

# ADF&G STAFF PRESENTATION

King and Tanner Task Force – December 2021

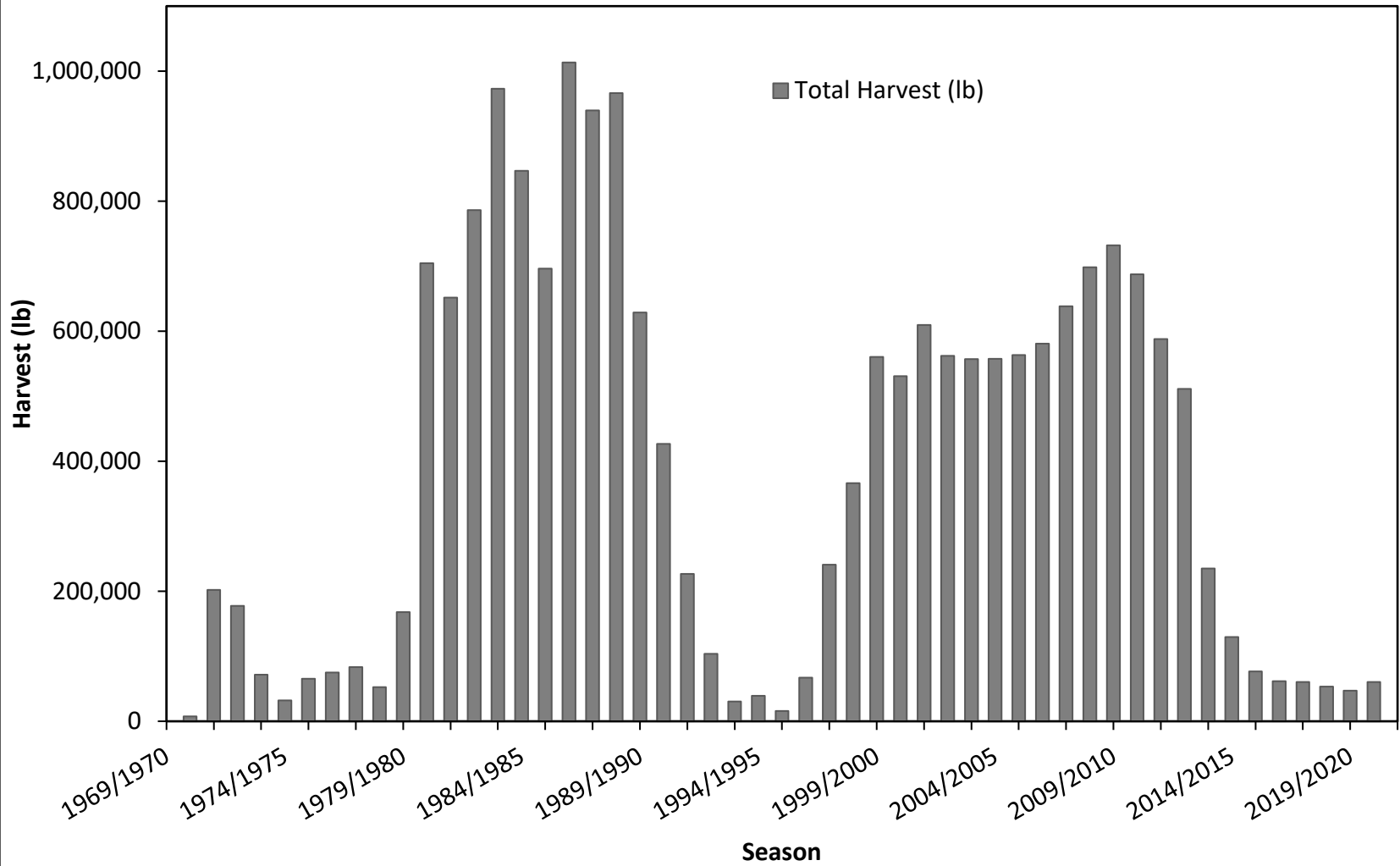


## Golden King Crab Commercial Fisheries

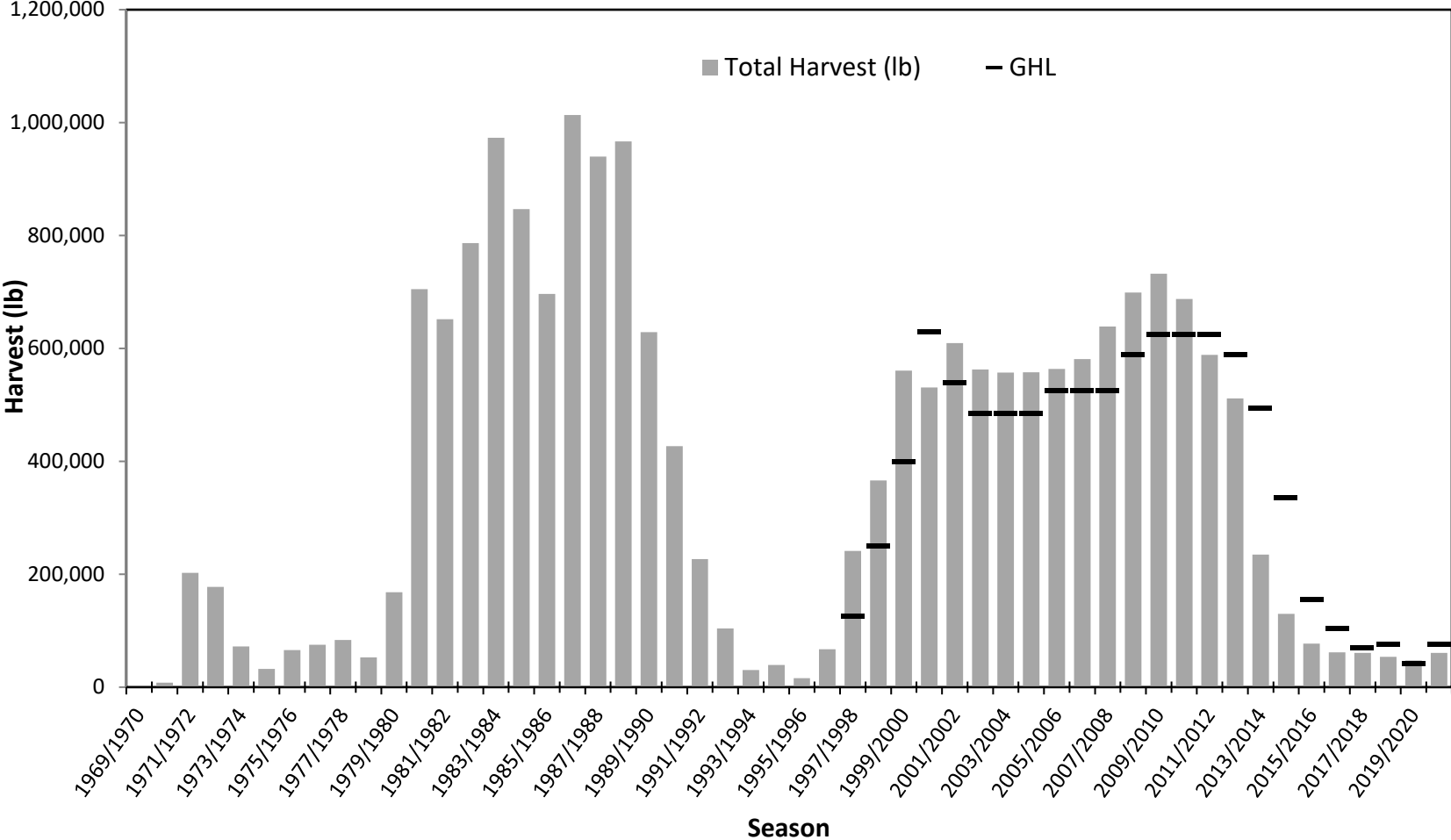
Joe Stratman, Lead Shellfish Biologist  
Division of Commercial Fisheries, Southeast Region



## GKC Harvest by Season

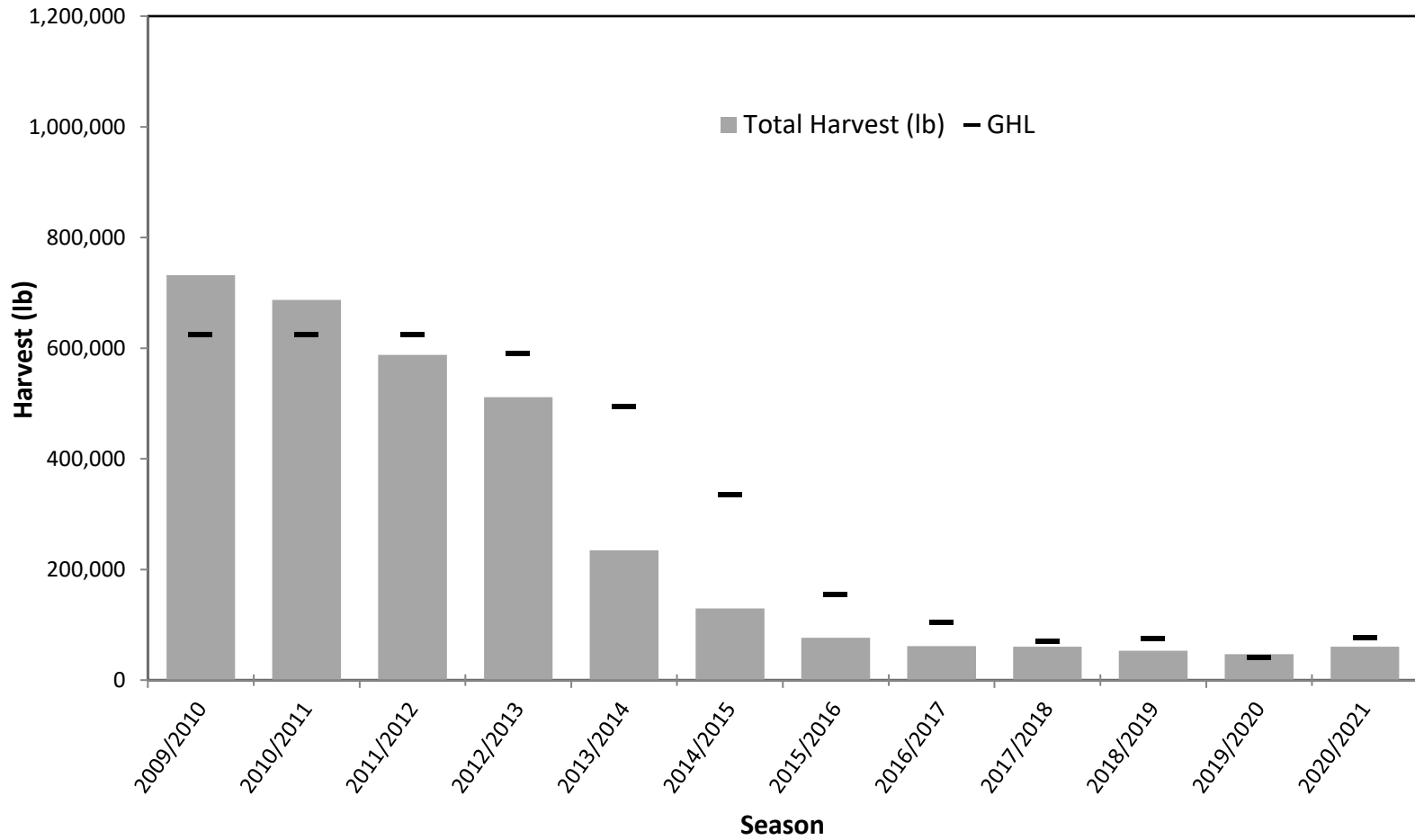


# GKC Harvest and GHGs by Season

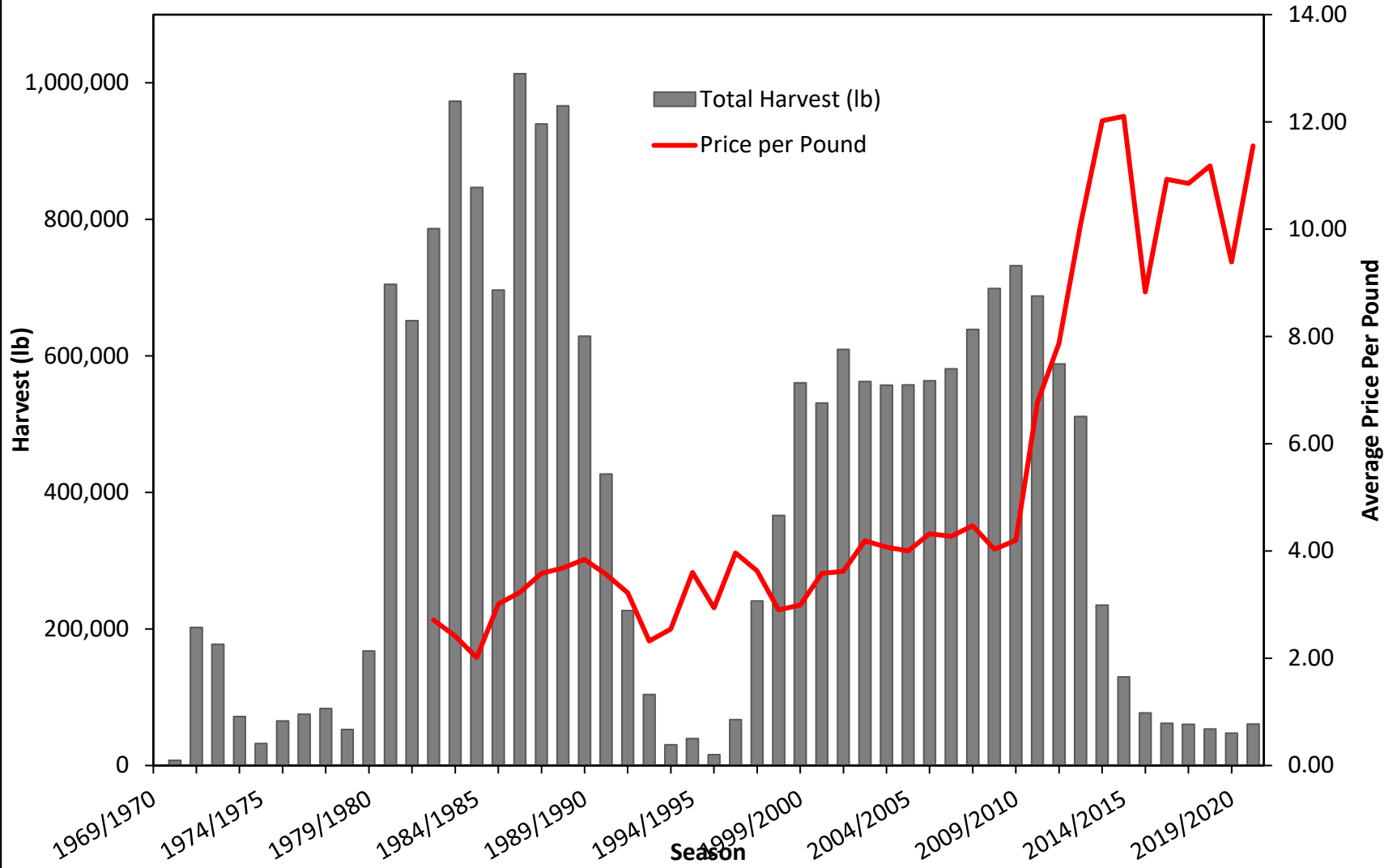




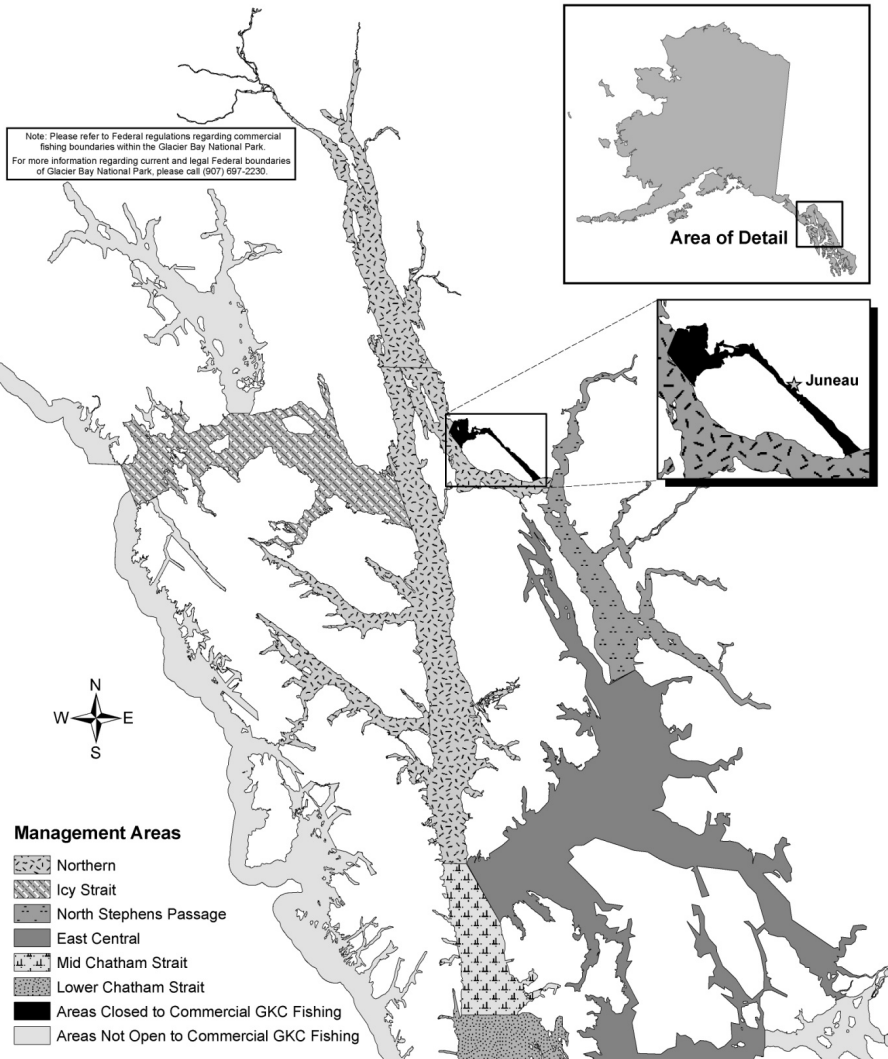
## GKC Harvest and GHGs by Season



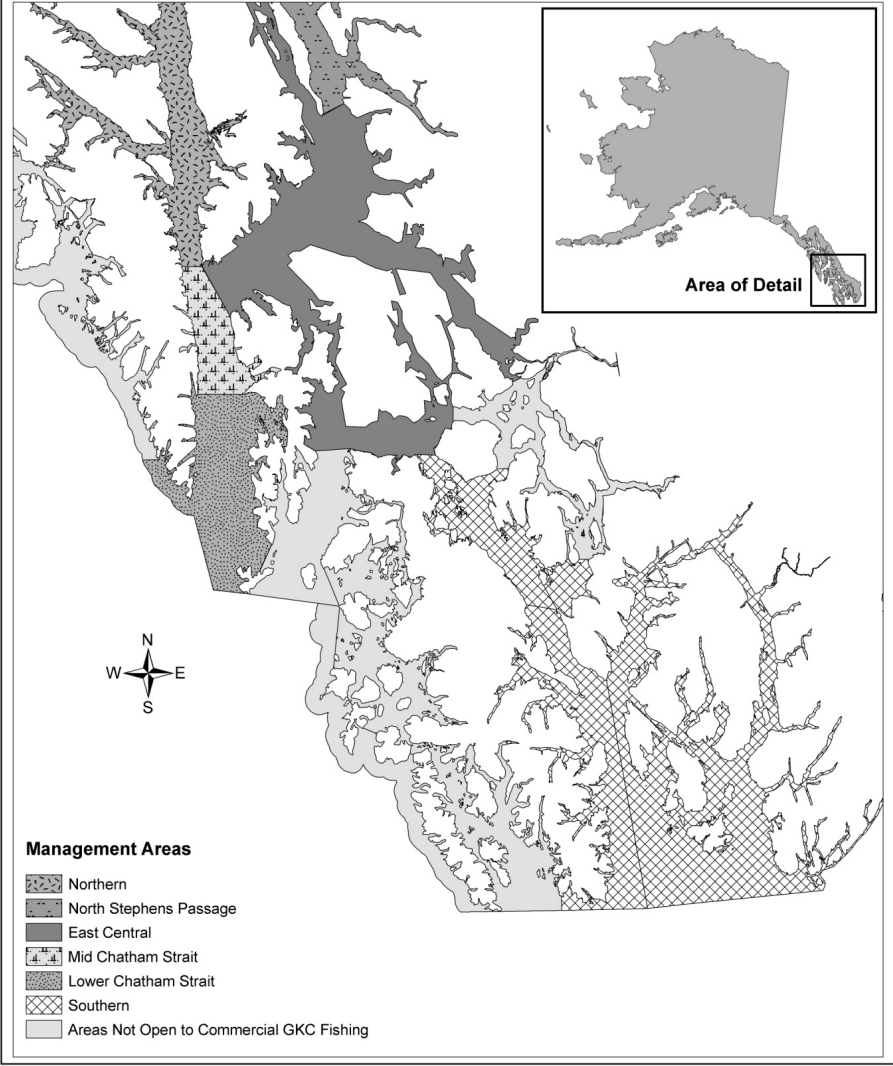
# GKC Harvest and Average Price Per Pound by Season



**Golden King Crab Northern Management Areas and Waters of Northern Registration Area A Closed and Not Open to Commercial Fishing**  
 Refer to 5AAC 34.107 and 5 AAC 34.150 for Legal Descriptions



**Golden King Crab Southern Management Areas and Waters of Southern Registration Area A Closed and Not Open to Commercial Fishing**  
 Refer to 5AAC 34.107 for Legal Descriptions



# Summary – GHL Review

- GHL recommendations are made annually employing a precautionary approach to minimize the risk of recruitment failure.
- Three reasons for this approach:
  - 1) Recent fishery performance has been poor.
  - 2) Data poor fishery with no fishery independent stock assessment program.
  - 3) Golden king crabs are a long-lived deep-water species, on a 20-month asynchronous reproductive cycle with non-feeding larvae that remain at depth; are less fecund than RKC and size at maturity varies across management areas.



## Data Sources

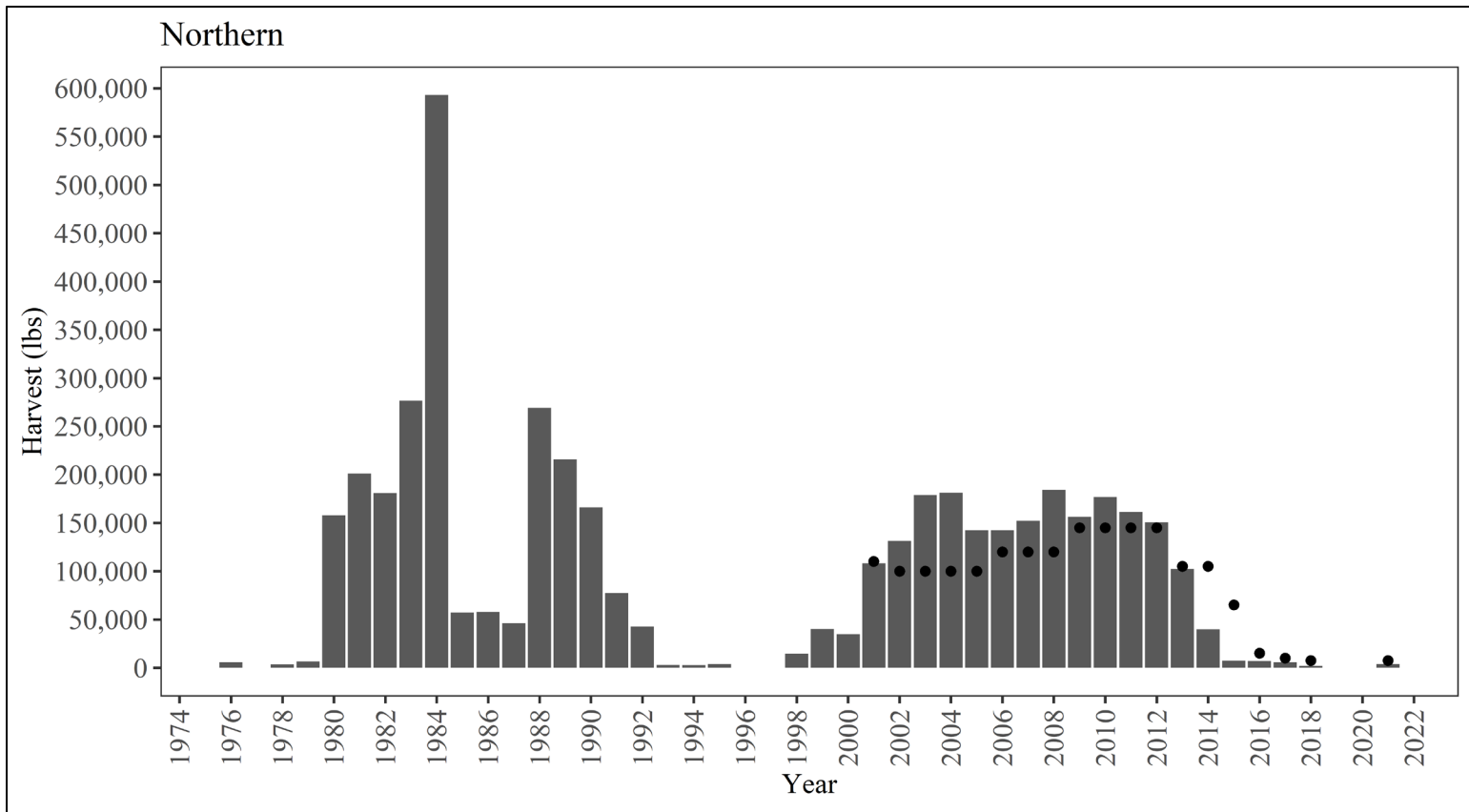
- All data currently available to assess GKC in Southeast Alaska are fishery dependent:
  - 1) Commercial CPUE - fish ticket and logbook. Logbooks have been used in the fishery since 2000.
  - 2) Dockside sampling – length frequencies of crab by recruit class (recruit and post-recruit) from the early 1970s to present.
  - ~~3) Onboard observer data (late 1990s through 2016).~~



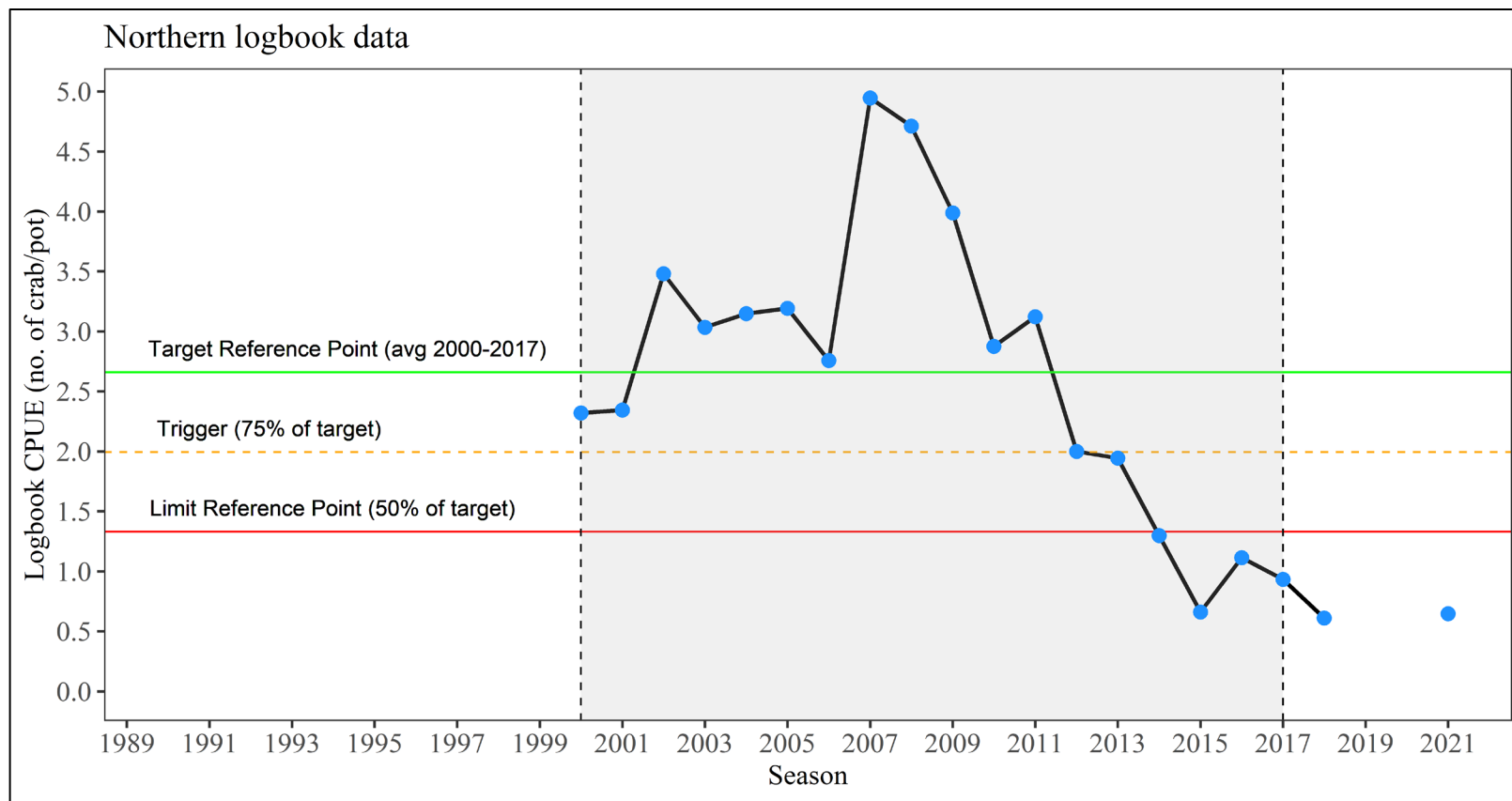


# 2020/2021 Fishery

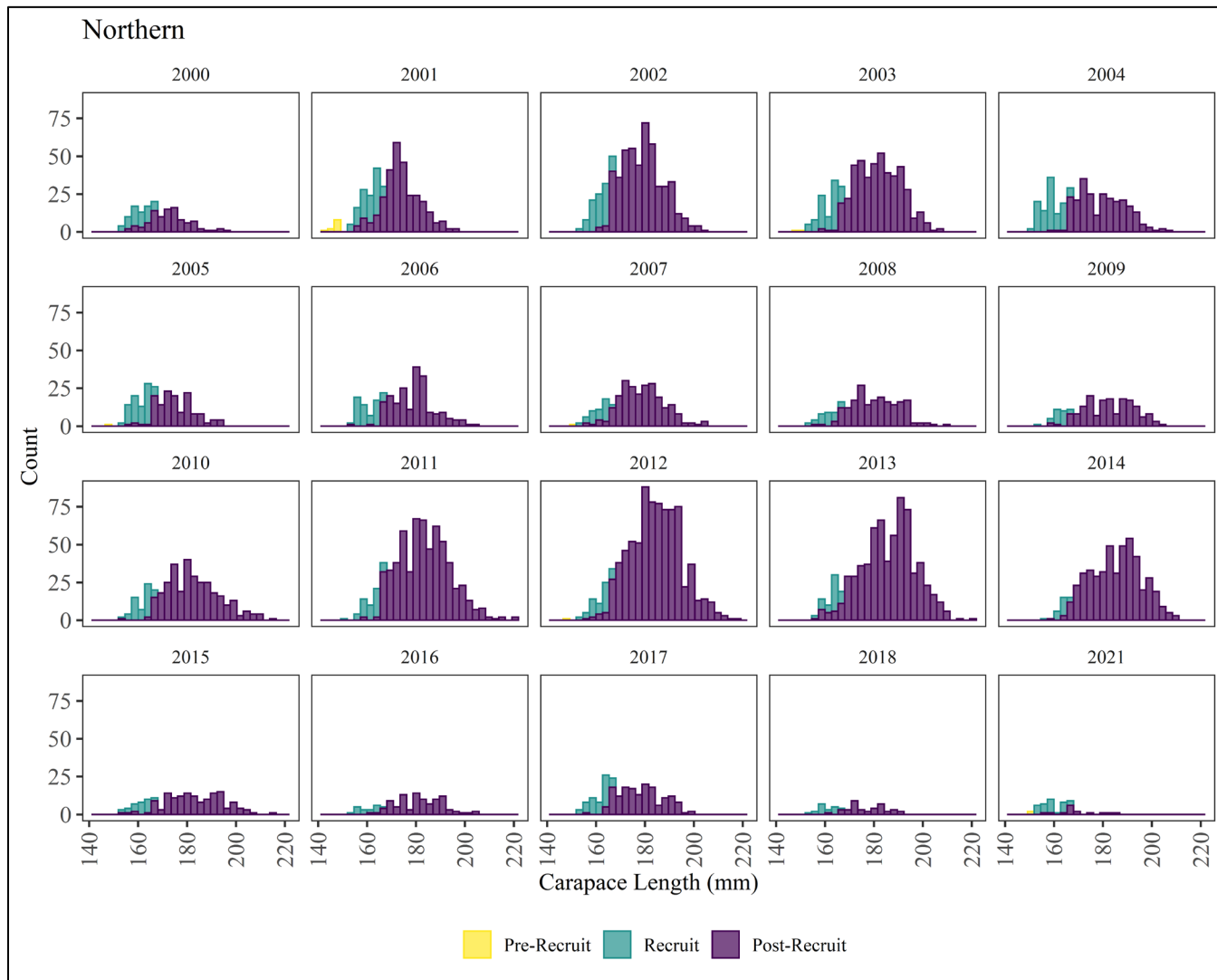
- All seven fishery areas were open:
  - 1) Northern – 7,500 lb.
  - 2) Icy Strait – 7,500 lb.
  - 3) North Stephens Passage – 15,000 lb.
  - 4) East Central – 11,500 lb.
  - 5) Mid-Chatham Strait – 7,500 lb.
  - 6) Lower Chatham Strait – 7,500 lb.
  - 7) Southern – 20,000 lb.



Harvest this season was 3,632 lb.



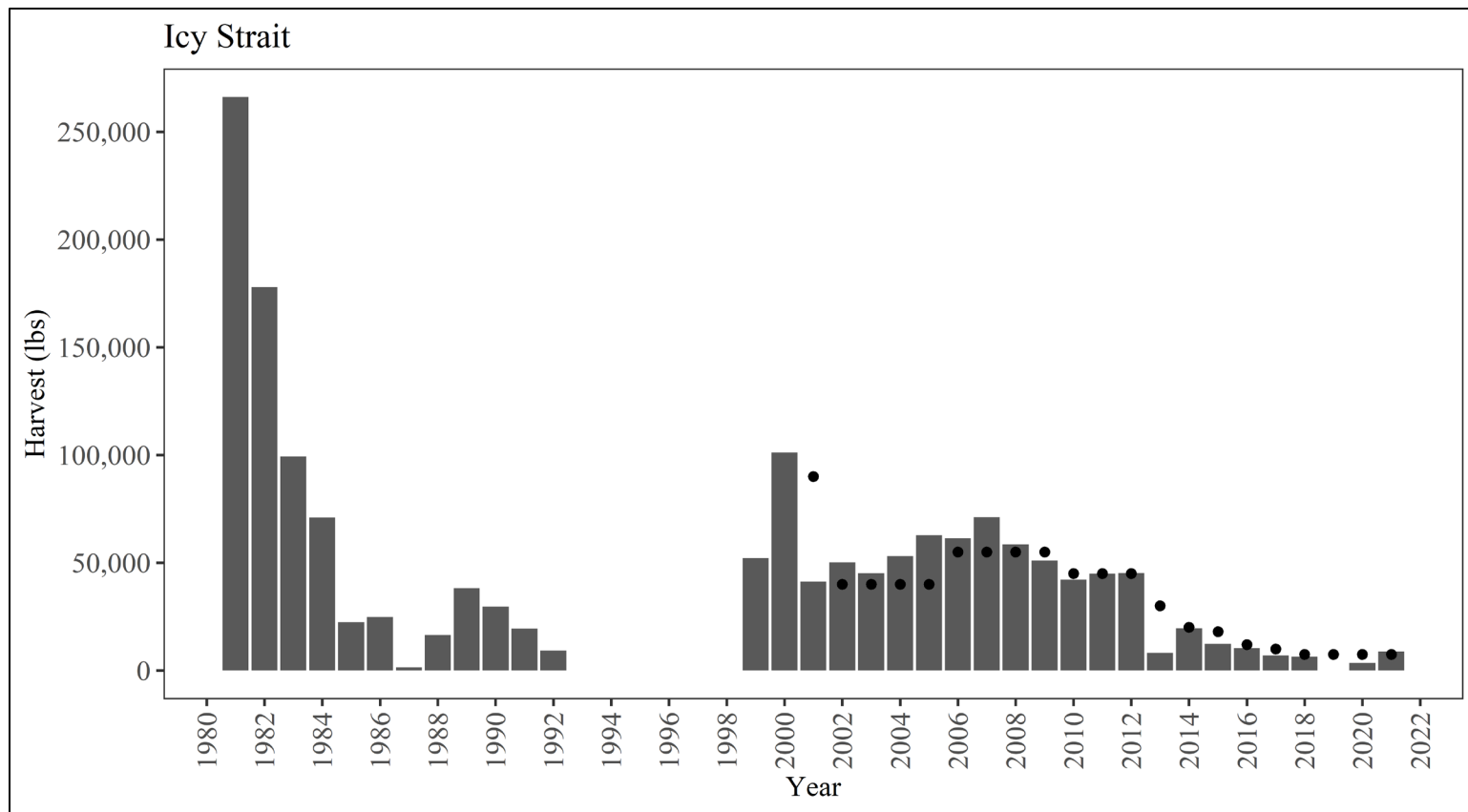
The CPUE this season was 0.65 crab per pot.



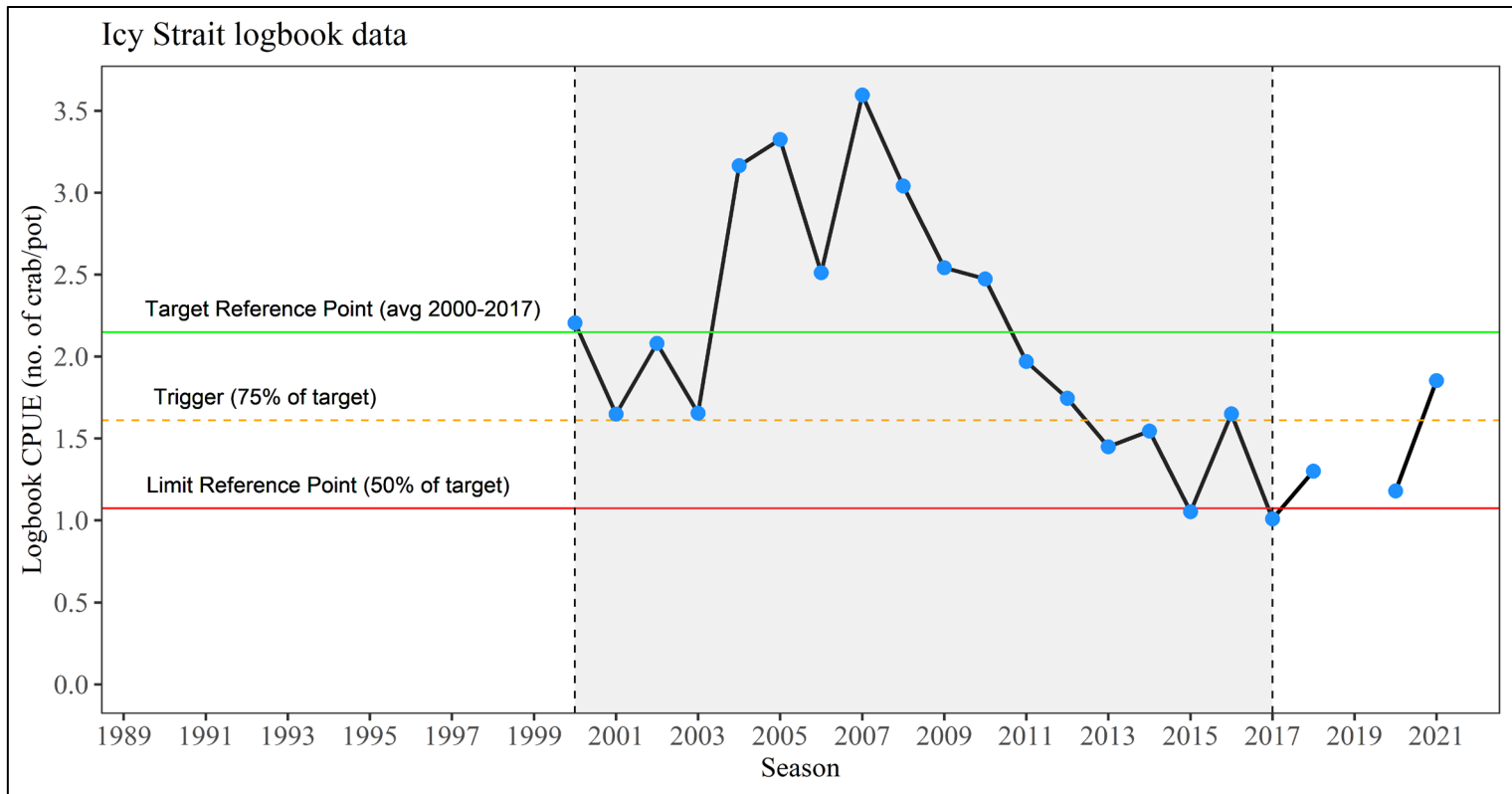
Length frequencies of sampled commercial harvest show small sample sizes and an even mix of recruit and post recruit crabs in the most recent season.

# Northern

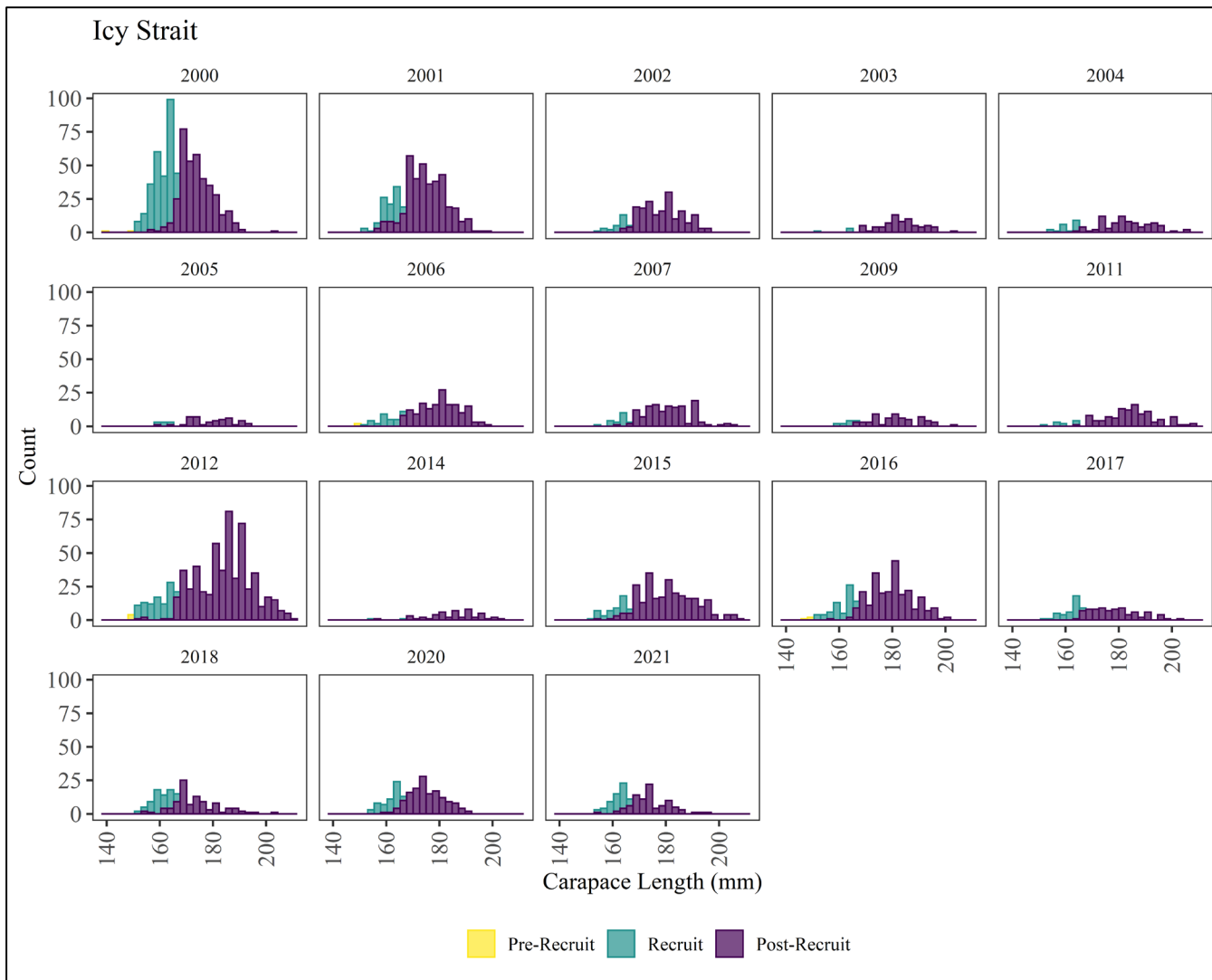
- The department evaluated fishery performance using fishery dependent indicators after exceeding the minimum requirement of 500 pot lifts according to inseason decision rules in the harvest strategy.
- When the data were analyzed the average CPUE was 0.6 crab/pot, which was less than the corresponding trigger (2.0 crab/pot) and limit (1.3 crab/pot) reference points.
- This season's low CPUE remained unchanged from the 2017/18 season, matching the lowest CPUE on record for the last 19 seasons and warranting management action.
- The Northern management area was closed on April 5, 2021.



Harvest this season was 8,833 lb.



The average CPUE this season was 1.85 crab/pot.

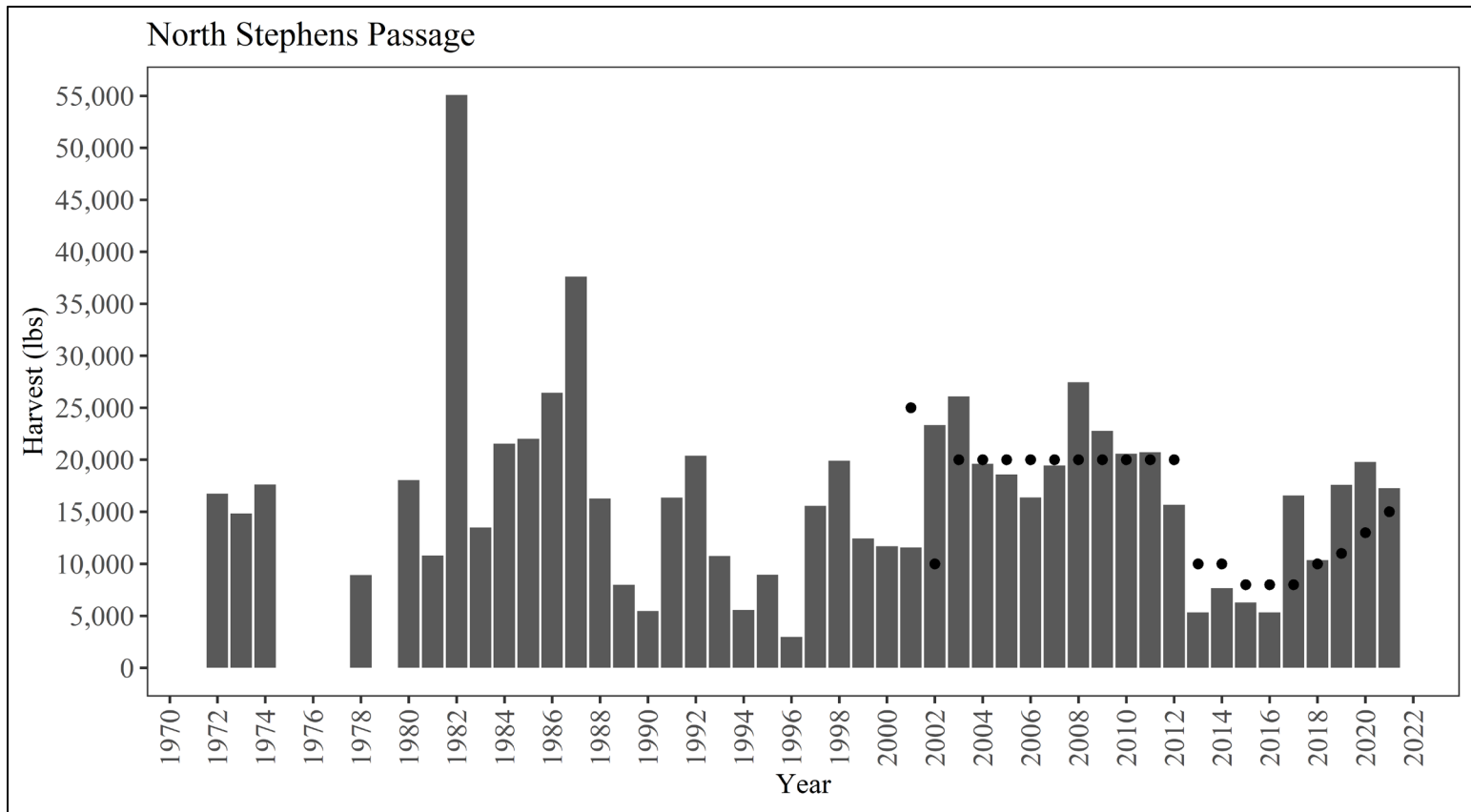


Length frequencies of sampled commercial harvest show an even mix of recruit and post recruit crabs in the most recent season.

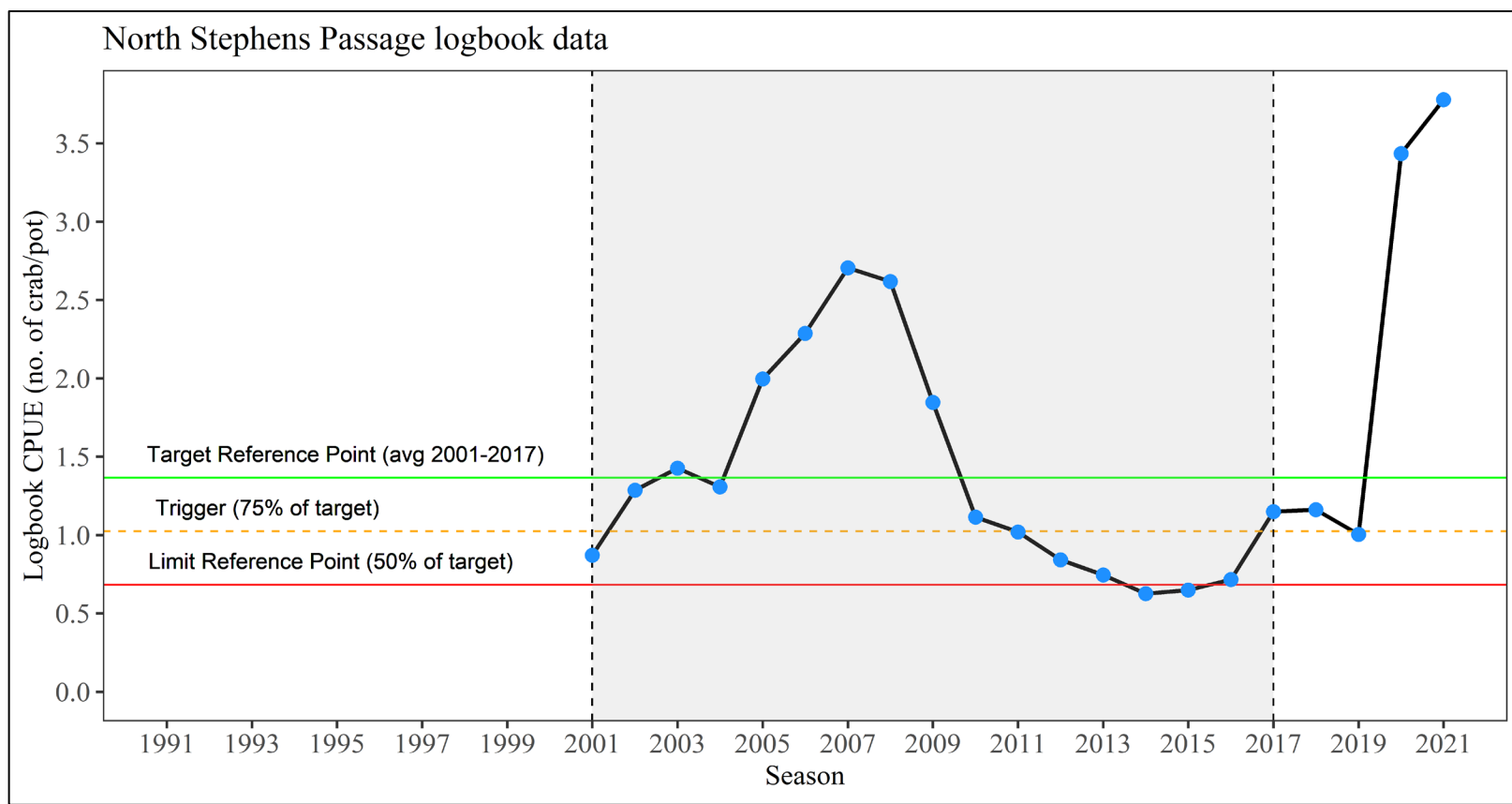


# Icy Strait

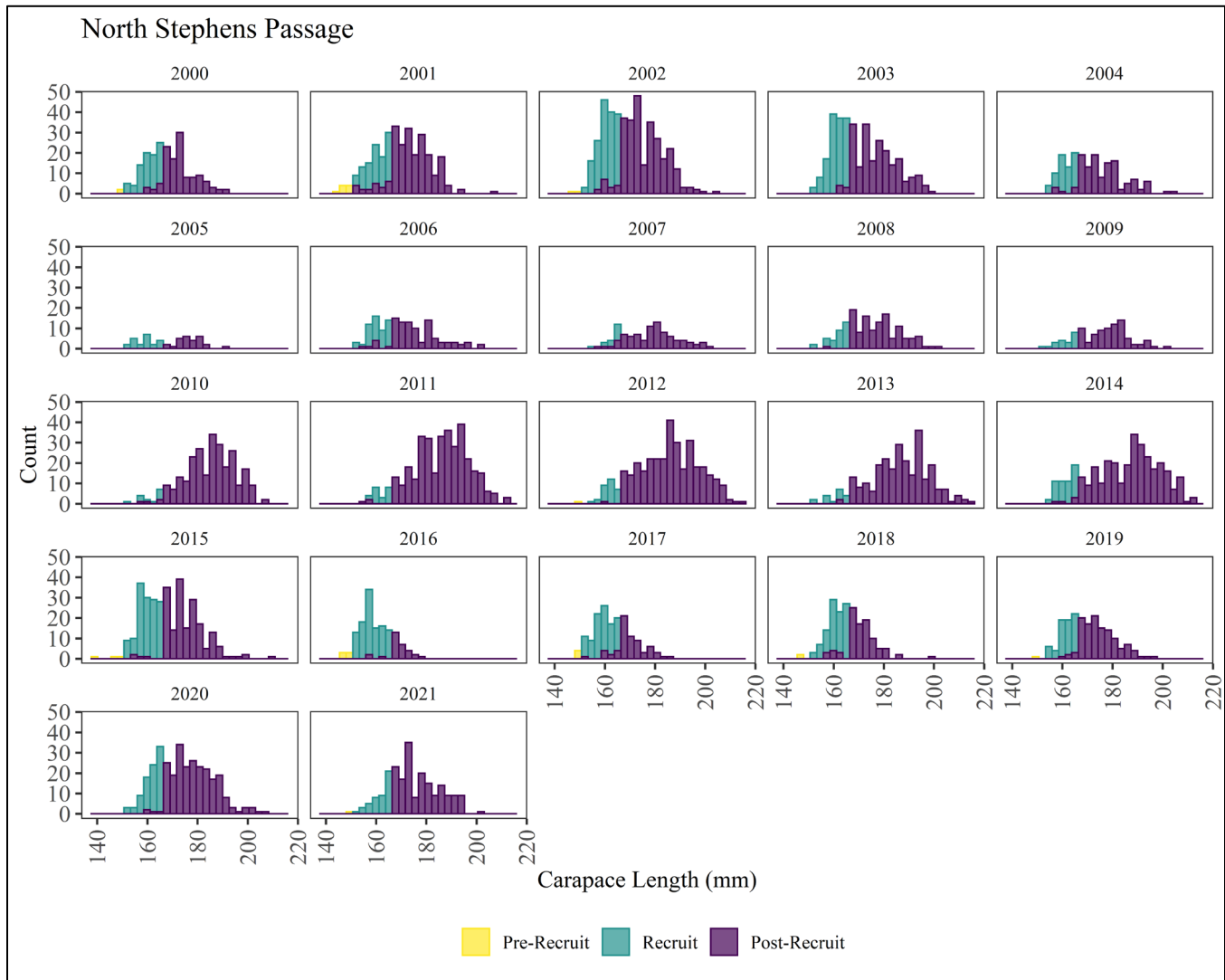
- The Icy Strait management area was closed by EO on March 5, 2021.
- Based on an analysis of effort levels and harvest projections, the harvest was expected to reach the 7,500-pound GHF for the Icy Strait management area by the closure date.



Harvest this season was 17,267 lb.



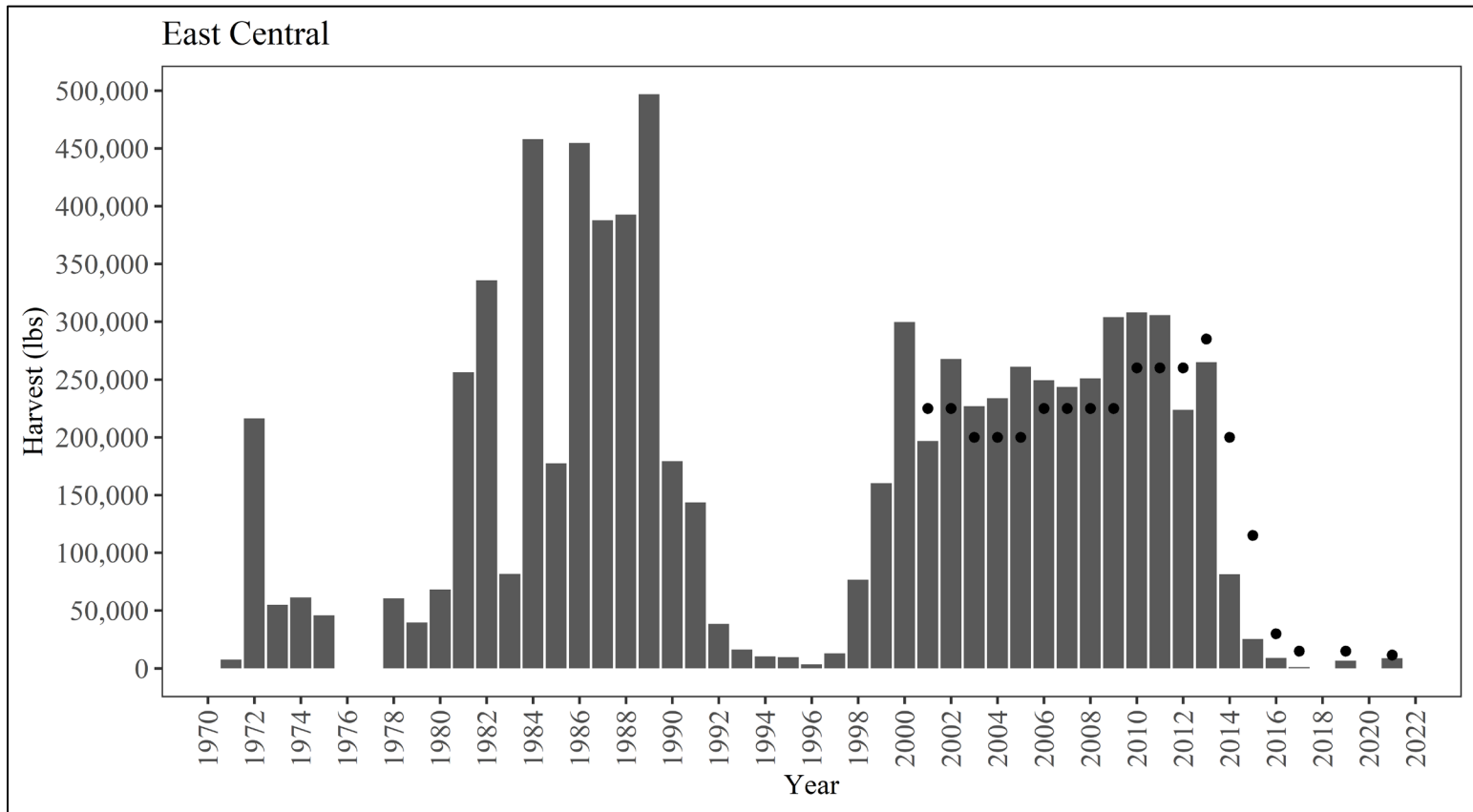
The average CPUE this season was 3.78 crab per pot.



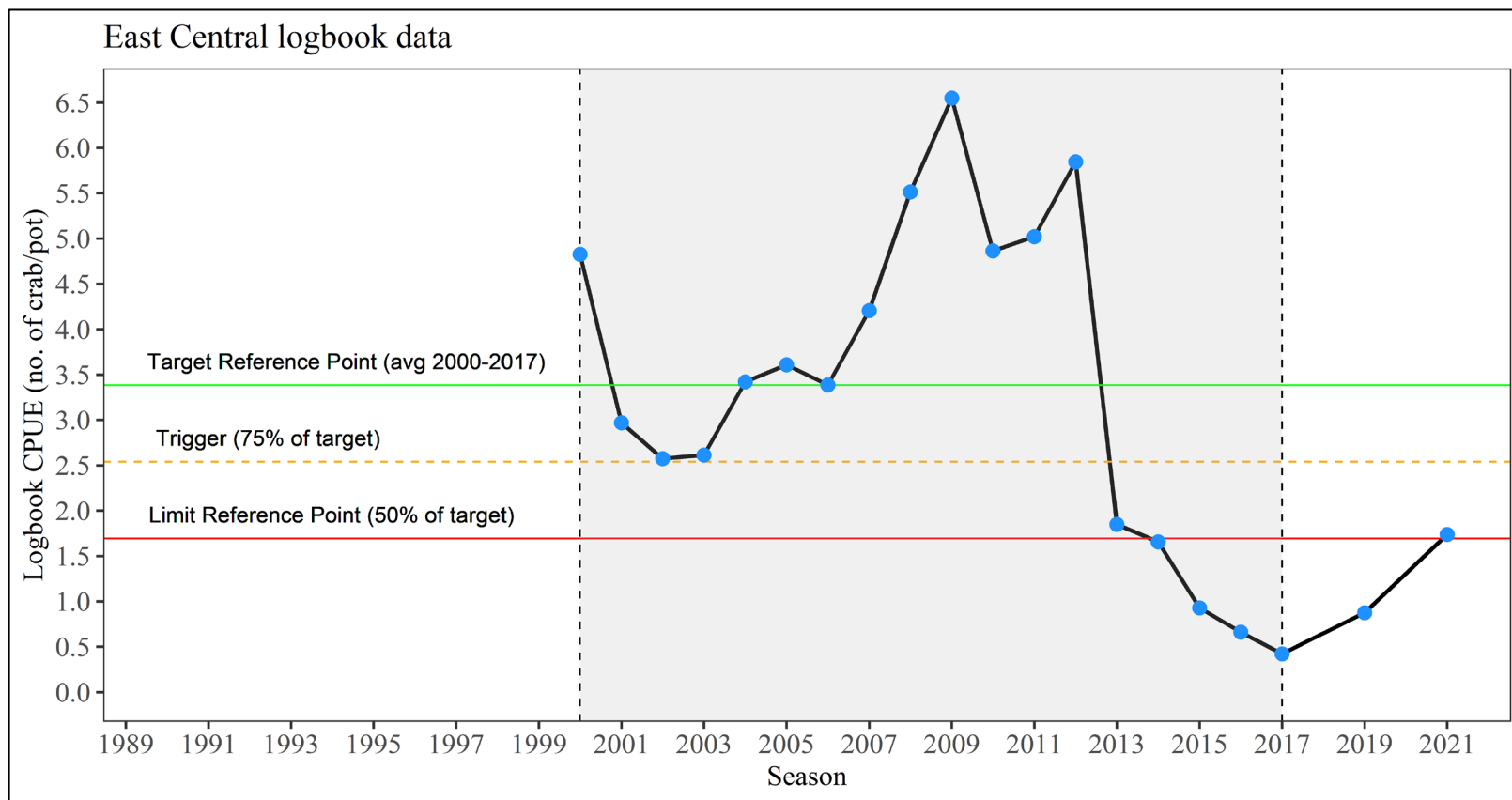
Length frequencies of sampled commercial harvest show a mix of recruit and post recruit crabs in the most recent season.

# North Stephens Passage

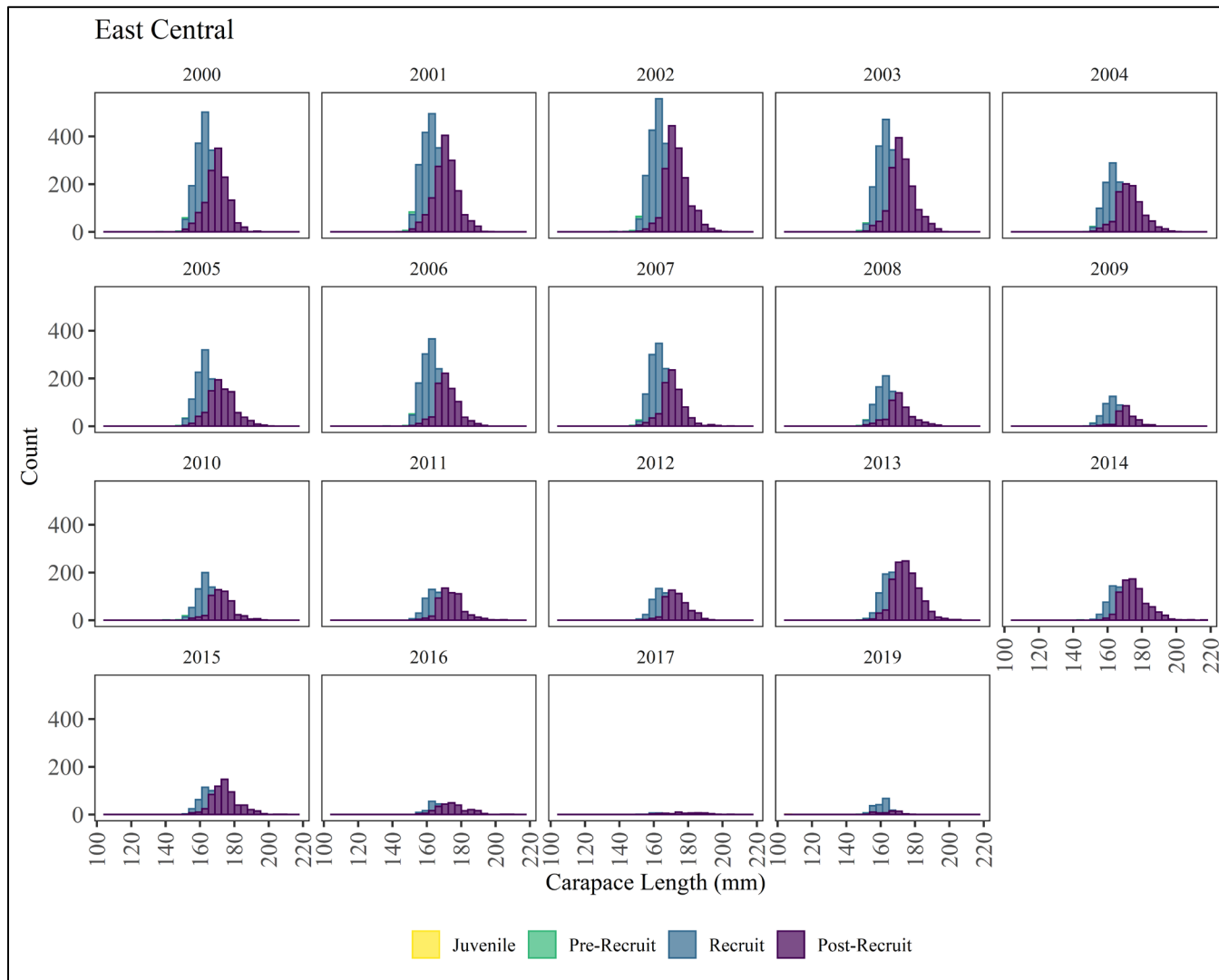
- The North Stephens Passage management area was closed by emergency order (EO) on February 19, 2021 after just over two days of fishing.
- Based on an analysis of effort levels and harvest projections, harvest as of the closure date was expected to reach the 15,000-pound guideline harvest level for the North Stephens Passage management area.



Harvest this season was 8,744 lb.



The CPUE this season was 1.74 crab per pot.

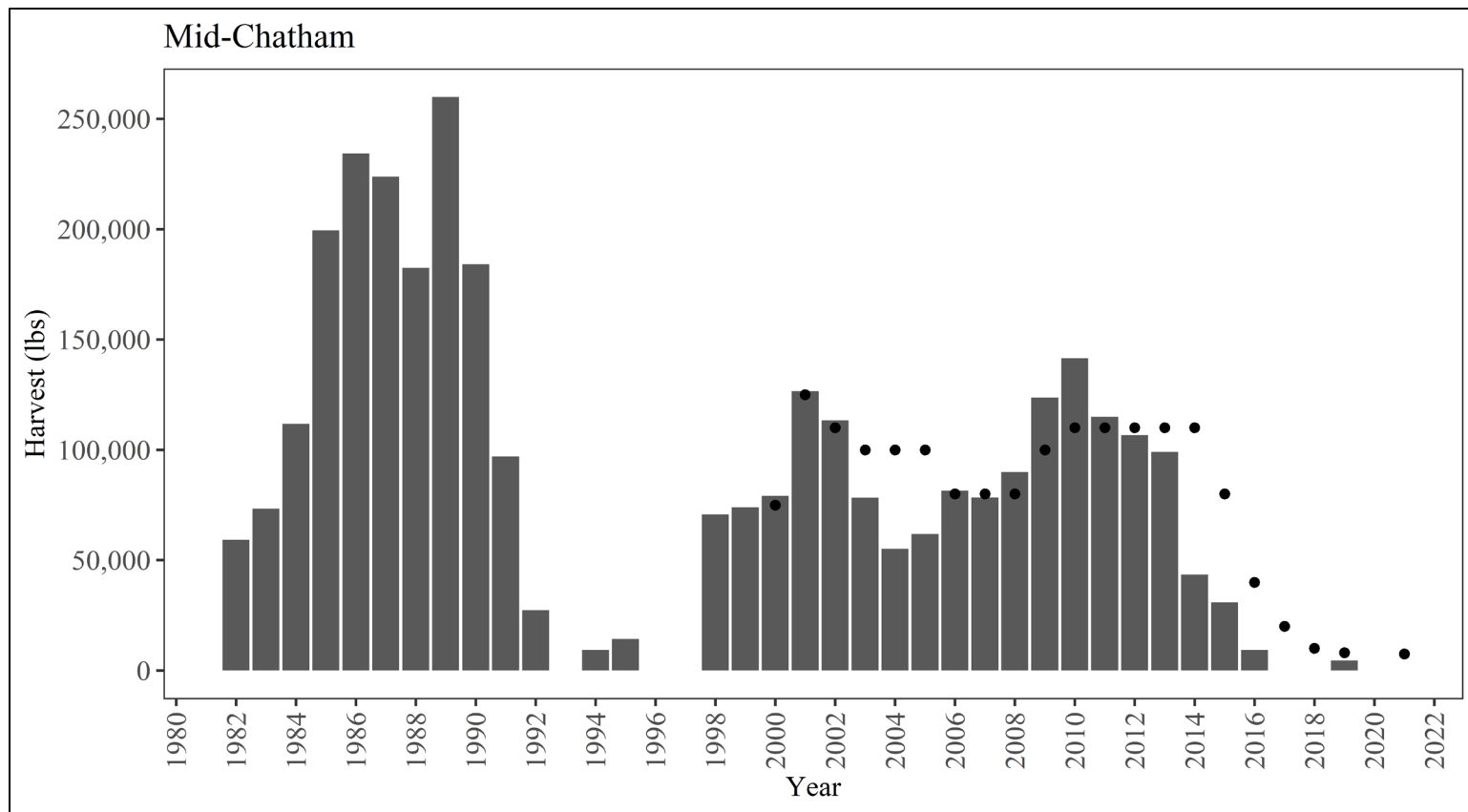


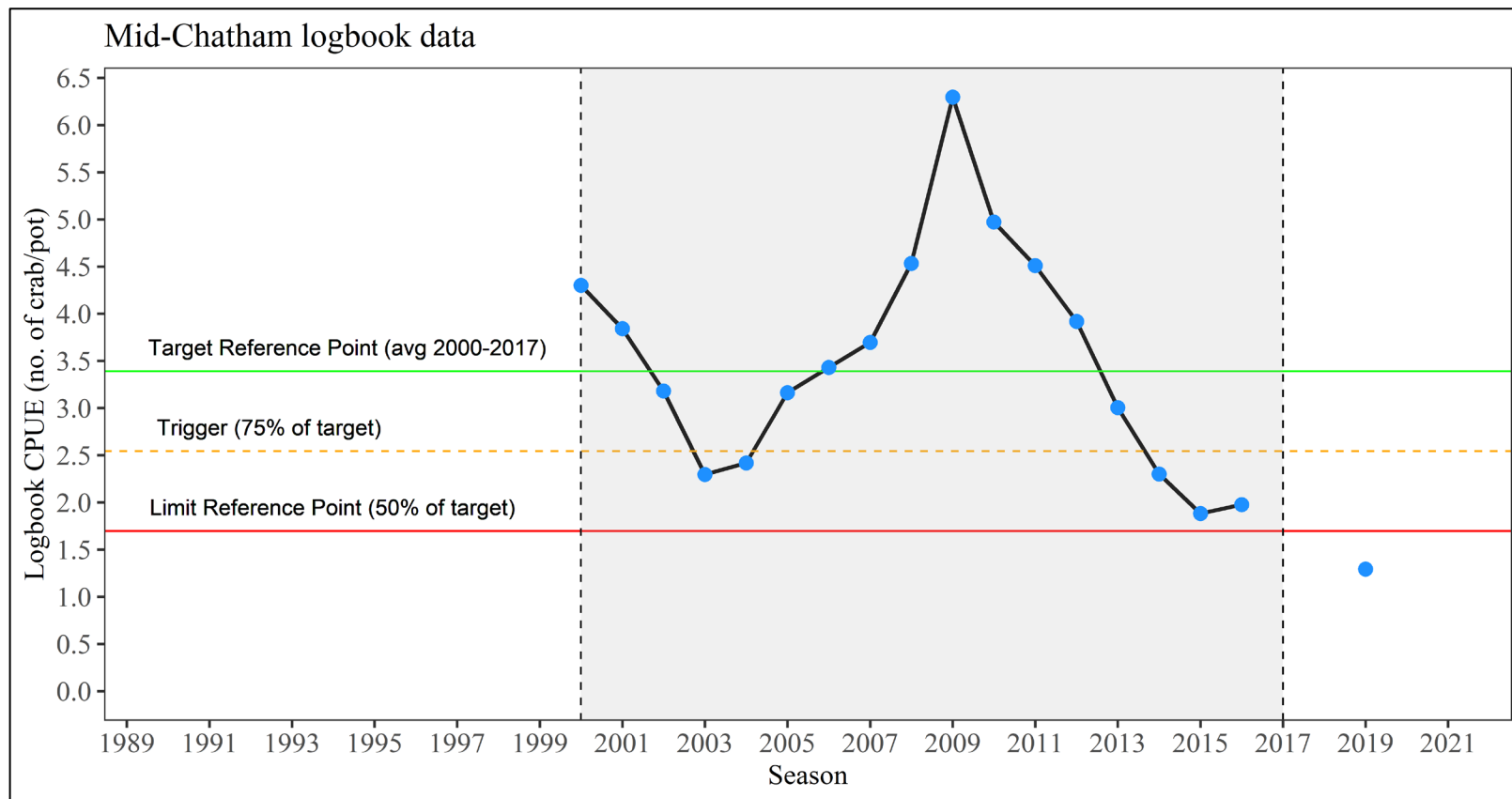
Length frequencies of commercial harvest show small sample sizes and predominantly recruit class crab in the samples.

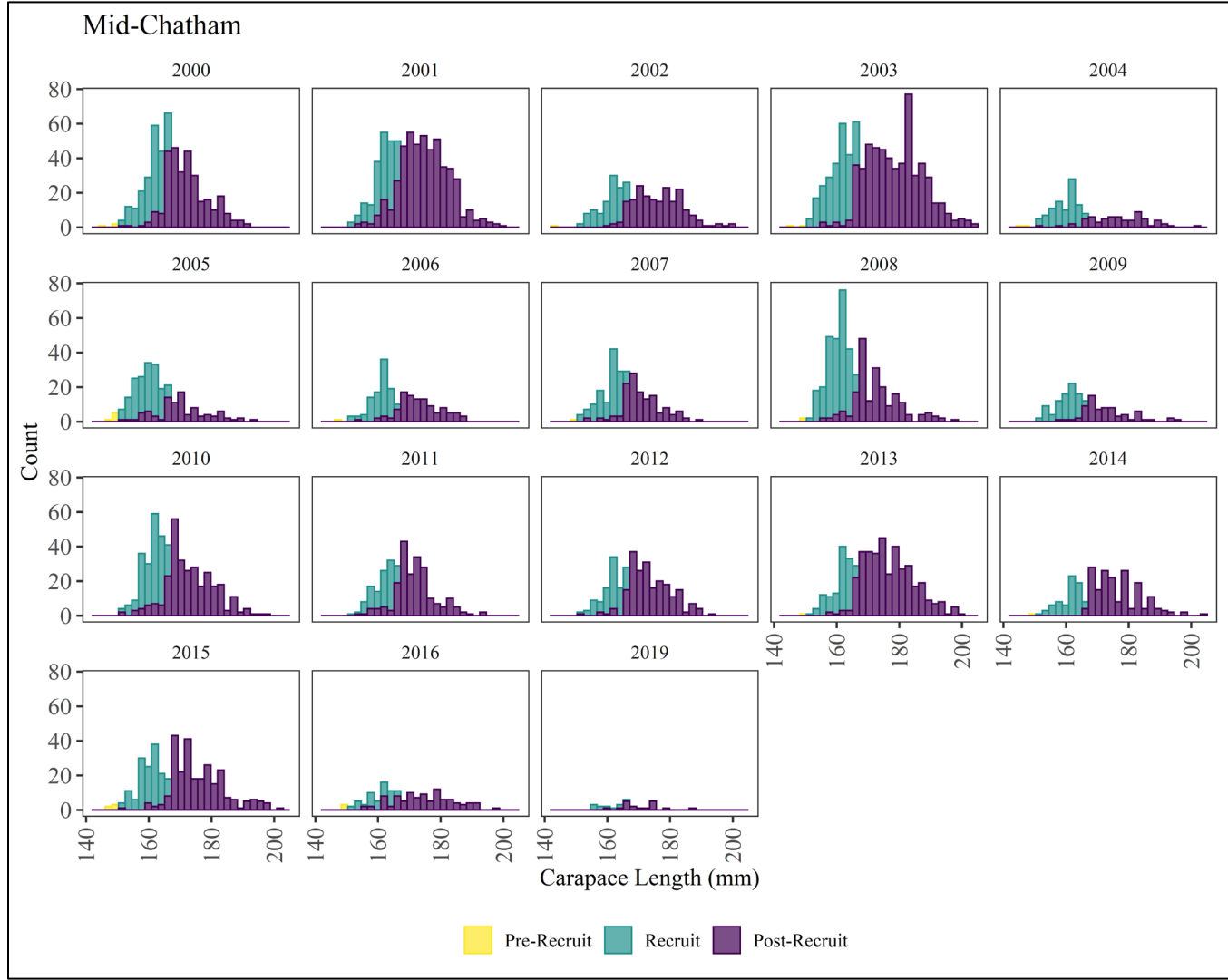


# East Central

- The department evaluated fishery performance using fishery dependent indicators after exceeding the minimum requirement of 500 pot lifts according to inseason decision rules in the harvest strategy.
- When the data were analyzed the average CPUE was 1.6 crab/pot, which was less than the corresponding trigger (2.5 crab/pot) and limit (1.7 crab/pot) reference points.
- The East Central management area was closed on May 5, 2021.

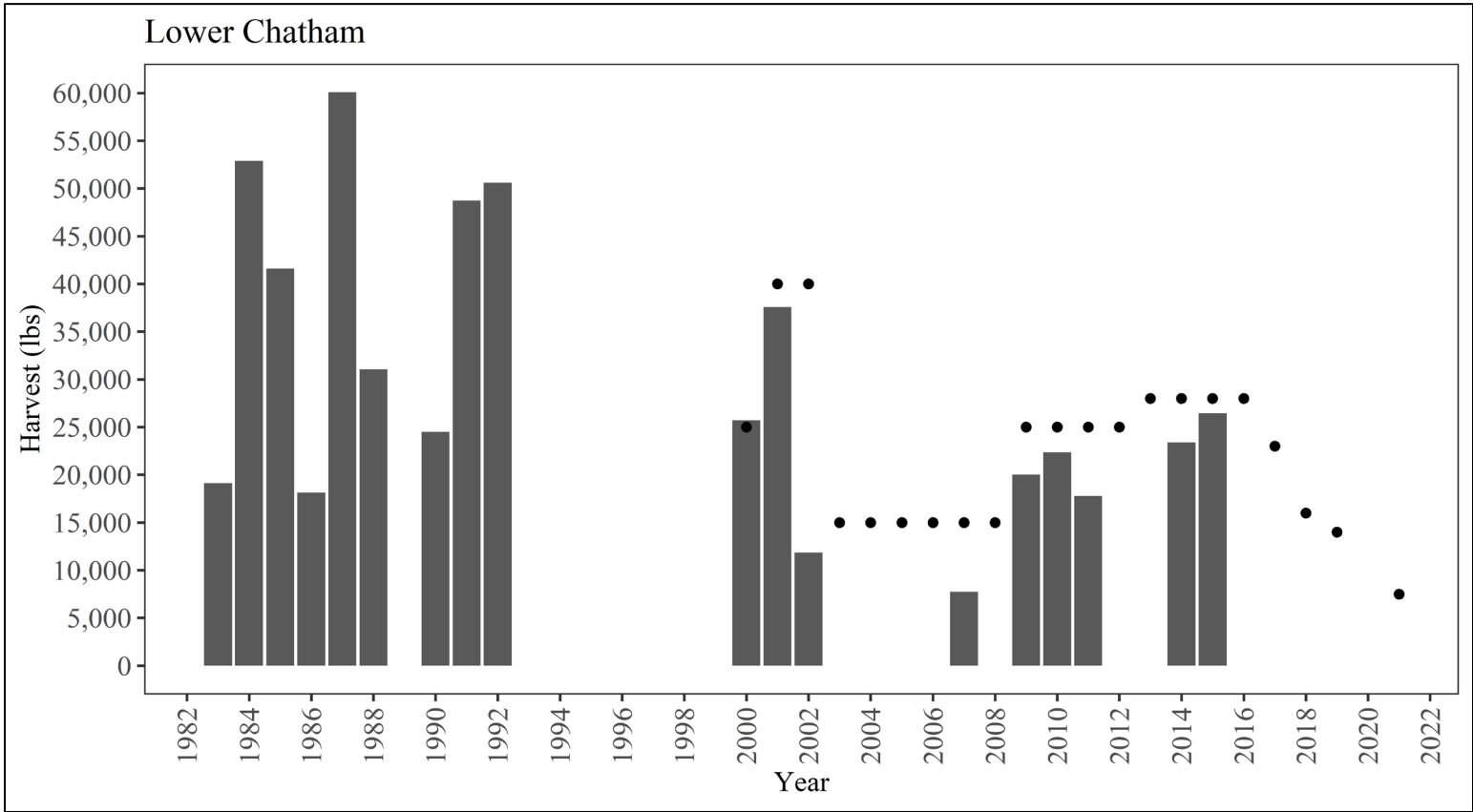


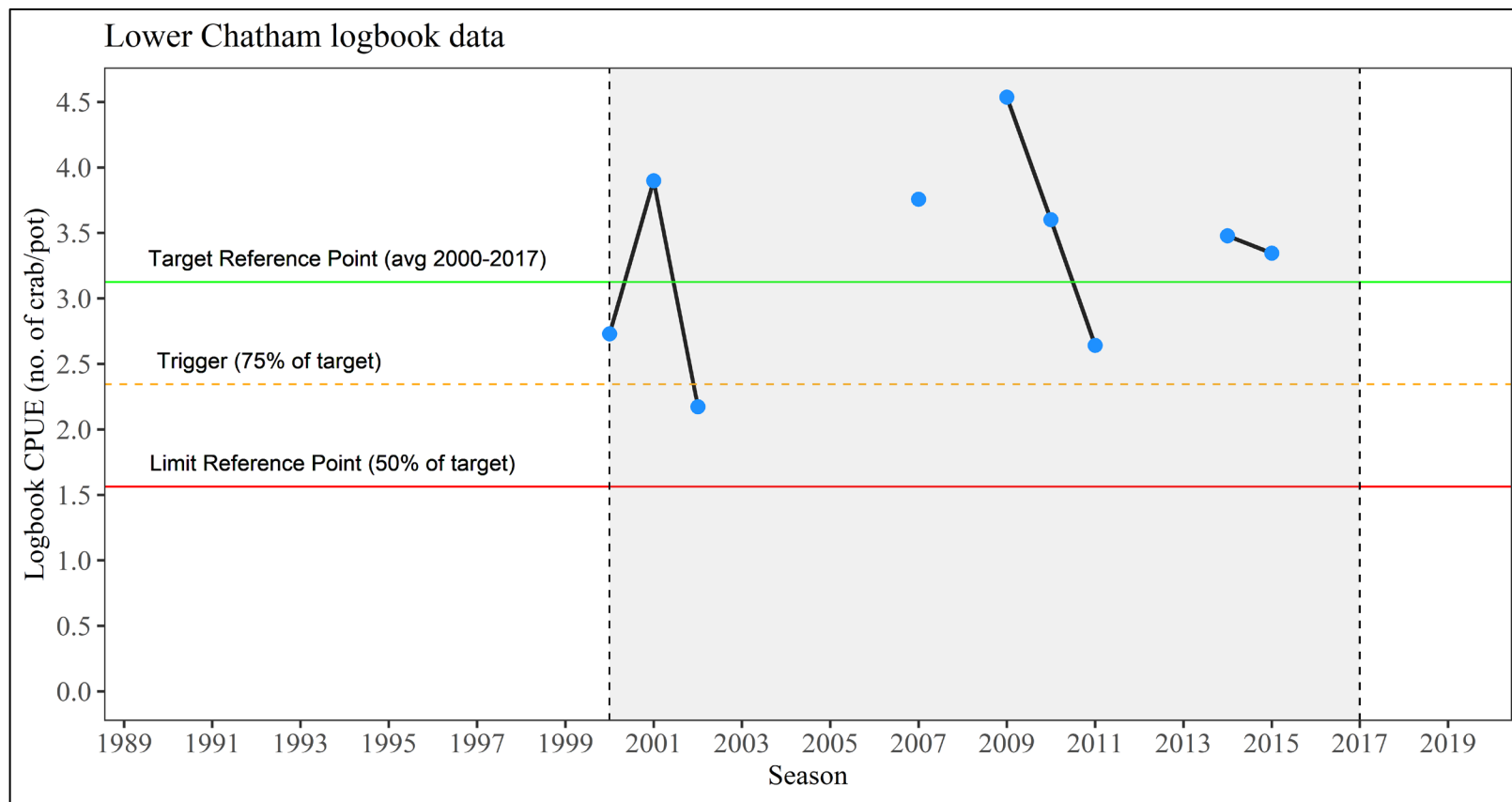


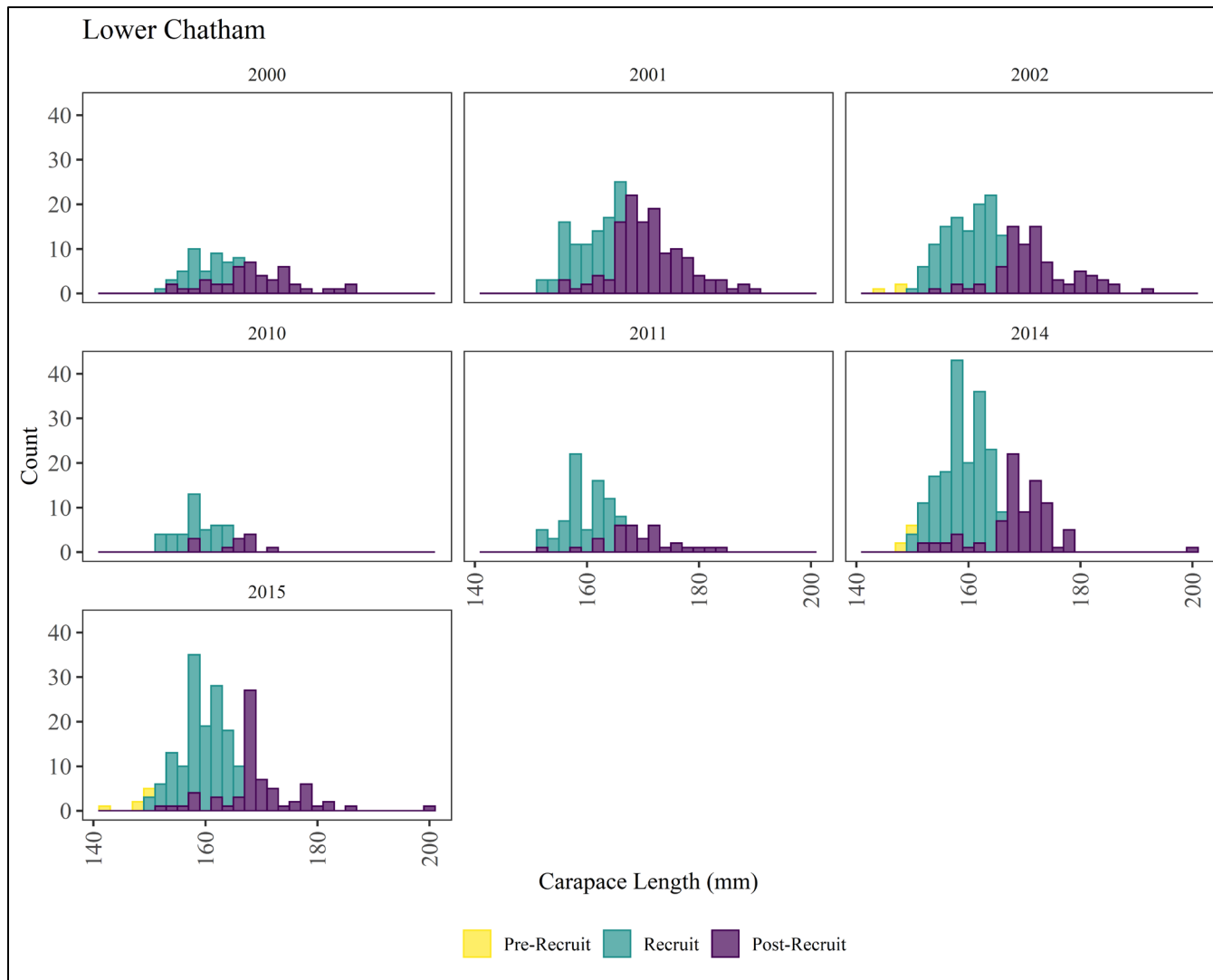


# Mid- Chatham Strait

- The Mid-Chatham Strait management area saw very few pot lifts in 2021, much fewer than the 500 pot lift threshold, so no inseason decision rules in the harvest strategy were triggered.
- The Mid-Chatham Strait management area was closed by regulation [5 AAC 34.110(b)] on December 1, 2021.



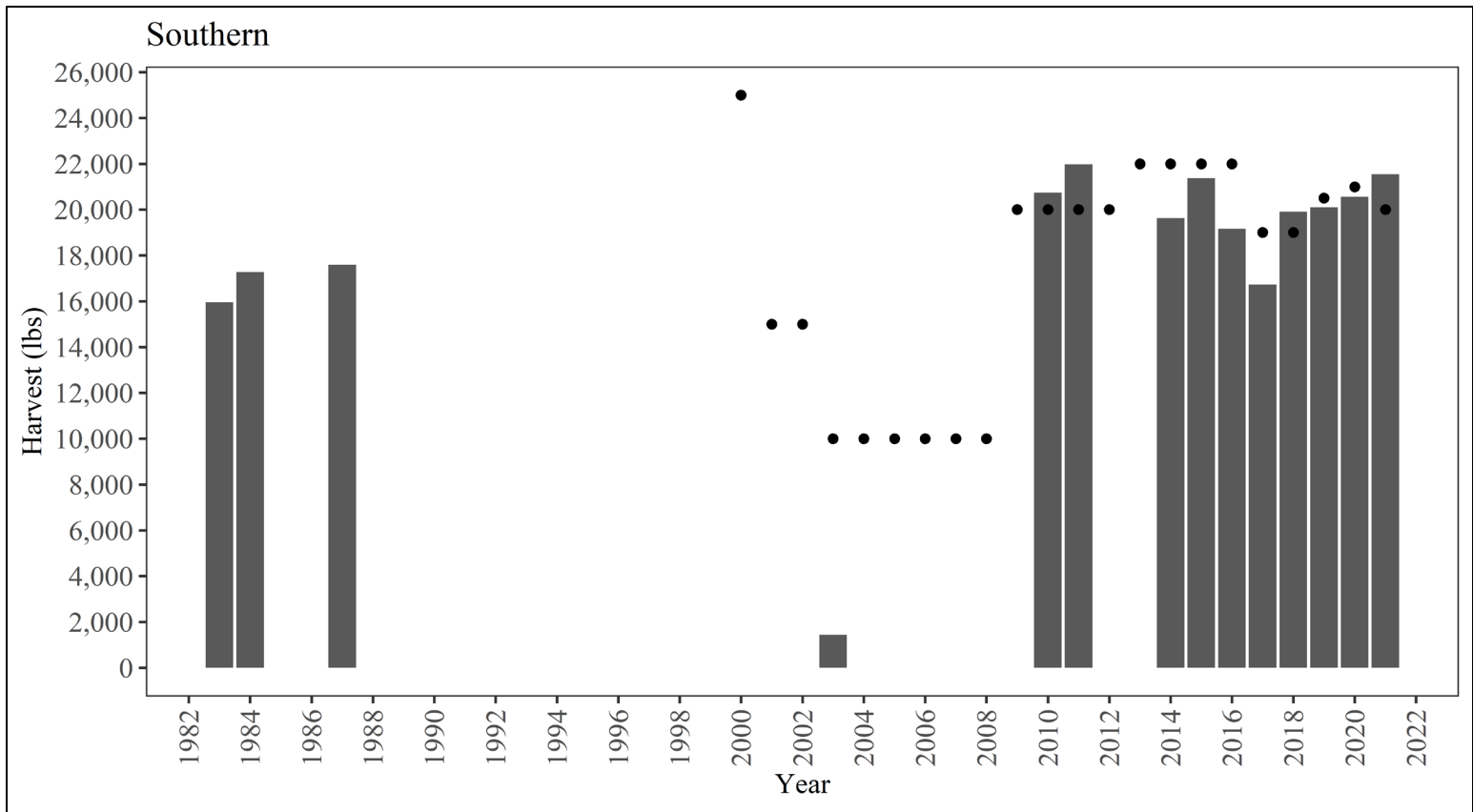




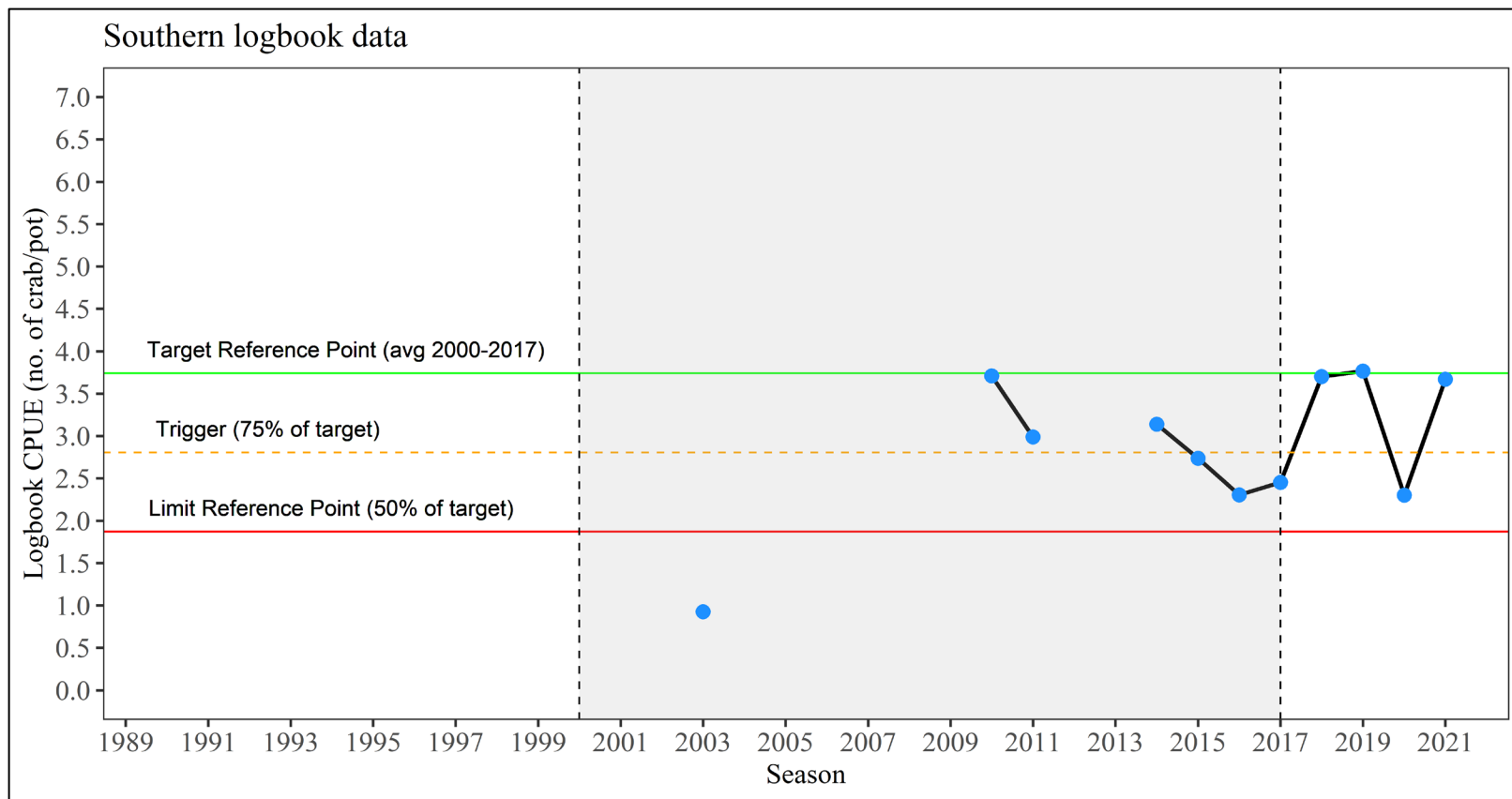


# Lower Chatham Strait

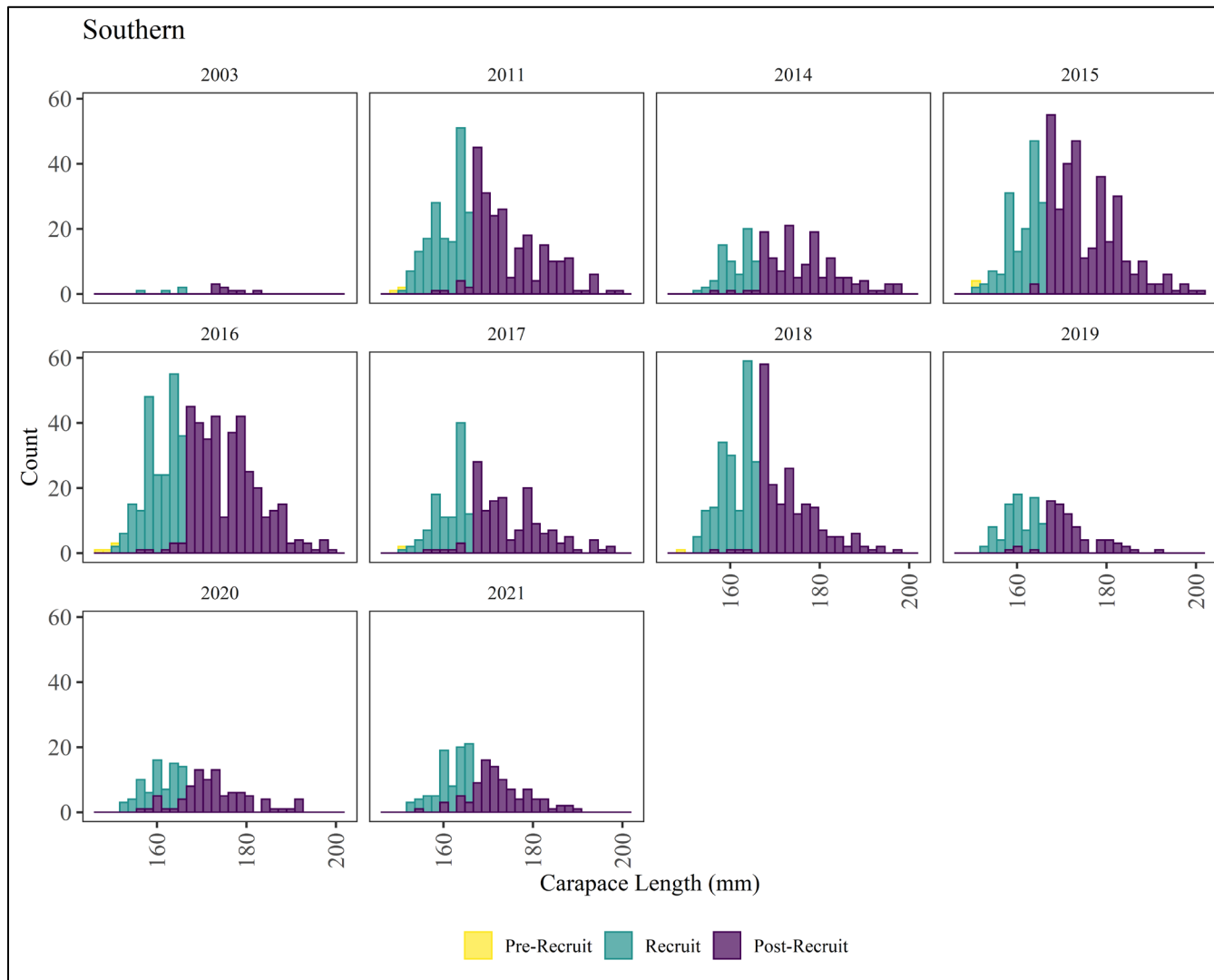
- There was no effort in the Lower Chatham Strait management area this season.
- The Lower Chatham Strait management area was closed by regulation [5 AAC 34.110(b)] on December 1, 2021.



Harvest this season was 21,546 lb.



The CPUE this season was 3.67 crab per pot.



Length frequencies of sampled commercial harvest show small sample sizes and an even mix of recruit and post recruit crabs in the most recent season.

# Southern

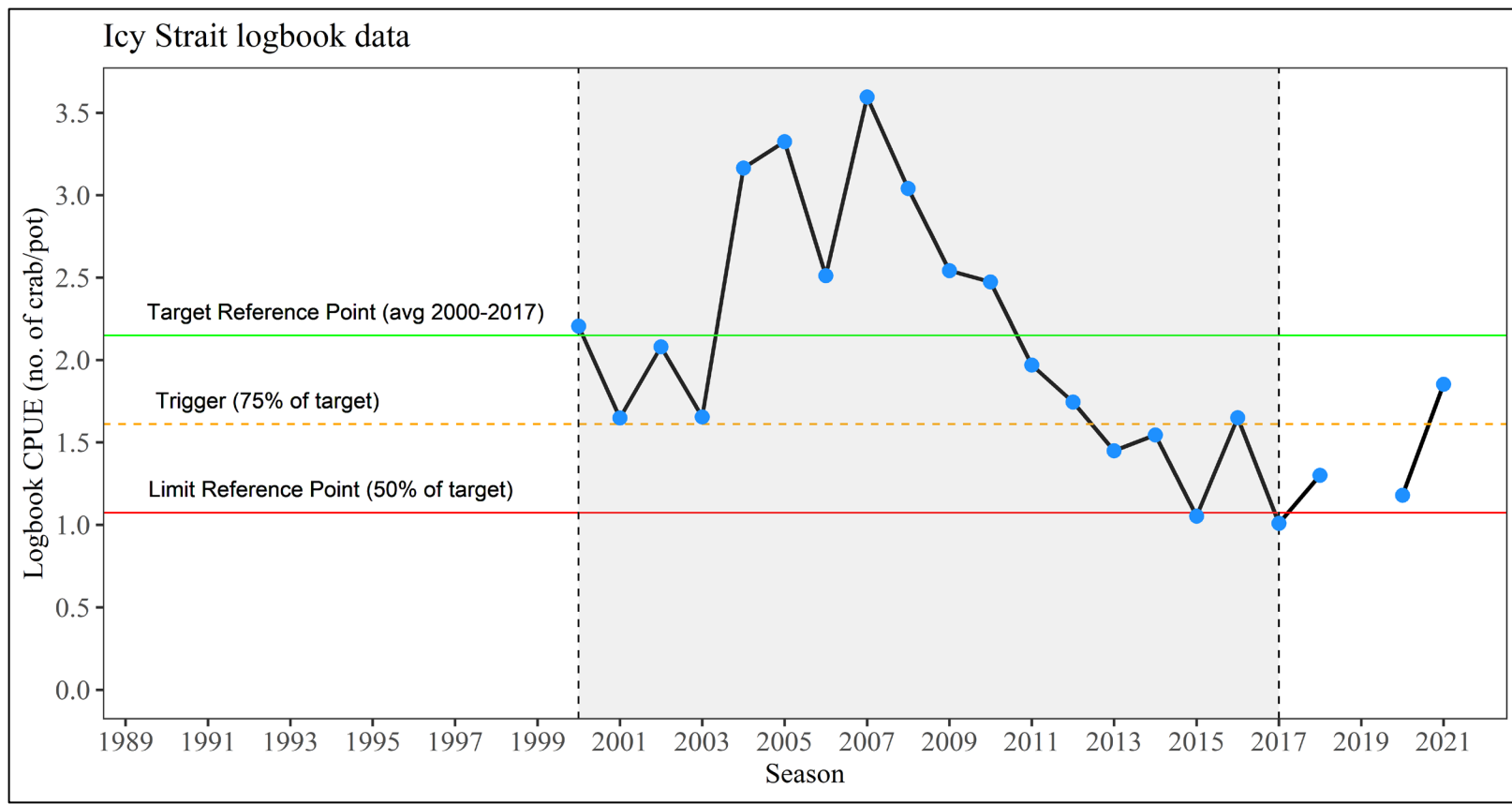
- The Southern management area was closed by EO on April 27, 2021.
- Based on an analysis of effort levels and harvest projections, the harvest was expected to reach the 20,000-pound GHL for the Icy Strait management area by the closure date.

# 2021/2022 Fishery

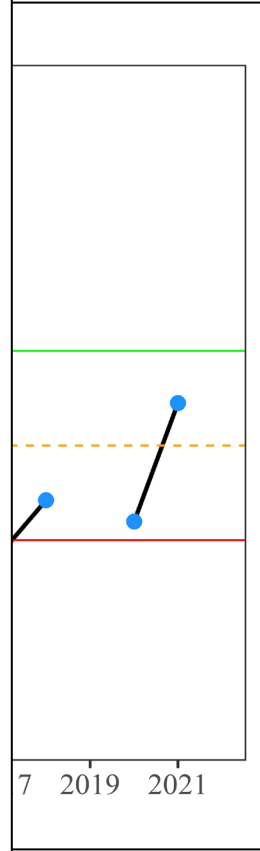
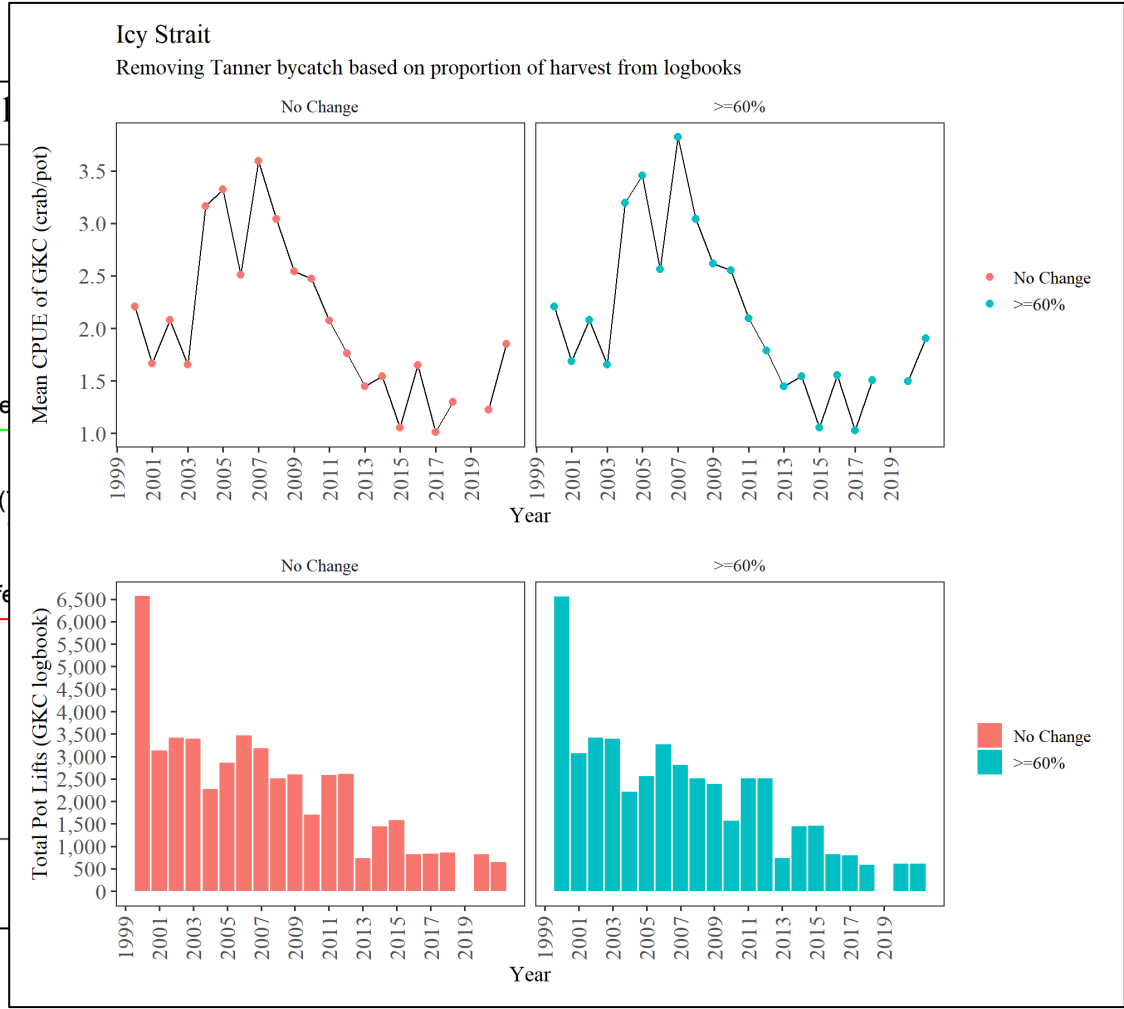
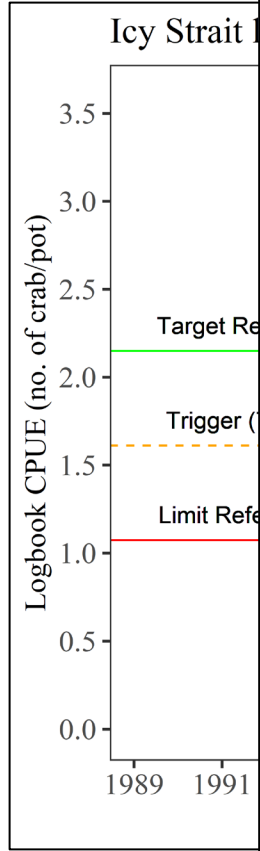
- The season will open on February 11, 2022 and GHGs have not been finalized.
- The department has been in the process of refining a harvest strategy used for the first time last season, with inseason and post-season decision rules defining management actions.

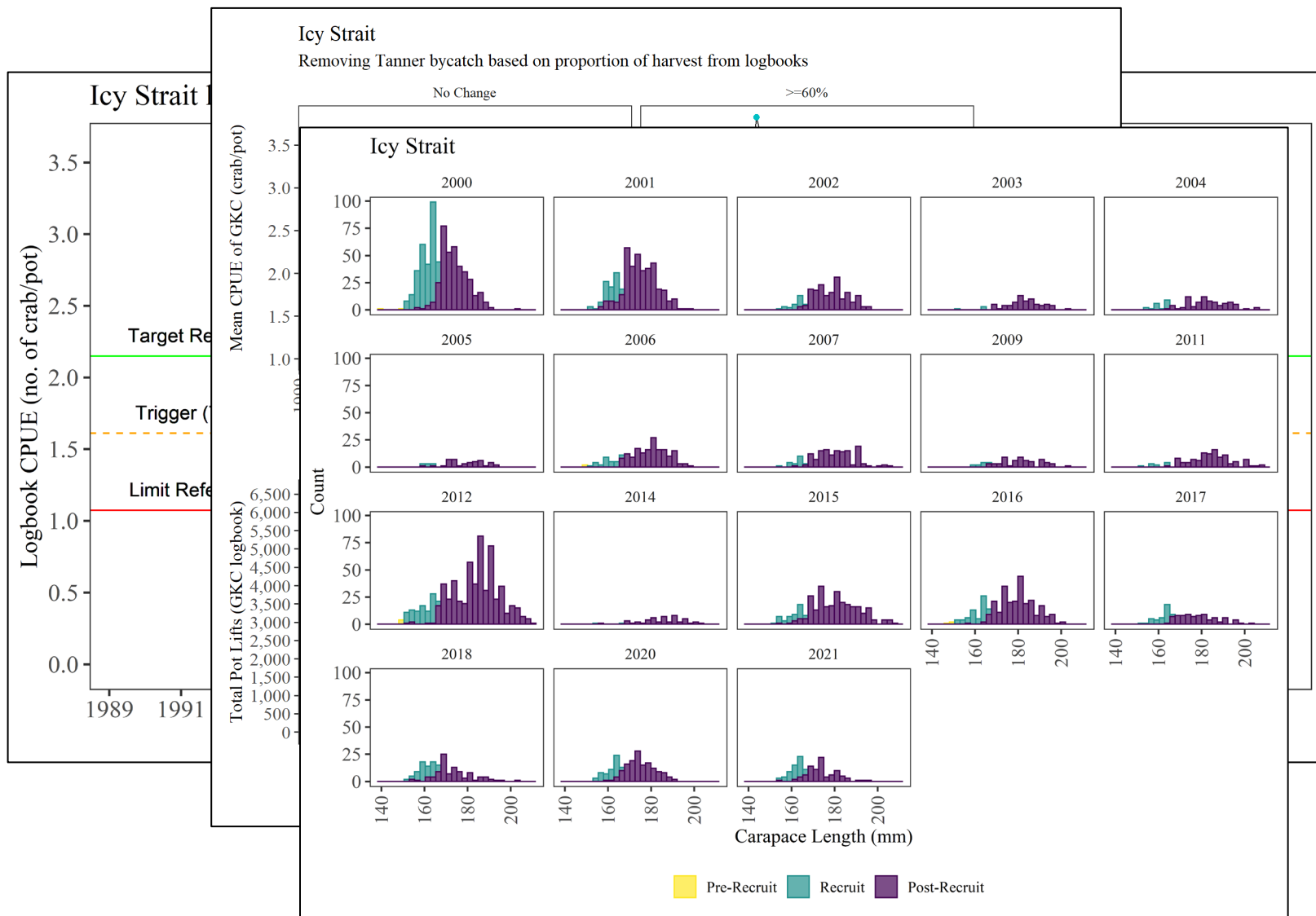
# 2021/2022 Fishery (cont.)

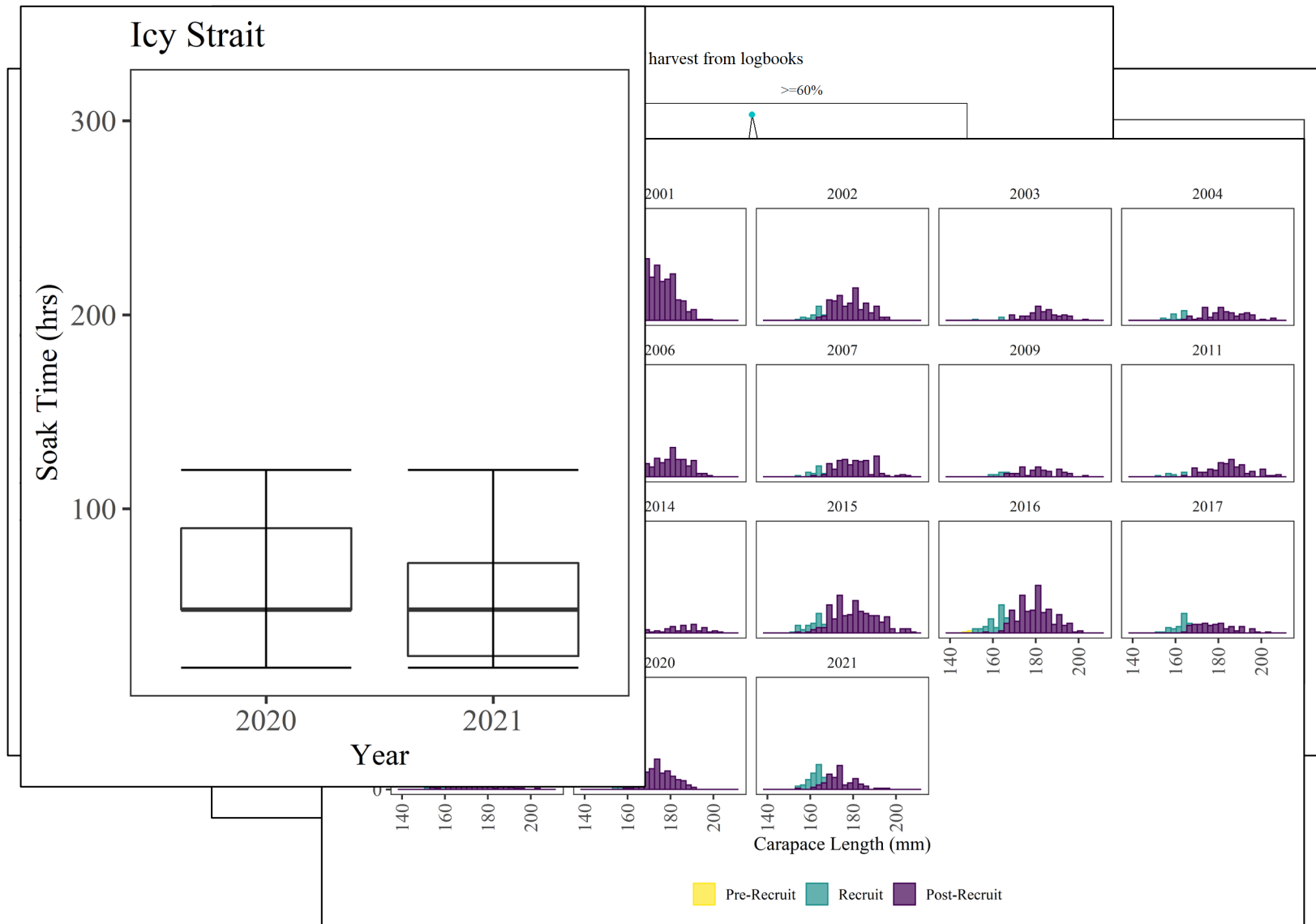
- For each, we reviewed postseason decision rules from the harvest strategy in its current form (i.e. target, trigger @ 75%, and limit @ 50%).
- We also considered secondary performance indicators to refine the recommendations.











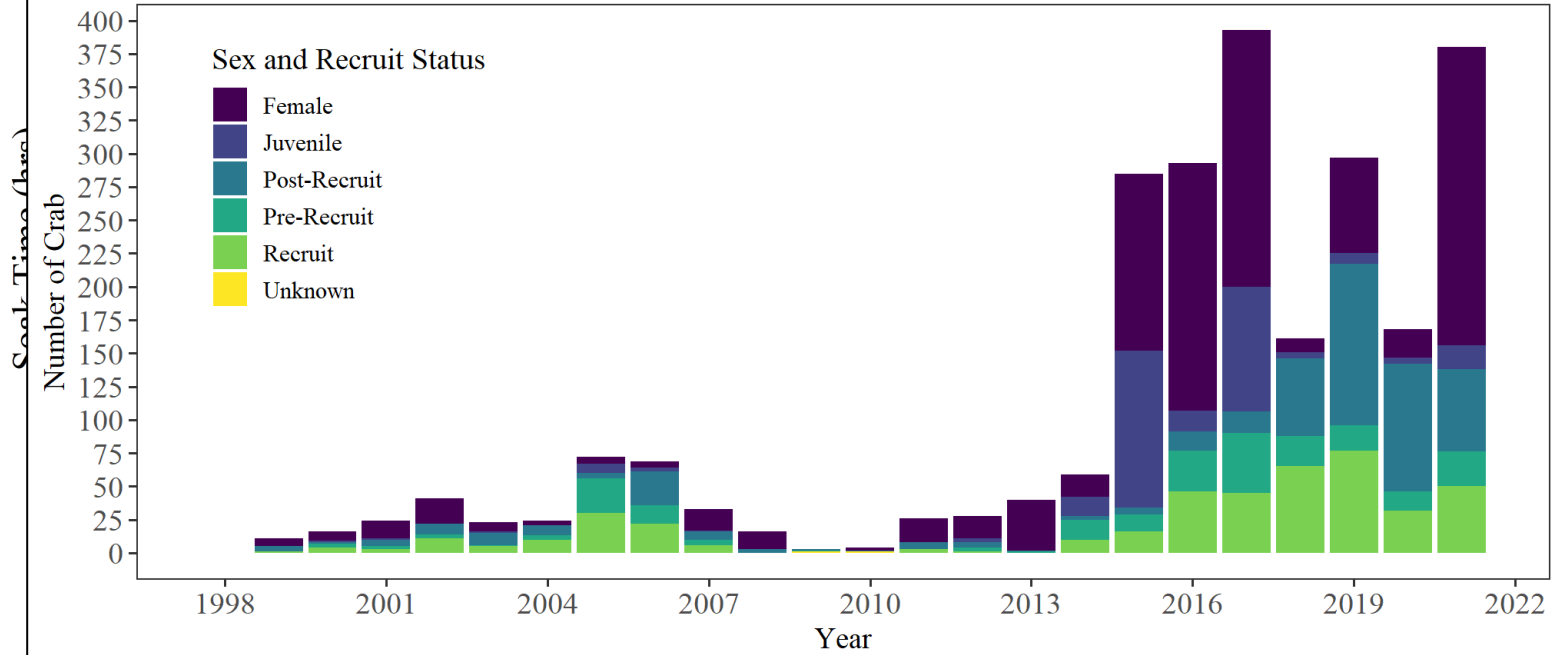
# Icy Strait

harvest from logbooks

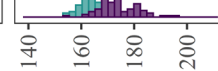
>=60%

## Holkham Bay

Number of GKC caught during the Tanner survey



Year



Carapace Length (mm)

Pre-Recruit Recruit Post-Recruit

## 2021/2022 Fishery (cont.)

- After analysis of all seven areas, some potential courses of action include:
  - Northern: closure for 2022.
  - Icy Strait: GHL increase of 0% - 10%.
  - North Stephens Passage: GHL increase of 10% - 20%.
  - East Central: GHL increase of 0% - 5%.

## 2021/2022 Fishery (cont.)

- Mid-Chatham Strait: Reopen with the same GHL as 2021.
- Lower Chatham Strait: Reopen with the same GHL as 2021.
- Southern: GHL increase of 5% - 10%.



QUESTIONS?