Science, Service, Stewardship

Habitat Protection and Restoration Prioritization

Chesapeake Bay

A NOAA
Nature Conservancy
Partnership

Key Drivers

NOAA's shift toward targeted restoration

- Oysters, fish passage, wetlands & benthic habitat
- Provide regional focal areas for investment that lead to greater ecological returns

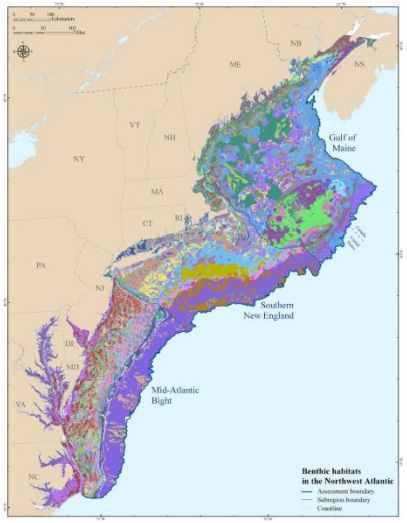
Habitat protection

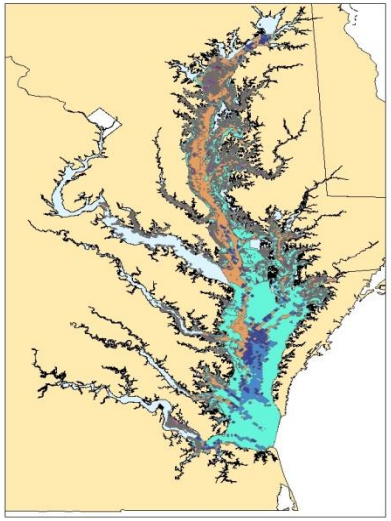
- Classify and prioritize benthic habitat types
- Strengthen permit communication with partners
- Enhance protection where it is needed most

Building on Existing Regional Efforts with a Common Partner

Northwest Atlantic Marine Ecoregional Assessment

Northeast Regional Coastal and Marine Ecological Classification Standard





Northeast Aquatic Connectivity

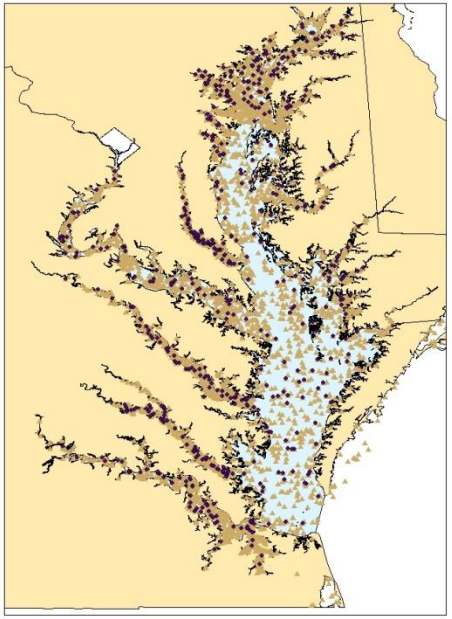
Chesapeake Fish Passage Prioritization

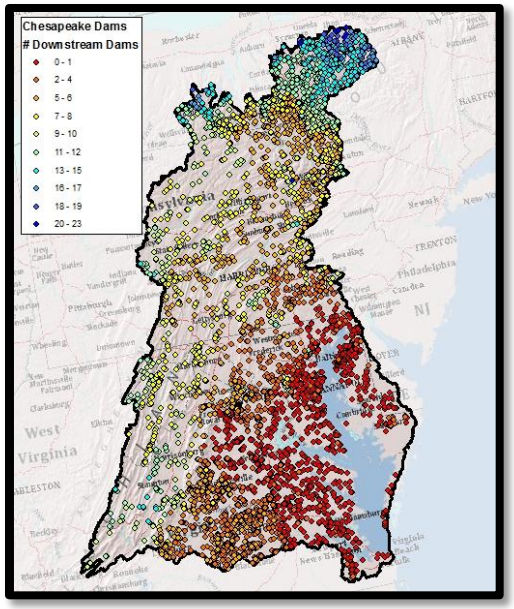
Mid-Atlantic Regional Team Mapping Portal

Coastal Marine Ecological Classification Standard

Current Status In the Chesapeake

Many pieces in place but currently no Bay wide framework to determine priorities and evaluate tradeoffs





Goal to prioritize display NOAA's habitat priorities in the Chesapeake Bay in one GIS

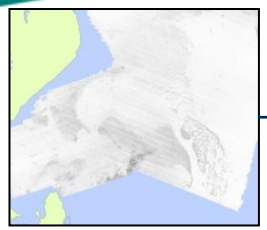
Products

Maps showing NOAA's habitat restoration/protection priority areas, including areas of overlap

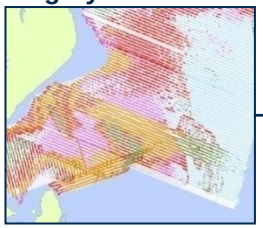
Priority areas determined using a set of GIS data (prioritization criteria)

GIS based application

Allow user to work at a different Scale (subwatershed, state, etc)

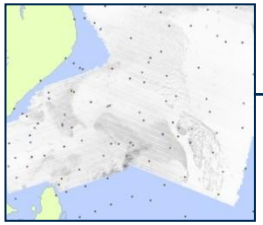


Side Scan Sonar Imagery

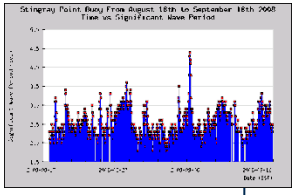


Acoustic Bottom Type Data

Single Beam Bathymetry

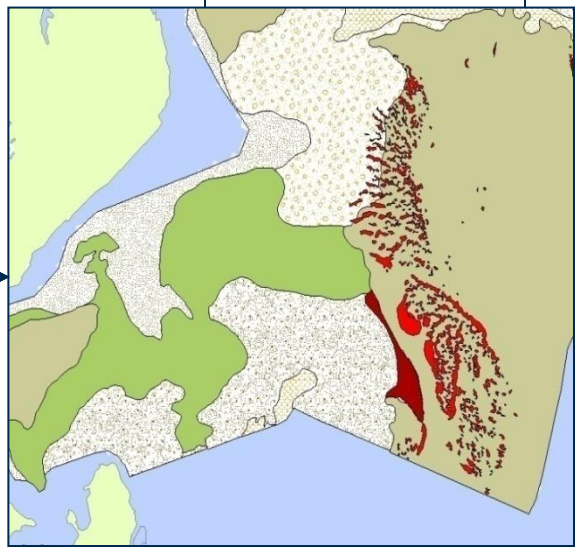


Sediment Samples

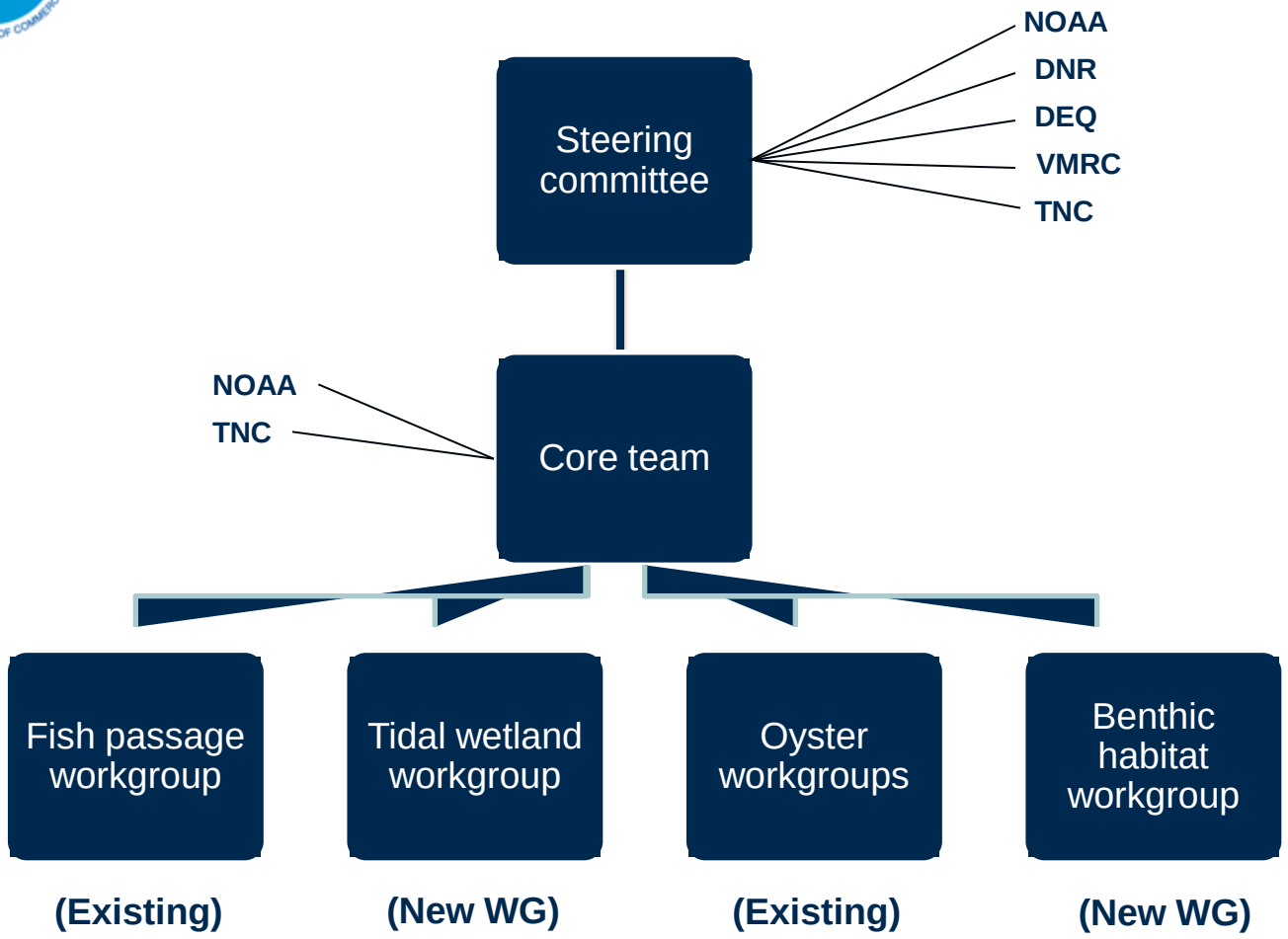


Oceanographic Data

Biological Survey



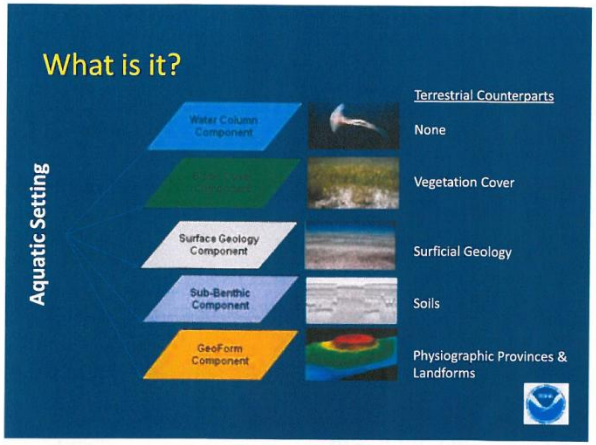
Project Framework



Benthic Work Group

Goal is to **classify** the bay bottom using physical characteristics (grain size, bathymetry, slope) and biological data (benthic community, fish trawl survey data)

Prioritization of benthic habitat types using : Bottom DO, salinity, fish species to determine highest priority areas for restoration/protection

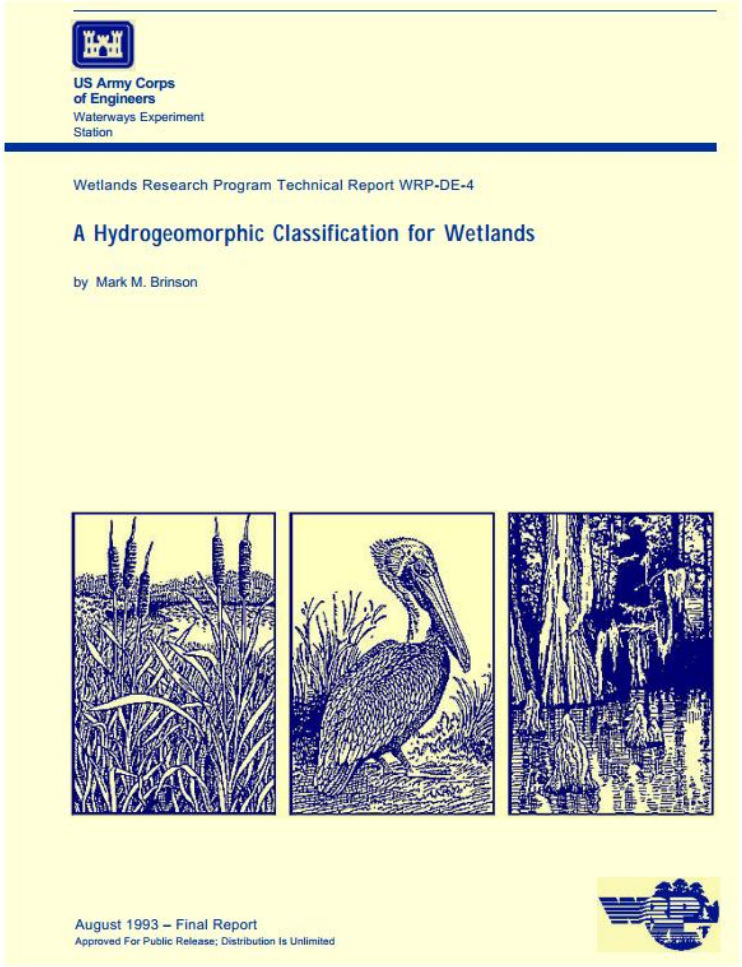


Tidal Wetlands Work Group

Prioritize areas for NOAA to conduct tidal wetland restoration/protection

Provide focus areas for HCD permit review

Prioritization using GIS data: Erosion vulnerability (fetch, wind direction), Bathymetry, Adjacency to priority benthic habitats, Historic wetlands, SAV/Oyster (avoid replacement but prioritize proximity), Sea Level Rise, Upland Land Use, Topography ?????



Living Shorelines

Tidal marsh restoration that offers shoreline protection benefits

Addressed by tidal wetlands work group

Will be a secondary prioritization using priority wetland restoration areas: Public/private ownership, Persistent geologic features, Erosion rates (not just vulnerability) ????

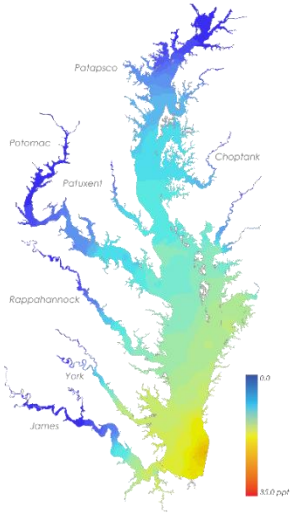
Project Milestones

1. Data Inventory
2. Develop base map (propose highest level resolution feasible)

   -Review with working groups
3. Propose prioritization criteria and analysis methods for each habitat type

   -Already complete for fish passage and oysters
4. Conduct analysis and review with workgroups
5. Propose and review secondary prioritization based on overlapping priorities for multiple habitat types

Project Timeline



Catalogue data
5/12

Draft base map
6/12

Confirm data, scale, etc. w/ WG
7/12

Draft prioritization criteria
8/12

Refine criteria w/ WG
10/12

Initial priority maps
12/12

ID areas of overlap
3/13

Finalize restoration and protection prioritization
5/13

Anticipated Benefits

1. Prioritize NOAA's Chesapeake Bay protection and restoration efforts
2. Better communicate these priorities to our partners, public, etc.
3. Identify collaborative restoration and protection opportunities
4. Enhance resolution of habitat and living resource data