Forestry with Birds – and Climate and Carbon – in Mind

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Foresters for the Birds
Climate Threatened – may lose over 50% of current range by 2080

Climate Endangered – may lose over 50% of current range by 2050
Map 5
2011 Demonstration Timber Sale
Property of Green Mountain Audubon Center
Located in Huntington, Vermont
Scale: 1:5000 or 1” = 417’
Map prepared by Keith Thompson of FPR
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Sale areas, trails and landing locations represent approximate locations of features.
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 specie 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