



Summary of Seabird Mortality Associated with the Alaska Groundfish Trawl Fleet, 1998 through 2002

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North Pacific Fishery Management Council Recommendations for 2004 Final Groundfish Specifications

Species	Gulf of Alaska	Bering Sea/ Aleutian Islands
Pollock	71,260	1,493,050
Pacific Cod	48,033	215,500
Sablefish	16,550	6,000
Yellowfin sole		86,075
Deep Water flatfish	6,070	
Rox Sole	12,650	
Shallow water flatfish	20,740	
Rock sole		41,000
Flathead sole	10,880	19,000
Alaska plaice		10,000
Greenland turbot		3,500
Arrowtooth flounder	38,000	12,000
Other flatfish		3,000
Other slope rockfish	670	
Northern rockfish	4,870	5,000
Pacific ocean perch	13,340	12,580
Shortaker/rougheye	1,318	
Shortaker rockfish		526
Rougheye rockfish		195
Other rockfish		1,094
Pelagic shelf rockfish	4,470	
Demersal shelf rockfish	450	
Thornyhead rockfish	1,940	
Atka mackerel	600	63,000
Squid		1,275
Other species	12,592	27,205
Total	264,433	2,000,000

ABSTRACT

Trawl vessels operating in U.S. federal waters off Alaska are required to meet coverage requirements which place NMFS-certified fishery observers on board vessels over 59 ft length overall for some or all of their fishing days. Vessels operate in several processing modes and use either bottom or pelagic trawl gear. Observers record seabird incidental takes when sampling the catch, and have recorded from 45 to 154 total birds taken annually.

Due to data-recording procedures that will be corrected for 2004, analysts must generate high and low estimates of seabird bycatch. These estimates result in annual average takes of either 11,955 or 1,754, with single year highs and lows of 14,969 and 407 seabirds. Average annual species composition varies depending on the estimation procedure. Northern fulmars (*Fulmarus glacialis*) constitute either 67.0% or 53.4% of the total for the 5-year average. For the next highest component, gull spp. were 18.6% of the low estimates while shearwater spp. were 11.8% of the high estimates. Laysan albatross (*Phoebastria immutabilis*) were less than 2% of the total in either method. No other albatross species were observed taken in trawl gear in Alaska during this period.

Observer Sampling Methodologies



Whole-haul sampling (typically 20 to 80 mt, but varies greatly)



Partial-haul sampling (ca. 500 kg to 5 mt)



Basket Sampling (ca. 300 kg)

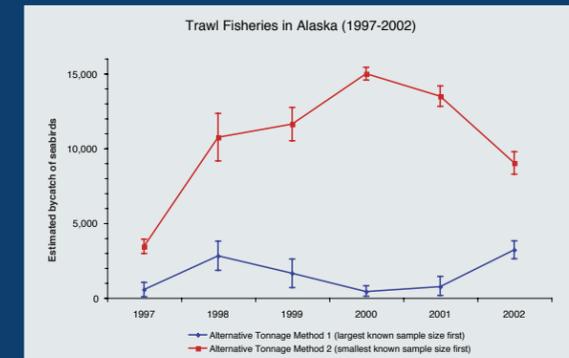


Sampling vessels at shoreside delivery

Range of Estimates of Total Incidental Catch of Seabirds by Species or Species Groups in the Combined Bering Sea and Aleutian Islands and Gulf of Alaska Trawl Fisheries, 1998-2002

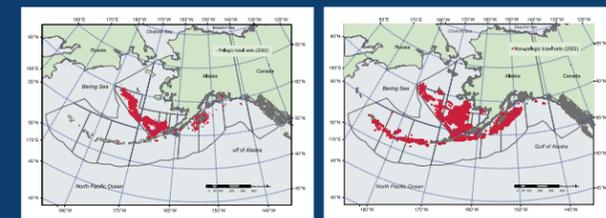
Year	Actual Number Taken ^a	Estimate Range	Shear-tailed	Black-footed	Laysan	Northern Fulmar	Gull spp.	Unit. Dark Shearwater	Unit. Tubenoses	Auklets	Other ^b	Unit. Albatross	Unit. Seabird	Total
1998	45	low	0	0	135	96	1,590	856	1	110	3	0	8	2,798
		high	0	0	343	4,012	707	1,353	163	543	2,494	0	1,110	10,725
1999	154	low	0	0	8	858	0	82	0	664	2	0	17	1,630
		high	0	0	27	8,538	0	1,149	0	730	85	0	1,025	11,604
2000	101	low	0	0	0	298	37	10	2	1	0	0	60	407
		high	0	0	0	10,678	114	3,086	155	182	0	0	603	14,969
2001	141	low	0	0	8	323	4	329	9	1	3	0	65	741
		high	0	0	150	10,022	288	887	1,075	68	297	0	681	13,468
2002	69	low	0	0	1	3,111	4	4	0	1	9	0	59	3,193
		high	0	0	56	6,809	71	595	0	68	124	0	475	9,008
Average Annual Estimate														
1998-2002	na	low	0	0	30	937	327	256	2	156	3	0	42	1,754
		high	0	0	115	8,010	236	1,414	279	523	600	0	779	11,955

^a Actual number taken is the total number of seabirds recorded dead in the observed hauls.
^b One red-legged kittiwake was reported caught by the trawl fishery in the Bering Sea in 2001; the estimated take was 1 (low) and 37 (high). One red-legged kittiwake was also reported caught by the trawl fishery in the Bering Sea in 2002; the estimated take was 9 (low) and 124 (high). Each of these takes are included in the "Other" category in the table.



The high and low estimates result from different methodologies used by observers to sample the haul. "Low" from effort data of observed hauls based on largest sample unit actually used by observers for fish species monitoring ("whole sample approach"). "High" from effort data of observed hauls based on smallest sample unit actually used by observers for fish species monitoring ("basket sample approach").

Estimates of seabird incidental catch were based on the number of seabirds, by species, in samples collected by observers from sampled trawl hauls. Observers also recorded the groundfish catch during the sample period, and the effort where appropriate. These constitute one source of data necessary for completing an estimate of total bird catch. The other data source is the total commercial fish catch as estimated by the NMFS Blend program, Alaska Region. Estimates of bird mortality were made using total tons of groundfish catch per haul or set, available from the Blend program.



Not all trawl-related seabird mortalities can be monitored by observers, so these estimates do not account for the total seabird bycatch in the Alaskan trawl fleet. For example, some birds become entangled in the sonar trawl cables used by many vessels. (See photo at right). Collaborative studies are currently underway to investigate this source of mortality and to develop measures to mitigate associated mortalities.



Web Sites

Additional information on Alaskan groundfish trawl fisheries is available at these websites:

- North Pacific Fishery Management Council: www.fakr.noaa.gov/npfmc
- Alaska Fisheries Science Center: www.afsc.noaa.gov
- NMFS Alaska Regional Office: www.fakr.noaa.gov

