Strategic Habitat Conservation Workshop
Appalachian Landscape Conservation
January 27, 2010

What is a Fish Habitat Partnership?

"Partnerships are valuable to the extent that they enable conservation that exceeds the sum of the potential actions of the individual organizations that comprise them."

USFWS/USGS NEAT Report, 2006

SOUTHEAST AQUATIC RESOURCES PARTNERSHIP

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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
    - ~ 26,000 miles of coastal shoreline
    - 45% of the country's wetlands
    - 78% of the country's coastal marsh

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
- Atlantic and Gulf States Marine Commissions
- South Atlantic Fishery Management Council

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
- Southeastern Association of Fish and Wildlife Agencies

Strategic Planning

The Southeast Aquatic Habitat Plan

- Completion of 4 pilot watershed management plans
  - Duck River, TN
  - Roanoke River, NC
  - Pascagoula River, MS
  - Altamaha River, GA

Threats to the Duck River, TN

- Incompatible agricultural practices
- Wastewater treatment
- Urbanization
- Water management practices (dam operations, ground & surface water withdrawals)
- Resource extraction (gravel dredging, forestry)
- Invasive species

Duck River Conservation Areas
Priority Areas

- Eastern Highland Rim streams
- Inner Nashville Basin streams
- Upper Duck River mainstem
- Lower Duck River mainstem
- Western Highland Rim streams
- Buffalo River mainstem
- Normandy reservoir fishery

Duck River
Conservation Strategies and Targets
Habitat Objectives

- Achieve 15% net improvement in the near-stream habitat conditions of river mainstems and impaired tributary streams
- Establish an instream flow policy for the Duck & Buffalo watersheds that protects ecosystem functions and designated uses
- Protect 10 % of critical stream and mainstem river habitats through fee title or conservation easement aquistion
- Provide community training that teaches land use planning and economic development principles that are protective of aquatic habitats and watersheds to at least five communities in the Duck River basin

Regional Plan Development

- The model developed from the four pilot watershed plans was used as a framework for the Southeast Aquatic Habitat Plan
- State Wildlife Action Plans were incorporated
- SARP hosted two workshops for stakeholders to develop the Plan
  - Workshop 1 focused on technical aspects of the Plan
  - Workshop 2 on implementation and facilitation

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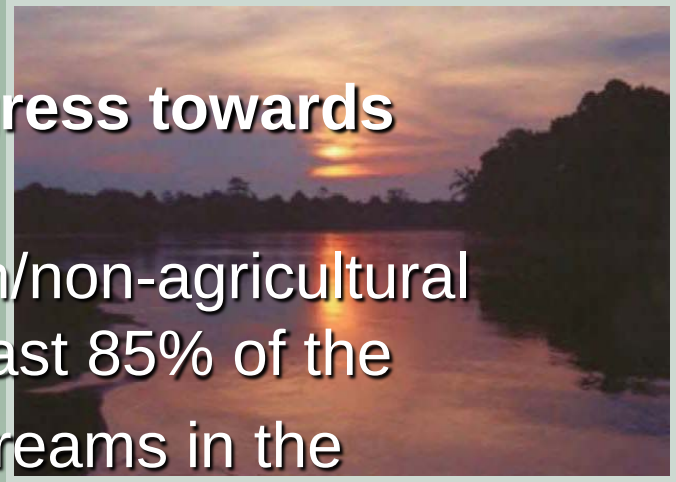
Southeast Aquatic Habitat Plan Objectives

- 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

Plan Structure

Objectives and Targets

- *Objective:* **Objective 1: *Establish, improve and maintain riparian zones***
- Target **[method to measure progress towards achieving this objective]**
- 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.



Next Steps

- Conservation strategies developed in the Plan provide a blueprint for SARP activities to advance aquatic habitat conservation in the region
- Instream Flow Network was identified as a conservation strategy in the Plan

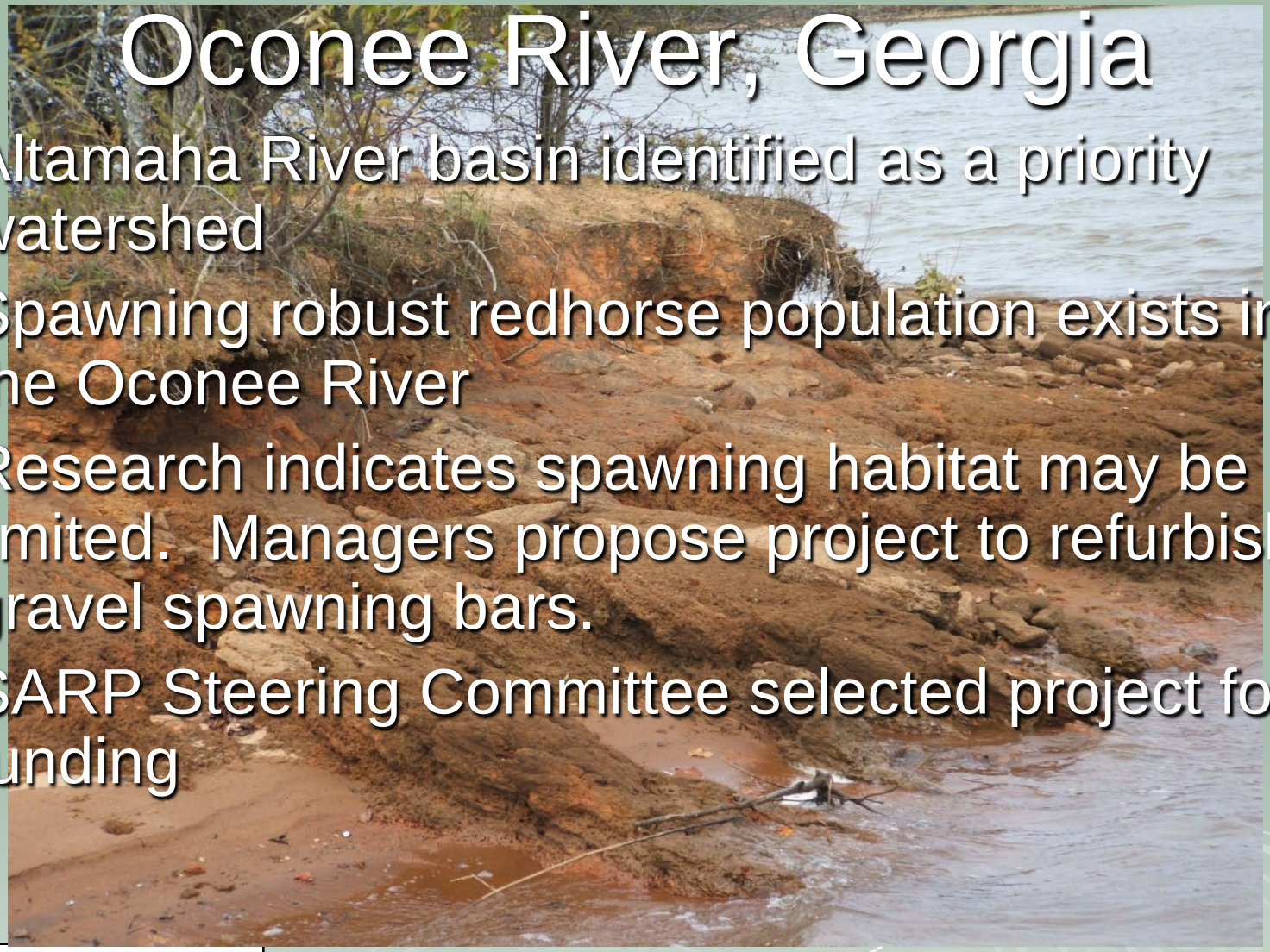
Volunteers planting cypress trees along a shoreline in the Altamaha river basin

Habitat Assessment

- Habitat assessment will help guide the implementation of the Plan
- Currently focusing our resources on a regional assessment based on the objectives in the Southeast Aquatic Habitat Plan
  - Riparian areas
  - Connectivity
  - Hydrology

Conservation Delivery

Oconee River, Georgia



- Altamaha River basin identified as a priority watershed
- Spawning robust redhorse population exists in the Oconee River
- Research indicates spawning habitat may be limited. Managers propose project to refurbish gravel spawning bars.
- SARP Steering Committee selected project for funding

Oconee River Gravel Bar Restoration

Primary site

Avant Mine

Existing gravel spawning bar

Secondary site

Possible future sites

© 2006 Navteq

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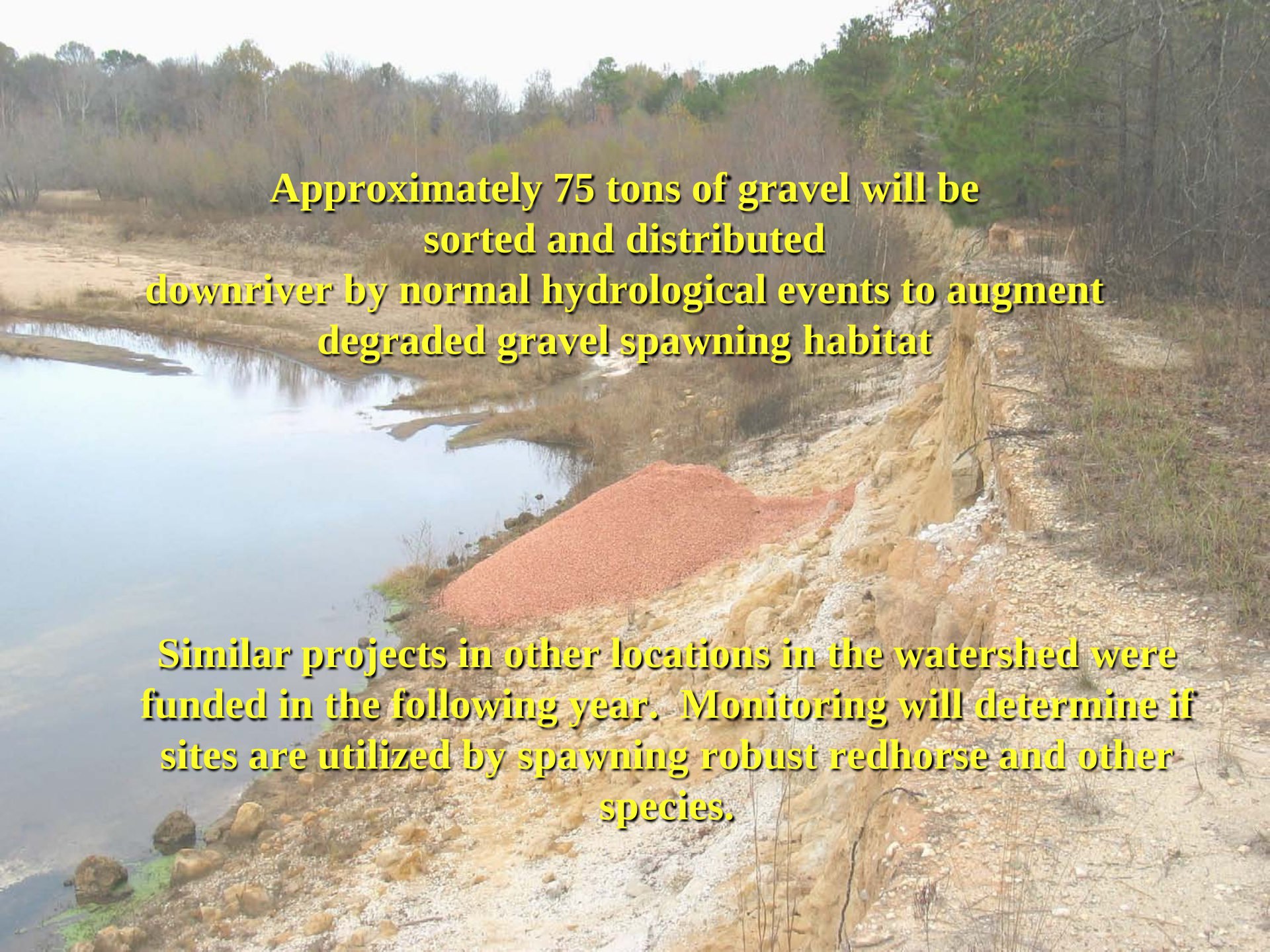
Pointer 32°56'09.76" N 83°03'59.13" W elev 223 ft Streaming 100% Eye alt 3613 ft

Gravel spawning bar, behind Avant Kaolin Mine
Washington County, GA

Gravel separator
Used to separate gravel from fines


Approximately 75 tons of gravel will be sorted and distributed downriver by normal hydrological events to augment degraded gravel spawning habitat
Similar projects in other locations in the watershed were funded in the following year. Monitoring will determine if sites are utilized by spawning robust redhorse and other species.

NOAA Community Based Habitat Restoration Program

Mangroves

Kelp Forests

Coral Reefs

Oyster Reefs

- ✓ Debris removal
- ✓ Restoring tidal flow
- ✓ SAV and salt marsh restoration
- ✓ Spawning habitat restoration
- ✓ Oyster reef restoration and creation

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NOAA Habitat Partnership

- SARP was accepted as a partner in NOAA's Community Based Habitat Restoration Grant Program
- SARP receives grant from NOAA
- SARP and NOAA select local projects with local partners for distribution of smaller grants
- 3 year program will allow SARP and NOAA to support projects that meet the Southeast Aquatic Habitat Plan goals

Action Plan: National Board Strategies

- Strategy 1 – Identify and protect intact and healthy waters
- **Strategy 2- Restore natural variability in river and stream flows and water surface elevations in natural lakes and reservoirs.**
- Strategy 3 – Reconnect fragmented river, stream, reservoir, coastal, and lake habitat to allow access to historic spawning, nursery and rearing grounds.
- Strategy 4 – Reduce and maintain sedimentation, phosphorus and nitrogen runoff to river, stream, reservoir, coastal, and lake habitats to a level within 25% of the expected natural variance in these factors or above numeric State Water Quality Criteria

Southern Instream Flow Network:

A partnership to develop and implement instream flow policies that protect and improve aquatic habitats in the region

Southern Instream Flow Network
Partners

The Nature Conservancy
Instream Flow Council
American Fisheries Society

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Southern Instream Flow Network

1) Initiate and develop working state team relationships,

2) Educate participants on the scientific basis of instream flow policy,

3) Share instream flow policy tools & resources specific to state needs,

4) Communicate among states to support and build on experiences,

5) Provide training for use of assessment tools to determine environmental impacts to hydrologic regimes and develop instream flow standards, and

6) Produce guidance documents and materials for development of effective instream flow protection policy and supporting programs.

Southern Instream Flow Network

Southern Instream Flow Research Agenda: A Joint Proposal to Advance the Science For Instream Flow Protection in Southern Rivers

Draft

Endorsed by

Southeast Aquatic Resources Partnership

The Nature Conservancy

Auburn University

Submitted by the Southern Instream Flow Network to funding and research agencies and institutions with an interest in sustainable water management and protection of the rich aquatic resources of the Southern United States

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Southern Instream Flow Network

Develop a regional river and stream classification system

Identify commonalities in ecosystem responses to flow alterations

Compile regional aquatic ecology data sets

Develop hypotheses for regional ecological responses to flow alteration

Perform field studies to test ecological responses to altered flow regimes

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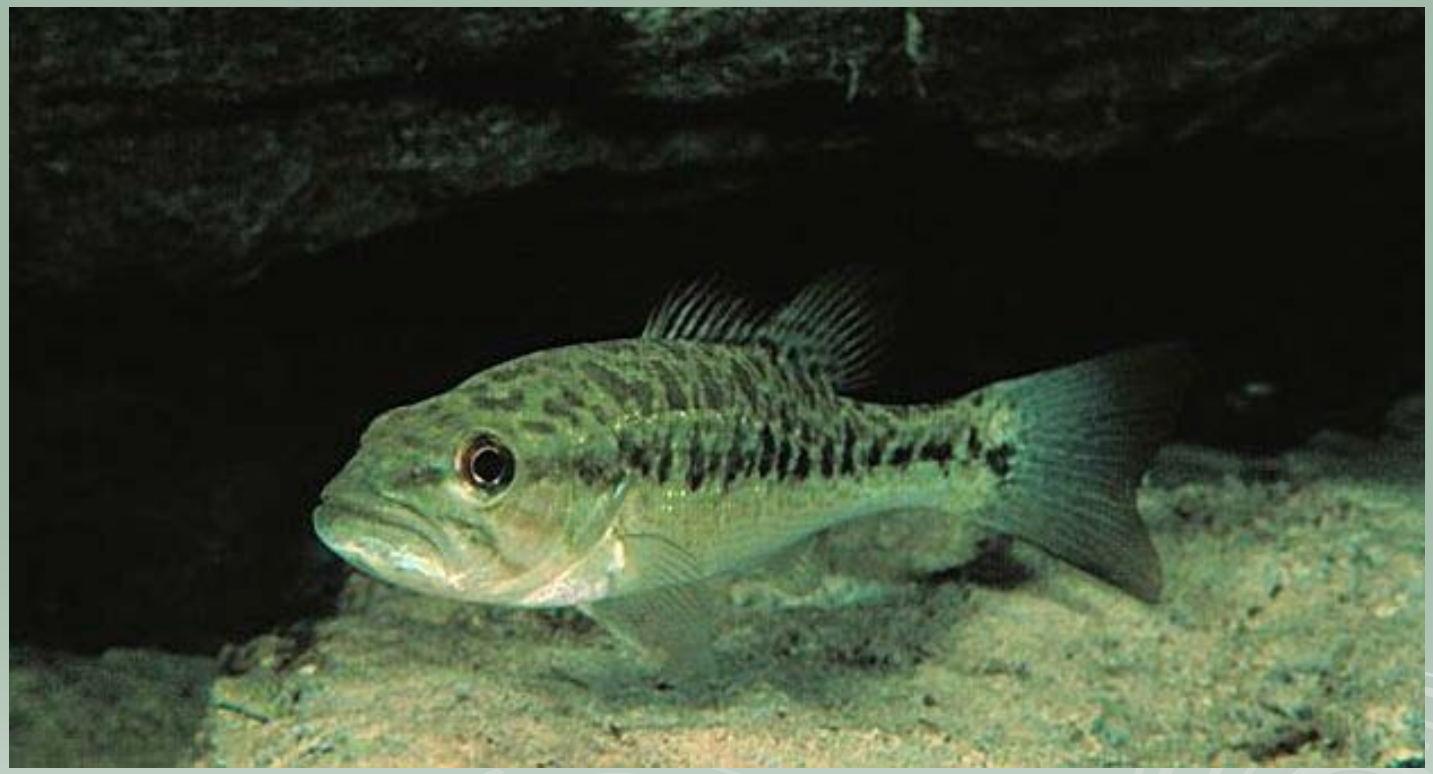
REPRESENTATIVE SPECIES?
A Business Plan for the Conservation of Native Black Bass Species in the Southeastern US:

A Ten Year Plan



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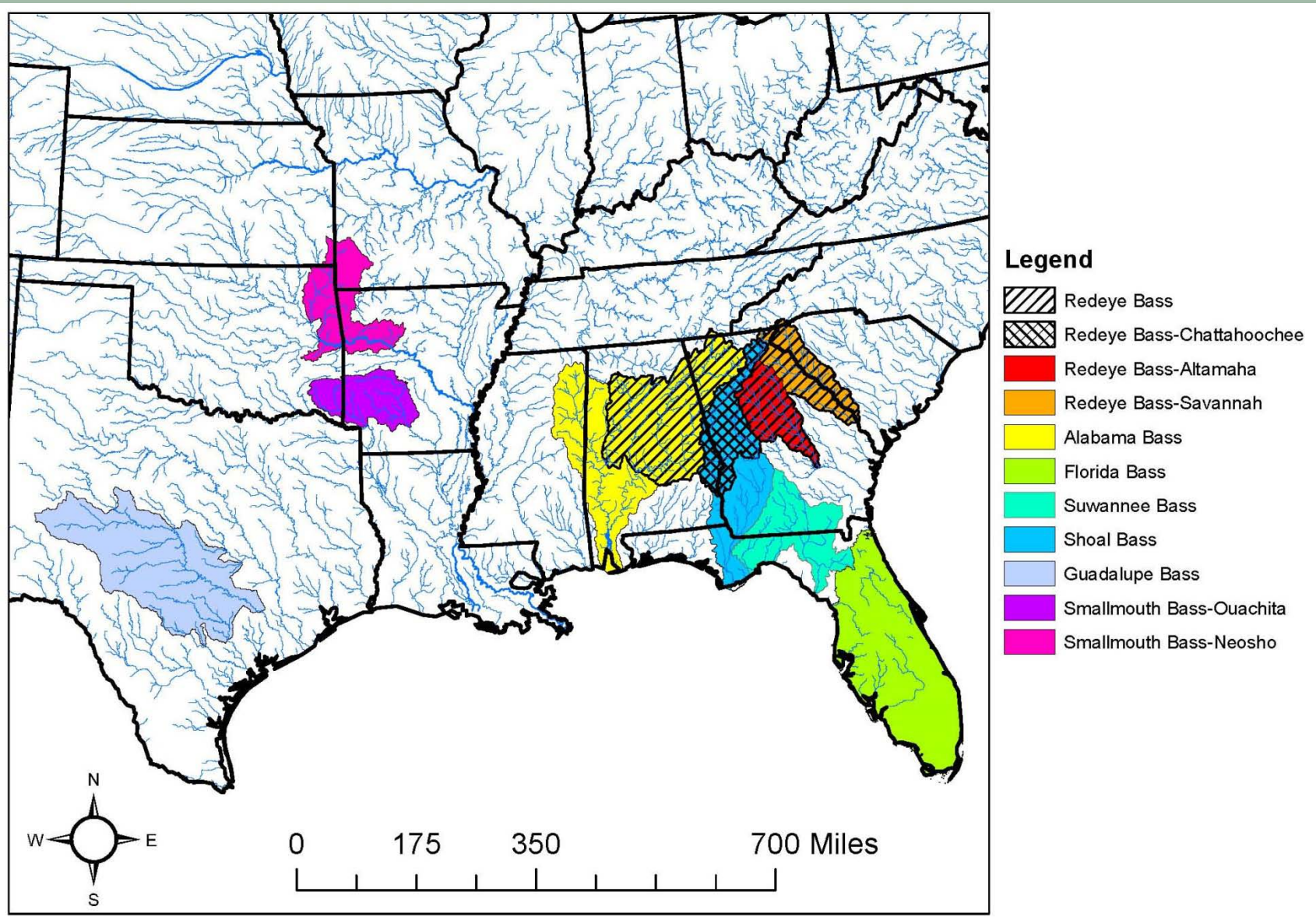

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