

Natural Resources | Local Economies | Climate Change: *Exploring the Links and Opportunities for Action*

Members of the Upper Valley Adaptation Workgroup

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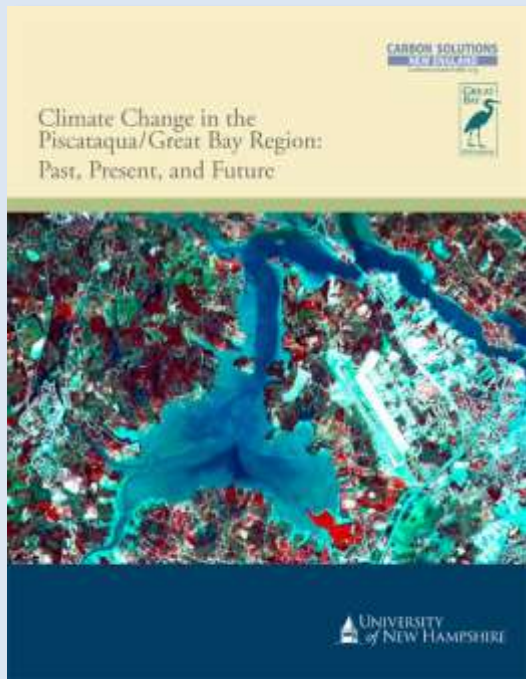
Mark Goodwin – City of Lebanon

Paige Heverly – Vital Communities

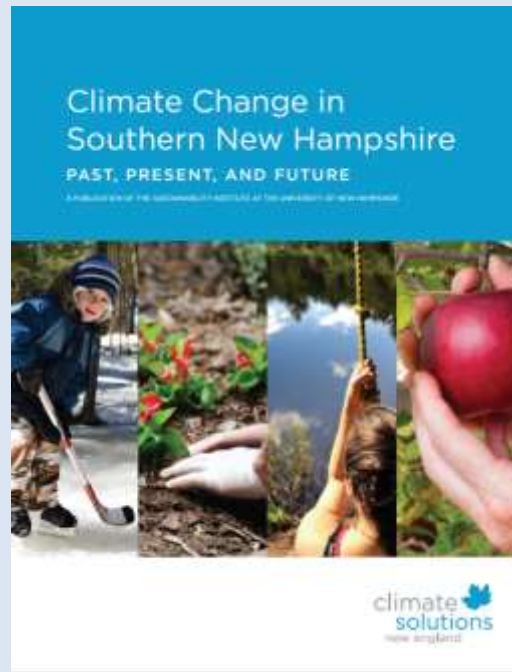
**Upper Valley Land Trust
March 19, 2019**



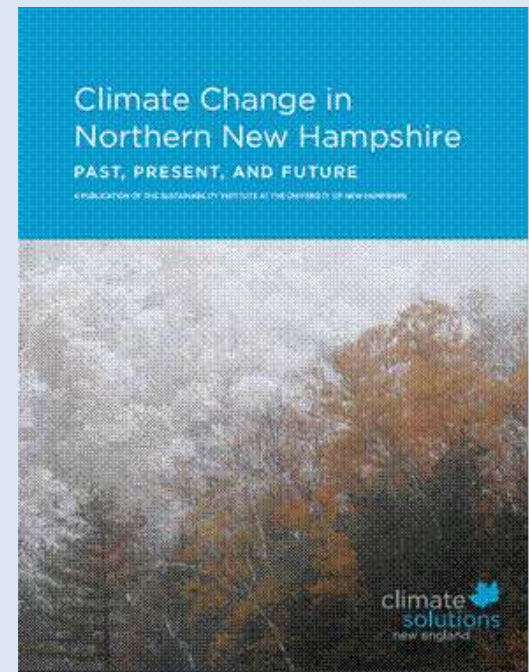
NH's Local and Regional Climate Assessments



Seacoast



Southern NH



Northern NH

Local Data!

Observed Climate Patterns

- Increase in precipitation – rain & snow
 - Amount and intensity
- Increase in average temperature
 - Decrease in night time cooling
- Increase in extreme weather
- Changing seasonality
- Drought
- Sea-level rise
 - Portsmouth's sea level has risen 6" since 1926
 - Weekly high tide flooding in Hampton
 - Increases in ground water levels



Natural Resource Based Economies



Forestry



Agriculture



Tourism



Recreation



Winter Sports

Natural Systems + Species Will (and already are) Face Major Terrestrial and Aquatic Issues

- Individual species will shift ranges
- Phenology shifts
- Flooding
- Hydrological changes
- Temperature
- Invasive species
- Habitat shifts



Credit: Outdoor Hub



Credit: Gabe Roxby

Impacts and Actions

Spread of
Invasive
Species

Monitor
and Control

Increased
Storms +
Flooding

Protect
Floodplains

Undersized
Culverts

Restore
Aquatic
Connectivity

Warmer
Waters

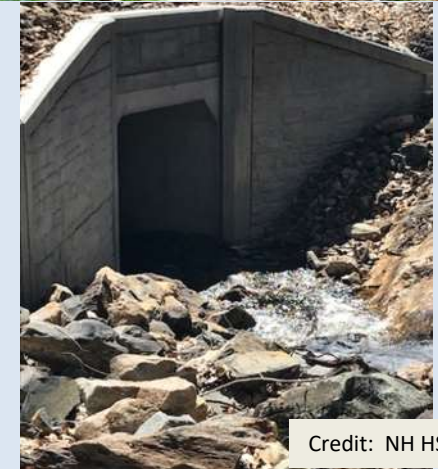
Riparian
Buffers

Habitat +
Ecosystems

Prioritize
Critical Habitat
Protection +
Restoration



Credit: Emily Lord



Credit: NH HSEM



Credit: Ben Kimball

Impacts and Actions



Warmer temperatures

Diverse Ecosystems

Changes to freeze thaw cycles

Changes to logging

Dirt road posting



Shifting Species

Tree Planting Efforts



Drought

Infiltrate

Increased risk of wildfires

Forest Management

Public Education



Agriculture and Maple Sugaring



- Support local farmers and sugarers
- Raise awareness
- Encourage water conservation
- Connect with your local agriculture commission
- Conserve farmland



More, More, More



- Public education – keep talking about this!
 - Conservation commission field walks
 - Community workshops
 - Photo contests
 - Habitat restoration projects
- Citizen science – engage!
 - NH F&G frog survey volunteers
- Phenology – keep lists!



Siting of Solar on Open Lands vs. Existing Buildings Become a Part of the Conversation...

- Runoff
- Wildlife
- Ecosystems
- Agriculture
- Other...



Incorporate Impacts and Actions into Natural Resources Planning!

Natural Resources Inventory

Town of Stratham, NH
October 2011

Prepared by the Town of Stratham Conservation Commission with support from the Rockingham Planning Commission and grant funds from the New Hampshire Coastal Program

Newmarket Open Space Conservation Plan



Prepared for the Town of Newmarket
by
Ellen Snyder, Ibis Wildlife Consulting
June 2007

This project was funded by a grant from the New Hampshire Estuaries Project,
as authorized by the U.S. Environmental Protection Agency's
National Estuary Program



Wagon Hill Farm Stewardship Plan



Prepared for the
Durham Conservation Commission

Prepared by
Ellen Snyder
Ibis Wildlife Consulting

Connect with Your Community



Planners



Economic Development
Capital Improvement Planning



Emergency Managers



Public Works

Natural Resource Based Economies have many facets. We need to work together

Examples from Community Work

Revisions to wetland buffers standards

Flood hazard district overlays; associated zoning changes; site design standards

Revisions to building codes to require freeboard

Community outreach focused on flooding

Chapters on Climate Change in Municipal plans

Prioritize culverts for replacement

Upper Valley Adaptation Workgroup Partners

Municipal Regional State Medical Academic Non-Profit Business



<https://vitalcommunities.org/adaptation/>

Examples from the Region

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