GOA Rougheye & Blackspotted Rockfish

Shotwell, Hanselman, Heifetz
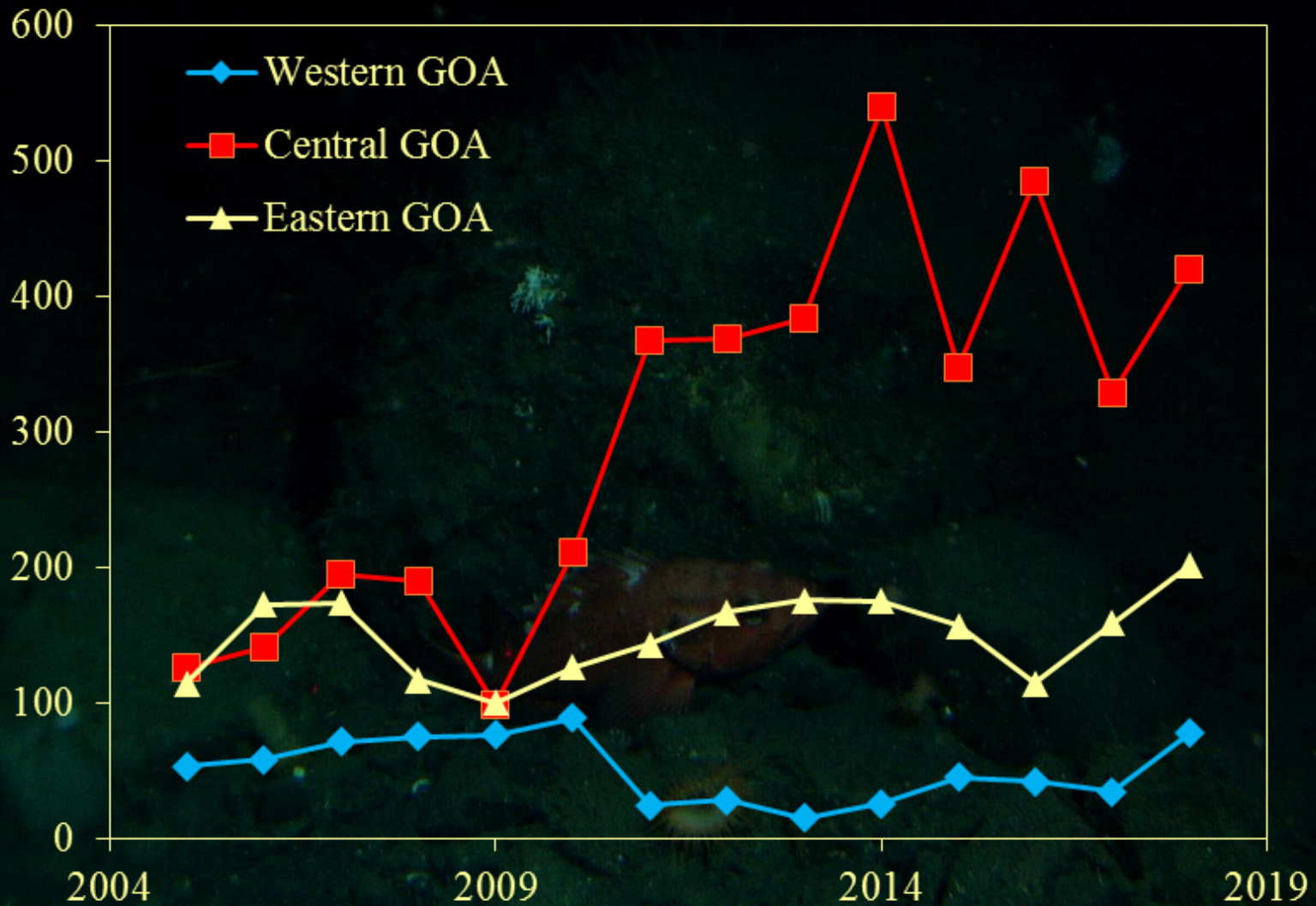
RE/BS (Rougheye/Blackspotted)

- Tier 3a species – RE/BS rockfish
  - Only updated the catches in the projection model
  - Updated 2017 and estimated 2018-2020 catches
- Catch update:
  - 2017 catch = 523 t and 2018 catch (10/6) = 700 t
  - Catches below 50% of ABC with no overages
- Recommended 2019 ABC: **1,428 t**
  - Slightly lower than 2018 ABC of 1,444 t
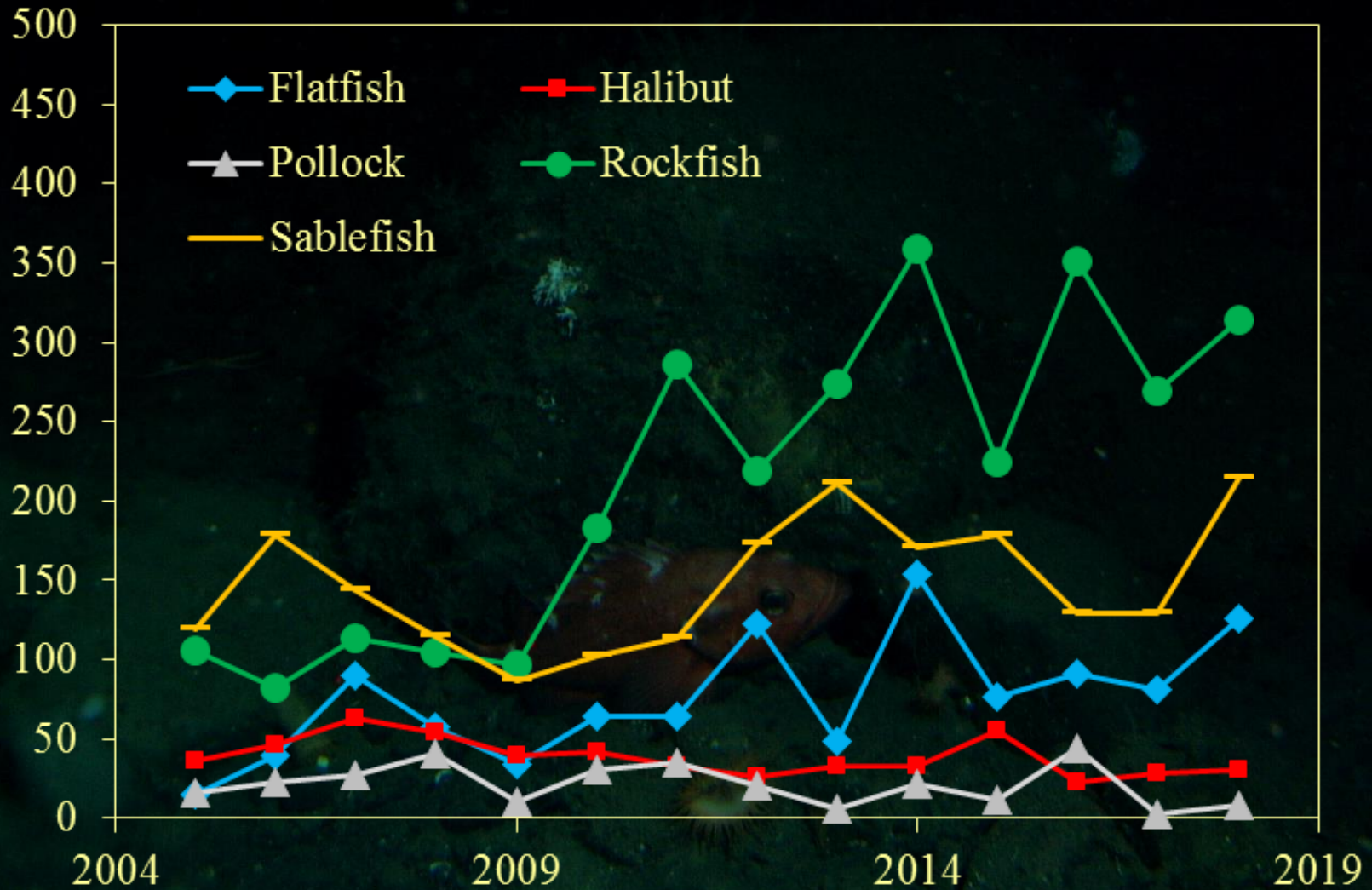 - Exceptionally close to last year's projected 2019 ABC of 1,427 t

RE/BS Fishery

- Gulfwide catch increased in 2018 compared to 2017, still within time series range

- In 2018, 1/3rd taken in longline fisheries, 2/3rd taken in trawl fisheries

- Generally 20%-60% of TAC, 48% in 2018
  - Increase occurred in all areas, no overages
  - Most increase in rockfish and sablefish fishery, some increase in flatfish fishery, stable in halibut and pollock
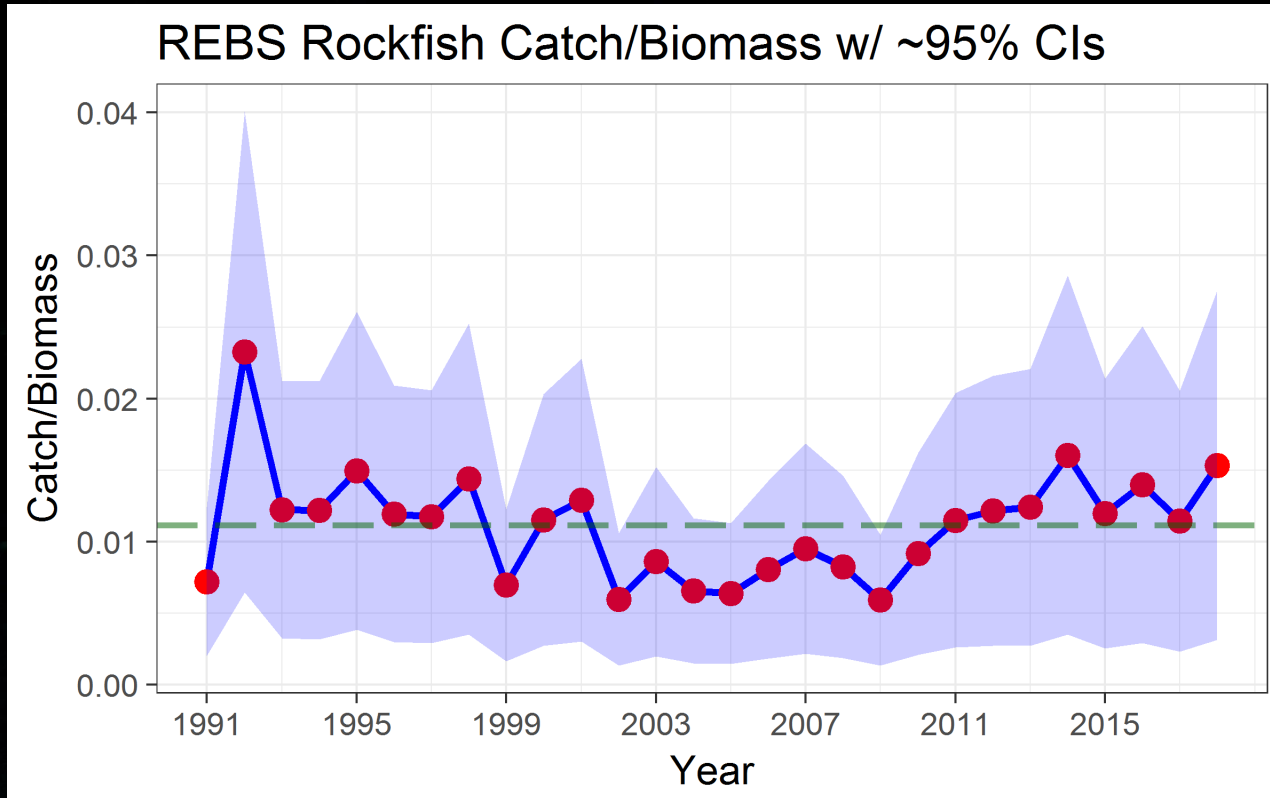
RE/BS Catch by Region

RE/BS Catch by Fishery

RE/BS Fishery Ages Update

- Project during 2017 on archived fishery ages
  - Uses otolith morphology and growth characteristics to distinguish two species
  - Enabled historic reconstruction of species composition in the fishery

- Preliminary results (Heifetz swan song at WGC)
  - Otoliths are pretty distinct between species (otolith weight being critical)
  - Implied that 2/3 of the catch is BS (however more otoliths come from LL which probably catch more BS)
  - Could be a cheaper/easier collection than genetics for the fishery because we take them anyway
  - Given current catches, still unlikely a conservation concern, summary report next full assessment
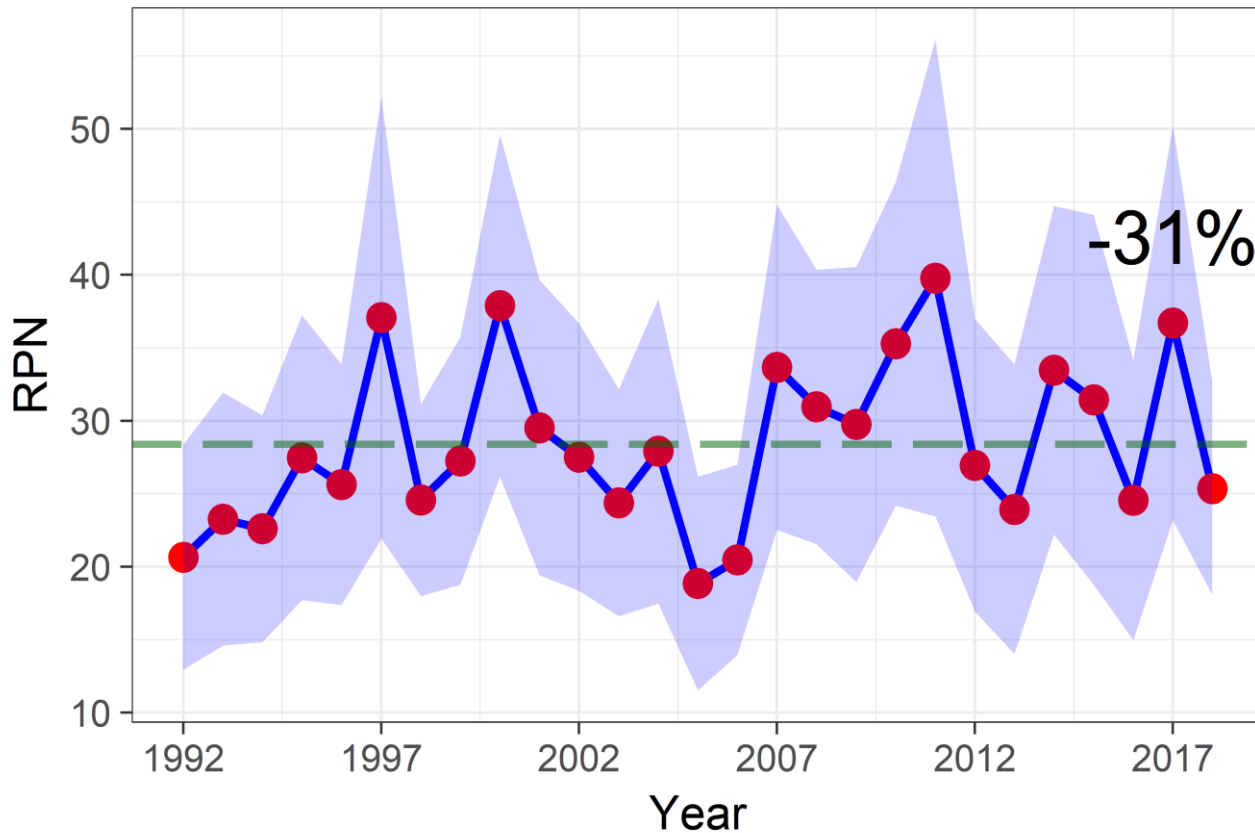
Catch/Biomass Update

REBS Rockfish Catch/Biomass w/ ~95% CIs

- C/B ranges from 0.006 to 0.02, lightly exploited stock

- 2018 C/B slightly up from long term mean but within range of past few years
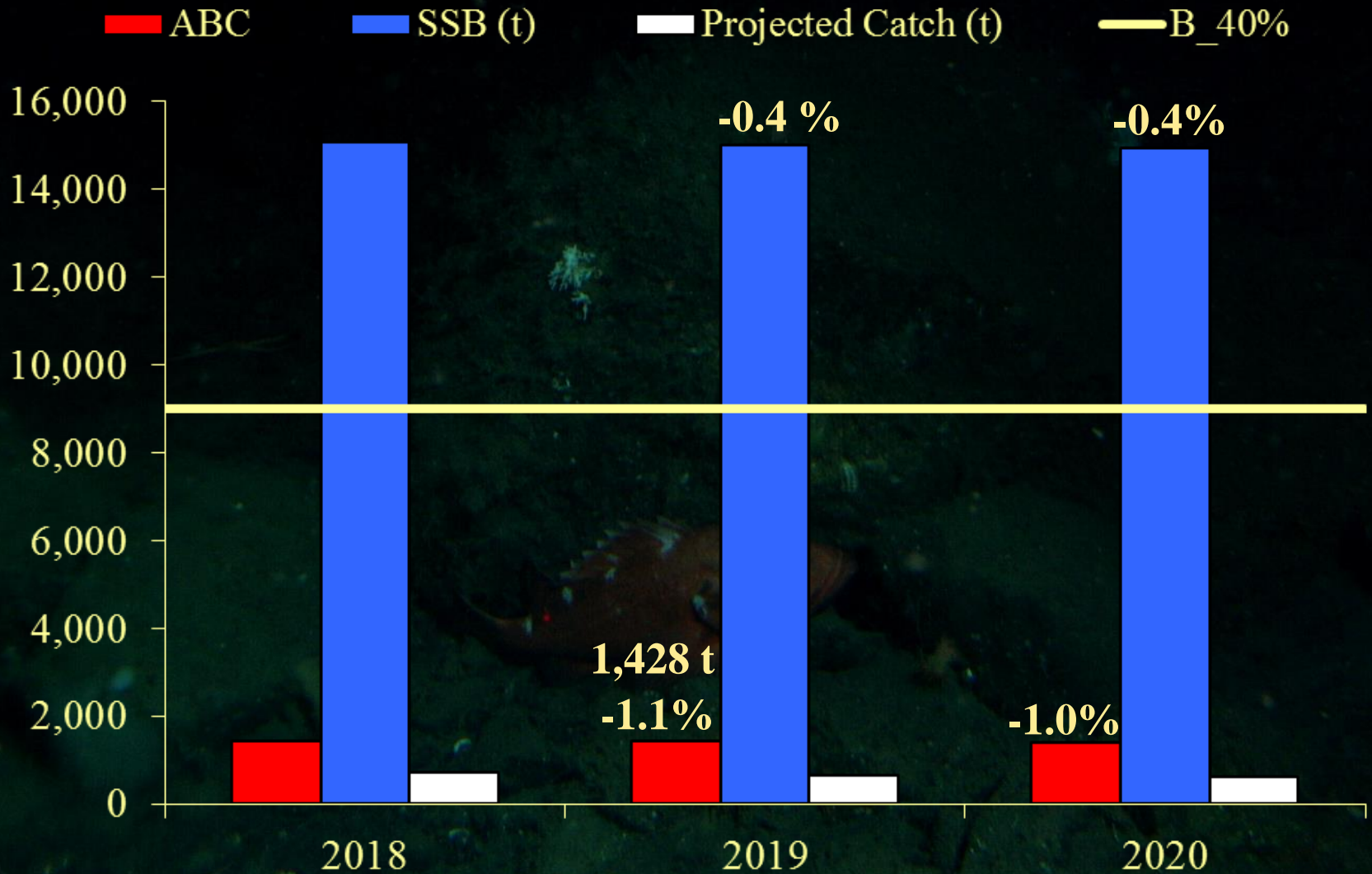
Longline Survey Update

GOA Rougheye longline survey RPNs

- 2018 longline survey RPN down by 31%.

- Estimates by area all consistently down.

- Data not used for updating 2018 projection since partial assessment year.

RE/BS Summary

Legend: ABC (red), SSB (t) (blue), Projected Catch (t) (white), B_40% (yellow line)

2019:
- -0.4 %
- 1,428 t
- -1.1%

2020:
- -0.4%
- -1.0%

RE/BS Apportionment

	Western	Central	Eastern	Total
2018 ABC	176	556	712	1,444
2019 ABC	174	550	704	1,428
2018 OFL				1,735
2019 OFL				1,715

Research Priorities

- Examine apportionment methods with two survey options using random effects and VAST models

- Evaluate life history characteristics of RE versus BS in bottom trawl genetic study

- Evaluate historical reconstruction of fishery ages to help guide management concerns on disproportionate harvest by species

- Provide fishery ages by gear type and consider new maturity information by species