

N.C. Wildlife Federation Petition for Rulemaking

N.C. Marine Fisheries Commission
Joint Advisory Committee Meeting

January 17, 2017



Overview

- Introduction of Petition, Blakely Hildebrand, Southern Environmental Law Center
- Policy Justification, David Knight, Policy Consultant, N.C. Wildlife Federation
- Technical Background, Jack Travelstead

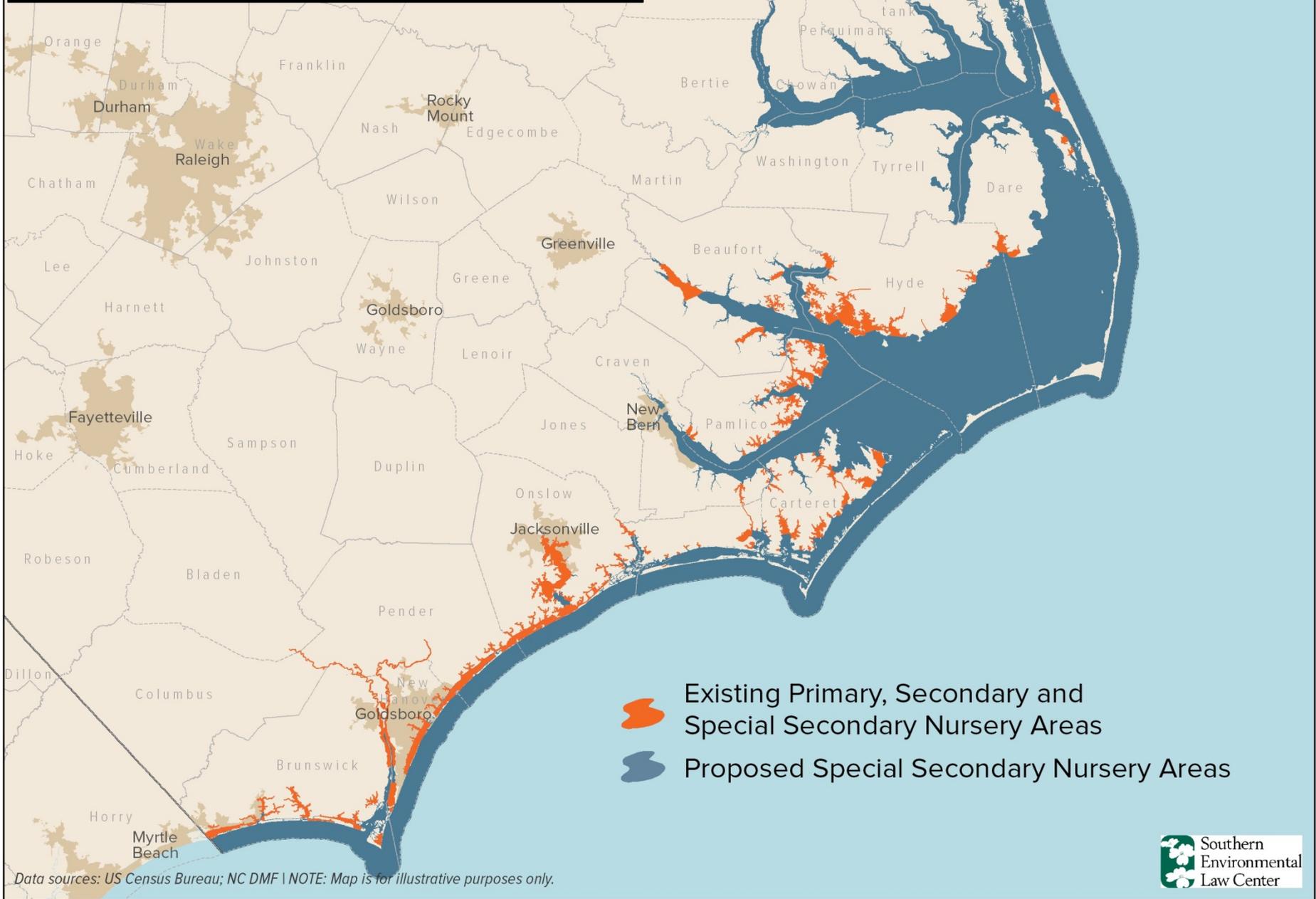
Goals of Petition

- Define, designate, and protect habitat for juvenile fish.
- Ensure that juvenile fish grow, thrive, and contribute to the adult population.
- Preserve North Carolina fisheries resources for all North Carolinians.
- Take concrete steps to achieve goals of the Fisheries Reform Act.
- Balance the needs of the commercial shrimping industry with the needs of the resource.
- Propose management measures that are based on DMF data and research.

Details of Petition

- All proposals apply to commercial and recreational fishing industries
- 1. Modifies the definition of secondary nursery areas to include “ocean waters”
 - 15A N.C. Admin. Code 3I.0101(4)(f)
- 2. Designates all inshore and near shore (0-3 miles) coastal fishing waters as SSNAs
 - 15A N.C. Admin. Code 3R.0105(13)

Existing and Proposed Nursery Areas in North Carolina Coastal Fishing Waters



Details of Petition (cont'd)

- 3. Implements management strategies in newly designated SSNAs open to trawling
 - Three days per week of trawling in inshore SSNAs, four days per week of trawling in ocean SSNAs
 - Daytime trawling only
 - Tow times limited to 45 minutes
 - 15A N.C. Admin. Code 3N.0105(c)
- 4. Provides clear guidelines to Fisheries Director for opening of shrimp season
 - 15A N.C. Admin. Code 3L.0101(b)

Details of Petition (cont'd)

- 5. Caps combined headrope length at 90 feet in inshore waters and 110 feet in ocean waters
 - 15A N.C. Admin. Code 3L.0103
- 6. Requires the use of two BRDs in all trawl nets used in coastal fishing waters
 - 15A N.C. Admin. Code 3L.0103
- 7. Implements 8 inch size limit for spot and 10 inch size limit for Atlantic croaker
 - 15A N.C. Admin. Code 3M.0522 (spot)
 - 15A N.C. Admin. Code 3M.0523 (Atlantic croaker)

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David Knight, Policy Consultant, N.C.
Wildlife Federation



Impetus for Petition

- NC is the only state on east coast to allow trawlers in internal, estuarine waters
- NC has the weakest shrimp trawl regulations on the east coast
- Stocks are in decline and important habitat areas have been left unprotected
- Shrimp trawls are by far the largest source of bycatch in NC waters
- Goals of the Fisheries Reform Act and Coastal Habitat Protection Plan have not been realized

A Technical Review of a Proposal Submitted by the N.C. Wildlife Federation to Reduce Mortality of Juvenile Fishes in N.C.

Presented by Jack Travelstead



Primary Sources of Data and Science

- 31 reports reviewed
- Atlantic States Marine Fisheries Commission FMPs and Habitat Assessments
- NC Division of Marine Fisheries characterizations of state shrimp trawl fishery
- Alverson's global assessment of fisheries bycatch

Strategies

- Document the status of selected fish species
- Examine the magnitude of bycatch mortalities
- Understand the habitat needs
- Search for solutions that were science-based, balanced, and practical that minimized impacts to fishermen and the economy

Initial Compelling Factors

- Sustainable harvest depends on a reliable recruitment of juveniles into the adult population
- Bycatch mortality increases as fish move out of the current gear restricted nursery areas, defeating their purpose
- In October 2016, ASMFC unanimously recommended no trawling in Sciaenid HAPCs
- Prior to decline in late 1980s, spot, croaker, and weakfish were major components of NC's commercial and recreational fisheries
- Commercial: 37.6 million lbs (1981) → 2.3 million lbs (2015)
- Recreational: 5.3 million lbs (1981) → 1.6 million lbs (2015)

Initial Compelling Factors

- When bycatch approaches or exceeds commercial directed removals, the likelihood of negative impacts is great. When most of the bycatch is juveniles, the problem is magnified.
- In 2014, shrimp trawl bycatch of spot, croaker, and weakfish was 15.6 million lbs—or 4 times the combined NC commercial and recreational harvest and approaching total coast wide harvest of 18.7 million lbs of these species.

Importance of Nursery Areas

- The majority of species encountered in Pamlico Sound are juveniles
- In NC DMF survey, 47 species of fish encountered--spot and croaker were in all strata, and weakfish were in all strata except Neuse River (Knight and Zapf 2015)
- All estuarine and near shore ocean waters function as secondary nursery areas; these areas have the physical conditions for development and provide essential habitat (soft organic bottoms, shell, oyster reefs, live bottom)
- Current nursery areas contain small fraction of important habitat areas in NC waters
- Only difference between currently designated nursery areas and the rest of the nursery is the size of the juveniles encountered

Protect all Estuarine and Near Coastal Waters

- Action is consistent with the recommendations of the NC Coastal Habitat Protection Plan
- In October 2016, ASMFC unanimously approved a report designating all estuaries as HAPCs for spot and croaker and advised that fishing gear having a negative impact on these habitats be prohibited
- A 2016 ASMFC study indicates that trawls impact sciaenid habitats by removing epifauna, altering bathymetry, and changing organism assemblages. These habitats take months to years to recover

Atlantic Croaker Fishery Status

- Commercial and recreational fisheries have declined significantly
- NC commercial landings amounted to 21.1 million lbs in 1980 and 1.8 million lbs in 2015
- In 1990, NC accounted for 22% of Atlantic harvest of croaker. In 2010, NC accounted for only 4%
- The fishery is consistently relying on juvenile fishes. In 2015, 90% of the fishery did not reach L100%

Atlantic Croaker Bycatch

- The dominant species in shrimp trawl bycatch
- NC DMF observed 388 observed trips, averaging 832 lbs of croaker per trip (Brown, 2012-2015)
- $32,388 \text{ total trips} \times 832 \text{ lbs/trip} = \text{estimated } 27 \text{ millions lbs of croaker}$
- Assuming 10-20 fish per pound = estimated 270-540 million croaker caught in trawls

Spot Fishery Status

- Also shows declining trend in abundance
- In 1980s, NC accounted for 50% of coast wide harvest
Today NC accounts for 14%
- In 2001, 3.0 million lbs of spot were harvested. In 2014, 760,000 pounds were harvested
- In 2015, 69% of recreational catch was less than L100%

Spot Bycatch

- Largest bycatch component for spot is the shrimp trawl fishery
- NC DMF observed 388 trips, averaging 284 lbs of spot per trip (Brown, 2012-2015)
- $32,388 \text{ total trips} \times 284 \text{ lbs/trip} = \text{estimated } 9.2 \text{ million lbs of spot}$
- Assuming 10-25 fish/lb = estimated 92-230 million spot caught in trawls

Weakfish Fishery Status

- The stock is depleted
- Age frequency truncated, only 5% of commercial harvest greater than age 4
- According to ASMFC (2016), only 0.01% of recreational harvest was at age 5+. In 1998, 46% of recreational harvest was at age 5+.
- According to NC DMF data, less than 5% of catch is age 4+ (NC MRIP).

Weakfish Bycatch

- NC DMF observed 388 trips, averaging 77 lbs of weakfish per trip (Brown 2012-2015)
- 32,388 total trips X 77 lbs/trip = estimated 2.5 million lbs
- Assuming 7-14 fish per pound = estimated 17-34 million weakfish caught in trawl nets
- At-net mortalities of 87%

Management Recommendations

- Most effective single strategy: closure of the shrimp trawl fishery in inshore and nearshore waters
- Balance conservation goals with current fishing practices to mitigate the effects of bycatch mortality
- Designate all inshore and ocean (0-3 miles) waters as special secondary nursery areas
- Delay opening of the shrimp season until count reaches 60 shrimp/pound, heads on, in Pamlico Sound
- Reduce combined headrope length from 220 feet to 90 feet in internal waters, cap headrope at 110 feet in the ocean waters
- Require the use of two BRDs on all shrimp trawls

Management Recommendations

- Limit tow times to 45 minutes in SSNAs
- Limit effort to 3 days/week in SSNAs in internal waters and 4 days for SSNAs in ocean waters
- Limit trawling to daylight hours in SSNAs
- Establish size limits for spot and croaker

Conclusions

- Only difference between current defined nursery areas and the rest of NC's estuaries is the size of the juvenile fishes present
- Protection of the juveniles throughout the system is necessary to allow them to contribute to the health of their stock by spawning at least once
- Spot, croaker, and weakfish were major components of NC's fisheries and can be again

Questions?