

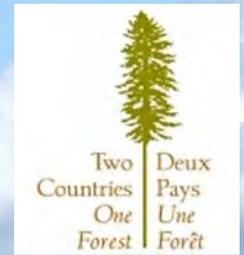
Connecting the Landscape for Nature and People in the Northern Appalachian-Acadian Region

The Staying Connected Initiative: A Bi-National Partnership



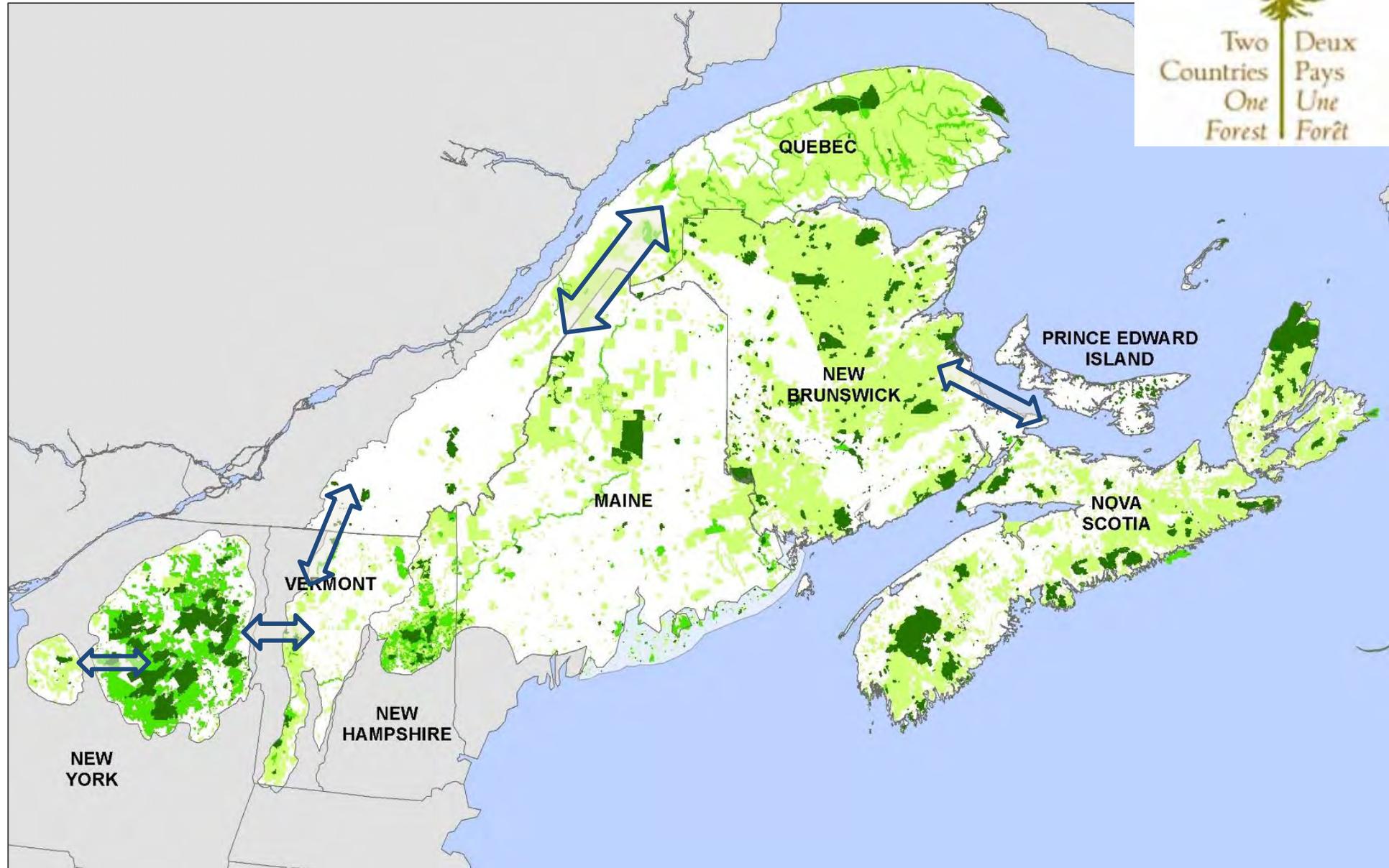
Laura Marx, The Nature Conservancy
Jessie Levine, SCI Coordinator
RCP Network Gathering
November 16, 2016





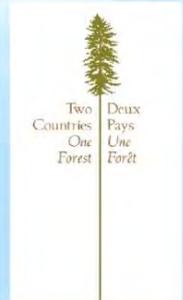
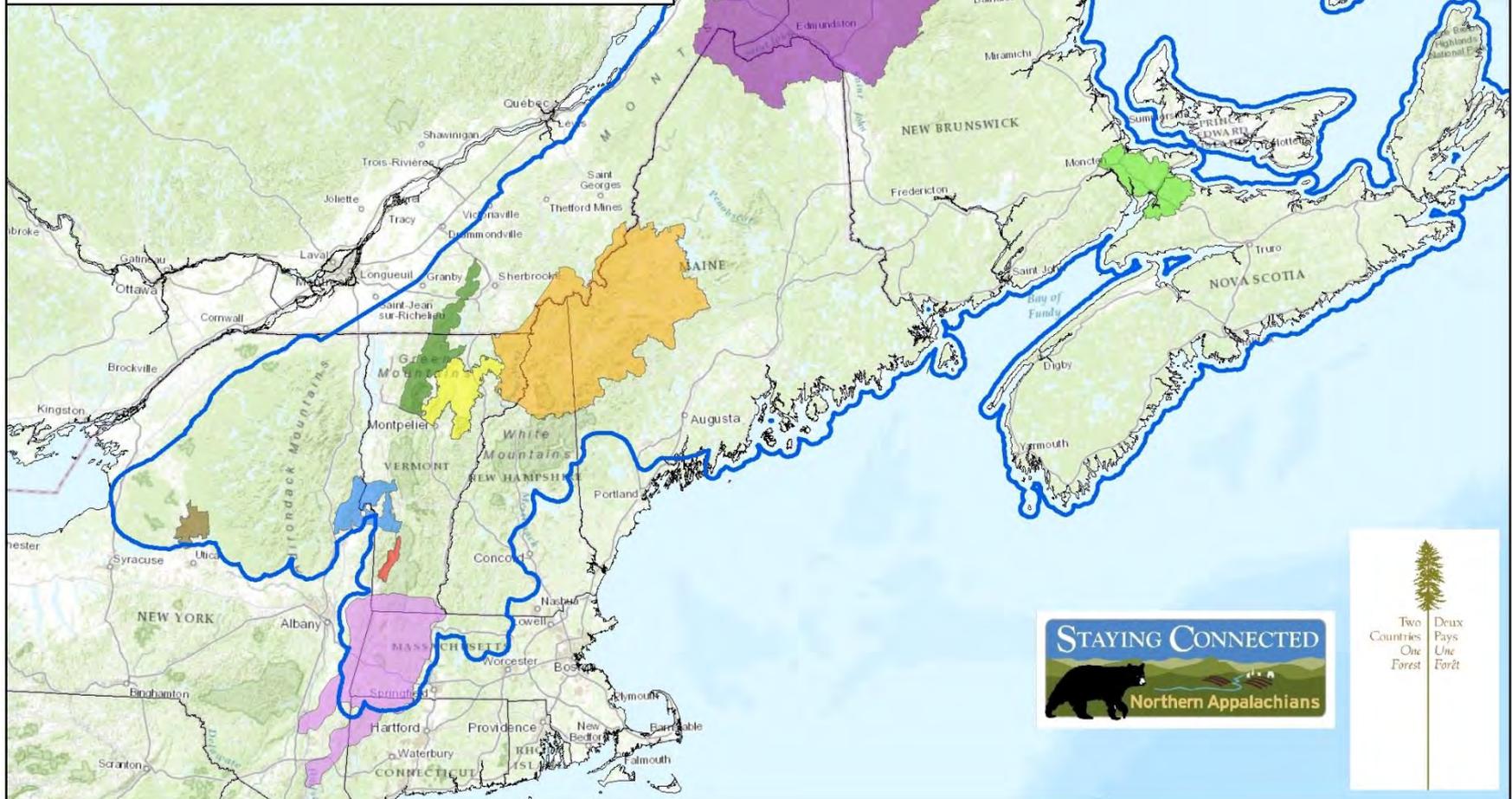
“The mission of the Staying Connected Initiative is to conserve, restore, and sustain critical landscape connections across the Northern Appalachian-Acadian region for the benefit of nature and people. Sustaining these linkages will help safeguard native wildlife and plants from the impacts of habitat fragmentation and climate change, and support human activities and values that are tied to the forested landscape. We work across borders and at multiple scales to address these challenges.”

Origins of SCI



Priority Linkages in the Northern Appalachians

- Tug Hill Plateau to Adirondack Mountains
- Green Mountains to Hudson Highlands
- Adirondack Mountains to Green Mountains
- Taconic Mountains to Southern Green Mountains
- Northern Green Mountains
- Worcester Range to Northeast Kingdom
- Northeast Kingdom Vermont to Northern New Hampshire to Western Maine
- Three-Borders: Maine's North Woods to Quebec's Gaspé Peninsula
- Chignecto Isthmus
- Northern Appalachian-Acadian Region



Habitat Connectivity

- A functional network of connected habitat: core forest and corridors connecting them
 - Wide-ranging wildlife meet needs for breeding, feeding, shelter
- A **climate adaptation strategy**
 - Opportunities for movement, migration, changes in distribution





Multiple Partners, Multiple Scales

Regional Level – Steering Committee:

- Canadian Parks and Wilderness Society
- Maine Audubon
- Maine Department of Inland Fisheries and Wildlife
- National Wildlife Federation
- Nature Conservancy Canada (NB, NS, QC)
- New York State Department of Transportation
- New York Department of Environmental Conservation
- North Atlantic Landscape Conservation Cooperative
- Nova Scotia Department of Environment
- The Nature Conservancy (NY, VT, NH, MA)
- Trust for Public Land
- Tug Hill Commission
- Two Countries, One Forest
- Vermont Agency of Transportation
- Vermont Department of Fish and Wildlife
- Wildlife Conservation Society (Adirondack Program, Canada)

State Level – Vermont example:

- The Conservation Fund
- National Wildlife Federation
- The Nature Conservancy (VT)
- Trust for Public Land
- Vermont Agency of Transportation
- Vermont Department of Forests, Parks and Recreation
- Vermont Fish and Wildlife Department
- Vermont Land Trust
- Vermont Natural Resources Council
- USFS Green Mountain and Finger Lakes National Forest
- Cold Hollow to Canada
- Northeast Wilderness Trust
- University of Vermont – Transportation Research Center

Linkage Level – Greens to Adirondacks

Example:

- Brandon Planning Commission
- The Conservation Fund
- Friends of Hawk Hill
- Hubbardton Battlefield Association
- Middletown Springs Conservation Commission
- The Nature Conservancy (VT, NY)
- New York State Department of Environmental Conservation
- New York State Department of Transportation
- Poultney Conservation Commission
- Rutland Regional Planning Commission
- Vermont Agency of Transportation
- Vermont Department of Fish and Wildlife
- Vermont Land Trust
- Vermont Natural Resources Council
- Wildlife Conservation Society – Adirondack Program



SCI's Multi-Pronged Approach to Sustaining Connectivity

1. Conservation science
2. Targeted land protection
3. Technical assistance for land use planning
4. Community outreach and engagement
5. Transportation – helping wildlife cross roads safely
6. Improving policy

- *Mix of elements tailored to each linkage*
- *Different partners take lead for different parts*
- *Sharing best practices across the region*

SCI's Multi-Pronged Approach to Sustaining Connectivity

1. Conservation science: sharing best practices

Northeastern
Transportation
and Wildlife
Conference:
SCI Camera
Summit,
September
2016



Bushnell M 17°F-8°C 02-07-2016 08:17:24
2014-07-15 6:49:36 AM M 1/3 62°F



52 RECONY



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2014-10-04 12:29:46 PM M 3/3 60°F



61 RECONY

SCI's Multi-Pronged Approach to Sustaining Connectivity

2. Targeted land protection



500,000 acres permanently protected in SCI linkages since 2009

SCI's Multi-Pronged Approach to Sustaining Connectivity

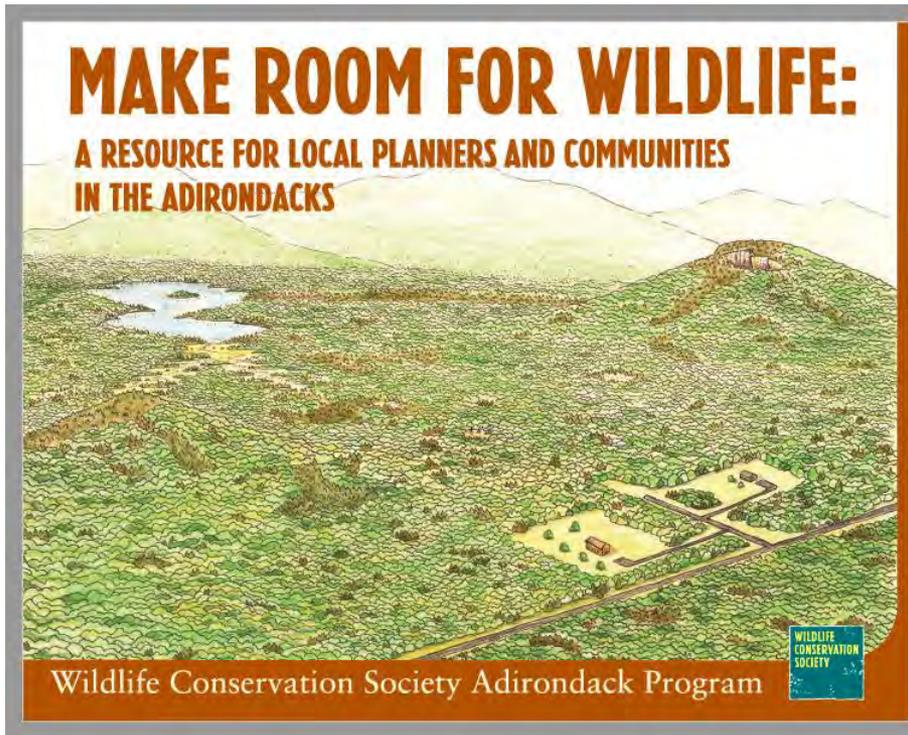
3. Land use planning and technical assistance: sharing best practices



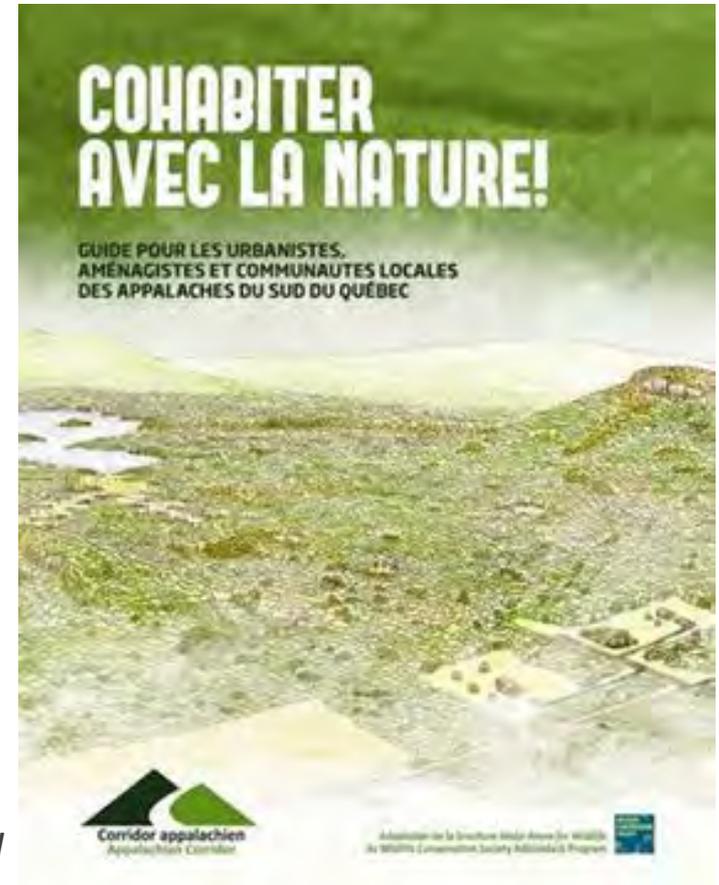
27 towns, 7 regional planning entities have incorporated connectivity provisions into their plans

SCI's Multi-Pronged Approach to Sustaining Connectivity

3. Land use planning and technical assistance: sharing best practices



27 towns, 7 regional planning entities have incorporated connectivity provisions into their plans



SCI's Multi-Pronged Approach to Sustaining Connectivity

4. Community outreach and engagement



SCI's Multi-Pronged Approach to Sustaining Connectivity

5. Making roads more wildlife-friendly



SCI's Multi-Pronged Approach to Sustaining Connectivity

5. Making roads more wildlife-friendly

- Expanding DOT participation in the US and Canada
- Pilot projects in VT, NY
- Sharing best practices: site identification, design options, monitoring
- Developing approaches to combine transportation mitigation and land protection
- Identifying funding opportunities



SCI's Multi-Pronged Approach to Sustaining Connectivity

6. Improving policies



40th Annual Conference of New England Governors and Eastern Canadian Premiers - Boston Massachusetts 2016

40e Conférence annuelle des gouverneurs de la Nouvelle-Angleterre et des premiers ministres de l'Est du Canada

RESOLUTION 40-3

**RESOLUTION ON ECOLOGICAL CONNECTIVITY,
ADAPTATION TO CLIMATE CHANGE, AND BIODIVERSITY CONSERVATION**



Resolution online at:
coneg.org/negecp



Monitoring Wildlife Movement with Cameras



Why Use Wildlife Cameras?

- **Structural connectivity:** physical relationship between landscape elements; where we *expect* wildlife to be moving
 - Modeled using GIS
- **Functional connectivity:** degree to which landscapes actually facilitate/impede movement; where wildlife are *actually* moving
 - Assessed with cameras, collaring, tracking, etc.
- **Landowner engagement!**



SCI's Wildlife Camera Work

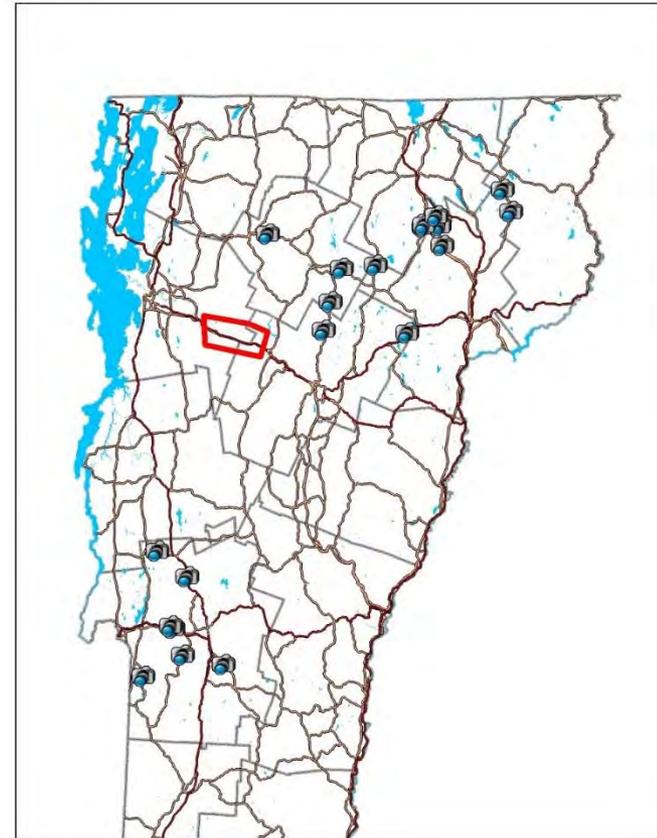
- 83 camera sites in 8 of 9 linkages:
 - MA, ME, NH, NY, VT, QC, NB
 - 225 cameras deployed
- Many sites near roads, to assess wildlife movement near, over, and under roads
- Results used to help improve permeability of roads for wide-ranging wildlife



SCI's Wildlife Camera Work: Vermont's Camera Study



- Objective: develop recommendations to increase frequency of under-road movement of wide-ranging species
- Analyzed camera data on frequency of under-highway wildlife movement through bridges and culverts of *different sizes and designs* in VT
- 23 sites, 84 cameras across Vermont
- Partnership: VT Agency of Transportation, VT Dept of Fish and Wildlife, The Nature Conservancy in VT, University of VT, National Wildlife Federation



SCI's Wildlife Camera Work: Vermont's Camera Study



- Small minority of transportation structures on VT's highway system are currently usable by wider-ranging wildlife
- Wildlife use drainage structures to *occasionally* move under roads
- Site characteristics:
 - “Pinched” sites used most often
 - “Fragmented” sites not used much
- Potentially important structural characteristics:
 - “Shelf:” dry even movement surfaces inside a structure
 - Openness: high structure width/stream width ratio

