

# STAYING CONNECTED

## Habitat Connectivity IS a Climate Change Adaptation Strategy

### What is the Staying Connected Initiative?

*Staying Connected in the Northern Appalachians* is an initiative to help safeguard wide-ranging and forest-dwelling wildlife such as bear, moose, lynx, marten and bobcat from the impacts of habitat fragmentation and climate change by maintaining and restoring landscape connections across the Northern Appalachians region.



### What is a Network of Connected Land?

A network of connected land is the combination of adjoining blocks of forest, wetlands, valleys, ridges, and riparian areas linked together that provide both habitat and dispersal routes for plants and animals. These areas provide food, cover, and access to mates for species large and small from salamanders to bears.

#### Good for animals

The forest blocks provide prime wildlife habitat while the connecting lands—often small forest and woodland patches, wetlands and river corridors—allow wildlife movement across the landscape between larger forested blocks.

#### Good for Plants

Connected lands benefit plants, providing pathways for seed dispersal and avenues for the plants to move along as the climate changes.

A wildlife network is a connected landscape of high quality habitat that meets the needs of a variety of animal and plant species.

### Large and Small Scale Connectivity

Large scale connectivity provides avenues for mobile species to range widely and for plant species to disperse across the landscape in search of new growing areas.

Small scale connectivity provides valuable areas for less mobile species such as amphibians that make short seasonal migrations during mating seasons. Small scale connectivity may be in areas as small as your back-yard, where micro-habitats may exist for amphibians or wildflowers.

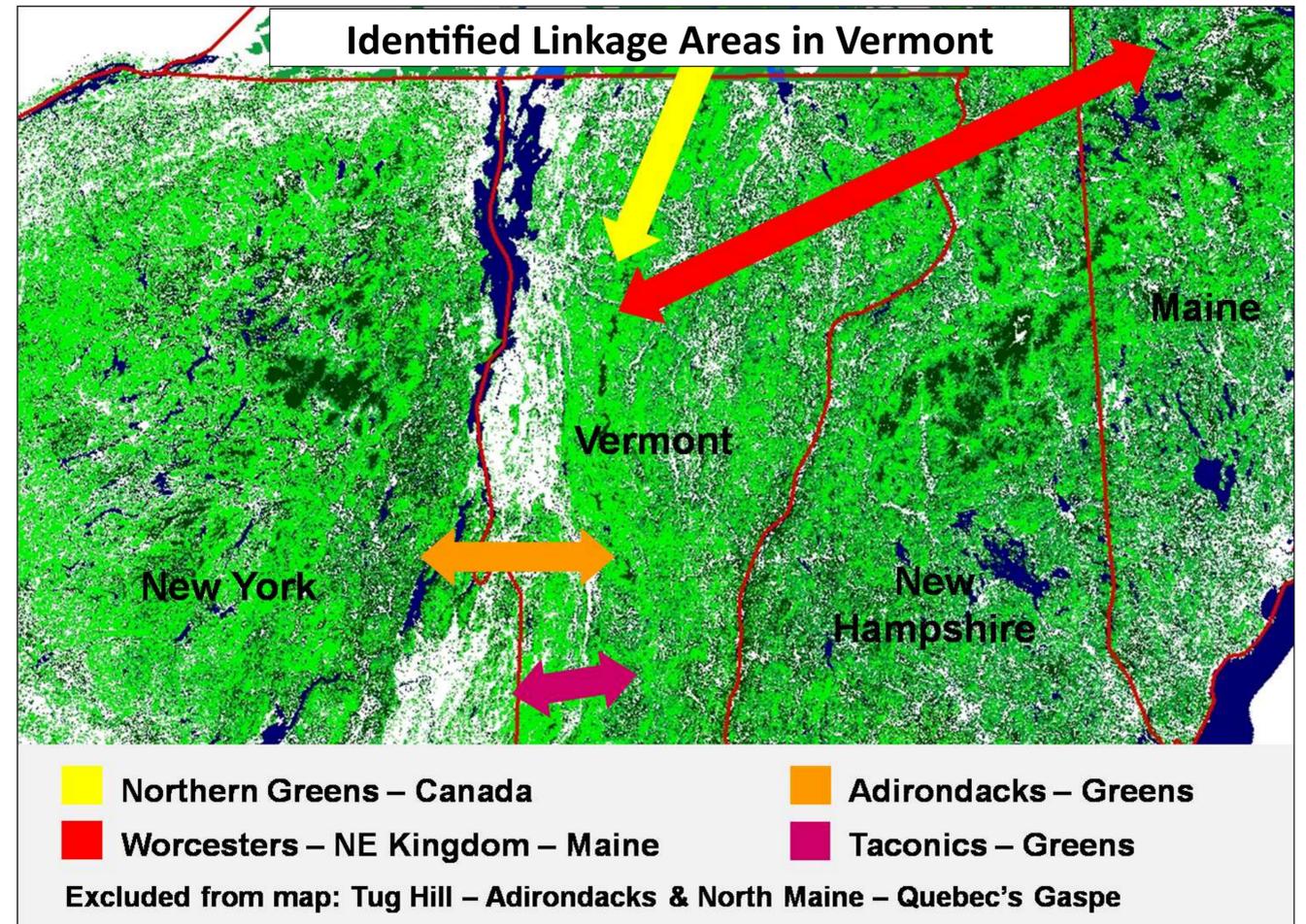
### Climate Change in Vermont

Climate change in Vermont will have a number of effects on the landscape and livelihoods of Vermonters. **Examples of expected changes are:**

- Changes growing season affecting agricultural productivity
- Movement of plants and animals into new areas resulting in novel species assemblages
- Mild winters affecting logging practices, tourism, hydrology, sugaring, and wildlife numbers
- Changing precipitation patterns affecting fisheries, agriculture, summer drought, and snowfall
- Increases in non-native species, especially insect pests and invasive plants
- Increase in frequency of extreme weather events leading to property and road damage



Conserved land creates key "stepping stones" in the system of wildlife habitat connectivity



### How does a Network of Connected Land Help us Cope with Climate Change?

Intact landscapes are resistant to extreme weather events, such as flooding, that damage infrastructure. Connected landscapes allow species to move in response to climate change, preserving both species diversity and resources humans use. Connected lands are wildlife networks that maintain species diversity, abundant game species, resilient plant communities, timber resources, and ecosystem services.

#### Some of the benefits of a connected landscape

- **Biodiversity**
  - healthy, resilient populations of plants and animals strengthened by genetic exchange from distant populations
- **Adaptive Capacity**
  - options for plants and animals that must shift their range in response to changes in their habitat
- **Ecosystem Services**
  - robust ecosystem services that provide clean water and air, biological breakdown of pollutants, and healthy soil
- **Flood Mitigation**
  - slowing of rainwater runoff, increase in groundwater infiltration, and reduction of damage to infrastructure
- **Resource Conservation**
  - ongoing supplies of timber, maple syrup, firewood, wild collected foods, fall landscapes, areas for recreation, and associated jobs
- **Game species**
  - abundant and healthy populations of moose, deer, turkey, woodcock, duck, grouse, and bear

We live at the crossroads of an extensive wildlife habitat network in a time of climate change