Table 2.1-3 summarizes the activities of the nine catcher vessel classes in 2000. The table provides a comparison of the relative level of activities of the different classes.

Table 2.1-3. Summary of Catcher Vessel Activity in the Groundfish Fisheries, 2000

	No. of Vessels	Retained Harvest (Thousands of Tons)				Ex-Vessel Value ($Millions)	Payments to Labor ($Millions)	Total Employment (No. of Persons)
		PLCK	PCOD	ARSO	FLAT			
TCV BSP ≥ 125	30	300.3	6.2	0.1	2.6	79.5	31.8	135
TCV BSP 60-124	45	301.3	16.7	0.8	1.6	82.7	33.1	203
TCV Div. AFA	30	49.4	16.8	3.9	4.1	25.3	10.1	135
TCV Non-AFA	38	24.0	10.4	5.5	7.0	16.4	6.5	171
TCV < 60	46	11.3	13.9	0.3	0.5	13.4	5.4	184
PCV	158	0.1	25.9	0.5	0.0	21.0	8.4	869
LCV	72	0.0	1.4	4.1	0.1	21.0	7.9	396
FGCV 33-59	590	0.1	16.2	7.4	0.1	47.9	19.7	2,360
FGCV ≤ 32	69	a	1.0	0.1	a	1.1	0.5	276
Total	1,078	686.5	108.6	22.7	15.9	308.3	123.3	4,729

[a] Data omitted to protect confidentiality.

2.1.1 Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length (TCV BSP ≥ 125)

This catcher vessel class includes all vessels for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is greater than the value of the catch of all other species combined, vessel length is greater than or equal to 125 ft., and the total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible.

2.1.1.1 Class Characteristics

All trawl vessels tend to have the cabin set forward, a large working deck in the aft, and fish holds set amidships. They have a stern ramp to aid in retrieving the trawl net. All vessels in this class are constructed of steel (CFEC, 2001). As vessel length increases, the vessels tend to have a higher freeboard, a deeper draft, greater ballast, and equipment that enables them to fish in more adverse weather conditions.

Typically, these vessels have one forward and one aft net reel, twin trawl winches, and several auxiliary winches. These vessels typically have large, below-deck refrigerated seawater (RSW) tanks for holding groundfish. A large hold size and a RSW system become more important as distance to the fishing grounds increases.

The vessels in this class have high horsepower engines and can tow very large trawls, which allows for larger catches. They also have very large fish holds, which allows them to extend their trips to the maximum feasible time while still maintaining high fish quality—typically 36 to 48 hours after the first fish is caught. The combination of high horsepower and large fish holds make these vessels very efficient in the high volume BSAI shore-based pollock fishery—particularly as regulatory changes move the pollock fishery farther from shore. All vessels in this category have auxiliary engines to control their nets, and this equipment enables them to operate their pelagic trawls at depths just above ocean bottom.

In 2000, vessels in the TCV BSP ≥ 125 class had an average length of 153 feet and ranged from 125 to 193 feet (Table 2.1.1-1). Most were less than 155 feet. The vessels in this class have an average horsepower rating of about 2,475, with a maximum of about 6,600 and a minimum of 1,125. Average gross tonnage is approximately 310 tons and average hold capacity is 13,500 cubic feet. The hold capacity of these vessels is approximately 73 percent higher than the hold capacity of vessels in the TCV BSP 60-124 class. (CFEC, 2001).

Table 2.1.1-1. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, by Vessel Length, 1992-2000

Year	Vessel Length				
	125-139'	140'-154'	155'-169'	170'+	Total
1992	7	2	9	7	25
1993	8	3	6	5	22
1994	7	3	7	5	22
1995	6	4	7	7	24
1996	11	8	5	5	29
1997	6	9	7	14	36
1998	6	9	7	9	31
1999	9	9	7	8	33
2000	9	8	6	7	30

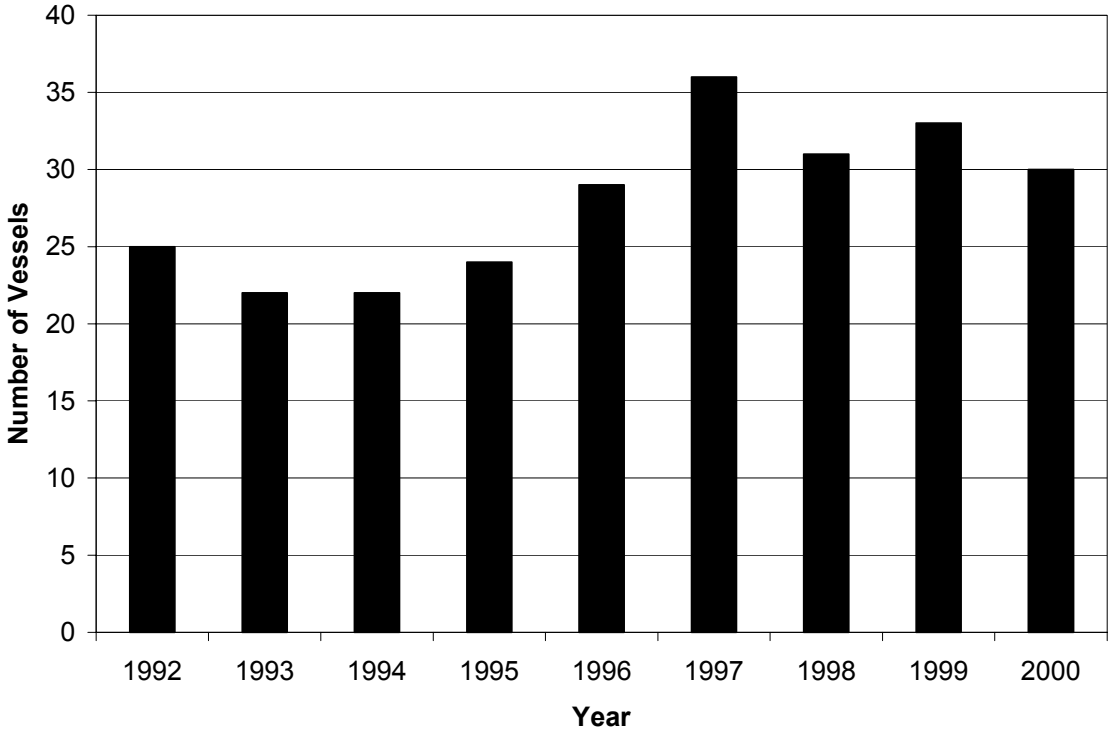
Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

The vessels in this class focus their fishing efforts in the BSAI pollock fishery. The primary pollock fishing periods extend from mid-January through about the end of April and from August through November with variations due to regulatory changes. Some of these vessels also participate in the summer Pacific whiting fishery off the coasts of Oregon and Washington. During June and July, some vessels in this category may tender salmon or undergo maintenance if they are not engaged in the whiting fishery. Vessels in this category are typically moored for the month of December, although the moorage location may be at Bering Sea or Western GOA ports to avoid a long trip back to a Pacific Northwest port following the fishing period ending in November.

2.1.1.2 Class Participation

The number of vessels in this class reached a peak of 36 in 1997 (Figure 2.1.1-1). Of the vessels in the TCV BSP ≥ 125 class that were active in the groundfish fishery in 2000, the average number of years since 1992 in which a vessel was active was 6.93, with a minimum of two years and a maximum of nine years. Of those vessels that were not active in 2000, the average number of years of participation was 1.91, with a minimum of one and a maximum of eight.

Figure 2.1.1-1. Number of Active Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data, June 2001.

2.1.1.3 Description of Fishing Operations

As reported by IAI (1994), trawlers use nets (trawls) towed from the stern of the vessel to fish either near the bottom (using bottom trawls) or off the bottom (using pelagic trawls).[9] A tow cycle entails the "shooting" or setting of a net, towing it through schools of fish, hauling it up the stern ramp and onboard the vessel, emptying the net into a fish hold, and resetting the net. A tow ranges from about 30 minutes to several hours in duration, depending on the fishery, concentration of fish, and horsepower of the vessel. The towed net is attached to the vessel by an intricate set of rigging that begins with hydraulic winches aft of the wheelhouse. Cable from these winches is attached to otter boards or "doors," and from the doors, a "bridle" is attached to the net. Primary functions of the door are to spread the net opening and to steer fish into the net. The nets, made from either nylon or polypropylene, vary in size, shape, and material, depending on whether they are used for pelagic or bottom trawling.

Modern net designs consider vessel horsepower, vessel length, fish species, bycatch issues, and fishing location. Although generalizations oversimplify the complexity of modern net technology, some broad statements can be made. Pelagic trawl nets tend to be symmetrical from top to bottom. They are nylon and have a mesh size up to 512 inches at the wing end, but reduced to between 4 and 8 inches near the rear. Doors on pelagic nets have an airplane-wing shape to reduce drag and usually are towed above the net body to pull the top of the net open. Fishing circles on pelagic nets, ranging

[9] Regulations in the pollock fishery through most of the period between 1992 and 2000 encouraged the use of pelagic trawls in the BSAI pollock fishery by limiting the amount of prohibited species that could be taken in the pollock bottom trawl fishery. In 1998 the use of bottom trawls in the pollock fishery was prohibited.

from about 12 fathoms to more than 50 fathoms, sweep the water horizontally and vertically much more than bottom nets do.

Net sounders (sonar) and other electronics can be attached to the opening or "wings" to monitor net shape and track fish entering the fishing circle. Other telemetry equipment allows monitoring of the shape of the net as it moves through the water. Fish are herded into the net by the doors and the net wings. The fish continue along the large mesh net body and accumulate in the small-mesh cod-end. The net is hauled from the water and up a stern ramp by using the hydraulic winches and gantries on either side of the stern ramp. Depending on net type, deck capacity, and fishing conditions, a tow can result in as much as 50 to 200 MT of fish. The cod-end is unzipped by pulling a line at the very end of the net, and the catch is emptied into a fish hold. The cod-end is then closed and any necessary repairs to the remainder of the net are made. The net is set again and the tow cycle repeats.

Bottom trawl nets have relatively small mesh sizes, usually less than 18 inches, resulting in high drag and therefore, relatively small nets. The nets are usually asymmetrical, with the top larger than the bottom. The fishing circle or net opening on bottom trawl nets ranges from one fathom to a maximum of about 12 fathoms, but nets less than seven fathoms are most common. These designs are intended to move across the ocean bottom and herd fish into the net. The mesh is made of polypropylene and is generally larger than mesh on pelagic nets.

Pelagic and bottom trawling each have operational advantages and disadvantages. Bottom trawls have been found to be the only effective way to harvest the abundant flatfish resource in the BSAI and GOA. Bottom trawls can also be deployed from vessel with relatively low engine horsepower, and thus can be used more easily by smaller vessels. On the other hand, pelagic trawling is considered a "cleaner" fishing method than bottom trawling because of the lower level of bycatch. Bycatch is a major concern during fishing operations because reaching a bycatch threshold can close down a fishery or result in fines. Bycatch concerns led to a prohibition on the use of bottom trawls in the BSAI pollock fishery in March 1999 under Amendment 57 to the BSAI Groundfish FMP. Bottom trawling is still allowed in all other trawl fisheries.

The pollock seasons in the BSAI begin in January. Prior to 1991, the pollock seasons in the BSAI continued until the harvest quota was reached. In 1991, the fishery was divided into two subareas BS and AI, with other 95 percent of the fishery in the BS. In 1991, the pollock fishery was also split into "A" and "B" seasons.

From 1991 to 1998, the BS pollock A season started in January and lasted until February or March. In 1991–1992, the B season began in June and lasted until September. From 1993 through 1995, the pollock B season began in August and lasted until September or October. From 1996 through 1998, the B season lasted from September to October. In 1999, due to the AFA and restrictions imposed for Stellar sea lion conservation Aleutians Island fishery was closed, the seasons changed to A-1 (January), A-2 (February), B (August), C (September), and D (October) for the BS.

In 2000, the season opening dates were changed again because of Sea Lion measures with A from January 20 through March 31 and the B season continuing from April 1 through June 10. The difference in the A and B season is the amount of the pollock that can be removed from the Sea Lion Conversation Area (SCA). In 2000, C season began June 10 and runs through August 19, and the D season from August 20 through November 1. As in the roe season, the difference in the C and D seasons are found in the amount of pollock that can be removed from the SCA.

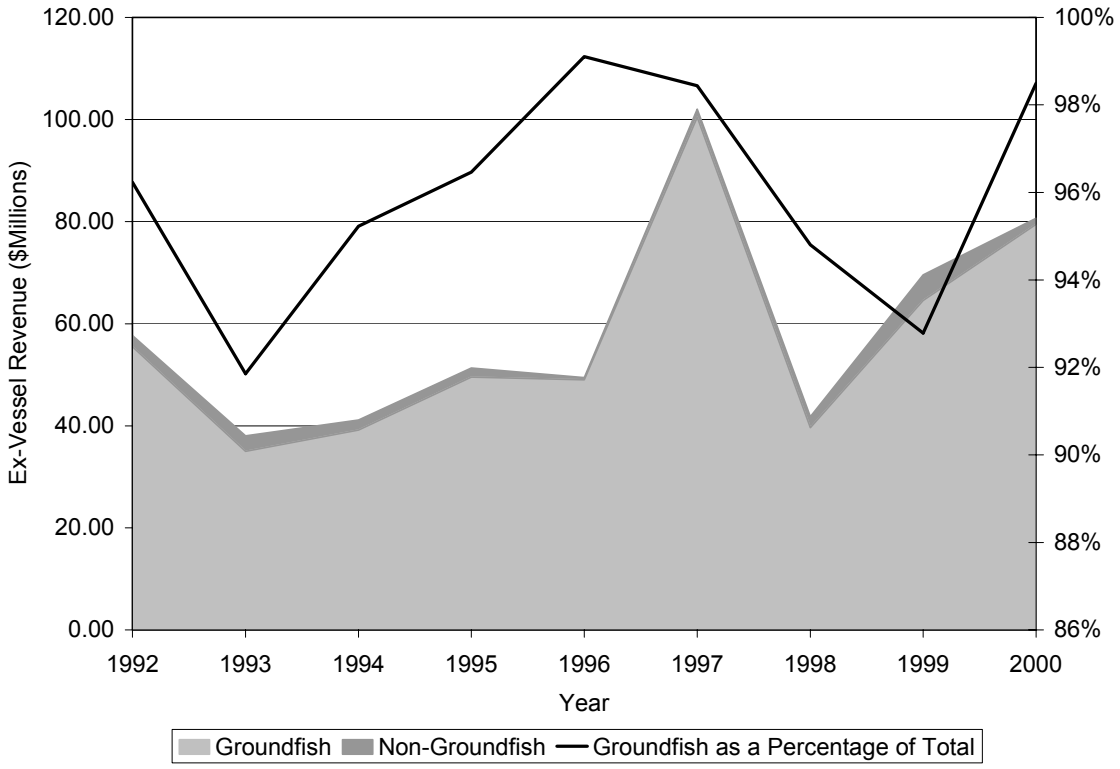
In 1991, the AI pollock seasons were classified as one fishery lasting from January to March. In 1992, the AI season was split into an A and B season. From 1992 through 1998, the A season lasted from January until March. In 1992, the B season began in June and ended in June. In 1993 and 1994, the B season lasted from August until October. From 1995 through 1998, there was no B season. In 1999,

the AI pollock fishery was closed and reclassified as bycatch-only status as a measure to reduce the risk of further endangering the recovery of stellar sea lions.

2.1.1.4 Dependence on Groundfish and Annual Cycle of Operations

Figure 2.1.1-2 and Table 2.1.1-2 show total ex-vessel value from groundfish and from non-groundfishspecies for 1992 through 2000 for vessels in the TCV BSP ≥ 125 class. In every year during this period, groundfish accounted for more than 90 percent of total ex-vessel value for this class. In 1999, the most recent year for which landings data for all non-groundfish species are available, about 93 percent of all ex-vessel value generated by the class came from groundfish fisheries. The ex-vessel value per vessel from non-groundfish was only a small fraction of that from groundfish (Table 2.1.1-3).

Figure 2.1.1-2. Ex-Vessel Value of Harvest in Major Alaska Fisheries for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1988–1998



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Table 2.1.1-2. Number of Vessels and Total Ex-Vessel Value by Species Group for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length,1992-2000

Year	Number of Vessels	$Millions		
		Groundfish	Non-Groundfish	All Species
1992	25	55.51	2.17	57.68
1993	22	34.96	3.10	38.06
1994	22	39.16	1.96	41.12
1995	24	49.51	1.82	51.33
1996	29	49.02	0.44	49.46
1997	36	100.43	1.60	102.02
1998	31	39.61	2.17	41.78
1999	33	64.56	5.02	69.58
2000	30	79.46	1.21	80.67

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.1-3. Number of Vessels and Ex-Vessel Value Per Vessel by Species Group for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	Number of Vessels	Ex-Vessel Value Per Vessel ($)		
		Groundfish	Non-Groundfish	All Species
1992	25	2,220,286	86,886	2,307,172
1993	22	1,589,040	140,881	1,729,921
1994	22	1,779,986	89,166	1,869,152
1995	24	2,063,031	75,681	2,138,712
1996	29	1,690,411	15,235	1,705,646
1997	36	2,789,586	44,328	2,833,914
1998	31	1,277,766	70,091	1,347,857
1999	33	1,956,264	152,118	2,108,383
2000	30	2,648,514	40,371	2,688,885

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.1-4 and Table 2.1.1-5 provide additional detail about the relative importance of non-groundfish fisheries to vessels in the TCV BSP ≥ 125 class. Of the 30 vessels that participated in groundfish fisheries in 2000, four participated in crab fisheries, down from ten in 1999. As noted above, however, the economic importance of non-groundfish fisheries to vessels in this class is relatively small.

Table 2.1.1-4. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length Participating in Non-Groundfish Fisheries, by Species, 1992-2000

Year	Number of Vessels				
	Salmon	Crab	Halibut	Other	Total
1992	0	3	0	0	3
1993	0	5	0	0	5
1994	0	3	0	0	3
1995	0	6	0	0	6
1996	0	2	0	0	2
1997	0	9	0	1	10
1998	1	8	0	0	9
1999	1	10	0	1	12
2000	0	4	a	0	4

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Value for halibut is not available.

Table 2.1.1-5. Ex-Vessel Value of Non-Groundfish Species Harvested by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, by Species, 1992-2000

Year	Ex Vessel Value ($Millions)				
	Salmon	Crab	Halibut	Other	Total
1992	0.00	a	0.00	0.00	a
1993	0.00	3.10	0.00	0.00	3.10
1994	0.00	a	0.00	0.00	a
1995	0.00	1.82	0.00	0.00	1.82
1996	0.00	a	0.00	0.00	a
1997	0.00	1.60	0.00	a	1.60
1998	a	2.17	0.00	0.00	a
1999	a	5.02	0.00	a	5.02
2000	0.00	1.21	b	0.00	1.21

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit vessels over 60 feet in length from landing salmon.
[a] Data omitted due to confidentiality restrictions.
[b] Value for halibut is not available.

Table 2.1.1-6 shows ex-vessel value by month in 1999 and 2000 from groundfish and from all other species. The bimodal distribution of groundfish activity is a function of the two primary regulatory seasons for pollock—the roe season in the winter and spring and the non-roe season in the summer and fall.

Table 2.1.1-6. Ex-Vessel Value of Groundfish, Salmon, Crab, Halibut, and Other Species Harvested by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, by Month, 1999-2000

Year	$Millions													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1999	Salmon	a	a	a	a	a	a	a	a	a	a	a	a	a
	Crab	0.44	1.25	0.59	0.00	0.00	0.00	0.00	0.00	0.00	2.73	0.00	0.00	5.02
	Halibut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	a	a	a	a	a	a	a	a	a	a	a	a	a
	Groundfish	5.29	18.02	5.60	1.21	0.00	0.38	0.47	15.37	11.81	6.41	0.00	0.00	64.56
2000	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crab	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.00	1.21
	Halibut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Groundfish	3.30	19.07	10.34	1.14	0.00	0.03	3.63	15.25	16.20	10.09	0.41	0.00	79.46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
[a] Data omitted due to confidentiality restrictions.

The number of vessels participating in and ex-vessel value from groundfish fisheries by trimester are shown in Table 2.1.1-7 and Table 2.1.1-8, respectively. The number of vessels participating groundfish fisheries by month is shown in Table 2.1.1-9.

Table 2.1.1-7. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length with Groundfish Landings by Trimester, 1992-2000

Year	Number of Vessels			
	Jan-Apr	May-Aug	Sep-Oct	Total
1992	16	23	19	25
1993	20	20	21	22
1994	20	21	21	22
1995	22	21	22	24
1996	29	15	27	29
1997	34	16	33	36
1998	28	14	31	31
1999	30	33	31	33
2000	29	30	28	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-8. Ex-Vessel Value of Harvest of Groundfish by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by Trimester, 1992-2000

Year	$Millions			
	Jan-Apr	May-Aug	Sep-Dec	Total
1992	19.43	24.95	11.12	55.51
1993	16.27	6.07	12.62	34.96
1994	18.40	6.64	14.12	39.16
1995	26.51	9.65	13.36	49.51
1996	26.11	0.62	22.29	49.02
1997	59.96	4.57	35.89	100.43
1998	19.95	1.07	18.59	39.61
1999	30.13	16.21	18.22	64.56
2000	33.85	18.91	26.69	79.46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-9. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length with Groundfish Landings, by Month, 1992-2000

Year	Number of Vessels												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1992	12	13	13	13	9	19	21	21	19	4	0	2	25
1993	9	19	20	17	0	7	2	19	20	20	0	0	22
1994	19	19	20	9	4	8	4	20	21	20	1	0	22
1995	16	21	21	13	7	15	10	20	22	16	0	0	24
1996	28	29	29	24	6	11	0	7	27	26	0	0	29
1997	29	32	31	24	3	7	0	10	33	32	0	0	36
1998	28	28	27	16	3	11	0	6	30	31	10	0	31
1999	29	29	28	18	0	4	9	33	31	31	0	0	33
2000	18	29	29	11	0	1	19	28	28	23	5	0	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.1.5 Catch and Value in Groundfish Fisheries

Table 2.1.1-10 shows the number of vessels in the TCV BSP ≥ 125 class with landings for each of the four major species groups (pollock, Pacific cod, flatfish, and the ARSO species complex, consisting of Atka mackerel, rockfish, sablefish, and other) on an annual basis. The fact that most of the vessels made deliveries of all four species groups is due to incidental catches of non-target species rather than targeted effort.

Table 2.1.1-10. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by Species, 1992-2000

	Number of Vessels				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	16	21	23	25	25
1993	16	17	20	22	22
1994	20	21	22	22	22
1995	19	19	20	24	24
1996	26	29	29	29	29
1997	28	30	32	36	36
1998	29	29	31	31	31
1999	32	32	32	33	33
2000	29	30	30	30	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

As shown in Table 2.1.1-11 and Table 2.1.1-17, pollock is clearly the most important species for this class in terms of harvest volume and total ex-vessel value. Pacific cod has been the second most important species in terms of volume and value since 1988. From 1992 to 2000, total harvest volume for the class varied between 205,000 and 382,000 tons. In the same period, ex-vessel revenue ranged from a high of $100 million in 1997 to a low of $35 million in 1993.[10]

Table 2.1.1-12 shows ex-vessel prices per pound and ex-vessel prices per ton for the TCV BSP ≥ 125 class. Prices were calculated by dividing total retained catch into total ex-vessel value. Ex-vessel values were supplied by calculated by CFEC in the fish-ticket database. The CFEC values do not typically include post-season bonuses, which are a significant component (perhaps as much as 50 percent) of the total value attained in the pollock roe fishery. Thus the total values shown underestimate actual values earned. As seen in the table, the ex-vessel price of Pacific cod was substantially higher than that of pollock. Therefore, while Pacific cod accounted for only two percent of the total retained groundfish deliveries by weight in 2000, it accounted for four percent of total groundfish revenue.

[10] It is expected that under AFA ex-vessel prices may be more closely tied to the quality of fish delivered than was the case in the past, particularly for roe-bearing pollock harvested in the A season. Higher A season prices were noted in the payments to at-sea trawl catcher vessels from motherships (Footnote 3) (Paine, 2000).

Table 2.1.1-11. Retained Tons of Groundfish by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by Species, 1992-2000

Year	Tons				
	ARSO	FLAT	PCOD	PLCK	Total
1992	36	3,812	4,563	197,382	205,794
1993	29	129	5,950	219,885	225,993
1994	74	3,552	6,033	223,272	232,931
1995	286	3,555	9,231	220,465	233,537
1996	161	3,618	14,784	250,072	268,634
1997	590	22,445	15,393	344,187	382,614
1998	539	776	8,050	259,882	269,247
1999	176	1,894	8,735	289,769	300,574
2000	100	2,561	6,197	300,288	309,146

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-12. Ex -Vessel Prices by Species for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	ARSO		FLAT		PCOD		PLCK	
	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton
1992	$0.03	$56.00	$0.11	$241.27	$0.13	$292.80	$0.12	$269.78
1993	$0.18	$391.91	$0.01	$26.06	$0.13	$291.94	$0.07	$151.02
1994	$0.14	$299.33	$0.06	$127.49	$0.11	$249.85	$0.08	$166.51
1995	$0.21	$461.65	$0.07	$149.98	$0.14	$307.01	$0.09	$208.71
1996	$0.02	$51.10	$0.05	$107.51	$0.14	$315.15	$0.08	$175.81
1997	$0.02	$49.87	$0.11	$241.49	$0.15	$339.78	$0.12	$260.75
1998	$0.04	$86.55	$0.02	$36.03	$0.13	$285.76	$0.06	$143.28
1999	$0.02	$54.40	$0.04	$97.18	$0.22	$481.52	$0.09	$207.60
2000	$0.01	$29.34	$0.07	$143.90	$0.26	$572.71	$0.11	$251.54

Source: CFEC/ADFG Fish Ticket Data, June 2001

Table 2.1.1-13. Ex-Vessel Value of Harvest by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by Species, 1992-2000

Year	$Millions				
	ARSO	FLAT	PCOD	PLCK	Total
1992	0.00	0.92	1.34	53.25	55.51
1993	0.01	0.00	1.74	33.21	34.96
1994	0.02	0.45	1.51	37.18	39.16
1995	0.13	0.53	2.83	46.01	49.51
1996	0.01	0.39	4.66	43.97	49.02
1997	0.03	5.42	5.23	89.75	100.43
1998	0.05	0.03	2.30	37.24	39.61
1999	0.01	0.18	4.21	60.16	64.56
2000	0.00	0.37	3.55	75.53	79.46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-14 through Table 2.1.1-17 focus on the primary target fisheries of the TCV BSP ≥ 125 class. Pollock is clearly the most important fishery for the class, accounting for 97 percent of total groundfish landings volume and 95 percent of total groundfish ex-vessel value. Table 2.1.1-18 shows the ex-vessel value of landings of all groundfish species in the top three target fisheries. Table 2.1.1-19 and Table 2.1.1-20 show the volume and value of the target species in target fisheries by trimester. Before 1999 very little effort was expended by these vessels in the second trimester. Changes in seasons due to stellar sea lion concerns resulted in earlier non-roe pollock seasons.

Table 2.1.1-14. Number of Vessels in Top Three Target Fisheries for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	$Millions			
	PLCK	PCOD	FLAT	Total
1992	25	9	10	25
1993	22	10	0	22
1994	22	12	7	22
1995	24	15	12	24
1996	29	23	4	29
1997	36	21	11	36
1998	31	23	5	31
1999	33	25	2	33
2000	30	23	2	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-15. Ex-vessel Value of Total Catch in Top Three Target Fisheries by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	$Millions			
	PLCK	PCOD	FLAT	Total
1992	53.38	1.25	0.77	55.51
1993	33.18	1.77	0.00	34.96
1994	37.26	1.42	0.46	39.16
1995	46.21	2.58	0.63	49.51
1996	44.20	4.41	0.41	49.02
1997	89.69	4.98	5.76	100.43
1998	37.48	2.13	0.00	39.61
1999	60.30	4.08	a	a
2000	75.75	3.36	a	a

Note: Includes catches of all species in the target fishery listed.

[a] Data omitted due to confidentiality restrictions.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.1-16. Total Catch of Target Species by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by Trimester, 1992-2000

	Thousands of Tons				
Target	Year	Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	0.0	2.8	0.0	2.9
	1993	0.0	0.0	0.0	0.0
	1994	1.4	1.4	0.5	3.3
	1995	3.0	0.4	0.0	3.4
	1996	3.2	0.0	0.0	3.2
	1997	21.1	0.8	0.0	21.8
	1998	0.0	0.0	0.1	0.1
	1999	a	a	a	a
	2000	a	a	a	a
PCOD	1992	3.3	0.2	0.1	3.6
	1993	4.4	0.1	0.0	4.6
	1994	4.9	0.2	0.0	5.1
	1995	8.0	0.0	0.0	8.0
	1996	12.7	0.5	0.1	13.3
	1997	13.4	0.0	0.0	13.4
	1998	6.2	0.0	0.8	7.1
	1999	8.1	0.0	0.0	8.1
	2000	5.0	0.2	0.0	5.2
PLCK	1992	62.6	91.8	42.6	197.1
	1993	95.5	40.0	84.2	219.8
	1994	100.9	38.4	83.6	222.8
	1995	110.5	45.7	64.0	220.2
	1996	121.7	3.6	124.4	249.7
	1997	172.7	21.2	148.4	342.3
	1998	125.5	8.6	125.3	259.4
	1999	124.3	78.0	86.9	289.2
	2000	119.6	75.0	105.4	300.0

[a] Data omitted due to confidentiality restrictions.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.1-17. Ex-Vessel Value Total Catch of Target Species by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by Trimester, 1992-2001

		$Millions			
Target	Year	Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	0.00	0.76	0.01	0.77
	1993	0.00	0.00	0.00	0.00
	1994	0.25	0.13	0.09	0.46
	1995	0.49	0.14	0.00	0.63
	1996	0.41	0.00	0.00	0.41
	1997	5.68	0.08	0.00	5.76
	1998	0.00	0.00	0.00	0.00
	1999	a	a	a	a
	2000	a	a	a	a
PCOD	1992	1.16	0.08	0.02	1.25
	1993	1.72	0.05	0.00	1.77
	1994	1.37	0.05	0.00	1.42
	1995	2.58	0.00	0.00	2.58
	1996	4.23	0.15	0.03	4.41
	1997	4.98	0.00	0.00	4.98
	1998	1.90	0.01	0.21	2.13
	1999	4.08	0.00	0.00	4.08
	2000	3.32	0.04	0.00	3.36
PLCK	1992	18.17	24.12	11.10	53.38
	1993	14.53	6.02	12.62	33.18
	1994	16.78	6.45	14.03	37.26
	1995	23.44	9.42	13.36	46.21
	1996	21.47	0.47	22.26	44.20
	1997	49.30	4.49	35.89	89.69
	1998	18.05	1.06	18.37	37.48
	1999	25.87	16.21	18.22	60.30
	2000	30.19	18.87	26.69	75.75

[a] Data omitted due to confidentiality restrictions.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.1-18 and Table 2.1.1-19 show the number of vessels and ex-vessel value of the TCV BSP ≥ 125 fleet by FMP subarea, respectively. Because of the class's reliance on the pollock resource, the BS FMP subarea is clearly the sector's most important fishing area. In 2000, this area accounted for about 99 percent of the total ex-vessel value of groundfish retained by this vessel class. The number of vessels with pollock and Pacific cod landings by FMP subarea are presented in Table 2.1.1-20, while Table 2.1.1-21 shows the ex-vessel value of the landings of these species by FMP subarea. These two species are highlighted because of their relative importance to catcher vessels and because recent actions to protect stellar sea lions involve closures that directly affect the pollock and Pacific cod fisheries.

Table 2.1.1-18. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by FMP Subarea, 1992-2000

Year	Number of Vessels					
	AI	BS	WG	CG	EG	Total
1992	10	25	13	5	0	25
1993	14	22	6	7	1	22
1994	15	22	11	9	2	22
1995	13	24	19	6	1	24
1996	20	29	14	9	0	29
1997	23	33	21	5	1	36
1998	16	31	17	6	3	31
1999	8	33	21	11	2	33
2000	13	30	2	0	0	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-19. Ex-Vessel Value of Harvest of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions					
	AI	BS	WG	CG	EG	Total
1992	3.61	49.55	1.86	0.48	a	55.51
1993	1.85	31.61	0.69	0.81	a	34.96
1994	2.56	34.81	0.98	0.80	a	39.16
1995	3.53	42.76	2.35	0.87	a	49.51
1996	1.91	45.73	1.00	0.39	a	49.02
1997	4.23	93.51	1.95	0.73	a	100.43
1998	1.17	36.19	1.14	1.11	a	39.61
1999	1.13	61.48	1.21	0.74	a	64.56
2000	1.05	78.40	b	b	b	79.46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value from CG to protect the confidentiality of the small number of TCV BSP ≥ 125 that reported catches in this subarea during the year.

[b] Combined with value from BS to protect the confidentiality of the small number of TCV BSP ≥ 125 that reported catches in this subarea during the year.

Table 2.1.1-20. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length with Pacific Cod and Pollock Landings by FMP Subarea, 1992-2000

Year	Number of Vessels												
	PCOD						PLCK						Total
	AI	BS	WG	CG	EG	Total	AI	BS	WG	CG	EG	Total	
1992	6	23	6	3	0	23	10	25	13	4	0	25	25
1993	10	20	5	5	0	20	14	22	6	7	1	22	22
1994	9	22	10	0	1	22	15	22	11	9	2	22	22
1995	12	20	18	5	0	20	13	24	15	4	1	24	24
1996	14	29	7	8	0	29	19	29	13	2	0	29	29
1997	13	32	12	5	0	32	23	33	17	4	1	36	36
1998	7	31	15	5	0	31	14	31	17	5	3	31	31
1999	8	32	10	6	0	32	2	33	21	10	2	33	33
2000	13	30	2	0	0	30	2	30	2	0	0	30	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-21. Ex-Vessel Value of Pacific Cod and Pollock Landings by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions						
	PCOD			PLCK			
	AI-BS	WG	CG	AI	BS	WG	CG
1992	0.84	0.50	b	3.61	47.93	1.30	0.41
1993	1.48	0.09	0.17	1.85	30.13	0.59	0.57
1994	1.51	0.00	0.00	2.56	32.85	0.98	0.49
1995	2.01	0.40	0.43	3.53	40.15	1.96	0.31
1996	4.28	0.02	0.36	1.73	41.23	1.01	d
1997	4.70	0.45	0.08	3.61	83.99	1.50	0.15
1998	2.18	0.00	0.12	1.07	34.04	1.14	0.20
1999	4.03	0.11	0.07	c	58.38	1.10	0.47
2000	3.55	a	0.00	c	75.53	0.00	0.00

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value of AI-BS to protect the confidentiality of the small number of TCV BSP ≥ 125s that reported catching these species in this subarea during the year.

[b] Combined with value of WG to protect the confidentiality of the small number of TCV BSP ≥ 125s that reported catching these species in this subarea during the year.

[c] Combined with value of BS to protect the confidentiality of the small number of TCV BSP ≥ 125s that reported catching these species in this subarea during the year.

[d] Combined with value of WG to protect the confidentiality of the small number of TCV BSP ≥ 125s that reported catching these species in this subarea during the year.

Detailed information on the geographical distribution of the pollock and Pacific cod catch of vessels in the TCV BSP ≥ 125 class is presented in Figure 2.1.1-3 and Figure 2.1.1-4 for the years 1997 and 1998 combined. In the figures onlycatches in areas in which 4 or more vessels reported landings are shown.

Figure 2.1.1-3. Average Annual Pollock Catch of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, by Statistical Area, 1997-1998

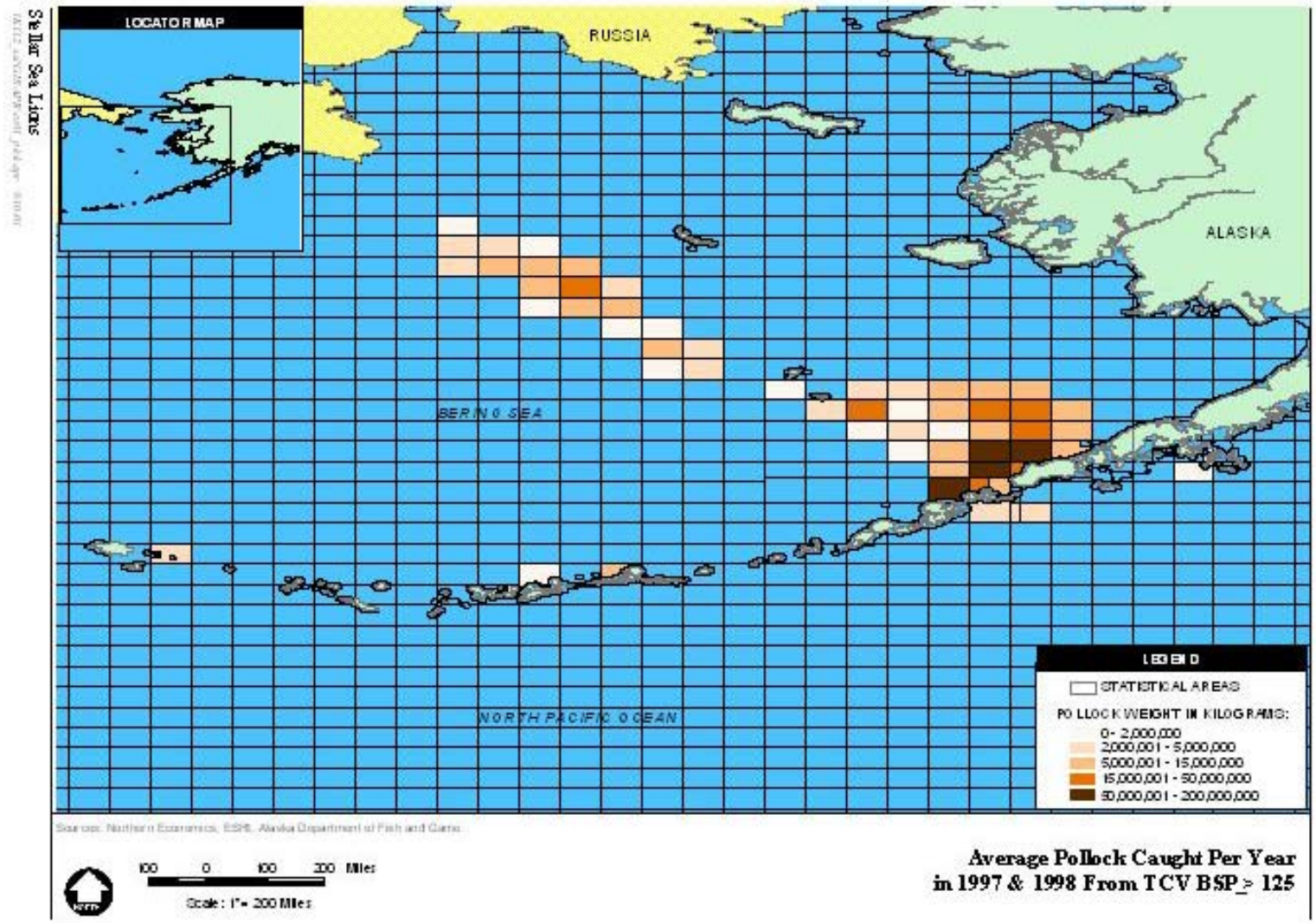
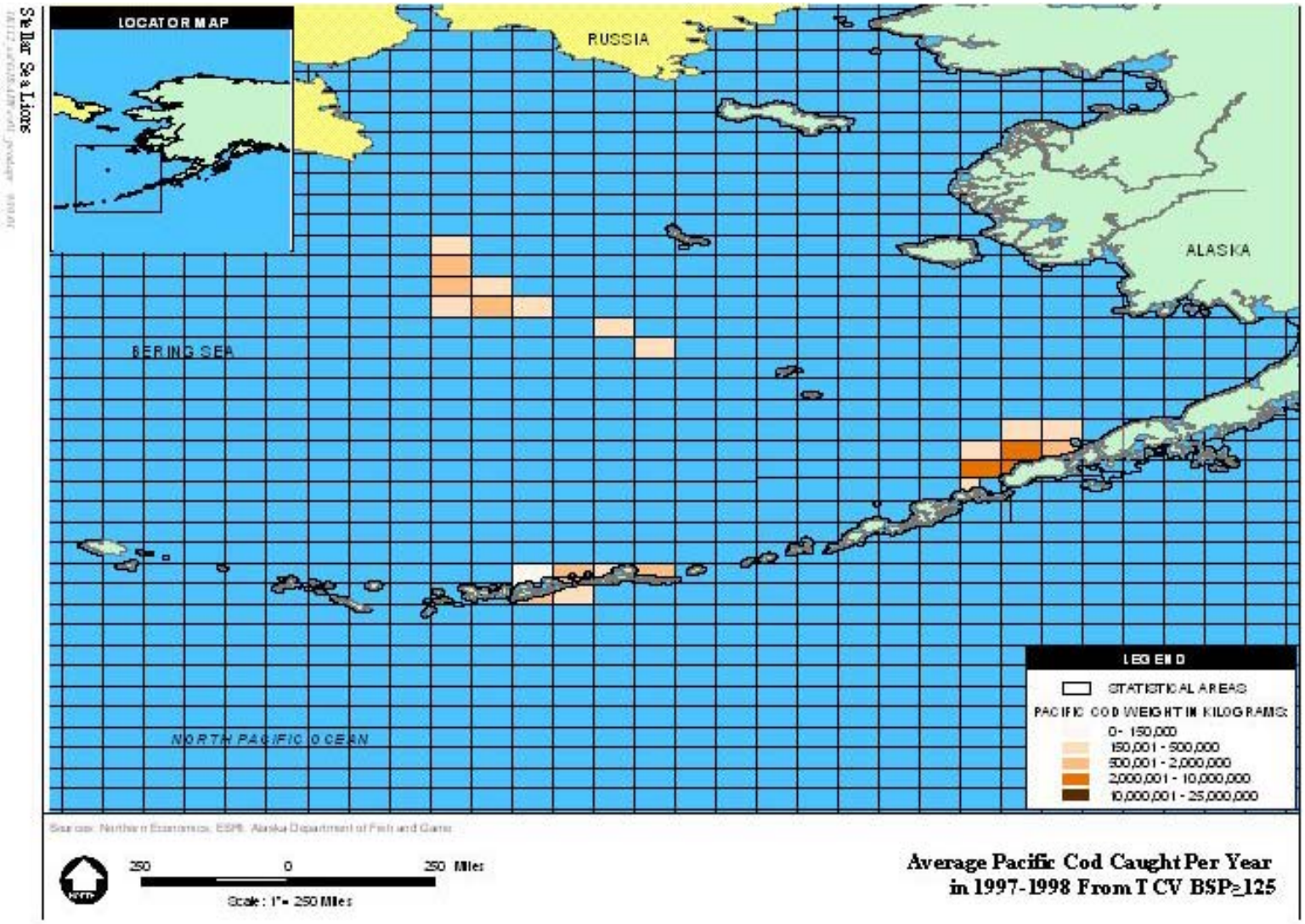


Figure 2.1.1-4. Average Annual Pacific Cod Catch of Bering Sea Pacific Cod Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, by Statistical Area, 1997-1998



The nearly exclusive reliance of the vessels in this class on trawl gear is shown in Table 2.1.1-22.

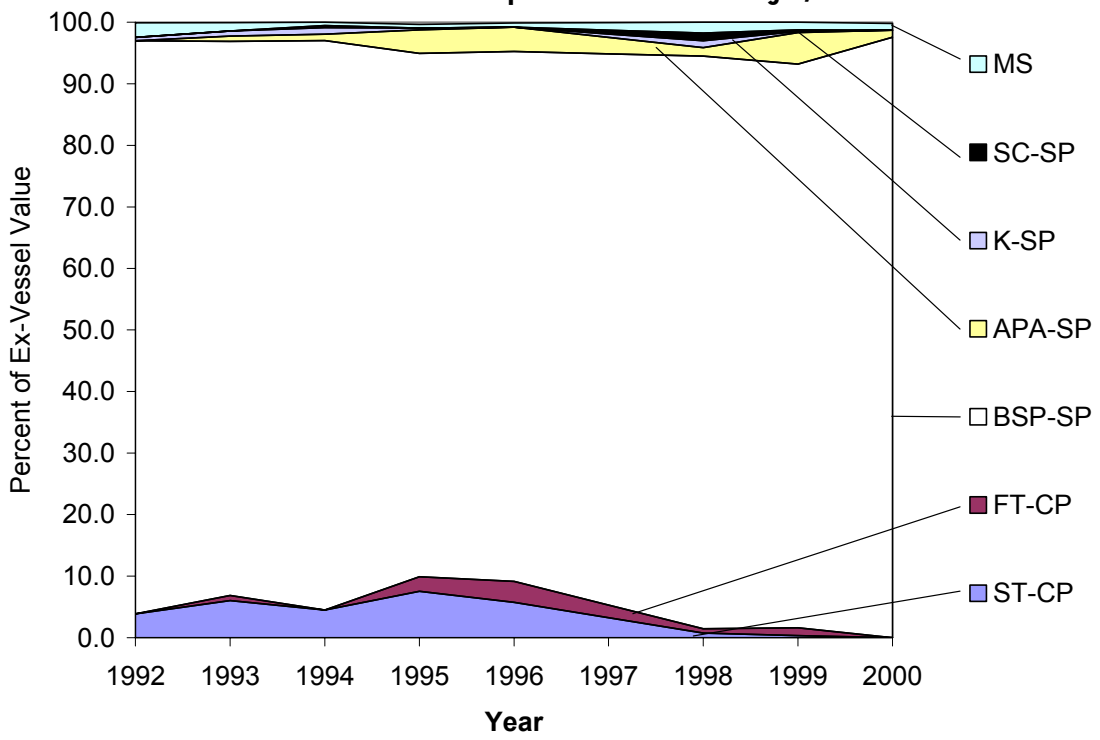
Table 2.1.1-22. Percent of Total Value by Gear in Top Three Target Fisheries by Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1996-2000

Year	Percent of Total Value				
	HAL	JIG-OTH	POT	TWL	Total
PLCK					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.3	0.0	99.7	100.0
2000	0.0	0.0	0.0	100.0	100.0
PCOD					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	1.1	98.9	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0
FLAT					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Figure 2.1.1-5 shows the reliance of the TCV BSP ≥ 125 fleet on various processors from 1992 through 2000. In 2000, roughly 98 percent of the total ex-vessel revenue was generated from deliveries to the Bering Sea pollock inshore plants (BSP-SP).

Figure 2.1.1-5. Ex-Vessel Value Paid by Various Processor Classes to Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Data for 1997 is a simple of average of the values for 1996 and 1998.

2.1.1.6 Crew Employment and Income

Normally, a vessel in the TCV BSP ≥ 125 class carries four to five crewmembers (including the skipper) when fishing for pollock and other groundfish. In addition to the fishing crew, one or more people must be responsible for accounting, correspondence, recordkeeping, and other business requirements. The vessel owner may fill this role or hire a person or firm to complete these tasks.

Similarly, the vessel owner may or may not be the skipper on vessels in this class. Some owners take a less active at-sea role and become more involved in the business of fishing because of their age or because their vessels have become larger and require more logistical and general business support. Some hired skippers may have a partial ownership interest in the vessel.

This analysis assumed an average crew size of four, including the skipper, for this type of vessel. Another 0.5 position was added to the average to account for vessel support staff. Table 2.1.1-23 shows the total number of crew in this class in groundfish and non-groundfish fisheries from 1992 to 2000. Each year's estimate was derived by multiplying the average crew size by the number of unique vessels with landings in that year. The number of crew-member months was used to estimate FTE employment based on the assumption that crewmembers work an average of 16 hours per day for an average 15 days for every month their vessel is active. The total number of estimated crewmember hours is then divided by the 2080 hours per year.

Implementation of the AFA may eventually result in a decline in the number of crewmembers per vessel. Because the provisions of the AFA eliminate the "race for fish" and allow vessels to operate at a slower pace, fewer crew are necessary. On the other hand, the crew that are hired are likely to be more experienced and highly paid (Fraser, 2000; Hughes, 2000).

Table 2.1.1-23. Number of Crewmembers and Crewmember Months by Species Group for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	Number of Crew Members	Crewmember Months			Groundfish FTE
		Groundfish	Non-Groundfish	All Species	
1992	112.5	657	72	725	76
1993	99.0	599	68	657	69
1994	99.0	653	27	675	75
1995	108.0	725	41	738	84
1996	130.5	842	9	851	97
1997	162.0	905	54	959	104
1998	139.5	855	54	896	99
1999	148.5	954	86	999	110
2000	135.0	860	23	873	99

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Crewmembers typically are paid on a share-of-revenue basis. A share may be calculated as a portion of gross revenue such as gross revenue less food and fuel expenditures or gross revenue less food, fuel, and landing tax expenditures. Individual crew shares are about six to ten percent of the gross revenue after expenditures have been subtracted. A 1996 survey of vessel owners and crewmembers operating in the BS and WG found that crewshares for trawl vessels vary substantially according to experience and the fishery (Northern Economics, 1997). Trawl crew shares ranged from less than one percent for crewmembers without prior experience to almost seven percent for crew with ten or more years of experience. Skippers earn the largest shares (often 11 to 14 percent), and engineers often receive the next largest share.

Information provided by the owners of trawl vessels for the 1996 survey indicated that total compensation for the crew (including a hired skipper) was about 40 percent of gross revenues for the vessel. Crew compensation was less for smaller trawl vessels (26 to 30 percent) because the skipper was typically the vessel owner. The 1996 survey defined compensation to the owner as a return to the owner's investment and not a return to labor. If the vessel owner's compensation is considered payments to labor the total payments to labor were about 40 percent for trawl catcher vessels. For this reason, this analysis assumes that 40 percent of ex-vessel revenue goes to payments for labor.[11]

The AFA is likely to result in a reduction in crew sizes for this vessel class. Since vessels can operate at a slower pace, fewer crewmembers are necessary. If the vessel needs to be out of service for a short period of maintenance, the work can be done without the vessel losing potential revenue. Using fewer crewmembers also increases income for the remaining crewmembers (Fraser, 2000; Hughes, 2000).

Estimated payments to labor over time in groundfish and non-groundfish fisheries are shown in Table 2.1.1-24. Since 1992, the employment level has remained between 99 and 162. Estimated payments to labor have varied more widely as a result of fluctuations in ex-vessel revenues. Payments to labor per vessel in groundfish and non-groundfish fisheries are shown in Table 2.1.1-25. Payments to labor per crewmember are shown in (Table 2.1.1-26).

[11] No data were available to estimate operating costs; therefore, the analysis makes no assumptions about profits earned by the vessel owner.

Table 2.1.1-24. Payments to Labor by Species Group for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	$Millions		
	Groundfish	Non-Groundfish	All Species
1992	22.20	0.87	23.07
1993	13.98	1.24	15.22
1994	15.66	0.78	16.45
1995	19.81	0.73	20.53
1996	19.61	0.18	19.79
1997	40.17	0.64	40.81
1998	15.84	0.87	16.71
1999	25.82	2.01	27.83
2000	31.78	0.48	32.27

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-25. Payments to Labor Per Vessel by Species Group for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

	Payments to Labor Per Vessel ($)		
Year	Groundfish	Non-Groundfish	All Species
1992	888,114	34,754	922,869
1993	635,616	56,352	691,968
1994	711,994	35,666	747,661
1995	825,213	30,272	855,485
1996	676,164	6,094	682,258
1997	1,115,834	17,731	1,133,565
1998	511,106	28,036	539,143
1999	782,506	60,847	843,353
2000	1,059,406	16,149	1,075,554

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.1-26. Number of Crewmembers and Labor Payments Per Crewmember by Species Group for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	Number of Crew Members	Labor Payments per Crewmember ($)			Groundfish Labor Payments per FTE ($)
		Groundfish	Non-Groundfish	All Species	
1992	112.5	197,359	7,723	205,082	292,884
1993	99.0	141,248	12,523	153,771	202,491
1994	99.0	158,221	7,926	166,147	208,051
1995	108.0	183,381	6,727	190,108	236,914
1996	130.5	150,259	1,354	151,613	201,952
1997	162.0	247,963	3,940	251,903	384,898
1998	139.5	113,579	6,230	119,810	160,605
1999	148.5	173,890	13,522	187,412	234,588
2000	135.0	235,423	3,589	239,012	320,472

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.1.7 Regional Residence of Vessel Owners

Table 2.1.1-27 presents information on vessel owner residency. From 1992 to 2000, residents of WAIW owned more than 88 percent of the vessels in this class. In 2000, Washington residents owned all vessels in this class except one. The one exception was owned by a resident of the Other Regions.

The owner's residence is an important factor because most of the regional economic impact of catcher vessel operations occurs in the owner's region of residence. Table 2.1.1-28 shows the ex-vessel revenue accruing to each region using the convention that 100 percent of economic activity accrues to the owners region.[12] Table 2.1.1-29 and Table 2.1.1-30 show the crewmember months and payments to labor accruing to each region. It was assumed that all crewmembers of a particular vessel and home office staff reside in the vessel owner's region of residence.

Table 2.1.1-27. Number of Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length Landing Groundfish, by Region of Owner, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0	0	0	0	22	1	2	25
1993	0	0	0	0	20	1	1	22
1994	0	0	0	0	20	1	1	22
1995	0	0	0	0	22	1	1	24
1996	0	0	0	0	26	0	3	29
1997	0	0	0	0	35	0	1	36
1998	0	0	0	0	30	0	1	31
1999	0	0	0	0	32	0	1	33
2000	0	0	0	0	29	0	1	30

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001

Table 2.1.1-28. Ex-Vessel Revenue by Vessel Owner's Region for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.00	0.00	0.00	0.00	52.42	1.75	4.64	55.51
1993	0.00	0.00	0.00	0.00	32.76	1.55	1.48	34.96
1994	0.00	0.00	0.00	0.00	37.63	1.48	1.68	39.16
1995	0.00	0.00	0.00	0.00	49.83	1.80	2.54	49.51
1996	0.00	0.00	0.00	0.00	47.88	0.00	4.73	49.02
1997	0.00	0.00	0.00	0.00	105.76	0.00	2.31	100.43
1998	0.00	0.00	0.00	0.00	40.23	0.00	1.27	39.61
1999	0.00	0.00	0.00	0.00	62.15	0.00	2.12	64.56
2000	0.00	0.00	0.00	0.00	80.48	0.00	2.77	79.46

[12] Detailed information on expenditure patterns of catcher vessels are not available, and therefore it is not possible to more accurately assign economic impacts other than by assigning them to the vessel owner's regions.

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted average revenue per vessel.

Table 2.1.1-29. Crewmember Months by Vessel Owner's Region for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	Crewmember Months							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0	0	0	0	578	26	53	657
1993	0	0	0	0	544	27	27	599
1994	0	0	0	0	593	30	30	653
1995	0	0	0	0	664	30	30	725
1996	0	0	0	0	754	0	87	842
1997	0	0	0	0	879	0	25	905
1998	0	0	0	0	827	0	28	855
1999	0	0	0	0	925	0	29	954
2000	0	0	0	0	831	0	29	860

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Estimated by multiplying the number of vessels associated with the region by the number of crewmember months.

Table 2.1.1-30. Payments to Labor by Vessel Owner's Region for Bering Sea Pollock Trawl Catcher Vessels Greater than or Equal to 125 Feet in Length, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.00	0.00	0.00	0.00	20.97	0.70	1.86	22.20
1993	0.00	0.00	0.00	0.00	13.11	0.62	0.59	13.98
1994	0.00	0.00	0.00	0.00	15.05	0.59	0.67	15.66
1995	0.00	0.00	0.00	0.00	19.93	0.72	1.02	19.81
1996	0.00	0.00	0.00	0.00	19.15	0.00	1.89	19.61
1997	0.00	0.00	0.00	0.00	42.30	0.00	0.92	40.17
1998	0.00	0.00	0.00	0.00	16.09	0.00	0.51	15.84
1999	0.00	0.00	0.00	0.00	24.86	0.00	0.85	25.82
2000	0.00	0.00	0.00	0.00	32.19	0.00	1.11	31.78

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted payments to labor.

2.1.2 Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length (TCV BSP 60-124)

This catcher vessel class includes all vessels for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is greater than the value of the catch of all other species combined, vessel length is 60 ft. to 124 ft., and the total value of groundfish catch is greater than $5000. All of these vessels fishing after 1998 are AFA-eligible.

Vessels in this class are similar to vessels in the TCV BSP ≥ 125 class discussed above. The key difference between the two classes is vessel size. Because of their relatively small fish-hold sizes, (compared to fish-hold sizes of vessels in the TCV BSP ≥ 125 class) many of the vessels in this class cannot carry enough pollock to be cost effective in the high volume shore-based pollock fishery. Therefore, many of the vessels in this class deliver their pollock to motherships or to catcher processors. In 2000, over 42 percent of total value of deliveries in the TCV BSP 60-124 class was generated by at-sea deliveries.

2.1.2.1 Class Characteristics

In 2000, vessels in the TCV BSP 60-124 class had an average length of 113 feet and ranged from 81 to 124 feet (Table 2.1.2-1). Most were less than 120 feet. The vessels have an average horsepower rating of about 1,330, with a maximum of about 2,000 and a minimum of 730. Average gross tonnage is approximately 210 tons. The average of hold capacity of these vessels is capacity is 7,763 cubic feet or approximately 42 percent less than the hold capacity of the larger TCV BSP ≥ 125 vessels. (CFEC, 2001)

Table 2.1.2-1. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, by Vessel Length, 1992-2000

Year	Vessel Length				
	60-79'	80'-94'	95'-109'	110'-124	Total
1992	1	10	12	33	56
1993	4	7	11	32	54
1994	5	9	12	28	54
1995	3	12	17	31	63
1996	3	11	20	28	62
1997	2	6	18	28	54
1998	0	3	14	31	48
1999	0	3	11	28	42
2000	0	5	10	30	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

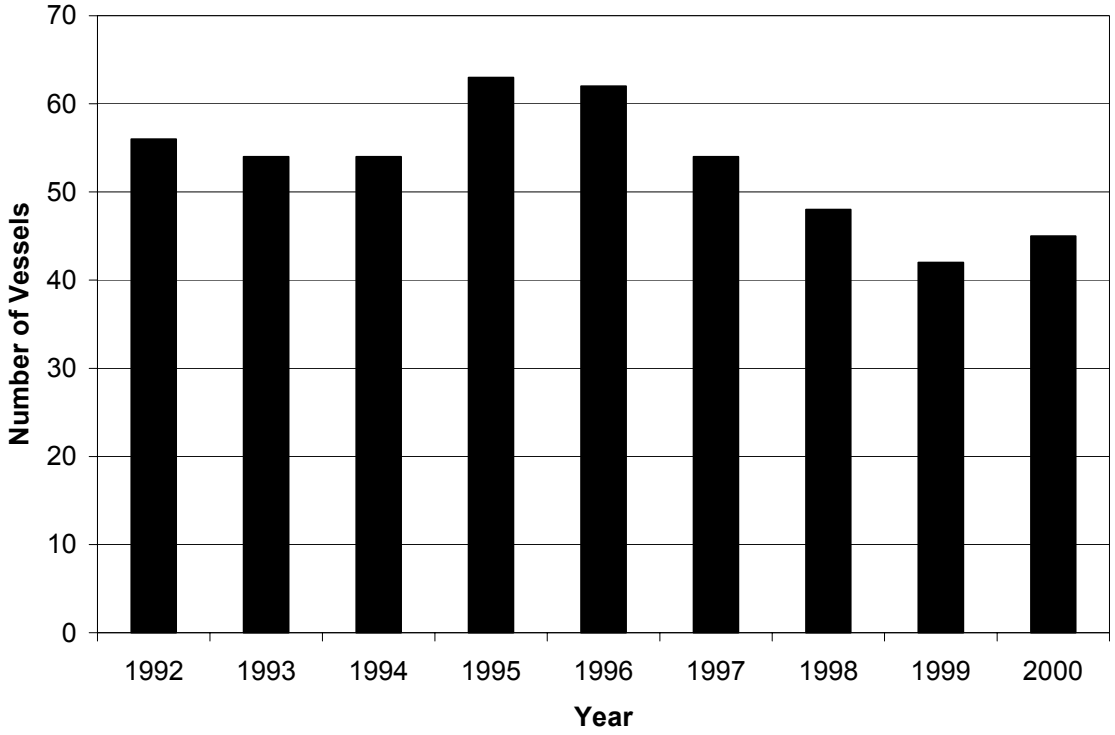
The vessels in this class focus their fishing efforts in the BSAI pollock fishery. The primary pollock fishing periods extend from mid-January through about the end of April and from August through November with variations due to regulatory changes. Some of these vessels also participate in the summer Pacific whiting fishery off the coasts of Oregon and Washington. During June and July, some vessels in this category may tender salmon or undergo maintenance if they are not engaged in the whiting fishery. Vessels in this category are typically moored for the month of December, although

the moorage location may be at Bering Sea or Western GOA ports to avoid a long trip back to a Pacific Northwest port following the fishing period ending in November

2.1.2.2 Class Participation

The number of vessels in the TCV BSP 60-124 class increased dramatically in 1988-1991, coincidentally with the transition from joint ventures to a fully domestic fishery with U.S.-owned processing vessels and shorebased plants located in Alaska. By 1991, three large Bering Sea pollock shore plants were operational, and a fourth was under construction. The number of vessels in this class reached a peak of 63 in 1995 (Figure 2.1.2-1) and have declined to 42 in 1999 and 45 in 2000.

Figure 2.1.2-1. Number of Active Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Of the vessels in the TCV BSP 60-124 class that were active in the groundfish fishery in 2000, the average number of years since 1992 in which a vessel was active was 7.93, with a minimum of three years and a maximum of nine years. Vessels that were not active in 2000 averaged umber 3.10 years of participation, with a minimum of one and a maximum of eight.

2.1.2.3 Description of Fishing Operations

The TCV BSP 60-124 operational profile is similar to that of vessels in the TCV BSP ≥ 125 class, as described in Subsection 2.1.1.3. The major difference between this class and the larger TCV BSP ≥ 125 class is that while deliveries to BSP-SP are very important (accounting for 55 percent of ex-vessel value vessel value) many of the vessels in the class deliver their pollock harvests to

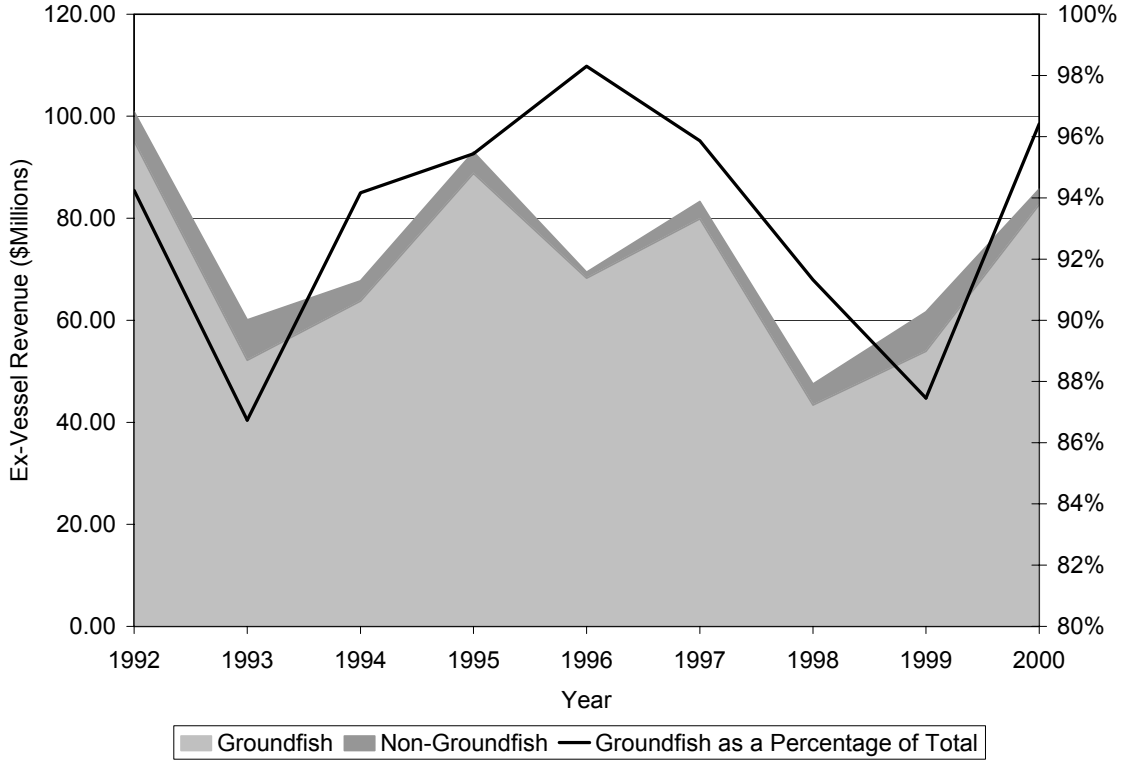
motherships. Since 1998 this class has accounted for 95 percent of the value of all at-sea deliveries of groundfish.

Because motherships operate at sea, catcher vessels do not need to bring their catches on-board before delivery, and therefore the need for extensive fish hold capacity is reduced. To deliver to motherships, the catcher vessel makes a tow just as shore based vessels would. However, rather than bringing the entire trawl net on board, the posterior portion of the trawl (the cod-end) that serves as the trawls catch storage area is "unzipped" from the front portion of the trawl. The cod-end is closed like a drawstring purse, attached to buoys and a towline, and towed to the nearby mothership. Crewmembers on the mothership grapple the cod-end and bring it on-board the mothership where it is dumped into the fish hold. An empty cod-end is attached to the towline and returned to the catcher vessel.

2.1.2.4 Dependence on Groundfish and Annual Cycle of Operations

The trawl fisheries targeting pollock and, secondarily, Pacific cod, are the only major Alaska fisheries in which vessels in the TCV BSP 60-124 class participate. Figure 2.1.2-2 and Table 2.1.2-2 shows that groundfish fisheries accounted for between 87 to 98 percent of all ex-vessel revenue earned by this class in Alaska fisheries during the 1992-2000 period. In 1999, the most recent year for which landings data for all non-groundfish species are available, about 87 percent of all ex-vessel value generated by the class came from groundfish fisheries. The ex-vessel value per vessel from non-groundfish was very small compared to total revenue (Table 2.1.2-3).

Figure 2.1.2-2. Ex-Vessel Value of Harvest in Major Alaska Fisheries for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1988–1998



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Table 2.1.2-2. Number of Vessels and Total Ex-Vessel Value by Species Group for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length,1992-2000

Year	Number of Vessels	$Millions		
		Groundfish	Non-Groundfish	All Species
1992	56	95.07	5.81	100.87
1993	54	52.14	7.97	60.12
1994	54	63.76	3.95	67.72
1995	63	88.79	4.24	93.03
1996	62	68.26	1.18	69.44
1997	54	79.88	3.45	83.33
1998	48	43.38	4.12	47.50
1999	42	53.90	7.73	61.63
2000	45	82.68	3.07	85.75

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.2-3. Number of Vessels and Ex-Vessel Value Per Vessel by Species Group for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	Number of Vessels	Ex-Vessel Value Per Vessel ($)		
		Groundfish	Non-Groundfish	All Species
1992	56	1,697,659	103,676	1,801,335
1993	54	965,613	147,636	1,113,249
1994	54	1,180,773	73,222	1,253,996
1995	63	1,409,375	67,286	1,476,660
1996	62	1,101,005	19,052	1,120,058
1997	54	1,479,269	63,832	1,543,101
1998	48	903,658	85,869	989,527
1999	42	1,283,367	184,041	1,467,408
2000	45	1,837,295	68,288	1,905,583

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.2-4 and Table 2.1.2-5 provide additional detail about the relative importance of groundfish to vessels in the TCV BSP 60-124 class. While 24 of the 42 vessels in this class made landings of crab in 1999, these landings accounted for only 12 percent of total revenue.

Table 2.1.2-4. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length Participating in Non-Groundfish Fisheries, by Species, 1992-2000

Year	Number of Vessels				
	Salmon	Crab	Halibut	Other	Total
1992	1	22	0	0	23
1993	1	27	2	0	29
1994	1	16	1	0	17
1995	4	21	1	0	25
1996	0	7	1	1	9
1997	1	29	1	1	32
1998	1	27	0	1	29
1999	0	24	1	0	25
2000	0	19	a	0	19

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Value for halibut is not available.

Table 2.1.2-5. Ex-Vessel Value of Non-Groundfish Species Harvested by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, by Species, 1992-2000

Year	$Millions				
	Salmon	Crab	Halibut	Other	Total
1992	a	5.81	0.00	0.00	5.81
1993	a	7.85	a	0.00	7.97
1994	a	3.90	a	0.00	3.95
1995	0.02	4.19	A	0.00	4.24
1996	0.00	1.14	A	a	1.18
1997	a	3.40	A	a	3.45
1998	a	3.81	0.00	a	4.12
1999	0.00	7.69	A	0.00	7.73
2000	0.00	3.07	B	0.00	3.07

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Data omitted due to confidentiality restrictions
[b] Value for halibut is not available.

Table 2.1.2-6 shows ex-vessel value by month in 1999 and 2000 from groundfish and from all other species. The bimodal distribution in the groundfish fishery is a function of the two major pollock seasons; the roe season, which by regulation opens in late January and runs until the seasonal catch allocations are harvested—usually by the end of March; and the non-roe season, which opens in prior to 2000 began in August or September. Beginning in 2000 AFA and sea lion actions have allowed harvests in the non-roe season beginning in late June. Not-with-standing the ability to fish earlier vessels in AFA cooperatives and their associated processors did not begin prosecuting the non-roe pollock fishery until August. Fishing is more lucrative in the roe season than in the non-roe season because of the high value of pollock roe.

TCV BSP 60-124 participation in the crab fisheries occurs primarily after the B season and usually is limited to king crab and *Bairdi* tanner crab. Many vessels in the class that have crab licenses do not usually participate in the *opilio* tanner crab fishery, which usually occurs at the same time as the roe season for pollock. The number of vessels participating in and ex-vessel value from groundfish and non-groundfish fisheries by trimester are shown in Table 2.1.2-7 and Table 2.1.2-8, respectively. The number of vessels participating groundfish and non-groundfish fisheries by month is shown in Table 2.1.2-9.

Table 2.1.2-6. Ex-Vessel Value of Groundfish, Salmon, Crab, Halibut, and Other Species Harvested by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, by Month, 1999-2000

Year		$Millions												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1999	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crab	0.63	0.71	1.51	0.00	0.00	0.00	0.00	0.00	0.00	4.83	0.00	0.00	7.69
	Halibut	a	a	a	a	a	a	a	a	a	a	a	a	a
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Groundfish	5.29	18.02	5.60	1.21	0.00	0.38	0.47	15.37	11.81	6.41	0.00	0.00	64.56
2000	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crab	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	2.08	0.00	0.00	3.07
	Halibut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Groundfish	3.30	19.07	10.34	1.14	0.00	0.03	3.63	15.25	16.20	10.09	0.41	0.00	79.46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Data omitted due to confidentiality restrictions

Table 2.1.2-7. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length with Groundfish Landings by Trimester, 1992-2000

Year	Number of Vessels			
	Jan-Apr	May-Aug	Sep-Oct	Total
1992	56	56	42	56
1993	53	51	53	54
1994	52	54	54	54
1995	61	63	63	63
1996	60	40	59	62
1997	53	15	53	54
1998	48	19	47	48
1999	38	32	40	42
2000	45	40	38	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-8. Ex-Vessel Value of Harvest of Groundfish by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by Trimester, 1992-2000

Year	$Millions			
	Jan-Apr	May-Aug	Sep-Dec	Total
1992	39.93	41.95	13.19	95.07
1993	24.47	8.55	19.12	52.14
1994	30.78	12.48	20.50	63.76
1995	46.35	16.66	25.78	88.79
1996	35.26	3.11	29.90	68.26
1997	43.96	2.01	33.90	79.88
1998	22.36	2.22	18.79	43.38
1999	25.09	9.70	19.11	53.90
2000	39.28	20.26	23.14	82.68

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-9. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length with Groundfish Landings, by Month, 1992-2000

Year	Number of Vessels												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1992	53	56	56	22	16	54	55	54	38	6	0	15	56
1993	33	53	43	36	0	8	9	51	53	38	0	0	54
1994	46	48	46	26	20	15	18	54	54	38	3	1	54
1995	50	60	61	40	15	28	16	63	63	47	0	1	63
1996	56	59	60	52	29	16	10	13	59	59	13	0	62
1997	35	51	45	48	1	6	4	9	53	52	0	0	54
1998	46	47	40	35	0	12	4	11	47	47	8	0	48
1999	27	38	34	24	0	7	5	32	39	40	0	0	42
2000	37	45	43	32	0	1	28	38	38	25	2	0	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.2.5 Catch and Value in Groundfish Fisheries

Table 2.1.2-10 shows the number of trawler vessels in the TCV BSP 60-124 class with landings for each of the four major species groups (pollock, Pacific cod, flatfish, and the ARSO species complex, consisting of Atka mackerel, rockfish, sablefish, and other) on an annual basis. The fact that most of the vessels made deliveries of all four species groups in every year is primarily due to incidental catches of non-target species rather than targeted effort. In 1995 however, vessels in this class landed an unusually large volume of flatfish, corresponding to an apparently short-term increase in demand by BSP-SPs. (Effort in target fisheries is shown in Table 2.1.2-14 through Table 2.1.2-17.)

Pollock is the most important species for this class in terms of harvest volume and ex-vessel value (Table 2.1.2-11 and Table 2.1.2-12). From 1992 to 2000, total harvest volume for the class varied between 254,000 and 424,000 tons. In the same period, ex-vessel value ranged from a high of $95 million in 1992 to a low of $43 million in 1998.

Table 2.1.2-10. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by Species, 1992-2000

	Number of Vessels				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	40	43	51	56	56
1993	46	46	51	54	54
1994	49	47	54	54	54
1995	55	61	62	63	63
1996	50	47	60	62	62
1997	46	46	52	54	54
1998	48	48	48	48	48
1999	39	40	42	42	42
2000	42	42	45	45	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-11. Retained Tons of Groundfish by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by Species, 1992-2000

	Tons				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	97	1,682	14,698	388,074	404,552
1993	124	332	13,931	337,993	352,380
1994	151	6,604	25,928	351,533	384,216
1995	440	11,576	32,520	379,767	424,304
1996	1,853	5,493	34,958	328,607	370,910
1997	762	4,283	31,828	313,890	350,763
1998	760	1,563	18,338	271,530	292,192
1999	479	437	13,462	239,907	254,284
2000	837	1,555	16,746	301,267	320,405

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-12. Ex -Vessel Prices by Species for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	ARSO		FLAT		PCOD		PLCK	
	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton
1992	$0.05	$115.37	$0.11	$231.57	$0.17	$370.54	$0.10	$229.91
1993	$0.37	$818.46	$0.09	$208.10	$0.13	$297.15	$0.06	$141.52
1994	$0.20	$449.19	$0.07	$144.80	$0.12	$272.86	$0.07	$158.34
1995	$0.40	$890.03	$0.09	$190.32	$0.15	$339.11	$0.09	$197.93
1996	$0.31	$683.12	$0.10	$211.50	$0.15	$328.94	$0.08	$165.35
1997	$0.29	$634.54	$0.07	$145.69	$0.16	$351.94	$0.10	$215.27
1998	$0.16	$348.34	$0.07	$159.83	$0.15	$322.49	$0.06	$136.07
1999	$0.13	$290.84	$0.02	$45.00	$0.23	$500.44	$0.09	$195.93
2000	$0.17	$371.37	$0.05	$110.36	$0.28	$626.96	$0.11	$237.98

Source: CFEC/ADFG Fish Ticket Data, June 2001

Table 2.1.2-13. Ex-Vessel Value of Harvest by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by Species, 1992-2000

Year	$Millions				
	ARSO	FLAT	PCOD	PLCK	Total
1992	0.01	0.39	5.45	89.22	95.07
1993	0.10	0.07	4.14	47.83	52.14
1994	0.07	0.96	7.07	55.66	63.76
1995	0.39	2.20	11.03	75.17	88.79
1996	1.27	1.16	11.50	54.34	68.26
1997	0.48	0.62	11.20	67.57	79.88
1998	0.26	0.25	5.91	36.95	43.38
1999	0.14	0.02	6.74	47.01	53.90
2000	0.31	0.17	10.50	71.70	82.68

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Details on the number of vessels and ex-vessel value in target fisheries and the harvest volume and value by target species are presented in Table 2.1.2-14 through Table 2.1.2-17. In 2000, pollock accounted for 94 percent of harvest volume and 87 percent of total ex-vessel value. The ex-vessel price paid for Pacific cod is higher than the price paid for pollock. Therefore, while Pacific cod accounted for only five percent of the total retained groundfish deliveries by weight in 2000, it accounted for 13 percent of total groundfish revenue.

Table 2.1.2-14. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length in Each Target Fishery, 1992-2000

Year	Number of Vessels						
	PLCK	PCOD	FLAT	ROCK	OT-AM	SABL	Total
1992	56	33	8	0	2	0	56
1993	54	36	9	0	3	1	54
1994	54	41	17	0	2	4	54
1995	63	58	29	2	4	6	63
1996	62	58	15	10	10	0	62
1997	54	50	6	4	6	0	54
1998	48	43	8	2	1	0	48
1999	42	31	0	3	0	0	42
2000	45	40	4	2	3	0	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-15. Ex-vessel Value of Total Catch in Top Three Target Fisheries by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	$Millions			
	PLCK	PCOD	FLAT	Total
1992	89.88	4.83	0.36	95.07
1993	48.05	3.96	0.08	52.14
1994	55.98	6.81	0.93	63.76
1995	75.32	10.52	2.48	88.79
1996	54.61	11.16	0.94	68.26
1997	67.72	11.00	0.72	79.88
1998	37.25	5.58	0.33	43.38
1999	47.17	6.57	0.00	53.90
2000	71.83	10.33	0.14	82.68

Note: Includes catches of all species in the target fishery listed.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.2-16. Total Catch of Target Species by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by Trimester, 1992-2000

Target	Year	Thousands of Tons			
		Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	0.0	1.3	0.0	1.3
	1993	0.0	0.1	0.0	0.1
	1994	2.2	2.4	1.4	6.0
	1995	7.1	1.4	2.0	10.5
	1996	3.3	0.3	0.2	3.9
	1997	2.9	0.5	0.0	3.4
	1998	0.4	0.1	0.3	0.9
	1999	0.0	0.0	0.0	0.0
	2000	0.5	0.0	0.0	0.5
PCOD	1992	11.7	0.7	0.0	12.4
	1993	13.0	0.0	0.0	13.0
	1994	22.4	1.3	0.1	23.8
	1995	29.6	0.0	0.3	29.9
	1996	28.7	3.3	0.9	32.9
	1997	30.5	0.0	0.0	30.5
	1998	15.3	1.1	0.3	16.7
	1999	12.6	0.0	0.0	12.7
	2000	15.8	0.0	0.0	15.8
PLCK	1992	144.2	176.7	67.0	387.8
	1993	142.9	60.0	134.9	337.8
	1994	151.3	73.5	126.3	351.2
	1995	171.9	81.0	125.2	378.0
	1996	147.8	2.7	177.7	328.2
	1997	149.5	7.7	156.2	313.4
	1998	123.6	11.8	135.3	270.7
	1999	94.7	46.2	98.1	239.1
	2000	121.0	83.2	96.3	300.5

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.2-17. Ex-Vessel Value Total Catch of Target Species by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by Trimester, 1992-2001

	$Millions				
Target	Year	Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	0.00	0.36	0.00	0.36
	1993	0.01	0.06	0.00	0.08
	1994	0.39	0.32	0.22	0.93
	1995	1.26	0.53	0.69	2.48
	1996	0.75	0.14	0.05	0.94
	1997	0.59	0.13	0.00	0.72
	1998	0.21	0.05	0.08	0.33
	1999	0.00	0.00	0.00	0.00
	2000	0.14	0.00	0.00	0.14
PCOD	1992	4.58	0.25	0.00	4.83
	1993	3.95	0.01	0.00	3.96
	1994	6.40	0.38	0.02	6.81
	1995	10.34	0.00	0.18	10.52
	1996	9.67	1.12	0.37	11.16
	1997	11.00	0.00	0.00	11.00
	1998	5.12	0.36	0.10	5.58
	1999	6.57	0.00	0.01	6.57
	2000	10.33	0.00	0.00	10.33
PLCK	1992	35.35	41.34	13.19	89.88
	1993	20.51	8.43	19.11	48.05
	1994	23.99	11.75	20.25	55.98
	1995	34.64	15.90	24.78	75.32
	1996	24.70	0.44	29.47	54.61
	1997	32.27	1.55	33.90	67.72
	1998	17.02	1.62	18.62	37.25
	1999	18.53	9.54	19.10	47.17
	2000	28.79	19.93	23.11	71.83

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.2-18 and Table 2.1.2-19 show the number of vessels and ex-vessel value of the TCV BSP 60-124 fleet by FMP subarea, respectively. Because of reliance on pollock, the BS FMP subarea is the most important fishing area for the class and accounted for about 97 percent of the total ex-vessel value of groundfish retained by the class in 2000. The number of vessels with pollock and Pacific cod landings by FMP subarea are presented in Table 2.1.2-20, while Table 2.1.2-21 shows the ex-vessel value of the landings of these species by FMP subarea. These tables are particularly relevant given the recent management actions in the pollock and Pacific cod fisheries intended to provide additional protection to Steller sea lions.

Table 2.1.2-18. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by FMP Subarea, 1992-2000

Year	Number of Vessels					
	AI	BS	WG	CG	EG	Total
1992	14	56	32	18	0	56
1993	16	54	13	19	3	54
1994	11	54	21	24	2	54
1995	11	63	43	32	7	63
1996	16	62	32	24	4	62
1997	11	54	31	15	5	54
1998	11	48	19	24	1	48
1999	5	42	22	10	1	42
2000	12	45	2	8	0	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-19. Ex-Vessel Value of Harvest of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions					
	AI	BS	WG	CG	EG	Total
1992	1.75	88.32	2.72	2.28	a	95.07
1993	1.35	48.60	1.15	1.04	a	52.14
1994	0.84	59.55	1.27	2.10	a	63.76
1995	0.95	81.25	3.40	3.18	0.01	88.79
1996	1.27	63.00	0.82	2.83	0.35	68.26
1997	1.67	74.21	1.61	1.99	0.40	79.88
1998	1.03	39.15	0.82	2.38	a	43.38
1999	0.91	50.87	1.20	0.92	a	53.90
2000	1.11	80.26	a	1.31	a	82.68

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value from CG to protect the confidentiality of the small number of TCV BSP 60-124 that reported catches in this subarea during the year.

Table 2.1.2-20. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length with Pacific Cod and Pollock Landings by FMP Subarea, 1992-2000

Year	Number of Vessels												
	PCOD						PLCK						Total
	AI	BS	WG	CG	EG	Total	AI	BS	WG	CG	EG	Total	
1992	7	51	20	12	0	51	14	56	30	13	0	56	56
1993	11	51	7	12	1	51	16	54	13	18	2	54	54
1994	6	54	20	7	0	54	11	54	20	22	2	54	54
1995	7	61	31	19	0	62	10	63	40	28	7	63	63
1996	10	59	10	21	2	60	11	62	29	11	3	62	62
1997	8	52	21	14	2	52	8	54	28	11	4	54	54
1998	11	48	19	23	0	48	9	48	16	17	1	48	48
1999	5	42	14	9	1	42	0	42	22	10	0	42	42
2000	12	45	2	7	0	45	1	45	2	7	0	45	45

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-21. Ex-Vessel Value of Pacific Cod and Pollock Landings by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions						
	PCOD			PLCK			
	AI-BS	WG	CG	AI	BS	WG	CG
1992	4.43	0.48	0.54	1.75	83.49	2.24	1.73
1993	4.12	0.01	0.01	0.81	45.00	1.11	0.88
1994	6.72	0.14	0.21	0.84	51.86	1.13	1.35
1995	9.10	1.41	0.52	0.83	70.30	1.99	2.03
1996	10.76	0.04	0.70	0.26	52.89	0.78	0.29
1997	10.26	0.35	0.60	0.28	65.07	1.24	0.76
1998	5.07	0.22	0.62	0.07	34.94	0.60	1.12
1999	6.10	0.57	0.06	0.00	45.66	0.63	0.72
2000	10.21	a	0.29	0.00	71.01	b	0.68

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value of CG to protect the confidentiality of the small number of TCV BSP 60-124 that reported catching these species in this subarea during the year.

[b] Combined with value of CG to protect the confidentiality of the small number of TCV BSP 60-124 that reported catching these species in this subarea during the year.

Detailed information on the geographical distribution of the pollock and Pacific cod catch of vessels in the TCV BSP 60-124 class is presented in Figure 2.1.2-3 and Figure 2.1.2-4 for the years 1997 and 1998 combined. In the figures only catches in areas in which 4 or more vessels reported landings are shown.

Figure 2.1.2-3. Average Annual Pollock Catch of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, by Statistical Area, 1997-1998

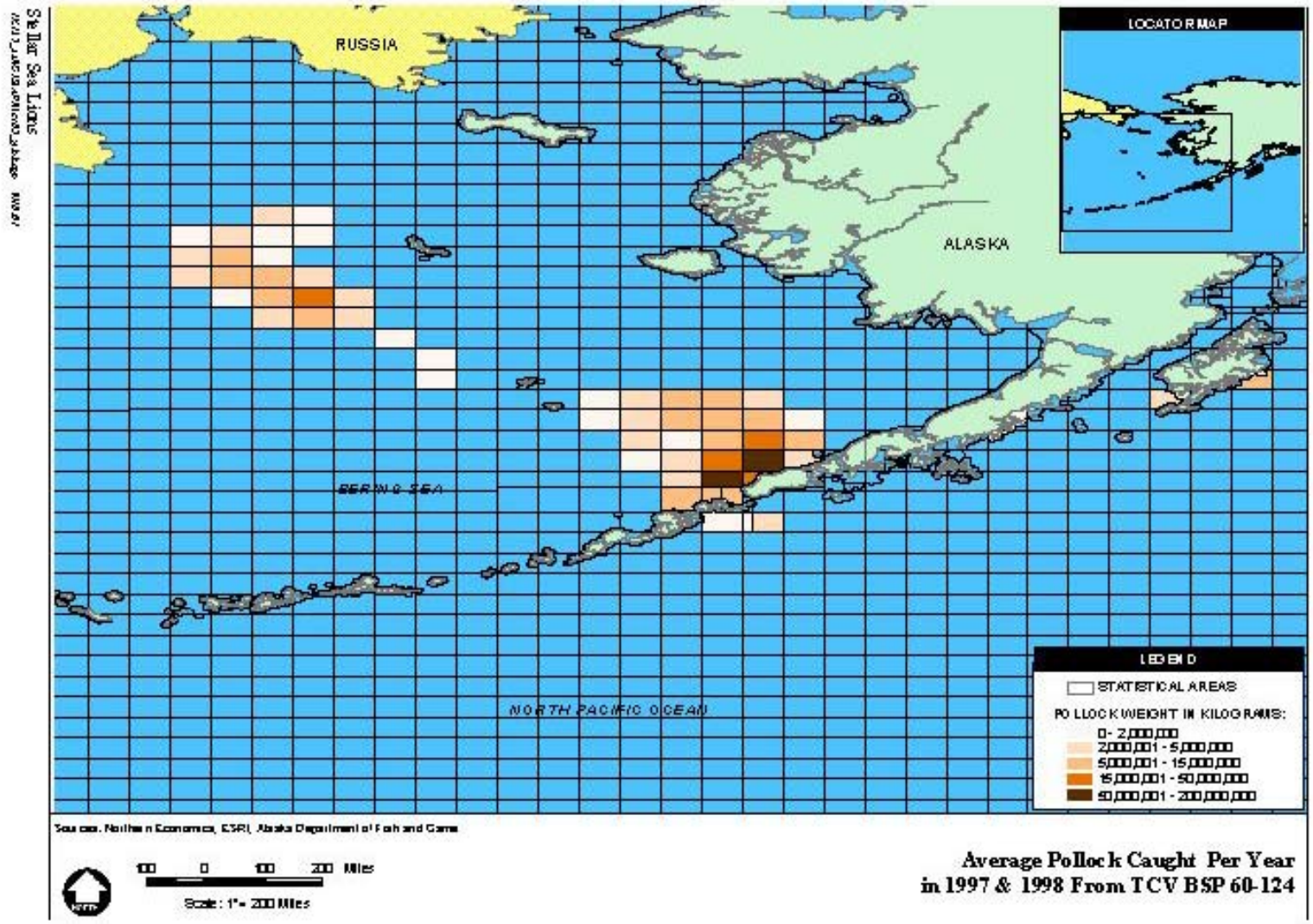
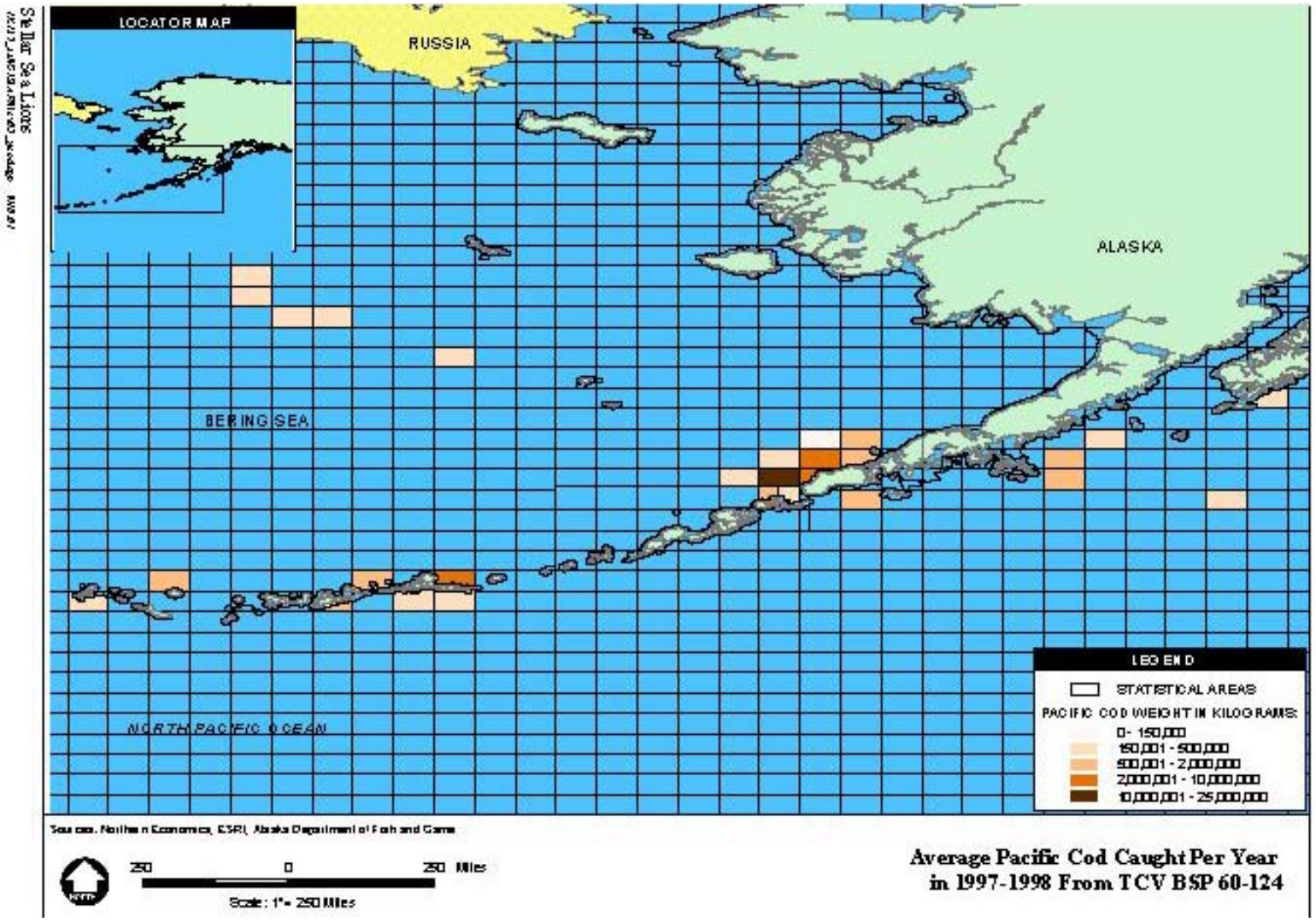


Figure 2.1.2-4. Average Annual Pacific Cod Catch of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, by Statistical Area, 1997-1998



The nearly exclusive reliance of the vessels in this class on trawl gear is shown in Table 2.1.2-22.

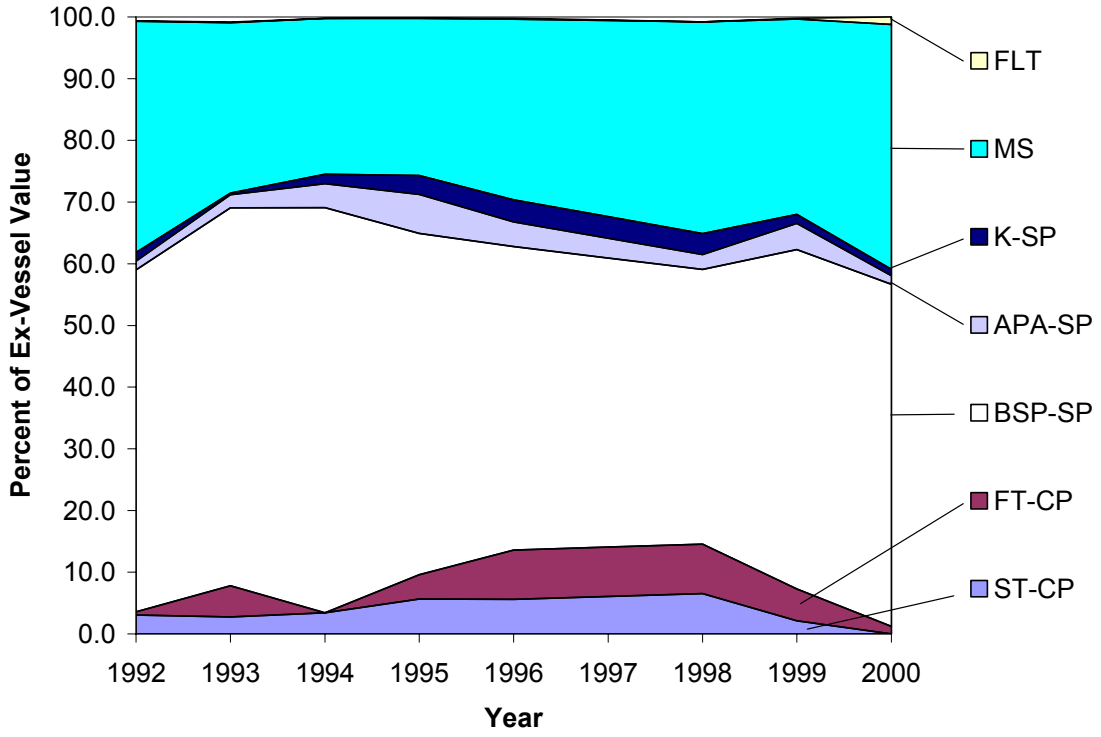
Table 2.1.2-22. Percent of Total Value by Gear in Top Three Target Fisheries by Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1996-2000

Year	Percent of Total Value				
	HAL	JIG-OTH	POT	TWL	Total
PLCK					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.1	0.0	99.9	100.0
2000	0.0	0.0	0.0	100.0	100.0
PCOD					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.1	99.9	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0
FLAT					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Figure 2.1.2-5 shows the reliance of the TCV BSP 60-124 class on various processors from 1992 through 2000. In 2000, roughly 56 percent of the total ex-vessel revenue was generated from deliveries to the Bering Sea pollock inshore plants (BSP-SP), while motherships accounted for 40 percent of the class's groundfish revenue.

Figure 2.1.2-5. Ex-Vessel Value Paid by Various Processor Classes to Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Data for 1997 is a simple average of the values for 1996 and 1998.

2.1.2.6 Crew Employment and Income

Four- to five-person crews, including the skipper, are typical on vessels in the TCV BSP 60-124 class, although it is likely that the AFA will result in a reduction in crew size for some vessels. The provisions of AFA eliminate the "race for fish" and allow vessels to operate at a slower pace, fewer crew are necessary. On the other hand, the crew that are hired are likely to be more experienced and highly paid. (Fraser, 2000, and Hughes, 2000)

This analysis assumed an average crew size of four, including the skipper, for this type of vessel. Another 0.5 position was added to this average to account for vessel support staff. The actual number of crew varies with the size of the vessel. Table 2.1.2-23 shows the estimated total number of crew (including skipper and administrative staff) in this class for each year between 1992 and 2000. Each year's estimate was derived by multiplying the average crew size by the number of unique vessels with landings in that year. The number of crewmember months was used to estimate FTE employment based on the assumption that crewmembers work an average of 16 hours per day for an average 15 days for every month their vessel is active. The total number of estimated crewmember hours is then divided by the 2080 hours per year.

Table 2.1.2-23. Number of Crewmembers and Crewmember Months by Species Group for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	Number of Crewmembers	Crewmember Months			Groundfish FTE
		Groundfish	Non-Groundfish	All Species	
1992	252.0	1,913	234	2,070	221
1993	243.0	1,458	266	1,710	168
1994	243.0	1,661	144	1,751	192
1995	283.5	1,998	171	2,111	231
1996	279.0	1,917	45	1,953	221
1997	243.0	1,368	158	1,517	158
1998	216.0	1,337	162	1,476	154
1999	189.0	1,107	194	1,175	128
2000	202.5	1,301	95	1,355	150

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Crewmembers are typically paid on a share basis. A share may be calculated as a portion of gross revenue such as gross revenue less food and fuel expenditures or gross revenue less food, fuel, and landing tax expenditures. Individual crew shares are about six to ten percent of the gross revenue after expenditures have been subtracted. This analysis assumes that 40 percent of ex-vessel revenue goes to payments for labor.[13]

Estimated payments to labor over time in groundfish and non-groundfish fisheries are shown in Table 2.1.2-24. Since 1992, the estimated FTE for the TCV BSP 60-124 class have declined from over an average of 206 prior to 1996 to an average of 147 in more recent years. Estimated payments to labor have varied more widely as a result of fluctuations in ex-vessel revenues. Labor payments per vessel in groundfish and non-groundfish fisheries are shown in Table 2.1.2-25. Estimated labor payments per FTE, shown in Table 2.1.2-26 were at an all-time high in 2000 at over $220,000.

Table 2.1.2-24. Payments to Labor by Species Group for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	$Millions		
	Groundfish	Non-Groundfish	All Species
1992	38.03	2.32	40.35
1993	20.86	3.19	24.05
1994	25.50	1.58	27.09
1995	35.52	1.70	37.21
1996	27.30	0.47	27.78
1997	31.95	1.38	33.33
1998	17.35	1.65	19.00
1999	21.56	3.09	24.65
2000	33.07	1.23	34.30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[13] The analysis makes no assumptions about owner profits, as no data were available to estimate operating costs.

Table 2.1.2-25. Payments to Labor Per Vessel by Species Group for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	Payments to Labor Per Vessel ($)		
	Groundfish	Non-Groundfish	All Species
1992	679,064	41,470	720,534
1993	386,245	59,055	445,300
1994	472,309	29,289	501,598
1995	563,750	26,914	590,664
1996	440,402	7,621	448,023
1997	591,707	25,533	617,240
1998	361,463	34,348	395,811
1999	513,347	73,616	586,963
2000	734,918	27,315	762,233

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.2-26. Number of Crewmembers and Labor Payments Per Crewmember by Species Group for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	Number of Crew Members	Labor Payments per Crewmember ($)			Groundfish Labor Payments per FTE ($)
		Groundfish	Non-Groundfish	All Species	
1992	252.0	150,903	9,216	160,119	172,325
1993	243.0	85,832	13,123	98,955	123,980
1994	243.0	104,958	6,509	111,466	133,117
1995	283.5	125,278	5,981	131,259	154,058
1996	279.0	97,867	1,694	99,561	123,444
1997	243.0	131,491	5,674	137,164	202,426
1998	216.0	80,325	7,633	87,958	112,509
1999	189.0	114,077	16,359	130,436	168,797
2000	202.5	163,315	6,070	169,385	220,391

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.2.7 Regional Residence of Vessel Owners

Table 2.1.2-27 presents information on vessel owner residency for this vessel class. In 2000, vessel owners from WAIW accounted for more than three-quarters of the vessels in this class. Oregon residents owned about 15 percent of the fleet, and residents of Other Regions owned slightly more than four percent.[14] One vessel was owned by a resident of Kodiak. This general pattern of ownership occurred throughout the 1990s.

The owner's residence is an important factor because most of the regional economic impact of catcher vessel operations occurs in the owner's region of residence. Table 2.1.2-28 shows the ex-vessel revenue accruing to each region. Table 2.1.2-29 and Table 2.1.2-30 show the crewmember months

[14] While it is known that many of the large shore plants have full or part ownership of many of the catcher vessels that deliver to them, detailed information regarding ownership linkages within the fishing industry is absent. Vessel registration and permit information do not necessarily reveal the true ownership of vessels. As a result, this analysis did not attempt to provide a detailed description of vessel ownership patterns.

and payments to labor accruing to each region. It was assumed that all crewmembers of a particular vessel and home office staff reside in the vessel owner's region of residence.

Table 2.1.2-27. Number of Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length Landing Groundfish, by Region of Owner, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0	1	3	0	40	8	4	56
1993	1	1	1	0	43	3	5	54
1994	1	1	1	0	40	6	5	54
1995	0	4	1	0	44	9	5	63
1996	0	5	0	0	42	10	5	62
1997	0	2	1	0	40	7	4	54
1998	0	3	0	0	39	3	3	48
1999	0	1	0	0	35	4	2	42
2000	0	1	0	0	35	7	2	45

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001

Table 2.1.2-28. Ex-Vessel Revenue by Vessel Owner's Region for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.00	1.75	3.92	0.00	72.87	10.69	7.10	95.07
1993	0.59	1.12	0.74	0.00	42.80	2.83	4.49	52.14
1994	0.73	1.31	0.74	0.00	49.93	5.87	5.58	63.76
1995	0.00	5.74	0.76	0.00	68.08	11.07	8.67	88.79
1996	0.00	5.97	0.00	0.00	50.38	10.63	5.13	68.26
1997	0.00	3.30	0.81	0.00	64.09	8.85	4.89	79.88
1998	0.00	2.83	0.00	0.00	36.98	2.73	2.70	43.38
1999	0.00	1.62	0.00	0.00	44.60	5.35	2.79	53.90
2000	0.00	1.97	0.00	0.00	67.38	11.41	3.85	82.68

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted average revenue per vessel.

Table 2.1.2-29. Crewmember Months by Vessel Owner's Region for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	Crewmember Months							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0	34	102	0	1,366	273	137	1,913
1993	27	27	27	0	1,161	81	135	1,458
1994	31	31	31	0	1,230	185	154	1,661
1995	0	127	32	0	1,395	285	159	1,998
1996	0	155	0	0	1,299	309	155	1,917
1997	0	51	25	0	1,013	177	101	1,368
1998	0	84	0	0	1,086	84	84	1,337
1999	0	26	0	0	923	105	53	1,107
2000	0	29	0	0	1,012	202	58	1,301

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the number of crewmember months.

Table 2.1.2-30. Payments to Labor by Vessel Owner's Region for Bering Sea Pollock Trawl Catcher Vessels 60 to 124 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.00	0.70	1.57	0.00	29.15	4.28	2.84	38.53
1993	0.24	0.45	0.30	0.00	17.12	1.13	1.80	21.03
1994	0.29	0.52	0.30	0.00	19.97	2.35	2.23	25.67
1995	0.00	2.30	0.31	0.00	27.23	4.43	3.47	37.73
1996	0.00	2.39	0.00	0.00	20.15	4.25	2.05	28.85
1997	0.00	1.32	0.32	0.00	25.64	3.54	1.96	32.78
1998	0.00	1.13	0.00	0.00	14.79	1.09	1.08	18.10
1999	0.00	0.65	0.00	0.00	17.84	2.14	1.11	21.74
2000	0.00	0.79	0.00	0.00	26.95	4.56	1.54	33.84

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted payments to labor.

2.1.3 Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length (TCV Div. AFA)

The Diversified AFA-eligible Trawl Catcher Vessel ≥ 60 Feet Class (TCV Div. AFA) includes all vessels that are AFA-eligible for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 ft., and the total value of groundfish catch is greater than $5000.

Vessels in the TCV Div. AFA class are more diversified in fishing effort than vessels in the TCV BSP ≥ 125 and TCV BSP 60-124 classes, but are also eligible under AFA to participate in the BSAI pollock fisheries. In addition to Bering Sea pollock, vessels in the TCV Div. AFA class have significant participation in the GOA pollock fisheries the Pacific cod fisheries in both the BSAI and GOA. Some vessels in the class also participate in the Pacific whiting fishery off the coasts of Oregon and Washington.

2.1.3.1 Class Characteristics

In 2000, vessels in the TCV Div AFA class had an average length of 92 feet and ranged from 73 to 123 feet. Most vessels were less than 95 feet long. The vessels have an average horsepower rating of about 995, with a maximum of about 1,750 and a minimum of 630. Average gross tonnage is approximately 170 tons and average hold capacity is 4,866 cubic feet—38 percent less hold space on average the vessels in the TCV BSP 60-124 class. (CFEC, 2001).

Table 2.1.3-1. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Vessel Length, 1992-2000

	Vessel Length								
Year	60-79'	80'-94'	95'-109'	110'-124	125-139'	140'-154'	155'-169'	170'+	Total
1992	13	10	5	2	1	0	0	0	31
1993	13	13	4	1	0	0	0	0	31
1994	10	11	5	1	0	0	0	0	27
1995	9	11	3	0	0	0	0	1	24
1996	4	12	2	0	0	0	1	0	19
1997	5	16	3	0	2	0	0	0	26
1998	4	20	6	0	2	0	0	0	32
1999	4	19	7	4	0	0	0	0	34
2000	4	16	8	2	0	0	0	0	30

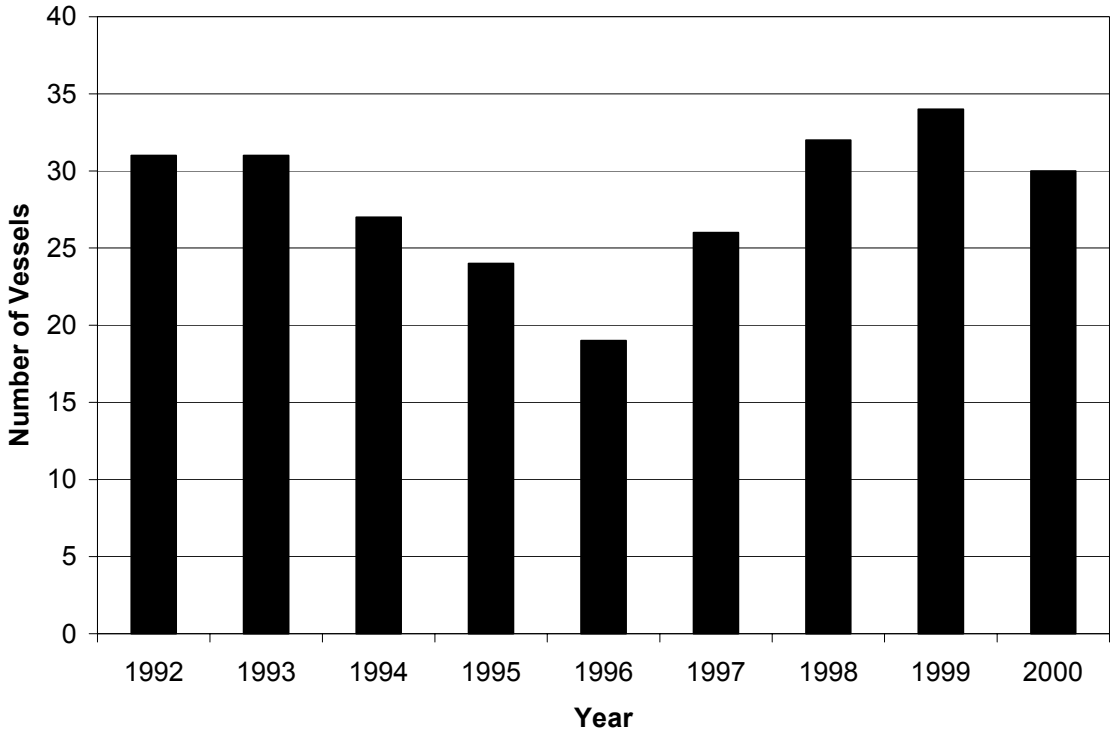
Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.3.2 Class Participation

The number of vessels in this class varied between 19 and 34 during the 1992-2000 period (Figure 2.1.3-1). It should be noted that this class, unlike other vessel classes is a closed class and is strictly limited by AFA eligibility requirements over the entire period shown. The TCV BSP vessels in the first two classes only coincidently restricted to be AFA eligible, and then only after 1998. The fact that vessels in the TCV Div. AFA class are strictly accounts for the reduced numbers in 1994-

1996—in those years vessels that would eventually become AFA eligible were focusing on BS pollock and were therefore assigned to one of the TCV BSP classes.

Figure 2.1.3-1. Number of Active Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length,1992-2000



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Of the vessels in the TCV Div AFA class that were active in the groundfish fishery in 2000, the average number of years since 1992 in which a vessel was active was 6.93, with a minimum of one year and a maximum of nine years. Of those vessels that were not active in 2000, the average number of years of participation was 2.42, with a minimum of one and a maximum of six.

2.1.3.3 Description of Fishing Operations

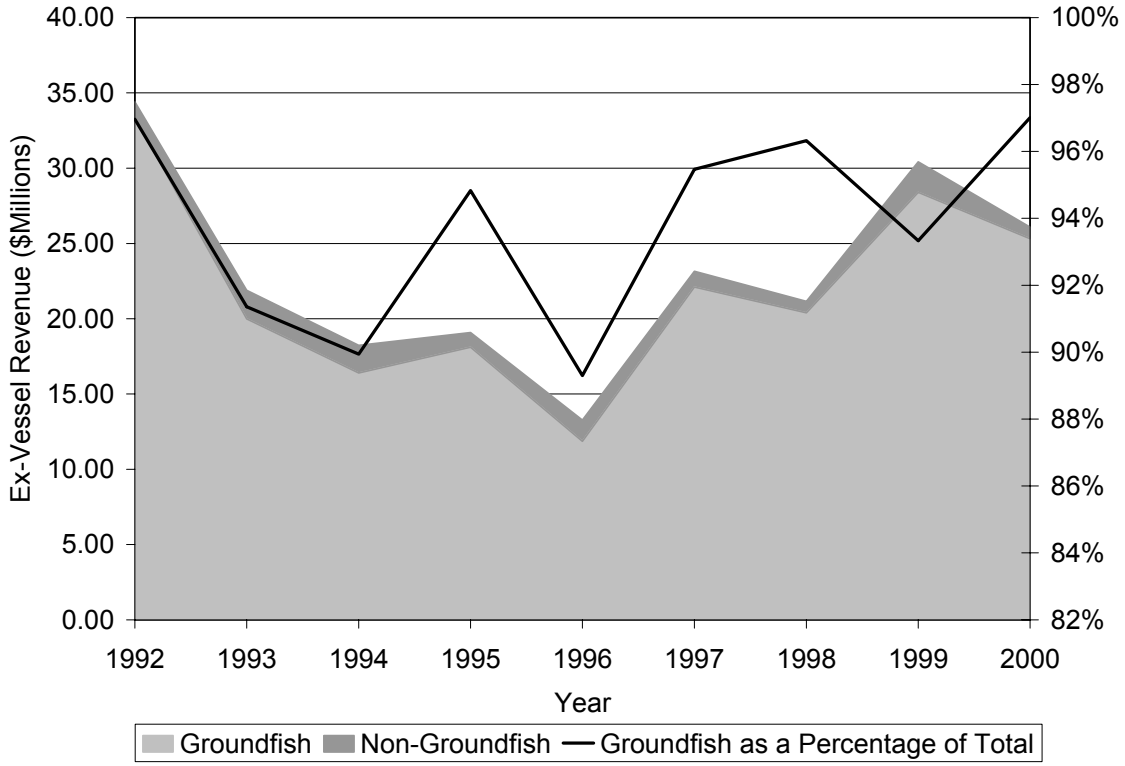
The fishing operations of the TCV Div. AFA class are similar to fishing operations of vessels in the TCV BSP ≥ 125 class. The generally smaller hold sizes and horsepower ratings (compared to other AFA vessels) leads TCV Div. AFA vessels to use bottom trawl gear and target on higher value Pacific cod more often than other AFA vessels. Also the generally smaller TACs of pollock and lower catch per unit effort (CPUE) in the GOA make these vessels more cost effective when operating in the GOA than other AFA catcher vessels.

2.1.3.4 Dependence on Groundfish and Annual Cycle of Operations

The TCV Div. AFA class has a focus on groundfish that is similar to vessels in the TCV BSP ≥ 125 and TCV BSP 60-124 classes. Groundfish fisheries accounted for 89 to 97 percent of all ex-vessel value earned by this class in Alaska fisheries during the 1992-2000 period (Figure 2.1.3-2 and

Table 2.1.3-2). The ex-vessel value per vessel from groundfish also far exceeded that from non-groundfish (Table 2.1.3-3).

Figure 2.1.3-2. Ex-Vessel Value of Harvest in Major Alaska Fisheries for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length,1992-2000



Source: CFEC/ADFG Fish ticket Data, June 2001.

Table 2.1.3-2. Number of Vessels and Total Ex-Vessel Value by Species Group for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length,1992-2000

Year	Number of Vessels	$Millions		
		Groundfish	Non-Groundfish	All Species
1992	31	33.36	1.05	34.41
1993	31	19.99	1.89	21.88
1994	27	16.40	1.83	18.23
1995	24	18.10	0.99	19.09
1996	19	11.85	1.42	13.27
1997	26	22.10	1.05	23.14
1998	32	20.38	0.78	21.16
1999	34	28.39	2.03	30.42
2000	30	25.31	0.78	26.09

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.3-3. Number of Vessels and Ex-Vessel Value Per Vessel by Species Group for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Number of Vessels	Ex-Vessel Value Per Vessel ($)		
		Groundfish	Non-Groundfish	All Species
1992	31	1,076,270	33,711	1,109,980
1993	31	644,893	61,005	705,898
1994	27	607,263	67,936	675,198
1995	24	754,166	41,133	795,298
1996	19	623,667	74,724	698,391
1997	26	849,833	40,354	890,187
1998	32	637,026	24,325	661,352
1999	34	835,087	59,625	894,712
2000	30	843,625	26,000	869,625

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.3-4 and Table 2.1.3-5 provide additional detail about the relative importance of groundfish to vessels in the TCV Div. AFA class. In 1999, the most recent year for which landings data for all non-groundfish species are available, six vessels in this class made landings of crab and four vessels made landings of halibut. However, these and other non-groundfish landings accounted for only about seven percent of the total revenue during that year.

Table 2.1.3-4. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length Participating in Non-Groundfish Fisheries, by Species, 1992-2000

Year	Number of Vessels				
	Salmon	Crab	Halibut	Other	Total
1992	1	5	5	0	10
1993	0	8	9	1	14
1994	1	4	10	1	12
1995	0	1	4	1	6
1996	0	2	5	0	7
1997	1	3	6	1	9
1998	2	5	7	0	12
1999	1	6	4	1	9
2000	1	5	a	0	6

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Value for halibut is not available.

Table 2.1.3-5. Ex-Vessel Value of Non-Groundfish Species Harvested by Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Species, 1992-2000

Year	Ex Vessel Value ($Millions)				
	Salmon	Crab	Halibut	Other	Total
1992	a	0.90	0.14	0.00	1.05
1993	0.00	1.48	0.41	a	1.89
1994	a	0.84	0.99	a	1.83
1995	0.00	a	0.99	a	0.99
1996	0.00	a	1.42	0.00	1.42
1997	a	a	1.05	a	1.05
1998	a	0.45	0.32	0.00	0.78
1999	a	1.30	0.72	a	2.03
2000	a	0.78	b	0.00	0.78

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Combined with the value for halibut due to confidentiality restrictions.
[b] Value for halibut is not available.

Table 2.1.3-6 shows ex-vessel value by month in 1999 and 2000 from groundfish and from all other species. The TCV Div. AFA class generates very little revenue from non-groundfish fisheries in Alaska. The bimodal distribution in the groundfish fishery that dominates the other AFA catcher vessel class is slightly less pronounced in the TCV Div. AFA class as the cod season and GOA fishing periods tend to spread groundfish harvests somewhat more evenly throughout the year. The number of vessels participating in and ex-vessel value from groundfish and non-groundfish fisheries by trimester are shown in Table 2.1.3-7 and Table 2.1.3-8, respectively. The number of vessels participating groundfish and non-groundfish fisheries by month is shown in Table 2.1.3-9.

Table 2.1.3-6. Ex-Vessel Value of Groundfish, Salmon, Crab, Halibut, and Other Species Harvested by Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Month, 1999-2000

Year		$Millions												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1999	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
	Crab	0.04	0.18	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.00	0.00	1.30
	Halibut	0.00	0.00	0.00	0.08	0.17	0.14	0.09	0.00	0.00	0.00	0.02	0.00	0.49
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.13	0.02	0.00	0.00	0.00	0.23
	Groundfish	2.16	6.30	5.39	1.29	0.06	1.56	1.09	2.86	4.83	2.84	0.00	0.00	28.39
2000	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crab	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.78
	Halibut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Groundfish	2.13	6.15	6.62	2.07	0.18	0.31	2.45	1.69	1.28	2.25	0.11	0.07	25.31

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-7. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2000

Year	Number of Vessels			
	Jan-Apr	May-Aug	Sep-Oct	Total
1992	30	27	23	31
1993	30	28	27	31
1994	26	24	23	27
1995	24	23	23	24
1996	19	12	17	19
1997	26	17	26	26
1998	32	21	27	32
1999	34	27	31	34
2000	30	18	19	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-8. Ex-Vessel Value of Harvest by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2000

Year	$Millions			
	Jan-Apr	May-Aug	Sep-Dec	Total
1992	14.33	14.11	4.93	33.36
1993	9.87	5.91	4.20	19.99
1994	7.80	5.15	3.44	16.40
1995	9.33	3.63	5.14	18.10
1996	6.59	1.13	4.13	11.85
1997	12.64	2.43	7.02	22.10
1998	11.87	2.58	5.93	20.38
1999	15.14	5.57	7.68	28.39
2000	16.98	4.62	3.71	25.31

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-9. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Month, 1992-2000

Year	Number of Vessels												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1992	27	30	30	28	18	26	26	23	21	19	2	2	31
1993	23	29	30	27	2	22	24	22	13	27	7	2	31
1994	23	24	25	15	14	19	20	14	16	22	2	0	27
1995	19	22	23	14	11	13	12	23	23	17	1	0	24
1996	16	17	19	19	8	9	6	4	17	17	9	0	19
1997	23	26	26	26	7	15	10	7	26	24	8	0	26
1998	31	32	32	32	2	20	12	8	26	26	3	0	32
1999	29	31	31	31	3	19	15	24	31	30	0	1	34
2000	29	30	30	23	4	3	15	18	17	16	4	2	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.3.5 Catch and Value in Groundfish Fisheries

Table 2.1.3-10 shows the number of vessels in the TCV Div. AFA class that retained harvests of the four groundfish species aggregations used in this analysis. Most vessels caught significant amounts of all species groups (Table 2.1.3-11), however most of the catches in the ARSO and FLAT species groups appear to be incidental catches in Pacific cod target fisheries.

Pollock is the single most important species for the TCV Div. AFA class in terms of harvest volume and ex-vessel value. Pacific cod is the second most important species. Table 2.1.3-11 and Table 2.1.3-13 provide information on retained landings and ex-vessel values by species group. Overall, ex-vessel value peaked in 1992 as the groundfish fisheries transitioned from joint venture fisheries to domestic processing operations. In 1993, revenues dropped significantly due primarily to lower price rather than smaller harvests. From 1992 to 2000, total harvest volume for the class varied between 48,000 and 111,000 tons. In the same period, ex-vessel value ranged from a high of $33 million in 1992 to a low of $11 million in 1996.

Table 2.1.3-10. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Species, 1992-2000

	Number of Vessels				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	24	29	31	31	31
1993	23	24	31	29	31
1994	19	21	27	24	27
1995	22	24	24	24	24
1996	14	16	19	19	19
1997	24	25	26	26	26
1998	29	29	32	32	32
1999	34	33	33	34	34
2000	26	30	30	30	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-11. Retained Tons of Groundfish by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Species, 1992-2000

	Tons				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	2,223	15,309	19,890	73,700	111,122
1993	395	3,369	21,010	74,496	99,270
1994	633	2,793	11,998	62,773	78,197
1995	320	5,327	17,512	47,316	70,475
1996	1,249	1,546	14,895	29,872	47,561
1997	2,522	4,866	22,835	45,483	75,707
1998	2,762	2,830	25,651	75,243	106,487
1999	3,290	2,392	23,289	65,880	94,850
2000	3,930	4,079	16,779	49,424	74,212

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-12. Ex -Vessel Prices by Species for Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length, 1992-2000

Year	ARSO		FLAT		PCOD		PLCK	
	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton
1992	$0.50	$1,091.41	$0.18	$388.58	$0.18	$396.98	$0.11	$231.93
1993	$0.62	$1,366.66	$0.13	$293.88	$0.15	$332.40	$0.07	$154.08
1994	$0.88	$1,941.11	$0.15	$338.55	$0.14	$313.76	$0.08	$166.60
1995	$1.04	$2,283.70	$0.10	$221.35	$0.17	$381.29	$0.09	$201.05
1996	$0.28	$613.97	$0.13	$293.12	$0.16	$342.60	$0.08	$185.02
1997	$0.24	$531.79	$0.13	$290.59	$0.18	$388.40	$0.10	$230.22
1998	$0.14	$313.51	$0.11	$241.12	$0.15	$330.66	$0.06	$137.61
1999	$0.18	$388.04	$0.09	$194.33	$0.25	$548.05	$0.10	$210.81
2000	$0.17	$382.55	$0.08	$179.36	$0.30	$650.49	$0.11	$246.02

Source: CFEC/ADFG Fish Ticket Data, June 2001

Table 2.1.3-13. Ex-Vessel Value of Harvest by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Species, 1992-2000

Year	$Millions				
	ARSO	FLAT	PCOD	PLCK	Total
1992	2.43	5.95	7.90	17.09	33.36
1993	0.54	0.99	6.98	11.48	19.99
1994	1.23	0.95	3.76	10.46	16.40
1995	0.73	1.18	6.68	9.51	18.10
1996	0.77	0.45	5.10	5.53	11.85
1997	1.34	1.41	8.87	10.47	22.10
1998	0.87	0.68	8.48	10.35	20.38
1999	1.28	0.46	12.76	13.89	28.39
2000	1.50	0.73	10.91	12.16	25.31

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Additional details on the number of vessels and ex-vessel value in target fisheries and the harvest volume and value by target species are presented Table 2.1.3-14 through Table 2.1.3-17. In 2000, pollock accounted for 65 percent of harvest volume and 48 percent of total ex-vessel value. The ex-vessel price paid for Pacific cod is higher than the price paid for pollock. Therefore, while Pacific cod accounted for only 23 percent of the total retained groundfish deliveries by weight in 2000, it accounted for 43 percent of total groundfish revenue. While several vessels targeted species other than pollock and Pacific cod, the fact that very little value was earned in target fisheries for these other fisheries indicates that these other fisheries are most likely incidental to Pacific cod fisheries. Also apparent in Table 2.1.3-16 and Table 2.1.3-17 is the importance of the first trimester Pacific cod fishery which typically generates over twice the revenue for the class than the first trimester pollock fisheries.

Table 2.1.3-14. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length in Each Target Fishery, 1992-2000

Year	Number of Vessels						
	PLCK	PCOD	FLAT	ROCK	OT-AM	SABL	Total
1992	30	30	22	17	5	1	31
1993	28	30	16	16	0	2	31
1994	23	26	15	12	1	10	27
1995	24	24	17	13	2	3	24
1996	18	19	7	7	6	2	19
1997	26	26	16	16	10	2	26
1998	29	32	16	13	13	2	32
1999	34	33	17	8	16	1	34
2000	26	30	9	10	12	0	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-15. Ex-vessel Value of Total Catch in Top Three Target Fisheries by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length, 1992-2000

Year	$Millions			
	PLCK	PCOD	FLAT	Total
1992	17.04	7.76	6.33	33.36
1993	11.58	6.86	0.64	19.99
1994	10.55	3.73	1.26	16.40
1995	9.53	6.49	1.42	18.10
1996	5.58	5.09	0.23	11.85
1997	10.47	8.81	1.20	22.10
1998	10.42	8.41	0.63	20.38
1999	13.98	12.54	0.56	28.39
2000	12.11	10.45	0.34	25.31

Note: Includes catches of all species in the target fishery listed.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.3-16. Total Catch of Target Species by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2000

	Thousands of Tons				
Target	Year	Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	1.9	10.1	1.0	13.0
	1993	0.8	0.4	0.1	1.3
	1994	0.7	0.5	0.7	1.9
	1995	3.0	0.7	0.4	4.0
	1996	0.5	0.1	0.2	0.8
	1997	1.2	1.1	0.5	2.8
	1998	1.3	0.2	0.0	1.5
	1999	1.2	0.0	0.0	1.2
	2000	0.8	0.3	0.0	1.1
PCOD	1992	17.0	1.1	0.2	18.3
	1993	20.1	0.2	0.0	20.3
	1994	11.3	0.3	0.0	11.7
	1995	15.5	0.0	1.0	16.5
	1996	13.9	0.4	0.3	14.6
	1997	19.9	0.0	2.0	21.9
	1998	23.8	0.1	0.8	24.7
	1999	20.5	0.0	2.0	22.5
	2000	15.6	0.0	0.0	15.7
PLCK	1992	17.0	37.6	17.7	72.3
	1993	15.4	32.8	26.0	74.3
	1994	21.3	24.3	17.1	62.7
	1995	10.2	14.4	22.3	46.9
	1996	8.2	0.7	20.9	29.8
	1997	15.6	5.4	23.9	44.9
	1998	22.7	11.9	39.7	74.3
	1999	15.2	20.3	29.9	65.4
	2000	24.5	10.2	14.1	48.8

[a] Data omitted due to confidentiality restrictions.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.3-17. Ex-Vessel Value Total Catch of Target Species by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2001

		$Millions			
Target	Year	Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	1.04	4.78	0.51	6.33
	1993	0.38	0.24	0.01	0.64
	1994	0.45	0.43	0.38	1.26
	1995	1.03	0.32	0.07	1.42
	1996	0.14	0.07	0.03	0.23
	1997	0.75	0.29	0.16	1.20
	1998	0.56	0.07	0.00	0.63
	1999	0.56	0.00	0.00	0.56
	2000	0.27	0.06	0.00	0.34
PCOD	1992	7.19	0.48	0.09	7.76
	1993	6.79	0.07	0.00	6.86
	1994	3.64	0.10	0.00	3.73
	1995	6.03	0.01	0.45	6.49
	1996	4.86	0.14	0.09	5.09
	1997	7.74	0.03	1.05	8.81
	1998	8.05	0.04	0.33	8.41
	1999	11.27	0.02	1.25	12.54
	2000	10.42	0.02	0.00	10.45
PLCK	1992	4.48	8.51	4.04	17.04
	1993	2.54	5.16	3.88	11.58
	1994	3.66	4.05	2.83	10.55
	1995	2.06	2.98	4.49	9.53
	1996	1.53	0.15	3.91	5.58
	1997	3.63	1.18	5.66	10.47
	1998	3.17	1.66	5.59	10.42
	1999	3.28	4.29	6.40	13.98
	2000	6.01	2.54	3.56	12.11

[a] Data omitted due to confidentiality restrictions.

Source: CFEC/ADFG Fish Ticket Data and NMFS Observation Data, June 2001

Table 2.1.3-18 and Table 2.1.3-19 show the number of vessels and ex-vessel value of the TCV Div. AFA fleet by FMP subarea, respectively. In recent years, including 2000, GOA fisheries were more important for this class than BSAI fisheries in terms of ex-vessel value. The number of vessels with pollock and Pacific cod landings by FMP subarea are presented in Table 2.1.3-20, while Table 2.1.3-21 shows the ex-vessel value of the landings of these species by FMP subarea.

Table 2.1.3-18. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by FMP Subarea, 1992-2000

	Number of Vessels					
Year	AI	BS	WG	CG	EG	Total
1992	3	28	11	27	1	31
1993	0	20	10	28	3	31
1994	0	18	5	23	6	27
1995	0	24	9	18	2	24
1996	0	19	5	13	0	19
1997	1	18	7	20	4	26
1998	2	23	16	25	2	32
1999	2	32	6	25	7	34
2000	5	25	7	16	3	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-19. Ex-Vessel Value of Harvest of Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by FMP Subarea, 1992-2000

	$Millions					
Year	AI	BS	WG	CG	EG	Total
1992	a	16.63	2.00	14.74	b	33.36
1993	a	6.54	0.77	12.68	b	19.99
1994	a	4.03	0.67	11.12	0.57	16.40
1995	a	10.55	0.93	6.62	b	18.10
1996	a	6.99	0.93	3.93	b	11.85
1997	a	9.30	1.81	10.86	0.13	22.10
1998	a	9.06	1.64	9.68	b	20.38
1999	a	12.71	1.18	14.40	0.10	28.39
2000	a	12.10	1.94	11.27	b	25.31

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value from BS to protect the confidentiality of the small number of TCV Div AFAs that reported catches in this subarea during the year.

[b] Combined with value from CG to protect the confidentiality of the small number of TCV Div AFAs that reported catches in this subarea during the year.

Table 2.1.3-20. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length with Pacific Cod and Pollock Landings by FMP Subarea, 1992-2000

Year	Number of Vessels												
	PCOD						PLCK						Total
	AI	BS	WG	CG	EG	Total	AI	BS	WG	CG	EG	Total	
1992	3	26	11	26	1	31	0	28	8	25	0	31	31
1993	0	19	10	27	1	31	0	18	5	23	3	29	31
1994	0	17	5	22	2	27	0	15	3	21	5	24	27
1995	0	20	7	18	2	24	0	24	7	17	2	24	24
1996	0	19	4	10	0	19	0	19	5	13	0	19	19
1997	1	17	7	20	3	26	0	18	7	20	2	26	26
1998	2	23	16	24	2	32	2	23	16	25	2	32	32
1999	2	31	5	22	4	33	2	32	6	25	3	34	34
2000	5	24	6	15	1	30	2	25	7	16	3	30	30

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-21. Ex-Vessel Value of Pacific Cod and Pollock Landings by Diversified AFA-Eligible Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions						
	PCOD			PLCK			
	AI-BS	WG	CG	AI	BS	WG	CG
1992	2.77	1.63	3.49	0.00	7.62	0.17	9.30
1993	3.55	0.33	3.11	0.00	2.96	0.44	8.05
1994	1.66	0.28	1.83	0.00	2.09	0.39	7.47
1995	3.46	0.36	2.81	0.00	6.60	0.56	2.35
1996	3.46	0.24	1.40	0.00	3.47	0.69	1.36
1997	4.70	0.55	3.59	0.00	4.59	1.25	4.62
1998	5.83	0.47	2.16	a	3.24	1.16	5.95
1999	7.24	0.22	5.29	a	5.46	0.96	7.47
2000	8.03	0.34	2.54	a	4.03	1.59	6.49

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value of BS to protect the confidentiality of the small number of TCV Div. AFAs that reported catching these species in this subarea during the year.

Detailed information on the geographical distribution of the pollock, Pacific cod, flatfish and rock sole catch by vessels in the TCV Div. AFA class is presented in Figure 2.1.3-3 through Figure 2.1.3-6 for the years 1997 and 1998 combined. For comparison purposes the scale of catches by area in thiese figures is the same used for all trawl catches of each of the species shown, and that for pollock none of the catches of vessels in the TCV Div. AFA class reach the higest end of the scale. Also note that in order to protect the confidentiality of catches, only catches in areas in which four or more vessls reported landing s are shown.

Figure 2.1.3-3. Average Annual Pollock Catch of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998

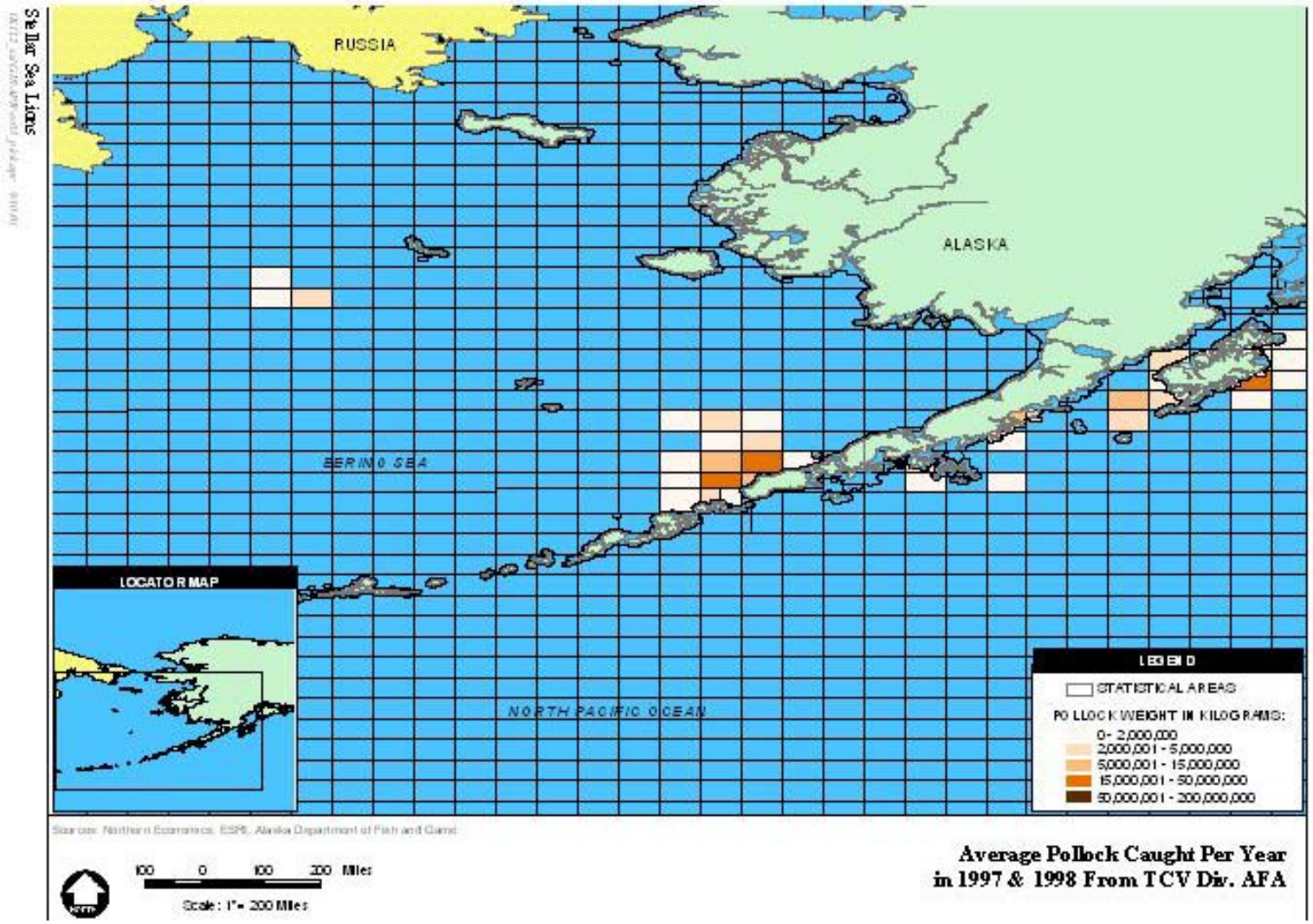


Figure 2.1.3-4. Average Annual Pacific Cod Catch of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998

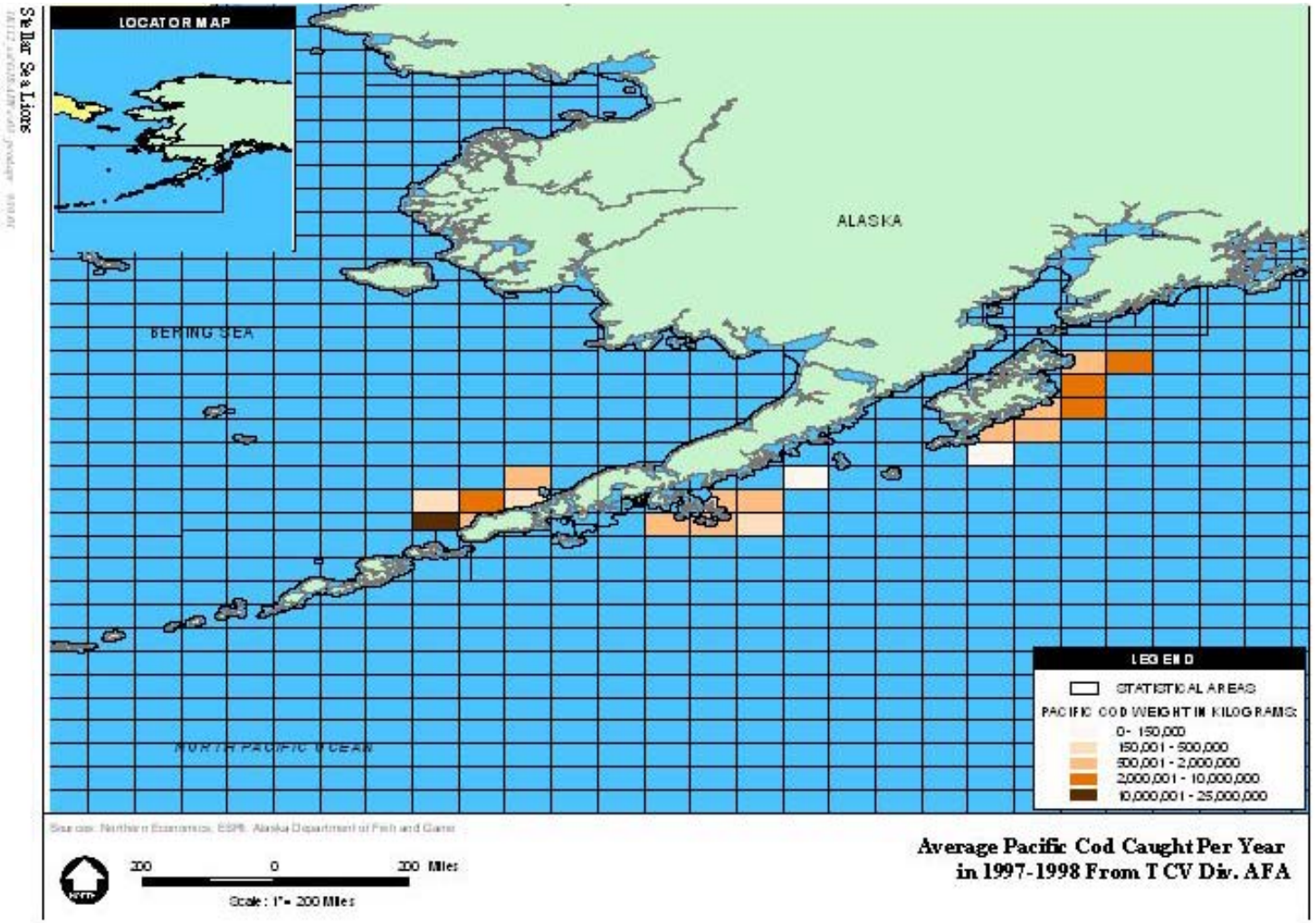


Figure 2.1.3-5. Average Annual Flatfish Catch of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998

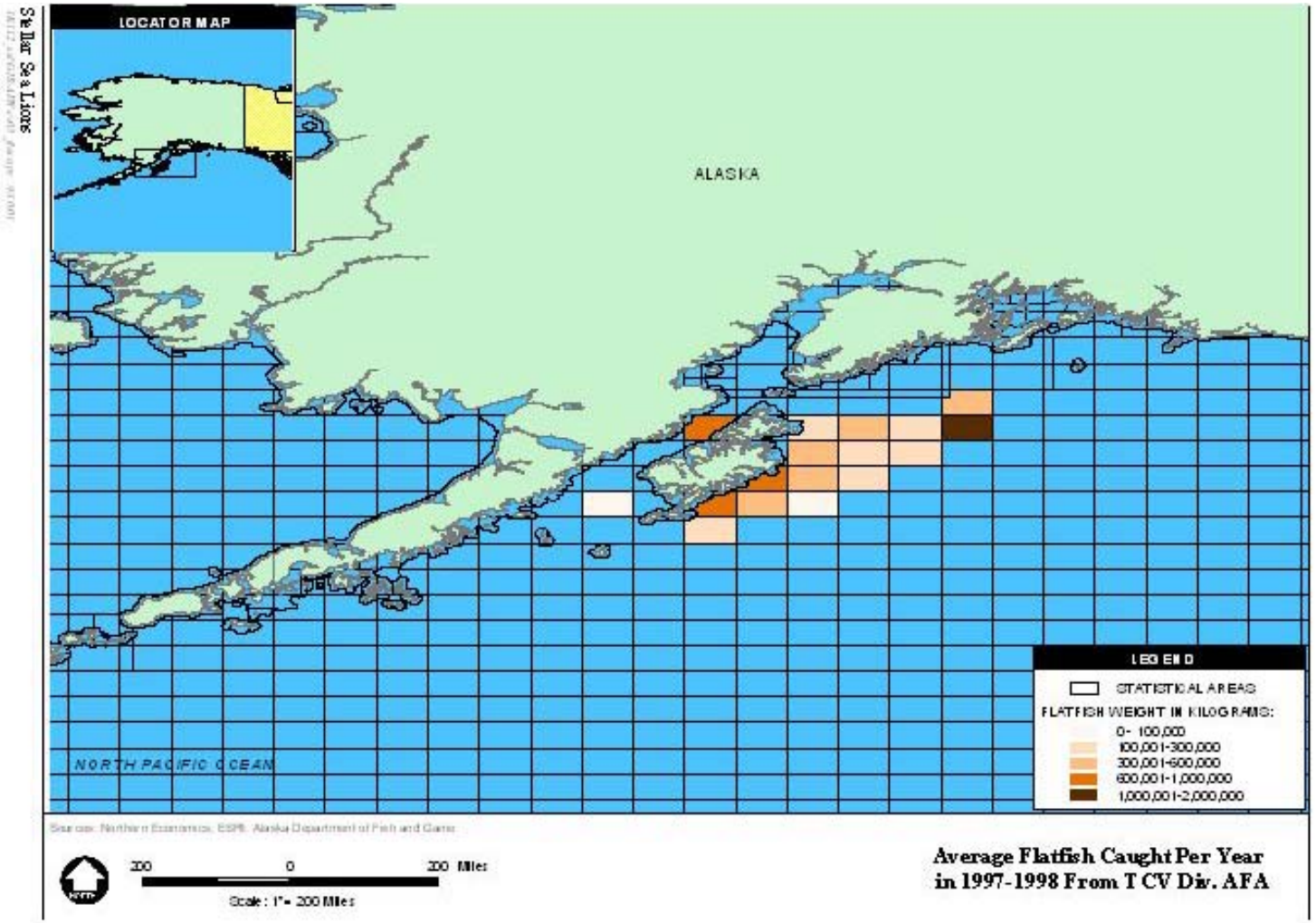
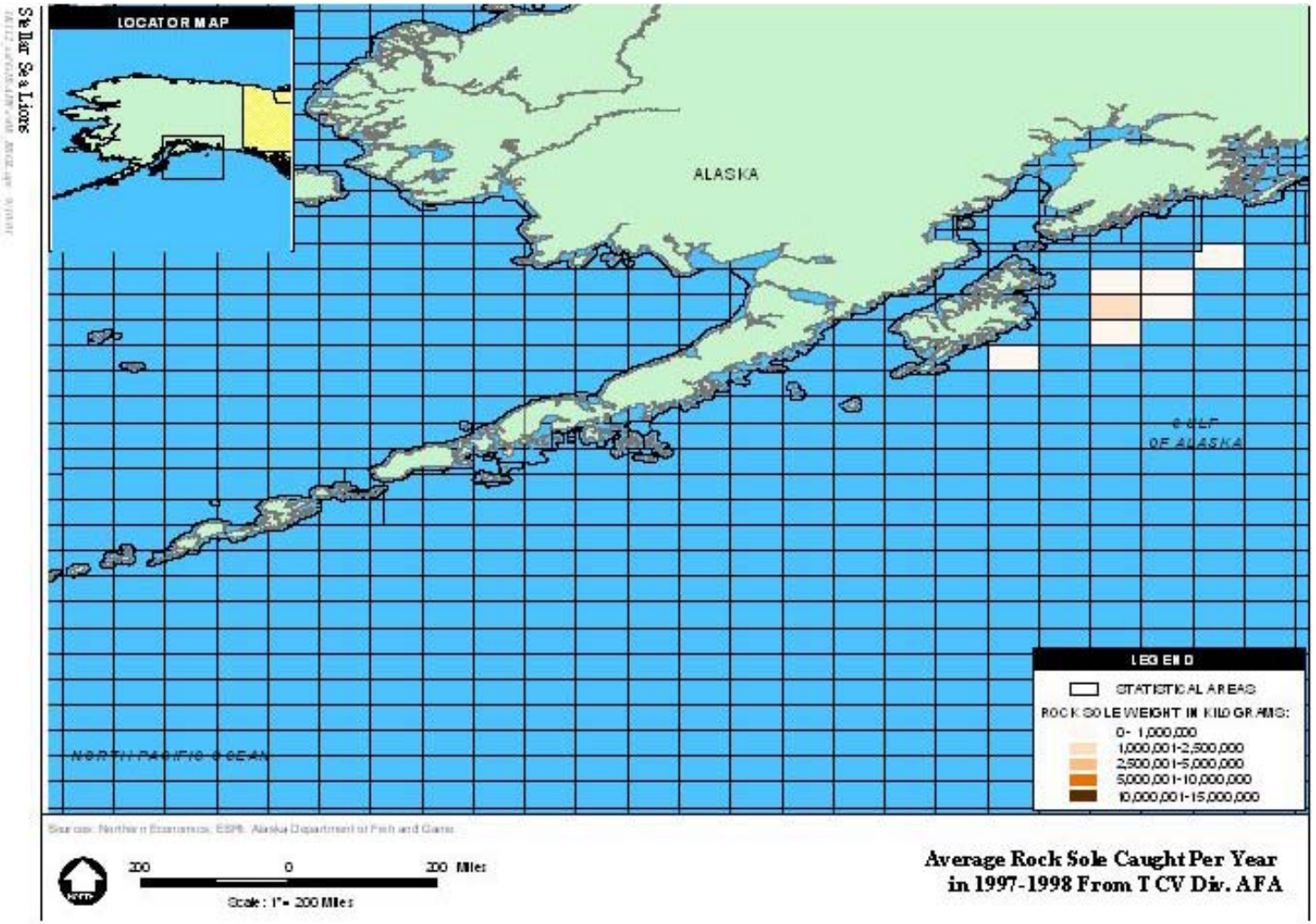


Figure 2.1.3-6. Average Annual Rocksole Catch of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998



The nearly exclusive reliance of the vessels in this class on trawl gear is shown in Table 2.1.3-22.

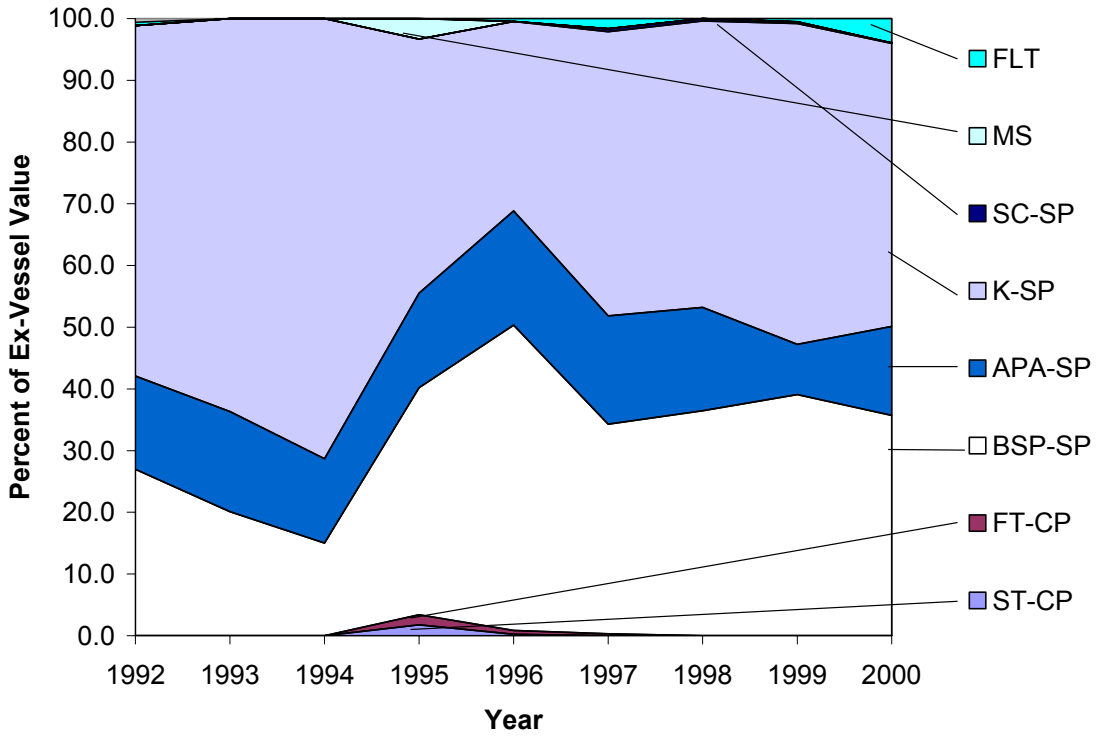
Table 2.1.3-22. Percent of Total Value by Gear in Top Three Target Fisheries by Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1996-2000

Year	Percent of Total Value				
	HAL	JIG-OTH	POT	TWL	Total
PLCK					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0
PCOD					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.1	99.9	100.0
1999	0.0	0.0	1.6	98.4	100.0
2000	0.0	0.0	0.7	99.3	100.0
FLAT					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Figure 2.1.3-7 shows the reliance of the TCV Div. AFA fleet on various processors from 1992 through 2000. In 2000, roughly 46 percent of the total ex-vessel revenue was generated from deliveries to the Kodiak Shore Plants (KSP) while 36 percent of revenues were from Bering Sea pollock inshore plants (BSP-SP). Deliveries to Alaska Peninsula Aleutian Island Shore Plants (APA-SP) accounted for more than 14 percent of the class's groundfish revenue.

Figure 2.1.3-7. Ex-Vessel Value Paid by Various Processor Classes to Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.3.6 Crew Employment and Income

Four person crews, including the skipper, are typical on vessels in the TCV Div. AFA class. This crew size is similar to that for vessels in the previously described classes of trawl catcher vessels. This analysis assumed an average crew size of four, including the skipper, for this type of vessel. Another 0.5 position was added to this average to account for vessel support staff. The actual number of crew varies with the size of the vessel. Table 2.1.3-23 shows the estimated total number of crew (including skipper and administrative staff) in this class for each year between 1992 and 2000. Each year's estimate was derived by multiplying the average crew size by the number of unique vessels with landings in that year. The number of crew-member months was used to estimate FTE employment based on the assumption that crewmembers work an average of 16 hours per day for an average 15 days for every month their vessel is active. The total number of estimated crewmember hours is then divided by the 2080 hours per year. Estimated FTEs for the class range from 131 in 1992 to 73 in 1996. In 2000 the TCV Div. AFA class had 99 FTE.

Table 2.1.3-23. Number of Crewmembers and Crewmember Months by Species Group for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Number of Crew Members	Crewmember Months			Groundfish FTE
		Groundfish	Non-Groundfish	All Species	
1992	139.5	1,134	72	1,175	131
1993	139.5	1,026	122	1,130	118
1994	121.5	873	99	914	101
1995	108.0	801	36	819	92
1996	85.5	635	45	653	73
1997	117.0	891	68	927	103
1998	144.0	1,008	72	1,040	116
1999	153.0	1,103	77	1,148	127
2000	135.0	860	36	891	99

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Crewmembers are typically paid on a share basis. A share may be calculated as a portion of gross revenue such as gross revenue less food and fuel expenditures or gross revenue less food, fuel, and landing tax expenditures. Individual crew shares are about six to ten percent of the gross revenue after expenditures have been subtracted. This analysis assumes that 40 percent of ex-vessel revenue goes to payments for labor.[15]

Estimated payments to labor over time in groundfish and non-groundfish fisheries are shown in Table 2.1.3-24. Payments to labor have varied widely as a result of fluctuations in ex-vessel revenues. Labor payments per vessel in groundfish and non-groundfish fisheries are shown in Table 2.1.3-25. Labor payments per crewmember are shown in Table 2.1.3-26. Estimated payments to labor per FTE have ranged from $64,700 in 1998 to 102,000 in 2000.

Table 2.1.3-24. Payments to Labor by Species Group for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

	$Millions		
Year	Groundfish	Non-Groundfish	All Species
1992	13.35	0.42	13.76
1993	8.00	0.76	8.75
1994	6.56	0.73	7.29
1995	7.24	0.39	7.63
1996	4.74	0.57	5.31
1997	8.84	0.42	9.26
1998	8.15	0.31	8.47
1999	11.36	0.81	12.17
2000	10.12	0.31	10.44

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[15] The analysis makes no assumptions about owner profits, as no data were available to estimate operating costs.

Table 2.1.3-25. Payments to Labor Per Vessel by Species Group for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

	Payments to Labor Per Vessel ($)		
Year	Groundfish	Non-Groundfish	All Species
1992	430,508	13,484	443,992
1993	257,957	24,402	282,359
1994	242,905	27,174	270,079
1995	301,666	16,453	318,119
1996	249,467	29,890	279,356
1997	339,933	16,142	356,075
1998	254,811	9,730	264,541
1999	334,035	23,850	357,885
2000	337,450	10,400	347,850

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.3-26. Number of Crewmembers and Labor Payments Per Crewmember by Species Group for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Number of Crew Members	Labor Payments per Crewmember ($)			Groundfish Labor Payments per FTE ($)
		Groundfish	Non-Groundfish	All Species	
1992	139.5	95,668	2,997	98,665	101,996
1993	139.5	57,324	5,423	62,747	67,548
1994	121.5	53,979	6,039	60,018	65,109
1995	108.0	67,037	3,656	70,693	78,335
1996	85.5	55,437	6,642	62,079	64,742
1997	117.0	75,541	3,587	79,128	85,969
1998	144.0	56,625	2,162	58,787	70,107
1999	153.0	74,230	5,300	79,530	89,278
2000	135.0	74,989	2,311	77,300	102,079

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.3.7 Regional Residence of Vessel Owners

Table 2.1.3-27 presents information on the residence of owners of vessels in this class. In 2000, vessel owners from Oregon Coastal Region accounted for 37 percent of the vessels in this class, while residents of the WAIA accounted for 27 percent of the vessels. The percentage of vessels owned by Kodiak residents has declined over the years, but residents of this region still accounted for one-fifth of the fleet in 2000.

The owner's residence is an important factor because most of the regional economic impact of catcher vessel operations occurs in the owner's region of residence. Table 2.1.3-28 shows the ex-vessel revenue accruing to each region. Table 2.1.3-29 and Table 2.1.3-30 show the crewmember months and payments to labor accruing to each region. It was assumed that all crewmembers of a particular vessel and home office staff reside in the vessel owner's region of residence.

Table 2.1.3-27. Number of Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length Landing Groundfish, by Region of Owner, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0	12	0	0	6	10	3	31
1993	0	11	0	0	2	14	4	31
1994	0	11	0	0	3	11	2	27
1995	0	8	0	0	3	10	3	24
1996	0	7	0	0	2	8	2	19
1997	0	9	0	0	4	11	2	26
1998	0	8	0	0	4	16	4	32
1999	0	6	1	0	8	15	4	34
2000	0	6	1	0	8	11	4	30

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001

Table 2.1.3-28. Ex-Vessel Revenue by Vessel Owner's Region for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.00	13.30	0.00	0.00	6.93	8.47	3.38	33.36
1993	0.00	8.19	0.00	0.00	1.33	8.82	2.40	19.99
1994	0.00	7.40	0.00	0.00	1.93	5.54	1.15	16.40
1995	0.00	6.14	0.00	0.00	2.48	6.58	2.78	18.10
1996	0.00	4.74	0.00	0.00	1.36	4.82	1.16	11.85
1997	0.00	8.54	0.00	0.00	3.68	7.99	1.41	22.10
1998	0.00	5.32	0.00	0.00	2.67	10.27	2.54	20.38
1999	0.00	6.31	0.60	0.00	6.63	13.06	3.63	28.39
2000	0.00	5.44	0.60	0.00	7.07	8.23	3.53	25.31

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted average revenue per vessel.

Table 2.1.3-29. Crewmember Months by Vessel Owner's Region for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Crewmember Months							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0	439	0	0	219	366	110	1,134
1993	0	364	0	0	66	463	132	1,026
1994	0	356	0	0	97	356	65	873
1995	0	267	0	0	100	334	100	801
1996	0	234	0	0	67	267	67	635
1997	0	308	0	0	137	377	69	891
1998	0	252	0	0	126	504	126	1,008
1999	0	195	32	0	259	486	130	1,103
2000	0	172	29	0	229	315	115	860

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the number of crewmember months.

Table 2.1.3-30. Payments to Labor by Vessel Owner's Region for Diversified AFA-Eligible Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.00	5.32	0.00	0.00	2.77	3.39	1.35	13.35
1993	0.00	3.28	0.00	0.00	0.53	3.53	0.96	8.00
1994	0.00	2.96	0.00	0.00	0.77	2.22	0.46	6.56
1995	0.00	2.46	0.00	0.00	0.99	2.63	1.11	7.24
1996	0.00	1.89	0.00	0.00	0.54	1.93	0.47	4.74
1997	0.00	3.42	0.00	0.00	1.47	3.20	0.56	8.84
1998	0.00	2.13	0.00	0.00	1.07	4.11	1.01	8.15
1999	0.00	2.52	0.24	0.00	2.65	5.23	1.45	11.36
2000	0.00	2.17	0.24	0.00	2.83	3.29	1.41	10.12

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted payments to labor.

2.1.4 Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length (TCV Non-AFA)

This class includes all vessels that are not AFA-eligible for which trawl catch accounts for more than 15 percent of total catch value, the value of Bering Sea pollock catch is less than value of catch of all other species combined, vessel length is greater than or equal to 60 ft., and the total value of groundfish catch is greater than $5000.

2.1.4.1 Class Characteristics

These trawlers are not eligible to participate in the BSAI pollock fisheries and they are generally shorter than the trawlers in the three classes of AFA-eligible vessels discussed above. On the other hand, the fact that the vessels in this class are longer than 58 feet and therefore cannot participate in commercial salmon seine fisheries in Alaska distinguishes them from smaller trawlers that are not AFA eligible (some vessels in this class with a record of participation in commercial salmon seine fisheries prior to 1976 were allowed to continue to participate in these fisheries).

Vessels in the TCV Non-AFA class typically were constructed for use in multiple fisheries. These vessels tend to have the cabin set forward, a relatively large working deck aft, and fish holds amidships. Most vessels in this class are steel, although some are constructed of aluminum or fiberglass. As vessel length increases, the vessels tend to have higher freeboard, deeper draft, greater ballast, and equipment that enables them to fish in weather conditions that would be impossible for smaller vessels.

About 90 percent of the vessels in this category have refrigeration systems. Almost all of the vessels are steel-hulled and equipped with a stern ramp, a stern gantry, one forward and one aft net reel, twin trawl winches, and a variety of lifting gear. Most of the vessels in this category have large belowdeck RSW tanks for holding their round fish catch. (CFEC vessel files, 2000). Hold size and RSW systems become more important as the distance to the fishing grounds increases. Vessels with smaller fish holds and without RSW systems have a competitive disadvantage relative to vessels that possess RSW systems and large fish holds. Almost all vessels in this category have auxiliary engines to control their net, enabling them to operate pelagic trawl nets at depths near the bottom.

In 2000, vessels in the TCV Non-AFA class had an average length of 83 feet and ranged from 60 to 112 feet. Most were less than 90 feet. The vessels have an average horsepower rating of about 660, with a maximum of about 1,280 and a minimum of 350. Average gross tonnage is approximately 140 tons. The average hold capacity of these vessels is 3,550 cubic feet—28 percent less than vessels in the TCV Div AFA class (CFEC, 2001).

Table 2.1.4-1. Number of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Vessel Length, 1992-2000

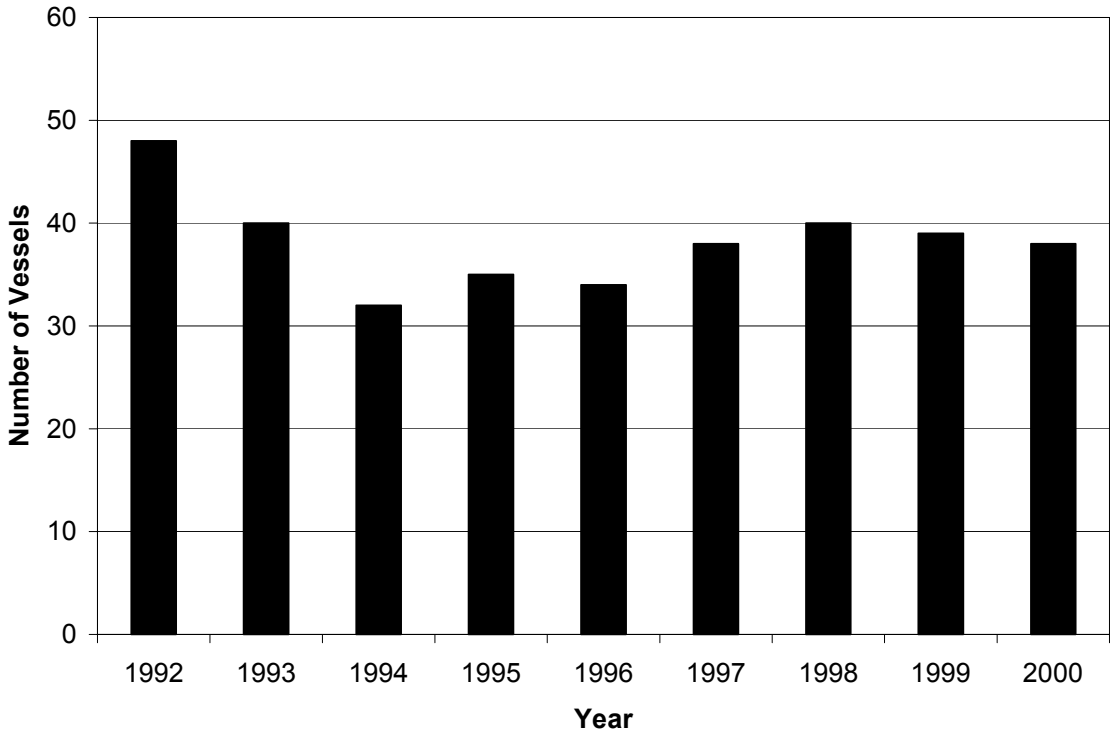
Year	Vessel Length							
	60-79'	80'-94'	95'-109'	110'-124	125-139'	140'-154'	170'+	Total
1992	34	12	0	0	1	0	1	48
1993	28	12	0	0	0	0	0	40
1994	20	10	0	0	0	1	1	32
1995	20	14	0	0	0	0	1	35
1996	16	17	1	0	0	0	0	34
1997	13	21	2	1	1	0	0	38
1998	15	21	2	1	0	0	1	40
1999	15	20	3	1	0	0	0	39
2000	15	19	3	1	0	0	0	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.4.2 Class Participation

The number of vessels in this class increased dramatically from 1988 through 1992. Participation peaked at 48 vessels in 1992, and then dropped back to a more stable level between 32 and 40 vessels (Figure 2.1.3-1).

Figure 2.1.4-1. Number of Active Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Of the vessels in the TCV Non-AFA class that were active in the groundfish fishery in 2000, the average number of years since 1992 in which a vessel was active was 7.11, with a minimum of one year and a maximum of nine years. Of those vessels that were not active in 2000, the average number of years of participation was 1.95, with a minimum of one and a maximum of five.

2.1.4.3 Description of Fishing Operations

Many of the vessels in this class have undergone a number of changes during their years of operation, including moving between gear types and having structural alteration work done that has resulted in the vessels becoming longer and wider. A number of these vessels began as crabbers and were later converted to either trawl vessels or combination trawl and pot vessels. In recent years, some of the vessels have been modified to be largely trawl operations. Vessels in the class have typically increased their fishing capacity over the past several years through increases in horsepower and/or hold capacity.

Vessels in this size class can operate in more adverse weather conditions than is possible for smaller vessels. Therefore, vessels in the TCV Non-AFA class can fish more days and target species such as pollock that are often found far from protected waters. Adequate fish hold capacity also enables these vessels to harvest and deliver pollock in a cost-effective manner.

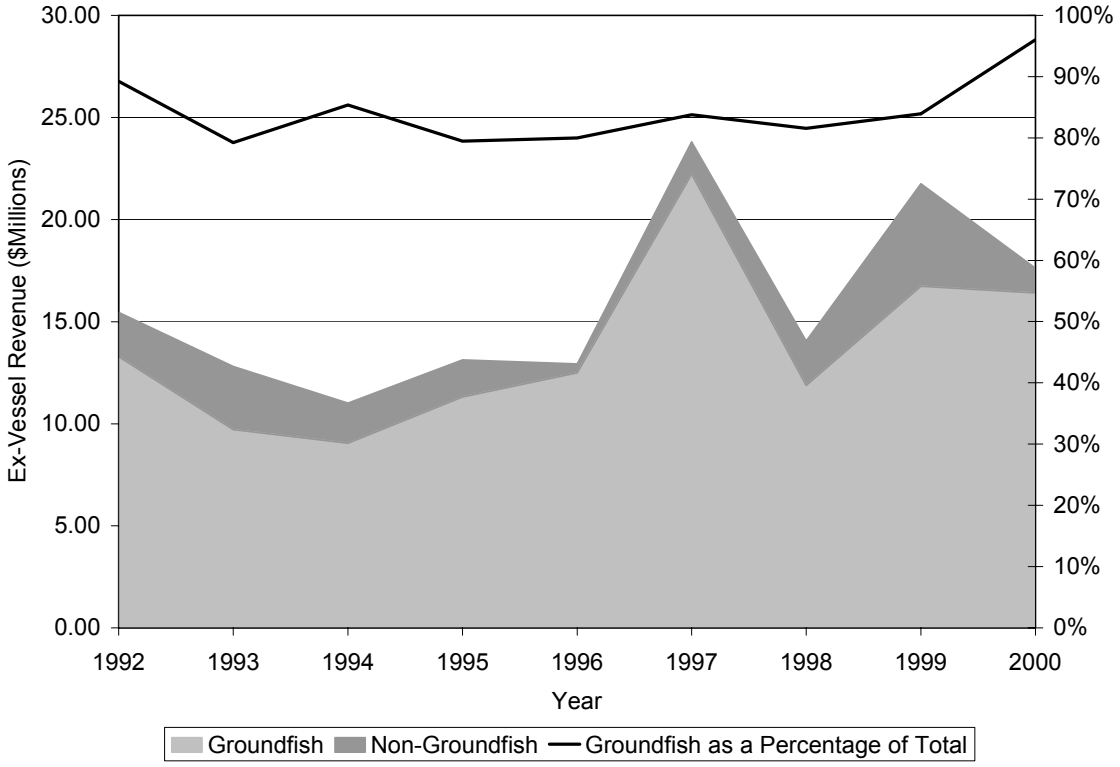
In general, vessels in the TCV Non-AFA class have a greater record of participation in GOA trawl fisheries than in BSAI fisheries. Typically, currently active vessels in this class do not have a history of participation in the BSAI pollock fisheries. The vessels harvest a variety of species, using a combination of trawl, longline, and pot gear. A few vessels have crab endorsements under the Crab LLP. An operator might fish for crab in January and February and target groundfish and other species during the remainder of the year. For example, a vessel might fish for halibut and tender for salmon in the summer. A more complete description of trawling is in Subsection 2.1.1.3.

2.1.4.4 Dependence on Groundfish and Annual Cycle of Operations

Figure 2.1.4-2 and Table 2.1.4-2 show that since 1992, between 79 and 96 percent of total ex-vessel value for vessels in the TCV Non-AFA class came from groundfish.

The annual cycle of operations of vessels in the TCV Non-AFA class differs from that of AFA-eligible trawl catcher vessels. Differences include the reliance of the TCV Non-AFA fleet on the GOA groundfish fishery and the participation of several vessels in this class in the halibut IFQ fisheries using longline gear.

Figure 2.1.4-2. Ex-Vessel Value of Harvest in Major Alaska Fisheries for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length,1992-2000



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Table 2.1.4-2. Number of Vessels and Total Ex-Vessel Value by Species Group for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length,1992-2000

Year	Number of Vessels	$Millions		
		Groundfish	Non-Groundfish	All Species
1992	48	13.28	1.60	14.89
1993	40	9.71	2.54	12.26
1994	32	9.05	1.55	10.60
1995	35	11.31	2.92	14.23
1996	34	12.49	3.13	15.61
1997	38	22.22	4.31	26.53
1998	40	11.87	2.68	14.56
1999	39	16.74	3.20	19.94
2000	38	16.41	0.68	17.09

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.4-3. Number of Vessels and Ex-Vessel Value Per Vessel by Species Group for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Number of Vessels	Ex-Vessel Value Per Vessel ($)		
		Groundfish	Non-Groundfish	All Species
1992	48	276,736	33,422	310,158
1993	40	242,837	63,606	306,443
1994	32	282,671	48,518	331,189
1995	35	323,156	83,542	406,698
1996	34	367,263	91,922	459,185
1997	38	584,657	113,372	698,029
1998	40	296,841	67,097	363,938
1999	39	429,121	82,093	511,214
2000	38	431,808	17,948	449,755

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.4-4 and Table 2.1.4-5 provide additional detail about the relative importance of groundfish to vessels in the TCV Non-AFA class. In 1999, the most recent year for which landings data for all non-groundfish species are available, 14 vessels in this class made landings of halibut and two vessels made landings of crab. In that year, 84 percent of the total revenue for vessels in this class came from groundfish, while harvests of halibut with longline gear accounted for most of the remaining 16 percent of the revenue.

Table 2.1.4-4. Number of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length Participating in Non-Groundfish Fisheries, by Species, 1992-2000

Year	Number of Vessels				
	Salmon	Crab	Halibut	Other	Total
1992	0	5	23	2	25
1993	2	8	18	6	23
1994	0	2	18	2	19
1995	2	5	14	1	19
1996	0	4	15	5	21
1997	0	3	15	2	18
1998	1	3	15	2	20
1999	0	2	14	1	17
2000	0	3	a	0	3

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Value for halibut is not available.

Table 2.1.4-5. Ex-Vessel Value of Non-Groundfish Species Harvested by Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Species, 1992-2000

Year	Ex Vessel Value ($Millions)				
	Salmon	Crab	Halibut	Other	Total
1992	0.00	0.56	1.05	a	1.60
1993	a	0.97	1.00	0.57	2.54
1994	0.00	a	1.55	a	1.55
1995	a	1.28	1.65	a	2.92
1996	0.00	1.07	1.89	0.16	3.13
1997	0.00	a	4.31	a	4.31
1998	a	a	2.68	a	2.68
1999	0.00	a	3.20	a	3.20
2000	0.00	b	c	0.00	b

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
Note: Values for salmon may represent data entry errors, as ADFG salmon regulations generally prohibit seine vessels over 60 feet in length from landing salmon.
[a] Combined with value for halibut due to confidentiality restrictions.
[b] Data omitted due to confidentiality restrictions
[c] Value for halibut is not available.

Table 2.1.4-6 shows ex-vessel value by month in 1999 and 2000 from groundfish and from all other species. Vessels in the TCV Non-AFA class are active in GOA groundfish fisheries from January through April, in June and July, and in September and October. Non-groundfish activity is highest during May, August, and November—slack periods in groundfish fisheries. The number of vessels participating in and ex-vessel value from groundfish and non-groundfish fisheries by trimester are shown in Table 2.1.4-7 and Table 2.1.4-8, respectively. The number of vessels participating groundfish and non-groundfish fisheries by month is shown in Table 2.1.4-9.

Table 2.1.4-6. Ex-Vessel Value of Groundfish, Salmon, Crab, Halibut, and Other Species Harvested by Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Month, 1999-2000

Year		$Millions												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1999	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crab	a	a	a	a	a	a	a	a	a	a	a	a	a
	Halibut	0.00	0.00	0.00	0.16	0.41	0.57	0.14	0.46	0.20	0.44	0.82	0.00	2.90
	Other	a	a	a	a	a	a	a	a	a	a	a	a	a
	Groundfish	1.26	4.42	3.38	0.60	0.14	1.04	0.76	0.50	2.32	2.25	0.03	0.03	16.74
2000	Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Crab	b	b	b	b	b	b	b	b	b	b	b	b	b
	Halibut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Groundfish	1.82	4.55	3.93	1.20	0.55	0.00	2.67	0.74	0.10	0.70	0.08	0.08	16.41

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
[a] Combined with value for halibut due to confidentiality restrictions.
[b] Data omitted due to confidentiality restrictions.

Table 2.1.4-7. Number of Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length with Groundfish Landings by Trimester, 1992-2000

	Number of Vessels			
Year	Jan-Apr	May-Aug	Sep-Oct	Total
1992	46	38	23	48
1993	40	26	19	40
1994	32	26	19	32
1995	34	24	21	35
1996	32	26	27	34
1997	35	22	30	38
1998	36	28	29	40
1999	39	27	29	39
2000	38	24	15	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-8. Ex-Vessel Value of Harvest of Groundfish by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2000

	$Millions			
Year	Jan-Apr	May-Aug	Sep-Dec	Total
1992	8.08	3.85	1.36	13.28
1993	6.00	2.31	1.41	9.71
1994	5.27	2.78	0.99	9.05
1995	8.28	1.63	1.40	11.31
1996	7.68	2.15	2.65	12.49
1997	12.98	3.62	5.62	22.22
1998	6.32	2.27	3.28	11.87
1999	9.66	2.45	4.63	16.74
2000	11.50	3.96	0.95	16.41

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-9. Number of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length with Groundfish Landings, by Month, 1992-2000

	Number of Vessels												
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1992	28	42	39	35	27	24	23	18	11	20	0	0	48
1993	19	40	40	32	7	18	21	10	3	18	12	5	40
1994	25	29	31	19	20	13	19	13	9	16	0	0	32
1995	28	31	32	18	16	15	19	3	6	20	0	1	35
1996	29	29	30	21	15	10	16	15	22	24	11	2	34
1997	32	35	35	27	9	14	17	10	26	23	11	2	38
1998	33	36	35	22	3	25	18	7	26	27	1	0	40
1999	35	38	38	24	6	23	15	12	25	28	4	4	39
2000	36	38	36	20	14	0	18	20	4	13	3	2	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.4.5 Catch and Value in Groundfish Fisheries

Table 2.1.4-10 shows the number of vessels in the TCV Non-AFA class that had retained harvests of the four groundfish species aggregations used in this analysis. While the broad range of species landed by most vessels may partly be attributed to incidental catches in pollock and Pacific cod fisheries, vessels in this class are likely to have targeted at least some flatfish and ARSO species (Atka mackerel, all rockfish species, sablefish, and other groundfish).

Table 2.1.4-10. Number of Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Species, 1992-2000

	Number of Vessels				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	31	31	48	38	48
1993	25	26	40	31	40
1994	26	28	32	28	32
1995	24	28	34	31	35
1996	28	29	33	28	34
1997	34	35	38	35	38
1998	37	37	40	40	40
1999	33	33	38	39	39
2000	31	35	38	37	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

As with AFA eligible trawl catcher vessels, pollock is the primary species in terms of retained tonnage for vessels in the TCV Non-AFA class (Table 2.1.4-11). However, the ex-vessel value of Pacific cod exceeded that of pollock in every year except 1998. (Table 2.1.4-13). From 1992 to 2000, total harvest volume for the class varied between 33,000 and 55,000 tons. In the same period, ex-vessel value ranged from a high of $22 million in 1997 to a low of $9 million in 1994.

Table 2.1.4-11. Retained Tons of Groundfish by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Species, 1992-2000

	Thousands of Tons				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	0.5	6.5	15.7	15.7	38.3
1993	0.4	5.5	12.9	18.9	37.8
1994	0.5	3.6	10.0	18.6	32.6
1995	0.6	3.9	14.3	14.6	33.4
1996	2.2	5.8	14.1	17.6	39.7
1997	2.8	9.2	18.5	22.5	53.0
1998	3.0	4.1	12.1	36.5	55.7
1999	3.1	3.1	14.2	30.3	50.8
2000	5.5	7.0	10.4	24.0	47.0

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-12. Ex -Vessel Prices by Species for Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length, 1992-2000

	ARSO		FLAT		PCOD		PLCK	
YEAR	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton
1992	$0.77	$1,702.38	$0.15	$323.59	$0.19	$426.10	$0.11	$238.39
1993	$0.50	$1,112.53	$0.14	$317.44	$0.16	$345.40	$0.07	$159.66
1994	$1.00	$2,202.62	$0.20	$442.71	$0.14	$316.06	$0.08	$167.41
1995	$0.54	$1,190.50	$0.18	$400.75	$0.19	$408.77	$0.10	$217.67
1996	$0.28	$618.74	$0.16	$358.13	$0.17	$382.75	$0.09	$204.65
1997	$0.35	$772.17	$0.33	$733.92	$0.20	$434.92	$0.10	$231.21
1998	$0.14	$303.50	$0.13	$293.19	$0.16	$351.09	$0.07	$150.54
1999	$0.18	$387.10	$0.11	$246.04	$0.27	$592.70	$0.09	$208.45
2000	$0.19	$428.79	$0.09	$197.55	$0.29	$647.52	$0.11	$245.16

Source: CFEC/ADFG Fish Ticket Data, June 2001

Table 2.1.4-13. Ex-Vessel Value of Harvest by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Species, 1992-2000

	$Millions				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	0.82	2.09	6.64	3.73	13.28
1993	0.48	1.75	4.47	3.01	9.71
1994	1.21	1.57	3.15	3.11	9.05
1995	0.73	1.56	5.84	3.18	11.31
1996	1.42	2.07	5.40	3.60	12.49
1997	2.23	6.79	8.00	5.20	22.22
1998	0.92	1.19	4.26	5.50	11.87
1999	1.23	0.77	8.42	6.32	16.74
2000	2.37	1.38	6.76	5.89	16.41

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Additional details on the number of vessels and ex-vessel value in target fisheries and the harvest volume and value by target species are presented in Table 2.1.4-12 and Table 2.1.4-14 through Table 2.1.4-17. In 2000, pollock accounted for 51 percent of harvest volume and 36 percent of total ex-vessel value for vessels in this class. Pacific cod in 2000 accounted for 22 percent of the harvest volume and 41 percent of total value. Flatfish and species in the ARSO aggregation together accounted for 23 percent of total ex-vessel value.

Table 2.1.4-14. Number of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length in Each Target Fishery, 1992-2000

Year	Number of Vessels						
	PLCK	PCOD	FLAT	ROCK	OT-AM	SABL	Total
1992	43	31	24	21	0	9	48
1993	40	28	18	21	4	6	40
1994	30	22	19	15	4	15	32
1995	34	25	17	15	2	7	35
1996	31	24	18	20	14	6	34
1997	37	30	22	22	15	3	38
1998	40	38	20	22	16	6	40
1999	38	32	15	12	15	5	39
2000	35	31	14	20	17	6	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-15. Ex-vessel Value of Total Catch in Top Three Target Fisheries by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length, 1992-2000

YEAR	$Millions			
	PCOD	PLCK	FLAT	Total
1992	6.39	3.68	1.68	13.28
1993	4.25	3.09	0.69	9.71
1994	3.09	3.14	1.73	9.05
1995	5.80	3.25	1.24	11.31
1996	5.52	3.60	0.72	12.49
1997	9.25	5.21	5.42	22.22
1998	4.19	5.59	0.58	11.87
1999	8.18	6.43	0.56	16.74
2000	5.99	5.90	1.00	16.41

Note: Includes catches of all species in the target fishery listed. Total includes catches of all species in both target and non-target fisheries.
Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-16. Total Catch of Target Species by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2000

Target	Thousands of Tons				
	Year	Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	1.0	2.0	0.2	3.1
	1993	0.8	0.4	0.4	1.6
	1994	0.8	0.7	0.3	1.9
	1995	1.5	0.3	0.2	2.0
	1996	0.6	0.7	0.3	1.5
	1997	1.9	1.7	1.8	5.4
	1998	1.0	0.2	0.1	1.3
	1999	1.3	0.0	0.0	1.3
	2000	1.4	1.1	0.2	2.7
PCOD	1992	0.0	0.0	0.0	0.0
	1993	0.0	0.0	0.0	0.0
	1994	0.0	0.0	0.0	0.0
	1995	0.0	0.1	0.0	0.1
	1996	0.0	0.1	0.3	0.4
	1997	0.1	0.1	0.2	0.3
	1998	0.2	0.1	0.0	0.3
	1999	0.0	0.0	0.0	0.0
	2000	0.0	0.1	0.0	0.1
PLCK	1992	14.3	0.2	0.1	14.5
	1993	11.6	0.2	0.0	11.8
	1994	9.4	0.3	0.0	9.7
	1995	13.1	0.1	0.5	13.7
	1996	13.5	0.3	0.1	13.8
	1997	14.5	0.2	2.3	17.0
	1998	9.8	0.1	1.4	11.2
	1999	10.9	0.2	2.3	13.4
	2000	8.9	0.0	0.0	8.9

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-17. Ex-Vessel Value Total Catch of Target Species by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by Trimester, 1992-2001

Target	Year	$Millions			
		Jan-Apr	May-Aug	Sep-Dec	Total
FLAT	1992	0.27	0.72	0.05	1.04
	1993	0.25	0.12	0.08	0.45
	1994	0.72	0.25	0.06	1.02
	1995	0.70	0.09	0.04	0.83
	1996	0.16	0.20	0.07	0.43
	1997	2.09	0.93	1.05	4.07
	1998	0.27	0.06	0.01	0.34
	1999	0.27	0.00	0.01	0.28
	2000	0.31	0.22	0.03	0.57
PCOD	1992	6.05	0.07	0.03	6.14
	1993	4.01	0.06	0.00	4.08
	1994	2.86	0.10	0.00	2.96
	1995	5.33	0.05	0.22	5.59
	1996	5.16	0.09	0.02	5.27
	1997	6.23	0.08	1.05	7.36
	1998	3.44	0.02	0.49	3.96
	1999	6.35	0.12	1.46	7.94
	2000	5.89	0.00	0.00	5.90
PLCK	1992	0.94	1.87	0.71	3.52
	1993	1.04	1.28	0.62	2.94
	1994	1.08	1.32	0.67	3.07
	1995	1.62	0.80	0.72	3.14
	1996	1.59	0.15	1.81	3.55
	1997	2.38	0.70	2.03	5.11
	1998	1.85	1.10	2.52	5.46
	1999	2.42	1.10	2.73	6.26
	2000	4.62	0.53	0.63	5.79

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-18 and Table 2.1.4-19 show the number of vessels and ex-vessel value of the TCV Non-AFA fleet by FMP subarea, respectively. The CG has been the most important FMP subarea for the class. The importance of the BS peaked in 1997. After that year, vessels in the TCV Non-AFA class were unable to fish for BSAI pollock as a result of enactment of the AFA. However, the non-pollock harvest restrictions on AFA trawl vessels may encourage non-AFA trawl vessels to increase their participation in the BSAI Pacific cod fishery. The number of vessels with pollock and Pacific cod landings by FMP subarea are presented Table 2.1.4-20, while Table 2.1.4-21 shows the ex-vessel value of the landings of these species by FMP subarea.

Table 2.1.4-18. Number of Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by FMP Subarea, 1992-2000

	Number of Vessels					
Year	AI	BS	WG	CG	EG	Total
1992	0	19	21	37	1	48
1993	1	14	13	33	3	40
1994	1	9	4	26	6	32
1995	0	14	10	27	8	35
1996	0	12	7	28	9	34
1997	0	10	11	34	9	38
1998	2	11	9	38	4	40
1999	2	10	7	33	7	39
2000	2	8	7	30	5	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-19. Ex-Vessel Value of Harvest of Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by FMP Subarea, 1992-2000

	$Millions					
Year	AI	BS	WG	CG	EG	Total
1992	a	2.93	1.88	8.42	b	13.28
1993	a	1.60	1.04	7.02	b	9.71
1994	a	1.81	0.58	6.46	0.18	9.05
1995	a	2.06	0.81	8.37	0.08	11.31
1996	a	1.50	1.28	9.57	0.14	12.49
1997	a	5.77	1.55	13.77	1.12	22.22
1998	a	0.66	0.87	10.28	0.07	11.87
1999	a	1.38	1.64	13.18	0.35	16.74
2000	a	1.16	1.72	12.28	0.57	16.41

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value from BS to protect the confidentiality of the small number of TCV Non-AFAs that reported catches in this subarea during the year.

[b] Combined with value from CG to protect the confidentiality of the small number of TCV Non-AFAs that reported catches in this subarea during the year.

Table 2.1.4-20. Number of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length with Pacific Cod and Pollock Landings by FMP Subarea, 1992-2000

Year	Number of Vessels												
	PCOD						PLCK						Total
	AI	BS	WG	CG	EG	Total	AI	BS	WG	CG	EG	Total	
1992	0	18	21	37	0	48	0	12	7	31	0	38	48
1993	1	14	12	33	0	40	1	6	3	26	1	31	40
1994	1	9	4	26	5	32	0	6	2	24	6	28	32
1995	0	12	10	27	4	34	0	8	6	27	2	31	34
1996	0	12	6	27	4	33	0	7	3	25	3	28	34
1997	0	10	11	34	5	38	0	7	5	31	3	35	38
1998	1	11	9	38	2	40	0	9	8	36	1	40	40
1999	2	9	7	32	5	38	1	8	6	32	2	39	39
2000	2	7	7	28	4	38	0	8	7	30	4	37	38

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-21. Ex-Vessel Value of Pacific Cod and Pollock Landings by Non-AFA Trawl Catcher Vessels Greater than or Equal to 60 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions						
	PCOD			PLCK			
	AI-BS	WG	CG	AI	BS	WG	CG
1992	2.10	1.74	2.80	0.00	0.34	0.08	3.32
1993	1.21	0.87	2.38	0.00	0.24	0.11	2.66
1994	1.06	0.42	1.66	0.00	0.10	0.14	2.87
1995	1.20	0.56	4.07	0.00	0.28	0.24	2.65
1996	1.10	0.80	3.49	0.00	0.40	0.47	2.72
1997	2.43	0.81	4.75	0.00	0.17	0.26	4.63
1998	0.57	0.64	3.04	0.00	0.08	0.22	5.15
1999	1.07	1.21	6.13	a	0.48	0.42	5.28
2000	1.68	1.14	3.91	a	0.15	0.58	4.72

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value of BS to protect the confidentiality of the small number of TCV Non-AFAs that reported catching these species in this subarea during the year.

Detailed information on the geographical distribution of the pollock, Pacific cod, rockfish, and flat fishcatch by vessels in the TCV Non-AFA class is presented in Figure 2.1.4-3 through Figure 2.1.4-6 for the years 1997 and 1998 combined. For comparison purposes the scale of catches by area in these figures is the same used for all trawl catches of each of the species shown, and that for pollock none of the catches of vessels in the TCV Non-AFA class reach the higer ends of the scale. Also note that in order to protect the confidentiality of catches ,only catches in areas in which four or more vessls reported landing s are shown.

Figure 2.1.4-3. Average Annual Pollock Catch of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998

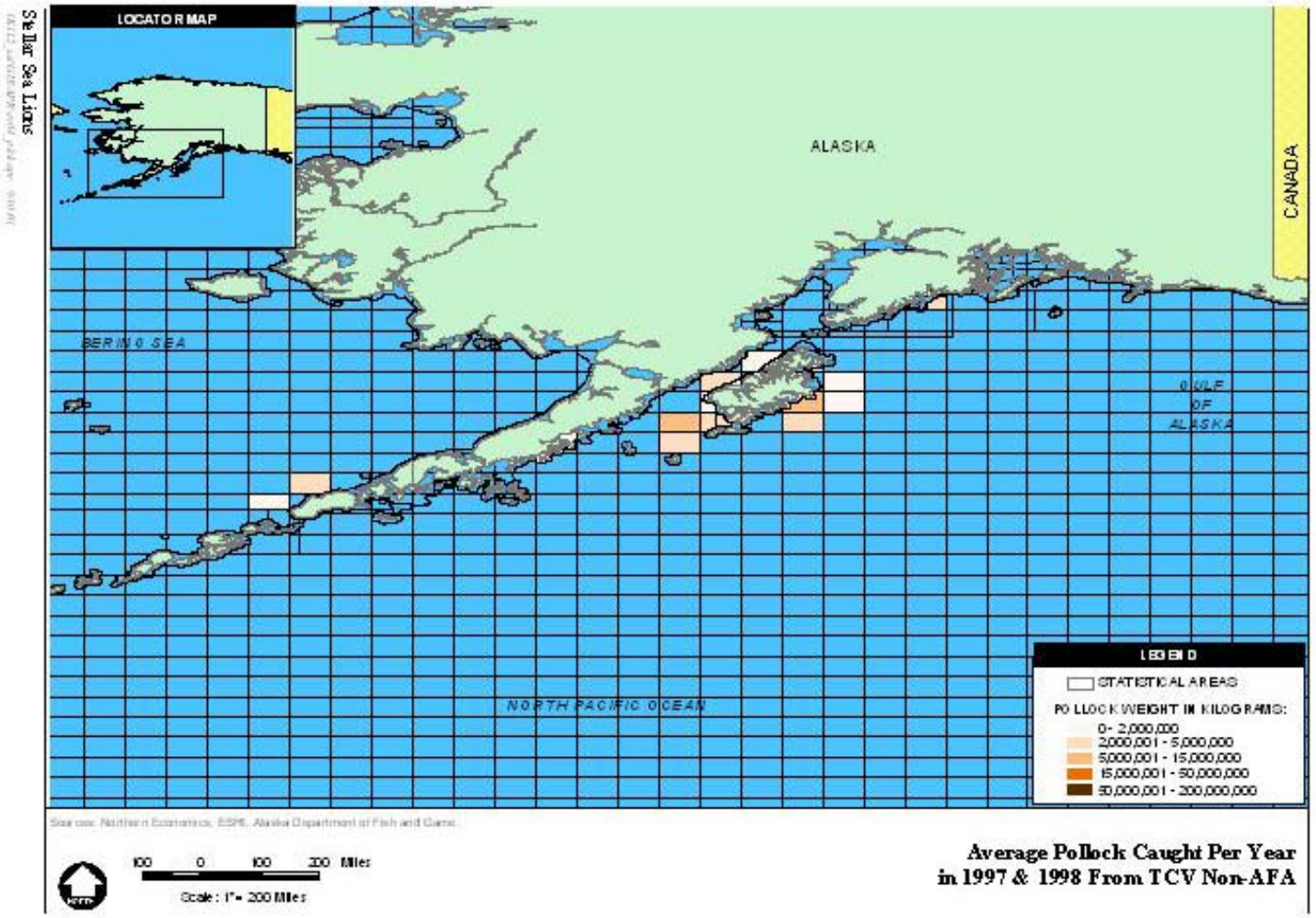


Figure 2.1.4-4. Average Annual Pacific Cod Catch of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998

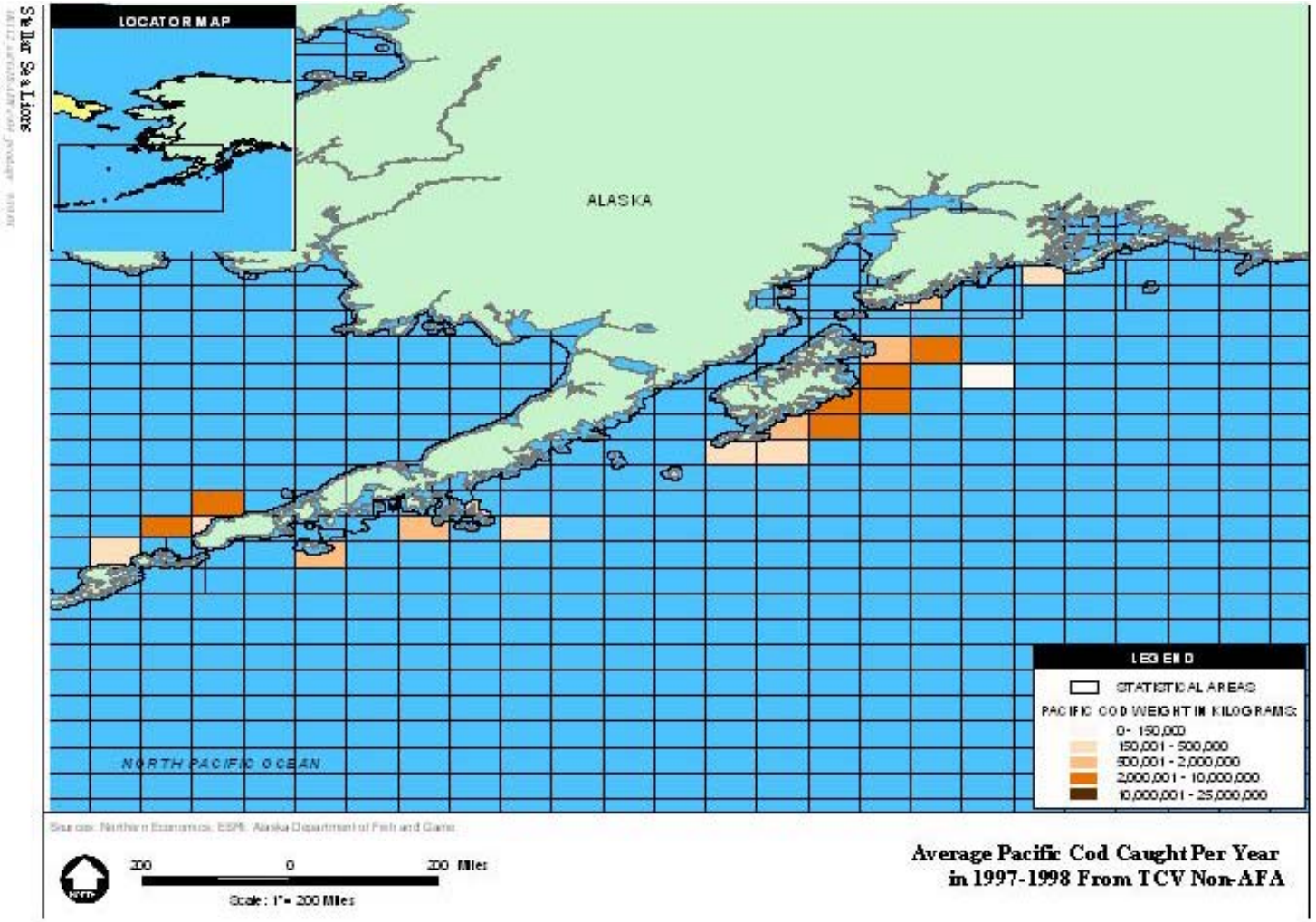


Figure 2.1.4-5. Average Annual Rockfish Catch of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998

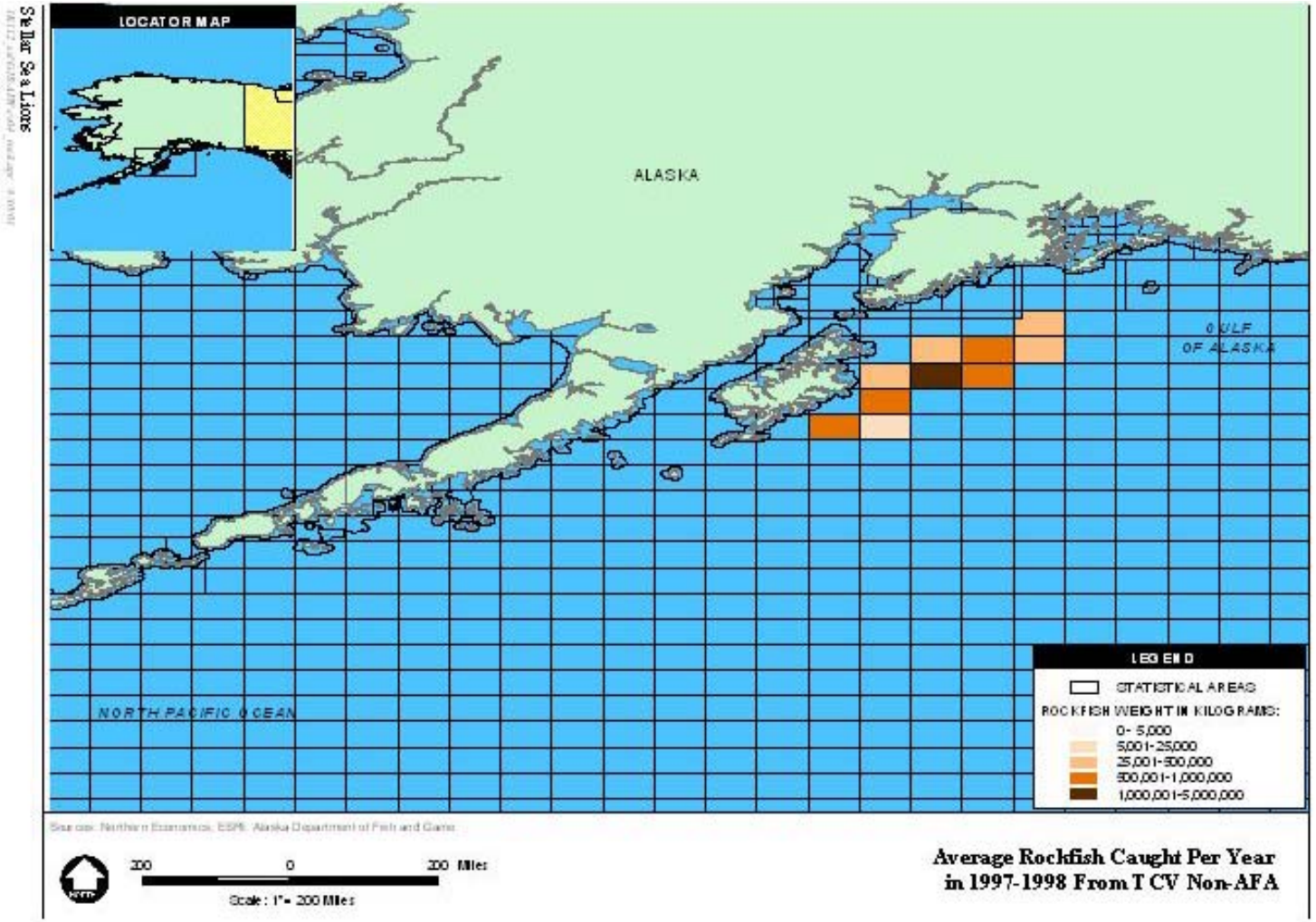
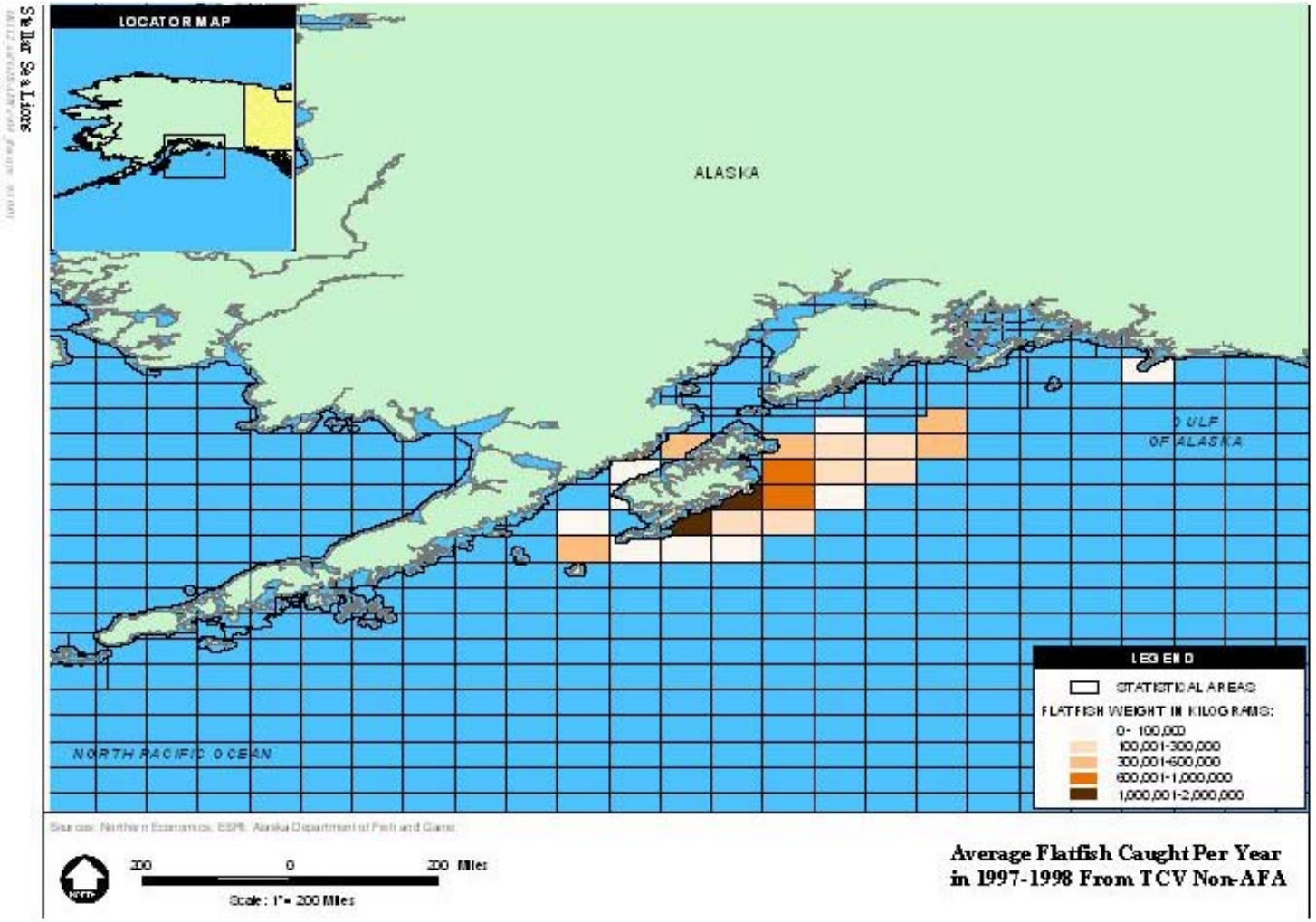


Figure 2.1.4-6. Average Annual Flatfish Catch of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, by Statistical Area, 1997-1998



The nearly exclusive reliance of the vessels in this class on trawl gear in the target groundfish fisheries is shown in Table 2.1.4-22, although it should be noted that the table does not include landings of halibut with longline gear—a fishery in which some vessels in the class participate.

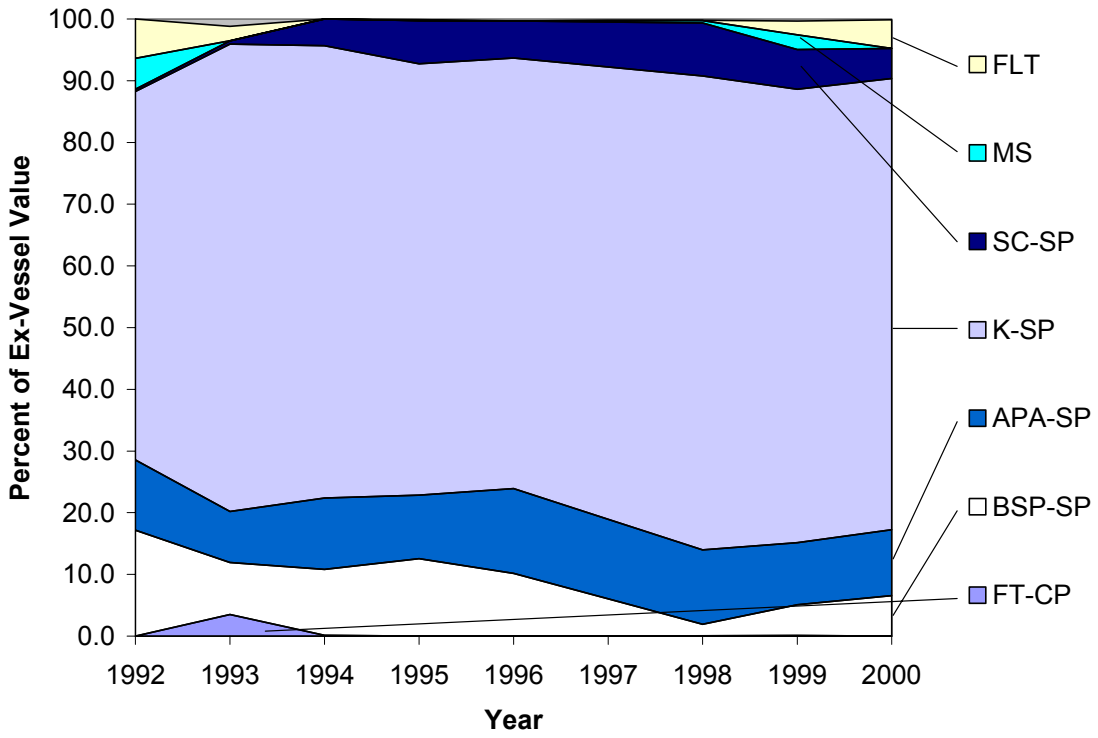
Table 2.1.4-22. Percent of Total Value by Gear in Top Three Target Fisheries by Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1996-2000

Year	Percent of Total Value				
	HAL	JIG-OTH	POT	TWL	Total
PCOD					
1996	0.0	0.0	4.5	95.5	100.0
1997	0.0	0.0	3.3	96.7	100.0
1998	0.0	0.0	2.2	97.8	100.0
1999	0.0	0.0	3.8	96.1	100.0
2000	0.0	0.0	1.4	98.6	100.0
PLCK					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0
FLAT					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.1	99.9	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Figure 2.1.4-7 shows the reliance of this vessel class on various processors from 1992 through 2000. Over the period shown the Kodiak shore plants (K-SP) have taken deliveries ranging from 69 to 76 percent of ex-vessel value in any given year. In 2000, K-SP account of 74 percent of revenues while APA-SP accounted for 11 percent.

Figure 2.1.4-7. Ex-Vessel Value Paid by Various Processor Classes to Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Data for 1997 is a simple average of the values for 1996 and 1998.

2.1.4.6 Crew Employment and Income

Vessels in the TCV Non-AFA class typically carry a crew off four including the skipper. One crewmember typically functions as the engineer in addition to filling a position on deck. One person may function as the cook, or that role may be shared among crewmembers. This analysis assumed an average crew size of four, including the skipper, for this type of vessel. Another 0.5 position was added to the average to account for vessel support staff. The actual number of crew depends primarily on vessel size.

Table 2.1.4-23 shows the estimated total number of crew (including skipper and administrative staff) in this class from 1992 through 2000. The estimated employment level for this vessel class was relatively stable after 1996, ranging between 171 and 180. Each year's estimate was derived by multiplying the average crew size by the number of unique vessels with landings in that year. The number of crewmember months was used to estimate FTE employment based on the assumption that crewmembers work an average of 16 hours per day for an average 15 days for every month their vessel is active. The total number of estimated crewmember hours is then divided by the 2080 hours per year.

Table 2.1.4-23. Number of Crewmembers and Crewmember Months by Species Group for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Number of Crew Members	Crewmember Months			Groundfish FTE
		Groundfish	Non-Groundfish	All Species	
1992	216.0	1,202	239	1,368	139
1993	180.0	1,013	252	1,202	117
1994	144.0	873	162	968	101
1995	157.5	851	176	968	98
1996	153.0	1,008	207	1,112	116
1997	171.0	1,085	194	1,184	125
1998	180.0	1,049	207	1,197	121
1999	175.5	1,134	216	1,274	131
2000	171.0	918	27	941	106

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Crewmembers typically are paid a share of the gross revenue. A share may be calculated as a portion of gross revenue such as gross revenue less food and fuel expenditures or gross revenue less food, fuel, and landing tax expenditures). Individual crew shares are about 6 to 10 percent of the gross revenue after expenditures have been subtracted. This analysis assumes that 40 percent of ex-vessel revenue goes to payments for labor.[16]

Table 2.1.4-24 presents estimated payments to labor in groundfish and non-groundfish fisheries over time. Payments to labor have varied widely as a result of fluctuations in ex-vessel revenues. Labor payments per vessel in groundfish and non-groundfish fisheries are shown in Table 2.1.4-25. Labor payments per crewmember are shown in Table 2.1.4-26. In three of the last four years payments to labor per FTE have exceeded $50,000.

Table 2.1.4-24. Payments to Labor by Species Group for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	$Millions		
	Groundfish	Non-Groundfish	All Species
1992	5.31	0.64	5.96
1993	3.89	1.02	4.90
1994	3.62	0.62	4.24
1995	4.52	1.17	5.69
1996	4.99	1.25	6.24
1997	8.89	1.72	10.61
1998	4.75	1.07	5.82
1999	6.69	1.28	7.97
2000	6.56	0.27	6.84

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[16] The analysis makes no assumptions about profits earned by the vessel owner, as no data were available to estimate operating costs,

Table 2.1.4-25. Payments to Labor Per Vessel by Species Group for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

	Payments to Labor Per Vessel ($)		
Year	Groundfish	Non-Groundfish	All Species
1992	110,695	13,369	124,063
1993	97,135	25,442	122,577
1994	113,068	19,407	132,476
1995	129,262	33,417	162,679
1996	146,905	36,769	183,674
1997	233,863	45,349	279,212
1998	118,736	26,839	145,575
1999	171,649	32,837	204,486
2000	172,723	7,179	179,902

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.4-26. Number of Crewmembers and Labor Payments Per Crewmember by Species Group for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Number of Crew Members	Labor Payments per Crewmember ($)			Groundfish Labor Payments per FTE ($)
		Groundfish	Non-Groundfish	All Species	
1992	216.0	24,599	2,971	27,570	38,326
1993	180.0	21,586	5,654	27,239	33,258
1994	144.0	25,126	4,313	29,439	35,919
1995	157.5	28,725	7,426	36,151	46,102
1996	153.0	32,646	8,171	40,816	42,945
1997	171.0	51,970	10,078	62,047	71,018
1998	180.0	26,386	5,964	32,350	39,258
1999	175.5	38,144	7,297	45,441	51,162
2000	171.0	38,383	1,595	39,978	61,965

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.4.7 Regional Residence of Vessel Owners

Table 2.1.4-27 presents information on the residence of owners of vessels in this class. A fairly stable ownership pattern by Alaska residents is evident. Between 11 and 15 of the vessels were registered to residents of Kodiak between 1992 and 2000. Other Alaska residents were the registered owners of another three to eight vessels. Residents of WAIW and ORCO owned most of the remaining vessels.

The owner's residence is an important factor because most of the regional economic impact of catcher vessel operations occurs in the owner's region of residence. Table 2.1.4-28 shows the ex-vessel revenue accruing to each region. Table 2.1.4-29 and Table 2.1.4-30 show the crewmember months and payments to labor accruing to each region. It was assumed that all crewmembers of a particular vessel and home office staff reside in the vessel owner's region of residence.

Table 2.1.4-27. Number of Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length Landing Groundfish, by Region of Owner, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	5	14	3	0	18	4	4	48
1993	3	13	3	0	14	4	3	40
1994	2	14	1	0	11	2	2	32
1995	4	11	2	0	10	4	4	35
1996	3	10	2	0	11	5	3	34
1997	3	15	2	0	8	6	4	38
1998	3	13	3	0	9	6	6	40
1999	3	12	2	0	10	6	6	39
2000	3	12	2	0	9	6	6	38

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001

Table 2.1.4-28. Ex-Vessel Revenue by Vessel Owner's Region for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	1.14	3.99	0.64	0.00	5.35	0.87	1.16	13.28
1993	0.45	3.65	0.56	0.00	3.50	0.95	0.68	9.71
1994	0.35	4.38	0.18	0.00	3.29	0.47	0.53	9.05
1995	0.77	3.62	0.35	0.00	3.55	1.13	1.59	11.31
1996	0.90	3.98	0.37	0.00	4.40	1.77	1.03	12.49
1997	1.53	9.80	0.64	0.00	5.07	3.00	1.93	22.22
1998	0.72	4.03	0.58	0.00	2.80	1.79	1.77	11.87
1999	1.17	6.48	0.61	0.00	4.26	2.69	2.79	16.74
2000	0.99	5.57	0.62	0.00	4.07	2.30	2.71	16.41

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted average revenue per vessel.

Table 2.1.4-29. Crewmember Months by Vessel Owner's Region for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	Crewmember Months							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	125	350	75	0	451	100	100	1,202
1993	76	329	76	0	354	101	76	1,013
1994	55	382	27	0	300	55	55	873
1995	97	267	49	0	243	97	97	851
1996	89	296	59	0	326	148	89	1,008
1997	86	428	57	0	228	171	114	1,085
1998	79	341	79	0	236	157	157	1,049
1999	87	349	58	0	291	174	174	1,134
2000	72	290	48	0	217	145	145	918

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the number of crewmember months.

Table 2.1.4-30. Payments to Labor by Vessel Owner's Region for Non-AFA Trawl Catcher Vessels Greater Than 60 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	0.46	1.60	0.26	0.00	2.14	0.35	0.46	5.31
1993	0.18	1.46	0.22	0.00	1.40	0.38	0.27	3.89
1994	0.14	1.75	0.07	0.00	1.31	0.19	0.21	3.62
1995	0.31	1.45	0.14	0.00	1.42	0.45	0.64	4.52
1996	0.36	1.59	0.15	0.00	1.76	0.71	0.41	4.99
1997	0.61	3.92	0.26	0.00	2.03	1.20	0.77	8.89
1998	0.29	1.61	0.23	0.00	1.12	0.72	0.71	4.75
1999	0.47	2.59	0.25	0.00	1.70	1.07	1.12	6.69
2000	0.40	2.23	0.25	0.00	1.63	0.92	1.09	6.56

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted payments to labor.

2.1.5 Trawl Catcher Vessels Less than 60 feet in Length (TCV < 60)

This catcher vessel class includes all vessels for which trawl catch accounts for more than 15 percent of total catch value, vessel length is less than 60 ft., and the total value of groundfish catch is greater than $2500.

The TCV < 60 fleet is treated as a distinct class because of differences between these vessels and larger trawling catcher vessels. In particular, vessels in the TCV < 60 class are allowed to participate in the State of Alaska commercial seine fisheries for salmon. Alaska's limited entry program for salmon fisheries established a 58-foot length limit for seine vessels entering these fisheries after 1976. Many trawl catcher vessels less than 60 feet in length were built to be salmon purse seine vessels, while others were designed to function as both trawlers and seiners.

Vessels in the TCV < 60 class are distinct from fixed gear vessels greater than 32 feet and less than 60 feet because of their ability and propensity to use trawl gear. Vessels in the TCV < 60 class have larger engines, more electronics, larger fish holds and the necessary deck gear and nets to operate in the trawl fisheries. Similar-sized fixed gear vessels that participate in commercial salmon fisheries with seine gear have not made the necessary investment to participate in the trawl fisheries.

2.1.5.1 Class Characteristics

Vessels in this class typically were constructed for use in the salmon purse seine fishery. These vessels have the cabin set forward, a relatively large working deck aft, and the fish hold amidships. Vessels originally designed as purse seine vessels have booms and hydraulic winches that enable them to handle the nets and other trawl equipment. Most vessels in this class are constructed of steel or fiberglass, with steel the preferred material for larger vessels. Relatively few vessels are constructed of wood or aluminum.

The description of trawling in Subsection 2.1.1.3 is generally appropriate for vessels in the TCV < 60 class although there are some differences because of the smaller size of these vessels.

Trawling equipment on these vessels is often mounted toward the aft part of the working deck because the fish hold is amidships or further forward. The trawl reel is mounted on the deck so that it can retrieve the trawl gear over the stern. Concerns about vessel stability typically prevent small trawl vessels from mounting the trawl reel forward near the cabin and above the deck as is often done on larger trawl catcher vessels. On those vessels not constructed with a stern ramp the trawl is brought onboard over the side, as in a purse seine operation. Depending on the size of the harvest, the cod-end (that portion of the net that holds the catch) may be hauled onboard or towed by the vessel to a processor. At times, the cod end may be very heavy and cannot be brought onboard without creating an unsafe condition such as a severe list. In such circumstances, the crew may use a small net with a handle (brailer) to move part of the catch into the fish hold until the cod end is light enough to haul aboard.

In 2000, vessels in the TCV < 60 class had an average length of 57 feet and ranged from 41 to 58 feet. The vessels have an average horsepower rating of about 410, with a maximum of about 700 and a minimum of 160. Average gross tonnage is approximately 77 tons and average hold capacity is 1,900 cubic feet—45 percent less than vessels in the TCV Non-AFA class. (CFEC, 2001). Table 2.1.5-1 shows the distribution of vessels by length. In 1995 many owners in the class changed the way they reported their vessel's length to management agencies (from registered length to length overall). (Stewart, 1999). This reporting change explains the sudden change from lengths less than 50 feet to lengths greater than 50 feet in the class.

Table 2.1.5-1. Number of Trawl Catcher Vessels Less Than 60 Feet in Length, by Vessel Length, 1992-2000

Year	Vessel Length							
	25'-28'	29'-32	33-39'	40'-44'	45'-49'	50'-54'	55'-59	Total
1992	0	0	0	0	34	8	16	58
1993	0	0	0	2	35	10	19	66
1994	0	0	0	0	33	8	19	60
1995	0	0	0	0	23	7	25	55
1996	0	0	0	2	3	8	45	58
1997	1	1	1	0	3	8	47	61
1998	0	0	0	0	2	7	45	54
1999	0	0	1	0	2	6	42	51
2000	0	0	0	1	1	4	40	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

The larger vessels in the TCV < 60 class typically are equipped with RSW systems to keep the catch cold. These systems chill seawater and circulate it through the fish hold. Vessels that are too small to install RSW systems or cannot afford the cost typically use ice in the fish holds to keep the catch cool. Ice melts over time and loses its effectiveness in maintaining the temperature of the fish. Consequently, a vessel without a RSW system is limited to shorter trips.

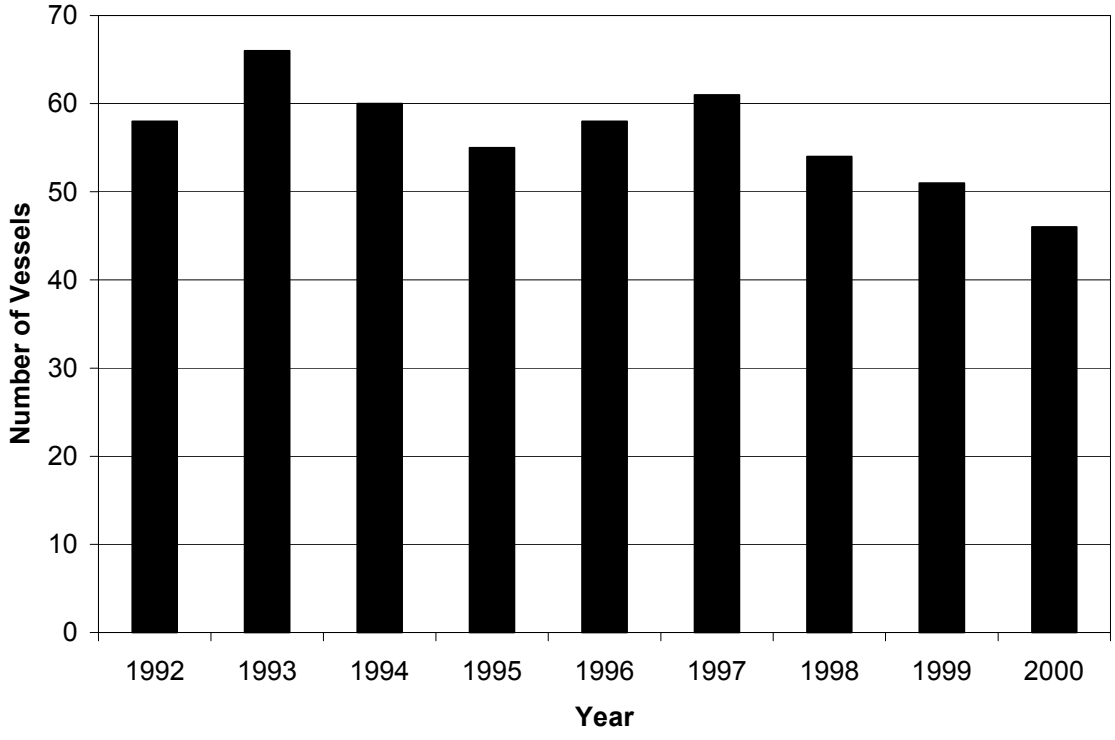
More than 80 percent of TCV < 60 vessels are owned by Alaska residents. These Alaska vessels generally make short fishing trips, returning to their home port at the end of the trip and delivering to a shorebased processor at the port. The crew typically resides in this community. Nonresident vessels also make short trips, returning to the port from which they typically operate while in Alaska and delivering to a shorebased plant.

The catch is offloaded by various means, depending on the technology employed at the plant, type of vessel, and, to some extent, on the species harvested. Large suction hoses are used at a number of plants to offload vessels with RSW systems and species that can be transported by suction (for example, pollock, Pacific cod, and smaller flatfish). Small dock cranes may be used to offload large rockfish and similar species by raising the catch in brailers from the fish hold to the dock level. Vessels with ice are more often offloaded in this manner than vessels with RSW systems.

2.1.5.2 Class Participation

The number of vessels in this class increased steadily from 1989 through 1993. This increase coincided with development of domestic, shorebased fisheries in the WG and CG FMP subareas of the GOA, where most of these vessels participate. From 1994 through 2000 the number of vessels in the TCV < 60 class remained between 46 and 61(Figure 2.1.5-1).

Figure 2.1.5-1. Number of Active Trawl Catcher Vessels Less Than 60 Feet in Length,1992-2000



Source: CFEC/ADFG Fish Ticket Data, June 2001.

Of the vessels in the TCV < 60 class that were active in the groundfish fishery in 2000, the average number of years since 1992 in which a vessel was active was 8.13, with a minimum of one year and a maximum of nine years. Of those vessels that were not active in 2000, the average number of years of participation was 3.21, with a minimum of one and a maximum of eight.

2.1.5.3 Description of Fishing Operations

The primary groundfish target species of trawling vessels in this class are Pacific cod and pollock. Compared to larger trawling catcher vessels, TCV < 60 vessels tend more to target Pacific cod for the following reasons:

- Inability of smaller vessels to compete effectively against larger vessels harvesting pollock
- Limited capacity of these smaller vessels creates an incentive to harvest a species with a value per pound higher than that of pollock
- Limited horsepower makes it more difficult to use pelagic trawls and avoid bycatch
- Pacific cod fishing grounds tend to be nearer to shore than pollock fishing grounds
- Inability of vessels of this size to operate in foul weather
- Restrictions on the ability of trawlers that target pollock to operate in other fisheries

The length and width of vessels in the TCV < 60 class hinder their ability to operate in portions of the BS or GOA during the periods of poor weather that can occur during Pacific cod and pollock fishing seasons. As a result, vessels in this class may fish fewer days than larger vessels.

When vessels in this class are able to operate during the groundfish season size hinders the amount of fish they can store. Because these vessels must return to port frequently to offload catch, restrict the

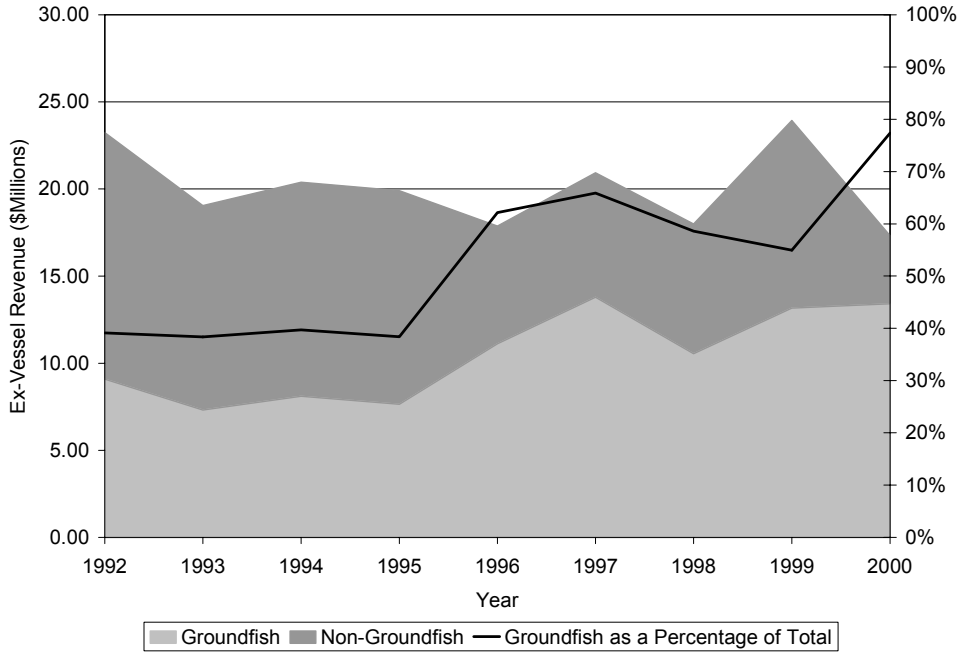
size of their trawl net, or both, they have less fishing time and are less competitive compared to larger trawl catcher vessels. Size also constrains capacity in terms of equipment. Whereas larger TCVs may install auxiliary engines to control nets, smaller vessels may not have the capacity to accommodate such equipment. Inability to install auxiliary engines restricts the hauling capacity that can be exerted on the trawling reel, thereby limiting ability to control the net. This limitation affects competitiveness under new trawling restrictions that have eliminated bottom trawling for BSAI pollock. In spite of apparent competitive shortcoming compared to larger trawl vessels, the ability of these vessels to participate in salmon fisheries gives vessels in the TCV < 60 class options for revenue generating activities not available to larger vessels.

Although bottom trawling has been restricted, the fact remains that pollock reside near the ocean bottom, during certain periods of the year. Therefore, a pollock trawler has an incentive to fish its gear as close to the bottom as possible without hanging up the net. Vessels with auxiliary engines can raise and lower their trawl gear above underwater pinnacles or down into canyons in a more controlled manner than vessels without auxiliary engines. The latter must either fish their gear at a relatively shallow depth or in areas where such control is not needed, or risk losing their trawls and doors.

2.1.5.4 Dependence on Groundfish and Annual Cycle of Operations

Groundfish accounted for between 38 and 77 percent of total ex-vessel value during the 1992-2000 period (Figure 2.1.5-2 and Table 2.1.5-2). The decline in non-groundfish revenue after 1995 was primarily the result of a drop in salmon landings. In 1999, the most recent year for which landings data for all non-groundfish species are available, the ex-vessel value per vessel from groundfish accounted for about 75 percent of the ex-vessel value for all species (Table 2.1.5-3).

Figure 2.1.5-2. Ex-Vessel Value of Harvest in Major Alaska Fisheries for Trawl Catcher Vessels Less Than 60 Feet in Length,1992-2000



Source: CFEC/ADFG Fish Ticket Data

Table 2.1.5-2. Number of Vessels and Total Ex-Vessel Value by Species Group for Trawl Catcher Vessels Less Than 60 Feet in Length,1992-2000

Year	Number of Vessels	$Millions		
		Groundfish	Non-Groundfish	All Species
1992	58	9.09	14.15	23.23
1993	66	7.31	11.74	19.05
1994	60	8.10	12.30	20.39
1995	55	7.65	12.26	19.91
1996	58	11.11	6.77	17.87
1997	61	13.79	7.14	20.92
1998	54	10.55	7.45	17.99
1999	51	13.16	10.79	23.94
2000	46	13.40	3.92	17.32

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Table 2.1.5-3. Number of Vessels and Ex-Vessel Value Per Vessel by Species Group for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

Year	Number of Vessels	Ex-Vessel Value Per Vessel ($)		
		Groundfish	Non-Groundfish	All Species
1992	58	156,648	243,905	400,554
1993	66	110,750	177,893	288,643
1994	60	134,946	204,928	339,874
1995	55	139,001	222,933	361,934
1996	58	191,494	116,687	308,180
1997	61	226,007	116,988	342,995
1998	54	195,280	137,938	333,219
1999	51	257,950	211,522	469,472
2000	46	291,410	85,175	376,585

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001
Note: Value of halibut landings is not included for 2000

Vessels in the TCV < 60 class participate in multiple fisheries and generally take full advantage of locally available fishery resources. These resources can differ significantly across different fishery management areas. Salmon harvesting is important to the economic viability of most vessels in this class. A significant percentage of the vessels also participate in the sablefish and halibut longline IFQ fisheries. Table 2.1.5-4 and Table 2.1.5-5 provide additional detail about the relative importance of groundfish to vessels in the TCV < 60 class. In 1999, 38 vessels in this class made landings of salmon and 22 vessels made landings of halibut. These species accounted for 95 percent of the ex-vessel value of non-groundfish landings in that year.

Table 2.1.5-4. Number of Trawl Catcher Vessels Less Than 60 Feet in Length Participating in Non-Groundfish Fisheries, by Species, 1992-2000

Year	Number of Vessels				
	Salmon	Crab	Halibut	Other	Total
1992	45	3	43	16	58
1993	50	11	43	17	64
1994	45	12	52	14	59
1995	43	17	27	12	51
1996	44	10	26	17	55
1997	45	5	25	18	55
1998	40	3	25	15	49
1999	38	1	22	12	47
2000	39	4	a	11	40

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
[a] Value for halibut is not available.

Table 2.1.5-5. Ex-Vessel Value of Non-Groundfish Species Harvested by Trawl Catcher Vessels Less Than 60 Feet in Length, by Species, 1992-2000

Year	Ex Vessel Value ($Millions)				
	Salmon	Crab	Halibut	Other	Total
1992	11.82	a	1.91	0.42	14.15
1993	8.82	0.51	1.70	0.71	11.74
1994	7.15	0.87	3.60	0.67	12.30
1995	9.33	0.71	1.83	0.38	12.26
1996	3.47	0.31	1.87	1.11	6.77
1997	3.89	0.21	2.50	0.54	7.14
1998	5.47	a	1.61	0.37	7.45
1999	7.81	a	2.39	0.59	10.78
2000	3.34	0.20	b	0.38	3.92

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001
[a] Combined with the value for halibut due to confidentiality restrictions.
[b] Value for halibut is not available.

Table 2.1.5-6 shows ex-vessel value by month in 1999 and 2000 from groundfish and from all other species. Vessels in this class rely heavily on salmon and to some extent of seining for herring. Alaska salmon fisheries start in May, but vessels in the TCV < 60 class typically do not begin salmon fishing until June, when Kodiak and False Pass salmon returns begin. The salmon season in areas such as Area M, Kodiak, Prince William Sound, and Southeast Alaska may continue with high participation until late August or early September. Herring fisheries typically begin in Southeast Alaska in March and continue as seasons commence along areas up the GOA coast to Bristol Bay (there are several small herring fisheries further north on the Bering Sea coast and in the fall). The last Bristol Bay herring fishery usually occurs in May. Halibut, which is managed with Individual Fishing Quotas (IFQs), is also an important fishery for the TCV < 60 class—landing are made throughout the open season from March 15 through November 15.

The number of vessels participating in and ex-vessel value from groundfish and non-groundfish fisheries by trimester are shown in Table 2.1.5-7 and Table 2.1.5-8, respectively. The number of vessels participating groundfish and non-groundfish fisheries by month is shown in Table 2.1.5-9. Vessels in the TCV < 60 class were active every month with the exception of December. Peak periods of activity in groundfish fisheries occur in February, March, and September. Groundfish fisheries participation also occurs in April, May, June, and October, but not at peak levels. Peaks in non-groundfish fishing activity coincide with the salmon season in June, July, and August.

Table 2.1.5-6. Ex-Vessel Value of Groundfish, Salmon, Crab, Halibut, and Other Species Harvested by Trawl Catcher Vessels Less Than 60 Feet in Length, by Month, 1999-2000

Year		$Millions												
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1999	Salmon	0.00	0.00	0.00	0.00	0.00	1.54	2.57	3.64	0.06	0.00	0.00	0.00	7.81
	Crab	a	a	a	a	a	a	a	a	a	a	a	a	a
	Halibut	0.00	0.00	0.00	0.19	0.81	0.31	0.08	0.16	0.23	0.44	0.17	0.00	2.22
	Other	0.00	0.00	0.06	0.00	0.01	0.00	0.40	0.00	0.12	0.00	0.00	0.00	0.59
	Groundfish	1.14	3.96	3.77	1.42	0.62	0.68	0.00	0.12	1.12	0.30	0.01	0.03	13.16
2000	Salmon	0.00	0.00	0.00	0.00	0.00	1.43	1.13	0.73	0.06	0.00	0.00	0.00	3.34
	Crab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.20
	Halibut	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Other	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.14	0.01	0.00	0.00	0.38
	Groundfish	1.68	4.06	3.74	1.97	0.56	0.37	0.03	0.50	0.05	0.44	0.00	0.00	13.40

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with the value for halibut due to confidentiality restrictions.

Table 2.1.5-7. Number of Trawl Catcher Vessels Less than 60 Feet in Length with Groundfish Landings by Trimester, 1992-2000

Year	Number of Vessels			
	Jan-Apr	May-Aug	Sep-Oct	Total
1992	57	21	12	58
1993	65	24	14	66
1994	59	25	31	60
1995	55	24	18	55
1996	57	19	26	58
1997	60	37	33	61
1998	53	26	31	54
1999	50	25	24	51
2000	46	21	14	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-8. Ex-Vessel Value of Harvest of Groundfish by Trawl Catcher Vessels Less than 60 Feet in Length by Trimester, 1992-2000

Year	$Millions			
	Jan-Apr	May-Aug	Sep-Dec	Total
1992	7.70	1.13	0.25	9.09
1993	5.37	1.70	0.23	7.31
1994	5.35	1.80	0.95	8.10
1995	5.52	1.24	0.89	7.65
1996	8.45	1.06	1.60	11.11
1997	10.03	1.46	2.29	13.79
1998	7.59	1.19	1.77	10.55
1999	10.28	1.42	1.46	13.16
2000	11.46	1.46	0.48	13.40

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-9. Number of Trawl Catcher Vessels Less Than 60 Feet in Length with Groundfish Landings, by Month, 1992-2000

Year	Number of Vessels												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1992	41	54	55	26	16	12	9	4	6	10	0	0	58
1993	6	57	63	8	15	15	10	4	5	10	2	1	66
1994	42	55	58	7	19	5	8	0	14	15	7	9	60
1995	49	52	55	13	9	16	11	2	6	14	3	0	55
1996	55	56	56	11	7	9	5	6	19	17	7	1	58
1997	54	59	58	20	21	20	8	1	27	12	7	1	61
1998	51	51	51	40	7	23	2	0	25	23	5	1	54
1999	39	50	49	43	13	17	0	3	21	11	3	6	51
2000	41	45	46	45	9	3	1	13	2	13	0	0	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.5.5 Catch and Value in Groundfish Fisheries

Table 2.1.5-10 shows the number of vessels that had retained harvests of the four groundfish species aggregations used in this analysis. Vessels in the TCV < 60 class focus their effort on Pacific cod in the WG and CG FMP areas of the GOA. Pollock is also an important trawl species, while sablefish (a component of the ARSO species aggregation) harvested with longline gear makes a substantial contribution to the overall revenue of the class.

Table 2.1.5-10. Number of Trawl Catcher Vessels Less than 60 Feet in Length by Species, 1992-2000

	Number of Vessels				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	19	15	57	31	58
1993	18	13	64	20	66
1994	23	19	59	26	60
1995	17	21	55	25	55
1996	30	27	56	30	58
1997	37	41	60	45	61
1998	28	33	54	42	54
1999	26	28	51	36	51
2000	26	26	46	31	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-11 and Table 2.1.5-12 provide information on retained landings and ex-vessel value by species group. From 1992 to 2000, total harvest volume for the class varied between 19,800 and 39,800 tons. In the same period, ex-vessel revenue ranged from a high of $14 million in 1997 to a low of $7 million in 1993.

Table 2.1.5-11. Retained Tons of Groundfish by Trawl Catcher Vessels Less than 60 Feet in Length by Species, 1992-2000

	Tons				
Year	ARSO	FLAT	PCOD	PLCK	Total
1992	326	787	17,935	3,116	22,163
1993	512	638	15,399	6,040	22,589
1994	629	352	13,954	10,156	25,091
1995	408	585	10,770	7,995	19,757
1996	605	1,922	19,386	10,596	32,509
1997	521	1,329	20,584	16,202	38,636
1998	485	670	19,101	19,502	39,758
1999	427	370	17,482	12,728	31,007
2000	262	547	13,922	11,331	26,061

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-12. Ex -Vessel Prices by Species for Trawl Catcher Vessels Less than 60 Feet in Length, 1992-2000

YEAR	ARSO		FLAT		PCOD		PLCK	
	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton	$ / Pound	$ / Ton
1992	$1.00	$2,207.14	$0.16	$349.02	$0.18	$407.67	$0.11	$250.41
1993	$1.02	$2,240.06	$0.15	$323.19	$0.15	$331.20	$0.06	$141.92
1994	$1.45	$3,203.16	$0.15	$327.41	$0.14	$308.63	$0.07	$163.56
1995	$1.66	$3,654.76	$0.19	$428.57	$0.19	$408.46	$0.09	$188.36
1996	$1.19	$2,625.71	$0.19	$408.95	$0.16	$347.79	$0.09	$187.84
1997	$1.47	$3,238.84	$0.17	$375.82	$0.17	$380.00	$0.11	$233.11
1998	$1.18	$2,603.32	$0.14	$315.48	$0.15	$330.43	$0.06	$141.54
1999	$1.15	$2,527.84	$0.15	$336.48	$0.24	$524.88	$0.10	$218.05
2000	$2.08	$4,575.07	$0.09	$198.56	$0.30	$663.51	$0.11	$252.37

Source: CFEC/ADFG Fish Ticket Data, June 2001

Table 2.1.5-13. Ex-Vessel Value of Harvest by Trawl Catcher Vessels Less than 60 Feet in Length by Species, 1992-2000

Year	$Millions				
	ARSO	FLAT	PCOD	PLCK	Total
1992	0.72	0.27	7.31	0.78	9.09
1993	1.15	0.21	5.10	0.86	7.31
1994	2.01	0.12	4.31	1.66	8.10
1995	1.49	0.25	4.40	1.51	7.65
1996	1.59	0.79	6.74	1.99	11.11
1997	1.69	0.50	7.82	3.78	13.79
1998	1.26	0.21	6.31	2.76	10.55
1999	1.08	0.12	9.18	2.78	13.16
2000	1.20	0.11	9.24	2.86	13.40

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Additional details on the number of vessels and ex-vessel value in target fisheries and the harvest volume and value by target species are presented in Table 2.1.5-14 through Table 2.1.5-17. While pollock accounted for 40 percent of total retained harvest by weight in 2000, it generated only 21 percent of the total ex-vessel value. Retained harvests of Pacific cod were only slightly higher than retained harvests of pollock, but because of Pacific cod's higher ex-vessel price, that species generated 69 percent of the total groundfish revenue for the class. Catch of species in the ARSO species aggregation, primarily sablefish in the longline IFQ fishery, accounted for only about one percent of retained harvest by weight in 2000, but nearly nine percent of total ex-vessel value.

Table 2.1.5-14. Number of Trawl Catcher Vessels Less Than 60 Feet in Length in Each Target Fishery, 1992-2000

Year	Number of Vessels						
	PLCK	PCOD	FLAT	ROCK	OT-AM	SABL	Total
1992	56	20	13	8	6	1	58
1993	63	18	14	5	7	1	66
1994	59	24	22	8	5	1	60
1995	55	21	12	7	4	0	55
1996	55	22	13	13	6	5	58
1997	60	37	12	13	9	4	61
1998	52	32	9	8	3	4	54
1999	50	27	7	3	2	2	51
2000	45	26	8	3	0	1	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-15. Ex-vessel Value of Total Catch in Top Three Target Fisheries by Trawl Catcher Vessels Less than 60 Feet in Length, 1992-2000

YEAR	$Millions			
	PCOD	PLCK	SABL	Total
1992	7.28	0.80	0.67	9.09
1993	5.04	0.91	1.14	7.31
1994	4.28	1.70	1.99	8.10
1995	4.37	1.54	1.47	7.65
1996	6.72	2.01	1.42	11.11
1997	7.80	3.82	1.62	13.79
1998	6.28	2.83	1.22	10.55
1999	9.18	2.79	1.03	13.16
2000	9.17	2.90	1.19	13.40

Note: Includes catches of all species in the target fishery listed. Total includes catches of all species in both target and non-target fisheries.
Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-16. Total Catch of Target Species by Trawl Catcher Vessels Less than 60 Feet in Length by Trimester, 1992-2000

Target	Thousands of Tons				
	Year	Jan-Apr	May-Aug	Sep-Dec	Total
PCOD	1992	17.7	0.1	0.0	17.7
	1993	15.2	0.0	0.0	15.2
	1994	13.6	0.0	0.2	13.8
	1995	10.4	0.0	0.1	10.6
	1996	19.1	0.0	0.0	19.1
	1997	19.6	0.5	0.2	20.2
	1998	18.5	0.0	0.3	18.8
	1999	16.9	0.2	0.2	17.3
	2000	13.7	0.0	0.0	13.7
PLCK	1992	1.5	0.9	0.5	2.9
	1993	1.7	3.2	1.1	5.9
	1994	6.3	2.4	1.4	10.1
	1995	5.2	2.2	0.5	8.0
	1996	3.5	0.4	6.6	10.5
	1997	6.1	2.0	7.9	16.1
	1998	7.0	3.8	8.6	19.4
	1999	5.4	2.0	5.2	12.7
	2000	7.5	2.0	1.8	11.3
SABL	1992	0.0	0.3	0.0	0.3
	1993	0.0	0.5	0.0	0.5
	1994	0.0	0.4	0.2	0.6
	1995	0.0	0.2	0.1	0.4
	1996	0.1	0.2	0.0	0.3
	1997	0.1	0.1	0.0	0.3
	1998	0.1	0.2	0.1	0.3
	1999	0.0	0.2	0.0	0.2
	2000	0.1	0.2	0.0	0.2

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-17. Ex-Vessel Value Total Catch of Target Species by Trawl Catcher Vessels Less than 60 Feet in Length by Trimester, 1992-2001

Target	Year	$Millions Jan-Apr	May-Aug	Sep-Dec	Total
PCOD	1992	7.19	0.02	0.02	7.23
	1993	5.01	0.00	0.00	5.01
	1994	4.19	0.00	0.08	4.26
	1995	4.27	0.01	0.04	4.32
	1996	6.62	0.00	0.01	6.63
	1997	7.41	0.18	0.09	7.68
	1998	6.10	0.00	0.11	6.21
	1999	8.85	0.14	0.13	9.11
	2000	9.13	0.03	0.00	9.16
PLCK	1992	0.36	0.24	0.14	0.73
	1993	0.25	0.42	0.17	0.84
	1994	1.04	0.39	0.23	1.66
	1995	0.96	0.44	0.11	1.50
	1996	0.68	0.07	1.23	1.97
	1997	1.42	0.47	1.86	3.75
	1998	1.00	0.53	1.22	2.75
	1999	1.17	0.44	1.13	2.74
	2000	1.90	0.50	0.45	2.85
SABL	1992	0.00	0.66	0.00	0.66
	1993	0.00	1.13	0.00	1.13
	1994	0.00	1.39	0.59	1.98
	1995	0.11	0.75	0.61	1.46
	1996	0.51	0.74	0.17	1.41
	1997	0.71	0.77	0.13	1.61
	1998	0.23	0.60	0.38	1.21
	1999	0.15	0.79	0.07	1.02
	2000	0.30	0.88	0.00	1.17

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-18 and Table 2.1.5-19 show the number of vessels and ex-vessel value of the TCV < 60 fleet by FMP subarea, respectively. WG and CG are by far the most important fishing areas for the class, accounting for about 90 percent of the ex-vessel value in 2000. The number of vessels with pollock and Pacific cod landings by FMP subarea are presented in Table 2.1.5-20, while Table 2.1.5-21 shows the ex-vessel value of the landings of these species by FMP subarea.

Recently, the State of Alaska annexed a portion of the Pacific cod harvest to create a Pacific cod fishery in state waters that is open to pot and jig gear. Some vessels in the TCV < 60 class have elected to change gear types in order to participate in this fishery.

Table 2.1.5-18. Number of Trawl Catcher Vessels Less than 60 Feet in Length by FMP Subarea, 1992-2000

	Number of Vessels					
Year	AI	BS	WG	CG	EG	Total
1992	0	5	45	51	4	58
1993	0	4	50	58	3	66
1994	0	3	42	55	8	60
1995	0	7	40	45	5	55
1996	0	3	40	55	5	58
1997	0	8	42	56	6	61
1998	0	4	41	50	6	54
1999	1	6	41	32	6	51
2000	1	15	40	13	5	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-19. Ex-Vessel Value of Harvest of Trawl Catcher Vessels Less than 60 Feet in Length by FMP Subarea, 1992-2000

	$Millions					
Year	AI	BS	WG	CG	EG	Total
1992	0.00	0.25	4.96	3.63	0.25	9.09
1993	0.00	0.06	3.79	3.46	b	7.31
1994	0.00	b	3.21	4.11	0.77	8.10
1995	0.00	0.07	2.93	4.10	0.54	7.65
1996	0.00	b	5.40	5.18	0.52	11.11
1997	0.00	0.08	6.97	6.15	0.58	13.79
1998	0.00	0.08	5.61	4.39	0.46	10.55
1999	a	0.12	9.75	2.85	0.42	13.16
2000	a	0.68	10.52	1.62	0.58	13.40

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Combined with value from BS to protect the confidentiality of the small number of TCV < 60s that reported catches in this subarea during the year.

[b] Combined with value from CG to protect the confidentiality of the small number of TCV < 60s that reported catches in this subarea during the year.

Table 2.1.5-20. Number of Trawl Catcher Vessels Less Than 60 Feet in Length with Pacific Cod and Pollock Landings by FMP Subarea, 1992-2000

Year	Number of Vessels												
	PCOD						PLCK						Total
	AI	BS	WG	CG	EG	Total	AI	BS	WG	CG	EG	Total	
1992	0	2	45	50	1	57	0	1	16	21	0	31	58
1993	0	3	50	56	1	64	0	2	8	11	1	20	65
1994	0	3	42	54	1	59	0	0	10	25	0	26	59
1995	0	6	40	45	0	55	0	2	12	21	0	25	55
1996	0	2	40	54	2	56	0	3	14	26	1	30	57
1997	0	7	41	56	1	60	0	7	27	35	0	45	61
1998	0	3	41	50	2	54	0	4	27	33	1	42	54
1999	1	6	41	31	2	51	0	6	26	24	0	36	51
2000	1	15	40	11	1	46	0	14	24	7	0	31	46

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-21. Ex-Vessel Value of Pacific Cod and Pollock Landings by Trawl Catcher Vessels Less than 60 Feet in Length by FMP Subarea, 1992-2000

Year	$Millions						
	PCOD			PLCK			
	AI-BS	WG	CG	AI	BS	WG	CG
1992	a	4.79	2.51	0.00	a	0.09	0.58
1993	a	3.26	1.78	0.00	a	0.46	0.39
1994	a	2.38	1.90	0.00	0.00	0.78	0.88
1995	0.03	1.85	2.53	0.00	a	0.96	0.50
1996	a	3.81	2.92	0.00	a	1.47	0.42
1997	a	5.33	2.48	0.00	0.07	1.50	2.20
1998	a	4.59	1.70	0.00	0.06	1.00	1.70
1999	0.01	7.67	1.50	0.00	0.12	2.05	0.61
2000	0.10	8.37	0.77	0.00	0.59	2.13	0.14

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[a] Data omitted to protect confidentiality.

Detailed information on the geographical distribution of the pollock and Pacific cod catch by vessels in the TCV < 60 class is presented in Figure 2.1.5-3 and Figure 2.1.5-4 for the years 1997 and 1998 combined. For comparison purposes the scale of catches by area in thiese figures is the same used for all trawl catches of each of the species shown, and that for pollock none of the catches of vessels in the TCV < 60 class reach the higer ends of the scale. Also note that in order to protect the confidentiality of catches, only catches in areas in which four or more vessls reported landing s are shown.

Figure 2.1.5-3. Average Annual Pollock Catch of Trawl Catcher Vessels Less Than 60 Feet in Length, by Statistical Area, 1997-1998

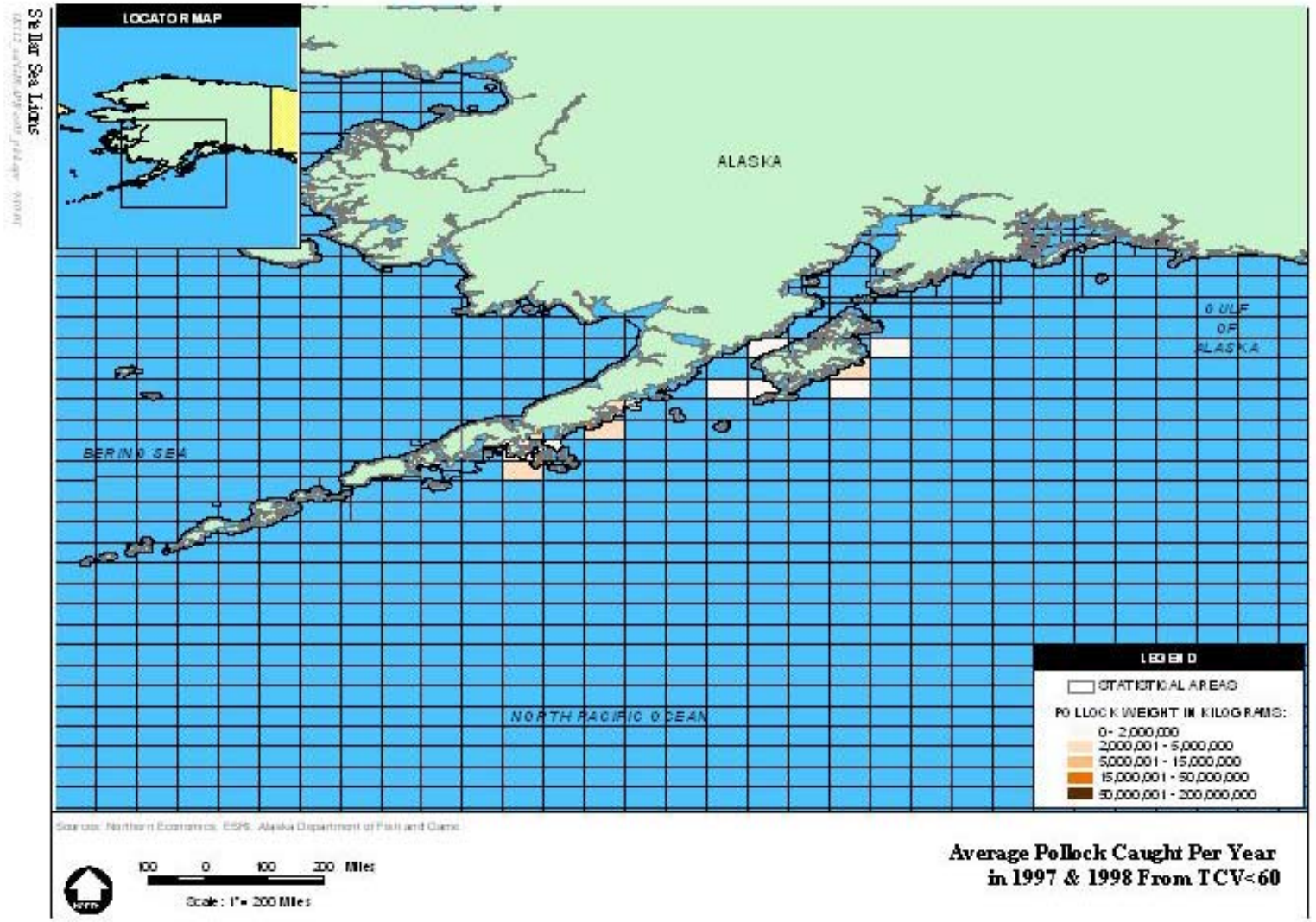
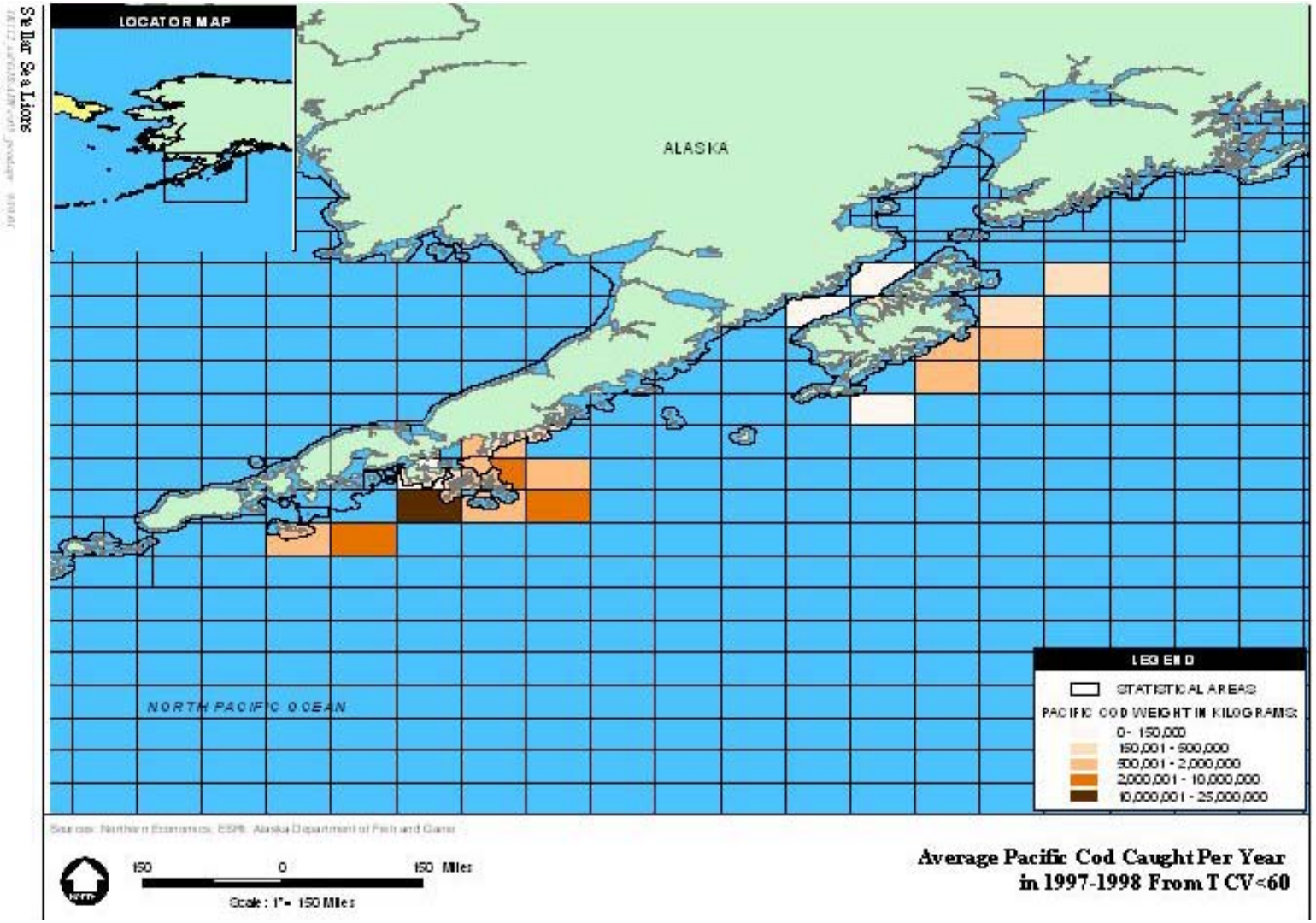


Figure 2.1.5-4. Average Annual Pacific Cod Catch of Trawl Catcher Vessels Less Than 60 Feet in Length, by Statistical Area, 1997-1998



The growing importance to vessels in this class of pot gear in harvesting Pacific cod is shown in Table 2.1.5-22.

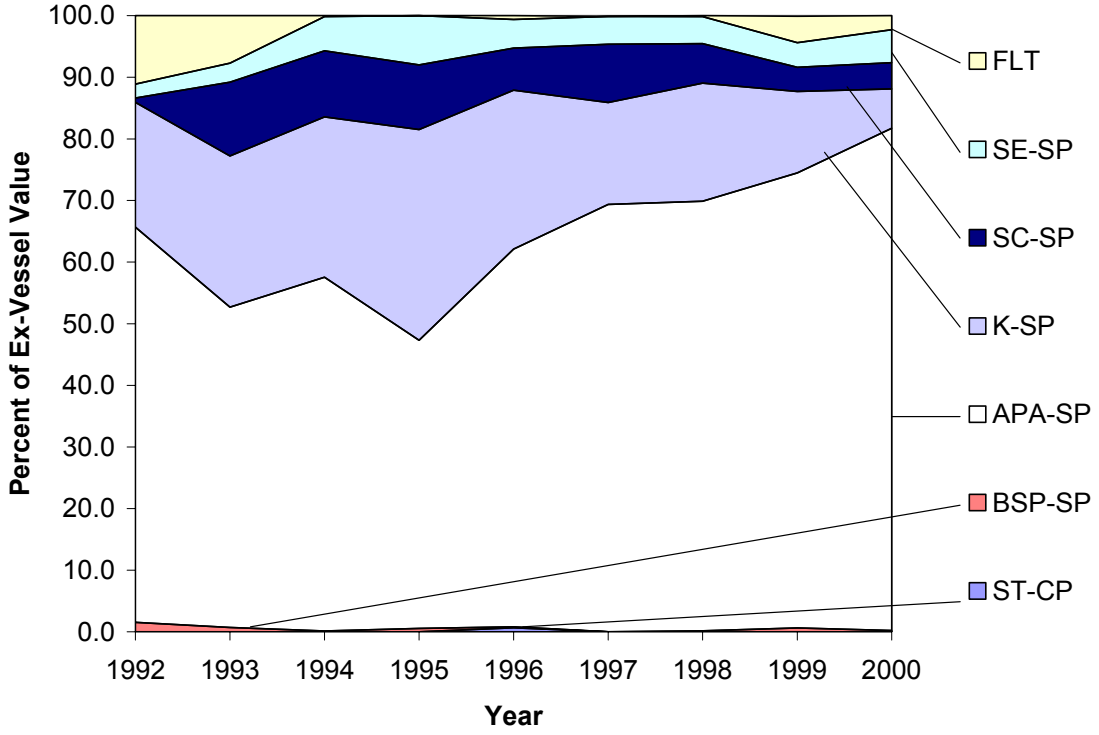
Table 2.1.5-22. Percent of Total Value by Gear in Top Three Target Fisheries by Trawl Catcher Vessels Less Than 60 Feet in Length, 1996-2000

Year	Percent of Total Value				
	HAL	JIG-OTH	POT	TWL	Total
PCOD					
1996	0.2	0.0	6.7	93.1	100.0
1997	0.0	0.0	8.5	91.4	100.0
1998	0.0	0.0	19.2	80.8	100.0
1999	0.0	0.0	31.5	68.5	100.0
2000	0.0	0.1	38.6	61.3	100.0
PLCK					
1996	0.0	0.0	0.0	100.0	100.0
1997	0.0	0.0	0.0	100.0	100.0
1998	0.0	0.0	0.0	100.0	100.0
1999	0.0	0.0	0.0	100.0	100.0
2000	0.0	0.0	0.0	100.0	100.0
SABL					
1996	91.5	0.0	0.0	8.5	100.0
1997	98.4	0.0	0.0	1.6	100.0
1998	97.0	1.9	0.0	1.1	100.0
1999	98.7	0.0	0.0	1.3	100.0
2000	100.0	0.0	0.0	0.0	100.0

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Figure 2.1.5-5 shows the reliance of the TCV < 60 fleet on various processors from 1992 through 2000. Vessel in the TCV < 60 class are increasingly relying on APA-SP for deliveries. In 2000, they revceived 82 percent of their revenue from APA-SP, up from 74 percent in 1999 and 70 percent in 1998. Processors in Kodiak are becoming less important to the TCV < 60 class, decline from 34 percent of ex-vessel value in 1995 to 6 percent in 2000.

Figure 2.1.5-5. Ex-Vessel Value Paid by Various Processor Classes to Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000



Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.5.6 Crew Employment and Income

The crew size on vessels in the TCV < 60 class typically range from three to four, including the skipper, depending on the fishery. Usually these crewmembers are employed in other fisheries as well.

This analysis assumed an average crew size of 3.5, including the skipper, for this type of vessel. Another 0.5 position was added to the average to account for vessel support staff. The actual number of crew depends primarily on the size of the vessel. Table 2.1.5-23 shows the estimated total number of crew (including skipper and administrative staff) in this class for each year between 1992 and 2000. Each year's estimate was derived by multiplying the average crew size by the number of unique vessels with landings in that year. The number of crewmember months was used to estimate FTE employment based on the assumption that crewmembers work an average of 16 hours per day for an average 15 days for every month their vessel is active. The total number of estimated crewmember hours is then divided by the 2080 hours per year. Since 1992, total estimated employment in the TCV < 60 class has varied between 184 and 264.

Table 2.1.5-23. Number of Crewmembers and Crewmember Months by Species Group for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

Year	Number of Crew Members	Crewmember Months			Groundfish FTE
		Groundfish	Non-Groundfish	All Species	
1992	232.0	1,202	788	1,620	139
1993	264.0	1,013	880	1,536	117
1994	240.0	873	924	1,756	101
1995	220.0	851	728	1,460	98
1996	232.0	1,008	704	1,568	116
1997	244.0	1,085	628	1,588	125
1998	216.0	1,049	600	1,560	121
1999	204.0	1,134	600	1,488	131
2000	184.0	918	496	1,296	106

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Crewmembers are typically paid on a share basis. A share may be calculated as a portion of gross revenue such as gross revenue less food and fuel expenditures or gross revenue less food, fuel, and landing tax expenditures. Individual crew shares are about six to ten percent of the gross revenue after expenditures have been subtracted. This analysis assumes that 40 percent of ex-vessel revenue goes to payments for labor.[17]

Estimated payments to labor over time in groundfish and non-groundfish fisheries are shown in Table 2.1.5-24. Estimated payments to labor were relatively stable from 1992 through 1995, but jumped in 1996 and 1997. Labor payments per vessel in groundfish and non-groundfish fisheries are shown in Table 2.1.5-25. Labor payments per crewmember are shown in Table 2.1.5-26.

Table 2.1.5-24. Payments to Labor by Species Group for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

	$Millions		
Year	Groundfish	Non-Groundfish	All Species
1992	3.63	5.66	9.29
1993	2.92	4.70	7.62
1994	3.24	4.92	8.16
1995	3.06	4.90	7.96
1996	4.44	2.71	7.15
1997	5.51	2.85	8.37
1998	4.22	2.98	7.20
1999	5.26	4.32	9.58
2000	5.36	1.57	6.93

Source: CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

[17] The analysis makes no assumptions about owner profits, as no data were available to estimate operating costs.

Table 2.1.5-25. Payments to Labor Per Vessel by Species Group for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

	Payments to Labor Per Vessel ($)		
Year	Groundfish	Non-Groundfish	All Species
1992	62,659	97,562	160,222
1993	44,300	71,157	115,457
1994	53,978	81,971	135,950
1995	55,600	89,173	144,774
1996	76,598	46,675	123,272
1997	90,403	46,795	137,198
1998	78,112	55,175	133,287
1999	103,180	84,609	187,789
2000	116,564	34,070	150,634

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Table 2.1.5-26. Number of Crewmembers and Labor Payments Per Crewmember by Species Group for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

Year	Number of Crew Members	Labor Payments per Crewmember ($)			Groundfish Labor Payments per FTE ($)
		Groundfish	Non-Groundfish	All Species	
1992	232.0	15,665	24,391	40,055	26,215
1993	264.0	11,075	17,789	28,864	25,027
1994	240.0	13,495	20,493	33,987	32,152
1995	220.0	13,900	22,293	36,193	31,162
1996	232.0	19,149	11,669	30,818	38,197
1997	244.0	22,601	11,699	34,299	44,069
1998	216.0	19,528	13,794	33,322	34,866
1999	204.0	25,795	21,152	46,947	40,217
2000	184.0	29,141	8,517	37,658	50,621

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

2.1.5.7 Regional Residence of Vessel Owners

Table 2.1.5-27 presents information on the residence of owners of vessels in this class. More than 75 percent of the vessels were owned by Alaska residents in 2000, and the remainder were owned predominantly by residents of WAIW. AKAPAI has consistently been the region with the highest number of vessel owners in this class during the past decade, with most current owners residing in King Cove and Sand Point.

The owner's residence is an important factor because most of the regional economic impact of catcher vessel operations occurs in the owner's region of residence. Table 2.1.5-28 shows the ex-vessel revenue accruing to each region. Table 2.1.5-29 and Table 2.1.5-30 show the crewmember months and payments to labor accruing to each region. It was assumed that all crewmembers of a particular vessel and home office staff reside in the vessel owner's region of residence.

Table 2.1.5-27. Number of Trawl Catcher Vessels Less Than 60 Feet in Length Landing Groundfish, by Region of Owner, 1992-2000

Year	Number of Vessels							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	28	11	3	2	14	0	0	58
1993	32	11	4	4	15	0	0	66
1994	30	11	4	2	13	0	0	60
1995	31	10	1	3	10	0	0	55
1996	31	10	3	3	11	0	0	58
1997	30	13	2	2	13	0	1	61
1998	30	9	1	2	12	0	0	54
1999	29	6	1	3	12	0	0	51
2000	29	3	0	3	10	0	1	46

Source: CFEC/ADFG Fish Ticket Data provided by NPFMC, June 2001

Table 2.1.5-28. Ex-Vessel Revenue by Vessel Owner's Region for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	3.62	1.78	0.36	0.32	2.35	0.00	0.00	9.09
1993	2.18	1.41	0.34	0.48	1.71	0.00	0.00	7.31
1994	2.50	1.64	0.34	0.33	1.85	0.00	0.00	8.10
1995	2.58	1.42	0.08	0.41	1.53	0.00	0.00	7.65
1996	4.87	2.08	0.29	0.57	2.29	0.00	0.00	11.11
1997	5.92	3.28	0.25	0.41	3.18	0.00	0.19	13.79
1998	4.74	1.84	0.13	0.39	2.46	0.00	0.00	10.55
1999	6.82	1.95	0.18	0.68	3.07	0.00	0.00	13.16
2000	6.48	0.94	0.00	0.87	3.05	0.00	0.31	13.40

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted average revenue per vessel.

Table 2.1.5-29. Crewmember Months by Vessel Owner's Region for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

Year	Crewmember Months							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	580	228	62	41	290	0	0	1,202
1993	491	169	61	61	230	0	0	1,013
1994	437	160	58	29	189	0	0	873
1995	479	155	15	46	155	0	0	851
1996	539	174	52	52	191	0	0	1,008
1997	533	231	36	36	231	0	18	1,085
1998	583	175	19	39	233	0	0	1,049
1999	645	133	22	67	267	0	0	1,134
2000	579	60	0	60	200	0	20	918

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the number of crewmember months.

Table 2.1.5-30. Payments to Labor by Vessel Owner's Region for Trawl Catcher Vessels Less Than 60 Feet in Length, 1992-2000

Year	$Millions							
	AKAPAI	AKKO	AKSC	AKSE	WAIW	ORCO	OTHER	Total
1992	1.45	0.71	0.14	0.13	0.94	0.00	0.00	3.63
1993	0.87	0.56	0.14	0.19	0.69	0.00	0.00	2.92
1994	1.00	0.66	0.14	0.13	0.74	0.00	0.00	3.24
1995	1.03	0.57	0.03	0.16	0.61	0.00	0.00	3.06
1996	1.95	0.83	0.12	0.23	0.92	0.00	0.00	4.44
1997	2.37	1.31	0.10	0.16	1.27	0.00	0.07	5.51
1998	1.90	0.73	0.05	0.16	0.98	0.00	0.00	4.22
1999	2.73	0.78	0.07	0.27	1.23	0.00	0.00	5.26
2000	1.45	0.71	0.14	0.13	0.94	0.00	0.00	3.63

Source: Estimated by Northern Economics based on CFEC/ADFG Fish Ticket Data and NMFS Observer Data, June 2001

Note: Estimated by multiplying the number of vessels associated with the region by the regionally weighted payments to labor.