



## *2023 Fishery Management Plan Annual Monitoring*

*DEPARTMENT OF ENVIRONMENTAL QUALITY*

Marine Fisheries

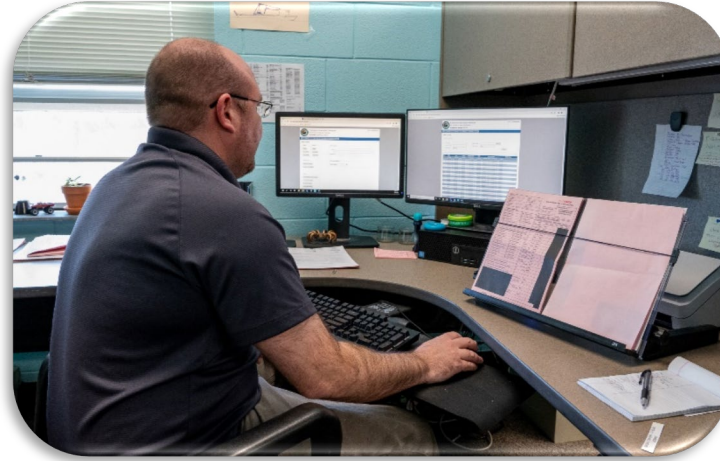
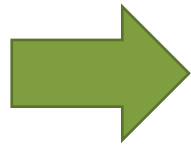
Marine Fisheries Commission | Brandi Salmon, Lee Paramore, and Steve Poland | August 2023



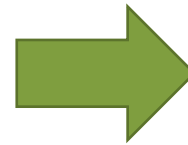
# *Fisheries Monitoring Flow*



Data Collection



Analysis and FMP Updates



Management



## *What Data Do We Collect?*

<b>Biotic Data</b> “Living”	<b>Abiotic Data</b> “Non-Living”
Lengths and Weights	Gear Types
Age - Otoliths (ear bones) and Scales	Water Temperatures and Samples
Sex	Socioeconomics
Genetics	Fishing Effort
Diet	Habitat



## *How Do We Collect The Data?*

### Dependent

- Trip Ticket Program
- Quota Monitoring Program
- Fish House Sampling
- MRIP
- Fisheries Economics Program
- Observer Program
- Tagging Program

### Independent

- Pamlico Sound Survey
- Juvenile Trawl Survey
- Independent Gillnet Survey
- Red Drum Longline Survey



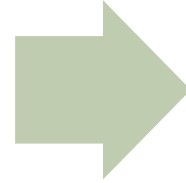
# Data Processing and Storage



Enter  
Data



QA/QC  
Data



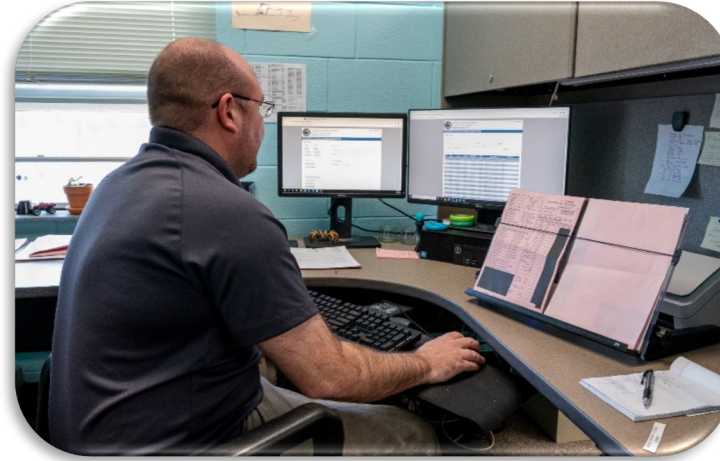
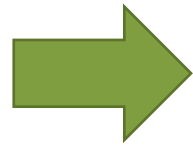
Store  
Data



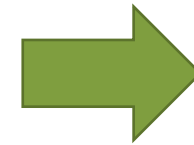
# *Analysis and Annual FMP Review Fisheries Monitoring Flow*



Data Collection



Analysis and FMP Updates



Management



## *Analysis and Annual FMP Review*

Each year, data compiled by DMF informs our annual FMP Review.

Individual reports done for:

- 13 state-managed species or species groups
- 21 ASMFC or federal species or species groups

For each species or species group:

- Summarize data annually for each report
- Update and review trends in data
- Draft updated report
- Review and assess management based on data



# Where can I find the Annual FMP Review?



About > Divisions > Marine Fisheries > Managing the Fisheries > Fishery Management Plans

## Fishery Management Plans

[2022 FMP Review \(August 2023\)](#)

[State-Managed Species](#)

[Interjurisdictional Species](#)

The North Carolina Fisheries Reform Act of 1997 requires the North Carolina Division of Marine Fisheries prepare fishery management plans for adoption by the North Carolina Marine Fisheries Commission for all commercially and recreationally significant species or fisheries that comprise state marine or estuarine resources. The goal of these plans is to ensure long-term viability of the fisheries.

### [Managing the Fisheries](#)

[Fisheries Management and You](#)

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## *What is included in FMP Review?*

**North Carolina  
Division of Marine Fisheries  
2022 Fishery Management Plan  
Review**

**August 2023**



- Presented during August MFC meeting
- Available on the website
- For each species:
  - History of the plan;
  - Management unit;
  - Goal and objectives;
  - Description of the stock;
  - Description of the fishery;
  - Monitoring program data;
  - Research needs;
  - Management strategy; and
  - Recommendation for next FMP Review



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## Fishery Management Plans



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# *Where can I find the Annual FMP Review?*

## **State-Managed Species**

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**Bay Scallop**



**Blue Crab**



**Eastern Oyster**



**Estuarine Striped Bass**



**Hard Clam**



**Kingfishes**



# *Where can I find the Annual FMP Review?*

**Red Drum**



**River Herring**



**Sheepshead**



**Shrimp**



**Southern Flounder**



**Spotted Seatrout - FMP under review**



**Striped Mullet - FMP under review**



# *Spotted Seatrout FMP Update example*



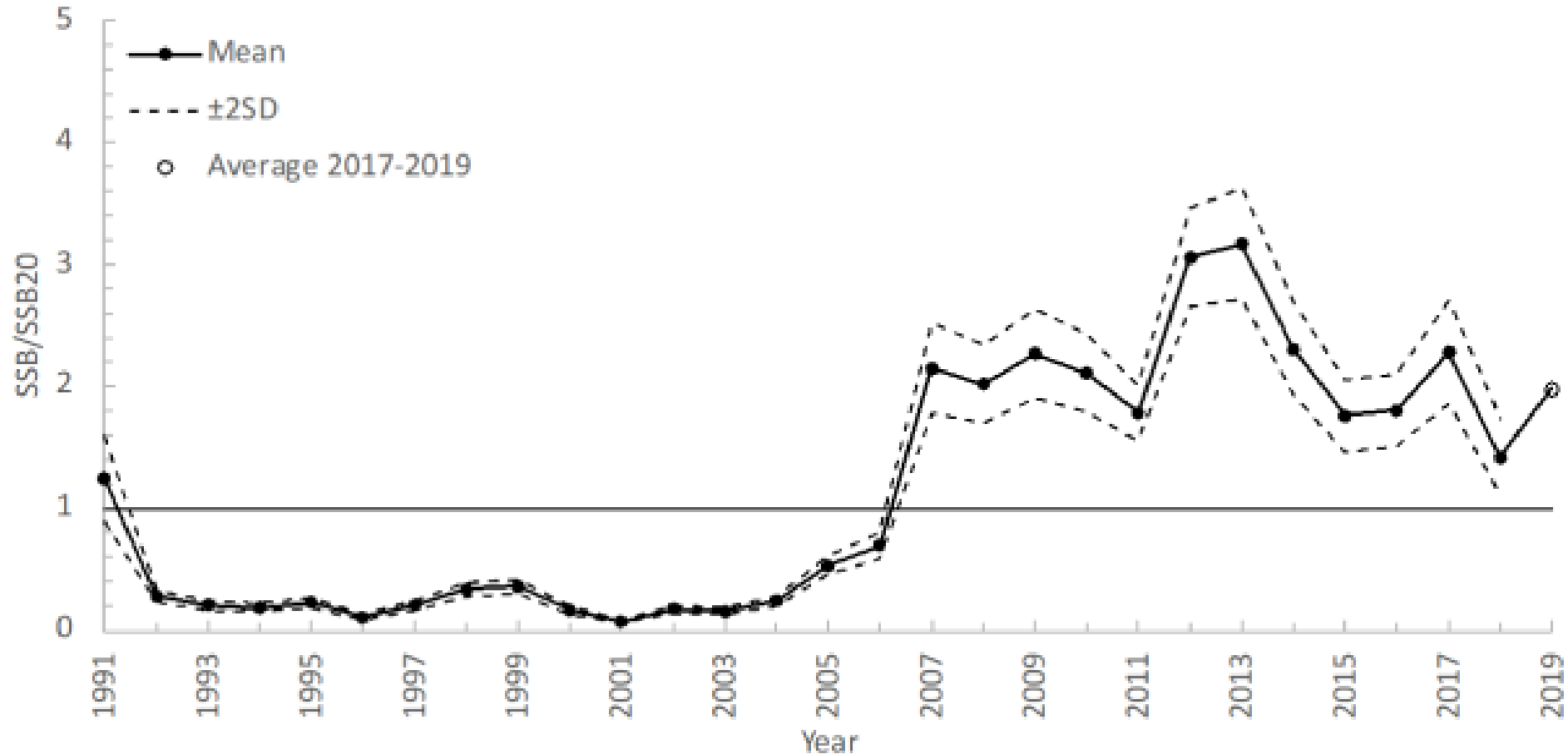
## Spotted Seatrout Annual Update

The 2022 stock assessment indicated that the spotted seatrout stock in North Carolina and Virginia was not overfished but that overfishing was occurring in the terminal year (2019). The assessment passed peer review and was accepted for management use. Additionally, recreational and commercial landings since 2020 have remained above average. Review of the fishery management plan began in November 2022 and management options will focus on ending overfishing and ensuring sustainable harvest. For more information, contact Lucas Pensinger at [Lucas.Pensinger@deq.nc.gov](mailto:Lucas.Pensinger@deq.nc.gov) or Melinda Lambert at [Melinda.Lambert@deq.nc.gov](mailto:Melinda.Lambert@deq.nc.gov).



# Spotted Seatrout FMP Update example

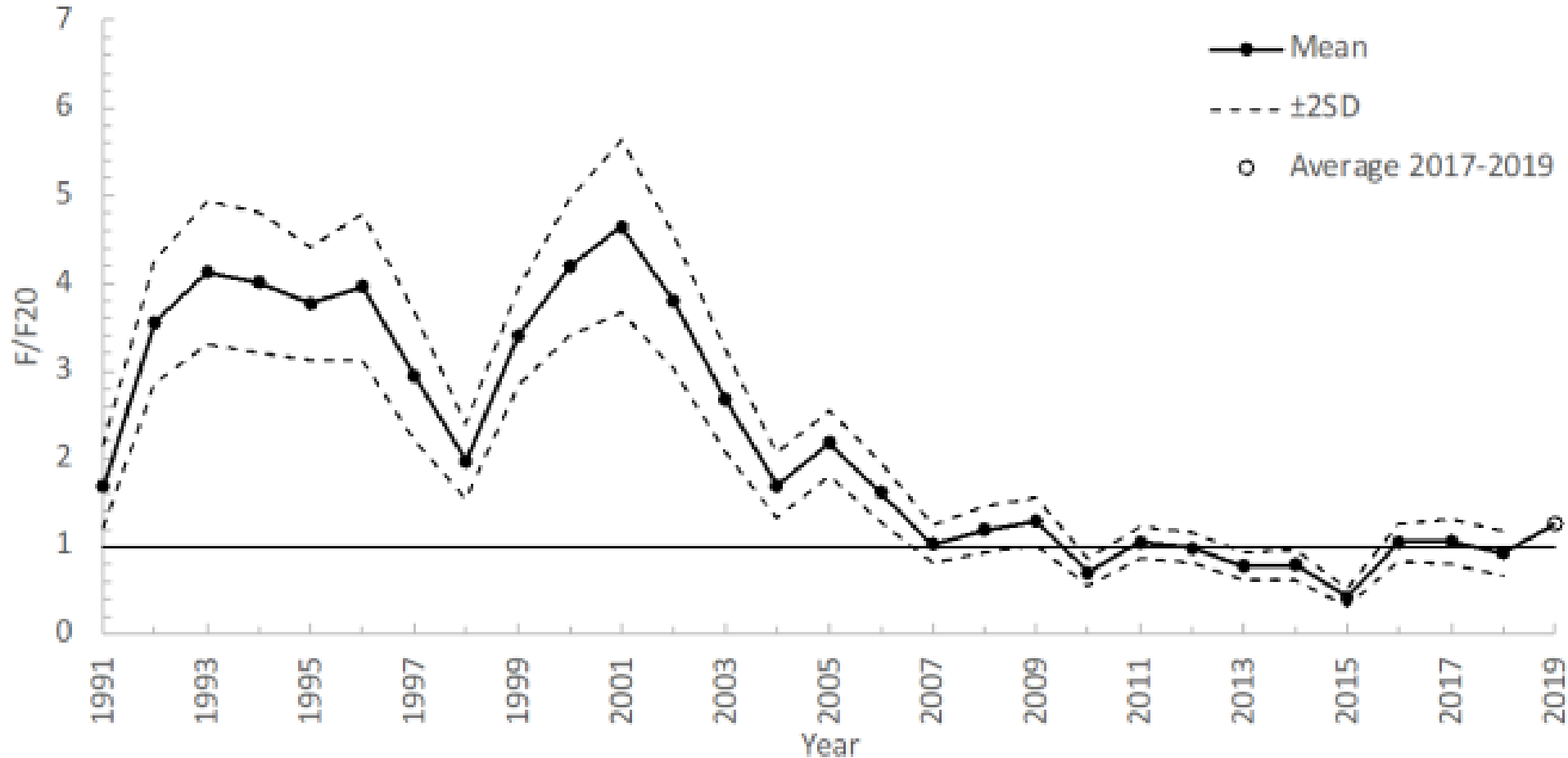
## Spawning Stock Biomass Status – Not Overfished



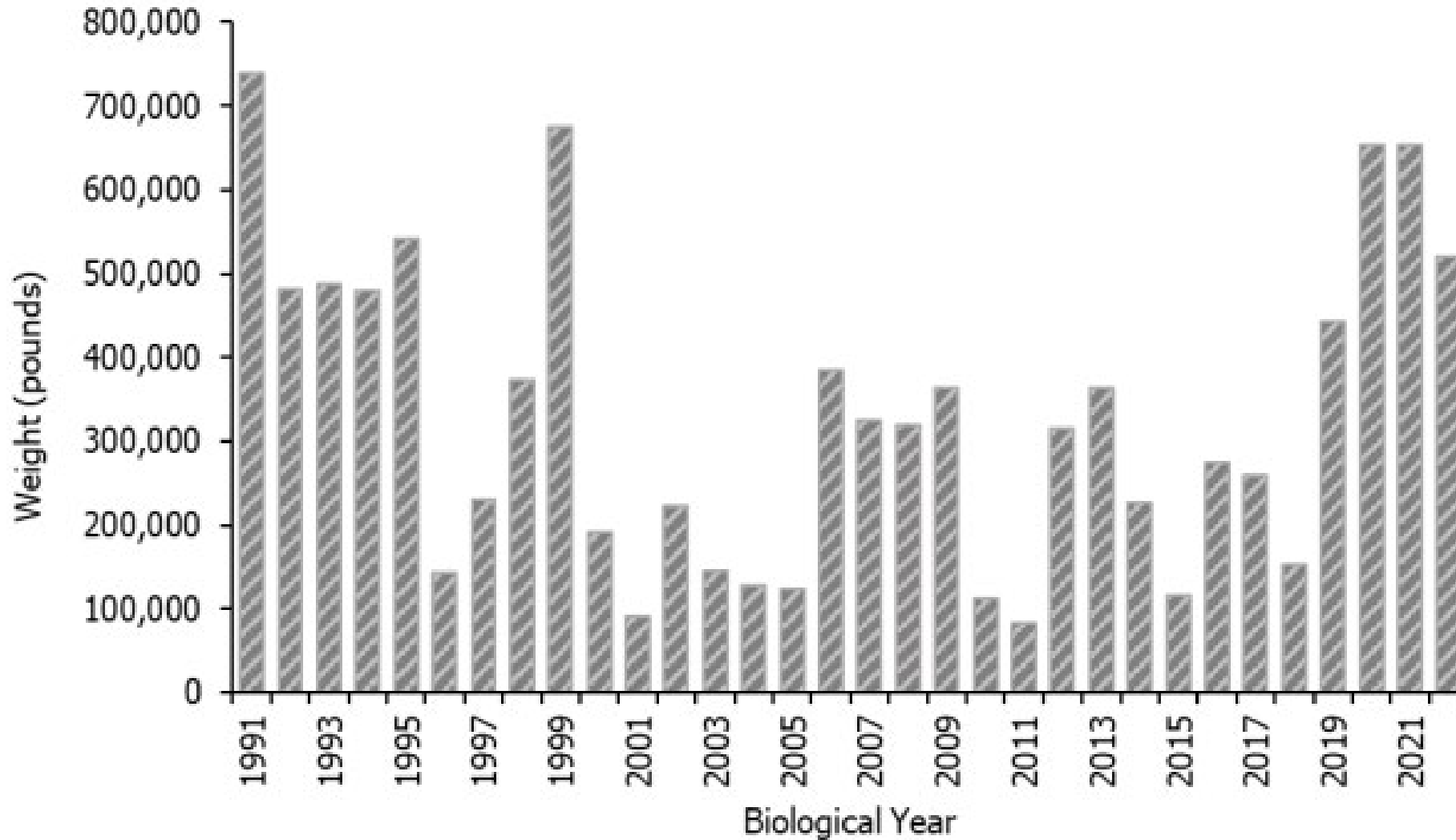


# Spotted Seatrout FMP Update example

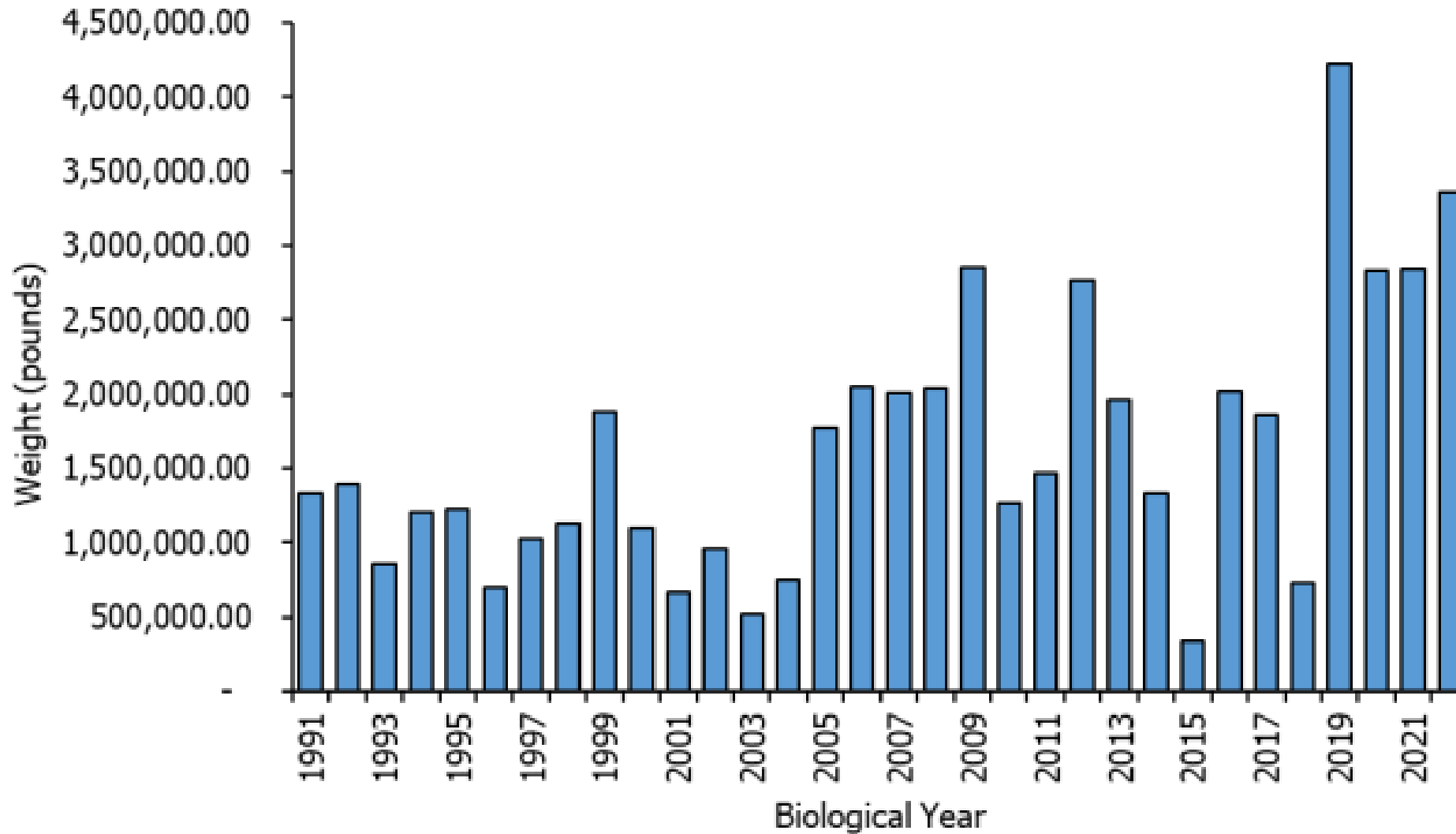
## Fishing Mortality Stock Status – Overfishing in Terminal Year



# *Spotted Seatrout FMP Update example Annual Commercial Landings, 1991–2022*

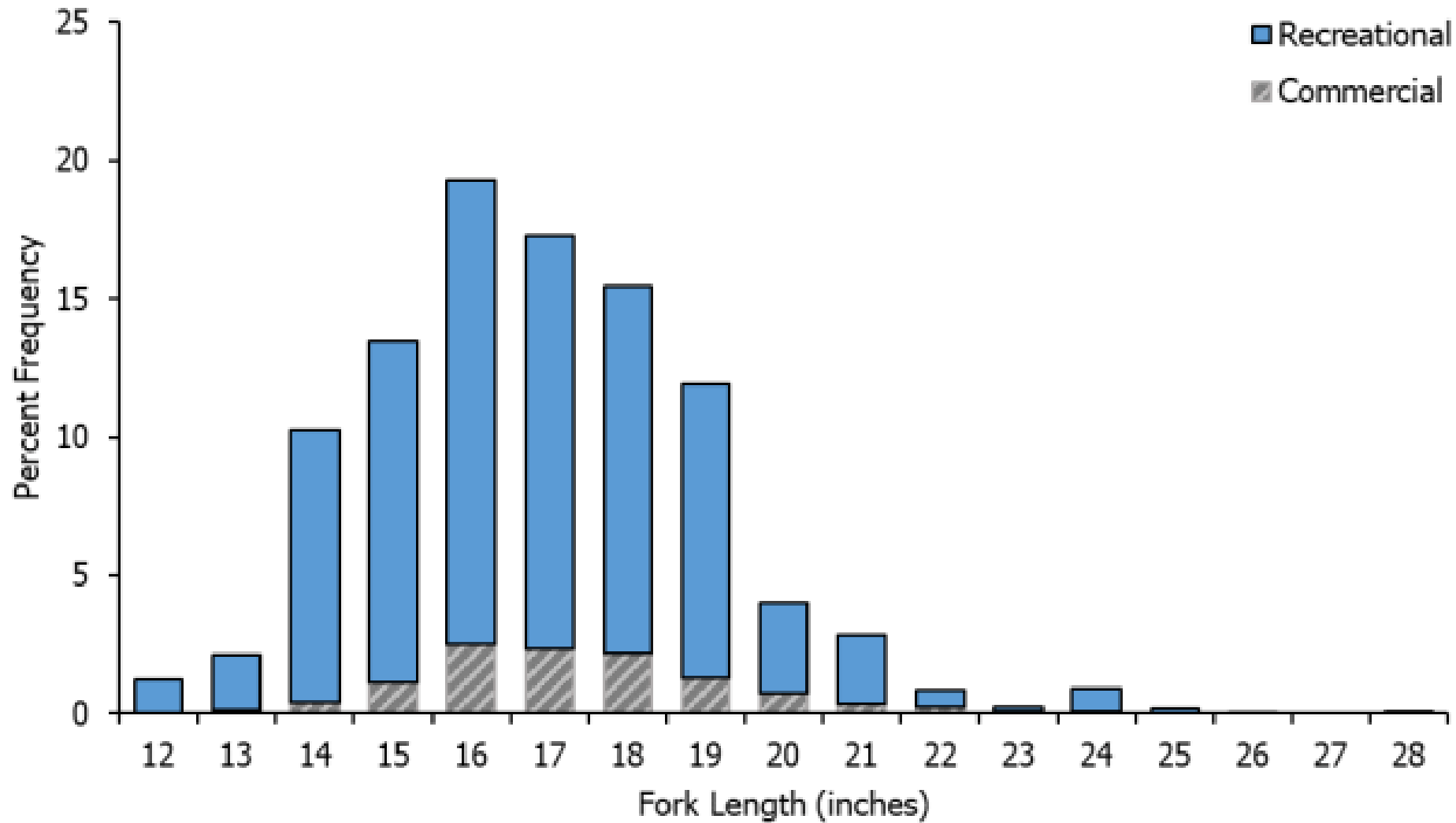


# *Spotted Seatrout FMP Update example Annual Recreational Landings, 1991–2022*



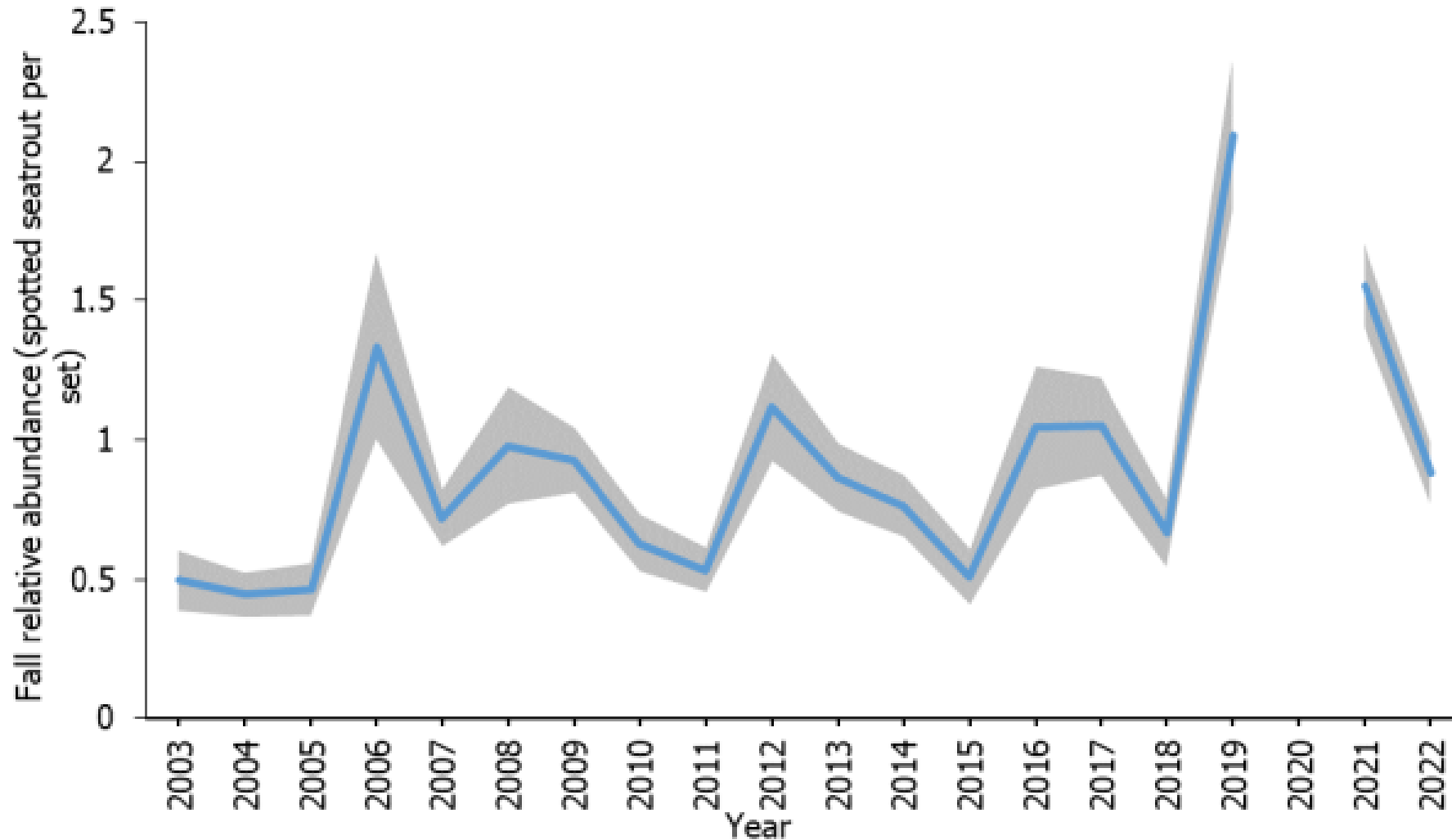
# *Spotted Seatrout FMP Update example*

## *Length Composition of Harvest for 2022*

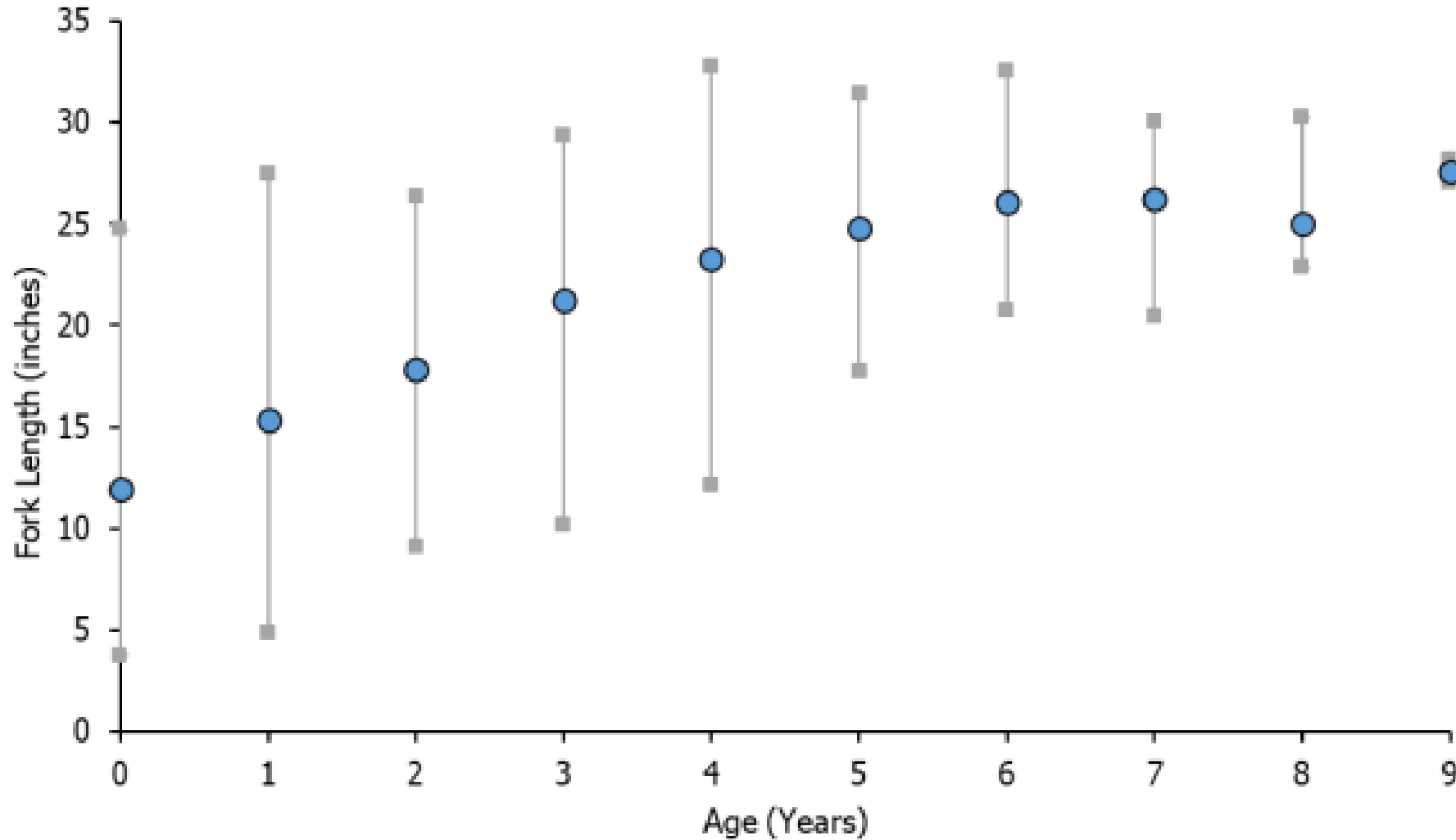


# *Spotted Seatrout FMP Update example*

## *Fall Index of Abundance from the Independent Gill Net Survey*

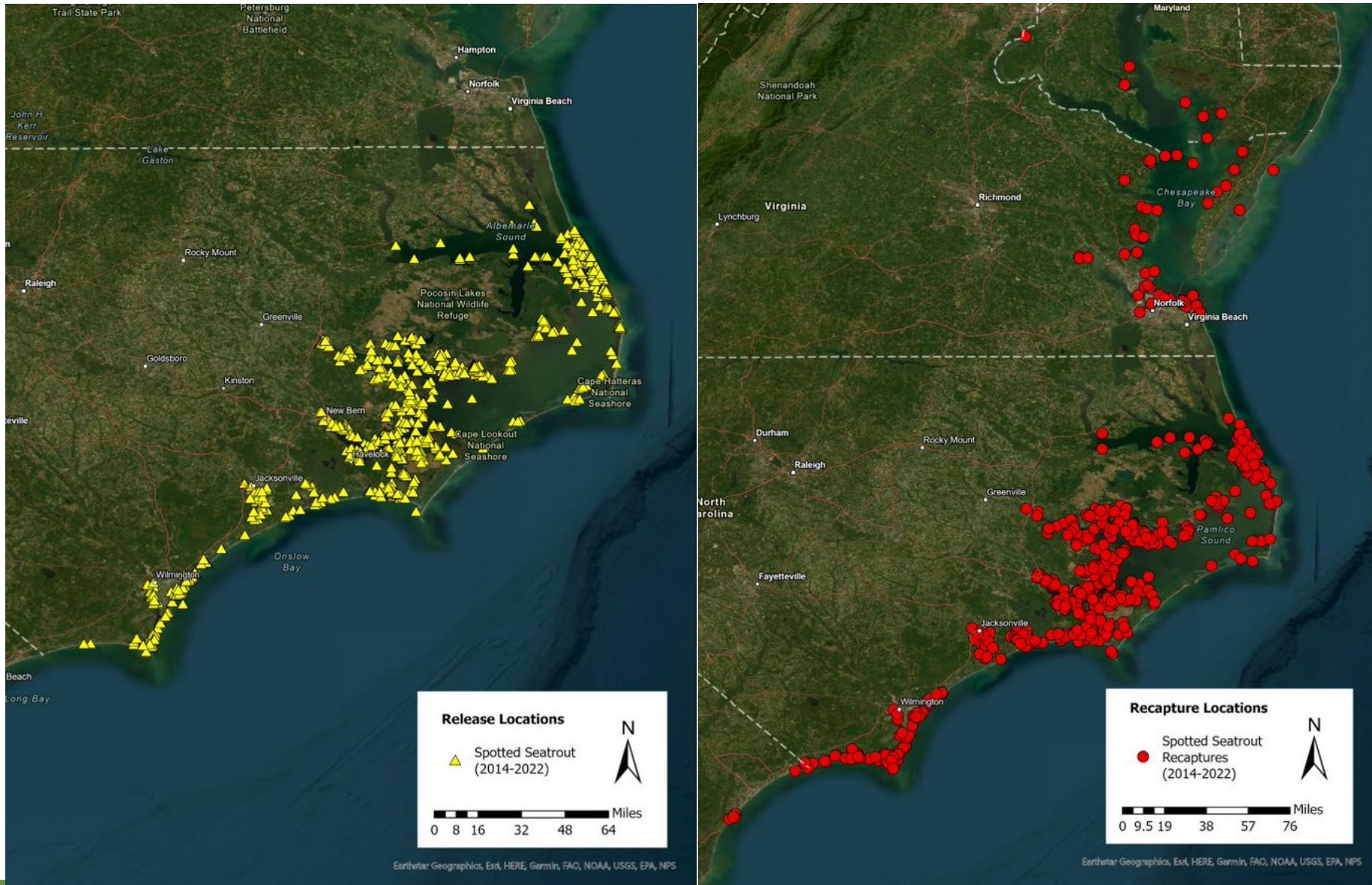


# *Spotted Seatrout FMP Update example Age and Growth*



# Spotted Seatrout FMP Update example

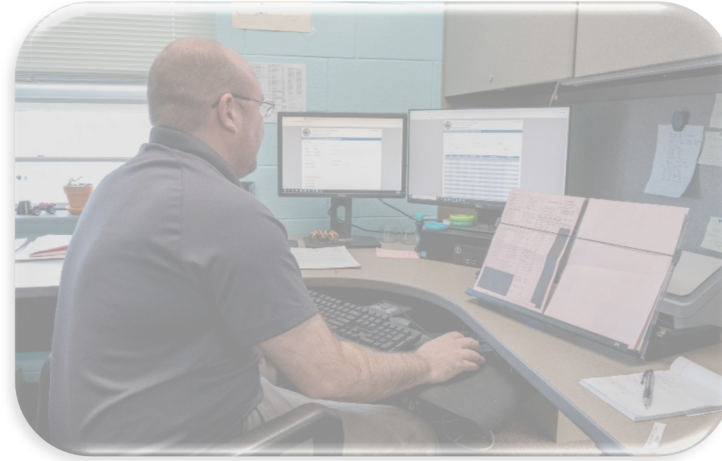
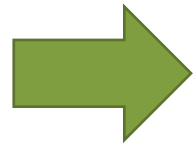
## Tagging Data



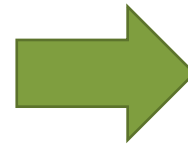
# *Fisheries Monitoring Flow*



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## *Management Updates*



- FMP reviews provide MFC and public a comprehensive 'snapshot' of the fishery
  - Landings and discards
  - Fishery monitoring data
  - Summary of management strategies



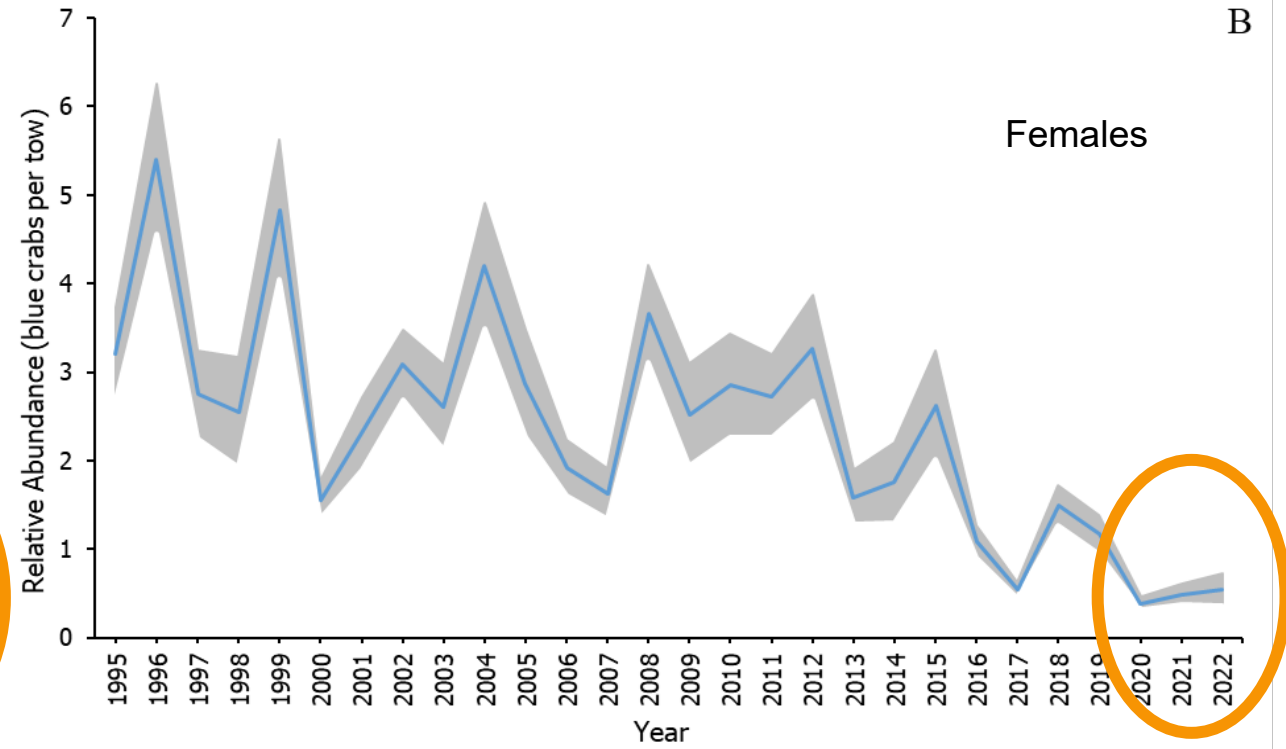
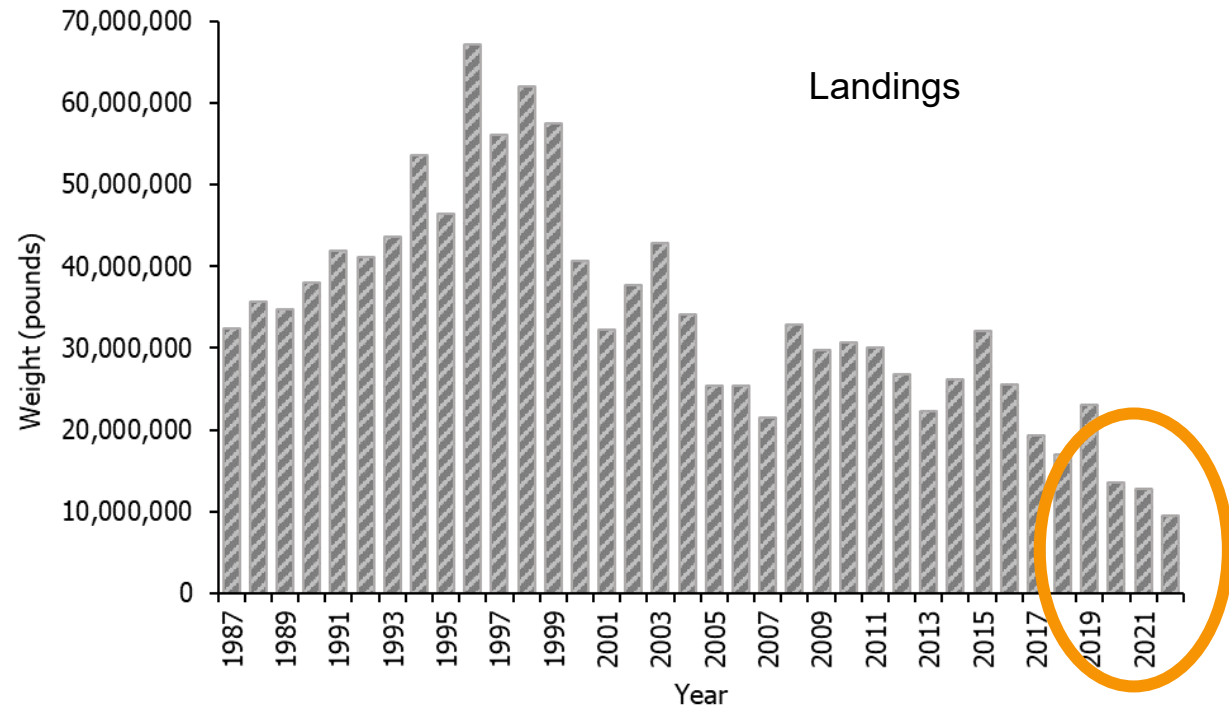
## *Management Updates*



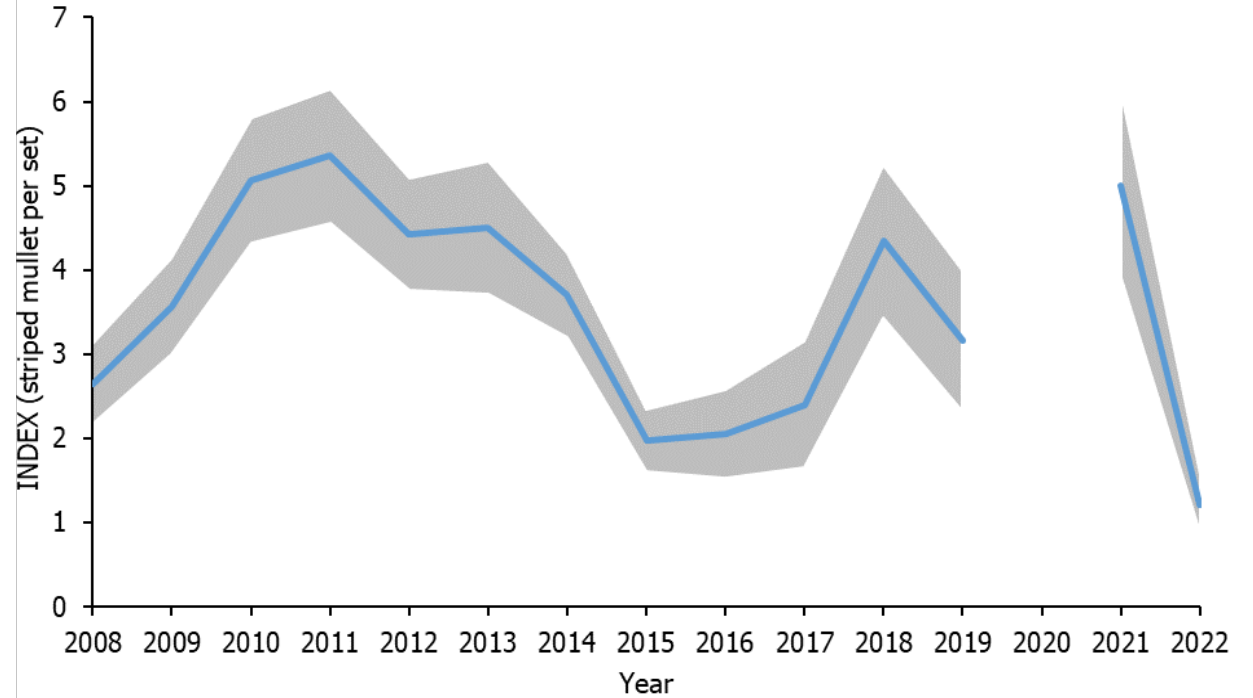
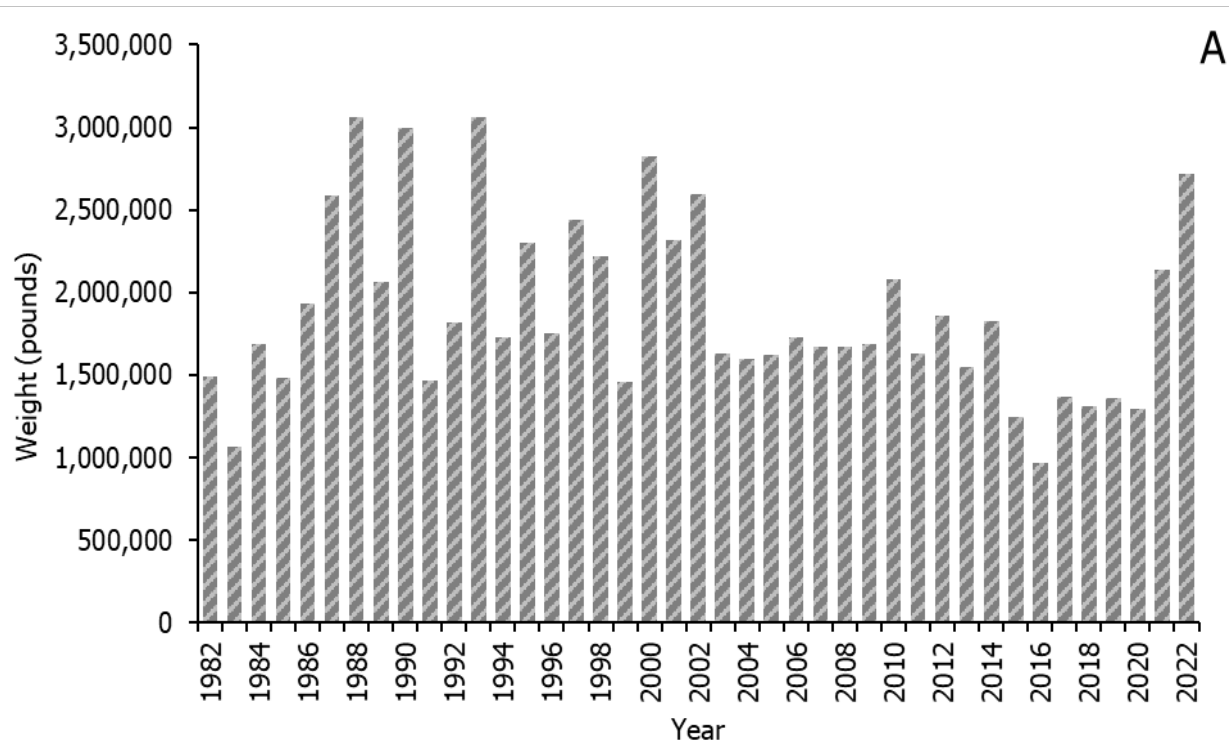
- Management may be adjusted for state managed species
  - Modifying stock assessment timing
  - Consider adjusting FMP review schedule
  - Adaptive management



# Management Updates: Blue Crab

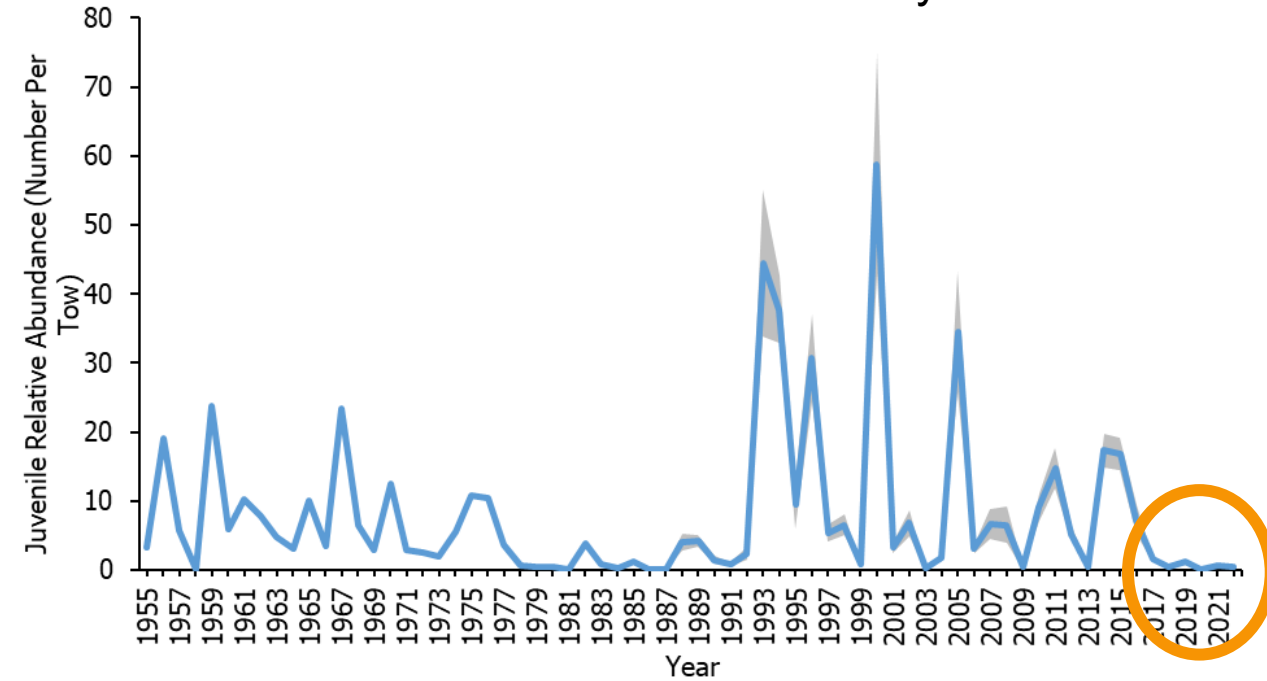


# Management Updates: Striped Mullet

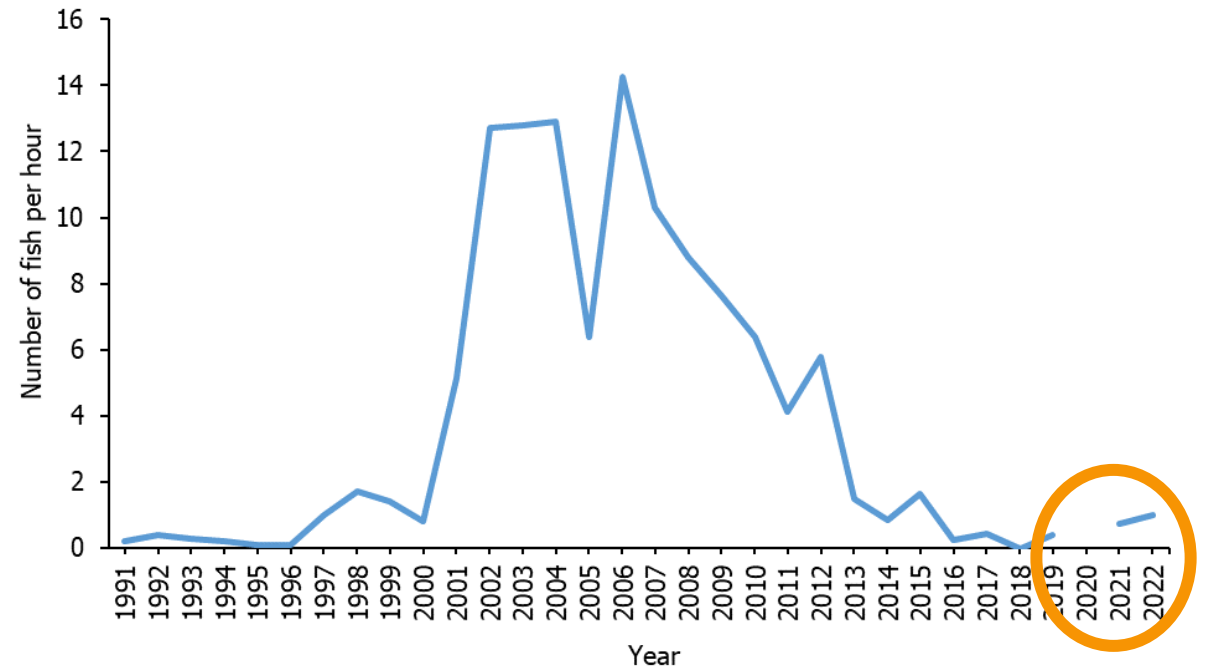


# Management Update: Albemarle/Roanoke River Striped Bass

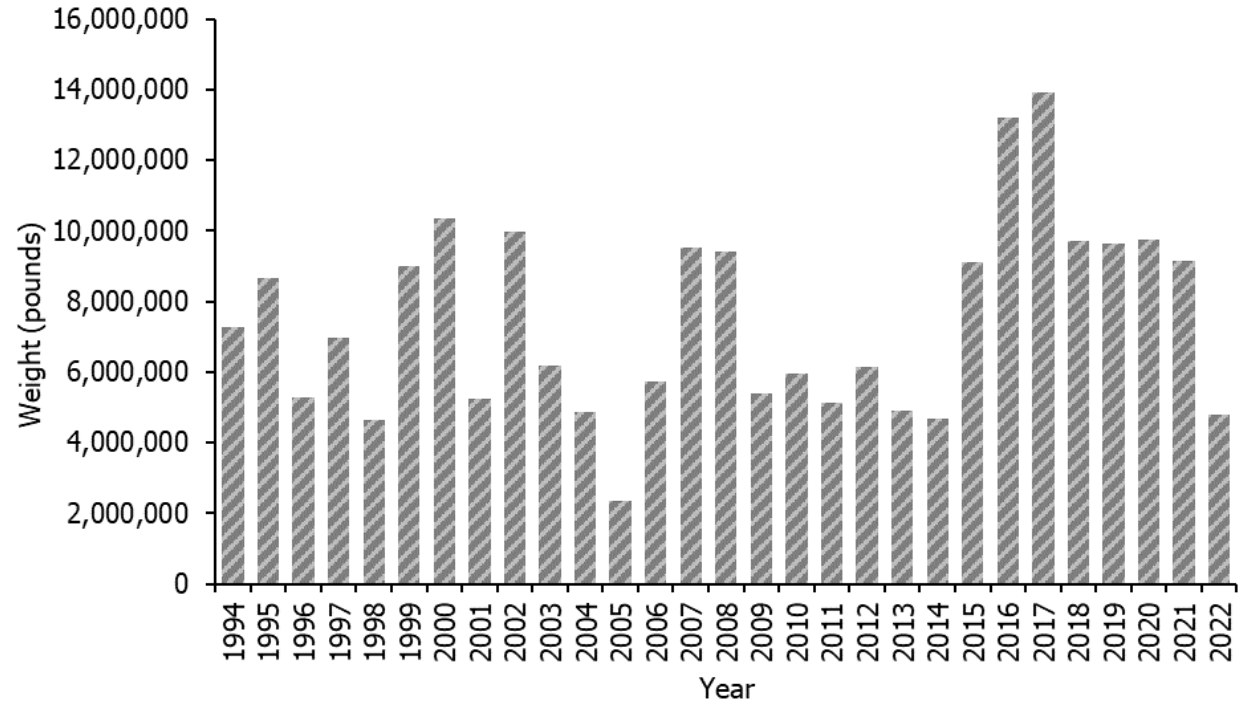
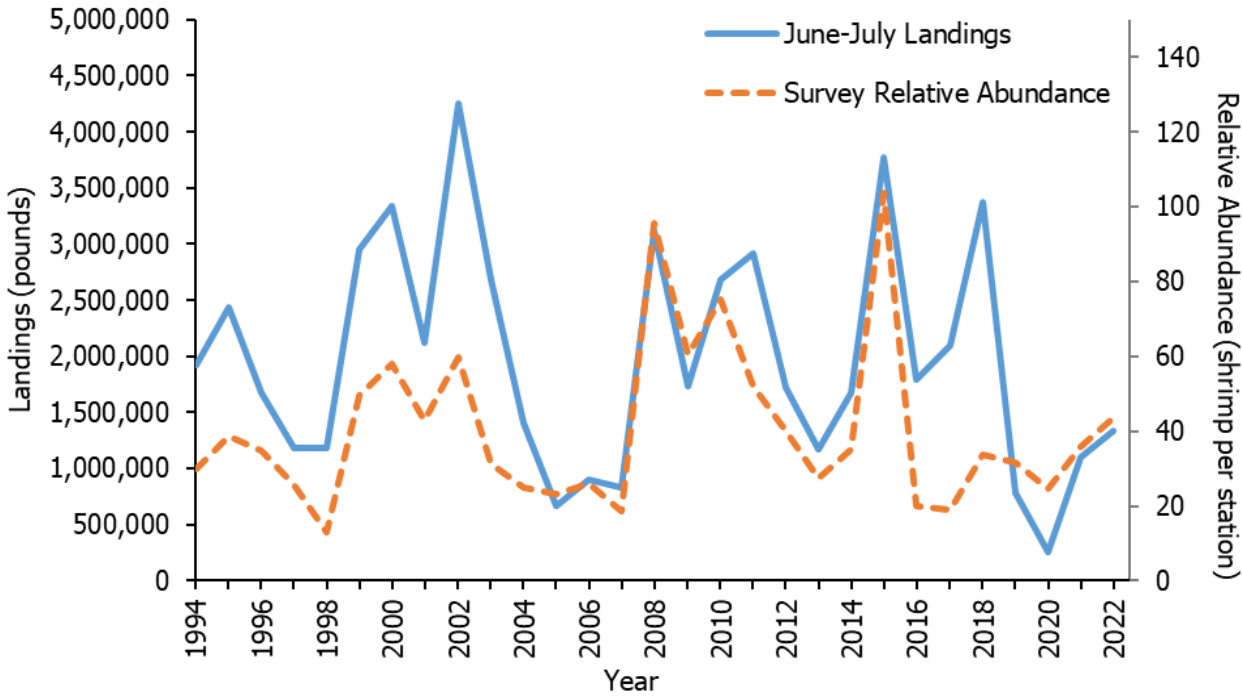
## Juvenile trawl survey



## Spawning grounds electrofishing survey



# Management Update: Shrimp





*Questions?*