

GOA Flatfish

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Executive Summary

The 2003 survey biomass estimates were used to calculate ABC's for 2005 for all species except Greenland turbot and deepsea sole, where the mean catch from 1978 to 1995 was used.

Catches for species in the deep-water or shallow-water groups were estimated from 1978 to 2003 by multiplying the group catch estimate by the estimate of the fraction of each species in the catch based on observer data.

Survey abundance estimates were higher in 2003 compared to 2001 (adjusted for the eastern GOA) for Dover sole, northern rock sole, butter sole, English sole, rex sole, sand sole and Alaska plaice. The 2003 survey abundance estimate is lower than the 2001 for starry flounder. Southern rock sole and yellowfin sole 2003 survey estimates were similar to those from 2001.

The 2003 NMFS bottom-trawl survey biomass was used as current biomass for calculation of ABC. Greenland turbot and deepsea sole ABC and OFL were calculated using average catch. The ABCs for northern and southern rock soles were estimated using F40%, ABC's for other flatfish were estimated using $F = 0.75 M$. The 2005 ABC for deep-water flatfish increased to 6,067 t from 4,877 t in 2003, due to the increase in 2003 survey estimates for Dover sole (Tables 2 and 3). The 2005 ABC for shallow-water flatfish increased to 52,073 t from 49,349 t in 2003. The 2005 ABC for rex sole increased to 12,650 t from 9,466 t in 2003, due to the increase in the 2003 survey estimates.

The flatfish resource was lightly to moderately harvested in 2003. The shallow-water, deep-water, and rex sole were only harvested at 9%, 19%, and 35%, respectively, of their ABC levels¹. The 2004 catches were lower than 2003 (Table 1). Catch in the deep-water complex declined from 2,285 t in 1999 to 804 t in 2001, increased to 946 t in 2003, then declined to 682 t through October 9, 2004. Shallow-water flatfish catch increased from 2,577 t in 1999 to 6,928 t in 2000, decreased again to 4,465 t in 2003 and further declined in 2004 to 2,938 t. Rex sole catch increased slightly from 3,060 t in 1999 to 3,591 t in 2000, declined to 3,330 t in 2003, then declined further in 2004 to 1,441 t (through October 9, 2004).

Table 1. Gulf of Alaska flatfish catch (t) through October 9, 2004.

Species	Western	Central	West Yakutat	East Yakutat/SE	Total
Arrowtooth flounder	2,779	12,240	76	33	15,128
Shallow water flatfish	129	2,808	1	0	2,938
Deep water flatfish(Dover sole)	9	614	55	4	682
Flathead sole	820	1,540	0	0	2,360
Rex sole	499	942	0	0	1,441

Table 2. Acceptable biological catch (t) for 2005 Gulf of Alaska flatfish, based on biomass estimates from the 2003 bottom trawl survey and F_{ABC} . Presented by North Pacific Fishery Management Council regulatory area. Split to Western, Central and Eastern management areas estimated by applying the average fraction of the catch in each area from 1991 to 1995.

	Area				Total
	Western	Central	West Yakutat	East Yakutat/SE	
<i>Deep-water flatfish</i>					
Dover sole	187	2,921	1,872	904	5,884
Greenland turbot ^a	122	40	9	8	179
Deep-sea sole ^a	0	4	0	0	4
Total	309	2,965	1,881	912	6,067
<i>Shallow-water flatfish</i>					
Northern Rock sole	7,238	6,188	0	0	13,426
Southern Rock sole	7,491	8,869	170	768	17,298
Total Rock sole	14,729	15,057	170	768	30,723
Yellowfin sole	5,338	1,590	0	0	6,928
Butter sole	427	3,180	333	3	3,942
Starry flounder	678	6,302	428	0	7,408
English sole	42	679	1,094	441	2,257
Sand sole	0	168	4	0	172
Alaska plaice	370	272	0	0	643
Total	21,584	27,247	2,028	1,213	52,073
Rex sole	1,679	7,344	1,337	2,290	12,650

^a 0.75 * Average catch used to calculate ABC level.

Table 3. Overfishing level (t) for 2005 Gulf of Alaska flatfish, based on biomass estimates from the 2003 bottom trawl survey and F_{OFL} . Presented by North Pacific Fishery Management Council regulatory area. Split to Western, Central and Eastern management areas estimated by applying the average fraction of the catch in each area from 1991 to 1995.

	Area				Total
	Western	Central	West Yakutat	East Yakutat/SE	
<i>Deep-water flatfish</i>					
Dover sole	247	3,854	2,470	1,193	7,764
Greenland turbot ^a	162	53	12	11	238
Deep-sea sole ^a	0	6	0	0	6
Total Deep-water	408	3,914	2,483	1,204	8,008
<i>Shallow-water flatfish</i>					
Northern rock sole	8,529	7,291	0	0	15,820
Southern rock sole	8,754	10,365	199	898	20,215
Total rock sole	17,275	17,660	199	901	36,034
Yellowfin sole	6,952	2,071	0	0	9,023
Butter sole	556	4,142	434	4	5,134
Starry flounder	883	8,208	557	0	9,648
English sole	55	884	1,425	574	2,939
Sand sole	0	219	5	0	224
Alaska plaice	482	354	0	0	837
Total shallow-water	26,462	33,405	2,486	1,487	63,841
Rex sole	2,187	9,565	1,741	2,983	16,476

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