

Alaska Recreational Halibut Fisheries



**For the International Pacific Halibut Commission
2019 Annual Meeting**

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Overview

- ▶ Alaska recreational fishery review through 2018
- ▶ Analysis of charter management measures for 2019
 - ▶ Area 2C
 - ▶ Area 3A

Fishery Review Through 2018



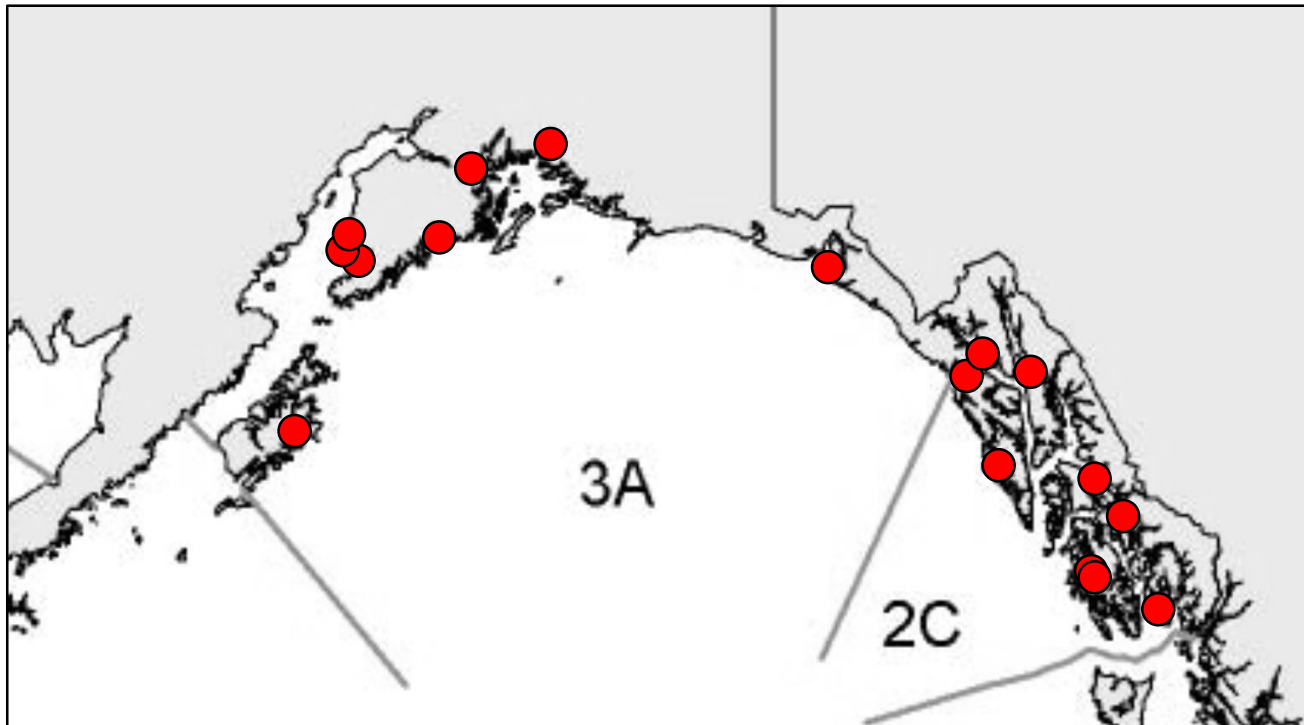
Photo: Eric Lehm

What estimates does ADF&G provide to IPHC?

- ▶ Numbers of halibut harvested & released
- ▶ Average weight of harvest
- ▶ Yield and release mortality in pounds
- ▶ Harvest prior to the IPHC survey in 2C, 3A
- ▶ Length, age, and sex composition (on request)

Data Sources

- ▶ Charter logbook (statewide, mandatory)
- ▶ Statewide harvest survey (mail)
- ▶ Creel surveys at major ports in 2C, 3A



Charter Information (2017)

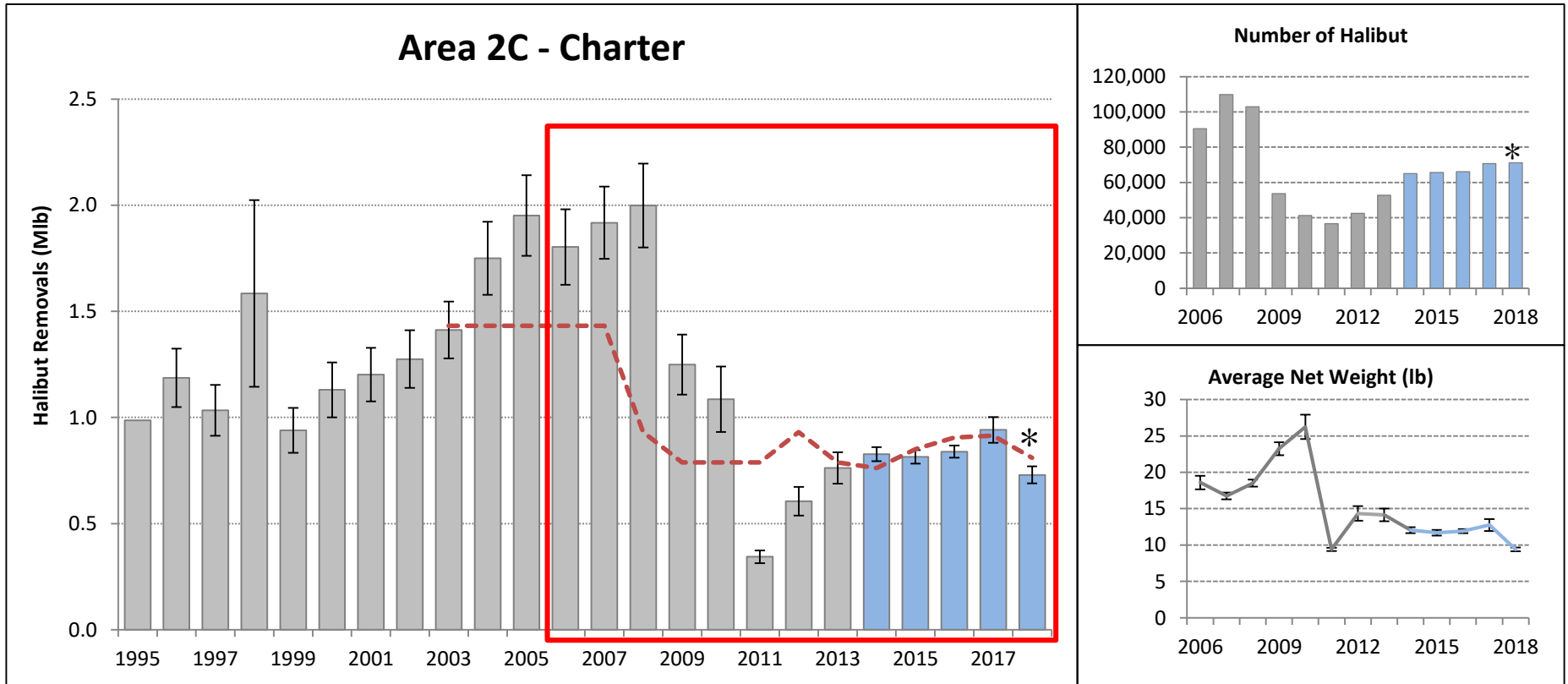
▶ Businesses that harvested halibut

Area Fished	No. Businesses
2C	240
3A	220
2C and 3A	8
3B	3
4A	1

▶ Charter vessels that harvested halibut

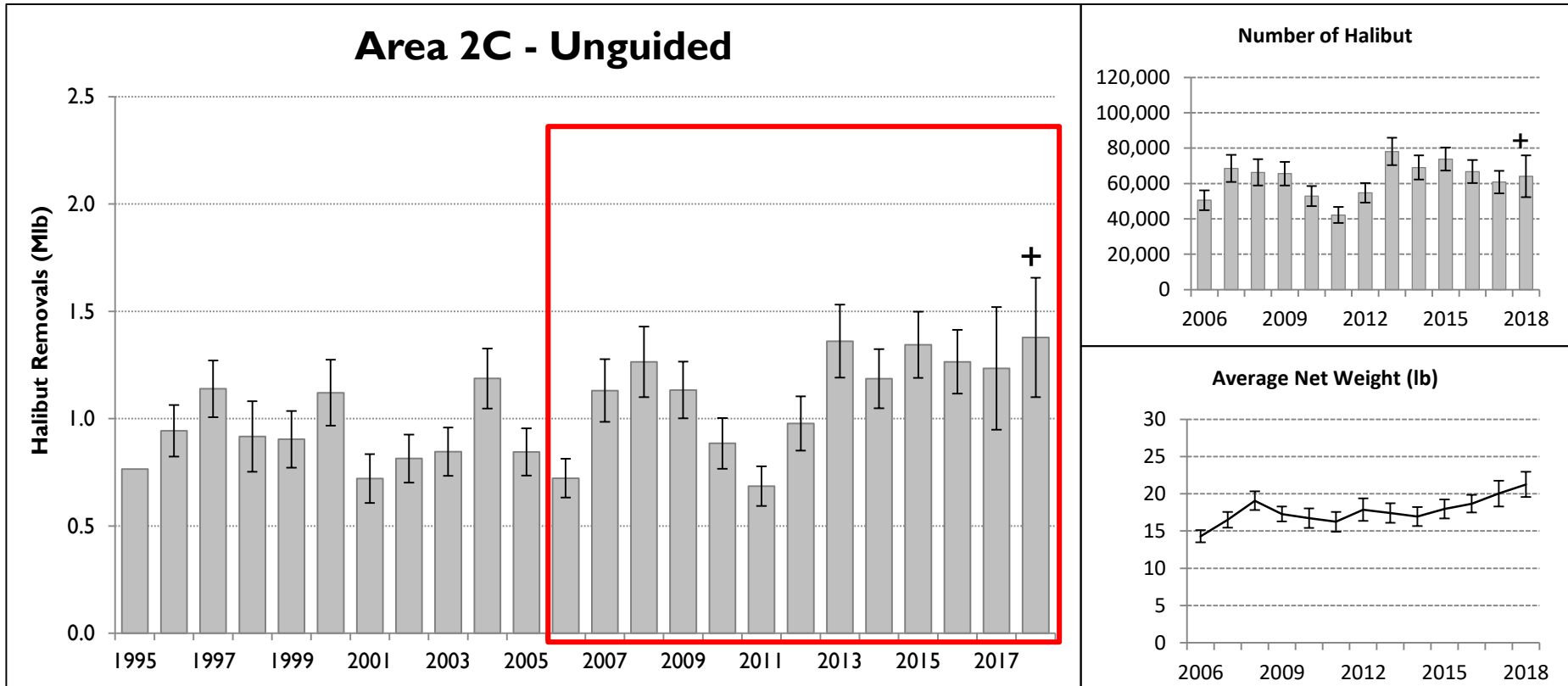
Area Fished	No. Vessels
2C	513
3A	350
2C and 3A	25
3B	3
4A	1

Area 2C Charter



* Projection based on data through July 31

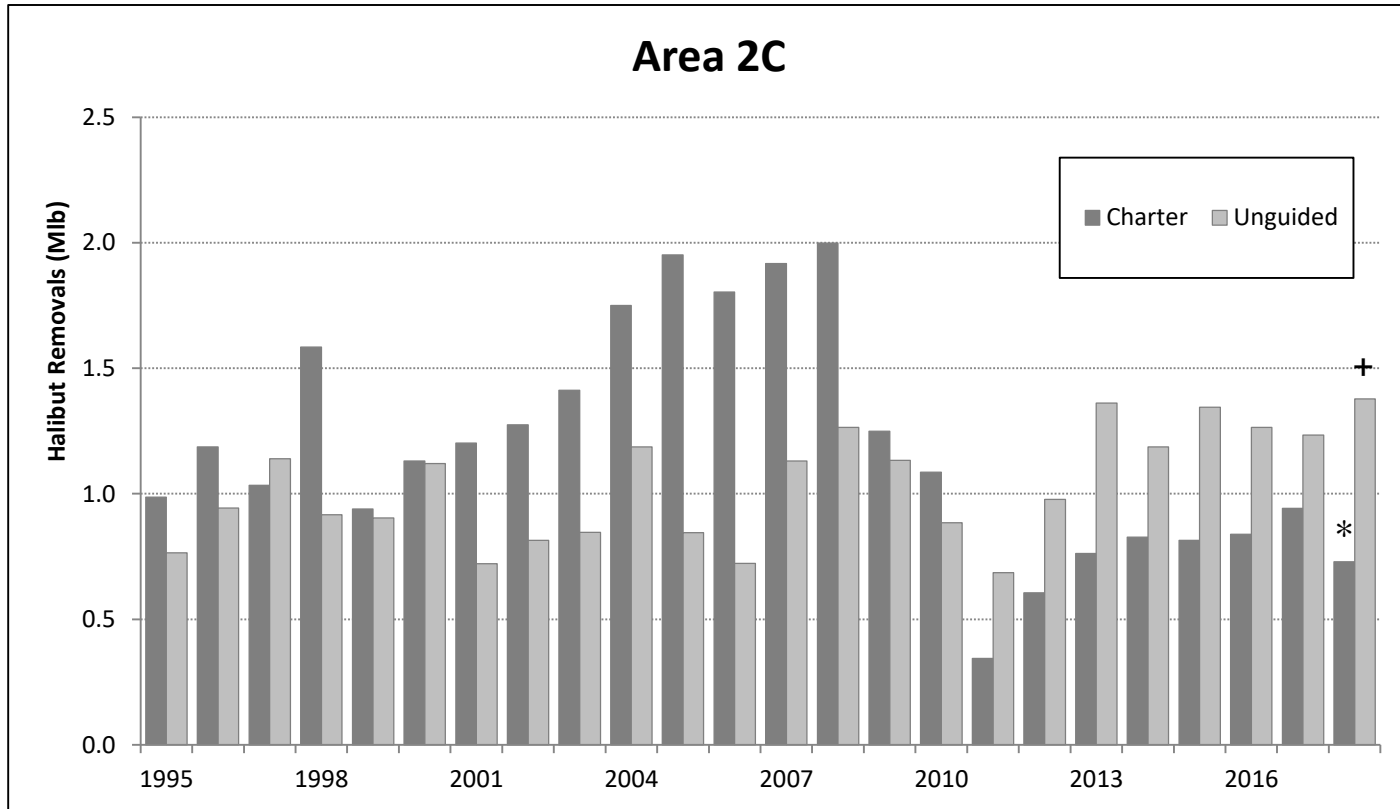
Area 2C Unguided



+ Time series forecast



Area 2C Charter and Unguided

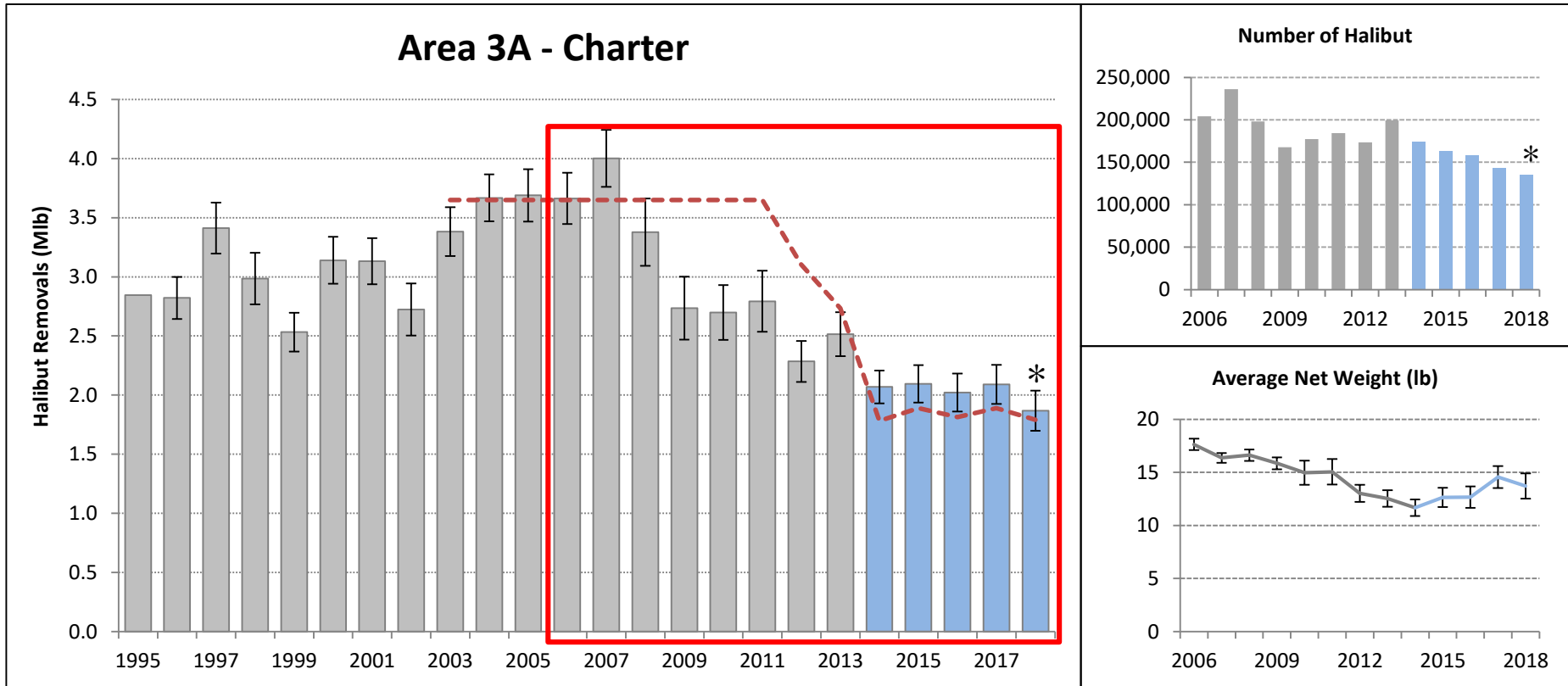


* Projection based on data through July 31

+ Time series forecast

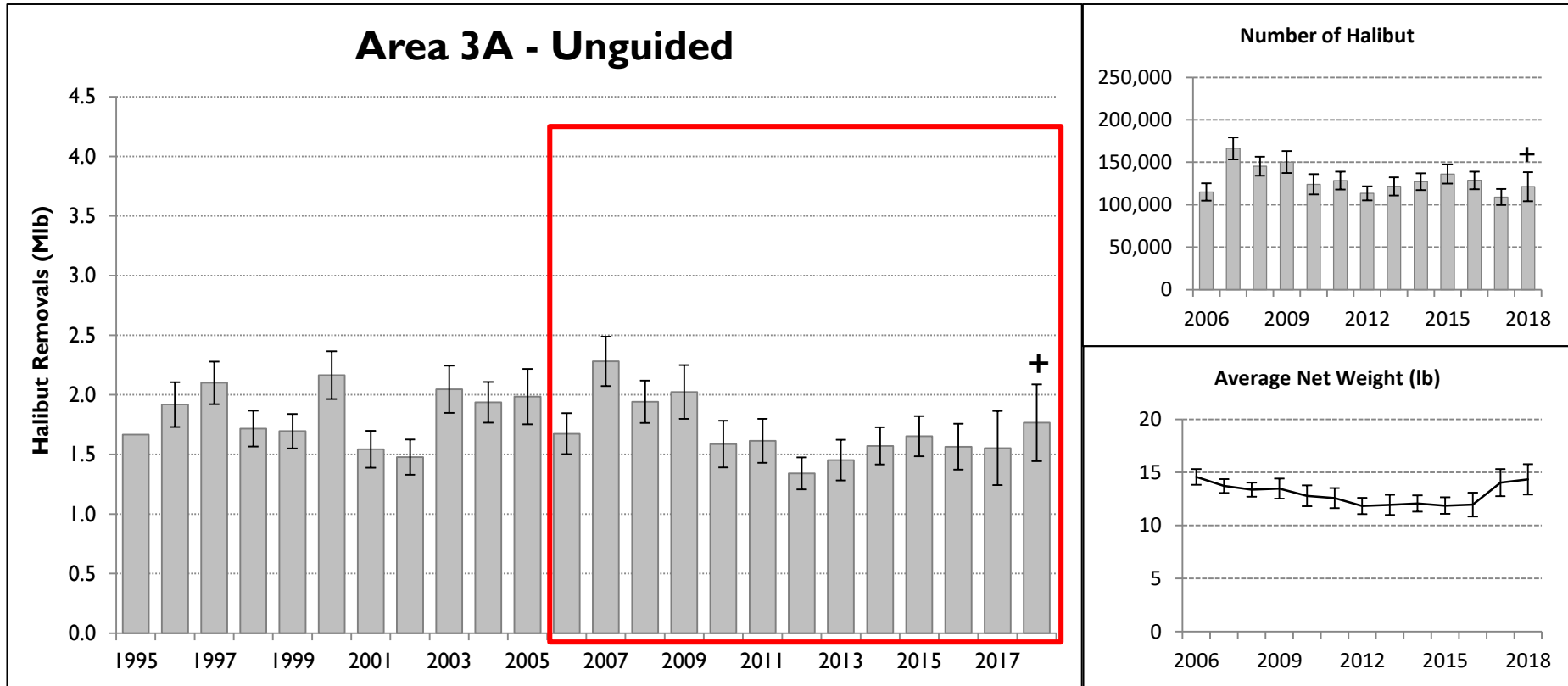


Area 3A Charter



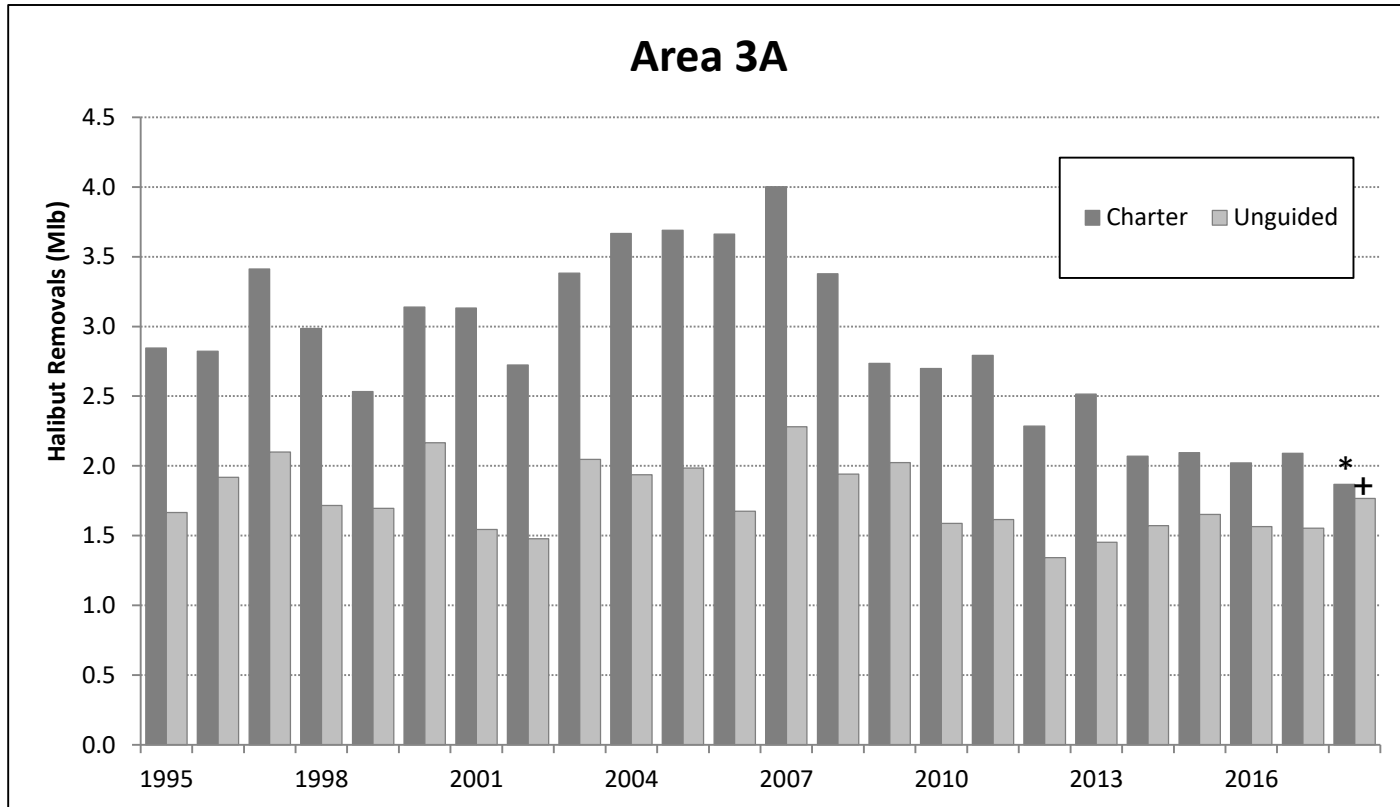
* Projection based on data through July 31

Area 3A Unguided



+ Time series forecast

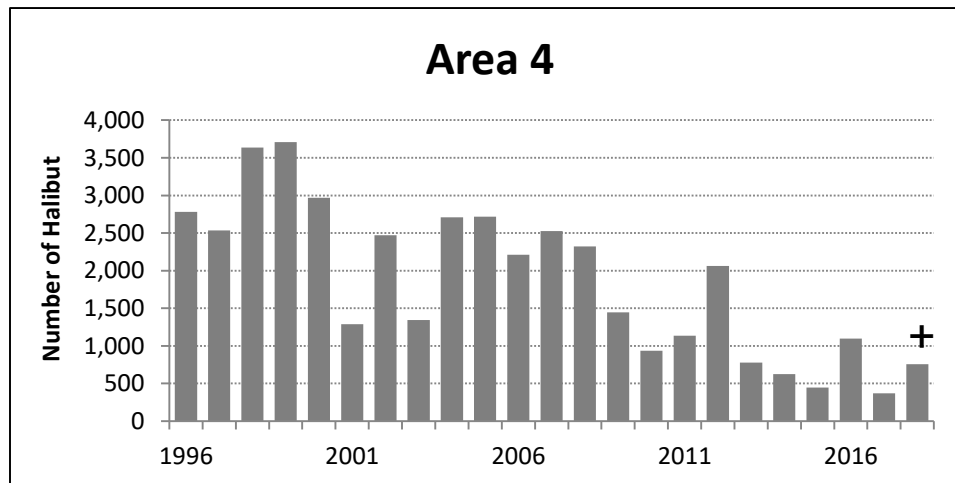
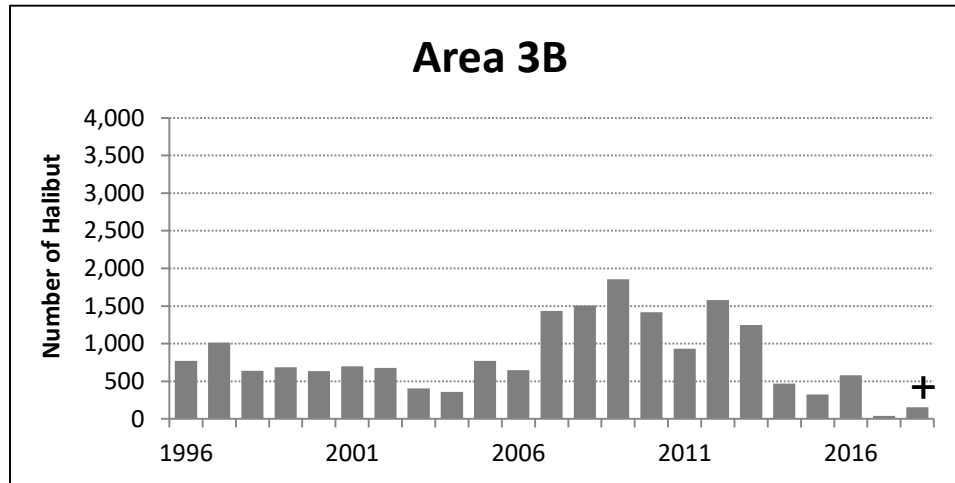
Areas 3A – Charter and Unguided



* Projection based on data through July 31

+ Time series forecast

Areas 3B and 4 – Total Recreational Harvest



+ Time series forecast



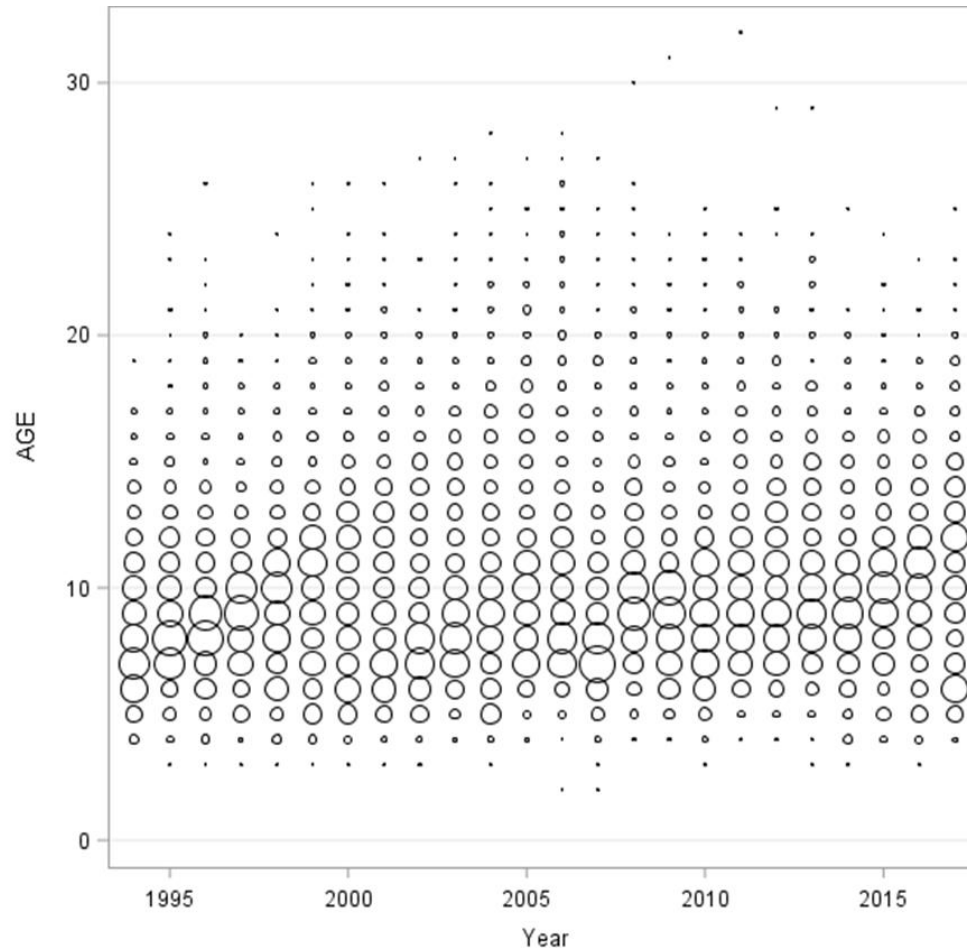
Recreational Fishery Release Mortality (Mlb)

Area	Year	Yield	Total RelMort	% of Removals
2C	2014	1.954	0.062	3.1%
	2015	2.094	0.065	3.0%
	2016	2.035	0.071	3.4%
	2017	2.120	0.057	2.6%
	2018	<i>2.029</i>	<i>0.078</i>	3.7%
3A	2014	3.567	0.070	1.9%
	2015	3.682	0.073	1.9%
	2016	3.542	0.056	1.6%
	2017	3.606	0.045	1.2%
	2018	<i>3.588</i>	<i>0.044</i>	1.2%
3B	2014	0.007	0.000	0.0%
	2015	0.005	0.000	0.0%
	2016	0.008	0.000	0.0%
	2017	0.001	0.000	0.0%
	2018	<i>0.002</i>	<i>0.000</i>	0.0%
4	2014	0.009	0.000	0.0%
	2015	0.007	0.000	0.0%
	2016	0.015	0.000	0.0%
	2017	0.006	0.000	0.0%
	2018	<i>0.011</i>	<i>0.000</i>	0.0%

Red italics = preliminary estimates.



Age Composition (Area 3A)



Analysis of Charter Management Measures for 2019



General Methods

$$\text{Effort} \times \text{HPUE} = \text{Harvest}$$

$$\text{Harvest} \times \text{Average Weight} = \text{Yield}$$

$$\text{Yield} + \text{Release Mortality} = \text{Removals}$$



2C – Status Quo

- ▶ One fish bag limit, U38080 reverse slot size limit

	2018 Prelim Estimates	2019 Forecast
Harvest (number of fish)	71,107	75,988
Average Weight (lbs)	9.39	10.06
Removals (Mlb)	0.729	0.833

Area 2C – Reverse Slot Limit

- ▶ Management measure selected by NPFMC
 - ▶ If the 2C charter allocation is 0.81Mlb, use status quo management measures
 - ▶ If the allocation is above or below 0.81Mlb, adjust the lower slot to keep the 2C charter sector within their allocation

No annual limit

Lower Limit (in)	Upper Length Limit (in)															
	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80
35	1.410	1.316	1.246	1.167	1.111	1.059	0.986	0.916	0.877	0.845	0.813	0.792	0.763	0.746	0.744	0.731
36	1.440	1.349	1.280	1.203	1.147	1.096	1.024	0.956	0.917	0.885	0.853	0.833	0.804	0.787	0.785	0.772
37	1.456	1.366	1.298	1.222	1.167	1.117	1.046	0.977	0.939	0.908	0.876	0.856	0.828	0.811	0.809	0.796
38	1.482	1.394	1.328	1.254	1.200	1.150	1.080	1.013	0.975	0.944	0.913	0.893	0.865	0.848	0.846	0.833
39	1.500	1.413	1.348	1.275	1.222	1.172	1.103	1.037	0.999	0.969	0.938	0.918	0.890	0.874	0.872	0.859
40	1.512	1.427	1.363	1.291	1.238	1.190	1.121	1.056	1.019	0.989	0.958	0.938	0.911	0.894	0.892	0.880
41	1.529	1.446	1.384	1.312	1.261	1.213	1.145	1.081	1.044	1.014	0.984	0.964	0.937	0.921	0.919	0.906
42	1.537	1.455	1.394	1.324	1.273	1.226	1.159	1.095	1.059	1.029	0.999	0.980	0.953	0.936	0.935	0.922
43	1.547	1.467	1.406	1.337	1.287	1.240	1.174	1.111	1.075	1.046	1.016	0.997	0.970	0.954	0.952	0.940
44	1.563	1.485	1.426	1.358	1.309	1.263	1.198	1.135	1.100	1.071	1.041	1.022	0.996	0.980	0.978	0.966
45	1.582	1.506	1.448	1.381	1.333	1.288	1.223	1.162	1.127	1.098	1.069	1.050	1.024	1.008	1.006	0.994
46	1.592	1.517	1.460	1.394	1.346	1.302	1.238	1.178	1.143	1.115	1.086	1.067	1.041	1.026	1.024	1.012
47	1.608	1.535	1.479	1.414	1.367	1.324	1.261	1.201	1.167	1.139	1.110	1.092	1.066	1.051	1.049	1.037
48	1.616	1.544	1.489	1.426	1.380	1.336	1.274	1.215	1.181	1.154	1.125	1.107	1.081	1.066	1.064	1.052
49	1.636	1.566	1.512	1.450	1.405	1.362	1.301	1.243	1.209	1.182	1.154	1.136	1.111	1.096	1.094	1.082
50	1.646	1.578	1.526	1.464	1.420	1.378	1.318	1.260	1.227	1.200	1.173	1.155	1.130	1.115	1.113	1.101

2C – Charter Halibut Management

- ▶ The following options were not selected by the NPFMC:
 - ▶ Reverse slot limit with annual limits of 1 – 5 halibut
 - ▶ Reverse slot limit with trip limits of 1 trip per permit per vessel per day
 - ▶ Reverse slot limit with a closure of one day per week
 - ▶ Reverse slot limit with a combination of an annual limit and a trip limit

3A – Status Quo

- ▶ Status quo
 - ▶ 2-fish bag limit/ one any size, one \leq 28 inches
 - ▶ Annual limit 4 fish
 - ▶ One trip per vessel per day and per CHP per day
 - ▶ Wednesdays closed all year, six Tuesdays closed

	2018 Prelim Estimate	2019 Forecast
Harvest (number of fish)	135,031	127,778
Average Weight (lbs)	13.79	14.14
Removals (Mlb)	1.867	1.834

Area 3A – Status Quo with Tuesday Closures June - August

- ▶ Management measure selected by NPFMC
 - ▶ Adjust the number of closed Tuesdays to keep the 3A charter sector within their allocation

Number of Closed Tuesdays	Beginning and Ending Dates	Percentage change in harvest relative to status quo	Projected Harvest (no. Fish)	Projected Removals (Mlb)
0		10.4%	141,083	2.023
1	Jul 30	8.8%	138,966	1.994
2	Jul 30 – Aug 6	7.2%	136,950	1.967
3	Jul 23 – Aug 6	5.8%	135,198	1.940
4	Jul 16 – Aug 6	4.1%	132,976	1.907
5	Jul 16 – Aug 13	2.7%	131,223	1.882
6 (status quo)	Jul 9 - Aug 13	0.0%	127,778	1.834
7	Jul 02 - Aug 13	-1.4%	126,004	1.808
8	Jul 02 - Aug 20	-2.5%	124,615	1.787
9	Jun 25 - Aug 20	-3.4%	123,371	1.770
10	Jun 18 - Aug 20	-4.6%	121,956	1.748
11	Jun 18 - Aug 27	-4.8%	121,673	1.744
12	Jun 11 - Aug 27	-5.7%	120,445	1.726
13	Jun 04 - Aug 27	-6.2%	119,814	1.718

3A Status Quo with Tuesday Closures and Range of Maximum Size on 2nd Fish

- ▶ Management measure selected by NPFMC
 - ▶ If the 3A charter allocation is greater than 2.023Mlb, adjust the size of the second fish up to a maximum of 30 inches

Projected Charter Removals (Mlb)

Size limit	Number of Tuesday Closures													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13
26	1.956	1.929	1.903	1.877	1.845	1.820	1.773	1.749	1.730	1.712	1.693	1.689	1.672	1.663
27	1.983	1.955	1.928	1.902	1.869	1.845	1.797	1.772	1.753	1.735	1.715	1.712	1.694	1.685
28	2.023	1.994	1.967	1.940	1.907	1.882	1.834	1.808	1.788	1.771	1.750	1.746	1.729	1.719
29	2.049	2.019	1.992	1.965	1.932	1.906	1.857	1.831	1.811	1.793	1.772	1.768	1.750	1.741
30	2.088	2.059	2.031	2.003	1.969	1.943	1.893	1.867	1.846	1.828	1.807	1.803	1.784	1.775

3A – Charter Halibut Management

- ▶ The following options were not selected by the NPFMC:
 - ▶ Status quo with Tuesdays closed June – August and additional day of the week closures
 - ▶ Status quo with reverse slot limit on one fish

Acknowledgements

- ▶ Bob Powers – logbook data
 - ▶ Diana Tersteeg, Mike Jaenicke – Southeast data
 - ▶ Martin Schuster – Southcentral data
 - ▶ Mike Martz, Bill Romberg – SWHS
 - ▶ Steve MacLean – NPFMC staff
 - ▶ Charter Halibut Management Committee
 - ▶ Numerous technicians – halibut measurements and angler interviews
 - ▶ Cooperating anglers and charter operators
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- ▶ Funding:
 - State of Alaska General Funds
 - DJ-WB Federal Aid in Fish Restoration
 - Fish & Game Funds



Photo: Crackerjack Charters