

TVA's Aquatic Resources Stewardship & "Vital Signs" Monitoring

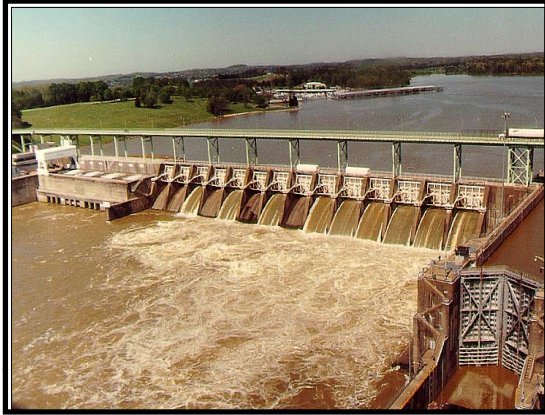
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Tennessee Valley Authority**



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Balancing Demands of the Tennessee River System



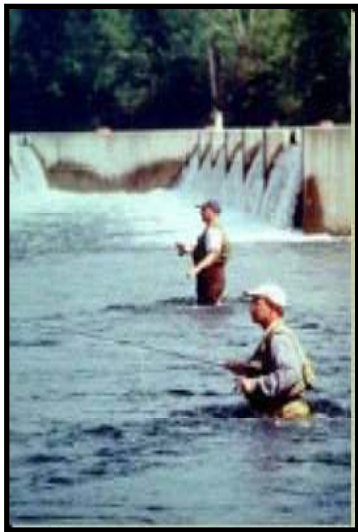
Flood Control



Navigation



Power Production



Recreational Activities



Water Supply



Resource Stewardship 2



River System



MS

AL

GA

SC

NC

KY

TN

VA

Kentucky Dam & Lock

Cumberland River

Pin Oak Dam
Beech Dam
Pine Dam
Cedar Dam
Redbud Dam
Dogwood Dam
Lost Creek Dam
Sycamore Dam

Great Falls Dam

Normandy Dam

Tims Ford Dam

Chickamauga Dam & Lock

Nickajack Dam & Lock

Wheeler Dam & Lock

Wilson Dam & Lock

Cedar Creek Dam

Little Bear Creek Dam

Bear Creek Dam

Upper Bear Creek Dam

Guntersville Dam & Lock

Raccoon Mountain Pumped Storage Plant

Watts Bar Dam & Lock

Apalachia Dam

Ocoee #1 Dam

Ocoee #2 Dam

Ocoee #3 Dam

Blue Ridge Dam

Fontana Dam

Hiwassee Dam

Chatuge Dam

Nottely Dam

Melton Hill Dam & Lock

Ft. Loudoun Dam & Lock

Tellico Dam

Douglas Dam

Norris Dam

Cherokee Dam

Nolichucky Dam

John Sevier Dam

Boone Dam

Wilbur Dam

Watauga Dam

Ft. Patrick Henry Dam

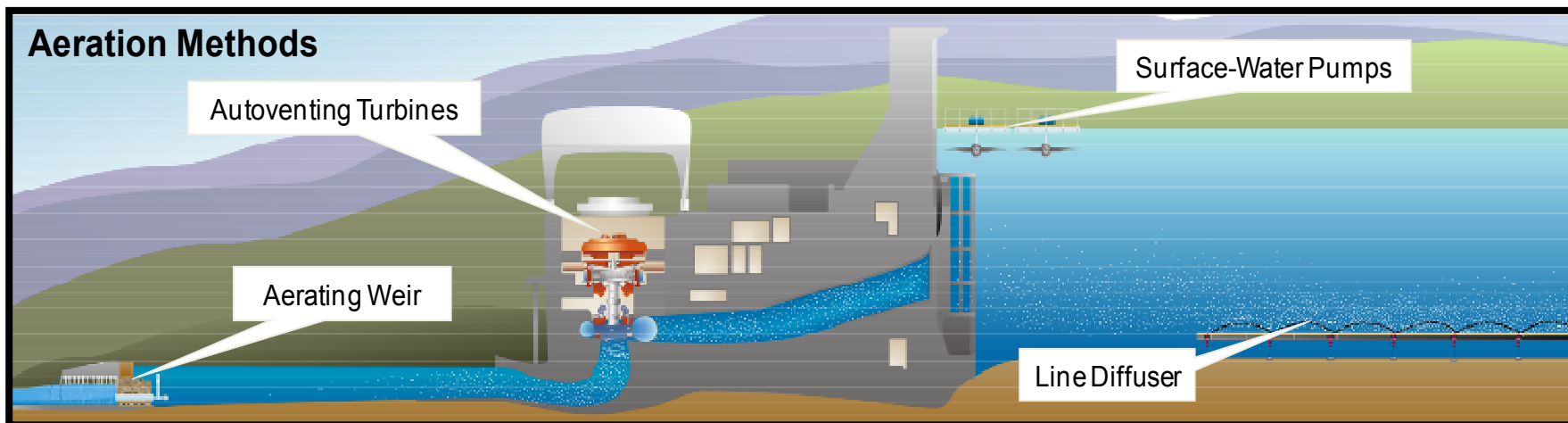
South Holston Dam

Clear Creek Dam

Beaver Creek Dam

Clear Creek Dam
Beaver Creek Dam

- ◆ Maintains wetted habitat in 180 miles of river that was previously impacted by intermittent drying
- ◆ Increased dissolved oxygen levels in 300 miles of rivers downstream of TVA dams
- ◆ Spent \$60M constructing capital projects since 1991

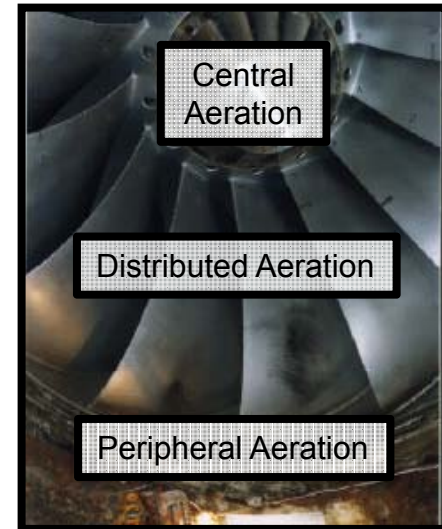


TVA Habitat Improvement & Restoration Efforts

◆ Aeration systems installed at 16 projects

System	Location
Oxygen Injection	Blue Ridge, Cherokee, Douglas, Fort Loudoun, Hiwassee, Norris, Nottely, Tims Ford, Watts Bar
Turbine Venting	Apalachia, Boone, Cherokee, Douglas, Fontana, Hiwassee, Norris, South Holston, Watauga
Surface-Water Pumps	Cherokee, Douglas
Aeration Weirs	Chatuge, South Holston, Norris
Air Compressors or Blowers	Nottely, Normandy, Tims Ford

◆ Spend \$3-4M annually operating and maintaining projects

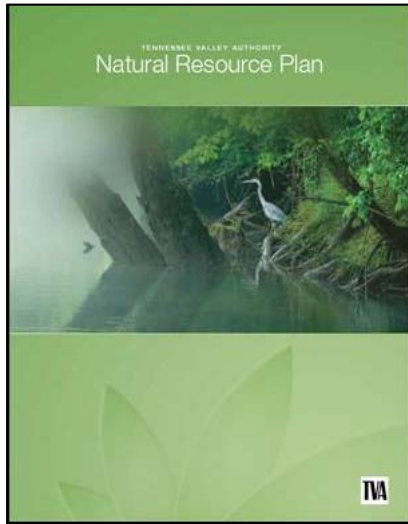


TVA Habitat Improvement & Restoration Efforts

◆ South Holston Tailwater



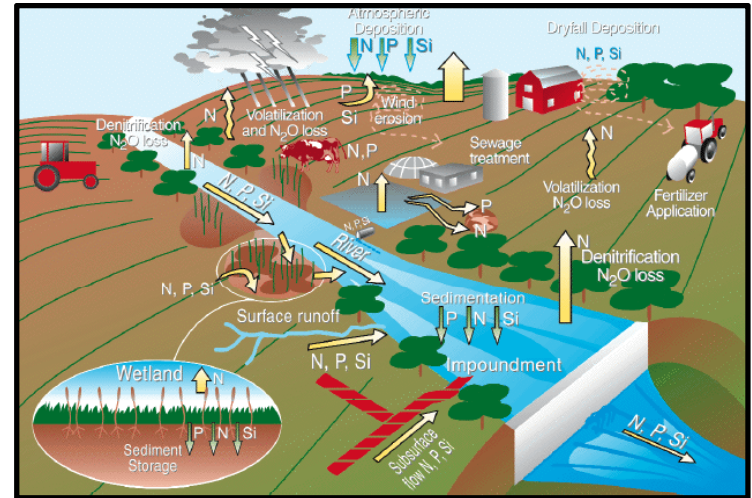
TVA Habitat Improvement & Restoration Efforts



- ◆ Natural Resource Plan (NRP)
 - Shoreline Stabilization/Riparian Management



- Nutrient Source-Watershed Identification and Improvement
- Aquatic Ecology Management
- Stream and Tailwater Monitoring



Vital Signs Monitoring Program

Monitoring Objective:

Provide current and long-term aquatic data in support of TVA's power production operations and its stewardship of the Tennessee Valley.



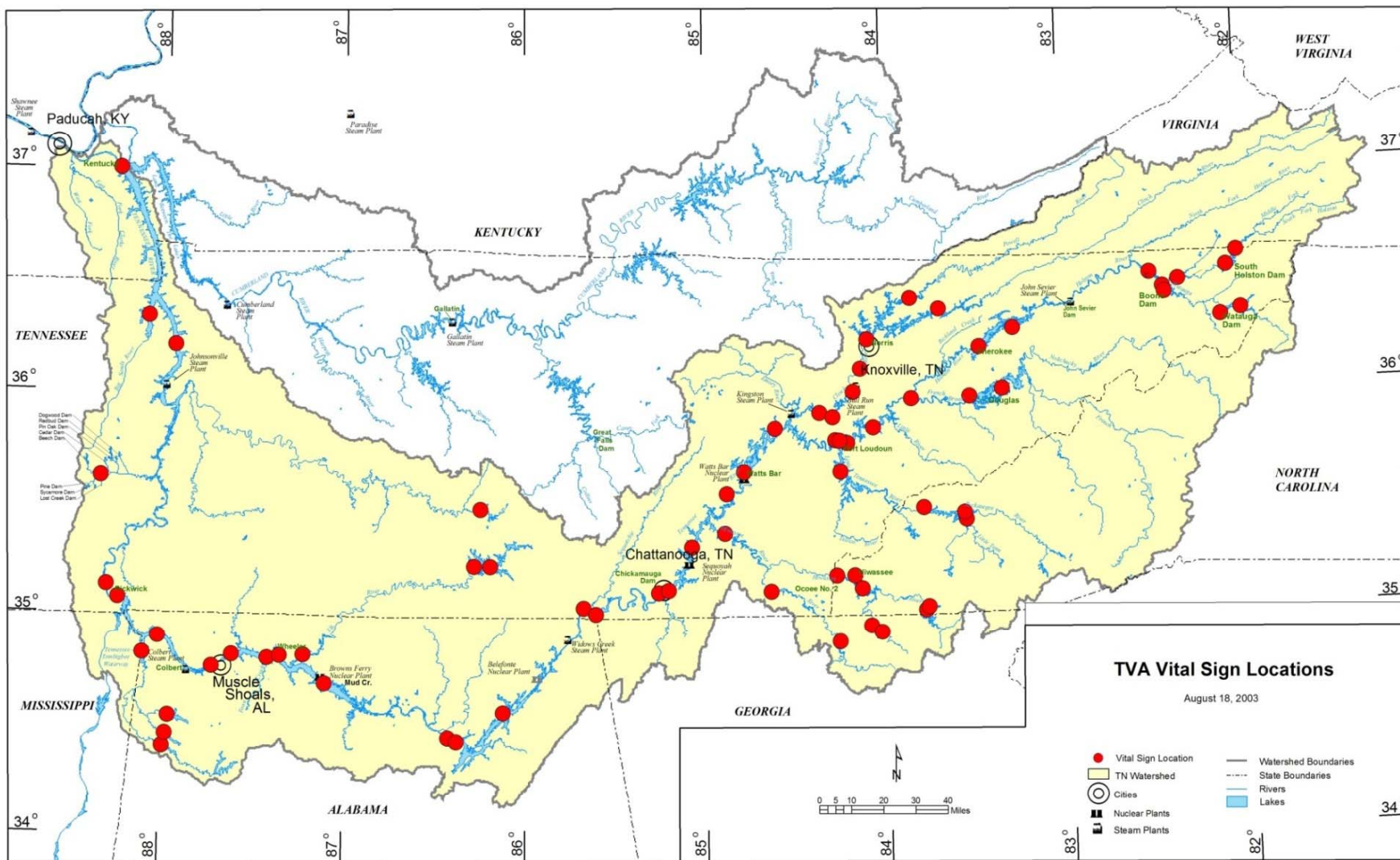


Vital Signs Monitoring Program

- ◆ Core monitoring activities (Vital Signs):
 - Reservoir Ecological Health
 - Sport fish Assessments
 - Contaminants in Fish Flesh
 - Stream and Tailwater Ecological Health



Reservoir Ecological Health Sampling Locations

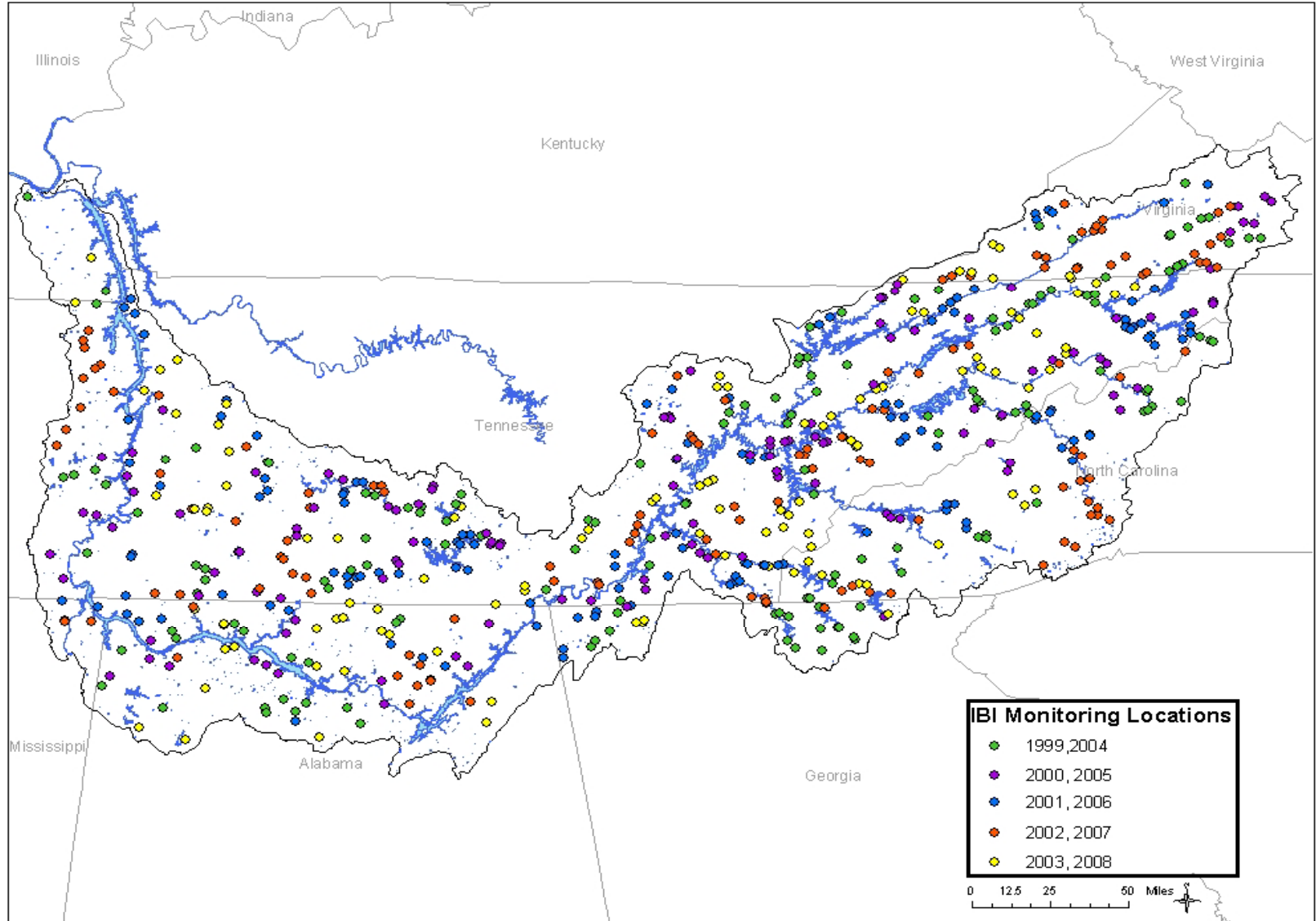


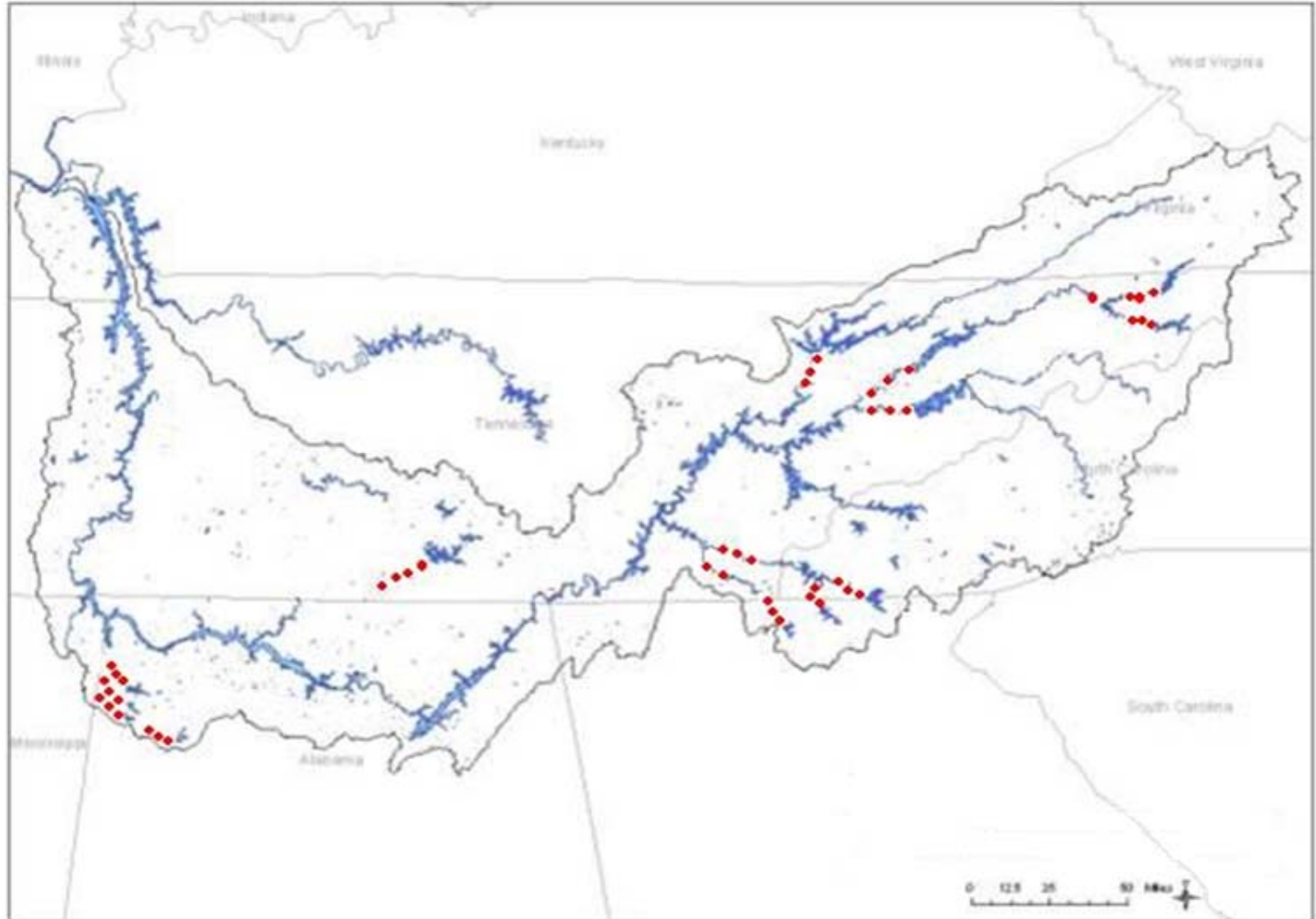


Reservoir Monitoring

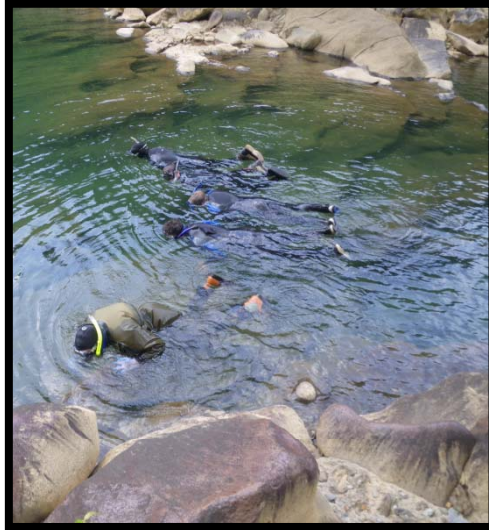


Stream and Tailwater Ecological Health





Stream and Tailwater Monitoring





Questions

