

# The North Atlantic LCC in Vermont

The North Atlantic Landscape Conservation Cooperative (LCC) is an applied science and management partnership that builds upon a long history of collaborative conservation in the North Atlantic region. It is a forum to unite agencies and stakeholders around common goals for sustaining natural and cultural resources, and to develop tools and strategies to achieve those goals in the face of threats and uncertainty.



Foundational information, assessments, and tools supported by the North Atlantic LCC offer resources for partners in Vermont to protect important species, habitats, and landscapes now and in the future. These products were designed to address specific needs expressed by partners and partnerships in Vermont, including:

- Regionally consistent habitat maps
- Regional context and conservation opportunity areas for State Wildlife Action Plan updates
- Prioritization tools for conservation of Eastern brook trout, and other key species
- Conservation strategies to address sea level rise and other climate change impacts
- Consistent approaches for assessing and prioritizing aquatic connectivity

## Examples of North Atlantic LCC Science Products

### AQUATIC CONSERVATION RESOURCES

#### **Forecasting Changes in Aquatic Systems & Resilience of Brook Trout**

A decision-support tool to help prioritize areas and management strategies by predicting current stream temperature, flow, and brook trout occupancy, and how conditions may change based on expected impacts from climate change and development.

#### **Products** (available now)

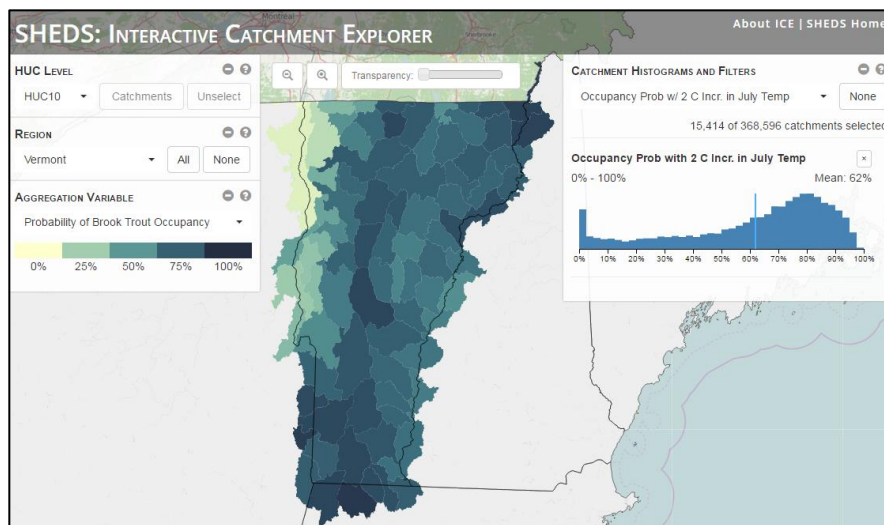
- Web mapping tool to visualize predicted persistence of local brook trout populations in different climate change scenarios
- Modeled current and future stream temperatures in Northeast

#### **Contacts**

- Ben Letcher, US Geological Survey: [bletcher@usgs.gov](mailto:bletcher@usgs.gov)
- Scott Schwenk, North Atlantic LCC: [william\\_schwenk@fws.gov](mailto:william_schwenk@fws.gov)

## Learn more

- [Interactive Catchment Explorer](#)
- [North Atlantic LCC Projects page](#)



## **North Atlantic Aquatic Connectivity Collaborative (NAACC)**

A network of partners sharing resources to collectively take on the work of assessing road-stream crossings across the region, the NAACC provides a framework for prioritizing upgrades to bridges and culverts in order to improve passage for fish and wildlife while increasing resiliency to future floods.

### Products (available now)

- Regional network of partners coordinating to assess and upgrade road-stream crossings
- Standard protocols and training for conducting road-stream assessments
- Regional database of road-stream crossings
- Web-based tools to prioritize upgrades based on both ecological benefits and resiliency

### Contacts

- Scott Jackson, University of Massachusetts Amherst: [sjackson@umass.edu](mailto:sjackson@umass.edu)
- Erik Martin, The Nature Conservancy: [emartin@tnc.org](mailto:emartin@tnc.org)
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## Learn more

- [North Atlantic LCC Projects page](#)
- [North Atlantic Aquatic Connectivity Collaborative](#)

## **North Atlantic Vernal Pool Cooperative**

A collaborative effort to create a comprehensive, spatial database of vernal pool locations in the Northeast and Mid-Atlantic regions with input from practitioners in order to inform conservation measures and future surveys.

### Products (available now)

- Secure GIS dataset of currently mapped vernal pool locations in the North Atlantic LCC region, including potential and verified pools
- Overview of vernal pool mapping and certification approaches employed in the region
- Methodology for identifying potential vernal pool sites using LiDAR and OBIA technology

### Contacts

- Steve Faccio, Vermont Center for Ecostudies: [sfaccio@vtecostudies.org](mailto:sfaccio@vtecostudies.org)
- Scott Schwenk, North Atlantic LCC: [william\\_schwenk@fws.gov](mailto:william_schwenk@fws.gov)

### Learn more

- [North Atlantic LCC Projects page](#)
- [Vermont Center for Ecostudies](#)
- [North Atlantic LCC Conservation Planning Atlas: Level 1 data](#)
- [North Atlantic LCC Conservation Planning Atlas: Level 2 data](#)

## LANDSCAPE CONSERVATION RESOURCES

### **Connecticut the Connecticut**

A collaborative effort using input from diverse partners to develop models that help identify key areas in the Connecticut River watershed that can support resilient ecosystems and associated species as part of an interconnected network of core areas.

#### Products (available now)

- Network of core areas and connections representing conservation priorities
- A suite spatial tools for assessing relative integrity, resiliency, species habitat suitability and conservation opportunities
- Predictions about climate change and development probabilities
- A watershed-wide prioritization of protection and restoration opportunities

#### Contacts

- Kevin McGarigal, UMass Amherst: [mccgarigalk@eco.umass.edu](mailto:mccgarigalk@eco.umass.edu)
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#### Learn more

- [Connect the Connecticut website](#)
- [North Atlantic LCC Conservation Planning Atlas](#)

### **Habitat Capability Models for Representative Species**

These models can be used to identify potential conservation priorities based on areas that offer high quality habitat for a set of 30 representative species, selected because they typify lifecycles and habitat requirements for a larger group of species, are sensitive to landscape changes, and can be monitored feasibly.

#### Products (available now)

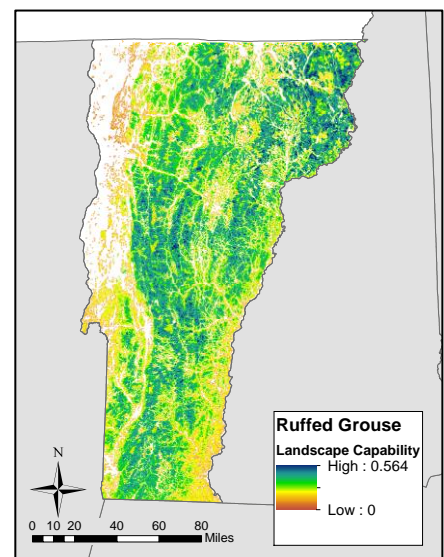
- Models for 30 species, including black bear, wood turtle, and ovenbird, which collectively represent all major ecosystem/habitat types in the region

#### Contact

- Kevin McGarigal, UMass Amherst: [mccgarigalk@eco.umass.edu](mailto:mccgarigalk@eco.umass.edu)
- Scott Schwenk, North Atlantic LCC: [william\\_schwenk@fws.gov](mailto:william_schwenk@fws.gov)

#### Learn more

- [North Atlantic LCC Projects page](#)
- [UMass Designing Sustainable Landscapes page](#)
- [North Atlantic LCC Conservation Planning Atlas](#) (See “Wildlife Species Models” folder)



*Sweet spots for ruffed grouse: The dark blue values indicate areas of relatively high habitat value for ruffed grouse and species with similar requirements.*

### **The Index of Ecological Integrity (IEI)**

This tool identifies areas with the greatest capability to support biodiversity now and into the future by assessing the intactness and resilience to sustain key biological functions over time, relative to other sites within the same ecological system (habitat class).

#### **Products** (available now)

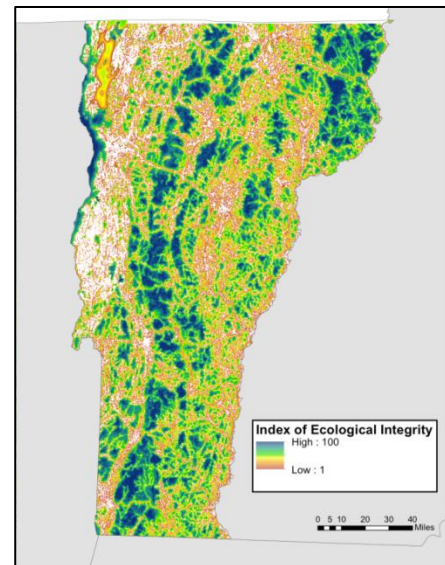
- Maps of the relative integrity of ecological systems at regional, state, and watershed scales (For stratified versions, contact North Atlantic LCC GIS Analyst Renee Vieira Farnsworth: [renee\\_vieira@fws.gov](mailto:renee_vieira@fws.gov))

#### **Contacts**

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#### **Learn more**

- [North Atlantic LCC Projects page](#)
- [UMass Designing Sustainable Landscapes page](#)
- [North Atlantic LCC Conservation Planning Atlas](#)



***Visualizing integrity:** The dark blue values indicate areas that are most likely to sustain ecological functions over time according to a suite of key metrics.*

### **Regional Conservation Opportunity Areas (RCOAs)**

This ongoing collaborative effort has brought technical experts from 13 states representing fish and wildlife agencies, federal programs, conservation organizations, and universities together to develop a regional conservation design that lays the groundwork for unified conservation action across the entire Northeast region. The resulting resources offer voluntary guidance for partners to identify the best opportunities for conserving and restoring terrestrial, aquatic, and coastal ecosystems and the host of different species that depend on them.

#### **Products** (Version 1.0 available now)

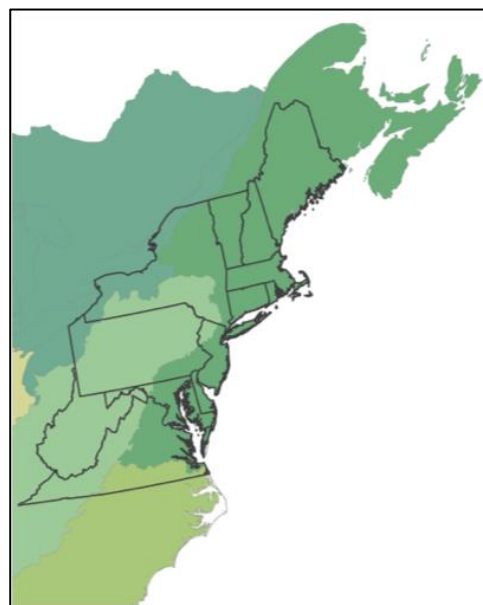
- Spatially delineated network of core areas and connectors across the Northeast
- Suite of regionally consistent datasets offering decision support through five conservation approaches: Terrestrial Core Networks, Aquatic Core Networks, Connectivity, Restoration, and Important Habitats for imperiled species and Species of Greatest Conservation Need

#### **Contact**

- Steve Fuller, North Atlantic LCC: [sfuller71@comcast.net](mailto:sfuller71@comcast.net)

#### **Learn more**

- [Regional Conservation Opportunity Areas Version 1.0 website](#)



***One region, 13 states, thousands of conservation opportunities:** Partners worked together to develop a regional conservation design that lays the groundwork for unified conservation action across the Northeast.*

## North Atlantic LCC Partners & Contributors in Vermont

### **Steering Committee**

Eric Palmer and Kim Royar

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**To learn more about North Atlantic LCC Science**

Contact North Atlantic LCC Science Coordinator Scott Schwenk: [william\\_schwenk@fws.gov](mailto:william_schwenk@fws.gov)

Explore products in the North Atlantic LCC Products database: <http://northatlanticlcc.org/products>

Explore maps and spatial data in the North Atlantic Conservation Planning Atlas: <https://nalcc.databasin.org/>