

ADF&G STAFF PRESENTATION

King and Tanner Task Force – December 2019

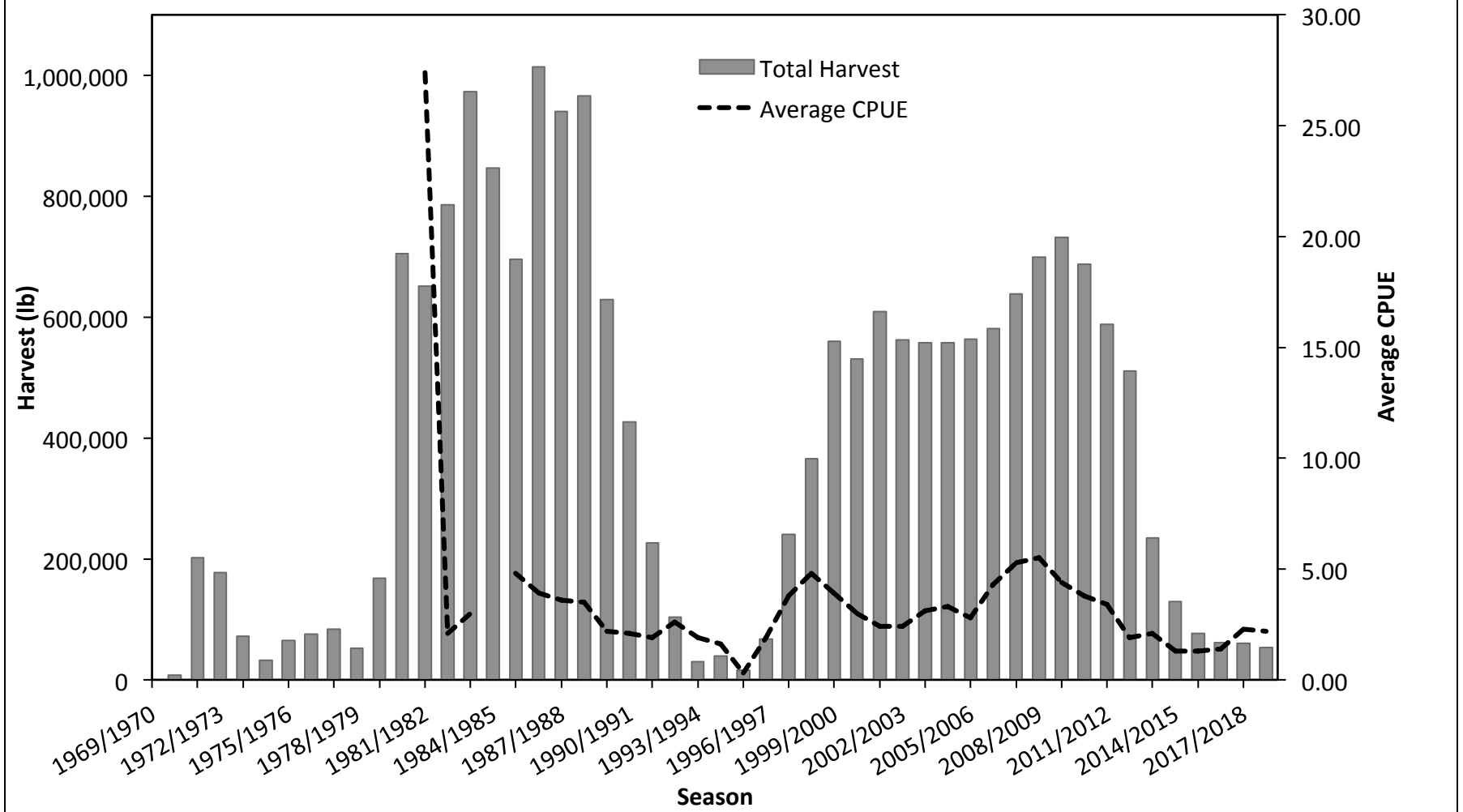


Golden King Crab Commercial Fisheries

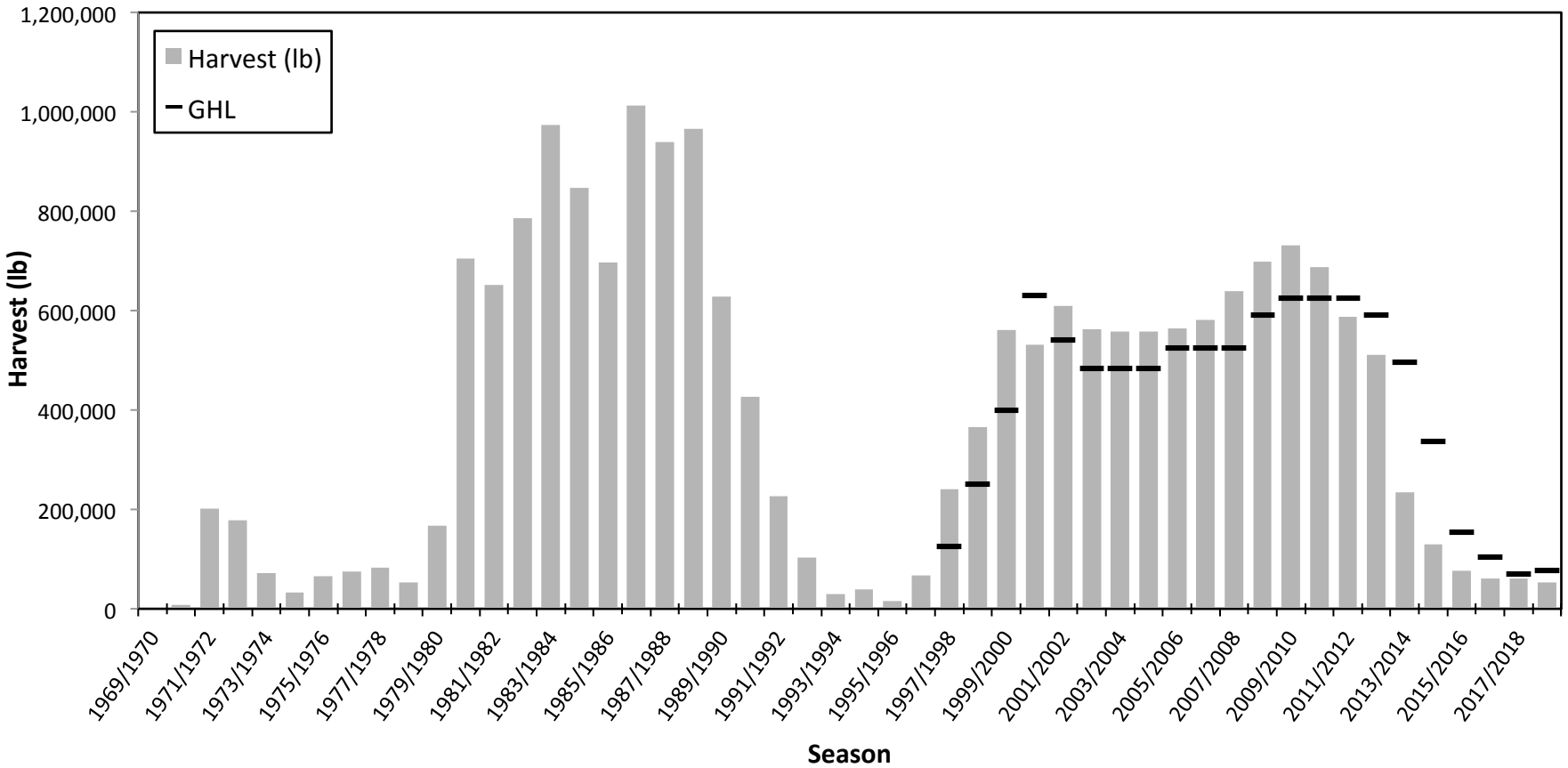
Joe Stratman, Lead Crab Biologist

Division of Commercial Fisheries, Southeast Region

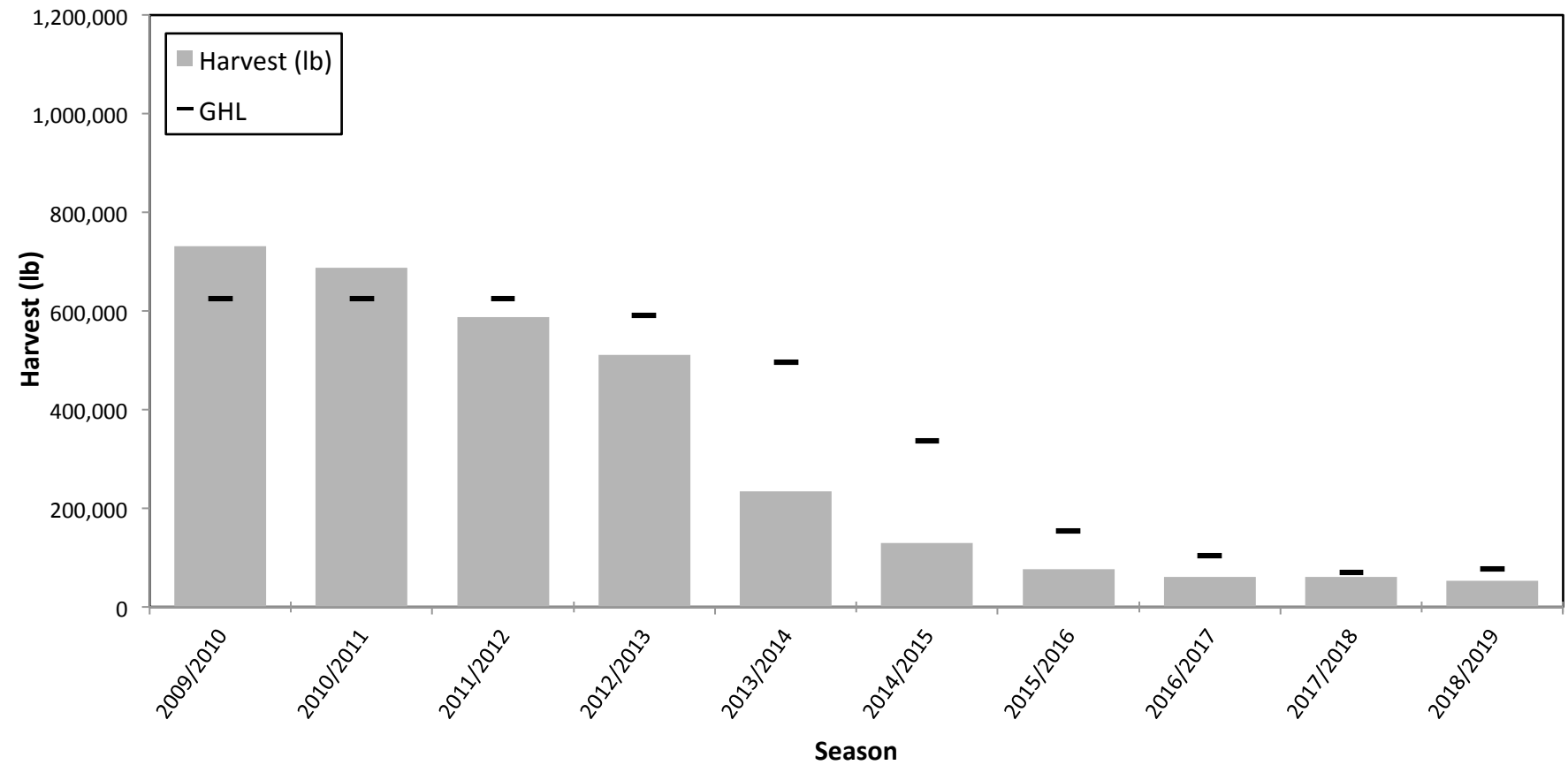
GKC Harvest and Average CPUE by Season



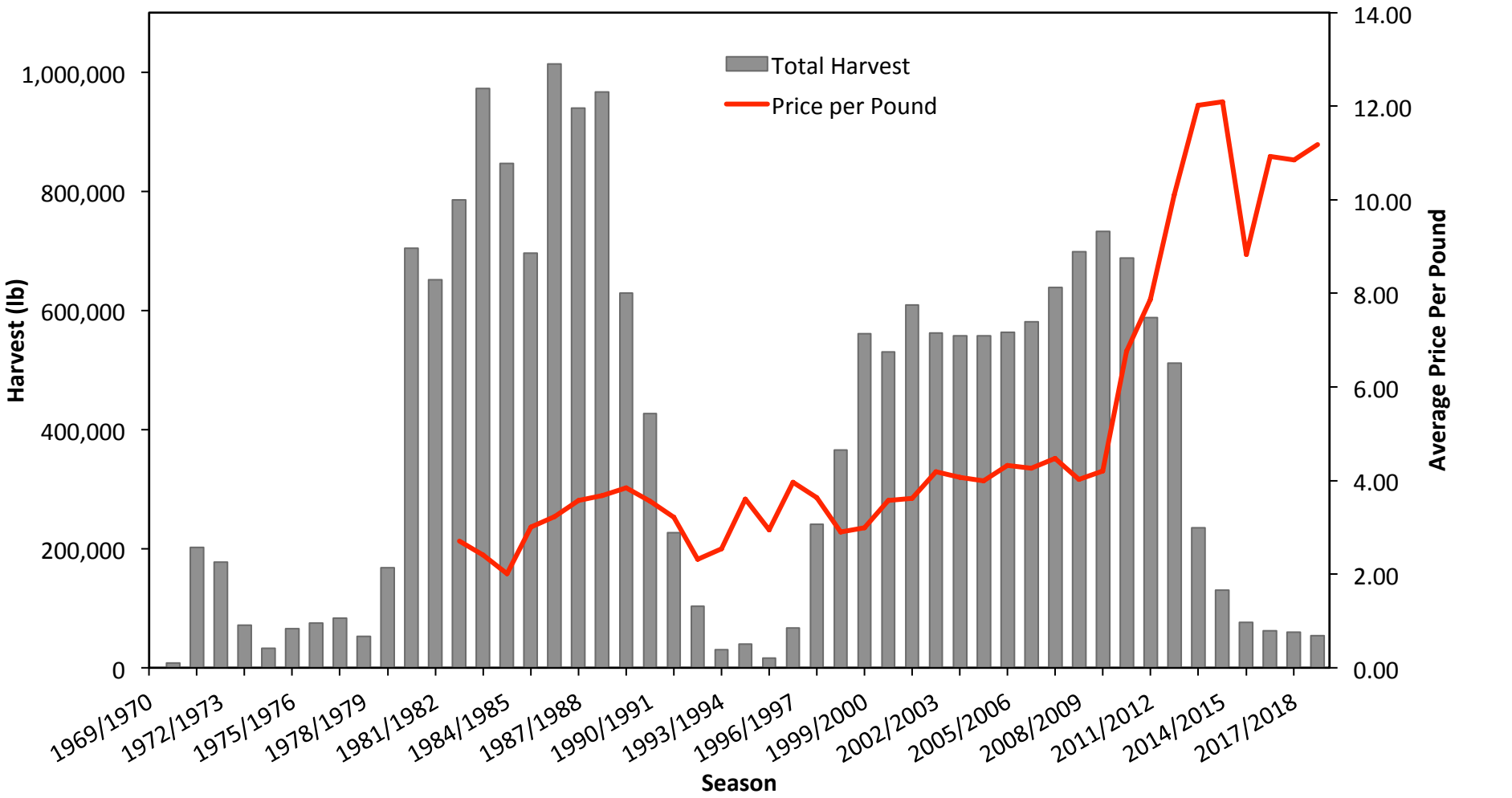
GKC Harvest and GHGs by Season



GKC Harvest and GHGs by Season



GKC Harvest and Average Price Per Pound by Season



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

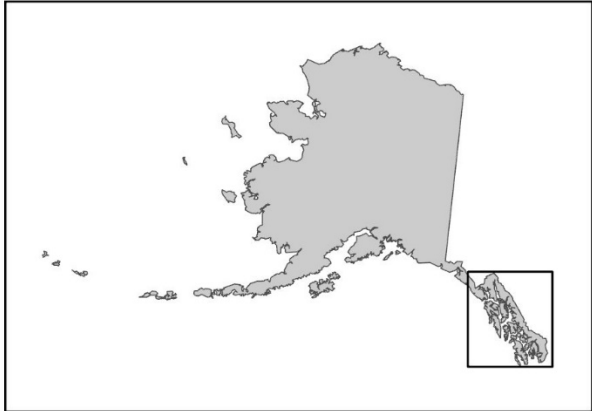
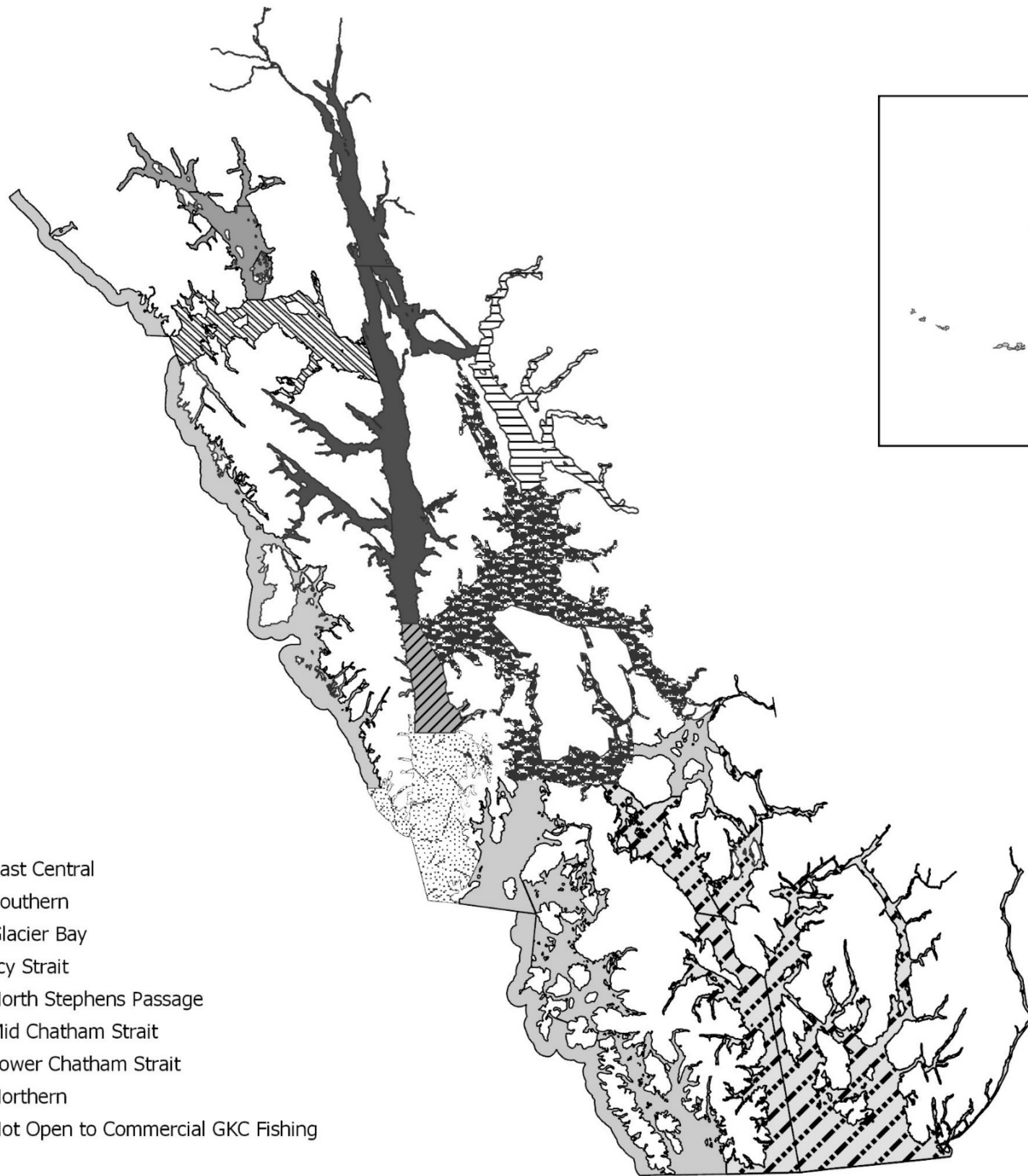
- All data currently available to assess GKC in Southeast Alaska are fishery dependent:
 - 1) Commercial CPUE - fish ticket and logbook. Logbooks have been used in the fishery since 2000.
 - 2) Dockside sampling percentage of recruit and post-recruit class crab (from the early 1970s to present).
 - 3)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

Commercial catch per unit effort (CPUE) from logbooks

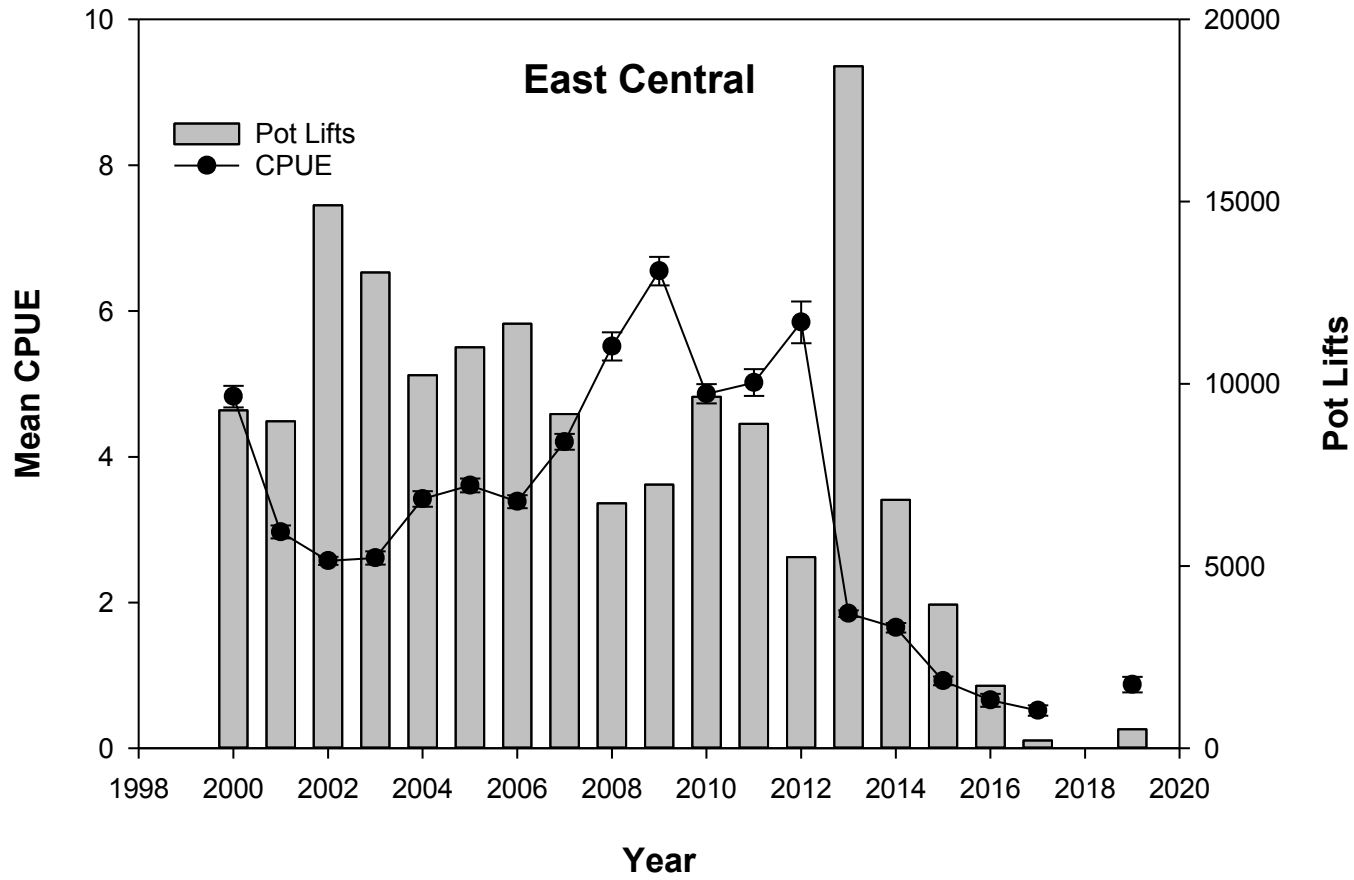
- Commercial CPUE from logbooks provides a broad view of fishery performance, but has limitations:
 - 1) Potential reporting errors (numbers of crab, pots lifted, etc.).
 - 2) Neither fish ticket nor logbook databases account for soak times, so soak times cannot be factored into catch/pot or catch/pot/day calculations.

Port Sampling

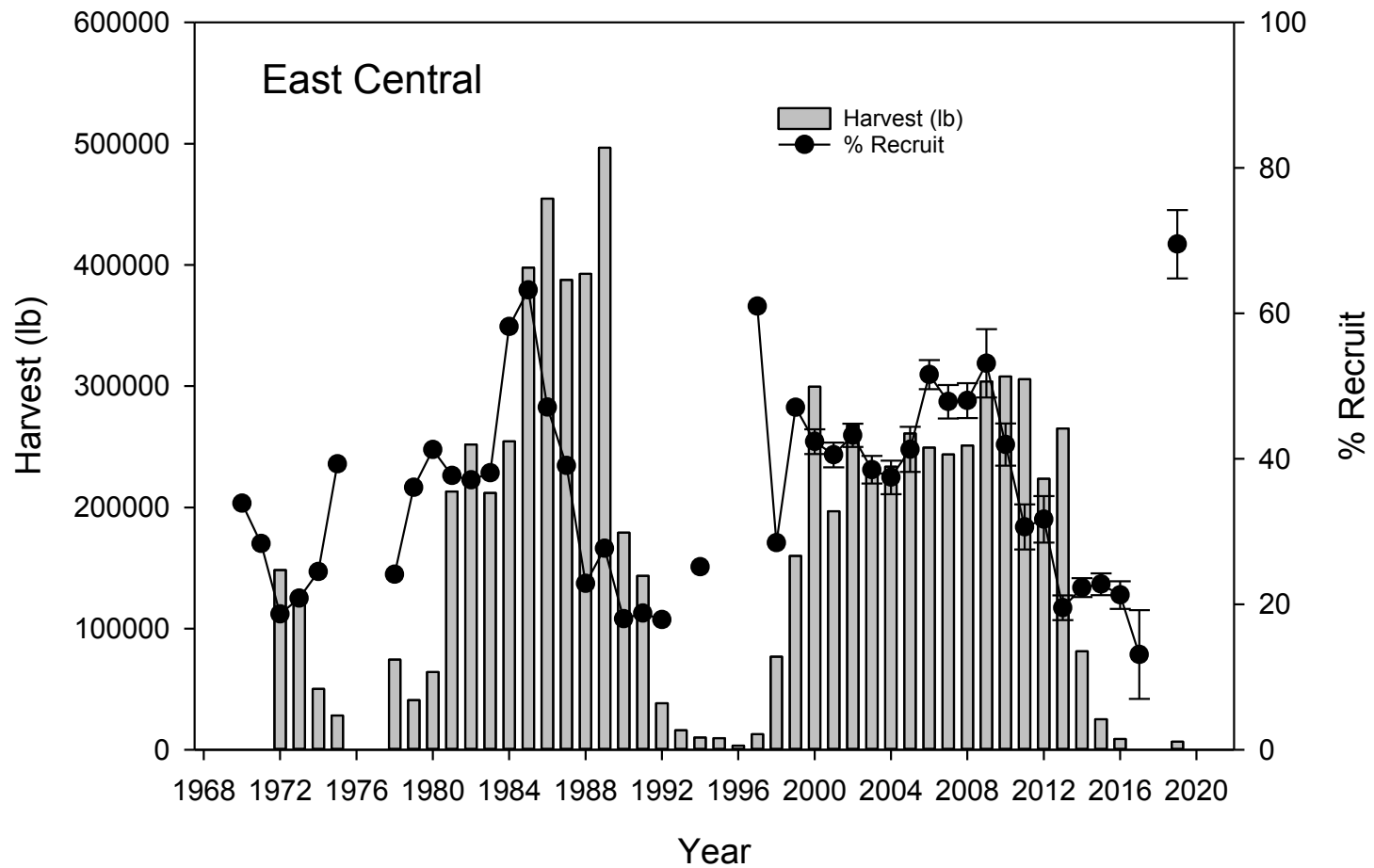
- Dockside sampling provides a wider look at the fishing grounds than observer data but depends to a great degree on many trips being sampled each year.
- Dockside information on changes in the proportion of recruit to post-recruit crabs is difficult to interpret.
- Although significant carry-over of post-recruits is desirable, pulsed recruitment and changes in population abundance confounds the interpretation of changes in proportions.
- Many deliveries are comprised of crab from more than one fishery area (mixed loads), though some voluntary efforts by fishermen have given port sampling the ability to sample these loads.



-  East Central
-  Southern
-  Glacier Bay
-  Icy Strait
-  North Stephens Passage
-  Mid Chatham Strait
-  Lower Chatham Strait
-  Northern
-  Not Open to Commercial GKC Fishing

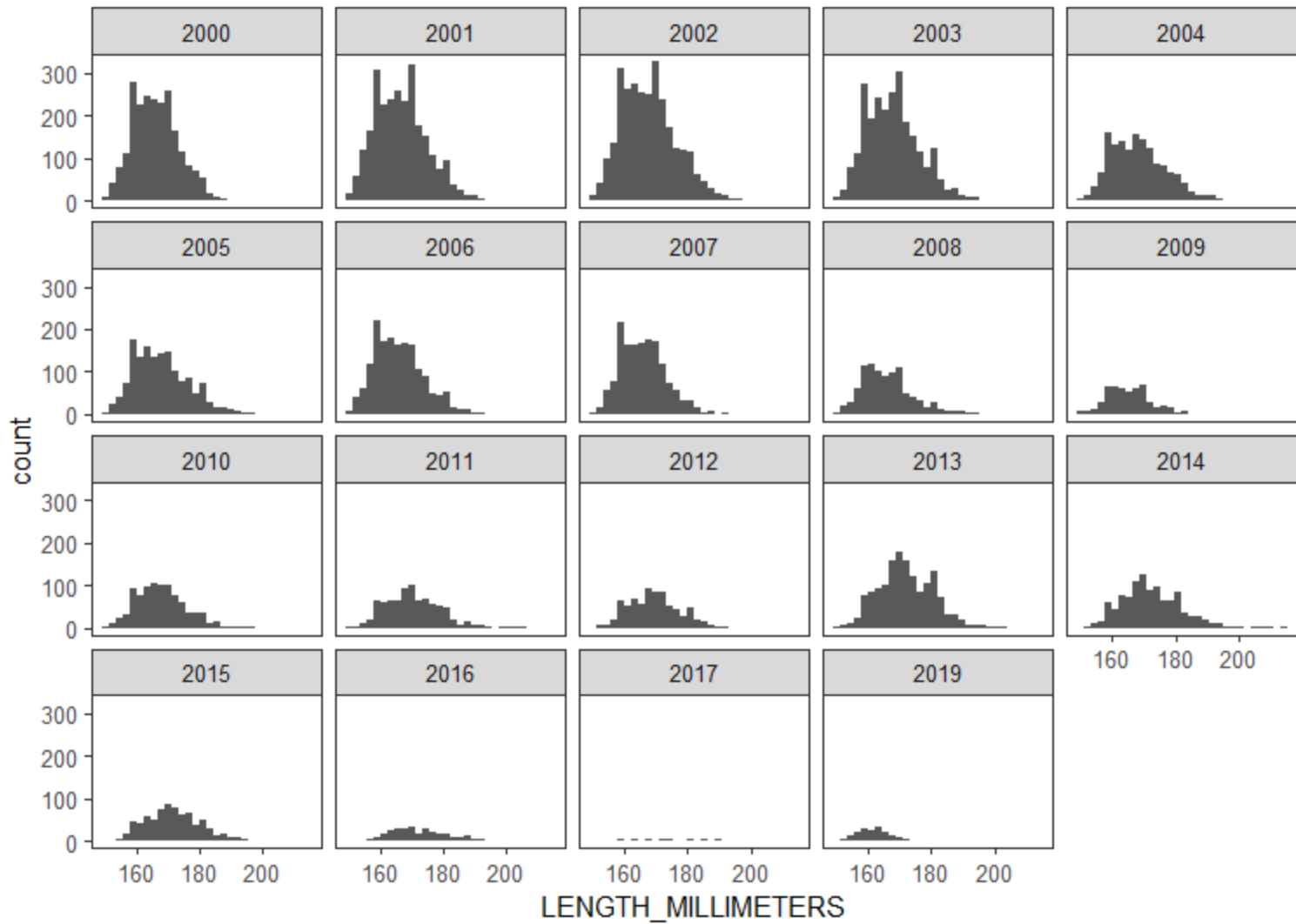


The area was reopened after a closure in 2018.
 The average CPUE this season was 0.9 crabs/
 pot.



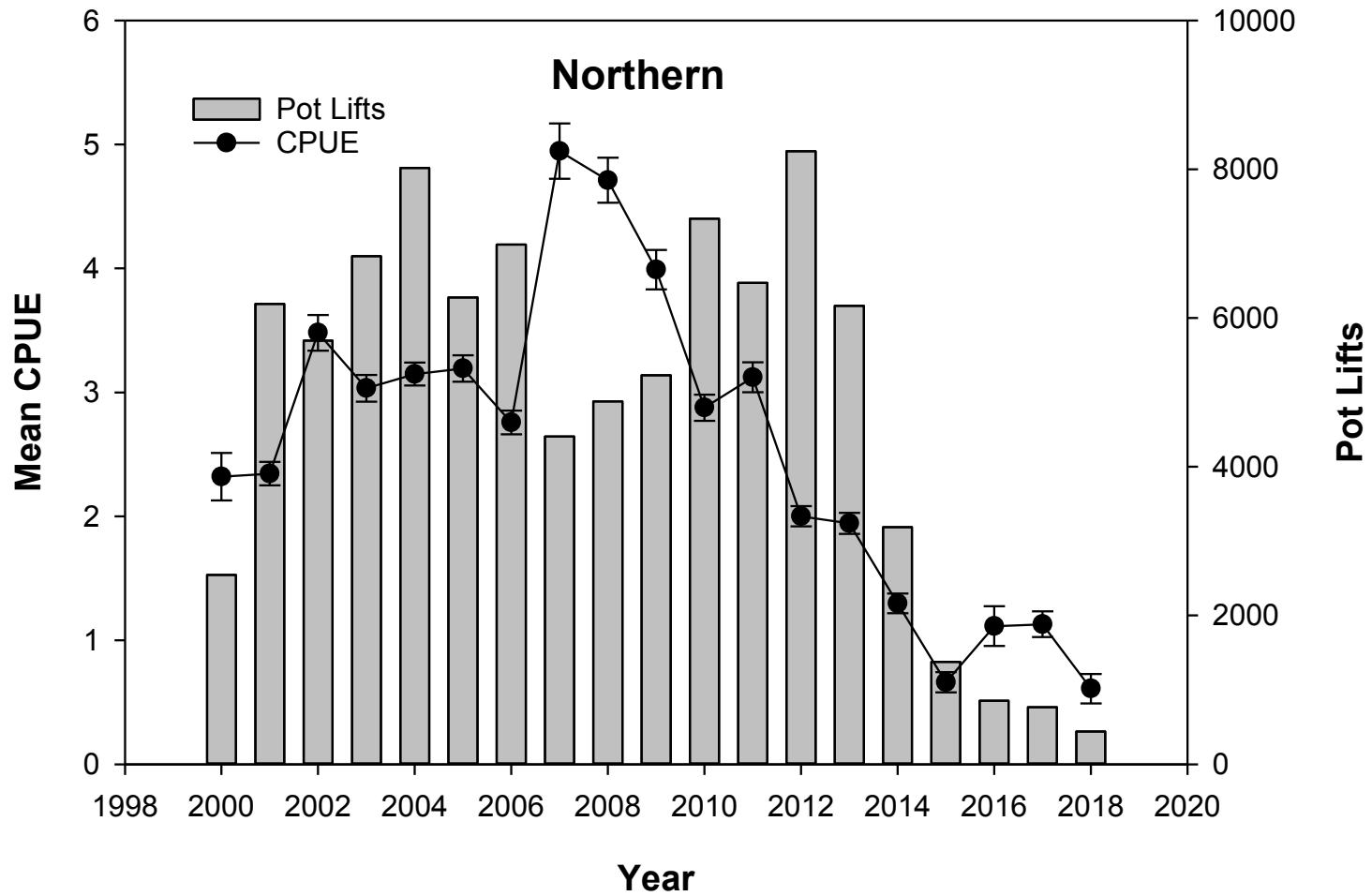
Harvest was 6,749 lb. The percentage of recruit class crab was historically high at 68%.

East Central GKC CL Frequencies

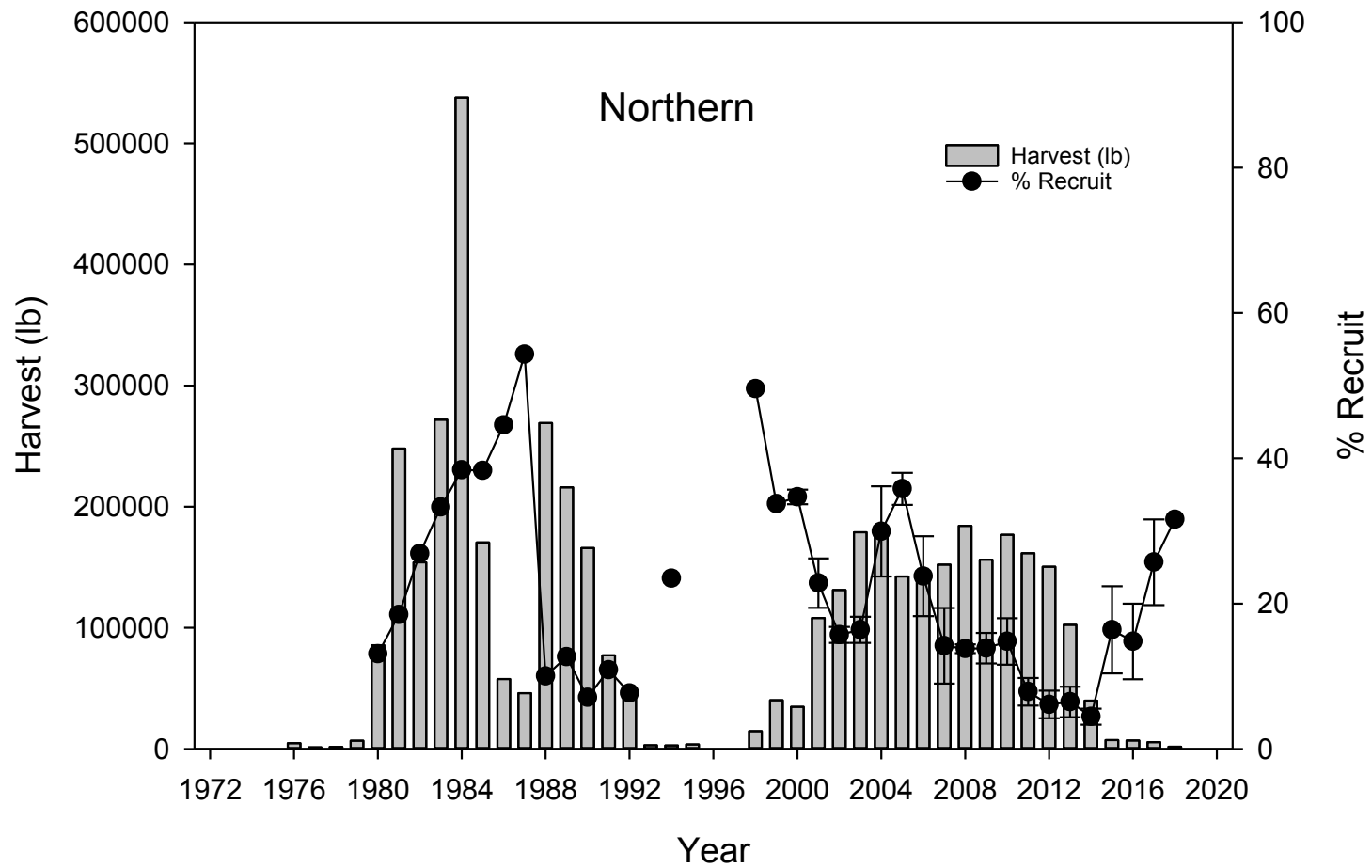


East Central

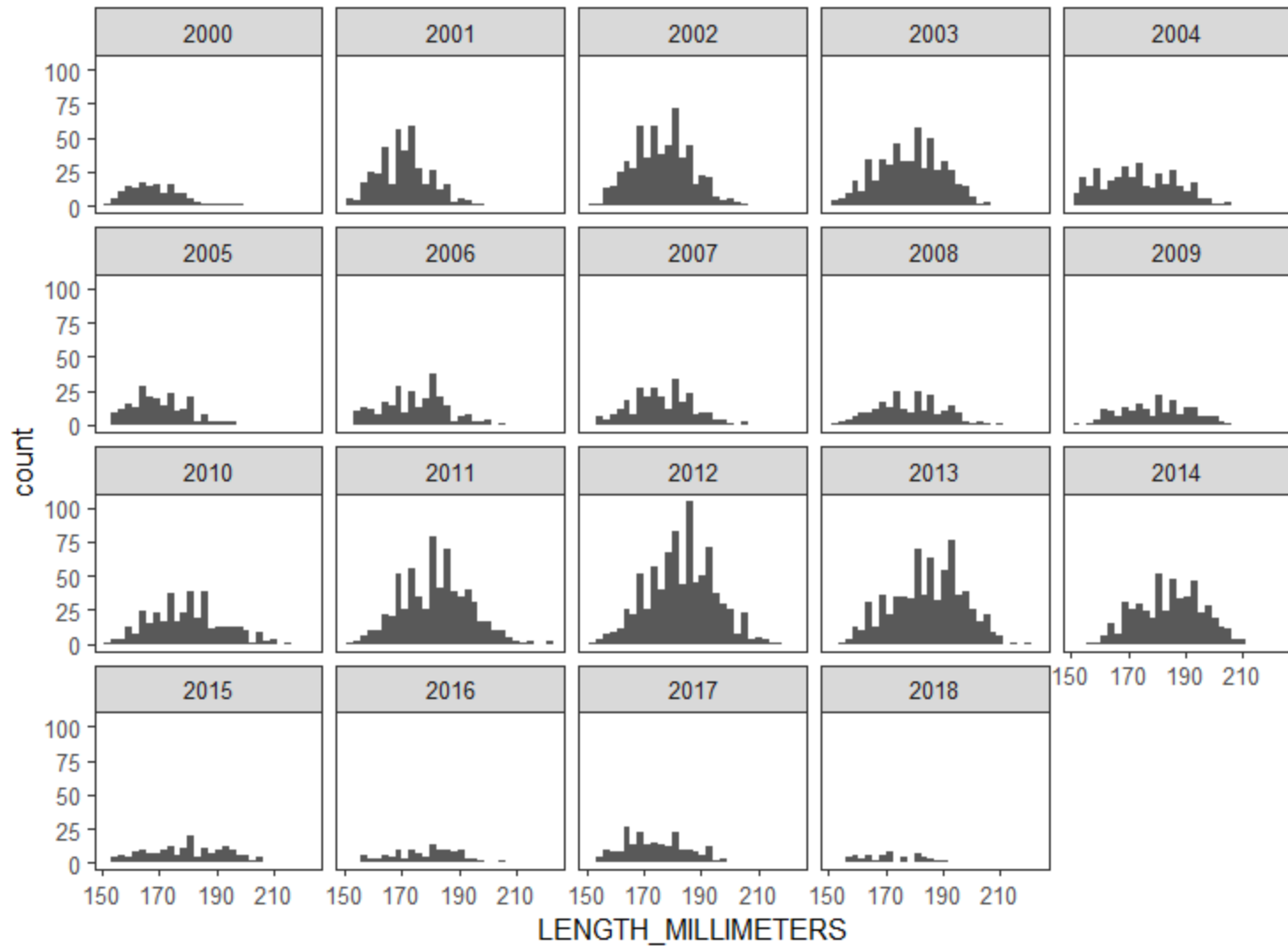
- The East Central management area was closed by emergency order (EO) on April 16, 2019 for the following reasons:
 - 1) At the time of the closure the CPUE was 21% of the average for the past 19 seasons.
 - 2) Catch rates of golden king crab landed (14 pounds per boat/per day) was well below the 2000-2017 average of 529 pounds per boat/per day.



The Northern area was closed in the most recent season.

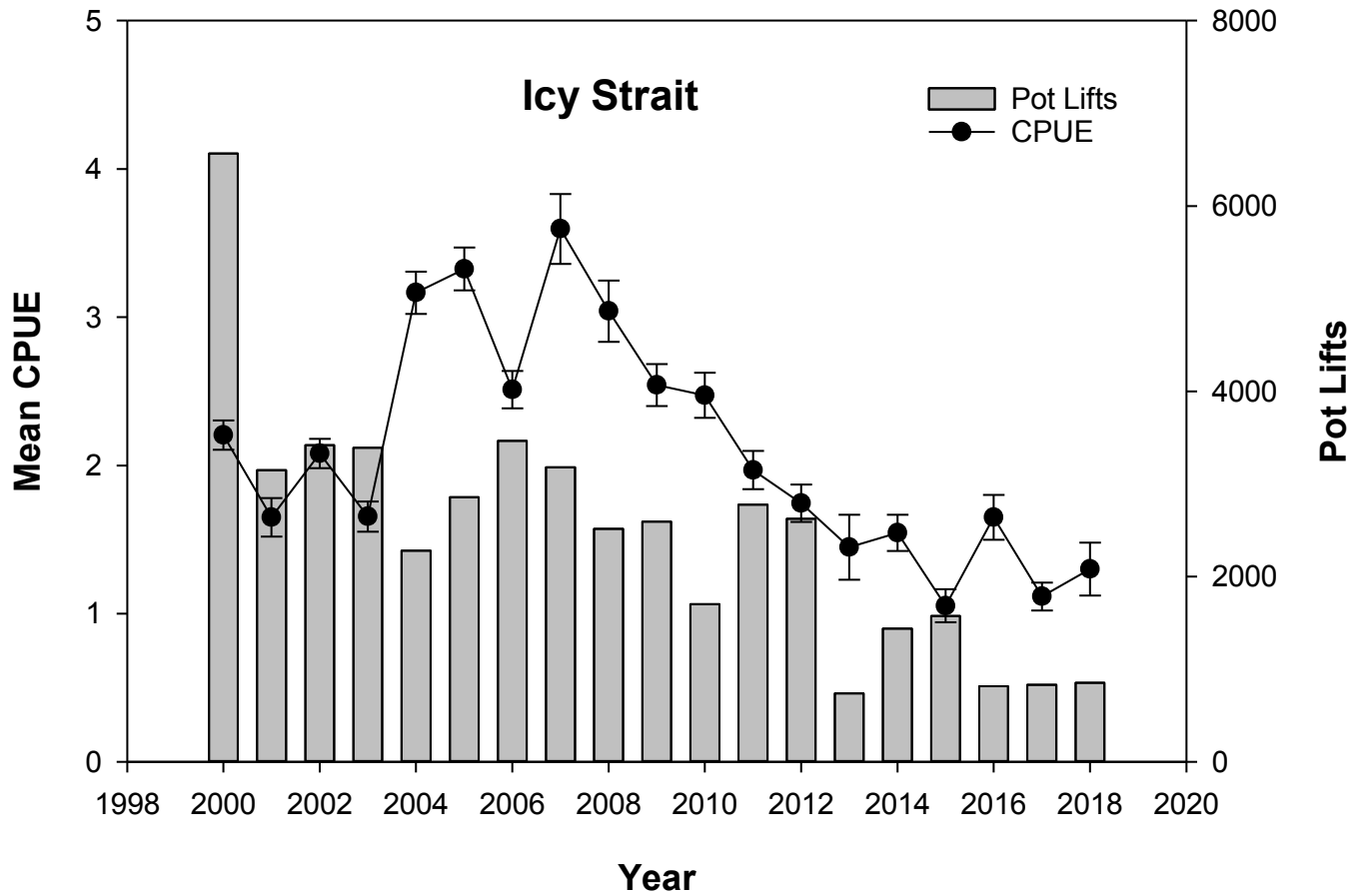


Northern GKC CL Frequencies

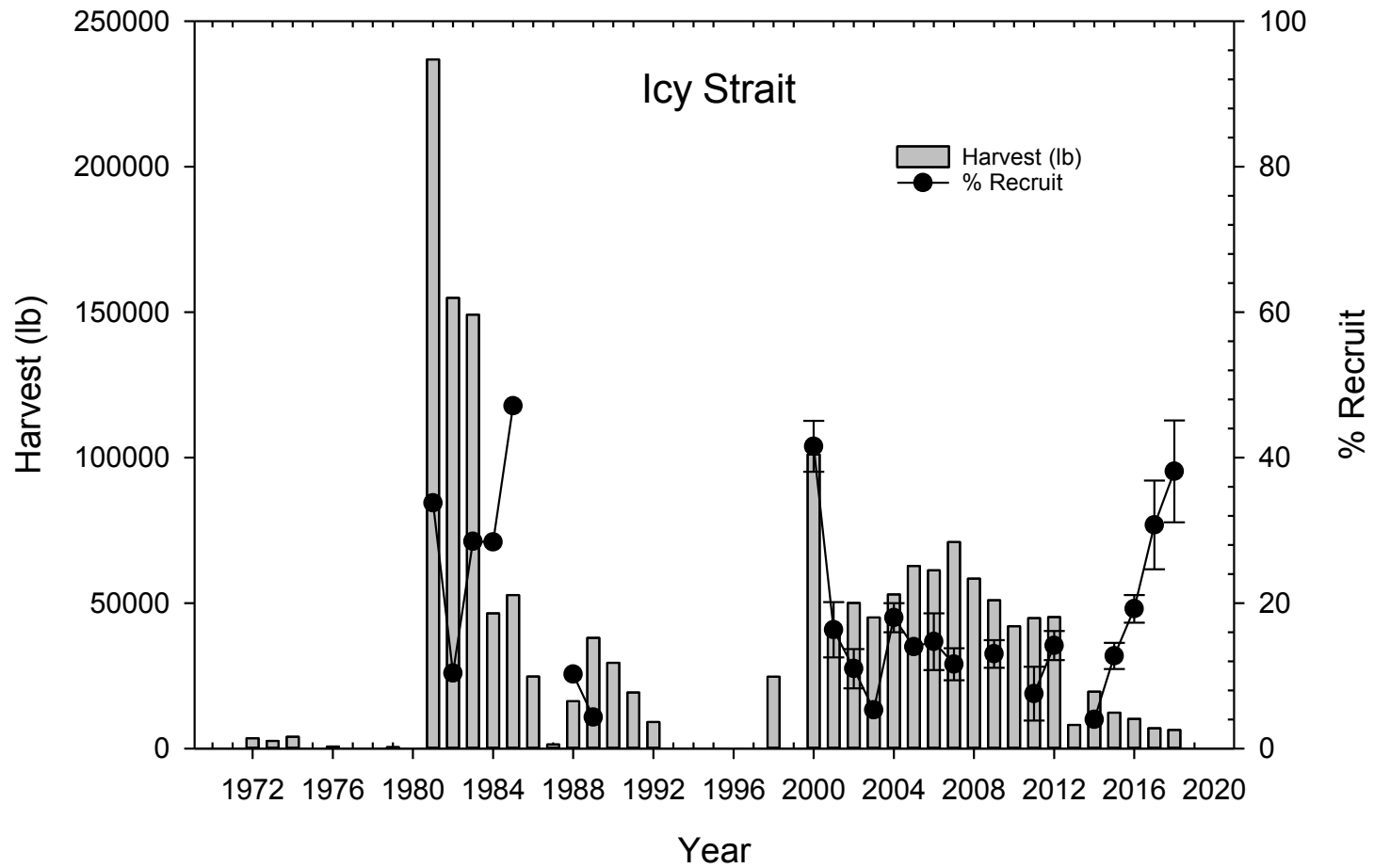


Northern

- The Northern management area was kept closed in 2019 for the following reasons:
 - 1) The 2018 season was closed early after 45 days of fishing by emergency order due to stock health concerns and continued poor fishery performance.
 - 2) Logbook data showed a CPUE of 0.8 crab, only 29% of the average and the second lowest CPUE in the past 17 seasons.
 - 3) Catch rates of golden king crab landed to date (13 pounds per boat/per day), were the lowest on record for the past 17 seasons and well below the 2000–2016 average of 219 pounds per boat/per day.

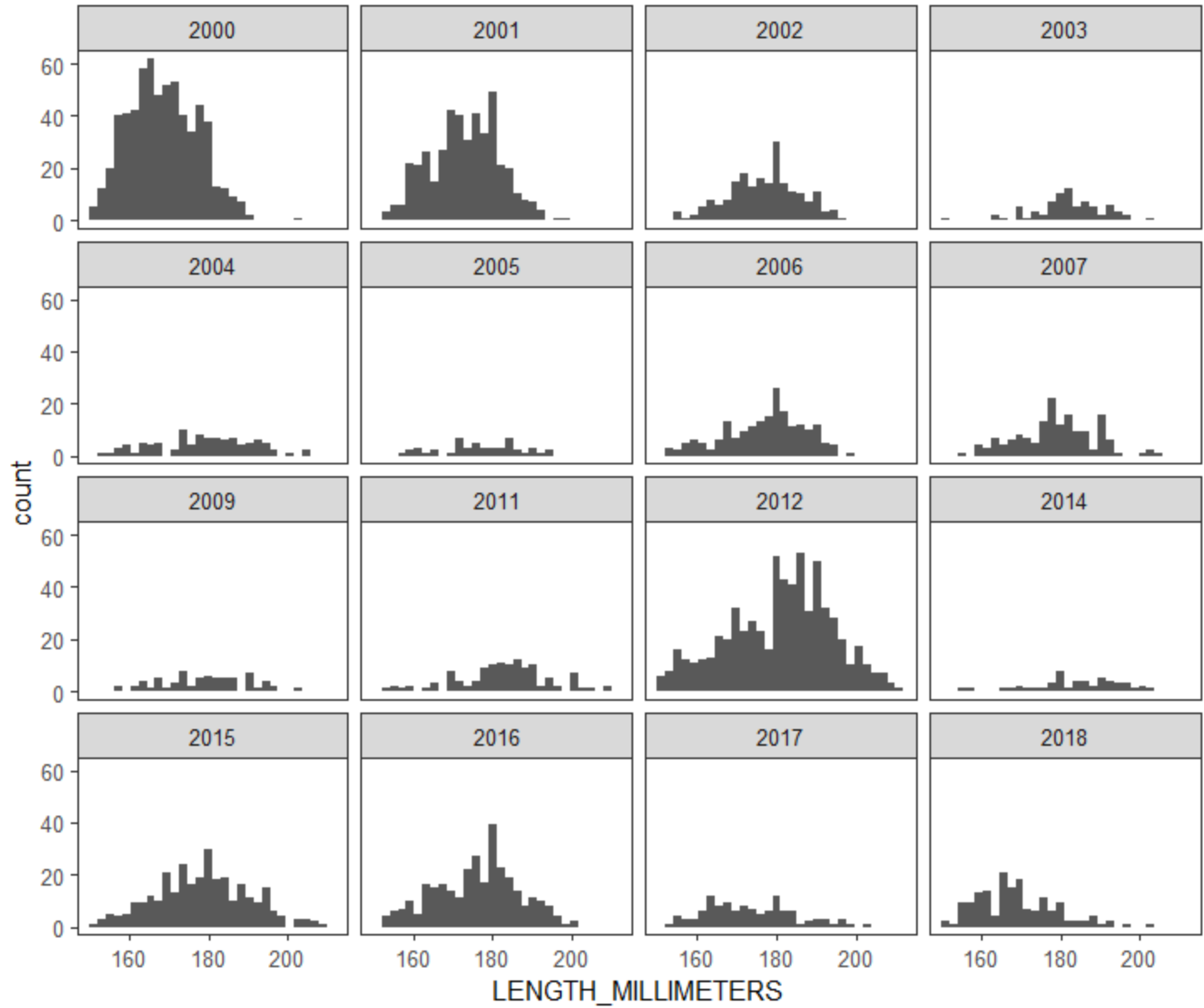


The average CPUE this season is confidential data due to fewer than three permits fished.



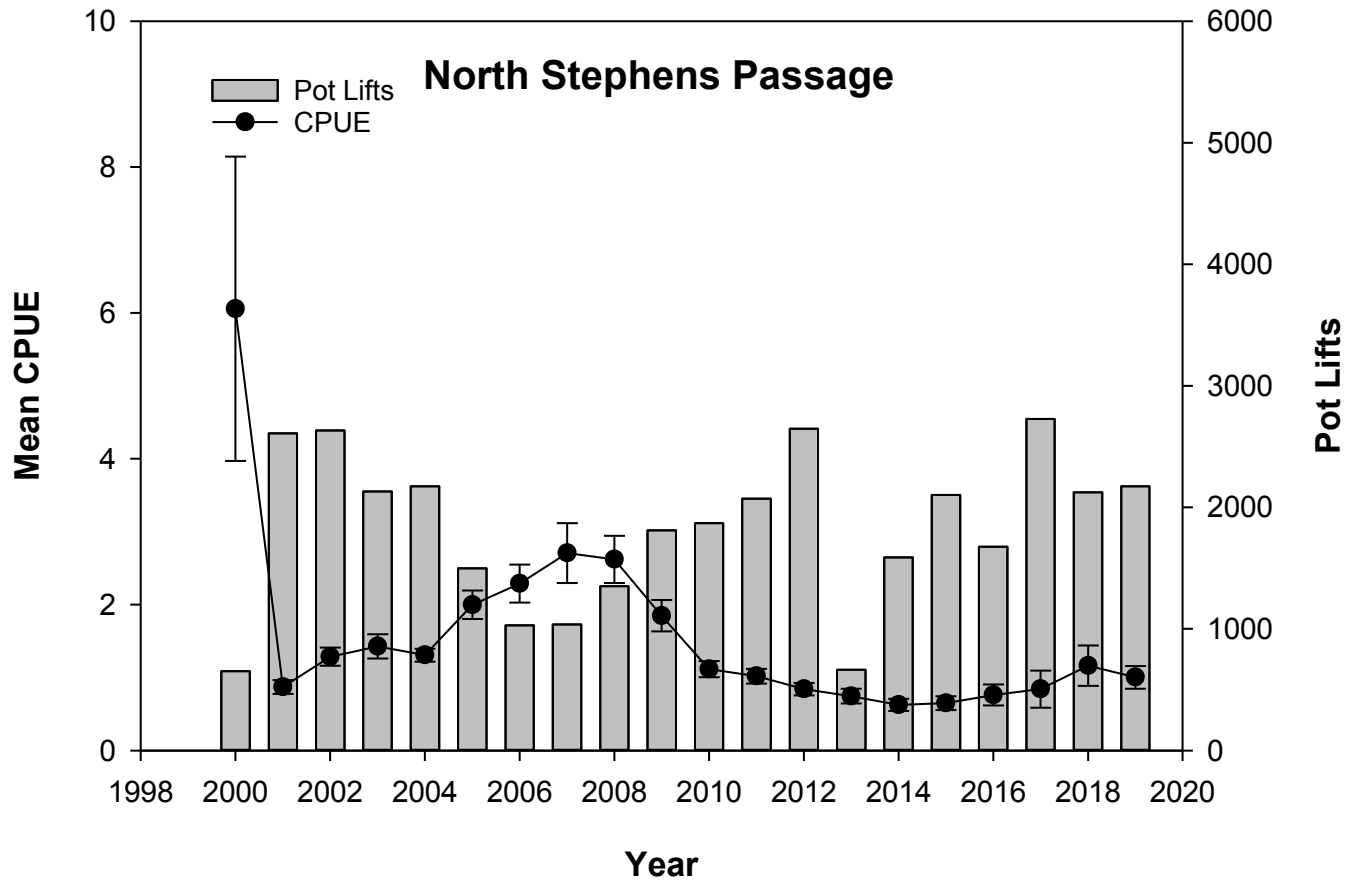
Harvest and % recruit data are confidential.

Icy Strait GKC CL Frequencies

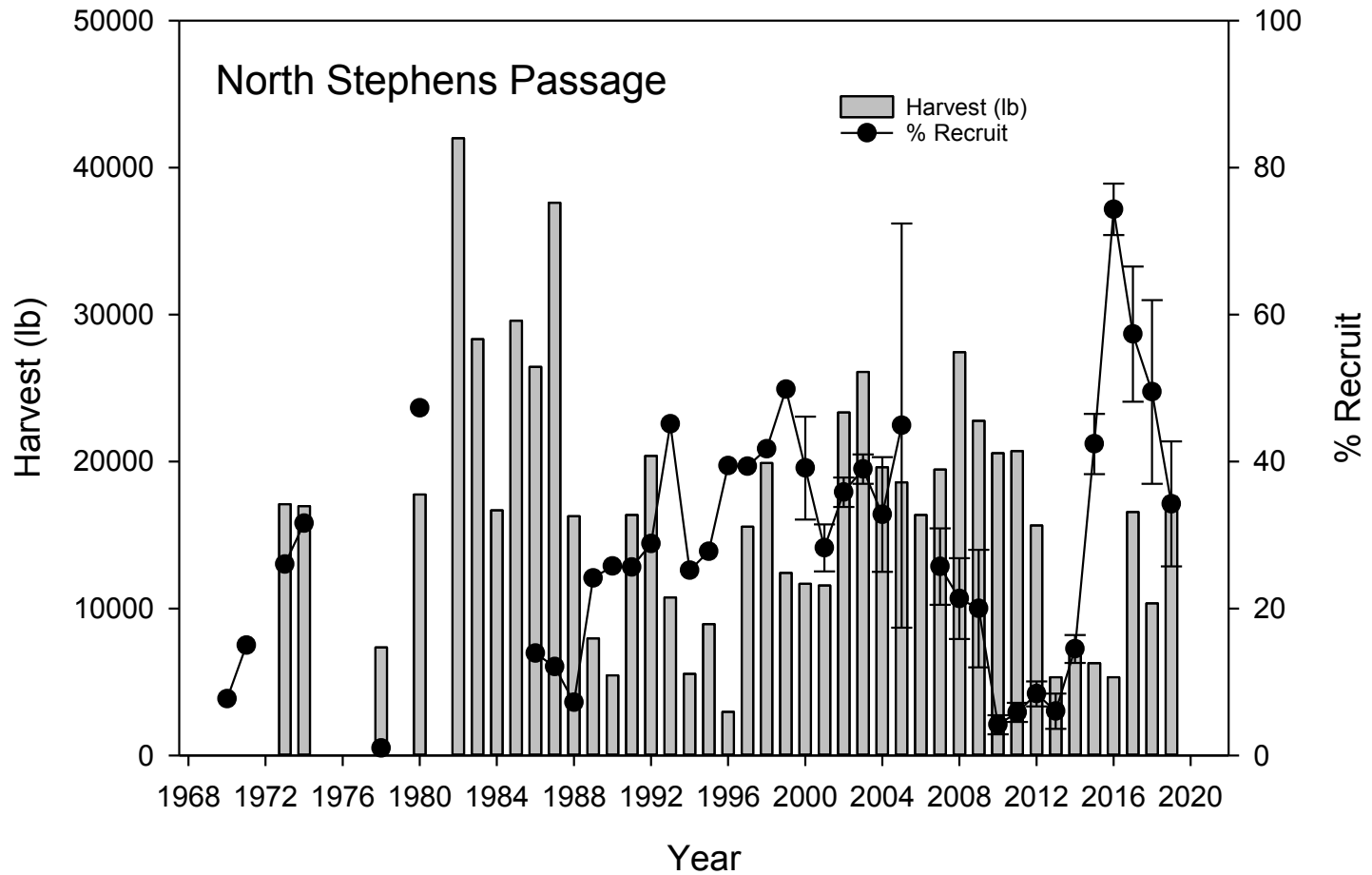


Icy Strait

- The Icy Strait management area was closed by emergency order (EO) on March 7, 2019.
- Based on an analysis of effort levels and harvest projections, the harvest was expected to reach the 7,500-pound GHL for the Icy Strait Area by the closure date.

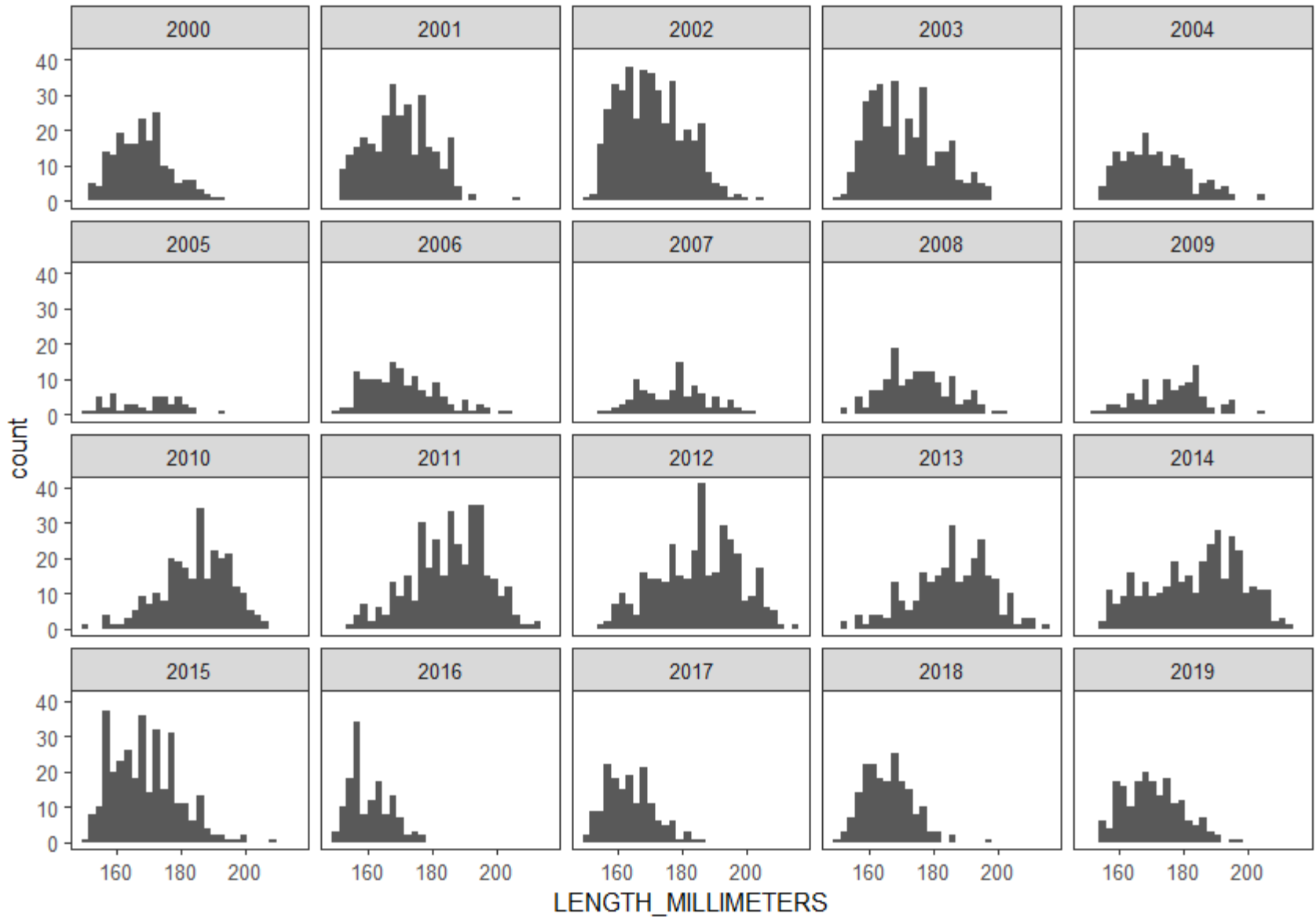


The average CPUE this season was 1.0 crab per pot.



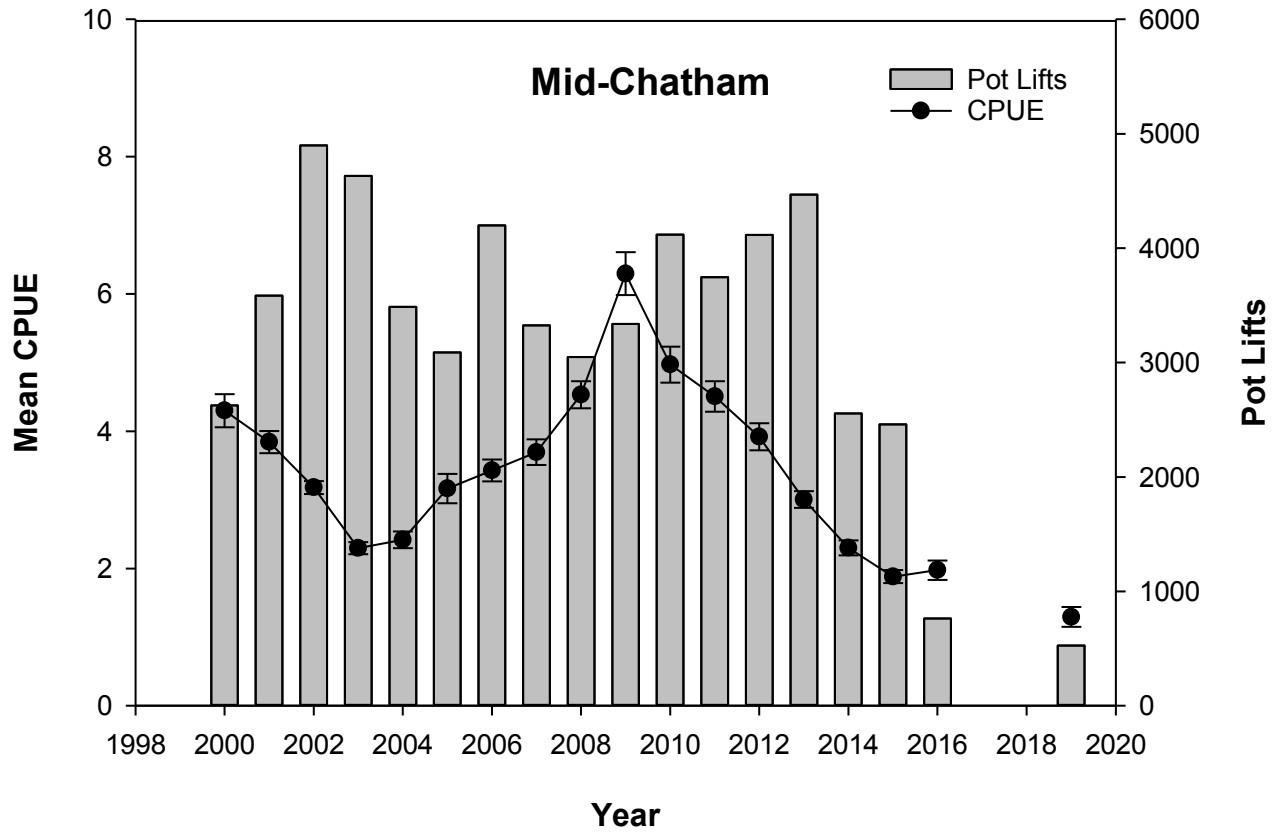
Harvest this season was 17,581 lb and % recruit is trending down.

North Stephens Passage GKC CL Frequencies

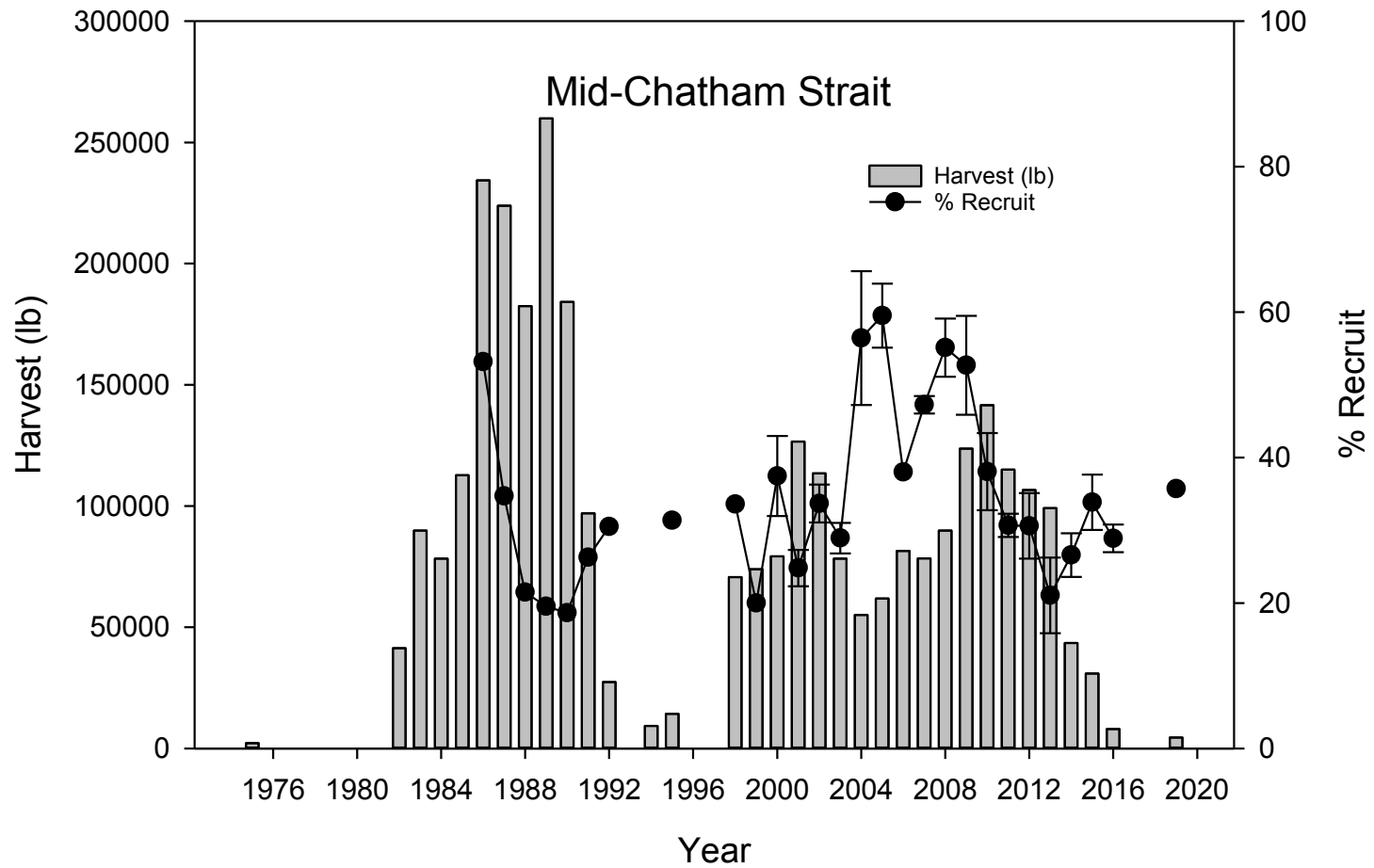


North Stephens Passage

- The North Stephens Passage management area was closed by emergency order (EO) on February 17, 2019 after six days of fishing.
- Based on an analysis of effort levels and harvest projections, the harvest as of the closure date was expected to reach the 11,000-pound GHL for the North Stephens Passage Area.

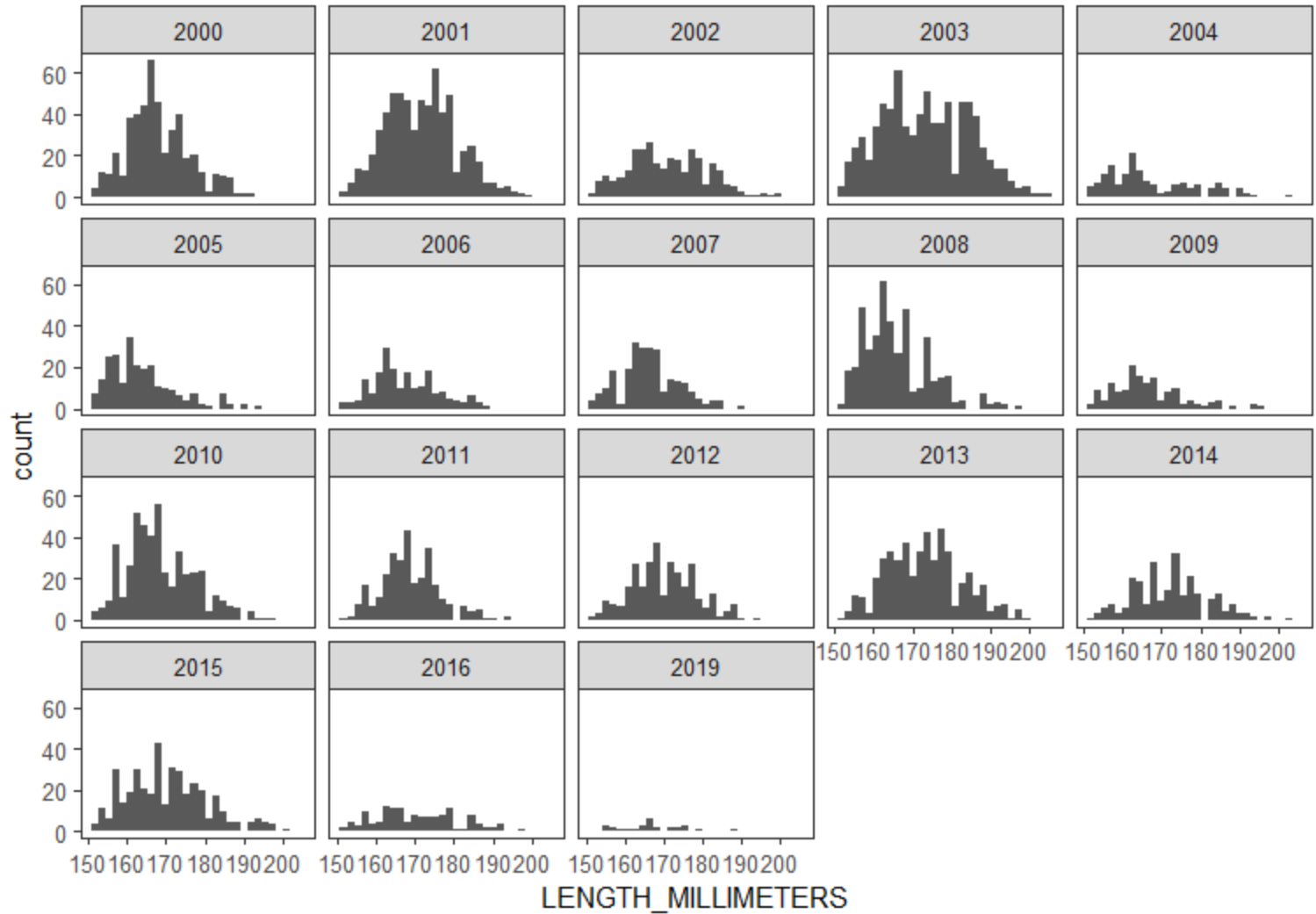


The average CPUE this season was 1.3 crab per pot.



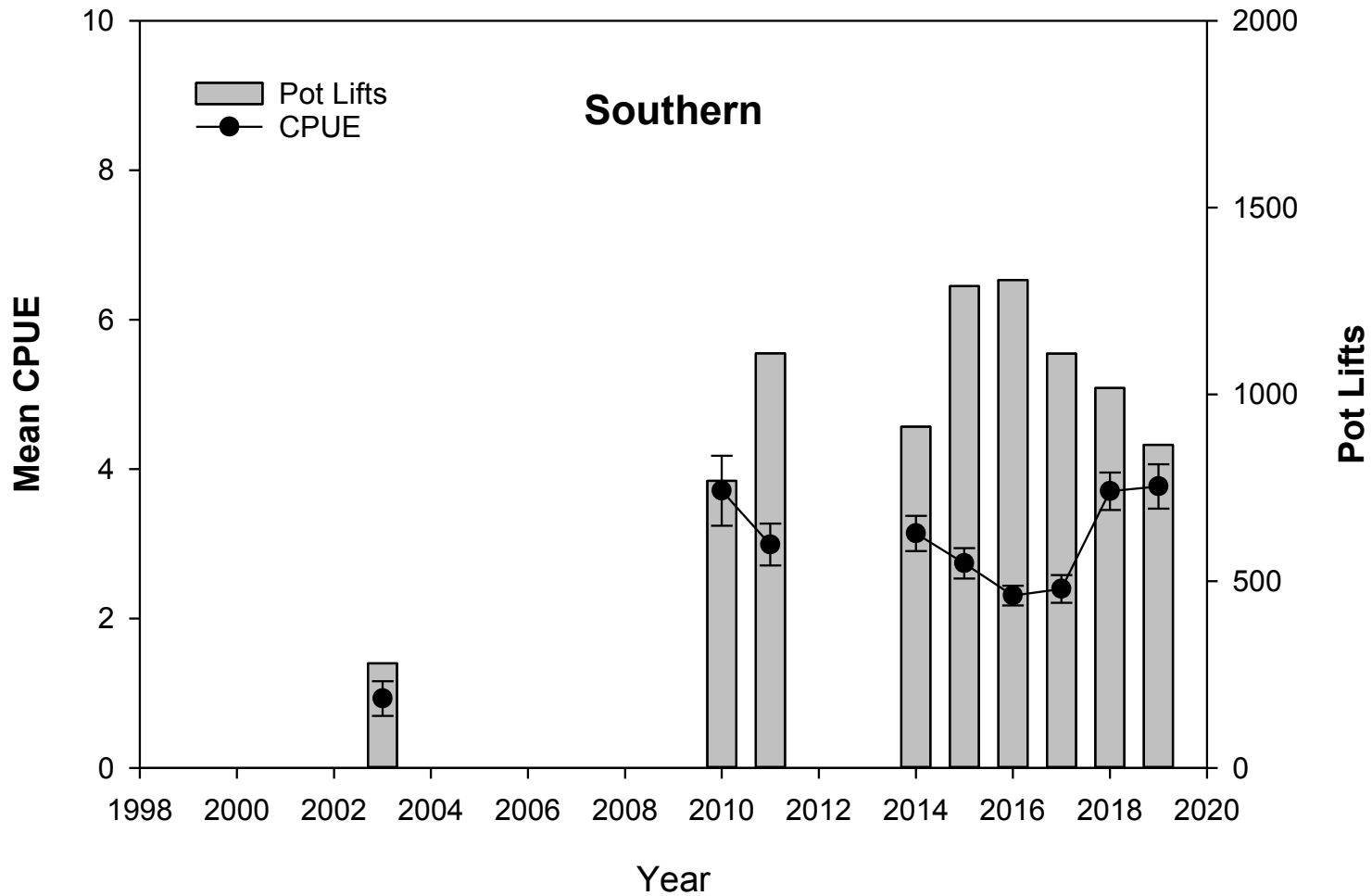
Harvest this season was 4,481 lb.

Mid-Chatham GKC CL Frequencies

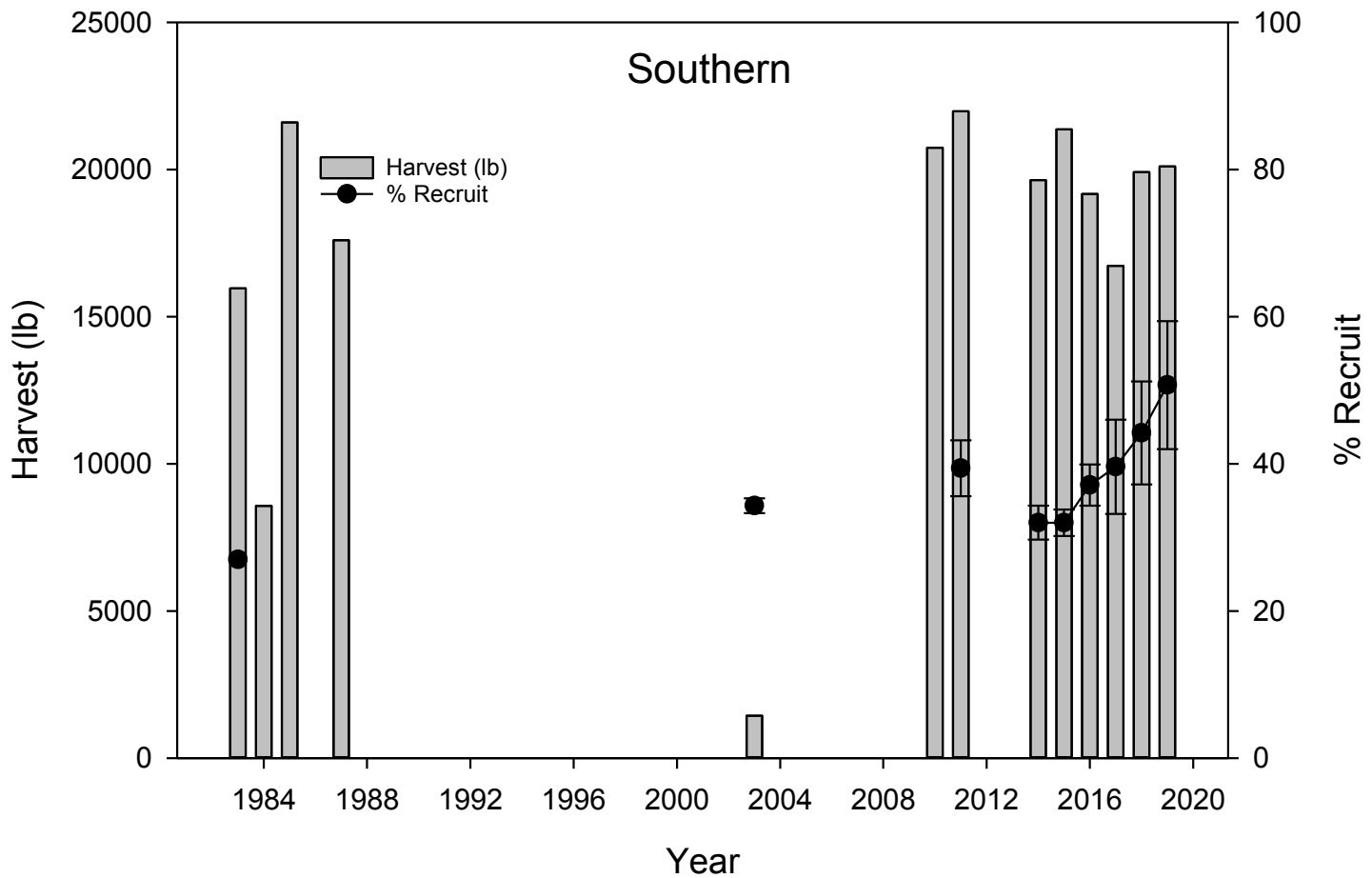


Mid-Chatham Strait

- The Mid-Chatham Strait management area was closed by emergency order (EO) on June 2, 2019 for the following reasons:
 - 1) The CPUE averaged 3.3 crab per pot during the period 2000-2018. The average CPUE this season was at an historical low of 1.2 crab per pot.
 - 2) The amount of golden king crab landed per boat/per day was approximately 12 pounds per boat/per day which was well below the 2000–2018 average of 112 pounds per boat/per day.

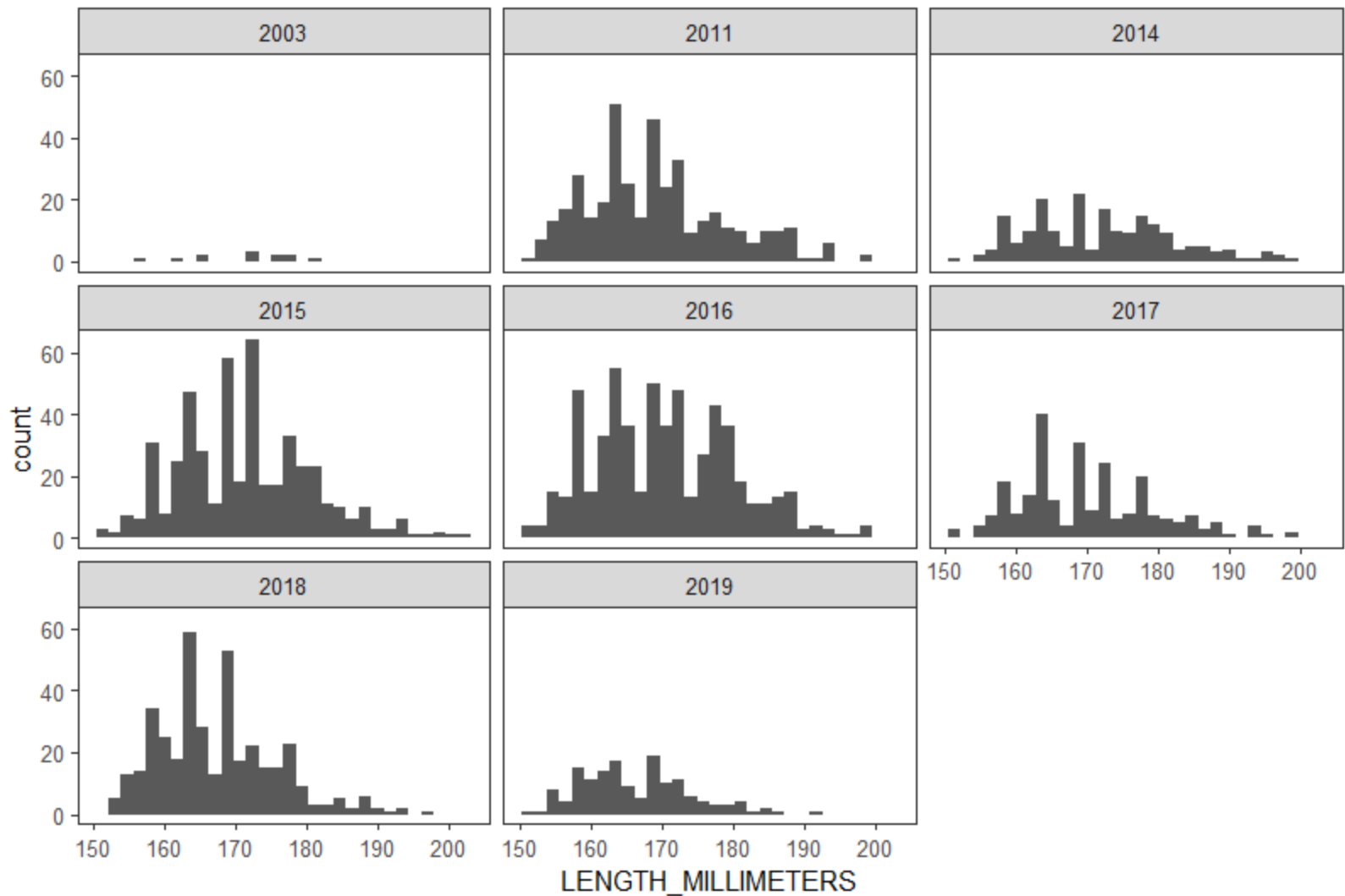


The average CPUE this season was 3.8 crab per pot.



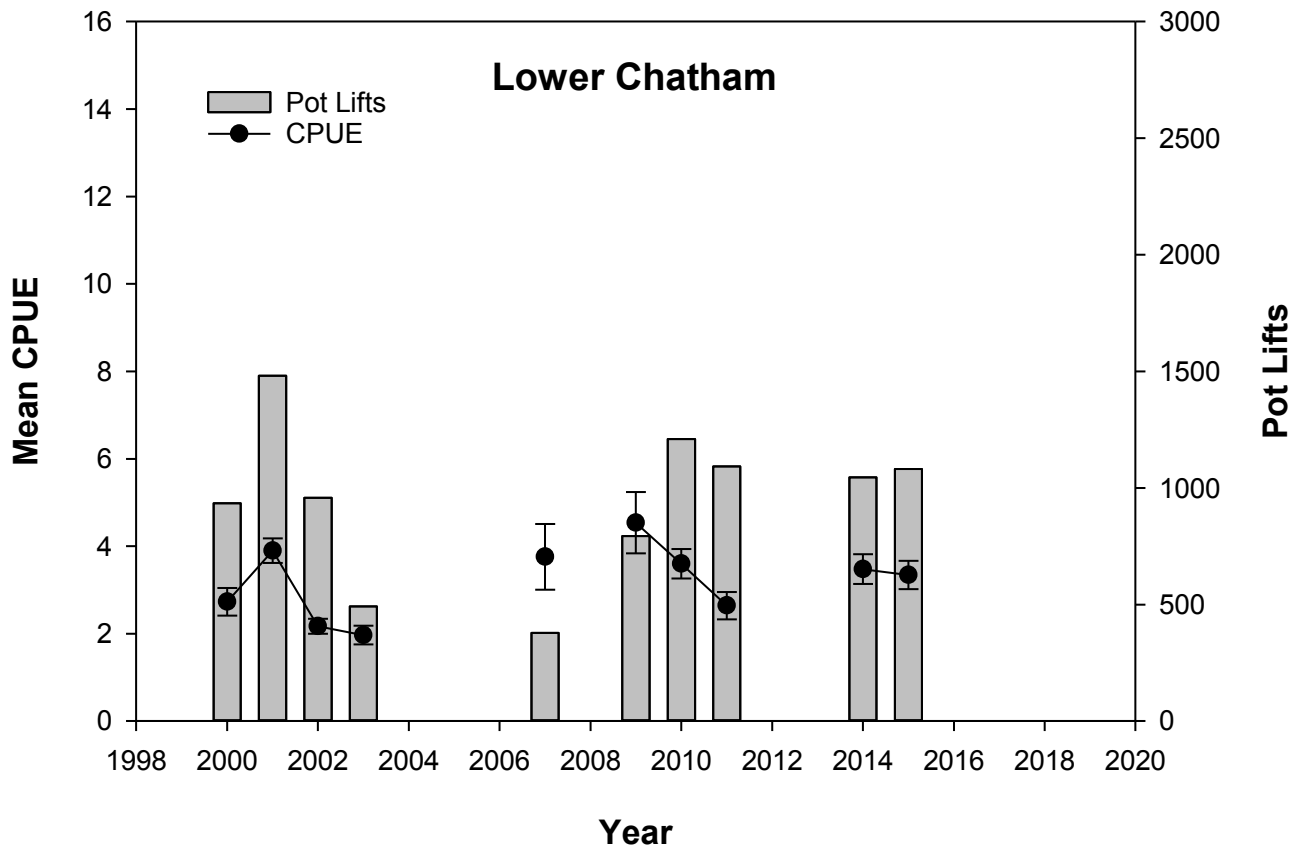
Harvest this season was 20,105 lb and % recruit is historically high.

Southern GKC CL Frequencies

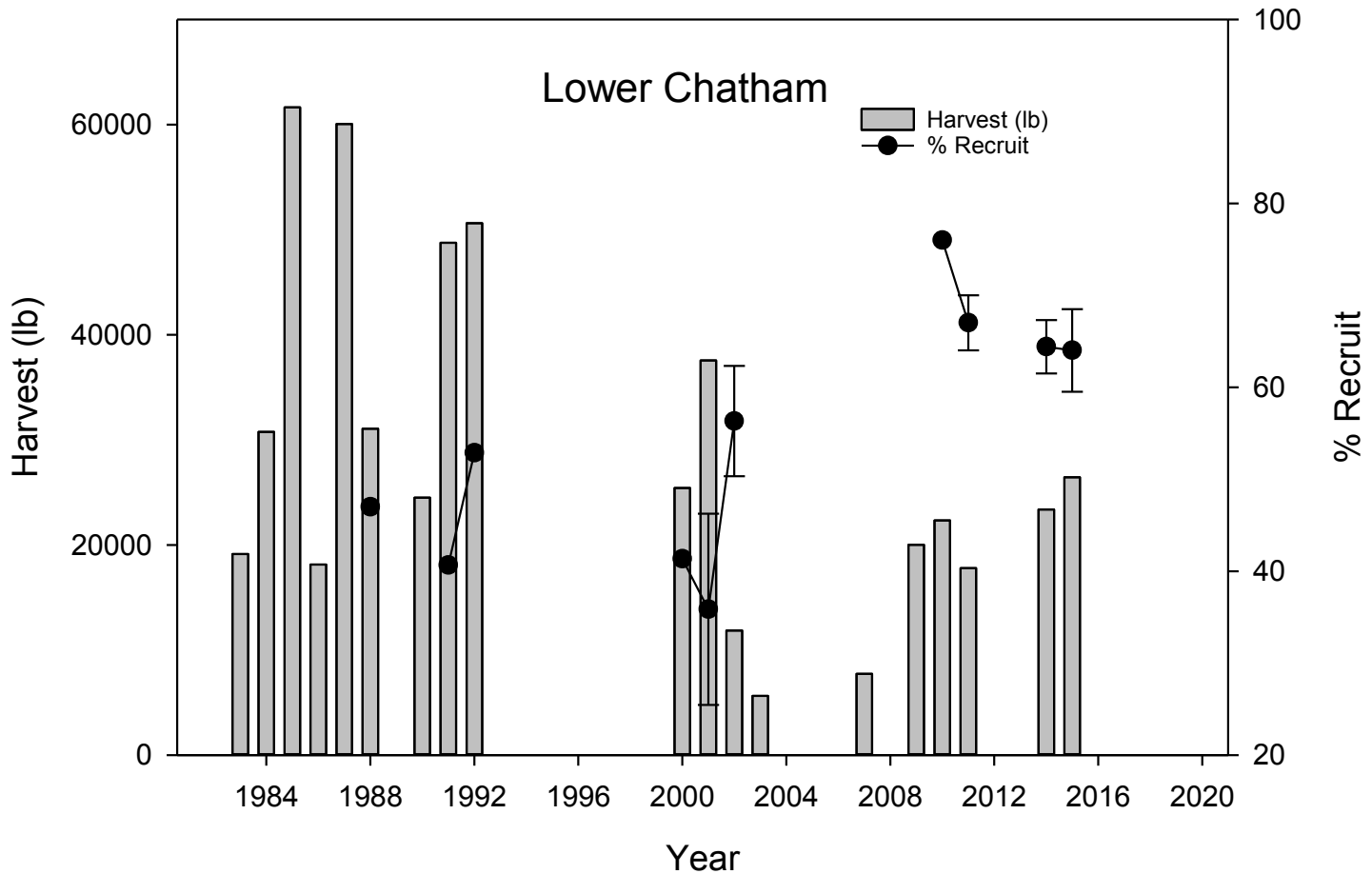


Southern

- The Southern management area was closed by emergency order (EO) on March 18, 2019.
- Based on an analysis of effort levels and harvest projections, harvest as of the closure date was expected to reach the 20,500-pound guideline harvest level for the Southern Area.

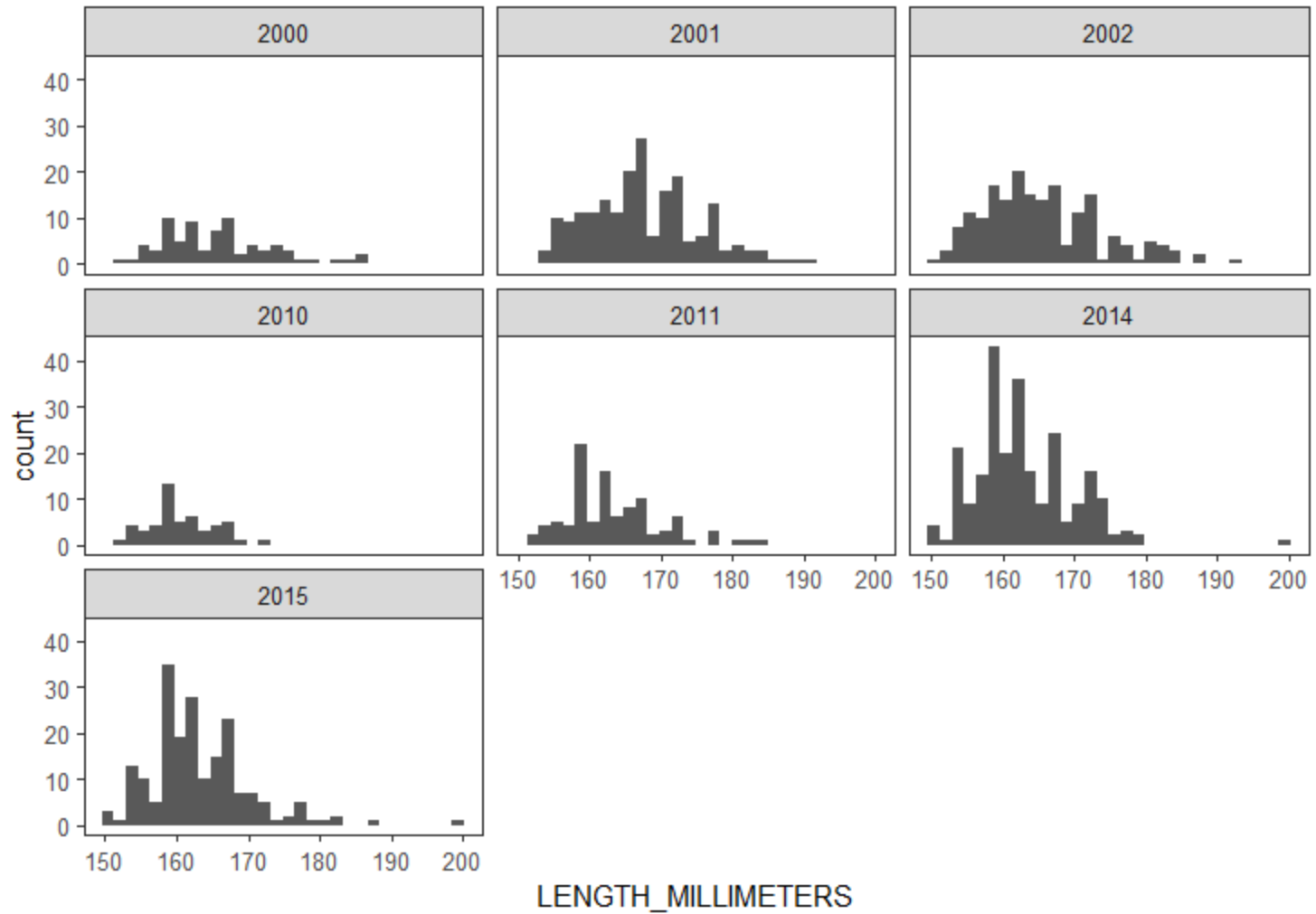


Fewer than three permits fished this season,
so CPUE data are confidential.



Fewer than three permits fished this season, so harvest and % recruit data are confidential.

Lower Chatham GKC CL Frequencies



Lower Chatham Strait

- The Lower Chatham Strait management area was closed by emergency order (EO) on June 2, 2019 for the following reasons:
 - 1) The 2019 GHL for golden king crab in Lower Chatham Strait was 14,000 pounds with harvest remaining confidential due to fewer than three permits participating in the fishery.
 - 2) Progress towards harvesting the GHL through May 16 was below 15% suggesting the GHL was not attainable.
 - 3) This season's CPUE was one of the lowest on record from 2000–2018.

In Conclusion

- This season, one fishery area (Northern) did not open. Three fishery areas (East Central, Mid-Chatham, and Lower Chatham) were closed short of their respective GHGs for conservation concerns. Fishery area GHGs were reached in three areas (North Stephens Passage, Icy Strait, and Southern).
- The department has not finalized GHGs for the upcoming 2020 GKC season but is rather considering a range of options at this point.

FISHERY AREA	RANGE OF OPTIONS CONSIDERED
East Central	Lowering the GHL 20% to 12,000 lb, lowering the GHL 65% to 5,000 lb, or closing the area for 2020 were all discussed.
Icy Strait	Leaving the GHL at its current level of 7,500 lb, raising the GHL 5% to 8,000 lb, or raising the GHL 20% to 9,000 lb.
Mid-Chatham Strait	Closing the area for 2020.
North Stephens Passage	Leaving the GHL at its current level of 11,000 lb, raising the GHL 20% to 13,000 lb, raising the GHL 25% to 14,000 lb.
Northern	Leaving the GHL at its current level of 7,500 lb or closing the area for 2020.
Lower Chatham Strait	Lowering the GHL 20% to 11,000 lb, lowering the GHL 30% to 10,000 lb, lowering the GHL 80% to 2,000 lb, or closing the area for 2020 were all discussed.
Southern	Raising the GHL <5% to 21,000 lb or raising the GHL 10% to 22,500 lb.



QUESTIONS?