

# Final 2018 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, 2018.

Subarea	Charter (logbook)			Unguided (SWHS)		
	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	9,538	10.07	0.096	7,944	17.09	0.136
POW Island	18,731	7.17	0.134	8,770	19.12	0.168
PBG/WRG	2,143	13.08	0.028	11,248	18.94	0.213
Sitka	24,327	10.57	0.257	4,820	28.20	0.136
Jun/Haines/Skag	7,998	7.05	0.056	13,976	15.80	0.221
Glacier Bay	7,255	11.61	0.084	10,930	31.41	0.343
Area 2C	69,992	9.37	0.656	57,688	21.09	1.216

<sup>a</sup>-Number of fish harvested in charter fishery is from logbook data, estimate for unguided 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	Estimate	StdErr	Lower 95%	Upper 95%
Charter	0.656	0.019	0.618	0.694
Unguided	1.216	0.070	1.079	1.354
Overall	1.873	0.073	1.730	2.015

Table 1.3. Comparison of preliminary and final estimates of sport halibut removals in Area 2C in 2018 (million pounds).

Sector	Removal	Preliminary (Oct 2018)	Final (Oct 2019)	Diff (M lb) (Prelim – Final)
Charter	Yield	0.668	0.656	0.012
	O26 Rel mort	0.060	0.060	0.000
	Total	0.728	0.716	0.012
Unguided	Yield	1.362	1.216	0.145
	All Rel mort	0.017	0.015	0.002
	Total	1.379	1.231	0.147

Table 1.4. Performance of Area 2C charter management measures recommended annually by the North Pacific Fishery Management Council under the Catch Sharing Plan, 2014-2018.

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	-4.3%
2016	One fish, ≤ 43" or ≥ 80", CSP provisions.	0.906	0.839	-0.067	-7.4%
2017	One fish, ≤ 44" or ≥ 80", CSP provisions.	0.915	0.941	+0.026	+2.8%
2018	One fish, ≤ 38" or ≥ 80", CSP provisions.	0.810	0.716	-0.094	-11.6%

<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) from charter logbook data beginning in 2014 and estimated using the ADF&G mail survey before 2014.

Year	Charter			Unguided			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
2017	70,647	12.76	0.901	60,817	20.03	1.218	131,464	16.12	2.120
2018	69,992	9.37	0.656	57,688	21.09	1.216	127,680	14.67	1.873

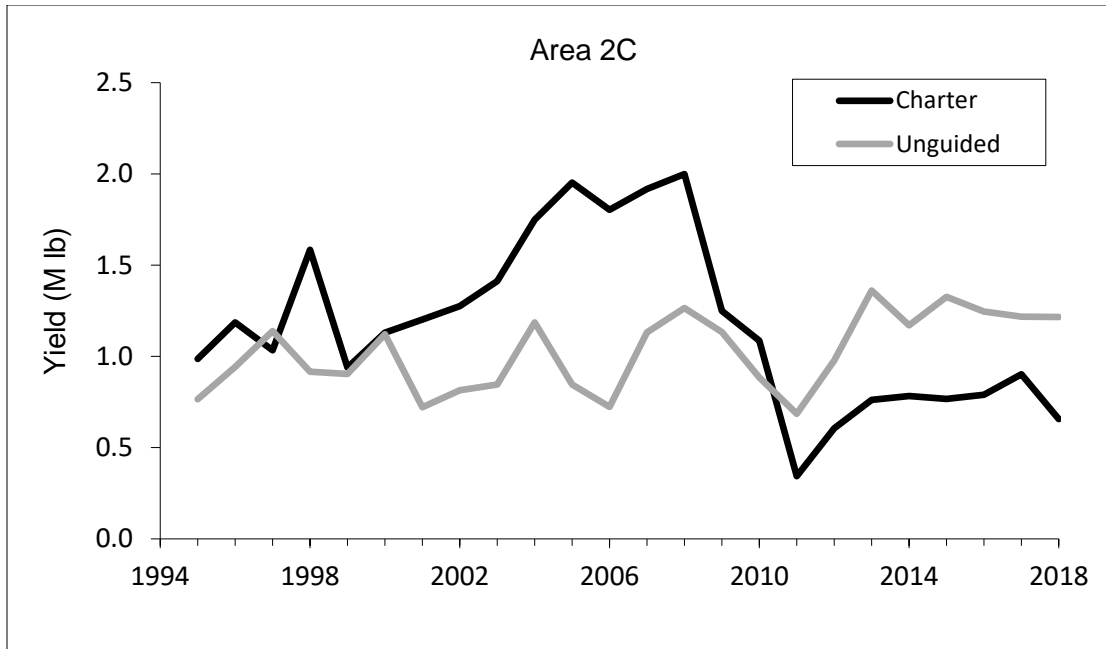


Figure 1.1. Charter and Unguided halibut yield (M lb) in Area 2C since 1995.

## 2. Area 3A

Table 2.1. Area 3A sport halibut harvest estimates by sector and subarea, 2018.

Subarea	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	28,183	11.03	0.311	25,166	12.05	0.303
Lower Cook Inlet	56,262	8.81	0.496	45,972	10.33	0.475
Kodiak	7,488	12.38	0.093	6,352	14.08	0.089
North Gulf Coast	29,068	15.45	0.449	9,165	18.54	0.170
Eastern PWS	4,803	34.45	0.165	7,364	30.07	0.221
Western PWS	4,302	26.96	0.116	10,032	23.18	0.233
Yakutat	4,322	37.36	0.161	1,829	34.82	0.064
Glacier Bay	1,884	43.83	0.083	--	--	--
Area 3A	136,312	13.75	1.874	105,880	14.69	1.555

<sup>a</sup>-Number of fish harvested in charter fishery is from logbook data, estimate for unguided 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	Estimate	StdErr	Lower 95%	Upper 95%
Charter	1.874	0.057	1.761	1.986
Unguided	1.555	0.095	1.369	1.742
Overall	3.429	0.111	3.211	3.647

Table 2.3 Comparison of preliminary and final estimates of sport halibut removals in Area 3A in 2018 (million pounds).

Sector	Removal	Preliminary (Oct 2018)	Final	Difference (Prelim - Final)
Charter	Yield	1.850	1.874	-0.023
	O26 Release mort (waste)	0.011	0.012	-0.001
	Total	1.862	1.886	-0.025
Unguided	Yield	1.738	1.555	0.183
	All Release mort (waste)	0.028	0.020	0.007
	Total	1.765	1.575	0.190

Table 2.4. Performance of Area 3A charter management measures recommended annually by the North Pacific Fishery Management Council under the Catch Sharing Plan, 2014-2018.

Year	Measures	Allocation	Removals <sup>a</sup>	Under(-)/Over(+) Allocation	
		(Mlb)	(Mlb)	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%
2017	Two fish, one < 28", one trip per vessel per day, Wed closed all year, three Tuesdays closed, annual limit=4, CSP provisions.	1.890	2.089	+0.199	+10.5%
2018	Two fish, one < 28", one trip per vessel per day, Wed closed all year, six Tuesdays closed, annual limit=4, CSP provisions.	1.790	1.886	+0.096	+5.4%

<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) from charter logbook data beginning in 2014 and estimated using the ADF&G mail survey before 2014.

Year	Charter			Unguided			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
2017	142,664	14.55	2.076	108,972	14.04	1.530	251,636	14.33	3.606
2018	136,312	13.75	1.874	105,880	14.69	1.555	242,192	14.16	3.429

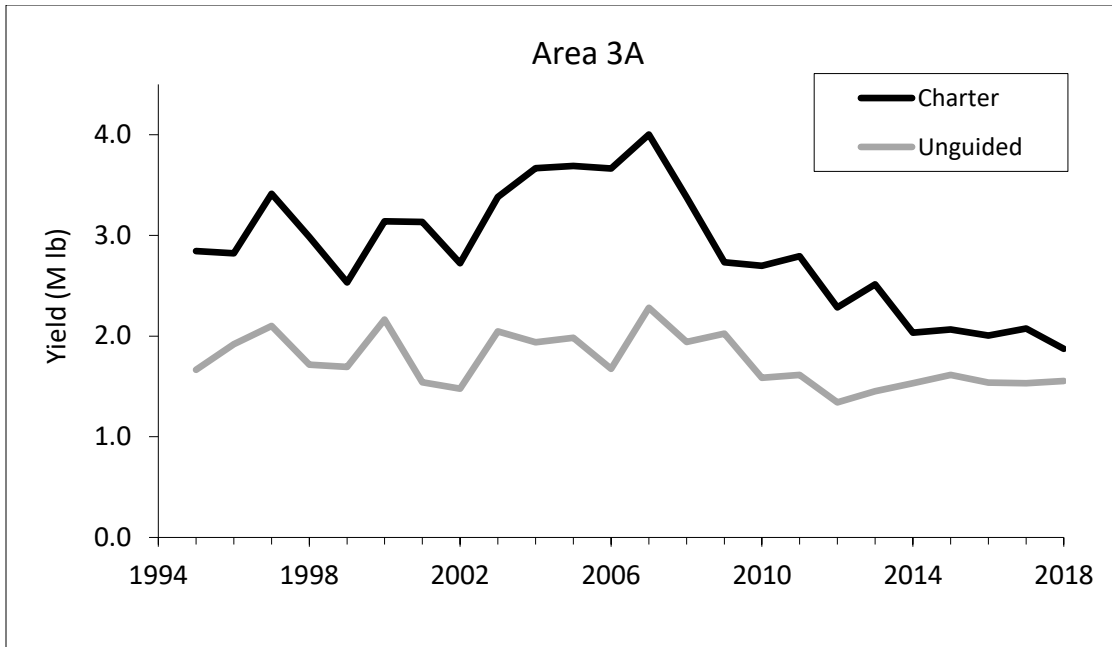


Figure 2.1. Charter and Unguided halibut yield (M lb) in Area 3A since 1995.

### 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), 2006-2018. 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
	2017	0.901	0.029	0.647	0.028
	2018	0.656	0.019	0.551	0.022
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
	2017	2.076	0.082	1.945	0.090
	2018	1.874	0.057	1.829	0.072

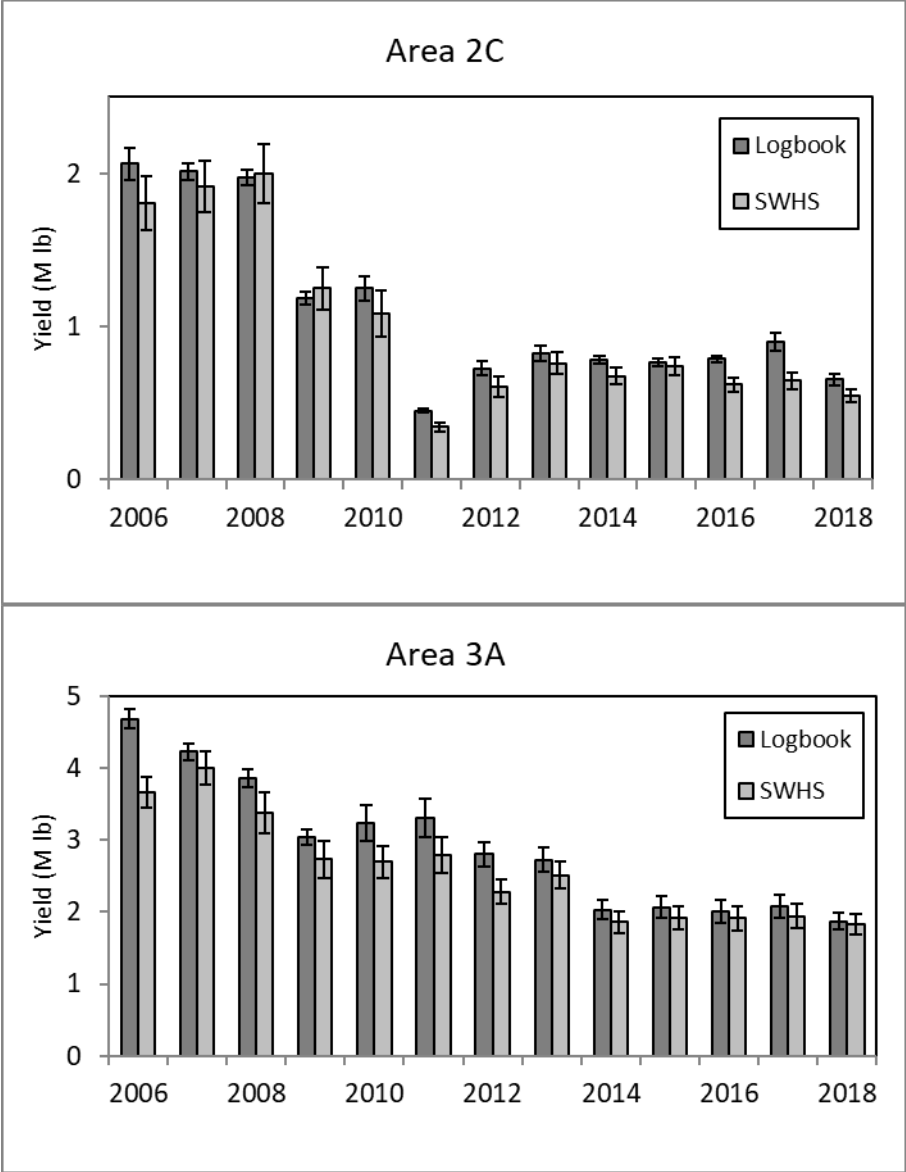


Figure 3.1. Comparison of logbook- and SWHS-based estimates of charter halibut yield in Areas 2C and 3A (with approx 95% confidence intervals).