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COMMERCIAL GROUND FISH FISHERIES  
IN THE  
COOK INLET AND NORTH GULF MANAGEMENT AREAS

1995 Report to the  
Alaska Board of Fisheries



by

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## ABSTRACT

Cook Inlet, here including both state and federal waters north of a line from Point Adam to Cape Elizabeth to Cape Douglas, and the North Gulf, here defined as state waters west of Cape Suckling and north of Cape Douglas and excluding Cook Inlet and Prince William Sound, are a portion of Alaska's Central Region. Through September 1995, 79 vessels delivered a record 4.8 million lb (2,154 tonnes) of groundfish in 520 landings from Cook Inlet waters. This 1995 harvest more than doubled the previous Cook Inlet record set in 1993. Pacific cod have composed over 97% of all groundfish harvests since 1987. Groundfish harvests from the North Gulf through September 1995 exceeded 3.3 million lb. The 1995 harvest by 139 vessels making 406 deliveries is the second largest on record. Pacific cod composed 90% and rockfish 9% of the 1995 North Gulf harvest.

Although groundfish markets remained favorable, fishing seasons were limited in 1994 and 1995 due to (1) a general decrease in groundfish quotas for the Gulf of Alaska, (2) halibut bycatch mortality caps for longline gear were attained in the first half of the calendar year, and (3) more conservative management of some nearshore fishery resources. State management of groundfish stocks in Cook Inlet and the North Gulf generally coincided with Federal inseason actions in the adjacent offshore waters; primary exceptions included rockfish, lingcod, and state actions to minimize unnecessary discards during limited-duration sablefish and halibut openings. To protect depressed or rebuilding crab resources from incidental handling and bycatch mortality, ADF&G has also closed areas of prime crab habitat to groundfish pots. More active and intensive management of nearshore groundfish resources will be necessary as fishing effort continues to increase and people search for more diversified fishing opportunities. This need will be exacerbated by limited access programs in the federal waters, but few access limitations in the state groundfish fisheries. Improved stock assessment programs are urgently needed to ensure that nearshore groundfish resources are harvested at sustainable levels.

**KEY WORDS:** Groundfish, Central Region, North Gulf, Cook Inlet, Pacific cod, rockfish, lingcod.

## INTRODUCTION

The terms groundfish and bottomfish refer to all marine finfish excluding halibut, herring, salmonids, and osmerids. The Alaska Department of Fish and Game (ADF&G) and the National Marine Fisheries Service (NMFS) coordinate management responsibilities for groundfish harvests in coastal waters off Alaska. ADF&G has management jurisdiction for groundfish stocks in territorial waters extending 0 to 3 miles from shore. NMFS has jurisdiction in federally managed waters of the Exclusive Economic Zone (EEZ; previously referred to as the Fishery Conservation Zone) extending from 3 to 200 miles from shore. Fishery management plans for the EEZ are developed by the North Pacific Fisheries Management Council (NPFMC), must be approved by the U.S. Secretary of Commerce, and are implemented with inseason management actions by NMFS. Management regulations for state waters are established by the Alaska Board of Fisheries, with inseason adjustments by ADF&G Emergency Orders. Unless specific management actions have been established in regulation by the Alaska Board of Fisheries, ADF&G management authority is limited to time and area closures for resource conservation. State inseason management actions often coincide with federal actions implemented in the adjacent EEZ (Bechtol 1995a, 1995b). This report presents data on commercial groundfish seasons and landings from Cook Inlet and the North Gulf District of the Central Gulf of Alaska.

## METHODS

### *Reporting Areas*

Groundfish harvests were further summarized according to following Central Region management areas (Figure 1):

- (1) Cook Inlet, defined as all state and federal waters of Cook Inlet enclosed by lines from Point Adam (59°15'20" N, 151°58'30" W) to Cape Elizabeth (59°09'30" N, 151°53' W) to Cape Douglas (58°52' N); and
- 2) North Gulf, defined as all state waters between Cape Suckling (143°53' W.) and Cape Douglas, excluding Prince William Sound and Cook Inlet.

## Harvest Data

Processors, buyers, and permit holders were responsible for recording each groundfish landing on an ADF&G fish ticket and submitting that fish ticket to ADF&G. As part of a cooperative agreement between NMFS and ADF&G, harvest data for all groundfish landings at Central Region processors were entered into the statewide groundfish database. An ADF&G representative reviewed fish ticket data for incomplete or inaccurate information, and then entered the data into an electronic database (ADF&G 1989). Groundfish data were electronically transferred to ADF&G Computer Services and subsequently to the NMFS Management Division office, both in Juneau, Alaska, for compilation of statewide harvest data. Data reported herein resulted from harvests of sablefish, miscellaneous groundfish, and other species by longline, pot, jig, and other gears in state waters of Cook Inlet and the North Gulf.

Harvests reported on ADF&G fish tickets by commercial fishers and processors were usually expressed as dressed weight. For this report, dressed weights and product values were converted to round weight equivalents using Product Recovery Ratios (PRR's) specific to species and delivery condition codes (Appendix A; ADF&G 1989). Groundfish harvest data, expressed in pounds (lb) or tonnes (1 tonne = 1,000 kg or 2,205 lb) of round weight, were summarized by individual species or species groups: rockfish *Sebastes* and *Sebastolobus* spp., sablefish *Anoplopoma fimbria*, Pacific cod *Gadus macrocephalus*, flatfish Pleuronectiformes, lingcod *Ophiodon elongatus*, and "other species". Walleye pollock *Theragra chalcogramma* and octopus *Octopus dofleini* were minor components of the catch from state groundfish fisheries and were included in the "other species" category.

For consistency with other data in this report, exvessel values were presented as round-weight equivalents. Product value was not always available for each landing report. To estimate exvessel value, the price-per-pound for individual species was averaged across all Central Region landings for which product values were reported. This average price was then applied to the summed landings and within fish groups for each reporting area.

## RESULTS

### *Management Actions in 1994*

With the exception of fisheries for lingcod and sablefish and fishing with trawl gear, all groundfish fisheries in state waters of Cook Inlet and the North Gulf and in the adjacent federal waters opened for directed fishing on 1 January 1994 (Appendix B). Groundfish trawl fisheries were delayed until 20 January. An emergency regulation, effective 1 January, allowed commercial crab vessels to fish groundfish pots during the 14 day period prior to the commercial Tanner crab *Chionoecetes bairdi* season in the Cook Inlet Management Area. Because Pacific cod is important as bait in the commercial Tanner crab fishery, this action allowed the fleet to diversify and maximize potential economic gain during the relatively short commercial seasons for cod and crab.

An emergency regulation effective from 1 January through 31 December 1994 established commercial groundfish seasons in Cook Inlet and the Central Gulf of Alaska, including the North Gulf, as coinciding with seasons in the adjacent federal waters. This emergency order (1) allowed consistent management for fisheries which harvested the same groundfish stocks in adjacent state and federal waters; (2) facilitated enforcement of regulations; (3) reduced the number of individual regulatory actions issued for adjacent state and federal waters; and (4) provided stock conservation measures in cases where ADF&G lacks sufficient data to actively manage nearshore groundfish populations. A notable implication of this was state adoption of seasonal closures of trawl and longline gears when quarterly or trimester caps for the prohibited species catch of halibut had been reached for the Gulf of Alaska. A similar emergency order has been implemented since 1991 (Bechtol 1995a). Lingcod and rockfish were excluded from this emergency order because explicit management strategies existed for these species. In an effort to keep the public informed, news releases detailing the status of the various groundfish fisheries were periodically distributed to Central Region groundfish processors.

Several Cook Inlet and North Gulf groundfish fisheries were restricted or closed to reduce the bycatch of depressed or prohibited species. Waters around several marine mammal rookeries in the North Gulf were closed throughout 1994. The Kamishak Bay and inner Kachemak Bay areas of Cook Inlet were closed to groundfish pot gear for all of 1994 to protect depressed or rebuilding crab stocks. Groundfish fishing with non-pelagic trawl gear was closed in waters north of Anchor Point, also to protect crab stocks. The commercial lingcod fishery was closed by regulation from 1 January through 30 June to protect depressed lingcod populations during the critical spawning and nest-guarding phase (Vincent-Lang and Bechtol 1992). Regulations also establish a minimum size of 35 inches (889 mm) or longer for lingcod retention during the open season. Lingcod fishing has remained closed in Resurrection Bay since February 1993 to protect depressed stocks. A closure of the directed Pacific cod fishery on 9 April reduced much of the Cook Inlet and North Gulf groundfish effort. Rockfish species were restricted to bycatch-only allowances on 28 May in the North Gulf and 11 June in Cook Inlet.

Sablefish in 1994 was opened in Cook Inlet and the North Gulf from 18-28 May. As halibut bycatch mortality caps were exceeded, directed longline groundfish fishing in the Gulf of Alaska and Cook Inlet and the North Gulf was closed from 28 May to the end of the year. Directed trawl groundfish fisheries were also closed when halibut bycatch

mortality caps were exceeded. These trawl closures occurred from 21 to 31 March, 19 May to 30 June, and 15 August to 30 September for shallow water flatfish species; from 22 April to 30 June and 29 August to 30 September for deep water flatfish species; and from 29 October to 31 December for all species.

### *Management Actions in 1995*

Similar to 1994 seasons, all groundfish fisheries in state waters of Cook Inlet and the North Gulf and in the adjacent federal waters opened for directed fishing on 1 January 1995 except for lingcod, trawl, and directed sablefish fisheries. Groundfish trawl fisheries were delayed until 20 January. An emergency regulation effective from 1 January through 31 December 1995 established commercial groundfish seasons in the Central Gulf of Alaska, including the North Gulf, as coinciding with seasons in the adjacent federal waters. Cook Inlet was excluded from this emergency order to encourage diverse fishery development and because many of the species actively managed in the offshore waters are not found in significant abundance in Cook Inlet. An emergency order effective throughout 1995 was issued to close groundfish pot fishing in crab concentration areas. This action has been taken since 1991 to protect depressed and rebuilding crab resources. This action was modified January 20 to reduce the closure area and slightly increase the potential pot fishing area. Crab bycatch, although somewhat higher in this reopened margin area, was still deemed acceptable. An emergency order effective from January 6 through December 31 established that longline seasons would correspond to the adjacent federal waters. This allowed state waters to close when halibut bycatch caps were met for the Gulf of Alaska. An emergency order effective January 5 closed waters north of Anchor Point to non-pelagic trawl fishing for groundfish. This closure provided protection to crab resources.

The Pacific cod fishery in Cook Inlet was closed March 22 to coincide with a federal closure. The closure was subsequently delayed to March 23 to provide greater opportunity for pot vessels to retrieve pot gear. Also in concert with a federal fishery, the Pacific cod fishery was reopened from September 1 through 11 October.

The sablefish fishery in the North Gulf was opened from March 15 through April 5, and was also opened for a weekly 24-hour fishing period during the weeks of June 7 and June 14. As the rockfish guideline was reached, the directed rockfish fishery in the North Gulf and Cook Inlet was closed June 1. An emergency regulation adopted May 1 established bycatch allowances for species other than sablefish and lingcod caught on longline gear. Although lingcod in most Central Region areas opens July 1, an emergency order was issued to prohibit lingcod retention in Resurrection Bay for the remainder of the year due to depressed stock levels. Also to protect lingcod, an emergency regulation adopted in 1995 extended state lingcod regulations into the adjacent federal waters.



### *Cook Inlet Harvests*

During 1994, 1.9 million lb of groundfish were harvested from state and federal waters of Cook Inlet (Table 1). The 290 landings by 45 vessels generated an exvessel value of \$0.5 (Tables 2). The 1994 harvest was the third largest on record (Table 2; Figure 2). Similar to previous years, Pacific cod composed virtually all (98%) of the Cook Inlet groundfish harvest. Other species (15,800 lb) accounted for most of the remaining harvest. The largest component of the other species harvest was octopus (14,727 lb) taken as bycatch in the Pacific cod fishery. Monthly harvests from Cook Inlet peaked at 0.7 million lb in February.

Preliminary data indicates a record 4.8 million lb of groundfish were harvested from all Cook Inlet waters during 1995 (Table 2; Figure 2). The 520 deliveries by 79 vessels generated \$1.1 million. The majority of the harvests occurred from January through March with monthly harvests ranging from 1.3-1.7 million lb. As in previous years, Pacific cod generated virtually all (99.7%) of the Cook Inlet groundfish harvests in 1995. Harvest data is still being compiled from a September 1 to October 11 reopening of the Pacific cod fishery to pot and jig gear. Kachemak Bay has produced most of the groundfish harvests from state waters of Cook Inlet. However, given the difficulties in enforcement and that Pacific cod migrate across state-federal boundaries in Cook Inlet, it has been difficult to justify an independent fishery in Cook Inlet state waters. Therefore, Cook Inlet has been managed as a cohesive unit to make better use of the area reflecting the resource distribution instead of legal jurisdictions.

The Cook Inlet groundfish fishery was traditionally a longline fishery with some trawl harvests (Table 3; Figure 3). However, in recent years, over 95 percent of the groundfish harvest has come from pot gear as vessel operators have attempted to minimize halibut bycatch, find alternative uses for crab gear, and develop "niche" markets.

### *North Gulf Harvests*

During 1994, 2.1 million lb of groundfish were harvested from the North Gulf (Table 1, Figure 4). Monthly harvests from the North Gulf in 1994 peaked at 997,961 lb in February. The 1994 harvest generated an estimated \$0.7 million for the 115 vessels making 311 landings (Table 2). Pacific cod composed 83% (1.7 million lb), rockfish 11% (221,374 lb), and sablefish 5% (105,369 lb) of the harvest. The remaining harvest was composed of lingcod (22,325 lb), other species (1,330 lb), and flatfish (608 lb). Although the 1994 North Gulf harvest represented a declining trend as annual production declined by 37% in each of the two previous years (Table 2). This decline largely reflected more conservative management strategies for lingcod and rockfish, and seasons

for sablefish and Pacific cod which coincided with the adjacent federal waters. The North Gulf sablefish harvest was the smallest since 1990.

The rockfish harvest in 1994 was the second greatest on record. An estimated two-thirds of the 1994 harvest occurred in directed longline and jig fisheries, the remaining harvest resulted from incidentally catch during non-rockfish fisheries such as Pacific cod, sablefish, and halibut. Most rockfish deliveries were less than the five-day landing limits of 4,000 lb established in regulation. Based on the North Gulf District Rockfish Management Plan (regulation 5 AAC 28.465), the directed rockfish fishery was closed in May 1994 and rockfish retention was limited to a bycatch allowance of 20 percent of the total onboard catch. While the reported catch of North Gulf rockfish declined following this seasonal closure, there were several instances of state water rockfish harvests being misreported as coming from federal waters. State and federal enforcement agents will be monitoring these fisheries closely in the future. The 1994 lingcod harvest from the North Gulf, was a 48% increase over 1993 harvest but well below the record 1991 harvest. Lingcod continues to be managed with an open season of July through December and a minimum retention size of 35 in (889 mm). Lingcod resources in some areas, particularly around Resurrection Bay, continue to be depressed without any evidence of significant recruitment (Doug Vincent-Lang, ADF&G, Anchorage, personal communication).

Preliminary 1995 data from the North Gulf indicates a groundfish harvest of 3.3 million lb through September, generating an estimated \$1.1 million (Table 2). Pacific cod composed 90% (2,960,405 lb) of this harvest, rockfish 9% (284,250 lb), and sablefish <1% (30,183 lb). The largest monthly harvests, 2,021,793 lb, occurred in March. Fishing effort in the latter half of 1995 has primarily been limited to lingcod and a limited amount of other species caught as bycatch to IFQ halibut. A major exception was the opening of Pacific cod to pot and jig gear from September 1 to October 11.

Also of note was the North Gulf sablefish fishery. The federal Individual Fishing Quota (IFQ) sablefish program allows IFQ permit holders to harvest an individual's allocation of sablefish in federal waters. The IFQ program also recognizes that non-IFQ sablefish fisheries will continue to occur in state waters. Because the North Gulf has generated an average annual harvest of nearly 150,000 lb of sablefish since 1991, the department pursued a sablefish fishery in the North Gulf for a biomass consistent with the annual average. Under the department's legal authority, this fishery was open to all sablefish interim-use permit holders irrespective of IFQ status. However, federal IFQ regulations limit IFQ holders fishing the North Gulf fishery to their IFQ sablefish share allocations. To closely monitor harvests, ADF&G conducted limited directed sablefish openings in March and again in June; little effort occurred and 30,000 lb of sablefish were taken.

Similar to Cook Inlet, the use of groundfish pots has increased significantly in the North Gulf (Table 3; Figure 5). However, longline gear has continued to be the major groundfish producer. Also of note is the increase in the use of jig gear, primarily to target rockfish and lingcod.

## DISCUSSION

Participation in Cook Inlet and North Gulf groundfish fisheries has been extremely variable, driven by a combination of market fluctuations, declines in other fisheries such as salmon, crab, and alternative fishing opportunities (Bechtol 1995a, 1995b). Management actions, in the face of continually evolving groundfish fisheries, have focused on protecting groundfish resources from over-exploitation (Bechtol 1992; Vincent-Lang and Bechtol 1992). Management strategies will be modified as resource knowledge increases or as fishing patterns change. However, accurate stock assessment or historical harvest data for many groundfish species remains limited. To provide resource protection in the absence of stock production data or established management strategies, ADF&G management actions for many groundfish fisheries will continue to coincide with NMFS actions in adjacent federal waters.

There has been increased industry interest in developing state groundfish management plans (Anon 1995). To provide access to target species, reduce the potential for overharvest, and avoid resource waste through unnecessary discards, a better understanding is needed of the time and area changes in groundfish species composition and the impact different fisheries have on these resources (Leaman and Beamish 1984; Dewees and Ueber 1990; Leaman 1991). Managers and the industry are working to reduce interactions with prohibited species by modifying fishing gear, methods, and areas. For example, groundfish pots equipped with halibut exclusion devices and biodegradable panels have proven effective in harvesting Pacific cod, reducing halibut bycatch, and reducing ghost fishing problems caused by lost pots (Kimker 1990, 1992; Kruse and Kimker 1993). Crab bycatch in groundfish pots remains a particular concern because of the delayed crab mortality induced by on-deck exposure to cold temperatures in the winter months (Carls and O'Clair 1995). Because groundfish pot gear which reduces crab bycatch to acceptable levels has not been developed, groundfish pot fishing continues to be closed in many Cook Inlet areas containing important crab habitat (Bechtol 1995a, 1995b).

ADF&G has also continued to collect resource assessment data on an opportunistic basis (Bechtol and Yuen in press). Since 1989, the primary component of this research has involved sampling rockfish collected by trawl during crab and shrimp surveys of Kachemak and Kamishak Bays in Cook Inlet (Kimker 1994; unpublished data). In 1994, rockfish, sablefish, Pacific cod, and pollock were sampled from trawl surveys and from halibut and sablefish deliveries. Data collection included age, size, sex, and maturity (unpublished data). In addition, several other assessments programs have evolved in cooperation with industry interests. For example, lower Cook Inlet was surveyed in 1994

to assess the distribution and abundance of Pacific sandfish (*Trichodon trichodon*; J. McDonald, Institute of Marine Science, Seward, AK, personal communication).

Groundfish fisheries should continue to develop in Cook Inlet and the North Gulf, although market emphasis may vary both seasonally and by area. Several fishing cooperatives have developed small, specialized "niche" markets for selected species. These cooperatives have obtained a relatively high exvessel value for their catch by delivering a high quality product at a relatively constant supply rate. Similar fishing cooperatives are a major component of the shore-based fishing industry in Japan (personal observation). To ensure that seasonally consistent supplies of selected nearshore groundfish are available, more comprehensive allocation strategies may be needed for Cook Inlet and the North Gulf. Establishment of such allocations could be based on historical harvests or on stock dynamics data that would justify managing some inshore bottomfish resources independently of offshore resources in federal waters. It may also be necessary for the public to propose or develop plans which limit access into some nearshore fisheries to maintain economic viability.

Groundfish fisheries will continue to change as issues such as bycatch, marine mammals, gear efficiency, and catch allocation are addressed. Cooperative efforts are needed among the industry, management agencies, and the public to develop gear and conduct fisheries that minimize bycatch, are cost-effective, and yield high quality products. As managers develop a better understanding of stock production and dynamics, users will play an increasingly important role in resolving related social and economic issues. While ADF&G supports the concept of more comprehensive management and research, such programs depend upon adequate funding. ADF&G is pursuing measures to increase both general funds and test fish allocations. These allocations, if adopted, will provide ADF&G the tools to better develop the groundfish research and management programs to reflect existing and potential resource use. Ultimately, the public process will be used to guide the development of acceptable strategies for the use and harvest of state groundfish resources.

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Table 1. Monthly commercial groundfish harvest and effort from Cook Inlet and the North Gulf Cook Inlet during 1994

Month	Vessels	Landings	Round Weight (lb)						Total
			Rockfish	Sablefish	Pacific	Flatfish	Other	Lingcod	
<b>Cook Inlet</b>									
January	18	100	0	0	557,077	0	6,733	0	563,810
February	21	92	69	114	695,952	0	5,432	0	701,567
March	16	83	33	28	571,346	0	3,635	0	575,042
April	0	0	0	0	0	0	0	0	0
May	<4	<4	0	9,784	0	0	0	0	9,784
June	<4	<4	0	1,201	0	0	0	0	1,201
July	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0
September	11	11	343	12,730	3,661	0	0	0	16,734
October	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>45</b>	<b>290</b>	<b>445</b>	<b>23,857</b>	<b>1,828,036</b>	<b>0</b>	<b>15,800</b>	<b>0</b>	<b>1,868,138</b>
<b>North Gulf</b>									
January	11	14	13,022	393	69,014	0	132	0	82,561
February	36	69	42,490	398	512,287	0	619	110	555,904
March	46	91	30,715	455	965,705	581	505		997,961
April	26	61	113,425	2	149,597	0	74	543	263,641
May	16	18	10,685	23,994	12,313	0	0		46,992
June	10	14	2,608	7,425	1,007	27	0		11,067
July	<4	<4	584	0	0	0	0	0	584
August	0	0	0	0	0	0	0	0	0
September	32	33	2,053	72,702	3,262				78,017
October	5	8	4,873	0	0	0	0	21,121	25,994
November	<4	<4	623	0	0	0	0	186	809
December	<4	<4	296	0	0	0	0	365	661
<b>Total</b>	<b>115</b>	<b>311</b>	<b>221,374</b>	<b>105,369</b>	<b>1,713,185</b>	<b>608</b>	<b>1,330</b>	<b>22,325</b>	<b>2,064,191</b>

Table 2. Commercial groundfish harvest, effort, and value from Cook Inlet and the North Gulf during 1987 to 1995.

Year	Ves- sels	Land- ings	Round Weight (lb)						TOTAL	ExVessel Value
			Rockfish	Sablefish	Pacific Cod	Flatfish	Other	Lingcod		
<b>Cook Inlet</b>										
1987	166	704	12,708	0	881,551	135,238	56,874	103	1,086,474	\$267,643
1988	53	159	3,684	67,607	214,903	50	275	127	286,646	\$119,861
1989	4	5	30	0	7,726	0	234	0	7,990	\$1,672
1990	63	151	1,132	1,899	365,851	0	1,938	414	371,234	\$89,926
1991	86	414	302	132	2,011,379	0	1,612	0	2,013,425	\$564,132
1992	63	345	521	105	1,665,531	0	6,488	0	1,672,645	\$402,263
1993	53	255	6,512	147	2,195,764	91	18,568	0	2,221,082	\$495,393
1994	45	290	445	23,857	1,828,036	0	15,800	0	1,868,138	\$513,503
1995 <sup>a</sup>	79	520	4,750	11	4,737,957	0	7,981	0	4,750,699	\$1,114,428
<b>North Gulf</b>										
1987	116	310	169,109	37,338	785,661	887	4,834	25,557	1,023,386	\$277,836
1988	76	200	183,810	108,735	308,551	2,368	2,495	25,176	631,135	\$252,444
1989	25	56	47,606	3,797	35,028	0	316	7,026	93,773	\$32,834
1990	59	80	46,709	12,487	62,038	13	468	5,467	127,182	\$43,282
1991	113	261	219,151	127,283	968,455	175	1,238	65,256	1,381,558	\$473,112
1992	203	767	350,519	162,959	4,685,596	1,056	3,428	28,442	5,232,000	\$1,397,879
1993	121	345	77,050	172,238	3,020,757	31	1,908	15,087	3,287,071	\$862,448
1994	115	311	221,374	105,369	1,713,185	608	1,330	22,325	2,064,191	\$716,482
1995 <sup>a</sup>	139	406	295,593	30,183	2,973,297	109	1,163	5,042	3,305,387	\$961,980

<sup>a</sup> Preliminary data processed through September 1995.



Table 3. Commercial groundfish harvests by gear type from Cook Inlet and the North Gulf during 1987 to 1995.

Year	Round Weight (lb)				Total
	Longline	Pot	Jig	Other	
<b>Cook Inlet</b>					
1987	828,886	24,377	4,009	229,202	1,086,474
1988	254,397	17,161	3,217	11,871	286,646
1989	7,990				7,990
1990	299,346	44,337		27,551	371,234
1991	833,747	1,174,783	4,895		2,013,425
1992	210,509	1,449,460	12,676		1,672,645
1993	152,059	2,066,168	2,764	91	2,221,082
1994	153,612	1,714,526			1,868,138
1995 <sup>a</sup>	129,996	4,530,103	1,949		4,662,048
<b>North Gulf</b>					
1987	938,312		82,513	2,561	1,023,386
1988	537,574	4,311	89,250		631,135
1989	80,440	707	12,626		93,773
1990	76,844	20,524	29,814		127,182
1991	1,041,661	58,932	278,539	2,426	1,381,558
1992	3,934,770	1,185,958	111,272		5,232,000
1993	2,540,845	697,917	48,309		3,287,071
1994	1,501,918	390,323	171,204	746	2,064,191
1995 <sup>a</sup>	2,191,508	410,008	247,724	426,047	3,275,287

a Preliminary data processed through September 1995.

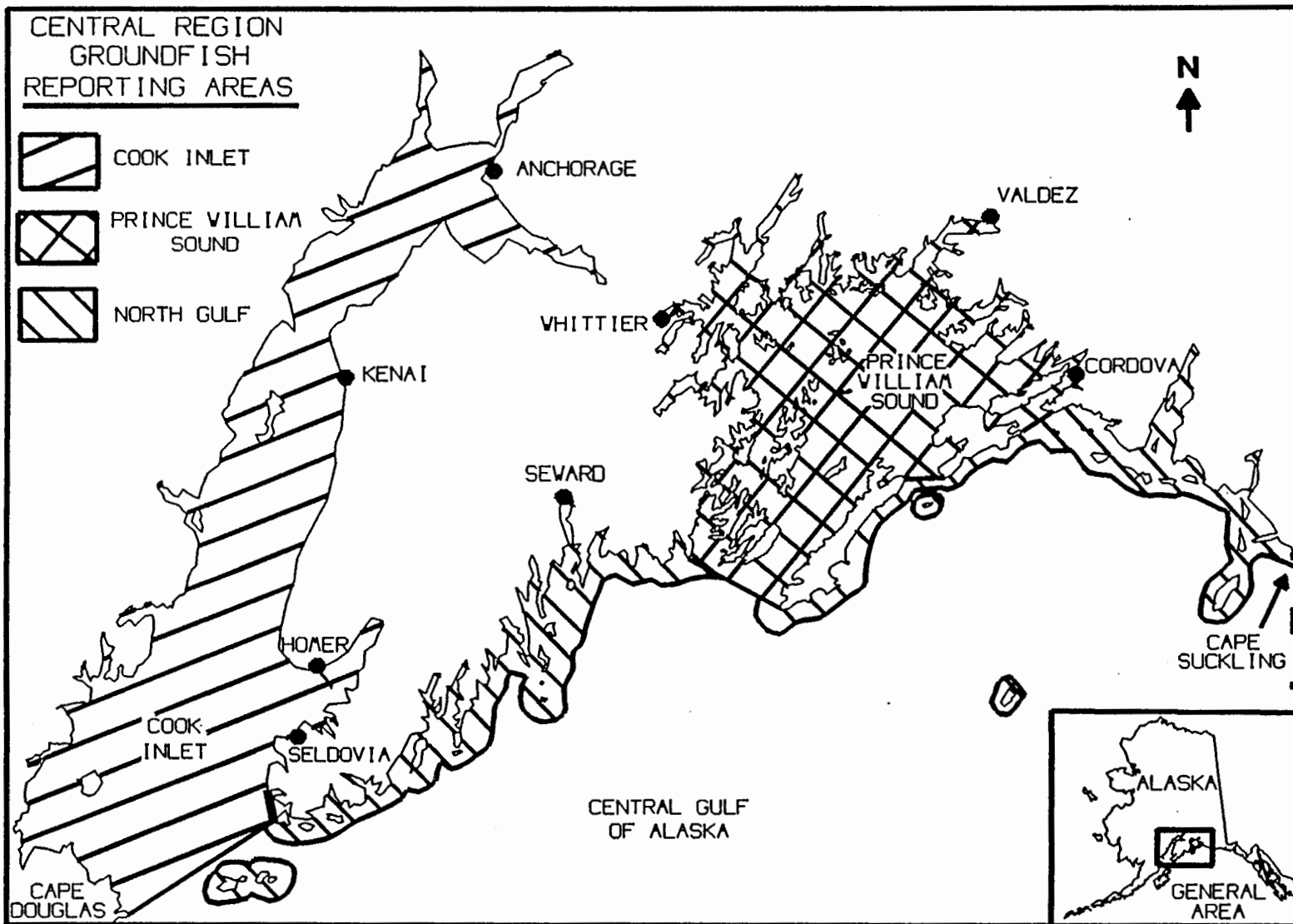


Figure 1. Groundfish harvest reporting areas of the Central Region.

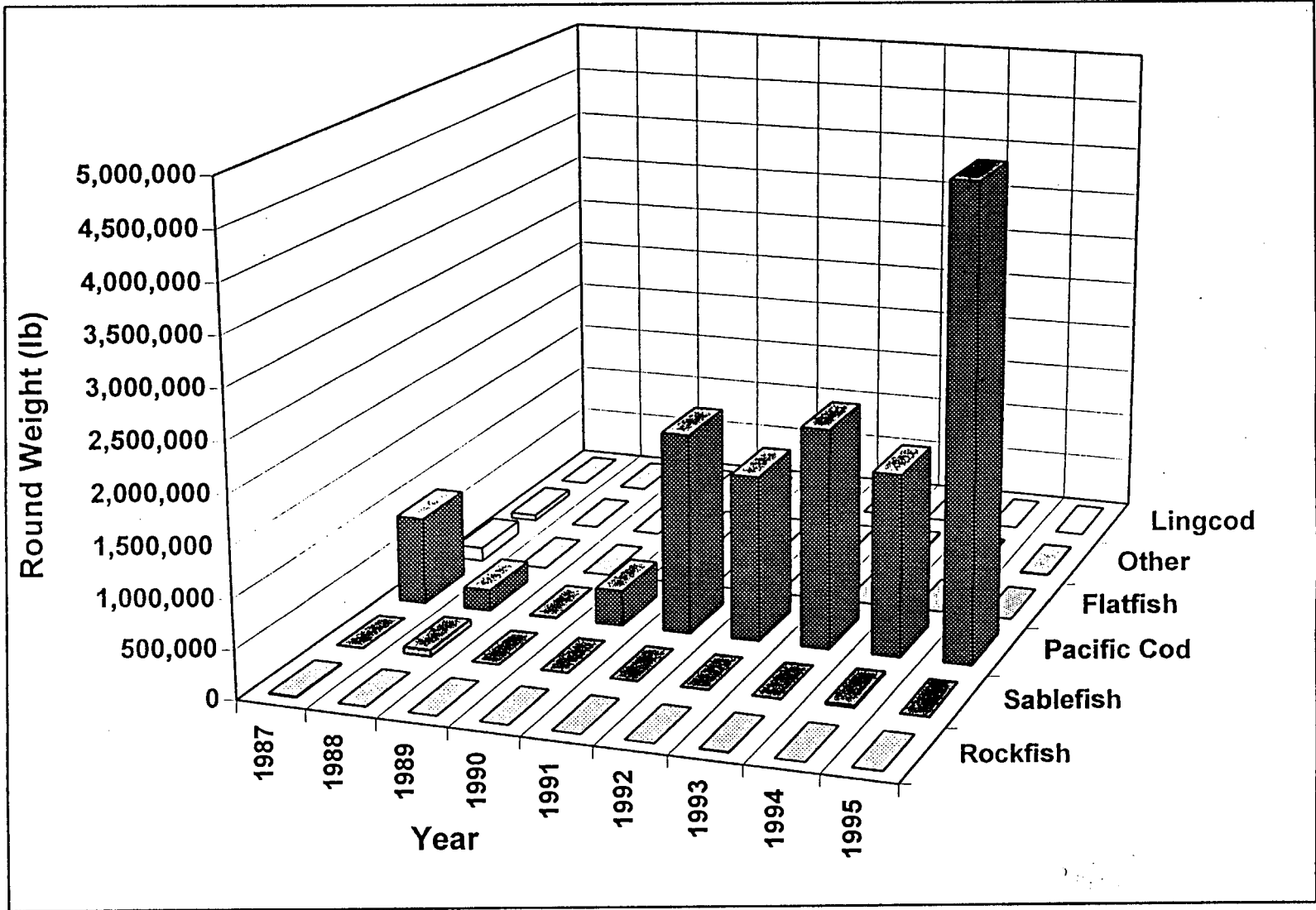


Figure 2. Commercial groundfish harvests from Cook Inlet during 1987 to 1995.

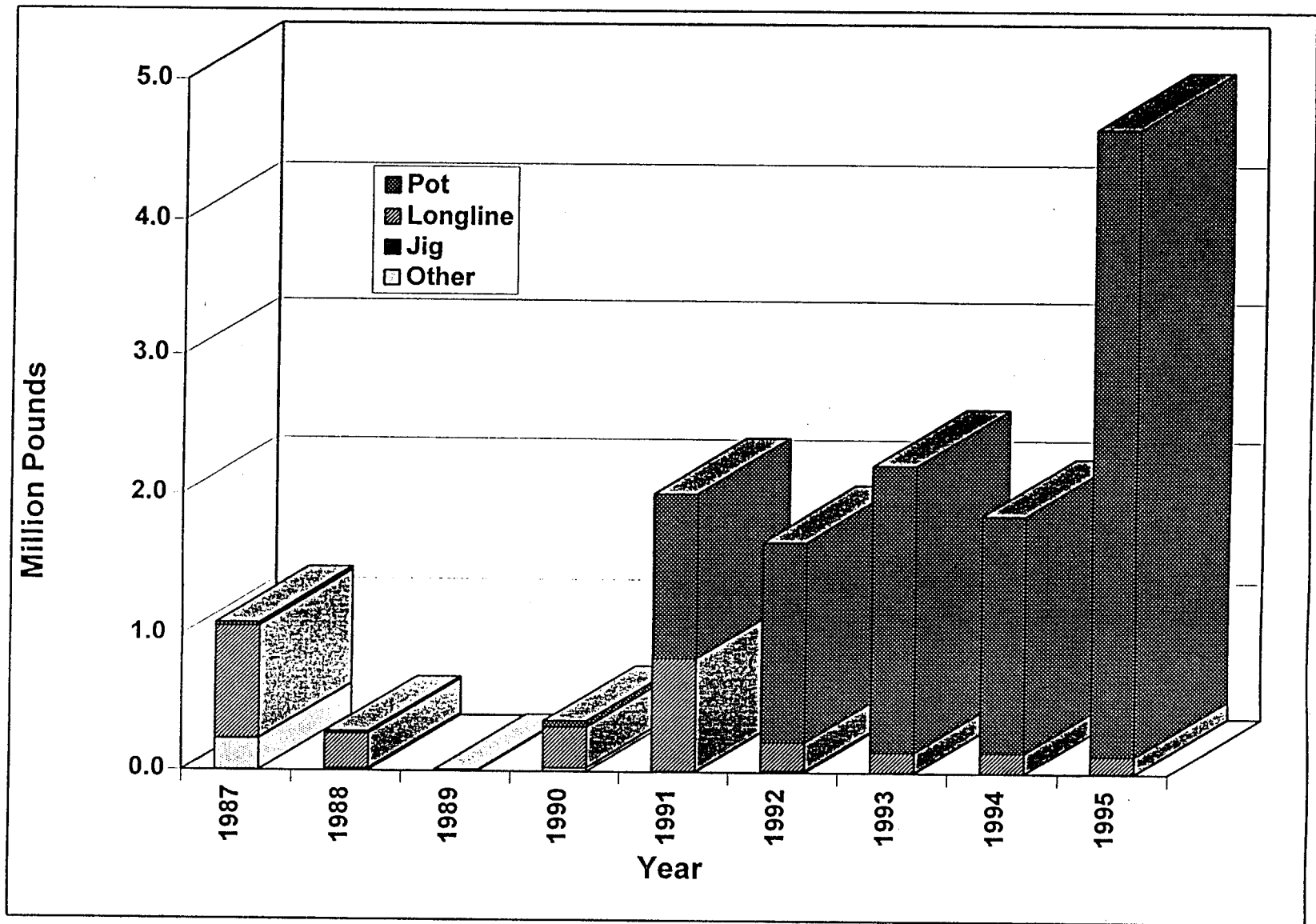


Figure 3. Commercial groundfish harvests by gear type from Cook Inlet during 1987 to 1995.

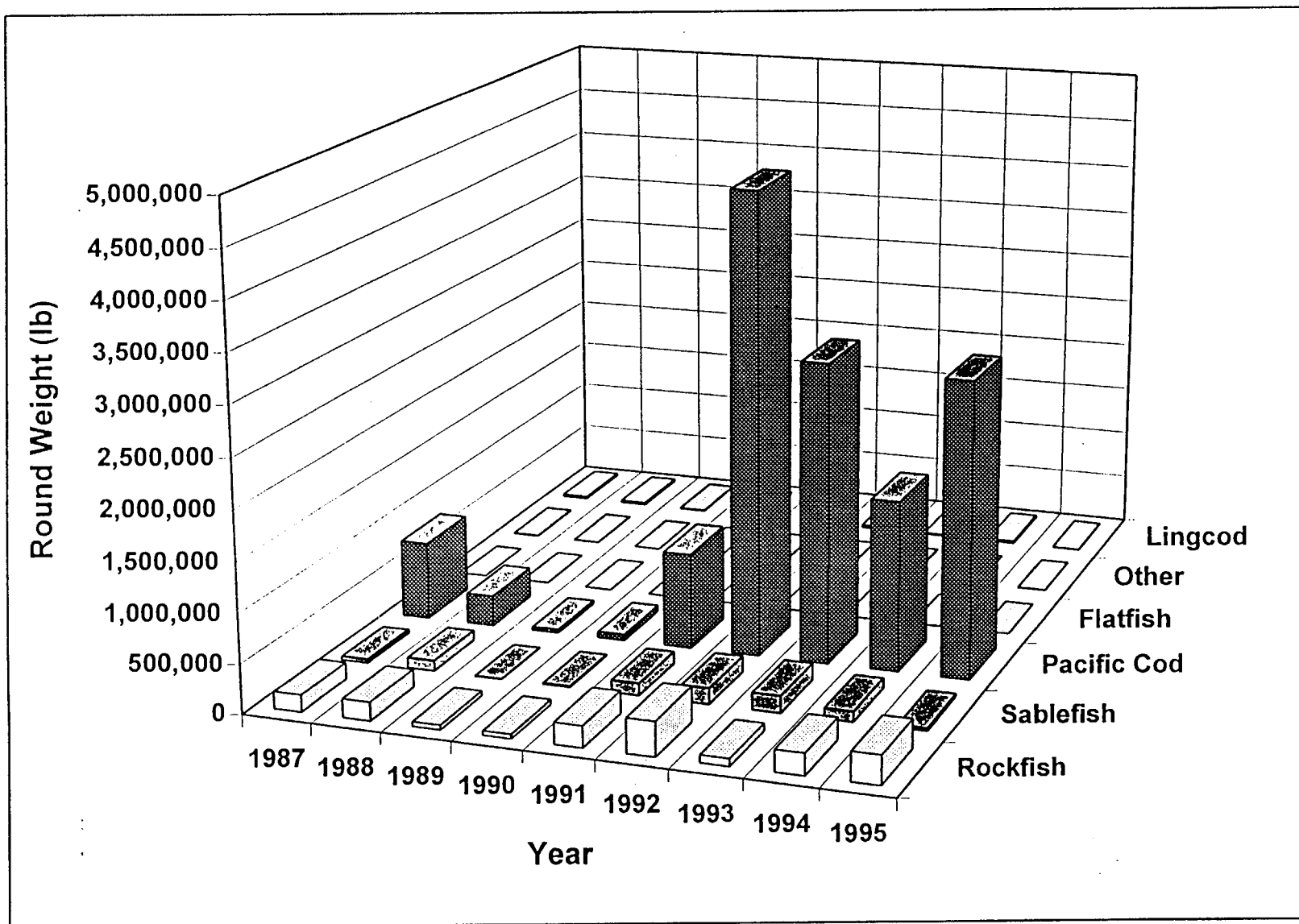


Figure 4. Commercial groundfish harvests from the North Gulf during 1987 to 1995.

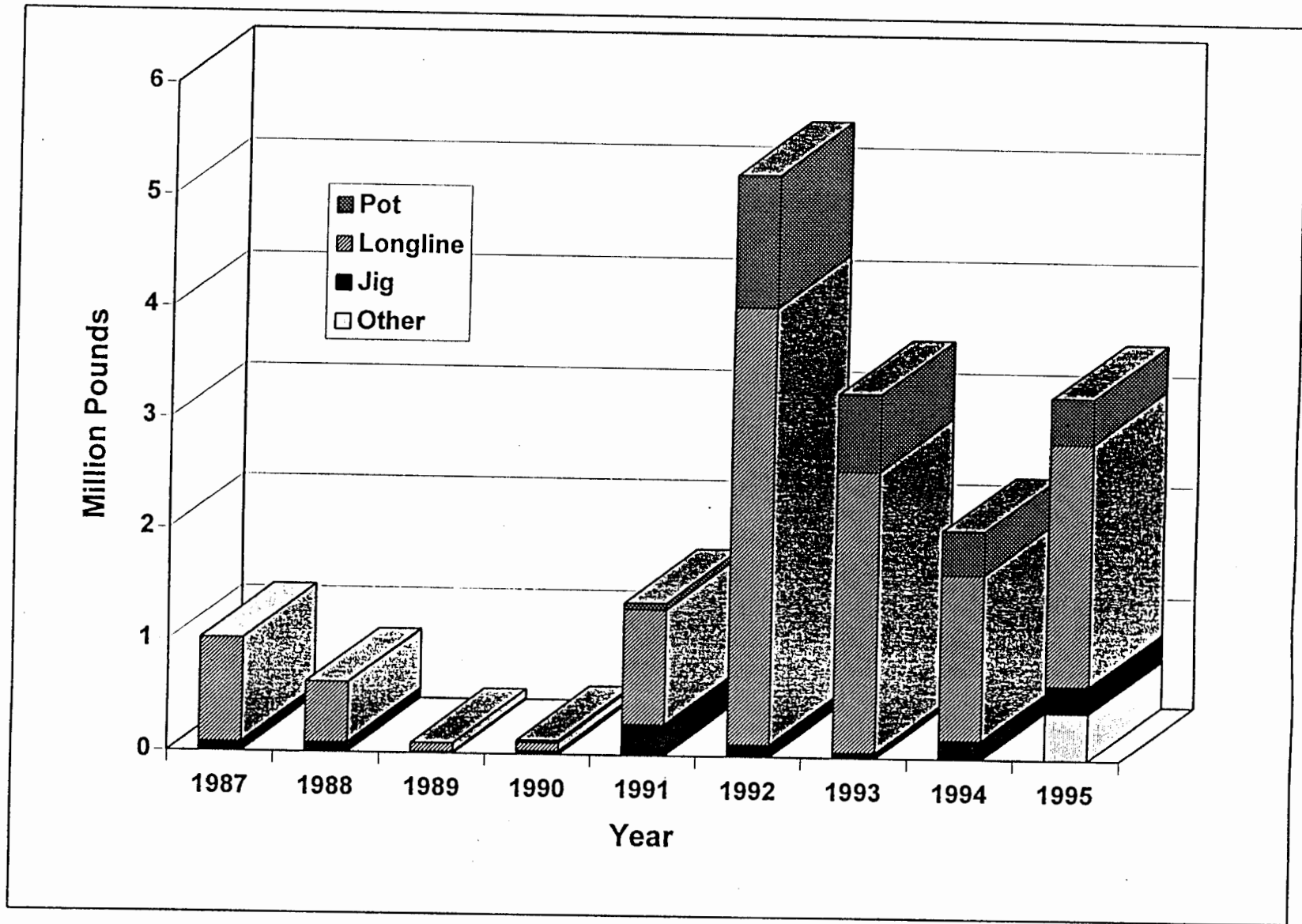


Figure 5. Commercial groundfish harvests by gear type from the North Gulf during 1987 to 1995.

Appendix B. Primary openings and closures of groundfish fisheries in state waters of the Central Region during 1994.

Date	Waters <sup>a</sup>	Fishery	Gear	Action <sup>b</sup>
1/01	AROUND MARINE MAMMAL ROOKERIES	ALL	ALL	CLOSED
1/01 <sup>c</sup>	CI - EMERGENCY REGULATION TO VOID 14-DAY POT WAITING PERIOD			
1/01 <sup>c</sup>	KAMISHAK & KACHEMAK BAYS	ALL	POT	CLOSED
1/01 <sup>c</sup>	CI, NG	SEASONS COINCIDE W/NMFS SEASONS		
1/01	CI, NG	ALL	TRAWL	CLOSED
1/01	CI, NG	SABLEFISH	ALL	CLOSED
1/01 <sup>c</sup>	CI, NG	LINGCOD	ALL	CLOSED
1/14 <sup>c</sup>	CI NORTH OF ANCHOR PT		NON-PEL. TRAWL	CLOSED
1/20	CI, NG	ALL	TRAWL	OPENED
2/18	CI, NG	POLLOCK	ALL	OPENED
3/16	CI, NG	POLLOCK	ALL	CLOSED
3/21	CI, NG	SHALLOW WATER SPECIES	TRAWL	CLOSED
4/01	CI, NG	SHALLOW WATER SPECIES	TRAWL	OPENED
4/09	CI, NG	PACIFIC COD	ALL	CLOSED
4/15 <sup>c</sup>	NG - WEST YAKUTAT	LINGCOD	ALL	CLOSED
4/22	CI, NG	DEEP WATER SPECIES	TRAWL	CLOSED
5/18	CI, NG	SABLEFISH	HOOK-AND-LINE	OPENED
5/19	CI, NG	SHALLOW WATER SPECIES	TRAWL	CLOSED
5/28 <sup>c</sup>	NG	ROCKFISH	ALL	BYCATCH
5/28	CI, NG	SABLEFISH	HOOK-AND-LINE	CLOSED
5/28	CI, NG	ALL	HOOK-AND-LINE	CLOSED
6/01	CI, NG	POLLOCK	ALL EXCEPT H&L	OPENED
6/06-07 <sup>d</sup>	CI, NG	HALIBUT	HOOK-AND-LINE	OPENED
6/11 <sup>c</sup>	CI	ROCKFISH	ALL	BYCATCH
6/22	CI, NG	POLLOCK	ALL	CLOSED
7/01 <sup>c</sup>	CI, NG	LINGCOD	ALL EXCEPT H&L	OPENED
7/01 <sup>c</sup>	RESURRECTION BAY	LINGCOD	ALL	CLOSED
7/01	CI, NG	SHALLOW WATER SPECIES	ALL EXCEPT H&L	OPENED
7/01	CI, NG	DEEP WATER SPECIES	ALL EXCEPT H&L	OPENED
7/01	CI, NG	POLLOCK	ALL EXCEPT H&L	OPENED
7/15	CI, NG	POLLOCK	ALL	CLOSED
8/15	CI, NG	SHALLOW WATER SPECIES	TRAWL	CLOSED
8/29	CI, NG	DEEP WATER SPECIES	TRAWL	CLOSED
9/12-14 <sup>c</sup>	CI, NG	ALL EXCEPT ROCKFISH	HOOK-AND-LINE	OPENED
9/12-14 <sup>d</sup>	CI, NG	HALIBUT	HOOK-AND-LINE	OPENED
9/30	CI, NG	SHALLOW WATER SPECIES	ALL EXCEPT H&L	OPENED
9/30	CI, NG	DEEP WATER SPECIES	ALL EXCEPT H&L	OPENED
10/01	CI, NG	POLLOCK	ALL EXCEPT H&L	OPENED
10/10	CI, NG	POLLOCK	ALL	CLOSED
10/29	CI, NG	ALL	TRAWL	CLOSED

<sup>a</sup> CI = Cook Inlet (5 AAC 28.300), NG = North Gulf (5 AAC 28.405(c)).

<sup>b</sup> BYCATCH - A fishery can be opened to bycatch allowances only if authorized by the Alaska Board of Fisheries.

<sup>c</sup> Management actions involving the Alaska Board of Fisheries regulations or ADF&G Emergency Orders specific to waters of State jurisdiction.

<sup>d</sup> Halibut fisheries are regulated by the International Pacific Halibut Commission.

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