

C7: ANALYSIS OF MANAGEMENT MEASURES FOR THE AREA 2C AND 3A CHARTER HALIBUT FISHERIES FOR 2024

BRIANNA BOWMAN - DECEMBER 2023



FISHERY REVIEW THROUGH 2023



PRELIMINARY CHARTER ESTIMATES FOR 2023

Area	Mean Weight (lb)	Harvest (no. fish)	Yield (lb)	Release Mortality (lb)	Total Removals (lb)	Allocation (lb)	Overage (lb)	Overage %
2C	9.41	83,605	786,438	26,338	812,776	800,000	12,776	1.6%
3A	10.09	153,337	1,546,445	9,219	1,555,664	1,890,000	-334,336	-17.7%

2023 Regulations

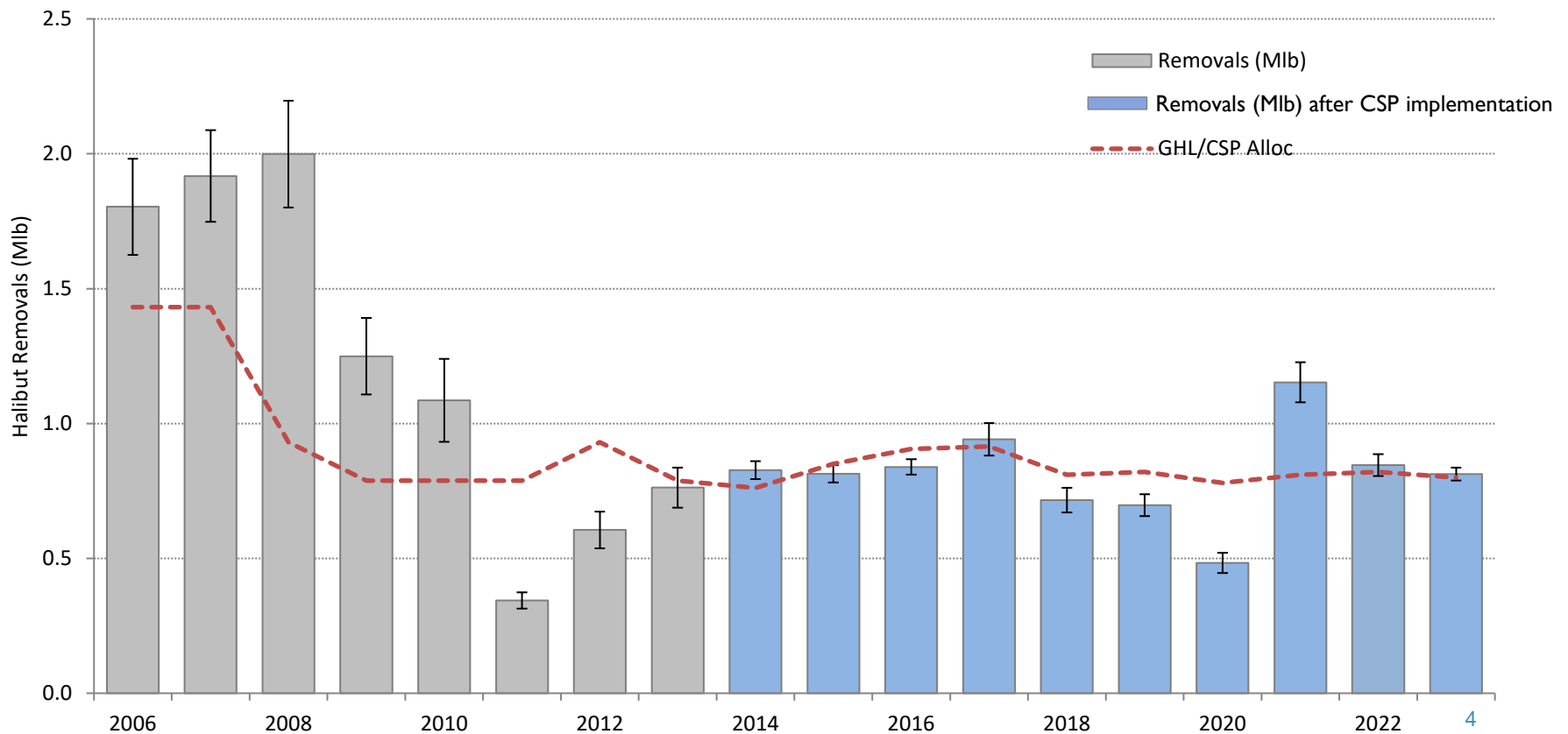
2C –

- One fish bag limit
- Reverse slot size limit of less than or equal to 40 inches or greater than or equal to 80 inches
- **Closed on Mondays starting July 24th**

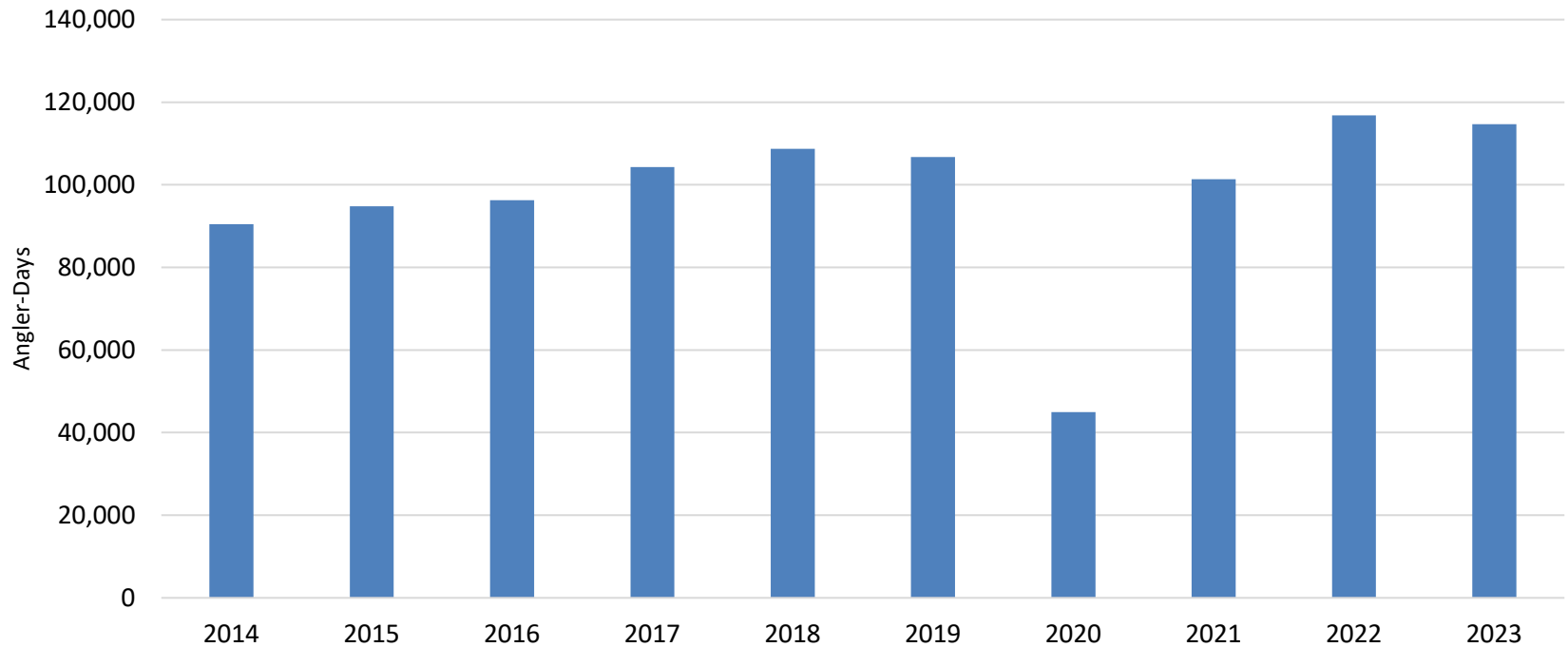
3A –

- Two fish bag limit: one fish of any size, one fish less than or equal to 28 inches
- One trip per vessel per day and per charter halibut permit per day
- Wednesdays closed to retention of halibut
- **Nine Tuesdays closed to retention of halibut**

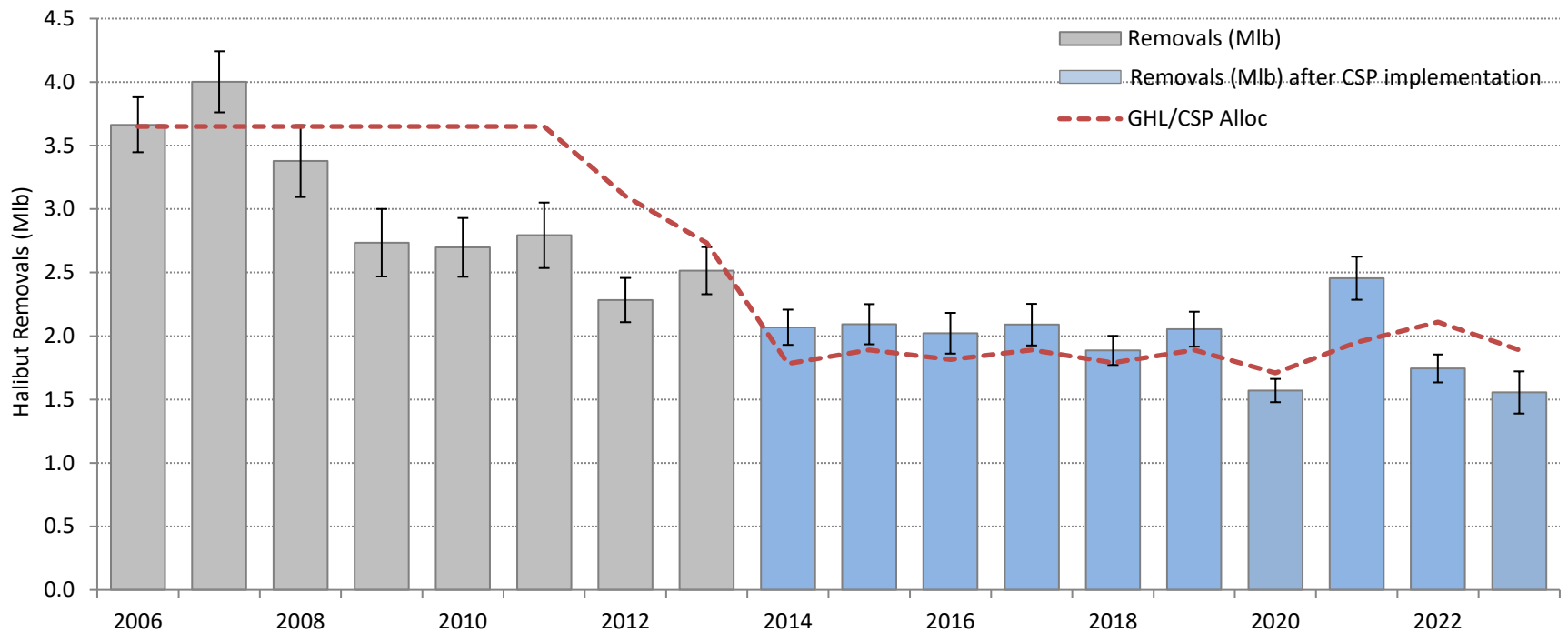
2C CHARTER HALIBUT REMOVALS



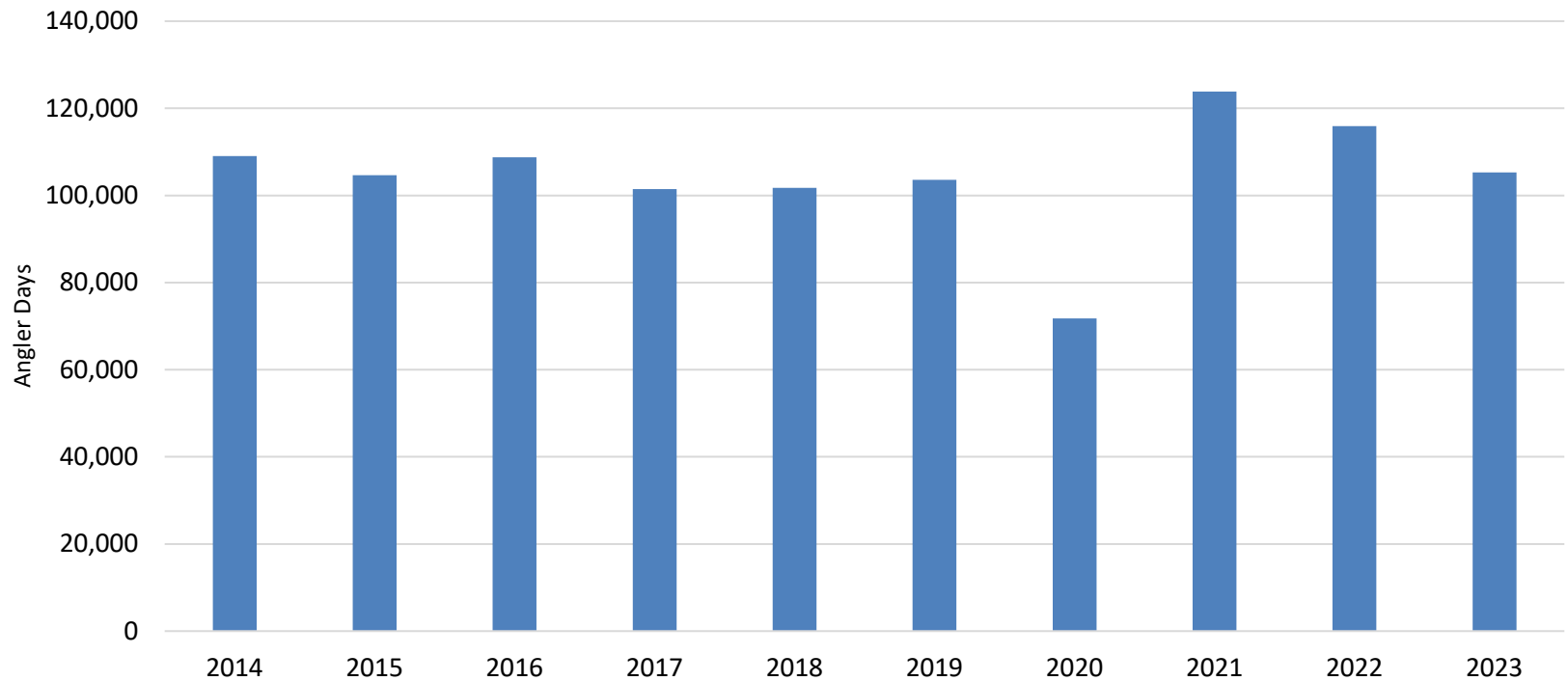
2C EFFORT



3A CHARTER HALIBUT REMOVALS



3A EFFORT



BUSINESSES AND VESSELS HARVESTING HALIBUT

2C

	Businesses	Vessels
2014	246	520
2015	241	515
2016	248	532
2017	248	537
2018	244	534
2019	256	545
2020	192	386
2021	232	496
2022	235	523
2023	238	535

3A

	Businesses	Vessels
2014	259	399
2015	250	407
2016	240	388
2017	227	374
2018	232	391
2019	226	399
2020	203	343
2021	231	392
2022	220	387
2023	215	383



ANALYSIS OF MANAGEMENT MEASURES FOR 2024



CHARTER ALLOCATION FOR 2024

- Allocations are currently unknown
- The IPHC's interim agreement has expired limiting information on potential Regulatory Area TCEYs and allocations for 2024
- We have used the 2023 allocations as a reference for this analysis

	2023 Allocation
2C	0.80 Mlb
3A	1.89 Mlb



2C – STATUS QUO FORECAST

- Table 2C.3
- 83,487 halibut
 - 95% confidence interval 81,038 – 85,936 halibut
- Used preliminary 2023 effort as 2024 forecast
 - 2C regulations in 2023 specifically targeted effort by closing days
- HPUE used data from 2009 – 2019 and 2022-2023
 - Substantial HPUE increases in 2020 and 2021, likely related to changes in size limits
 - Figure 2 in the analysis document



2C – STATUS QUO FORECAST

Status Quo Regulations:

- One fish bag limit
- Reverse slot limit of less than or equal to 40 or greater than or equal to 80 inches
- Mondays closed starting July 24th
- Projected average weight: 9.94 lbs
- Release mortality: 35,481 lbs
- Table 2C.3

**Status Quo
Regulations
Removals
Projection**

0.865 Mlb



2C – MANAGEMENT MEASURES FOR 2024

- Reverse Slot ranging from 32 – 50 inches on the low end and 50 – 80 inches on the upper end
- Reverse Slot with day closures with savings in removals displayed for each day of closure
 - Analyzed for each day from May 15 – September 15 or for the entire season
 - Analyzed for lower slot limits ranging from 32 inches to 50 inches, and an upper slot limit of 80 inches
- Differential Reverse Slot displayed in removals
 - Analyzed for lower slot limits ranging from 40-45 inches at the beginning of the season, changing to a range of 35-40 inches for the end of the season, and an upper slot limit of 80 inches throughout
 - Analyzed to change lower slot limits on July 1, July 15, and August 1



2C – SUMMARY

Management Measures	Options Below 2023 Allocation (0.80 Milb)?
Status Quo (reverse slot with lower limit of 40 inches and upper limit of 80 inches)	No
Reverse slot limit with U32-U50 on the low end and O50-O80 on the high end.	Yes
Reverse slot limit with U32-U50 on the low end and O80 on the high end, analyzed with a day of the week closures presented in savings per day	Yes
Reverse slot limit with U40-U45 change to U35-U40 after July 1, July 15, or August 1	No



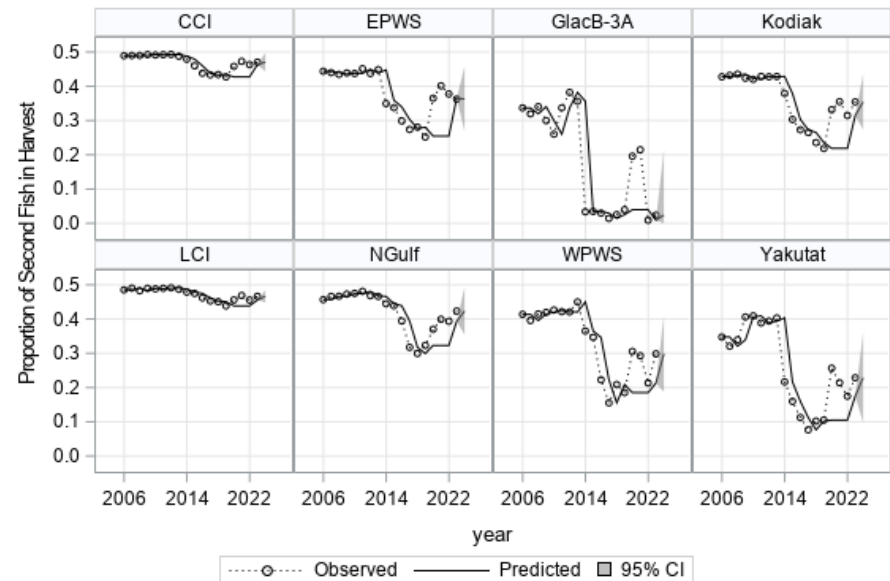
2C – IMPLEMENTATION CONSIDERATIONS AND SUMMARY

- At this stage, it appears that 2C will likely need to adopt more restrictive management measures to remain within allocation (if the allocation ends up being similar to last year)
- There are options within likely range of allocations for 2024
- Day of the week closures
- Reverse slot limit



3A – STATUS QUO FORECAST

- 158,160 halibut
 - 95% confidence interval 153,378 – 162,942 halibut
 - 2023 effort was used as forecast
 - HPUE forecast used data through 2019 and 2022-2023
 - Figure 3 in the analysis document for Effort and HPUE
 - Figure 4 is proportion of second fish in the harvest



3A – STATUS QUO FORECAST

Status Quo Regulations:

- Two fish bag limit: one any size, one less than or equal to 28 inches
- One trip per vessel per day and per charter halibut permit per day
- Wednesdays closed to retention of halibut
- Nine Tuesdays closed to retention of halibut

**Status Quo
Regulations
Removals
Projection**

1.695 Mlb



3A – MANAGEMENT MEASURES FOR 2024

- Day of the week closures on Tuesdays from June 1 – August 31 or for the entire season
- Maximum size limits of 26 – 32 inches on one fish
- Annual limits of 2 – 4 fish
- Any combination of the above management measures



3A – SUMMARY

Management Measures

Options Below 2023 Allocation (1.89 Milb)?

Status quo (two-fish bag limit with a 28-inch maximum size limit on one fish, one trip per vessel and one trip per CHP per day, Wednesday closures all year, and two Tuesdays closed)

Yes

Day of the week closures on Tuesdays from June 1 – August 31 or for the entire season

Yes

Maximum size limits of 26 – 32 inches on one fish

Yes

Annual limits of 2 – 4 fish

Yes

Combination of the above management measures

Yes



3A – IMPLEMENTATION CONSIDERATIONS AND SUMMARY

- Day of the week closures
- Annual limits
- Release mortality
- Many options within likely range of allocations for 2024



ACKNOWLEDGEMENTS

- Ben Jevons and Kayla Carr – logbook data summaries and review
- Diana Tersteeg and Mike Jaenicke – Southeast data
- Clay Mckean and Marian Ford – Southcentral data
- Countless technicians – halibut measurements and angler interviews
- Sarah Marrinan – Council Staff
- Sarah Webster – ADF&G Fisheries Scientist

- Funding:
 - State of Alaska General Funds
 - DJ-WB Federal Aid in Fish Restoration
 - Fish and Game Fund



EXTRA SLIDES



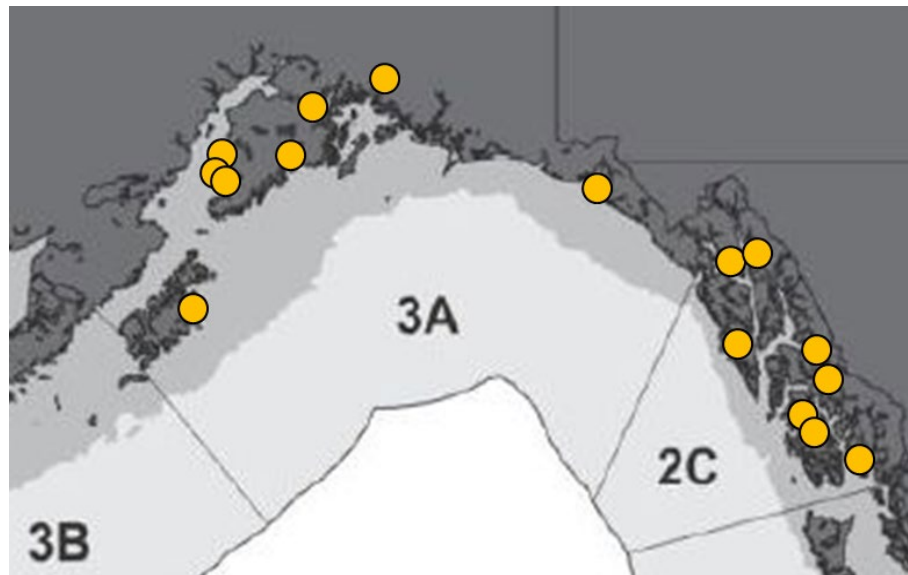
FISHERY

REVIEW



DATA SOURCES

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



GENERAL METHODS

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

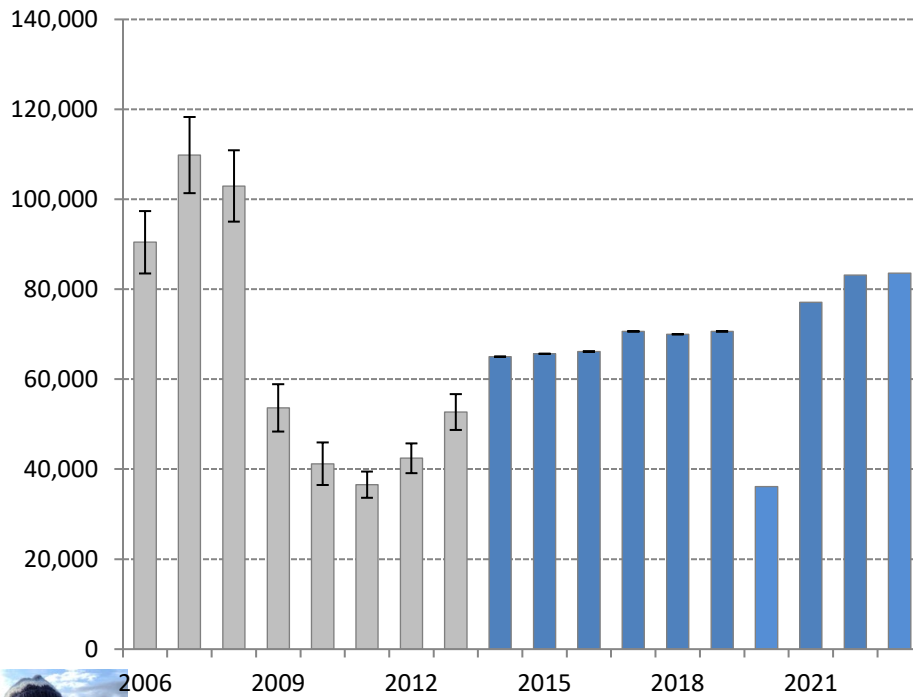
$$\text{Harvest} \times \text{Average weight} = \text{Yield}$$

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

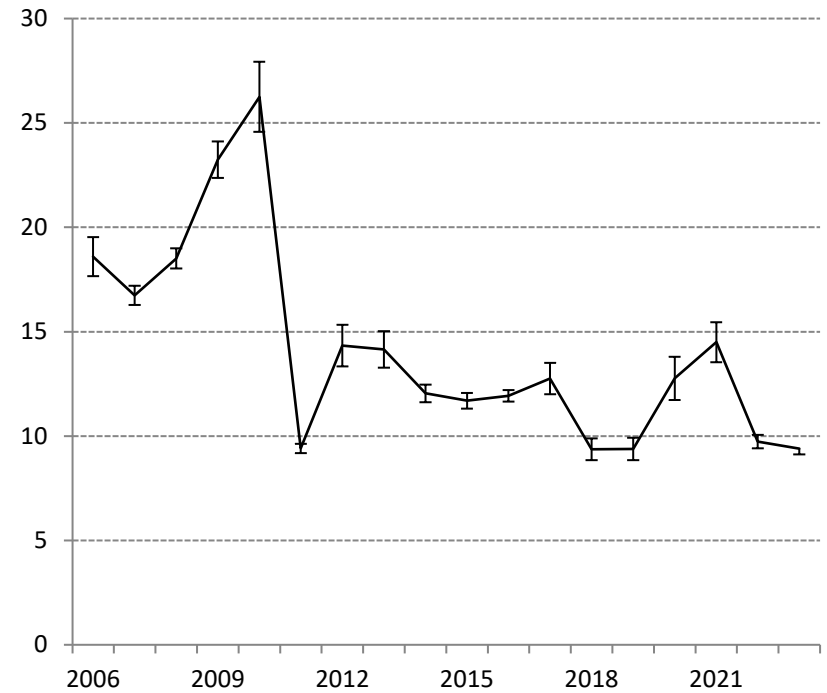


2C – CHARTER HALIBUT HARVEST AND MEAN WEIGHT

Number of Halibut

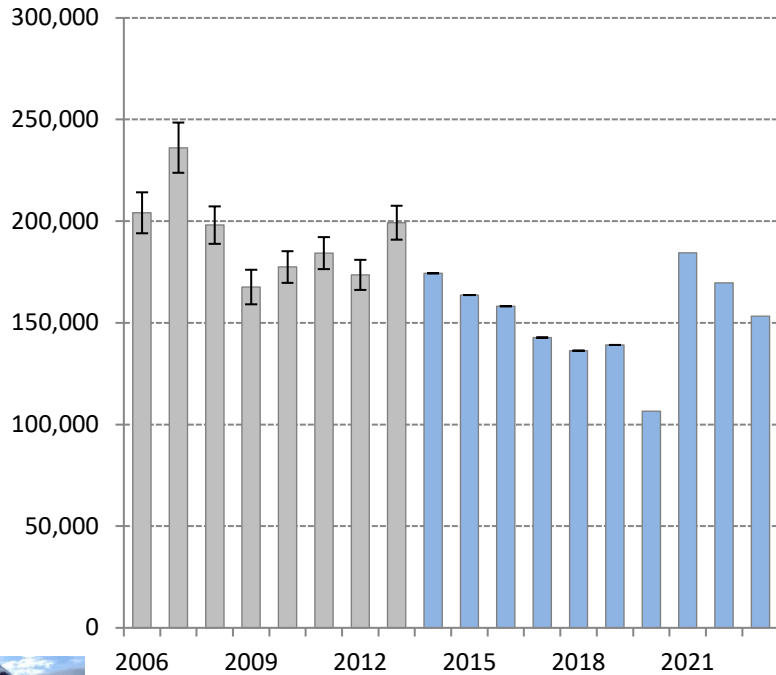


Average Net Weight (lb)

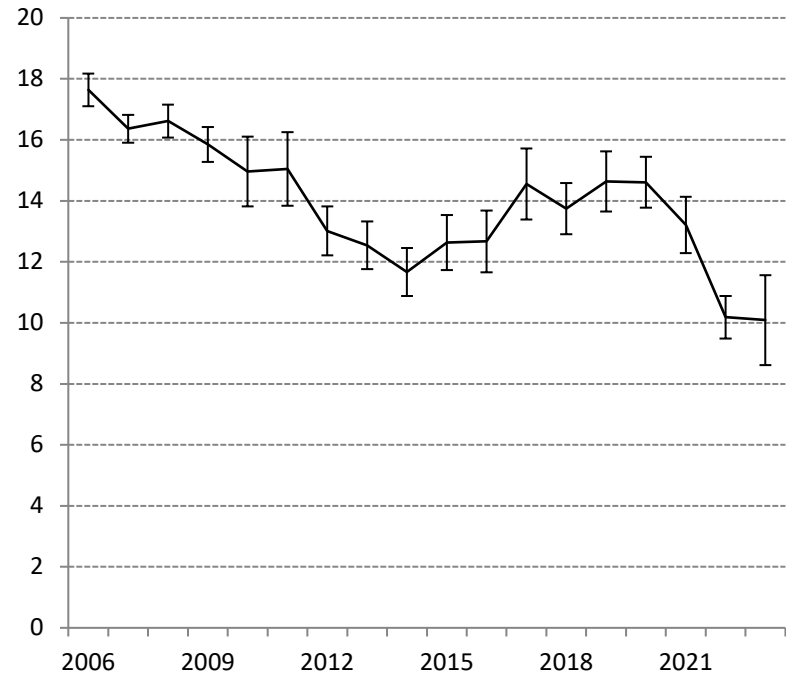


3A – CHARTER HALIBUT HARVEST AND MEAN WEIGHT

Number of Halibut



Average Net Weight (lb)



2023 FORECASTS AND PRELIMINARY ESTIMATES

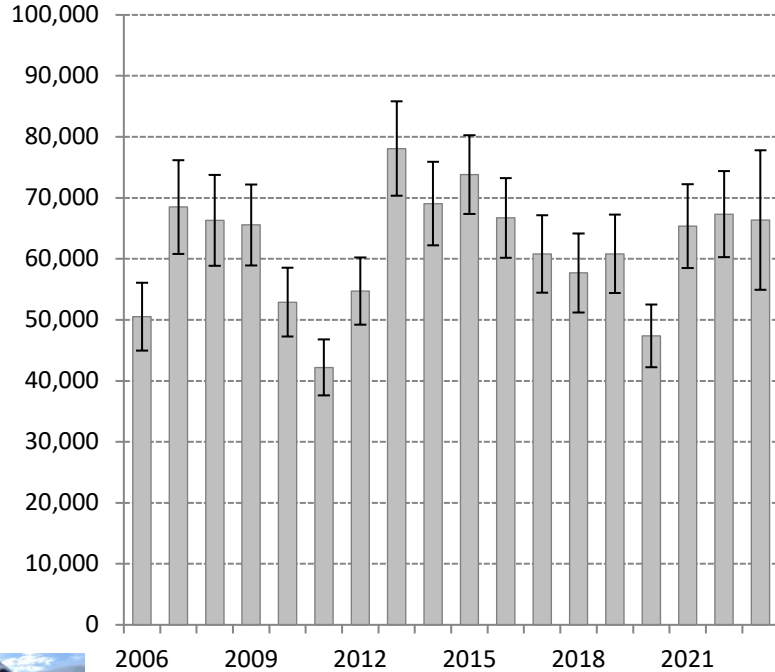
Area	Component	Forecast	Preliminary Oct 2023
2C	Harvest (no. fish)	80,402	83,605
	Average wt (lb)	10.13	9.41
	Yield (Mlb)	0.815	0.786
	Release mort (Mlb)	0.037	0.026
	Total removals (Mlb)	0.867	0.813
3A	Harvest (no. fish)	169,046	153,337
	Average wt (lb)	11.87	10.09
	Yield (Mlb)	2.006	1.546
	Release mort (Mlb)	0.017	0.009
	Total removals (Mlb)	2.023	1.556

PERFORMANCE OF COUNCIL-RECOMMENDED MANAGEMENT MEASURES

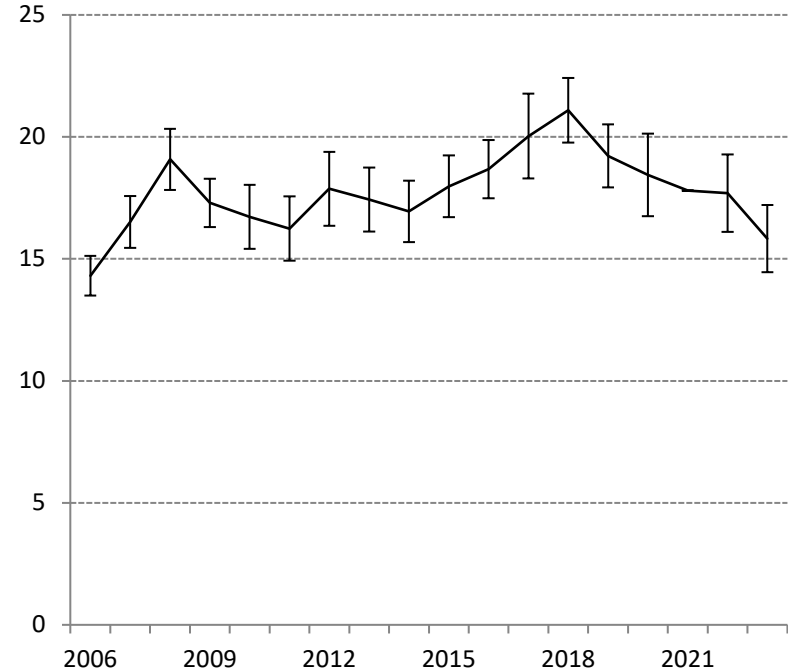
Area	Year	Management measure	Mgmt	Allocation	Removals	Overage	Overage
			Type	(Mlb)	(Mlb)	(Mlb)	Percent
2C	2017	One fish, U44-O80 rev slot	CSP	0.915	0.941	0.026	3%
	2018	One fish, U38-O80 rev slot	CSP	0.810	0.716	-0.094	-12%
	2019	One fish, U38-O80 rev slot	CSP	0.820	0.697	-0.123	-15%
	2020	One fish, U40-O80 rev slot thru 6/14, U45-O80 after 6/14	CSP	0.780	0.483	-0.297	-38%
	2021	One fish, U50-O72 rev slot	CSP	0.810	1.163	0.353	43.6%
	2022	One fish, U40-O80 rev slot	CSP	0.820	0.848	0.28	3.4%
	2023	One fish, U40-O80 rev slot, nine Mondays closed	CSP	0.800	0.812	0.012	1.6%
3A	2017	Two fish, one ≤ 28", Wednesday closed all year, three Tuesdays closed, annual limit 4 halibut, one trip/day with halibut harvest.	CSP	1.890	2.089	0.199	11%
	2018	Two fish, one ≤ 28", Wednesday closed all year, six Tuesdays closed, annual limit 4 halibut, one trip/day with halibut harvest.	CSP	1.790	1.886	0.096	5%
	2019	Two fish, one ≤ 28", Wednesday closed all year, five Tuesdays closed, annual limit 4 halibut, one trip/day with halibut harvest.	CSP	1.890	2.054	0.122	6%
	2020	Two fish (one ≤ 26" thru 6/14, ≤ 32" after 6/14), Tuesday and Wednesday closed thru 6/14, all days open after 6/14, annual limit 4 halibut thru 6/14, no annual limit after 6/14, one trip/day with halibut harvest.	CSP	1.710	1.567	-0.143	-8%
	2021	Two fish, one ≤ 32", Wednesday closed all year, one trip/day with halibut harvest.	CSP	1.950	2.455	0.505	25.9%
	2022	Two fish, one ≤ 32", Wednesday closed all year, two Tuesdays, one trip/day with halibut harvest.	CSP	2.11	1.741	-0.369	-17.5%
	2023	Two fish, one ≤ 32", Wednesday closed all year, two Tuesdays, one trip/day with halibut harvest.	CSP	1.89	1.555	-0.334	-17.7%

2C – UNGUIDED HALIBUT HARVEST AND MEAN WEIGHT

Number of Halibut

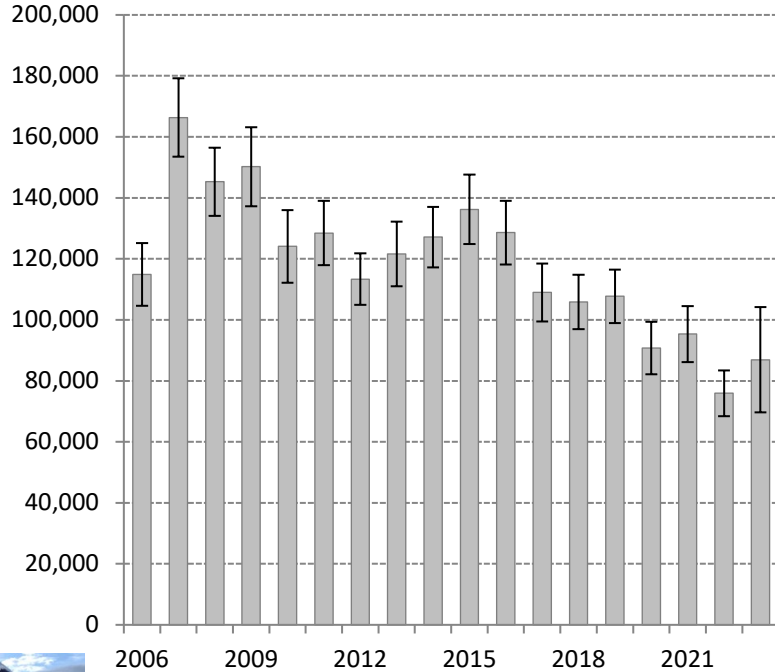


Average Net Weight (lb)

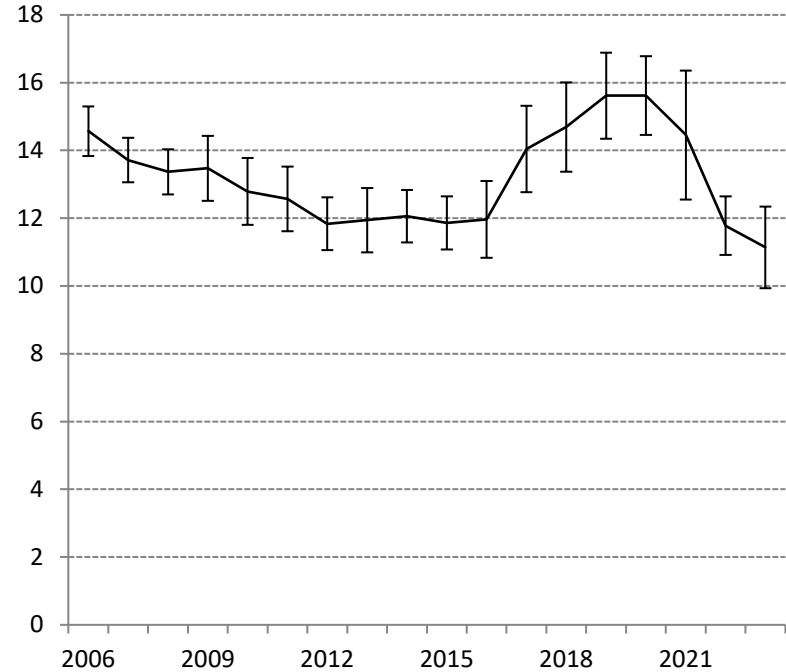


3A – UNGUIDED HALIBUT HARVEST AND MEAN WEIGHT

Number of Halibut



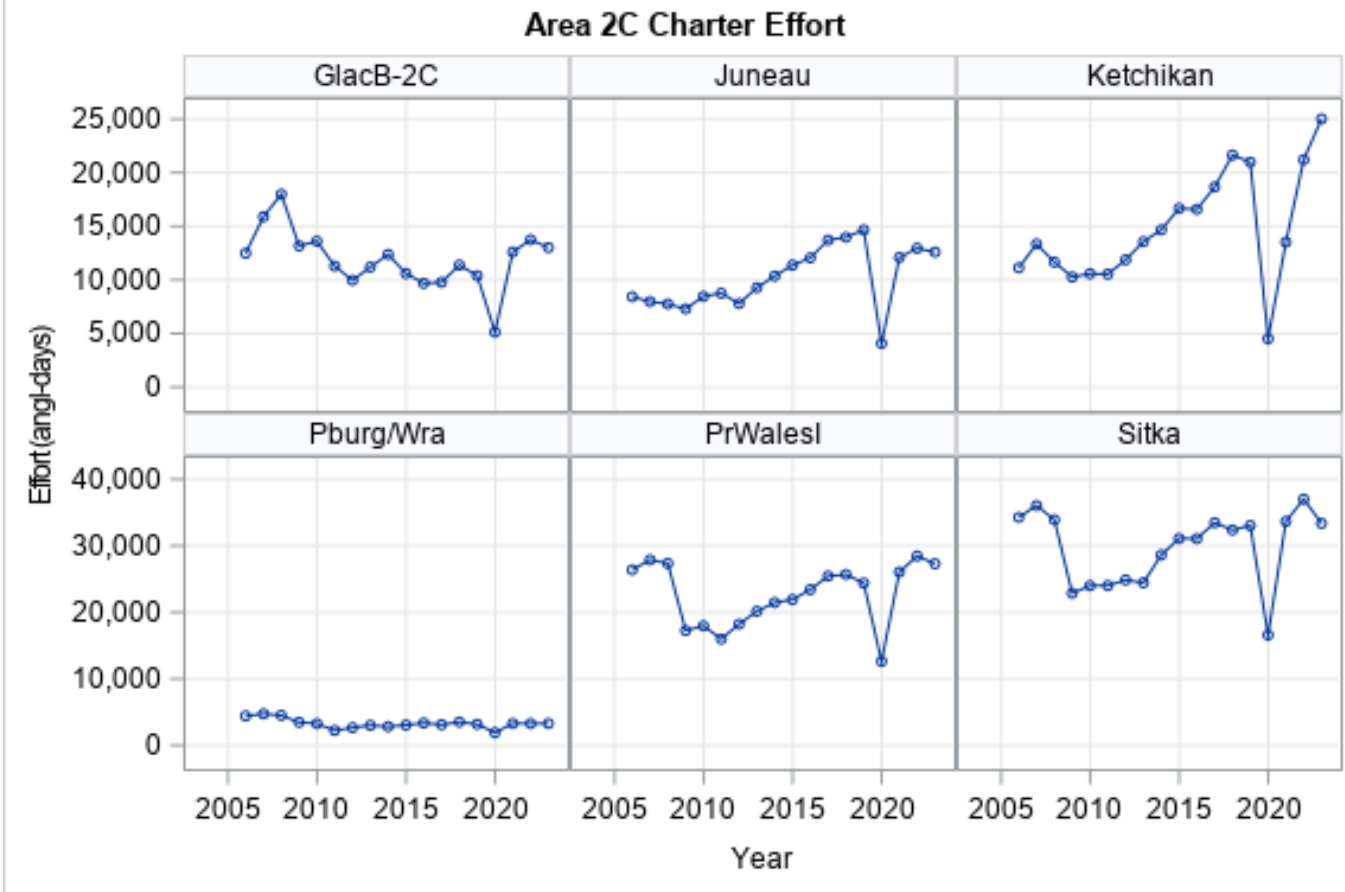
Average Net Weight (lb)



FIGURES

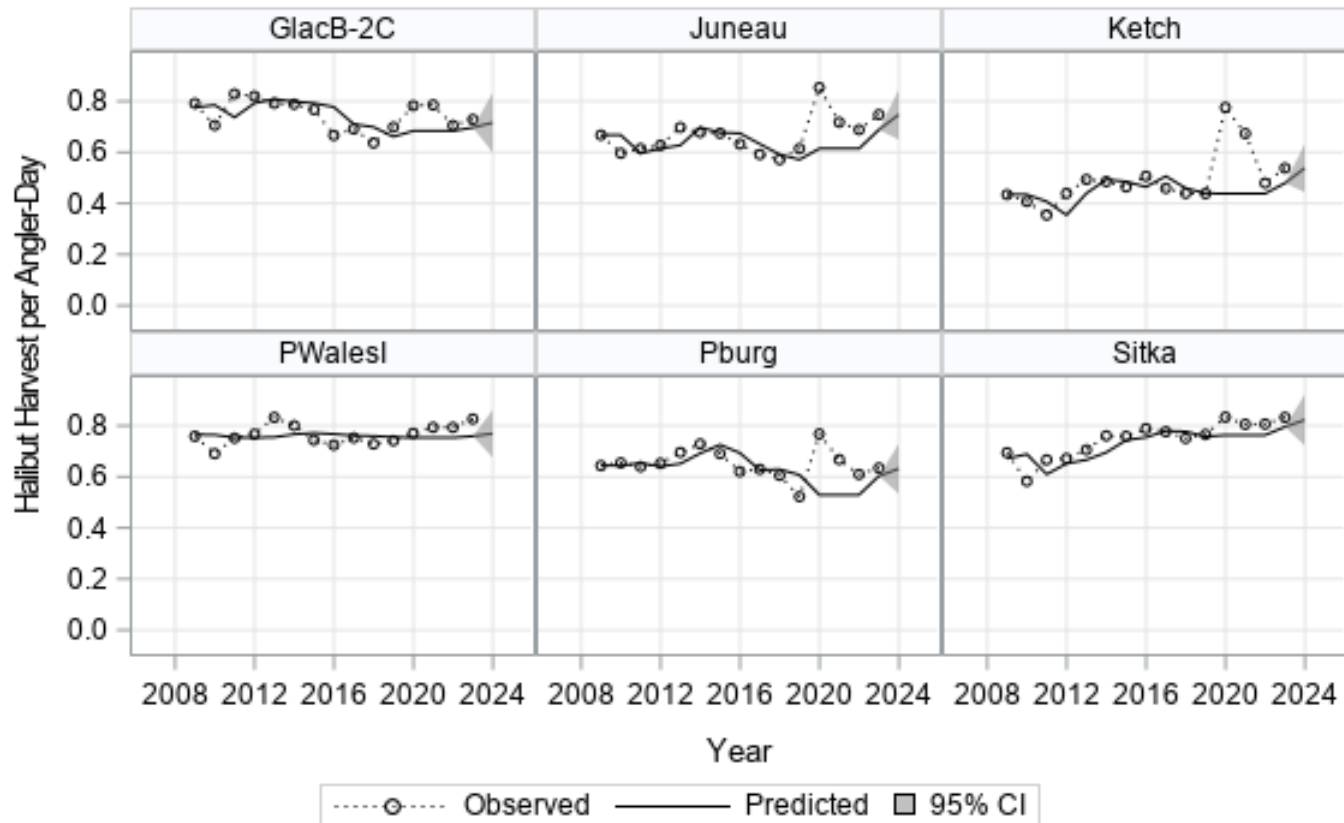


2C EFFORT FORECASTS

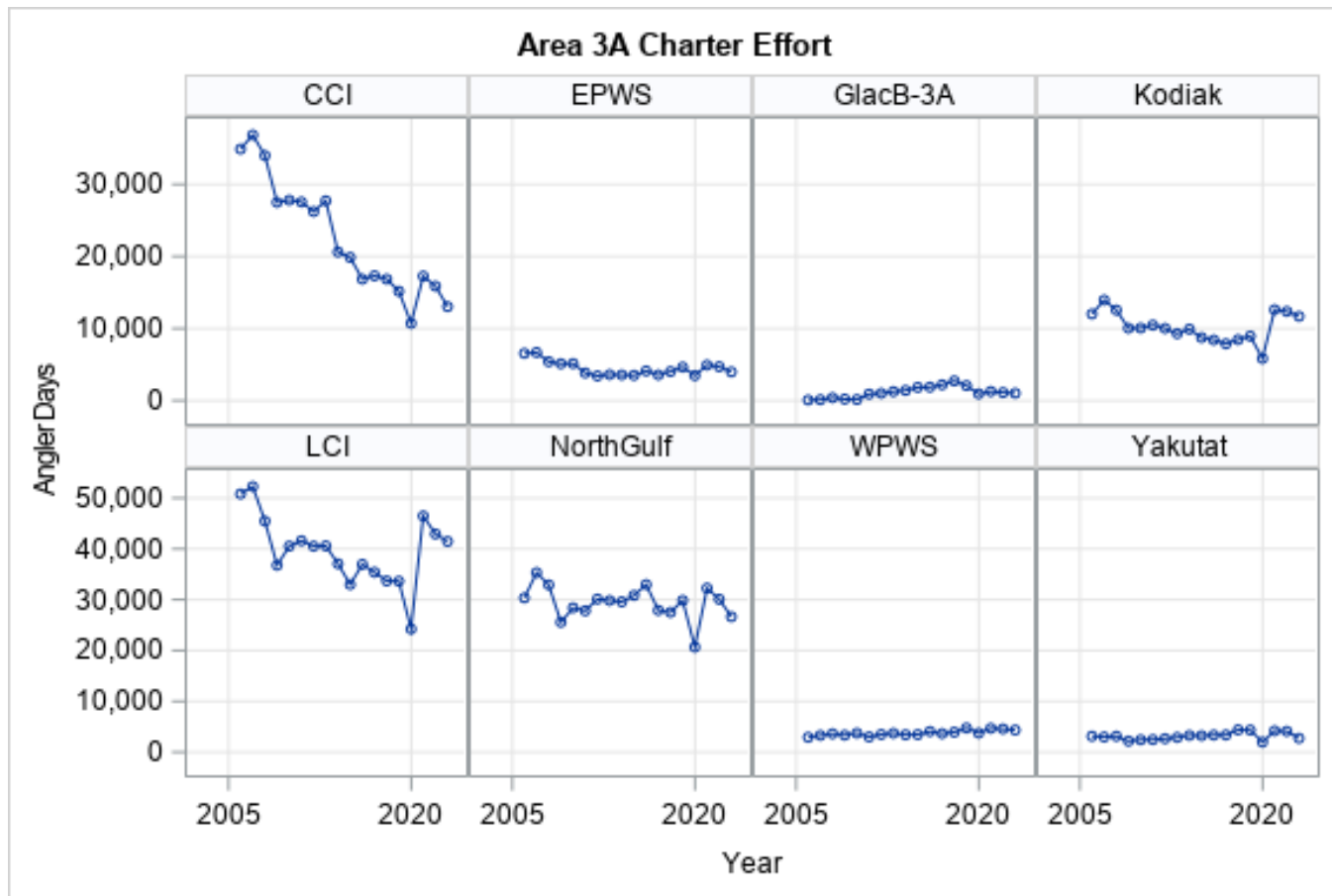


2C HPUE FORECASTS

Area 2C HPUE

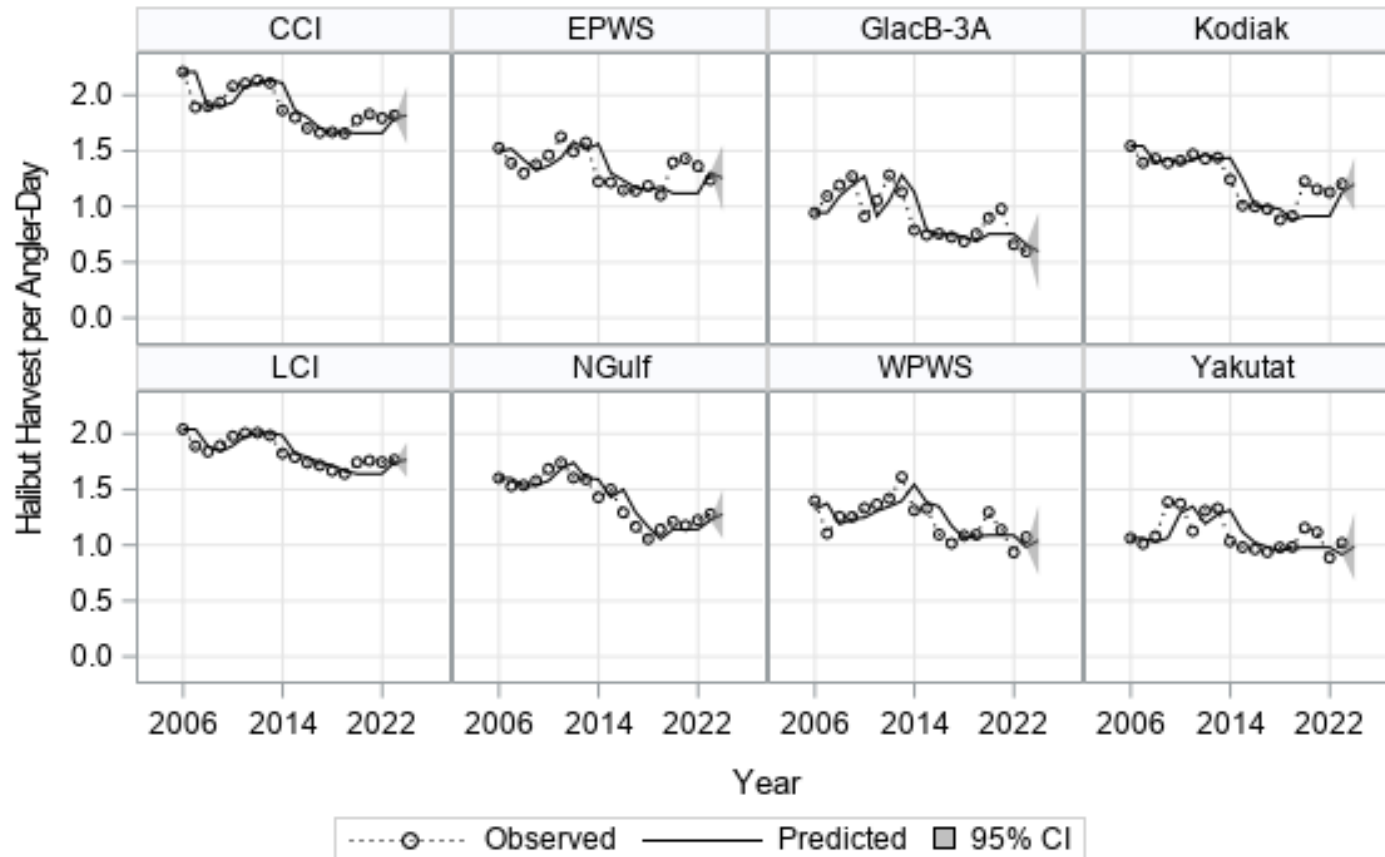


3A EFFORT FORECASTS

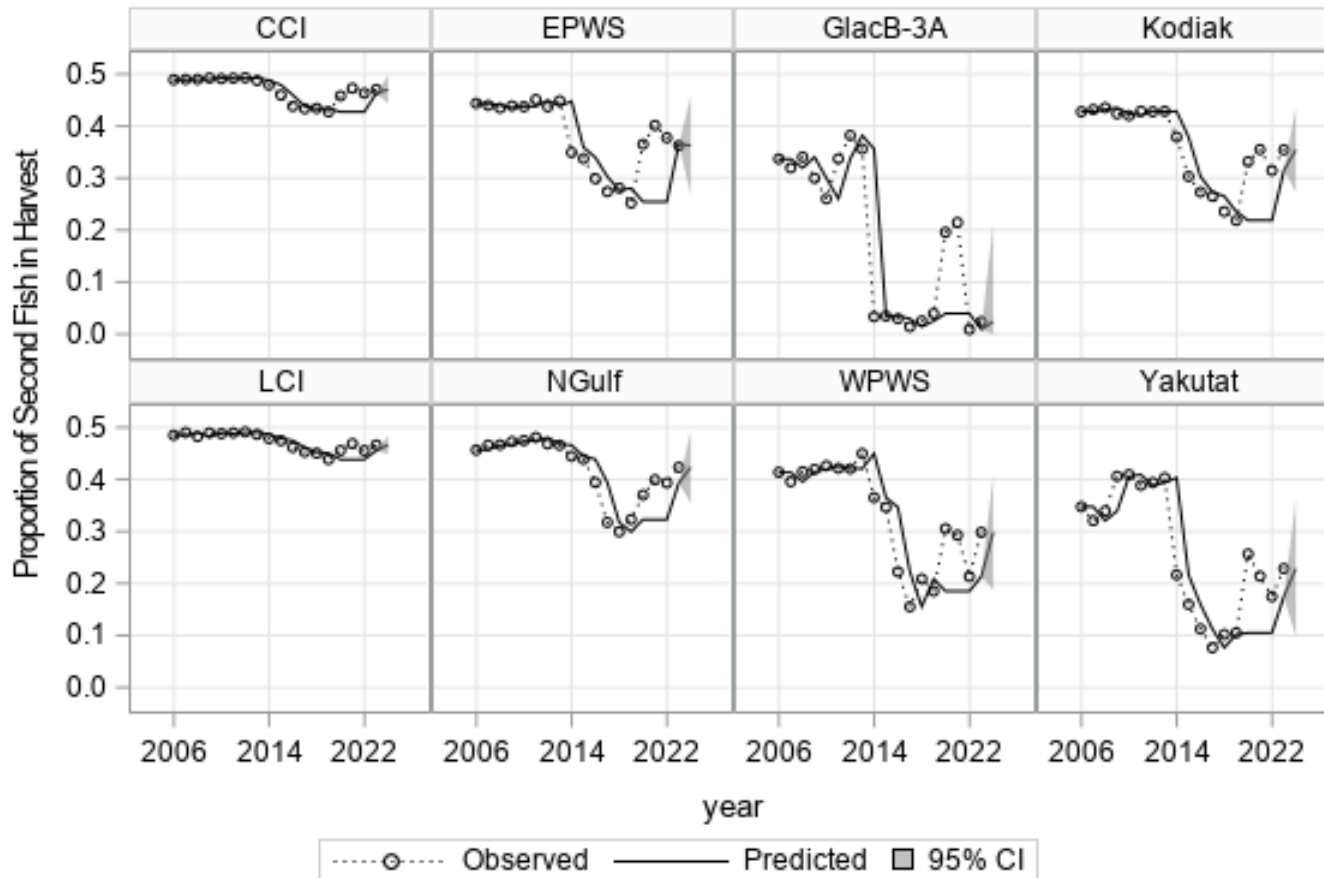


3A HPUE FORECASTS

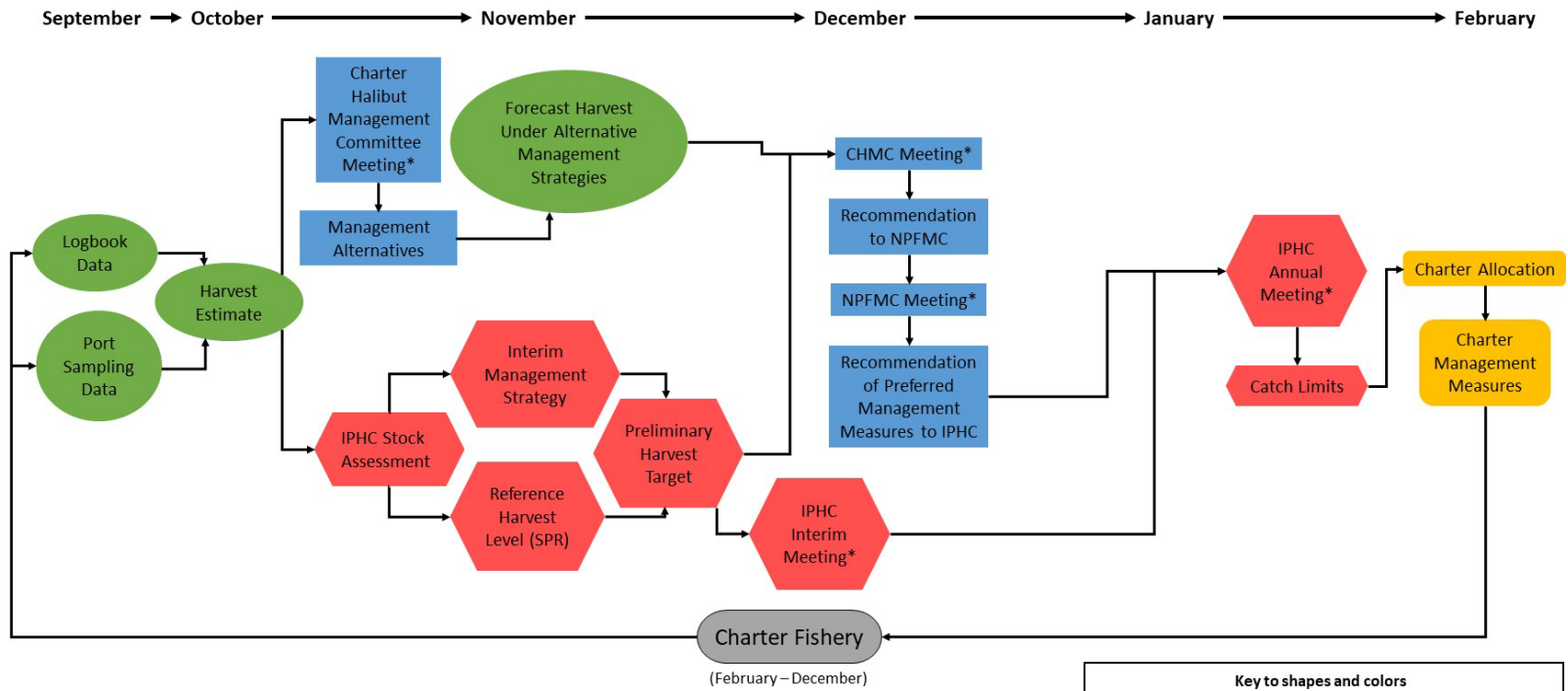
Area 3A HPUE



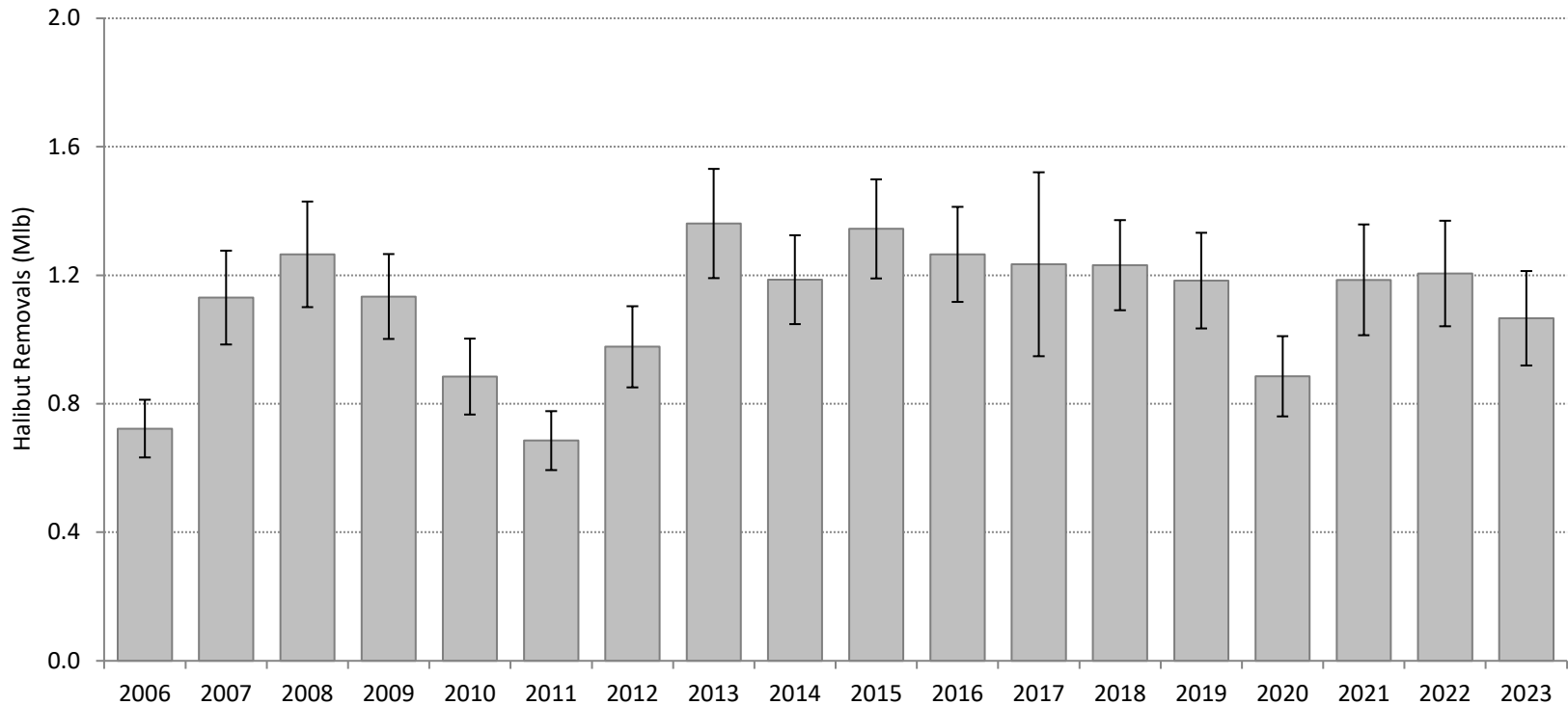
3A PROPORTION OF SECOND FISH FORECASTS



CHARTER HALIBUT MANAGEMENT PROCESS



2C – UNGUIDED HALIBUT REMOVALS



3A – UNGUIDED HALIBUT REMOVALS

