GOA skate complex 2021
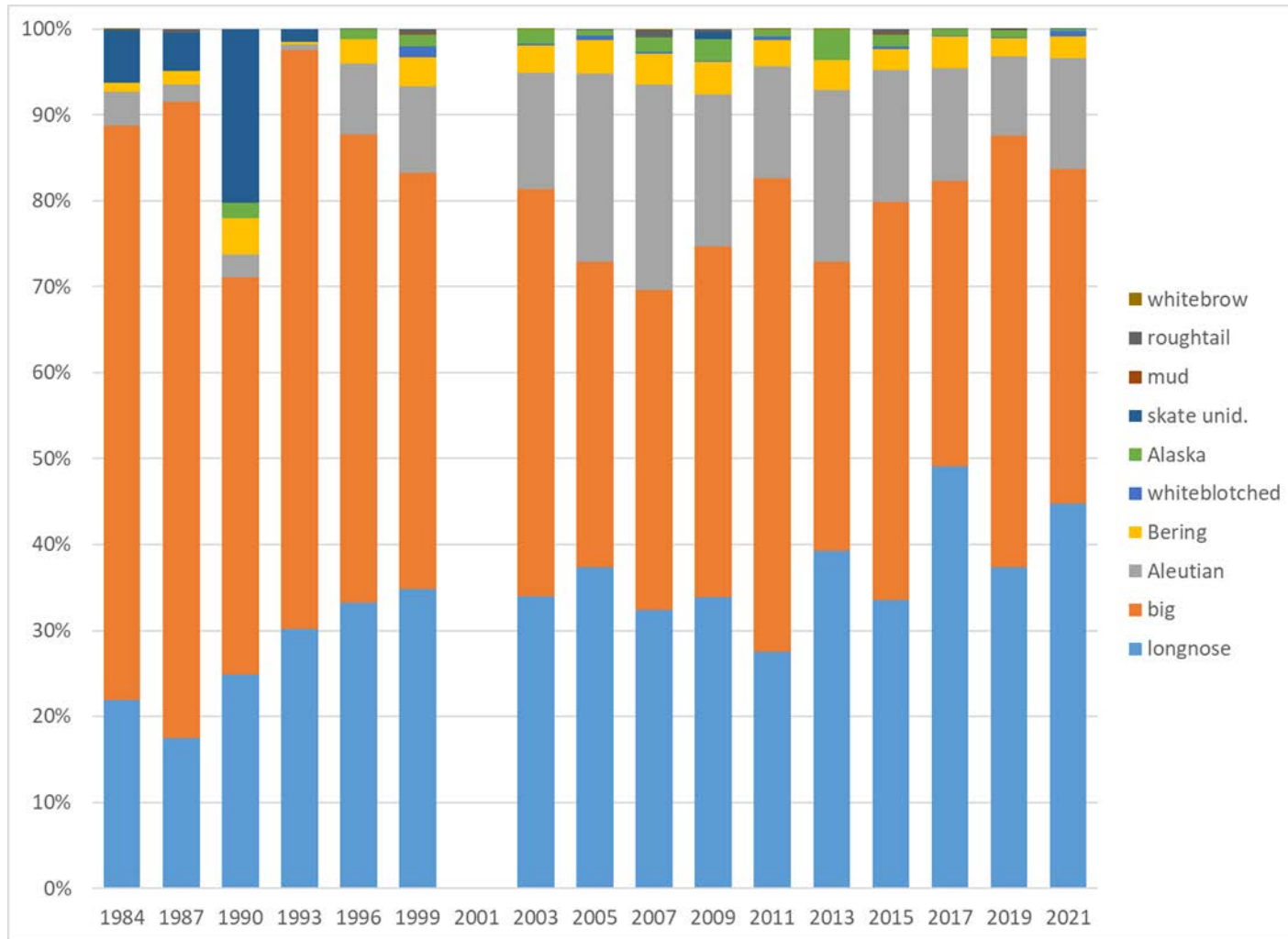

Olav A. Ormseth
Alaska Fisheries Science Center
NPFMC Groundfish Plan Team meeting, November 2021
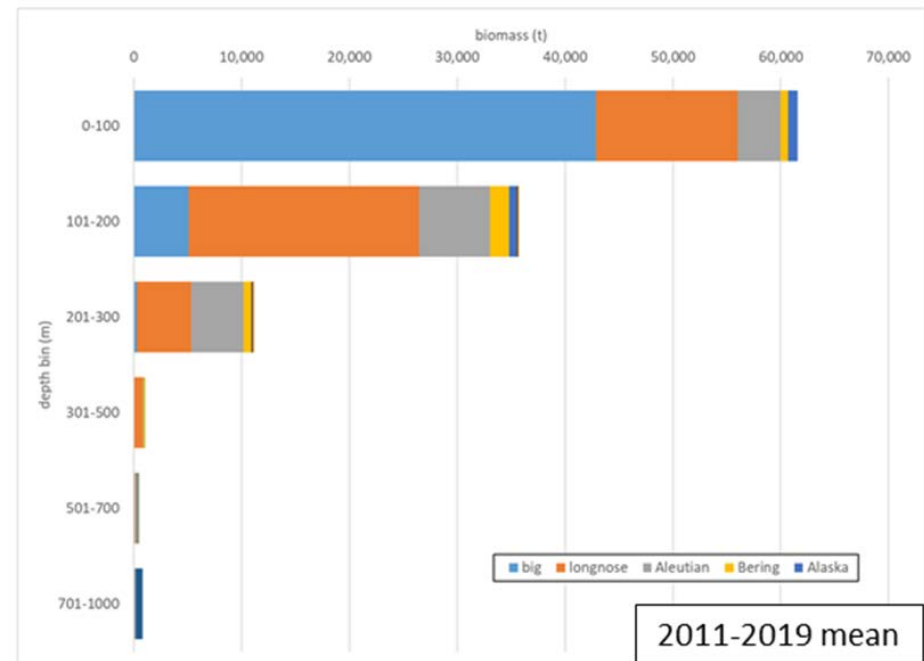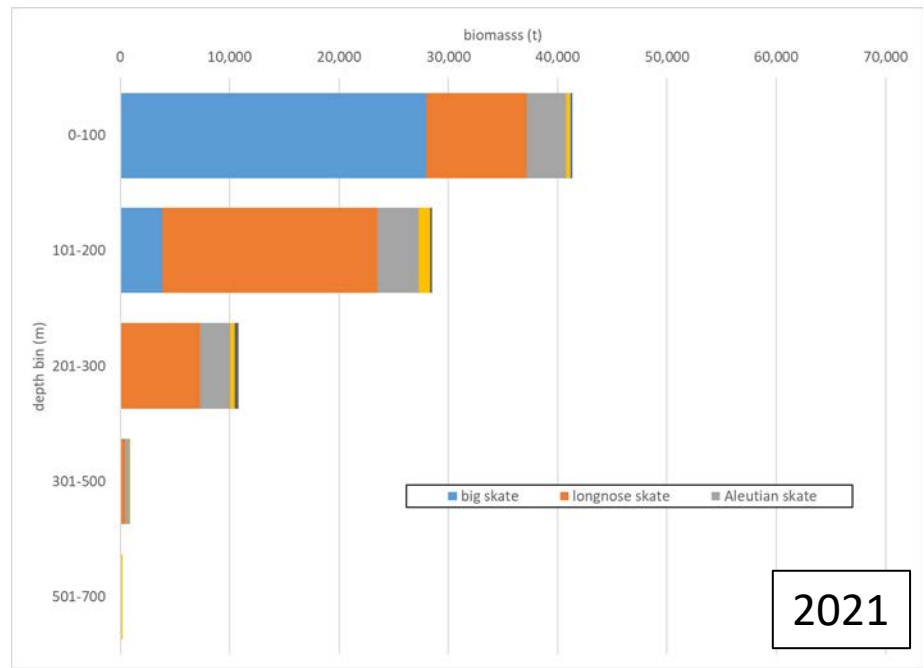
overview

1) overview of the complex

2) status: survey results for skates

3) skate catch information

4) harvest recommendations
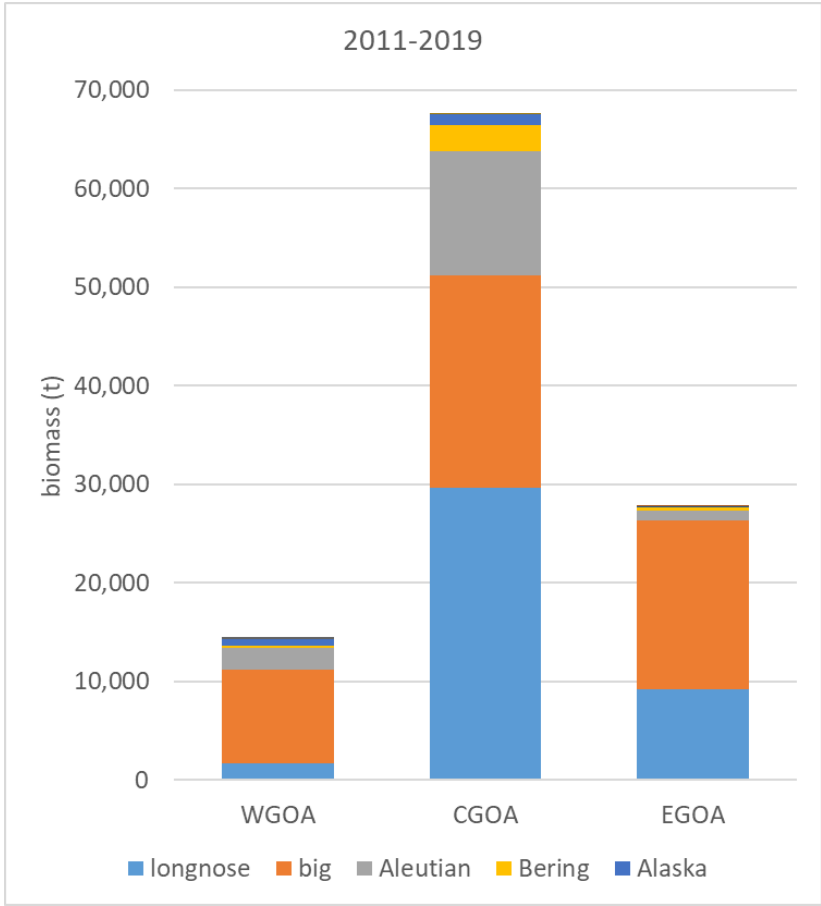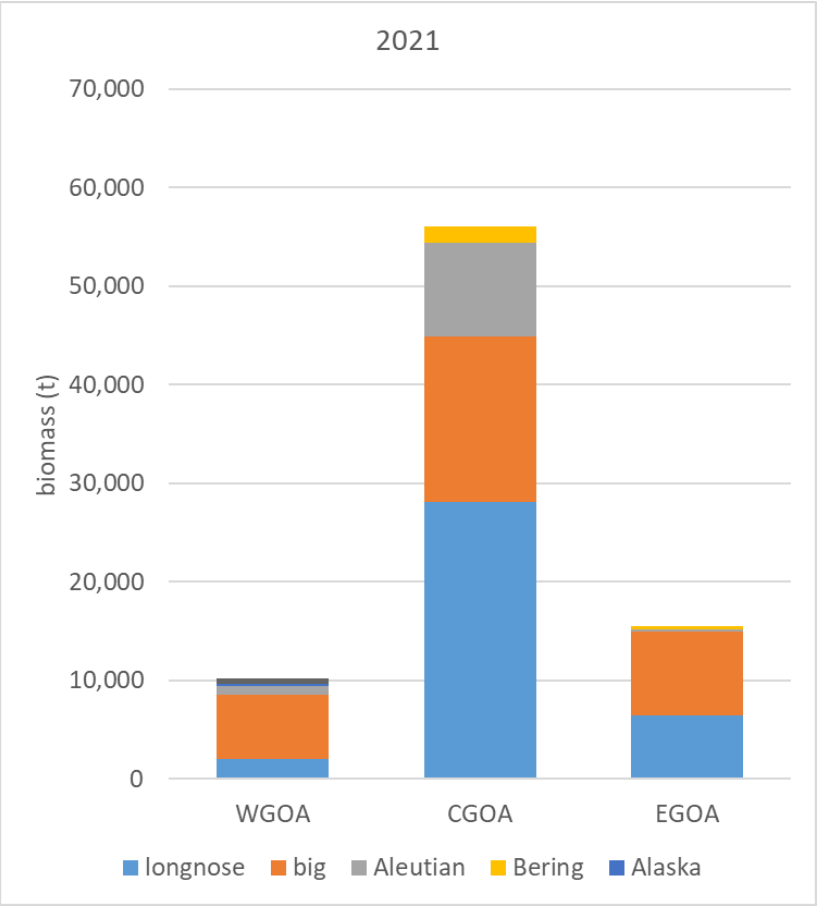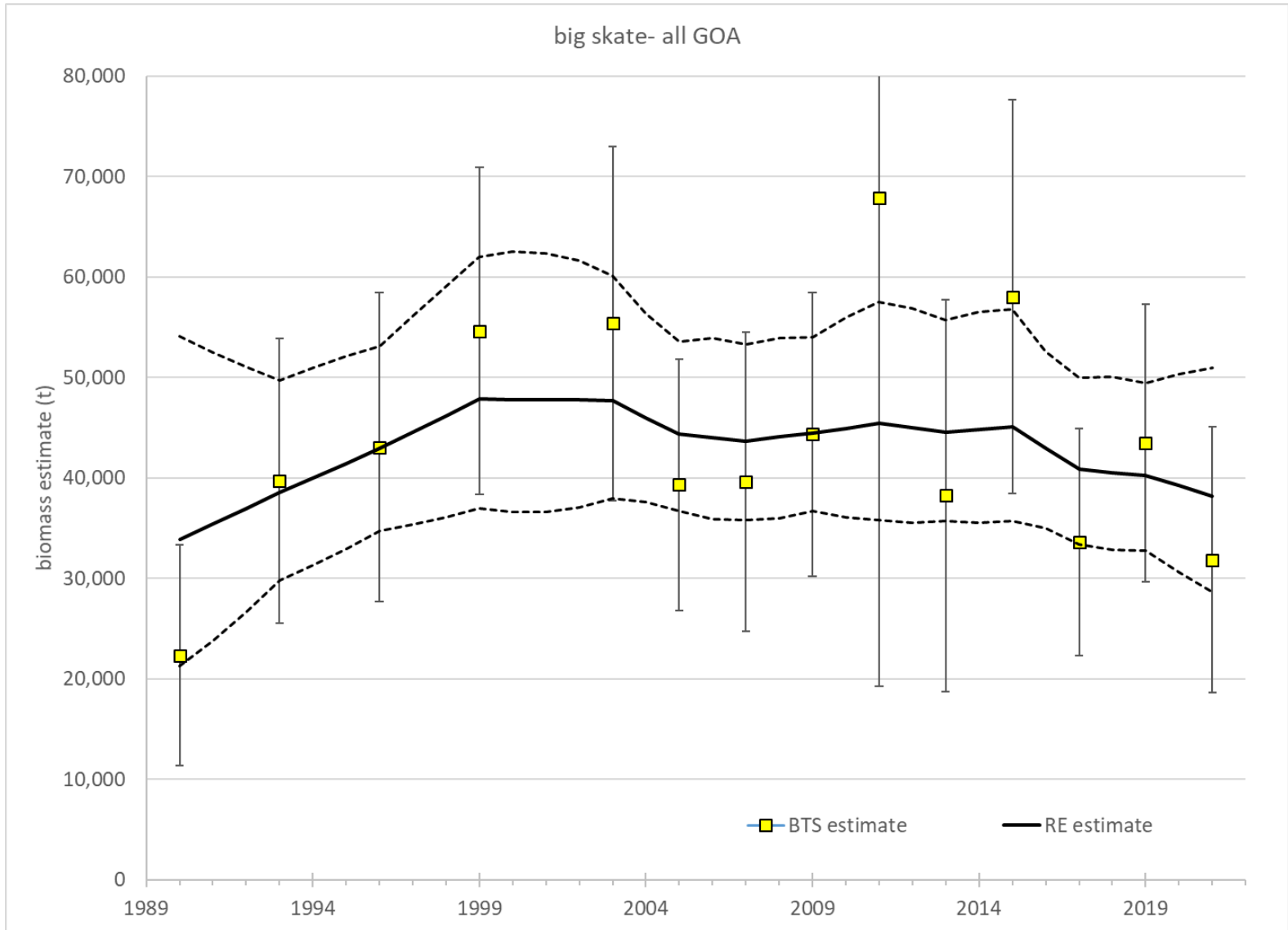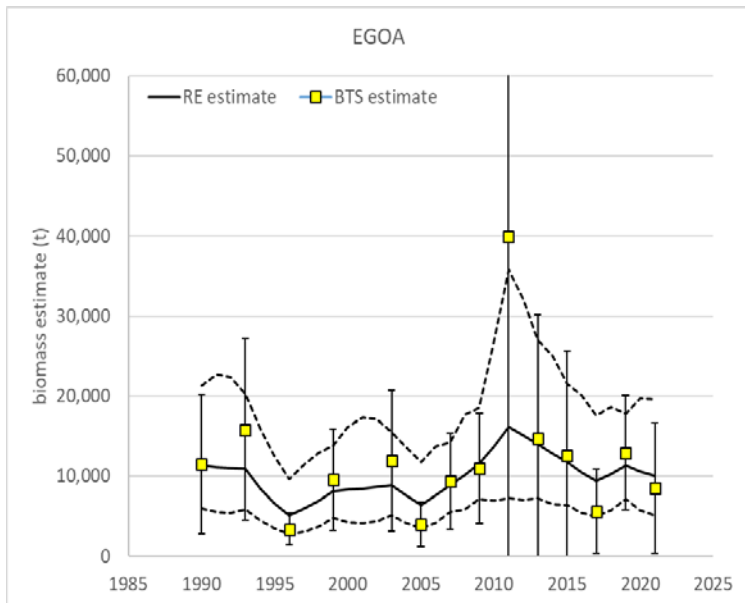
GOA skate species composition

skate distribution by depth

species composition/biomass by area
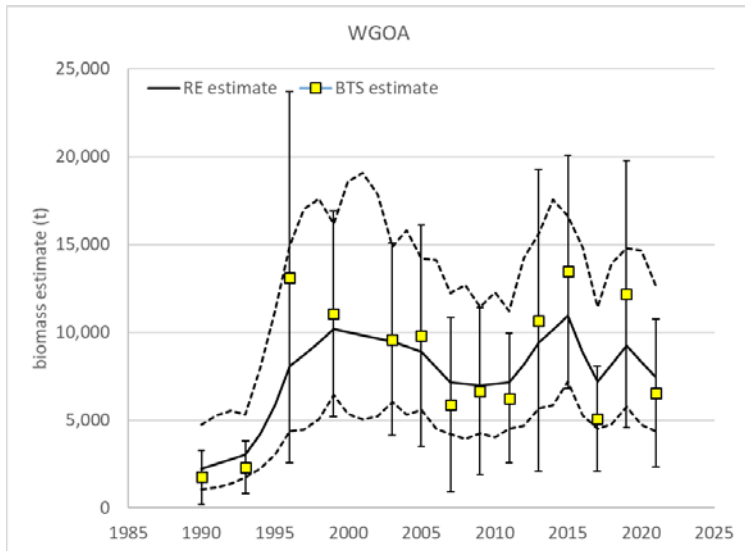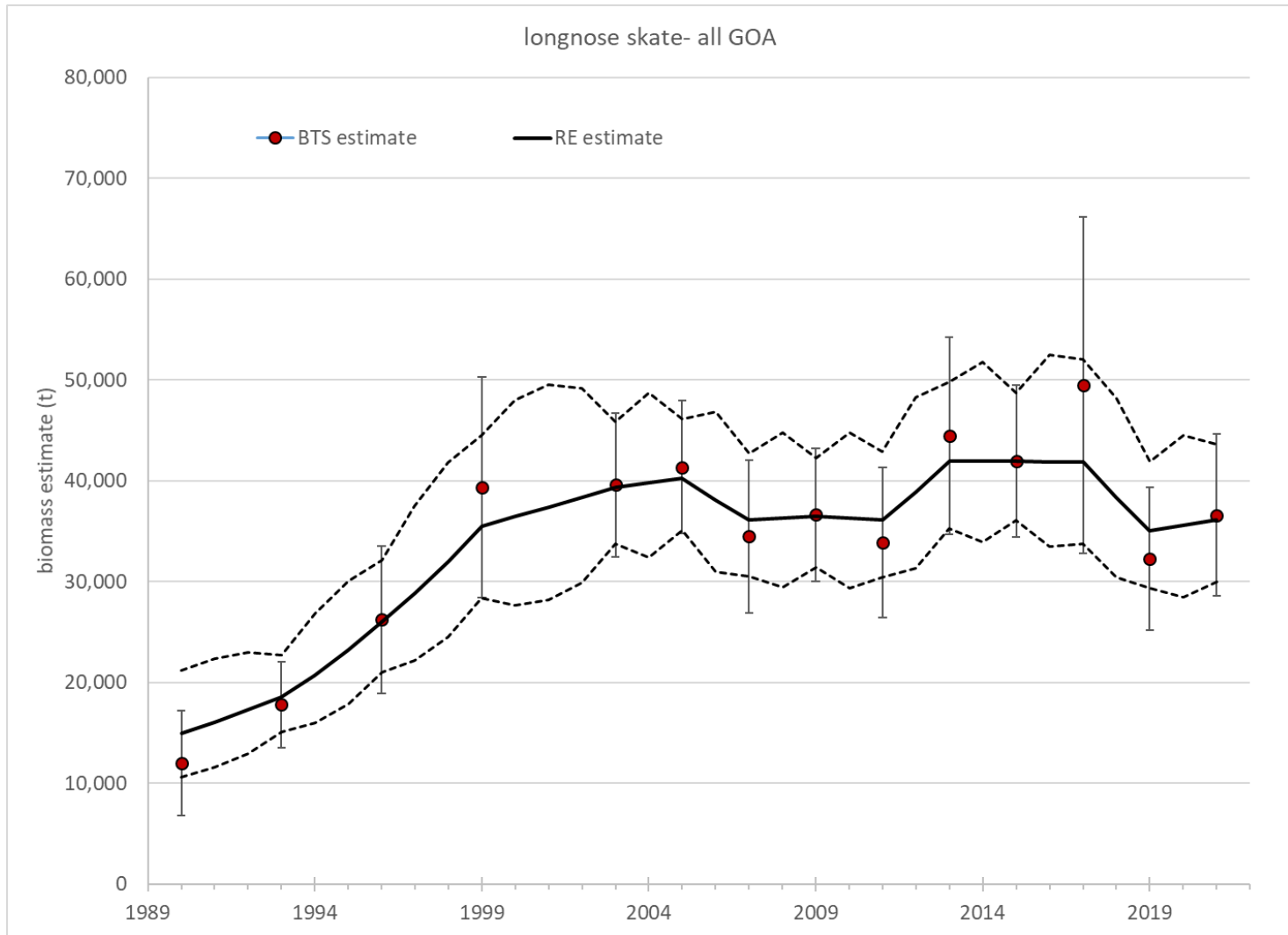
AFSC BTS biomass – big skate

big skate- all GOA

big skate biomass by area
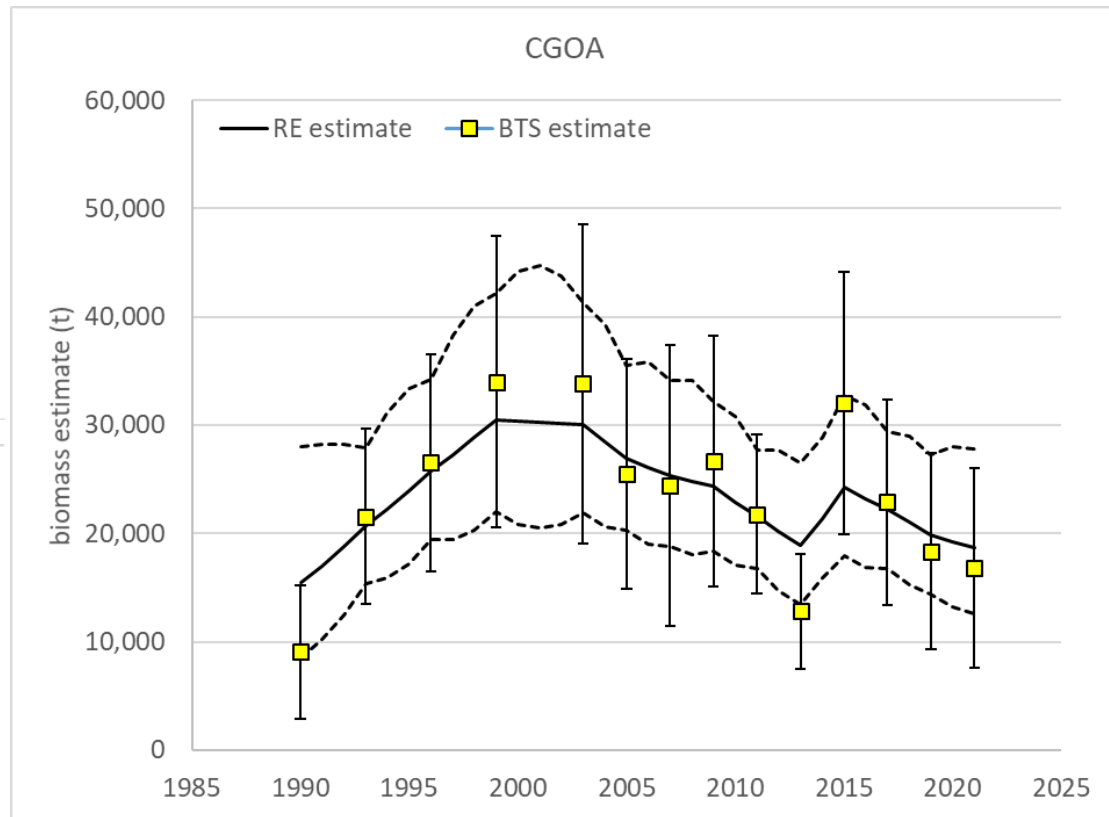
AFSC BTS biomass – longnose skate

longnose skate- all GOA

longnose skate biomass by area
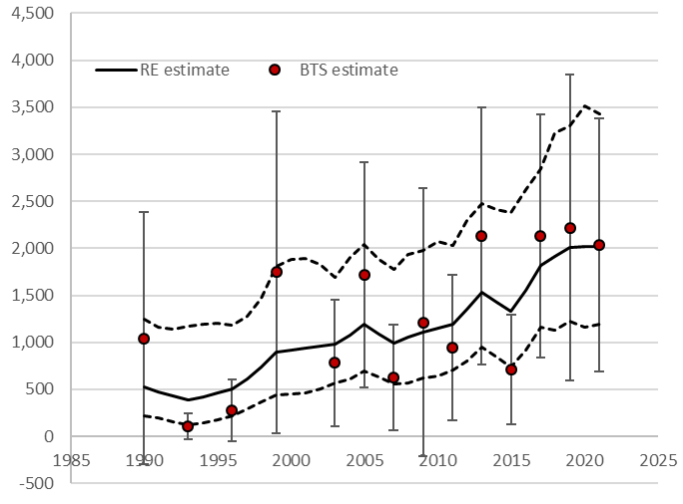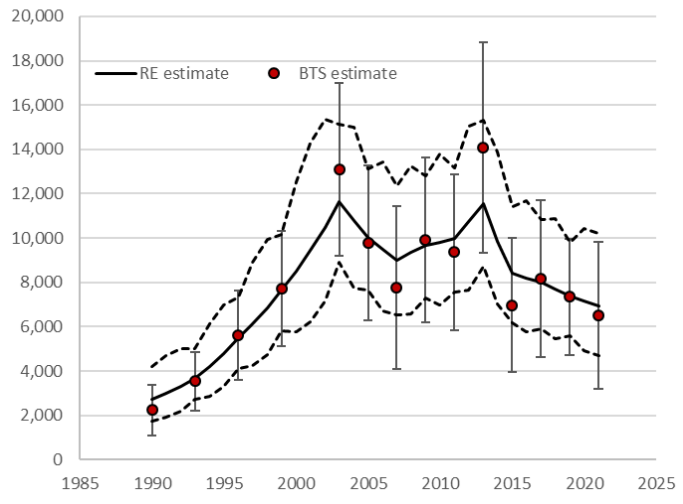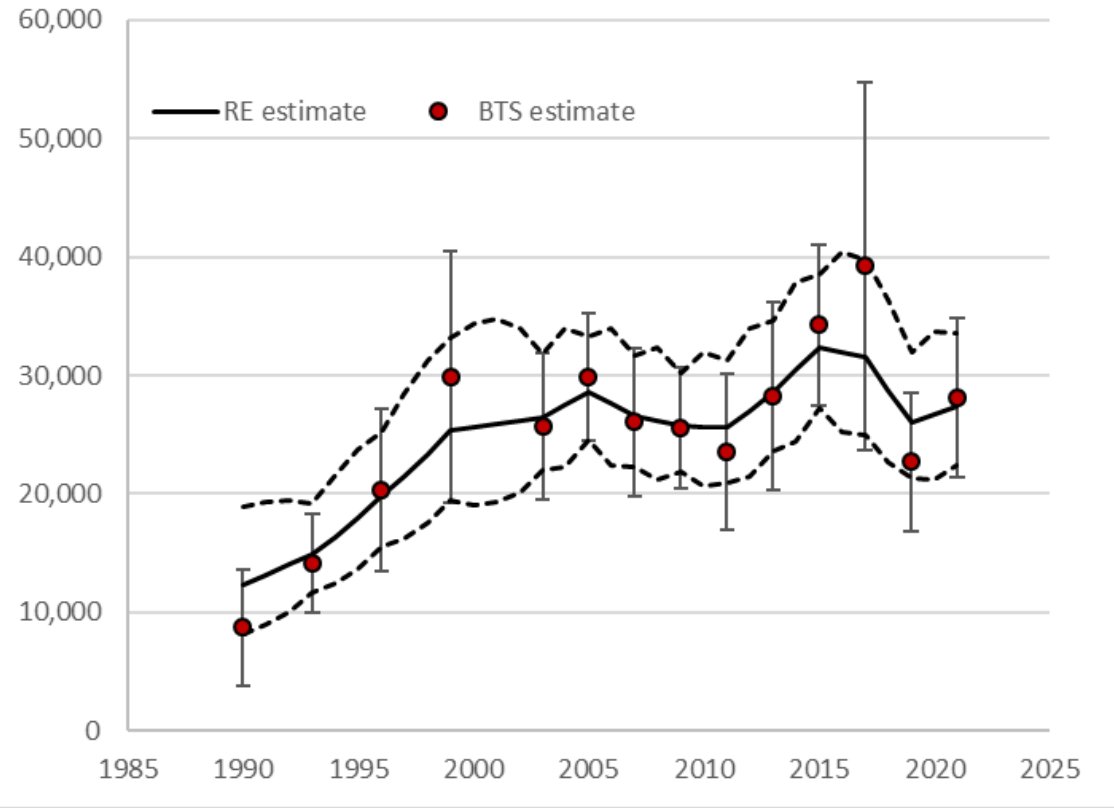
AFSC BTS biomass – other skates
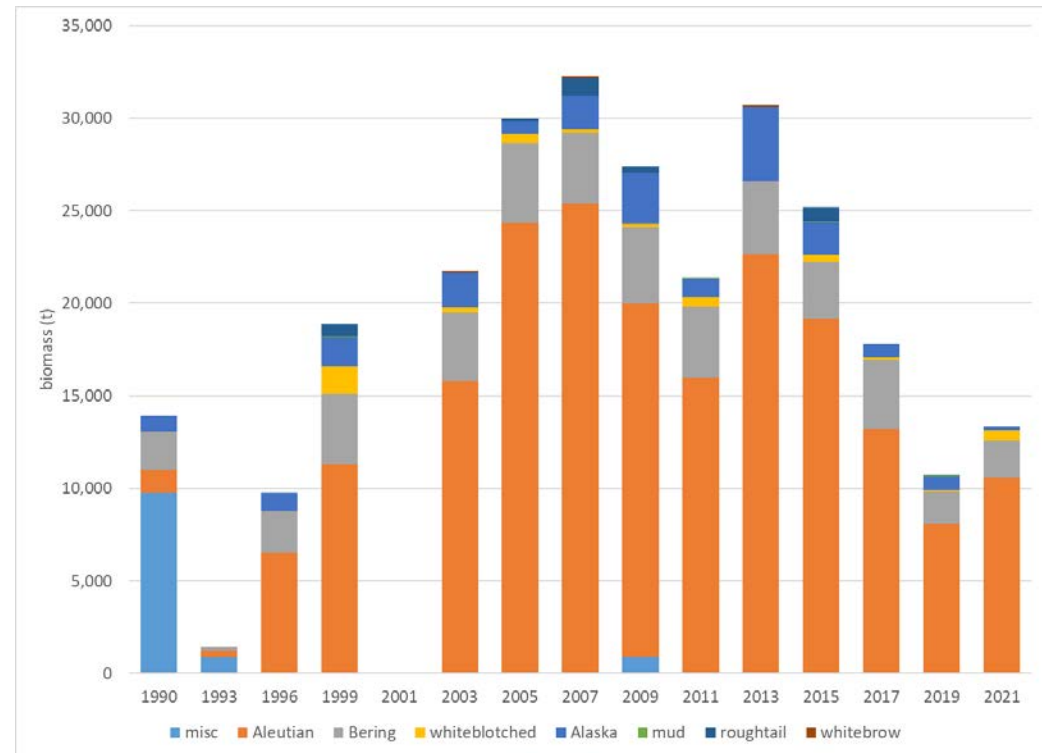
big skate size composition GOA-wide
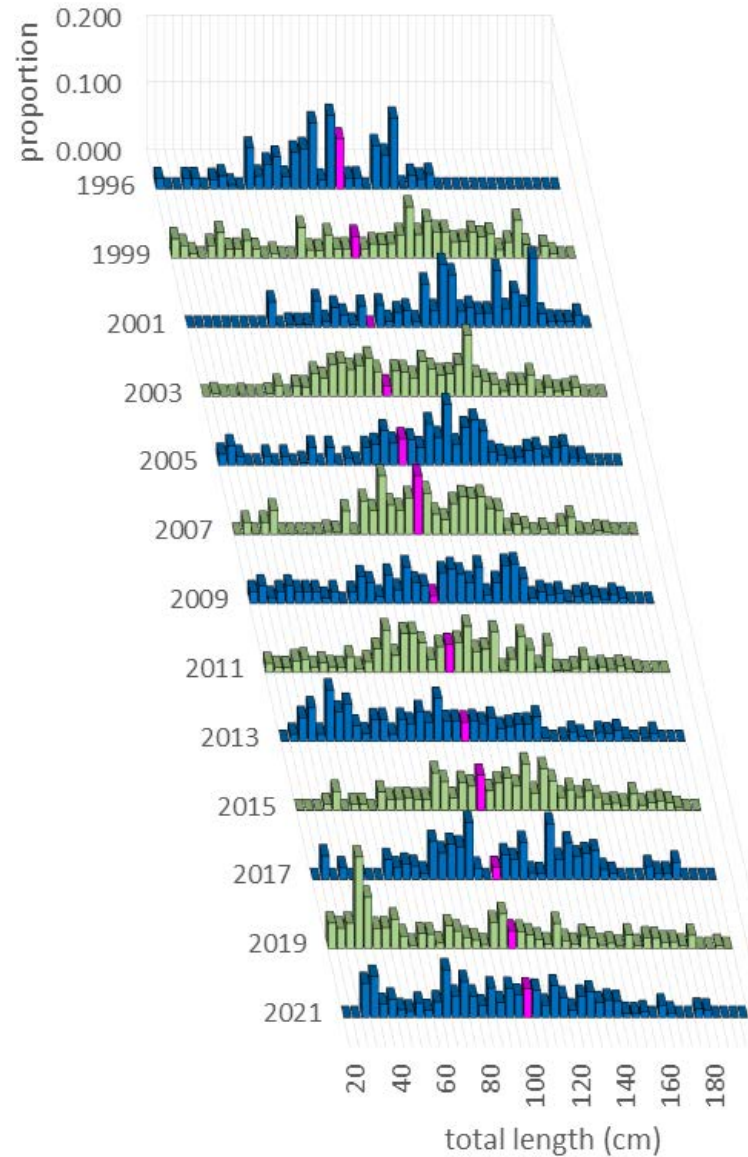
big skate size composition by area
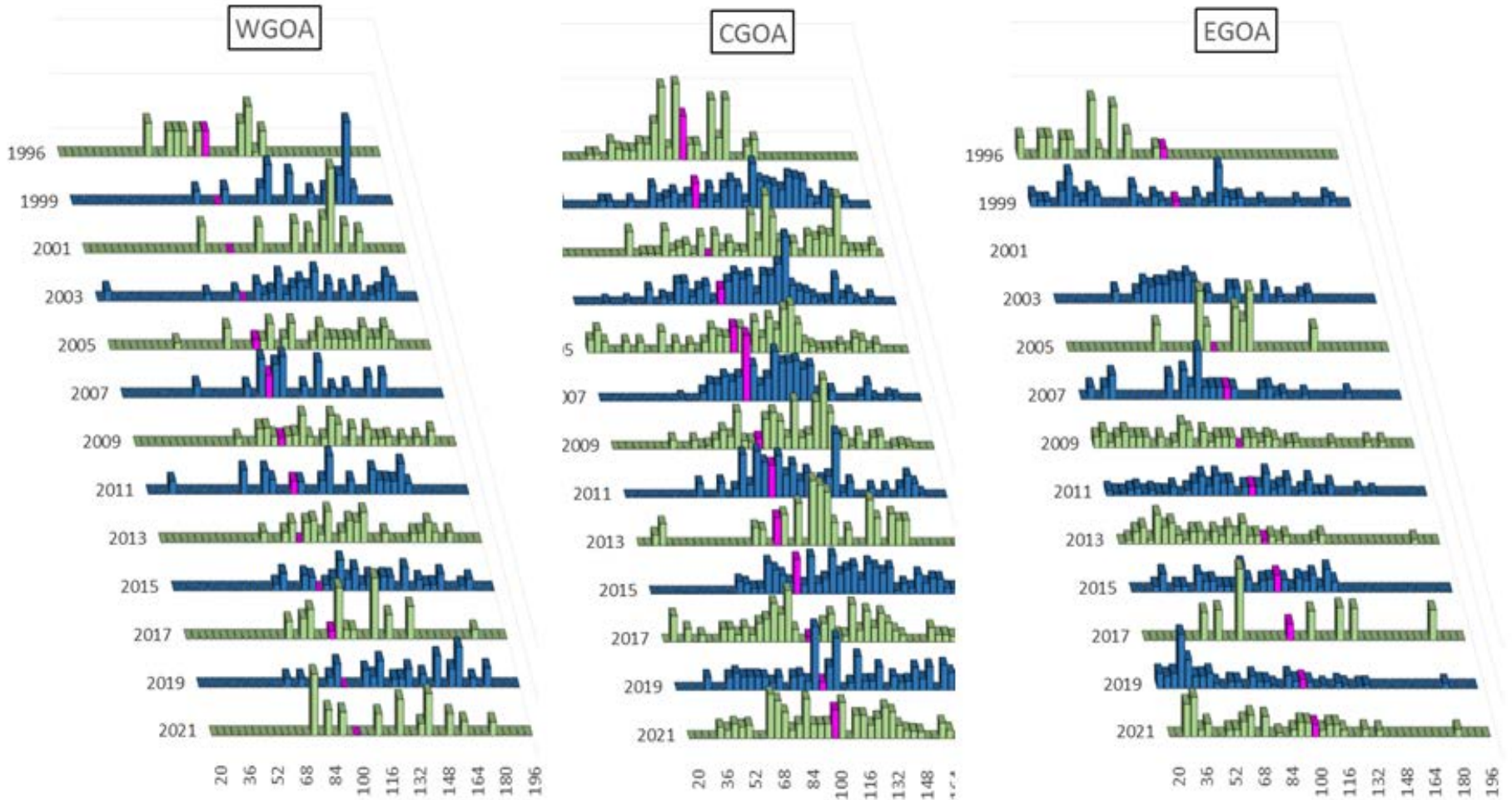
longnose skate size composition GOA-wide
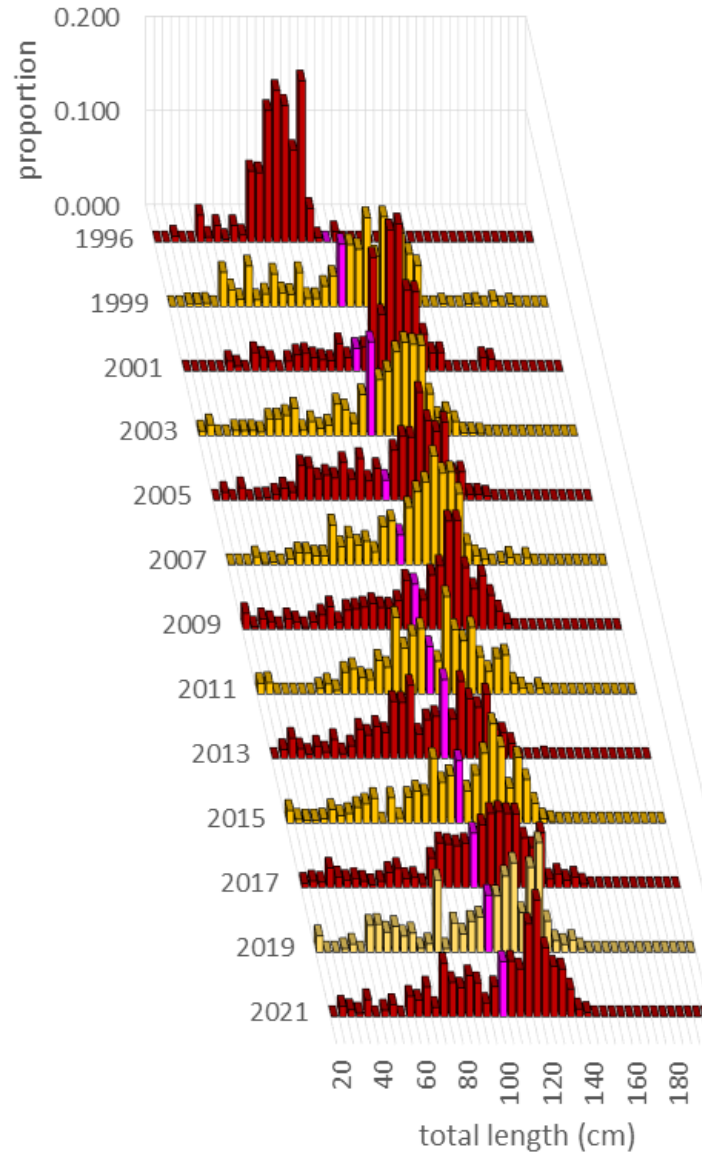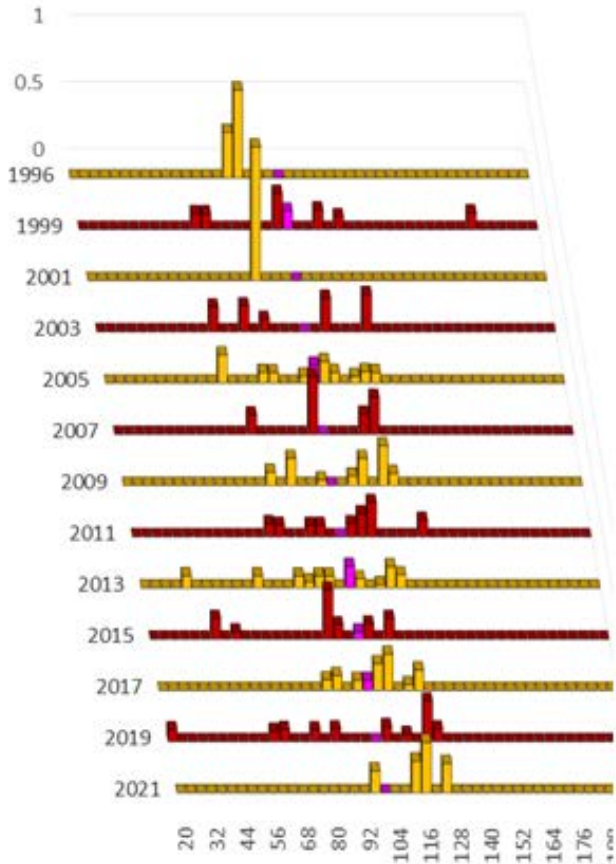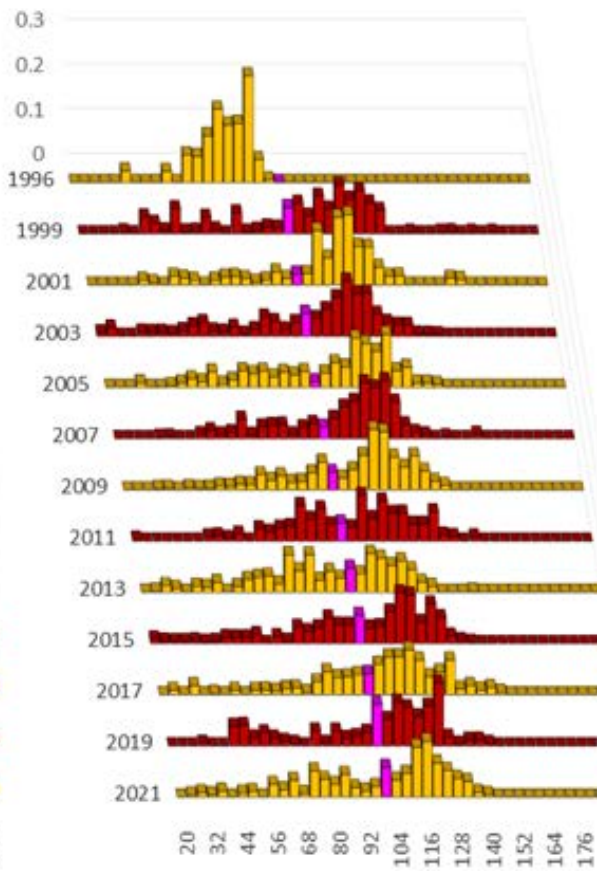
longnose skate size composition by area
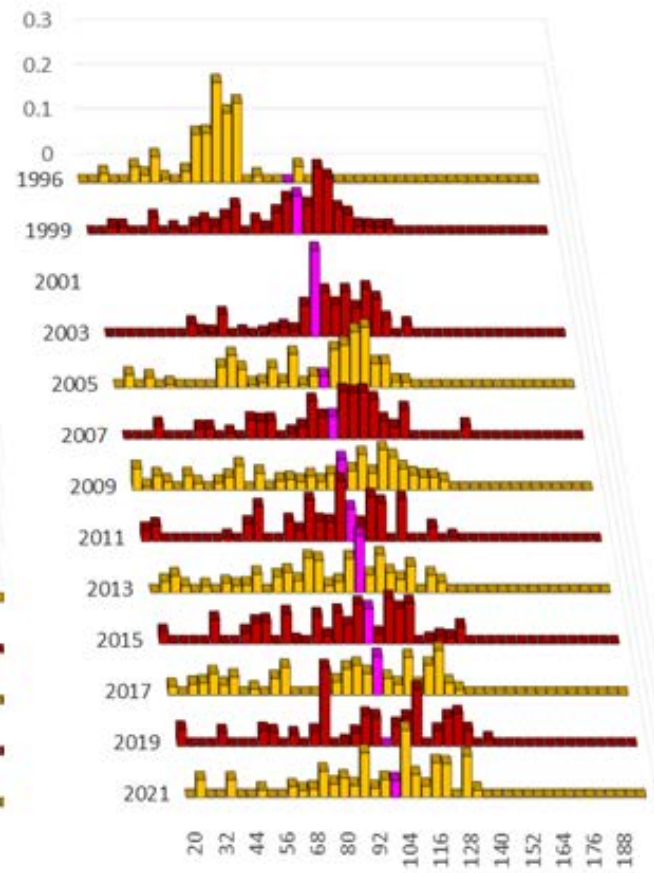
additional survey data

- **AFSC longline survey (RPN)**

- **IPHC longline survey (RPN)**

- **ADF&G "Kodiak+" bottom trawl survey (CPUE)**

- **ADF&G "PWS+" bottom trawl survey (CPUE, FO, biomass)**

- **PWS survey the only one that doesn't overlap AFSC BTS**

skate depth & AFSC longline survey
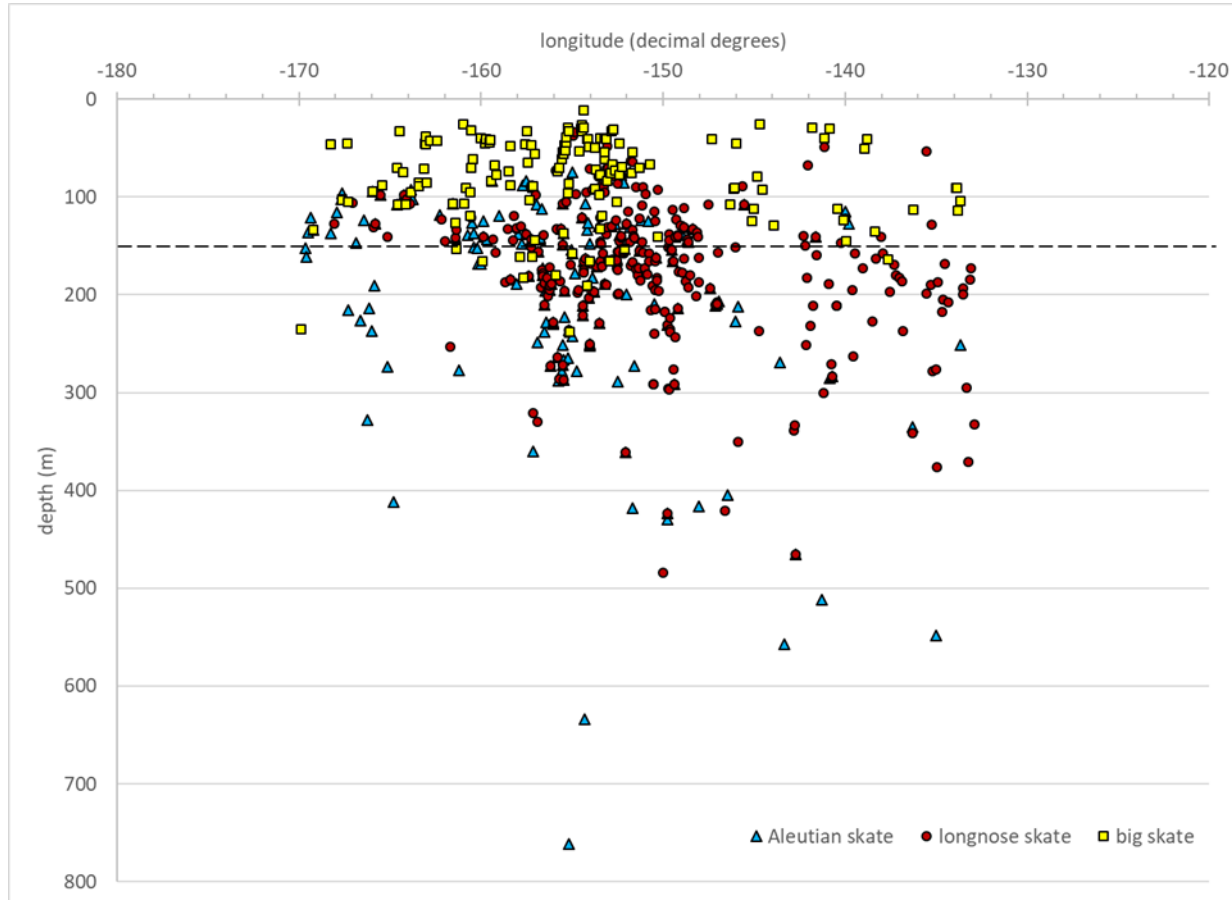
- dashed line = 150 m; no sampling in waters shallower than 150 m

AFSC longline survey (AKFIN)
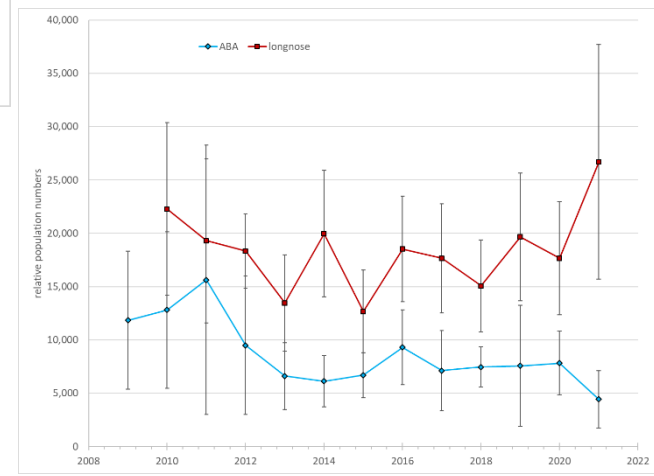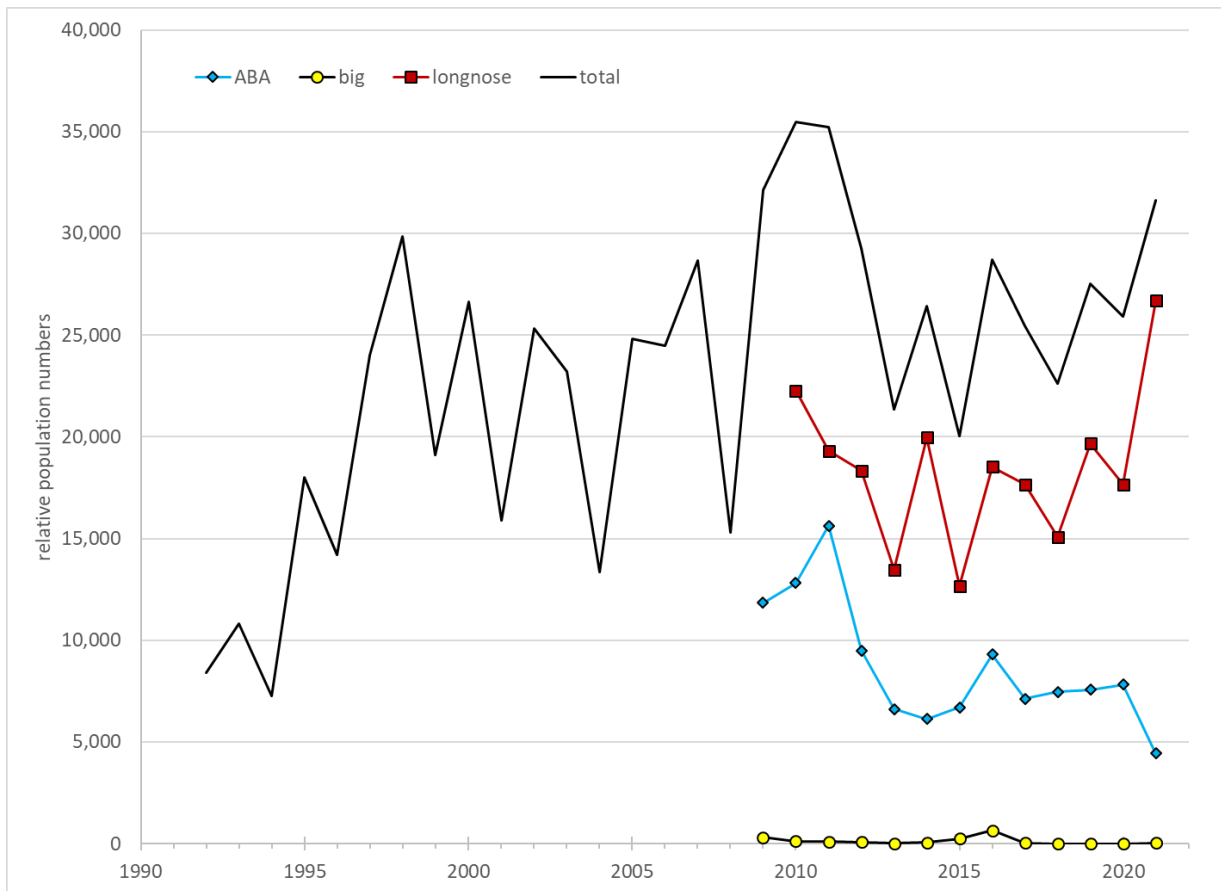
IPHC longline survey (Tribuzio/Sullivan)
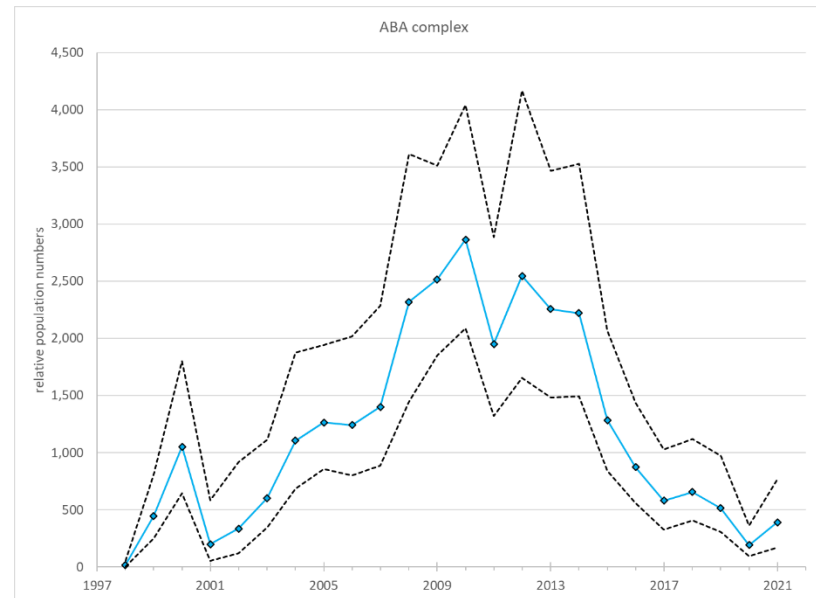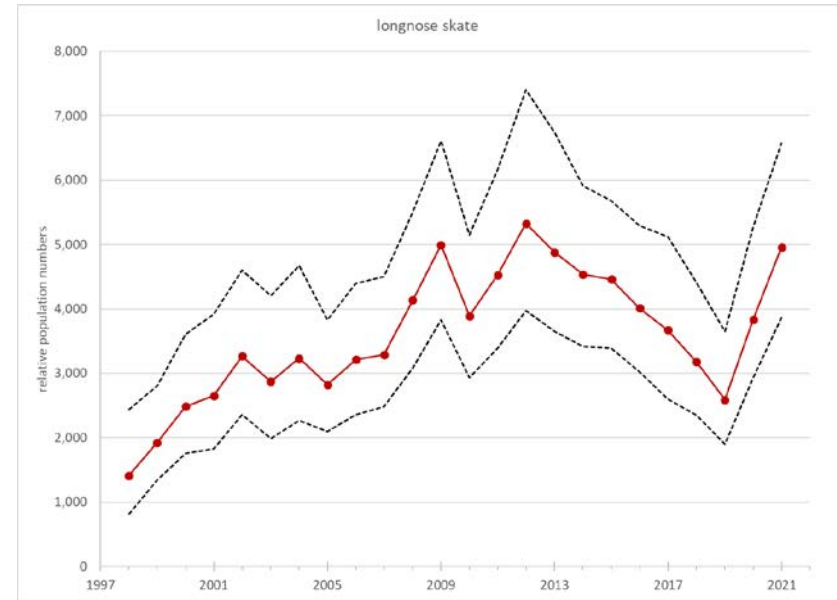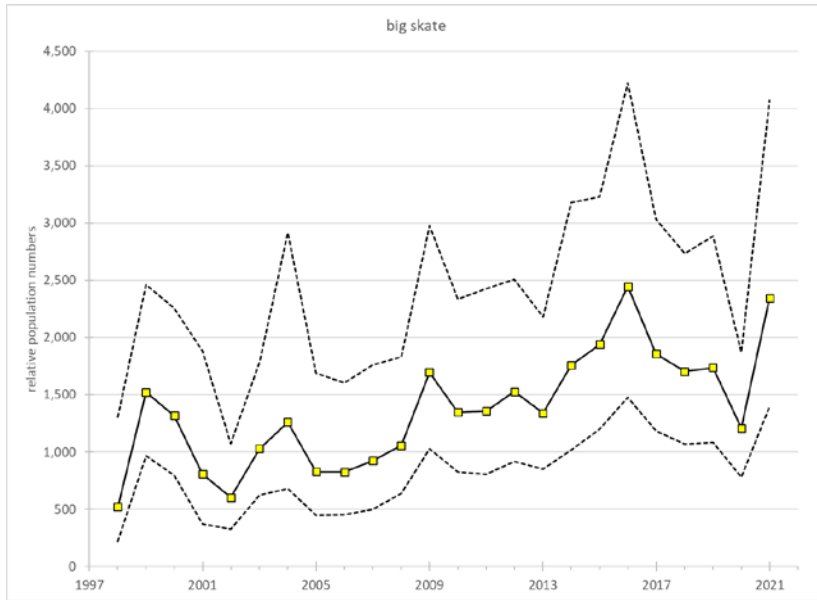
ADF&G trawl survey locations
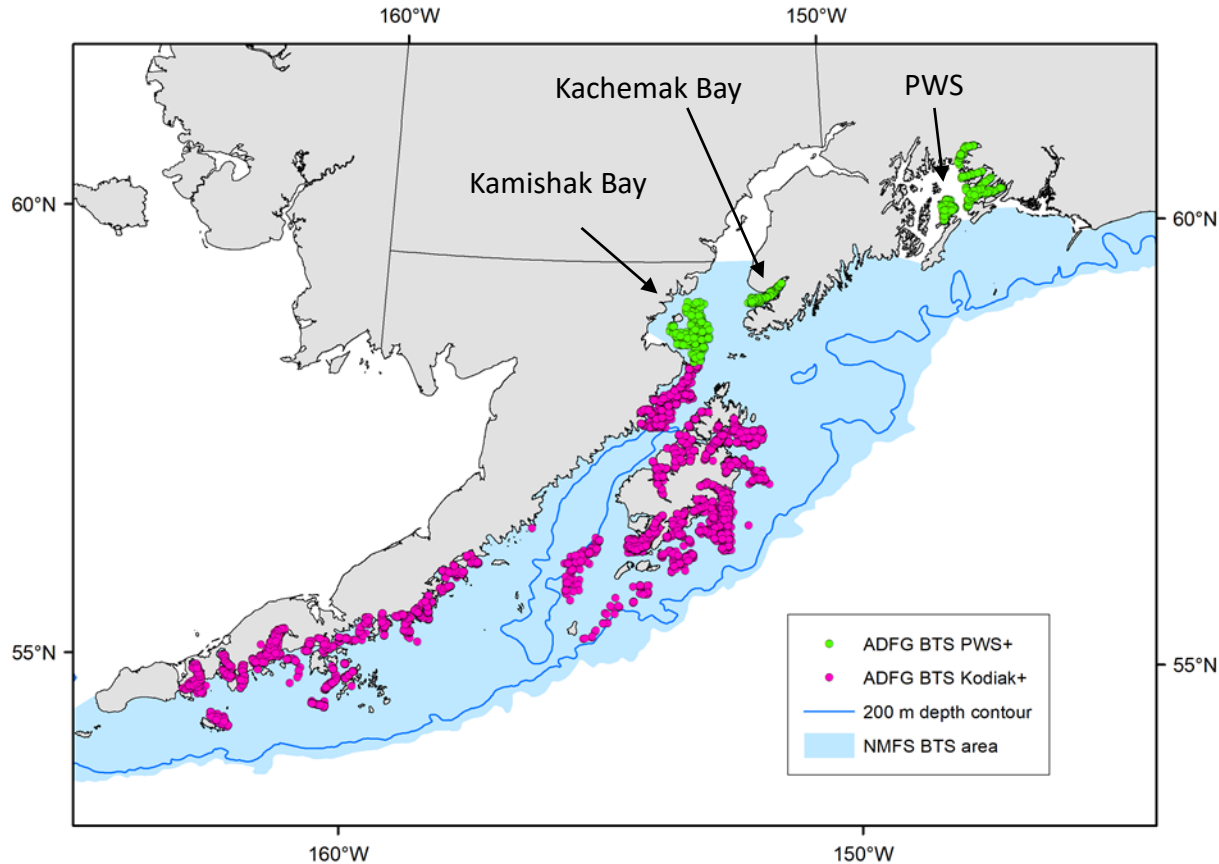
- shows only PWS "core" stations
- PWS only ADFG area outside of AFSC area

ADF&G trawl survey CPUE – Kodiak+ (Spalinger)
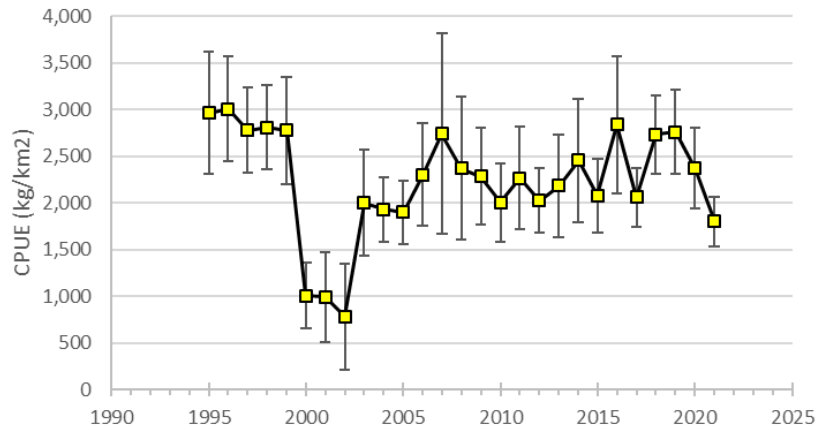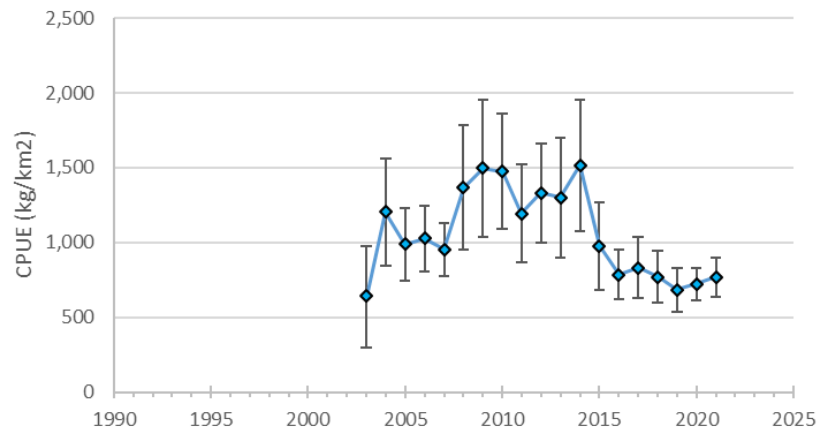
ADF&G trawl survey – PWS (Byerly)

big skate
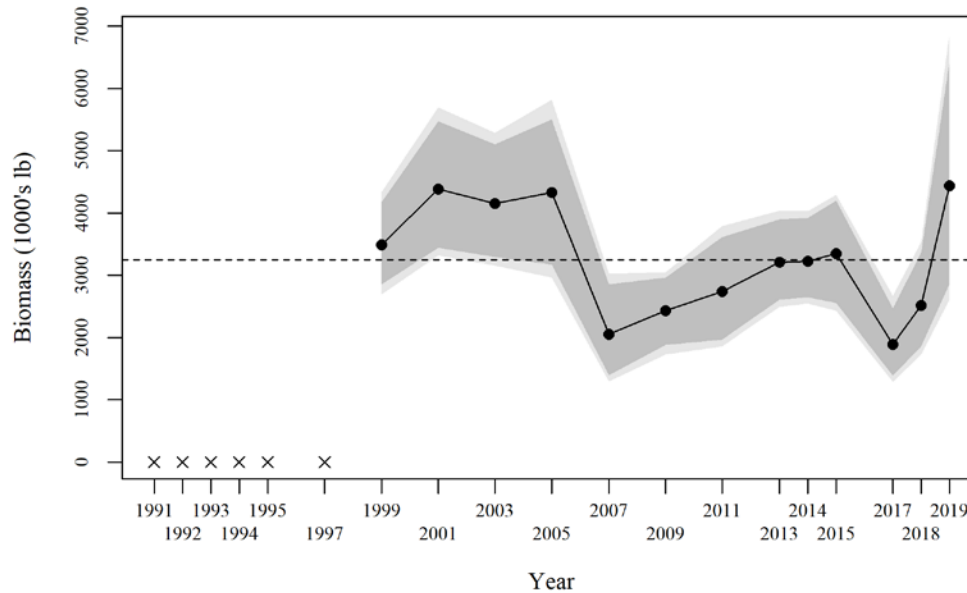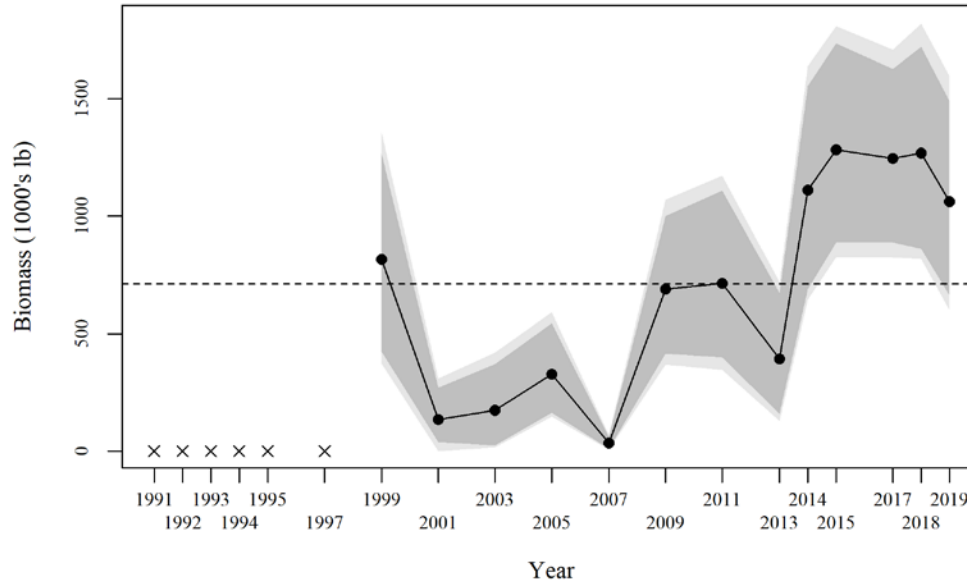
longnose skate

skate catch: gulfwide
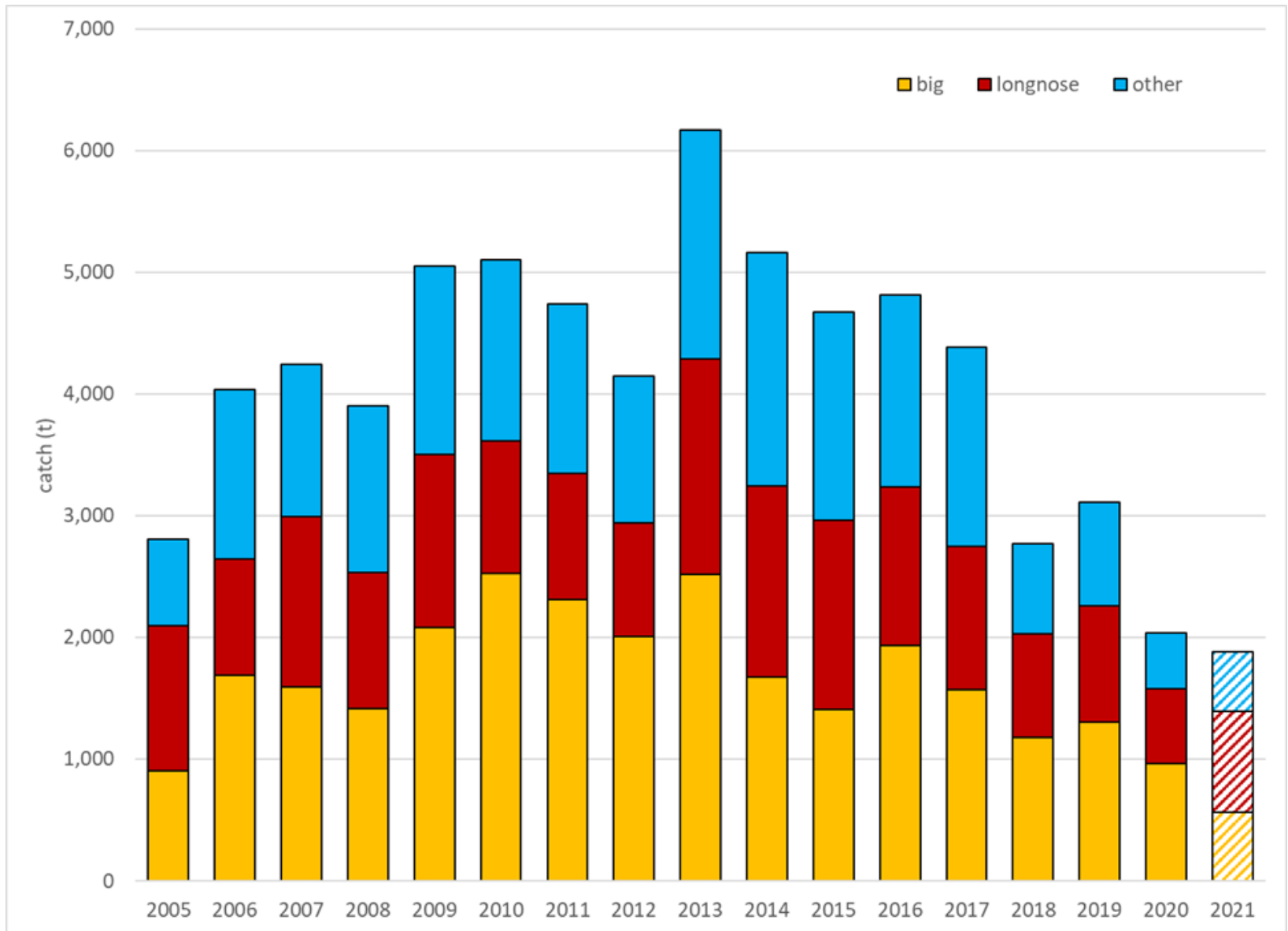
649 & 659 not included

catch size composition (all gears)

big skate
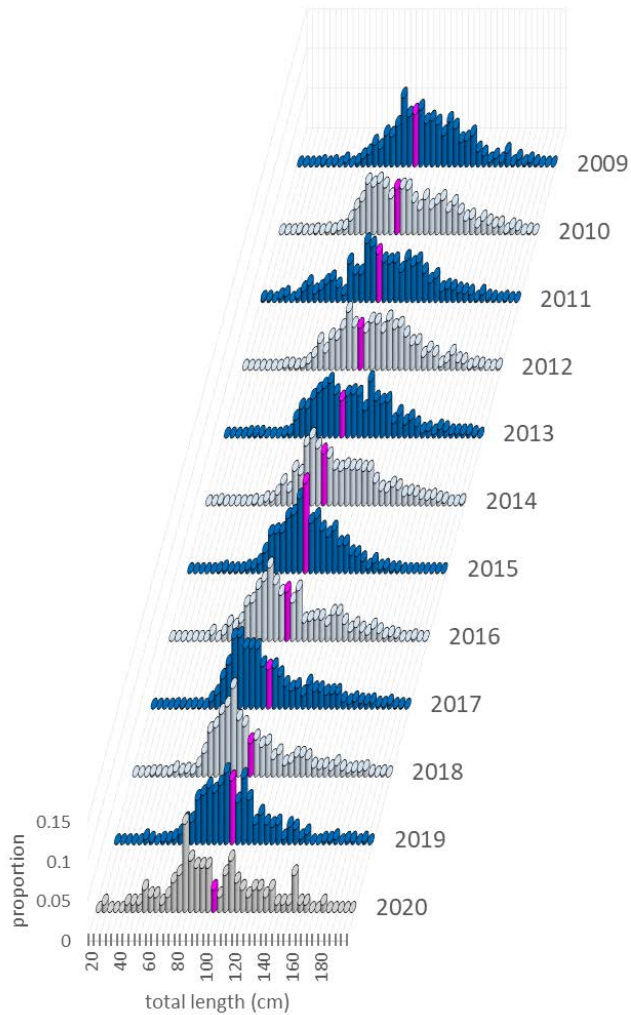
longnose skate
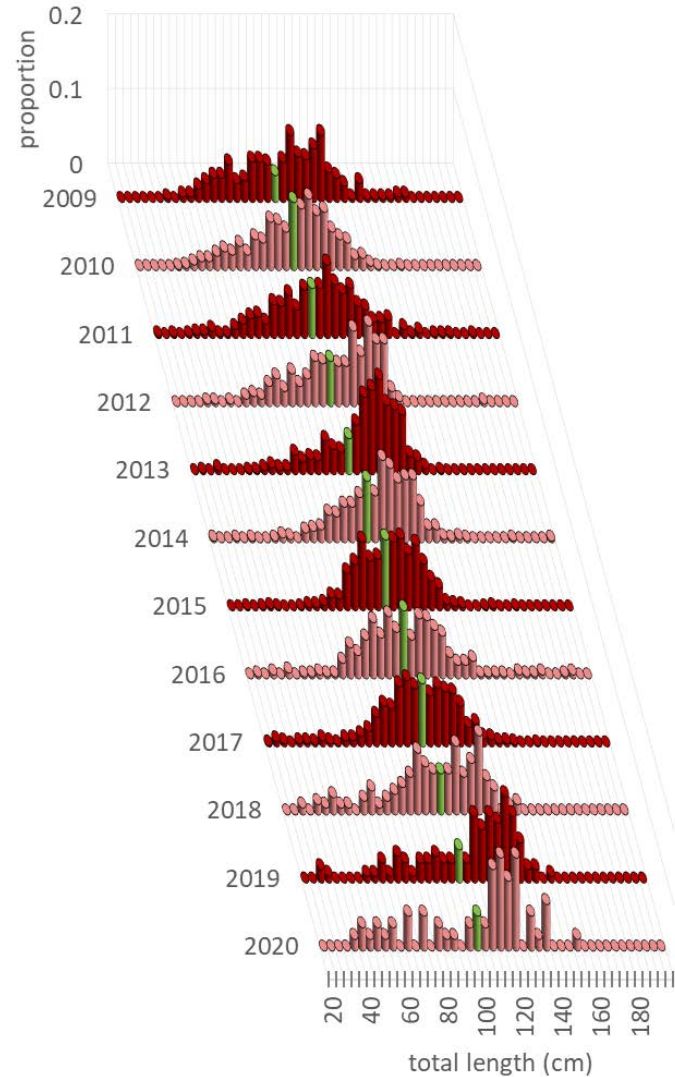
catch size composition (by gear 2013-2021)
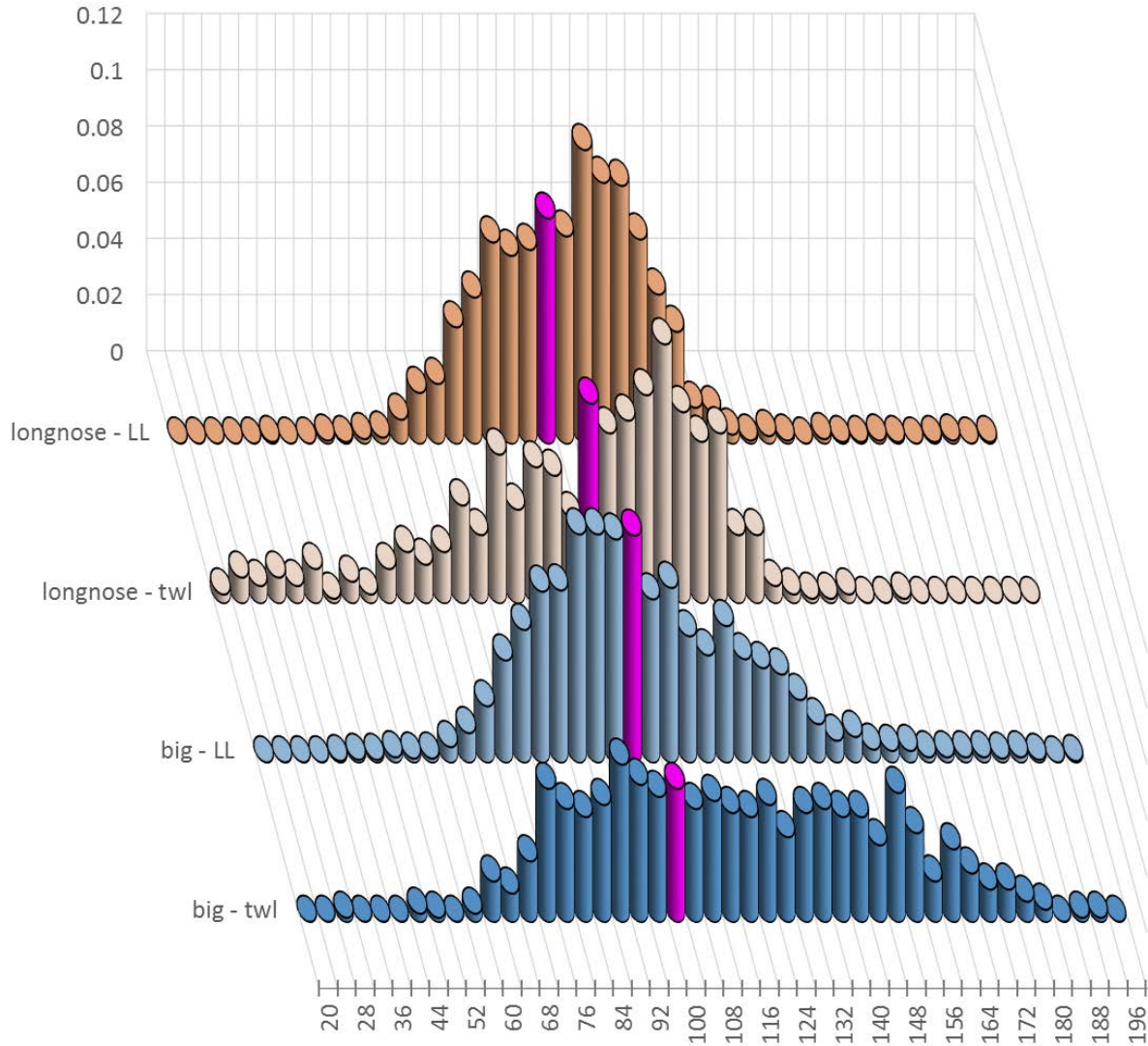
retention rates
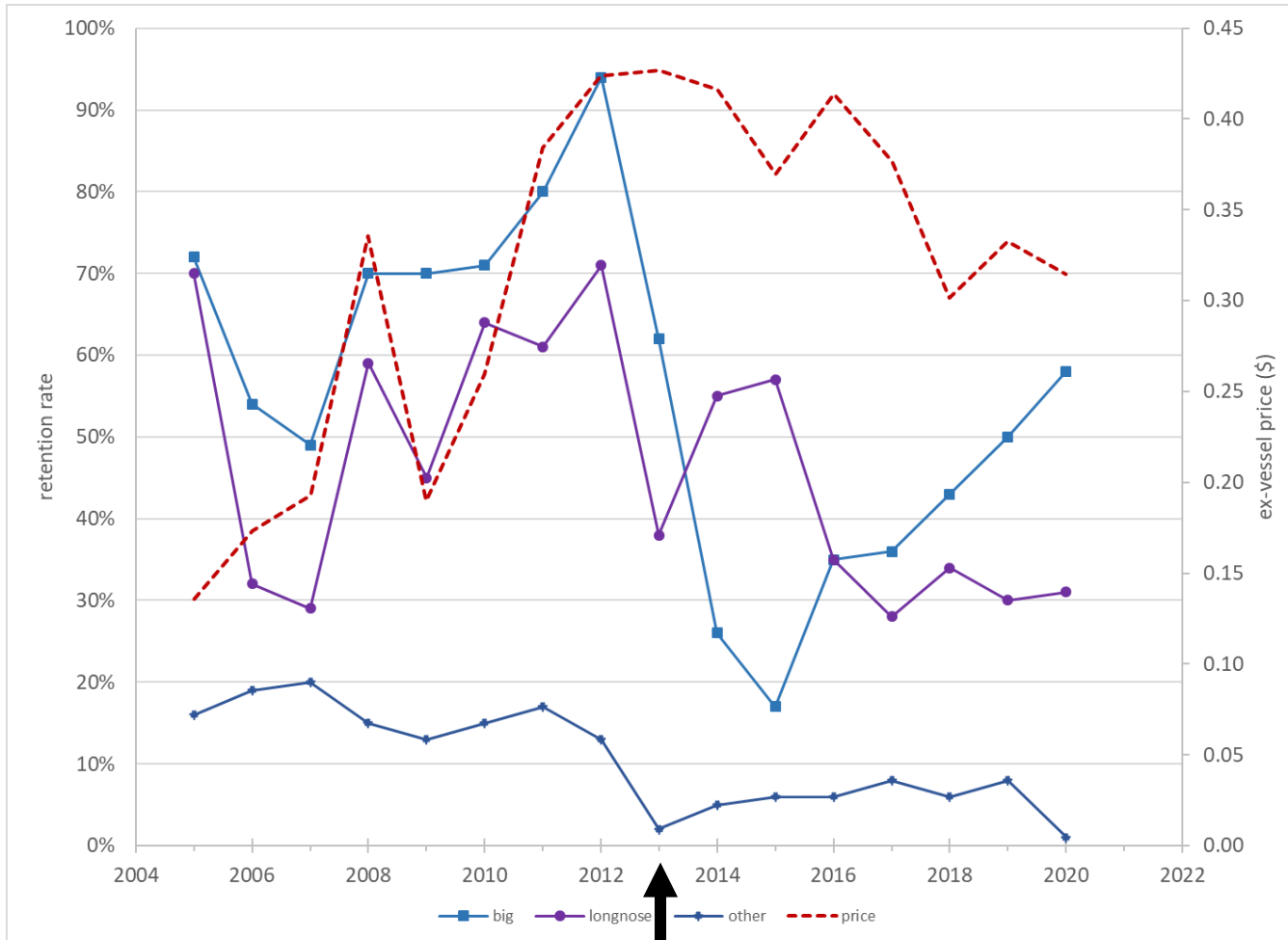
mgmt. measures to
reduce retention begin

harvest recs – big skate

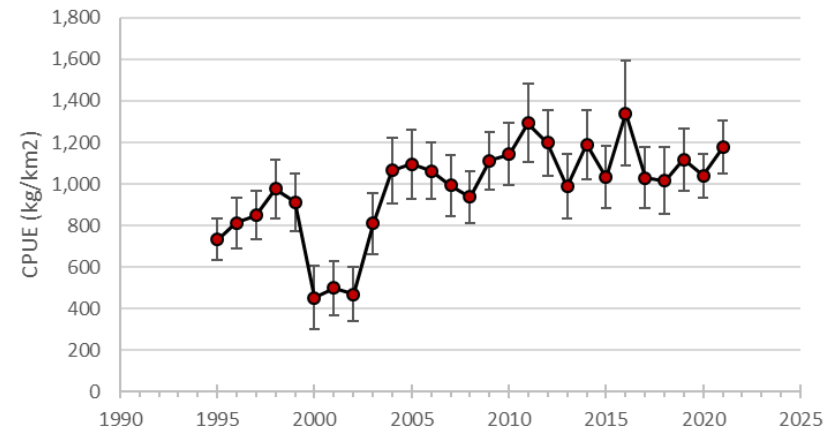| big skate (*Beringraja binoculata*)						
			As estimated or *specified last full assessment* for		As estimated or *recommended this* year for:	
Quantity			2020	2021	**2022**	2023
M (natural mortality)			0.1	0.1	**0.1**	0.1
Specified/recommended Tier			5	5	**5**	5
Biomass (t)		W	10,109	10,109	**7,882**	7,882
		C	20,798	20,798	**19,756**	19,756
		E	11,861	11,861	**10,581**	10,581
	GOA-wide		42,779	42,779	**38,220**	38,220
F_{OFL} (*F=M*)			0.1	0.1	**0.1**	0.1
$maxF_{ABC}$ (*F=0.75*M*)			0.075	0.075	**0.075**	0.075
F_{ABC}			0.075	0.075	**0.075**	0.075
OFL (t)	GOA-wide		4,278	4,278	**3,822**	**3,822**
Maximum permissible ABC (t)		W	758	758	**591**	591
		C	1,560	1,560	**1,482**	1,482
		E	890	890	**794**	794
Recommended ABC (t)		W	758	758	**591**	591
		C	1,560	1,560	**1,482**	1,482
		E	890	890	**794**	794
			As determined *last* year for:		As determined *this* year for:	
Status			2018	2019	**2020**	2021
Overfishing?			*no*	*na*	**no**	na
(for Tier 5 stocks, data are not available to determine whether the stock is in an overfished condition)						

harvest recs – longnose skate

longnose skate (*Raja rhina*)						
Quantity		As estimated or *specified last full assessment* for		As estimated or *recommended this* year for:		
		2020	2021	**2022**	2023	
M (natural mortality)		0.1	0.1	**0.1**	0.1	
Specified/recommended Tier		5	5	**5**	5	
Biomass (t)	W	2,156	2,156	**2,013**	2,013	
	C	25,583	25,583	**27,258**	27,258	
	E	7,558	7,558	**6,890**	6,890	
	GOA-wide	34,487	34,487	**36,162**	36,162	
F_{OFL} (*F=M*)		0.1	0.1	**0.1**	0.1	
$maxF_{ABC}$ (*F=0.75*M*)		0.075	0.075	**0.075**	0.075	
F_{ABC}		0.075	0.075	**0.075**	0.075	
OFL (t)	GOA-wide	3,449	3,449	**3,616**	3,616	
Maximum permissible ABC (t)	W	158	158	**151**	151	
	C	1,875	1,875	**2,044**	2,044	
	E	554	554	**517**	517	
Recommended ABC (t)	W	158	158	**151**	151	
	C	1,875	1,875	**2,044**	2,044	
	E	554	554	**517**	517	
Status		As determined *last* year for:		As determined *this* year for:		
		2018	2019	**2020**	2021	
Overfishing?		*no*	*na*	**no**	na	
(for Tier 5 stocks, data are not available to determine whether the stock is in an overfished condition)						

harvest recs – other skate

other skates (*Bathyraja* species)					
		As estimated or *specified last full assessment* for		As estimated or *recommended this* year for:	
Quantity		2020	2021	**2022**	2023
M (natural mortality)		0.1	0.1	**0.1**	0.1
Specified/recommended Tier		5	5	**5**	5
Biomass (t)	GOA-wide	11,662	11,662	13,114	13,114
F_{OFL} (F=M)		0.1	0.1	**0.1**	0.1
$maxF_{ABC}$ (F=0.75*M)		0.075	0.075	**0.075**	0.075
F_{ABC}		0.075	0.075	**0.075**	0.075
OFL (t)	GOA-wide	1,166	1,166	1,311	1,311
Maximum permissible ABC (t)	GOA-wide	875	875	984	984
Recommended ABC (t)	GOA-wide	875	875	984	984
		As determined *last* year for:		As determined *this* year for:	
Status		2018	2019	**2020**	2021
Overfishing?		*no*	*na*	**no**	na
(for Tier 5 stocks, data are not available to determine whether the stock is in an overfished condition)					

risk table – short version

Assessment-related considerations	*Population dynamics considerations*	*Environmental/ ecosystem considerations*	*Fishery Performance considerations*	***Overall score (highest of the individual scores)***
Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal	**Level 1: Normal**

<u>Risk matrix table analysis and reductions to maximum ABC</u>: All elements in the risk table were scored as 1 (Normal). **No reduction from the maximum ABC is recommended.**