Update and Next Steps for NALCC Science Delivery and SWAP Support

Steven Fuller, NALCC

The Wildlife
Management Institute

LANDSCAPE CONSERVATION COOPERATIVES

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Science Delivery

- **Competitive funding program**
  https://www.dropbox.com/s/8c5nouk5sja4nr5/5_Science%20Delivery.docx
- **Organizational websites**
- **Training workshops to use tools**
- **Webinars**
- **Information management**
- **Databasin**
- **Science Base**

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Science Delivery Accomplishments:

Supported staff to manage web data
Contract Chesapeake Conservancy to assist workshops
13 hard drives chock full 'o data delivered
1 meeting with FWS staff
1 workshop for SWAP coordinators
2 two-day workshops for state GIS staff
1 follow-up meeting with NEFWDTC

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Everyone has been asking:

"what is the regional context of the species and habitats in my state."

Data available to develop Northeast COAs (What is the regional context of _____?)

- Geospatial Condition Analysis (TNC)
- Ecological Integrity Grids (forthcoming from UMass)
- Downscaled climate data for the Northeast Region (forthcoming from UMass)
- Urban Growth models for the Northeast Region (forthcoming from UMass)
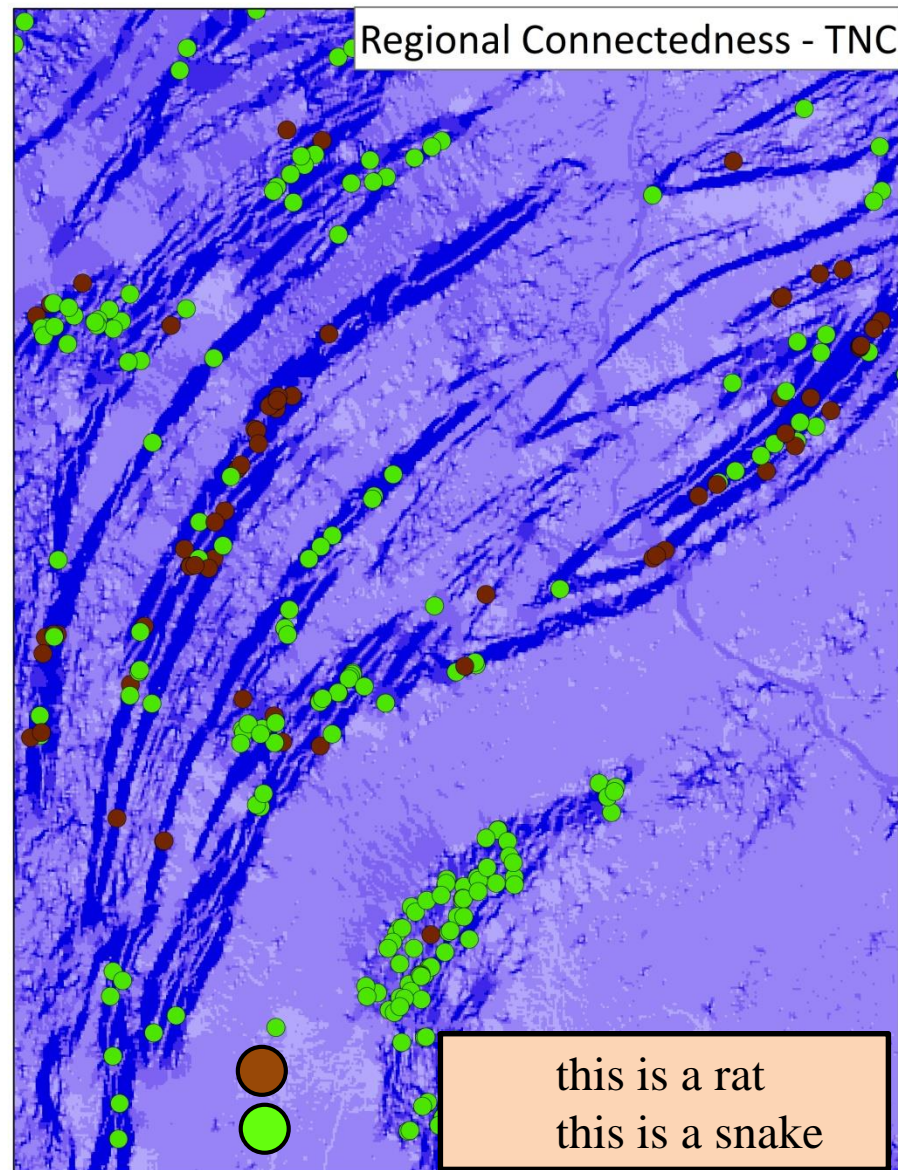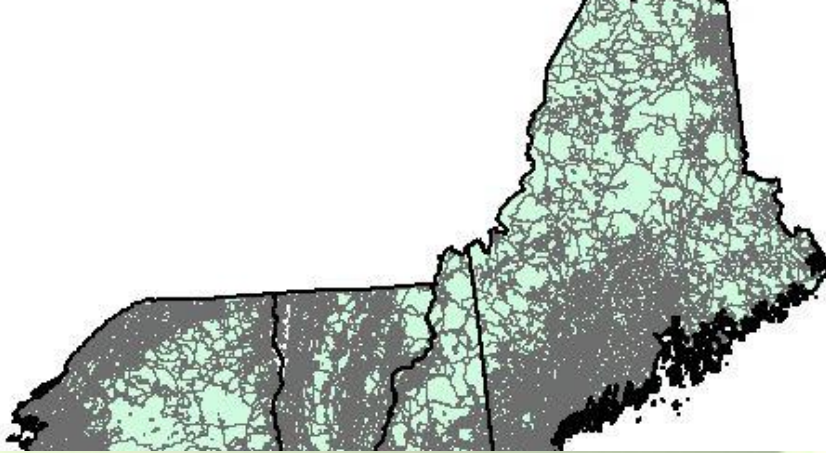

Northeast

0   70 140   280 Kilometers
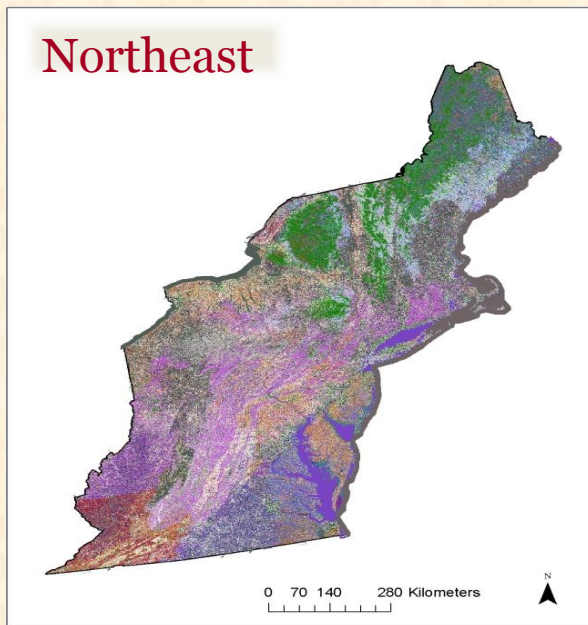
1 Belknap Range Conservation Coalition
2 Chateauguay Notown Conservation Project
3 Cold Hollow to Canada Forest Link Project
4 Downeast Research and Education Network
5 Fairfield County Regional Conservation Partnership
6 Forest Works!
7 Forever Farmland Initiative
8 Friends of the Silvio O. Conte National Fish and Wildlife Refuge
9 Great Bay Resource Protection Partnership
10 High Peaks Initiative
11 Kennebec Woodland Partnership
12 Litchfield Hills Greenprint Collaborative
13 Lower Penobscot Watershed Coalition
14 MA-VT Woodland Partnership
15 Mahoosuc Initiative
16 Mass-Conn Sustainable Forest Partnership
17 Mt. Agamenticus to the Sea Conservation Initiative
18 Natchaug River Basin Municipal Conservation Compact
19 Newfound Land Conservation Partnership
20 North Quabbin Regional Landscape Partnership
21 Orange County Headwaters Project
22 Quabbin to Cardigan Partnership
23 Quiet Corner Initiative
24 Rensselaer Plateau Alliance
25 River Link
26 Salmon Falls Watershed Collaborative
27 Sandy Brook Conservation Corridor
28 Southern New England Heritage Forest Partnership
29 Taconics Landscape Partnership
30 Taunton River Coalition
31 The Chittenden County Uplands Conservation Project
32 The Lower Connecticut River and Coastal Region Land Trust Exchange
33 The RI Woodland Partnership
34 Twelve Rivers Collaborative
35 Upland Headwaters Alliance
36 West Suburban Conservation Council
37 Taylor Valley Conservation Project
38 Nashua River Forest Partnership

Map by Brian Hall and Bill Labich courtesy of Highstead; 6/14/2013.

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With consistent data on species distributions, we can begin to identify areas of risk and opportunity.

We need different applications according to data quality:
BEST data…use model
POOR data…coarse metric

Regional Connectedness - TNC

this is a rat
this is a snake
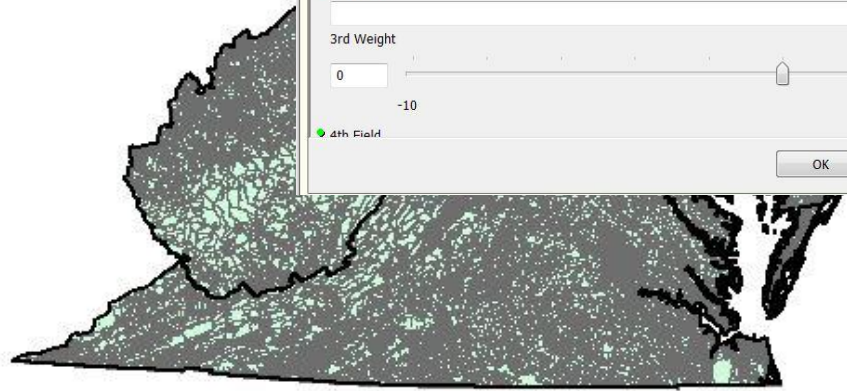
Landscape Condition Metrics

pLCI_Avg Landscape Context Index Average Score for Minor Block (

pStandAge_A Stand Age Average (n years) for Minor Block

pCore_A Natural Core Amount in Acres for Minor Block

pLocCon_avg Local Connectedness Average Score(higher is more co

pLandComp_A Landscape Complexity Average Score (higher is mor

pResilience Resilience Average Score using the 30 meter detailed gr

pStandHeigh Stand Height (in meters) for Minor Block
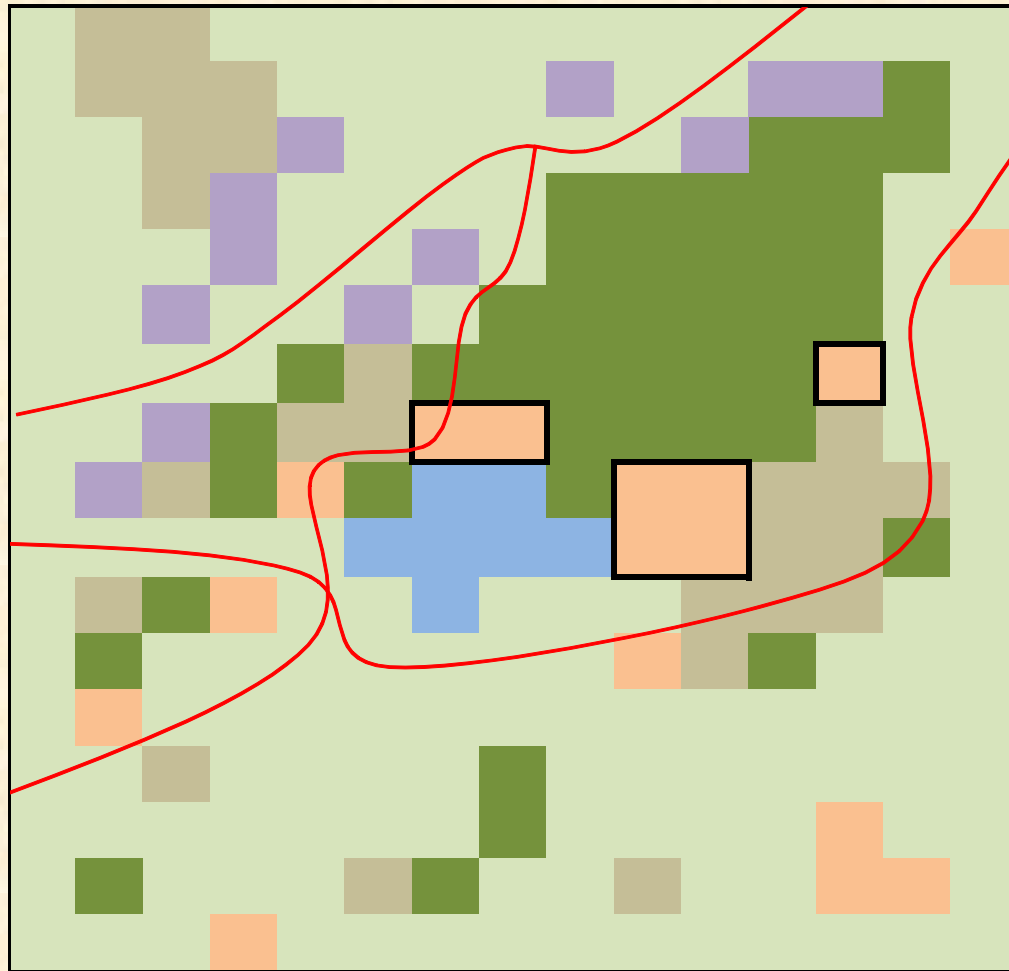
pBiomass_Av Biomass for Minor Block

Threat Metrics

pUnconserve Amount unconserved

pDev2060_A Amount Predicted to be Developed in 2060 (Acres)

pGAP12_A Amount of Minor Block Conserved in GAP 1 & 2 (Biodive

Wetland Metrics

pMax_Wet Size of the largest Wetland complex in minor block (in n

pAvg_Wet Average size of Wetland Complexes in minor block (in m

pTotal_Wet Total Area of Wetland Complexes in minor block (in me

pNum_Wet Number of Wetland Complexes in minor block

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8

Imperfect prediction of habitat classes does mean the models can't tell us about habitat diversity…
Especially when we use appropriate units of analysis.

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10

NATIONAL *fish, wildlife & plants*
CLIMATE ADAPTATION STRATEGY

Shared solutions to protect shared values

CONTACT US

ABOUT US
Who & Why

THE STRATEGY
What & How

LEARN MORE
Impacts & Adaptation

ENGAGEMENT
Events & Feedback

A Call to Action:

Fish, wildlife, and plants provide jobs, food, clean water, storm protection, health benefits and many other important ecosystem services that support people, communities and economies across the nation. Action is needed now to help safeguard these valuable natural resources and the communities that depend on them in a changing climate.

The **National Fish, Wildlife and Plants Climate Adaptation Strategy** provides a unified approach—reflecting shared principles and science-based practices—for reducing the negative impacts of climate change on fish, wildlife, plants, and the natural systems upon which they depend.

National Fish, Wildlife, and Plants Climate Ada...

0:00 / 4:40

WHAT'S NEW

States pass official resol[ution] support for Strategy

Intergovernmental pane[l] releases 2013 climate s[cience] report

Learn about the Preside[nt's] Climate Action Plan

Strategy working group[s] to chart course for implementation

The Strategy has been released!

Download the Strategy Highlights Brochure

RESOURCES

For Media

News Release

Factsheet

Frequently Asked Quest[ions]

Case Studies

CONNECT WITH US

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Strategy 1.1: Identify areas for an ecologically-connected network of terrestrial, freshwater, coastal, and marine conservation areas that are likely to be resilient to climate change and to support a broad range of fish, wildlife, and plants under changed conditions.

ACTIONS

1.1.1: Identify and map high priority areas for conservation using information such as species distributions (current and projected), habitat classification, land cover, and geophysical settings (including areas of rapid change and slow change).

1.1.2: Identify and prioritize areas currently experiencing rapid climate impacts (e.g., the coastline of Alaska, low-lying islands, and high alpine tundra).

1.1.3: Assess the potential of species to shift ranges, and prioritize conservation efforts taking into account range shifts and accounting for ecosystem functions and existing and future physical barriers.

Best Practices for State Wildlife Action Plans

Voluntary Guidance to States for Revision and Implementation

TEAMING WITH WILDLIFE
a natural investment

November 2012

Best Practices

Mapping and Modeling

1. Identify and spatially depict priority areas on the landscape that offer the best opportunities and potential for SGCN conservation as determined by each state, and use the generic term Conservation Opportunity Areas (COAs) for these focal areas.

Chapter 1 – Regional Species of Greatest Conservation Need

CONSERVATION OPPORTUNITY AREAS

A next step for utilizing regional conservation planning information and tools developed through the RCN program and LCCs in the Northeast is the identification of regional Conservation Opportunity Areas (COAs). These COAs can be developed through a process of selecting conservation features including species and habitats, agreeing on metrics for prioritizing these features , including species occurrences, habitat suitability, ecosystem integrity and ecosystem resiliency, and finally combining and weighting these metrics to achieve goals.

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The guiding purpose of COAs—paraphrasing AFWA and the NAAT guidelines—is to identify and spatially depict priority areas on the landscape that offer the best opportunities and potential for SGCN conservation, considering the **location and relative condition of their habitats.**
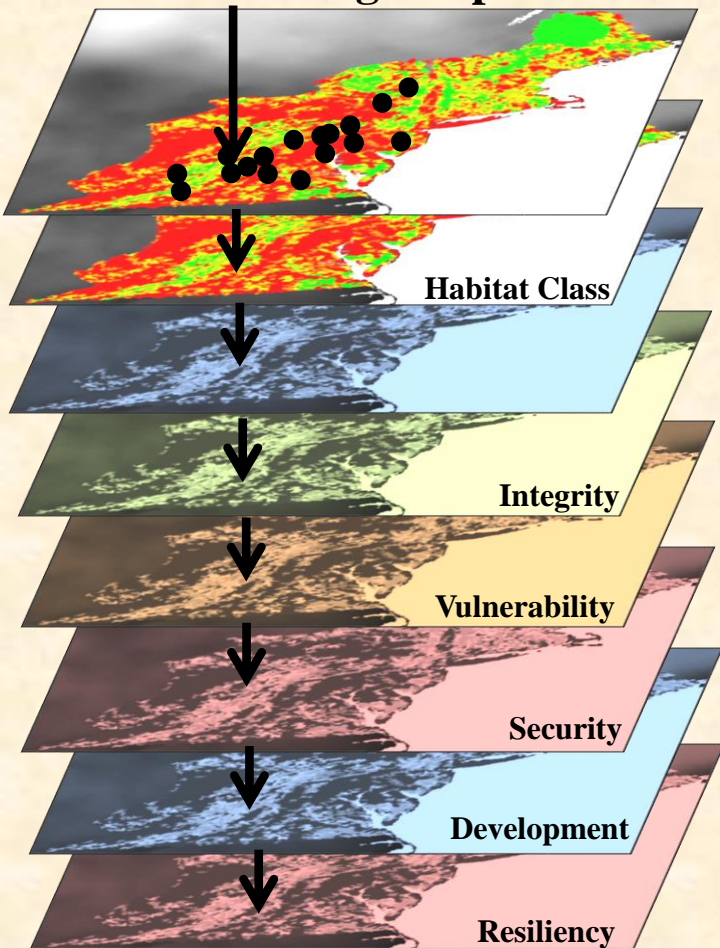
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To support states efforts:

NALCC will continue to provide data and training on development of COAs.

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NALCC will collaborate with states to develop a methodology for Northeast Regional COAs (RCOAs).

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•RSGCN
•T&E
•Surrogate species

Habitat Class

Integrity

Vulnerability

Security

Development
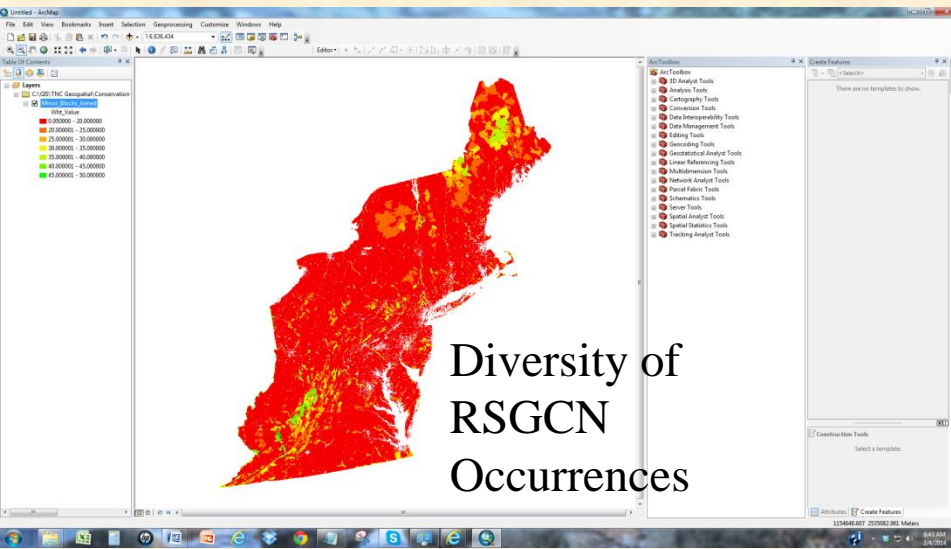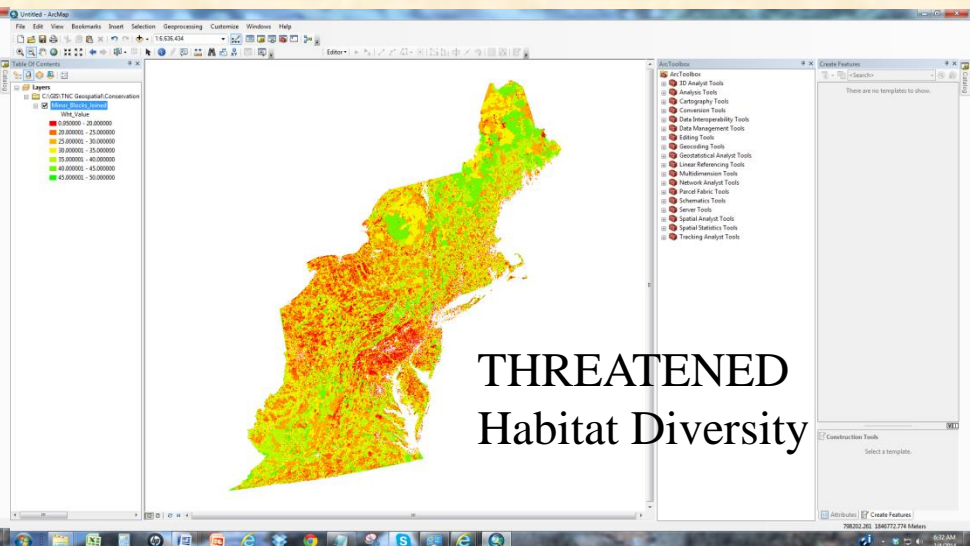
Resiliency
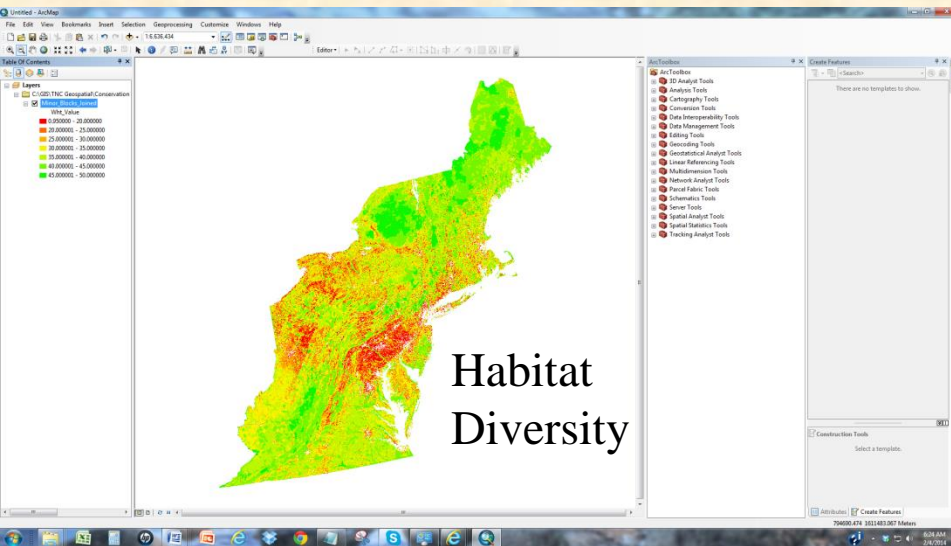
Landscape Conservation Design is the sum of many parts that must work together...

What is the relative weight of each layer?

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Habitat Diversity

THREATENED Habitat Diversity

Diversity of RSGCN Occurrences

Integrity of streams
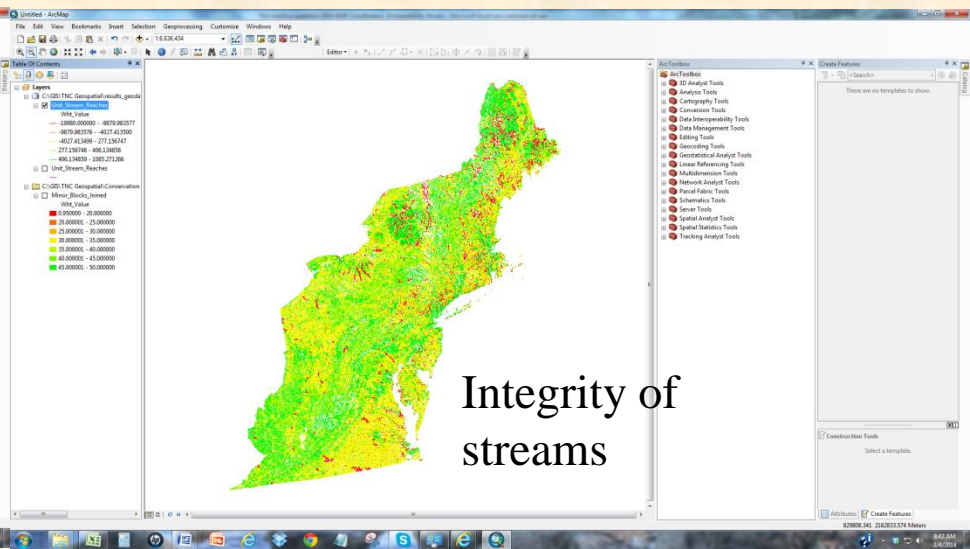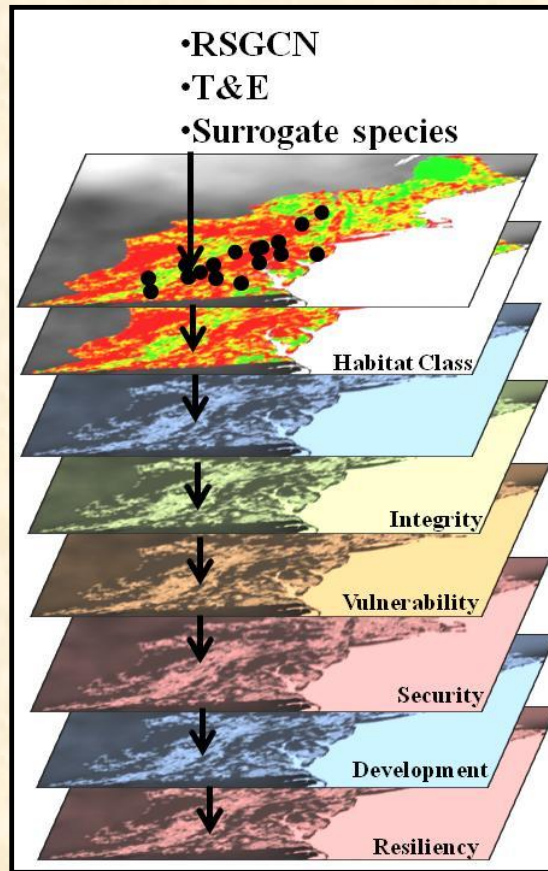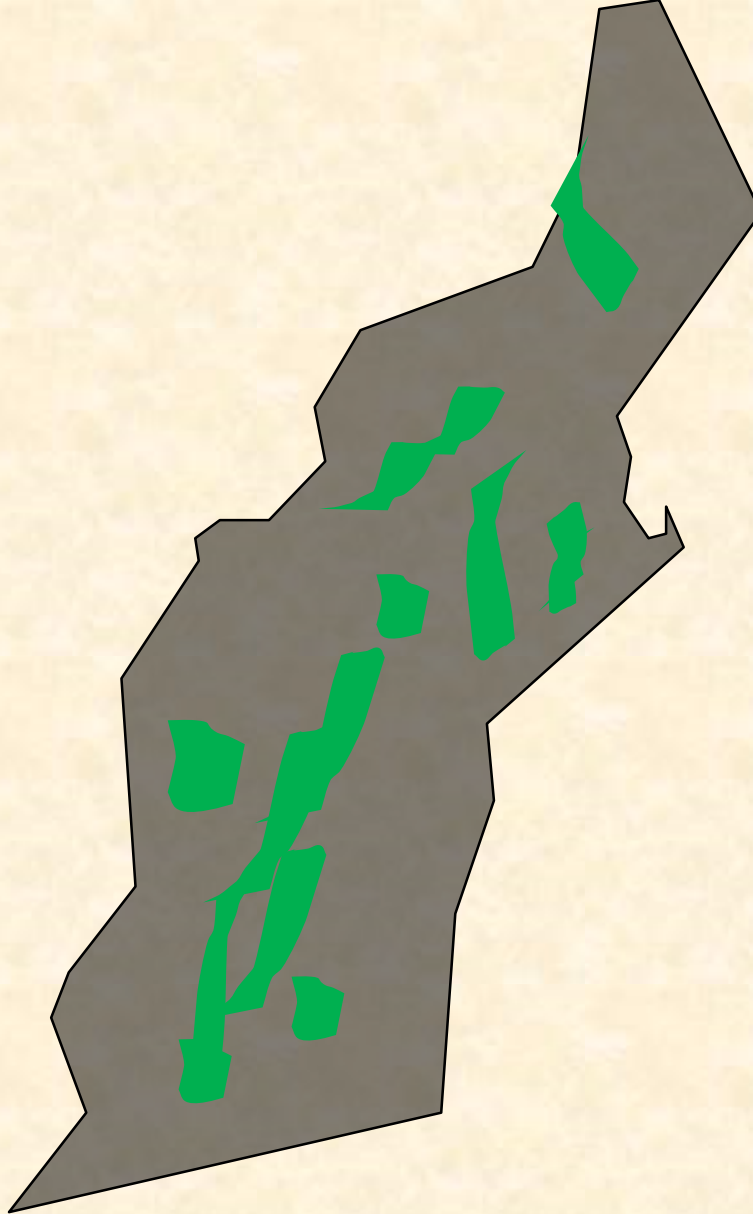
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How do priorities
from nested scales of
planning relate?

Regional scale patterns…
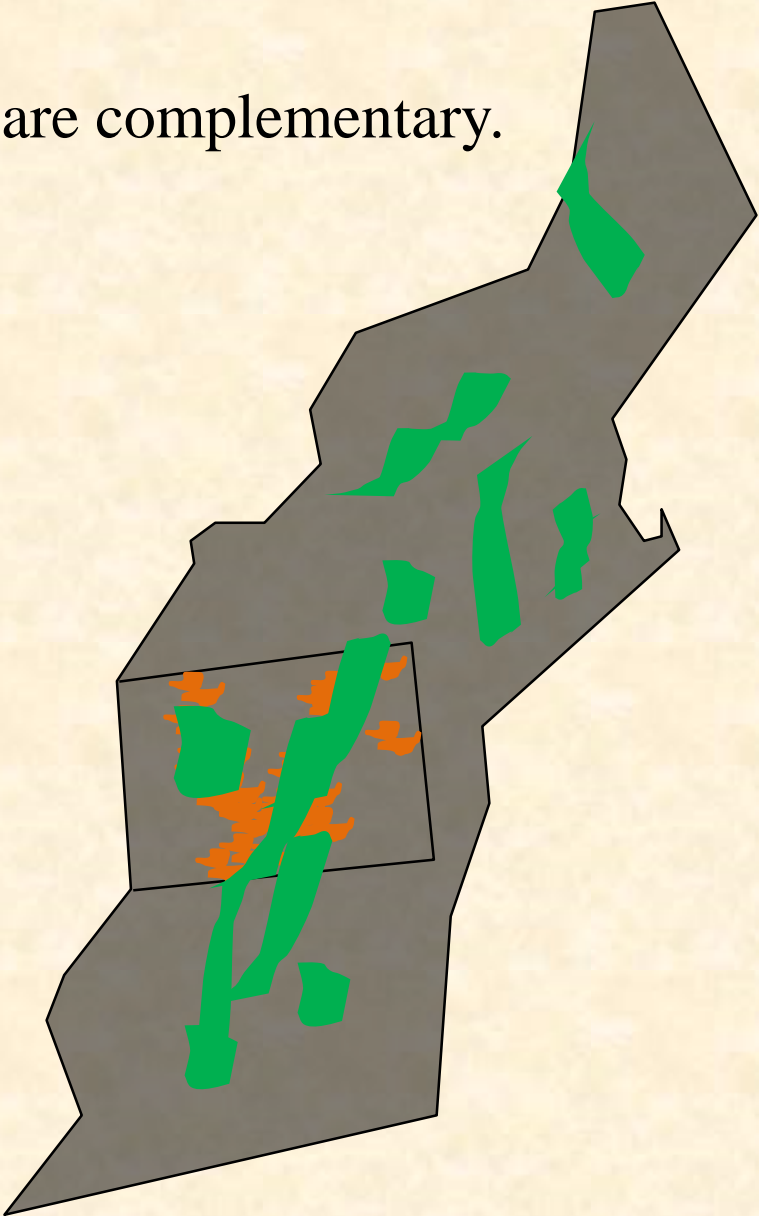

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State or watershed patterns…

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Nested scales of planning are complementary.

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Next steps for developing NE Regional COAs (RCOAs):

1. The guiding purpose of RCOAs is to identify and spatially depict priority areas at the Northeast regional landscape scale that offer the best opportunities and potential for RSGCN conservation, considering the **location and relative condition of their habitats;**

2. NEFWDTC will provide **input on specific conservation and management objectives that may be supported by COAs**, as well as general input on missing data, species, or habitats that might need to be incorporated in the methodology for developing COAs, including focus areas for regional priority species, such as NEC and wood turtle;

3. The **NALCC will continue to serve a facilitating role** in the management of data, support in development of methodology, **and provide support to execute GIS for COAs** according to methodology developed in collaboration with the states as described below;

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Next steps for developing NE Regional COAs (RCOAs):

4. **NEFWDTC will designate an ad hoc technical subcommittee** with appropriate GIS, biological, and landscape technical capability to provide input on behalf of the committee and other conservation partners (i.e., TNC) by June 1, 2014;

5. **NALCC will send a list recommending ad hoc committee members** to NEFWDTC by May 1;

6. **NALCC will create a first draft of methods** for initial review with/by ad hoc technical subcommittee by June 1, 2014;

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Next steps for developing NE Regional COAs (RCOAs):

7. During June and July, 2014, **NALCC will provide training to GIS staff in each state** to prepare them with data and tools to assist state decision makers to make informed technical decisions about the RCOA methodology;

8. **NALCC will facilitate a workshop** for the ad hoc technical committee, GIS staff, and supporting staff to provide input and revise a draft methodology before fall NEFWDTC meeting by August 1, 2014;

9. The **NEFWDTC will review the draft methodology at their September, 2014 annual meeting** and make recommendations on a final methodology.

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Next steps for SPECIES MODELS:

1. Draft list of species to model based on data quality by May 1;
2. Draft general method for review by ad hoc technical committee by June 1;
3. Collaborate with state taxa teams on data preparation and habitat predictor variables during June and July;
4. Begin model implementation in August;
5. Review draft results at NEFWDTC in September.

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What are the next steps?