


Status and Results: Landscape Conservation Design in the Connecticut River Watershed

[see also Handout 14]

North Atlantic Landscape Conservation Cooperative
Steering Committee Meeting

April 22, 2015

LANDSCAPE CONSERVATION COOPERATIVES

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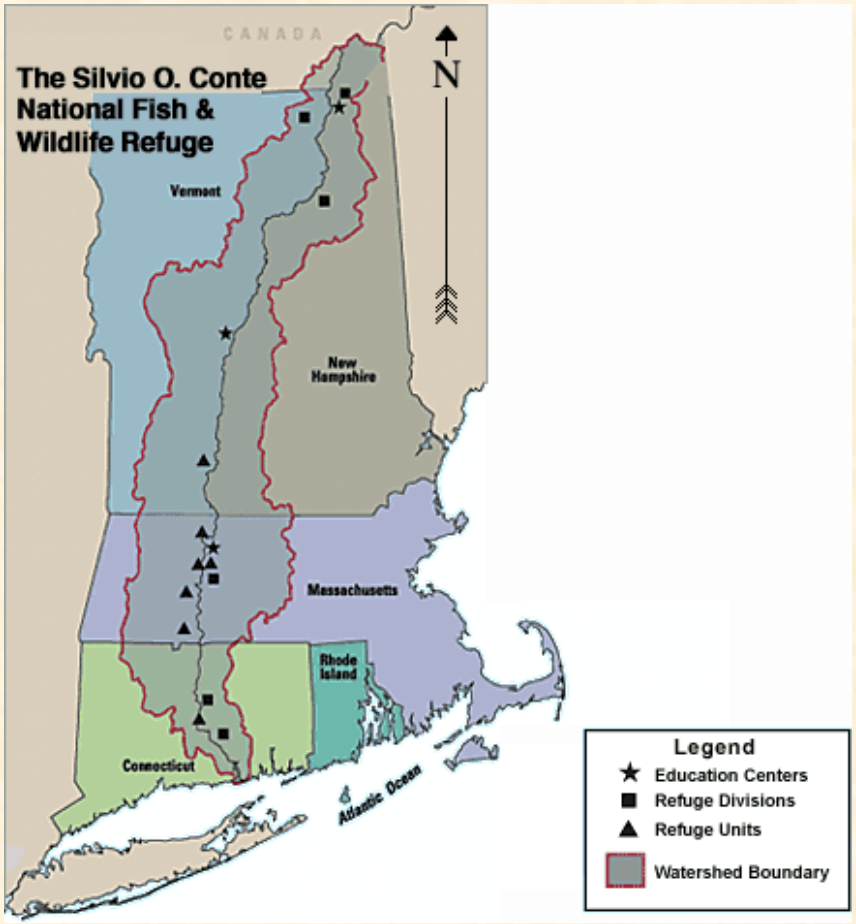
Objectives for Design Effort

1. **Collaboratively prioritize places and actions for long term conservation**
2. **Deliver information, maps, and tools**
3. **Establish a process**



Status and History

- Builds on 4 years LCC, 7 years RCN science **tool development**
- **Nov. 2013**: approved by LCC Steering Committee and USFWS NE Region leaders
- **Feb. 2014**: kickoff - first partner meeting
- **April 2015**: design and products circulating for partner review

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Who is participating on the CT River Pilot Project Team?

- **Leadership team** (North Atlantic LCC staff, USFWS staff, Kevin McGarigal – UMass)
- "Core team" of more than **30 partners**: Four State fish and wildlife; Federal agencies; NGOs
- Conduct monthly, in-person meetings (15 to date); plus frequent subteam meetings

Major Decisions Completed

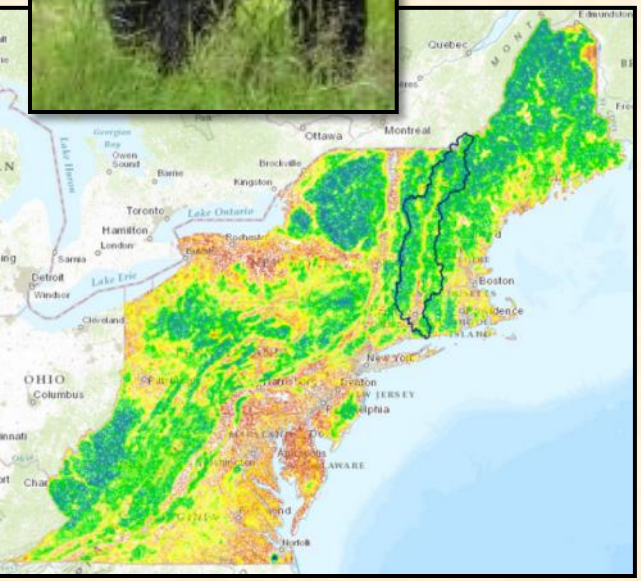
1. Defined conservation **goals** – ecosystems and species
2. **Selected species and ecosystems** for analysis, both aquatic and terrestrial
3. Set species and ecosystem **objectives**
4. Decided relative **weights (trade-offs)** for species and ecosystems
5. Decided how to address potential **climate change and future development**

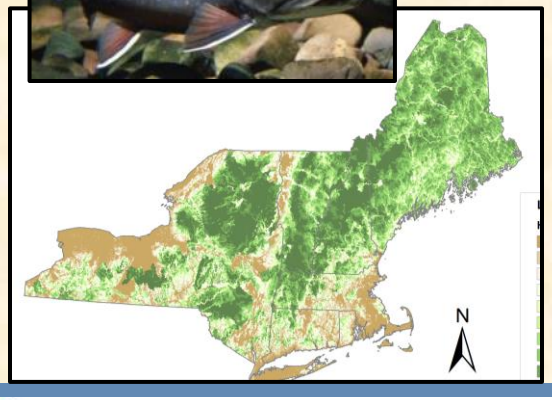
Major Decisions Completed

6. Agreed how to define and generate **highest priority areas** (“core areas”) and
   - Terrestrial connections among them
   - Aquatic buffers
7. Decided how to **integrate** species and ecosystem approaches in final design
8. Agreed on the importance of **additional products** beyond the core-connector network

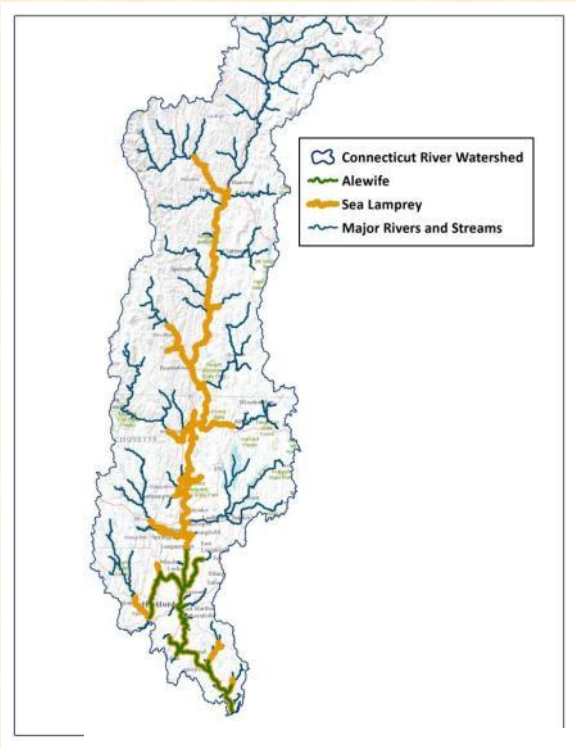
Species Components of the Design

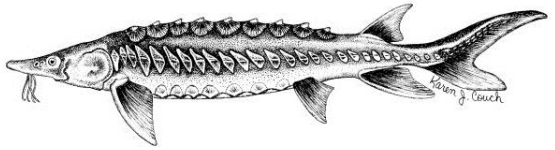
14 “surrogate species” habitat models





5 anadromous fish





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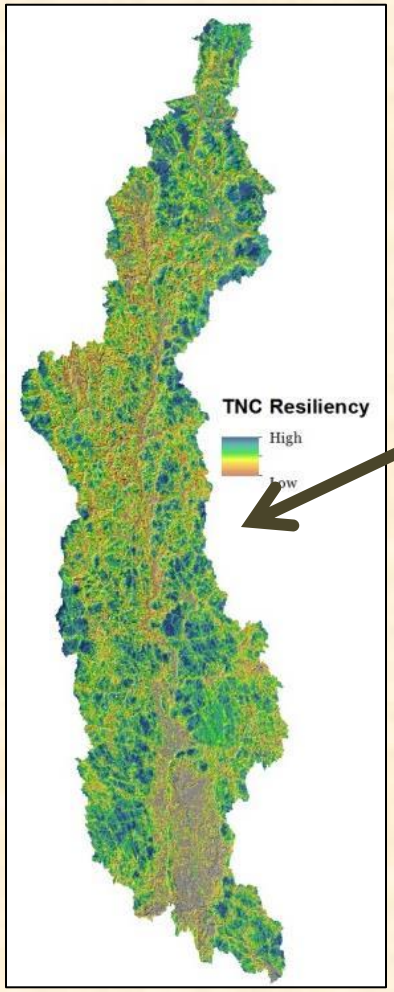
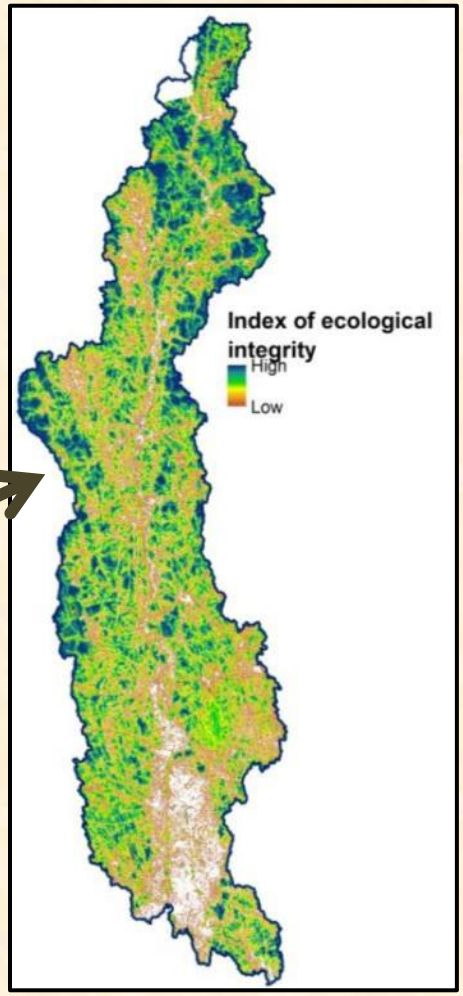
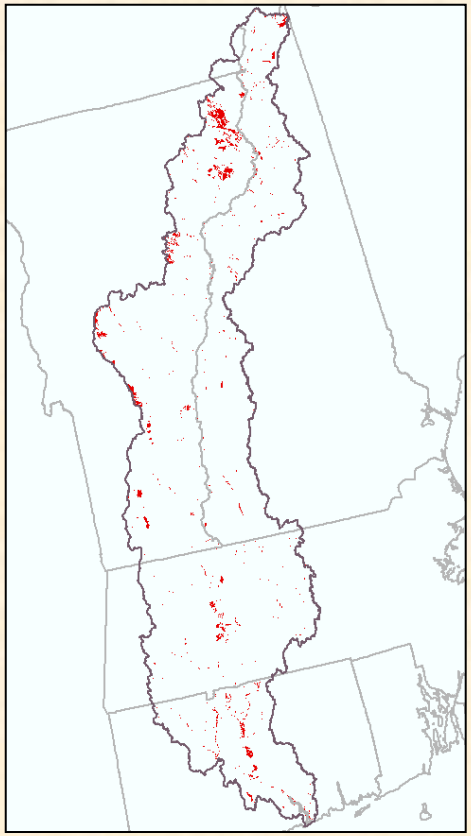
Ecosystems Components of the Design



TNC Terrestrial Resilience (geophysical approach)

UMass Index of Ecological Integrity





Rare natural communities

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Integrating the Elements

Landscape Conservation Design

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Integrating Ecosystem Components - Terrestrial

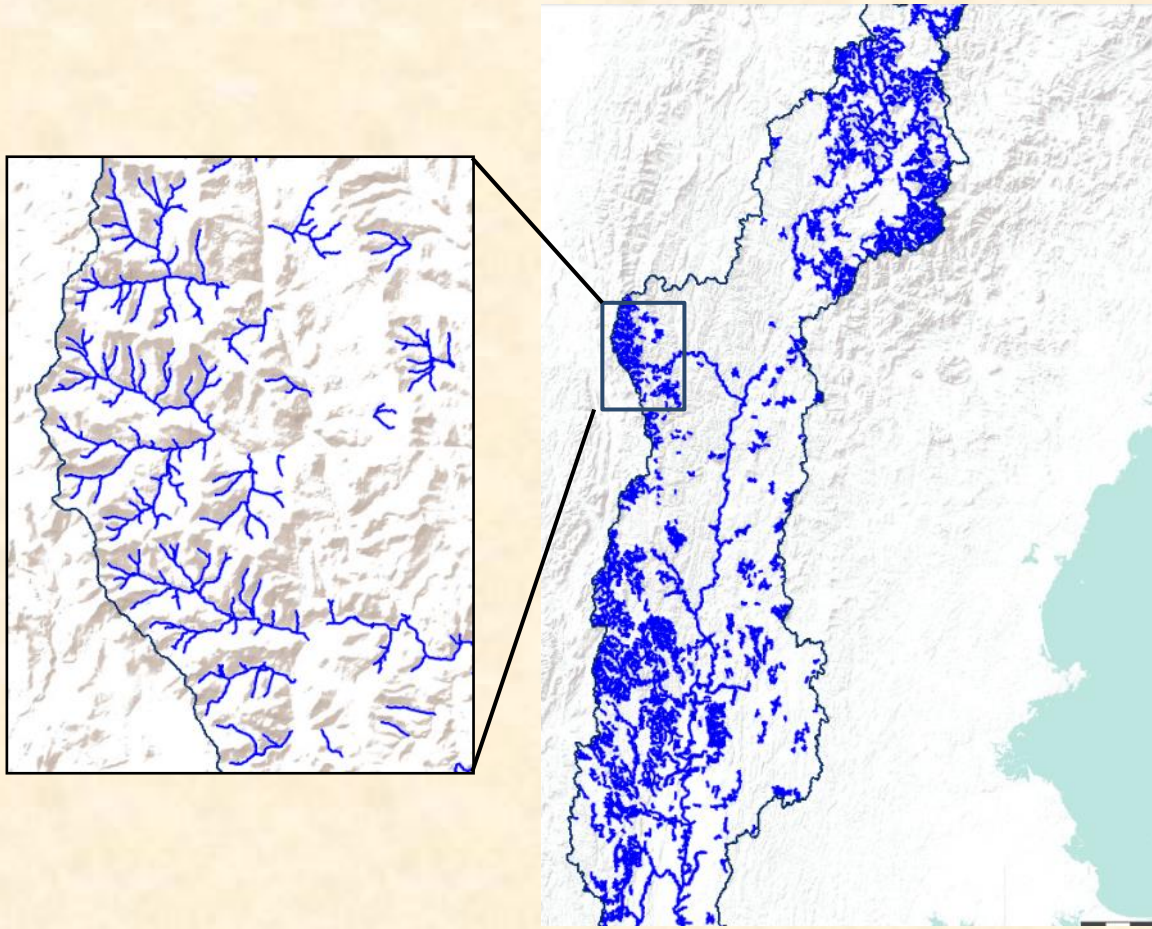
Identify highest priorities for conservation – "core areas"

"grow out, starting with the best"

Integrating Ecosystem Components - Aquatic

"Core areas" – for rivers and streams

- High aquatic integrity and species habitat
- Minimum 1 km in length
- Buffer indicating upslope zone of influence (not shown)



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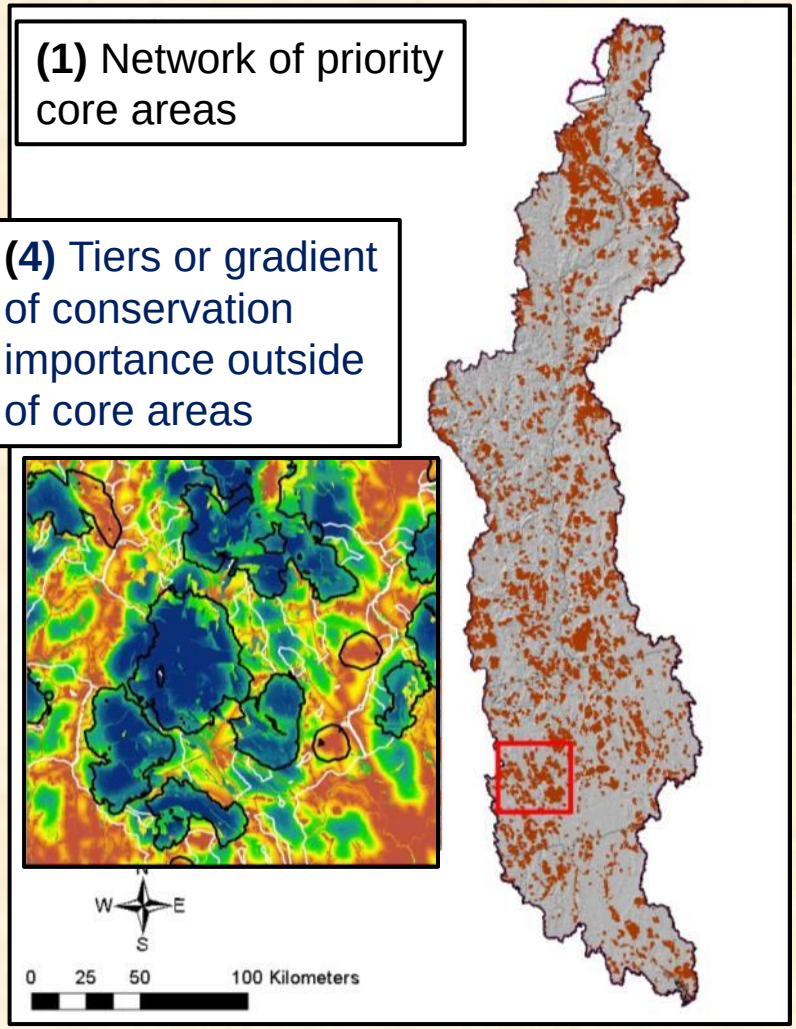
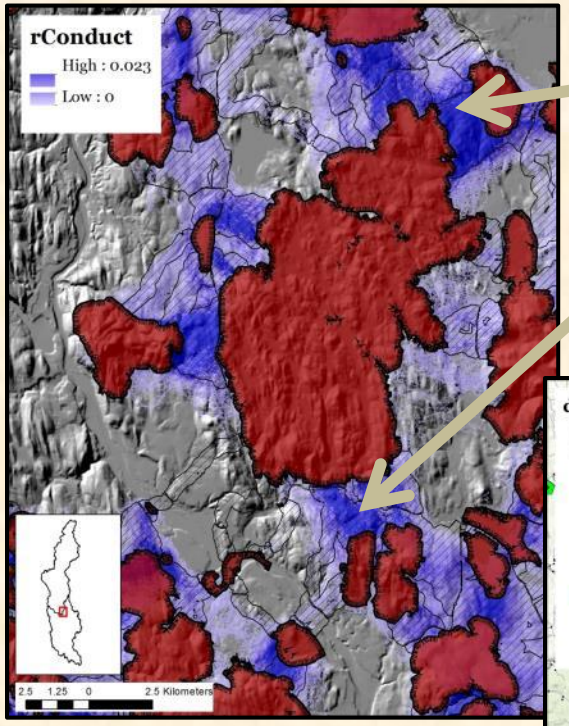
Combined Conservation Design Elements

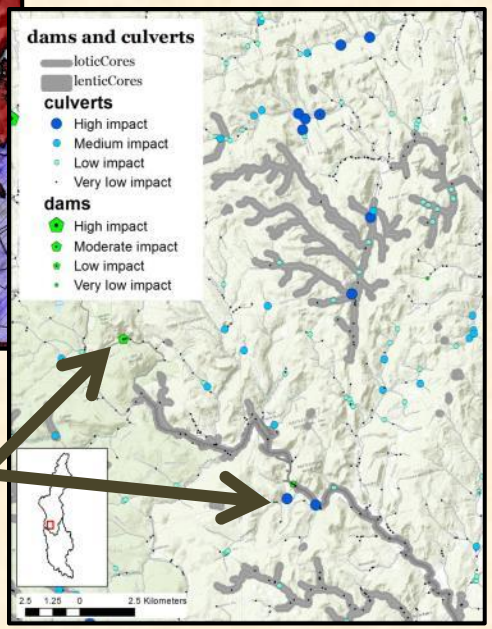
(1) Network of priority core areas



(2) Prioritized connections among cores



(3) Restoration and management opportunities



(4) Tiers or gradient of conservation importance outside of core areas

(5) Plus, make individual (input) datasets available

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Communications Accomplishments

Based upon collaboration

Reflects needs of human and natural communities

Free resource offering voluntary guidance

Complementary to other information and efforts

Transferable to other places

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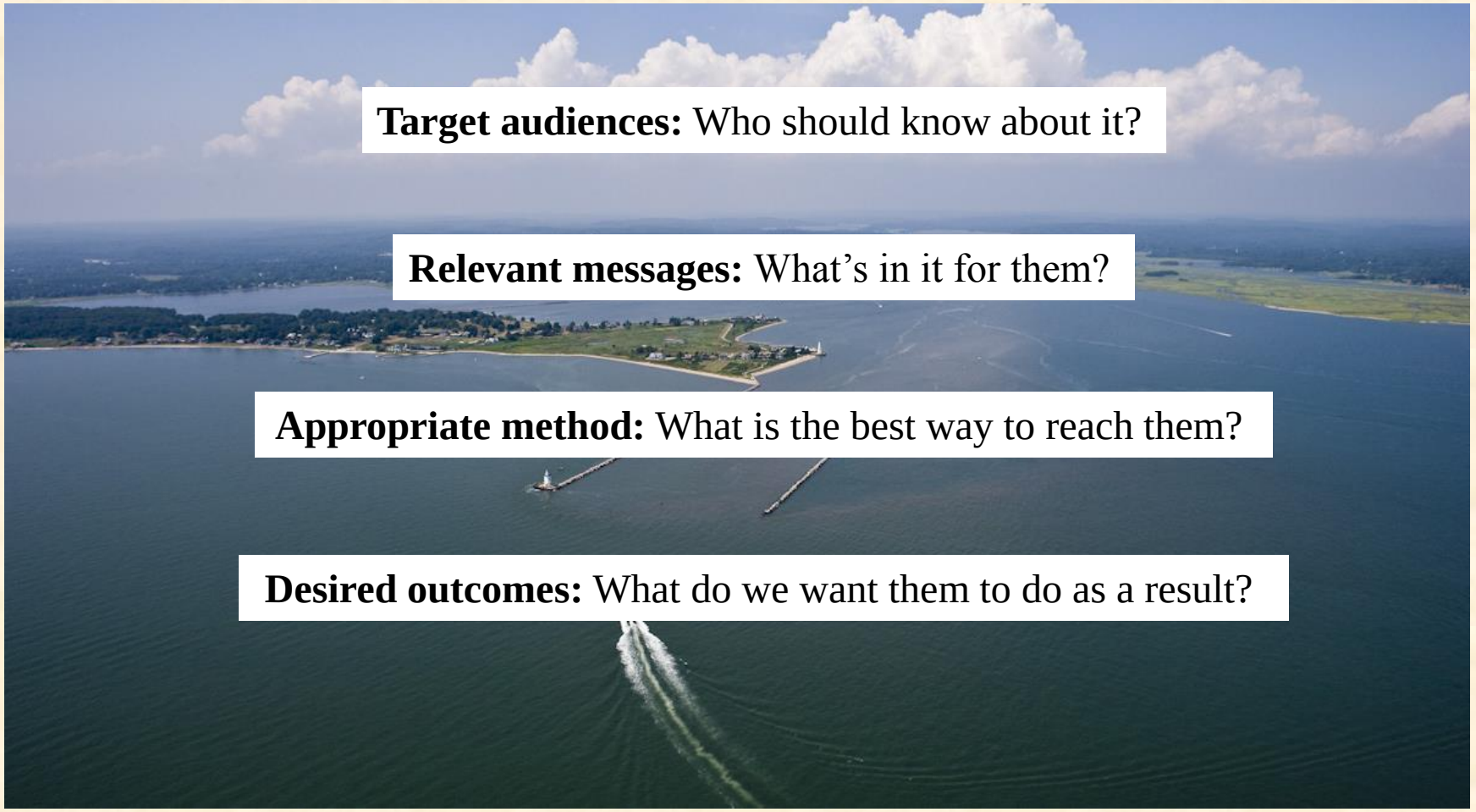
Communications Accomplishments



Target audiences: Who should know about it?

Relevant messages: What's in it for them?

Appropriate method: What is the best way to reach them?

Desired outcomes: What do we want them to do as a result?

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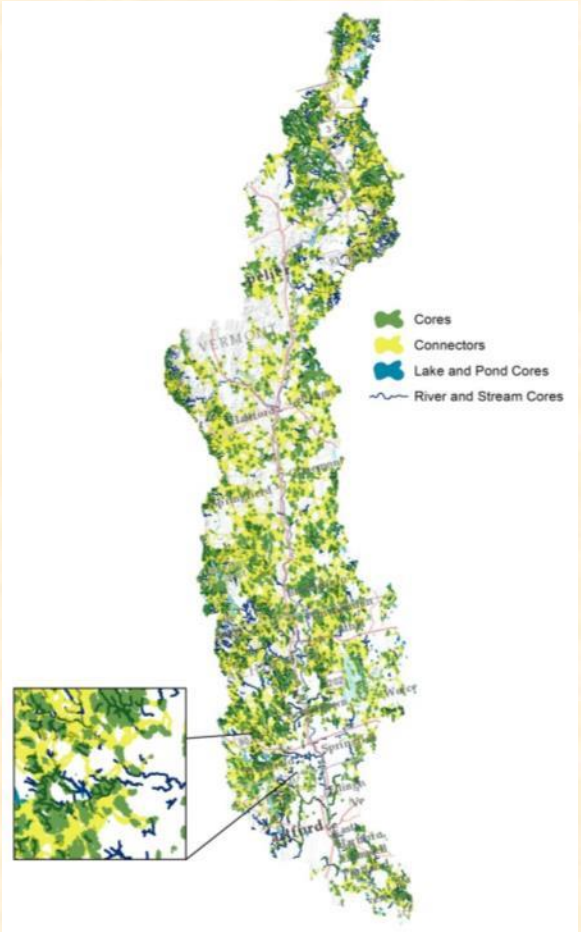
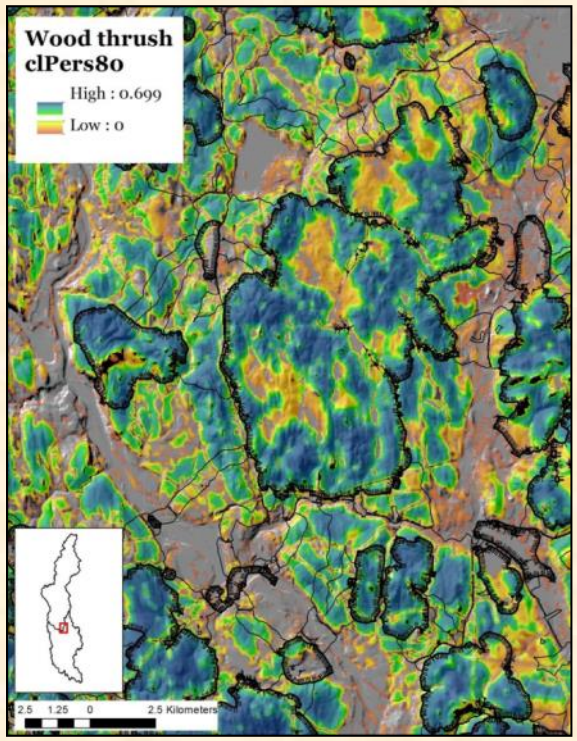
Suggestions for Using the Products: Core Area Network



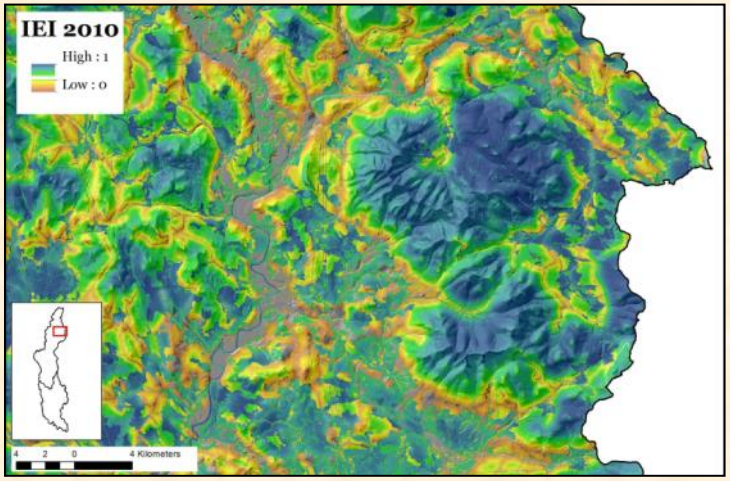
Strategic starting point for land conservation and stewardship

Compare to priorities identified at other scales to further rank areas for protection.

Suggestions for Using the Products: Individual Layers



Identify places of high ecological value outside of designated core areas



Identify where systems have high integrity or high quality species habitat.

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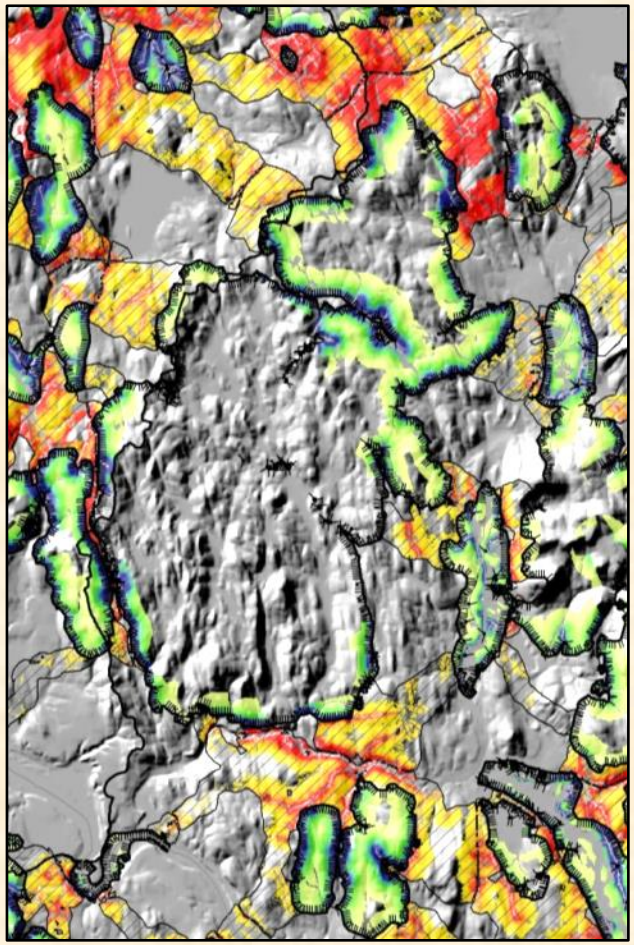
Suggestions for Using the Products: Probability of Development



- Highlights important places that are relatively more likely to be developed (2010-2080 time frame).

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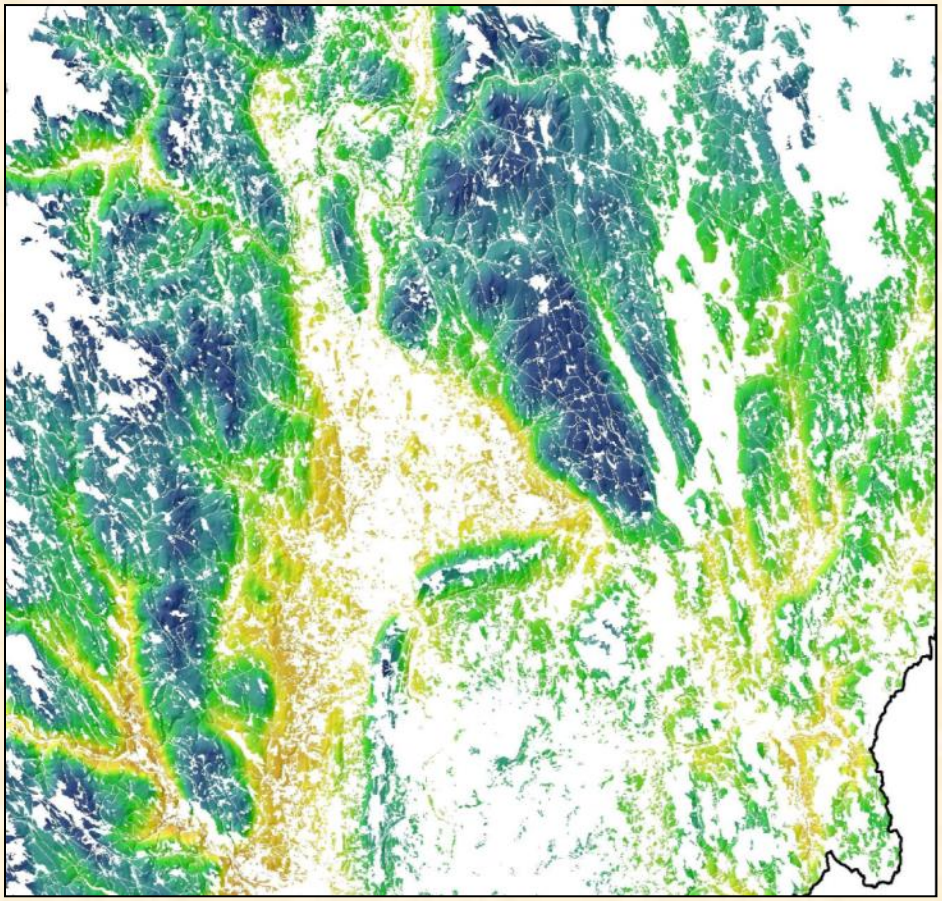
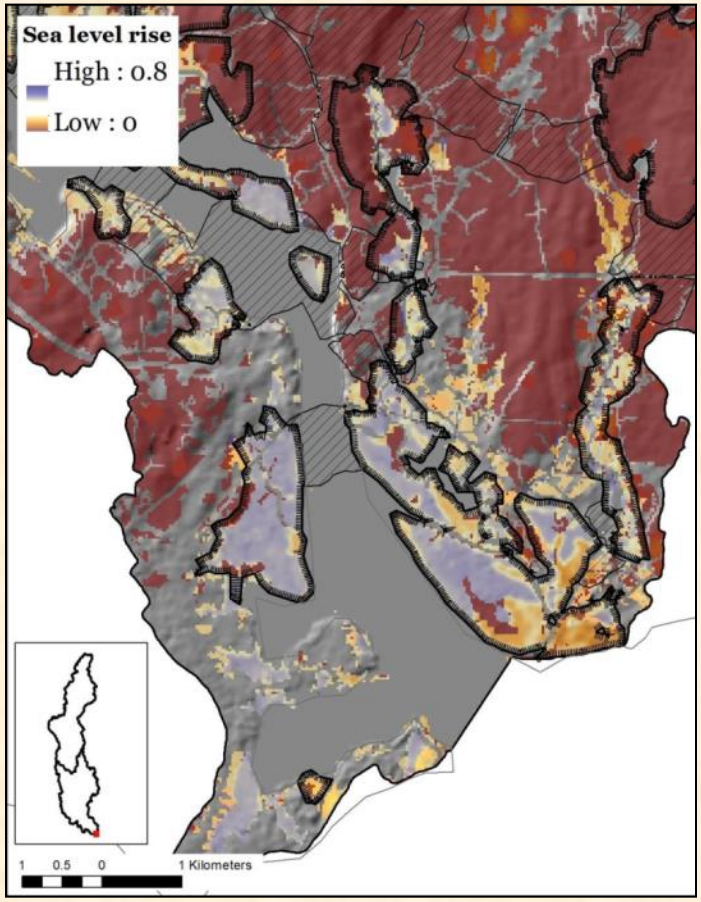
Suggestions for Using the Products: Climate Stress



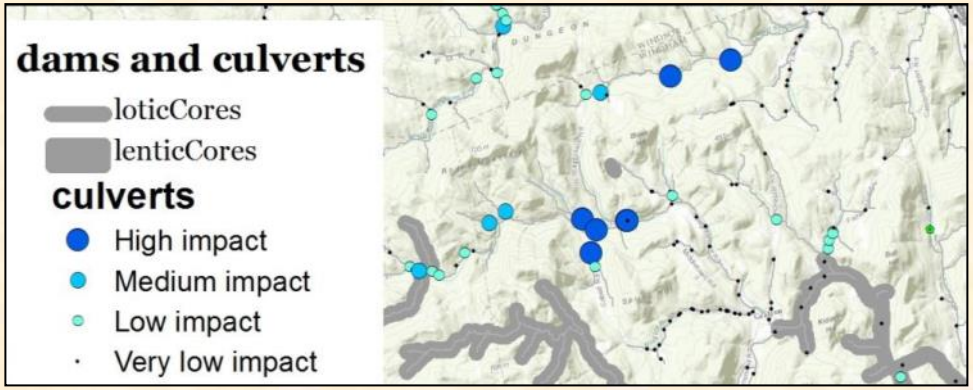
Identify important places for species or ecosystems that are relatively vulnerable to climate change

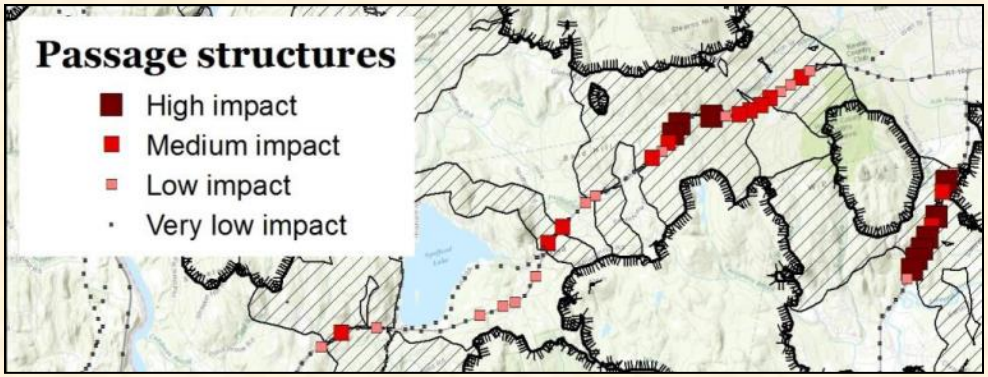
Suggestions for Using the Products: Sea Level Rise



Identify where threats due specifically to sea level rise exist for species, ecosystems, and the core area networks.

Suggestions for Using the Products: Restoration





- Use to direct field surveys of road crossings, dams, or culverts.
- Use in combination with core networks to improve connectivity.
- Use to prioritize restoration when awarding funding or selecting mitigation strategies.

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Lessons Learned – Preliminary Assessment

- Using LCC-sponsored tools, LCC products and other datasets can be integrated into sophisticated conservation design
- Substantial staff capacity and partner time required
- Learning may expedite applications elsewhere – but cannot replace partnership process
- Aquatic issues: novel components, importance of dams, data issues
- Limitations in data quality and availability
- Long-term institutional support and outreach will be necessary, success not a given

Next Steps for North Atlantic LCC in Landscape Conservation Design?

Discussion Topic for 11:30

Acknowledgments to many partners and other LCC staff!

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