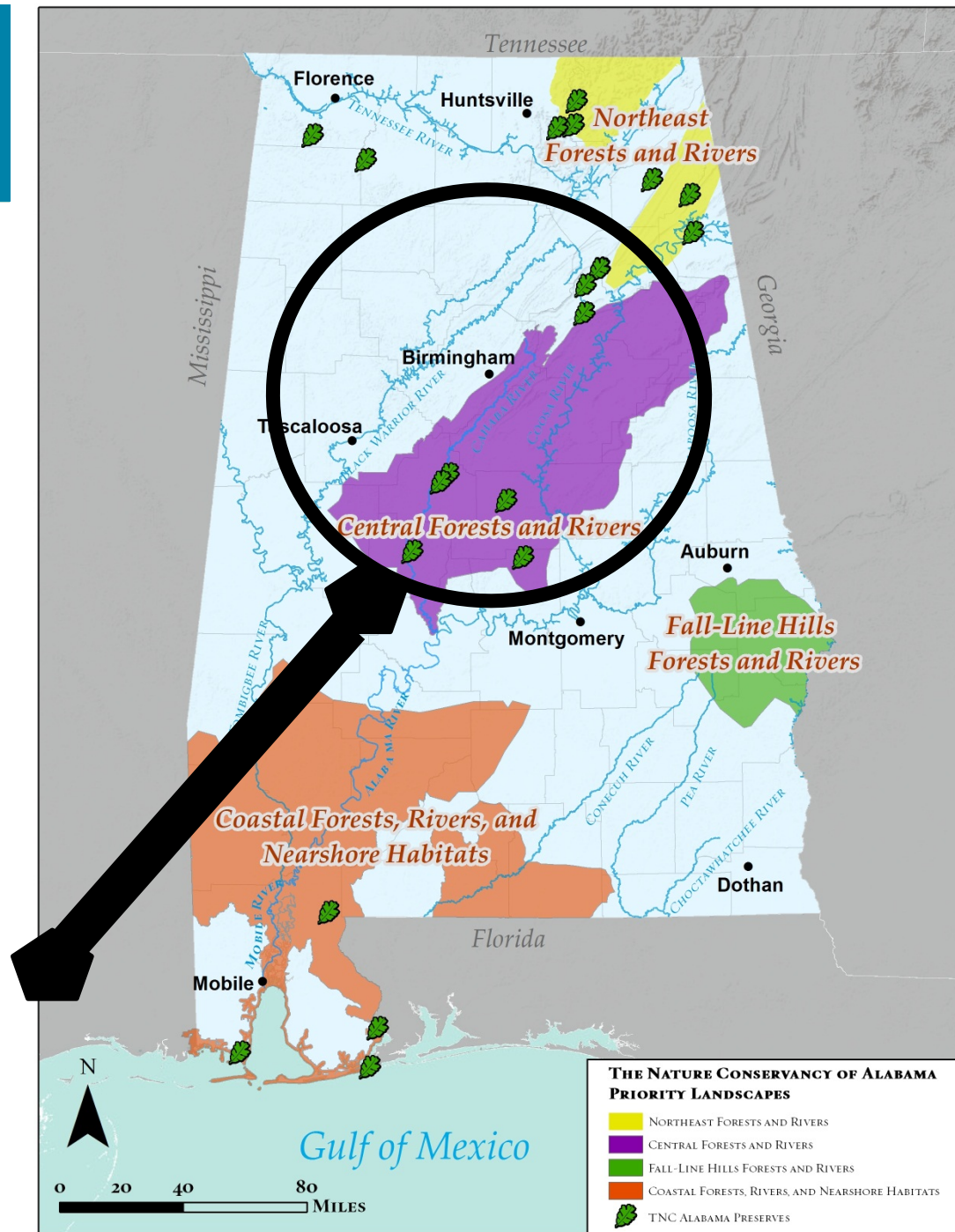# Looking through a bigger lens in Alabama

February 12, 2014
Marine Aggregation
Silo-Busting Session

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- **Coastal Resilience 2.0** – upgrade from original version "Gulf Decision Support Tool"- spearheaded by the TNC Global Marine Team

- **Southeast Aquatic Connectivity Assessment Project (SEACAP)** – spearheaded by TNC, Southeast Aquatics Resources Partnership (SARP), and South Atlantic Landscape Conservation Cooperative (SA LCC)

- **Stream Classification System in Appalachian Landscape Conservation Cooperative (APP LCC)** – spearheaded by Eastern Division TNC with help of post-doctoral student

- **Southeast Resilience Project** – spearheaded by Eastern Division TNC

Coastal Resilience 2.0 (Basic Layers)
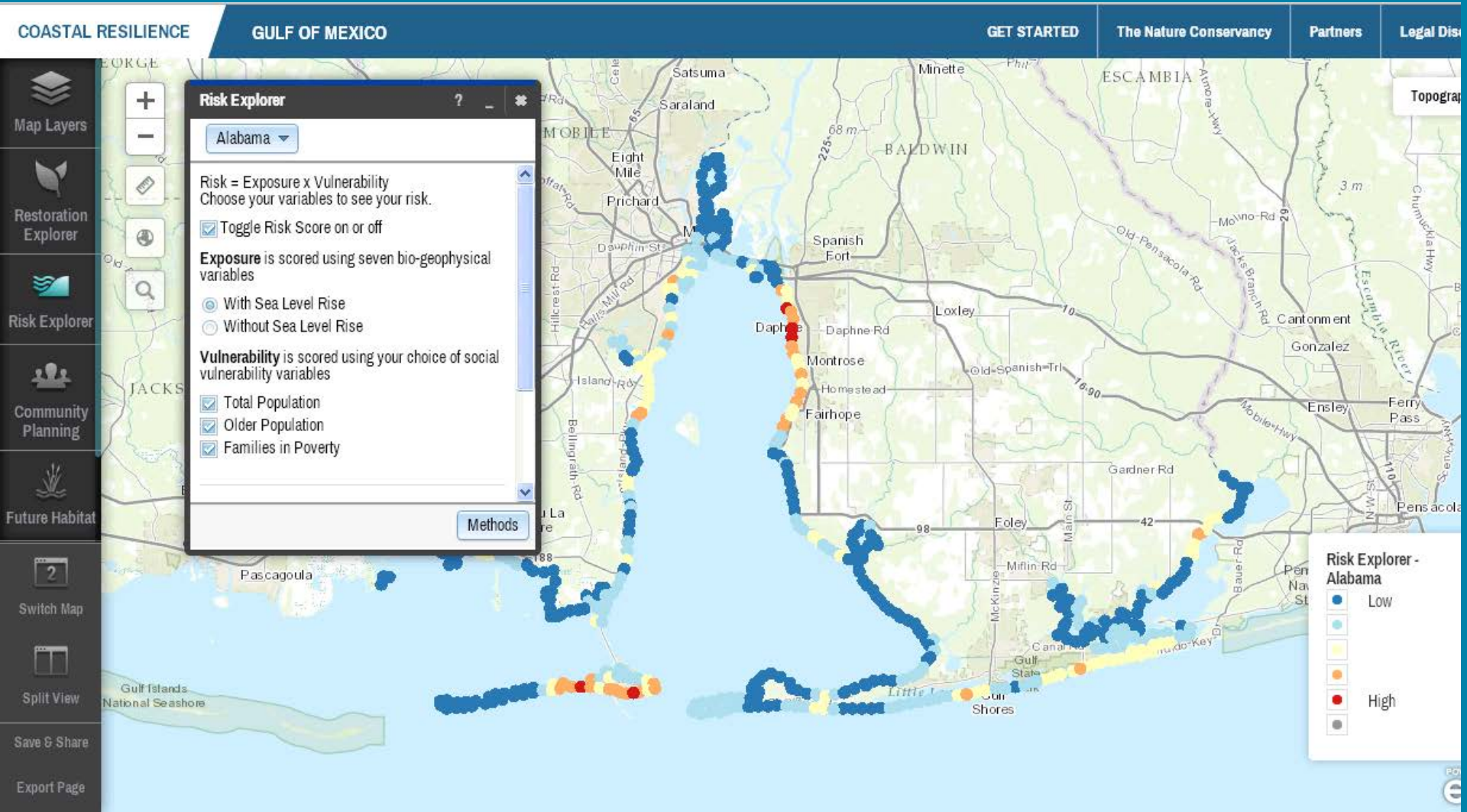http://maps.coastalresilience.org/network/
http://coastalresilience.org/geographies/gulf-mexico
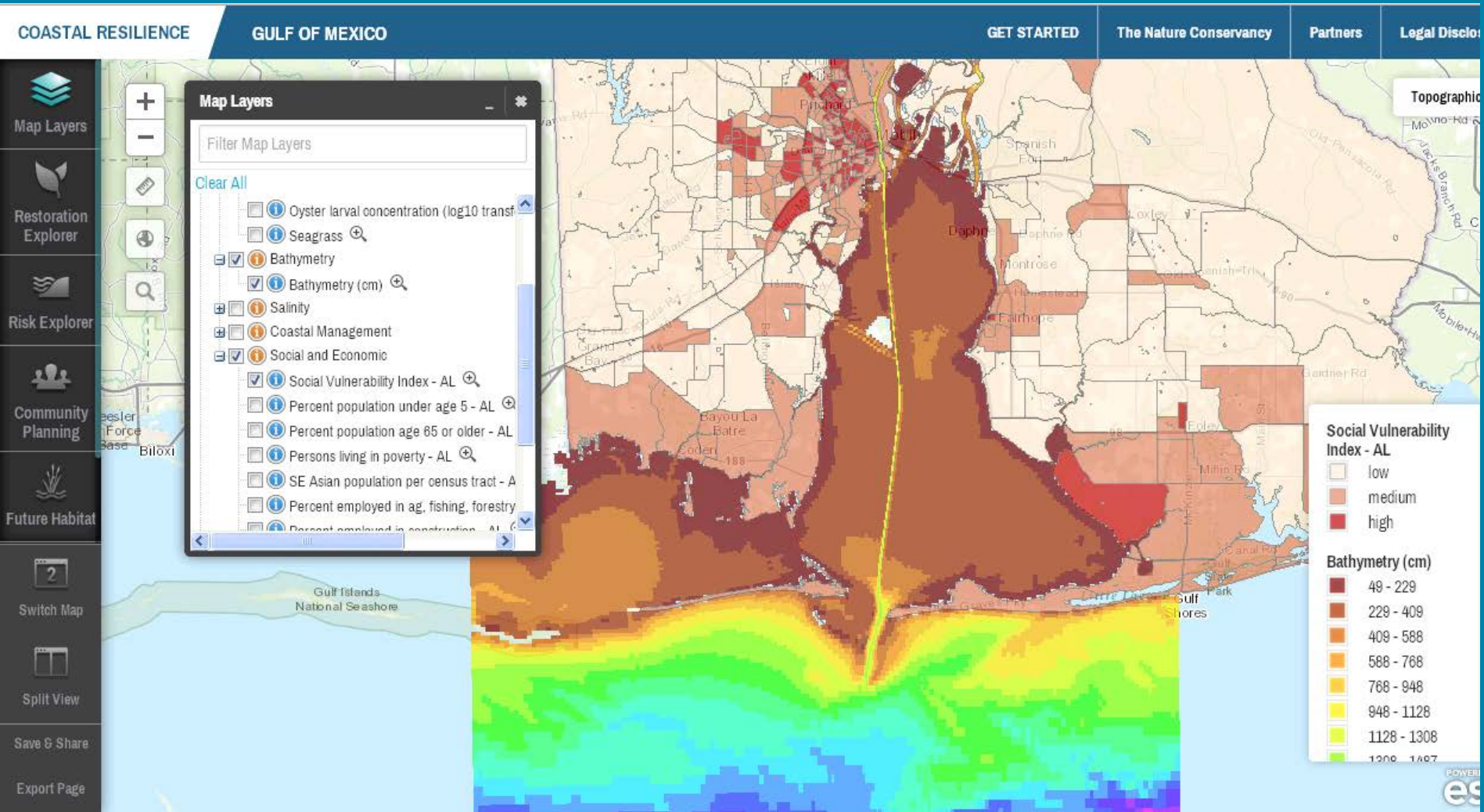
Coastal Resilience 2.0 (Risk Explorer)
http://maps.coastalresilience.org/network/
http://coastalresilience.org/geographies/gulf-mexico

Southeast Aquatic Connectivity Assessment Project (SEACAP)

The Nature Conservancy
Protecting nature. Preserving life.™

Goal: Conducting a thorough ecological assessment of dams and its impact across the South Atlantic LCC region, including some areas outside due to watershed boundaries.

Applications:
- Support planners/managers in fish passage efforts
- Prioritizing dams to be removed or bypassed based on their ecological benefit
- Develop watershed plans
- Aid in acquisition of project funds
- Provide a baseline for indicators and measures
- Help with project communications

- Study area = 250,000 + miles
- 350,000+ miles of mapped streams & rivers
- 10s of thousands dams & 100s of thousands of road crossings

Southeast Aquatic Connectivity Assessment Project (SEACAP)
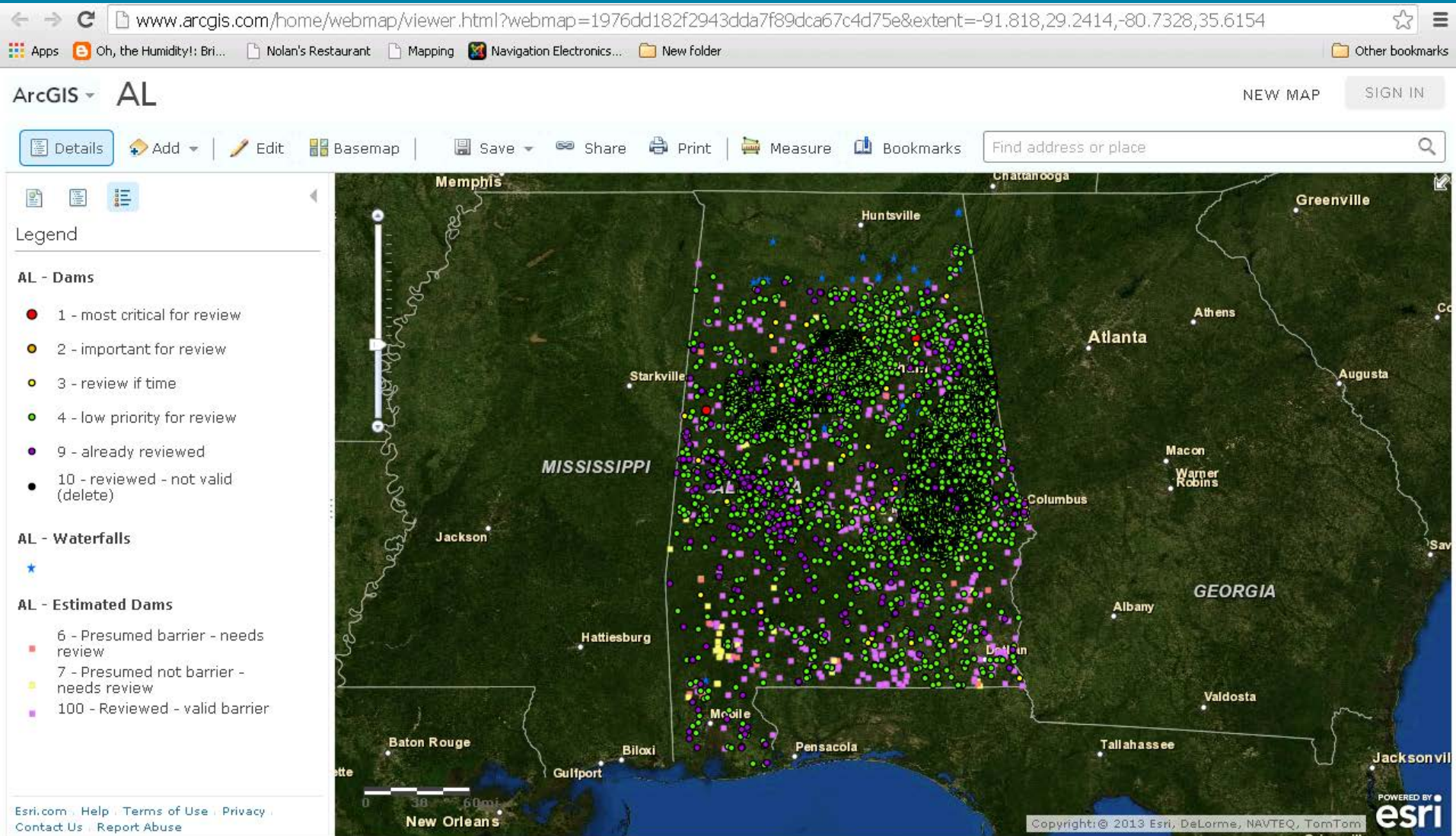
APP LCC Stream Classification Project

Appalachian LCC with USGS Drainage Regions
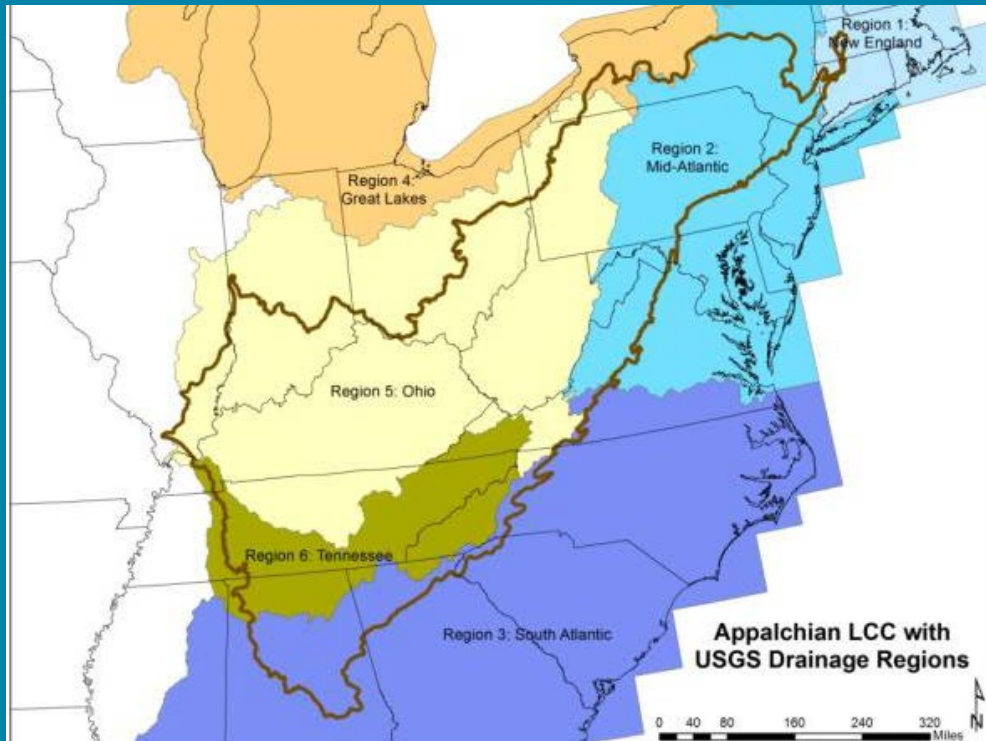
Goal: **A** standardized aquatic habitat classification and dataset for the Appalachian Landscape Conservation Cooperative (APPLCC)
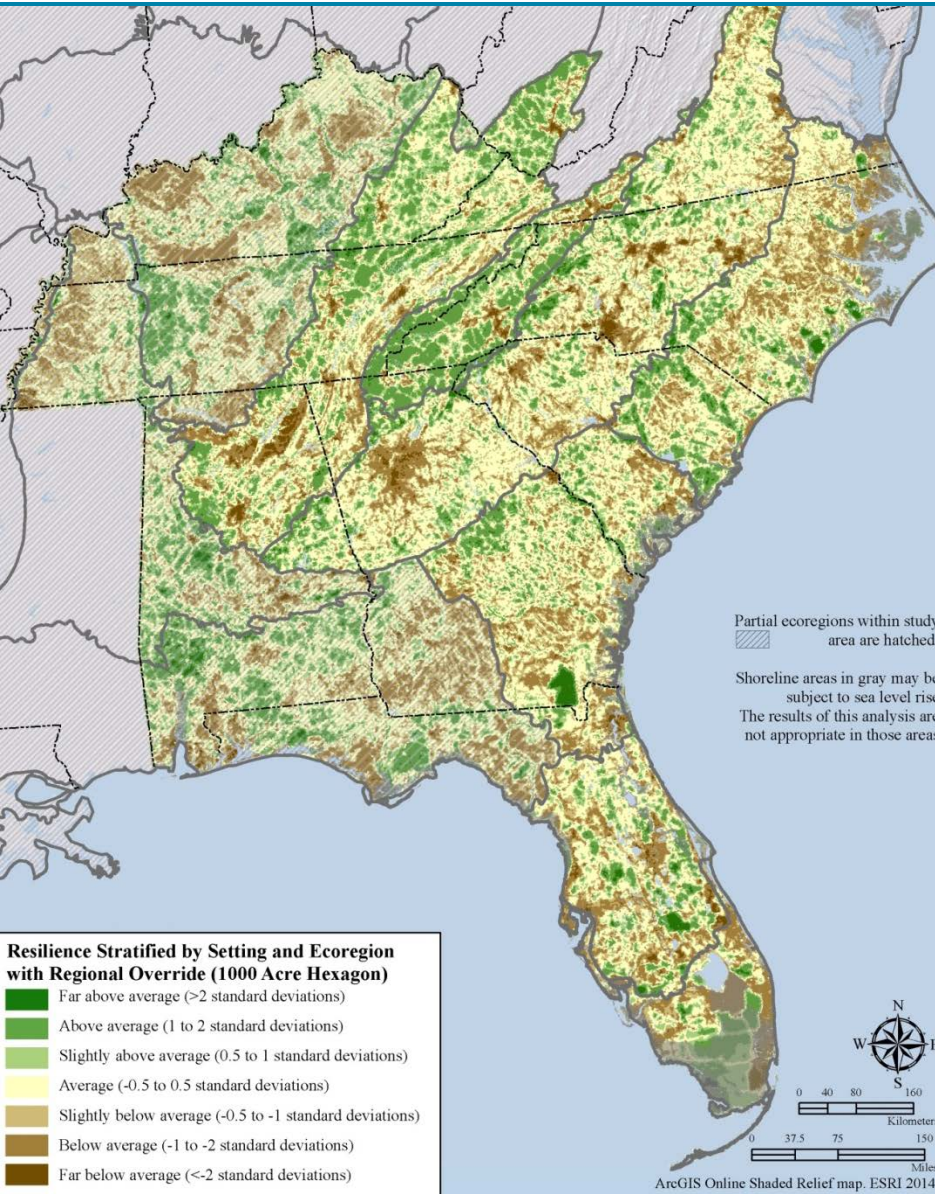
Applications:
- Provide common definitions and mapping of aquatic habitats across state lines.

- Facilitate a new understanding of aquatic biota on a regional scale

- Create a new opportunity to assess condition and prioritize habitats

- Facilitate more effective and efficient habitat conservation

Products:
1) A classification system and report describing the method used to develop the system.
2) a GIS stream data set based on the NHD+ medium resolution stream reaches attributed with the selected classification variables such as stream size, gradient, geology and pH, temperature, and hydrologic class

Southeast Resilience Project (Terrestrial Lands Assessment)

Partial ecoregions within study area are hatched.

Shoreline areas in gray may be subject to sea level rise. The results of this analysis are not appropriate in those areas.

Resilience Stratified by Setting and Ecoregion with Regional Override (1000 Acre Hexagon)

- Far above average (>2 standard deviations)
- Above average (1 to 2 standard deviations)
- Slightly above average (0.5 to 1 standard deviations)
- Average (-0.5 to 0.5 standard deviations)
- Slightly below average (-0.5 to -1 standard deviations)
- Below average (-1 to -2 standard deviations)
- Far below average (<-2 standard deviations)

ArcGIS Online Shaded Relief map. ESRI 2014.

Goal:
- To assess terrestrial landscapes and ecosystems using a variety of metrics:
    - landform variety
    - geologic formations
    - wetland density
    - landscape complexity
    - local connectedness
    - protected lands
    - portfolio sites

- To determine its potential ability to be resilient to climate change and also to determine areas of high biodiversity.

- **Anticipated uses:** future conservation opportunities, land acquisitions, restoration efforts, cross-state/landscape efforts