# HABITAT CONNECTIVITY CONSERVATION: FROM LOCAL TO REGIONAL

**Staying Connected Initiative** 



Paul Marangelo

Senior Conservation Ecologist

The Nature Conservancy -VT Chapter



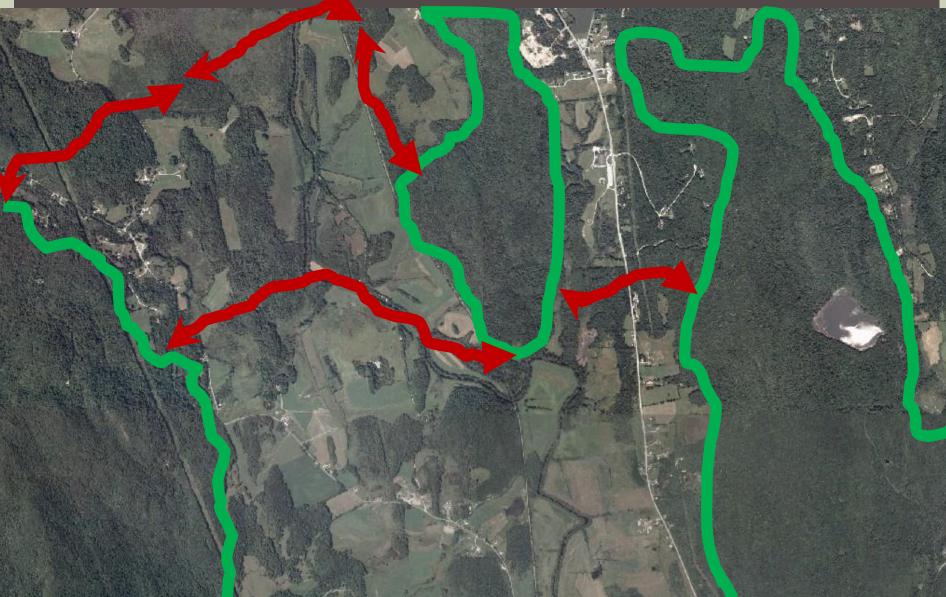
# WHAT IS HABITAT CONNECTIVITY?







# STEPPING STONES



### MORE CONNECTIVITY: MORE HABITAT ACCESSIBILITY



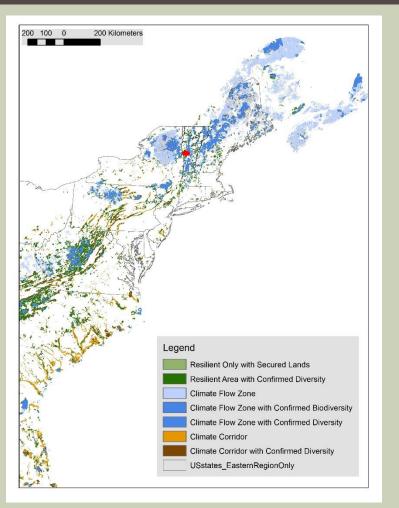


Enable range shifts (climate adaptation)

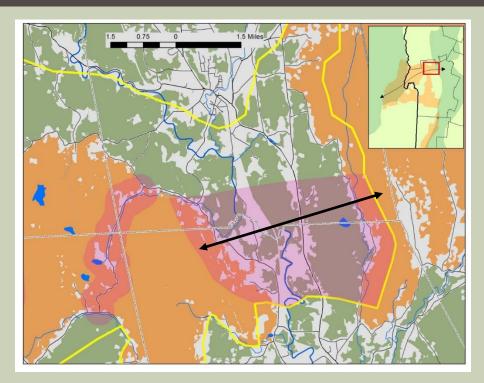
Greater resilience to non-climate stressors

 Reduced population isolation (genetic)
 <u>Can't have too much!</u>
 The more the better!

### MODELING REGIONAL AND LOCAL CONNECTIVITY

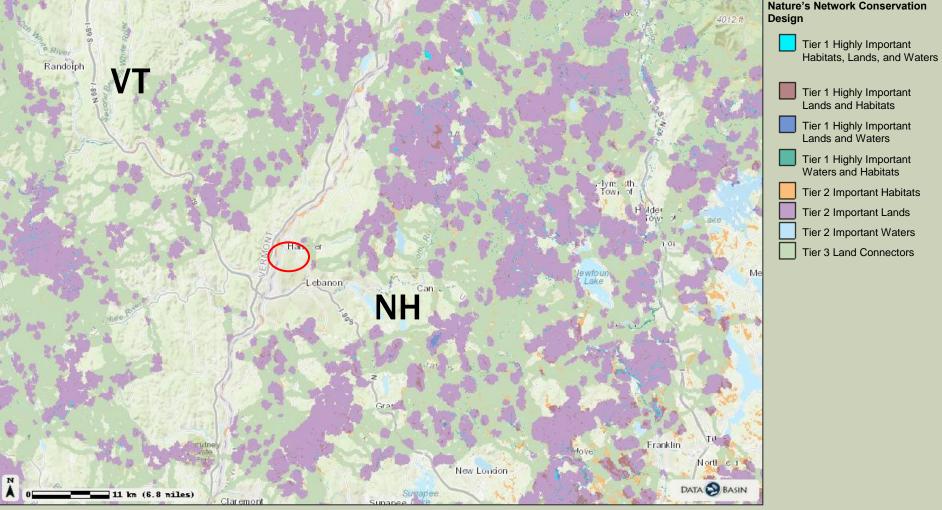


TNC Resilient and Connected Lands (Anderson et al 2016)



Linking forest blocks across US 7 in Rutland County Staying Connected/TNC Vermont

#### Legend



### **Nature's Network Conservation Design**

https://nalcc.databasin.org/datasets/3d670fad4c924e7ba2ae02f04a128256

University of Massachusetts, Amherst, Landscape Ecology Lab; Chris Tracey, Western Pennsylvania Conservancy; North Atlantic Landscape Conservation Cooperative

#### Montreal ttawa NEW YORK ano ochester Albany Providence



6,741.0

#### **Vermont Conservation Design**

vermont.gov

1:404,453

-----

4

E.

October 4, 2017

•



LEGEND

Highest Priority Interior Forest Highest Priority Connectivity B Priority Connectivity Blocks Town Boundary

NOTES

Map created using BioFinder

### BIOFINDER.VT.GOV

3,370.00 6,741.0 Feet DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere articular use, nor  $\Theta \oplus$ © Vermont Agency of Natural Resources THIS MAP IS N £M) ß 102% data on this map.

# MODELS ARE JUST THE STARTING POINT.....

#### You need on-the-ground knowledge:

- Where wildlife tend to move across roads
- Where are the most important habitats adjacent to roads
- Potentially important connecting features across road corridors
  - hedgerows
  - culverts/bridges usable by wildlife





### ROADS ARE THE MOST FORMIDABLE CONNECTIVITY IMPEDIMENTS

# The ability to move across roadways is needed to connect habitat.



Some crossings are regionally important, some are more locally important.





# WILDLIFE USE OF CULVERTS/BRDIGES



Protecting nature. Preserving life.™





Where are wildlife using transportation structures
What type of structures, if any, are being used?







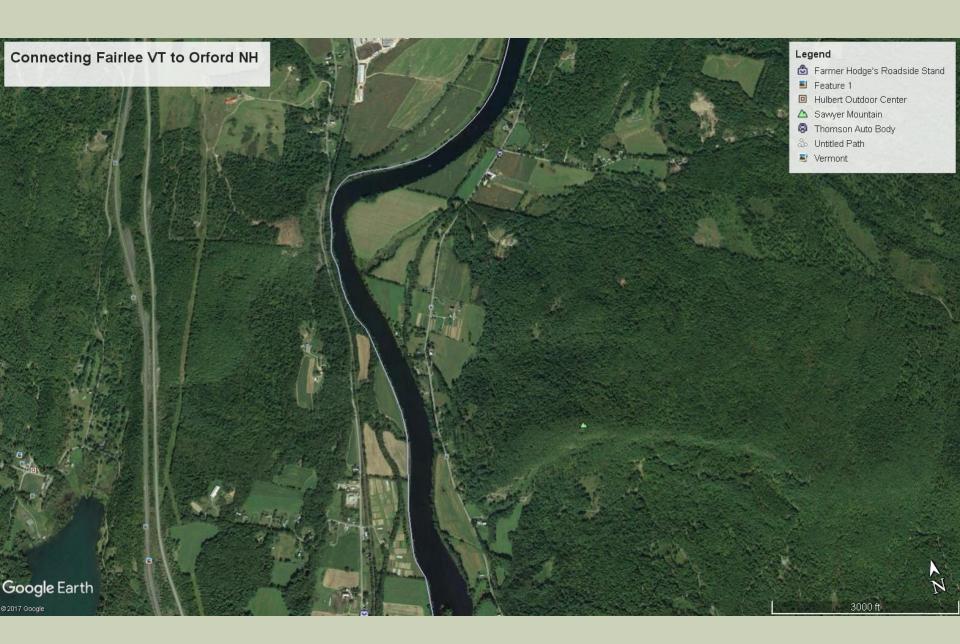
# CONNECTIVITY CONSERVATION IN ROAD CORRIDORS:



Culvert and bridge modification

Targeted road corridor restoration and land protection

Land-use planning (town plans, zoning)



# ASSISTANCE FOR TOWNS, COUNTIES, LOCAL GROUPS, ETC.

### VTF&W Community Wildlife Program

- Technical assistance and municipal planning
  - http://www.vtfishandwildlife.com/cms/one.aspx?pageld=132648

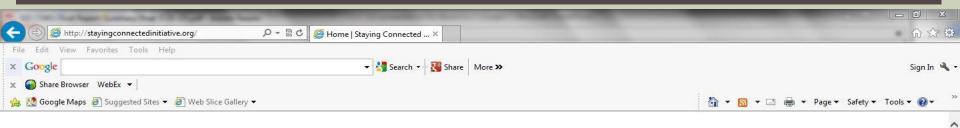
Staying Connected Initiative



NH local assistance?



#### WEBSITE – WWW.STAYINGCONNECTEDINITIATIVE.ORG





#### People

#### Habitat



#### For the well-being of wildlife and human communities, connections matter.

The Staying Connected Initiative is a visionary partnership working to restore and enhance landscape connections for the benefit of people and wildlife across the Northern Appalachian/Acadian region of the eastern U.S. and Canada. Each step of the way, from the Tug Hill Plateau and Adirondack Mountains in New York across the forests of New England to the Canadian Maritimes, the actions we take in our own backyards and communities make a difference.

http://stayingconnectedinitiative.org/our-work/

W

e

€ 75% ▼ 7:01 AM 11/7/2013

