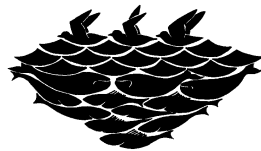


**DISCARDS IN THE NORTH PACIFIC
GROUND FISH FISHERIES
2001**

prepared for



Alaska Marine Conservation Council

Box 101145 • Anchorage, Alaska 99510
(907) 277-5357 • (fax) 277-5975
amcc@akmarine.org • www.akmarine.org

by

Fisheries Information Services

2007 Cohen Drive
Juneau, Alaska 99801
fis@ptialaska.net

February 2003

CONTENTS

FORWARD	v
INTRODUCTION	P.1
DATA SOURCE AND METHODOLOGY	P.2
MANAGING ENTITIES	P.3
GENERAL CAUSES OF DISCARDS	P.3
MANAGEMENT ACTIONS	P.3
CDQ FISHERIES	P.4
REVIEW OF 2000 – 2001 DATA	P.4

APPENDIX: FIGURES AND TABLES**BERING SEA AND ALEUTIAN ISLANDS FIGURES**

FIGURE 1.	PELAGIC POLLOCK: SEASONS AND CHINOOK SALMON	P. 12
FIGURE 2.	PELAGIC POLLOCK: SEASONS AND “OTHER” SALMON	P. 13
FIGURE 3.	YELLOWFIN SOLE: SEASONS AND C. BAIRDI CRAB	P. 14
FIGURE 4.	ROCK SOLE: SEASONS AND RED KING CRAB	P. 15
FIGURE 5.	2000 AND 2001 DISCARDS BY SECTOR : PERCENT OF TOTAL	P. 16
FIGURE 6.	2000 AND 2001 FISHERIES WITH HIGHEST DISCARD RATES	P. 17

BSAI TABLES: 2001

TABLE 6	ALL GEAR ALL MODES ALL TARGETS	P. 18
TABLE 7	TRAWL CATCHER /PROCESSOR ALL TARGETS	P. 19
TABLE 8	TRAWL CATCHER /PROCESSOR ATKA MACKEREL	P. 20
TABLE 9	TRAWL CATCHER /PROCESSOR BOTTOM POLLOCK	P. 21
TABLE 10	TRAWL CATCHER /PROCESSOR MIDWATER POLLOCK	P. 22
TABLE 11	TRAWL CATCHER /PROCESSOR PACIFIC COD	P. 23
TABLE 12	TRAWL CATCHER /PROCESSOR ROCKFISH	P. 24
TABLE 13	TRAWL CATCHER /PROCESSOR FLATHEAD SOLE	P. 25
TABLE 14	TRAWL CATCHER /PROCESSOR ROCK SOLE	P. 26
TABLE 15	TRAWL CATCHER /PROCESSOR GREENLAND TURBOT	P. 27
TABLE 16	TRAWL CATCHER /PROCESSOR YELLOWFIN SOLE	P. 28
TABLE 17	TRAWL CATCHER /PROCESSOR ARROWTOOTH FLOUNDER	P. 29
TABLE 18	TRAWL SHORESIDE ALL TARGETS	P. 30

TABLE 19	TRAWL SHORESIDE BOTTOM POLLOCK	P. 31
TABLE 20	TRAWL SHORESIDE MIDWATER POLLOCK	P. 32
TABLE 21	TRAWL SHORESIDE PACIFIC COD	P. 33
TABLE 22	TRAWL MOTHERSHIP ALL TARGETS	P. 34
TABLE 23	TRAWL MOTHERSHIP MIDWATER POLLOCK	P. 35
TABLE 24	TRAWL MOTHERSHIP PACIFIC COD	P. 36
TABLE 25	HOOK-AND-LINE CATCHER/PROCESSOR ALL TARGETS	P. 37
TABLE 26	HOOK-AND-LINE CATCHER/PROCESSOR GREENLAND TURBOT	P. 38
TABLE 27	HOOK-AND-LINE CATCHER/PROCESSOR PACIFIC COD	P. 39
TABLE 28	HOOK-AND-LINE CATCHER/PROCESSOR SABLEFISH	P. 40
TABLE 29	HOOK-AND-LINE SHORESIDE ALL TARGETS	P. 41
TABLE 30	HOOK-AND-LINE SHORESIDE GREENLAND TURBOT	P. 42
TABLE 31	HOOK-AND-LINE SHORESIDE PACIFIC COD	P. 43
TABLE 32	HOOK-AND-LINE SHORESIDE SABLEFISH	P. 44
TABLE 33	JIG SHORESIDE PACIFIC COD	P. 45
TABLE 34	POT ALL MODES ALL TARGETS	P. 46
TABLE 35	POT SHORESIDE PACIFIC COD	P. 47
TABLE 36	POT CATCHER/PROCESSOR PACIFIC COD	P. 48

GULF OF ALASKA FIGURES

FIGURE 7.	POLLOCK SEASONS AND CHINOOK SALMON	P. 49
FIGURE 8.	SHALLOW-WATER COMPLEX, GROUND FISH SEASONS	P. 50
FIGURE 9.	SHALLOW-WATER COMPLEX, HALIBUT MORTALITY	P. 51
FIGURE 10.	DEEP-WATER COMPLEX, GROUND FISH SEASONS	P. 52
FIGURE 11.	DEEP-WATER COMPLEX, HALIBUT MORTALITY	P. 53
FIGURE 12.	2000 AND 2001 DISCARDS BY SECTOR	P. 54
FIGURE 13.	2000 AND 2001 FISHERIES WITH HIGHEST RATES	P. 55

GULF OF ALASKA TABLES: 2001

TABLE 37	ALL GEAR ALL MODES ALL TARGETS	P. 56
TABLE 38	TRAWL CATCHER /PROCESSOR ALL TARGETS	P. 57
TABLE 39	TRAWL CATCHER /PROCESSOR ARROWTOOTH FLOUNDER	P. 58
TABLE 40	TRAWL CATCHER /PROCESSOR FLATHEAD SOLE	P. 59
TABLE 41	TRAWL CATCHER /PROCESSOR REX SOLE	P. 60
TABLE 42	TRAWL CATCHER /PROCESSOR PACIFIC COD	P. 61

TABLE 43	TRAWL CATCHER /PROCESSOR ROCKFISH	P. 62
TABLE 44	TRAWL SHORESIDE ALL TARGETS	P. 63
TABLE 45	TRAWL SHORESIDE BOTTOM POLLOCK	P. 64
TABLE 46	TRAWL SHORESIDE MIDWATER POLLOCK	P. 65
TABLE 47	TRAWL SHORESIDE PACIFIC COD	P. 66
TABLE 48	TRAWL SHORESIDE DEEP-WATER FLATFISH	P. 67
TABLE 49	TRAWL SHORESIDE SHALLOW-WATER FLATFISH	P. 68
TABLE 50	TRAWL SHORESIDE ROCKFISH	P. 69
TABLE 51	HOOK-AND-LINE CATCHER/PROCESSOR ALL TARGETS	P. 70
TABLE 52	HOOK-AND-LINE CATCHER/PROCESSOR PACIFIC COD	P. 71
TABLE 53	HOOK-AND-LINE CATCHER/PROCESSOR SABLEFISH	P. 72
TABLE 54	HOOK-AND-LINE SHORESIDE ALL TARGETS	P. 73
TABLE 55	HOOK-AND-LINE SHORESIDE PACIFIC COD	P. 74
TABLE 56	HOOK-AND-LINE SHORESIDE ROCKFISH	P. 75
TABLE 57	HOOK-AND-LINE SHORESIDE SABLEFISH	P. 76
TABLE 58	POT ALL MODES ALL TARGETS	P. 77
TABLE 59	POT CATCHER/PROCESSOR PACIFIC COD	P. 78
TABLE 60	POT SHORESIDE PACIFIC COD	P. 79
TABLE 61	JIG SHORESIDE PACIFIC COD	P. 80
TABLE 62	JIG SHORESIDE ROCKFISH	P. 81

CDQ TABLES: 2001

TABLE 63	ALL GEAR ALL MODES ALL TARGETS	P. 82
TABLE 64	TRAWL CATCHER /PROCESSOR ATKA MACKEREL	P. 83
TABLE 65	TRAWL CATCHER /PROCESSOR BOTTOM POLLOCK	P. 84
TABLE 66	TRAWL CATCHER /PROCESSOR MIDWATER POLLOCK	P. 85
TABLE 67	H&L CATCHER/PROCESSOR PACIFIC COD	P. 86
TABLE 68	H&L CATCHER/PROCESSOR SABLEFISH	P. 87



Forward

Bycatch - marine life that is incidentally caught and discarded when commercial fishing for another target species - has always been a problem in North Pacific fisheries. Each year the sheer volume of wasted fish is striking. In 2001, over 261 million pounds of groundfish species were wasted. Groundfish include fish such as pollock, rockfish, Pacific cod, sole, sablefish and others. In addition to the groundfish there was over 14 million pounds of halibut, 611 thousand pounds of herring and over a 100 thousand salmon incidentally caught in the 2001 North Pacific groundfish fisheries. These numbers are staggering but they don't fully represent all the waste and incidental loss of life.

Not documented in this report are the marine animals that have no commercial value and those that were not enumerated by fishery observers. Over 1,000 species of fish, invertebrates (like corals and sponges), mammals and birds have been recorded as bycatch in the North Pacific. Many of these species receive little or no documentation by onboard observers.

This excess of waste is viewed by many as an ethical and cultural disgrace. Some communities far from the ocean, yet still connected by river, are highly concerned that 100,000 salmon were intercepted at sea as bycatch in the groundfish fisheries. Alaska Native families living along the Yukon and Kuskokwim River drainages are falling short in meeting their salmon subsistence needs.

In addition to the cultural and ethical problems associated with bycatch, there are also ecological ramifications to consider. One effect is the observed and unobserved bycatch of habitat forming organisms like sea whips, corals and sponges. Additionally there are concerns about how discarded offal affects ecological communities. What is happening to the trophic structure of the food web when the configuration of organic matter is changing from living, swimming animals to ground up offal deposited into the water column and onto the seafloor? Are the commercial fisheries altering the marine trophic food web, favoring scavengers over other animals in the food chain? In the *Ecological Effects of Fishing* (Dayton et al 2002), the authors report that discarded bycatch can affect the behavior of marine animals by attracting an influx of scavenger species. These species feed on bycatch during seasons of high fishing effort and when fishing stops, these same scavengers then shift their diet to resident species. Surely the bycatch of 261 million pounds of groundfish has some effect on the ecosystem, but the nature and extent of this effect is unknown.

The Alaska Marine Conservation Council has been working with fishery managers and fishermen since 1993 to reduce bycatch in the North Pacific. Improvements have been made in some fisheries, but problems persist. Publishing this report, "Discards in the North Pacific Groundfish Fisheries, 2001" is one way AMCC promotes awareness of a problem that would otherwise be lost in the archives of fishery

databanks. This bycatch report is the continuation of a series of reports dating back to 1992 that highlight groundfish and prohibited species catch (PSC) by target fishery, area and gear type.

Rockfish Highlights – Bering Sea and Aleutian Islands

Rockfish have been called the “elders” of fish society. Some species of fish belonging to the rockfish genera, *Sebastes* (Greek for “magnificent”) can live to be 100 years old. Rougheye rockfish (*Sebastes aleutianus*) have been aged by scientists to 205 years old, making them one of the longest lived fishes on Earth (Love et al 2002). There are 32 species of *Sebastes* and two species in the genus *Sebastolobus* that live in the waters off the coast of Alaska (Kramer & O’Connell 1995). Many species do not reach sexual maturity until they are 10 or 15 years old. Additionally, unlike many fish species, these fish don’t lay eggs. They are viviparous, meaning that they give birth to live young and nourish their larvae in the ovary. The different rockfish species inhabit a variety of habitats from nearshore kelp forests to deep offshore waters along the continental shelf break.

The complex population and stock structure of rockfish species - including ecological distinctions in site fidelity, reproductive rates, variations in reproduction within species located in different areas, and the potential of genetic drift within reproductively isolated populations - create unique challenges for fishery management and rockfish conservation. The unique characteristics of rockfish elevate the risk of localized depletion and overfishing through directed fishing and bycatch.

Of the 34 rockfish species that live off the coast of Alaska, approximately 28 of those have been documented in the Eastern Bering Sea and Aleutian Islands (BSAI). Some are managed as single species but most species are lumped together in groups and managed under a single harvest limit. By lumping unique species into aggregate complexes, managers are treating the different species and populations within the complex as though they were one. Knowledge about rockfish life histories, new genetic discoveries, and emerging information about discrete breeding populations all indicate the need for a more refined management policy. For example, scientists have indicated that if the fishing quotas for northern, rougheye, and shortraker rockfish were applied to smaller areas that more closely matched the actual distribution of the species, the commercial catch would have exceeded overfishing levels in both the Bering Sea and Aleutians Islands numerous times in recent years (NPFMC 2001).

Most of the BSAI sharpchin and northern rockfish are caught and discarded in the Atka mackerel trawl fishery. In 2001, over 12 million pounds of sharpchin and northern rockfish were caught in the Atka mackerel fishery and 97.3% of those fish were discarded. In comparison to all other BSAI trawl fisheries, the Atka mackerel fishery has the highest amounts of rockfish discards of all managed complexes (Figures 1 - 5).

While vessels fishing with trawls accounted for the greatest discards of Pacific ocean perch, sharpchin, northern, and “other rockfish”, vessels fishing with longlines had the highest discards of shortraker and rougheye rockfish, totaling 348,000 pounds (Figure 6). In comparison, the cumulative trawl discards of these species was 40,000 pounds. 83% of the longline shortraker and rougheye discards occurred in the Pacific cod fishery.

Figure 1.

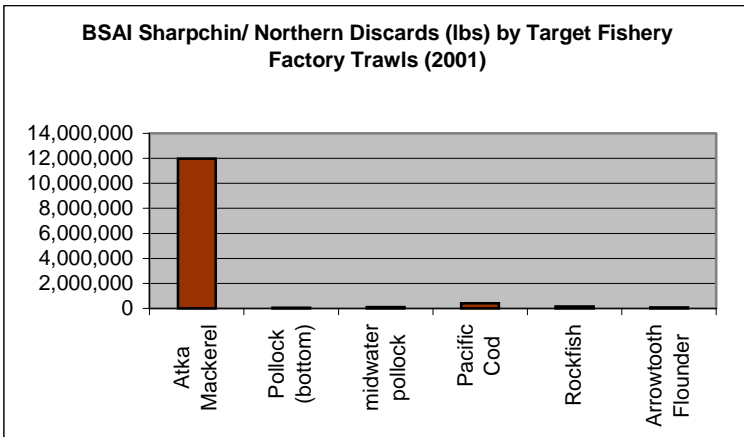


Figure 2.

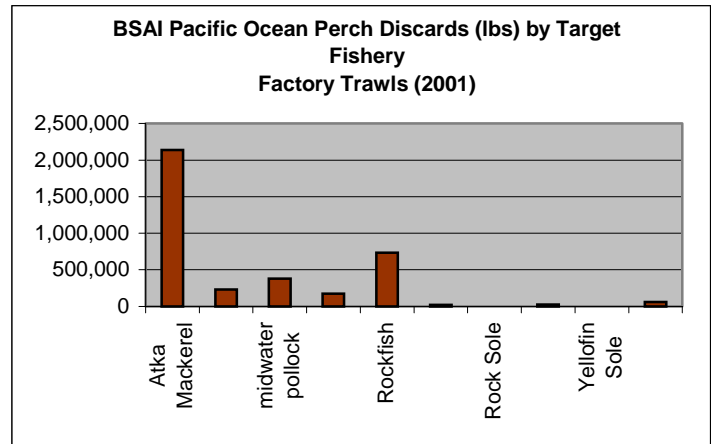


Figure 3.

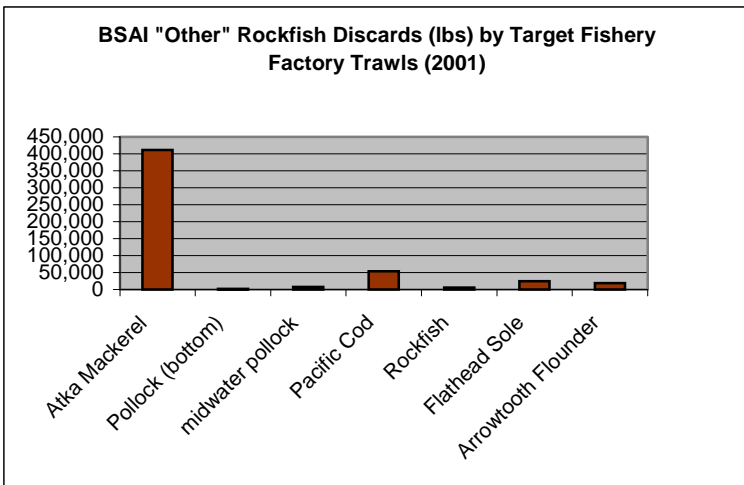


Figure 4.

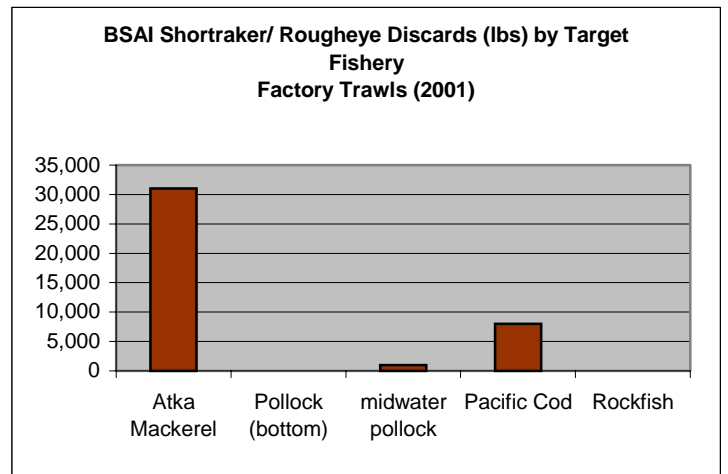


Figure 5.

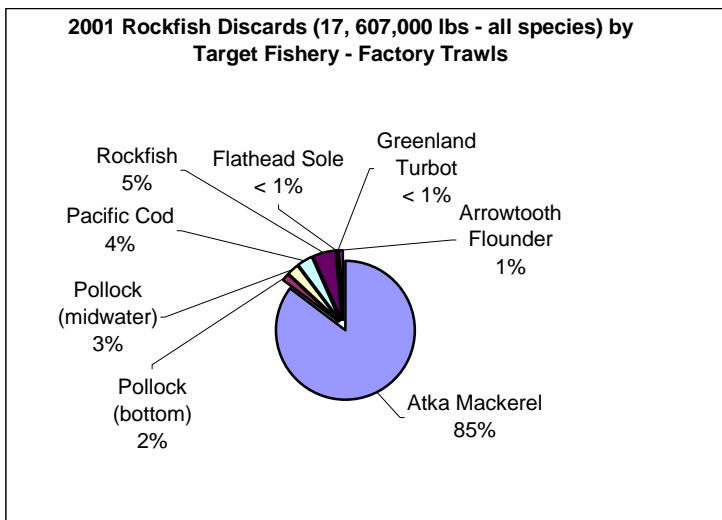
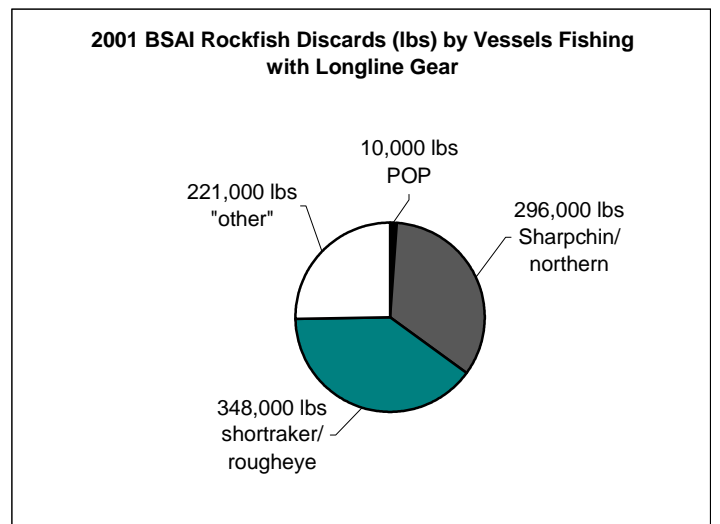


Figure 6.



Salmon Highlights

In *An Overview of Salmon Bycatch in Alaska Groundfish Fisheries*, the authors state, “From 1990 – 2001, an average of 37,819 chinook salmon and 69,332 other salmon species (>95% are chum salmon) were incidentally caught annually in the Bering Sea and Aleutian Island groundfish trawl fisheries and 20,779 chinook and 20,496 other salmon were incidentally caught annually in the Gulf of Alaska” (Witherell, Ackley & Coon 2002). In comparison to vessels using longlines and pots, vessels using trawls account for 99% of salmon bycatch in the North Pacific region. The salmon that are intercepted in the groundfish fisheries are primarily between one and two years away from returning to their natal streams to spawn.

Intercepted salmon in the North Pacific are bound for rivers in western Alaska, central and southeast Alaska, Asia and British Columbia. Fishery scientists estimate that approximately 60% of chinook salmon bycatch in any given year are bound for western Alaska rivers (Myers and Rogers 1998 as in Witherell, Ackley and Coon 2002). Using this estimate, 30,000 chinook salmon incidentally caught in the Bering Sea/ Aleutian Islands (BSAI) groundfish fisheries would equate to 18,000 fish intercepted from western Alaska. Adjusting for natural mortality at sea, it was calculated that for every 30,000 chinook intercepted in the Bering Sea and Aleutian Islands, roughly half (14,581) would have successfully returned to spawn in western Alaska rivers (Witherell, Ackley and Coon 2002).

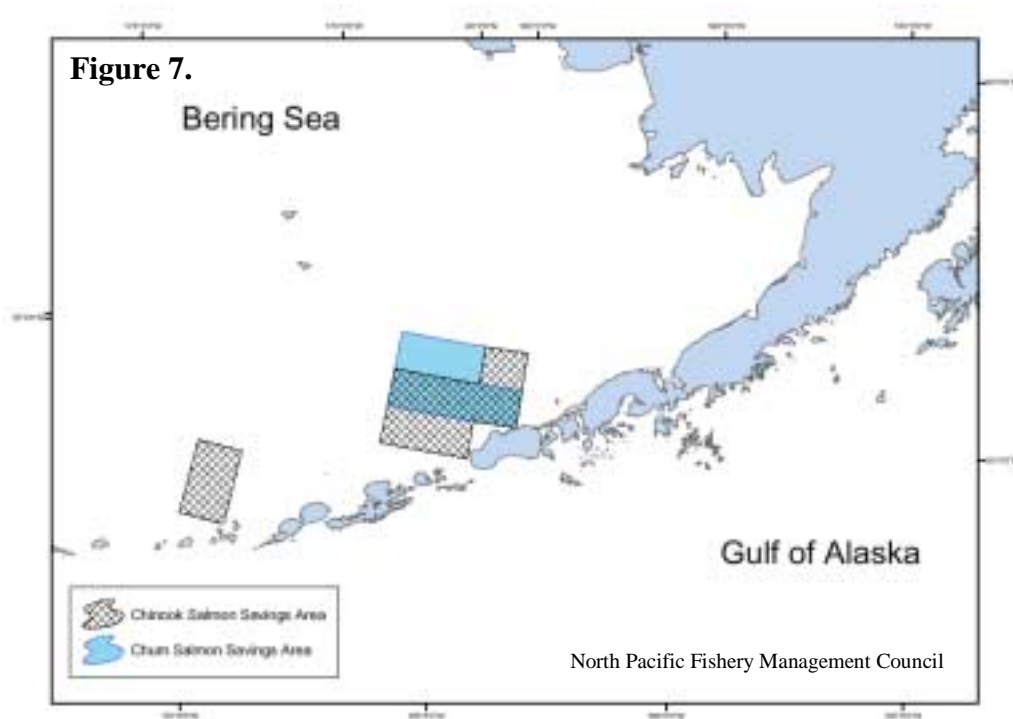
In the Bering Sea, the NPFMC has implemented chinook and chum bycatch “savings areas” (Figure 7). It was determined that these are areas of excessively high salmon bycatch and therefore bycatch controls in these areas would provide the most benefit. Since 1994, the Chum Salmon Savings Area closes to all trawling during the month of August. The area remains closed for the rest of the year if a bycatch cap of 42,000 chum is exceeded within the “catcher vessel operation area” prior to the “accounting period” (August 15 to October 14). However each year the cap is exceeded, yet the savings area is not closed to trawling because either the cap is exceeded after the accounting period or the chum are caught outside of the catcher vessel operation area. The “catcher vessel operation area” and the “accounting period” are caveats to chum salmon bycatch reduction that are rendering the program ineffective. Although chum salmon bycatch is controlled inside the savings area, bycatch is remaining high at an average of 62,275 chum per year since the regulation went into effect in 1994.

There are two chinook bycatch savings areas that close to trawling if the bycatch cap is exceeded before August 15 or after September 1. In 2000, new regulations were implemented that incrementally reduced the BSAI chinook bycatch limit from 48,000 to 29,000 in 2003. This report documents 39,776 chinook salmon caught in the BSAI groundfish and CDQ fisheries while Witherell et al document 40,303. Regardless of the difference, both numbers exceed the 37,000 chinook bycatch cap set for 2001. However, the savings areas were not closed because the cap only applies to chinook caught by vessels targeting pollock. Approximately 30,900 chinook were caught in the pollock fishery and over 8,800 were caught in other groundfish and CDQ trawl fisheries. Although the pollock fishery accounts for the majority of the chinook bycatch, there are no regulatory incentives for other trawl fisheries to minimize and avoid chinook salmon.

In February 2002 (one year after the 2001 fishery addressed in this report), the NPFMC voted unanimously to investigate bycatch savings areas and caps for the Gulf of Alaska. At this time the NPFMC has not proceeded further with analyzing the location for chinook or chum salmon bycatch savings areas. Presently there are no limits to the amount of salmon that could be caught as bycatch in the Gulf of Alaska groundfish fisheries.

Table 1. Bycatch of Pacific salmon in Alaska groundfish trawl fisheries, 1996 – 2001. Bycatch includes salmon incidentally caught in the Community Development Quota (CDQ) program. Number of fish based on: Witherell, Ackley, Coon 2002.

<i>Bering Sea and Aleutian Islands</i>			<i>Gulf of Alaska</i>			<i>* Chum bycatch includes coho, sockeye and pink salmon. Total numbers are however predominantly chum salmon.</i>
<i>Year</i>	<i>Chinook</i>	<i>Chum*</i>	<i>Year</i>	<i>Chinook</i>	<i>Chum*</i>	
<i>1996</i>	63,205	77,771	<i>1996</i>	15,761	3,969	
<i>1997</i>	50,218	67,349	<i>1997</i>	15,119	3,349	
<i>1998</i>	58,966	69,237	<i>1998</i>	16,941	13,539	
<i>1999</i>	14,586	47,204	<i>1999</i>	30,600	7,529	
<i>2000</i>	8,219	59,306	<i>2000</i>	26,706	10,996	
<i>2001</i>	40,303	60,460	<i>2001</i>	14,946	5,995	



For more information on bycatch in Alaska's fisheries:

Additional information on bycatch and management measures to reduce bycatch is available in AMCC's publication, "Wasting Alaska's Future" and another AMCC report published in June 2001. Historical bycatch data is available from both the Alaska Department of Fish and Game and the National Marine Fisheries Service.

Alaska Marine Conservation Council's web site: www.akmarine.org

Discards in the Groundfish Fisheries of the Bering Sea/ Aleutian Islands and Gulf of Alaska 1998 – 2000. <http://www.cf.adfg.state.ak.us/geninfo/pubs/pubshome.htm>

National Marine Fisheries Service: <http://www.nmfs.noaa.gov/bycatch.htm>

Works Cited:

Dayton, P.K., Thrush, S., Coleman, F.C. 2002. Ecological Effects of Fishing In Marine Ecosystems of the United States. Pew Oceans Commission. Arlington, VA.

Kramer, D.E., O'Connell, V.M. 1995. Guide to Northeast Pacific Rockfishes. Alaska Sea Grant Marine Advisory Bulletin No. 25

Love, Milton S. et al. 2002. The Rockfishes of the Northeast Pacific. University of California Press. Berkeley, Los Angeles, London.

Myers, K.W., Rogers, D.E. 1988. Stock origins of Chinook salmon in incidental catches by groundfish fisheries in the eastern Bering Sea. *North American Journal of Fisheries Management*. 8: 162-171.

NPFMC. 2001. Stock Assessment and Fishery Evaluation Report For the Groundfish Resources of the Bering Sea/ Aleutian Islands Region. November 2001. pgs 11-13: 11-14. North Pacific Fishery Management Council, Anchorage, AK. November 2001.

Witherell, D., Ackley, D., Coon, C. 2002. An Overview of Salmon Bycatch in Alaska Groundfish Fisheries. *Alaska Fisheries Research Bulletin*. 9(1): 53-64.

Discards in the North Pacific Groundfish Fisheries, 2001

1.0 Introduction

This report updates the 2002 Alaska Department of Fish and Game (ADF&G) sponsored report, Discards in the North Pacific Groundfish Fisheries 1998-2000. It documents the amounts and sources of groundfish, crab, halibut, herring and salmon discards in commercial groundfish fisheries in the Bering Sea/Aleutian Islands (BSAI) and the Gulf of Alaska (GOA) during calendar year 2001.

Appendix 1 includes tables for the BSAI target fisheries, Appendix 2 has tables for GOA target fisheries, Appendix 3 has tables for Community Development Quota (CDQ) groundfish fisheries.

A summary table below shows the total groundfish harvest, groundfish discards and prohibited species discards for years 1997 through 2001. As predicted by the authors of the 1998 version of the report, implementation of the Improved Retention/Improved Utilization program contributed to substantial declines (rate in 1998 was 44% of that in 1997) in groundfish discards. However, 1999 showed an increase, followed by a slight decrease in 2000. It wasn't until 2001 that another substantial decrease in groundfish discards occurred: discard rate was 72% of that in 2000.

TABLE 1. ALASKA SUMMARY	1997	1998	1999	2000	2001
Total Groundfish Catch (mt)	1,940,764	1,774,489	1,527,219	1,672,261	1,831,197
Total Groundfish Discards (mt)	292,413	149,606	148,946	150,576	118,647
Groundfish Discards (thou. pds)	644,654	329,822	328,368	331,961	261,568
Percent Groundfish Discarded	15.1%	8.4%	9.8%	9.0%	6.5%
Halibut Mortality (thou. pds)	14,620	14,087	14,414	13,558	14,356
Herring (thou. pounds)	2,515	1,797	1,989	1,137	611
Chinook Salmon (numbers)	63,231	70,000	43,492	33,825	53,055
Other Salmon (numbers)	66,578	81,580	53,792	68,532	63,381
Red King Crab (numbers)	74,634	49,191	94,022	115,682	80,909
Other King Crab (numbers)	29,093	43,220	61,879	36,914	36,285
Bairdi Tanner Crab (numbers)	2,262,152	1,643,587	996,764	1,254,100	1,258,219
Other Tanner Crab (numbers)	5,654,941	4,633,578	1,604,354	3,314,970	2,043,627

The rate changes in “percent groundfish discarded” closely track those for pollock, which is to be expected as it is by far the dominant species in Alaskan groundfish catch. Table 2 shows these details. Not only did pollock discard rates fall substantially in both the Gulf of Alaska and Bering Sea/Aleutians Islands, but in 2001, pollock was a greater proportion of the total groundfish harvest.

Discards in the North Pacific Groundfish Fisheries, 2001

TABLE 2.

<u>POLLOCK</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
<u>CATCH (mt)</u>					
BSAI	1,060,641	1,040,268	889,337	1,019,186	1,247,048
GOA	89,667	125,288	95,420	72,845	72,028
TOTAL	1,150,308	1,165,555	984,758	1,092,031	1,319,076
<u>DISCARD (mt)</u>					
BSAI	92,425	16,060	28,244	21,984	17,355
GOA	6,954	1,326	1,894	2,086	721
TOTAL	99,379	17,386	30,138	24,070	18,076
<u>DISCARD RATE</u>					
BSAI	8.71%	1.54%	3.18%	2.16%	1.39%
GOA	7.76%	1.06%	1.98%	2.86%	1.00%
TOTAL	8.64%	1.49%	3.06%	2.20%	1.37%
<u>POLLOCK CATCH AS % OF TOTAL GROUND FISH CATCH</u>	59.27%	65.68%	64.48%	65.30%	72.03%

2.0 Data sources and Methodology

As in previous reports, the National Marine Fisheries Service (NMFS) “best blend” data provided by the Alaska Regional Office was used as the data source. A description of the derivation of this data can be found at:

<http://www.fakr.noaa.gov/sustainablefisheries/blend.htm>

Numbers may differ slightly from those in NMFS annual reports posted on NMFS Alaska Fisheries Science Center webpages for several reasons. First, slightly different methodologies were used in assigning targets in the data provided to the author (that data is in the format used for in-season fisheries management). Second, small amounts of catch in unassigned categories were not included in this report; and third, data for categories with fewer than three processors were not provided to the author due to NMFS confidentiality constraints.

This report breaks out sharpchin/northern rockfish from the “other rockfish” category, reflecting its separate management quota.

2.1 The assumed mortality rate for all species except halibut continued to be 100%. Halibut mortality rates are determined by the International Pacific Halibut Commission (IPHC), based on observer sampling data from recent years. Information on these rates can be found at <http://www.iphc.washington.edu/halcom/pubs/rara/1999rara/99rara06.pdf>

3.0. **Managing Entities**

The managing entities for groundfish fisheries in the North Pacific include NMFS, the North Pacific Fisheries Management Council (NPFMC), ADF&G, and the IPHC. The NPFMC develops management policies and recommends harvest guidelines. NMFS is responsible for day-to-day management of fisheries and regulatory development. ADF&G manages groundfish fisheries in state waters. The IPHC provides information and recommendations about halibut bycatch issues. Information about these agencies can be found at:

NMFS: <http://www.fakr.noaa.gov/>

NPFMC: <http://www.fakr.noaa.gov/npfmc/>

ADF&G: http://www.cf.adfg.state.ak.us/cf_home.htm

IPHC: <http://www.iphc.washington.edu/halcom/default.htm>

4.0 **General Causes of Discards**

This issue was comprehensively discussed in the 1998 report (p. 3). Regulatory discards continue to be a substantial component of discards, although exact accounting is beyond the scope of this series. In 2000 there were 49 in-season actions where a species or species group became “bycatch only” to one or more gear groups in an entire area, or one of its subareas: 20 of these were in the BSAI, 29 in the Gulf. In 2001 there were 52 such inseason actions, 23 in the BSAI and 29 in the Gulf. These closures can be year-round, or seasonal for periods between open fisheries. They can apply to entire areas or subareas and to one or more gear types. During these periods, the closed species can be retained according to a maximum retainable bycatch limit, or MRB. Despite such “bycatch only” closures, it is still sometimes necessary for NMFS to make some groundfish species or species groups prohibited to retention (PSC) in certain areas when their Total Allowable Catch (TAC) amounts were exceeded. In 2000 there were six such closures (three in BSAI and three in Gulf) and in 2001, five. Most of these closures involved rockfish species with very low TACs.

5.0 **Improved Retention/Improved Utilization (IR/IU)**

Details of this program were described in last version.

6.0 **Prohibited Species Donation Program**

Details of this program were described in last version.

7.0 **Other Management Actions affecting fisheries bycatch.**

These were discussed in previous versions of this report, including measures in the 1990’s specifically intended to control bycatch, as well as the dramatic affect of the American Fisheries Act (1999) on pollock fisheries. Also initially implemented in 1999 were the first RPAs (Reasonable and Prudent Alternatives) for the protection of Steller sea lions. These dispersed fishing effort both temporally and spatially for the pollock and Atka mackerel fleets by establishing new quotas and seasons, and additionally established conservation zones in the Bering Sea and Gulf (Shelikof Strait). Subsequent

Discards in the North Pacific Groundfish Fisheries, 2001

Steller sea lion protection measures similarly affected Pacific cod fisheries.

8.0. CDQ Fisheries.

The Western Alaska CDQ program allocates a percentage of all Bering Sea and Aleutian Islands quotas for groundfish, prohibited species, halibut, and crab to eligible communities. From 1993-1997 pollock was the only groundfish species allocated; 1998 marked the first year of the “multi-species” CDQ program where all groundfish species (and associated PSC quotas) were allocated.

Fishing for CDQ quota tends to be during times outside of the open access groundfish seasons. Because dates for some open access fisheries were set to minimize PSC bycatch, there was concern that PSC bycatch in CDQ fisheries could be greater than in open access fisheries. However, CDQ quota is subdivided among six groups, each of which in turn subdivides its own quota among specific fishing operations or even boats. A boat with its own quota is usually able to make operational choices to avoid bycatch that it is less able to do in an open access, “race for the fish” mode.

Some CDQ information is currently unavailable as CDQ data is in a different format than open-access groundfish and prohibited species data.

9.0 Review of 2000-2001 Data

Information from year 2000 is included in this section for purposes of comparison.

9.1 BERING SEA/ALEUTIAN ISLANDS

- Groundfish discards in 2000 were 273 million pounds (mp) or 8.4%; in 2001, 209 mp or 5.8%.
- Trawl fisheries accounted for 91.1% of harvest and 85.5% of discards in 2000; 91.6% and 80.4% of discards in 2001.
- Trawl catcher/processors accounted for 47.5% of harvest and 77.1% of discards in 2000; 45.8% of harvest and 74.9% of discards in 2001.
- Shoreside trawl catcher vessels accounted for 36.4% of harvest and 7.8% of discards in 2000; 38.1% of harvest and 4.6% of discards in 2001.
- Fixed gear accounted for 8.9% of harvest and 14.5% of discards in 2000; 8.5% of harvest and 19.6% of discards in 2001.
- Salmon bycatch was 64,804 in 2000; 95,310 in 2001.
- Crab bycatch of all kinds was 4.6 million in 2000; 3.2 million in 2001.
- Halibut bycatch mortality was 4,008 mt in 2000; 4,060 mt in 2001.

Catcher/processor Mid-water pollock trawl fishery.

- 2000 Total groundfish harvest: 371,872 mt. Total groundfish discarded 2,972 mt (0.8%). Total pollock discarded 870 mt (0.2%).
- 2001 Total groundfish harvest: 473,104 mt. Total groundfish discarded 1,792 mt (0.4%). Total pollock discarded 175 mt (0.0%).
- Salmon bycatch: 7,092 fish in 2000; 34,956 fish in 2001.

Discards in the North Pacific Groundfish Fisheries, 2001

CDQ Catcher/processor Mid-water pollock trawl fishery.

- 2000 Total groundfish harvest: 84,306 mt. Total groundfish discarded 485 mt (0.6%). Total pollock discarded 102 mt (0.1%)
- 2001 Total groundfish harvest: 118,597 mt. Total groundfish discarded 569 mt (0.5%). Total pollock discarded 0 mt (0.0%).
- Salmon bycatch: 1,633 salmon in 2000; 3,697 salmon in 2001.

Catcher/processor Bottom pollock trawl fishery. At its June 1998 meeting, the NPFMC voted to prohibit bottom trawling for pollock effective January 1 1999. Some tonnage continues to show up in this target because target definition depends on amount of bycatch, rather than gear used.

- 2000 Total groundfish harvest: 27,540 mt. Total groundfish discarded 1,949 mt (7.1%). Total pollock discarded 108 mt (0.4%). Largest discard, rock sole 875 mt (86.7%).
- 2001 Total groundfish harvest: 17,853 mt. Total groundfish discarded 842 mt (4.7%). Total pollock discarded 172 mt (1.1%). Largest discard, pollock, 172 mt (1.1%).

CDQ Catcher/processor Bottom pollock trawl fishery

- 2000 Total groundfish harvest: 6,915 mt. Total groundfish discarded 221 mt (3.2%). Total pollock discarded 0 mt (0%).
- 2001 Total groundfish harvest: 2,701 mt. Total groundfish discarded 55 mt (2.0%). Total pollock discarded 0 mt (0.0%).

Catcher/processor Yellowfin sole trawl fishery.

- 2000 Total groundfish harvest: 114,168 mt. Total groundfish discarded 33,374 mt (29.2%). Total yellowfin sole discarded 9,600 mt (13.7%).
- 2001 Total groundfish harvest: 99,173 mt. Total groundfish discarded 26,856 mt (27.1%). Total yellowfin sole discarded 5,940 mt (10.9%).
- Halibut bycatch mortality: 2000 - 884 mt. 2001 - 1,046 mt.
- Crab bycatch: 2000 - 2,868,179 crabs. 2001 - 1,403,283 crabs.

CDQ Catcher/processor Yellowfin sole trawl fishery. Category does not appear in 2000 or 2001.

Catcher/processor Rock sole trawl fishery. Traditionally this fishery was mostly a roe fishery and males were discarded. Because of NMFS' inseason target definitions, a portion of the catch in the fishery ends up assigned to the yellowfin sole target category.

- 2000 Total groundfish harvest: 46,870 mt. Total groundfish discarded 21,686 mt (46.3%). Total Rock sole discarded 14,490 mt (49.9%).
- 2001 Total groundfish harvest: 30,435 mt. Total groundfish discarded 9,386 mt (30.8%). Total Rock sole discarded 3,480 mt (24.2%).
- Halibut bycatch mortality: 2000 - 483 mt; 2001 - 729 mt.
- Crab bycatch: 2000 - 404,696 crab; 2001 - 535,701 crab.

Catcher/processor Pacific cod trawl fishery.

- 2000 Total groundfish harvest: 32,298 mt. Total groundfish discarded 11,063 mt (34.3%). Total

Discards in the North Pacific Groundfish Fisheries, 2001

Pacific cod discarded 146 mt (1.0%). Largest discard, rock sole - 3,960 mt (61.3%).

- 2001 Total groundfish harvest: 27,037 mt. Total groundfish discarded 8,233 mt (30.4%). Total Pacific cod discarded 168 mt (1.3%). Largest discard, rock sole - 2,273 mt (47.4%).
- Halibut bycatch mortality: 2000 - 436 mt; 2001 - 410 mt.
- Crab bycatch: 2000 - 181,109 crab; 2001 - 97,285 crab.

Catcher/processor Atka mackerel trawl fishery.

- 2000 Total groundfish harvest: 49,801 mt. Total groundfish discarded 7,482 mt (15.0%). Total Atka mackerel discarded 2,259 mt (5.4%). Largest discard, other rockfish 4,136 mt (91.8%).
- 2001 Total groundfish harvest: 64,414 mt. Total groundfish discarded 10,994 mt (17.1%). Total Atka mackerel discarded 3,490 mt (6.4%). Largest discard, sharpchin/northern rockfish 5,437 mt (97.3%).

CDQ Catcher/processor Atka mackerel trawl fishery.

- 2000 Total groundfish harvest: 5,266 mt. Total groundfish discarded 194 mt (15.0%). Total Atka mackerel discarded 136 mt (3.0%).
- 2001 Total groundfish harvest: 6,359 mt. Total groundfish discarded 540 mt (8.5%). Total Atka mackerel discarded 343 mt (6.9%).

Shoreside Mid-water pollock trawl fishery.

- 2000 Total groundfish harvest: 488,395 mt. Total groundfish discarded 1,325 mt (0.3%). Total Pollock discarded 572 mt (0.1%).
- 2001 Total groundfish harvest: 602,316 mt. Total groundfish discarded 1,248 mt (0.2%). Total pollock discarded 220 mt (0.0%).
- Salmon bycatch: 2000 - 52,894 fish; 2001 - 37,336 fish.

CDQ Shoreside Mid-water pollock trawl fishery. Not available due to confidentiality.

Mothership Mid-water pollock trawl fishery.

- 2000 Total groundfish harvest: 92,391 mt. Total groundfish discarded 293 mt (0.3%). Total pollock discarded 0 mt (0%).
- 2001 Total groundfish harvest: 121,813 mt. Total groundfish discarded 662 mt (0.5%). Total pollock discarded 412 mt (0.3%).
- Salmon bycatch: 2000 - 697 fish; 2001 - 10,690 fish.

Shoreside Pacific cod trawl fishery.

- 2000 Total groundfish harvest: 42,730 mt. Total groundfish discarded 8,343 mt (19.5%). Total Pacific cod discarded 118 mt (0.4%). Largest discard pollock, 4,831 mt (77.1%).
- 2001 Total groundfish harvest: 19,120 mt. Total groundfish discarded 2,980 mt (15.6%). Total Pacific cod discarded 38 mt (0.2%). Largest discard pollock, 1,234 mt (61.2%).
- Halibut bycatch mortality: 2000 - 474 mt; 2001 - 245 mt.
- Crab bycatch: 2000 - 44,366 crab; 2001 - 19,022 crab.

Discards in the North Pacific Groundfish Fisheries, 2001

Catcher/processor Pacific cod Hook-and-Line fishery. More than half of the discards consist of “other species”, primarily skates and sculpins with negligible current market value.

- 2000 Total groundfish harvest: 102,005 mt. Total groundfish discarded 15,036 mt (14.7%). Total Pacific cod discarded 2,395 mt (2.9%). Largest discard “other species” 9,503 mt (84.3%).
- 2001 Total groundfish harvest: 118,197 mt. Total groundfish discarded 17,027 mt (14.4%). Total Pacific cod discarded 1,516 mt (1.6%). Largest discard “other species”, 11,898 mt (87.6%).
- Halibut bycatch mortality: 2000 - 706 mt; 2001 - 762 mt.

CDO Catcher/processor Pacific cod Hook-and-Line fishery.

- 2000 Total groundfish harvest: 15,256 mt. Total groundfish discarded 2,298 mt (15.1%). Total Pacific cod discarded 286 mt (2.3%).
- 2001 Total groundfish harvest: 13,594 mt. Total groundfish discarded 1,717 mt (12.6%). Total Pacific cod discarded 239 mt (2.1%).
- Halibut bycatch mortality: 2000 - n/a; 2001 - 48 mt.

Catcher/processor and Shoreside catcher vessel Pacific cod Pot fisheries.

- 2000 Total groundfish harvest: 18,774 mt. Total groundfish discarded 72 mt (0.4%).
- 2001 Total groundfish harvest: 15,620 mt. Total groundfish discarded 588 mt (3.8%).
- Halibut bycatch mortality: 2000 - 3 mt; 2001 - 2 mt.
- Crab bycatch: 2000 - 341,342 crab; 2001 - 194,277 crab.

9.2 GULF OF ALASKA

- Groundfish discards in 2000, 59.2 million pounds (mp) or 13.0%; in 2001 52.2 mp or 13.0%.
- Trawl fisheries accounted for 76.0% of catch and 79.4% of discards in 2000; and 81.2% of catch and 84.4% of discards in 2001.
- Trawl catcher/processors accounted for 17.3% of catch and 45.9% of discards in 2000; and 15.8% of catch and 40.0% of discards in 2001.
- Shoreside trawl catcher vessels accounted for 58.7% of total catch and 33.5% of discards in 2000; and 65.4% and 44.4% of discards in 2001.
- Fixed gear accounted for 24.0% of catch and 20.6% of discards in 2000; and 18.7% of catch and 15.5% of discards in 2001.
- Salmon bycatch was 37,553 fish in 2000; 21,126 fish in 2001.
- Crab bycatch of all species was 148,854 crab in 2000; 198,514 crab in 2001.
- Halibut bycatch mortality was 2,141 mt in 2000; 2,451 mt in 2001.

Shoreside Mid-water pollock trawl fishery.

- 2000 Total groundfish harvest: 62,973 mt. Total groundfish discarded 1,006 mt (1.6%). Total pollock discarded 572 mt (0.1%).
- 2001 Total groundfish harvest: 44,016 mt. Total groundfish discarded 442 mt (1.0%). Total pollock discarded 211 mt (0.5%).

Discards in the North Pacific Groundfish Fisheries, 2001

- Salmon bycatch: 2000 - 13,354 fish; 2001 - 4,370 fish.

Catcher/processor Rex sole trawl fishery.

- Halibut bycatch mortality: 2000 - 250 mt; 2001 - 248 mt.
- 2000 Total groundfish harvest: 8,661 mt. Total groundfish discarded 5,079 mt (58.6%). Total Rex sole discarded 0 mt (0%). Largest discard, arrowtooth flounder 3,791 mt (86.4%).
- 2001 Total groundfish harvest: 7,621 mt. Total groundfish discarded 4,605 mt (60.4%). Total Rex sole discarded 22 mt (1.0%). Largest discard, arrowtooth flounder 3,588 mt (98.5%).
- Crab bycatch: 2000 - 3,266 crab; 2001 - 2,529 crab.

Shoreside Pacific cod trawl fishery.

- 2000 Total groundfish harvest: 22,129 mt. Total groundfish discarded 2,275 Mt (10.2%). Total Pacific cod discarded 47 mt (0.2%). Largest discard, pollock 967 mt (78.8%).
- 2001 Total groundfish harvest: 24,758 mt. Total groundfish discarded 3,651 mt (14.7%). Total Pacific cod discarded 251 mt (1.5%). Largest discard, arrowtooth flounder 2,391 mt (82.9%).
- Halibut bycatch mortality: 2000 - 320 mt; 2001 - 608 mt.

Catcher/processor and Shoreside catcher vessel Pacific cod Pot fisheries.

- 2000 Total groundfish harvest: 17,722 mt. Total groundfish discarded 358 mt (2.0%). Total Pacific cod discarded 19 mt (0.1%). Largest discard "other groundfish" 304 mt (87.3%).
- 2001 Total groundfish harvest: 7,369 mt. Total groundfish discarded 290 mt (3.9%). Total Pacific cod discarded 128 mt (1.8%). Largest discard "other groundfish" 140 mt (80.7%).
- Halibut bycatch mortality: 2000 - 7 mt; 2001 - 5 mt.
- Crab bycatch: 2000 - 96,104 crab; 2001 - 69,582 crab.

Discards in the North Pacific Groundfish Fisheries, 2001

Table 3. Comparison of Discarded, Retained and Total catch by Component in Bering Sea/Aleutians, 2000-2001

	2000		2001	
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
<u>GROUNDFISH DISCARDS</u>				
Trawl Catcher Processor	95,404	77.1%	71,148	74.92%
Shoreside trawl Catcher Vessel	9,672	7.8%	4,332	4.6%
Mothership Trawl Catcher Vessel	705	0.6%	880	0.9%
Hook & Line Catcher Processor	16,160	13.1%	17,436	18.4%
Hook & Line Shoreside Catcher Vessel	772	0.6%	576	0.6%
All Pot Vessels	1,002	0.8%	589	0.6%
TOTAL	123,714	100.0%	94,961	100.0%
<u>GROUNDFISH RETAINED CATCH</u>				
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	601,071	44.8%	684,527	44.1%
Shoreside trawl Catcher Vessel	524,609	39.1%	622,922	40.1%
Mothership Trawl Catcher Vessel	104,830	7.8%	125,352	8.1%
Hook & Line Catcher Processor	91,944	6.8%	104,139	6.7%
Hook & Line Shoreside Catcher Vessel	1,051	0.1%	1,540	0.1%
All Pot Vessels	18,852	1.4%	15,030	1.0%
TOTAL	1,342,357	100.0%	1,553,581	100.0%
<u>GROUNDFISH TOTAL CATCH</u>				
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	696,474	47.5%	755,674	45.9%
Shoreside trawl Catcher Vessel	534,280	36.4%	627,254	38.1%
Mothership Trawl Catcher Vessel	105,535	7.2%	126,232	7.7%
Hook & Line Catcher Processor	108,104	7.4%	121,575	7.4%
Hook & Line Shoreside Catcher Vessel	1,823	0.1%	2,117	0.1%
All Pot Vessels	19854	1.4%	15,620	0.04%
TOTAL	1,466,071	100.0%	1,648,542	100.0%

Discards in the North Pacific Groundfish Fisheries, 2001

Table 4. Comparison of Discarded, Retained and Total catch by Component in Gulf of Alaska, 2000-2001.

	2000		2001	
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
<u>GROUND FISH DISCARDS</u>				
Trawl Catcher Processor	12,334	45.9%	9,485	40.0%
Shoreside trawl Catcher Vessel	8,997	33.5%	10,521	44.4%
Mothership Trawl Catcher Vessel	0	0.0%	0	0.0%
Hook & Line Catcher Processor	609	2.3%	515	2.2%
Hook & Line Shoreside Catcher Vessel	4,564	17.0%	2,876	12.1%
All Pot Vessels	358	1.3%	290	1.2%
TOTAL	26,862	100.0%	23,687	100.0%
<u>GROUND FISH RETAINED CATCH</u>				
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	23,236	13.0%	19,390	12.2%
Shoreside trawl Catcher Vessel	111,880	62.5%	108,728	68.5%
Mothership Trawl Catcher Vessel	0	0.0%	0	0.0%
Hook & Line Catcher Processor	6,518	3.6%	5,575	3.51%
Hook & Line Shoreside Catcher Vessel	19,999	11.2%	17,855	11.3%
All Pot Vessels	17,364	9.7%	7,079	4.5%
TOTAL	178,996	100.0%	158,696	100.0%
<u>GROUND FISH TOTAL CATCH</u>				
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	35,570	17.3%	28,876	15.8%
Shoreside trawl Catcher Vessel	120,877	58.7%	119,249	65.3%
Mothership Trawl Catcher Vessel	0	0.0%	0	0.0%
Hook & Line Catcher Processor	7,127	3.5%	6,090	3.3%
Hook & Line Shoreside Catcher Vessel	24,563	11.9%	20,731	11.4%
All Pot Vessels	17,722	8.6%	7,369	4.0%
TOTAL	205,859	100.0%	182,656	100.0%

Discards in the North Pacific Groundfish Fisheries, 2001

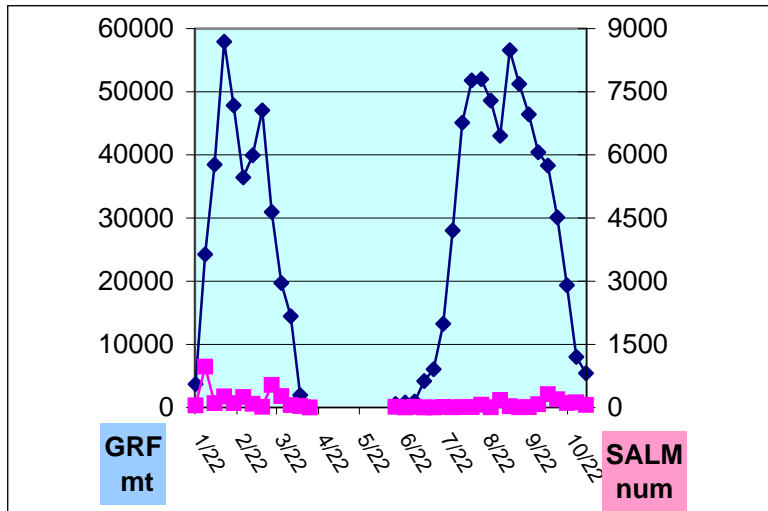
Table 5. Comparison of Discarded, Retained and Total catch by Component in Bering Sea/Aleutians and Gulf of Alaska, 2000-2001.

	2000		2001	
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
<u>GROUND FISH DISCARDS</u>				
Trawl Catcher Processor	107,738	71.6%	80,633	68.0%
Shoreside trawl Catcher Vessel	1,669	12.4%	14,853	12.5%
Mothership Trawl Catcher Vessel	705	0.5%	880	0.7%
Hook & Line Catcher Processor	16,769	11.1%	17,951	15.1%
Hook & Line Shoreside Catcher Vessel	5,336	3.5%	3,452	2.9%
All Pot Vessels	1,360	0.9%	879	0.7%
TOTAL	150,576	100.0%	118,648	100.0%
 <u>GROUND FISH RETAINED CATCH</u>				
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	624,306	41.0%	703,917	41.1%
Shoreside trawl Catcher Vessel	636,489	41.8%	731,650	42.7%
Mothership Trawl Catcher Vessel	104,830	6.9%	125,352	7.3%
Hook & Line Catcher Processor	98,462	6.5%	109,714	6.4%
Hook & Line Shoreside Catcher Vessel	21,050	1.4%	19,395	1.1%
All Pot Vessels	36,216	2.4%	22,109	1.3%
TOTAL	1,521,353	100.0%	1,712,277	100.0%
 <u>GROUND FISH TOTAL CATCH</u>				
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	732,044	43.8%	784,550	42.9%
Shoreside trawl Catcher Vessel	655,157	39.2%	746,503	40.7%
Mothership Trawl Catcher Vessel	105,535	6.3%	126,232	6.9%
Hook & Line Catcher Processor	115,231	6.9%	127,665	7.0%
Hook & Line Shoreside Catcher Vessel	26,386	1.6%	22,848	1.3%
All Pot Vessels	37,575	2.2%	22,989	1.3%
TOTAL	1,671,929	100.0%	1,827,339	100.0%

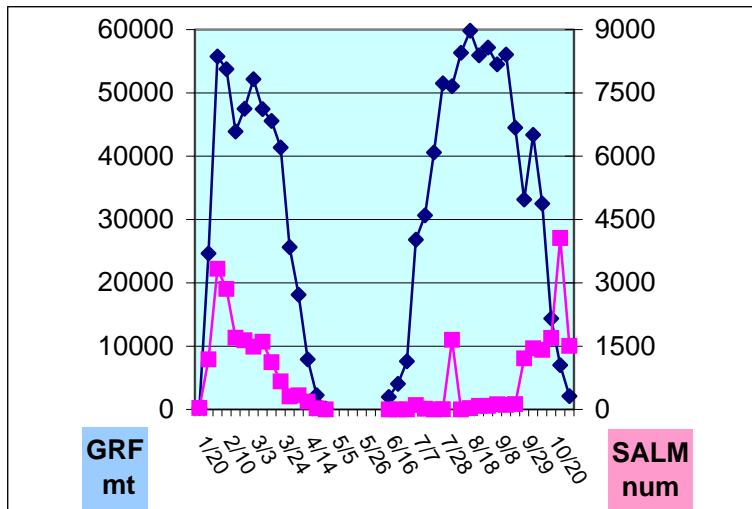
Discards in the Bering Sea/Aleutian Islands, 2001

FIGURE 1. PELAGIC POLLOCK: TOTAL GROUNDFISH BY WEEK AND CHINOOK SALMON

2000



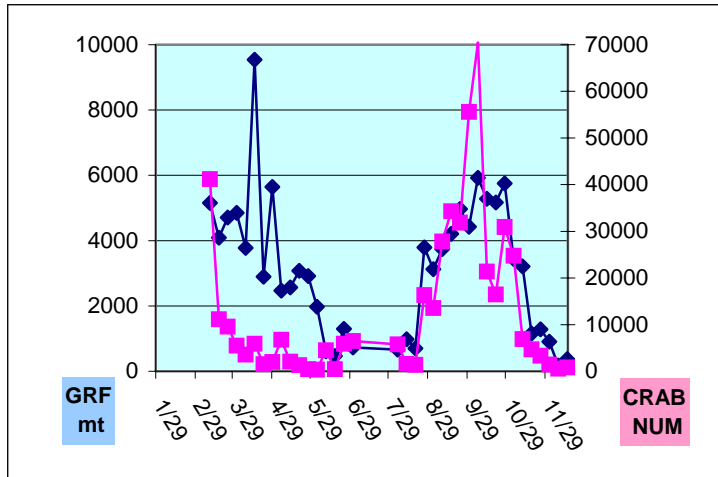
2001



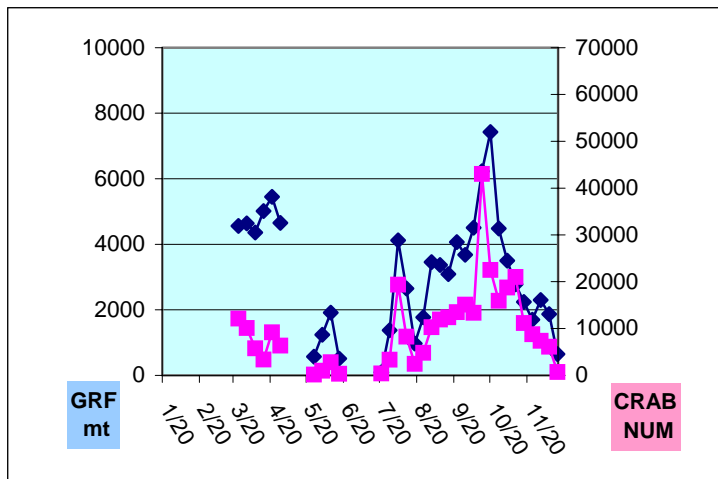
Discards in the Bering Sea/Aleutian Islands, 2001

FIGURE 3. YELLOWFIN SOLE: TOTAL GROUNDFISH BY WEEK AND C. BAIRDI CRAB

2000



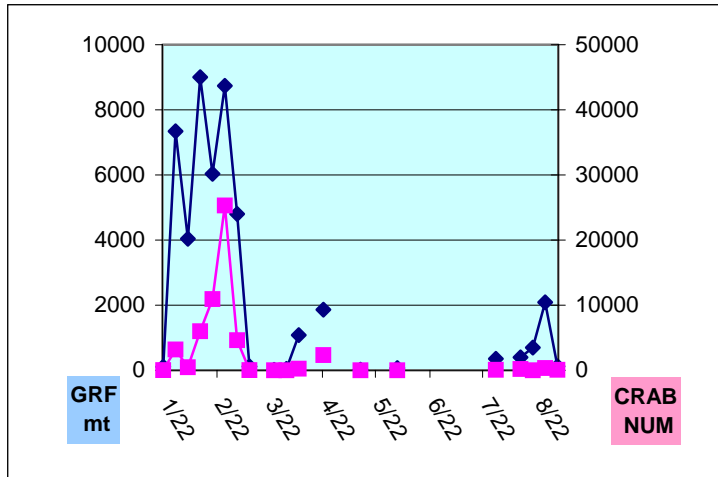
2001



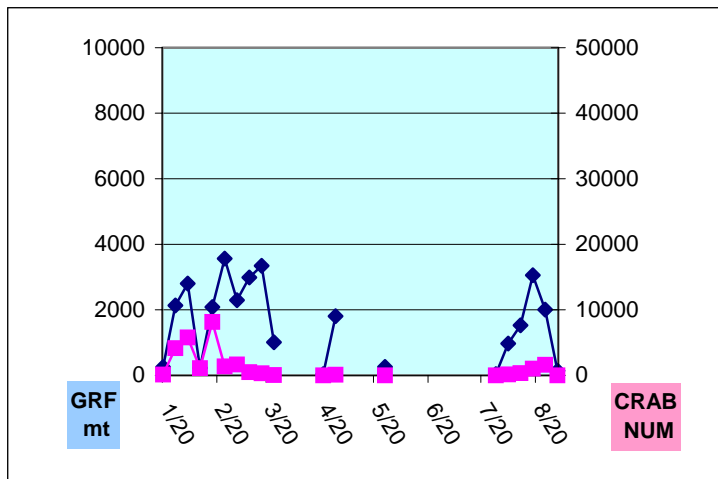
Discards in the Bering Sea/Aleutian Islands, 2001

FIGURE 4. ROCK SOLE: TOTAL GROUNDFISH BY WEEK AND RED KING CRAB

2000

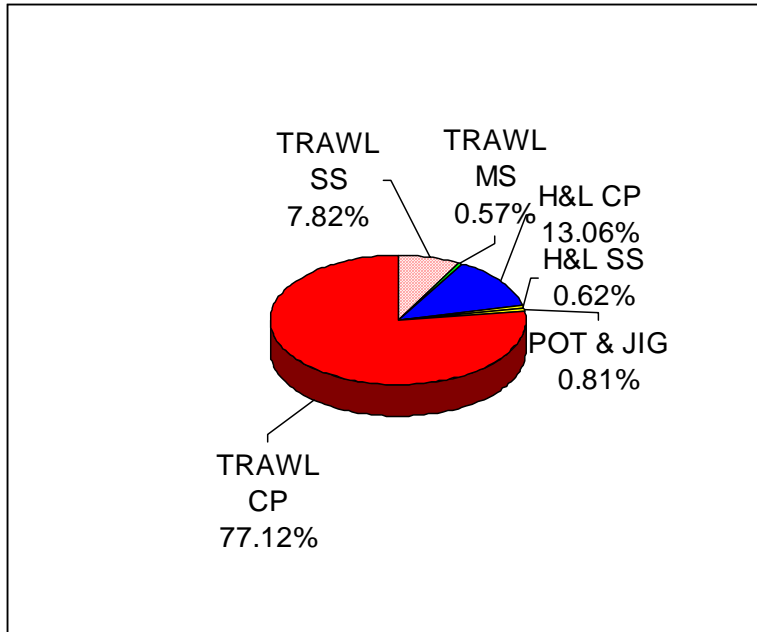


2001

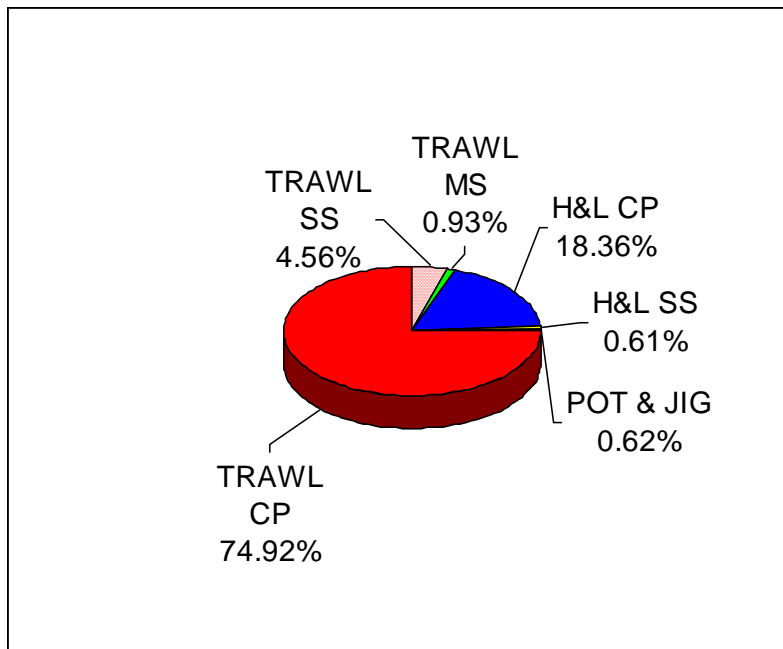


Discards in the Bering Sea/Aleutian Islands, 2001

FIGURE 5. 2000 DISCARDS BY SECTOR: PERCENT OF TOTAL



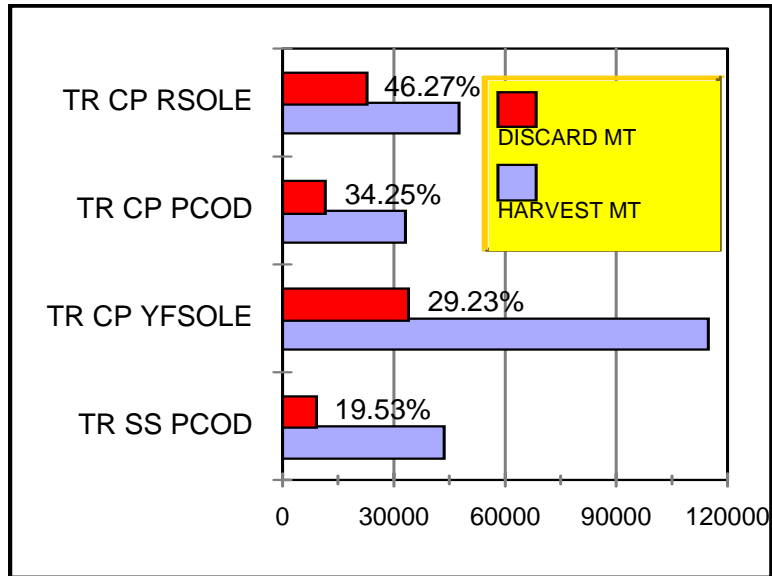
2001 DISCARDS BY SECTOR: PERCENT OF TOTAL



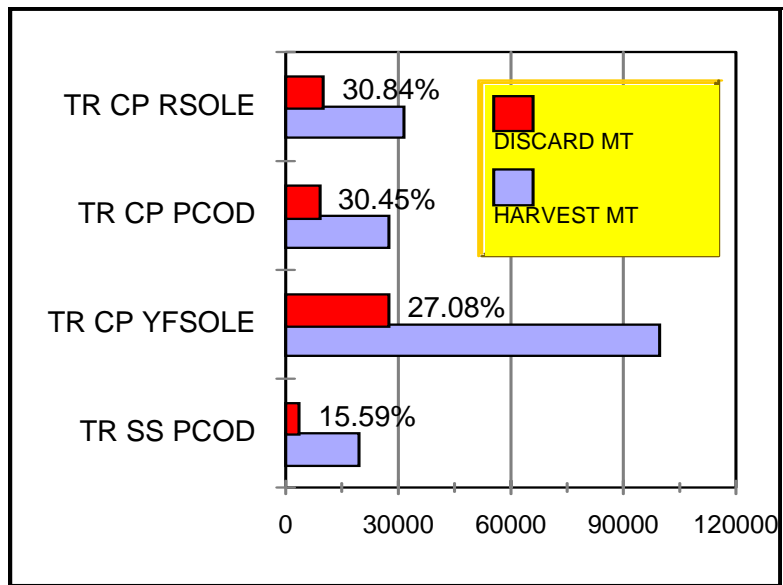
SS = SHORESIDE MS=MOTHERSHIP CP=CATCHER/PROCESSOR.
H&L= HOOK AND LINE

Discards in the Bering Sea/Aleutian Islands, 2001

FIGURE 6. 2000 FISHERIES WITH HIGHEST DISCARD RATES



2001 FISHERIES WITH HIGHEST DISCARD RATES



TR CP = TRAWL CATCHER/PROCESSORS
 TR SS = TRAWL SHORESIDE (CATCHER BOATS)
 RSOLE= ROCK SOLE
 PCOD = PACIFIC COD
 YFSOLE = YELLOWFIN SOLE

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 6. Bering Sea/Aleutian Islands Combined, 2001 (excluding CDQ)

2001	AREA:	BSAI				
	GEAR:	All				
	TYPE:	All				
	TARGET:	All				
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	56,501	52,327	4,174	7.4%	0.003	9,201,000
Pollock	1,247,048	1,229,693	17,355	1.4%	0.011	38,260,000
Pacific Cod	162,402	159,910	2,492	1.5%	0.002	5,494,000
Yellowfin sole	63,276	54,722	8,554	13.5%	0.006	18,858,000
Rock sole	29,116	19,279	9,837	33.8%	0.006	21,687,000
Flathead sole	17,462	14,235	3,227	18.5%	0.002	7,115,000
Other flatfish	9,663	641	9,022	93.4%	0.006	19,890,000
Greenland turbot	5,032	4,216	816	16.2%	0.001	1,800,000
Arrowtooth flounder	13,458	5,170	8,288	61.6%	0.005	18,272,000
Pacific ocean perch	8,803	6,975	1,828	20.8%	0.001	4,031,000
Sharpchin/northern rockfish	6,113	178	5,936	97.1%	0.004	13,086,000
Shortraker/rougheye rockfish	651	476	176	27.0%	0.000	388,000
Other rockfish	846	506	340	40.2%	0.000	750,000
Sablefish	1,599	1,474	125	7.8%	0.000	275,000
Other Species	26,571	3,780	22,791	85.8%	0.015	50,245,000
TOTAL	1,648,542	1,553,581	94,961	5.8%	0.061	209,352,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	11,159 mt	7 kg/mt	24,600,000
Halibut Mortality (mt)	4,060 mt	3 kg/mt	8,952,000
Herring (mt)	270 mt	0 kg/mt	596,000
C. bairdi Tanner crab	1,064,597 crab	0.685 indiv/mt	
Other Tanner crab	2,039,303 crab	1.313 indiv/mt	
Red king crab	80,856 crab	0.052 indiv/mt	
Other king crab	35,770 crab	0.023 indiv/mt	
Chinook salmon	37,955 salmon	0.024 indiv/mt	
Other salmon	57,355 salmon	0.037 indiv/mt	
Halibut and Herring Discard Pounds	9,548,000 pounds		
Crab and Salmon Discard Numbers	3,315,835 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 7.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Catcher/processor All			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	56,159	52,190	3,969	7.1%	0.006	8,750,000
Pollock	514,907	500,353	14,554	2.8%	0.021	32,085,000
Pacific Cod	29,280	28,414	867	3.0%	0.001	1,911,000
Yellowfin sole	62,379	54,677	7,702	12.3%	0.011	16,980,000
Rock sole	27,783	18,736	9,047	32.6%	0.013	19,946,000
Flathead sole	16,438	13,791	2,647	16.1%	0.004	5,836,000
Other flatfish	9,413	581	8,832	93.8%	0.013	19,470,000
Greenland turbot	1,995	1,590	405	20.3%	0.001	893,000
Arrowtooth flounder	11,347	4,936	6,411	56.5%	0.009	14,134,000
Pacific ocean perch	8,600	6,892	1,709	19.9%	0.002	3,767,000
Sharpchin/northern rockfish	5,952	174	5,778	97.1%	0.008	12,739,000
Shortraker/rougheye rockfish	417	399	18	4.3%	0.000	40,000
Other rockfish	557	320	237	42.5%	0.000	522,000
Sablefish	310	291	19	6.2%	0.000	42,000
Other Species	10,136	1,183	8,953	88.3%	0.013	19,738,000
						0
TOTAL	755,674	684,527	71,148	9.4%	0.104	156,852,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	3,825 mt	6 kg/mt	8,432,000
Halibut Mortality (mt)	2,857 mt	4 kg/mt	6,299,000
Herring (mt)	73 mt	0 kg/mt	162,000
C. bairdi Tanner crab	978,112 crab	1.429 indiv/mt	
Other Tanner crab	1,816,703 crab	2.654 indiv/mt	
Red king crab	61,815 crab	0.090 indiv/mt	
Other king crab	10,796 crab	0.016 indiv/mt	
Chinook salmon	21,469 salmon	0.031 indiv/mt	
Other salmon	22,698 salmon	0.033 indiv/mt	
Halibut and Herring Discard Pounds	6,461,000 pounds		
Crab and Salmon Discard Numbers	2,911,594 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 8.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Catcher/processor Atka mackerel			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	54,592	51,103	3,490	6.4%	0.065	7,693,000
Pollock	315	99	216	68.7%	0.004	477,000
Pacific Cod	1,661	1,652	9	0.5%	0.000	20,000
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	50	7	43	86.6%	0.001	95,000
Flathead sole	9	5	4	47.1%	0.000	9,000
Other flatfish	7	3	4	51.2%	0.000	8,000
Greenland turbot	48	28	20	41.9%	0.000	44,000
Arrowtooth flounder	256	163	93	36.4%	0.002	206,000
Pacific ocean perch	1,066	96	970	91.0%	0.018	2,139,000
Sharpchin/northern rockfish	5,590	153	5,437	97.3%	0.102	11,986,000
Shortraker/rougheyeye rockfish	18	4	14	76.7%	0.000	31,000
Other rockfish	287	100	186	65.1%	0.003	411,000
Sablefish	0	0	0	-	0.000	0
Other Species	516	8	507	98.4%	0.009	1,119,000
TOTAL	64,414	53,421	10,994	17.1%	0.206	24,237,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	80 mt	1 kg/mt	176,000
Halibut Mortality (mt)	60 mt	1 kg/mt	132,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	847 crab	0.016 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	565 salmon	0.011 indiv/mt	
Other salmon	347 salmon	0.006 indiv/mt	
Halibut and Herring Discard Pounds	132,000 pounds		
Crab and Salmon Discard Numbers	1,758 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 12.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Trawl Catcher/processor Rockfish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	670	496	174	25.9%	0.021	383,000
Pollock	202	202	0	0.0%	0.000	0
Pacific Cod	193	193	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0.97	0.97	0	0.0%	0.000	0
Other flatfish	5	4	1	16.5%	0.000	2,000
Greenland turbot	429	429	0	0.0%	0.000	0
Arrowtooth flounder	438	89	349	79.7%	0.041	770,000
Pacific ocean perch	6,860	6,526	334	4.9%	0.040	736,000
Sharpchin/northern rockfish	84	15	70	82.5%	0.008	154,000
Shortraker/rougheye rockfish	385	385	0	0.0%	0.000	0
Other rockfish	72	69	2	3.3%	0.000	5,000
Sablefish	37	37	0	0.0%	0.000	0
Other Species	99	0	99	100.0%	0.012	219,000
TOTAL	9,477	8,448	1,029	10.9%	0.122	2,269,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	79 mt	9 kg/mt	175,000
Halibut Mortality (mt)	55 mt	6 kg/mt	121,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	0 crab	0.000 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	4,658 crab	0.551 indiv/mt	
Chinook salmon	1 salmon	0.000 indiv/mt	
Other salmon	171 salmon	0.020 indiv/mt	
Halibut and Herring Discard Pounds	121,000		
Crab and Salmon Discard Numbers	4,830		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 15.

2001 GROUND FISH SPECIES	AREA:		BSAI						
	GEAR:	TYPE:	TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel				0	0	0	-	0.000	0
Pollock				49	16	34	68.5%	0.061	74,000
Pacific Cod				0	0	0	-	0.000	0
Yellowfin sole				0	0	0	-	0.000	0
Rock sole				3	0	2	84.8%	0.004	5,000
Flathead sole				68	65	4	5.1%	0.006	8,000
Other flatfish				3	3	0	0.0%	0.000	0
Greenland turbot				317	296	21	6.7%	0.038	47,000
Arrowtooth flounder				168	59	109	64.9%	0.198	240,000
Pacific ocean perch				52	42	11	20.8%	0.020	24,000
Sharpchin/northern rockfish				0	0	0	-	0.000	0
Shortraker/rougheye rockfish				0	0	0	-	0.000	0
Other rockfish				4	4	0	0.0%	0.000	0
Sablefish				66	66	0	0.0%	0.000	0
Other Species				22	0	22	100.0%	0.039	48,000
TOTAL				753	551	202	26.8%	0.367	445,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	16 mt	29 kg/mt	35,000
Halibut Mortality (mt)	11 mt	20 kg/mt	24,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	497 crab	0.903 indiv/mt	
Other Tanner crab	7,189 crab	13.055 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	471 crab	0.856 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	24,000		
Crab and Salmon Discard Numbers	8,157		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 16.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Catcher/processor Yellowfin sole			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	1,000
Pollock	16,480	9,404	7,076	42.9%	0.098	15,600,000
Pacific Cod	6,524	6,126	398	6.1%	0.006	878,000
Yellowfin sole	54,579	48,640	5,940	10.9%	0.082	13,094,000
Rock sole	5,737	3,828	1,908	33.3%	0.026	4,207,000
Flathead sole	3,218	2,768	450	14.0%	0.006	993,000
Other flatfish	6,830	200	6,629	97.1%	0.092	14,615,000
Greenland turbot	32	27	6	17.1%	0.000	12,000
Arrowtooth flounder	1,843	1,001	842	45.7%	0.012	1,857,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/rougeye rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other Species	3,929	322	3,607	91.8%	0.050	7,951,000
TOTAL	99,173	72,317	26,856	27.1%	0.371	59,208,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	1,291 mt	18 kg/mt	2,846,000
Halibut Mortality (mt)	1,046 mt	14 kg/mt	2,305,000
Herring (mt)	26 mt	0 kg/mt	58,000
C. bairdi Tanner crab	321,667 crab	4.448 indiv/mt	
Other Tanner crab	1,048,720 crab	14.502 indiv/mt	
Red king crab	32,461 crab	0.449 indiv/mt	
Other king crab	435 crab	0.006 indiv/mt	
Chinook salmon	575 salmon	0.008 indiv/mt	
Other salmon	620 salmon	0.009 indiv/mt	
Halibut and Herring Discard Pounds	2363000 pounds		
Crab and Salmon Discard Numbers	1,404,478 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 17.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Catcher/processor Arrowtooth Flounder			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	217	153	64	29.6%	0.026	142,000
Pacific Cod	201	197	4	1.9%	0.002	8,000
Yellowfin sole	12	10	1	11.0%	0.001	3,000
Rock sole	37	20	17	45.2%	0.007	37,000
Flathead sole	130	114	16	12.0%	0.006	34,000
Other flatfish	63	61	2	3.9%	0.001	5,000
Greenland turbot	350	201	149	42.5%	0.060	328,000
Arrowtooth flounder	1,792	1,538	254	14.2%	0.103	560,000
Pacific ocean perch	95	68	27	28.4%	0.011	60,000
Sharpchin/northern rockfish	37	0	37	100.0%	0.015	81,000
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	53	45	8	16.0%	0.003	19,000
Sablefish	82	72	10	12.5%	0.004	23,000
Other Species	165	0	165	100.0%	0.066	363,000
TOTAL	3,232	2,478	754	23.3%	0.304	1,662,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	87 mt	35 kg/mt	192,000
Halibut Mortality (mt)	62 mt	25 kg/mt	136,000
Herring (mt)	0 mt	0 kg/mt	1,000
C. bairdi Tanner crab	18,552 crab	7.486 indiv/mt	
Other Tanner crab	9,671 crab	3.903 indiv/mt	
Red king crab	79 crab	0.032 indiv/mt	
Other king crab	1,516 crab	0.612 indiv/mt	
Chinook salmon	236 salmon	0.095 indiv/mt	
Other salmon	46 salmon	0.018 indiv/mt	
Halibut and Herring Discard Pounds	137,000 pounds		
Crab and Salmon Discard Numbers	30,101 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 18.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Shoreside All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	43	5	38	88.0%	0.000	83,000
Pollock	605,491	604,037	1,454	0.2%	0.002	3,205,000
Pacific Cod	16,746	16,694	53	0.3%	0.000	116,000
Yellowfin sole	247	26	221	89.5%	0.000	488,000
Rock sole	1,215	542	672	55.3%	0.001	1,482,000
Flathead sole	705	430	274	38.9%	0.000	605,000
Other flatfish	147	59	87	59.4%	0.000	192,000
Greenland turbot	14	13	1	10.0%	0.000	3,000
Arrowtooth flounder	406	129	277	68.3%	0.000	611,000
Pacific ocean perch	177	83	93	52.9%	0.000	206,000
Sharpchin/northern rockfish	11	0	11	100.0%	0.000	25,000
Shorthead/rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	1	1	0	8.7%	0.000	0
Sablefish	14	12	2	15.8%	0.000	5,000
Other Species	2,038	890	1,147	56.3%	0.002	2,529,000
TOTAL	627,254	622,922	4,332	0.7%	0.007	9,551,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	493 mt	1 kg/mt	1,086,000
Halibut Mortality (mt)	351 mt	1 kg/mt	774,000
Herring (mt)	165 mt	0 kg/mt	364,000
C. bairdi Tanner crab	11,799 crab	0.019 indiv/mt	
Other Tanner crab	7,933 crab	0.013 indiv/mt	
Red king crab	192 crab	0.000 indiv/mt	
Other king crab	4,448 crab	0.007 indiv/mt	
Chinook salmon	14,127 salmon	0.023 indiv/mt	
Other salmon	26,112 salmon	0.042 indiv/mt	
Halibut and Herring Discard Pounds	1,138,000 pounds		
Crab and Salmon Discard Numbers	64,612 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 20.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Trawl Shoreside Midwater pollock			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	36	5	31	85.9%	0.000	69,000
Pollock	597,926	597,706	220	0.0%	0.000	485,000
Pacific Cod	1,341	1,327	14	1.0%	0.000	30,000
Yellowfin sole	59	26	33	55.8%	0.000	72,000
Rock sole	523	466	57	10.9%	0.000	126,000
Flathead sole	460	361	99	21.5%	0.000	218,000
Other flatfish	90	59	30	33.7%	0.000	67,000
Greenland turbot	13	13	0	0.0%	0.000	0
Arrowtooth flounder	171	121	50	29.3%	0.000	110,000
Pacific ocean perch	174	83	91	52.2%	0.000	200,000
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/rougheyeye rockfish	0	0	0	-	0.000	0
Other rockfish	1	1	0	0.0%	0.000	0
Sablefish	10	10	0	0.0%	0.000	0
Other Species	1,513	890	624	41.2%	0.001	1,375,000
TOTAL	602,316	601,068	1,248	0.2%	0.002	2,752,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	124 mt	0 kg/mt	274,000
Halibut Mortality (mt)	104 mt	0 kg/mt	230,000
Herring (mt)	165 mt	0 kg/mt	364,000
C. bairdi Tanner crab	11 crab	0.000 indiv/mt	
Other Tanner crab	696 crab	0.001 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	4,389 crab	0.007 indiv/mt	
Chinook salmon	12,285 salmon	0.020 indiv/mt	
Other salmon	25,051 salmon	0.042 indiv/mt	
Halibut and Herring Discard Pounds	594,000 pounds		
Crab and Salmon Discard Numbers	42,432 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 21.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Discarded	Discard	Rate/ Retain GF	Discard
	TARGET:		mt	Rate		Pounds
			Harvest	mt	Rate	Discard
			Retained	mt	Rate	Pounds
			Discarded	mt	Rate	Pounds
Atka Mackerel			6	0	100.0%	14,000
Pollock			2,017	783	61.2%	2,720,000
Pacific Cod			15,386	15,348	0.2%	84,000
Yellowfin sole			137	0	99.9%	301,000
Rock sole			599	3	99.5%	1,313,000
Flathead sole			150	4	97.4%	322,000
Other flatfish			56	0	100.0%	124,000
Greenland turbot			1	0	100.0%	3,000
Arrowtooth flounder			227	0	100.0%	501,000
Pacific ocean perch			3	0	100.0%	6,000
Sharpchin/northern rockfish			11	0	100.0%	25,000
Shortraker/rougeye rockfish			0	0	-	0
Other rockfish			0	0	100.0%	0
Sablefish			4	2	57.2%	5,000
Other Species			522	1	99.9%	1,150,000
TOTAL			19,120	16,140	15.6%	6,570,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	365 mt	23 kg/mt	805,000
Halibut Mortality (mt)	245 mt	15 kg/mt	539,000
Herring (mt)	0 mt	0 kg/mt	1,000
C. bairdi Tanner crab	11,662 crab	0.723 indiv/mt	
Other Tanner crab	7,109 crab	0.440 indiv/mt	
Red king crab	192 crab	0.012 indiv/mt	
Other king crab	59 crab	0.004 indiv/mt	
Chinook salmon	1,793 salmon	0.111 indiv/mt	
Other salmon	1,059 salmon	0.066 indiv/mt	
Halibut and Herring Discard Pounds	540,000 pounds		
Crab and Salmon Discard Numbers	21,874 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 24.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Mothership Pacific cod			
	TARGET:					
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	14	0	14	100.0%	0.003	30,000
Pollock	73	34	39	53.6%	0.009	86,000
Pacific Cod	4,166	4,166	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	37	0	37	100.0%	0.009	83,000
Flathead sole	15	0	15	100.0%	0.004	34,000
Other flatfish	1	0	1	100.0%	0.000	2,000
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	112	0	112	100.0%	0.027	246,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/roughey rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other Species	0	0	0	-	0.000	1,000
TOTAL	4,419	4,200	219	4.9%	0.052	482,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	26 mt	6 kg/mt	57,000
Halibut Mortality (mt)	17 mt	4 kg/mt	38,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	2,923 crab	0.696 indiv/mt	
Other Tanner crab	229 crab	0.055 indiv/mt	
Red king crab	4 crab	0.001 indiv/mt	
Other king crab	8 crab	0.002 indiv/mt	
Chinook salmon	116 salmon	0.028 indiv/mt	
Other salmon	35 salmon	0.008 indiv/mt	
Halibut and Herring Discard Pounds	38,000 pounds		
Crab and Salmon Discard Numbers	3316 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 25.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Catcher/processor			
	TARGET:		All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	269	132	137	51.0%	0.001	303,000
Pollock	5,305	4,422	883	16.6%	0.008	1,946,000
Pacific Cod	96,188	94,671	1,517	1.6%	0.015	3,344,000
Yellowfin sole	618	19	599	96.9%	0.006	1,320,000
Rock sole	31	1	30	97.9%	0.000	66,000
Flathead sole	253	14	240	94.7%	0.002	528,000
Other flatfish	94	1	93	99.2%	0.001	206,000
Greenland turbot	2,643	2,536	107	4.0%	0.001	236,000
Arrowtooth flounder	1,443	106	1,337	92.7%	0.013	2,948,000
Pacific ocean perch	5	0	5	100.0%	0.000	10,000
Sharpchin/northern rockfish	138	3	134	97.6%	0.001	296,000
Shortraker/rougheye rockfish	224	71	153	68.2%	0.001	336,000
Other rockfish	182	100	83	45.3%	0.001	182,000
Sablefish	430	366	65	15.0%	0.001	142,000
Other Species	13,753	1,699	12,054	87.6%	0.116	26,575,000
TOTAL	121,575	104,139	17,436	14.3%	0.167	38,439,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	6,631 mt	64 kg/mt	14,619,000
Halibut Mortality (mt)	813 mt	8 kg/mt	1,791,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	14,797 crab	0.142 indiv/mt	
Other Tanner crab	88,204 crab	0.847 indiv/mt	
Red king crab	17,762 crab	0.171 indiv/mt	
Other king crab	8,876 crab	0.085 indiv/mt	
Chinook salmon	17 salmon	0.000 indiv/mt	
Other salmon	34 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	1,791,000 pounds		
Crab and Salmon Discard Numbers	129,689 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 26.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Catcher/processor Greenland turbot			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	78	77	1	0.7%	0.000	1,000
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	1,000
Other flatfish	0	0	0	-	0.000	1,000
Greenland turbot	2,393	2,331	62	2.6%	0.024	136,000
Arrowtooth flounder	123	14	110	89.0%	0.043	242,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/roughey rockfish	28	9	19	67.7%	0.007	41,000
Other rockfish	28	28	0	1.5%	0.000	1,000
Sablefish	113	78	35	31.1%	0.014	77,000
Other Species	164	21	144	87.4%	0.056	317,000
TOTAL	2,928	2,557	371	12.7%	0.145	817,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	281 mt	110 kg/mt	620,000
Halibut Mortality (mt)	51 mt	20 kg/mt	112,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	1 crab	0.000 indiv/mt	
Other Tanner crab	520 crab	0.203 indiv/mt	
Red king crab	19 crab	0.008 indiv/mt	
Other king crab	303 crab	0.119 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	3 salmon	0.001 indiv/mt	
Halibut and Herring Discard Pounds	112,000 pounds		
Crab and Salmon Discard Numbers	846 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 28.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Catcher/processor Sablefish			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	5	5	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	83	75	8	9.3%	0.019	17,000
Arrowtooth flounder	30	16	14	45.7%	0.034	30,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/roughey rockfish	8	6	2	24.9%	0.005	4,000
Other rockfish	38	37	1	1.7%	0.002	1,000
Sablefish	274	273	1	0.5%	0.003	3,000
Other Species	13	0	13	100.0%	0.032	29,000
TOTAL	451	412	39	8.5%	0.093	85,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)		0 kg/mt	
Halibut Mortality (mt)		0 kg/mt	
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	0 crab	0.000 indiv/mt	
Other Tanner crab	47 crab	0.113 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	182 crab	0.441 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	1 salmon	0.003 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	230 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 29.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Shoreside			
	TARGET:		All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	614	589	25	4.1%	0.016	55,000
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	353	77	276	78.3%	0.179	609,000
Arrowtooth flounder	106	0	106	100.0%	0.069	234,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/rougheyeye rockfish	10	5	5	50.5%	0.003	12,000
Other rockfish	103	85	18	17.3%	0.012	39,000
Sablefish	822	784	38	4.7%	0.025	85,000
Other Species	107	0	107	100.0%	0.069	236,000
TOTAL	2,117	1,540	576	27.2%	0.374	1,271,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	139 mt	90 kg/mt	306,000
Halibut Mortality (mt)	18 mt	12 kg/mt	39,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	4 crab	0.002 indiv/mt	
Other Tanner crab	148 crab	0.096 indiv/mt	
Red king crab	13 crab	0.009 indiv/mt	
Other king crab	461 crab	0.299 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	12 salmon	0.008 indiv/mt	
Halibut and Herring Discard Pounds	39,000 pounds		
Crab and Salmon Discard Numbers	638 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 30.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Shoreside Greenland turbot			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	-	0
Pollock	0	0	0	-	-	0
Pacific Cod	0	0	0	-	-	0
Yellowfin sole	0	0	0	-	-	0
Rock sole	0	0	0	-	-	0
Flathead sole	0	0	0	-	-	0
Other flatfish	0	0	0	-	-	0
Greenland turbot	6	0	6	100.0%	-	14,000
Arrowtooth flounder	1	0	1	100.0%	-	2,000
Pacific ocean perch	0	0	0	-	-	0
Sharpchin/northern rockfish	0	0	0	-	-	0
Shorthead/rougeye rockfish	0	0	0	-	-	0
Other rockfish	0	0	0	-	-	0
Sablefish	2	0	2	100.0%	-	3,000
Other Species	2	0	2	100.0%	-	3,000
TOTAL	11	0	11	100.0%	-	24,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	20 mt	- kg/mt	43,000
Halibut Mortality (mt)	4 mt	- kg/mt	8,000
Herring (mt)	0 mt	- kg/mt	0
C. bairdi Tanner crab	0 crab	- indiv/mt	
Other Tanner crab	17 crab	- indiv/mt	
Red king crab	2 crab	- indiv/mt	
Other king crab	10 crab	- indiv/mt	
Chinook salmon	0 salmon	- indiv/mt	
Other salmon	5 salmon	- indiv/mt	
Halibut and Herring Discard Pounds	8000 pounds		
Crab and Salmon Discard Numbers	34 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 32.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Shoreside Sablefish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	68	61	7	9.9%	0.007	15,000
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	336	66	270	80.4%	0.282	595,000
Arrowtooth flounder	100	0	100	100.0%	0.105	221,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	10	5	5	49.4%	0.005	11,000
Other rockfish	98	81	17	17.1%	0.017	37,000
Sablefish	769	745	23	3.0%	0.024	51,000
Other Species	55	0	55	100.0%	0.057	121,000
						0
TOTAL	1,435	958	477	33.2%	0.498	1,051,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	not available	kg/mt	
Halibut Mortality (mt)	not available	kg/mt	
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	2 crab	0.002 indiv/mt	
Other Tanner crab	104 crab	0.108 indiv/mt	
Red king crab	11 crab	0.012 indiv/mt	
Other king crab	450 crab	0.470 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	4 salmon	0.004 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	571 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 33.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Jig Shoreside Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	71	71	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other Species	0	0	0	-	0.000	0
TOTAL	71	71	0	0.0%	0.000	0

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	0 mt	0 kg/mt	0
Halibut Mortality (mt)	0 mt	0 kg/mt	0
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	0 crab	0.000 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 35.

2001 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	Pot				
	TYPE:		Shoreside			
	TARGET:		Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	16	0	16	100.0%	0.001	35,000
Pollock	11	2	8	76.9%	0.001	18,000
Pacific Cod	12,029	12,002	27	0.2%	0.002	60,000
Yellowfin sole	32	0	32	100.0%	0.003	70,000
Rock sole	2	0	2	100.0%	0.000	4,000
Flathead sole	0	0	0	-	0.000	0
Other flatfish	1	0	1	100.0%	0.000	1,000
Greenland turbot	26	0	26	100.0%	0.002	58,000
Arrowtooth flounder	28	0	28	100.0%	0.002	61,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	1	0	1	100.0%	0.000	3,000
Shorotraker/rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	3	0	3	100.0%	0.000	6,000
Sablefish	23	22	1	2.9%	0.000	1,000
Other Species	405	6	400	98.6%	0.033	881,000
TOTAL	12,576	12,032	544	4.3%	0.045	1,199,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	37 mt	3 kg/mt	82,000
Halibut Mortality (mt)	1 mt	0 kg/mt	3,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	51,907 crab	4.314 indiv/mt	
Other Tanner crab	68,700 crab	5.710 indiv/mt	
Red king crab	1,053 crab	0.088 indiv/mt	
Other king crab	2,104 crab	0.175 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	3,000 pounds		
Crab and Salmon Discard Numbers	123,764 individuals		

Discards in the Bering Sea/Aleutian Islands, 2001

TABLE 36.

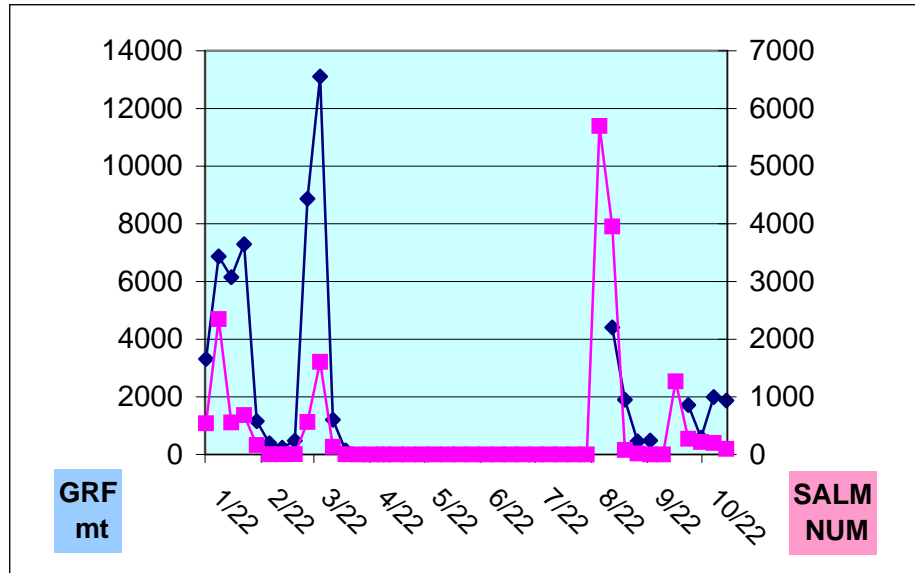
2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Pot Catcher/processor Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	5	0	5	100.0%	0.002	11,000
Pacific Cod	2,996	2,996	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/roughey rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other Species	42	2	40	94.5%	0.013	88,000
TOTAL	3,044	2,998	45	1.5%	0.015	100,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	5 mt	2 kg/mt	12,000
Halibut Mortality (mt)	0 mt	0 kg/mt	0
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	5,054 crab	1.686 indiv/mt	
Other Tanner crab	57,092 crab	19.041 indiv/mt	
Red king crab	16 crab	0.005 indiv/mt	
Other king crab	8,351 crab	2.785 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	70,513 individuals		

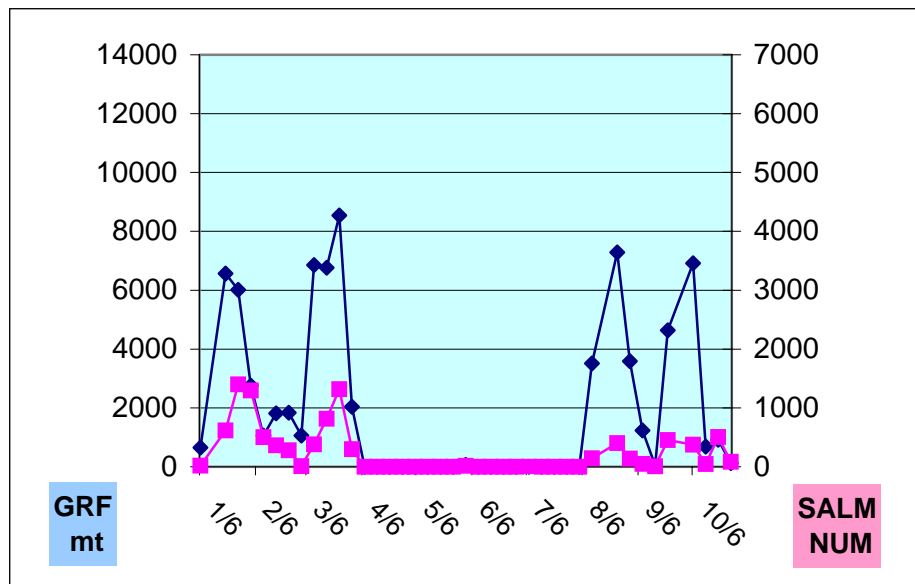
Discards in the Gulf of Alaska, 2001

FIGURE 7. POLLOCK (all) : GROUNDFISH WEEKLY CATCH AND CHINOOK SALMON

2000



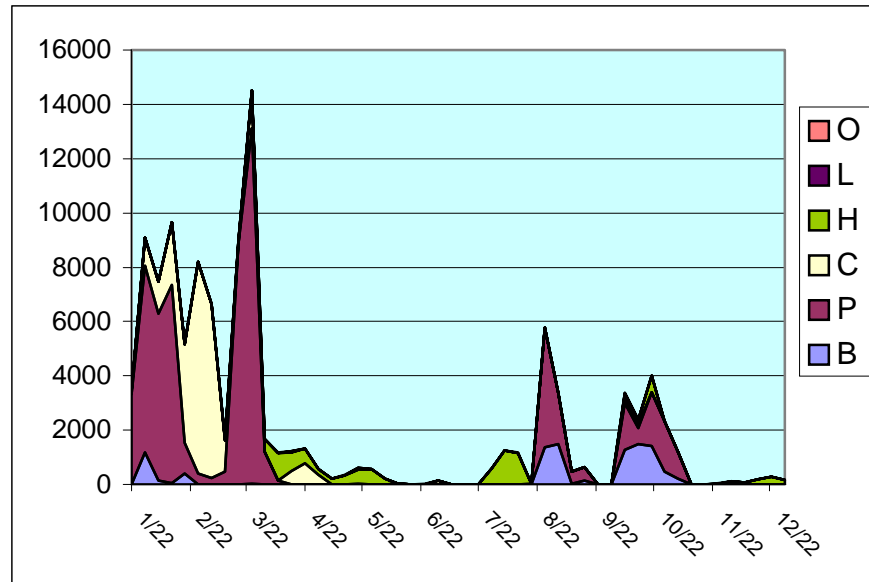
2001



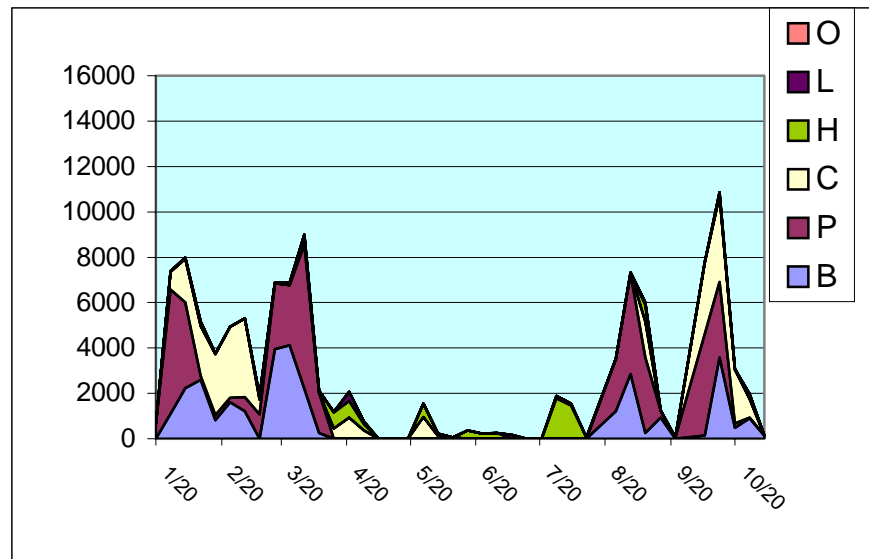
Discards in the Gulf of Alaska, 2001

FIGURE 8. SHALLOW-WATER COMPLEX: GROUND FISH WEEKLY CATCH (metric tons)
 O=OTHER L=FLATHEAD SOLE C=COD
 H=SHALLOW-WATER FLATFISH P=PELAGIC POLLOCK B=BOTTOM POLLOCK

2000



2001



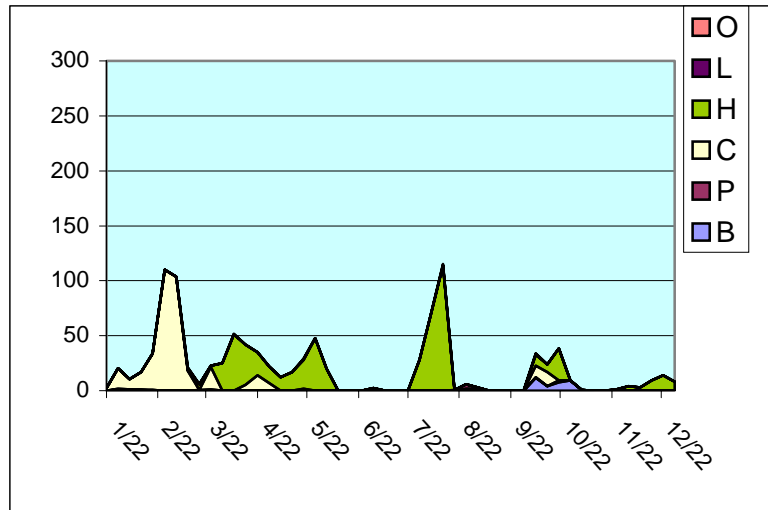
Discards in the Gulf of Alaska, 2001

FIGURE 9.

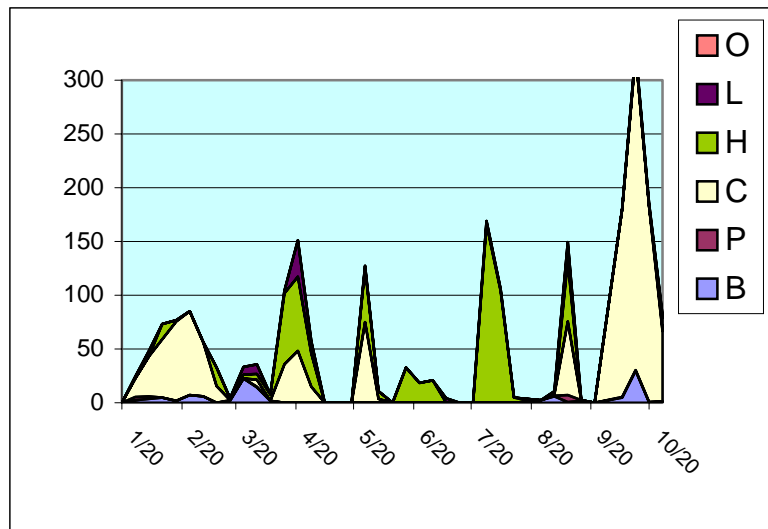
HALIBUT WEEKLY
MORTALITY (mt) IN
SHALLOW-WATER COMPLEX

O=OTHER L=FLATHEAD SOLE C=COD
H=SHALLOW-WATER FLATFISH
P=PELAGIC POLLOCK B=BOTTOM POLLOCK

2000



2001

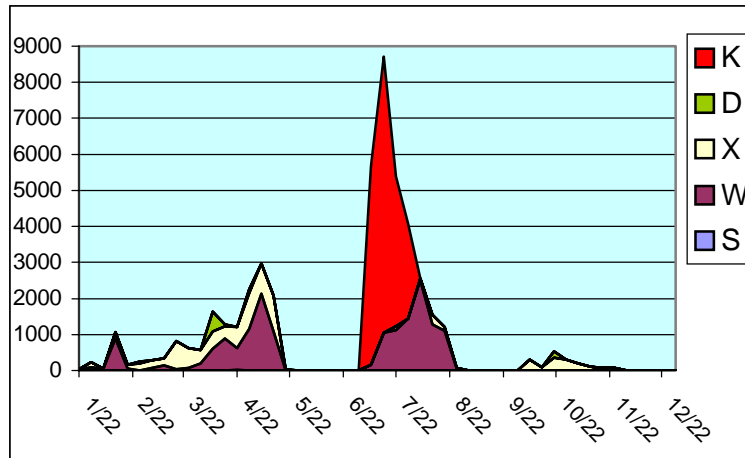


Discards in the Gulf of Alaska, 2001

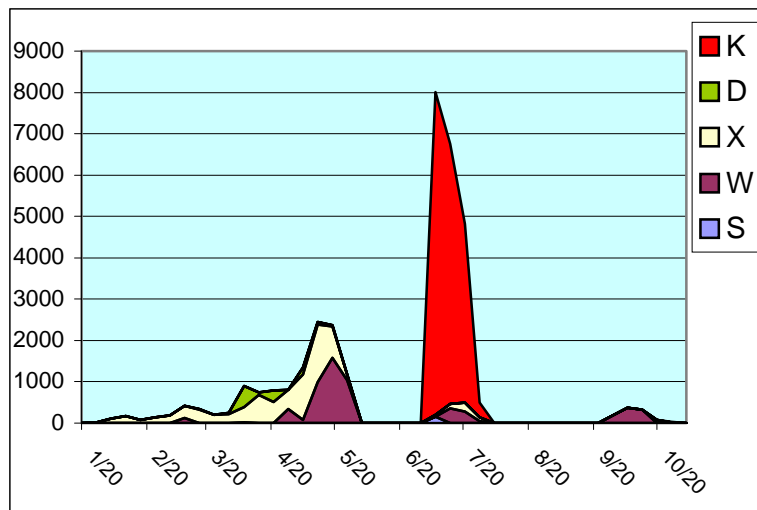
DEEP-WATER COMPLEX:
 GROUND FISH WEEKLY CATCH
 (metric tons)

K=ROCKFISH X=REX SOLE S=SABLEFISH
 D=SHALLOW-WATER FLATFISH
 W=ARROWTOOTH FLOUNDER

2000



2001



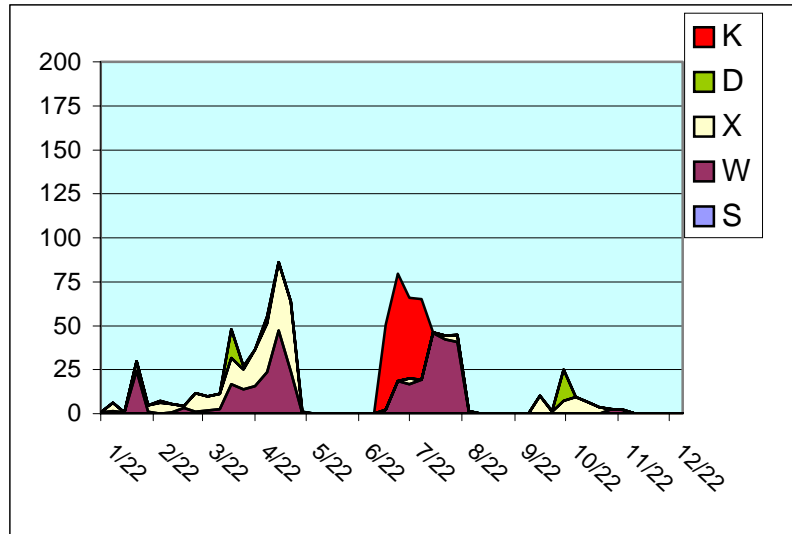
Discards in the Gulf of Alaska, 2001

FIGURE 11.

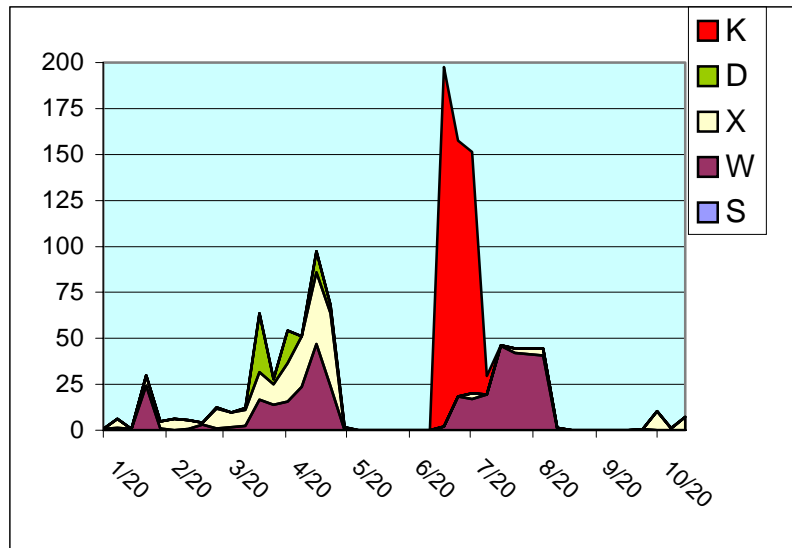
HALIBUT WEEKLY
MORTALITY (mt) IN
DEEP-WATER COMPLEX

K=ROCKFISH X=REX SOLE S=SABLEFISH
D=SHALLOW-WATER FLATFISH
W=ARROWTOOTH FLOUNDER

2000



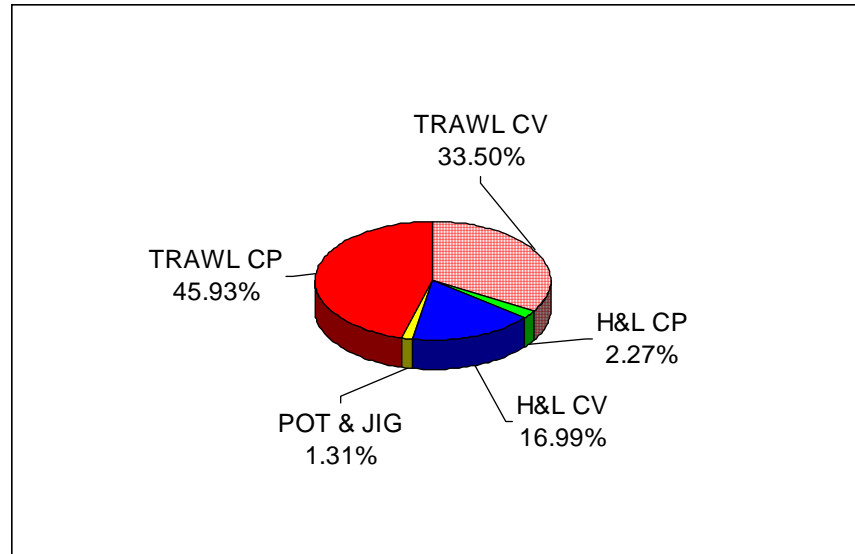
2001



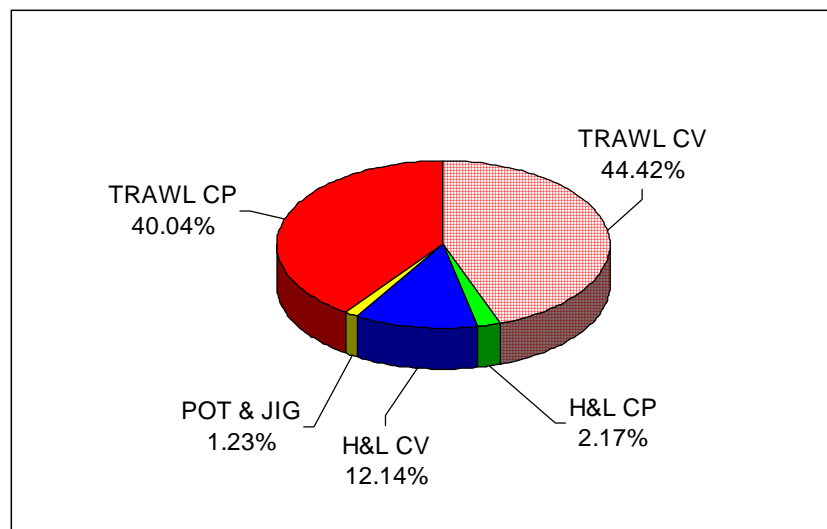
Discards in the Gulf of Alaska, 2001

FIGURE 12.

2000 DISCARDS BY SECTOR: PERCENT OF TOTAL



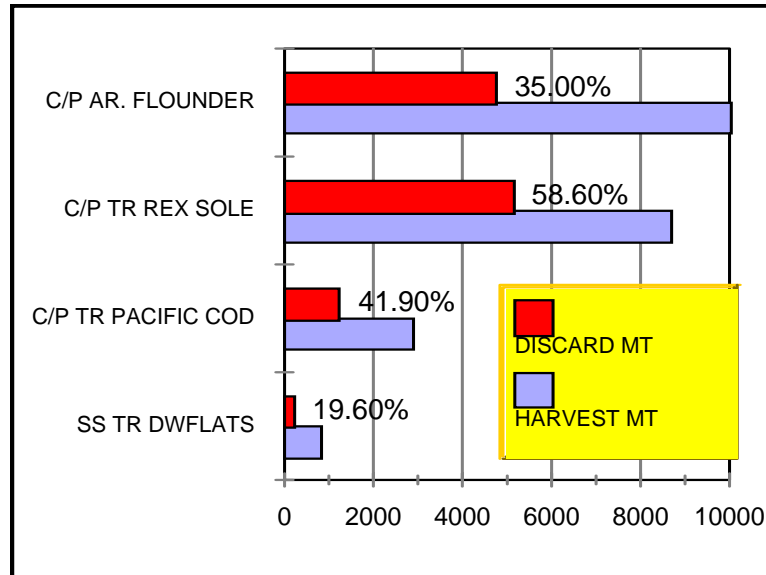
2001 DISCARDS BY SECTOR: PERCENT OF TOTAL



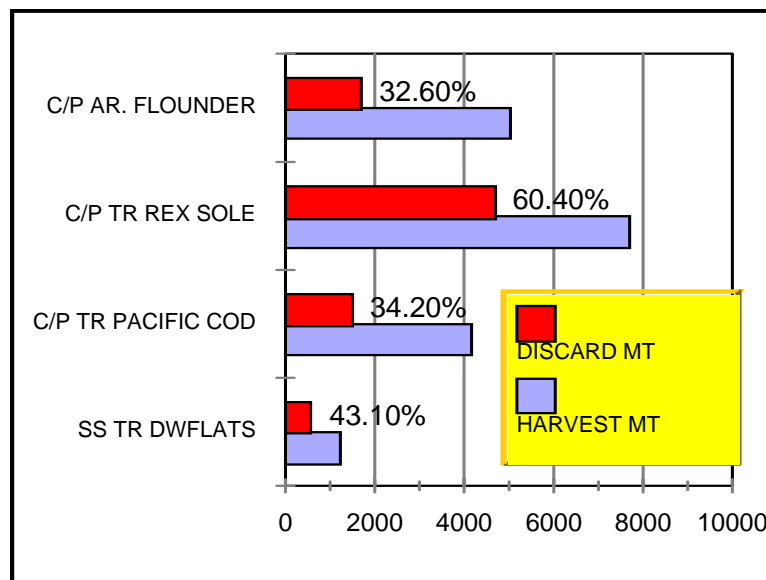
CP=CATCHER/PROCESSER. CV=CATCHER VESSEL (SHORESIDE)
H&L=HOOK AND LINE

Discards in the Gulf of Alaska, 2001

FIGURE 13. 2000 FISHERIES WITH HIGHEST DISCARD RATES



2001 FISHERIES WITH HIGHEST DISCARD RATES



AR. FLOUNDER = ARROWTOOTH FLOUNDER.
DW FLATS = DEEPWATER FLATFISH COMPLEX

Discards in the Gulf of Alaska, 2001

TABLE 37.

2001	AREA:	GOA				
	GEAR:	All				
	TYPE:	All				
	TARGET:	All				
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	69	51	17	25.2%	0.000	38,000
Pollock	72,028	71,306	721	1.0%	0.005	1,591,000
Pacific Cod	41,254	39,646	1,608	3.9%	0.010	3,545,000
Deep-water flatfish	790	601	189	23.9%	0.001	416,000
Rex sole	2,875	2,726	149	5.2%	0.001	328,000
Arrowtooth Flounder	19,223	5,987	13,236	68.9%	0.083	29,181,000
Shallow-water flatfish	5,835	5,346	489	8.4%	0.003	1,078,000
Flathead sole	1,859	1,603	256	13.8%	0.002	565,000
Pacific ocean perch	10,802	9,876	927	8.6%	0.006	2,043,000
Pelagic shelf rockfish	2,973	2,851	122	4.1%	0.001	268,000
Slope rockfish	325	175	150	46.2%	0.001	331,000
Shortraker/rougheye rockfish	1,903	1,312	591	31.1%	0.004	1,303,000
Northern rockfish	3,107	2,557	550	17.7%	0.003	1,213,000
Demersal shelf rockfish	538	511	26	4.9%	0.000	58,000
Black/Blue rockfish	216	206	10	4.8%	0.000	23,000
Thornyhead rockfish	1,293	1,206	87	6.7%	0.001	191,000
Sablefish	13,024	12,249	775	5.9%	0.005	1,708,000
Other groundfish	4,541	759	3,783	83.3%	0.024	8,339,000
TOTAL	182,656	158,969	23,687	13.0%	0.149	52,220,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	5,897 mt	37.096 kg/mt	13,001,000
Halibut Mortality (mt)	2,451 mt	15.419 kg/mt	5,404,000
Herring (mt)	7 mt	0.044 kg/mt	15,000
C. bairdi Tanner crab	193,622 crab	1.218 indiv/mt	
Other Tanner crab	4,324 crab	0.027 indiv/mt	
Red king crab	53 crab	0.000 indiv/mt	
Other king crab	515 crab	0.003 indiv/mt	
Chinook salmon	15,100 salmon	0.095 indiv/mt	
Other salmon	6,026 salmon	0.038 indiv/mt	
Halibut and Herring Discard Pounds	5,419,000 pounds		
Crab and Salmon Discard Numbers	219,640 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 40.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Catcher/processor Flathead sole			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	6	6	0	-	0.000	0
Pacific Cod	62	62	0	0.0%	0.000	0
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	31	31	0	0.0%	0.000	0
Arrowtooth Flounder	352	57	296	83.9%	0.674	652,000
Shallow-water flatfish	63	59	4	6.2%	0.009	9,000
Flathead sole	217	208	9	4.3%	0.021	21,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	-	0.000	0
Slope rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	0	0	0	-	0.000	0
Black/Blue rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	18	16	2	-	0.004	3,000
Other groundfish	24	0	24	100.0%	0.054	52,000
TOTAL	773	439	334	43.3%	0.762	737,000

PROHIBITED SPECIES	Discarded BYCATCH		Rate/ Retain GF	Discard Pounds
Halibut (mt)	48	mt	110 kg/mt	107,000
Halibut Mortality (mt)	28	mt	64 kg/mt	62,000
Herring (mt)	0	mt	0 kg/mt	0
C. bairdi Tanner crab	5,124	crab	11.680 indiv/mt	
Other Tanner crab	16	crab	0.036 indiv/mt	
Red king crab	0	crab	0.000 indiv/mt	
Other king crab	0	crab	0.000 indiv/mt	
Chinook salmon	26	salmon	0.060 indiv/mt	
Other salmon	19	salmon	0.043 indiv/mt	
Halibut and Herring Discard Pounds	62,000	pounds		
Crab and Salmon Discard Numbers	5,185	individuals		

Discards in the Gulf of Alaska, 2001

TABLE 41.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Catcher/processor Rex sole			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	1,000
Pollock	66	51	15	22.6%	0.005	33,000
Pacific Cod	430	380	50	11.6%	0.017	110,000
Deep-water flatfish	66	0	66	100.0%	0.022	146,000
Rex sole	2,118	2,097	22	1.0%	0.007	48,000
Arrowtooth Flounder	3,641	53	3,588	98.5%	1.190	7,910,000
Shallow-water flatfish	5	0	5	100.0%	0.002	11,000
Flathead sole	243	192	52	21.3%	0.017	114,000
Pacific ocean perch	295	23	272	92.1%	0.090	599,000
Pelagic shelf rockfish	7	0	7	100.0%	0.002	16,000
Slope rockfish	8	0	8	100.0%	0.003	18,000
Shortraker/rougeye rockfish	28	19	9	33.2%	0.003	20,000
Northern rockfish	32	0	32	100.0%	0.011	71,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Black/Blue rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	176	150	26	15.0%	0.009	58,000
Sablefish	176	52	124	70.7%	0.041	274,000
Other groundfish	328	0	328	100.0%	0.109	724,000
TOTAL	7,621	3,016	4,605	60.4%	1.527	10,152,000

PROHIBITED SPECIES	Discarded BYCATCH		Rate/ Retain GF	Discard Pounds
Halibut (mt)	407	mt	135 kg/mt	983,000
Halibut Mortality (mt)	248	mt	82 kg/mt	550,000
Herring (mt)	0	mt	0 kg/mt	0
C. bairdi Tanner crab	2,124	crab	0.704 indiv/mt	
Other Tanner crab	317	crab	0.105 indiv/mt	
Red king crab	0	crab	0.000 indiv/mt	
Other king crab	88	crab	0.029 indiv/mt	
Chinook salmon	1,811	salmon	0.600 indiv/mt	
Other salmon	355	salmon	0.118 indiv/mt	
Halibut and Herring Discard Pounds	550,000	pounds		
Crab and Salmon Discard Numbers	4,694	individuals		

Discards in the Gulf of Alaska, 2001

TABLE 42.

2001 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Trawl Catcher/processor Pacific cod			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	1	0	1	-	0.000	2,000
Pollock	32	23	9	28.8%	0.003	20,000
Pacific Cod	2,141	2,141	0	0.0%	0.000	0
Deep-water flatfish	40	0	40	100.0%	0.015	87,000
Rex sole	225	225	0	0.0%	0.000	0
Arrowtooth Flounder	1,164	0	1,164	100.0%	0.429	2,567,000
Shallow-water flatfish	103	91	12	11.5%	0.004	26,000
Flathead sole	203	187	16	7.9%	0.006	35,000
Pacific ocean perch	11	0	11	-	0.004	24,000
Pelagic shelf rockfish	0	0	0	-	0.000	0
Slope rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	1	0	1	-	0.000	1,000
Northern rockfish	14	0	14	100.0%	0.005	31,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Black/Blue rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	17	17	0	-	0.000	0
Sablefish	46	27	19	-	0.007	42,000
Other groundfish	120	0	120	100.0%	0.044	265,000
TOTAL	4,118	2,711	1,407	34.2%	0.519	3,101,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	299 mt	110 kg/mt	660,000
Halibut Mortality (mt)	183 mt	67 kg/mt	403,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	1,083 crab	0.400 indiv/mt	
Other Tanner crab	8 crab	0.003 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	802 salmon	0.296 indiv/mt	
Other salmon	310 salmon	0.114 indiv/mt	
Halibut and Herring Discard Pounds	403,000 pounds		
Crab and Salmon Discard Numbers	2,204 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 44.

2001 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Trawl Shoreside All			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	11	0	11	-	0.000	25,000
Pollock	71,813	71,141	672	0.9%	0.006	1,482,000
Pacific Cod	21,087	19,872	1,215	5.8%	0.011	2,679,000
Deep-water flatfish	620	592	29	4.6%	0.000	63,000
Rex sole	283	202	82	28.8%	0.001	180,000
Arrowtooth Flounder	8,761	2,860	5,900	67.4%	0.054	13,008,000
Shallow-water flatfish	5,641	5,191	450	8.0%	0.004	991,000
Flathead sole	1,099	971	128	11.6%	0.001	282,000
Pacific ocean perch	3,975	3,906	69	1.7%	0.001	152,000
Pelagic shelf rockfish	1,388	1,351	37	2.6%	0.000	81,000
Slope rockfish	6	2	4	59.6%	0.000	8,000
Shortraker/rougheye rockfish	107	52	55	51.7%	0.001	122,000
Northern rockfish	1,496	1,406	91	6.1%	0.001	200,000
Demersal shelf rockfish	6	5	1	15.4%	0.000	2,000
Black/Blue rockfish	10	0	10	100.0%	0.000	23,000
Thornyhead rockfish	109	100	9	8.6%	0.000	21,000
Sablefish	584	408	176	30.2%	0.002	389,000
Other groundfish	2,252	670	1,582	70.2%	0.015	3,487,000
TOTAL	119,249	108,728	10,521	8.8%	0.097	23,194,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	2,247 mt	21 kg/mt	4,953,000
Halibut Mortality (mt)	1,449 mt	13 kg/mt	3,194,000
Herring (mt)	7 mt	0 kg/mt	15,000
C. bairdi Tanner crab	113,502 crab	1.044 indiv/mt	
Other Tanner crab	3,090 crab	0.028 indiv/mt	
Red king crab	45 crab	0.000 indiv/mt	
Other king crab	84 crab	0.001 indiv/mt	
Chinook salmon	11,642 salmon	0.107 indiv/mt	
Other salmon	4,699 salmon	0.043 indiv/mt	
Halibut and Herring Discard Pounds	3,209,000 pounds		
Crab and Salmon Discard Numbers	133,062 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 50.

2001 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Discarded	Discard	Rate/ Retain GF	Discard
	TARGET:		mt	Rate		Pounds
			Harvest	Retained		
			mt	mt		
			mt			
Atka Mackerel			0	0		0
Pollock			53	19	65.3%	77,000
Pacific Cod			1,036	954	7.9%	180,000
Deep-water flatfish			76	55	27.6%	46,000
Rex sole			152	113	25.3%	84,000
Arrowtooth Flounder			1,035	172	83.4%	1,902,000
Shallow-water flatfish			354	331	6.4%	50,000
Flathead sole			71	50	29.4%	46,000
Pacific ocean perch			3,939	3,890	1.2%	108,000
Pelagic shelf rockfish			1,285	1,282	0.3%	8,000
Slope rockfish			6	2	59.1%	8,000
Shortraker/rougheye rockfish			18	14	23.7%	10,000
Northern rockfish			1,310	1,310	0.0%	0
Demersal shelf rockfish			5	5	0.0%	0
Black/Blue rockfish			0	0	-	0
Thornyhead rockfish			53	47	11.6%	13,000
Sablefish			458	356	22.2%	225,000
Other groundfish			172	23	86.8%	330,000
TOTAL			10,023	8,623	14.0%	3,087,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	299 mt	35 kg/mt	659,000
Halibut Mortality (mt)	206 mt	24 kg/mt	455,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	779 crab	0.090 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	255 salmon	0.030 indiv/mt	
Halibut and Herring Discard Pounds	455,000 pounds		
Crab and Salmon Discard Numbers	1,034 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 53.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Hook-and-line Catcher/processor Sablefish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	33	32	1	2.5%	0.001	2,000
Deep-water flatfish	5	4	2	30.5%	0.001	3,000
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	113	27	85	75.9%	0.053	188,000
Shallow-water flatfish	2	0	2	100.0%	0.001	5,000
Flathead sole	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	-	0.000	0
Slope rockfish	1	0	0	39.5%	0.000	1,000
Shortraker/rougheye rockfish	84	63	21	24.5%	0.013	45,000
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	2	2	0	4.3%	0.000	0
Black and blue rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	90	89	1	1.3%	0.001	3,000
Sablefish	1,400	1,382	19	1.3%	0.012	41,000
Other groundfish	49	0	49	100.0%	0.031	108,000
TOTAL	1,779	1,599	180	10.1%	0.112	396,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	not available	kg/mt	
Halibut Mortality (mt)		kg/mt	0
Herring (mt)	mt	kg/mt	0
C. bairdi Tanner crab	crab	indiv/mt	
Other Tanner crab	crab	indiv/mt	
Red king crab	crab	indiv/mt	
Other king crab	crab	indiv/mt	
Chinook salmon	salmon	indiv/mt	
Other salmon	salmon	indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 55.

2001 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Hook-and-line Shoreside Pacific cod			
	TARGET:					
	Harvest	Retained	Discarded	Discard	Rate/ Retain GF	Discard
	mt	mt	mt	Rate		Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	43	41	1	3.4%	0.000	3,000
Pacific Cod	5,705	5,606	99	1.7%	0.017	218,000
Deep-water flatfish	2	0	2	100.0%	0.000	5,000
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	205	0	205	100.0%	0.036	451,000
Shallow-water flatfish	0	0	0	-	0.000	0
Flathead sole	1	0	1	100.0%	0.000	2,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	3	1	2	58.5%	0.000	4,000
Slope rockfish	4	2	2	46.8%	0.000	4,000
Shortraker/rougheye rockfish	167	7	160	95.9%	0.028	352,000
Northern rockfish	0	0	0	-	0.000	1,000
Demersal shelf rockfish	18	12	5	30.6%	0.001	12,000
Black and blue rockfish	1	1	0	0.0%	0.000	0
Thornyhead rockfish	2	2	0	0.0%	0.000	0
Sablefish	27	20	7	27.4%	0.001	16,000
Other groundfish	625	38	587	94.0%	0.102	1,294,000
TOTAL	6,803	5,731	1,072	15.8%	0.187	2,364,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	1,044 mt	182 kg/mt	2,301,000
Halibut Mortality (mt)	146 mt	25 kg/mt	322,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	0 crab	0.000 indiv/mt	
Other Tanner crab	1 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	322,000 pounds		
Crab and Salmon Discard Numbers	2 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 56.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Hook-and-line Shoreside Rockfish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	37	37	0	0.0%	0.000	0
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	123	0	123	100.0%	0.109	271,000
Shallow-water flatfish	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	11	11	0	0.0%	0.000	0
Slope rockfish	116	115	1	1.1%	0.001	3,000
Shortraker/rougheye rockfish	351	335	16	4.5%	0.014	35,000
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	340	340	0	0.0%	0.000	0
Black and blue rockfish	19	19	0	0.0%	0.000	0
Thornyhead rockfish	262	259	3	1.2%	0.003	7,000
Sablefish	37	16	22	57.9%	0.019	48,000
Other groundfish	170	0	170	100.0%	0.150	375,000
TOTAL	1,466	1,131	335	22.9%	0.296	739,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	498 mt	441 kg/mt	1,099,000
Halibut Mortality (mt)	8 mt	7 kg/mt	18,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	0 crab	0.000 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	18 crab	0.016 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	18,000 pounds		
Crab and Salmon Discard Numbers	18 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 57.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Hook-and-line Shoreside Sablefish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	109	72	37	33.8%	0.003	81,000
Deep-water flatfish	7	0	7	100.0%	0.001	16,000
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	386	0	386	100.0%	0.035	850,000
Shallow-water flatfish	2	0	2	100.0%	0.000	4,000
Flathead sole	0	0	0	-	0.000	0
Pacific ocean perch	1	0	1	100.0%	0.000	2,000
Pelagic shelf rockfish	2	1	1	58.1%	0.000	2,000
Slope rockfish	17	13	5	26.3%	0.000	10,000
Shortraker/rougheye rockfish	581	261	320	55.1%	0.029	705,000
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	161	148	14	8.4%	0.001	30,000
Black and blue rockfish	8	8	0	0.0%	0.000	0
Thornyhead rockfish	449	415	34	7.5%	0.003	74,000
Sablefish	10,297	10,059	238	2.3%	0.022	525,000
Other groundfish	442	16	425	96.3%	0.039	938,000
TOTAL	12,462	10,993	1,469	11.8%	0.134	3,238,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
	not available		
Halibut (mt)	mt	kg/mt	
Halibut Mortality (mt)	mt	kg/mt	0
Herring (mt)	mt	kg/mt	0
C. bairdi Tanner crab	crab	indiv/mt	
Other Tanner crab	crab	indiv/mt	
Red king crab	crab	indiv/mt	
Other king crab	crab	indiv/mt	
Chinook salmon	salmon	indiv/mt	
Other salmon	salmon	indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 58.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Pot All All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	1	0	1	100.0%	0.000	1,000
Pollock	6	2	4	64.7%	0.001	8,000
Pacific Cod	7,171	7,043	128	1.8%	0.017	281,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	4	0	4	100.0%	0.001	9,000
Shallow-water flatfish	5	0	5	100.0%	0.001	10,000
Flathead sole	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	-	0.000	1,000
Pelagic shelf rockfish	2	0	2	96.7%	0.000	5,000
Slope rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	2	0	2	100.0%	0.000	5,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Black and blue rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	4	0	4	100.0%	0.001	10,000
Other groundfish	174	34	140	80.7%	0.019	309,000
TOTAL	7,369	7,079	290	3.9%	0.039	640,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	77 mt	10 kg/mt	170,000
Halibut Mortality (mt)	4 mt	1 kg/mt	10,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	69,091 crab	9376 indiv/mt	
Other Tanner crab	483 crab	66 indiv/mt	
Red king crab	8 crab	1 indiv/mt	
Other king crab	0 crab	0 indiv/mt	
Chinook salmon	0 salmon	0 indiv/mt	
Other salmon	0 salmon	0 indiv/mt	
Halibut and Herring Discard Pounds	10,000 pounds		
Crab and Salmon Discard Numbers	69,582 individuals		

Discards in the Gulf of Alaska, 2001

TABLE 61.

2001 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Jig Shoreside Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	143	143	0	0.0%	0.000	0
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	0	0	0	-	0.000	0
Shallow-water flatfish	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	-	0.000	0
Slope rockfish	0	0	0	-	0.000	0
Shorthead/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	0	0	0	-	0.000	0
Black and blue rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other groundfish	0	0	0	-	0.000	0
TOTAL	143	143	0	0.0%	0.000	0

PROHIBITED SPECIES	Discarded BYCATCH	Discard Rate/ Retained GF mt	Discard Pounds
Halibut (mt)	0 mt	0 kg/mt	0
Halibut Mortality (mt)	0 mt	0 kg/mt	0
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	0 crab	0.000 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Discards in the CDQ FISHERIES : TABLES

TABLE 63.

2001 CDQ	AREA:	BSAI				
			GEAR:	All	TYPE:	All
	TARGET:	All				
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	4,987	4,642	345	6.9%	0.002	760,000
Pollock	120,931	120,824	106	0.1%	0.001	235,000
Pacific Cod	11,957	11,716	241	2.0%	0.002	532,000
Yellowfin sole	31	0	31	100.0%	0.000	68,000
Rock sole	132	37	95	72.3%	0.001	210,000
Flathead sole	178	54	124	69.5%	0.001	273,000
Other flatfish	20	3	17	87.3%	0.000	38,000
Greenland turbot	27	16	11	40.2%	0.000	24,000
Arrowtooth flounder	133	40	93	70.2%	0.001	206,000
Pacific ocean perch	570	542	28	4.9%	0.000	61,000
Sharpchin/northern rockfish	310	221	88	28.6%	0.001	195,000
Shortraker/roughey rockfish	3	3	1	21.6%	0.000	2,000
Other rockfish	19	15	5	23.4%	0.000	10,000
Sablefish	29	24	4	15.5%	0.000	10,000
Other Species	1,974	278	1,696	85.9%	0.012	3,739,000
TOTAL	141,299	138,414	2,886	2.0%	0.021	6,361,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	516 mt	4 kg/mt	1137000
Halibut Mortality (mt)	77 mt	1 kg/mt	171,000
Herring (mt)	30 mt	0 kg/mt	67,000
C. bairdi Tanner crab	614 crab	0.004 indiv/mt	
Other Tanner crab	5,385 crab	0.039 indiv/mt	
Red king crab	234 crab	0.002 indiv/mt	
Other king crab	592 crab	0.004 indiv/mt	
Chinook salmon	1,821 salmon	0.013 indiv/mt	
Other salmon	2,076 salmon	0.015 indiv/mt	
Halibut and Herring Discard Pounds	238,000 pounds		
Crab and Salmon Discard Numbers	10,722 individuals		

Discards in the CDQ FISHERIES : TABLES

TABLE 65.

2001 CDQ	AREA:	BSAI				
	GEAR:	Trawl				
	TYPE:	Catcher/processor				
	TARGET:	Bottom pollock				
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	2,617	2,617	0	0.0%	0.000	0
Pacific Cod	16	16	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	16	3	13	79.6%	0.005	29,000
Flathead sole	29	8	21	71.0%	0.008	45,000
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	0	0	0	28.6%	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	0	0	0	-	0.000	0
Shortraker/roughey rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other Species	22	2	21	92.9%	0.008	46,000
TOTAL	2,701	2,646	55	2.0%	0.021	120,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	0 mt	0 kg/mt	1,000
Halibut Mortality (mt)	0 mt	0 kg/mt	0
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	5 crab	0.002 indiv/mt	
Other Tanner crab	2 crab	0.001 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	14 salmon	0.005 indiv/mt	
Other salmon	10 salmon	0.004 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	31 individuals		

Discards in the CDQ FISHERIES : TABLES

TABLE 66.

2001 CDQ	AREA:		BSAI			
	GEAR:	Trawl	Catcher/processor			
	TYPE:		Midwater pollock			
TARGET:						
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	1	1	0	25.4%	0.000	1,000
Pollock	117,654	117,654	0	0.0%	0.000	0
Pacific Cod	258	255	3	1.1%	0.000	6,000
Yellowfin sole	1	0	1	100.0%	0.000	3,000
Rock sole	110	33	76	69.6%	0.001	168,000
Flathead sole	128	46	82	64.1%	0.001	180,000
Other flatfish	11	3	9	77.3%	0.000	19,000
Greenland turbot	8	1	7	83.6%	0.000	15,000
Arrowtooth flounder	27	10	17	61.8%	0.000	37,000
Pacific ocean perch	6	2	4	71.1%	0.000	9,000
Sharpchin/northern rockfish	0	0	0	41.1%	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	1	1	0	19.7%	0.000	0
Sablefish	4	1	2	68.4%	0.000	6,000
Other Species	388	20	368	94.8%	0.003	811,000
TOTAL	118,597	118,027	569	0.5%	0.005	1,255,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	22 mt	0 kg/mt	49,000
Halibut Mortality (mt)	20 mt	0 kg/mt	44,000
Herring (mt)	30 mt	0 kg/mt	67,000
C. bairdi Tanner crab	27 crab	0.000 indiv/mt	
Other Tanner crab	56 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	1,753 salmon	0.015 indiv/mt	
Other salmon	1,944 salmon	0.016 indiv/mt	
Halibut and Herring Discard Pounds	111,000 pounds		
Crab and Salmon Discard Numbers	3,780 individuals		

Discards in the CDQ FISHERIES : TABLES

TABLE 67.

2001 CDQ	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Catcher/processor Pacific cod			
TARGET:						
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	2	0	2	100.0%	0.000	4,000
Pollock	660	553	106	16.1%	0.009	235,000
Pacific Cod	11,300	11,061	239	2.1%	0.020	526,000
Yellowfin sole	30	0	30	100.0%	0.002	65,000
Rock sole	4	0	4	100.0%	0.000	8,000
Flathead sole	21	0	21	100.0%	0.002	47,000
Other flatfish	9	0	9	100.0%	0.001	19,000
Greenland turbot	8	5	4	41.7%	0.000	8,000
Arrowtooth flounder	74	2	72	97.7%	0.006	159,000
Pacific ocean perch	0	0	0	-	0.000	0
Sharpchin/northern rockfish	2	0	2	100.0%	0.000	4,000
Shortraker/rougheye rockfish	1	1	1	41.4%	0.000	1,000
Other rockfish	3	1	2	69.5%	0.000	5,000
Sablefish	1	0	1	100.0%	0.000	3,000
Other Species	1,480	254	1,226	82.8%	0.103	2,703,000
TOTAL	13,594	11,877	1,717	12.6%	0.145	3,786,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	482 mt	41 kg/mt	1,062,000
Halibut Mortality (mt)	48 mt	4 kg/mt	106,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	582 crab	0.049 indiv/mt	
Other Tanner crab	5,327 crab	0.449 indiv/mt	
Red king crab	234 crab	0.020 indiv/mt	
Other king crab	555 crab	0.047 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	106,000 pounds		
Crab and Salmon Discard Numbers	6,698 individuals		

Discards in the CDQ FISHERIES : TABLES

TABLE 68.

2001 CDQ	AREA:	BSAI					
	GEAR:	Hook and line					
	TYPE:	Catcher/processor					
	TARGET:	Sablefish					
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds	
Atka Mackerel	0	0	0	-	0.000	0	
Pollock	0	0	0	-	0.000	0	
Pacific Cod	0	0	0	-	0.000	0	
Yellowfin sole	0	0	0	-	0.000	0	
Rock sole	0	0	0	-	0.000	0	
Flathead sole	0	0	0	-	0.000	0	
Other flatfish	0	0	0	-	0.000	0	
Greenland turbot	10	10	0	4.3%	0.010	1,000	
Arrowtooth flounder	4	3	0	2.8%	0.002	0	
Pacific ocean perch	0	0	0	-	0.000	0	
Sharpchin/northern rockfish	0	0	0	-	0.000	0	
Shortraker/rougeye rockfish	2	2	0	6.1%	0.003	0	
Other rockfish	4	4	0	3.1%	0.003	0	
Sablefish	24	23	1	3.5%	0.019	2,000	
Other Species	4	2	2	48.3%	0.045	5,000	
TOTAL	49	45	4	7.6%	0.082	8,000	

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)		0 kg/mt	0
Halibut Mortality (mt)	mt	0 kg/mt	0
Herring (mt)	mt	0 kg/mt	0
C. bairdi Tanner crab	crab	0.000 indiv/mt	
Other Tanner crab	crab	0.000 indiv/mt	
Red king crab	crab	0.000 indiv/mt	
Other king crab	crab	0.000 indiv/mt	
Chinook salmon	salmon	0.000 indiv/mt	
Other salmon	salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	0 individuals		