

Forestry with Birds – and Climate and Carbon – in Mind

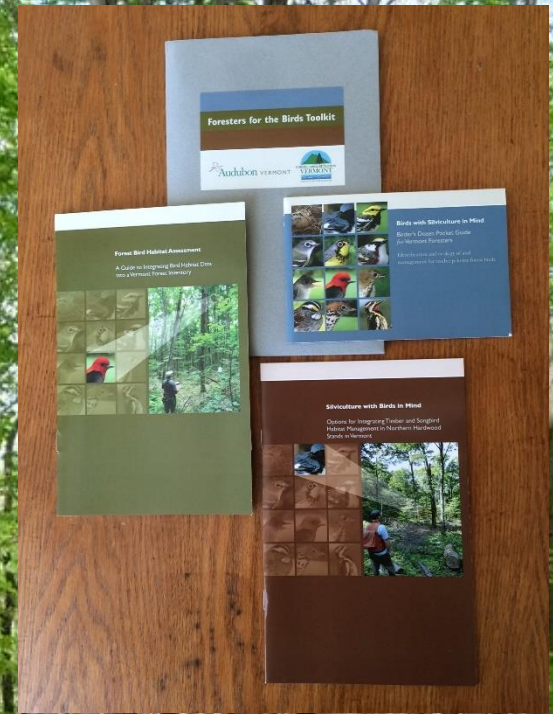


Audubon | VERMONT

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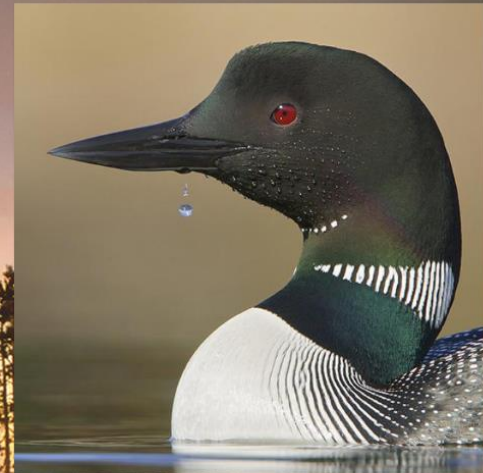
Foresters for the Birds



Audubon's Birds and Climate Change Report

314 Species on the Brink

Shrinking and shifting ranges could imperil nearly half of U.S. birds within this century



Common Loon

By 2080, this great icon of the north could lose 75 percent of its winter range.

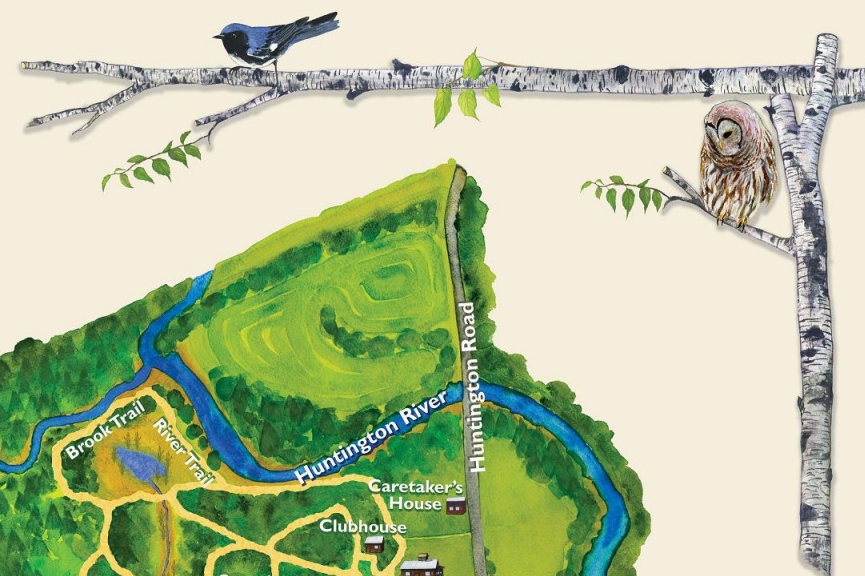
[See the climate forecast map »](#)

Climate Threatened – may lose over 50% of current range by 2080

Climate Endangered – may lose over 50% of current range by 2050



GREEN MOUNTAIN Audubon CENTER



The Green Mountain Audubon Center is operated by Audubon Vermont, the state program of the National Audubon Society.

Restrooms are located in the Visitor Center

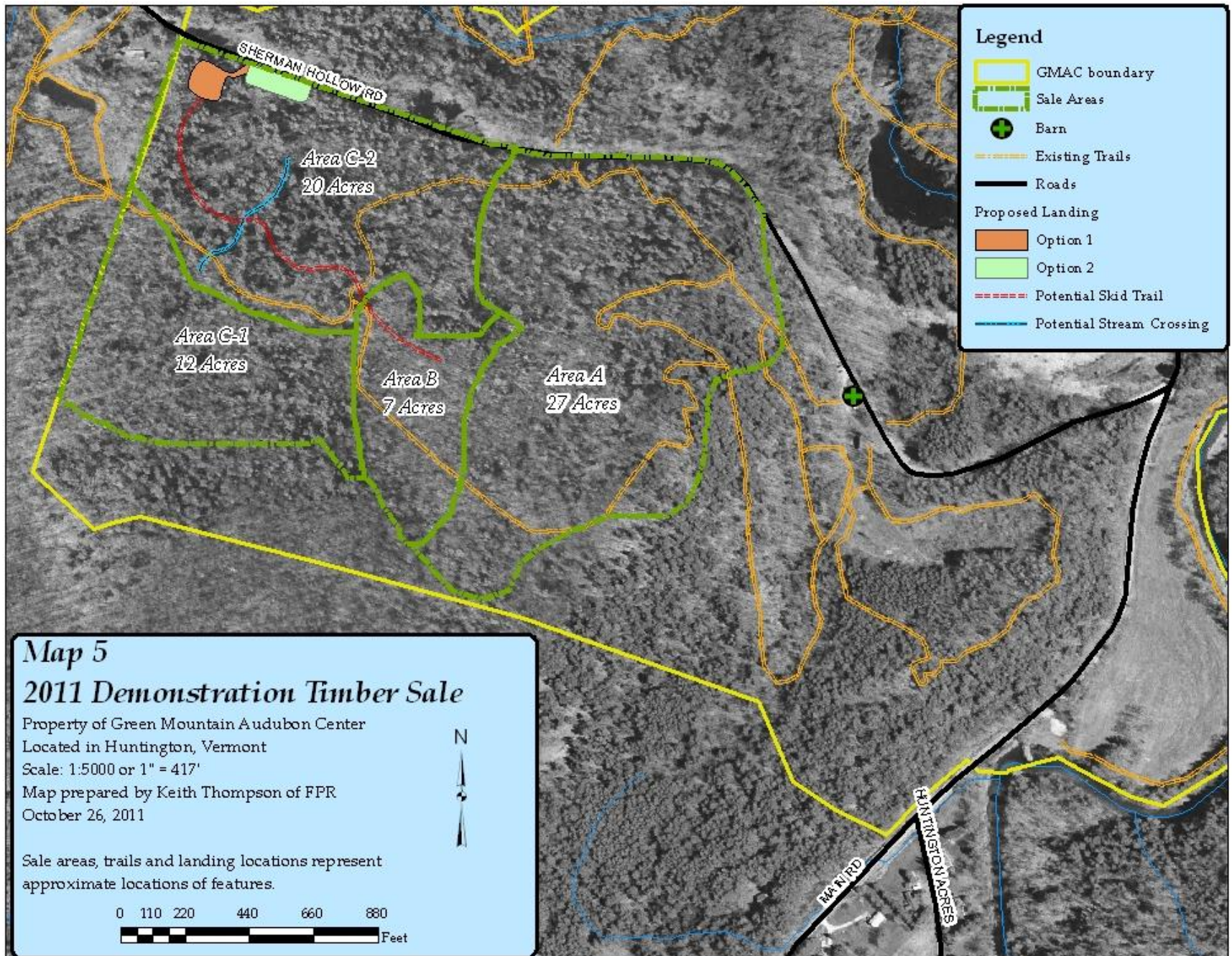
P1 Visitor Center Parking

P2 Sugarhouse Parking

P3 Horseshoe Bend Parking

Grounds Open from Dawn Until Dusk







Utilizing the Adaptation Framework

Define

GMAC Forest Management Objectives

- Protect interior forest conditions for neo-tropical songbird breeding habitat
- Increase sawtimber quantity, quality, and volume increment
- Enhance forest structure
- Controlling invasive species and prevent establishment of new invasives, particularly along hiking trails and in disturbed areas
- Sustainable maple sugarbush management
- Focus on concepts of forest resilience and transition
- Demonstrate forest management with birds, and climate and carbon, in mind

Utilizing the Adaptation Framework *Assess and Evaluate*

Impacts and Vulnerabilities

- Range expansion of non-native insect pests (HWA)



Utilizing the Adaptation Framework *Assess and Evaluate*

Impacts and Vulnerabilities

- Increases in non-native plant species



Utilizing the Adaptation Framework *Assess and Evaluate*

Impacts and Vulnerabilities

- Increase in northern red oak component



Utilizing the Adaptation Framework *Assess and Evaluate*

Impacts and Vulnerabilities

- Increase in deer browse



Utilizing the Adaptation Framework

Identify

Tactics and Approaches

- Maintain current extent of mature forest
 - Approach 1.1 – Avoid forest conversion to non-forest uses



Co-Benefits

- Bird habitat – maintains extent and quality
- Climate – maintains existing tree species diversity
- Carbon – maintains existing carbon sequestration capacity

Utilizing the Adaptation Framework

Identify

Tactics and Approaches

- Control of non-native invasive plant populations
 - Approach 2.3 – Prevent introduction and establishment, remove existing occurrences using mechanical, (preferred), herbicide, or targeted goat grazing



Co-Benefits

- Bird habitat – native plants support greater insect food sources
- Climate – maintains native plant diversity, enhances forest resilience
- Carbon – maintains carbon sequestration capacity

Utilizing the Adaptation Framework

Identify

Tactics and Approaches

- Implement regeneration silvicultural treatments
 - Approach 3.5 – Alter forest structure to reduce severity or extent of wind and ice damage
 - Approach 6.6 – Promote species and structural diversity to enhance carbon capture and storage efficiency



Co-Benefits

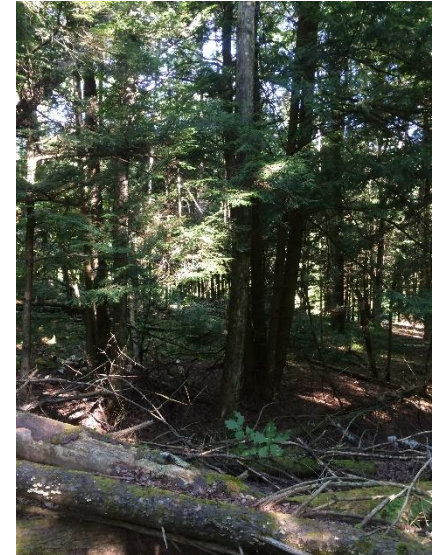
- Bird habitat – increase habitat quality and complexity through enhanced species and structural diversity
- Climate – improves tree health and vigor to enhance resilience
- Carbon – improves tree health to maintain long-term carbon stocks and maintain/enhance sequestration rates

Utilizing the Adaptation Framework

Identify

Tactics and Approaches

- Promote northern red oak component in areas where present
 - Approach 6.6 – Promote species and structural diversity to enhance carbon capture and storage efficiency



Co-Benefits

- Bird habitat – increase tree species diversity and potential food resources
- Climate – promotes native species expected to be better-adapted to future conditions
- Carbon – reduces risk of long-term carbon losses by favoring lower risk species

