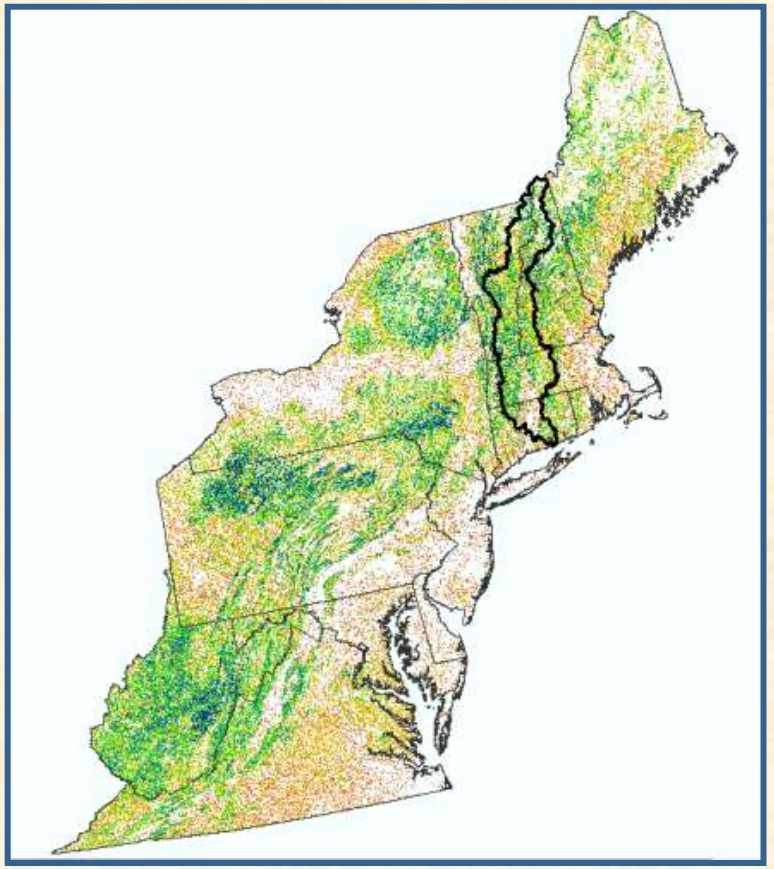
Connecticut River Pilot Update

Collaborative Application of North Atlantic LCC Tools and Products in Conservation Design



North Atlantic LCC
Steering Committee
July 1, 2014

North Atlantic Landscape Conservation Cooperative

LCC and USFWS Objectives for Landscape Conservation Design Pilot

1. Collaboratively prioritize places, strategies, and actions to conserve ecosystems and the fish, wildlife, and plants they support

2. Establish a process for conducting landscape conservation design that can be applied and adopted elsewhere

“Core Team” Participants

- 5 state (4 agencies)
- 9 NGO / private
- 17 FWS and LCC staff (including ‘observers’ from other areas)
- 5 other federal (3 agencies)

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Process and Progress

- Since February, 5 monthly meetings of the full core team
- 2 Subteams: aquatic and terrestrial / wetlands
- Presentations, materials documented at:

http://northatlanticlcc.org/groups/connecticut-river-watershed-pilot

Role of Major LCC Projects and Products in the Pilot

1. *Designing Sustainable Landscapes* project, led by Kevin McGarigal, UMass Amherst
2. Forecasting future changes in streams and implications for brook trout, led by Ben Letcher, USGS Conte Anadromous Fish Research Center

Role of LCC Projects and Products in the Pilot

1. Foundational products for the design
   - Ecosystem Integrity and Resilience
     - UMass: Index of Ecological Integrity
     - USGS: stream resilience to temperature change
   - Habitat for Representative Species
     - USGS: brook trout
     - UMass: 13 terrestrial and wetland species
   - Modeling framework and projections of future landscape change

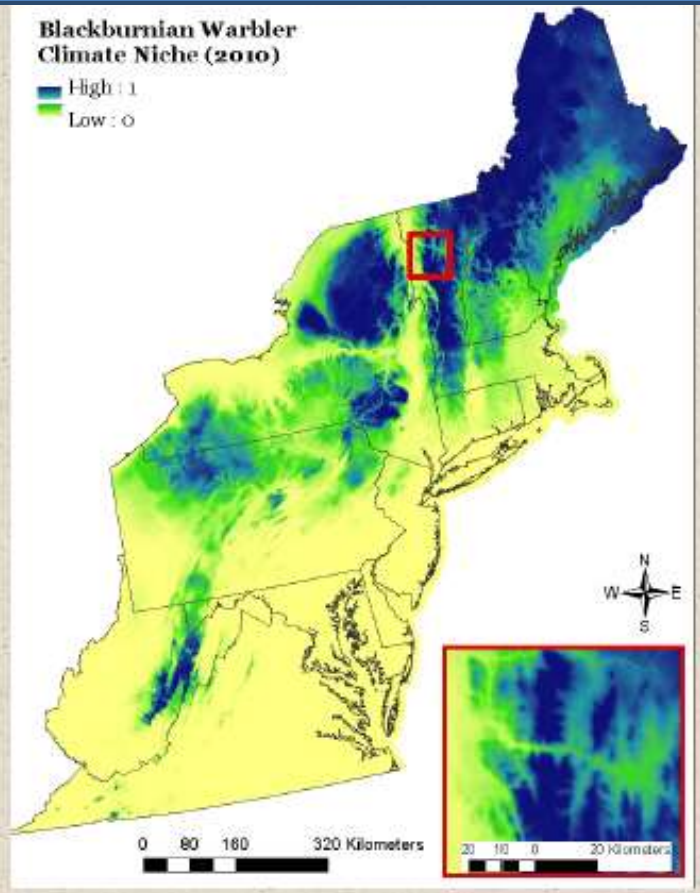
Role of LCC Projects and Products in the Pilot

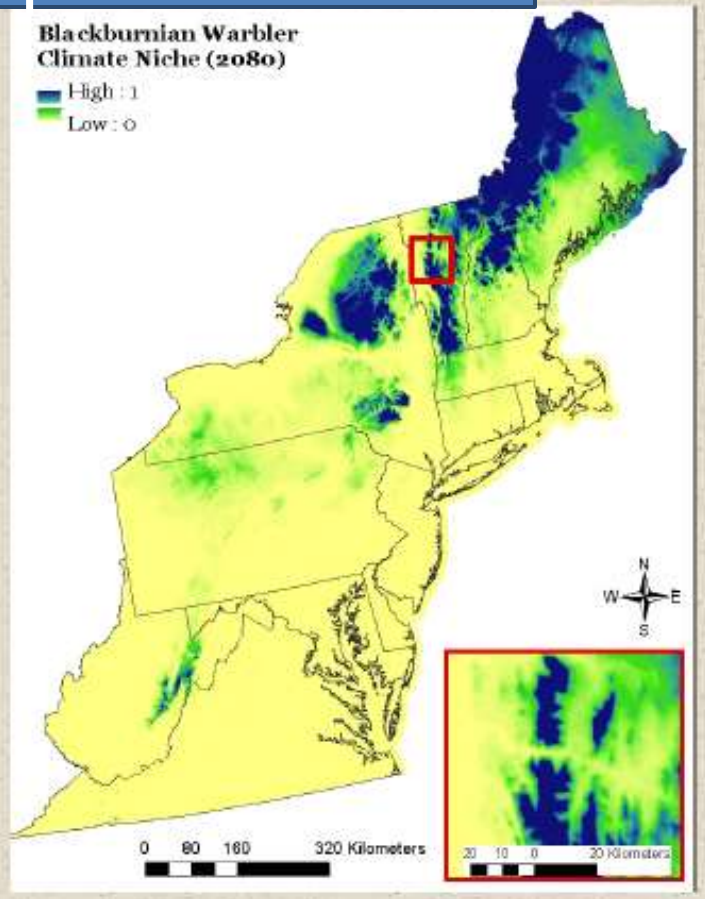
2. Support and capacity for the process

- UMass: Conservation design framework
- UMass and USGS: presentations and working with subteams
- UMass: technical implementation of conservation design decisions of the partners

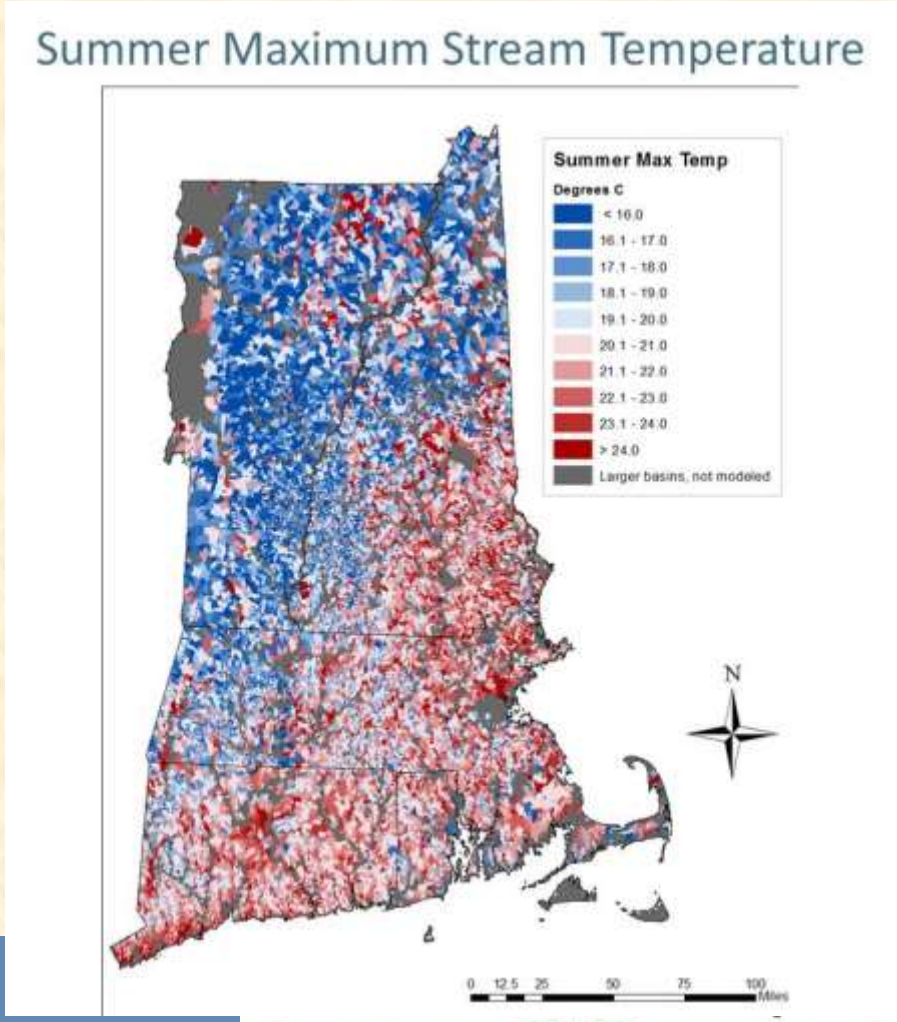
Utilizing Advances in Conservation Science, Information and Tools

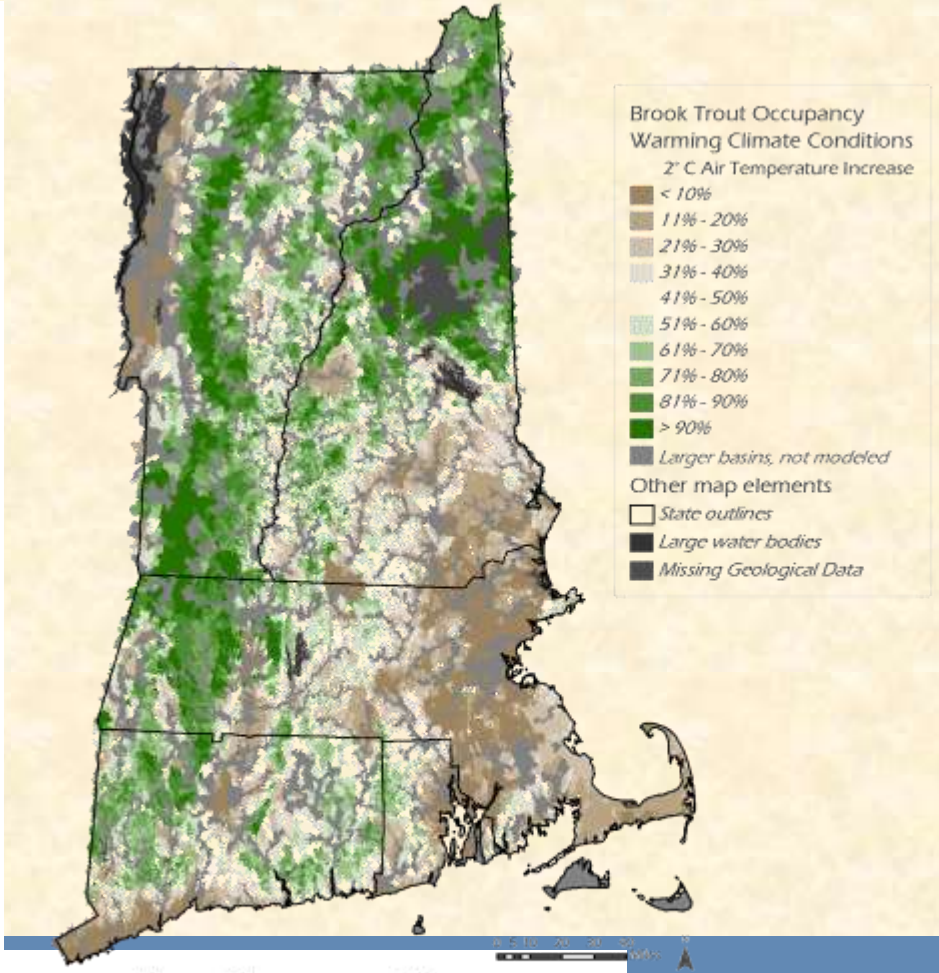
Space – Regional Context
Time – Current vs. Potential Future Climate and Development





Stream temperatures and projected future brook trout suitability (2º C↑)





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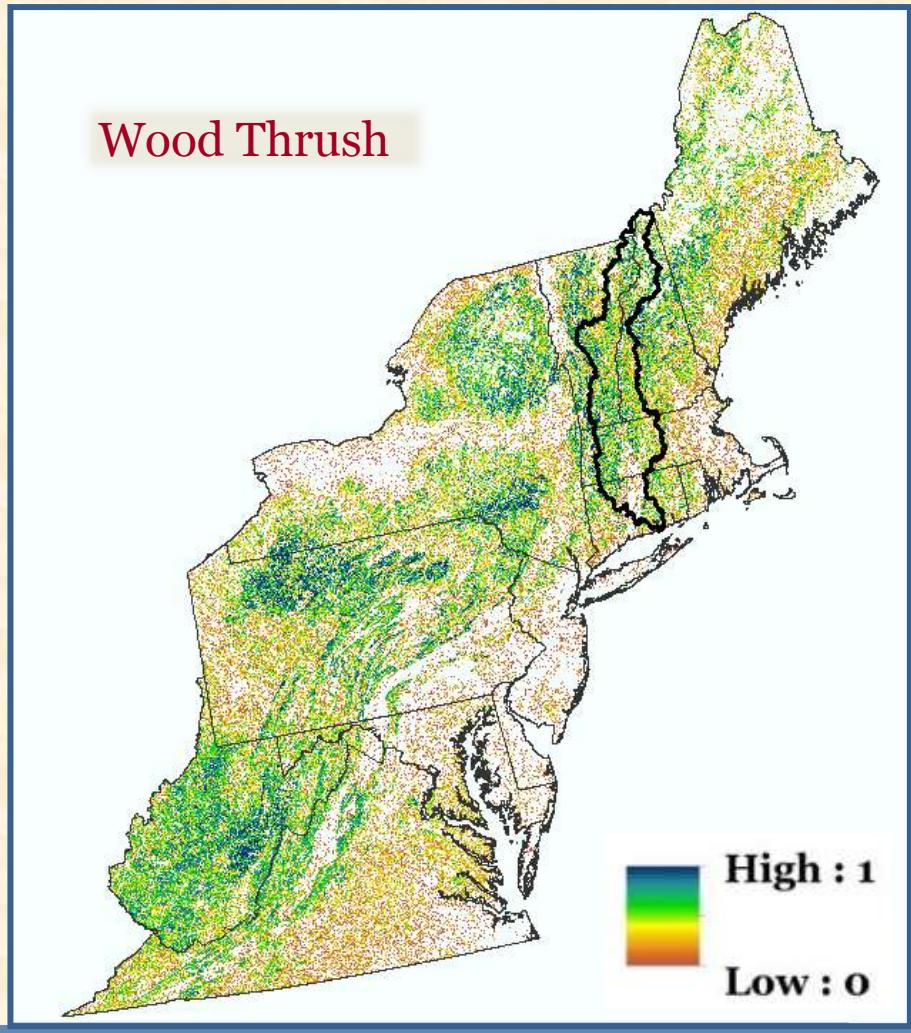
Representative (Surrogate) Species



Habitat capability models based on:

- Known habitat associations and effects of stressors

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- Actual field data (e.g., Breeding Bird Survey routes) where available

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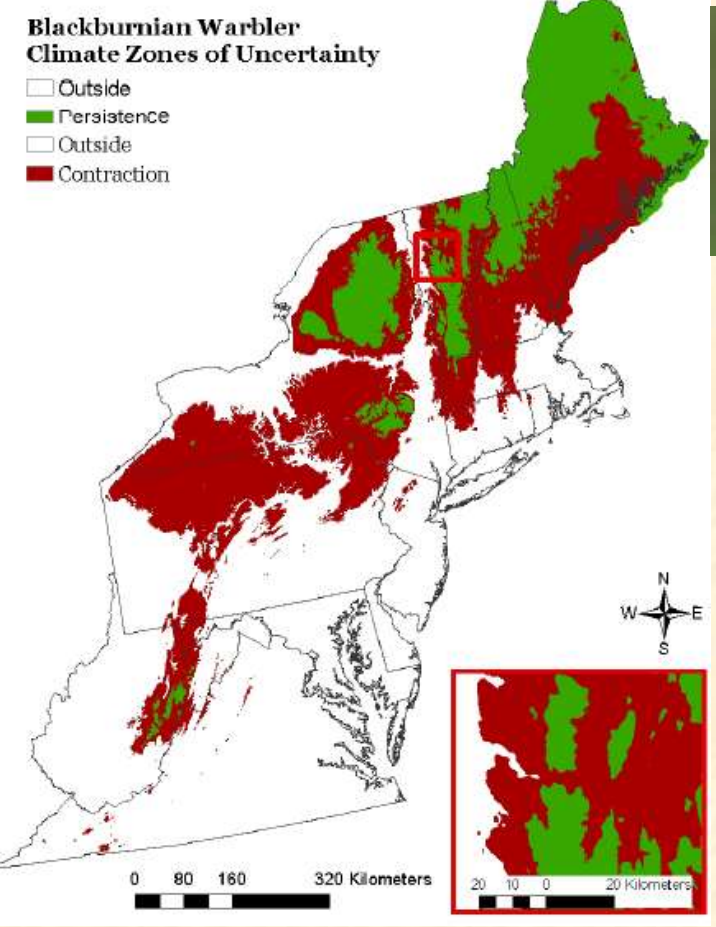
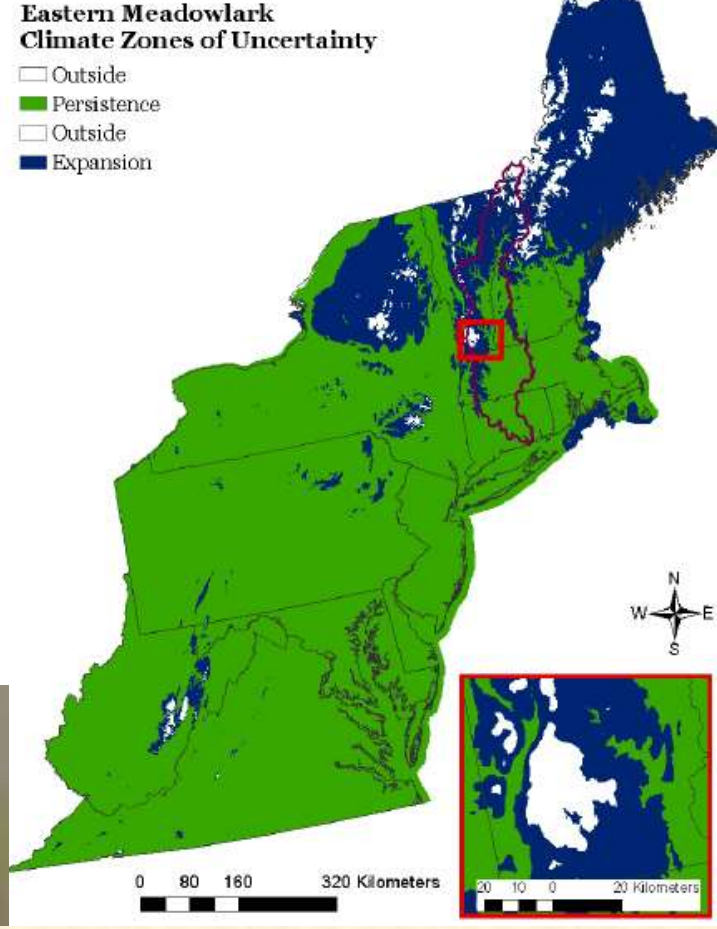
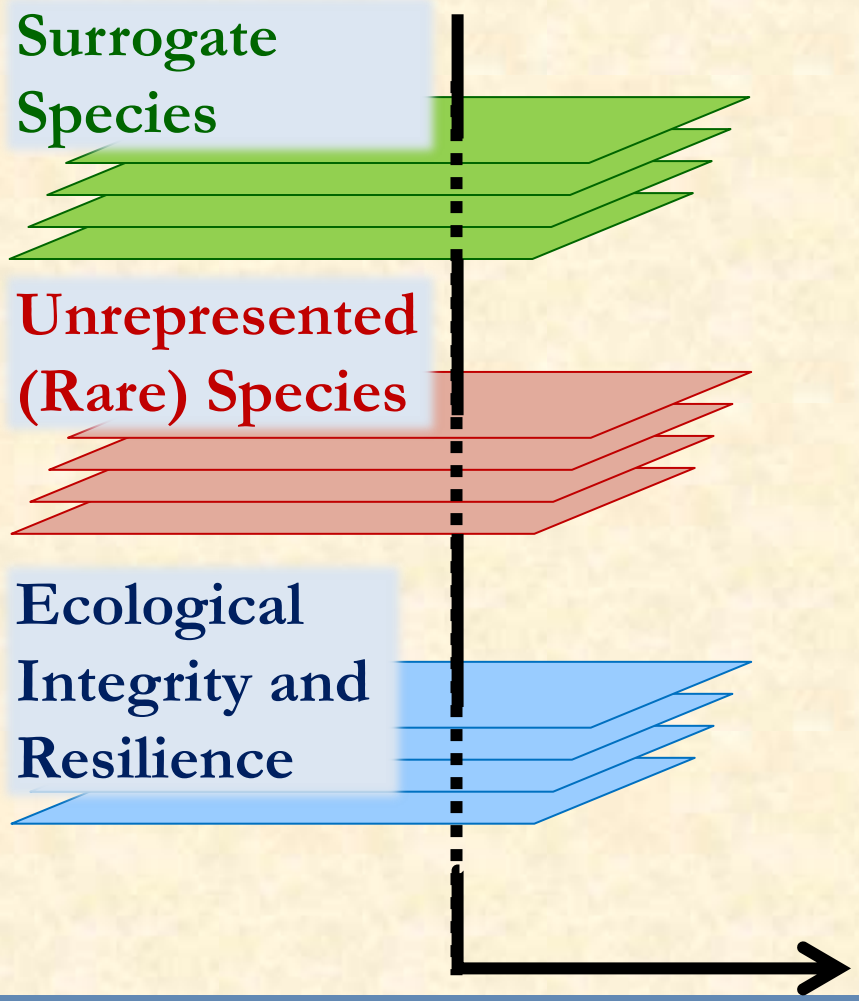
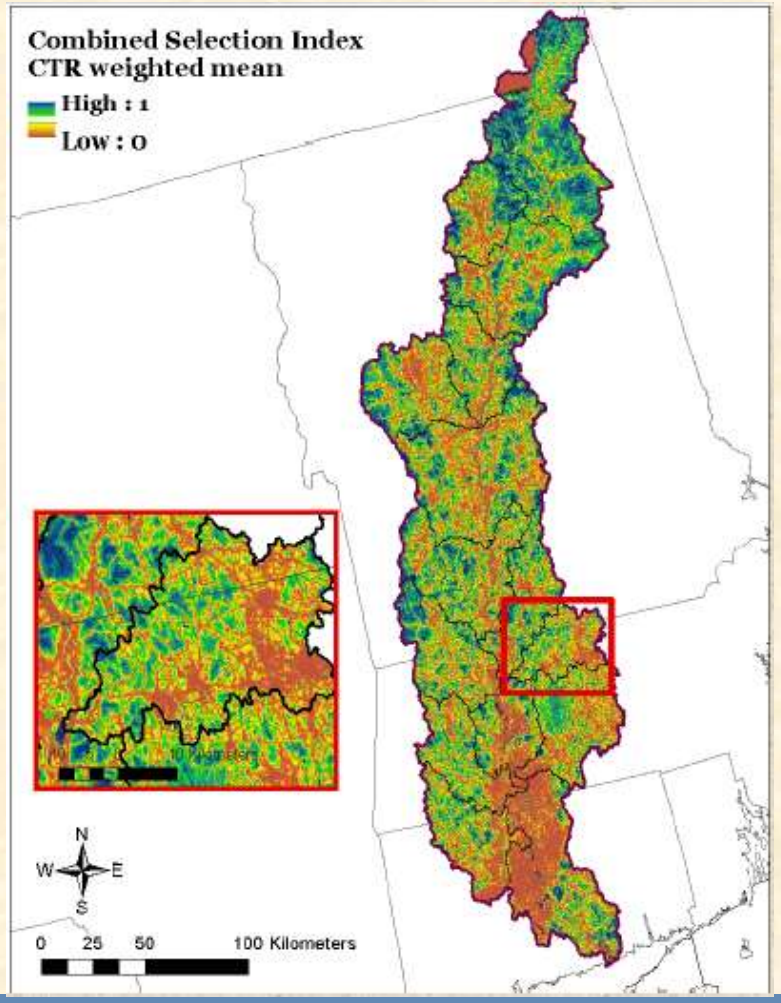




Species	Regional Responsibility in CT River	Loss/Gain to Climate: Region	Loss/Gain to Climate: CT River	Projected Habitat Loss (non-climate)
Blackburnian Warbler	11 %	-71%	-70%	*Coming soon*
Eastern Meadowlark	1%	+17%	+44%	*Coming soon*

Working toward a multi-species, multi-ecosystem Conservation Design





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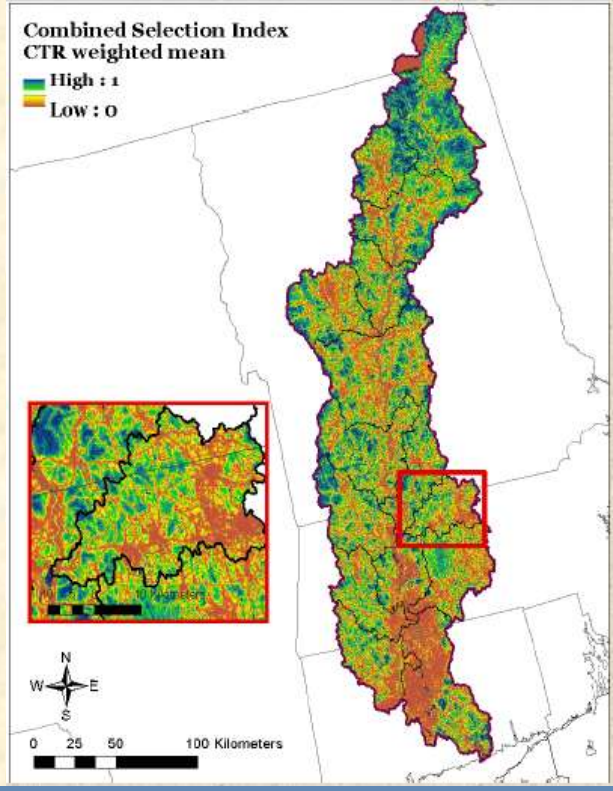
Lessons Learned to Date

- Multiple-scale species and ecosystem tools are powerful and complex
- Require significant input by (technical and management) partners
- Need for simpler documentation and output of products and tools



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Summary

- Testing the design for an *interconnected, resilient network* of lands and waterways with many benefits for society (fish and wildlife populations, clean water, recreation etc.)
- Strong participation, interest and contributions by partners
- Built upon LCC-supported tools, products, and capacity

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