SALCC Biological Objectives Workshop
The Role of Objectives in Conservation Planning
October 17, 2012

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Partnerships formed around key resources

- The Southeast Region has –
  - Approximately 2/3 of the freshwater fish and mussel species in North America
  - Highest aquatic habitat diversity in the country
    - More than 70 river basins
    - More miles of coastal shoreline (26,000)
    - 45% of the country's wetlands
    - 78% of the country's coastal marsh

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Development of the SAHP

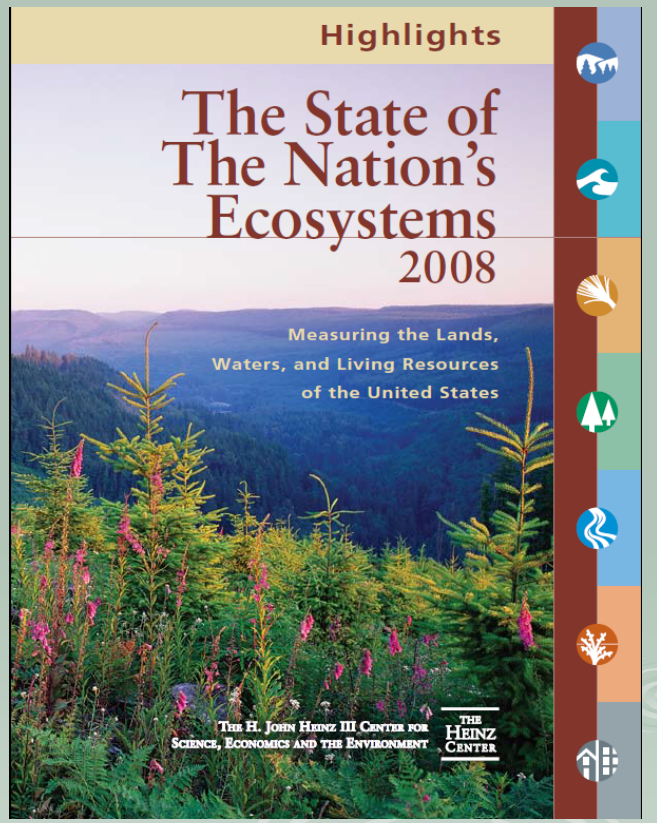
- Began in 2006
- Developed as a regional strategic plan and as part of a larger national effort
- Quantifiable targets required
- Information and data limited, especially consistent data on a regional scale

Development of the SAHP

The State of the Nation's Ecosystems.

Measuring the Lands, Waters, and Living Resources of the United States

- The H. John Heinz III Center for Science, Economics, and the Environment



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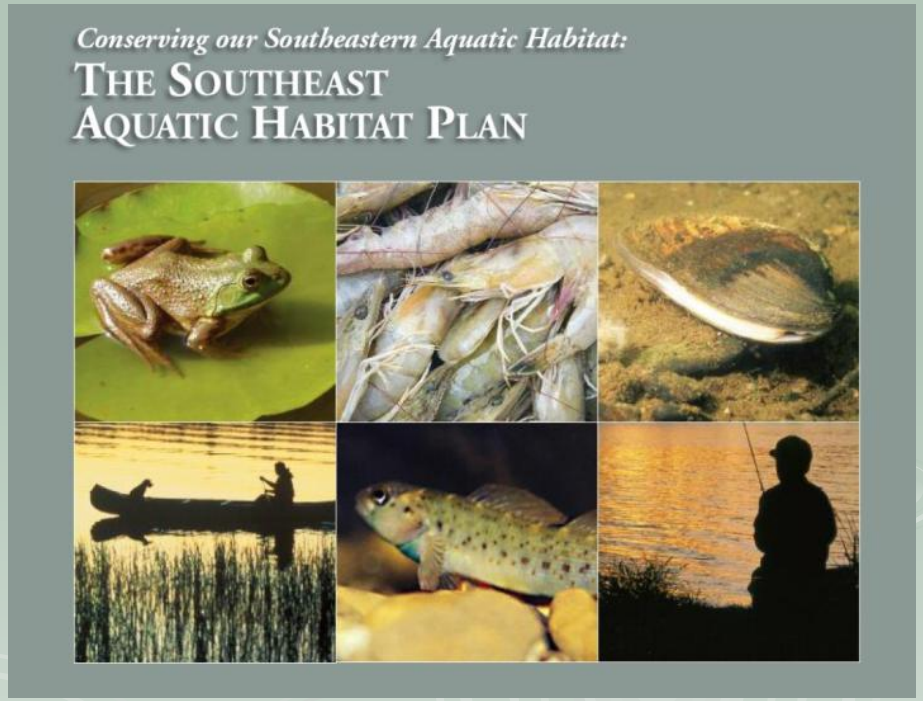
Strategic Planning
Southeast Aquatic Habitat Plan

Habitat Conservation efforts based on eight SAHP Objectives:

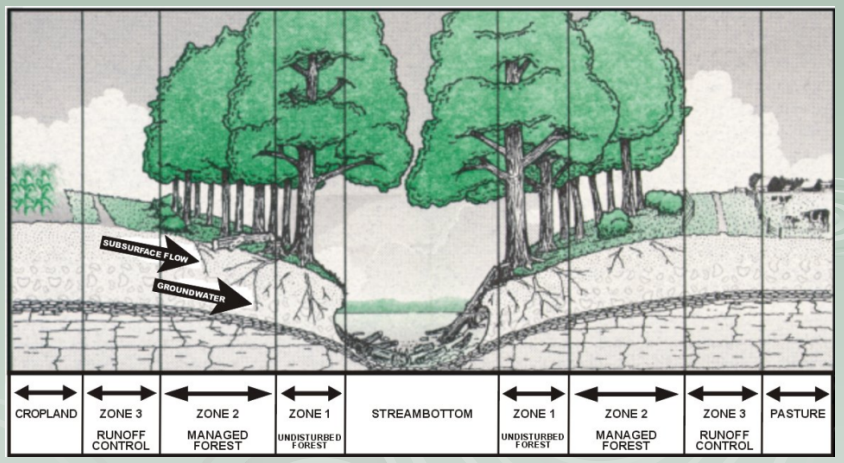
1. Riparian Areas
2. Water Quality
3. Watershed Connectivity
4. Hydrologic Integrity
5. Sediment Flows
6. Physical Habitat
7. Invasive Species
8. Estuarine & Marine Habitat Condition



From Objectives to Targets

Obj 1: Establish, improve, and maintain riparian zones

- Target 1A: Ensure that adequate non-urban/non-agricultural riparian buffer habitats exist on at least 85% of the lands within 100 feet of rivers and streams in the Southeast by 2022.
  - By 2012, reach 78%
  - By 2017, reach 81%
  - By 2022, reach 85%



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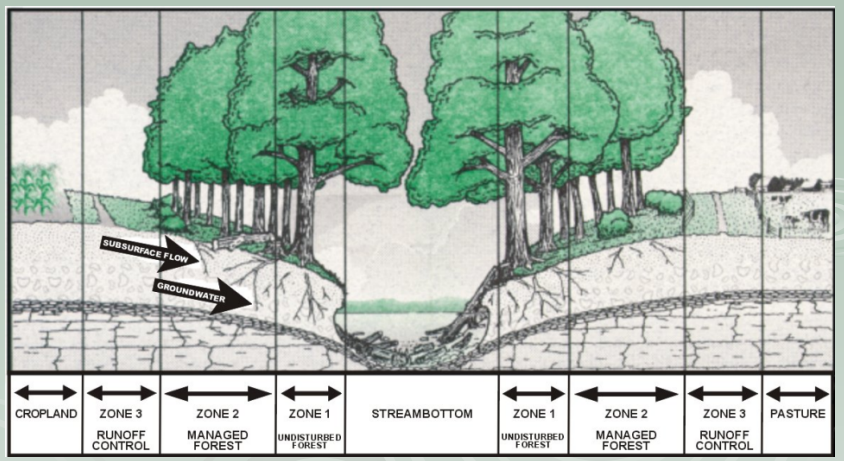

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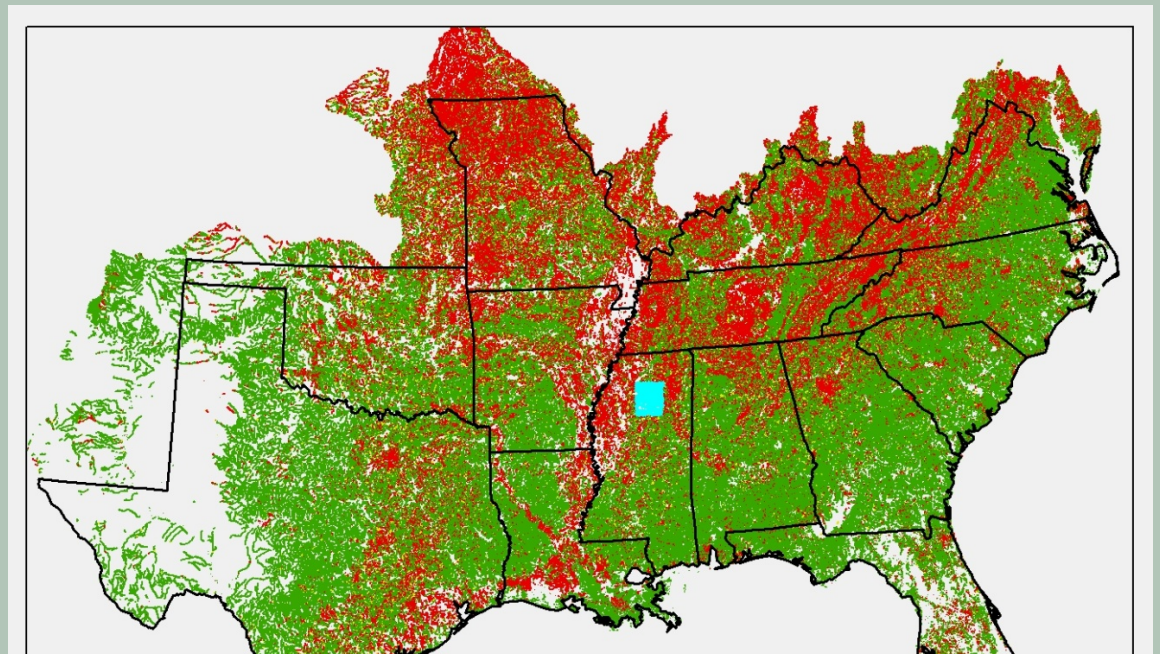
Where did those numbers come from?



Target 1A. Ensure that adequate non-urban/non-agricultural riparian buffer habitats exist on at least 85% of the lands within 100 feet of rivers and streams in the Southeast by 2022.

- By 2012 ensure that at least 78% of the lands within 100 feet of rivers and streams in the Southeast have adequate riparian buffers.

- By 2017 ensure that at least 81% of the lands within 100 feet of rivers and streams in the Southeast have adequate riparian buffers.

- By 2022 ensure that at least 85% of the lands within 100 feet of rivers and streams in the Southeast have adequate riparian buffers.

Lessons Learned – Riparian Zones

- Data constraints
  - Standardized and Current
- Local scale analysis is time consuming, but meaningful
- Great potential to work with new partners
  - watershed groups, agricultural groups
- No such thing as too much communication
- Want to relate these targets to species X to further evaluate them

From Objectives to Targets

- Obj 3: Improve or maintain watershed connectivity
  - Target 3A. Restore 1,000 miles of fish access to rivers and streams in the Southeast by effectively removing barriers to fish passage.
    - By 2012, restore 500 miles
  - Target 3B. Restore 20,000 acres of fish access to lakes, reservoirs, and coastal estuaries in the Southeast by effectively removing barriers to fish passage
    - By 2012, restore 10,000 acres

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Lessons Learned - Connectivity

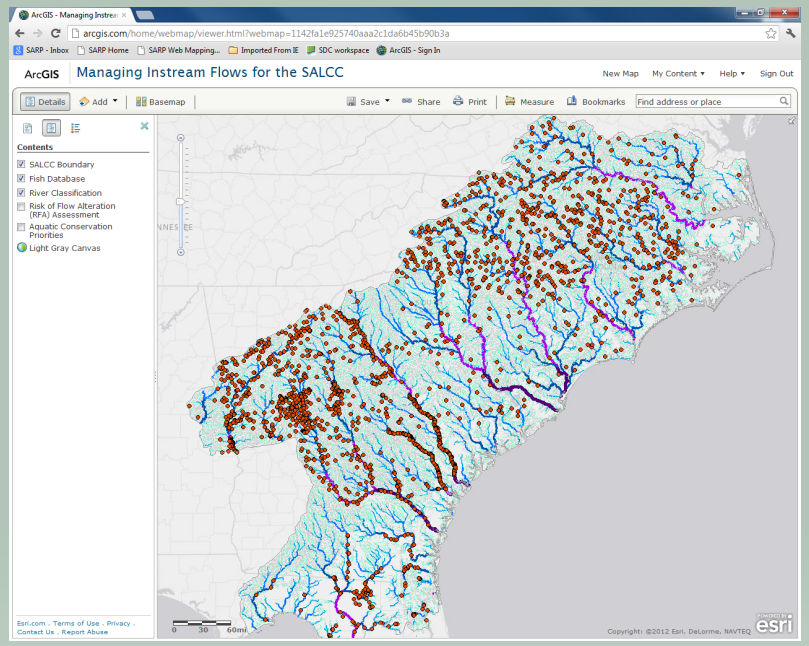
- Data constraints
  - Scale and Type of fish barriers
  - Standardized, Current and Best-available

- COMING SOON: SALCC Connectivity Assessment and Prioritization Tool
  - Rank removal of dams based on occurrence of migratory species

From Objectives to Targets

- Obj 4: Appropriate hydrologic conditions for biota in aquatic systems
  - Target 4A: Reduce % of rivers experiencing change in high or low flows
  - Target 4B: Reduce freshwater withdrawals
  - Target 4C: Increase % of urban natural area patches

Lessons Learned – Instream Flows



- Applicability due to data constraints
- SALCC Instream Flow Project
  - Assessed Risk of Flow Alteration & compilation of instream flow resources
- GCPLCC Instream Flow Project
  - Flow-ecology hypothesis

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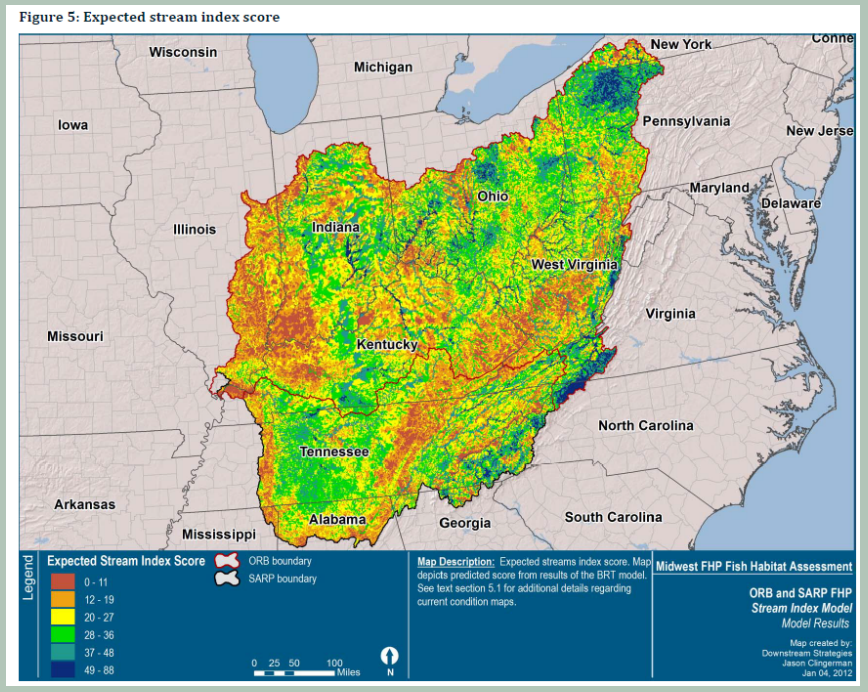
Ohio River Basin Assessment

7 Response Variables:

- Smallmouth Bass P/A
- 3 Redhorse spp. P/A
- Intolerant Mussel P/A
- Great River Species P/A
- % Intolerant Fish
- Small Streams Signature Fish Index
- Modified Index of Centers of Diversity



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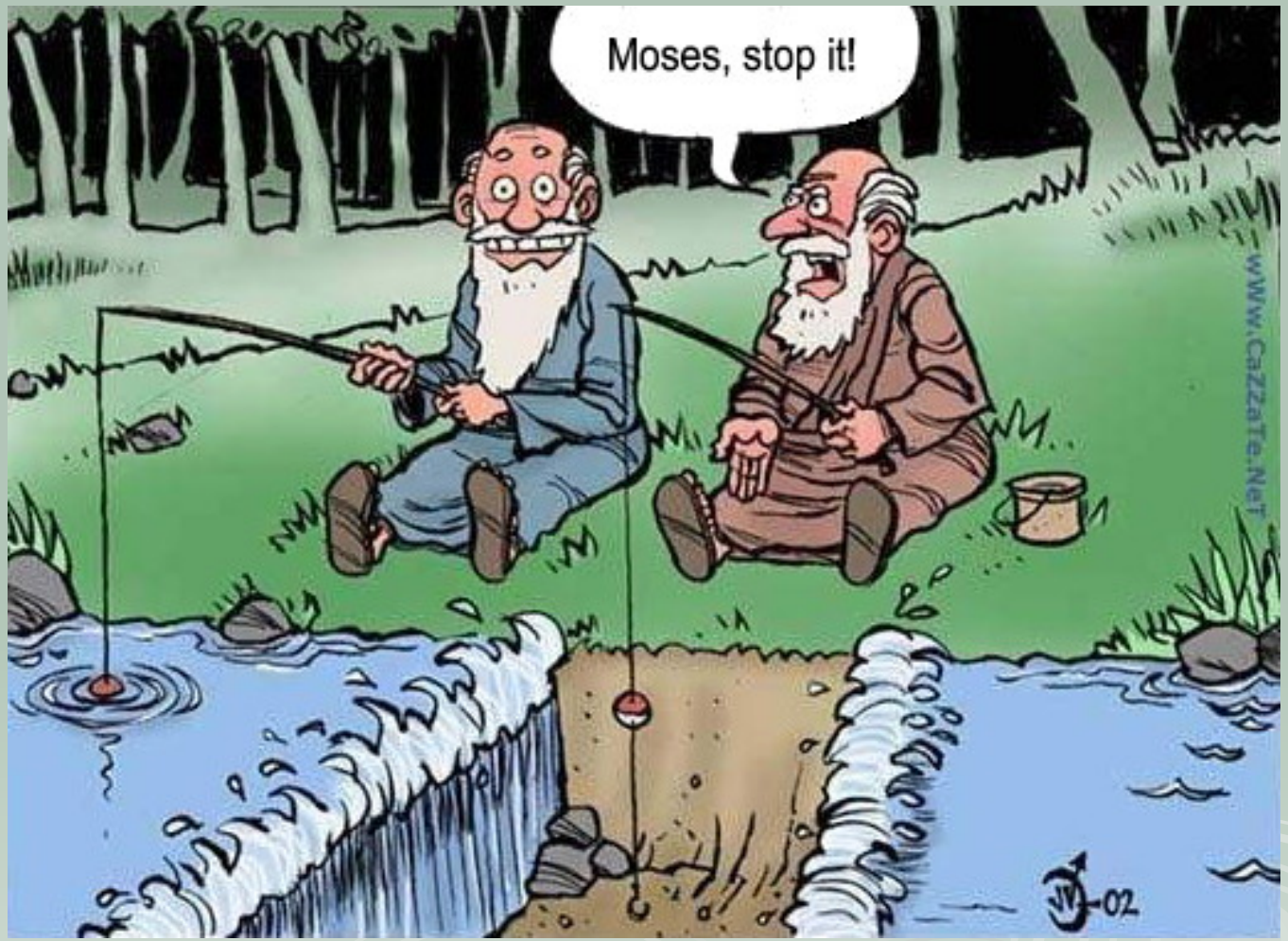
Lessons Learned – ORB Assessment

- Basin-wide response variables are difficult to achieve
  - Need for classification
- Data constraints
  - Standardization, integration, availability of imperiled species data
- Short time frame
- Use weighting to account for uncertainty to move forward

Summary

- Evolving process
- Dedicated people for planning and development
- Data is most limiting factor to creation and evaluation of targets at the regional scale
- Discussing ways to incorporate habitat targets with biological responses

Questions?



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National Fish Habitat Action Plan: Strategic Investment

- *Local* projects
- *Regional* strategies and priorities
- *National* attention and funding

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Benefits to NFH Approach

- Stronger coordination of efforts
- Increased constituent support
- More funding for projects at the local level that meet national priorities
- Initial funding often serves as a catalyst for action

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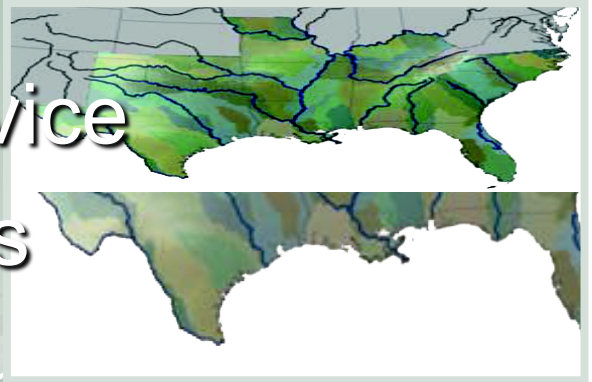
SARP Steering Committee

Federal and State agencies with management authority over fisheries

- 14 State Resource Agencies
  - FL, SC, NC, GA, AL, KY, TN, MS, LA, AR, MO, OK, TX, and VA
- U.S. Fish & Wildlife Service
- National Marine Fisheries Service
- Coastal Commissions/Councils



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Partners

- The Nature Conservancy
- SEAFWA
- Southeast Watershed Forum
- National Park Service
- Southern Company
- Bass Pro Shops
- BASS/ESPN
- US EPA – Gulf of Mexico Program
- Southern Company
- World Wildlife Fund
- USGS
- US Army Corps of Engineers

Eight Objectives with 31 Targets

- Riparian Zones
- Water Quality
- Watershed Connectivity
- Hydrologic Conditions (Instream Flows and Water Level Management)
- Sediment transport
- Physical Habitat
- Aquatic Nuisance Species (Ecological Balance)
- Coastal, estuarine, and marine habitats

Next Steps

- Plan is used as a guide for action to improve and conserve aquatic habitats.

Volunteers building habitat structures in the Altamaha river basin

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Using the SAHP Targets to Guide the Regional Aquatic Habitat Assessments and Evaluations

SAHP – Objectives & Targets:

Target 1A. Ensure that adequate non-urban/non-agricultural riparian buffer habitats exist on at least 85% of the lands within 100 feet of rivers and streams in the Southeast by 2022.

- By 2012 ensure that at least 78% of the lands within 100 feet of rivers and streams in the Southeast have adequate riparian buffers.
- By 2017 ensure that at least 81% of the lands within 100 feet of rivers and streams in the Southeast have adequate riparian buffers.
- By 2022 ensure that at least 85% of the lands within 100 feet of rivers and streams in the Southeast have adequate riparian buffers.

Develop Questions:

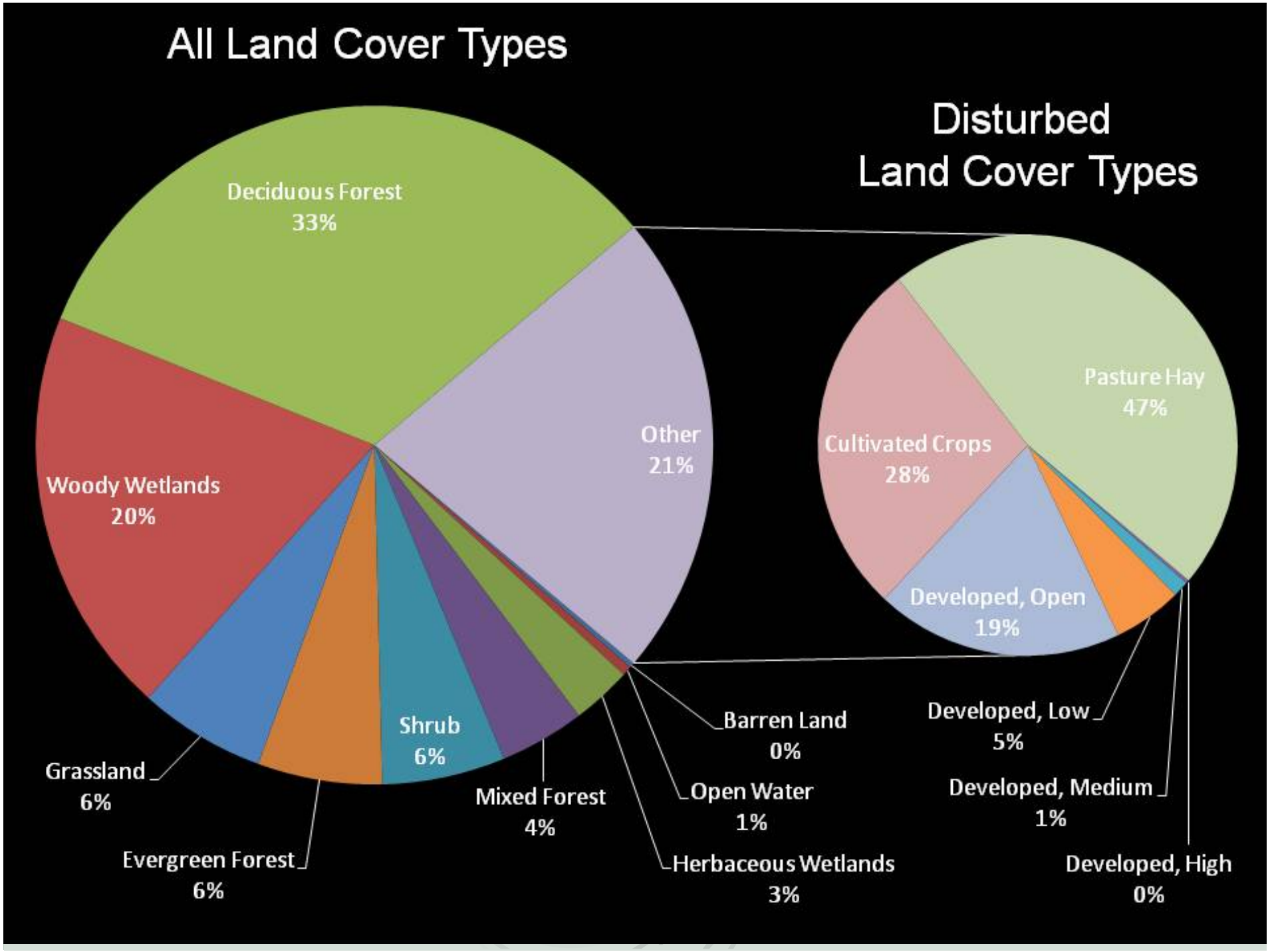
- What are the land cover types within riparian areas?
- How much of those land cover types are "disturbed" riparian land cover types?

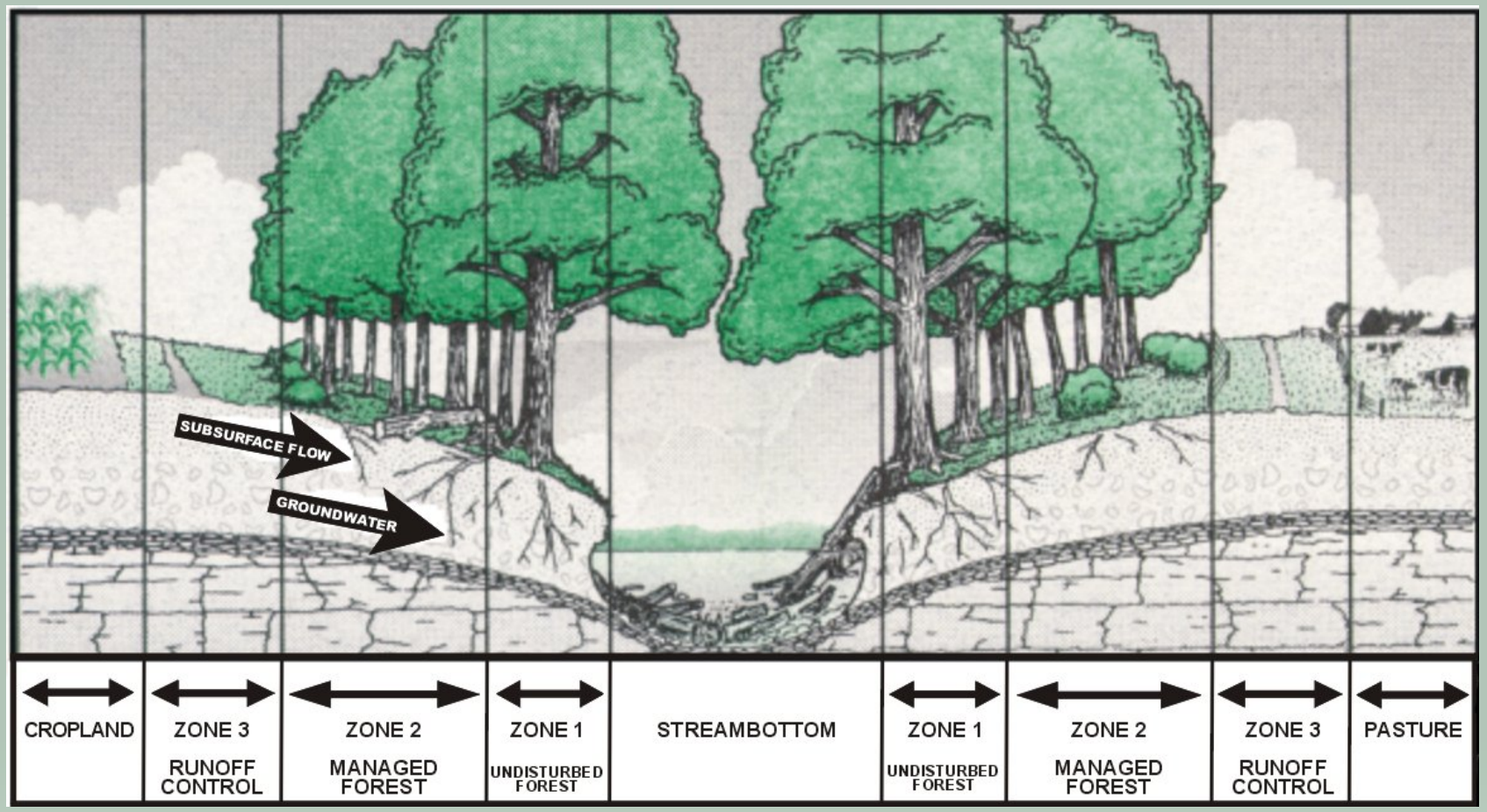
Analysis & Results:

- Quantified baseline condition of "disturbed" riparian area in SARP
- White paper documents methods and results

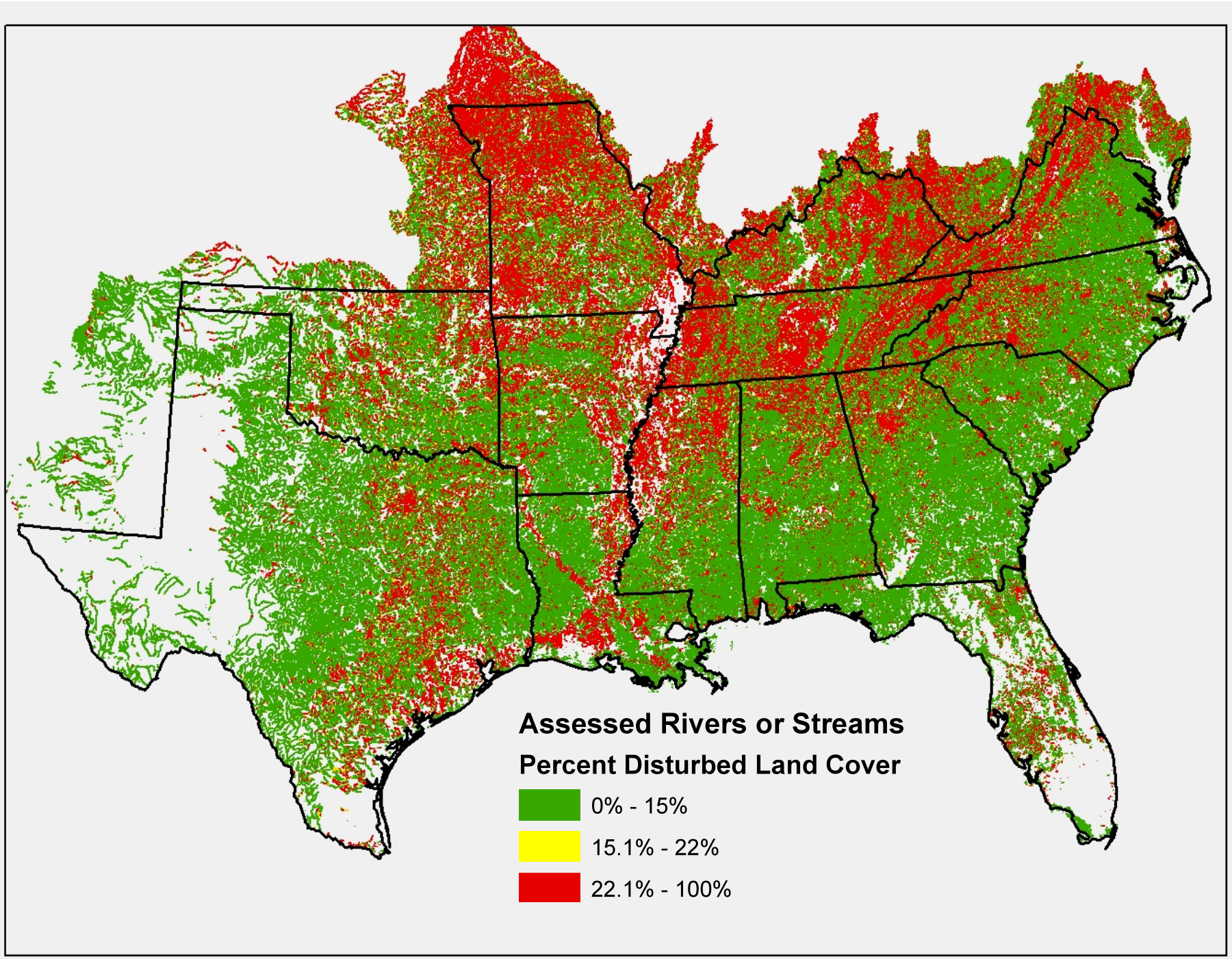
Evaluate Targets:

- How close are we to reaching our 2012 target?
- Does the target need revising?


All Land Cover Types
Deciduous Forest
33%
Woody Wetlands
20%
Other
21%
Grassland
6%
Evergreen Forest
6%
Shrub
6%
Mixed Forest
4%
Barren Land
0%
Open Water
1%
Herbaceous Wetlands
3%
Disturbed
Land Cover Types
Pasture Hay
47%
Cultivated Crops
28%
Developed, Open
19%
Developed, Low
5%
Developed, Medium
1%
Developed, High
0%


SUBSURFACE FLOW
GROUNDWATER
CROPLAND
ZONE 3
RUNOFF CONTROL
ZONE 2
MANAGED FOREST
ZONE 1
UNDISTURBED FOREST
STREAMBOTTOM
ZONE 1
UNDISTURBED FOREST
ZONE 2
MANAGED FOREST
ZONE 3
RUNOFF CONTROL
PASTURE

Thank you!


Assessed Rivers or Streams
Percent Disturbed Land Cover
0% - 15%
15.1% - 22%
22.1% - 100%

Baseline Summaries

Land Cover Class	Hectares
Barren Land	17,000
Open Water	33,000
Herbaceous Wetlands	205,000
Mixed Forest	292,000
Shrub	421,000
Evergreen Forest	425,000
Grassland	434,000
Woody Wetlands	1,396,000
Deciduous Forest	2,349,000
Developed, High	4,000
Developed, Medium	19,000
Developed, Low	85,000
Developed, Open	304,000
Culti vated Crops	440,000

Reaches Assessed	1,929,000
Total Riparian Area	7,135,000 hectares
Total Disturbed Land Area	1,597,000 hectares
Baseline Percent Disturbed Riparian	22.38%

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