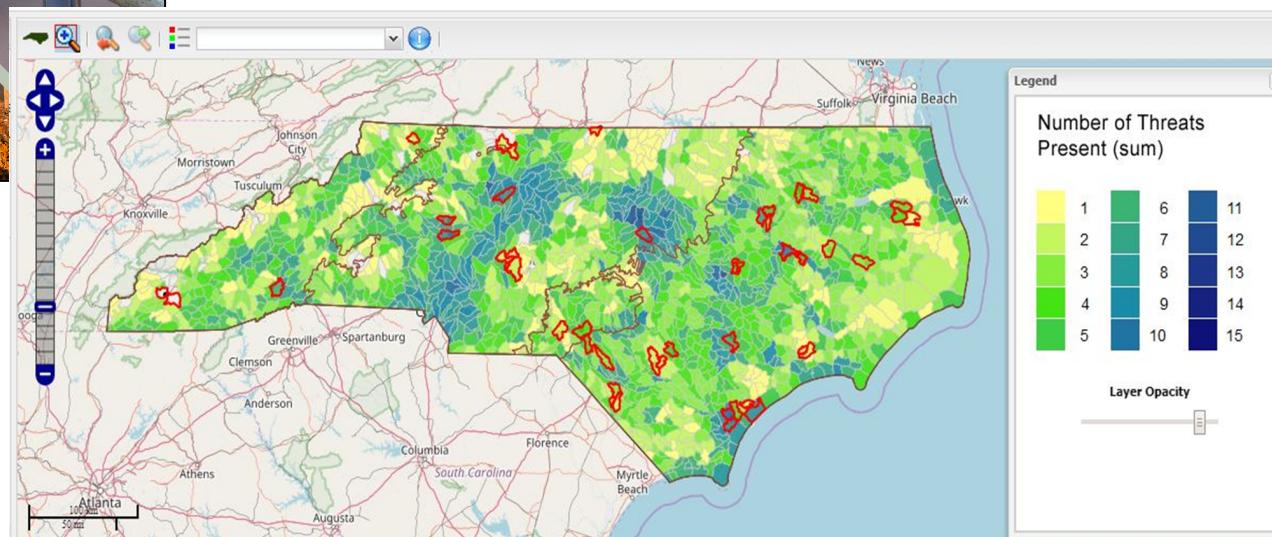


# Decision Support Tools:

- Conservation Opportunity Areas (COAs)
- Habitat Threats Risk Assessment (TRA)

Integration of the North Carolina  
Wildlife Action Plan, Southeast Gap Analysis Data,  
and NC Habitat Threats Risk Assessment Tool

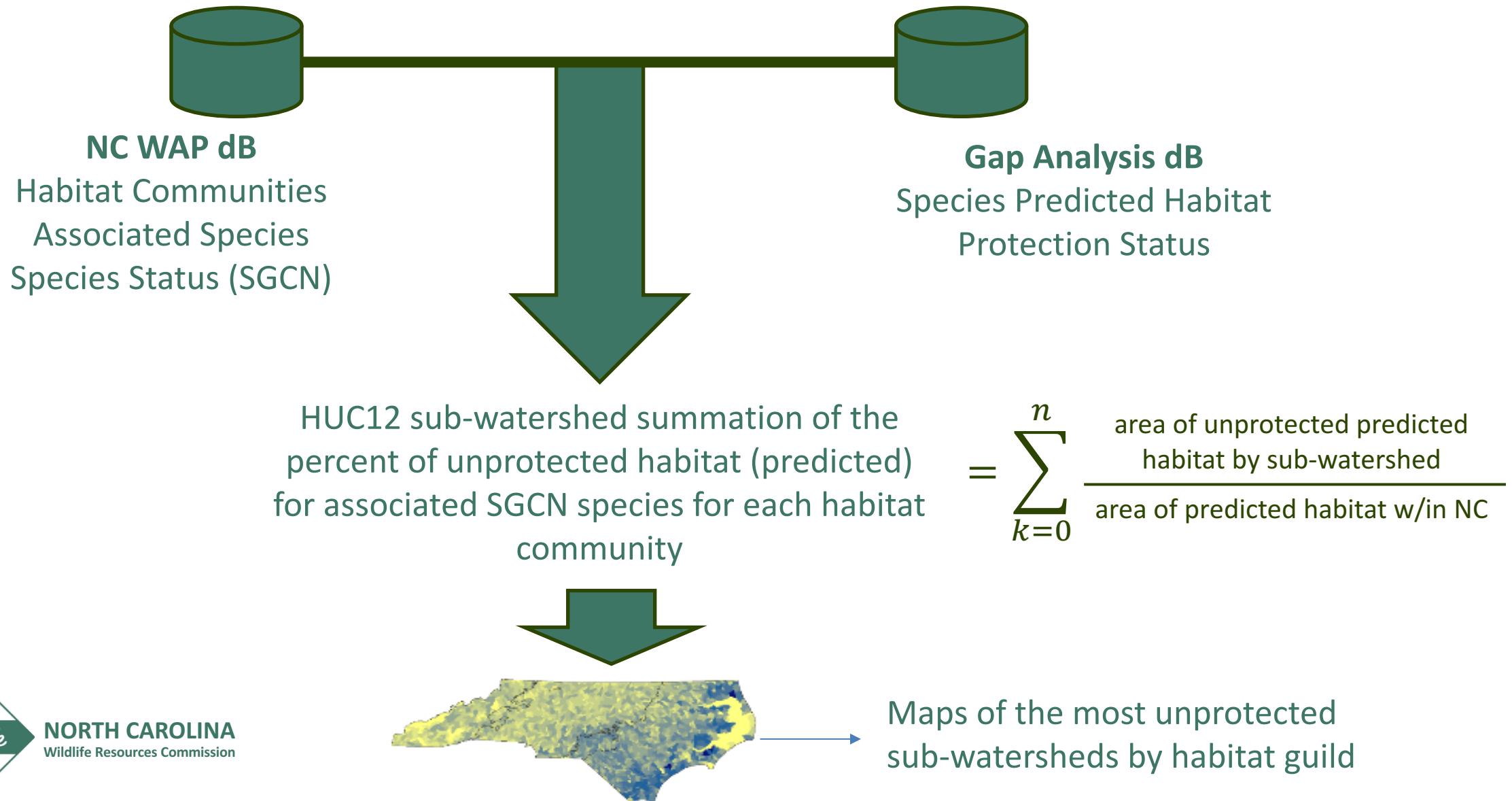


Cindy Simpson  
NC Wildlife Resources  
Commission



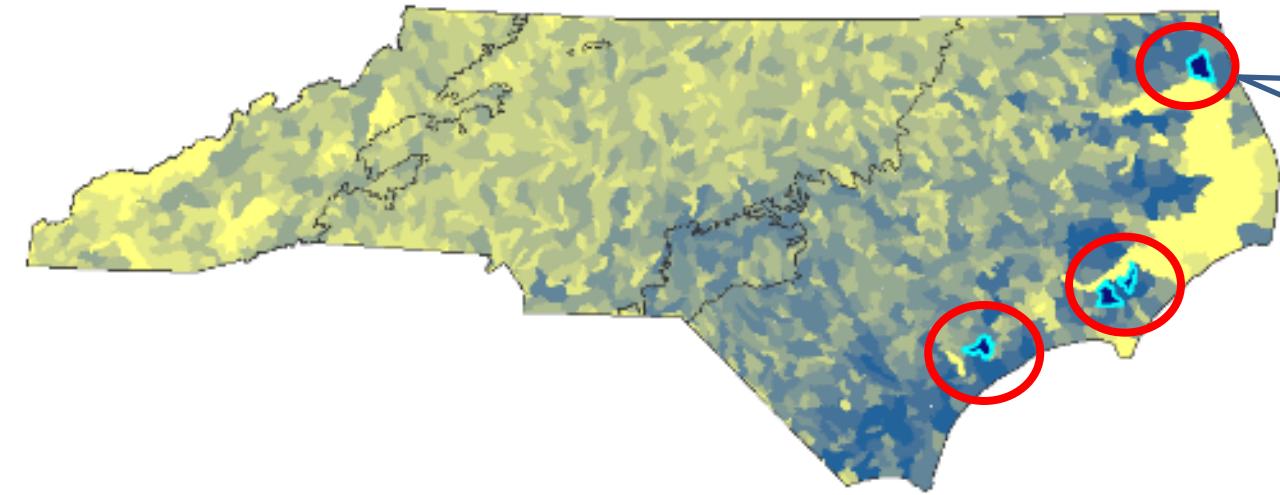
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Wildlife Resources Commission

# Identifying Conservation Opportunity Areas (COAs)



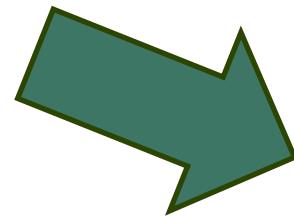
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# Analyze COAs for current and potential habitat threats



COAs = Top 5 most  
unprotected  
HUC12 sub-watersheds  
by habitat guild

COAs can be analyzed by  
Habitat Threats Risk Assessment  
tool for further prioritization

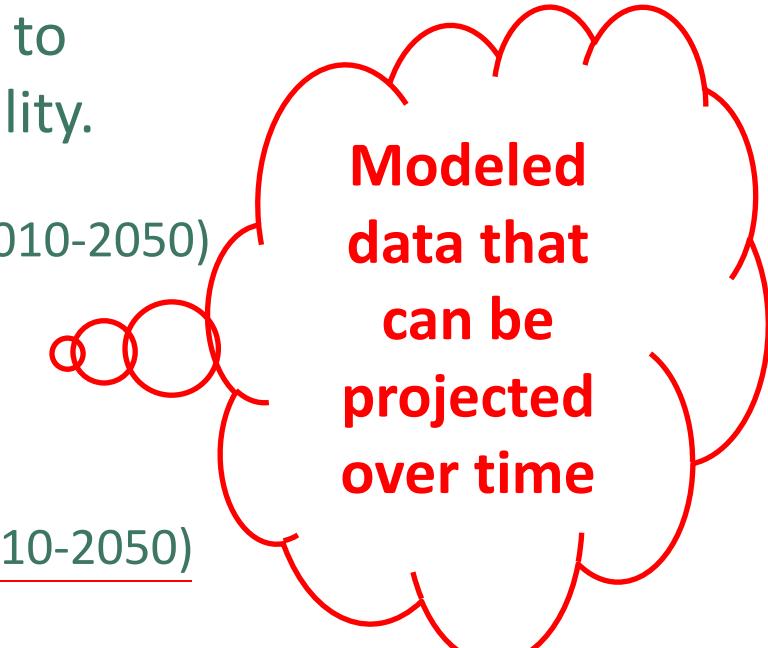


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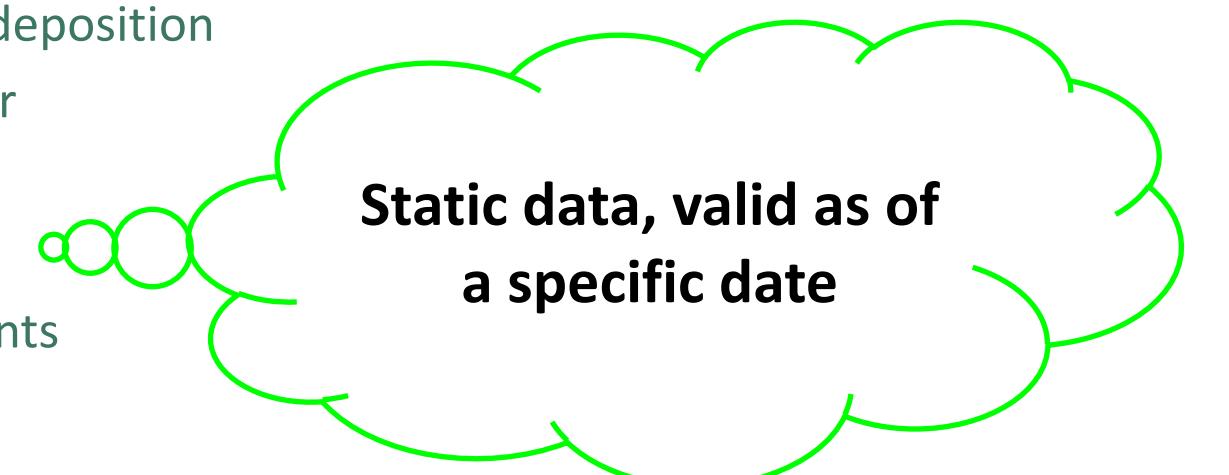
# THREAT DATA: Predicted and Known Occurrences

11 threat categories with GIS data layers from 20 potential threats to wildlife, including habitat loss and stressors that affect habitat quality.

1. **Habitat loss** – Forest, Wet Forest, Wet Herbaceous, Open, Scrub/Shrub (2010-2050)
2. **Urban growth** – Predicted urban development (2010-2050)
3. **Fire suppression** – Density of urban development (2010-2050)
4. **Transportation corridors** – Divided center line highways (2010-2050)
5. **Sea level rise** – Undeveloped upland and terrestrial land cover change (2010-2050)
6. **Nutrient loading** – Manure and synthetic nitrogen fertilizer application
7. **Atmospheric deposition** – Total nitrogen and sulfur deposition
8. **Energy development** – Triassic basin and wind power
9. **Forest health** – Forest insect/disease risk
10. **Hydrologic alteration** – Number of dams
11. **Impaired waters 303(d)** – Biota and metal impairments

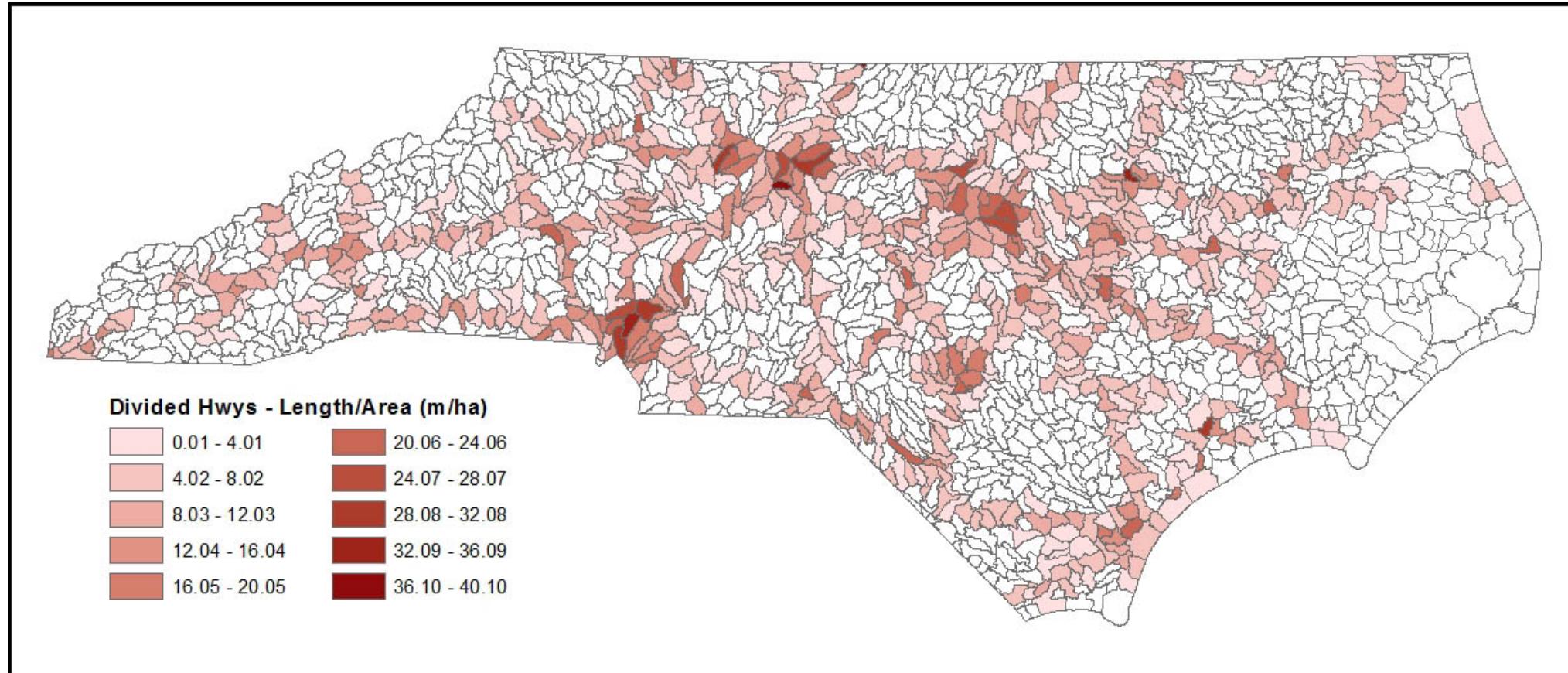


Modeled data that can be projected over time



Static data, valid as of a specific date

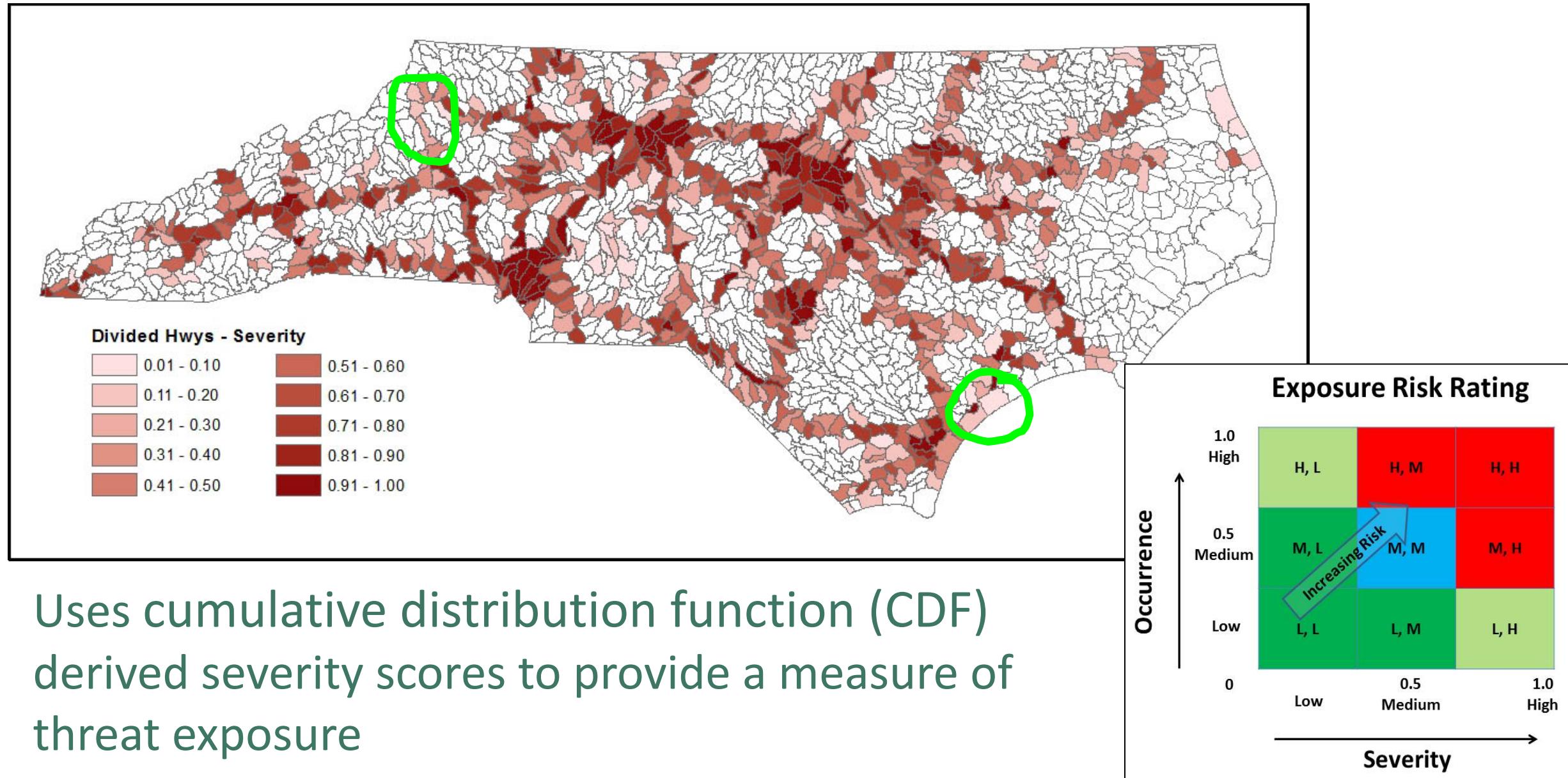
# EXAMPLE: Threat Data for Transportation Impacts



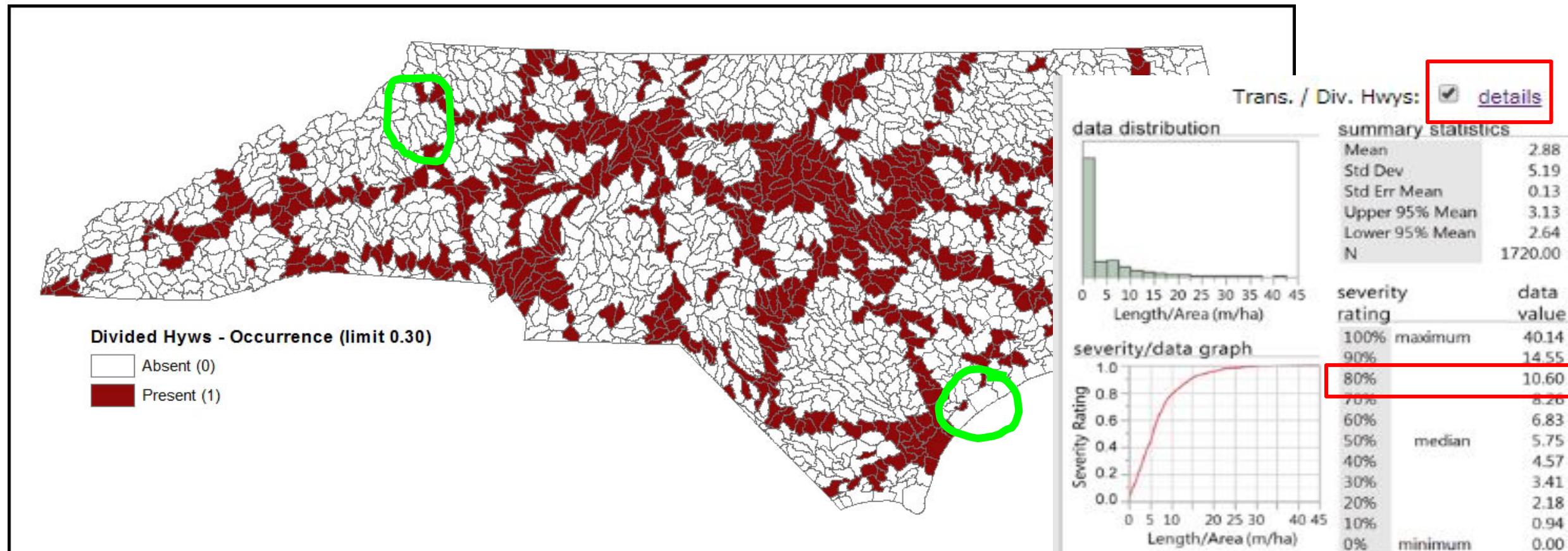
Many threats have highly skewed distribution on the landscape

- – entirely absent in many areas (white spaces)
- – relatively rare high values in few areas (darker spaces)

# EXAMPLE: Severity Ranking of Transportation Impacts



# EXAMPLE: Threat Occurrence for Transportation Impacts

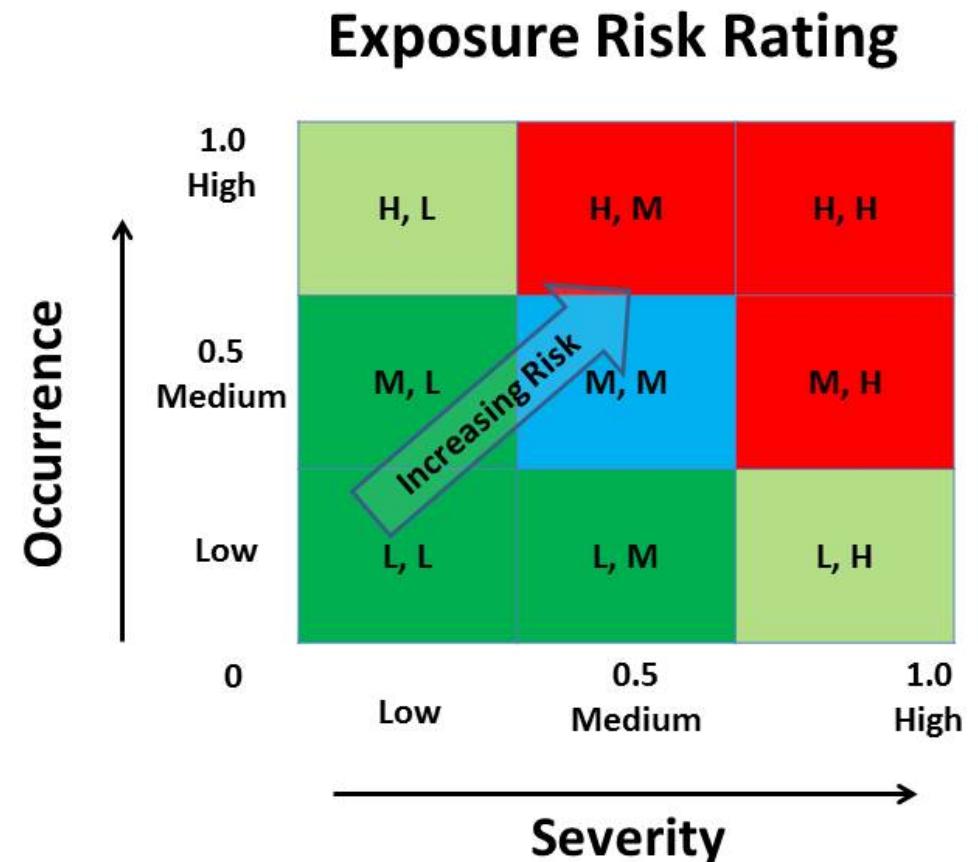


- If a single threat value is above a set minimum threshold, it is said to occur. Here, 0.8 is the threshold which calculates to 10.6 m/ha.
- Otherwise, the threat is considered absent.

# EXPOSURE ANALYSIS

Uses Bayesian Network to generate measures of exposure and a threat profile

1. Identification of threats,
2. A spatial assessment of threats at multiple scales,
3. Measures of threat intensity or severity using cumulative distribution function (CDF),
4. Provides a means to assess threat distribution and intensity over time (e.g., urban growth, climate change),
5. Interpret results using risk rating matrix to inform decisions.



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## Wildlife Action Plan

### Introduction

#### Decision Support Tools: Conservation Opportunity Areas (COA) and Threat Risk Assessment (TRA)

**CLICK HERE TO OPEN BOTH TOOLS IN A NEW WINDOW**

This tool works on Chrome or Firefox only.

- As of October 2, 2017:** The Decision Support Tools (Conservation Opportunity Area, Threats Risk Assessment) interface will be sporadically offline as improvements are made. Please check back or bookmark the page and try again if you are not able to access it at this time.

Two new web-based **decision support tools** (DSTs) were launched in Spring 2017 to support priority conservation recommendations in the North Carolina Wildlife Action Plan (NCWAP). They are the Threat Risk Assessment (TRA) tool and the Conservation Opportunity Area (COA) tool.

Download PDF documentation:

[User Guide and Step-by-Step Instructions](#)

[COA-TRA Analysis Worksheet](#)

Case Studies - Examples of How to Interpret COA-TRA analysis results (will be available soon!)

Draft\_WRC\_NCSL....pdf

## NC Forest Service

- [Forest Action Plan](#)  
(Presenter: Sean Brogan, NCFS)
- [Pre-harvest Planning Tool](#)  
(Presenters: Alan Coats and Bill Swartley, NCFS)

## Watershed Stewardship Network - Partnerships

- [Watershed Stewardship Network](#)

North Carolina Wildlife Habitat Threat Data Viewer and Analysis Tool

Biodiversity and Spatial  
**BaSIC**  
Information Center

Map showing North Carolina and surrounding states (Virginia, Kentucky, Tennessee, Georgia, South Carolina) with various green shaded areas indicating habitat priorities. Major cities like Charlotte, Raleigh, and Winston-Salem are labeled. A legend on the left shows symbols for COAs, Data, Analyze, AOI, Print, and Setup. A sidebar on the left lists "Community Name" and "SGCN Spp" for different regions: Coastal Plain, Terrestrial, Piedmont, Mountains, and River Basin Priorities. A table for the Coastal Plain region shows the following data:

Community Name	SGCN Spp
Caves & Mines	2
Mixed Hardwood Pine Forest, Managed Timberland	14
Dry Longleaf Pine Forests	27
Maritime Upland Forests	24
Maritime Grasslands	33
Sand, Shell, and Wrack Line Beach Zones	30
Successional Communities - Herb	29
Sandhills	

Legend:  
COA  
Data  
Analyze  
AOI  
Print  
Setup

River Basin Priorities

Scale: 50 mi