

# Final 2016 Sport Halibut Harvest Estimates for Areas 2C and 3A

## Alaska Department of Fish and Game

### 1. Area 2C

Table 1.1. Area 2C sport halibut harvest estimates by sector and subarea, 2016.

Subarea	Charter			Non-charter (unguided)		
	No. Fish <sup>a</sup>	Avg. Wt. <sup>b</sup>	Yield (Mlb)	No. Fish <sup>a</sup>	Avg. Wt. <sup>b</sup>	Yield (Mlb)
Ketchikan	8,414	13.15	0.111	8,569	18.56	0.159
POW Island	16,999	10.14	0.172	12,226	14.73	0.180
PBG/WRG	2,095	17.81	0.037	15,425	21.21	0.327
Sitka	24,528	11.78	0.289	5,336	14.50	0.077
Jun/Haines/Skag	7,642	9.67	0.074	13,751	12.72	0.175
Glacier Bay	6,469	16.37	0.106	11,407	28.71	0.327
Area 2C	66,147	11.93	0.789	66,714	18.68	1.246

<sup>a</sup>-Number of fish harvested in charter fishery is from logbook data, estimate for non-charter fishery is from the ADF&G Statewide Harvest Survey.

<sup>b</sup>-Average net weight (headed and gutted).

Table 1.2. Approximate 95% confidence intervals for yield estimates (million pounds).

User	Yield	StdErr	Lower 95%	Upper 95%
Charter	0.789	0.010	0.770	0.808
Non-Charter	1.246	0.074	1.101	1.391
Overall Sport	2.035	0.075	1.889	2.181

Table 1.3. Comparison of preliminary and final estimates of sport halibut removals in Area 2C in 2016 (million pounds).

Sector	Removal	Preliminary (Nov 2016)	Final	Difference (Final-Prelim)
Charter	Yield	0.792	0.789	-0.003
	O26 Release mort (waste)	0.052	0.050	-0.002
	Total	0.844	0.839	-0.005
Non-charter	Yield	1.308	1.246	-0.062
	All Release mort (waste)	0.021	0.020	-0.001
	Total	1.329	1.266	-0.063

Table 1.4. Performance of Area 2C charter management measures recommended annually by the North Pacific Fishery Management Council under the Catch Sharing Plan, 2014-2016.

Year	Measures	Allocation (Mlb)	Removals <sup>a</sup> (Mlb)	Under(-)/Over(+) Allocation	
				Mlb	Percent
2014	One fish, U44"-O76", CSP provisions	0.761	0.827	+0.066	+8.7%
2015	One fish, ≤ 42" or ≥ 80", CSP provisions.	0.851	0.814	-0.037	-4.4%
2016	One fish, ≤ 43" or ≥ 80", CSP provisions.	0.906	0.839	-0.067	-7.4%

<sup>a</sup>-Removals includes harvest and O26 release mortality.

Table 1.5. Area 2C sport halibut yield (excluding release mortality) by sector since 2000. Charter harvest (no. fish) was as reported in charter logbooks for 2014 on and estimated using the ADF&G mail survey before 2014.

Year	Charter			Non-Charter			Total Sport Harvest		
	Harvest (no. fish)	Avg. Wt. (lb net)	Yield (Mlb)	Harvest (no. fish)	Avg. Wt. (lb net)	Yield (Mlb)	Harvest (no. fish)	Avg. Wt. (lb net)	Yield (Mlb)
2000	57,208	19.75	1.130	54,432	20.59	1.121	111,640	20.16	2.251
2001	66,435	18.10	1.202	43,519	16.56	0.721	109,954	17.49	1.923
2002	64,614	19.74	1.275	40,199	20.25	0.814	104,813	19.94	2.090
2003	73,784	19.13	1.412	45,697	18.52	0.846	119,481	18.90	2.258
2004	84,327	20.75	1.750	62,989	18.84	1.187	147,316	19.93	2.937
2005	102,206	19.10	1.952	60,364	14.01	0.845	162,570	17.21	2.798
2006	90,471	19.94	1.804	50,520	14.30	0.723	140,991	17.92	2.526
2007	109,835	17.46	1.918	68,498	16.51	1.131	178,333	17.10	3.049
2008	102,965	19.42	1.999	66,296	19.08	1.265	169,261	19.28	3.264
2009	53,602	23.31	1.249	65,549	17.29	1.133	119,151	20.00	2.383
2010	41,202	26.36	1.086	52,896	16.72	0.885	94,098	20.94	1.971
2011	36,545	9.40	0.344	42,202	16.24	0.685	78,747	13.07	1.029
2012	42,436	14.27	0.605	54,696	17.87	0.977	97,132	16.30	1.583
2013	52,675	14.47	0.762	78,078	17.43	1.361	130,753	16.24	2.123
2014	65,036	12.04	0.783	69,060	16.95	1.170	134,096	14.57	1.954
2015	65,656	11.69	0.768	73,816	17.97	1.327	139,472	15.02	2.094
2016	66,147	11.93	0.789	66,714	18.68	1.246	132,861	15.32	2.035

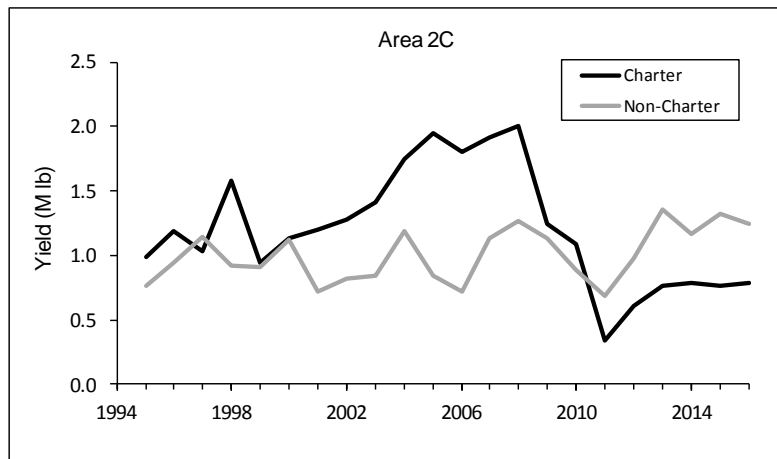


Figure 1.1. Charter and non-charter halibut yield (M lb) in Area 2C since 1995.

## 2. Area 3A

Table 2.1. Area 3A sport halibut harvest estimates by sector and subarea, 2016.

Subarea	Charter			Non-charter (unguided)		
	No. Fish <sup>a</sup>	Avg. Wt. <sup>b</sup>	Yield (Mlb)	No. Fish <sup>a</sup>	Avg. Wt. <sup>b</sup>	Yield (Mlb)
Central Cook Inlet	28,747	12.24	0.352	27,711	10.85	0.301
Lower Cook Inlet	64,392	10.20	0.657	58,114	9.32	0.541
Kodiak	8,436	11.98	0.101	6,544	13.26	0.087
North Gulf Coast	42,721	11.57	0.494	13,450	11.80	0.159
Eastern PWS	4,742	28.00	0.133	8,380	21.77	0.182
Western PWS	4,487	22.58	0.101	12,267	18.54	0.227
Yakutat	3,259	33.97	0.111	2,116	19.01	0.040
Glacier Bay	1,428	38.94	0.056	--	--	--
Area 3A	158,212	12.67	2.004	128,582	11.96	1.538

<sup>a</sup>-Number of fish harvested in charter fishery is from logbook data, estimate for non-charter fishery is from the ADF&G Statewide Harvest Survey.

<sup>b</sup>-Average net weight (headed and gutted).

Table 2.2 Approximate 95% confidence intervals for yield estimates (million pounds).

User	Yield	StdErr	Lower 95%	Upper 95%
Charter	2.004	0.080	1.848	2.161
Non-Charter	1.538	0.096	1.350	1.726
Overall Sport	3.542	0.125	3.297	3.787

Table 2.3 Comparison of preliminary and final estimates of sport halibut removals in Area 3A in 2016 (million pounds).

Sector	Removal	Preliminary (Nov 2016)	Final	Difference (Final-Prelim)
Charter	Yield	1.964	2.004	0.040
	O26 Release mort (waste)	0.016	0.017	0.001
	Total	1.980	2.021	0.041
Non-charter	Yield	1.528	1.538	0.010
	All Release mort (waste)	0.031	0.027	-0.004
	Total	1.559	1.565	0.006

Table 2.4. Performance of Area 3A charter management measures recommended annually by the North Pacific Fishery Management Council under the Catch Sharing Plan, 2014-2016.

Year	Measures	Allocation (Mlb)	Removals <sup>a</sup> (Mlb)	Under(-)/Over(+) Allocation	
				Mlb	Percent
2014	Two fish, one < 29", one trip per vessel per day, CSP provisions.	1.782	2.066	+0.284	+15.9%
2015	Two fish, one < 29", one trip per vessel per day, Thursdays closed 6/15-8/31, 5-fish annual limit, CSP provisions.	1.890	2.094	+0.204	+10.8%
2016	Two fish, one < 28", one trip per vessel per day, Wednesdays closed, 4-fish annual limit, CSP provisions.	1.814	2.021	+0.207	+11.4%

<sup>a</sup>-Removals includes harvest and O26 release mortality.

Table 2.5. Area 3A sport halibut yield (excluding release mortality) by sector since 2000. Charter harvest (no. fish) was as reported in charter logbooks for 2014 on and estimated using the ADF&G mail survey before 2014.

Year	Charter			Non-Charter			Total Sport Harvest		
	Harvest (no. fish)	Avg. Wt. (lb net)	Yield (Mlb)	Harvest (no. fish)	Avg. Wt. (lb net)	Yield (Mlb)	Harvest (no. fish)	Avg. Wt. (lb net)	Yield (Mlb)
2000	159,609	19.67	3.140	128,427	16.86	2.165	288,036	18.42	5.305
2001	163,349	19.18	3.132	90,249	17.09	1.543	253,598	18.43	4.675
2002	149,608	18.20	2.724	93,240	15.86	1.478	242,848	17.30	4.202
2003	163,629	20.67	3.382	118,004	17.34	2.046	281,633	19.27	5.427
2004	197,208	18.60	3.668	134,960	14.35	1.937	332,168	16.88	5.606
2005	206,902	17.83	3.689	127,086	15.61	1.984	333,988	16.98	5.672
2006	204,115	17.95	3.664	114,887	14.57	1.674	319,002	16.73	5.337
2007	236,133	16.95	4.002	166,338	13.71	2.281	402,471	15.61	6.283
2008	198,108	17.05	3.378	145,286	13.37	1.942	343,394	15.49	5.320
2009	167,599	16.31	2.734	150,205	13.47	2.023	317,804	14.97	4.758
2010	177,460	15.20	2.698	124,088	12.79	1.587	301,548	14.21	4.285
2011	184,293	15.16	2.793	128,464	12.57	1.615	312,757	14.09	4.408
2012	173,582	13.16	2.284	113,359	11.83	1.341	286,941	12.64	3.626
2013	199,248	12.62	2.514	121,568	11.94	1.452	320,816	12.36	3.966
2014	174,351	11.67	2.034	127,125	12.06	1.533	301,476	11.83	3.568
2015	163,632	12.63	2.067	136,225	11.86	1.616	299,857	12.28	3.682
2016	158,212	12.67	2.004	128,582	11.96	1.538	286,794	12.35	3.542

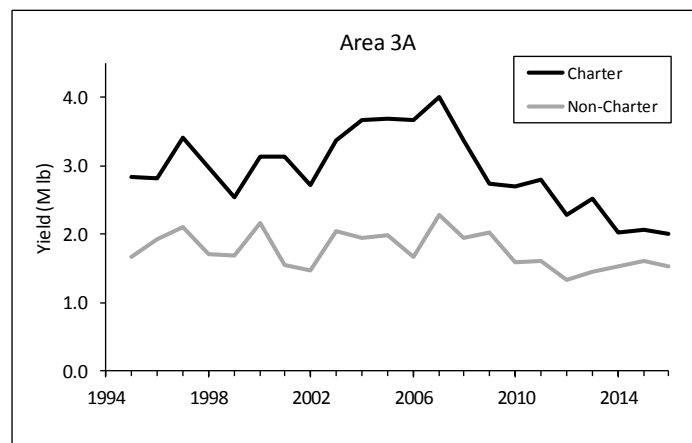


Figure 2.1. Charter and non-charter halibut yield (M lb) in Area 3A since 1995.

### 3. Comparison of Charter Logbook and Mail Survey Estimates

Table 3.1. Comparison of estimates of charter halibut yield based on numbers of fish reported harvested in charter logbooks and estimated via the ADF&G Statewide Harvest Survey (SWHS), 2006-2016. Logbook data include all reported harvest by clients, comps, and crew.

Area	Year	Logbook		SWHS	
		Yield (Mlb)	StdError	Yield (Mlb)	StdError
2C	2006	2.063	0.052	1.804	0.089
	2007	2.015	0.028	1.918	0.085
	2008	1.974	0.025	1.999	0.099
	2009	1.187	0.022	1.249	0.071
	2010	1.249	0.040	1.086	0.077
	2011	0.452	0.005	0.344	0.015
	2012	0.728	0.025	0.605	0.034
	2013	0.825	0.026	0.762	0.037
	2014	0.783	0.014	0.677	0.027
	2015	0.768	0.013	0.739	0.030
	2016	0.789	0.010	0.623	0.024
3A	2006	4.689	0.072	3.664	0.108
	2007	4.229	0.059	4.002	0.120
	2008	3.865	0.063	3.378	0.142
	2009	3.044	0.055	2.734	0.133
	2010	3.238	0.123	2.698	0.116
	2011	3.308	0.133	2.793	0.129
	2012	2.802	0.087	2.284	0.087
	2013	2.724	0.085	2.514	0.093
	2014	2.034	0.069	1.858	0.076
	2015	2.067	0.079	1.918	0.082
	2016	2.004	0.080	1.913	0.089

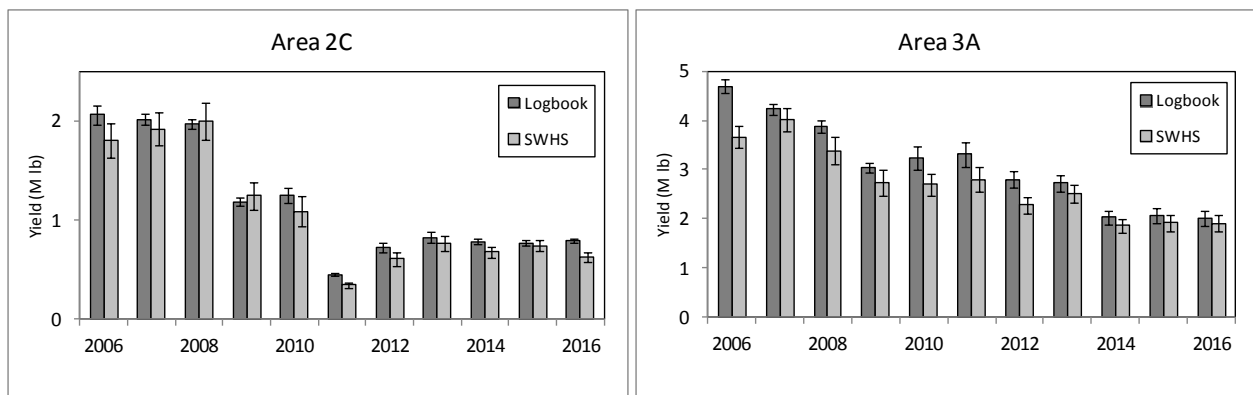


Figure 3.1. Comparison of logbook- and SWHS-based estimates of charter halibut yield in Areas 2C and 3A (with approx 95% confidence intervals).