



# *Kingfishes FMP Review*

*DEPARTMENT OF ENVIRONMENTAL QUALITY*  
Marine Fisheries

Marine Fisheries Commission | Matthew Doster & Claire Pelletier | May 2026



## N.C. FISHERY MANAGEMENT PLAN REVIEW SCHEDULE (July 2025 – June 2030)

SPECIES (Date of Last Action)	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030
<b>SOUTHERN FLOUNDER (8/25)</b>					
<b>RED DRUM (8/17)</b>					
<b>KINGFISHES (8/20)</b>					
<b>BLUE CRAB (2/20)</b>					
<b>BAY SCALLOP (8/20)</b>					
<b>SHRIMP (2/22)</b>					
<b>ESTUARINE STRIPED BASS (11/22)</b>					
<b>RIVER HERRING (8/22)</b>					
<b>INTERJURISDICTIONAL (5/22)</b>					
<b>STRIPED MULLET (5/24)</b>					
<b>SPOTTED SEATROUT (3/25)</b>					
<b>EASTERN OYSTER (5/25)</b>					
<b>HARD CLAM (5/25)</b>					

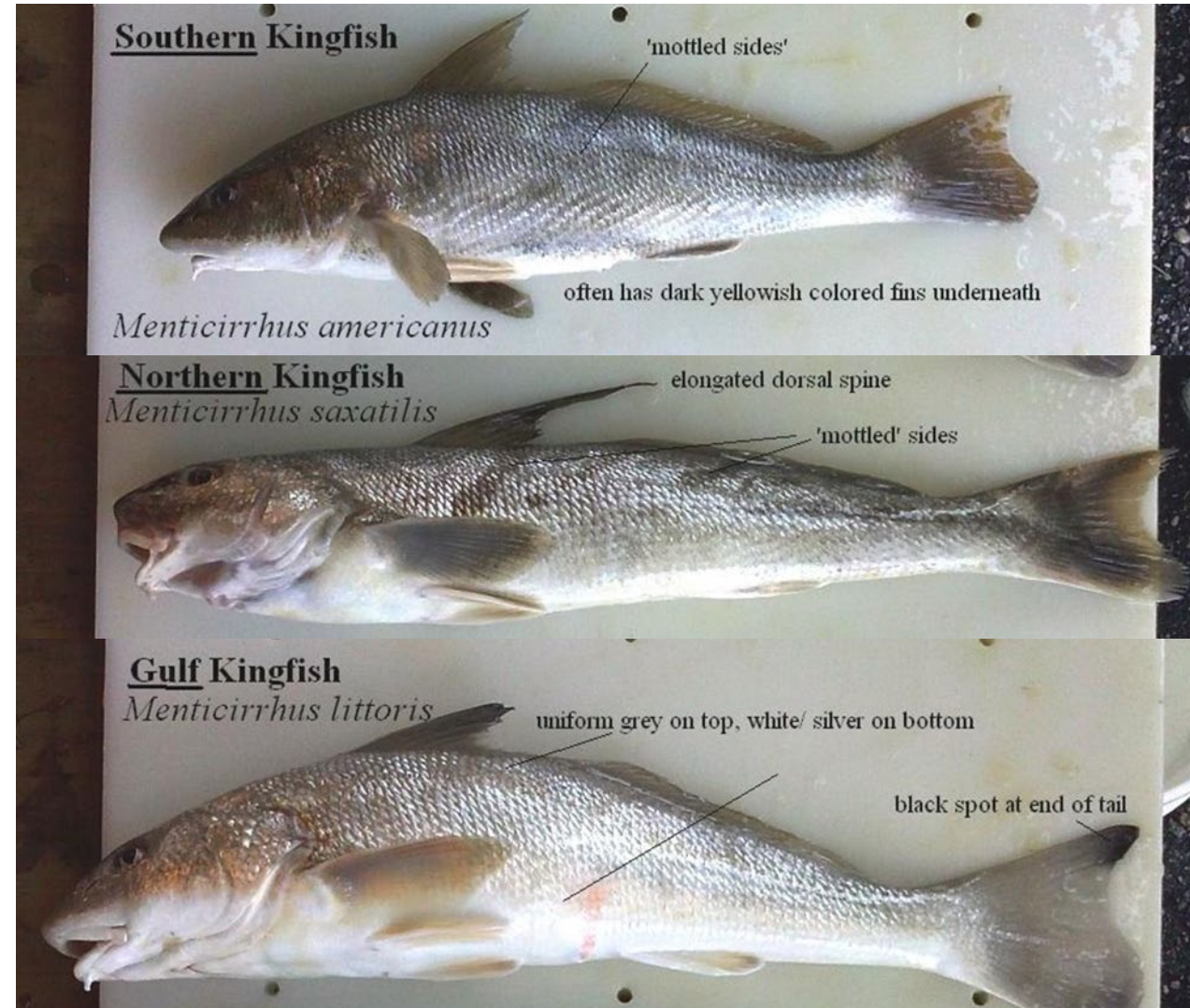
# *Presentation Outline*

- Life history (range, growth, age, etc.)
- Fishery characterization
- Kingfishes FMP
  - Current regulations
  - Stock assessment history
  - FMP history
- Management triggers
- FMP review



# Life History

- Three species in North Carolina
  - Southern
  - Northern
  - Gulf
- Several common names
  - Sea mullet, king whiting, king croaker, sea mink, roundhead, hard head, whiting, hake, Carolina whiting, and Virginia mullet
- Demersal, live near and feed on the bottom
- **Southern** and **Northern**: mud or sand-mud in estuary or ocean
- **Gulf**: sandy bottom in surf zone



# *Life History - Distribution*

Distribution of Southern Kingfish



Distribution of Northern Kingfish



Distribution of Gulf Kingfish



# Life History

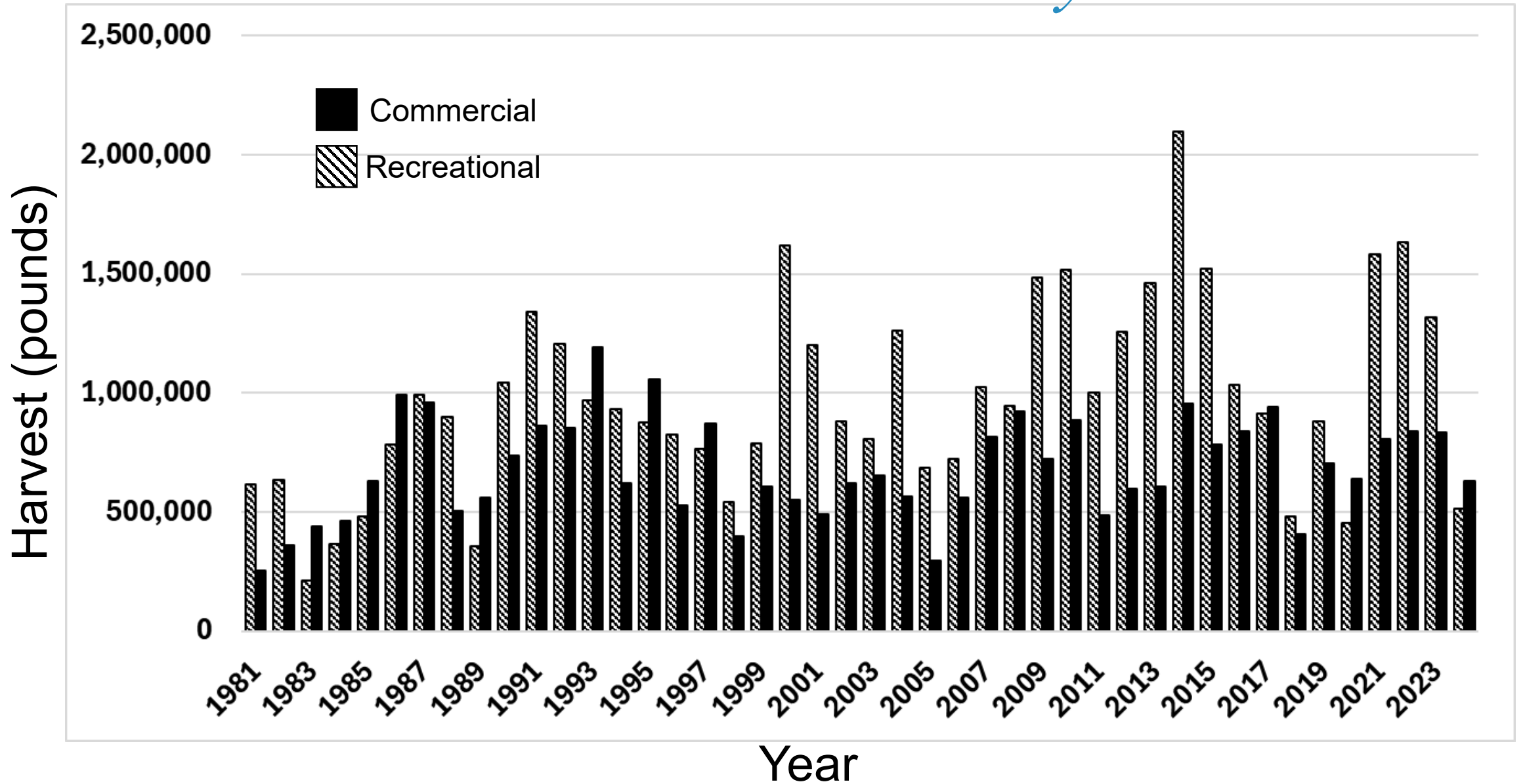
- Rapid growth as juveniles
- Mature quickly, generally reach maturity by second summer
  - 50% mature by 8¼ inches
  - 100% mature by 10 inches
- Up to age-7 in North Carolina
- Sexually dimorphic, females larger than males
- Spawn in the ocean April to October
- Seasonal movement
  - South and offshore in early fall and winter
  - North and inshore in the spring prior to spawning



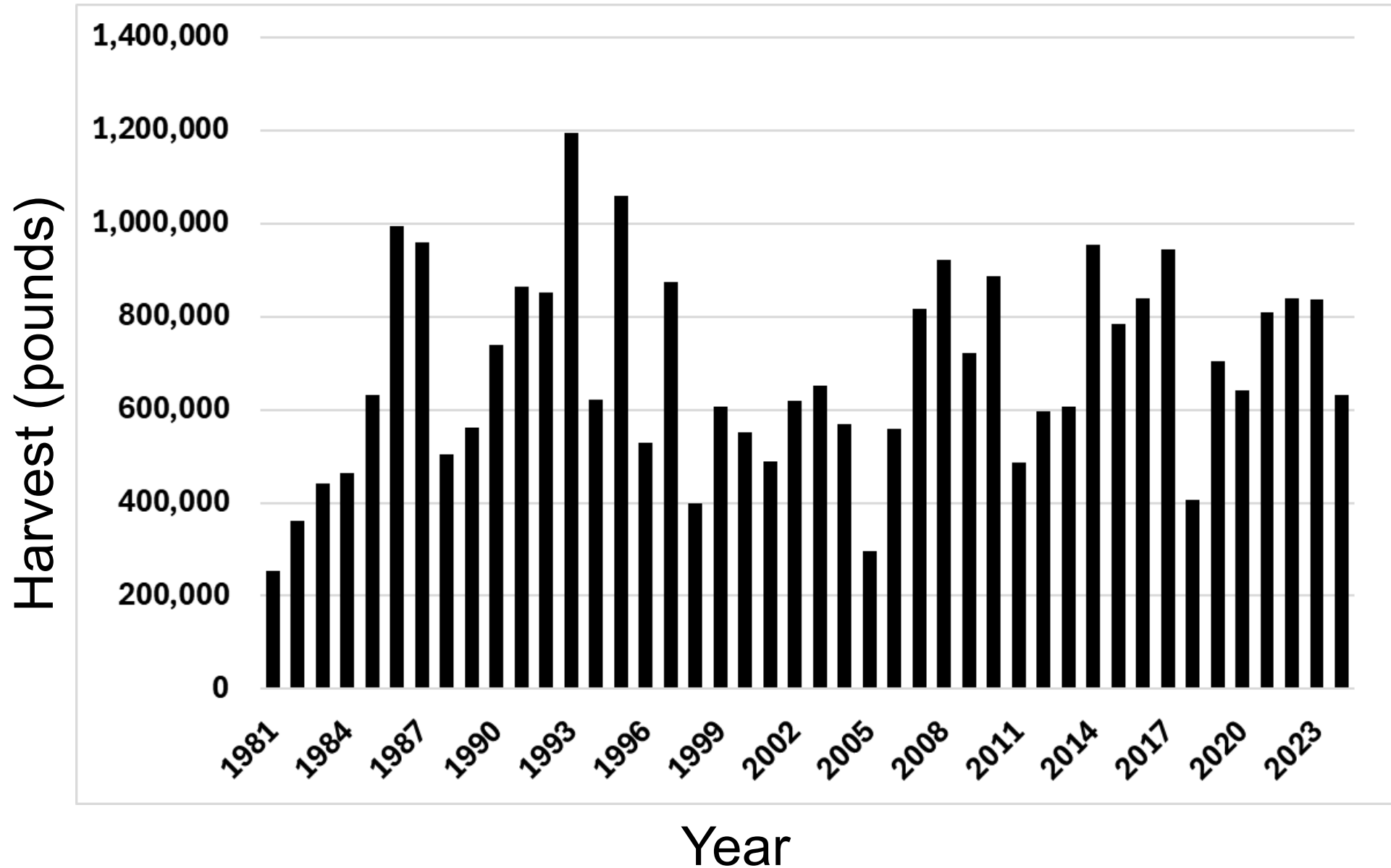
# *Fishery Characterization*



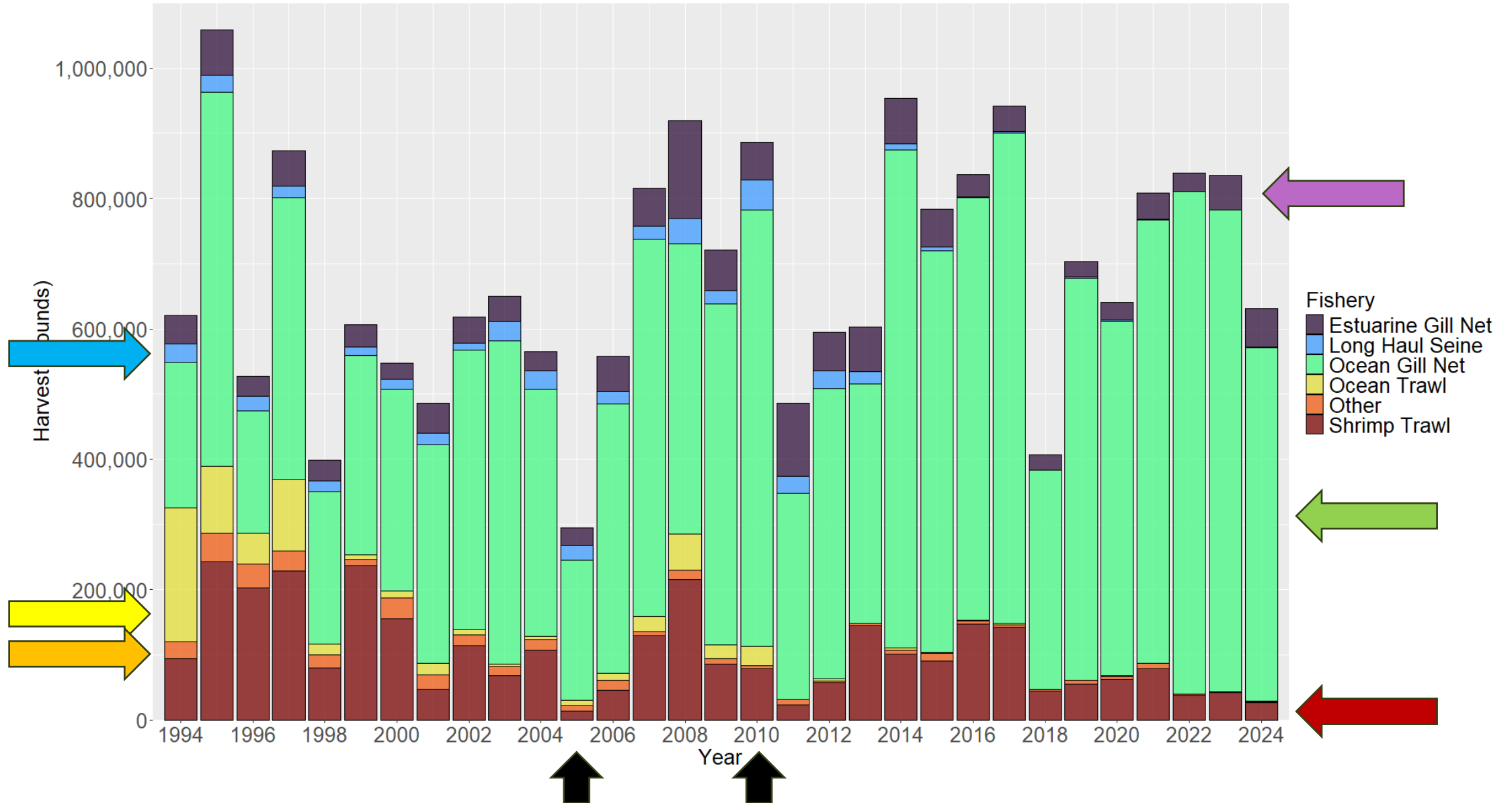
# Combined Fishery



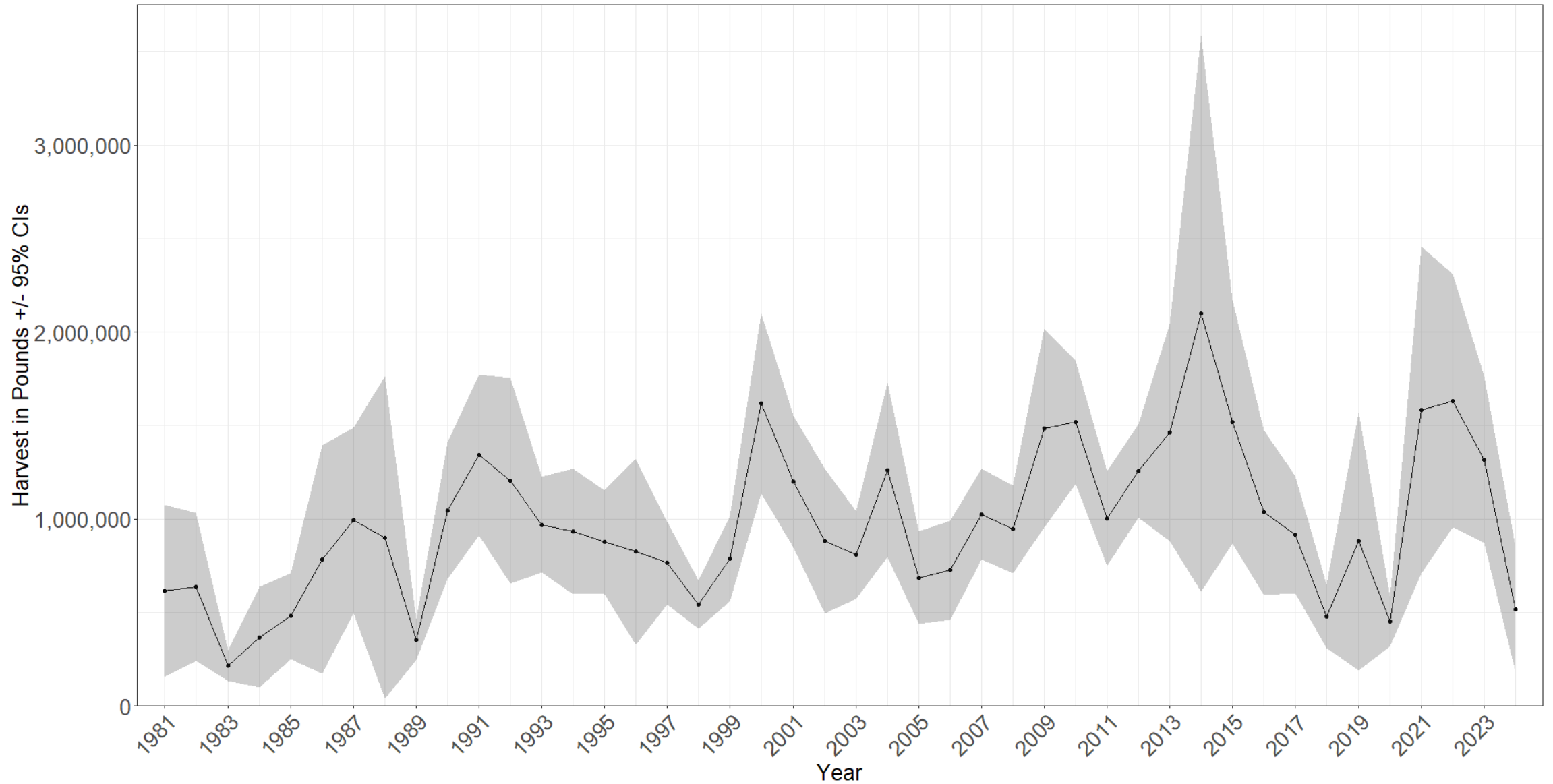
# *Commercial Fishery*



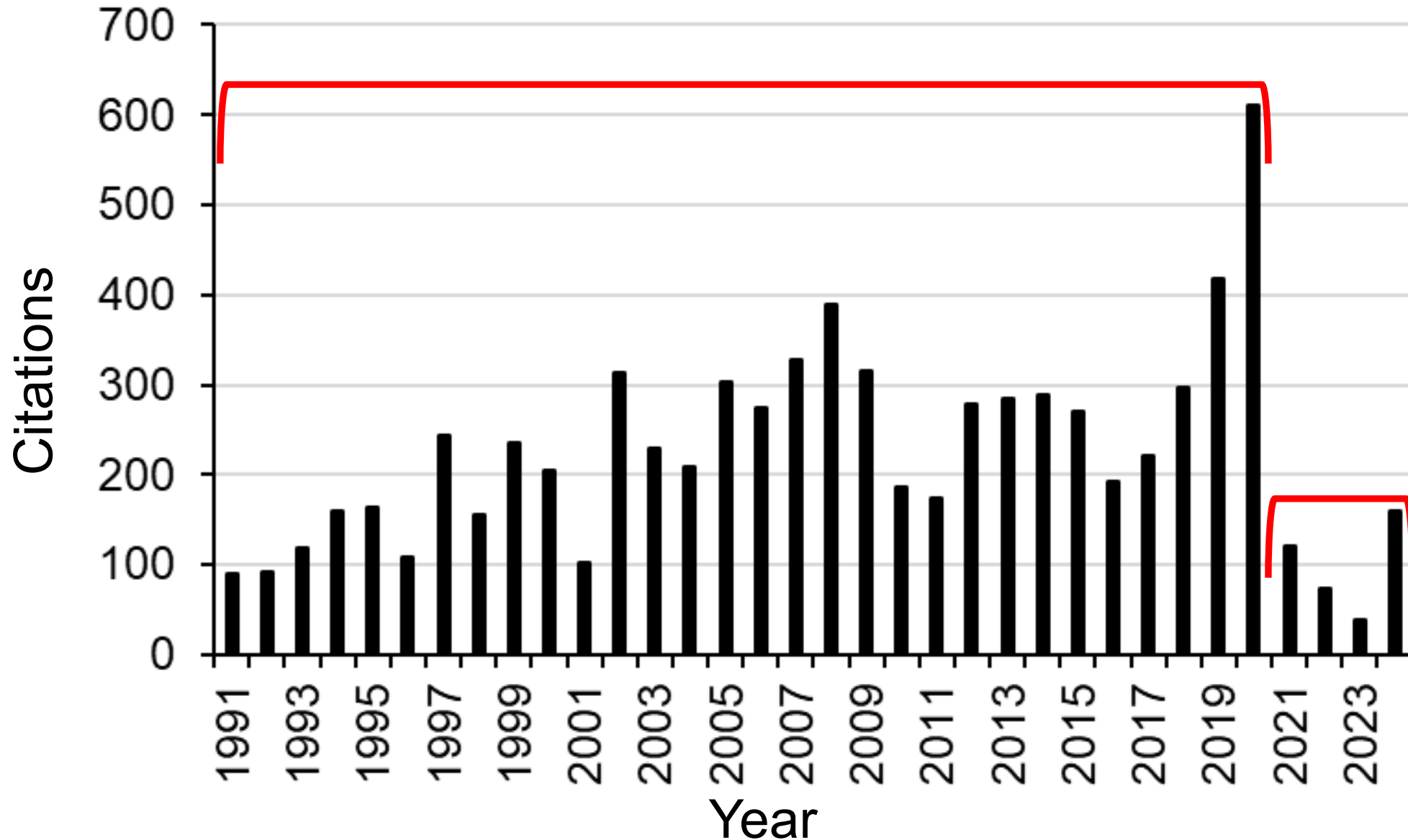
# Commercial Fishery



# *Recreational Fishery*



# *NC Saltwater Fishing Tournament*



# *Management and Assessment History*



# *Current Regulations*

- No direct harvest restrictions
- It shall be unlawful to possess finfish incidental to shrimp or crab trawl operations from December 1 through March 31 unless the weight of the combined catch of shrimp and crabs exceeds the weight of finfish, except an additional 300 pounds of kingfish (*Menticirrhus*, spp.) may be taken south of Bogue Inlet



# *Stock Assessment History*

- Division completed a stock assessment in 2006
  - Was peer reviewed and the Division did not accept for management use due to data limitations
- Lack of migration data to determine movement along North Carolina and Atlantic coast
- Academic assessment from UNCW researchers had same limitations
- A regional, multi-state stock assessment is likely needed to best determine the stock status along the Atlantic coast including North Carolina
- Regional management considered by ASMFC in 2008 and 2014
  - No major concerns with stocks and additional workload
  - No further action taken



# *FMP History*

- Kingfishes FMP adopted December 2007
- Southern kingfish designated as indicator species because of abundance and data
- Completed trend analysis
  - Increasing trends, no indication of growth overfishing, healthy age structure, increase in larger fish
- Implemented use of management triggers and established Director's proclamation authority



# *FMP History*

- 2015 Kingfishes FMP Information Update
  - Only incorporates changes in factual background information and data that do not alter management strategies or measures
  - Does not address new management issues
  - Refined and modified trigger analysis to better assess population trends
    - Updated annually
    - Two triggers two years in a row
    - Further data evaluation and potential management action
- 2020 Kingfishes FMP Information Update



# *Annual Trigger Analysis*

## Seven triggers

- Pamlico Sound Survey (Program 195)
  - June proportion mature
  - September juvenile abundance
- Independent Gill Net Survey (Program 915)
  - July–September proportion mature
- SEAMAP
  - Summer proportion mature
  - Fall juvenile abundance
  - Summer adult abundance
  - Relative  $F$  (total NC harvest/SEAMAP Spring Index)



# Annual Trigger Analysis

Year	Biological Monitoring			Fisheries-Independent Surveys			Other
	Proportion of Adults $\geq$ L50			YOY indices		Adult index	Relative <i>F</i>
	P195 June	P915 July-Sept	SEAMAP Summer	P195 Sept	SEAMAP Fall	SEAMAP Summer	
2015	0.53	0.98	0.56	7.81	325.06	24.56	12,124
2016	<b>0.36</b>	0.95	<b>0.34</b>	<b>1.88</b>	28.45	22.01	3,790
2017	0.50	0.95	0.68	3.75	26.23	10.84	2,468
2018	0.64	1.00	0.40	5.39	<b>6.60</b>	11.99	5,765
2019	0.53	0.97	0.45	5.45	32.91	34.22	6,417
2020	*	*	*	*	*	*	*
2021	*	1.00	*	*	32.60	*	*
2022	0.79	1.00	0.77	4.43	35.58	<b>8.95</b>	15,256
2023	0.47	1.00	0.73	5.31	<b>2.97</b>	<b>7.98</b>	<b>156,027</b>
2024	0.73	0.98	0.75	<b>1.60</b>	<b>1.30</b>	<b>1.50</b>	<b>1,009,650</b>
Threshold	< 0.39	< 0.65	< 0.39	< 3.48	< 17.73	< 10.36	>40,723

# Annual Trigger Analysis

## Internal (P195, P915)

- P195 June proportion of adults
  - Program ended, triggers will no longer be informative
- P195 September juvenile index
  - Program ended, triggers will no longer be informative
- P915 proportion of adults
  - Threshold is too conservative and will likely never trigger
  - Proportions are not informative without a sample size minimum

## External (SEAMAP)

- Spring abundance index used to calculate Relative  $F$ 
  - Sampling can extend into June when abundance tends to be lower
- Summer adult index
  - Sampling no longer occurs during the summer
- Summer proportion of adults
  - Sampling no longer occurs during the summer
- Fall juvenile index
  - Sampling no longer occurs in November, the month when abundance is highest

# *FMP Review*

- Review data to determine need for management changes
- Identify methods to monitor and manage the stock
- Remove or replace triggers



# Questions?

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