



*Protection of Critical Sea Grass Habitat Through Shrimp Trawl Area Closures*

*DEPARTMENT OF ENVIRONMENTAL QUALITY*  
Marine Fisheries

N.C. Marine Fisheries Commission | Chris Stewart | February 22, 2024



# *Presentation Outline*

- Adaptative Management
- Shrimp Fishery Management Plan Amendment 2
- Background
- Management Rationale
- Management Options by Region
- NCDMF Recommendation
- Habitat and Water Quality Recommendation
- Questions/Discussion
- Marine Fisheries Commission Vote
- Next Steps



# *Adaptive Management*



- *Improves decision-making as new data becomes available*
- *Allows flexibility in decision making*
- *New information may support alternative or additional actions*
- *Improves management outcomes*
- *Allows changes to occur between FMP reviews*



# *Shrimp Fishery Management Plan Amendment 2*



## **NCMFC Selected Management Strategy**

“That the Division of Marine Fisheries collaborate with the Coastal Habitat Protection Plan (CHPP) support staff and the Habitat and Water Quality Advisory Committee on issues related to SAV habitat. As the Division deems appropriate and feasible, actions to address that impact will be identified by the appropriate committees and brought to the MFC in the future for action as part of adaptive fisheries management with the collaboration of stakeholder groups and their advisory committees.”

*Department of Environmental Quality*

## **North Carolina Shrimp Fishery Management Plan Amendment 2**

By  
North Carolina Division of Marine Fisheries



North Carolina Department of Environmental Quality  
North Carolina Division of Marine Fisheries  
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# *Importance of SAV and SAV Habitat*

- Federally designated as Essential Fish Habitat and Habitat Areas of Particular Concern
- Ecological functions
  - Provides refuge, forage, corridor, spawning, and nursery areas for many species
  - Structural complexity
  - Sediment and shoreline stabilization
  - Improves water quality, primary and secondary productivity, nutrient cycling, and carbon sequestration
- Provides significant market and nonmarket value to the NC's economy





## *Impacts from Bottom Disturbing Gears*



- Reduced habitat complexity
- Reduced community composition
- Shearing or cutting of SAV leaves, flowers, or seeds
- Buries SAV
- Increased turbidity and sedimentation
  - Reduces water clarity
  - Reduces SAV growth, productivity, and survival
  - Limits nutrient regeneration
- Disrupts food web within ecosystem



# *Management Rationale*



- Updated imagery used to inform decision-making
  - Maximum known extent of SAV habitat (1981-2021 SAV Mosaic)
- Creation of buffers
  - Protection from physical disturbance, turbidity, and sedimentation
  - Increase connectivity of SAV habitats and regions
  - Promote compliance and simplify enforcement
- Balance SAV habitat protection and impacts to shrimp trawlers



# *No Further Management Needed*



**Region 1**



**Region 9**





# SAV Region 2 – Albemarle / Roanoke Sound

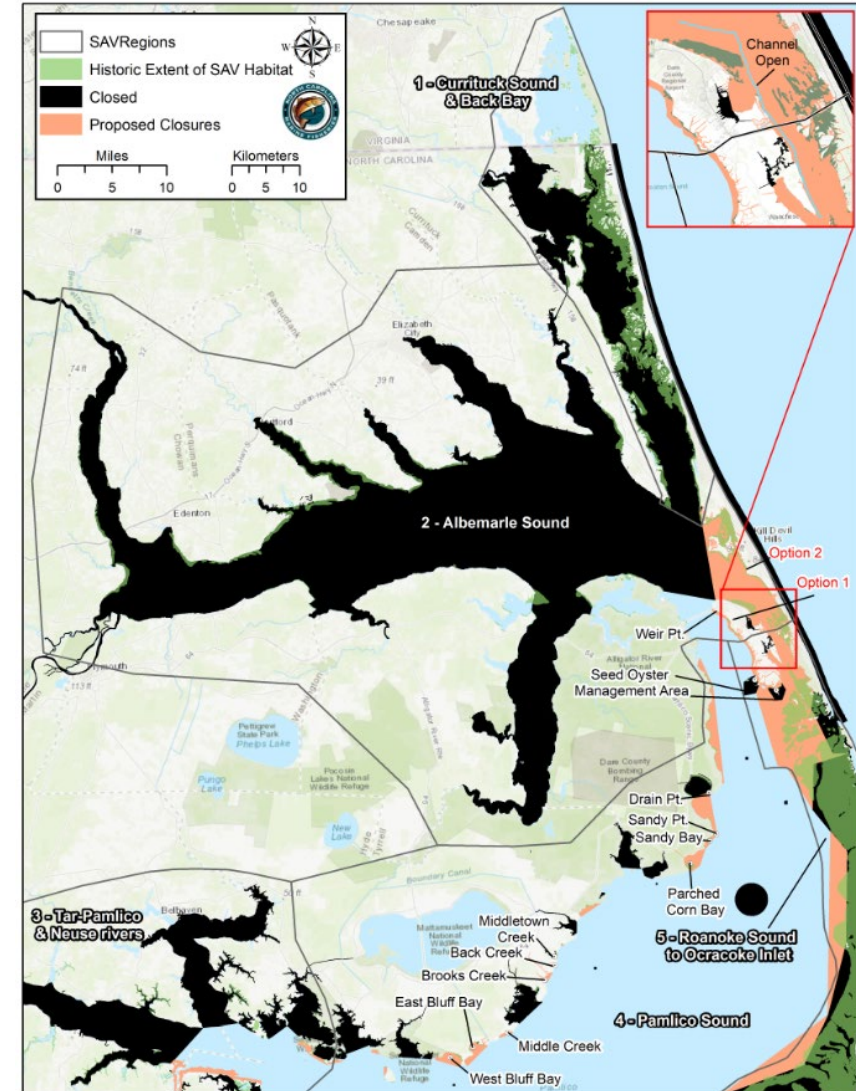


## Management Options:

1. Prohibit shrimp trawling along the western shoreline of Roanoke Island from Weir Point to the Manns Harbor Bridge.
2. Limit shrimp trawling to main channel only (100 ft either side) of the Roanoke Sound Channel.

\*See Pages 5-6, Figure 2

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# SAV Region 3 – Tar-Pamlico and Neuse rivers

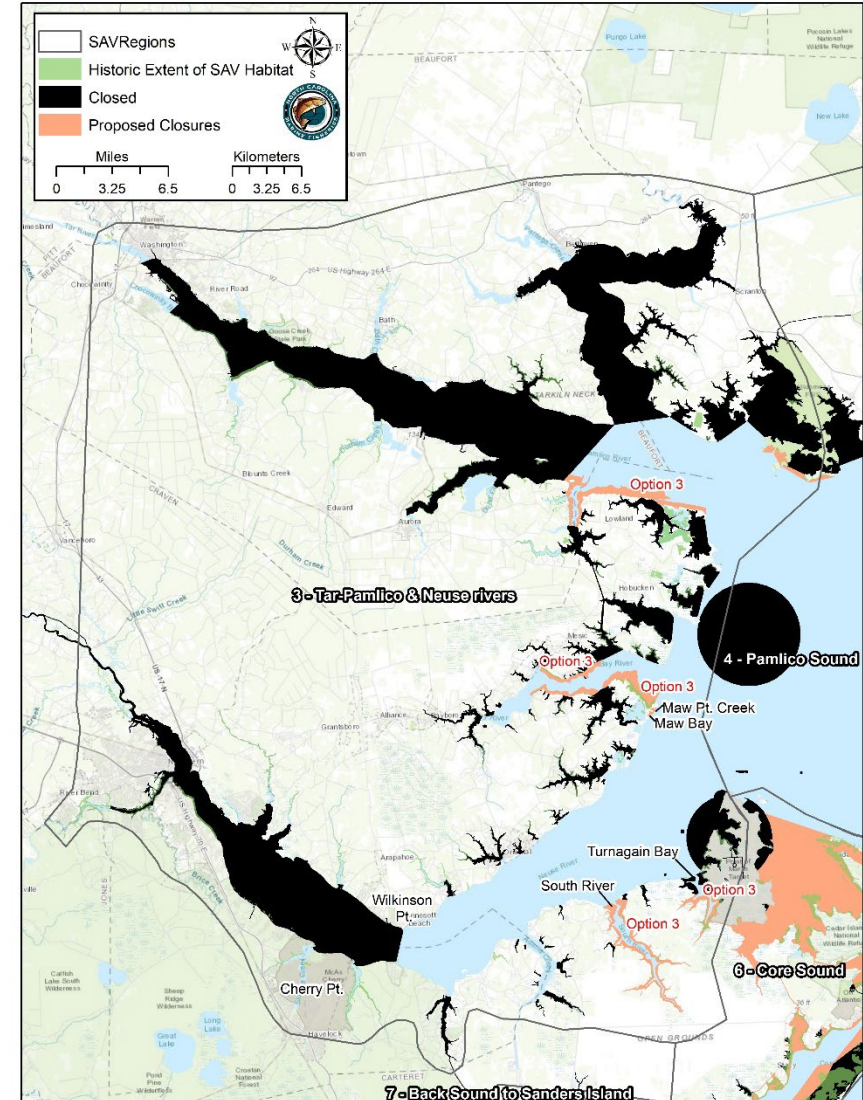


## Management Options:

3. Prohibit shrimp trawling year-round in designated pot areas in Vandemere Creek, Shell Bay, White Perch Bay, Bonner Bay, Fisherman's Bay, Turnagain Bay, and South River.

\*See Pages 6-7, Figure 3

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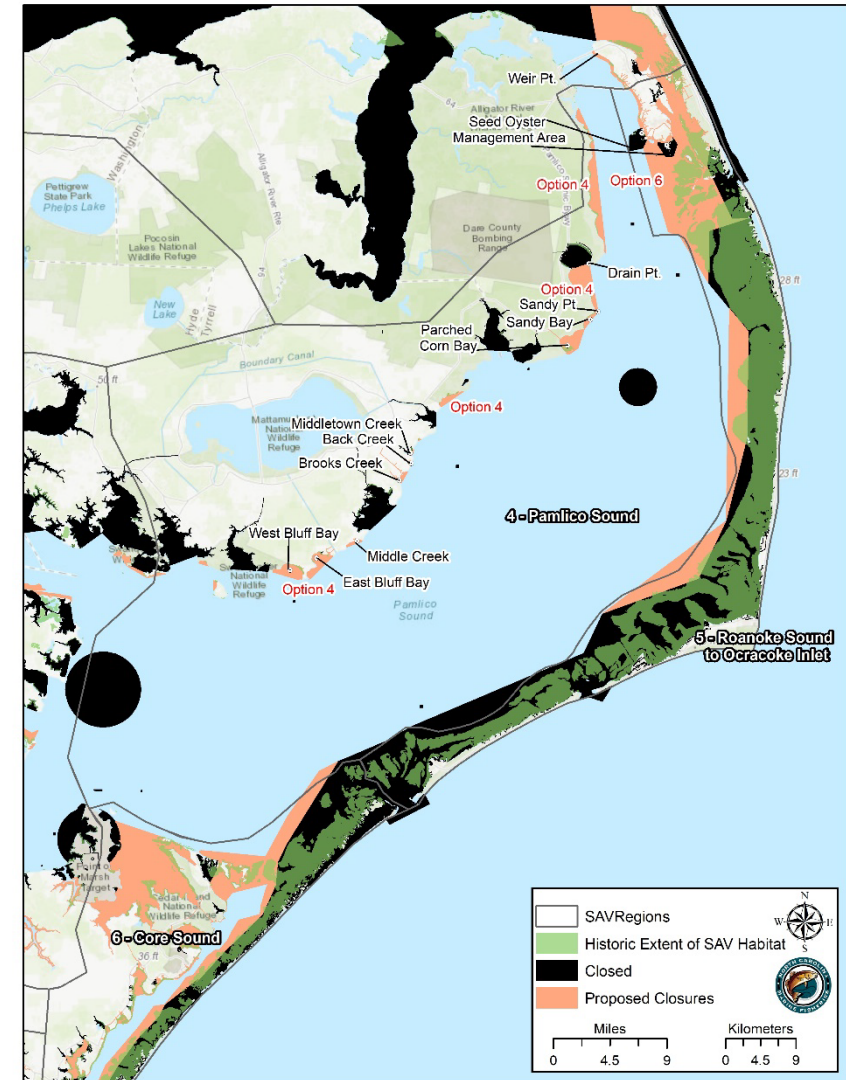
# SAV Region 4 – Pamlico Sound

## Management Options:

4. Create and expand existing closures along the western shoreline of Dare and Hyde counties to include the bays and tributaries from Manns Harbor to West Bluff Bay.

\* See Page 7, Figure 4

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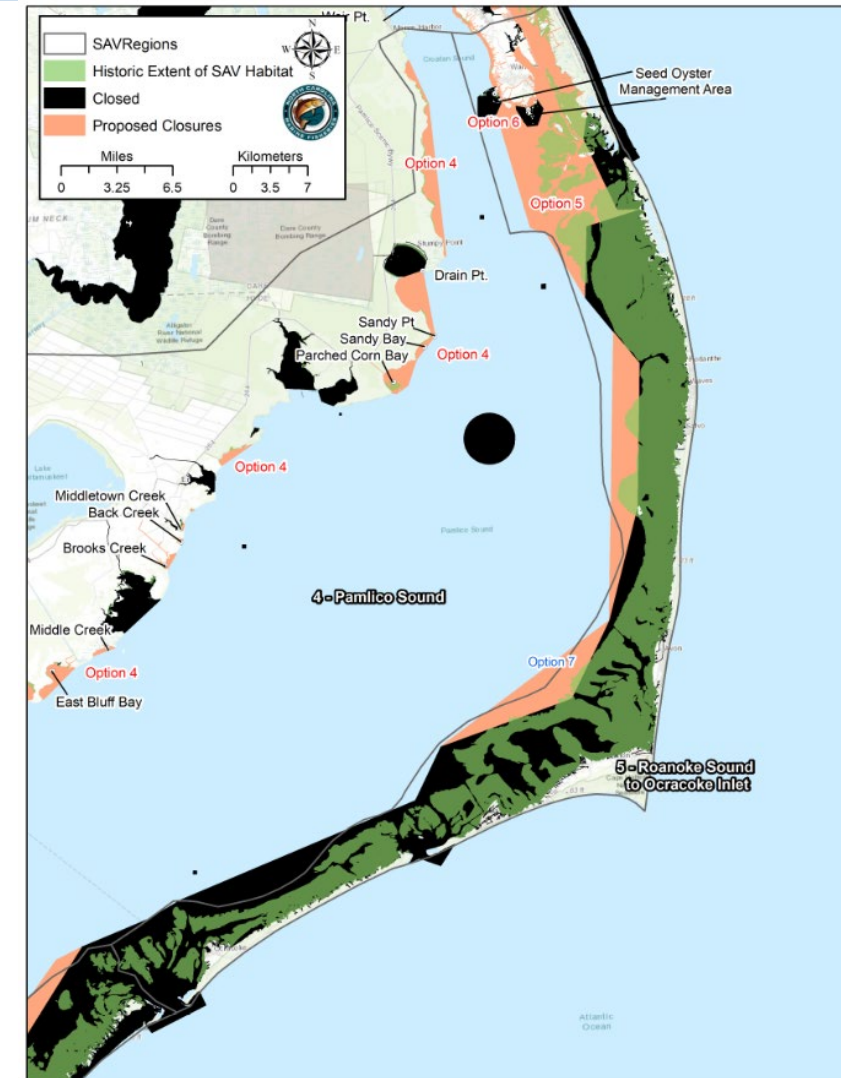
# SAV Region 5 – Roanoke Sound to Ocracoke Inlet

## Management Options:

5. Limit shrimp trawling to main channel only (100 ft either side) of the southeastern shore of Wanchese to the Bodie Island marshes.
6. Prohibit trawling along the western shore of Roanoke Island from the Manns Harbor Bridge to northern most tip of the Wanchese Seed Oyster Management Area.
7. Modify the existing trawl net prohibited area along the Outer Banks to include portions of the western shoreline behind Salvo and Buxton Harbor.

*\*See Pages 8-9, Figure 5*

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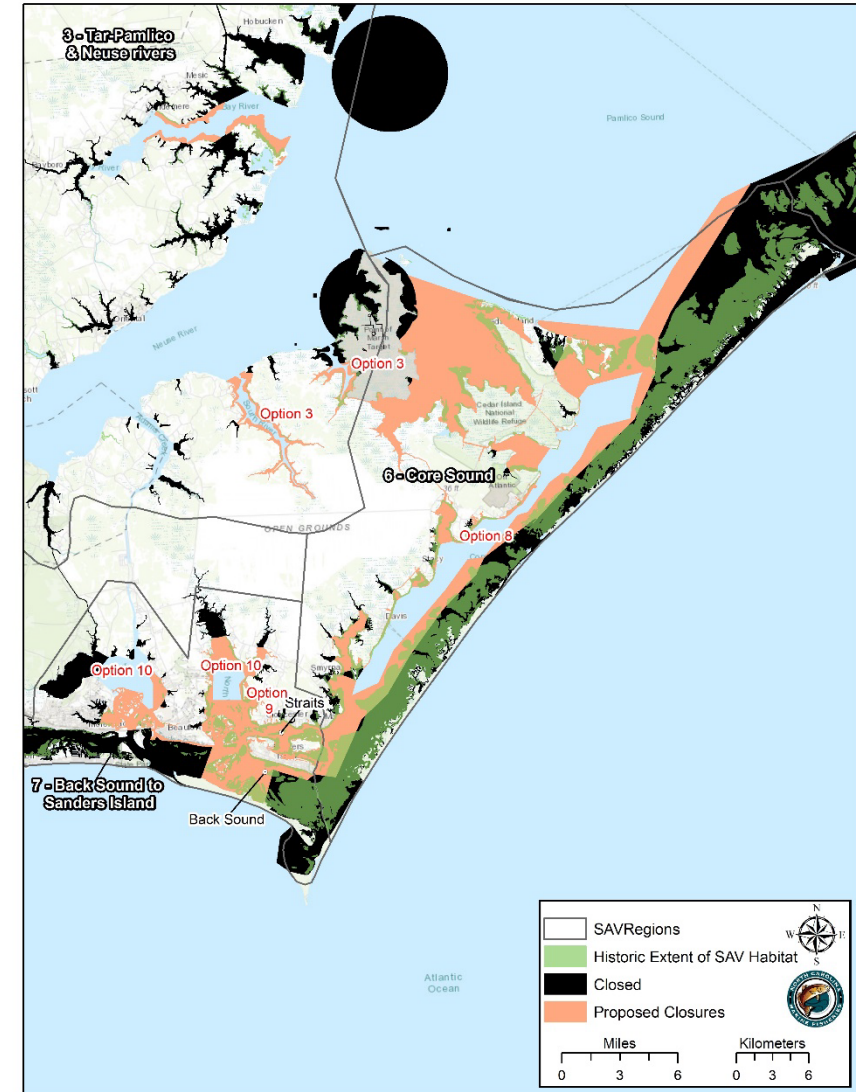


# SAV Region 6 – Core Sound



## Management Options:

8. Prohibit trawling in Core Sound, and its tributaries except for the Mechanical Clam Harvest Area (MCHA).



\*See Page 9, Figure 6

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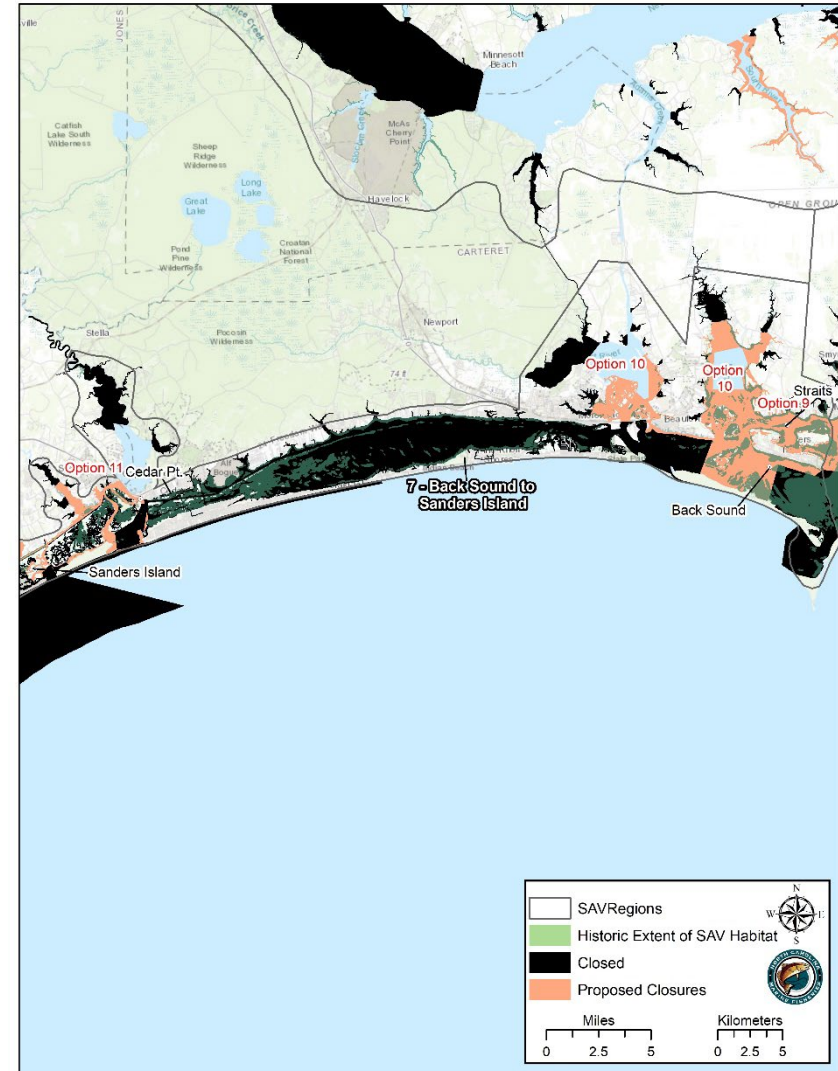
# SAV Region 7 – Back Sound to Sanders Island

## Management Options:

9. Prohibit shrimp trawling in the Straits, Back Sound, and their tributaries.
10. Modify existing or create new shrimp trawl closure lines in the North and Newport rivers.
11. Limit shrimp trawling to IWW from Cedar Point to Sanders Island.

*\*See Pages 9-10, Figure 7*

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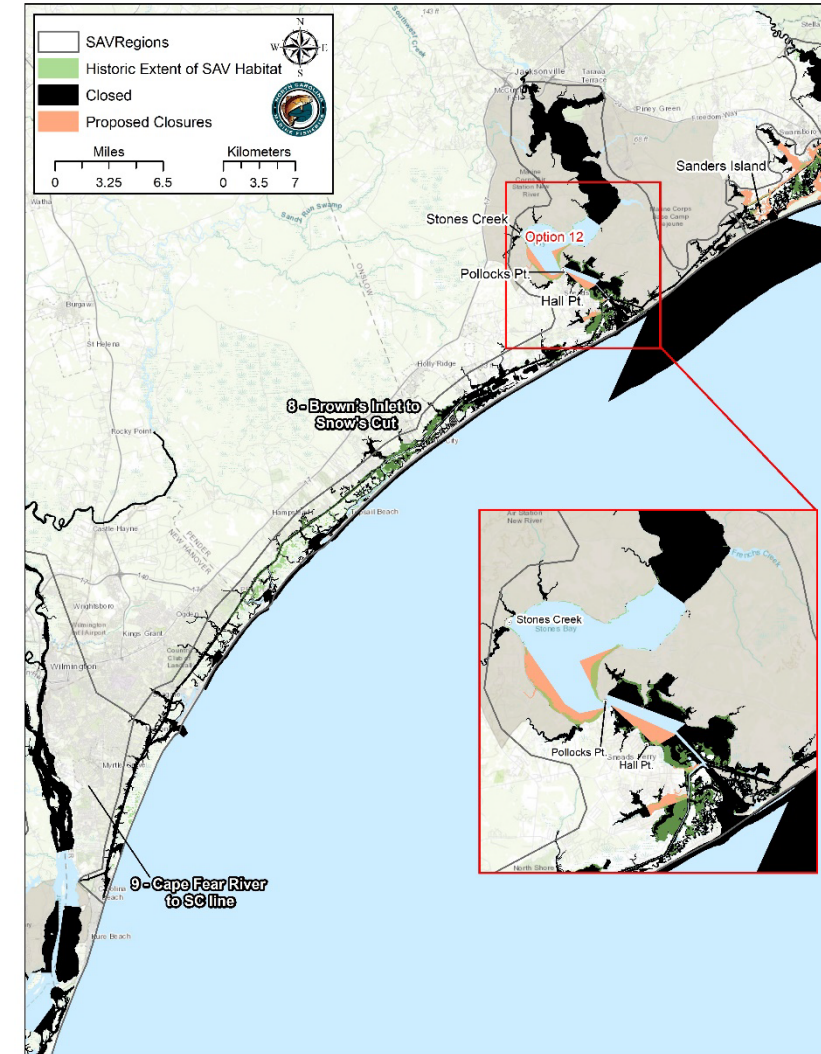
# SAV Region 8 – Brown's Inlet to Snow's Cut

## Management Options:

12. Modify existing or create new shrimp trawl closure lines in the New River.

\*See Page 11-12, Figure 8

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## *Division of Marine Fisheries Recommendation*



- In support of the CHPP, NCDMF recommends creating management buffers to protect SAV habitat from physical disturbance, turbidity, and sedimentation by implementing broad, region specific shrimp trawl closures (options 1-12).
- NCDMF recommends the issue paper be referred to the Northern and Southern regional and Shellfish/Crustacean ACs for further input before making final recommendations to the MFC.



# *Habitat and Water Quality Recommendation*



Endorse the division's recommendations to protect existing and prospective SAV habitat. In portions of proposed closure areas where SAV cannot be supported, the division should work with stakeholders to maximize SAV protection while reducing impact on stakeholder to maximize SAV protection while reducing impact on stakeholder use. A commitment should be made to quantify the status of SAV habitat in NC and a monitoring program to measure progress of these programs.



# *Marine Fisheries Commission Recommendation*

## **Action Needed**

Vote to refer the issue paper to the Northern and Southern regional and Shellfish/Crustacean advisory committees for their input.





## *Next Steps*

- If the issue paper is referred to the Northern and Southern regional and Shellfish/Crustacean advisory committees, the Commission will vote on its final recommendation at its May 2024 business meeting.
- If new management measures are selected, shrimp trawl area closures will be implemented via proclamation authority of the NCDMF Director in 2024 in accordance with Amendment 2 to the Shrimp FMP.
- The division in partnership with APNEP will continue to conduct annual statewide monitoring on a rotating schedule during the spring and fall each year to evaluate SAV health and abundance as a part of adaptive management.



*Questions?*

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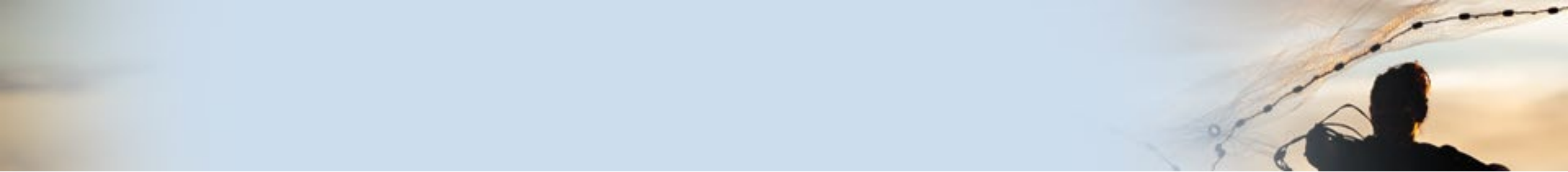


# *Marine Fisheries Commission Recommendation*

## **Action Needed**

Vote to refer the issue paper to the Northern and Southern regional and Shellfish/Crustacean advisory committees for their input.





# Shrimp FMP Support Application



## AGOL Interactive Map Viewer

A screenshot of the AGOL Interactive Map Viewer interface. The main map displays the 2024 Proposed Shrimp Designations - Amendment 2, with various regions labeled: 2-Albemarle Sound, 4-Pamlico Sound, 5-Roanoke Sound to Ocracoke Inlet, 6-Core Sound, and 9-Cape Fear River to SC Inlet. The Pamlico &amp; Neuse rivers are also labeled. The interface includes a search bar at the top, a legend on the left, and a layer list on the right. A context menu is open over the map, showing options like 'Set Transparency', 'Zoom to', 'Set visibility range', 'Enable pop-up', 'Move up', and 'Move down'. A 'Measurement Tool' icon is visible in the bottom right corner. The map is powered by Esri, with logos for Esri, CGIAR, USGS, and other partners at the bottom.

