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*Department of Environmental Quality*

**APNEP Symposium**



# *SAV management in North Carolina: making a hidden habitat more visible*



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# *SAV management in North Carolina*

## **Department of Environmental Quality**

*“Protect and conserve marine, estuarine, freshwater resources”*

- **Division of Marine Fisheries** - fishing gear and habitat rules
- **Division of Coastal Management** - development rules
- **Division of Water Resources** - water quality standards, rules

**Coastal Habitat Protection Plan - Fisheries Reform Act**

**Albemarle Pamlico National Estuary Partnership -  
Comprehensive Conservation and Management Plan**

# *SAV management in North Carolina*

## **Marine Fisheries Commission**

- Recognized as critical fish habitat since 1980s
- Fishery rules to prevent damage from bottom disturbing – No Trawl Areas, Prohibited Mechanical Harvest Areas
- Revised SAV definition in rule to include area where SAV is present or documented to have occurred in past 10 years
- Protocol & window for SAV surveys for permit review
- SAV Policy



# *SAV management in North Carolina*

## **Marine Fisheries Commission SAV Policy - 2004**

- Mapping and monitoring
- Minimizing nutrient and sediment loading
- Protecting from bottom disturbing fishing gear
- Prevent impacts from development
- Assess cumulative impacts of land use on SAV
- Require compensatory mitigation where impacts unavoidable
- Outreach to public and boaters on SAV value

**SAFMC, ASMFC, and SAV Partnership – other SAV policies**



# *SAV management in North Carolina*

## **Coastal Resources Commission Rules**

- Dredging – no new dredging in SAV
- Dock Siting Rules – revised in 2009 to protect bottom habitat
  - Minimum water depth required for dock construction over SAV
  - Seasonal window for SAV survey
  - Piers and docks must be located to minimize SAV under them

## **Environmental Management Commission Rules**

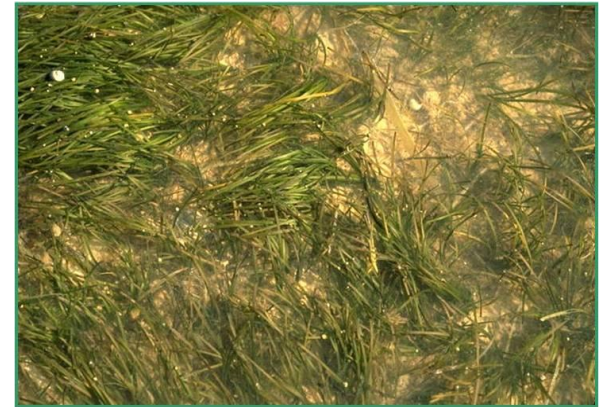
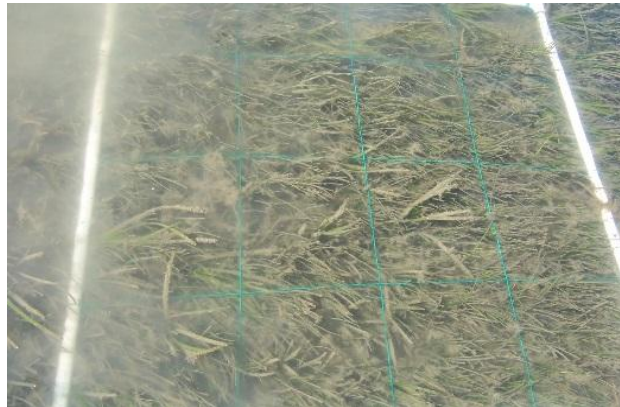
- Dredging – no new dredging in SAV
- Coastal Stormwater Rules - implemented in 2008
- Working on new nutrient criteria standards



# *SAV management in North Carolina*

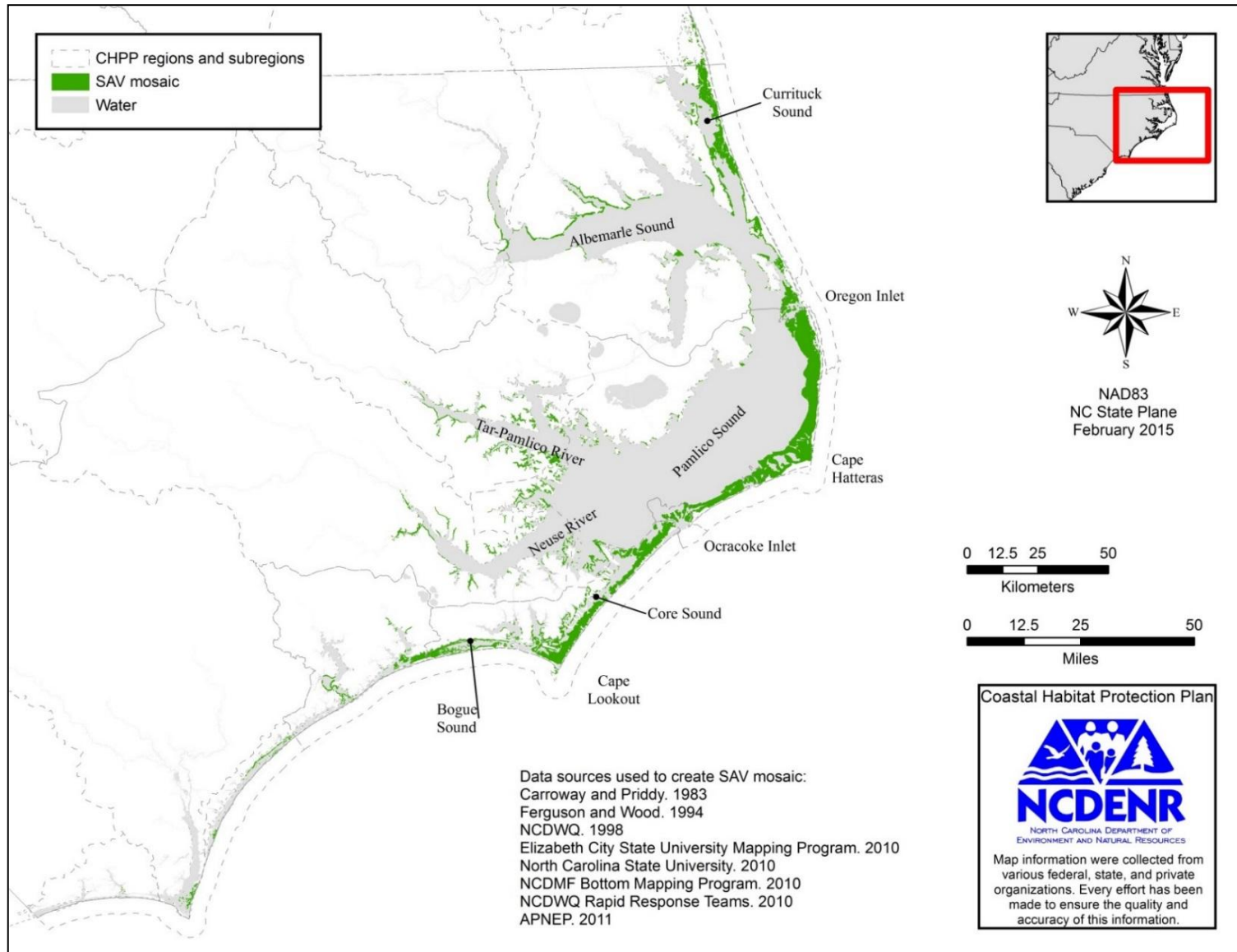
## Implementation Actions of Habitat Plans

- **CHPP**      **APNEP CCMP**      **SAV Partnership**
- Map SAV on 5 year cycles
- Develop sentinel sites and metrics to monitor annually
- Assess change in SAV distribution and abundance
- Assess invasive SAV in the APNEP region annually



# SAV management in North Carolina

## Mapping

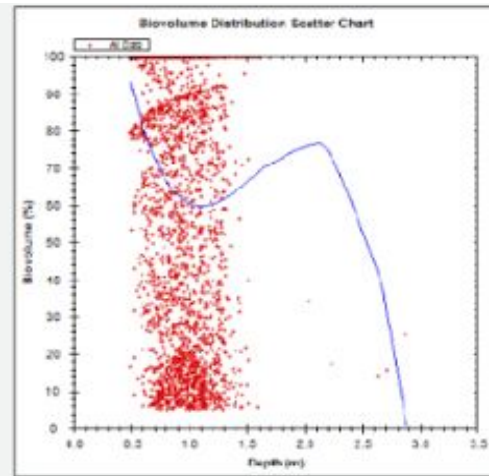




# *SAV management in North Carolina*


## Mapping and Assessment

- CRFL funded project to develop mapping protocol for the entire coast
  - High salinity grasses – aerial photography & field sampling
  - Low salinity grasses – sonar & drop camera
- CRFL funded research
  - Fish use in different SAV landscapes
  - Mapping and sentinel site development with sonar method
  - Mapping and sentinel site development south of Bogue Sound

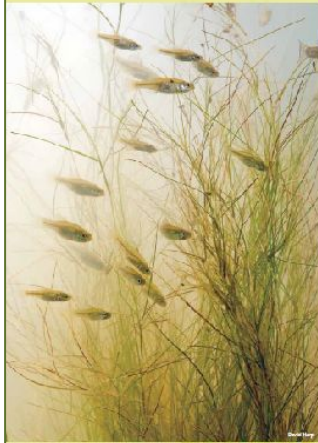


# SAV management in North Carolina

## Outreach



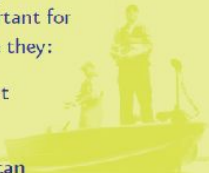
### HELP PROTECT AQUATIC GRASSES



**Have you ever noticed patches of underwater grass in the shallows?**

Those grasses are called submerged aquatic vegetation or SAV. SAVs occur in shallow protected waters and need light and calm water to grow. They are important for healthy water quality because they:



- help trap sediment that runs off from land
- absorb nutrients that can fuel algal blooms and
- deter fish kills with oxygen release.



**Seafood anyone?**

Aquatic grasses are an important nursery habitat for fish, providing food and cover for over 150 species of fish in our sounds and rivers, such as:

- red drum
- bay scallop
- shrimp
- hard clam
- spotted sea trout
- spot
- black sea bass
- flounder
- striped mullet
- river herring
- Atlantic croaker
- blue crab
- spot
- yellow perch




**SUBMERGED  
AQUATIC  
VEGETATION**

**How can you help protect aquatic grasses today?**

- **Stay off the grass!** Walking through grass beds damages roots.
- **Avoid boating over shallow grass beds.** Some dark patches may be oyster beds.
- **If you must boat in the shallows, trim your propeller up and slow down.**
- **Do not drop or drag your anchor through grass beds.**
- **Remove loose grass from the prop before trailering your boat.**

North Carolina has 138,000 acres of aquatic grass, and every acre is important. Find us on the web at [ncwildlife.org](http://ncwildlife.org) or scan the QR code.



 **Wildlife**  
Department of Environment and Natural Resources

Enjoy North Carolina's beautiful water resources responsibly near submerged aquatic vegetation and help save critical aquatic wildlife habitat.

# *SAV management in North Carolina*

## **Shellfish Aquaculture**



Until 2016, no leases can be sited if any SAV is present – 1 shoot = no lease.

Now, a low threshold of SAV present in lease investigation is allowed.  
Investigations must be done during the growing season (April – October)

In water depth  $\leq 5$  ft:

- 15% or less of the samples had SAV present
- SAV density within all samples was very sparse (10% or less)

In water depth  $> 5$  ft:

- 25% or less of the samples had SAV present
- SAV density within all samples was very sparse (10% or less)



*SAV management in North Carolina:  
striving to making a hidden habitat more visible*

