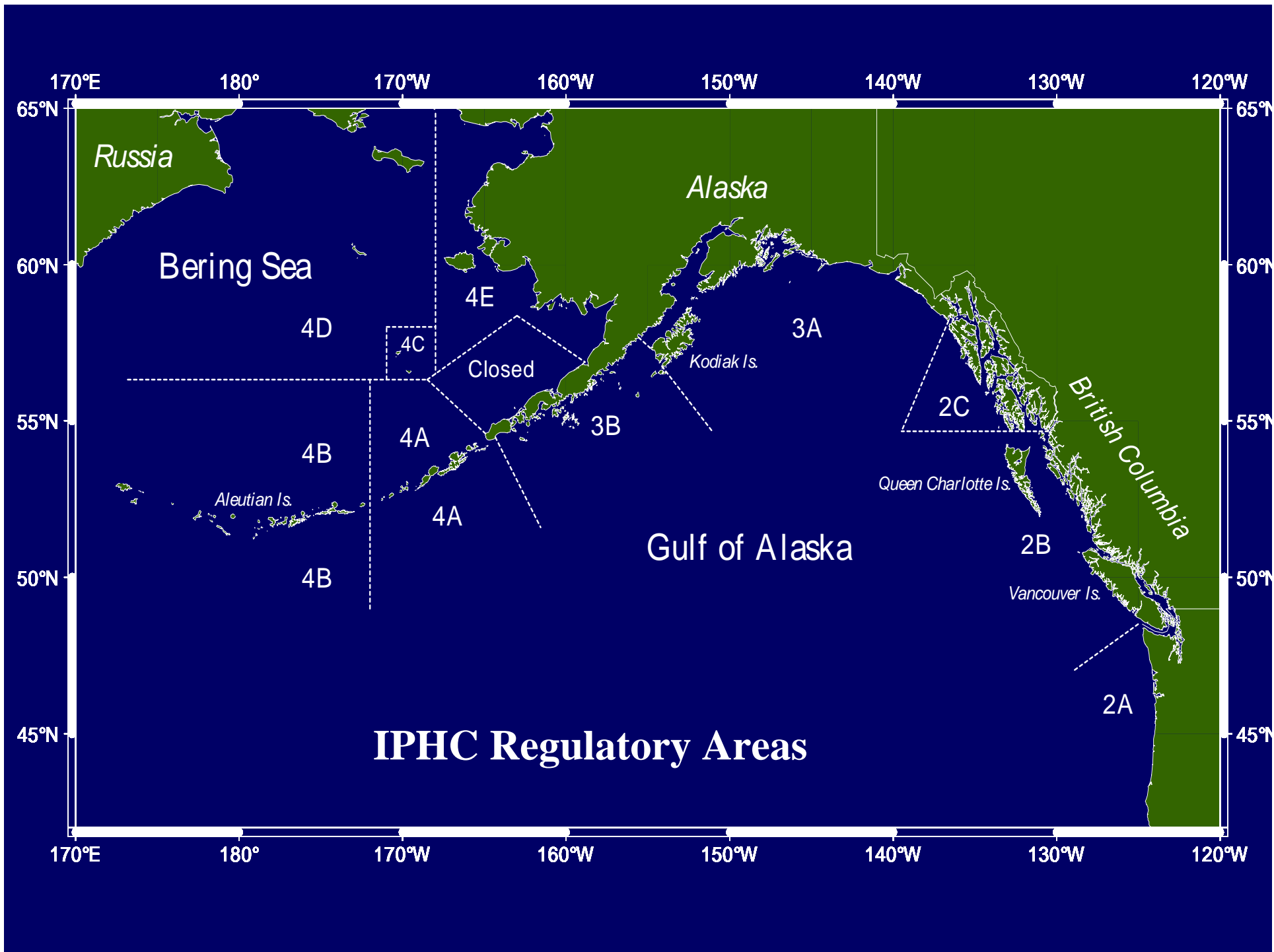


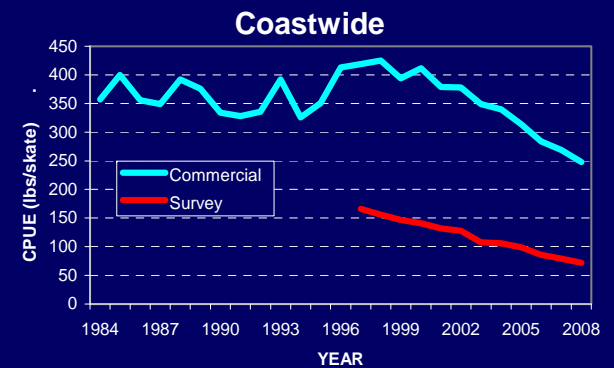
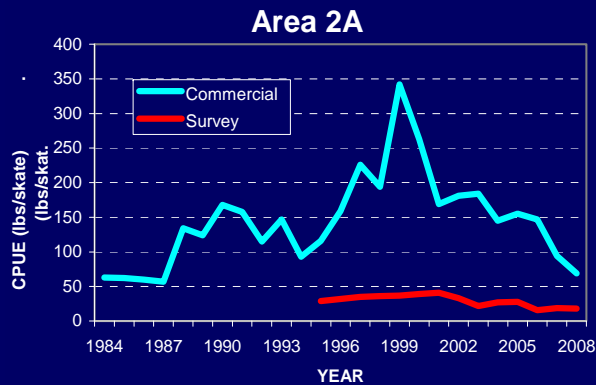
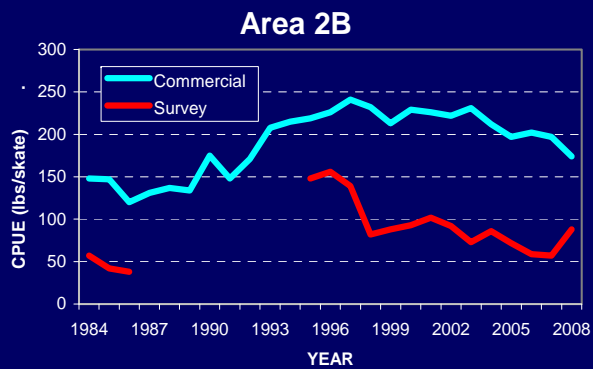
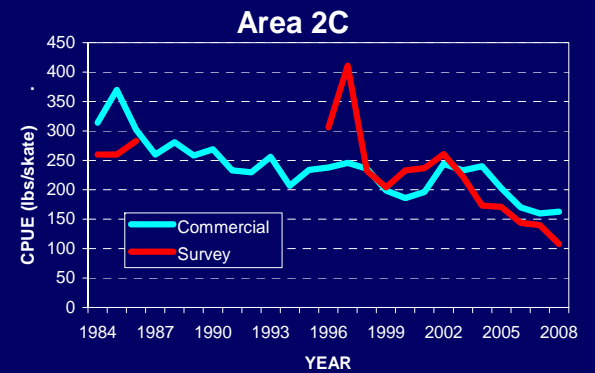
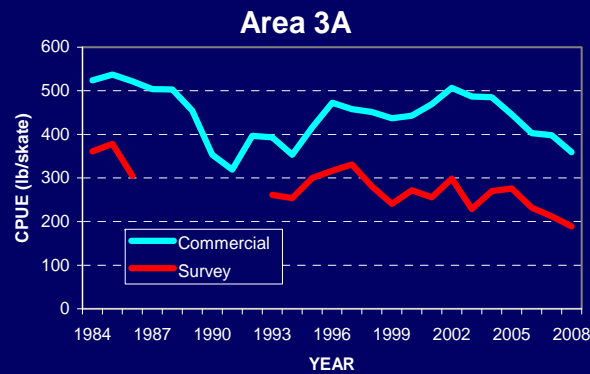
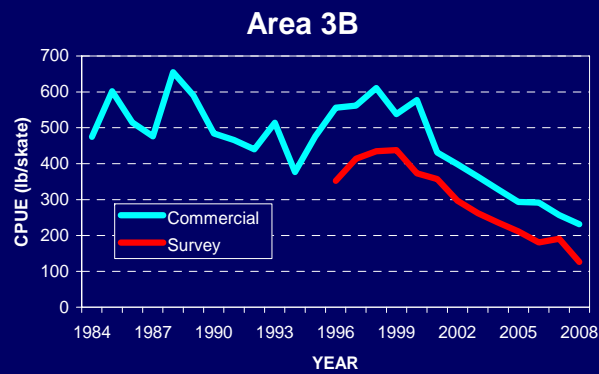
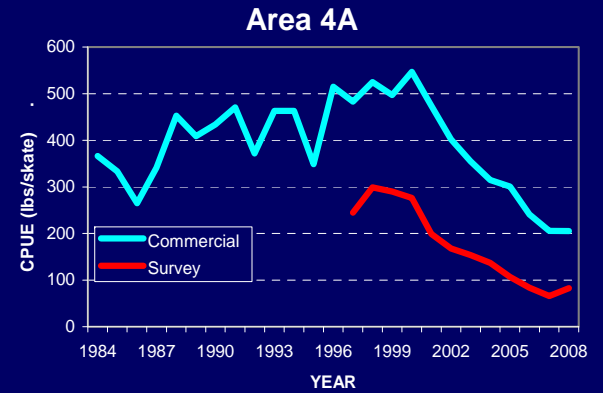
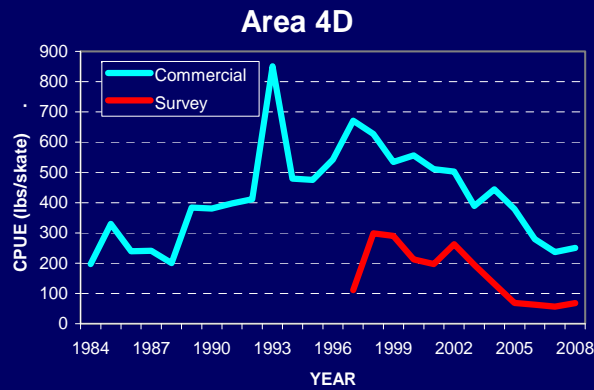
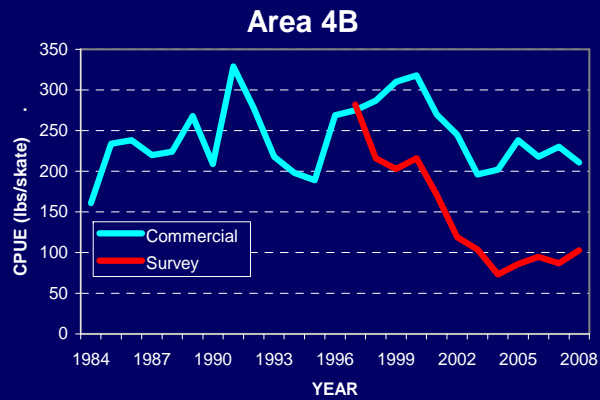
**2009 IPHC Staff Preliminary
Catch Limit Recommendations**



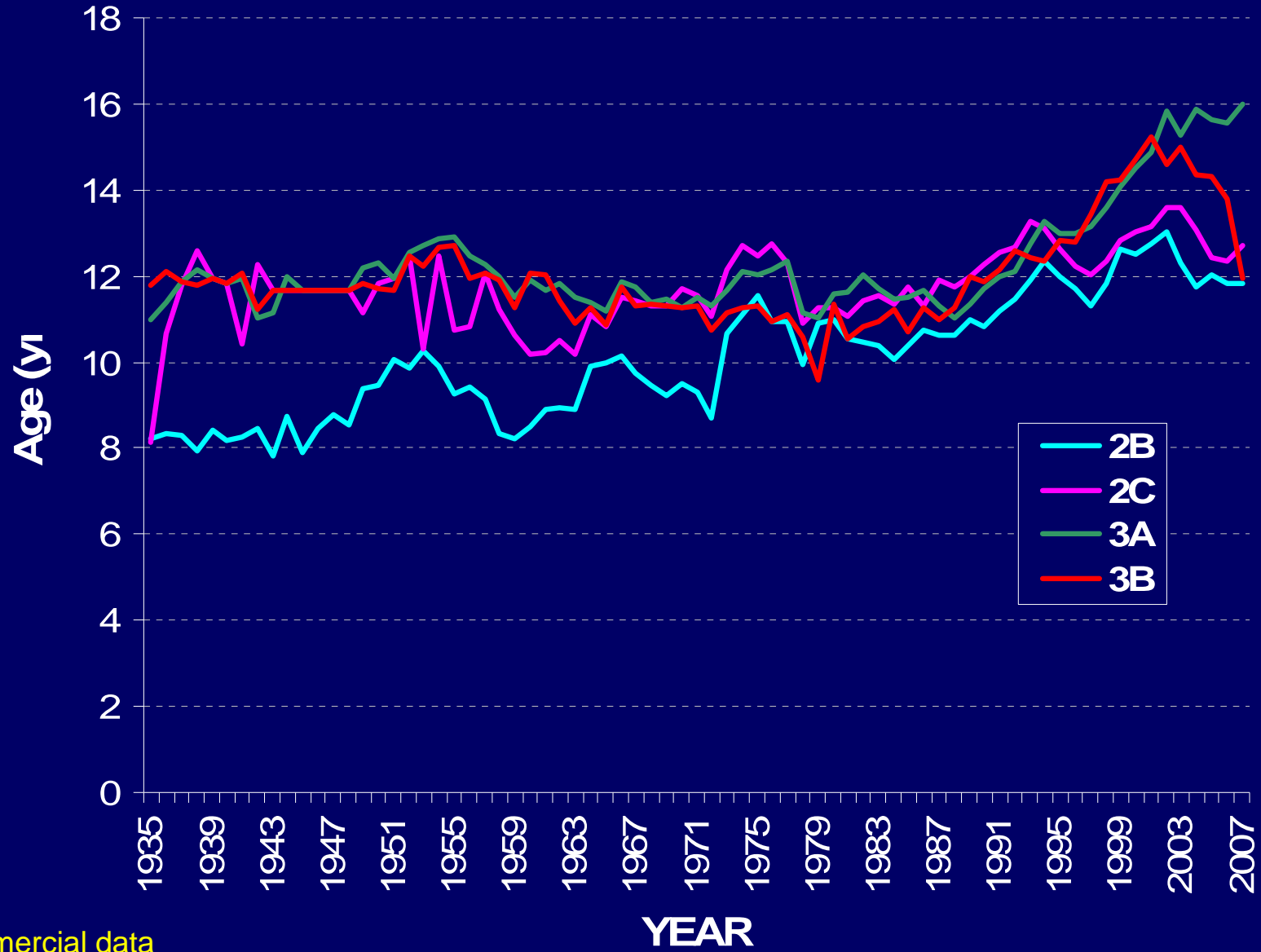
Stock Condition Indicators

- **Analytic stock assessment**
- **Survey CPUE**
- **Commercial CPUE**
- **Age composition**

Recent changes in CPUE

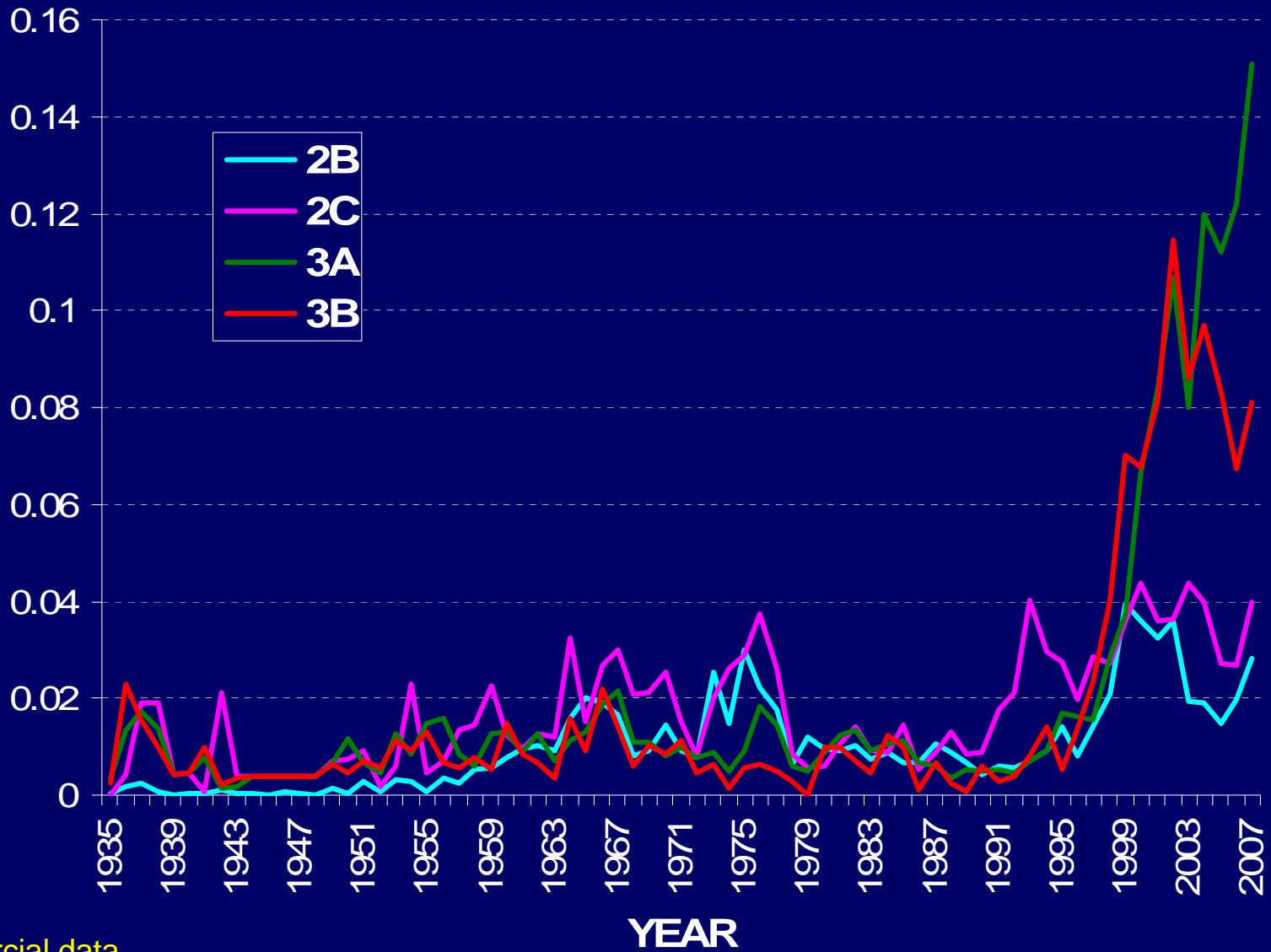


Average age 1935-2007



Commercial data

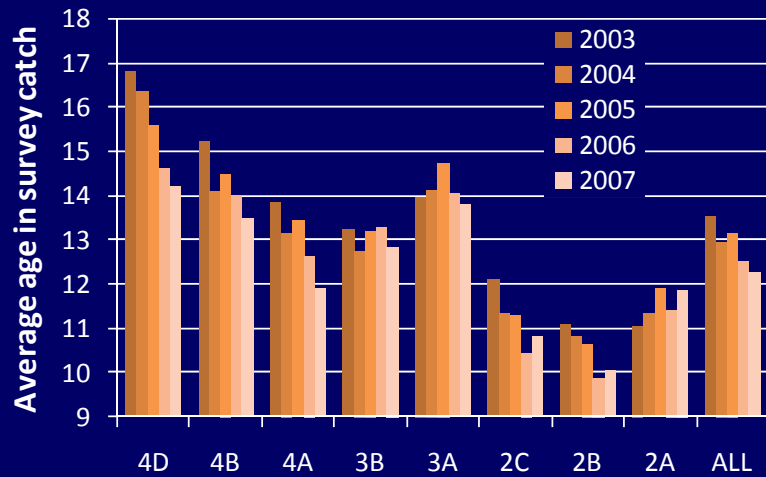
Fraction > 20 yr 1935-2007



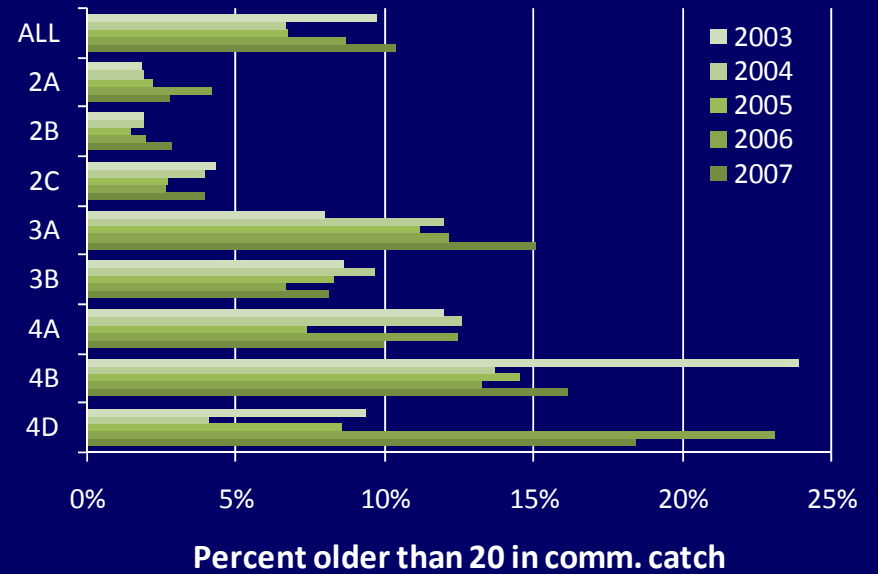
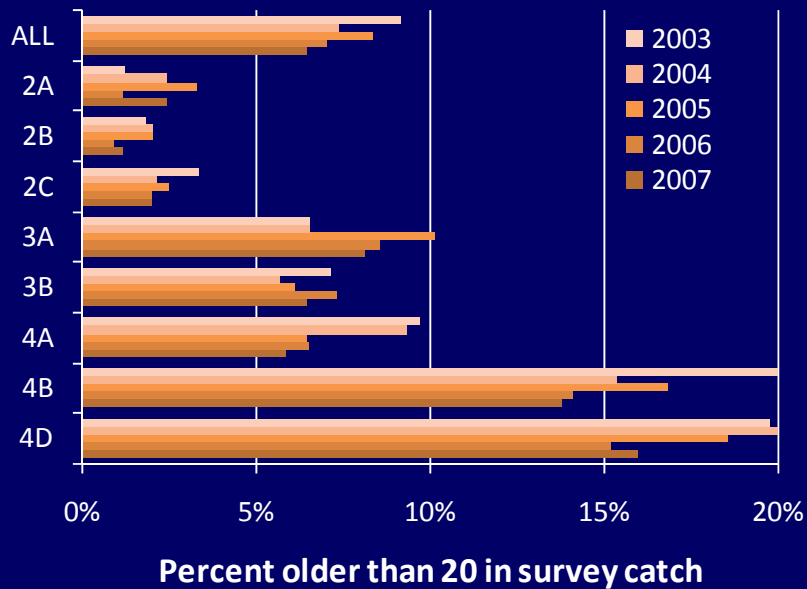
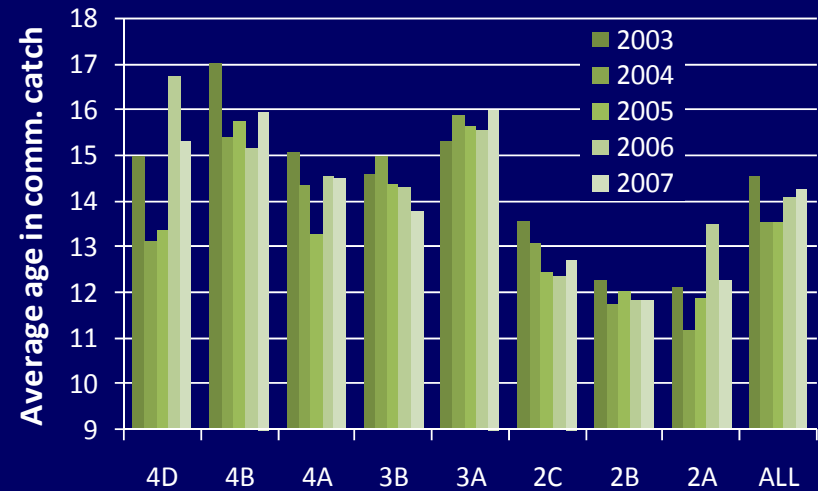
Commercial data

The age of captured halibut

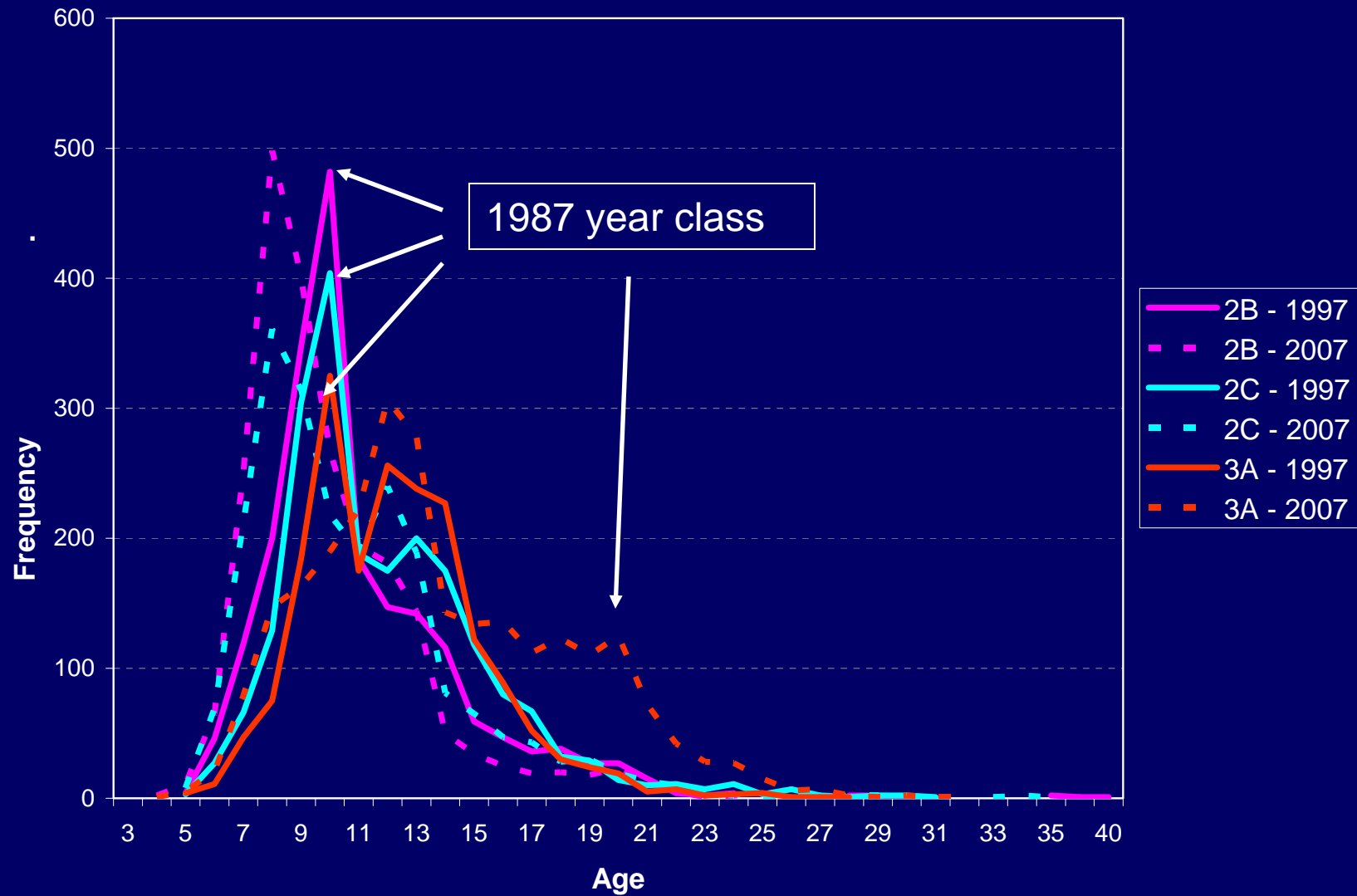
Survey



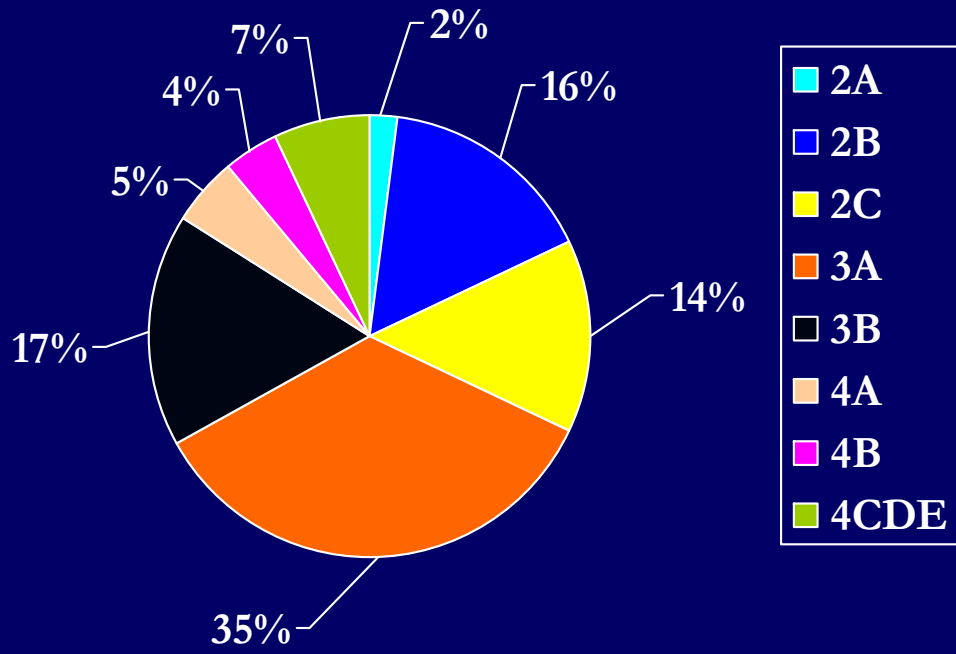
Commercial



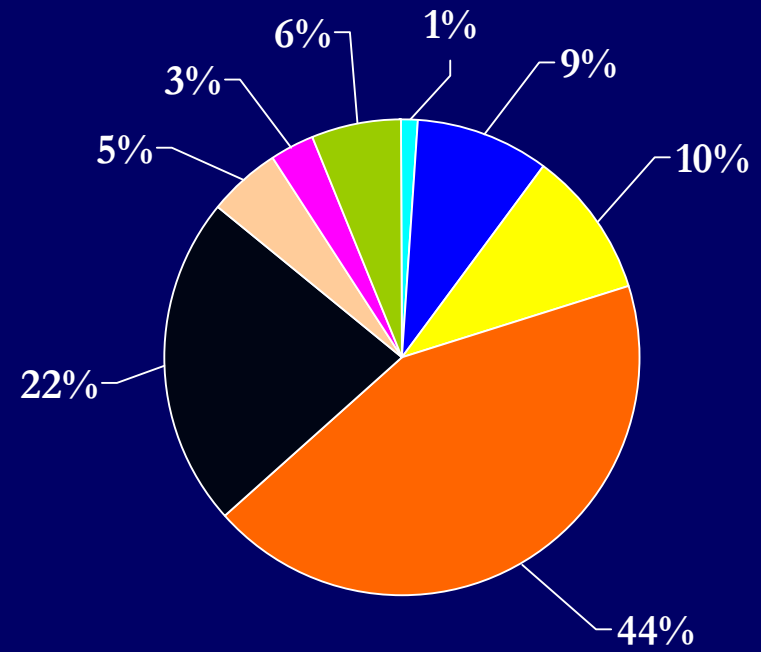
Area 2 vs. Area 3A Survey 1997/2007



Average Removals 1997-2007



Contribution to Spawning Biomass



Fish of all Sizes are Moving: Percent of recoveries made outside of area, by length at release (2004-2008)

Length at release	Release Area						
	4D	4A	3B	3A	2C	2B	Coastwide
<81 cm	0*	79	36	19	28	2	27
81-100 cm	6	69	37	10	11	7	17
101-120 cm	23	67	39	8	11	10	16
>120 cm	25	25	47	7	12	10	11

* Fewer than 10 recoveries

Fish are Moving in All Areas: Percent of recoveries in each Area that were released in other Areas (2003 releases)

Area	2004	2005	2006	2007
4A	0*	0*	17	29
3B	19	19	22	23
3A	11	18	22	30
2C	12	13	14	29
2B	22	30	37	27

*Fewer than 10 recoveries

Fish are Moving in All Areas: Estimates of net annual migration rates for legal-sized halibut

Area	Emigration ¹	Immigration ²	Net migration
4A	18.3	3.3	-15.0
3B	11.4	8.9	-2.5
3A	5.9	8.4	2.4
2C	10.1	6.0	-4.2
2B	1.8	8.6	6.8

¹Estimates of mean annual emigration rates from tag-recovery modelling for 2004-08

²Based on legal-sized population numbers for January 1 2008 estimated using the coastwide stock assessment.

Catch Limit Concerns

- Higher than target harvest rates in Area 2
- Area 4A reduced harvest rate
- Catch limit targets exceeded in Area 2B and 2C in 2008 due to sport fishery overruns of agency-identified targets
- Need to capitalize on incoming recruitment

Characteristics of Candidate Apportionment Methods

- Should address coastwide stock management
- Should have apportionment 'Sum to 1', i.e., be consistent across all regulatory areas of the coast
- Should achieve target harvest rate and provide protection for area-specific spawning contributions
- Should be sensitive to stock changes, i.e., provide feedback for ongoing apportionment
- Should be precautionary and robust to uncertainty about stock structure and stock status

Apportionment of Coastwide Biomass

2009 Apportionment Scenarios

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	0.009	0.083	0.082	0.415	0.196	0.056	0.057	0.102	1.000
Survey apportionment (with hook correction)	2	0.010	0.083	0.086	0.431	0.212	0.057	0.047	0.074	1.000

Coastwide abundance with partitioning

325

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	2.911	27.071	26.778	134.822	63.845	18.193	18.389	32.992	325.000
Survey apportionment (with hook correction)	2	3.208	27.072	27.868	140.041	68.784	18.465	15.401	24.162	325.000

2009 Total CEY

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	0.58	5.41	5.36	26.96	12.77	2.73	2.76	4.95	61.52
Survey apportionment (with hook correction)	2	0.64	5.41	5.57	28.01	13.76	2.77	2.31	3.62	62.10

Other Removals

	Area 2A	Area 2B	Area 2C	Area 3A	Area 3B	Area 4A	Area 4B	Area 4CDE	Total
Sport catch	0.457	1.520	3.083	5.629	0.018	0.043	0.000	0.000	10.750
Legal-sized bycatch	0.141	0.067	0.216	1.058	0.485	0.496	0.211	1.552	4.226
Personal use	0.030	0.405	0.525	0.372	0.048	0.015	0.002	0.092	1.489
Legal-sized wastage	0.001	0.023	0.012	0.063	0.004	0.012	0.012	0.014	0.141
Total	0.629	2.015	3.836	7.122	0.555	0.566	0.225	1.658	16.606
Total, excludes sport catch									
in Areas 2A and 2B and personal use in 2A	0.142	0.495	3.836	7.122	0.555	0.566	0.225	1.658	14.599

Guided	1.914	3.603
Unguided	1.169	2.026
Total	3.083	5.629

2009 Yield Table

	Area 2A	Area 2B	Area 2C	Area 3A	Area 3B	Area 4A	Area 4B	Area 4CDE	Total
Coastwide assessment ¹									
2009 exploitable biomass	3.208	27.072	27.868	140.041	68.784	18.465	15.401	24.162	325.001
Proportion of total	0.010	0.083	0.086	0.431	0.212	0.057	0.047	0.074	1.000
Target harvest rate	0.200	0.200	0.200	0.200	0.200	0.150	0.150	0.150	0.191
Total CEY	0.642	5.414	5.574	28.008	13.757	2.770	2.310	3.624	62.099
Other removals ²	0.142	0.495	3.836	7.122	0.555	0.566	0.225	1.658	14.599
2008 fishery CEY ²	0.500	4.919	1.738	20.886	13.202	2.204	2.085	1.966	47.500

Notes:

1 "Coastwide assessment" refers to the coastwide model fit with survey apportionment of the total biomass estimate among regulatory areas. "Area assessments" are the closed-area model fits.

2 "Other removals" comprise legal-sized wastage, legal-sized bycatch, personal use, and in most areas sport catch. In Areas 2A and 2B sport catch is included in fishery CEY rather than in other removals. 2A only legal wastage and bycatch

Catch Limits based on Coastwide Assessment, Sport Adheres to Limits

Reg Area	Exploitable biomass	Harvest Rate	Total CEY	2008 Other Removals	2008 Catch Limit	2009 Fishery CEY	2009 Catch Limit Recommendation	
2A	3.21	20.0%	0.64	0.14	1.22	0.50	0.86	1,4
2B	27.07	20.0%	5.41	0.50	9.00	4.92	6.96	2,4
2C	27.87	20.0%	5.57	2.85	6.21	2.72	4.47	4
3A	140.04	20.0%	28.01	7.17	24.22	20.84	22.53	4
3B	68.78	20.0%	13.76	0.56	10.90	13.20	11.67	3
4A	18.47	15.0%	2.77	0.57	3.10	2.20	2.65	4
4B	15.40	15.0%	2.31	0.23	1.86	2.09	1.94	3
4CDE	24.16	15.0%	3.62	1.66	3.89	1.97	2.93	4
Total	325.00	19.1%	62.10	13.66	60.40	48.44	54.01	

Note: Exploitable biomass is coastwide assessment, survey partitioning; amended 2C sport

¹ Catch limits and Fishery CEY for 2A includes commercial, sport, and treaty subsistence catches

² Catch limits and Fishery CEY for 2B includes commercial and sport catch

³ Calculated as 2008 catch limit plus 1/3 of the difference between
2009 Fishery CEY and 2008 Catch Limit

⁴ Calculated as 2008 Catch Limit minus 1/2 of the difference between
2009 Fishery CEY and 2008 Catch Limit

Assumes GHL of 0.931 Milb in Area 2C, 3.65 Milb in Area 3A under Other Removals; reduced GHL in Area 2C, based on NMFS-regulated GHL reduction associated with reduced Total CEY.

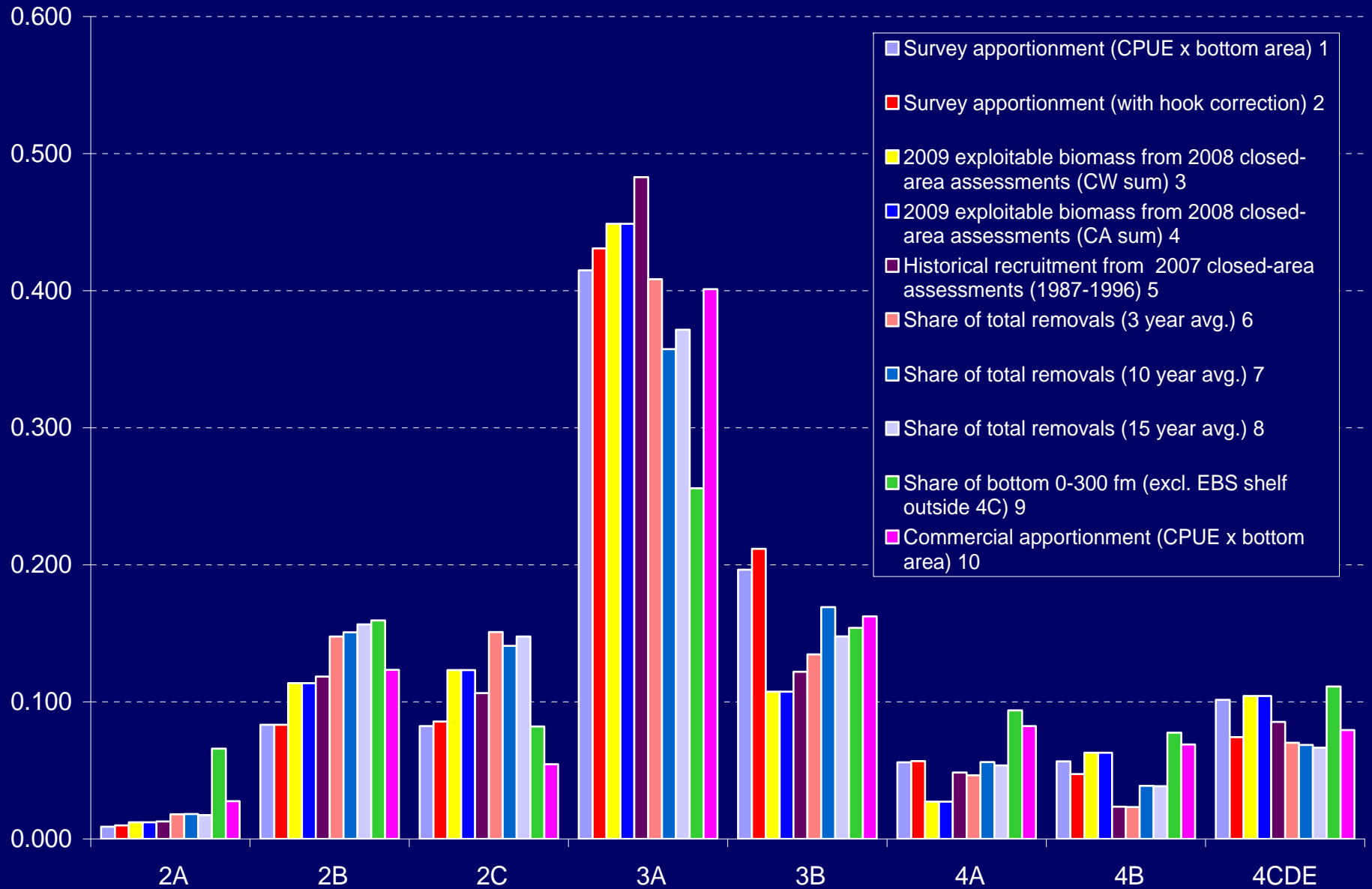
Other removals for 2C and 3A are adding projected unguided harvest to the applicable GHL

Proportions by Apportionment Method

2009 Apportionment Scenarios

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	0.009	0.083	0.082	0.415	0.196	0.056	0.057	0.102	1.000
Survey apportionment (with hook correction)	2	0.010	0.083	0.086	0.431	0.212	0.057	0.047	0.074	1.000
2009 exploitable biomass from 2008 closed-area assessments (CW sum)	3	0.012	0.114	0.123	0.449	0.107	0.027	0.063	0.104	1.000
2009 exploitable biomass from 2008 closed-area assessments (CA sum)	4	0.012	0.114	0.123	0.449	0.107	0.027	0.063	0.104	1.000
Historical recruitment from 2007 closed-area assessments (1987-1996)	5	0.013	0.118	0.106	0.483	0.122	0.049	0.024	0.085	1.000
Share of total removals (3 year avg.)	6	0.018	0.148	0.151	0.408	0.135	0.046	0.023	0.070	1.000
Share of total removals (10 year avg.)	7	0.018	0.151	0.141	0.357	0.169	0.056	0.039	0.069	1.000
Share of total removals (15 year avg.)	8	0.017	0.157	0.148	0.372	0.148	0.054	0.039	0.067	1.000
Share of bottom 0-300 fm (excl. EBS shelf outside 4C)	9	0.066	0.159	0.082	0.256	0.154	0.094	0.078	0.111	1.000
Commercial apportionment (CPUE x bottom area)	10	0.028	0.123	0.055	0.401	0.162	0.082	0.069	0.080	1.000

Proportions

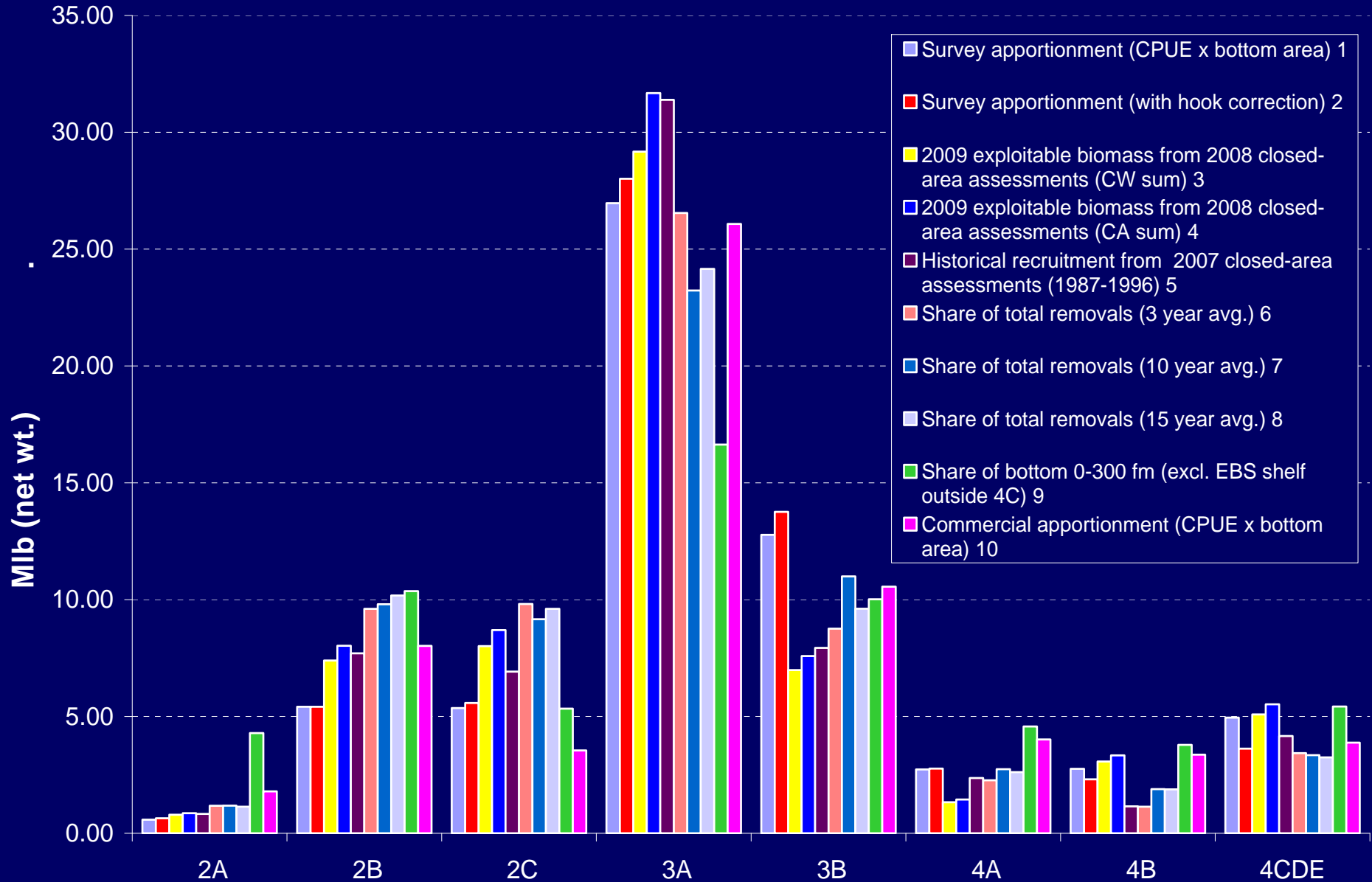


Total CEY by Apportionment Method

2009 Total CEY

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	0.58	5.41	5.36	26.96	12.77	2.73	2.76	4.95	61.52
Survey apportionment (with hook correction)	2	0.64	5.41	5.57	28.01	13.76	2.77	2.31	3.62	62.10
2009 exploitable biomass from 2008 closed-area assessments (CW sum)	3	0.79	7.39	8.01	29.17	6.99	1.33	3.07	5.09	61.84
2009 exploitable biomass from 2008 closed-area assessments (CA sum)	4	0.86	8.03	8.70	31.67	7.59	1.44	3.33	5.52	67.15
Historical recruitment from 2007 closed-area assessments (1987-1996)	5	0.83	7.70	6.92	31.39	7.93	2.36	1.15	4.16	62.44
Share of total removals (3 year avg.)	6	1.18	9.60	9.81	26.54	8.76	2.27	1.14	3.43	62.72
Share of total removals (10 year avg.)	7	1.18	9.80	9.16	23.23	10.99	2.74	1.89	3.35	62.34
Share of total removals (15 year avg.)	8	1.14	10.18	9.61	24.15	9.61	2.61	1.88	3.25	62.42
Share of bottom 0-300 fm (excl. EBS shelf outside 4C)	9	4.29	10.36	5.34	16.63	10.01	4.57	3.78	5.42	60.41
Commercial apportionment (CPUE x bottom area)	10	1.79	8.02	3.55	26.08	10.55	4.02	3.36	3.88	61.25

Total CEY 2009

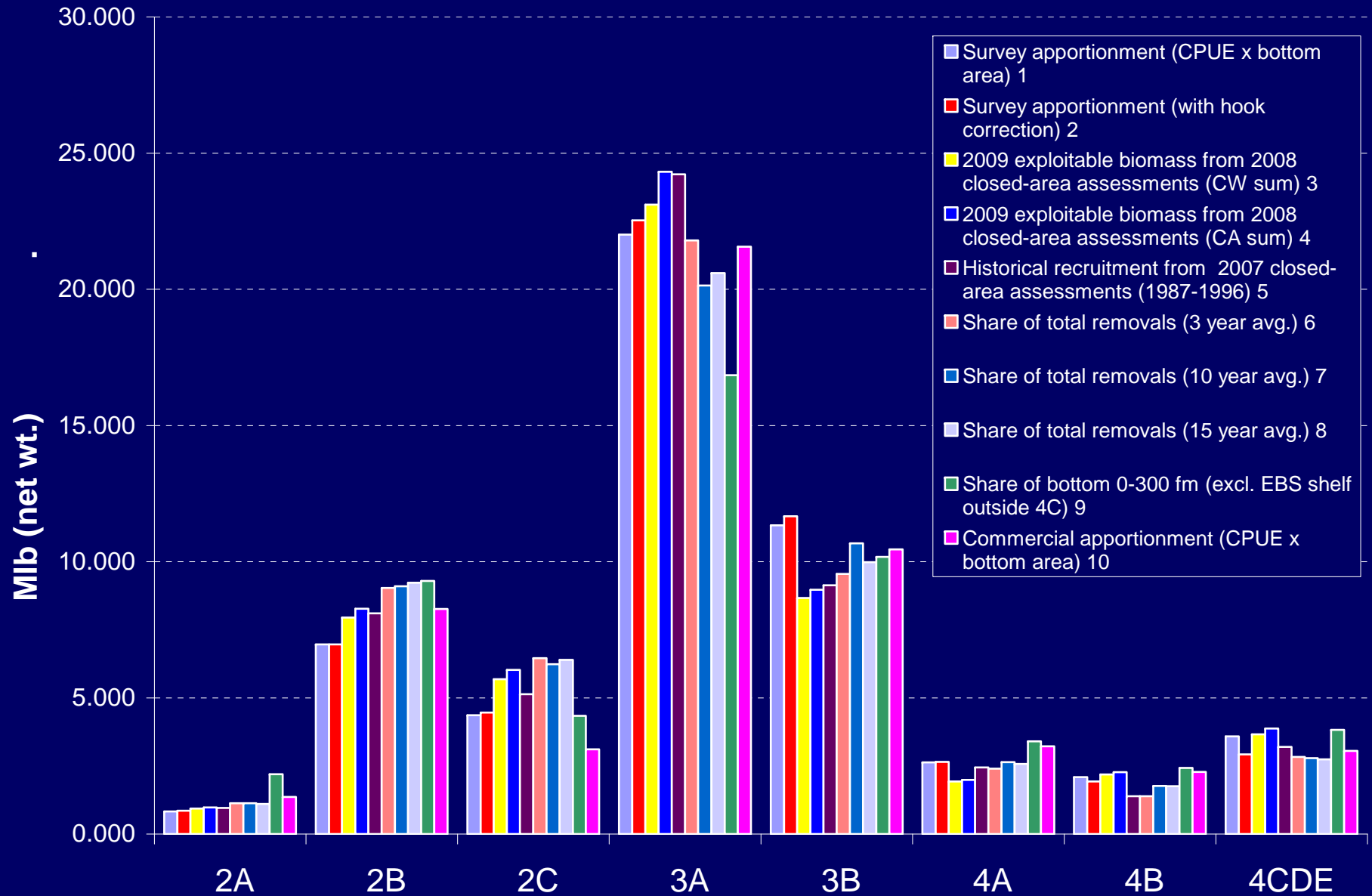


Catch Limits by Apportionment Method

2009 Catch Limit Recommendations with SUFD

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	0.830	6.960	4.356	22.008	11.338	2.631	2.084	3.590	53.798
Survey apportionment (with hook correction)	2	0.860	6.960	4.465	22.530	11.667	2.652	1.935	2.928	53.997
2009 exploitable biomass from 2008 closed-area assessments (CW sum)	3	0.936	7.949	5.684	23.111	8.665	1.931	2.188	3.659	54.124
2009 exploitable biomass from 2008 closed-area assessments (CA sum)	4	0.971	8.266	6.028	24.315	8.965	1.988	2.276	3.877	56.686
Historical recruitment from 2007 closed-area assessments (1987-1996)	5	0.953	8.103	5.137	24.218	9.139	2.449	1.392	3.198	54.589
Share of total removals (3 year avg.)	6	1.127	9.037	6.460	21.797	9.551	2.400	1.386	2.829	54.587
Share of total removals (10 year avg.)	7	1.131	9.102	6.242	20.140	10.670	2.637	1.763	2.789	54.472
Share of total removals (15 year avg.)	8	1.107	9.227	6.391	20.602	9.978	2.574	1.756	2.739	54.375
Share of bottom 0-300 fm (excl. EBS shelf outside 4C)	9	2.196	9.290	4.346	16.843	10.179	3.403	2.425	3.826	52.507
Commercial apportionment (CPUE x bottom area)	10	1.364	8.263	3.105	21.563	10.450	3.217	2.285	3.054	53.302

Catch Limit Recommendation 2009



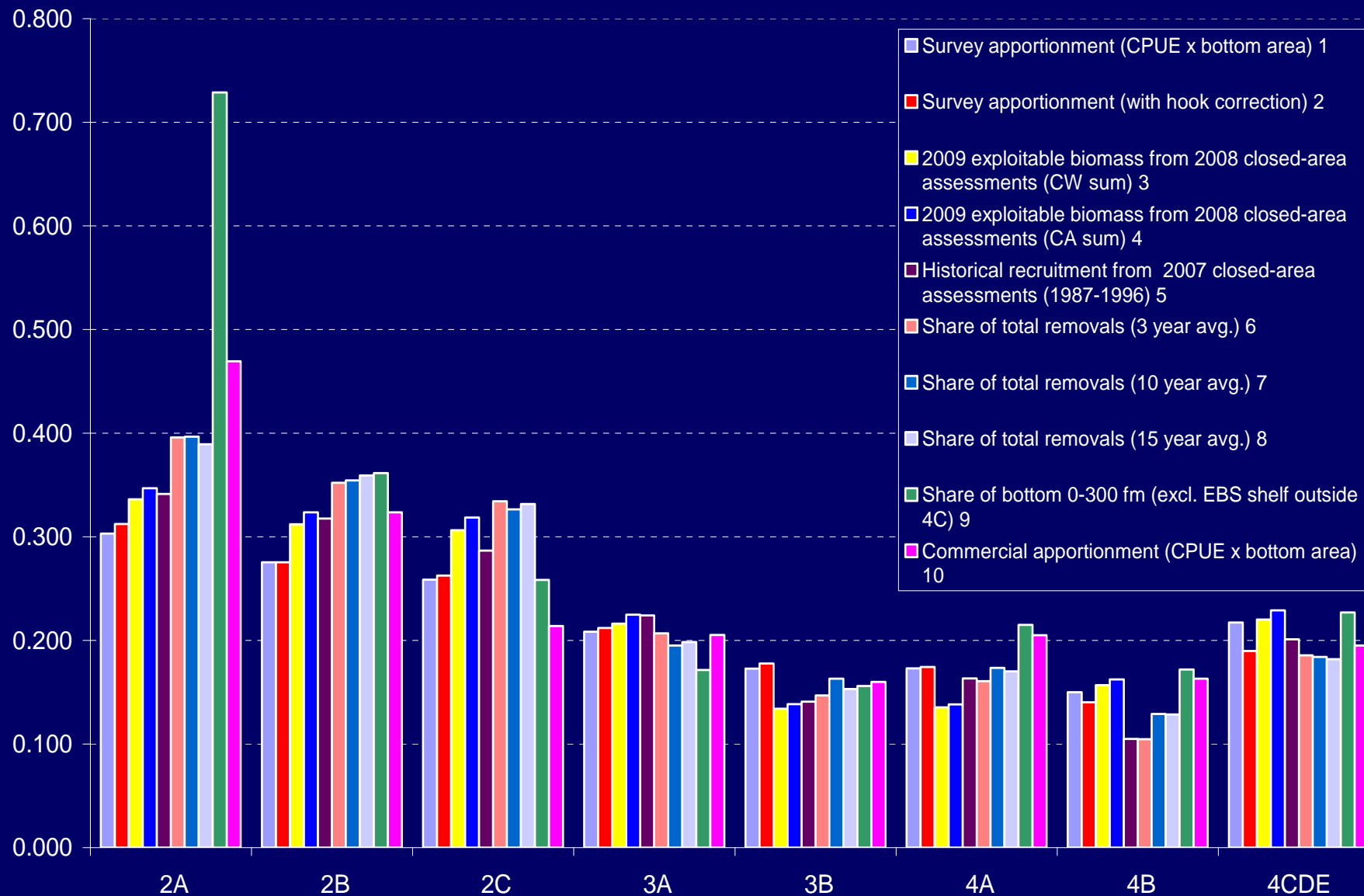
Realized Harvest Rate by Apportionment Method

Realized harvest rate

		2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Survey apportionment (CPUE x bottom area)	1	0.303	0.275	0.259	0.208	0.173	0.173	0.150	0.217	0.210
Survey apportionment (with hook correction)	2	0.312	0.275	0.263	0.212	0.178	0.174	0.140	0.190	0.211
2009 exploitable biomass from 2008 closed-area assessments (CW sum)	3	0.336	0.312	0.306	0.216	0.134	0.135	0.157	0.220	0.211
2009 exploitable biomass from 2008 closed-area assessments (CA sum)	4	0.347	0.324	0.319	0.225	0.138	0.138	0.162	0.229	0.219
Historical recruitment from 2007 closed-area assessments (1987-1996)	5	0.341	0.318	0.287	0.224	0.141	0.163	0.105	0.201	0.213
Share of total removals (3 year avg.)	6	0.396	0.352	0.334	0.207	0.147	0.161	0.105	0.186	0.213
Share of total removals (10 year avg.)	7	0.397	0.354	0.326	0.195	0.163	0.173	0.129	0.184	0.213
Share of total removals (15 year avg.)	8	0.389	0.359	0.332	0.198	0.153	0.170	0.129	0.182	0.212
Share of bottom 0-300 fm (excl. EBS shelf outside 4C)	9	0.729	0.361	0.258	0.171	0.156	0.215	0.172	0.227	0.206
Commercial apportionment (CPUE x bottom area)	10	0.469	0.324	0.214	0.205	0.160	0.205	0.163	0.195	0.209

24/11/08 1249

Realized Harvest Rate



Catch Limits based on Coastwide Assessment, Sport Adheres to Limits

Reg Area	Exploitable biomass	Harvest Rate	Total CEY	2008 Other Removals	2008 Catch Limit	2009 Fishery CEY	2009 Catch Limit Recommendation	
2A	3.21	20.0%	0.64	0.14	1.22	0.50	0.86	1,4
2B	27.07	20.0%	5.41	0.50	9.00	4.92	6.96	2,4
2C	27.87	20.0%	5.57	2.85	6.21	2.72	4.47	4
3A	140.04	20.0%	28.01	7.17	24.22	20.84	22.53	4
3B	68.78	20.0%	13.76	0.56	10.90	13.20	11.67	3
4A	18.47	15.0%	2.77	0.57	3.10	2.20	2.65	4
4B	15.40	15.0%	2.31	0.23	1.86	2.09	1.94	3
4CDE	24.16	15.0%	3.62	1.66	3.89	1.97	2.93	4
Total	325.00	19.1%	62.10	13.66	60.40	48.44	54.01	

Note: Exploitable biomass is coastwide assessment, survey partitioning; amended 2C sport

¹ Catch limits and Fishery CEY for 2A includes commercial, sport, and treaty subsistence catches

² Catch limits and Fishery CEY for 2B includes commercial and sport catch

³ Calculated as 2008 catch limit plus 1/3 of the difference between
2009 Fishery CEY and 2008 Catch Limit

⁴ Calculated as 2008 Catch Limit minus 1/2 of the difference between
2009 Fishery CEY and 2008 Catch Limit

Assumes GHL of 0.931 Milb in Area 2C, 3.65 Milb in Area 3A under Other Removals; reduced GHL in Area 2C, based on NMFS-regulated GHL reduction associated with reduced Total CEY.

Other removals for 2C and 3A are adding projected unguided harvest to the applicable GHL

Regulatory Proposals

IPHC Staff Proposals

- Section 28(2) - Alaska sport regulations state that no person shall possess on board a *fishing vessel*, including charter vessels and pleasure craft used for fishing, halibut that has been filleted, mutilated, or otherwise disfigured in any manner except that each halibut may be cut into no more than 2 ventral, 2 dorsal pieces, and 2 cheeks, with skin on. The definition of fishing vessel is broad; therefore, the recommendation will be to allow exceptions of vessels without fishing gear to have processed halibut onboard. Additionally in 2009, we will provide a handout on the halibut sport fishing regulations to Alaska sport fishers receiving licenses.

Regulatory Proposals

IPHC Staff Proposals

- Section 18(3) - Last year, regulations were approved by the Commission that allowed fishing in multiple Regulatory Areas (4A, 4B, 4C, or 4D) provided a certified observer was on board; or a Vessel Monitoring System was on board and the vessel did not possess at any time on board more halibut than IFQ allowed for the area currently fished. In both cases, the halibut need to be identifiable by regulatory area. The regulations as written in the Federal Register require the area possession limit when an observer is on board, which was not the intent. We recommend changing the text to ensure the intent of the regulation is correct.

Regulatory Proposals

IPHC Staff Proposals

- Section 19 (7, 8) - Recommend changing the Area 2A regulation that restricts setline gear use 72 hours prior to the fishery. The change would be to require the offloading of the catch or submitting to a hold inspection prior to fishing the halibut opening, similar to the requirements in other regulatory areas (Section 19 (9,10)).

Regulatory Proposals

Industry Proposals

- Continued use of electric reels by recreational anglers
- AK sport anglers filleting halibut: State regulations or new booklet and record catch
- Allow possession of halibut fillets aboard after inspection and certification at ports
- Allow retention of Area 4A IFQ halibut during Bering Sea sablefish pot fishery

Regulatory Proposals

Industry Proposals

- Eliminate size limit for commercial halibut fishery
- Develop a harvest tag or ticket for data collection for all recreational halibut in AK
- Use best catch estimate for guided sportfish removals in Areas 2C and 3A (not GHLs)
- Section 128 (AK sport regs): preserved halibut not to be included in daily/possession limit

Regulatory Proposals

Industry Proposals

- Section 14 (careful release regs): no flatbar or automated hook stripper unless IPHC-approved Electronic Monitoring
- Section 14: no automated hook stripper
- Section 14: no flatbar outboard or above roller to strip undersize halibut
- At-sea monitoring for all commercial halibut fisheries
- **LATE:** one-fish bag-limit for Area 2C sport