



# NC Coastal Habitat Protection Plan Update

*DEPARTMENT OF ENVIRONMENTAL QUALITY*

Marine Fisheries

Marine Fisheries Commission | Anne Deaton | November 15<sup>th</sup>, 2019



# *Coastal Habitat Protection Plan (CHPP)*

## *Origin and Purpose*

### **G.S. 143B-279.8 - Fisheries Reform Act of 1997**

- Required Department of Environmental Quality (DEQ) to draft the plan
- Required the Environmental Management (EMC), Coastal Resources (CRC), and Marine Fisheries (MFC) commissions to approve and implement recommendations

### **Purpose**

- Long-term enhancement of coastal fisheries by addressing habitat and water quality needs of fishery species





# *Coastal Habitat Protection Plan (CHPP)*

## *Origin and Purpose*

### **Plan Components**

- Shall recommend actions to protect and restore the fish habitats
- The Coastal Resources Commission, Environmental Management Commission, and Marine Fisheries Commission shall adopt rules to implement Coastal Habitat Protection Plans
- The three commissions shall review and revise the at least once every five years

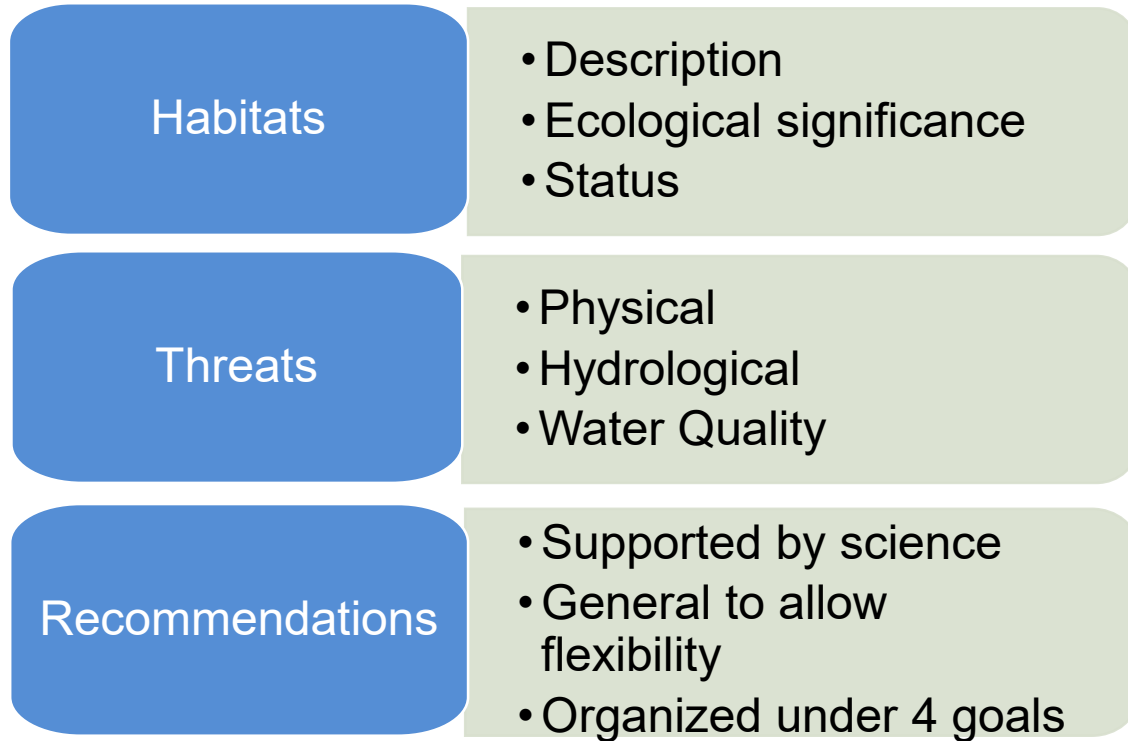


# Coastal Habitat Protection Plan

## What Is It?

Summarizes the latest science to aid Department divisions and commissions in management of fish habitat and water quality.

### Coastal Habitat Protection Plan



### Implementation Plans (for CHPP recommendations)

- Developed by DEQ staff
- Two year plans
- Reviewed by the CHPP Steering Committee
- Adopted by the commissions



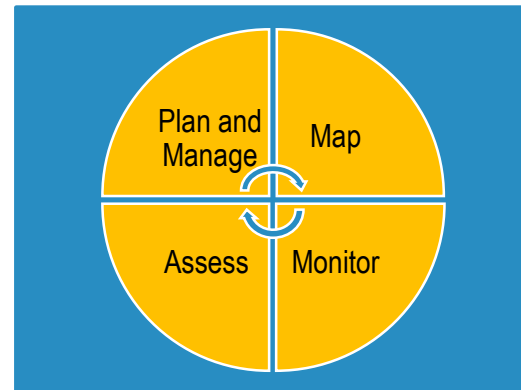
# *Status of 2016 Habitat Priorities – Coastal Habitat Protection Plan Implementation*



Oyster Restoration



Living Shorelines



Developing Metrics



Sedimentation



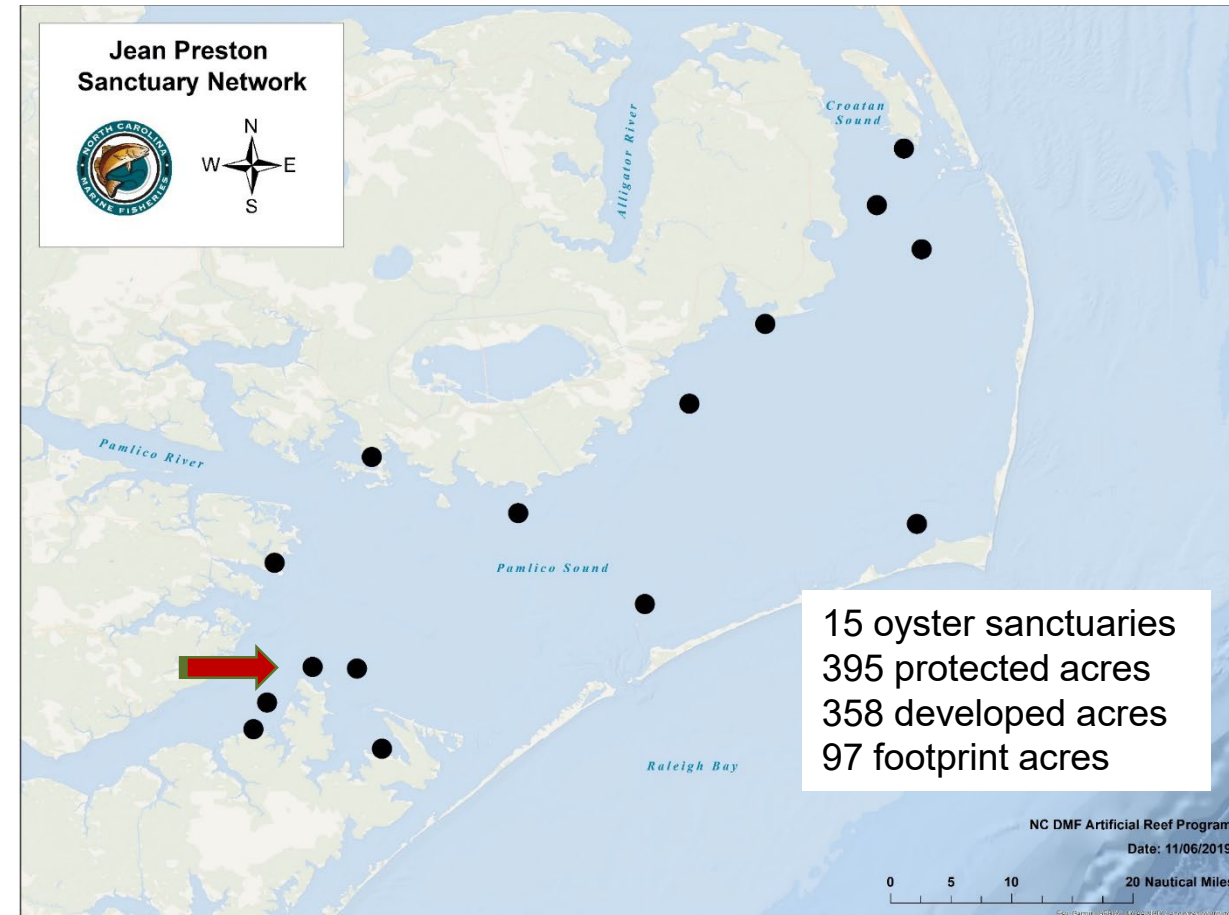
# Status of 2016 Habitat Priorities – Oyster Restoration

## No Harvest Sanctuaries

- **Objective:** supply viable larvae
- **Design:**
  - Large areas - ~40 acres each
  - High relief habitat – 2-6' high; ridges, mounds
  - Large aggregate rock (5-12"), reef balls, crushed concrete and pipe

## Cultch Planting

- **Objective:** enhance shellfish harvest
- **Design:**
  - Small sites (~3 acres/site; ~17 sites/year)
  - Low relief
  - Shell and limestone marl
  - 2017-19: 207,000-333,000 bushels/year



### Swan Island Sanctuary: 40 acres developed

2017: 19 acres - 30,600 tons of limestone marl (~12")

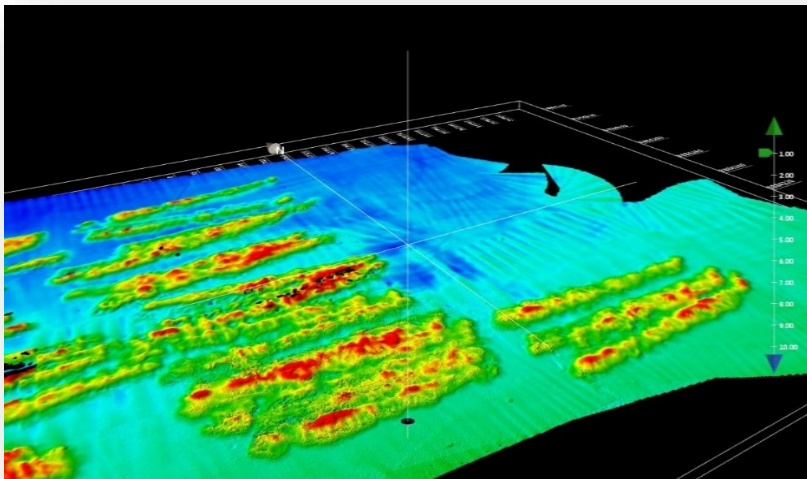
2018: 10 acres - 25,000 tons granite riprap (~5")

2019: 11 acres - 25,000 tons limestone marl (~12")

# *Status of 2016 Habitat Priorities – Oyster Restoration*

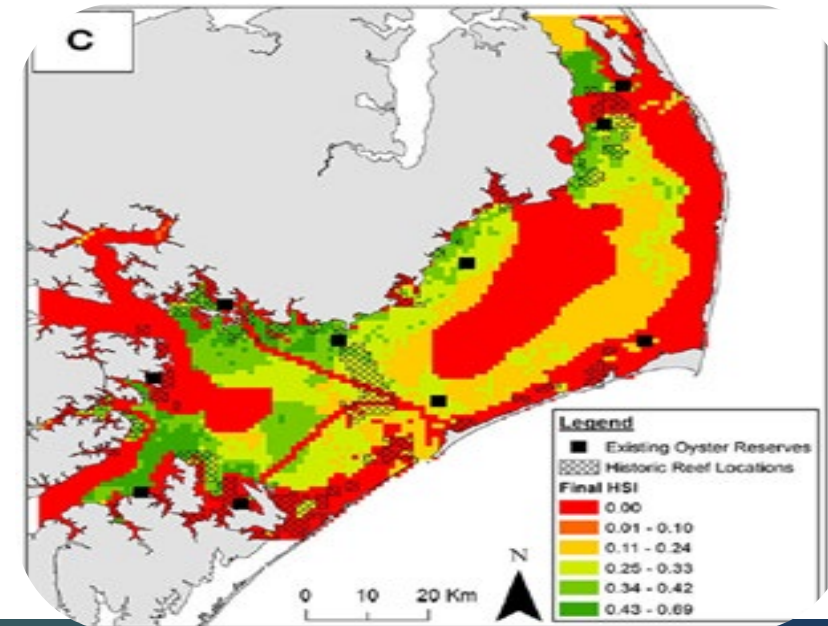
## **MONITORING**

- Cultch sites - spatfall and environmental monitoring
- Sanctuary monitoring – maps, length frequency of oysters, environmental data
- Sidescan of subtidal bottom
- Analysis of spatial/temporal trends and substrate comparison



## **SITING TOOLS**

- Habitat Suitability Index (NCSU)
- Long-term reef monitoring - oyster, water quality, pest data
- Division habitat maps
- Historical maps



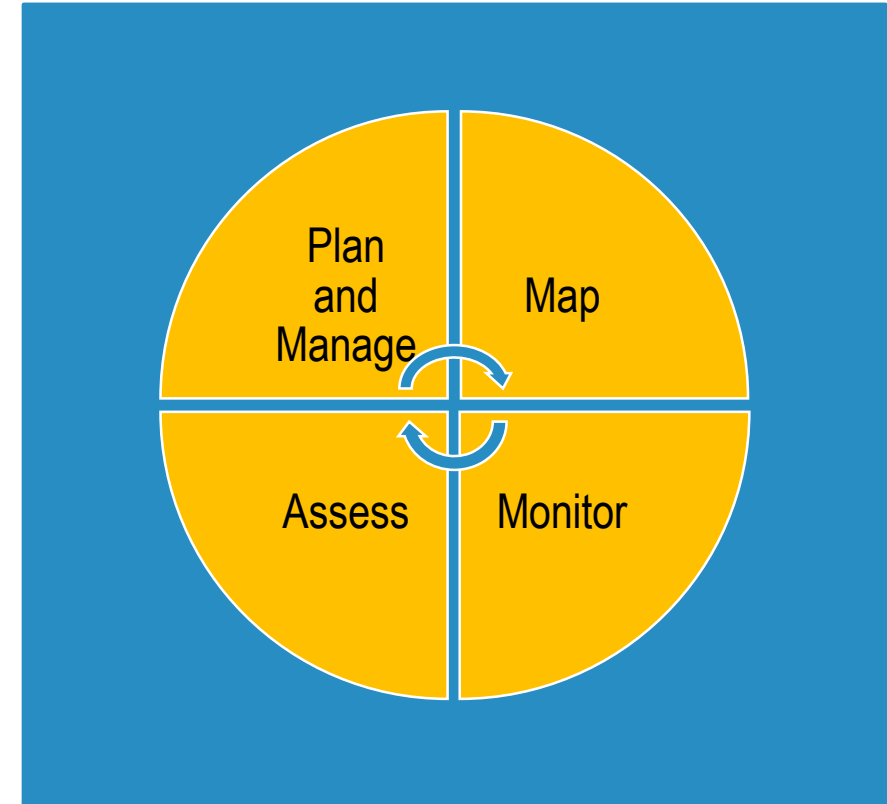
# *Status of 2016 Habitat Priorities – Developing Habitat Metrics*

## **Shell bottom**

- Intertidal oyster sampling protocol being developed
- Drone technology for mapping intertidal
- Side scan mapping of subtidal oyster
- Purpose: 1) assess habitat extent and condition; 2) data for oyster stock assessment and managing wild harvest

## **Submerged Aquatic Vegetation (SAV)**

- APNEP SAV Team developing monitoring protocols
- Coastwide imagery acquired from NC Department of Transportation (DOT)
- Field groundtruthing data collected in summer 2019
- Photo-interpretation beginning this month
- DEQ provided substantial funds to support SAV mapping





# *Status of 2016 Habitat Priorities – Living Shorelines*

- Monitoring – habitat value, durability, and performance across other shoreline types and during hurricanes
- Simplified General Permit effective March 2019
- Outreach with realtors, contractors, and homeowners - NC Coastal Reserve
- Research on effectiveness of biodegradable materials
- Living Shorelines Steering Committee - to advance use of living shorelines. Co- led by APNEP and NC Coastal Federation



# *2021 Coastal Habitat Protection Plan*

## *Proposed Priority Issues*

**To improve effectiveness, the 2021 revision will:**

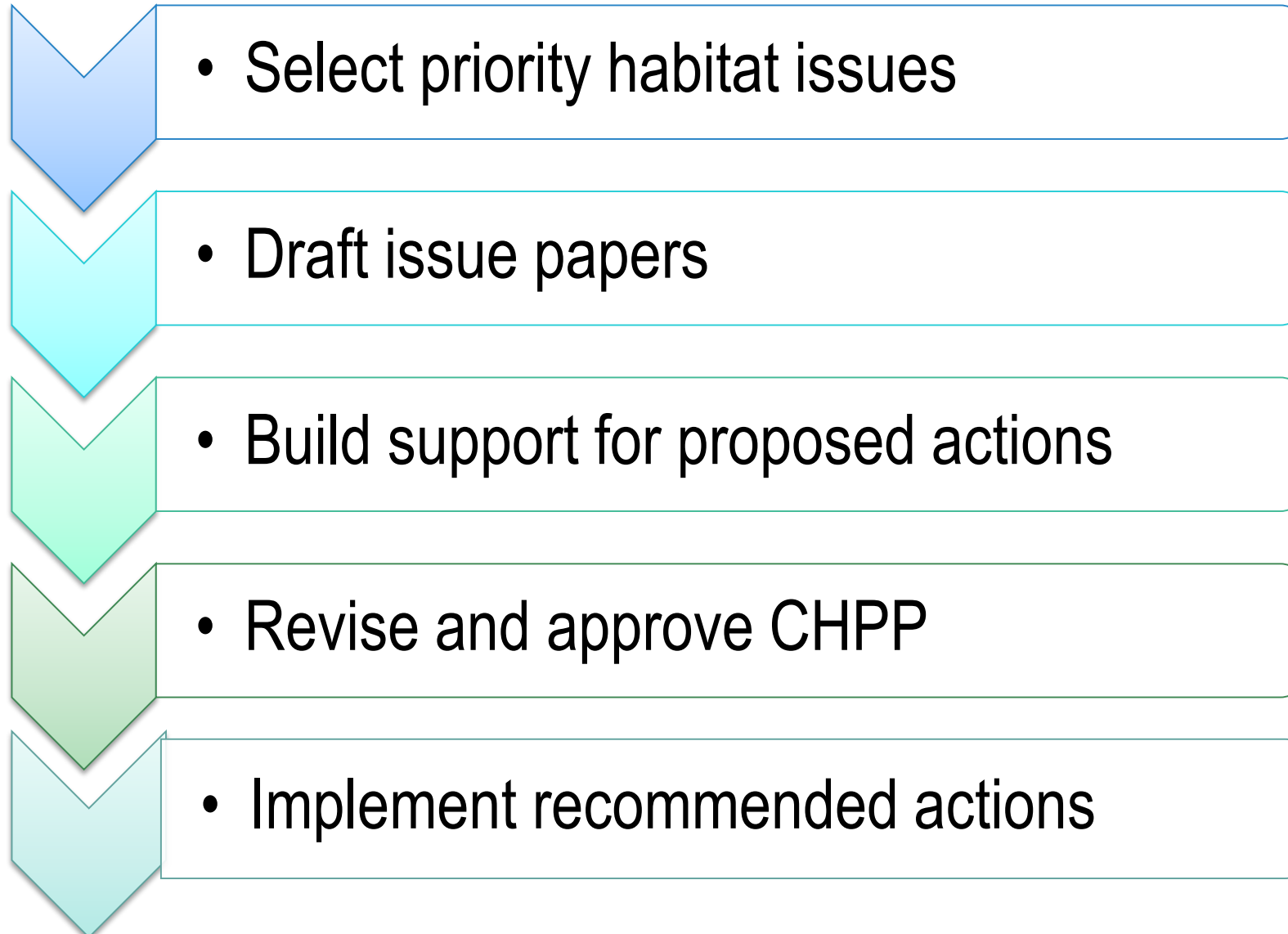
- Focus on priority habitat and water quality issues
- Strategic actions with co-benefits (coastal resiliency)
- Incorporate SMART recommended actions for the priority issues

**SMART** Goals, Objectives, and Strategies are:

**S**pecific, **M**easurable, **A**ttainable, **R**elevant, **T**ime Bound



## *2021 Revision Process*





# *Coastal Habitat Protection Plan*

## *Draft Timeline*

Action	Duration	Due Date
Select priority habitat issues	1 month	Nov 2019
Draft about 3 issue papers	9 month	Jul 2020
Review and discussions within the Department	1 month	Aug 2020
Review and discussions with CHPP Steering Committee	1 month	Sep 2020
Complete plan revisions	1 month	Oct 2020
Review and discussions with full commissions to take out for public comment	1 month	Nov 2020
Public comment period	1 month	Dec 2020
Take to full commissions for final approval	2 month	Spring 2021



# *2021 Coastal Habitat Protection Plan*

## *Proposed Priority Issues*

- 1) Submerged Aquatic Vegetation protection and restoration, with focus on water quality improvements***
- 2) Wetland protection and enhancement, with focus on nature-based methods***
- 3) Habitat condition monitoring and environmental rule compliance***
- 4) Reducing wastewater “inflow and infiltration” to improve water quality***



## *Next Steps*



- MFC letter regarding habitat and water quality concerns sent to EMC and CRC
- Elevating importance of involvement by EMC and CRC with upcoming CHPP revision
- Draft issue papers will be brought to all three commissions mid 2020

