



# ***Blue Crab Fishery Management Plan Amendment 3*** **Adaptive Management**

*DEPARTMENT OF ENVIRONMENTAL QUALITY*

Marine Fisheries

Marine Fisheries Commission | Robert Corbett & McLean Seward | May 21-23, 2025





# *Outline*

- Review Timeline
- Stock Assessment Summary
- Stock Trends
- Amendment 3 Adaptive Management
- Management Options
- Preliminary Division Recommendations
- Advisory Committees
- Moving Forward



# *Amendment 3 Adaptive Management Timeline*

<b>May 2024</b>	<b>DMF presents results of stock assessment update and adaptive management plan to MFC</b>
<b>May 2024 – August 2024</b>	<b>Outreach and analysis</b>
<b>September 2024</b>	<b>DMF updates Northern, Southern, and Shellfish/Crustacean advisory committees</b>
<b>September 2024 – December 2024</b>	<b>Additional outreach and analysis. DMF drafts Revision to Amendment 3</b>
<b>March 2025</b>	<b>Advisory Committees (Northern, Southern, Shellfish/Crustacean) review draft</b>
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# *Stock Assessment Summary*

## **2018 Benchmark Stock Assessment**

- Included data through 2016
- Stock overfished
- Overfishing occurring



# *Stock Assessment Summary*

## **2023 Stock Assessment Update**

- Included data through 2022
- Trends closely match benchmark
- Significant change in reference points
- Stock status significantly worse than benchmark





# *Stock Assessment Summary*

## **External review of 2023 assessment**

- Reviewers identified concerns with model specifications and results
- Suggestions provided can only be incorporated with a new benchmark stock assessment



# *Stock Assessment Summary*

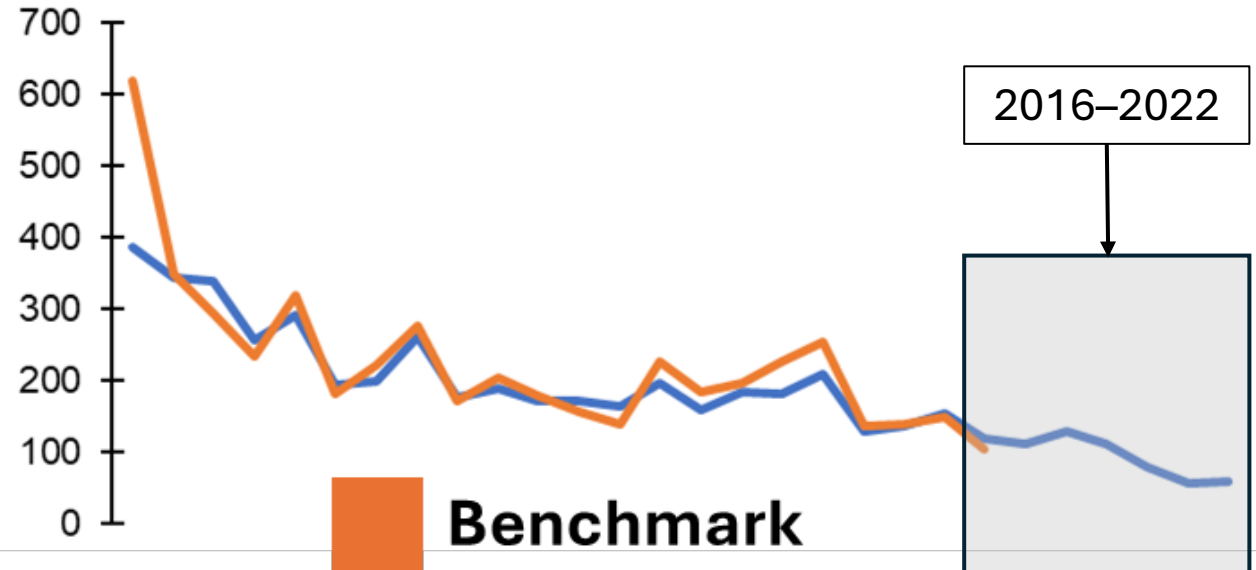
**2023 stock assessment update WILL  
NOT be used to inform harvest  
reduction percentages**



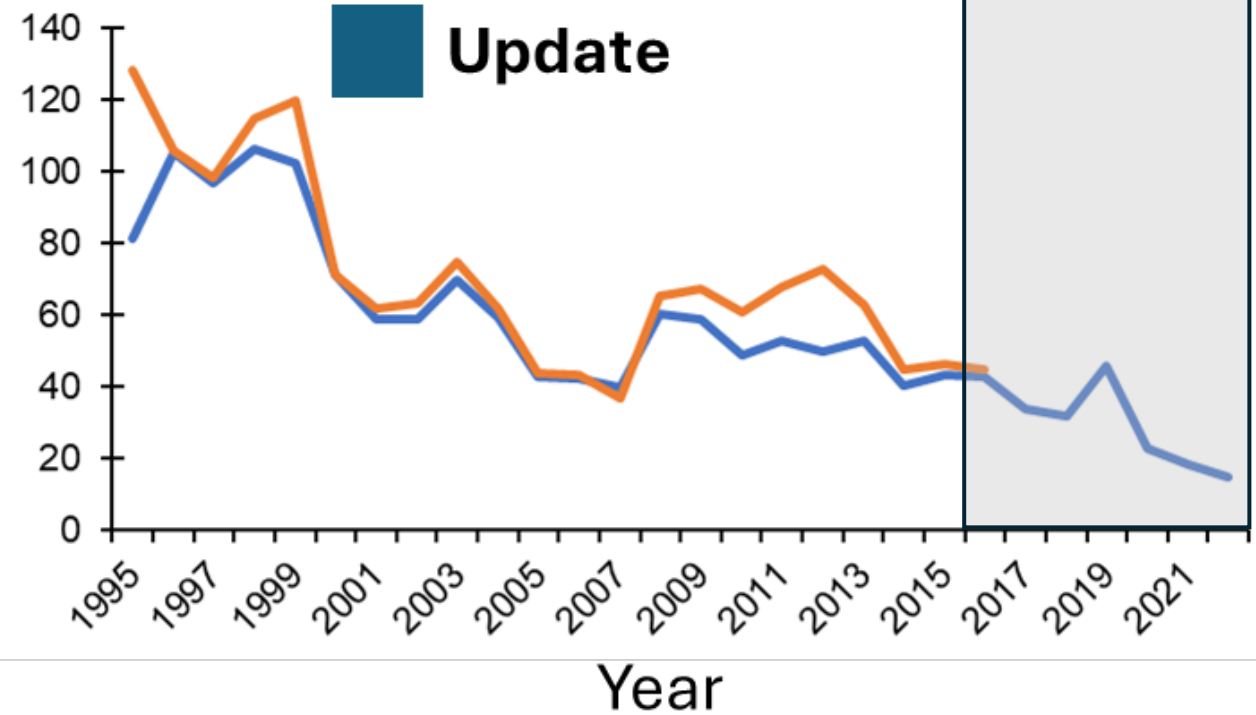


# Stock Trends

Estimated number of recruit crabs  
(millions of crabs), <5 inches

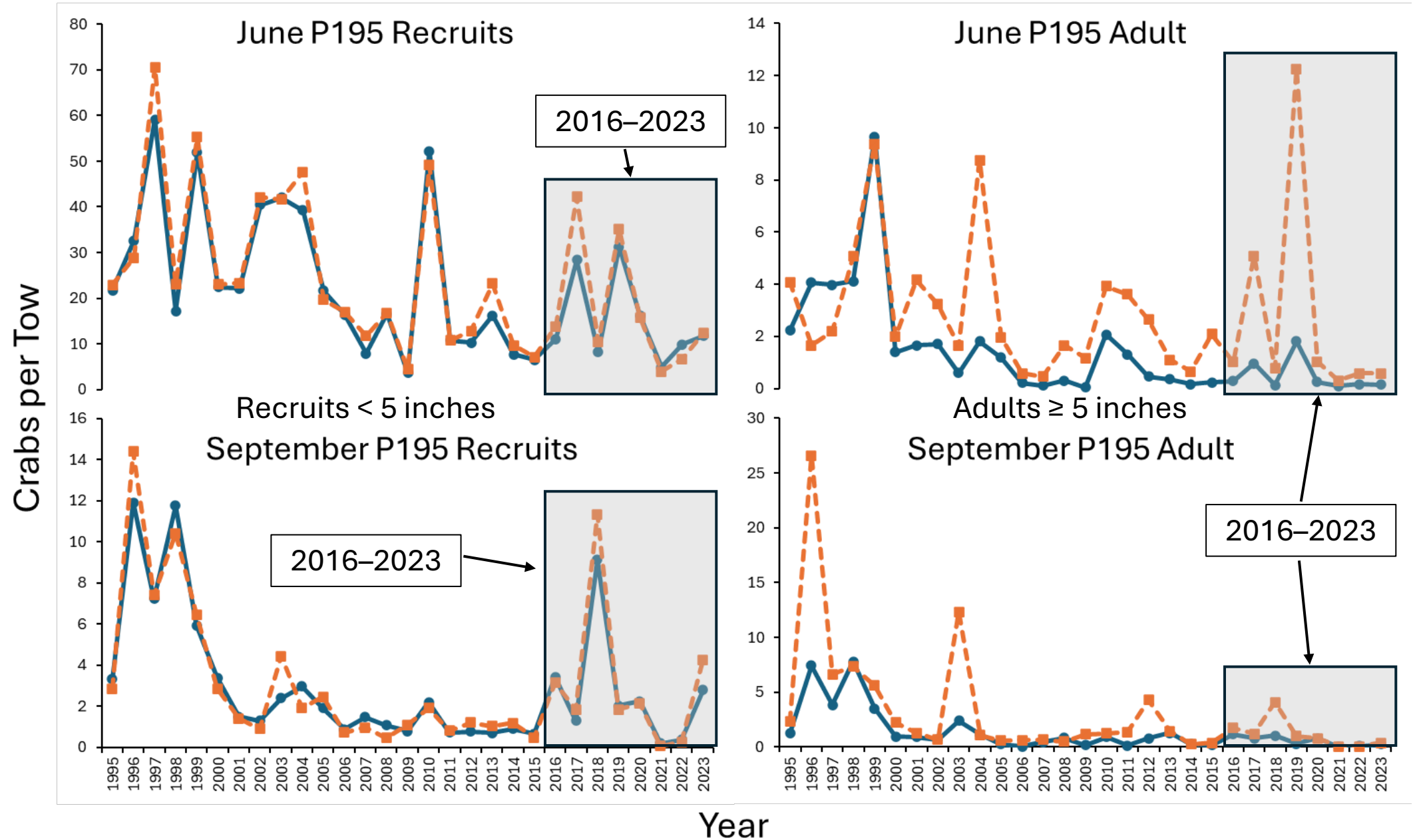


Estimated number of spawners  
(females; millions of crabs)

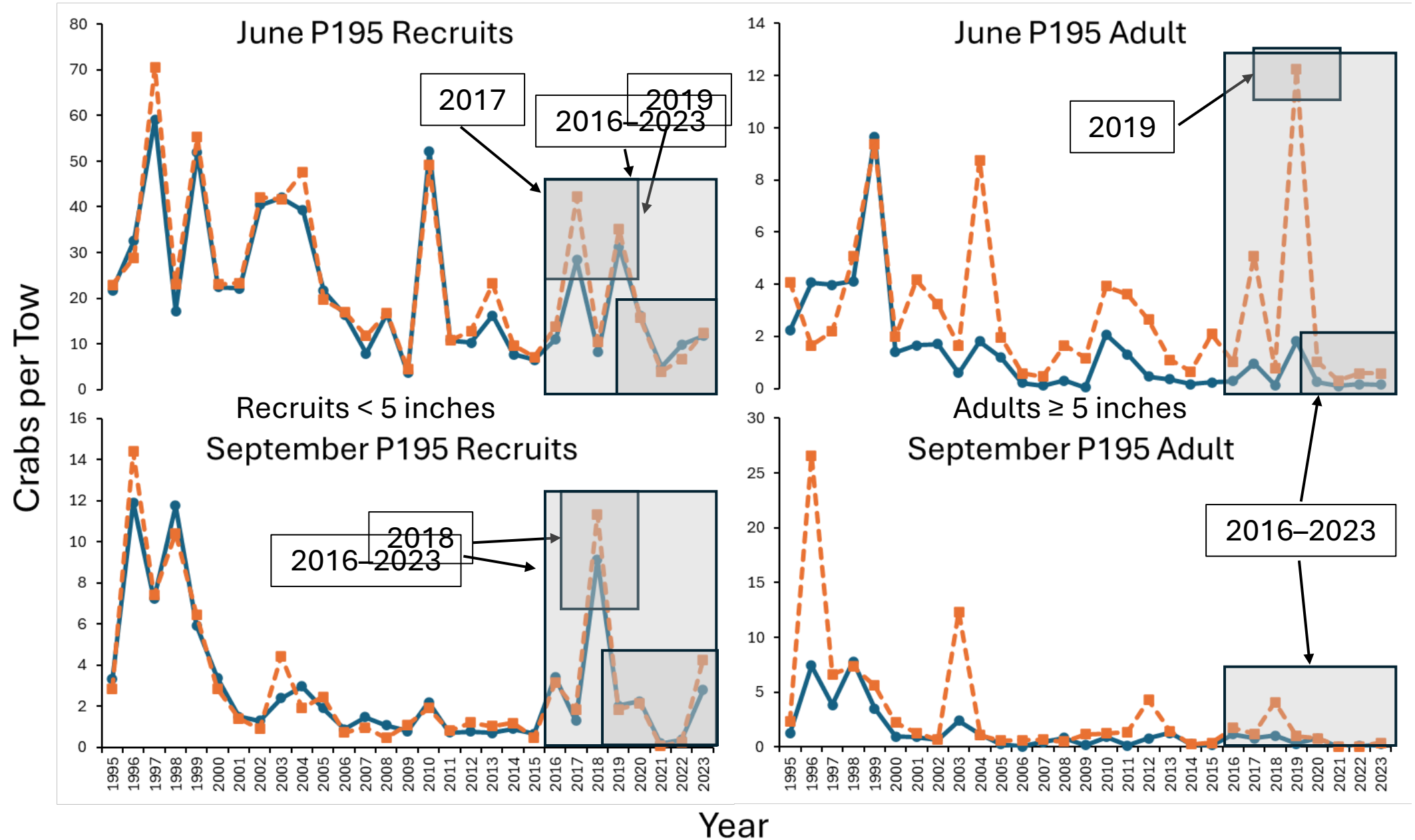




# Program 195 Trends



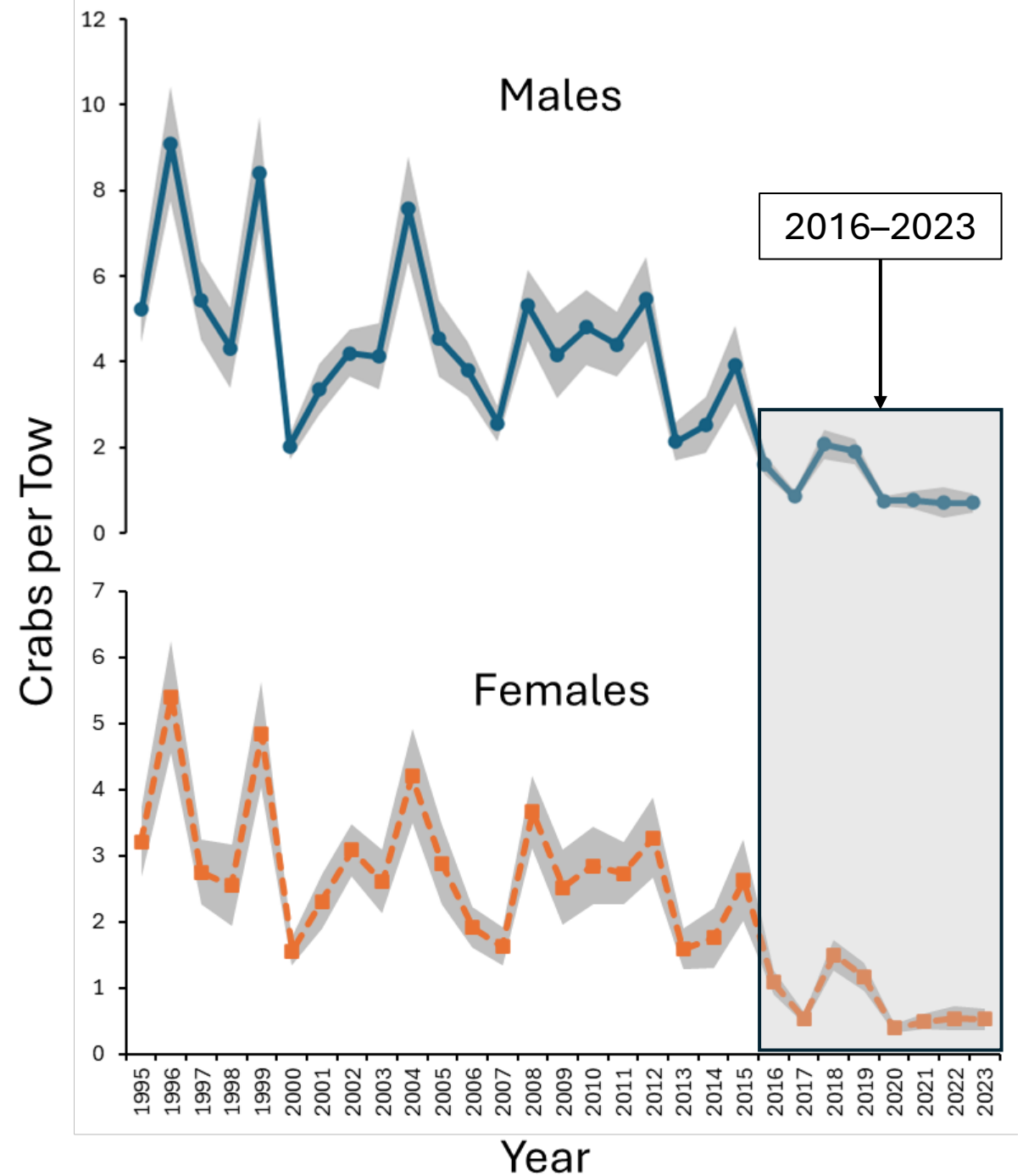
# Program 195 Trends



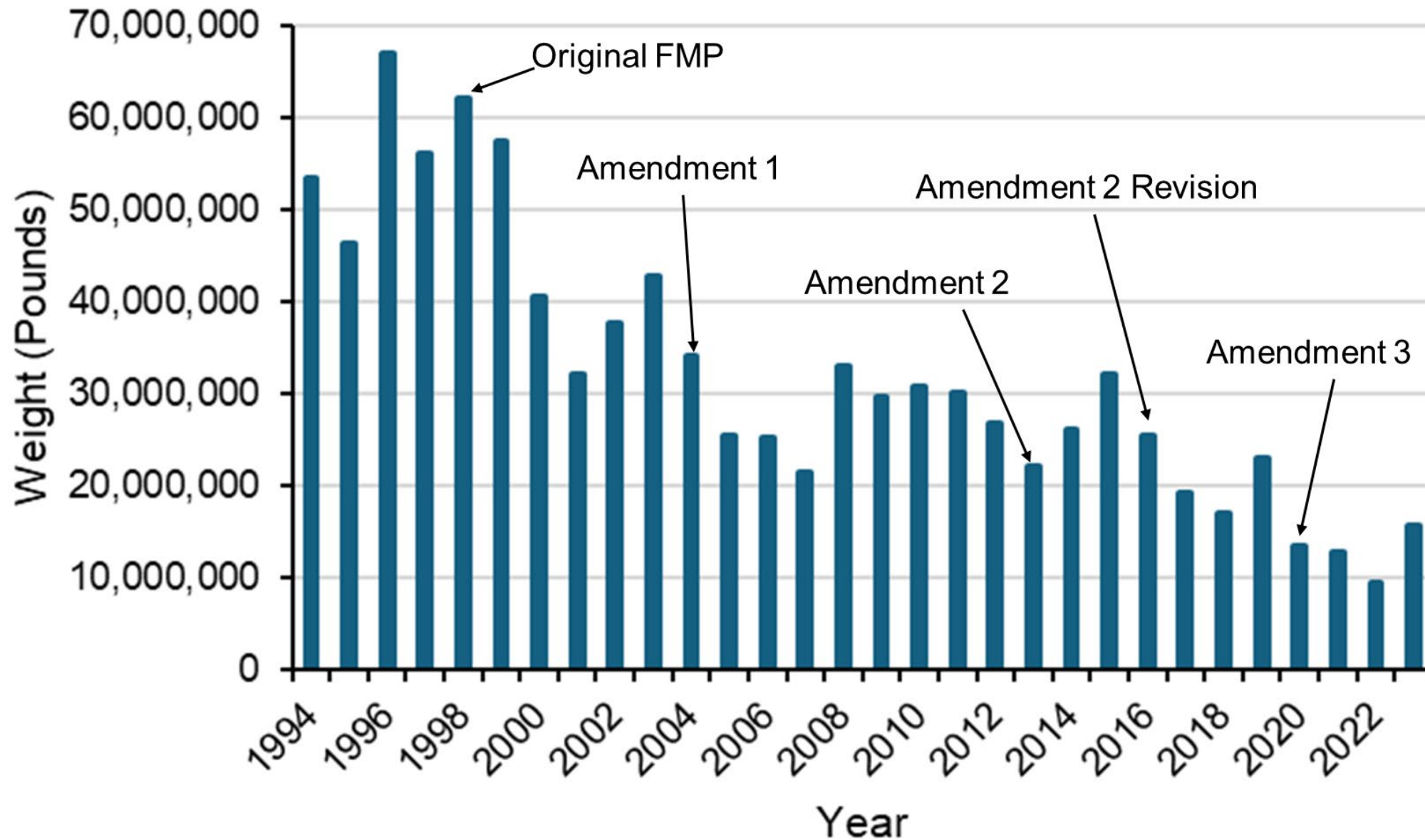


# *Program 120 Trends*

Recruits <5 inches  
carapace width

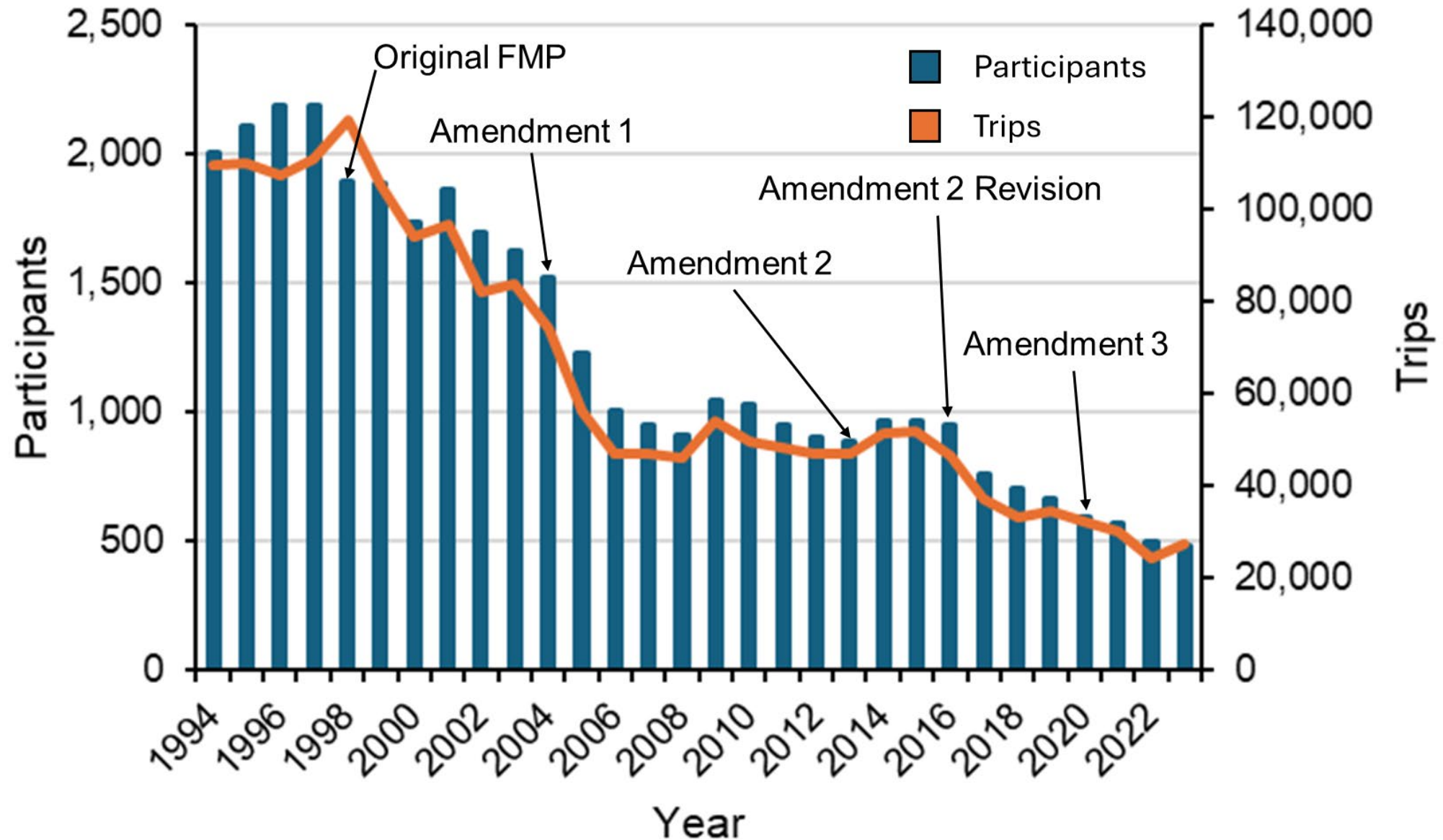


# *Annual Blue Crab Commercial Landings*





# *Annual Hard Blue Crab Participants & Trips*



# *Coastwide Trends - South Carolina*

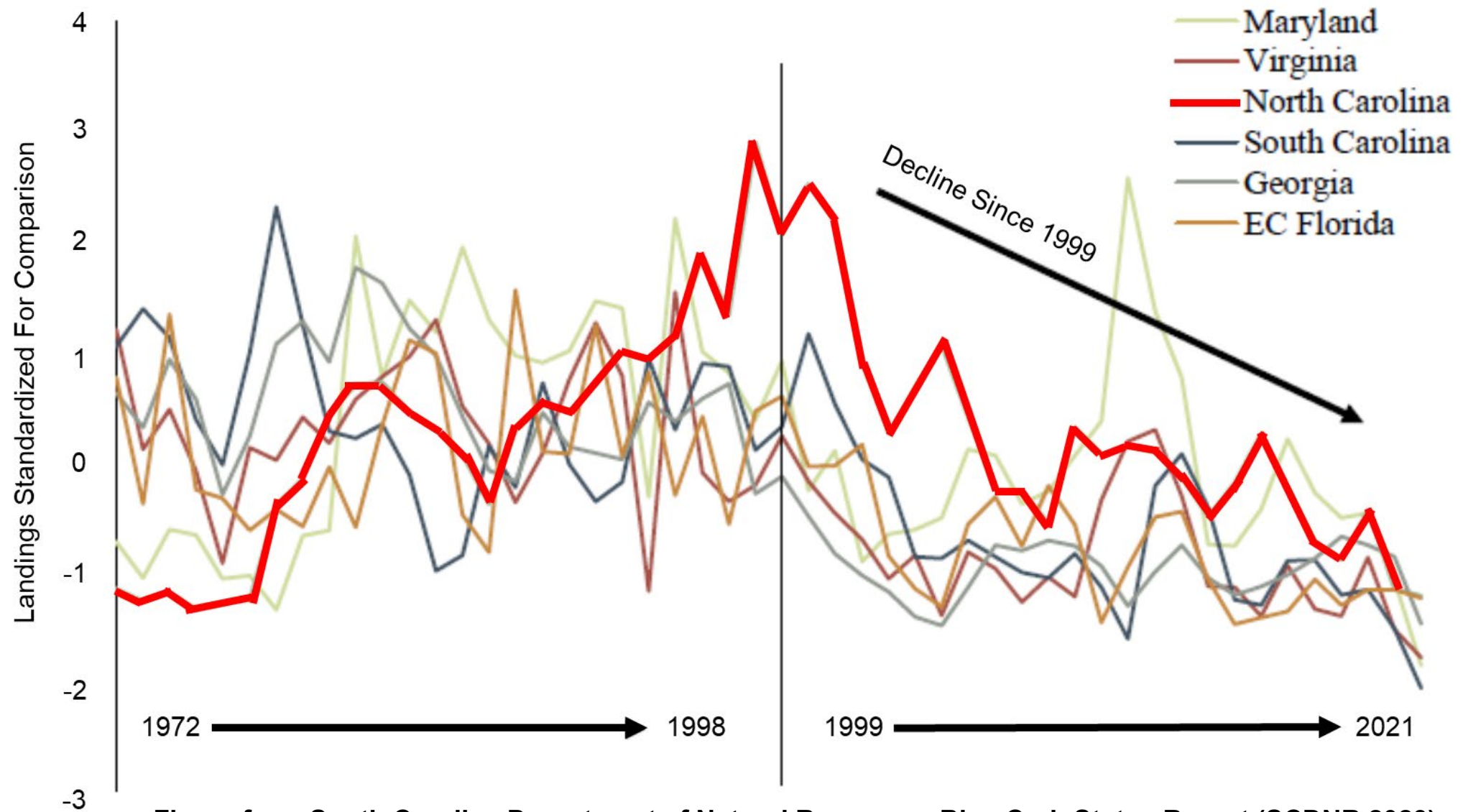
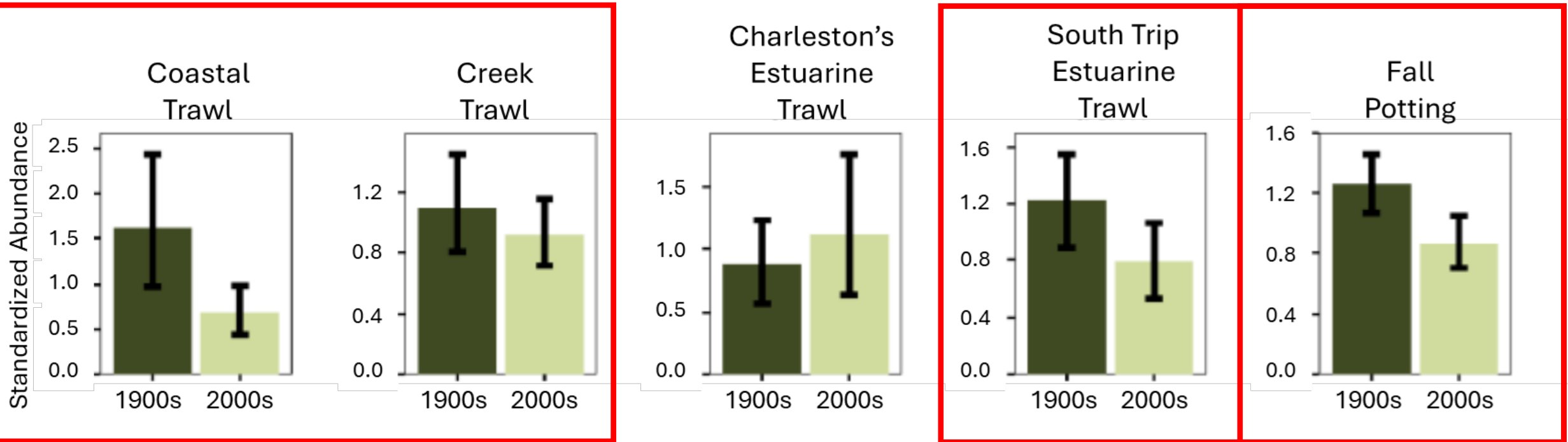


Figure from South Carolina Department of Natural Resources Blue Crab Status Report (SCDNR 2023)

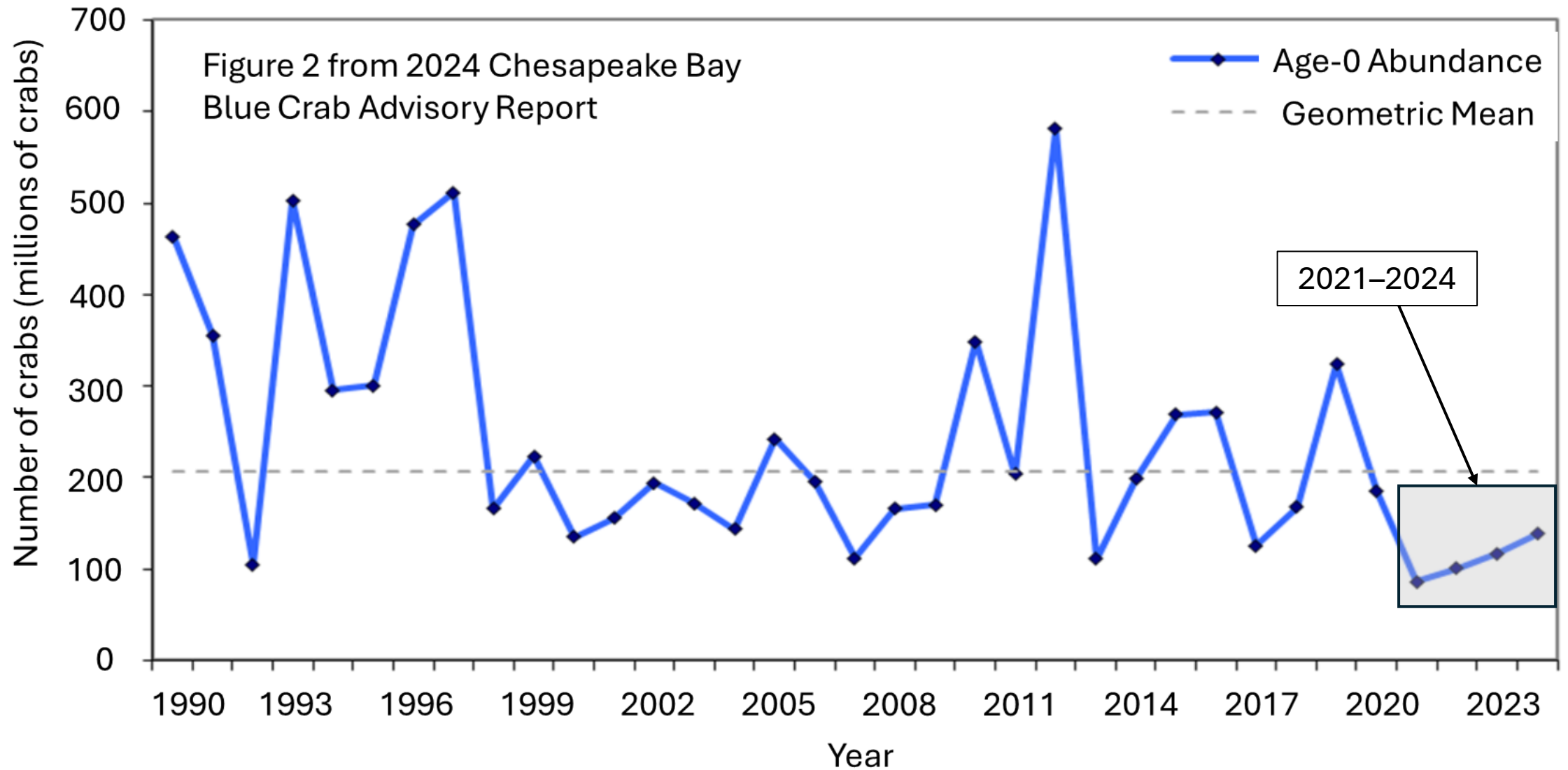


# *Coastwide Trends - South Carolina*



Comparison of mean standardized blue crab abundances ( $\pm$  confidence limits) from five SCDNR fisheries-independent survey between samples collected through 1999 and since 2000

# *Coastwide Trends - Chesapeake Bay*





# *Amendment 3 Adaptive Management Framework*

1. Update the stock assessment at least once in between full reviews of the FMP, timing at the discretion of the division
  - a. If the stock is overfished and/or overfishing is occurring or it is not projected to meet the sustainability requirements, then management measures shall be adjusted using the director's proclamation authority
  - b. If the stock is not overfished and overfishing is not occurring, then management measures may be relaxed provided it will not jeopardize the sustainability of the blue crab stock
2. Any quantifiable management measure, including those not explored in this paper, with the ability to achieve sustainable harvest (as defined in the stock assessment), either on its own or in combination, may be considered
3. Use of the director's proclamation authority for adaptive management is contingent on:
  - a. Consultation with the Northern, Southern, and Shellfish/Crustacean advisory committees
  - b. Approval by the Marine Fisheries Commission

Upon evaluation by the division, if a management measure adopted to achieve sustainable harvest (either through Amendment 3 or a subsequent Revision) is not working as intended, then it may be revisited and either: 1) revised or 2) removed and replaced as needed provided it conforms to steps 2 and 3 above.

# Benchmark Stock Assessment

Catch Reduction (%)	Probability of achieving sustainable harvest within 10 years (%)	Comments
0.0	31	2016 average $F$ from stock assessment
0.4	45	Catch reduction to meet $F$ threshold and end overfishing
1.7	46	Catch reduction to meet spawner abundance threshold and end overfished status
2.2	50	Catch reduction to meet minimum statutory requirement for achieving sustainable harvest
2.4	50	MFC adopted management
3.8	67	
5.9	90	Catch reduction to meet $F$ target
9.3	96	
12.3	100	
15.7	100	
19.8	100	Catch reduction to meet spawner abundance target
24.3	100	

# *Management Options*

- Size Limits
- Prohibit Crab Trawling
- Season Closures
- Trip Limits





# *Preliminary Division Recommendation Provided to Advisory Committees in March 2025*

## Option 8.a

- Prohibit harvest of mature females January – May
- 10-bushel mature female trip limit June – December

## Rationale

- Focus on conserving females during biologically important times of year
- Supports existing management
- Estimated to result in 21.7% harvest reduction



# *Advisory Committee Consultation*

- Presented to Northern, Southern, Shellfish/Crustacean Advisory Committees
- **Recommended MFC take final action in August 2025**
- **Recommended MFC remain status quo regarding Amendment 3 adaptive management**

# *Advisory Committee and Public Discussion*

- Northern (Washington) – 48 public
- Southern (Wilmington) – 13 public
- Shellfish/Crustacean (Manteo) – 50 public
- Staff available for at least one hour prior to each meeting



Photo Credit Jessica Lee



# *Advisory Committee and Public Discussion*

## Concerns

- Economic
- Unfairness between regions/fishery segments
- Market fluctuations



Photo Credit Jessica Lee



# *Advisory Committee and Public Discussion*

## Concerns

- Distrust of stock assessment and data collection
- Need for cooperation in data collection
- Adaptive management authority



Photo Credit Jessica Lee



# *Advisory Committee and Public Discussion*

## Concerns

- Water quality
- Predation
- Declining stock



Photo Credit Jessica Lee



# *Key Points*

- Concern for stock
- Strong indicators stock is not recovering
- Halfway through statutorily required rebuilding period
- Concern with preliminary recommendation presented to advisory committees





# *Moving Forward...*

- Final adaptive management action scheduled for August 2025
- Exploring additional options
- Prioritizing assessing the stock



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# *Questions?*

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