

Science, Service, Stewardship



NOAA

NFHAP National Coastal Assessment
SARP Science and Data Committee Meeting
October 27, 2011

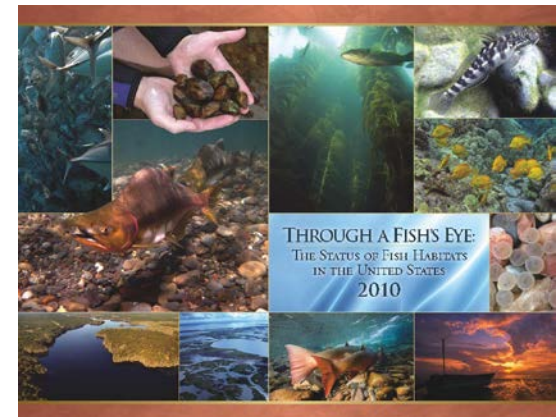
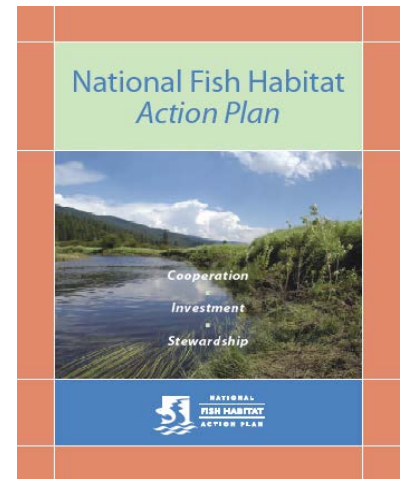
**NOAA
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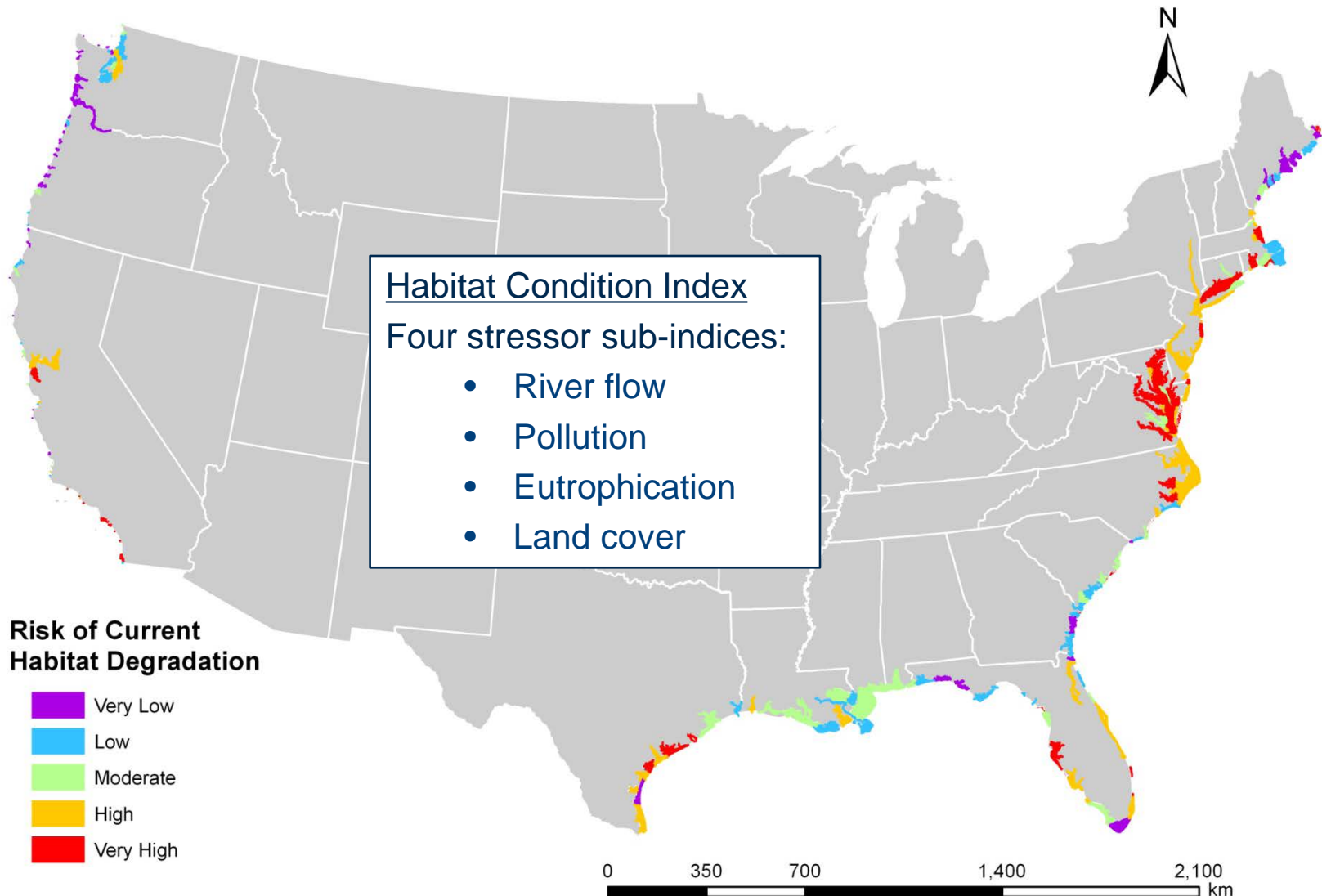


NFHAP Objectives

- 1) **Conduct a condition analysis of all fish habitats within the United States by 2010**
- 2) Identify priority fish habitats and establish Fish Habitat Partnerships targeting these habitats by 2010
- 3) Establish 12 or more Fish Habitat Partnerships throughout the United States by 2010
- 4) **Prepare a “Status of Fish Habitats in the United States” report in 2010 and every five years thereafter**
- 5) Protect all healthy and intact fish habitats by 2015
- 6) Improve the condition of 90 percent of priority habitats and species targeted by Fish Habitat Partnerships by 2020



2010 Estuarine Assessment Results



National Fish Habitat Action Plan

View Risk of Current Habitat Degradation for Stream and Coastal Fish Habitats in the United States

Map controls

Risk of Current Habitat Degradation for stream and coastal fish habitats

Scale: Ecological Drainage Unit (EDU's)

- Very Low Relative risk of habitat degradation based on the mapped level of disturbance to fish habitats within the selected geographic unit (*read more.*)
- Low
- Moderate
- High
- Very High
- Not Scored

Opacity: 0 100

Fish Habitat Partnership Boundaries
National Fish Habitat Partnerships target geographic and species habitat needs.

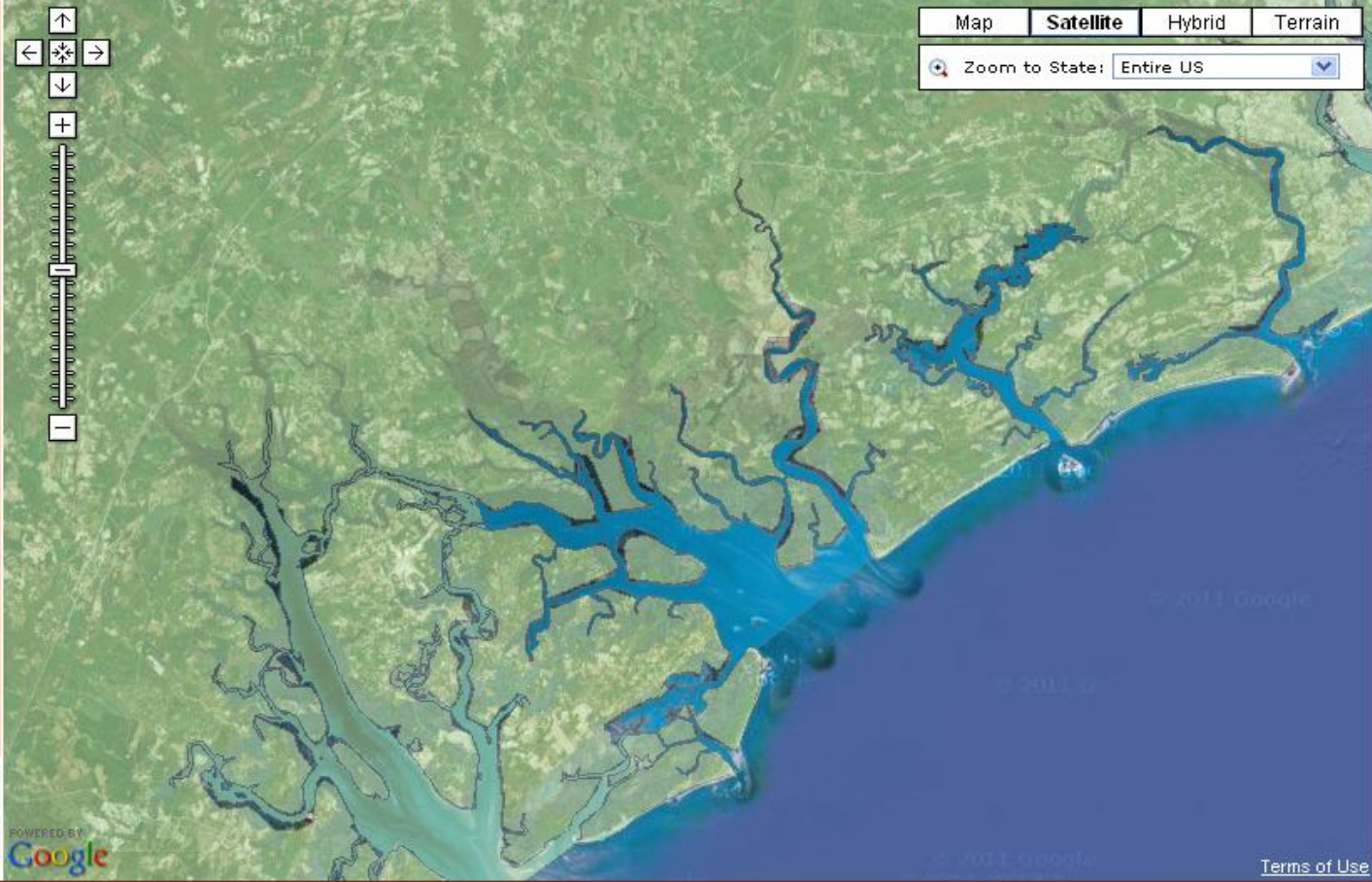
- Atlantic Coastal FHP
- California FHP
- Desert Fish Habitat Partnership
- Driftless Area Restoration

Select: All partnerships | None

Show partnership overlap areas.

Other Layers (*read more.*)

View: State/County Boundaries



- About this map viewer**
- Data, Metadata, and Map Services**

The National Fish Habitat Action Plan Data Viewer is hosted by the [National Biological Information Infrastructure Program](#); administered by the Biological Informatics Office of the [United States Geological Survey](#). References to non-U.S. Department of the Interior (DOI) products do not constitute an endorsement by the DOI. By viewing the Google Maps API on this web site the user agrees to these [Terms of Service](#) set forth by Google.



National Assessment Goals

Intended to:

- Be based on local and landscape indicators of habitat condition
- Be relevant to fish populations
- **Be comparable on a national scale**
- Be useful at both national and regional scales for protection and restoration prioritization and planning activities
- **Establish standardized data collection and analysis methodologies**
- Call attention to the condition of fish habitat, promote conservation action, and generate support for NFHAP

Not intended to:

- Support fine-scale conservation and restoration project prioritization decisions
- Replace restoration project monitoring programs



NFHAP Science and Data Committee Assessment Strategy for 2011-2020

Overall Assessment Goal: To have measurable process related data and true habitat condition scores for all habitats from the headwater streams and lakes to the continental shelf.

- Shift away from degradation symptoms to measuring processes directly related to fish habitat quality
 - Hydrology
 - Water Quality
 - Geomorphology
 - Connectivity
 - Material Recruitment
 - Energy Flow
- Work at scales that can be directly affected by Fish Habitat Partnerships' actions
- Refine initial habitat analysis to make it the best possible foundation
 - By 2014: incorporate FHP and other landscape and fisheries data; update current data layers and incorporate key new information; develop inland-coastal connection; and add detailed stressor assessments for missing habitat components



2015 Research Proposal

- Builds from the 2010 assessment
- Identifies three primary assessment tasks:
 1. Construction of a spatial framework at scales appropriate for spatial assessment
 2. Identification of datasets of indicators of habitat alteration
 3. Examination of how these indicators relate to fish composition and abundance
- Uses a regional approach
 - Proposed pilot region = Gulf of Mexico (Spring 2012)
- Proposes three options (high-medium-low) for 2015 based on assessment complexity and resource requirements

2015 Assessment Options

Assessment Task/Deliverable	Option 1 “low”	Option 2 “medium”	Option 3 “high”
Refine the existing estuarine spatial framework to include salinity zones, improve resolution, and expand watersheds	X	X	X
Collect and spatially compile fish abundance and composition data for estuarine habitats	X	X	X
Complete an estuarine habitat assessment calibrated to fish community indices	X	X	X
Refine the existing spatial framework for coastal and shelf habitats at resolutions appropriate for assessment		X	X
Collect and spatially compile data on fish habitat indices for coastal and shelf habitats		X	X
Complete a coastal and shelf habitat assessment using habitat indicators (but no fish data)		X	X
Collect and spatially compile fish abundance and composition data for coastal and shelf habitats			X
Complete an integrated assessment of estuarine, coastal and shelf habitats calibrated to fish community indices and investigating the linkages between habitats			X



Data Used in 2010 Assessment

Land Cover

- NOAA Coastal Change and Analysis Program (shoreline and watershed land cover and change)

River Flow

- USGS Stream Gages (mean annual discharge, maximum flow, 7-day scores for max & min flow, avg. high & low pulse duration, high pulse duration, and trend in low pulse duration)
- National Inventory of Dams (dams/km²)

Pollution

- EPA National Pollutant Discharge Elimination System (# sites w/in watershed)
- EPA Toxics Release Inventory (# sites w/in watershed)
- EPA CERCLIS Superfund National Priorities List (# sites w/in watershed)
- USGS Active Mines and Mineral Processing Plants (# sites w/in watershed)

Eutrophication

- National Estuarine Eutrophication Assessment (chlorophyll a, algal blooms, dissolved oxygen, impacts to SAV)



Additional Data Holdings

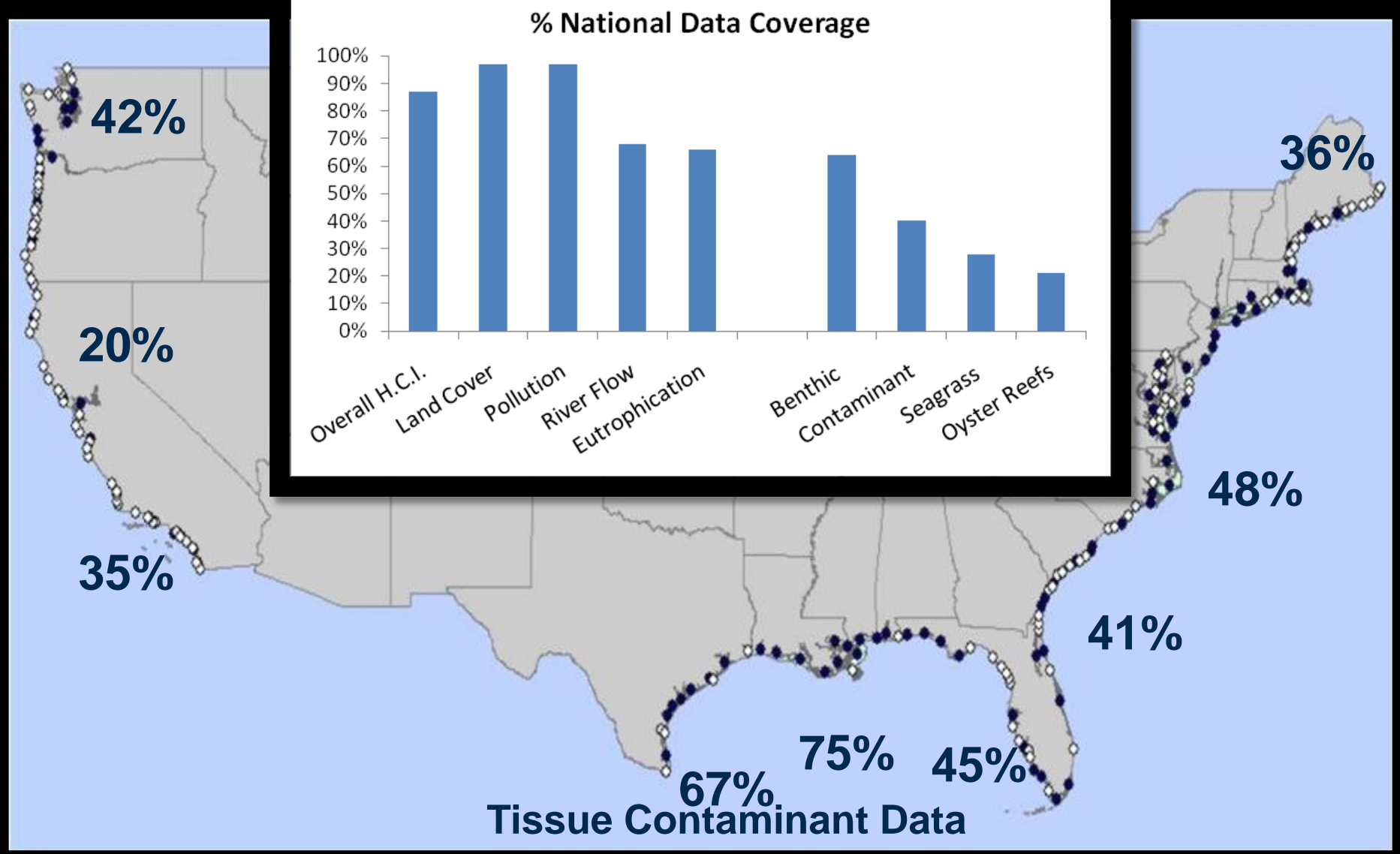
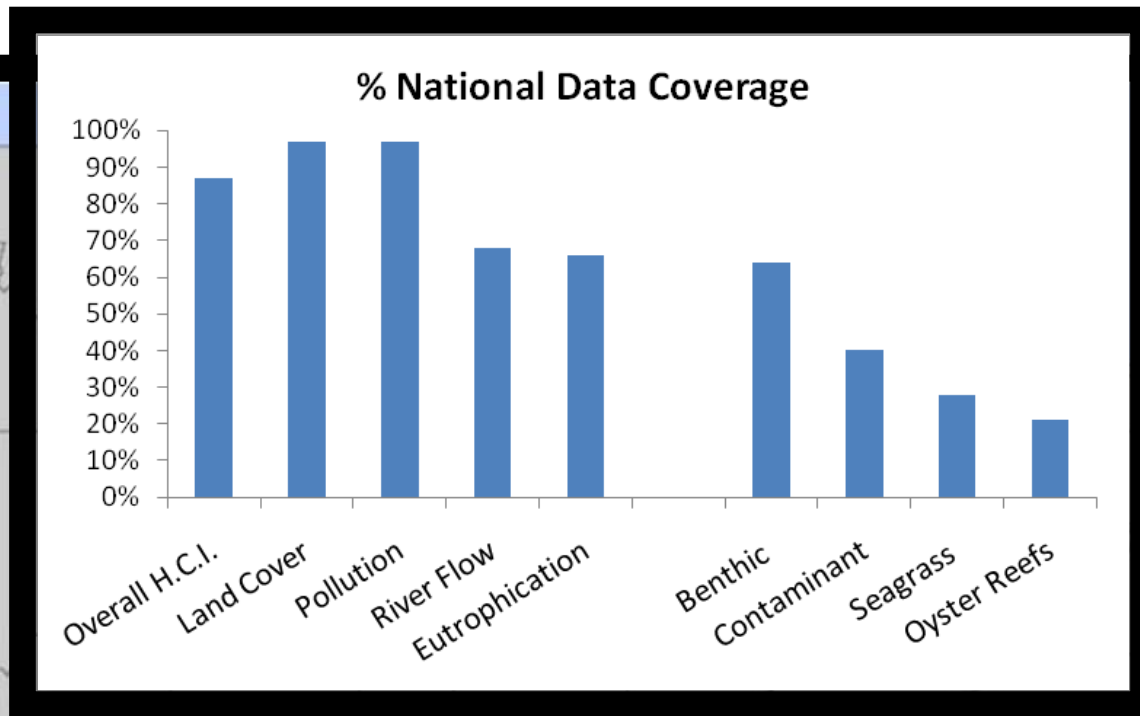
Other data sources:

- Estuary characterization – mixing, exchange rate, etc.
- Watershed summaries – network urban score, network agriculture score (compiled by inland assessment team)
- Surface oceanography – chlorophyll, SST, clarity (MODIS)

Limited information on:

- Seagrass (compiled from various sources)
- Shellfish beds/reefs (TNC Shellfish Reefs at Risk Report – 2009)
- Tissue contaminants (NOAA National Status & Trends [Mussel Watch], EPA National Coastal Assessment/EMAP)
- Sediment contaminants (NOAA National Status & Trends [Mussel Watch], EPA National Coastal Condition Report – 2008)

Data Gap Analysis





Assessment Data Needs

Focus on estuaries and coastal (< 3 mi.) areas

- Fishery-independent data
 - Fish and shellfish
- Biogenic habitat
 - Shellfish reefs
 - Coral
 - Seagrass and kelp
 - Mangroves and salt marsh
- Shoreline armoring
- Contaminants
- Eutrophication
- Protected areas
- Benthic community composition
- Sedimentation and channelization
- Benthic habitat
- Harmful algal blooms
- Aquaculture operations
- Oil spill history
- Fishing impacts
- Artificial reefs
- Storms
- Invasive species
- Marine debris and litter



Discussion Points

- What are SARP's coastal assessment needs and goals?
 - What scale are results most needed?
 - What habitats (i.e. estuary/coast/shelf) are most important to SARP?
 - What questions most need to be addressed?
- What resources (data, tools, expertise) does SARP have available?
- What are options for collaboration with ACFHP in South Atlantic?
- What are the next steps?
 - For NOAA assessment team?
 - For SARP?