

**DISCARDS IN THE NORTH PACIFIC
GROUND FISH FISHERIES
2004**

prepared for



Alaska Marine Conservation Council

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Alaska Marine Conservation Council is a community-based organization of people working to protect the health and diversity of Alaska's marine ecosystem. Our members are fishermen, subsistence harvesters, marine scientists, conservationists, small business owners and families. AMCC works to minimize bycatch, protect habitat, prevent overfishing and promote clean community-based fishing opportunities.

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Discards in the North Pacific Groundfish Fisheries 2004 is the continuation of a time series of catch and discard data. Previous years of bycatch data can be found on the Alaska Marine Conservation Council website and the Alaska Department of Fish and Game Commercial Fisheries website: www.cf.adfg.state.ak.us.

Discards in the Groundfish Fisheries of the Bering Sea/ Aleutian Islands & the Gulf of Alaska **1995-1997**: search: www.cf.adfg.state.ak.us

Discards in the Groundfish Fisheries of the Bering Sea/ Aleutian Islands & the Gulf of Alaska **1998- 2000**: search: www.cf.adfg.state.ak.us

Discards in the North Pacific Groundfish Fisheries **2001, 2002, 2003 and 2004**:
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Discards in the North Pacific Groundfish Fisheries, 2004

1.0 Introduction

This report updates the 2003 Alaska Marine Conservation Council (AMCC) sponsored report, Discards in the North Pacific Groundfish Fisheries 2003. 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 2004.

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 2004. As predicted in the 1998 version of this report, implementation of the Improved Retention/Improved Utilization program contributed to substantial declines 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: 2001 discards were 70 million pounds less than in 2000. In 2002, total groundfish discard rate increased from 6.5% to 7.1% (261 million pounds to 299 million pounds), resulting from increased discard rates in the two largest target fisheries, pollock and Pacific cod; in 2003, decreased discard rates in pollock led to a slight decrease in overall rate, to 7.0%. Year 2004 was similar to 2002 with an overall increase to 7.4%, mostly related to pollock.

TABLE 1. ALASKA SUMMARY	1997	1998	1999	2000	2001	2002	2003	2004
Total Groundfish Catch (mt)	1,940,764	1,774,489	1,527,219	1,672,261	1,831,197	1,924,256	1,970,496	1,958,449
Total Groundfish Discards (mt)	292,413	149,606	148,946	150,576	118,647	135,952	137,976	144,867
Groundfish Discards (thou. pds)	644,654	329,822	328,368	331,961	261,568	299,720	304,182	319,374
Percent Groundfish Discarded	15.1%	8.4%	9.8%	9.0%	6.5%	7.1%	7.0%	7.4%
Halibut Mortality (thou. pds)	14,620	14,087	14,414	13,558	13,673	13,688	13,051	12,784
Herring (thou. pounds)	2,515	1,797	1,989	1,137	608	308	2,444	2,414
Chinook Salmon (numbers)	63,231	70,000	43,492	33,825	53,055	50,433	67,866	76,941
Other Salmon (numbers)	66,578	81,580	53,792	68,532	63,380	81,772	199,292	452,763
Red King Crab (numbers)	74,634	49,191	94,022	115,682	80,909	133,832	105,509	94,107
Other King Crab (numbers)	29,093	43,220	61,879	36,914	36,284	62,477	151,438	73,399
Bairdi Tanner Crab (numbers)	2,262,152	1,643,587	996,764	1,254,100	1,258,219	1,404,762	1,223,118	910,262
Other Tanner Crab (numbers)	5,654,941	4,633,578	1,604,354	3,314,970	2,043,627	1,501,745	787,833	1,900,631

* Table 1 does not include catch and discards from CDQ groundfish fisheries. Halibut, herring, salmon and crab discards are in addition to groundfish discards.

The rate changes in “percent groundfish discarded” closely track those for pollock, which is by far the dominant species in Alaskan groundfish catch. Table 2 shows these details.

It is the opinion of the author that the accuracy of observer estimates of discards is suspect in high-volume, low-discard rate fisheries and that there may be no real significant difference, for example, among rates estimated for pollock over the last several years.

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TABLE 2.	1997	1998	1999	2000	2001	2002	2003	2004
POLLOCK								
CATCH (mt)								
BSAI	1,060,641	1,040,268	889,337	1,019,186	1,247,048	1,332,380	1,340,712	1,330,783
GULF	89,667	125,288	95,420	72,845	72,028	51,844	50,359	61,393
TOTAL	1,150,308	1,165,555	984,758	1,092,031	1,319,076	1,384,224	1,391,071	1,392,175
DISCARDS								
(mt)								
BSAI	92,425	16,060	28,244	21,984	17,355	20,471	16,416	23,258
GULF	6,954	1,326	1,894	2,086	721	1,094	1,022	1,050
TOTAL	99,379	17,386	30,138	24,070	18,076	21,565	17,438	24,307
DISCARD								
RATE								
BSAI	8.71%	1.54%	3.18%	2.16%	1.39%	1.54%	1.22%	1.75%
GULF	7.76%	1.06%	1.98%	2.86%	1.00%	2.11%	2.03%	1.71%
TOTAL	8.64%	1.49%	3.06%	2.20%	1.37%	1.56%	1.25%	1.75%
POLLOCK								
HARVEST AS								
% OF TOTAL								
GROUND FISH								
	59.27%	65.68%	64.48%	65.30%	72.03%	71.94%	70.59%	71.09%

2.0 Data sources and Methodology

In previous reports, the data source was the National Marine Fisheries Service (NMFS) “best blend” data provided by the Alaska Regional Office. In 2003 NMFS supplied similar data from a revamped and improved data system; its description can be found at: <http://www.fakr.noaa.gov/sustainablefisheries/catchaccounting.htm>

In this report, BSAI shortraker and sharpchin rockfish categories are separated, and certain Gulf of Alaska skate species are separated from their original “other species” category; this follows NMFS management and database changes.

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. Finally, data for categories with fewer than three processors were not provided to the author, due to NMFS confidentiality constraints. In 2005 this resulted in the anomalous situation where BSAI shoreside hook-and-line categories had catch reported, but no discards. Since it is unlikely that there were

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really companies with zero discards, this suggests an area where better observer coverage or better enforcement of catch reporting requirement would result in more accurate data.

2.1 The assumed mortality rate for all species except halibut continues to be 100%. The International Pacific Halibut Commission (IPHC) determines halibut mortality rates, based on observer sampling data from recent years. Information on these rates can be found at: <http://www.iphc.washington.edu/halcom/research/bycatch/2004dmrrep.pdf>[catch/dmr99_00.pdf](http://www.iphc.washington.edu/halcom/research/bycatch/2004dmrrep.pdf)

3.0 Managing Entities

The managing entities for groundfish fisheries in the North Pacific include NMFS, the North Pacific Fishery 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/default.htm>

ADF&G: <http://www.adfg.state.ak.us/>

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 significant component of discards, although an exact accounting is beyond the scope of this series. In 2003 there were 59 inseason actions where a species or species group became “bycatch only” to one or more gear groups in a fisheries management area (27 in the BSAI and 32 in the Gulf of Alaska). In 2004 there were 56 such actions (24 in the BSAI and 32 in the Gulf of Alaska). These closures can result from a groundfish species or species groups’ own catch limit being reached, or that of an associated prohibited species cap such as for salmon, halibut or crab being reached. In 2004, 5 of the BSAI closures and 4 of the Gulf closures fell in the latter category. These closures can be year-round, or for periods between open fisheries. They can apply to entire areas or subareas, and affect 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 being in effect, it is sometimes necessary for NMFS to make a groundfish species or species group prohibited to retention in certain areas when its Total Allowable Catch (TAC) amounts are exceeded. In 2004 there were 12 such closures.

5.0 Improved Retention/Improved Utilization (IR/IU)

Details of this program were described in the 2001 version of this series.

The most recent NPFMC actions on this issue can be found at:

http://www.fakr.noaa.gov/npfmc/current_issues/bycatch/bycatch.htm

6.0 Prohibited Species Donation Program

Details of this program were described in the 2001 version of this series. Regulations are found at:

<http://www.fakr.noaa.gov/regs/679b26.pdf>

7.0 Other Management Actions affecting fisheries bycatch.

The 2001 version of this report discussed 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. The RPAs dispersed pollock and Atka mackerel fishing effort both temporally and spatially by establishing new quotas and seasons, and established conservation zones in the Bering Sea, Aleutian Islands and Gulf of Alaska. Subsequent Steller sea lion protection measures similarly affected Pacific cod fisheries.

8.0 CDQ Fisheries.

This program was described in the 2002 version of this series. More information can be found at:<http://www.fakr.noaa.gov/cdq/default.htm>

CDQ data is in a different format than open-access groundfish and prohibited species data so a different approach had to be taken to develop certain tables.

9.0 Review of 2003-2004 Data

Information from year 2003 is included in this section for purposes of comparison.

9.1 BERING SEA/ALEUTIAN ISLANDS

- Groundfish discards in 2003 were 242 million pounds (mp) or 6.2% of the total harvest; in 2004 they were 283 mp or 7.2% of the harvest.
- Trawl fisheries accounted for 92.8% of the total harvest and 85.4% of discards in 2003; and 92.2% of total harvest and 92.6% of discards in 2004.
- Trawl catcher/processors accounted for 45.0% of the total harvest and 76.1% of discards in 2003; and 46.4% of total harvest and 78.8% of discards in 2004.
- Shoreside trawl catcher vessels accounted for 39.5% of the total harvest and 9.0% of discards in 2003; and 45.8% of harvest and 7.3% of discards in 2004.
- Fixed gear accounted for 8.2% of the total harvest and 14.6% of discards in 2003; and 7.8% of total harvest and 13.8% of discards in 2004.
- Salmon bycatch totaled 241,759 fish in 2003 and 489,671 fish in 2004.
- Crab bycatch of all kinds was 2.1 million crabs in 2003 and 2.9 million crabs in 2004.
- Halibut bycatch mortality was 3,779 mt in 2003 and 3,653 mt in 2004.

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Catcher/processor Mid-water trawl pollock fishery

- 2003 Total groundfish harvest: 149,971 mt. Total groundfish discarded: 1,858 mt (0.4%). Total pollock discarded: 183 mt (0.0%).
- 2004 Total groundfish harvest: 520,540 mt. Total groundfish discarded: 2,585 mt (0.5%). Total pollock discarded: 139 mt (0.0%).
- Salmon bycatch: 38,601 fish in 2003; 87,324 fish in 2004.

CDQ Catcher/processor Mid-water trawl pollock fishery.

- 2003 Total groundfish harvest: 149,971 mt. Total groundfish discarded: 0 mt (0.0%). Total pollock discarded: 0 mt (0.0%)
- 2004 Total groundfish harvest: 149,958 mt. Total groundfish discarded: 0 mt (0.0%). Total pollock discarded: 0 mt (0.0%)
- Salmon bycatch: 7,852 fish in 2003; 3,904 fish in 2004.

Catcher/processor Bottom trawl pollock fishery. Bottom trawling for pollock was disallowed effective January 1, 1999. This target continues to appear because its definition depends on the amount of bycatch, rather than only the gear used.

- 2003 Total groundfish harvest: 3,736 mt. Total groundfish discarded: 18 mt (0.5%). Total pollock discarded: 0 mt (0%). Largest discard: Pacific ocean perch, 11 mt (7.0%).
- 2004 Total groundfish harvest: 5,310 mt. Total groundfish discarded: 0 mt (0.0%). Total pollock discarded: 0 mt (0%). No discards indicated.

Catcher/processor Yellowfin sole trawl fishery.

- 2003 Total groundfish harvest: 103,624 mt. Total groundfish discarded: 28,553 mt (27.6%). Total yellowfin sole discarded: 7,664 mt (12.0%).
- 2004 Total groundfish harvest: 90,750 mt. Total groundfish discarded: 23,459 mt (25.8%). Total yellowfin sole discarded: 7,632 mt (12.9%).
- Halibut bycatch mortality: 2003 – 704 mt; 2004 – 396 mt.
- Crab bycatch. 2003 - 598,138 crabs. 2004 – 1,640,465 crabs.

CDQ Catcher/processor Yellowfin sole trawl fishery.

- 2003 Total groundfish harvest: 5,779 mt. Total groundfish discarded: 0 mt (0.0%). Total yellowfin sole discarded: 0 mt (0.0%).
- 2004 Total groundfish harvest: 7,593 mt. Total groundfish discarded: 0 mt (0.0%). Total yellowfin sole discarded: 0 mt (0.0%).
- Halibut bycatch mortality: 2003 – 61 mt; 2004 – 67 mt.
- Crab bycatch: 2003 – 18,492 crabs; 2004 – 42,818 crabs.

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.

- 2003 Total groundfish harvest: 35,786 mt. Total groundfish discarded: 13,026 mt (36.4%). Total Rock sole discarded: 6,456 mt (35.0%).
- 2004 Total groundfish harvest: 46,642 mt. Total groundfish discarded: 18,484 mt (39.6%). Total Rock sole discarded: 8,340 mt (34.4%).

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- Halibut bycatch mortality: 2003 - 889 mt; 2004 - 510 mt.
- Crab bycatch: 2003 – 332,283 crab; 2004 – 386,124 crab.

Catcher/processor Pacific cod trawl fishery.

- 2003 Total groundfish harvest: 42,745 mt. Total groundfish discarded: 16,131 mt (37.7%). Total Pacific cod discarded: 136 mt (0.7%). Largest discard: pollock – 4,181 mt (69.0%).
- 2004 Total groundfish harvest: 63,532 mt. Total groundfish discarded: 28,174 mt (44.3%). Total Pacific cod discarded: 130 mt (0.5%). Largest discard: arrowtooth flounder – 6,356 mt (89.9%).
- Halibut bycatch mortality: 2003 – 511 mt; 2004 – 1,077 mt.
- Crab bycatch: 2003 – 207,661 crab; 2004 – 251,706 crab.

Catcher/processor Atka mackerel trawl fishery.

- 2003 Total groundfish harvest: 57,289 mt. Total groundfish discarded: 16,036 mt (28.0%). Total Atka mackerel (largest discard) discarded: 9,039 mt (19.0%).
- 2004 Total groundfish harvest: 59,384 mt. Total groundfish discarded: 13,310 mt (22.4%). Total Atka mackerel (largest discard) discarded: 6,755 mt (13.7%).

CDQ Catcher/processor Atka mackerel trawl fishery.

- This category does not appear in 2003 available data.
- In 2004 this category was estimated by combining data from several annual CDQ company reports; totals may be slightly underestimated.
2004 Total groundfish harvest: 4,496 mt. Total groundfish discarded: 0 mt (0.0%).

Shoreside Mid-water trawl pollock fishery.

- 2003 Total groundfish harvest: 648,744 mt. Total groundfish discarded: 1,076 mt (0.2%). Total Pollock discarded: 256 mt (0.0%).
- 2004 Total groundfish harvest: 762,363 mt. Total groundfish discarded: 1,884 mt (0.2%). Total Pollock discarded: 269 mt (0.0%).
- Salmon bycatch: 2003 – 174,497 fish. 2004 – 382,028 fish.

Mothership Mid-water trawl pollock fishery.

- 2003 Total groundfish harvest: 130,156 mt. Total groundfish discarded: 335 mt (0.3%). Total pollock discarded: 0 mt (0.0 %).
- 2004 Groundfish data not provided due to confidentiality, however NMFS final inseason discard report indicates 133,000 mt in Mothership category (all targets). These numbers are included in table of shoreside mid-water trawl pollock fishery. NMFS did provide PSC numbers.
- Salmon bycatch: 2003 – 16,219 fish; 2004 – 17,042 fish.

Shoreside Pacific cod trawl fishery.

- 2003 Total groundfish harvest: 46,986 mt. Total groundfish discarded: 8,490 mt (18.1%). Total Pacific cod discarded: 291 mt (0.8%). Largest discard: pollock - 2,411 mt (73.7%).

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- 2004 Total groundfish harvest: 45,395 mt. Total groundfish discarded: 7,247 mt (16.0%). Total Pacific cod discarded: 207 mt (0.6%). Largest discard: pollock - 2,882 mt (78.1%).
- Halibut bycatch mortality: 2003 – 716 mt; 2004 – 439 mt.
- Crab bycatch: 2003 – 65,828 crab; 2004 – 51,484 crab.

Catcher/processor Pacific cod Hook-and-Line fishery. More than half of the discards consist of “other species”, mostly skates and sculpins.

- 2003 Total groundfish harvest: 118,171 mt. Total groundfish discarded: 14,044 mt (11.9%). Total Pacific cod discarded: 1,798 mt (1.9%). Largest discard: “other species” - 9,426 mt (63.6%).
- 2004 Total groundfish harvest: 118,885 mt. Total groundfish discarded: 16,863 mt (14.2%). Total Pacific cod discarded: 1,605 mt (1.7%). Largest discard: “other species” – 12,194 mt (77.9%).
- Halibut bycatch mortality: 2003 – 487 mt; 2004 – 431 mt.

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

- 2003 Total groundfish harvest: 15,830 mt. Total groundfish discarded: 0 mt (0.0%). Total Pacific cod discarded: 0 mt (0.0%).
- 2004 Total groundfish harvest: 18,004 mt. Total groundfish discarded: 0 mt (0.0%). Total Pacific cod discarded: 0 mt (0.0%).
- Halibut bycatch mortality: 2003 - 61 mt; 2004 – 47 mt.

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

- 2003 Total groundfish harvest 22,648 mt. Total groundfish discarded: 806 mt (3.6%).
- 2004 Total groundfish harvest: 17,426 mt. Total groundfish discarded: 485 mt (2.7%).
- Halibut bycatch mortality: 2003 - 3 mt; 2004 – 3 mt.
- Crab bycatch: 2003 - 114,182 crab; 2003 – 123,523 crab.

9.2 GULF OF ALASKA

- Groundfish discards in 2003 were 61.9 million pounds (mp) or 13.5% of the groundfish harvest; in 2004, discards were 36.2 mp or 10.0% of the groundfish harvest.
- Trawl fisheries accounted for 74.1% of the catch and 91.7% of the discards in 2003; and 74.7% of the catch and 83.4% of the discards in 2004.
- Trawl catcher/processors accounted for 23.2% of the catch and 57.2% of the discards in 2003; and 13.4% of the catch and 37.7% of the discards in 2004.
- Shoreside trawl catcher vessels accounted for 50.9% of the catch and 34.5% of the discards in 2003; and 61.3% of the catch and 37.7% of the discards in 2004.
- Fixed gear accounted for 25.9% of the catch and 8.3% of the discards in 2003; and 25.3% of the catch and 16.6% of the discards in 2004.
- Salmon bycatch totaled 25,399 fish in 2003 and 22,991 fish in 2004.
- Crab bycatch of all species was 148,548 crabs in 2003, and 80,220 crabs in 2004.
- Halibut bycatch mortality was 2,348 mt in 2003 and 2,433 mt in 2004.

Discards in the North Pacific Groundfish Fisheries, 2004

Shoreside Mid-water trawl pollock fishery.

- 2003 Total groundfish harvest: 46,875 mt. Total groundfish discarded: 1,030 mt (2.2%). Total pollock discarded: 737 mt (1.6%).
- 2004 Total groundfish harvest: 51,657 mt. Total groundfish discarded: 844 mt (1.6%). Total pollock discarded: 617 mt (1.2%).
- Salmon bycatch: 2003 – 9,841 fish; 2004 – 8,444 fish.

Catcher/processor Rex sole trawl fishery.

- 2003 Total groundfish harvest: 10,313 mt. Total groundfish discarded: 6,737 mt (65.3%). Total Rex sole discarded: 50 mt (2.4%). Largest discard: arrowtooth flounder 5,621 mt (96.7%).
- 2004 Total groundfish harvest: 3,399 mt. Total groundfish discarded: 2,240 mt (65.9%). Total Rex sole discarded: 15 mt (2.2%). Largest discard: arrowtooth flounder 1,928 mt (96.4%).
- Crab bycatch: 2003 – 28,583 crab; 2004 – 9,016 crab.

Shoreside Pacific cod trawl fishery.

- 2003 Total groundfish harvest: 14,377 mt. Total groundfish discarded: 1,031 mt (7.2%). Total Pacific cod discarded: 163 mt (1.3%). Largest discard: arrowtooth flounder - 411 mt (77.7%).
- 2004 Total groundfish harvest: 14,144 mt. Total groundfish discarded: 847 mt (6.0%). Total Pacific cod discarded: 22 mt (0.2%). Largest discard: arrowtooth flounder - 276 mt (82.0%).
- Halibut bycatch mortality: 2003 – 403 mt; 2004 – 874 mt.

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

- 2003 Total groundfish harvest: 21,041 mt. Total groundfish discarded: 434 mt (2.1%). Total Pacific cod discarded 25 mt (0.1%). Largest discard: “other groundfish” 377 mt (90.9%).
- 2004 Total groundfish harvest: 15,123 mt. Total groundfish discarded: 563 mt (3.7%). Total Pacific cod discarded 92 mt (0.6%). Largest discard: “other groundfish” 405 mt (76.5%).
- Halibut bycatch mortality: 2003 – 14 mt; 2004 – 25 mt.
- Crab bycatch: 2003 – 10,068 crab; 2004 – 8,941 crab.

Discards in the North Pacific Groundfish Fisheries, 2004

Table 3. Comparison of Discarded, Retained and Total catch by Component in
Bering Sea/Aleutians, 2003-2004

<u>GROUND FISH DISCARDS</u>	2003		2004	
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	83,580	76.1%	100,698	78.6%
Shoreside trawl Catcher Vessel	9,888	9.0%	9,350	7.3%
Mothership Trawl Catcher Vessel*	335	0.3%		
Hook & Line Catcher Processor	14,611	13.3%	17,387	13.6%
Hook & Line Shoreside Catcher Vessel	482	0.4%	85	0.1%
All Pot Vessels	1004	0.9%	561	0.4%
TOTAL	109,900	100.0%	127,721	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	719,363	43.0%	730,597	43.9%
Shoreside trawl Catcher Vessel	695,543	41.5%	811,487	48.7%
Mothership Trawl Catcher Vessel*	129,821	7.8%		
Hook & Line Catcher Processor	106,377	6.4%	104,025	6.2%
Hook & Line Shoreside Catcher Vessel	964	0.1%	1,1899	0.1%
All Pot Vessels	22,343	1.3%	18,094	1.1%
TOTAL	1,674,409	100.0%	1,665,392	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	802,943	45.0%	831,295	46.4%
Shoreside trawl Catcher Vessel	705,431	39.5%	820,837	45.8%
Mothership Trawl Catcher Vessel*	130,156	7.3%		
Hook & Line Catcher Processor	120,987	6.8%	121,412	6.8%
Hook & Line Shoreside Catcher Vessel	1,446	0.1%	1,273	0.1%
All Pot Vessels	23,346	1.3%	18,655	1.0%
TOTAL	1,784,309	100.0%	1,793,473	100.0%

*2004 Mothership data included in Shoreside trawl.

Discards in the North Pacific Groundfish Fisheries, 2004

Table 4. Comparison of Discarded, Retained and Total catch by Component in
Gulf of Alaska, 2003-2004

<u>GROUND FISH DISCARDS</u>	2003		2004	
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	16,052	57.2%	7,507	45.8%
Shoreside trawl Catcher Vessel	9,695	34.5%	6,179	37.7%
Mothership Trawl Catcher Vessel	0	0.0%	0	0.0%
Hook & Line Catcher Processor	748	2.7%	727	4.4%
Hook & Line Shoreside Catcher Vessel	1,146	4.1%	1,430	8.7%
All Pot Vessels	434	1.5%	563	3.4%
TOTAL	28,076	100.0%	16,406	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	26,320	17.0%	14,514	9.8%
Shoreside trawl Catcher Vessel	83,259	53.7%	94,523	63.9%
Mothership Trawl Catcher Vessel	0	0.0%	0	0.0%
Hook & Line Catcher Processor	7,611	4.9%	6,382	4.3%
Hook & Line Shoreside Catcher Vessel	16,716	10.8%	17,972	12.1%
All Pot Vessels	21,041	13.6%	14,560	9.8%
TOTAL	154,947	100.0%	147,950	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	42,372	23.2%	22,020	13.4%
Shoreside trawl Catcher Vessel	92,954	50.9%	100,702	61.3%
Mothership Trawl Catcher Vessel	0	0.0%	0	0.0%
Hook & Line Catcher Processor	8,359	4.6%	7,109	4.3%
Hook & Line Shoreside Catcher Vessel	17,862	9.8%	19,403	11.8%
All Pot Vessels	21,041	11.5%	15,123	9.2%
TOTAL	182,589	100.0%	164,356	100.0%

Discards in the North Pacific Groundfish Fisheries, 2004

Table 5. Comparison of Discarded, Retained and Total Catch by Component
In the *Bering Sea/Aleutians and Gulf of Alaska Combined*, 2003-2004

<u>GROUND FISH DISCARDS</u>	2003		2004	
	<u>mt</u>	<u>% of Tot</u>	<u>mt</u>	<u>% of Tot</u>
Trawl Catcher Processor	99,633	72.2%	108,205	75.1%
Shoreside trawl Catcher Vessel	19,583	14.2%	15,529	10.8%
Mothership Trawl Catcher Vessel*	335	0.2%	0	0.0%
Hook & Line Catcher Processor	15,359	11.1%	17,839	12.4%
Hook & Line Shoreside Catcher Vessel	1,628	1.2%	1,430	1.0%
All Pot Vessels	1,438	1.0%	1,124	0.8%
TOTAL	137,976	100.0%	144,127	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	745,682	40.8%	745,111	41.1%
Shoreside trawl Catcher Vessel	778,802	42.6%	906,010	50.0%
Mothership Trawl Catcher Vessel*	129,821	7.1%	0	0.0%
Hook & Line Catcher Processor	113,988	6.2%	110,337	6.1%
Hook & Line Shoreside Catcher Vessel	17,680	1.0%	18,971	1.0%
All Pot Vessels	43,384	2.4%	32,654	1.8%
TOTAL	1,829,357	100.0%	1,813,083	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	845,315	43.0%	853,316	43.6%
Shoreside trawl Catcher Vessel	798,385	40.6%	921,539	47.1%
Mothership Trawl Catcher Vessel*	130,156	6.6%	0	0.0%
Hook & Line Catcher Processor	129,347	6.6%	128,176	6.5%
Hook & Line Shoreside Catcher Vessel	19,308	1.0%	20,401	1.0%
All Pot Vessels	44,387	2.3%	33,778	1.7%
TOTAL	1,966,898	100.0%	1,957,211	100.0%

*2004 Mothership data included in Shoreside trawl

APPENDIX 1.

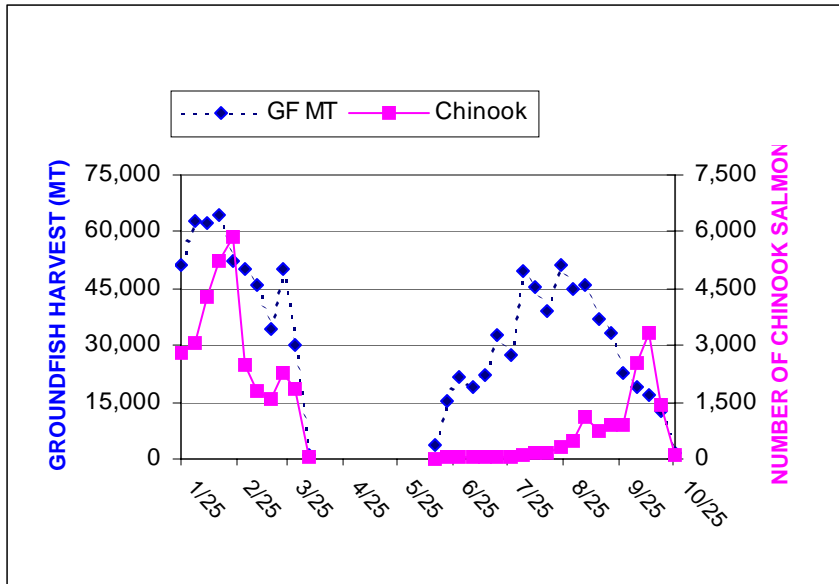
BERING SEA & ALEUTIAN ISLANDS

FIGURES 1-7

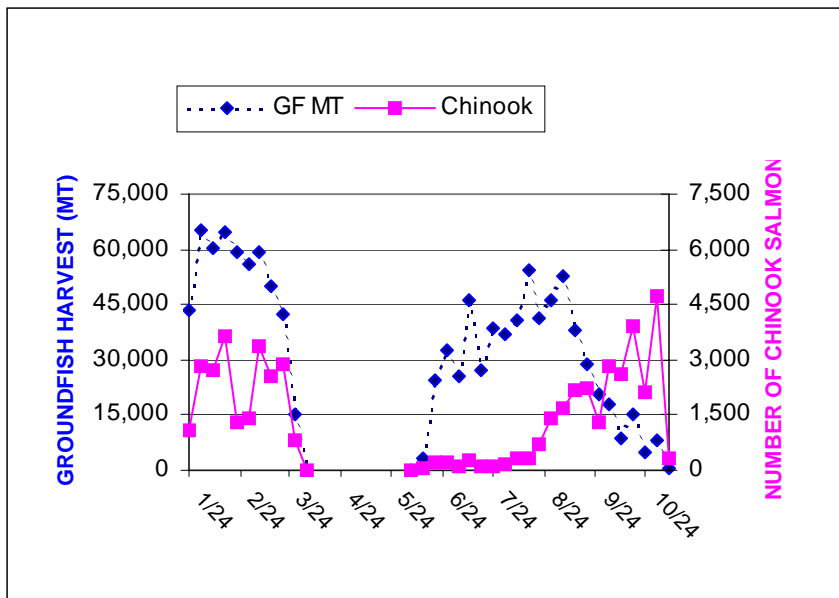
Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 1. WEEKLY GROUNDFISH HARVEST AND CHINOOK SALMON BYCATCH BY VESSELS TARGETING POLLOCK WITH PELAGIC TRAWLS

2003



2004

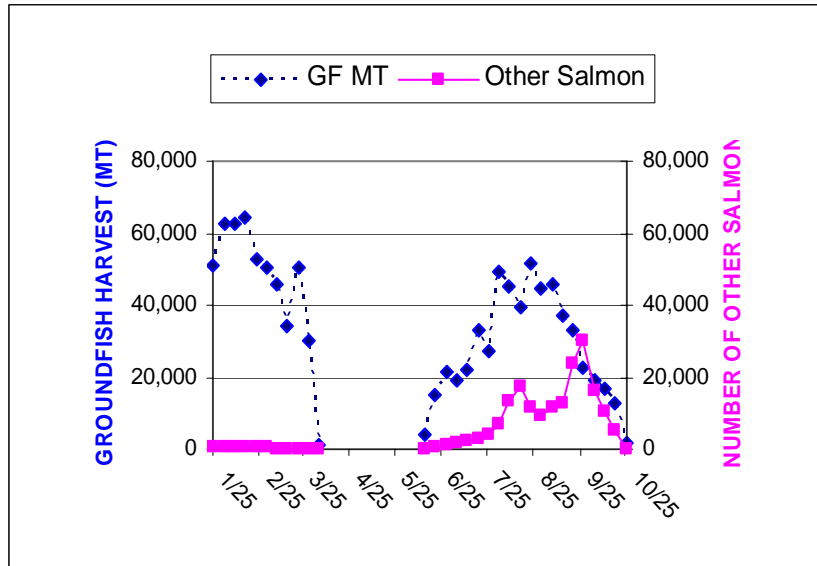


GROUNDFISH HARVESTED IN METRIC TONS (GF MT) INCLUDES TARGET AND NON-TARGET GROUNDFISH SPECIES

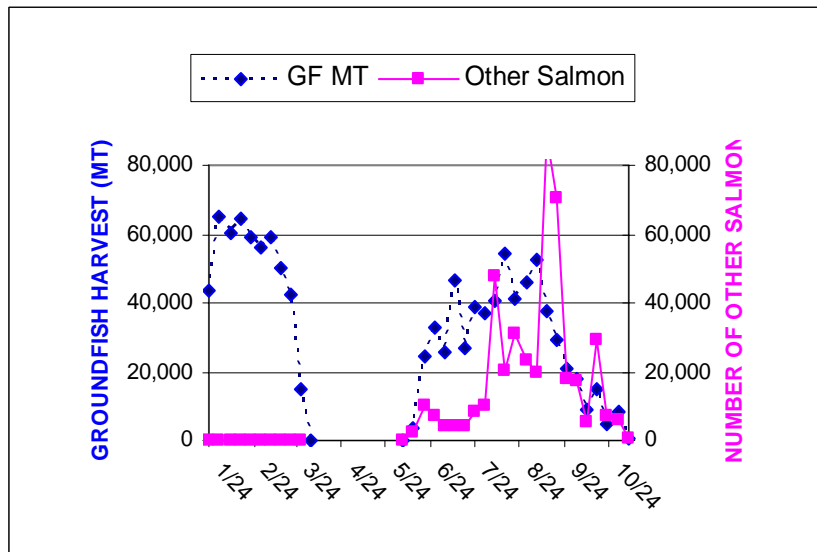
Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 2. WEEKLY GROUNDFISH HARVEST AND “OTHER” SALMON BYCATCH BY VESSELS TARGETING POLLOCK WITH PELAGIC TRAWLS

2003



2004

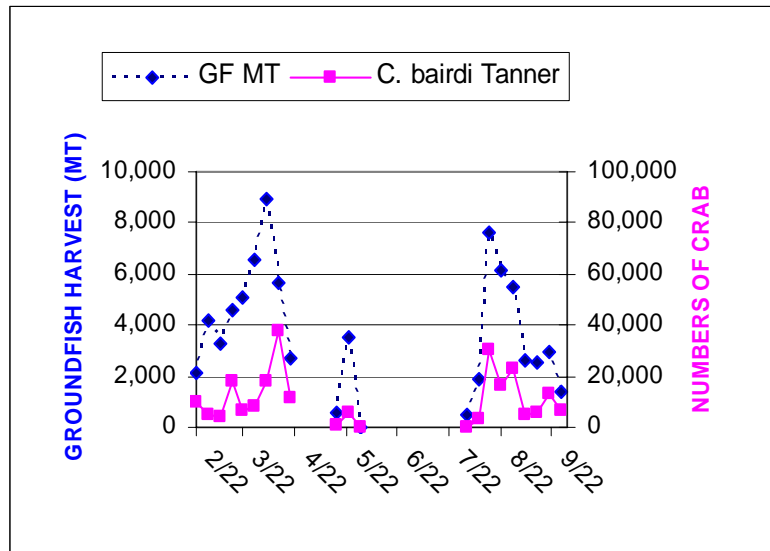


GROUNDFISH HARVESTED IN METRIC TONS (GF MT) INCLUDES TARGET AND NON-TARGET GROUND FISH SPECIES

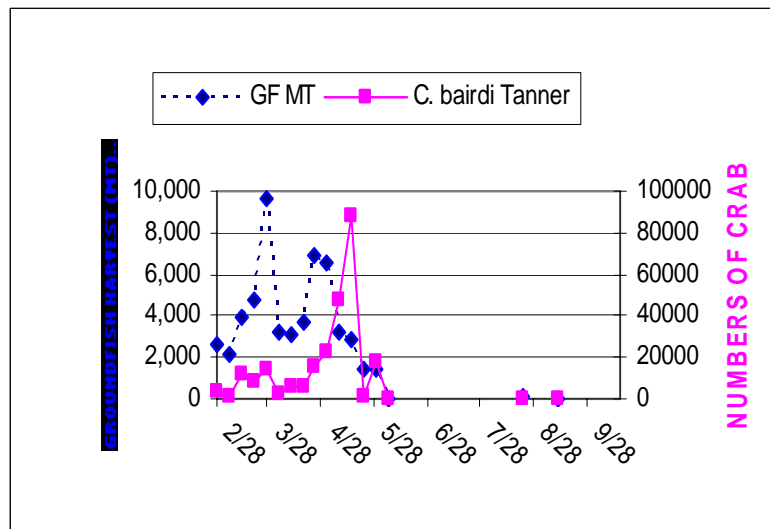
Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 3. WEEKLY GROUNDFISH HARVEST AND C. BAIRDI TANNER CRAB BYCATCH BY VESSELS TARGETING YELLOWFIN SOLE WITH TRAWLS

2003



2004

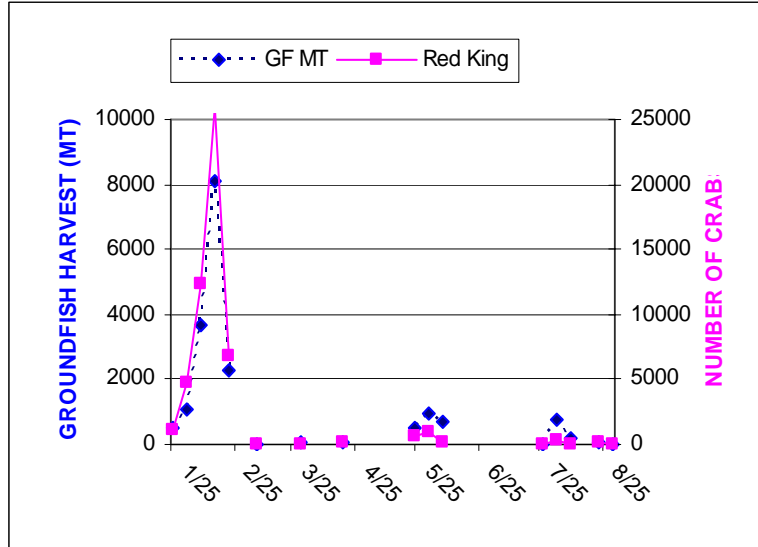


GROUNDFISH HARVESTED IN METRIC TONS (GF MT) INCLUDES TARGET AND NON-TARGET GROUNDFISH SPECIES

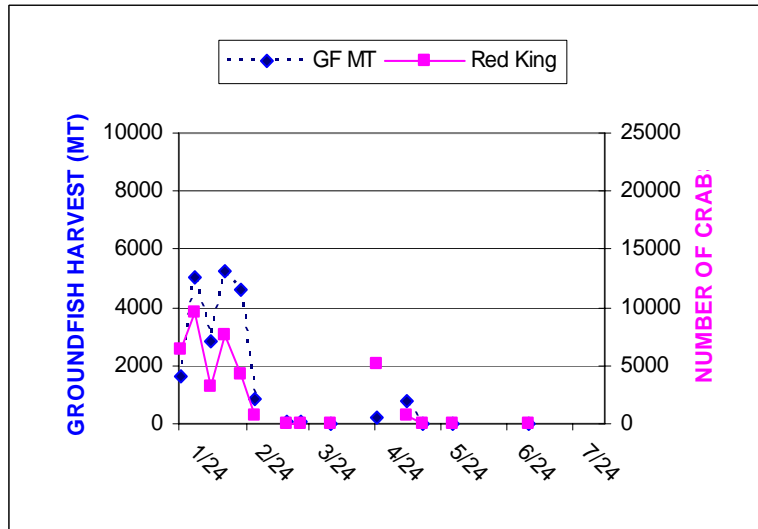
Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 4. WEEKLY GROUNDFISH HARVEST AND RED KING CRAB BYCATCH BY VESSELS TARGETING ROCK SOLE WITH TRAWLS

2003



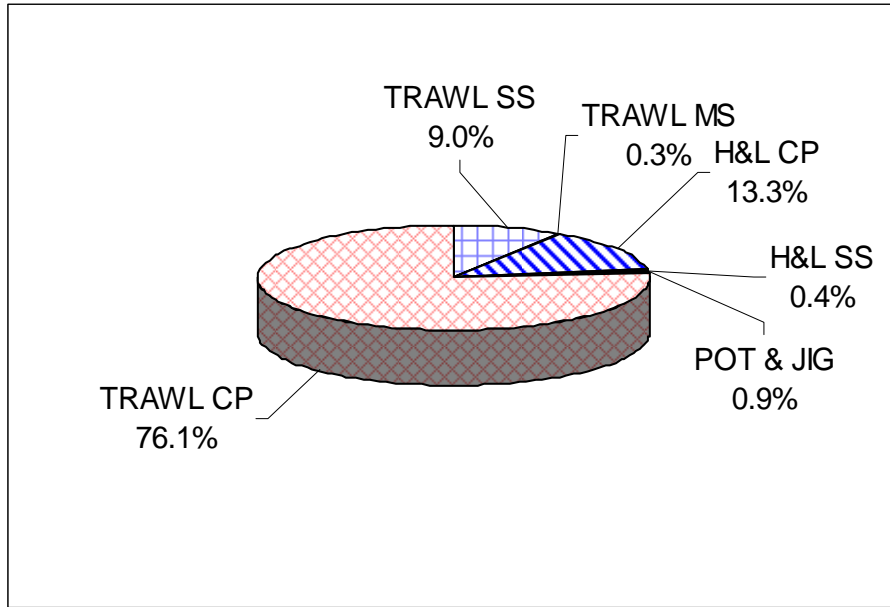
2004



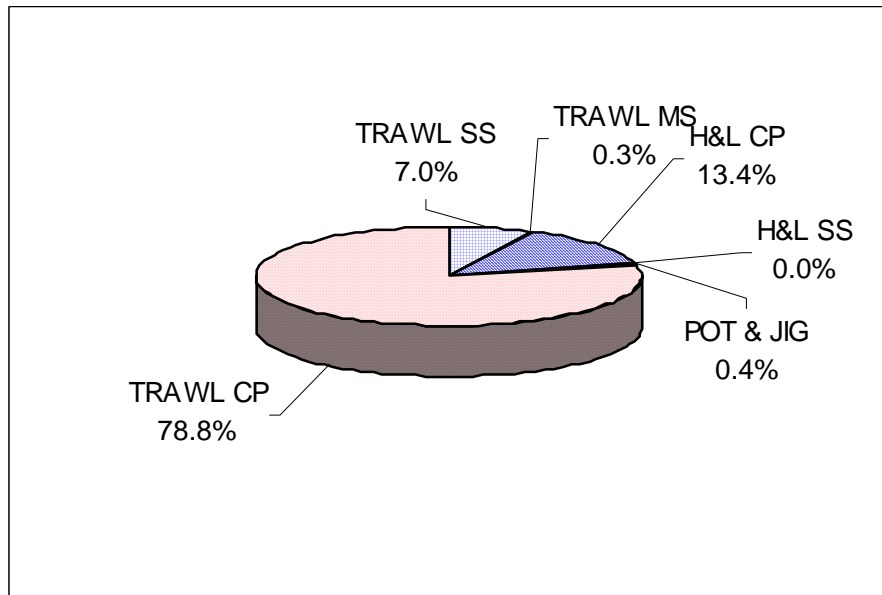
GROUNDFISH HARVESTED IN METRIC TONS (GF MT) INCLUDES TARGET AND NON-TARGET GROUNDFISH SPECIES

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 5. 2003 DISCARDS BY SECTOR: PERCENT OF TOTAL



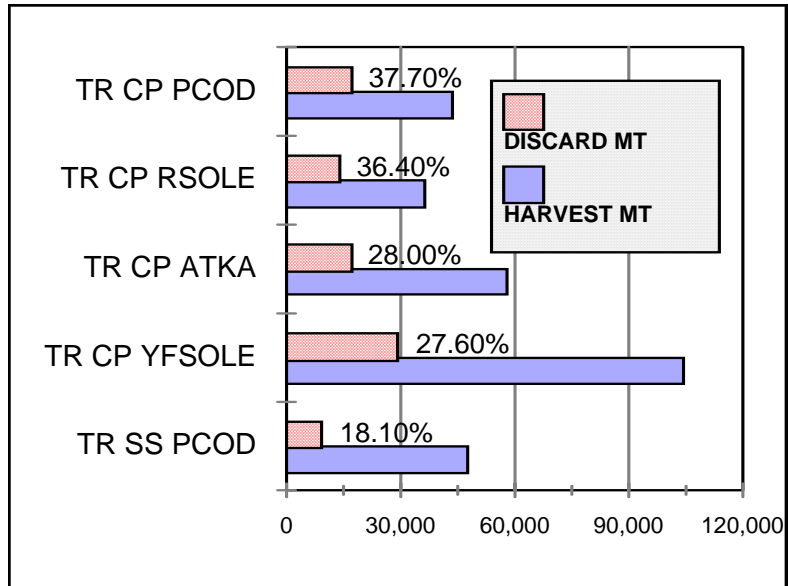
2004 DISCARDS BY SECTOR: PERCENT OF TOTAL



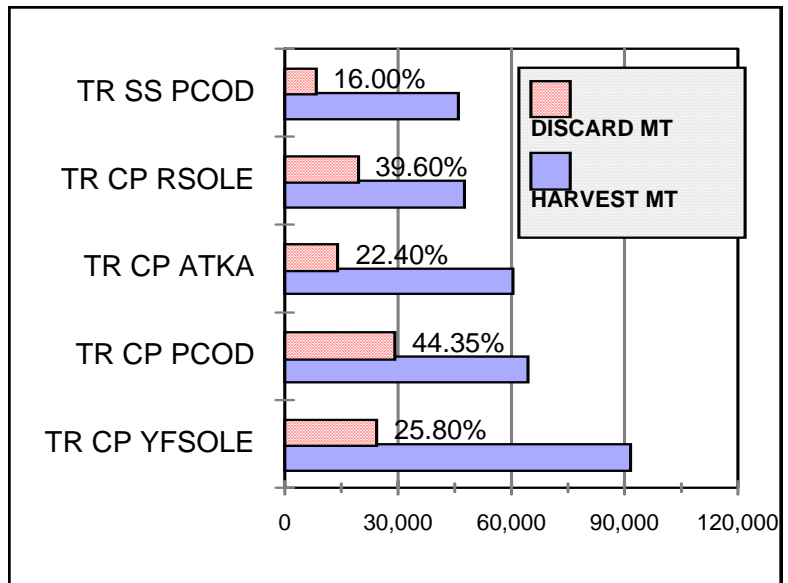
SS = SHORESIDE MS=MOTHERSHIP CP=CATCHER/PROCESSOR.
H&L= HOOK AND LINE

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 6. 2003 HIGH-VOLUME FISHERIES WITH HIGHEST DISCARD RATES



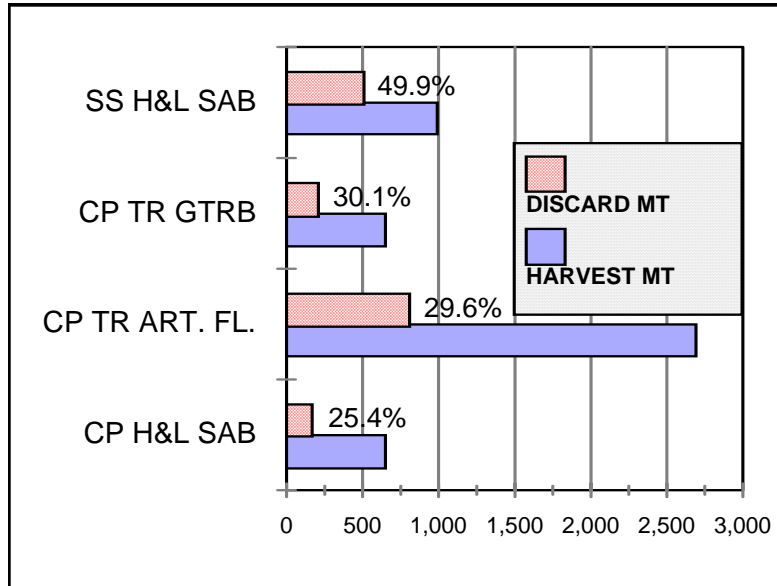
2004 HIGH-VOLUME FISHERIES WITH HIGHEST DISCARD RATES



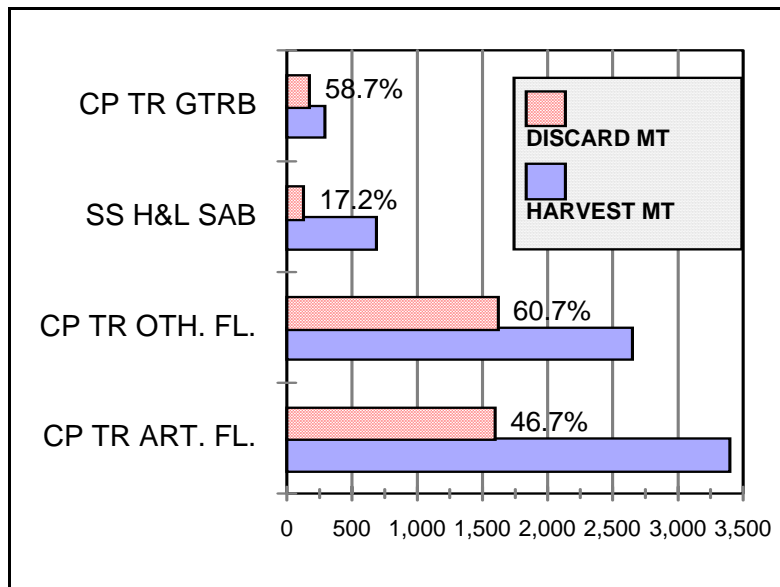
TR CP = TRAWL CATCHER/PROCESSORS
 TR SS = TRAWL SHORESIDE (CATCHER BOATS)
 RSOLE= ROCK SOLE
 PCOD = PACIFIC COD
 YFSOLE = YELLOWFIN SOLE

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: FIGURES 1-7

FIGURE 7. 2003 LOW-VOLUME FISHERIES WITH HIGHEST DISCARD RATES



2004 LOW-VOLUME 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
 OTH. FL.=OTHER FLATFISH

APPENDIX 1.

BERING SEA & ALEUTIAN ISLANDS

CATCH AND DISCARD TABLES

2003

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 6.

2004	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	55,977	44,521	11,466	20.5%	0.007	25,277,000
Pollock	1,330,783	1,307,532	23,258	1.7%	0.014	51,274,000
Pacific Cod	196,286	193,848	2,497	1.3%	0.001	5,506,000
Yellowfin sole	68,934	56,494	12,455	18.1%	0.007	27,459,000
Rock sole	47,773	26,434	21,406	44.8%	0.013	47,191,000
Flathead sole	16,860	11,663	5,259	31.2%	0.003	11,593,000
Alaska Plaice	7,564	269	7,294	96.4%	0.004	16,081,000
Other flatfish	4,709	1,548	3,168	67.3%	0.002	6,985,000
Greenland turbot	2,134	1,797	338	15.9%	0.000	746,000
Arrowtooth flounder	17,658	3,685	13,992	79.2%	0.008	30,848,000
Pacific ocean perch	11,084	9,053	2,032	18.3%	0.001	4,480,000
Northern rockfish	4,270	378	3,894	91.2%	0.002	8,584,000
Shortraker rockfish	166	116	50	30.1%	0.000	110,000
Rougeye rockfish	188	85	103	54.9%	0.000	227,000
Other rockfish	628	374	255	40.6%	0.000	562,000
Sablefish	1,786	1,673	113	6.3%	0.000	250,000
Other Species	26,935	6,154	20,879	77.5%	0.013	46,031,000
TOTAL	1,793,733	1,665,623	128,461	7.2%	0.077	283,205,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	8,657 mt	5 kg/mt	19,086,000
Halibut Mortality (mt)	3,657 mt	2 kg/mt	8,063,000
Herring (mt)	1,090 mt	1 kg/mt	2,403,000
C. bairdi Tanner crab	839,817 crab	0.504 indiv/mt	
Other Tanner crab	1,900,540 crab	1.141 indiv/mt	
Red king crab	93,740 crab	0.056 indiv/mt	
Other king crab	73,023 crab	0.044 indiv/mt	
Chinook salmon	59,361 salmon	0.036 indiv/mt	
Other salmon	447,352 salmon	0.269 indiv/mt	
Halibut and Herring Discard Pounds	10,466,000 pounds		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 7.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Trawl Catcher/processor All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	54,443	43,777	10,666	19.6%	0.015	23,515,000
Pollock	555,270	535,760	19,510	3.5%	0.027	43,012,000
Pacific Cod	41,330	40,853	477	1.2%	0.001	1,052,000
Yellowfin sole	68,088	56,283	11,806	17.3%	0.016	26,027,000
Rock sole	45,597	25,891	19,706	43.2%	0.027	43,444,000
Flathead sole	15,187	11,090	4,097	27.0%	0.006	9,032,000
Alaska plaice	7,555	269	7,287	96.4%	0.010	16,064,000
Other flatfish	4,079	1,414	2,666	65.3%	0.004	5,877,000
Greenland turbot	623	399	223	35.9%	0.000	492,000
Arrowtooth flounder	14,849	3,375	11,475	77.3%	0.016	25,297,000
Pacific ocean perch	10,807	8,873	1,935	17.9%	0.003	4,265,000
Northern rockfish	4,186	357	3,829	91.5%	0.005	8,441,000
Shortraker rockfish	90	70	20	22.6%	0.000	45,000
Rougheye rockfish	152	83	69	45.2%	0.000	151,000
Other rockfish	385	240	144	37.6%	0.000	318,000
Sablefish	261	197	64	24.5%	0.000	141,000
Other Species	8,391	1,666	6,724	80.1%	0.009	14,825,000
TOTAL	831,295	730,597	100,698	12.1%	0.138	221,999,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	3,807 mt	5 kg/mt	8,393,000
Halibut Mortality (mt)	2,719 mt	4 kg/mt	5,994,000
Herring (mt)	129 mt	0 kg/mt	285,000
C. bairdi Tanner crab	755,423 crab	1.034 indiv/mt	
Other Tanner crab	1,753,936 crab	2.401 indiv/mt	
Red king crab	78,584 crab	0.108 indiv/mt	
Other king crab	5,507 crab	0.008 indiv/mt	
Chinook salmon	17,411 salmon	0.024 indiv/mt	
Other salmon	84,717 salmon	0.116 indiv/mt	
Halibut and Herring Discard Pounds	6,279,000 pounds		
Crab and Salmon Discard Numbers	2,695,578 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 8.

2004 GROUND FISH SPECIES	AREA:		BSAI						
	GEAR:	TYPE:	TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel				49,231	42,476	6,755	13.7%	0.147	14,892,000
Pollock				460	349	111	24.2%	0.002	245,000
Pacific Cod				2,161	2,125	36	1.7%	0.001	80,000
Yellowfin sole				0	0	0	-	0.000	0
Rock sole				145	32	114	78.2%	0.002	250,000
Flathead sole				46	24	21	46.6%	0.000	47,000
Alaska plaice				0	0	0	-	0.000	0
Other flatfish				96	83	13	13.7%	0.000	29,000
Greenland turbot				95	56	39	40.7%	0.001	85,000
Arrowtooth flounder				421	57	364	86.6%	0.008	803,000
Pacific ocean perch				2,014	531	1,483	73.6%	0.032	3,269,000
Northern rockfish				3,900	251	3,648	93.6%	0.079	8,042,000
Shortraker rockfish				5	3	3	52.0%	0.000	6,000
Rougeye rockfish				25	10	15	58.8%	0.000	33,000
Other rockfish				136	47	90	65.8%	0.002	197,000
Sablefish				2	2	0	0.0%	0.000	0
Other Species				647	28	619	95.7%	0.013	1,365,000
TOTAL				59,384	46,074	13,310	22.4%	0.289	29,343,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	72 mt	2 kg/mt	158,000
Halibut Mortality (mt)	56 mt	1 kg/mt	123,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	348 crab	0.008 indiv/mt	
Other Tanner crab	110 crab	0.002 indiv/mt	
Red king crab	37 crab	0.001 indiv/mt	
Other king crab	8 crab	0.000 indiv/mt	
Chinook salmon	648 salmon	0.014 indiv/mt	
Other salmon	142 salmon	0.003 indiv/mt	
Halibut and Herring Discard Pounds	123,000 pounds		
Crab and Salmon Discard Numbers	1,294 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 9.

2004	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
Pollock	4,856	4,856	0	0.0%	0.000	0
Pacific Cod	74	74	0	0.0%	0.000	0
Yellowfin sole	120	120	0	-	0.000	0
Rock sole	199	199	0	0.0%	0.000	0
Flathead sole	47	47	0	0.0%	0.000	0
Alaska plaice	1	1	0	-	0.000	0
Other flatfish	0	0	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
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
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	13	13	0	0.0%	0.000	0
TOTAL	5,310	5,310	0	0.0%	0.000	0

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	2,000
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	6 crab	0.001 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	31 salmon	0.006 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	2,000 pounds		
Crab and Salmon Discard Numbers	37 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 12.

2004 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl Catcher/processor Rockfish			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	259	137	123	47.3%	0.014	270,000
Pollock	317	183	134	42.4%	0.015	296,000
Pacific Cod	134	132	2	1.8%	0.000	5,000
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	3	0	3	100.0%	0.000	6,000
Flathead sole	10	5	5	46.7%	0.001	11,000
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	6	3	3	52.3%	0.000	7,000
Greenland turbot	74	72	2	3.1%	0.000	5,000
Arrowtooth flounder	382	89	293	76.7%	0.033	646,000
Pacific ocean perch	8,391	8,122	269	3.2%	0.030	593,000
Northern rockfish	115	81	34	29.4%	0.004	75,000
Shortraker rockfish	30	30	0	0.0%	0.000	0
Rougheye rockfish	120	68	51	43.0%	0.006	113,000
Other rockfish	49	45	4	8.2%	0.000	9,000
Sablefish	19	19	0	0.0%	0.000	0
Other Species	73	0	73	100.0%	0.008	161,000
TOTAL	9,984	8,987	997	10.0%	0.111	2,198,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	76 mt	8 kg/mt	167,000
Halibut Mortality (mt)	56 mt	6 kg/mt	124,000
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	2,430 crab	0.270 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
 Halibut and Herring Discard Pounds	 124,000		
 Crab and Salmon Discard Numbers	 2,430		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 15.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Trawl Catcher/processor Other flatfish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	145	48	98	67.1%	0.094	215,000
Pollock	605	126	479	79.2%	0.462	1,057,000
Pacific Cod	176	175	1	0.4%	0.001	2,000
Yellowfin sole	25	17	9	33.8%	0.008	19,000
Rock sole	92	52	40	43.3%	0.039	88,000
Flathead sole	115	90	25	21.4%	0.024	54,000
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	316	288	27	8.6%	0.026	60,000
Greenland turbot	50	27	22	44.9%	0.022	49,000
Arrowtooth flounder	937	142	795	84.8%	0.767	1,752,000
Pacific ocean perch	7	2	5	75.0%	0.005	12,000
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
Rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	17	12	5	26.9%	0.004	10,000
Sablefish	27	24	3	12.6%	0.003	7,000
Other Species	125	33	92	73.3%	0.088	202,000
TOTAL	2,637	1,037	1,600	60.7%	1.543	3,528,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	77 mt	74 kg/mt	170,000
Halibut Mortality (mt)	55 mt	53 kg/mt	121,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	8,597 crab	8.291 indiv/mt	
Other Tanner crab	800 crab	0.772 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	100 salmon	0.096 indiv/mt	
Halibut and Herring Discard Pounds	121,000 pounds		
Crab and Salmon Discard Numbers	9,497 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 16.

2004 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Trawl 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	64	3	60	94.8%	0.537	133,000
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	14	14	0	0.6%	0.001	0
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	4	4	0	0.0%	0.000	0
Greenland turbot	57	57	0	0.0%	0.000	0
Arrowtooth flounder	81	0	81	100.0%	0.723	179,000
Pacific ocean perch	1	0	1	69.7%	0.009	2,000
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	1	1	0	0.0%	0.000	0
Rougeye rockfish	0	0	0	-	0.000	0
Other rockfish	20	16	4	21.5%	0.039	10,000
Sablefish	12	12	0	0.0%	0.000	0
Other Species	18	5	13	71.9%	0.114	28,000
TOTAL	272	112	159	58.7%	1.423	352,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	3 mt	26 kg/mt	7,000
Halibut Mortality (mt)	2 mt	19 kg/mt	5,000
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	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	5,000		
Crab and Salmon Discard Numbers	0		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 18.

2004 GROUND FISH SPECIES	AREA:		BSAI				Discard Pounds	
	GEAR:	TYPE:	Harvest mt	Retained mt	Discarded mt	Discard Rate		Rate/ Retain GF
	TARGET:		Arrowtooth Flounder					
Atka Mackerel			405	137	268	66.1%	0.149	591,000
Pollock			490	175	315	64.3%	0.175	695,000
Pacific Cod			152	151	1	0.4%	0.000	1,000
Yellowfin sole			4	4	1	16.1%	0.000	2,000
Rock sole			49	17	32	65.9%	0.018	71,000
Flathead sole			70	46	24	34.7%	0.013	54,000
Alaska plaice			0	0	0	100.0%	0.000	1,000
Other flatfish			296	266	31	10.4%	0.017	68,000
Greenland turbot			53	35	18	34.4%	0.010	40,000
Arrowtooth flounder			1,556	814	742	47.7%	0.412	1,636,000
Pacific ocean perch			53	41	13	24.2%	0.007	29,000
Northern rockfish			0	0	0	-	0.000	0
Shortraker rockfish			1	0	1	100.0%	0.000	2,000
Rougeye rockfish			3	2	0	18.1%	0.000	1,000
Other rockfish			44	37	7	16.4%	0.004	16,000
Sablefish			86	58	28	32.9%	0.016	63,000
Other Species			118	22	96	81.3%	0.053	212,000
TOTAL			3,381	1,803	1,578	46.7%	0.876	3,480,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	114 mt	63 kg/mt	252,000
Halibut Mortality (mt)	81 mt	45 kg/mt	179,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	3,901 crab	2.164 indiv/mt	
Other Tanner crab	968 crab	0.537 indiv/mt	
Red king crab	45 crab	0.025 indiv/mt	
Other king crab	714 crab	0.396 indiv/mt	
Chinook salmon	846 salmon	0.469 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	179,000 pounds		
Crab and Salmon Discard Numbers	6,474 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 19.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Trawl Shoreside All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	1,392	743	649	46.6%	0.001	1,432,000
Pollock	770,832	767,678	3,153	0.4%	0.004	6,952,000
Pacific Cod	41,046	40,776	270	0.7%	0.000	596,000
Yellowfin sole	173	72	101	58.4%	0.000	222,000
Rock sole	2,145	543	1,603	74.7%	0.002	3,533,000
Flathead sole	1,175	554	621	52.8%	0.001	1,368,000
Alaska plaice	8	0	8	94.6%	0.000	17,000
Other flatfish	441	126	315	71.4%	0.000	694,000
Greenland turbot	4	2	2	42.6%	0.000	4,000
Arrowtooth flounder	1,316	78	1,238	94.1%	0.002	2,730,000
Pacific ocean perch	273	179	95	34.6%	0.000	208,000
Northern rockfish	52	20	31	61.0%	0.000	69,000
Shortraker rockfish	1	0	1	100.0%	0.000	3,000
Rougeye rockfish	1	0	1	87.9%	0.000	1,000
Other rockfish	24	6	18	74.8%	0.000	40,000
Sablefish	17	9	7	44.5%	0.000	16,000
Other Species	1,938	700	1,237	63.9%	0.002	2,728,000
TOTAL	820,837	811,487	9,350	1.1%	0.012	20,613,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	685 mt	1 kg/mt	1,511,000
Halibut Mortality (mt)	472 mt	1 kg/mt	1,042,000
Herring (mt)	936 mt	1 kg/mt	2,064,000
C. bairdi Tanner crab	46,144 crab	0.057 indiv/mt	
Other Tanner crab	6,177 crab	0.008 indiv/mt	
Red king crab	143 crab	0.000 indiv/mt	
Other king crab	191 crab	0.000 indiv/mt	
Chinook salmon	38,182 salmon	0.047 indiv/mt	
Other salmon	349,127 salmon	0.430 indiv/mt	
Halibut and Herring Discard Pounds	3,106,000 pounds		
Crab and Salmon Discard Numbers	439,965 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 21.

2004 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	TARGET:	Discard Rate	Rate/ Retain GF	Discard Pounds
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	356	198	158	44.4%	0.000	348,000
Pollock	755,201	754,932	269	0.0%	0.000	592,000
Pacific Cod	3,497	3,433	63	1.8%	0.000	139,000
Yellowfin sole	69	56	13	18.8%	0.000	28,000
Rock sole	609	519	90	14.8%	0.000	199,000
Flathead sole	897	529	368	41.0%	0.000	811,000
Alaska plaice	1	0	0	26.4%	0.000	0
Other flatfish	222	112	110	49.7%	0.000	243,000
Greenland turbot	4	2	1	34.1%	0.000	3,000
Arrowtooth flounder	367	75	292	79.5%	0.000	643,000
Pacific ocean perch	201	125	76	37.7%	0.000	167,000
Northern rockfish	31	18	13	43.2%	0.000	29,000
Shortraker rockfish	1	0	1	100.0%	0.000	3,000
Rougeye rockfish	0	0	0	79.9%	0.000	1,000
Other rockfish	10	5	5	50.7%	0.000	11,000
Sablefish	11	8	3	26.5%	0.000	6,000
Other Species	888	467	421	47.4%	0.001	928,000
TOTAL	762,363	760,479	1,884	0.2%	0.002	4,153,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	37 mt	0 kg/mt	82,000
Halibut Mortality (mt)	31 mt	0 kg/mt	69,000
Herring (mt)	907 mt	1 kg/mt	1,999,000
C. bairdi Tanner crab	867 crab	0.001 indiv/mt	
Other Tanner crab	299 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	2 crab	0.000 indiv/mt	
Chinook salmon	35,408 salmon	0.047 indiv/mt	
Other salmon	346,620 salmon	0.456 indiv/mt	
Halibut and Herring Discard Pounds	2,068,000 pounds		
Crab and Salmon Discard Numbers	383,196 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 22.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Trawl Shoreside Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	394	2	392	99.4%	0.010	864,000
Pollock	3,693	810	2,882	78.1%	0.076	6,354,000
Pacific Cod	37,414	37,207	207	0.6%	0.005	456,000
Yellowfin sole	88	0	88	99.5%	0.002	194,000
Rock sole	1,522	11	1,511	99.3%	0.040	3,332,000
Flathead sole	260	10	250	96.0%	0.007	551,000
Alaska plaice	7	0	7	100.0%	0.000	16,000
Other flatfish	207	9	198	95.6%	0.005	437,000
Greenland turbot	0	0	0	100.0%	0.000	1,000
Arrowtooth flounder	936	1	936	99.9%	0.025	2,063,000
Pacific ocean perch	18	3	15	84.1%	0.000	34,000
Northern rockfish	20	2	18	89.1%	0.000	40,000
Shortraker rockfish	0	0	0	-	0.000	0
Rougheye rockfish	0	0	0	100.0%	0.000	0
Other rockfish	13	1	13	94.8%	0.000	28,000
Sablefish	3	0	3	100.0%	0.000	8,000
Other Species	816	90	726	88.9%	0.019	1,600,000
TOTAL	45,395	38,147	7,247	16.0%	0.190	15,978,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	646 mt	17 kg/mt	1,424,000
Halibut Mortality (mt)	439 mt	12 kg/mt	968,000
Herring (mt)	0 mt	0 kg/mt	1,000
C. bairdi Tanner crab	45,274 crab	1.187 indiv/mt	
Other Tanner crab	5,877 crab	0.154 indiv/mt	
Red king crab	143 crab	0.004 indiv/mt	
Other king crab	189 crab	0.005 indiv/mt	
Chinook salmon	2,140 salmon	0.056 indiv/mt	
Other salmon	736 salmon	0.019 indiv/mt	
Halibut and Herring Discard Pounds	969,000 pounds		
Crab and Salmon Discard Numbers	54,360 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 24.

2004 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	36	0	36	100.0%	0.000	79,000
Pollock	4,675	4,092	583	12.5%	0.006	1,284,000
Pacific Cod	95,698	94,093	1,605	1.7%	0.015	3,539,000
Yellowfin sole	596	139	456	76.6%	0.004	1,006,000
Rock sole	30	0	29	99.5%	0.000	65,000
Flathead sole	497	19	479	96.3%	0.005	1,056,000
Alaska plaice	0	0	0	100.0%	0.000	1,000
Other flatfish	188	8	180	95.9%	0.002	398,000
Greenland turbot	1,428	1,379	50	3.5%	0.000	109,000
Arrowtooth flounder	1,390	221	1,169	84.1%	0.011	2,578,000
Pacific ocean perch	4	2	2	51.6%	0.000	4,000
Northern rockfish	31	1	31	98.3%	0.000	68,000
Shortraker rockfish	67	45	22	33.0%	0.000	49,000
Rougheye rockfish	32	1	31	97.9%	0.000	69,000
Other rockfish	166	81	85	51.4%	0.001	188,000
Sablefish	365	339	26	7.1%	0.000	57,000
Other Species	15,864	3,537	12,327	77.7%	0.119	27,176,000
TOTAL	121,068	103,955	17,112	14.1%	0.165	37,726,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	4,065 mt	39 kg/mt	8,962,000
Halibut Mortality (mt)	453 mt	4 kg/mt	998,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	10,244 crab	0.099 indiv/mt	
Other Tanner crab	45,237 crab	0.435 indiv/mt	
Red king crab	14,648 crab	0.141 indiv/mt	
Other king crab	1,346 crab	0.013 indiv/mt	
Chinook salmon	56 salmon	0.001 indiv/mt	
Other salmon	173 salmon	0.002 indiv/mt	
Halibut and Herring Discard Pounds	998,000 pounds		
Crab and Salmon Discard Numbers	71,703 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 25.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Hook and line Catcher/processor Greenland turbot			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	1	0	0	21.0%	0.000	0
Pacific Cod	28	28	0	0.0%	0.000	0
Yellowfin sole	0	0	0	-	0.000	0
Rock sole	0	0	0	-	0.000	0
Flathead sole	3	0	3	100.0%	0.002	7,000
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	0	0	0	100.0%	0.000	0
Greenland turbot	1,166	1,149	17	1.5%	0.012	38,000
Arrowtooth flounder	174	136	38	21.6%	0.026	83,000
Pacific ocean perch	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Shorotraker rockfish	36	22	14	38.4%	0.009	30,000
Rougheye rockfish	5	0	4	92.8%	0.003	10,000
Other rockfish	39	37	2	5.9%	0.002	5,000
Sablefish	76	66	10	13.0%	0.007	22,000
Other Species	128	25	103	80.5%	0.071	228,000
TOTAL	1,656	1,464	192	11.6%	0.131	423,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	137 mt	93 kg/mt	301,000
Halibut Mortality (mt)	20 mt	14 kg/mt	45,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	11 crab	0.008 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	184 crab	0.126 indiv/mt	
Chinook salmon	17 salmon	0.012 indiv/mt	
Other salmon	80 salmon	0.055 indiv/mt	
Halibut and Herring Discard Pounds	45,000 pounds		
Crab and Salmon Discard Numbers	292 individuals		

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TABLE 26.

2004 GROUND FISH SPECIES	AREA:		BSAI			
	GEAR:	TYPE:	Hook and line Catcher/processor Pacific cod			
TARGET:	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	36	0	36	100.0%	0.000	79,000
Pollock	4,672	4,090	582	12.5%	0.006	1,284,000
Pacific Cod	95,638	94,032	1,605	1.7%	0.016	3,539,000
Yellowfin sole	596	139	456	76.6%	0.004	1,006,000
Rock sole	30	0	29	99.5%	0.000	65,000
Flathead sole	494	19	476	96.2%	0.005	1,049,000
Alaska plaice	0	0	0	100.0%	0.000	1,000
Other flatfish	188	8	180	95.9%	0.002	397,000
Greenland turbot	206	178	28	13.6%	0.000	61,000
Arrowtooth flounder	1,184	65	1,119	94.5%	0.011	2,467,000
Pacific ocean perch	4	2	2	51.6%	0.000	4,000
Northern rockfish	31	1	31	98.3%	0.000	68,000
Shortraker rockfish	25	18	7	28.4%	0.000	16,000
Rougheye rockfish	27	0	27	98.7%	0.000	59,000
Other rockfish	81	8	74	90.8%	0.001	163,000
Sablefish	17	1	16	91.9%	0.000	35,000
Other Species	15,656	3,462	12,194	77.9%	0.120	26,883,000
TOTAL	118,885	102,022	16,863	14.2%	0.165	37,176,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	3,917 mt	38 kg/mt	8,635,000
Halibut Mortality (mt)	431 mt	4 kg/mt	950,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	10,230 crab	0.100 indiv/mt	
Other Tanner crab	45,227 crab	0.443 indiv/mt	
Red king crab	14,635 crab	0.143 indiv/mt	
Other king crab	1,014 crab	0.010 indiv/mt	
Chinook salmon	39 salmon	0.000 indiv/mt	
Other salmon	93 salmon	0.001 indiv/mt	
Halibut and Herring Discard Pounds	950,000 pounds		
Crab and Salmon Discard Numbers	71,237 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 27.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI 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	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
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	57	52	4	7.6%	0.011	10,000
Arrowtooth flounder	30	20	9	31.7%	0.024	21,000
Pacific ocean perch	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Shorthead rockfish	6	5	1	21.4%	0.004	3,000
Rougeye rockfish	0	0	0	-	0.000	0
Other rockfish	46	36	9	20.6%	0.024	21,000
Sablefish	271	271	0	0.0%	0.000	0
Other Species	10	0	10	100.0%	0.027	23,000
TOTAL	420	385	35	8.3%	0.091	77,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	n/a	kg/mt	
Halibut Mortality (mt)	n/a	kg/mt	
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	129 crab	0.335 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	129 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 28.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Hook and line Catcher/processor Other			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	2	2	0	0.0%	0.000	0
Pacific Cod	33	33	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
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	3	0	3	100.0%	0.038	7,000
Pacific ocean perch	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
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	69	50	19	28.0%	0.228	43,000
TOTAL	107	85	22	21.0%	0.265	50,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	12 mt	137 kg/mt	26,000
Halibut Mortality (mt)	1 mt	15 kg/mt	3,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	3 crab	0.035 indiv/mt	
Other Tanner crab	10 crab	0.118 indiv/mt	
Red king crab	13 crab	0.153 indiv/mt	
Other king crab	19 crab	0.224 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	45 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 29.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:			BSAI Hook and line Shoreside All		Discard Rate	Rate/ Retain GF	Discard Pounds
	Harvest mt	Retained mt	Discarded mt					
Atka Mackerel	0	0	0	-	0.000		0	
Pollock	0	0	0	-	0.000		0	
Pacific Cod	641	641	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	
Alaska plaice	0	0	0	-	0.000		0	
Other flatfish	0	0	0	-	0.000		0	
Greenland turbot	3	3	0	0.0%	0.000		0	
Arrowtooth flounder	0	0	0	-	0.000		0	
Pacific ocean perch	0	0	0	-	0.000		0	
Northern rockfish	0	0	0	-	0.000		0	
Shorthead rockfish	0	0	0	-	0.000		0	
Rougheye rockfish	0	0	0	-	0.000		0	
Other rockfish	26	26	0	0.0%	0.000		0	
Sablefish	329	329	0	0.0%	0.000		0	
Other Species	0	0	0	-	0.000		0	
TOTAL	999	999	0	0.0%	0.000		0	

NOTE: Discard numbers not provided by NMFS because of confidentiality (fewer than 3 companies)

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	47 mt	47 kg/mt	103,000
Halibut Mortality (mt)	5 mt	5 kg/mt	11,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	40 crab	0.040 indiv/mt	
Other Tanner crab	188 crab	0.188 indiv/mt	
Red king crab	48 crab	0.048 indiv/mt	
Other king crab	103 crab	0.103 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	5 salmon	0.005 indiv/mt	
Halibut and Herring Discard Pounds	11,000 pounds		
Crab and Salmon Discard Numbers	384 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 30.

2004 GROUND FISH SPECIES	AREA:		BSAI		<i>NOTE: Discard numbers not provided by NMFS because of confidentiality (fewer than 3 companies)</i>		
	GEAR:	TYPE:	Hook and line	Shoreside			
	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	641	641	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	
Alaska plaice	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	
Northern rockfish	0	0	0	-	0.000	0	
Shortraker rockfish	0	0	0	-	0.000	0	
Rougheye rockfish	0	0	0	-	0.000	0	
Other rockfish	0	0	0	0.0%	0.000	0	
Sablefish	0	0	0	-	0.000	0	
Other Species	0	0	0	-	0.000	0	
TOTAL	641	641	0	0.0%	0.000	0	

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	47 mt	73 kg/mt	103,000
Halibut Mortality (mt)	5 mt	8 kg/mt	11,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	40 crab	0.062 indiv/mt	
Other Tanner crab	188 crab	0.293 indiv/mt	
Red king crab	48 crab	0.075 indiv/mt	
Other king crab	5 crab	0.007 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	11,000 pounds		
Crab and Salmon Discard Numbers	281 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 31.

2004 GROUND FISH SPECIES	AREA:		BSAI		<i>NOTE: Discard numbers not provided by NMFS because of confidentiality (fewer than 3 companies)</i>		
	GEAR:	TYPE:	Hook and line	Shoreside			
	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	
Alaska plaice	0	0	0	-	0.000	0	
Other flatfish	0	0	0	-	0.000	0	
Greenland turbot	3	3	0	0.0%	0.000	0	
Arrowtooth flounder	0	0	0	-	0.000	0	
Pacific ocean perch	0	0	0	-	0.000	0	
Northern rockfish	0	0	0	-	0.000	0	
Shortraker rockfish	0	0	0	-	0.000	0	
Rougheye rockfish	0	0	0	-	0.000	0	
Other rockfish	25	25	0	0.0%	0.000	0	
Sablefish	329	329	0	0.0%	0.000	0	
Other Species	0	0	0	-	0.000	0	
TOTAL	358	358	0	0.0%	0.000	0	

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	n/a	kg/mt	
Halibut Mortality (mt)	n/a	kg/mt	
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	98 crab	0.274 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	5 salmon	0.013 indiv/mt	
Halibut and Herring Discard Pounds	0 pounds		
Crab and Salmon Discard Numbers	103 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 32.

2004	AREA:		BSAI			
	GEAR:	TYPE:	Jig Shoreside			
	TARGET:		Pacific cod			
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	230	230	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
Alaska plaice	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
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
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	230	230	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		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 33.

2004 GROUND FISH SPECIES	AREA:		BSAI		Discard Rate	Rate/ Retain GF	Discard Pounds
	GEAR:	TARGET:	Pot	All			
	Harvest mt	Retained mt	Discarded mt				
Atka Mackerel	106	1	104		98.6%	0.006	230,000
Pollock	5	1	4		80.6%	0.000	10,000
Pacific Cod	17,237	17,190	47		0.3%	0.003	103,000
Yellowfin sole	77	0	77		100.0%	0.004	170,000
Rock sole	1	0	1		100.0%	0.000	2,000
Flathead sole	0	0	0		-	0.000	0
Alaska plaice	0	0	0		-	0.000	0
Other flatfish	1	0	1		100.0%	0.000	1,000
Greenland turbot	19	0	19		100.0%	0.001	41,000
Arrowtooth flounder	43	0	43		100.0%	0.002	95,000
Pacific ocean perch	0	0	0		100.0%	0.000	0
Northern rockfish	0	0	0		100.0%	0.000	1,000
Shortraker rockfish	1	0	1		100.0%	0.000	3,000
Rougheye rockfish	0	0	0		100.0%	0.000	0
Other rockfish	5	1	4		84.1%	0.000	9,000
Sablefish	666	651	15		2.3%	0.001	33,000
Other Species	494	250	243		49.3%	0.013	537,000
TOTAL	18,655	18,094	561		3.0%	0.031	1,237,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	48 mt	3 kg/mt	106,000
Halibut Mortality (mt)	4 mt	0 kg/mt	9,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	27,967 crab	1.546 indiv/mt	
Other Tanner crab	95,002 crab	5.250 indiv/mt	
Red king crab	317 crab	0.017 indiv/mt	
Other king crab	65,877 crab	3.641 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	9,000 pounds		
Crab and Salmon Discard Numbers	189,162 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 34.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Pot Shoreside Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	106	1	104	98.6%	0.007	230,000
Pollock	5	1	4	80.6%	0.000	10,000
Pacific Cod	13,994	13,947	47	0.3%	0.003	103,000
Yellowfin sole	44	0	44	100.0%	0.003	97,000
Rock sole	1	0	1	100.0%	0.000	2,000
Flathead sole	0	0	0	-	0.000	0
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	1	0	1	100.0%	0.000	1,000
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	3	0	3	100.0%	0.000	8,000
Pacific ocean perch	0	0	0	100.0%	0.000	0
Northern rockfish	0	0	0	100.0%	0.000	1,000
Shortraker rockfish	0	0	0	-	0.000	0
Rougheye rockfish	0	0	0	-	0.000	0
Other rockfish	3	0	3	100.0%	0.000	7,000
Sablefish	1	0	1	100.0%	0.000	2,000
Other Species	299	56	242	81.2%	0.017	534,000
TOTAL	14,457	14,006	451	3.1%	0.032	995,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	31 mt	2 kg/mt	69,000
Halibut Mortality (mt)	3 mt	0 kg/mt	6,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	21,279 crab	1.519 indiv/mt	
Other Tanner crab	51,470 crab	3.675 indiv/mt	
Red king crab	184 crab	0.013 indiv/mt	
Other king crab	13 crab	0.001 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	6,000 pounds		
Crab and Salmon Discard Numbers	72,946 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 35.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Pot 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	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
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	19	0	19	100.0%	0.029	21,000
Arrowtooth flounder	40	0	40	100.0%	0.061	18,000
Pacific ocean perch	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	1	0	1	100.0%	0.002	3,000
Rougheye rockfish	0	0	0	100.0%	0.000	0
Other rockfish	2	1	1	55.9%	0.001	2,000
Sablefish	665	651	14	2.2%	0.022	32,000
Other Species	1	0	1	100.0%	0.002	2,000
TOTAL	728	651	76	10.5%	0.117	169,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	12 mt	19 kg/mt	65,000
Halibut Mortality (mt)	1 mt	1 kg/mt	6,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	46 crab	0.070 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	11 crab	0.017 indiv/mt	
Other king crab	65,852 crab	101.110 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	6,000 pounds		
Crab and Salmon Discard Numbers	65,909 individuals		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 36.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		BSAI Pot Shoreside Other			
	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	9	9	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
Alaska plaice	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
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
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	194	194	0	0.0%	0.000	0
TOTAL	203	203	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		

Appendix 1. Discards in the Bering Sea/Aleutian Islands, 2004: TABLES

TABLE 37.

2004 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	0	0	0	-	0.000	0
Pacific Cod	3,234	3,234	0	0.0%	0.000	0
Yellowfin sole	33	0	33	100.0%	0.010	73,000
Rock sole	0	0	0	-	0.000	0
Flathead sole	0	0	0	-	0.000	0
Alaska plaice	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
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
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	3,268	3,234	33	1.0%	0.010	73,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	5 mt	1 kg/mt	10,000
Halibut Mortality (mt)	0 mt	0 kg/mt	1,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	6,642 crab	2.054 indiv/mt	
Other Tanner crab	43,532 crab	13.460 indiv/mt	
Red king crab	121 crab	0.038 indiv/mt	
Other king crab	12 crab	0.004 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	1,000 pounds		
Crab and Salmon Discard Numbers	50,308 individuals		

APPENDIX 2.

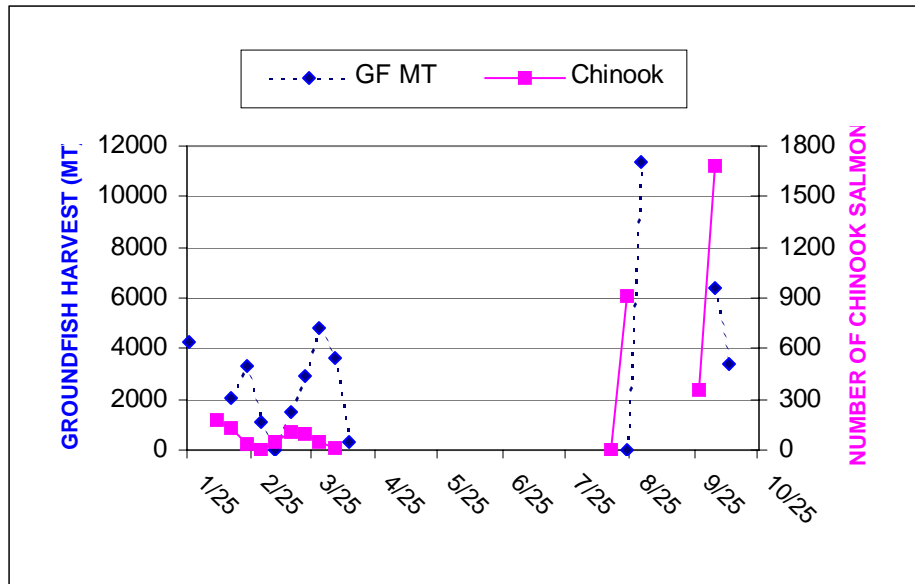
GULF OF ALASKA

FIGURES 8-14

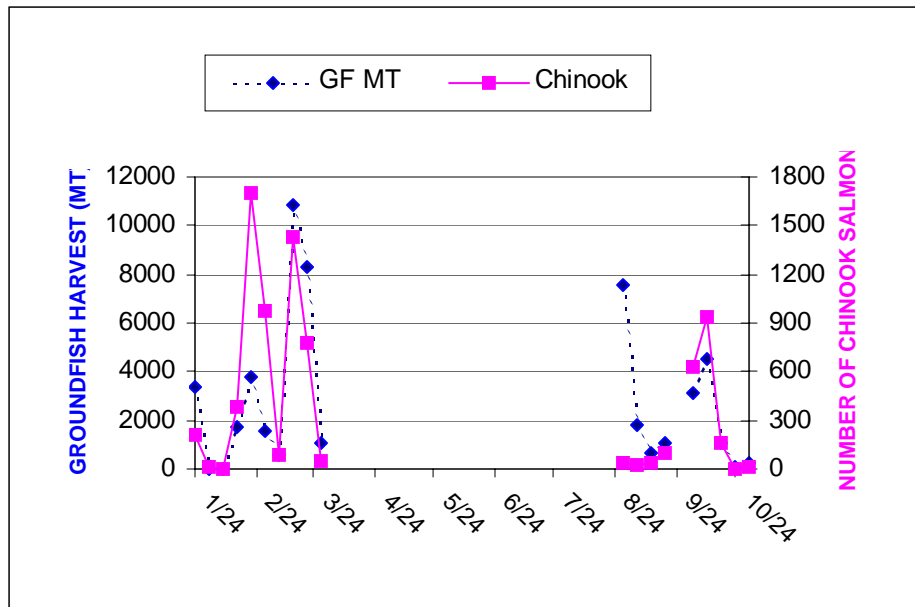
Appendix 2. Discards in the Gulf of Alaska, 2004: FIGURES 8-14

FIGURE 8. WEEKLY GROUNDFISH HARVEST AND CHINOOK SALMON BYCATCH BY VESSELS TARGETTING POLLOCK WITH PELAGIC TRAWLS

2003



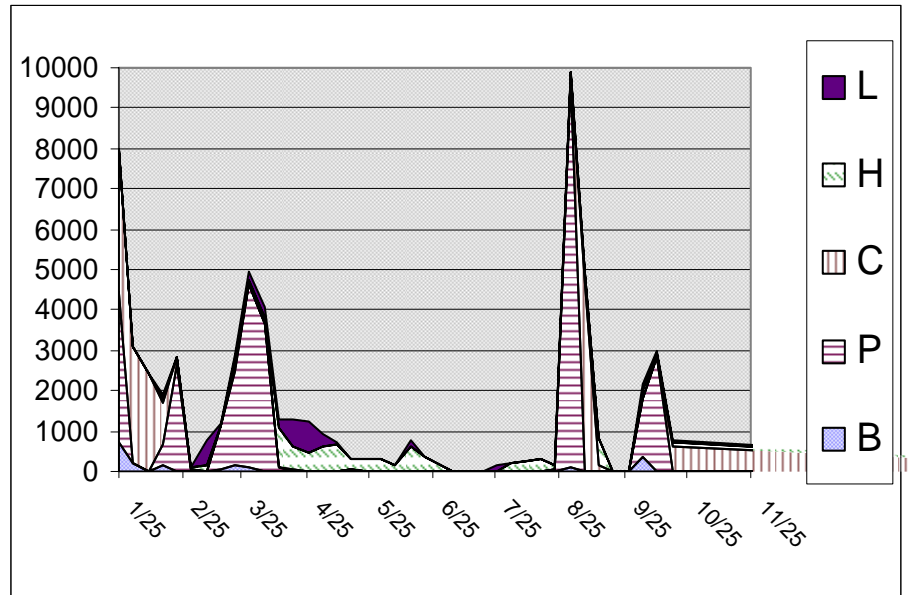
2004



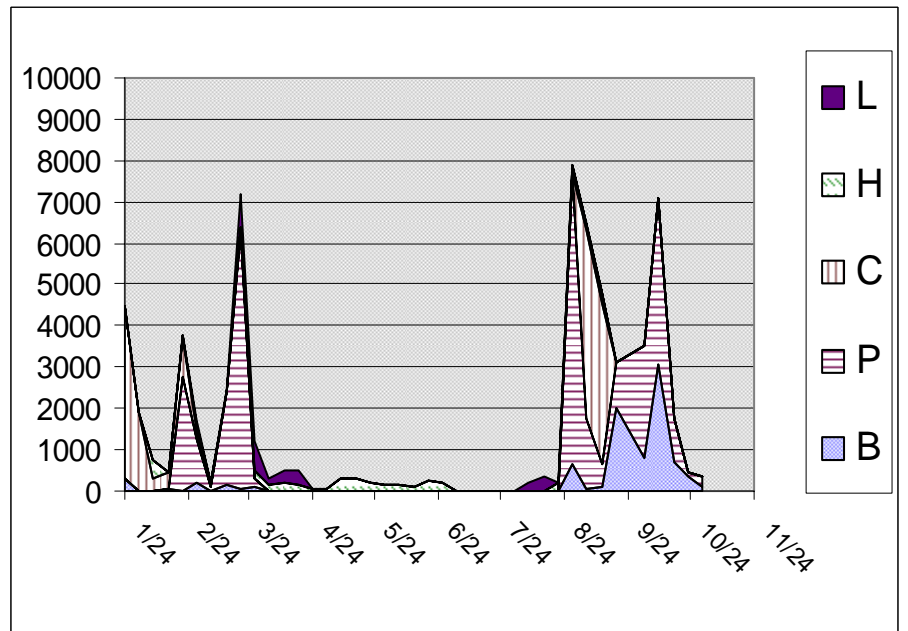
GROUNDFISH HARVESTED IN METRIC TONS (GF MT) INCLUDES TARGET AND NON-TARGET GROUNDFISH SPECIES

FIGURE 9. WEEKLY GROUNDFISH HARVEST (MT) BY VESSELS TARGETTING SHALLOW-WATER COMPLEX SPECIES WITH TRAWLS

2003



2004

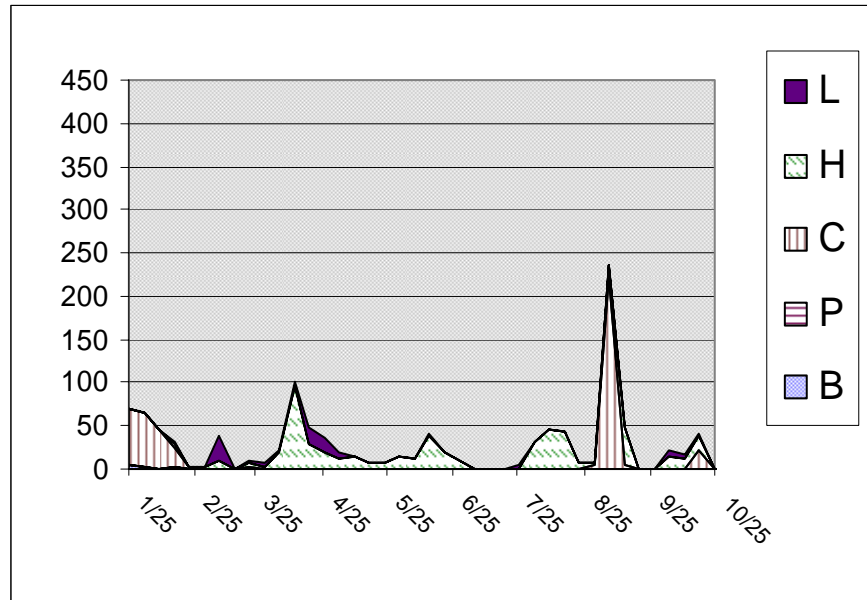


GROUNDFISH HARVESTED (GF MT) INCLUDES TARGET AND NON-TARGET GROUNDFISH SPECIES

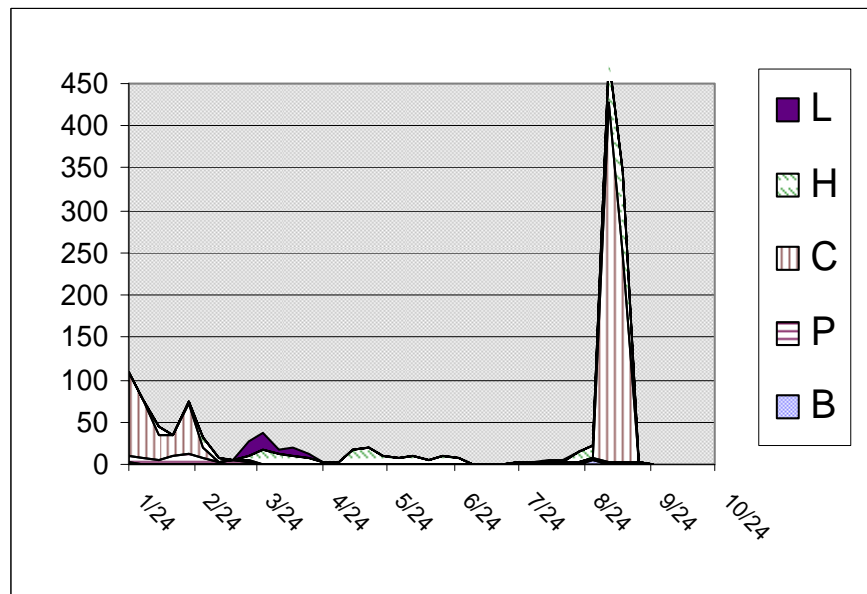
Appendix 2. Discards in the Gulf of Alaska, 2004: FIGURES 8-14

FIGURE 10. WEEKLY HALIBUT MORTALITY (MT) BY VESSELS TARGETTING SHALLOW-WATER COMPLEX SPECIES WITH TRAWLS

2003



2004

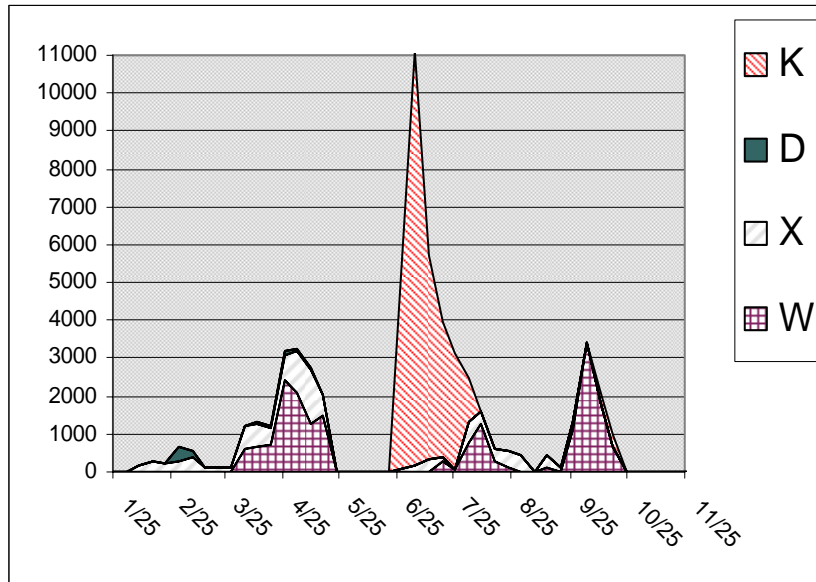


GROUND FISH HARVESTED (GF MT) INCLUDES TARGET AND NON-TARGET GROUND FISH SPECIES
 L=FLATHEAD SOLE C=PACIFIC COD P=PELAGIC POLLOCK B=BOTTOM POLLOCK H=SHALLOW-WATER FLATFISH

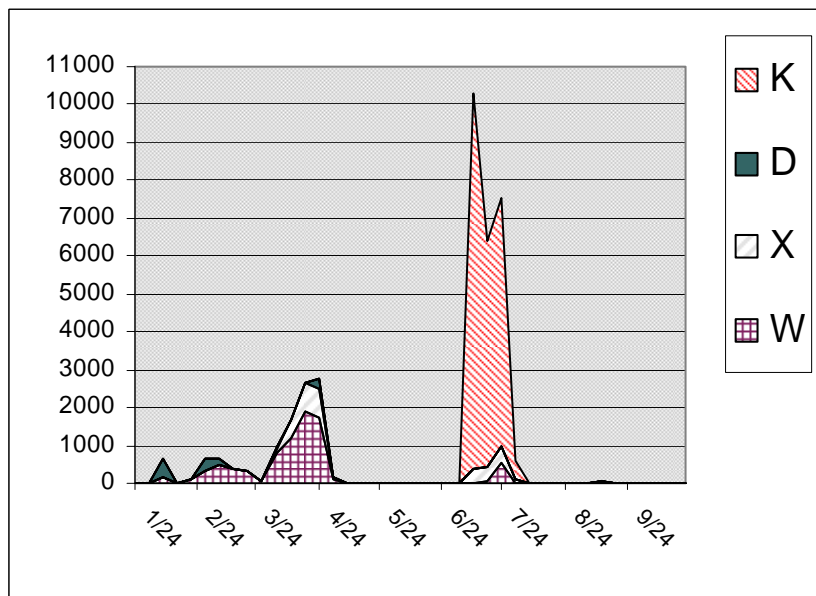
Appendix 2. Discards in the Gulf of Alaska, 2004: FIGURES 8-14

FIGURE 11. WEEKLY GROUNDFISH HARVEST (MT) BY VESSELS TARGETTING DEEP-WATER COMPLEX SPECIES WITH TRAWLS

2003



2004

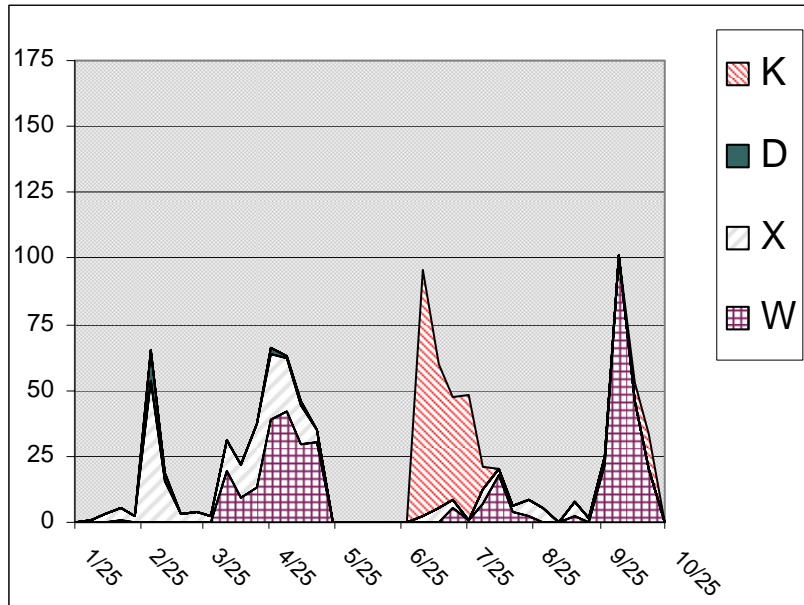


GROUNDFISH HARVESTED (GF MT) INCLUDES TARGET AND NON TARGET GROUNDFISH SPECIES
 K=ROCKFISH D=DEEP-WATER FLATFISH X=REX SOLE
 W=ARROWTOOTH FLOUNDER

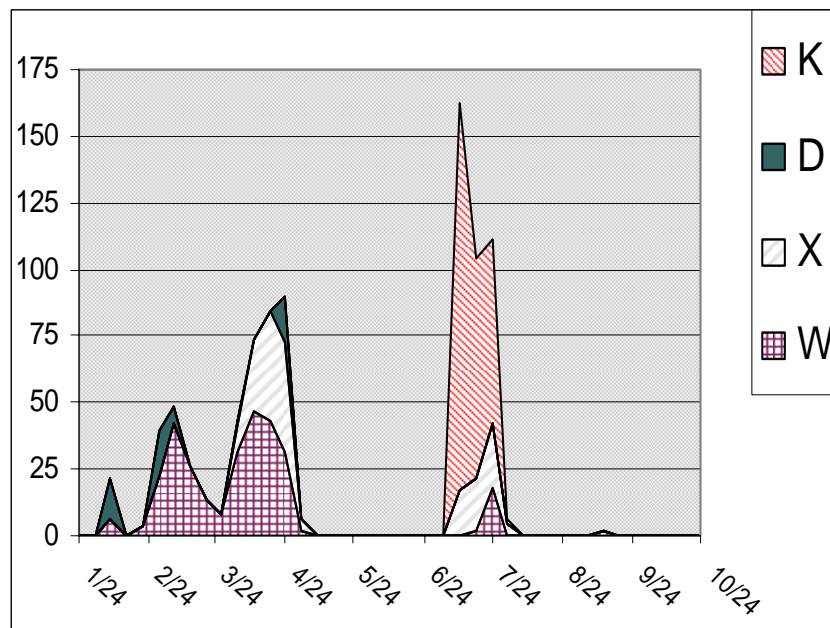
Appendix 2. Discards in the Gulf of Alaska, 2004: FIGURES 8-14

FIGURE 12. WEEKLY HALIBUT MORTALITY (MT) BY VESSELS TARGETTING DEEP-WATER COMPLEX SPECIES WITH TRAWLS

2003



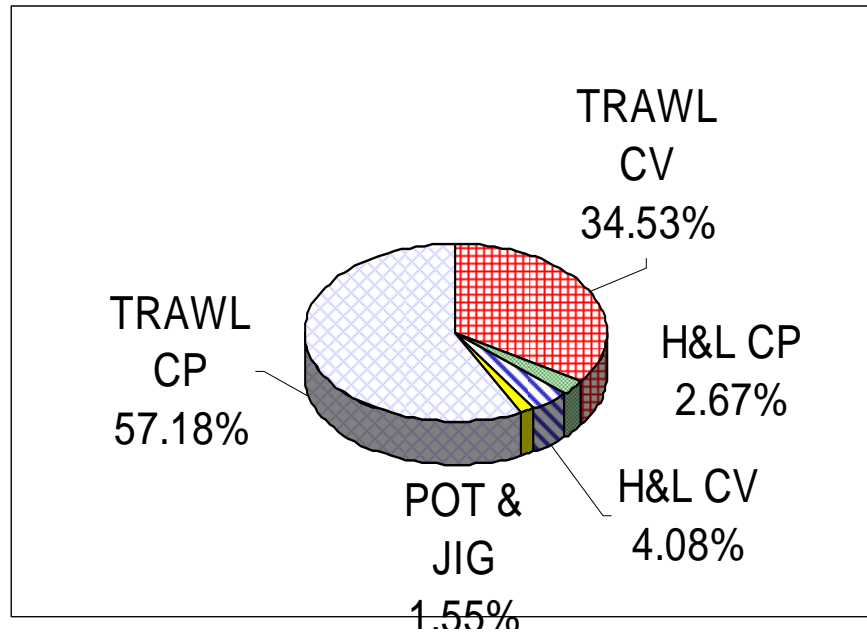
2004



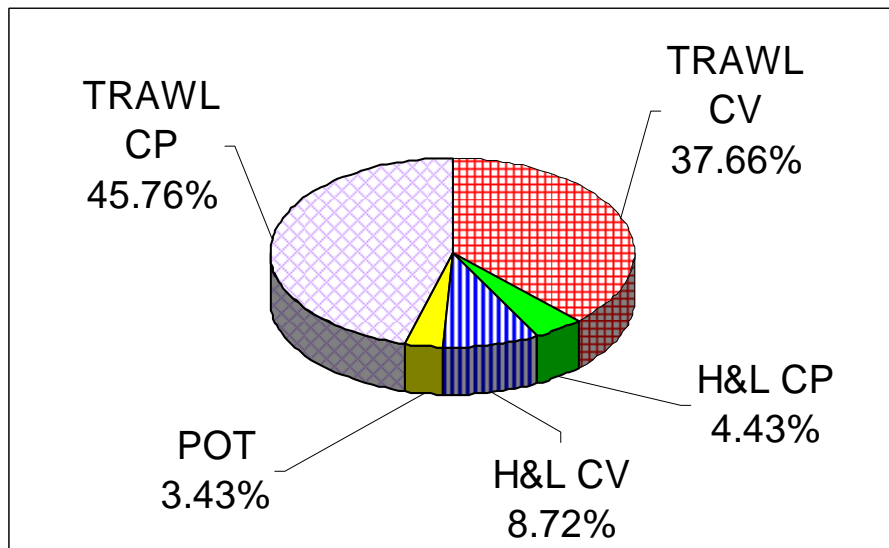
GROUND FISH HARVESTED (GF MT) INCLUDES TARGET AND NON-TARGET GROUND FISH SPECIES
 K=ROCKFISH D=DEEP-WATER FLATFISH X=REX SOLE
 W=ARROWTOOTH FLOUNDER

FIGURE 13.

2003 GROUNDFISH DISCARDS BY SECTOR: PERCENT OF TOTAL



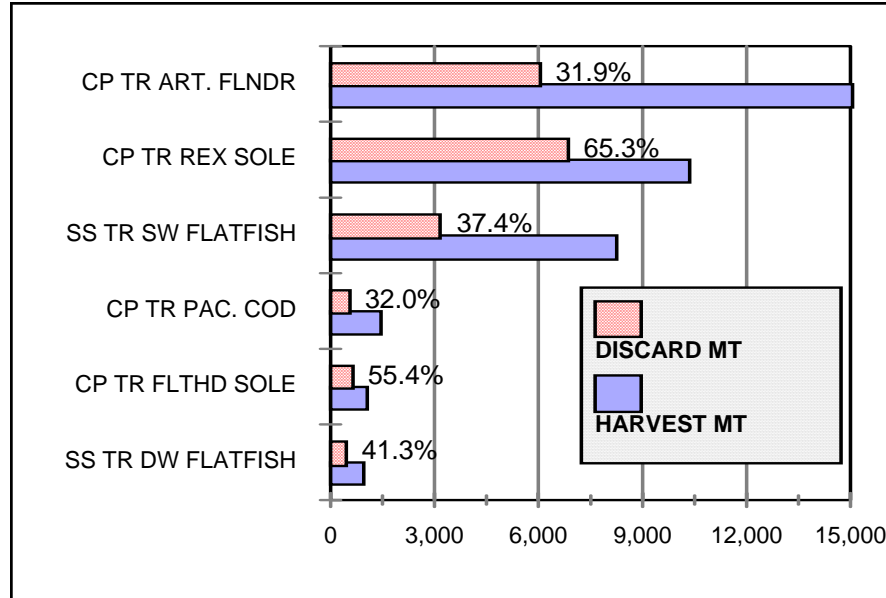
2004 GROUNDFISH DISCARDS BY SECTOR: PERCENT OF TOTAL



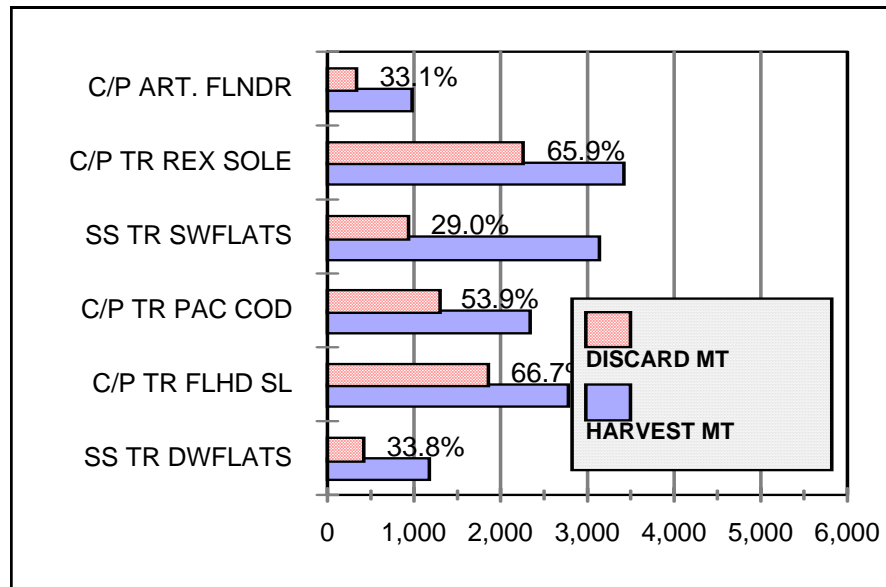
CP=CATCHER/PROCESSER. CV=CATCHER VESSEL (SHORESIDE)
 H&L=HOOK AND LINE

Appendix 2. Discards in the Gulf of Alaska, 2004: FIGURES 8-14

FIGURE 14. 2003 FISHERIES WITH HIGHEST DISCARD RATES



2004 FISHERIES WITH HIGHEST DISCARD RATES



TONNAGES SHOWN ARE ALL GROUND FISH SPECIES, , NOT JUST TARGET

FLHD SL=FLATHEAD SOLE

DW FLATS= DEEPWATER FLATFISH COMPLEX

APPENDIX 2.

**GULF OF ALASKA
CATCH AND DISCARD TABLES
2004**

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 38.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA All All All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	746	460	286	38.3%	0.002	630,000
Pollock	61,393	60,343	1,050	1.7%	0.007	2,314,000
Pacific Cod	42,006	40,998	1,009	2.4%	0.007	2,224,000
Deep-water flatfish	603	518	85	14.0%	0.001	186,000
Rex sole	1,404	1,319	85	6.1%	0.001	187,000
Arrowtooth Flounder	14,696	6,573	8,123	55.3%	0.055	17,908,000
Shallow-water flatfish	2,654	2,288	366	13.8%	0.002	806,000
Flathead sole	2,303	1,849	454	19.7%	0.003	1,002,000
Pacific ocean perch	10,637	9,821	816	7.7%	0.006	1,799,000
Pelagic shelf rockfish	2,612	2,532	81	3.1%	0.001	178,000
Other rockfish	844	287	557	66.0%	0.004	1,229,000
Shortraker/rougeye rockfish	790	578	213	26.9%	0.001	469,000
Northern rockfish	4,699	4,341	359	7.6%	0.002	791,000
Demersal shelf rockfish	170	170	0	0.0%	0.000	0
Thornyhead rockfish	741	666	75	10.1%	0.001	165,000
Sablefish	14,688	14,088	600	4.1%	0.004	1,324,000
Big & Longnose Skate	1,003	608	395	39.3%	0.003	870,000
Unspecified Skate	1,152	572	580	50.4%	0.004	1,278,000
Other groundfish	1,574	300	1,274	81.0%	0.009	2,809,000
TOTAL	164,716	148,310	16,406	10.0%	0.111	36,169,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	5,795 mt	39.073 kg/mt	10,390,000
Halibut Mortality (mt)	2,408 mt	16.238 kg/mt	4,721,000
Herring (mt)	279 mt	1.880 kg/mt	12,000
C. bairdi Tanner crab	70,445 crab	0.475 indiv/mt	
Other Tanner crab	90 crab	0.001 indiv/mt	
Red king crab	367 crab	0.002 indiv/mt	
Other king crab	376 crab	0.003 indiv/mt	
Chinook salmon	17,580 salmon	0.119 indiv/mt	
Other salmon	5,411 salmon	0.036 indiv/mt	
Halibut and Herring Discard Pounds	4,733,000 pounds		
Crab and Salmon Discard Numbers	94,270 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 39.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Catcher/processor All			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	720	460	260	36.1%	0.018	573,000
Pollock	384	291	93	24.2%	0.006	205,000
Pacific Cod	1,355	1,254	100	7.4%	0.007	221,000
Deep-water flatfish	48	1	47	98.5%	0.003	104,000
Rex sole	1,124	1,065	59	5.3%	0.004	131,000
Arrowtooth Flounder	6,017	1,035	4,982	82.8%	0.343	10,983,000
Shallow-water flatfish	81	57	24	29.7%	0.002	53,000
Flathead sole	940	665	275	29.2%	0.019	605,000
Pacific ocean perch	5,575	5,007	569	10.2%	0.039	1,254,000
Pelagic shelf rockfish	1,184	1,158	26	2.2%	0.002	56,000
Other rockfish	662	183	479	72.3%	0.033	1,056,000
Shortraker/rougheye rockfish	309	292	17	5.4%	0.001	37,000
Northern rockfish	2,430	2,167	263	10.8%	0.018	580,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	338	316	22	6.6%	0.002	49,000
Sablefish	527	459	68	12.9%	0.005	150,000
Big & Longnose Skate	38	38	0	0.0%	0.000	0
Unspecified Skate	114	66	47	41.6%	0.003	104,000
Other groundfish	176	0	176	100.0%	0.012	388,000
						0
TOTAL	22,020	14,514	7,507	34.1%	0.517	16,549,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut	702 mt	48 kg/mt	1,548,000
Halibut Mortality	443 mt	31 kg/mt	976,000
Herring	0 mt	0 kg/mt	0
C. bairdi Tanner crab	16,287 crab	1.122 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	272 crab	0.019 indiv/mt	
Other king crab	273 crab	0.019 indiv/mt	
Chinook salmon	2,039 salmon	0.140 indiv/mt	
Other salmon	1,312 salmon	0.090 indiv/mt	
Halibut and Herring Discard Pounds	976,000 pounds		
Crab and Salmon Discard Numbers	20,184 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 40.

2004 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Trawl Catcher/processor Arrowtooth flounder			
	TARGET:					
	Harvest	Retained	Discarded	Discard	Rate/ Retain GF	Discard
	mt	mt	mt	Rate		Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	35	35	0	0.0%	0.000	0
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	57	56	1	2.2%	0.002	3,000
Arrowtooth Flounder	831	530	302	36.3%	0.485	665,000
Shallow-water flatfish	0	0	0	-	0.000	0
Flathead sole	4	2	2	53.0%	0.003	4,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	3	0	3	100.0%	0.004	6,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	1	0	1	100.0%	0.002	2,000
TOTAL	931	623	309	33.1%	0.495	680,000

PROHIBITED SPECIES	Discarded BYCATCH		Rate/ Retain GF	Discard Pounds
Halibut	36	mt	58 kg/mt	79,000
Halibut Mortality	25	mt	40 kg/mt	55,000
Herring	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	55,000	pounds		
Crab and Salmon Discard Numbers	0	individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 41.

2004 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	0	0	0	-	0.000	0
Pacific Cod	178	115	63	35.5%	0.070	140,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	238	220	18	7.5%	0.020	39,000
Arrowtooth Flounder	1,419	0	1,419	100.0%	1.564	3,128,000
Shallow-water flatfish	6	6	0	0.0%	0.000	0
Flathead sole	766	550	216	28.2%	0.238	476,000
Pacific ocean perch	16	0	16	100.0%	0.017	35,000
Pelagic shelf rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	4	0	4	100.0%	0.005	10,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	43	17	26	60.7%	0.029	58,000
Other groundfish	59	0	59	100.0%	0.065	131,000
TOTAL	2,729	907	1,822	66.7%	2.007	4,016,000

PROHIBITED SPECIES	Discarded BYCATCH		Rate/ Retain GF	Discard Pounds
Halibut (mt)	92	mt	102 kg/mt	0
Halibut Mortality (mt)	57	mt	63 kg/mt	126,000
Herring (mt)	0	mt	0 kg/mt	0
C. bairdi Tanner crab	6,761	crab	7.451 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	1,325	salmon	1.460 indiv/mt	
Other salmon	76	salmon	0.084 indiv/mt	
Halibut and Herring Discard Pounds	126,000	pounds		
Crab and Salmon Discard Numbers	8,162	individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 42.

2004	AREA:	GOA				
	GEAR:	Trawl				
	TYPE:	Catcher/processor				
	TARGET:	Rex sole				
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	35	35	0	0.0%	0.000	0
Pacific Cod	175	148	27	15.5%	0.023	60,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	697	682	15	2.2%	0.013	33,000
Arrowtooth Flounder	2,001	73	1,928	96.4%	1.664	4,251,000
Shallow-water flatfish	0	0	0	-	0.000	0
Flathead sole	108	85	23	21.5%	0.020	51,000
Pacific ocean perch	128	0	128	100.0%	0.110	282,000
Pelagic shelf rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	5	5	0	0.0%	0.000	0
Northern rockfish	71	0	71	100.0%	0.062	157,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	35	35	0	0.0%	0.000	0
Sablefish	17	17	0	0.0%	0.000	0
Big & Longnose Skate	38	38	0	0.0%	0.000	0
Unspecified Skate	51	42	9	17.4%	0.008	19,000
Other groundfish	39	0	39	100.0%	0.033	85,000
TOTAL	3,399	1,159	2,240	65.9%	1.934	4,939,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	304	mt	671,000
Halibut Mortality (mt)	189	mt	416,000
Herring (mt)	0	mt	0
C. bairdi Tanner crab	9,016	crab	7.781 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	496	salmon	0.428 indiv/mt
Other salmon	1,048	salmon	0.905 indiv/mt
Halibut and Herring Discard Pounds	416,000	pounds	
Crab and Salmon Discard Numbers	10,559	individuals	

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 43.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Catcher/processor Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	5	0	5	100.0%	0.004	11,000
Pollock	29	21	8	28.8%	0.008	18,000
Pacific Cod	664	664	0	0.0%	0.000	0
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	62	53	9	15.0%	0.009	21,000
Arrowtooth Flounder	1,219	218	1,002	82.1%	0.943	2,208,000
Shallow-water flatfish	62	45	17	27.0%	0.016	37,000
Flathead sole	50	23	26	52.8%	0.025	58,000
Pacific ocean perch	8	0	8	100.0%	0.008	18,000
Pelagic shelf rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	5	3	3	-	0.002	6,000
Northern rockfish	154	0	154	100.0%	0.145	339,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	18	18	0	0.0%	0.000	0
Sablefish	10	10	0	0.0%	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	11	8	3	30.3%	0.003	7,000
Other groundfish	9	0	9	100.0%	0.009	21,000
TOTAL	2,306	1,062	1,244	53.9%	1.171	2,743,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	143 mt	134 kg/mt	314,000
Halibut Mortality (mt)	87 mt	82 kg/mt	192,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	510 crab	0.481 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	140 salmon	0.132 indiv/mt	
Other salmon	0 salmon	0.000 indiv/mt	
Halibut and Herring Discard Pounds	192,000 pounds		
Crab and Salmon Discard Numbers	650 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 45.

2004 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Trawl	Shoreside		
	TARGET:		All			
	Harvest	Retained	Discarded	Discard	Rate/ Retain GF	Discard
	mt	mt	mt	Rate		Pounds
Atka Mackerel	6	0	6	100.0%	0.000	13,000
Pollock	60,974	60,033	941	1.5%	0.010	2,074,000
Pacific Cod	15,709	15,060	650	4.1%	0.007	1,432,000
Deep-water flatfish	537	517	19	3.6%	0.000	42,000
Rex sole	280	254	26	9.1%	0.000	56,000
Arrowtooth Flounder	8,394	5,491	2,902	34.6%	0.031	6,398,000
Shallow-water flatfish	2,554	2,227	327	12.8%	0.003	722,000
Flathead sole	1,360	1,184	177	13.0%	0.002	389,000
Pacific ocean perch	5,062	4,815	247	4.9%	0.003	545,000
Pelagic shelf rockfish	1,339	1,322	17	1.3%	0.000	38,000
Slope rockfish	99	51	48	48.2%	0.001	105,000
Shortraker/rougheye rockfish	26	25	1	3.1%	0.000	2,000
Northern rockfish	2,259	2,174	85	3.7%	0.001	186,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	78	52	27	34.1%	0.000	59,000
Sablefish	677	558	119	17.6%	0.001	262,000
Big & Longnose Skate	532	401	131	24.7%	0.001	290,000
Unspecified Skate	239	184	55	23.0%	0.001	121,000
Other groundfish	578	175	403	69.7%	0.004	888,000
TOTAL	100,702	94,523	6,179	6.1%	0.065	13,622,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	2,578 mt	27 kg/mt	5,683,000
Halibut Mortality (mt)	1,638 mt	17 kg/mt	3,611,000
Herring (mt)	279 mt	3 kg/mt	615,000
C. bairdi Tanner crab	45,222 crab	0.478 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	58 crab	0.001 indiv/mt	
Other king crab	52 crab	0.001 indiv/mt	
Chinook salmon	15,516 salmon	0.164 indiv/mt	
Other salmon	3,924 salmon	0.042 indiv/mt	
Halibut and Herring Discard Pounds	4,226,000 pounds		
Crab and Salmon Discard Numbers	64,772 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 46.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Shoreside Bottom pollock			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	9,605	9,467	138	1.4%	0.013	304,000
Pacific Cod	220	217	3	1.2%	0.000	6,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	30	29	1	2.2%	0.000	1,000
Arrowtooth Flounder	635	560	75	11.8%	0.007	165,000
Shallow-water flatfish	5	5	0	0.0%	0.000	0
Flathead sole	180	168	11	6.3%	0.001	25,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	0.0%	0.000	0
Other 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
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	1	1	0	5.9%	0.000	0
Big & Longnose Skate	1	1	0	0.0%	0.000	0
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	66	26	40	60.7%	0.004	88,000
TOTAL	10,742	10,475	267	2.5%	0.026	589,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	23 mt	2 kg/mt	51,000
Halibut Mortality (mt)	14 mt	1 kg/mt	30,000
Herring (mt)	88 mt	8 kg/mt	193,000
C. bairdi Tanner crab	1,145 crab	0.109 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	58 crab	0.006 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	5,363 salmon	0.512 indiv/mt	
Other salmon	163 salmon	0.016 indiv/mt	
Halibut and Herring Discard Pounds	223,000 pounds		
Crab and Salmon Discard Numbers	6,729 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 47.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Shoreside Mid-water pollock			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	1,000
Pollock	50,874	50,257	617	1.2%	0.012	1,360,000
Pacific Cod	155	141	14	8.9%	0.000	30,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	5	3	3	48.5%	0.000	6,000
Arrowtooth Flounder	316	258	59	18.6%	0.001	129,000
Shallow-water flatfish	3	2	1	23.5%	0.000	2,000
Flathead sole	86	58	28	33.0%	0.001	63,000
Pacific ocean perch	2	1	1	55.7%	0.000	2,000
Pelagic shelf rockfish	0	0	0	33.6%	0.000	0
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	6	6	0	0.0%	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	52.7%	0.000	0
Unspecified Skate	0	0	0	27.5%	0.000	0
Other groundfish	208	87	121	58.2%	0.002	267,000
TOTAL	51,657	50,813	844	1.6%	0.017	1,860,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	1 mt	0 kg/mt	3,000
Halibut Mortality (mt)	1 mt	0 kg/mt	2,000
Herring (mt)	191 mt	4 kg/mt	421,000
C. bairdi Tanner crab	139 crab	0.003 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	7,995 salmon	0.157 indiv/mt	
Other salmon	449 salmon	0.009 indiv/mt	
Halibut and Herring Discard Pounds	423,000 pounds		
Crab and Salmon Discard Numbers	8,583 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 49.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Shoreside Deep-water flatfish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	20	0	20	100.0%	0.026	44,000
Pacific Cod	106	79	27	25.1%	0.035	59,000
Deep-water flatfish	464	464	0	0.0%	0.000	0
Rex sole	32	32	0	0.0%	0.000	0
Arrowtooth Flounder	350	78	272	77.6%	0.358	599,000
Shallow-water flatfish	47	47	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
Other 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
Thornyhead rockfish	28	22	6	21.0%	0.008	13,000
Sablefish	95	36	59	62.4%	0.078	131,000
Big & Longnose Skate	4	0	4	100.0%	0.005	8,000
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	0	0	0	-	0.000	0
TOTAL	1,146	759	387	33.8%	0.510	853,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	101 mt	134 kg/mt	224,000
Halibut Mortality (mt)	58 mt	76 kg/mt	127,000
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	0 crab	0.000 indiv/mt	
Chinook salmon	0 salmon	0.000 indiv/mt	
Other salmon	2 salmon	0.003 indiv/mt	
Halibut and Herring Discard Pounds	127,000 pounds		
Crab and Salmon Discard Numbers	2 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 50.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Shoreside Shallow-water flatfish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	89	62	27	30.6%	0.012	60,000
Pacific Cod	718	306	412	57.4%	0.187	908,000
Deep-water flatfish	6	6	0	3.4%	0.000	0
Rex sole	14	12	2	11.6%	0.001	3,000
Arrowtooth Flounder	322	151	172	53.3%	0.078	379,000
Shallow-water flatfish	1,385	1,287	98	7.1%	0.045	217,000
Flathead sole	117	105	12	9.9%	0.005	26,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	1	0	1	100.0%	0.000	2,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	1	0	1	100.0%	0.001	3,000
Sablefish	3	1	3	79.8%	0.001	6,000
Big & Longnose Skate	203	182	22	10.6%	0.010	48,000
Unspecified Skate	54	42	12	22.2%	0.005	26,000
Other groundfish	188	49	139	73.8%	0.063	306,000
TOTAL	3,102	2,201	900	29.0%	0.409	1,984,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	272 mt	123 kg/mt	599,000
Halibut Mortality (mt)	185 mt	84 kg/mt	407,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	8,556 crab	3.886 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	395 salmon	0.180 indiv/mt	
Other salmon	2,983 salmon	1.355 indiv/mt	
Halibut and Herring Discard Pounds	407,000 pounds		
Crab and Salmon Discard Numbers	11,934 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 51.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Shoreside Rockfish			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	3	0	3	100.0%	0.000	8,000
Pollock	76	60	16	21.3%	0.002	36,000
Pacific Cod	1,371	1,315	56	4.1%	0.005	123,000
Deep-water flatfish	16	0	16	100.0%	0.001	35,000
Rex sole	40	23	17	43.1%	0.002	38,000
Arrowtooth Flounder	1,234	262	972	78.8%	0.091	2,142,000
Shallow-water flatfish	91	75	16	17.9%	0.002	36,000
Flathead sole	44	18	25	58.2%	0.002	56,000
Pacific ocean perch	5,052	4,813	239	4.7%	0.022	527,000
Pelagic shelf rockfish	1,323	1,319	4	0.3%	0.000	8,000
Other rockfish	97	51	46	47.2%	0.004	101,000
Shortraker/rougheye rockfish	11	10	1	5.8%	0.000	1,000
Northern rockfish	2,207	2,159	48	2.2%	0.005	106,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	42	22	20	46.9%	0.002	43,000
Sablefish	530	503	27	5.1%	0.003	60,000
Big & Longnose Skate	28	7	20	72.9%	0.002	44,000
Unspecified Skate	7	0	7	100.0%	0.001	16,000
Other groundfish	13	3	10	78.6%	0.001	23,000
TOTAL	12,184	10,641	1,543	12.7%	0.145	3,402,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	316 mt	30 kg/mt	696,000
Halibut Mortality (mt)	211 mt	20 kg/mt	466,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	1,423 crab	0.134 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	52 crab	0.005 indiv/mt	
Chinook salmon	792 salmon	0.074 indiv/mt	
Other salmon	259 salmon	0.024 indiv/mt	
Halibut and Herring Discard Pounds	466,000 pounds		
Crab and Salmon Discard Numbers	2,525 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 52.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Trawl Shoreside "Other"		<i>NOTE: this category includes fish that could not be clearly assigned to another target; it does not refer to "other groundfish" target (skates etc).</i>		
	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	39	39	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	18	18	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	
Other rockfish	0	0	0	-	0.000	0	
Shorthead/rougeye rockfish	0	0	0	-	0.000	0	
Northern rockfish	0	0	0	-	0.000	0	
Demersal shelf rockfish	0	0	0	-	0.000	0	
Thornyhead rockfish	0	0	0	-	0.000	0	
Sablefish	0	0	0	-	0.000	0	
Big & Longnose Skate	0	0	0	-	0.000	0	
Unspecified Skate	0	0	0	-	0.000	0	
Other groundfish	0	0	0	-	0.000	0	
TOTAL	58	58	0	0.0%	0.000	0	

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	27 mt	472 kg/mt	60,000
Halibut Mortality (mt)	17 mt	288 kg/mt	37,000
Herring (mt)	0 mt	1 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	37,000 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 54.

2004 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Hook-and-line Catcher/processor Pacific cod			
	TARGET:					
	Harvest	Retained	Discarded	Discard	Rate/ Retain GF	Discard
	mt	mt	mt	Rate		Pounds
Atka Mackerel	4	0	4	100.0%	0.001	9,000
Pollock	3	3	0	5.8%	0.000	0
Pacific Cod	4,417	4,318	99	2.2%	0.022	218,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	64	23	42	64.9%	0.009	92,000
Shallow-water flatfish	3	0	3	100.0%	0.001	7,000
Flathead sole	2	0	2	100.0%	0.000	4,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	14	0	14	100.0%	0.003	30,000
Other rockfish	19	1	18	95.1%	0.004	39,000
Shortraker/rougheye rockfish	0	0	0	-	0.000	1,000
Northern rockfish	8	0	8	100.0%	0.002	17,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	12	0	12	100.0%	0.003	27,000
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	421	158	263	62.6%	0.059	581,000
Other groundfish	64	0	64	100.0%	0.014	141,000
TOTAL	5,031	4,501	529	10.5%	0.118	1,166,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	1,017 mt	226 kg/mt	2,243,000
Halibut Mortality (mt)	132 mt	29 kg/mt	292,000
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	0 crab	0.000 indiv/mt	
Chinook salmon	8 salmon	0.002 indiv/mt	
Other salmon	5 salmon	0.001 indiv/mt	
Halibut and Herring Discard Pounds	292,000 pounds		
Crab and Salmon Discard Numbers	12 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 55.

2004 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	100.0%	0.000	0
Pacific Cod	20	19	1	4.5%	0.000	2,000
Deep-water flatfish	2	0	2	100.0%	0.001	5,000
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	101	24	77	76.1%	0.041	169,000
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	0	0	0	-	0.000	0
Other rockfish	1	0	1	60.1%	0.000	1,000
Shortraker/rougeye rockfish	128	79	49	38.0%	0.026	107,000
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	90	84	6	6.3%	0.003	12,000
Sablefish	1,690	1,666	24	1.4%	0.013	52,000
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	45	7	37	83.4%	0.020	82,000
Other groundfish	3	0	3	100.0%	0.001	6,000
TOTAL	2,078	1,880	198	9.5%	0.105	437,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	n/a	kg/mt	0
Halibut Mortality (mt)	n/a	kg/mt	n/a
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	34 crab	0.018 indiv/mt	
Chinook salmon	5 salmon	0.003 indiv/mt	
Other salmon	24 salmon	0.013 indiv/mt	
Halibut and Herring Discard Pounds	n/a pounds		
Crab and Salmon Discard Numbers	63 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 56.

2004 GROUND FISH SPECIES	AREA:		GOA			
	GEAR:	TYPE:	Hook-and-line Shoreside All			
	TARGET:					
	Harvest	Retained	Discarded	Discard	Rate/ Retain GF	Discard
	mt	mt	mt	Rate		Pounds
Atka Mackerel	0	0	0	-	0.000	0
Pollock	21	15	6	27.7%	0.000	13,000
Pacific Cod	5,669	5,602	67	1.2%	0.004	148,000
Deep-water flatfish	16	0	16	100.0%	0.001	35,000
Rex sole	0	0	0	#DIV/0!	0.000	0
Arrowtooth Flounder	120	0	120	100.0%	0.007	264,000
Shallow-water flatfish	6	5	1	24.0%	0.000	3,000
Flathead sole	1	0	1	-	0.000	1,000
Pacific ocean perch	0	0	0	100.0%	0.000	0
Pelagic shelf rockfish	10	9	1	7.1%	0.000	2,000
Slope rockfish	56	46	10	17.5%	0.001	22,000
Shortraker/rougheye rockfish	328	182	146	44.5%	0.008	322,000
Northern rockfish	1	0	1	100.0%	0.000	3,000
Demersal shelf rockfish	168	168	0	0.0%	0.000	0
Thornyhead rockfish	235	215	20	8.6%	0.001	44,000
Sablefish	11,783	11,405	378	3.2%	0.021	833,000
Big & Longnose Skate	432	169	263	60.9%	0.015	580,000
Unspecified Skate	333	156	177	53.1%	0.010	390,000
Other groundfish	224	0	224	100.0%	0.012	493,000
TOTAL	19,403	17,972	1,430	7.4%	0.080	3,153,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	
Halibut (mt)	1,353 mt	75 kg/mt	2,528,000
Halibut Mortality (mt)	171 mt	10 kg/mt	411,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	32 crab	0.002 indiv/mt	
Other Tanner crab	90 crab	0.005 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	17 crab	0.001 indiv/mt	
Chinook salmon	12 salmon	0.001 indiv/mt	
Other salmon	145 salmon	0.008 indiv/mt	
Halibut and Herring Discard Pounds	411,000 pounds		
Crab and Salmon Discard Numbers	297 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 57.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Hook-and-line 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	21	15	6	27.7%	0.001	13,000
Pacific Cod	5,592	5,534	57	1.0%	0.010	126,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	3	0	3	100.0%	0.001	7,000
Shallow-water flatfish	1	0	1	100.0%	0.000	2,000
Flathead sole	1	0	1	100.0%	0.000	1,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	0	0	0	0.0%	0.000	0
Other rockfish	4	2	1	37.1%	0.000	3,000
Shortraker/rougheye rockfish	2	2	0	0.0%	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	1	0	1	100.0%	0.000	1,000
Big & Longnose Skate	227	23	204	89.9%	0.037	451,000
Unspecified Skate	77	9	68	88.3%	0.012	149,000
Other groundfish	101	0	101	100.0%	0.018	223,000
TOTAL	6,029	5,586	443	7.3%	0.079	977,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	1,251 mt	224 kg/mt	2,758,000
Halibut Mortality (mt)	163 mt	29 kg/mt	359,000
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	0 crab	0.000 indiv/mt	
Chinook salmon	5 salmon	0.001 indiv/mt	
Other salmon	3 salmon	0.001 indiv/mt	
Halibut and Herring Discard Pounds	359,000 pounds		
Crab and Salmon Discard Numbers	9 individuals		

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TABLE 58.

2004 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	6	6	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	5	5	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	9	9	0	0.0%	0.000	0
Other rockfish	25	25	0	0.0%	0.000	0
Shortraker/rougheye rockfish	14	14	0	0.0%	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	154	154	0	0.0%	0.000	0
Thornyhead rockfish	16	16	0	0.0%	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	0	0	0	-	0.000	0
TOTAL	228	228	0	0.0%	0.000	0

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	102 mt	446 kg/mt	224,000
Halibut Mortality (mt)	8 mt	36 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	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	18,000 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 59.

2004 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	100.0%	0.000	0
Pacific Cod	32	22	10	31.8%	0.001	22,000
Deep-water flatfish	16	0	16	100.0%	0.001	35,000
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	116	0	116	100.0%	0.010	256,000
Shallow-water flatfish	1	0	1	100.0%	0.000	1,000
Flathead sole	0	0	0	-	0.000	0
Pacific ocean perch	0	0	0	100.0%	0.000	0
Pelagic shelf rockfish	1	0	1	69.0%	0.000	2,000
Other rockfish	27	19	8	30.6%	0.001	18,000
Shortraker/rougheye rockfish	312	166	146	46.8%	0.012	322,000
Northern rockfish	1	0	1	100.0%	0.000	2,000
Demersal shelf rockfish	14	14	0	0.0%	0.000	0
Thornyhead rockfish	219	199	20	9.2%	0.002	44,000
Sablefish	11,782	11,405	377	3.2%	0.032	831,000
Big & Longnose Skate	59	0	59	100.0%	0.005	130,000
Unspecified Skate	109	0	109	100.0%	0.009	241,000
Other groundfish	123	0	123	100.0%	0.010	270,000
TOTAL	12,812	11,825	987	7.7%	0.083	2,176,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	n/a mt	kg/mt	0
Halibut Mortality (mt)	n/a mt	kg/mt	n/a
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	32 crab	0.003 indiv/mt	
Other Tanner crab	90 crab	0.008 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	17 crab	0.001 indiv/mt	
Chinook salmon	7 salmon	0.001 indiv/mt	
Other salmon	142 salmon	0.012 indiv/mt	
Halibut and Herring Discard Pounds	n/a pounds		
Crab and Salmon Discard Numbers	288 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 60.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Hook-and-line Shoreside "Other"			
	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	40	40	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
Other rockfish	0	0	0	-	0.000	0
Shortraker/rougeye rockfish	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	146	146	0	0.0%	0.000	0
Unspecified Skate	147	147	0	0.0%	0.000	0
Other groundfish	0	0	0	-	0.000	0
TOTAL	334	334	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		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 61.

2004 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	16	0	16	100.0%	0.001	36,000
Pollock	11	1	10	94.5%	0.001	22,000
Pacific Cod	14,526	14,435	92	0.6%	0.006	202,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	1	0	1	100.0%	0.000	2,000
Shallow-water flatfish	10	0	10	100.0%	0.001	22,000
Flathead sole	1	0	1	100.0%	0.000	3,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	24	0	24	100.0%	0.002	53,000
Slope rockfish	3	0	3	100.0%	0.000	6,000
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	2	0	2	100.0%	0.000	4,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Other groundfish	529	125	405	76.5%	0.027	892,000
TOTAL	15,123	14,560	563	3.7%	0.037	1,241,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	145 mt	10 kg/mt	319,000
Halibut Mortality (mt)	25 mt	2 kg/mt	54,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	8,904 crab	589 indiv/mt	
Other Tanner crab	0 crab	0 indiv/mt	
Red king crab	37 crab	2 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			54,000 pounds
Crab and Salmon Discard Numbers			8,941 individuals

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 62.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Pot Shoreside Pacific cod			
	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	16	0	16	100.0%	0.001	36,000
Pollock	11	1	10	94.5%	0.001	22,000
Pacific Cod	14,526	14,435	92	0.6%	0.006	202,000
Deep-water flatfish	0	0	0	-	0.000	0
Rex sole	0	0	0	-	0.000	0
Arrowtooth Flounder	1	0	1	100.0%	0.000	2,000
Shallow-water flatfish	10	0	10	100.0%	0.001	22,000
Flathead sole	1	0	1	100.0%	0.000	3,000
Pacific ocean perch	0	0	0	-	0.000	0
Pelagic shelf rockfish	24	0	24	100.0%	0.002	53,000
Other rockfish	3	0	3	100.0%	0.000	6,000
Shortraker/rougheye rockfish	0	0	0	-	0.000	0
Northern rockfish	2	0	2	100.0%	0.000	4,000
Demersal shelf rockfish	0	0	0	-	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	529	125	405	76.5%	0.028	892,000
TOTAL	15,123	14,560	563	3.7%	0.039	1,241,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	145 mt	10 kg/mt	319,000
Halibut Mortality (mt)	25 mt	2 kg/mt	54,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	8,904 crab	0.612 indiv/mt	
Other Tanner crab	0 crab	0.000 indiv/mt	
Red king crab	37 crab	0.003 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	54,000 pounds		
Crab and Salmon Discard Numbers	8,941 individuals		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 63.

2004 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	309	309	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	0.0%	0.000	0
Other 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
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	0	0	0	-	0.000	0
TOTAL	310	310	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		

Appendix 2. Discards in the Gulf of Alaska, 2004: TABLES

TABLE 64.

2004 GROUND FISH SPECIES	AREA: GEAR: TYPE: TARGET:		GOA Jig 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	1	1	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	42	42	0	0.0%	0.000	0
Other rockfish	5	5	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	2	2	0	0.0%	0.000	0
Thornyhead rockfish	0	0	0	-	0.000	0
Sablefish	0	0	0	-	0.000	0
Big & Longnose Skate	0	0	0	-	0.000	0
Unspecified Skate	0	0	0	-	0.000	0
Other groundfish	0	0	0	-	0.000	0
TOTAL	50	50	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		

APPENDIX 3.

**COMMUNITY DEVELOPMENT QUOTA
(CDQ)**

CATCH AND DISCARD TABLES

2004

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 65.

2004 CDQ	AREA:	GEAR:	TYPE:	TARGET:						
					BSAI	All	All			
					Harvest	Retained	Discarded	Discard	Rate/	Discard
					mt	mt	mt	Rate	Retain GF	Pounds
GROUND FISH SPECIES										
Atka Mackerel					3,197	3,197	0	0.0%	0.000	0
Pollock					149,440	149,440	0	0.0%	0.000	0
Pacific Cod					15,694	15,694	0	0.0%	0.000	0
Yellowfin sole					6,304	6,304	0	0.0%	0.000	0
Rock sole					843	843	0	0.0%	0.000	0
Flathead sole					522	522	0	0.0%	0.000	0
Alaska Plaice					298	298	0	0.0%	0.000	0
Other flatfish					40	40	0	0.0%	0.000	0
Greenland turbot					82	80	2	2.6%	0.000	5,000
Arrowtooth flounder					352	352	0	0.0%	0.000	0
Pacific ocean perch					870	870	0	0.0%	0.000	0
Northern rockfish					2	2	0	0.0%	0.000	0
Shorthead rockfish					6	6	0	0.0%	0.000	0
Rougheye rockfish					1	1	0	0.0%	0.000	0
Other rockfish					87	87	0	0.0%	0.000	0
Sablefish					145	145	0	0.0%	0.000	0
Other Species					3,206	3,206	0	0.0%	0.000	0
TOTAL					181,089	181,087	2	0.0%	0.000	5,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	1,236 mt	7 kg/mt	2,725,000
Halibut Mortality (mt)	124 mt	1 kg/mt	272,000
Herring (mt)	0 mt	0 kg/mt	0
C. bairdi Tanner crab	13,295 crab	0.073 indiv/mt	
Other Tanner crab	29,738 crab	0.164 indiv/mt	
Red king crab	0 crab	0.000 indiv/mt	
Other king crab	0 crab	0.000 indiv/mt	
Chinook salmon	2,947 salmon	0.016 indiv/mt	
Other salmon	957 salmon	0.005 indiv/mt	
Halibut and Herring Discard Pounds	272,000 pounds		
Crab and Salmon Discard Numbers	46,936 individuals		

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 66.

2004	CDQ	AREA:	GEAR:	TYPE:	TARGET:	BSAI	
						Trawl	Catcher/processor
							Atka mackerel
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds	
Atka Mackerel	3,196	3,196	0	0.0%	0.000	0	
Pollock	271	271	0	0.0%	0.000	0	
Pacific Cod	0	0	0	-	0.000	0	
Yellowfin sole	18	18	0	0.0%	0.000	0	
Rock sole	0	0	0	-	0.000	0	
Flathead sole	1	1	0	0.0%	0.000	0	
Alaska plaice	0	0	0	-	0.000	0	
Other flatfish	0	0	0	-	0.000	0	
Greenland turbot	54	54	0	0.0%	0.000	0	
Arrowtooth flounder	2	2	0	0.0%	0.000	0	
Pacific ocean perch	868	868	0	0.0%	0.000	0	
Northern rockfish	0	0	0	-	0.000	0	
Shortraker rockfish	0	0	0	-	0.000	0	
Rougeye rockfish	0	0	0	-	0.000	0	
Other rockfish	85	85	0	0.0%	0.000	0	
Sablefish	0	0	0	-	0.000	0	
Other Species	0	0	0	-	0.000	0	
TOTAL	4,496	4,496	0	0.0%	0.000	0	

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	0 mt	0.000 kg/mt	0
Halibut Mortality (mt)	0 mt	0.000 kg/mt	0
Herring (mt)	0 mt	0.000 kg/mt	0
C. bairdi Tanner crab	17 crab	0.004 indiv/mt	
Other Tanner crab	3 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	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	19 individuals		

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 67.

2004 CDQ	AREA:		BSAI			
	GEAR:	TYPE:	Trawl			
	TARGET:		Catcher/processor			
			Midwater pollock			
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	1	1	0	-	0.000	0
Pollock	148,545	148,545	0	0.0%	0.000	0
Pacific Cod	636	636	0	-	0.000	0
Yellowfin sole	27	27	0	-	0.000	0
Rock sole	282	282	0	-	0.000	0
Flathead sole	201	201	0	0.0%	0.000	0
Alaska plaice	1	1	0	-	0.000	0
Other flatfish	40	40	0	-	0.000	0
Greenland turbot	4	4	0	-	0.000	0
Arrowtooth flounder	59	59	0	-	0.000	0
Pacific ocean perch	1	1	0	-	0.000	0
Northern rockfish	2	2	0	-	0.000	0
Shortraker rockfish	3	3	0	-	0.000	0
Rougeye rockfish	0	0	0	-	0.000	0
Other rockfish	1	1	0	-	0.000	0
Sablefish	2	2	0	-	0.000	0
Other Species	155	155	0	-	0.000	0
TOTAL	149,958	149,958	0	0.0%	0.000	0

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	105 mt	0.001 kg/mt	232,000
Halibut Mortality (mt)	11 mt	0.000 kg/mt	23,000
Herring (mt)	0 mt	0.000 kg/mt	0
C. bairdi Tanner crab	100 crab	0.001 indiv/mt	
Other Tanner crab	95 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	2,947 salmon	0.020 indiv/mt	
Other salmon	957 salmon	0.006 indiv/mt	
Halibut and Herring Discard Pounds	23,000 pounds		
Crab and Salmon Discard Numbers	4,099 individuals		

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 68.

2004 CDQ	AREA:	BSAI					
	GEAR:	Trawl					
	TYPE:	Catcher/processor					
	TARGET:	Yellowfin sole					
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	187	187	0	0.0%	0.000	0	
Yellowfin sole	6,162	6,162	0	0.0%	0.000	0	
Rock sole	446	446	0	0.0%	0.000	0	
Flathead sole	215	215	0	-	0.000	0	
Alaska plaice	280	280	0	0.0%	0.000	0	
Other flatfish	0	0	0	-	0.000	0	
Greenland turbot	0	0	0	-	0.000	0	
Arrowtooth flounder	113	113	0	0.0%	0.000	0	
Pacific ocean perch	0	0	0	-	0.000	0	
Northern rockfish	0	0	0	-	0.000	0	
Shortraker rockfish	0	0	0	-	0.000	0	
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	190	190	0	0.0%	0.000	0	
TOTAL	7,593	7,593	0	0.0%	0.000	0	

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	665 mt	0.088 kg/mt	1,467,000
Halibut Mortality (mt)	67 mt	0.009 kg/mt	147,000
Herring (mt)	0 mt	0.000 kg/mt	0
C. bairdi Tanner crab	13,178 crab	1.736 indiv/mt	
Other Tanner crab	29,640 crab	3.904 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	147,000 pounds		
Crab and Salmon Discard Numbers	42,818 individuals		

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 69.

2004 CDQ	AREA:	BSAI				
	GEAR:	Trawl				
	TYPE:	Catcher/processor				
	TARGET:	Rock sole				
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	11	11	0	0.0%	0.000	0
Yellowfin sole	78	78	0	0.0%	0.000	0
Rock sole	106	106	0	0.0%	0.000	0
Flathead sole	0	0	0	-	0.000	0
Alaska plaice	18	18	0	0.0%	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	0	0	0	-	0.000	0
Arrowtooth flounder	1	1	0	0.0%	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	0	0	0	-	0.000	0
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	5	5	0	0.0%	0.000	0
TOTAL	218	218	0	0.0%	0.000	0

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	0 mt	0.000 kg/mt	0
Halibut Mortality (mt)	0 mt	0.000 kg/mt	0
Herring (mt)	0 mt	0.000 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		

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 70.

2004 CDQ	AREA:	BSAI				
	GEAR:	Hook and line				
	TYPE:	Catcher/processor				
	TARGET:	Pacific cod				
GROUND FISH SPECIES	Harvest mt	Retained mt	Discarded mt	Discard Rate	Rate/ Retain GF	Discard Pounds
Atka Mackerel	1	1	0	0.0%	0.000	0
Pollock	0	0	0	-	0.000	0
Pacific Cod	14,859	14,859	0	0.0%	0.000	0
Yellowfin sole	18	18	0	0.0%	0.000	0
Rock sole	9	9	0	0.0%	0.000	0
Flathead sole	91	91	0	0.0%	0.000	0
Alaska plaice	0	0	0	-	0.000	0
Other flatfish	0	0	0	-	0.000	0
Greenland turbot	15	15	0	0.0%	0.000	0
Arrowtooth flounder	151	151	0	0.0%	0.000	0
Pacific ocean perch	0	0	0	-	0.000	0
Northern rockfish	0	0	0	-	0.000	0
Shortraker rockfish	3	3	0	0.0%	0.000	0
Rougeye rockfish	0	0	0	-	0.000	0
Other rockfish	0	0	0	0.0%	0.000	0
Sablefish	0	0	0	0.0%	0.000	0
Other Species	2,856	2,856	0	0.0%	0.000	0
TOTAL	18,004	18,004	0	0.0%	0.000	0

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	466 mt	0.026 kg/mt	1,027,000
Halibut Mortality (mt)	47 mt	0.003 kg/mt	103,000
Herring (mt)	0 mt	0.000 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	103,000 pounds		
Crab and Salmon Discard Numbers	0 individuals		

Appendix 3. Discards in the CDQ Fisheries : TABLES

TABLE 71.

2004 CDQ	AREA: GEAR: TYPE: TARGET:	BSAI Pot Shoreside Sablefish					Discard Pounds	
			Harvest mt	Retained mt	Discarded mt	Discard Rate		Rate/ Retain GF
GROUND FISH SPECIES								
Atka Mackerel			0	0	0	-	0.000	0
Pollock			0	0	0	-	0.000	0
Pacific Cod			2	2	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
Alaska plaice			0	0	0	-	0.000	0
Other flatfish			0	0	0	-	0.000	0
Greenland turbot			9	7	2	24.1%	0.012	5,000
Arrowtooth flounder			26	26	0	0.0%	0.000	0
Pacific ocean perch			0	0	0	-	0.000	0
Northern rockfish			0	0	0	-	0.000	0
Shortraker rockfish			0	0	0	-	0.000	0
Rougheye rockfish			0	0	0	-	0.000	0
Other rockfish			1	1	0	0.0%	0.000	0
Sablefish			143	143	0	0.0%	0.000	0
Other Species			0	0	0	0.0%	0.000	0
TOTAL			181	179	2	1.2%	0.012	5,000

PROHIBITED SPECIES	Discarded BYCATCH	Rate/ Retain GF	Discard Pounds
Halibut (mt)	0 mt	0.000 kg/mt	0
Halibut Mortality (mt)	0 mt	0.000 kg/mt	0
Herring (mt)	0 mt	0.000 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		