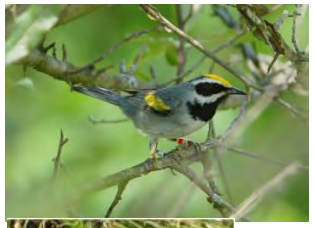
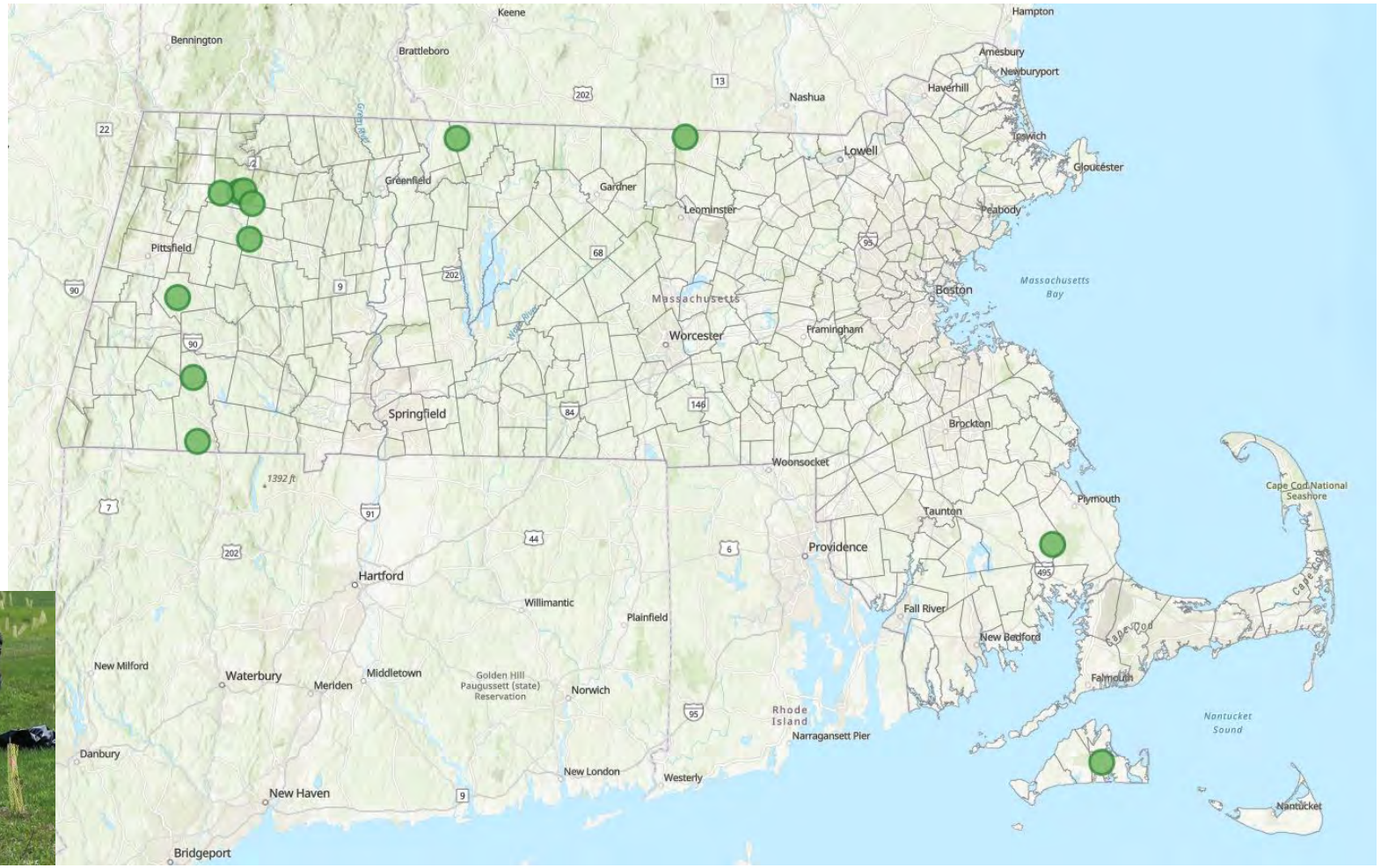
DCR Management Forestry Program
2022 Project Proposals





DCR Mission

To protect, promote and enhance our common wealth of natural, cultural and recreational resources for the well-being of all.

dcr MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION

Agenda

1) DCR Ecosystem Services Framework
   - DCR Priority Attributes for Project Locations
   - Forest Carbon & Climate Change
   - Forest Diversity & Resilience
   - Wildlife Habitat for Species of Greatest Conservation Need
   - Recreation & Renewable Wood Products
     - Jobs & Rural Economy
     - How Much Wood Do We Use?
2) Massachusetts Major Forest Ecosystem Types
3) DCR Guidance Documents for Management
   - 2020 DCR Forest Action Plan Goals
   - MA Climate Change Adaptation, Wildlife Action Plan
4) DCR Forest Management Flow Chart
5) DCR 2022 Forest Managment Proposal Priority Attributes
   - Project Sites
   - Ecosystem Services at Priority Sites
6) U.S. Forest Service Landscape Scale Restoration (LSR) Grant
7) Northern Institute of Applied Climate Science (NIACS)
   - Climate Adaptation Workbook
   - Climate Response Framework
8) DCR 2022 Forest Management Proposal Highlights

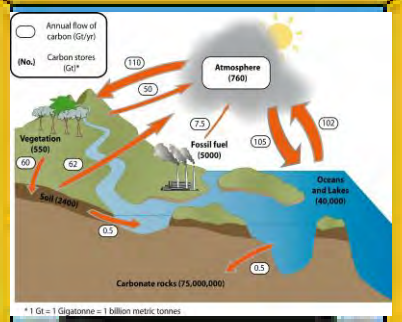
https://www.mass.gov/guides/forest-management-projects#-forest-management-projects-proposed-2022-

DCR Management Forestry Program stewardship activities are set within an Ecosystem Services framework that recognizes and values a diversity of forest benefits to the people of the Commonwealth of Massachusetts

M. G. L. Chapter 132, Section 40 (enacted 1943 and revised 1983):

"It is hereby declared that the public welfare requires the rehabilitation, maintenance, and protection of forest lands for the purpose of conserving water, preventing floods and soil erosion, improving the conditions for wildlife and recreation, protecting and improving air and water quality, and providing a continuing and increasing supply of forest products for public consumption, farm use, and for the wood-using industries of the commonwealth."


Clean Water



Climate Change Resiliency

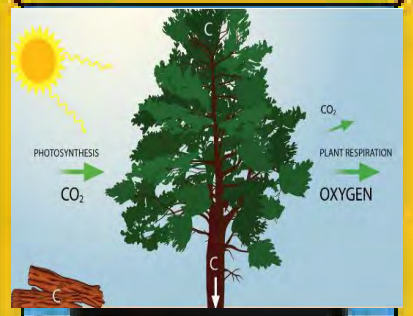

Spiritual Well Being


Recreation

Ecosystem Services


Wildlife Habitat


Forest Products



Clean Air


Jobs/Rural Economy

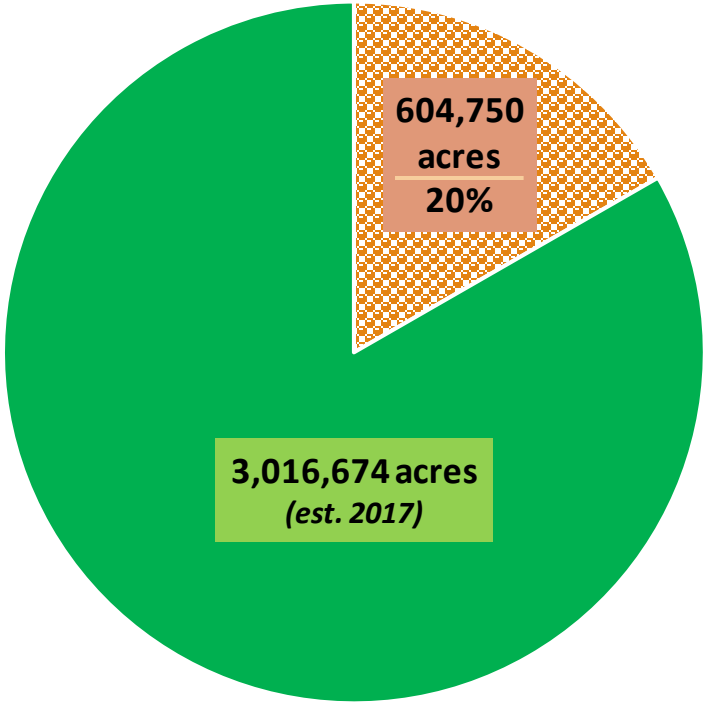
Massachusetts Annual Per Capita Wood Use

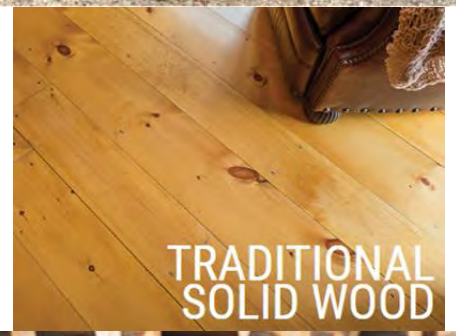
Each person in Massachusetts uses about 52 cubic feet of wood each year, or one tree about 18" in diameter and 80' tall.

Total annual wood use by all Massachusetts residents is about 359,450,000 cubic feet, or nearly seven million of those trees.

Harvesting on Massachusetts forest land under management removes 19,143,000 cubic feet over about 32,200 acres per year. This is 5% of our consumption, and an average of 594 cubic feet per acre.

To obtain 359,450,000 cubic feet of wood at 594 cubic feet per acre requires about 604,750 acres (about 20% of all MA forest land) to meet annual per capita use!!





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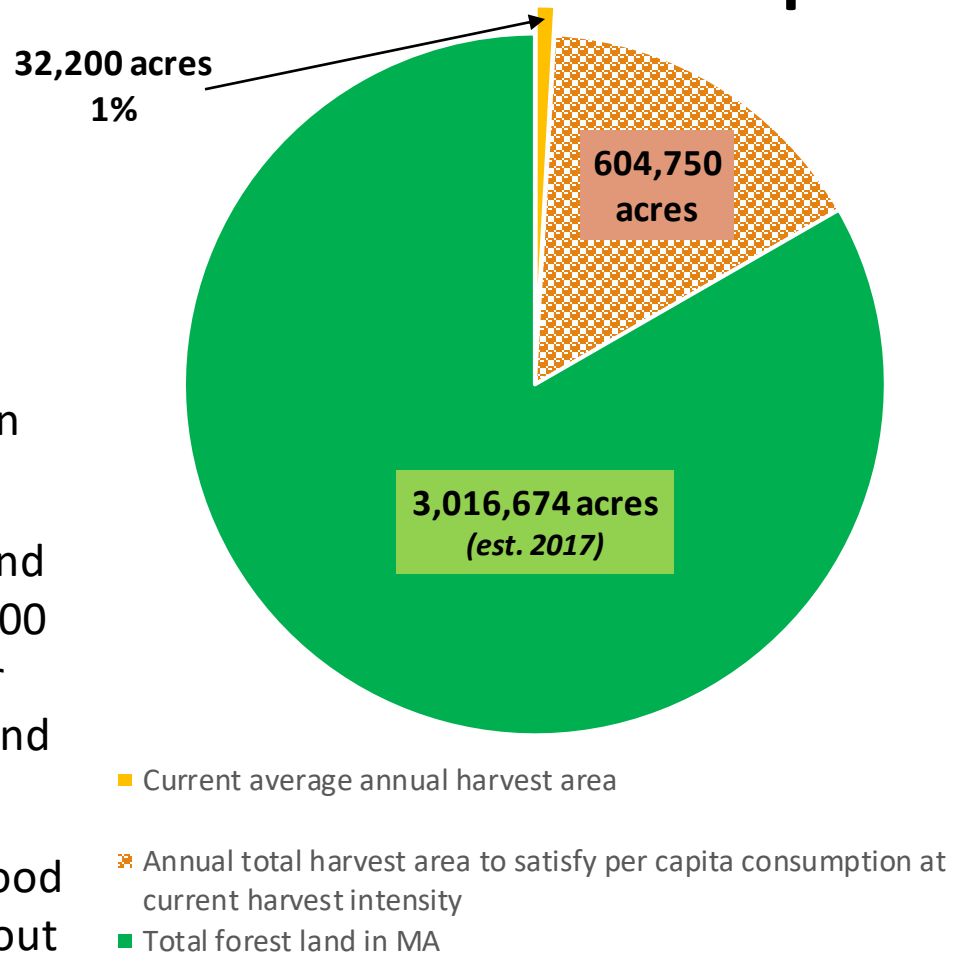
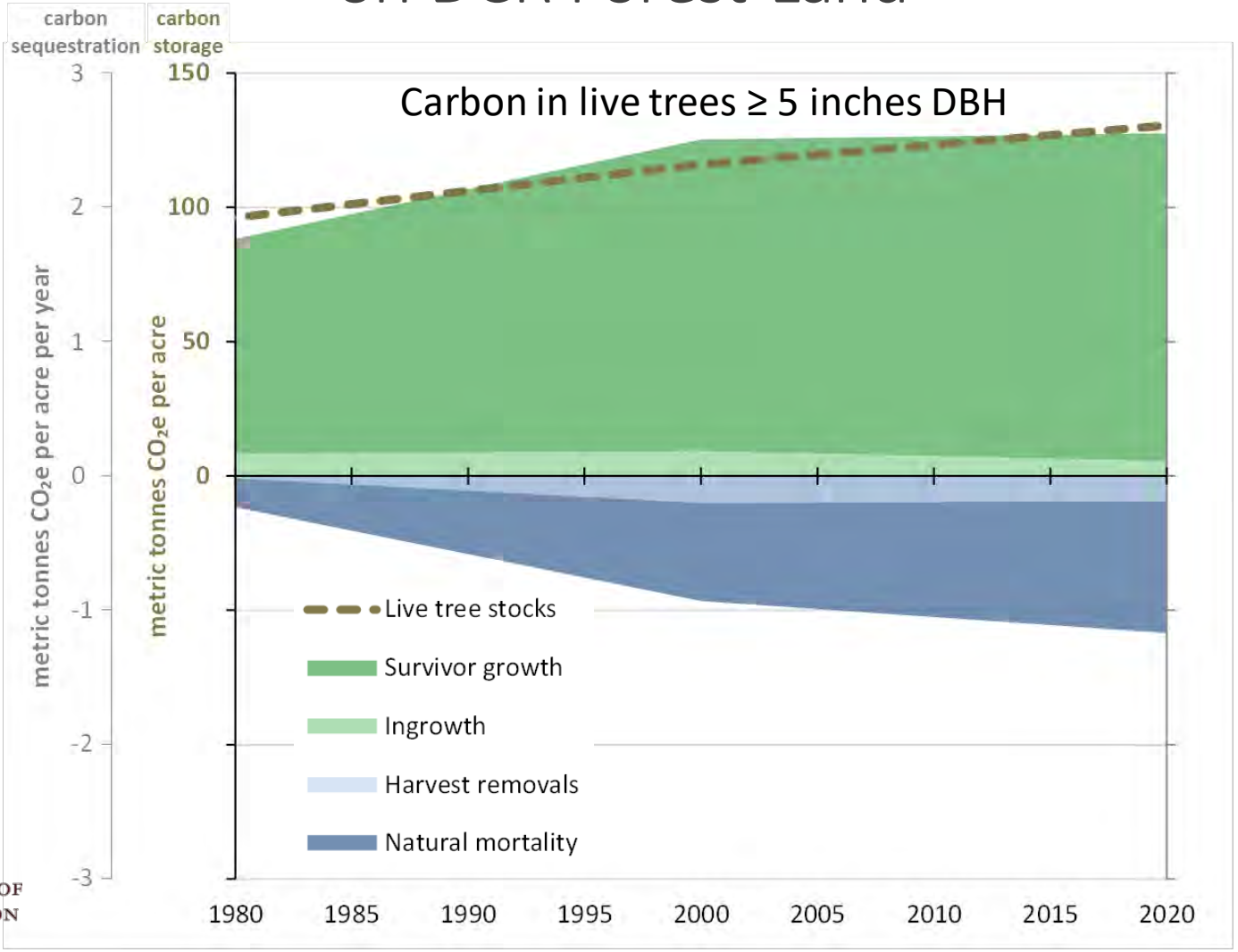


Average annual wood product harvest area on Massachusetts forest land under management is about 32,200 acres (about 1% of all MA forest land).

Carbon Storage and Sequestration
on DCR Forest Land

DCR uses CFI data to create models and algorithms that allow for apples-to-apples comparisons to U.S. Forest Service nationwide FIA data



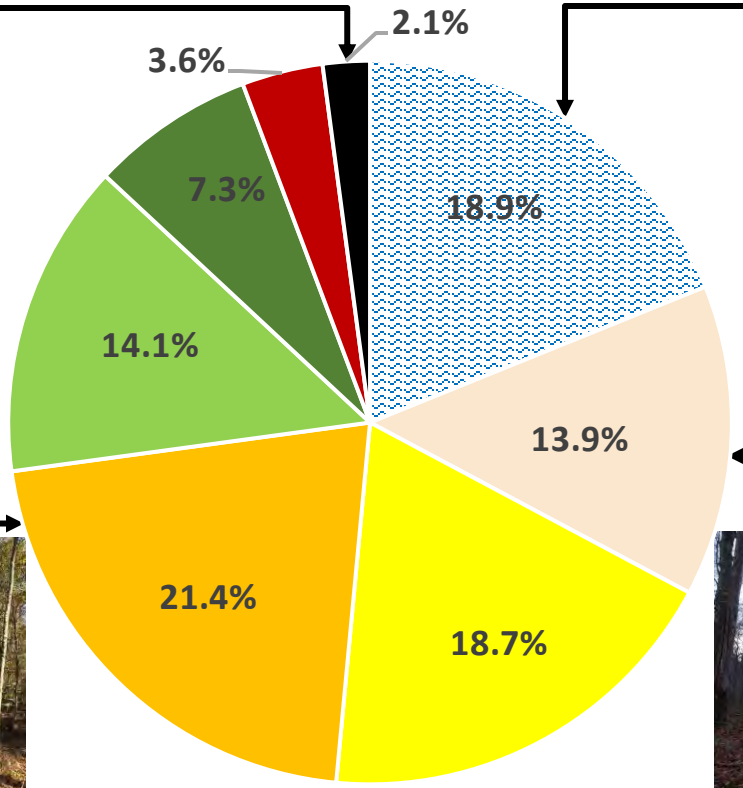
dcr MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION

Range of Carbon Storage on DCR Lands

carbon sequestration: net growth all live trees ≥5" dbh, pounds of carbon per acre per year
area by class of sequestration/net growth

Highest-performing stands

Negative net growth



Average stands

Underperforming stands

Priority Attributes for DCR Project Locations

Climate Resiliency

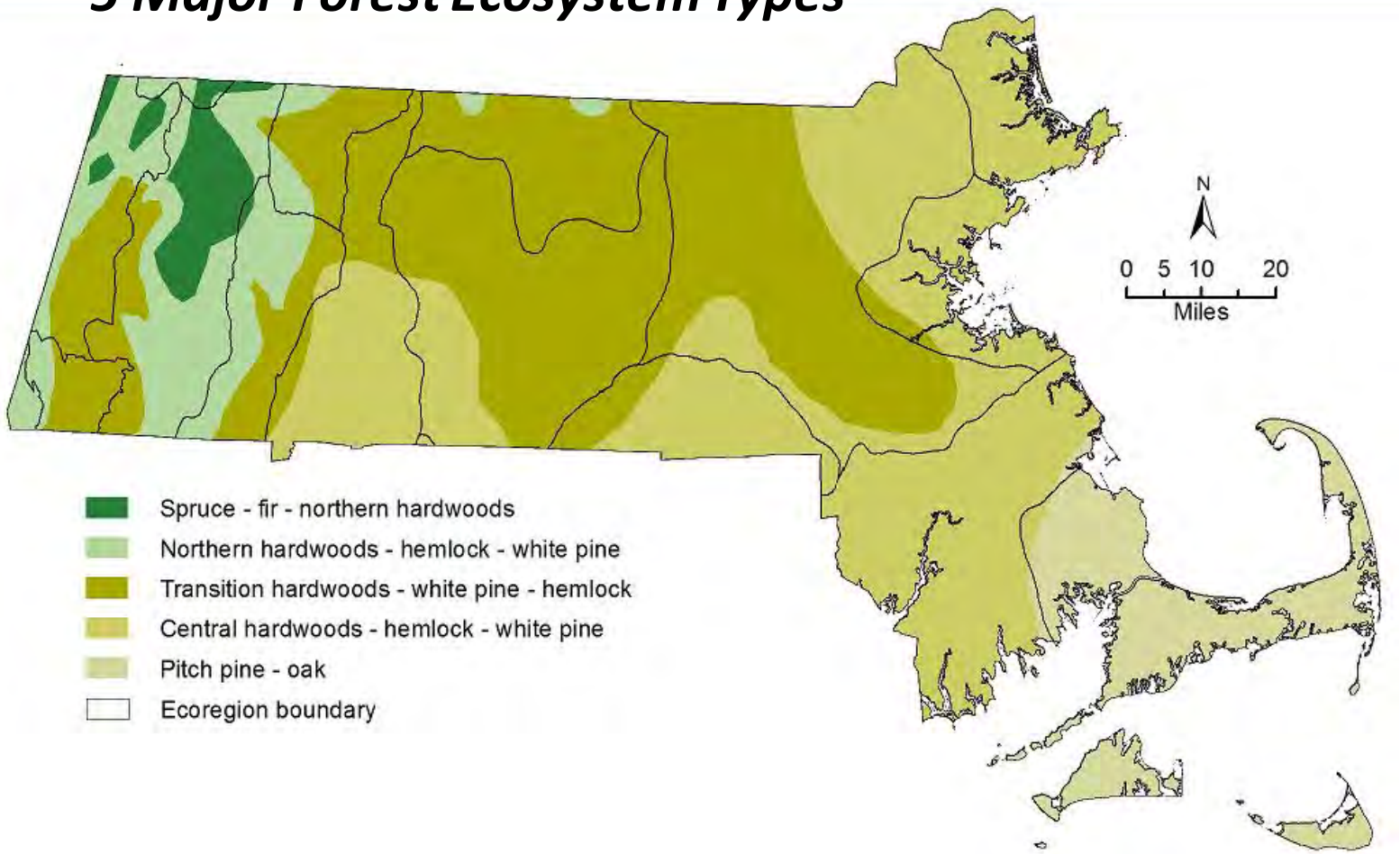
- Forest Areas with Low Carbon Storage
- Forest Areas with Low Rates of Carbon Sequestration
- Forest Areas of High Vulnerability to Climate Change
  - Spruce/Fir
  - Rich Mesic Forest
  - Pitch Pine/droughty/fire prone

Habitat/Biodiversity

- Invasive Exotic Insect Infestations
- Native Insect Infestations
- Areas of Low Species Diversity
  - Plantations of Exotic Tree Species
- Potential Natural Community Restoration Sites
  - Degraded Pine Barrens
  - Degraded Oak Woodlands
  - Aspen/Birch Forests
- Areas of Invasive Plant Occurrence Threatening Native Biodiversity

Massachusetts Forestlands

5 Major Forest Ecosystem Types



Massachusetts 60% Forested
8th most forested state in the Union.
Pop 6.873 million *(2020US Census data)*

Forested Acres	***2,984,347***
Private Forestland	***1,911,815***
Public Forestland	***1,072,532***

No. of Private Landowners = 293,000

US Forest Service Statistics

DCR Management Forestry Program has stewardship responsibilities on 326,313 acres.

<u>Landscape Designations</u>

35% Reserves
25% Parklands
40% Woodlands

DCR Management Forestry Program

Manage – For a range of ecosystem services in a manner that promotes forest health: a condition of well-being that allows state forestlands to resist, respond to, and recover from stress that comes from invasive insect pests, invasive plants, and both drought and severe storms brought on by climate change. A healthy forest contains a diversity of native plant species, a range of tree sizes and ages, and intact nutrient, water, and energy flow.

Monitor – Assess plant communities at management sites (including invasive and state-listed plants) and operate the statewide Continuous Forest Inventory (CFI) Program.

Maintain – ±4,681 Miles of Forest Boundaries and Mitigate Illegal Trail Damage

Assist - DCR Park Operations, DCR Land Acquisition Program, DCR Forest Health Program.

dcr MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION

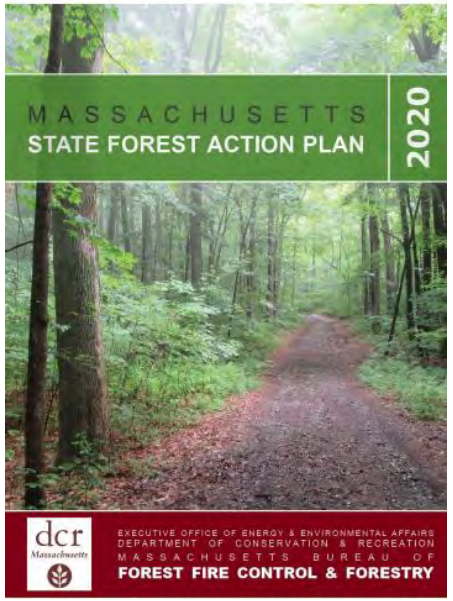
Guiding Internal Documents

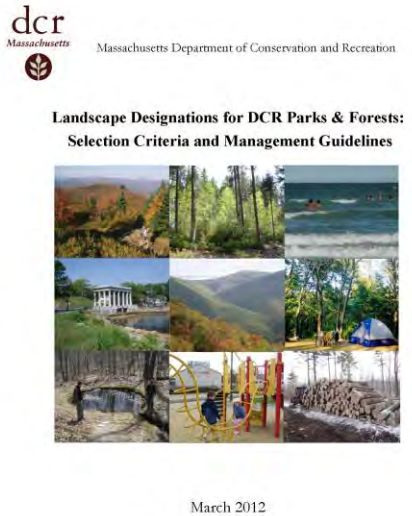
- **DCR State Forest Action Plan**
  https://www.mass.gov/service-details/massachusetts-forest-action-plan

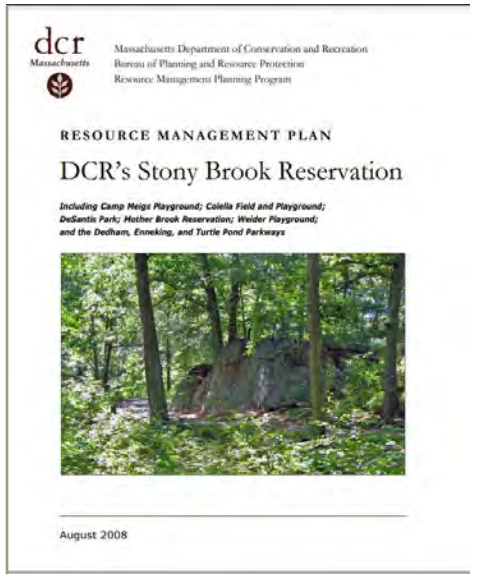
- **DCR Landscape Designations**
  https://www.mass.gov/doc/landscape-designations/download

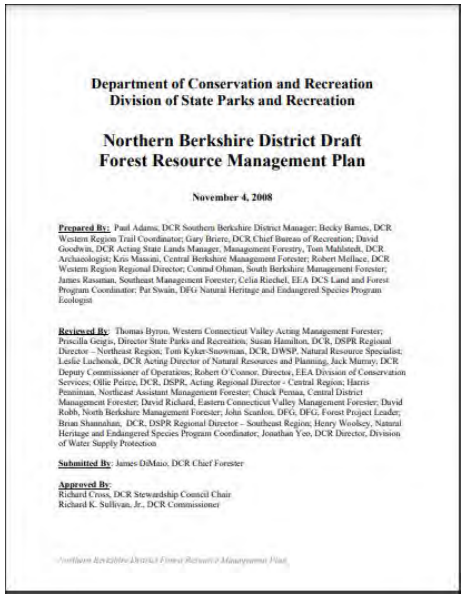
- **DCR Resource Management Plans (RMPs)**
  https://www.mass.gov/lists/resource-management-plans

- **DCR Forest Resource Management Plans (FRMP's)**
  https://www.mass.gov/guides/forest-resource-management-plans-on-state-lands



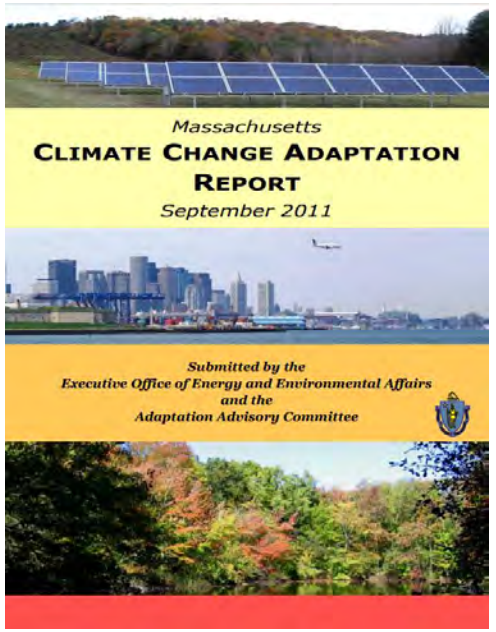


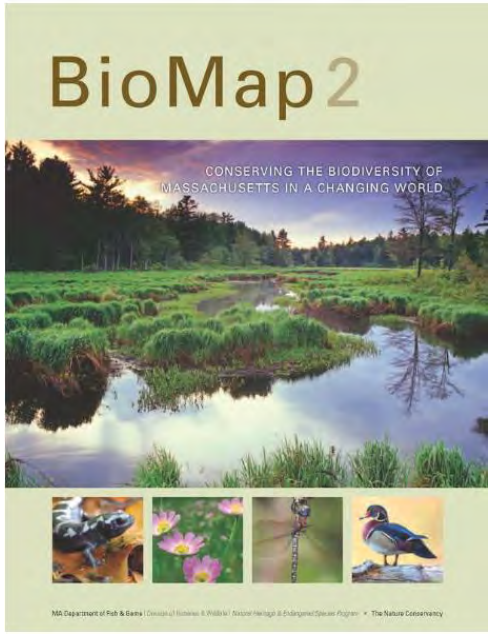


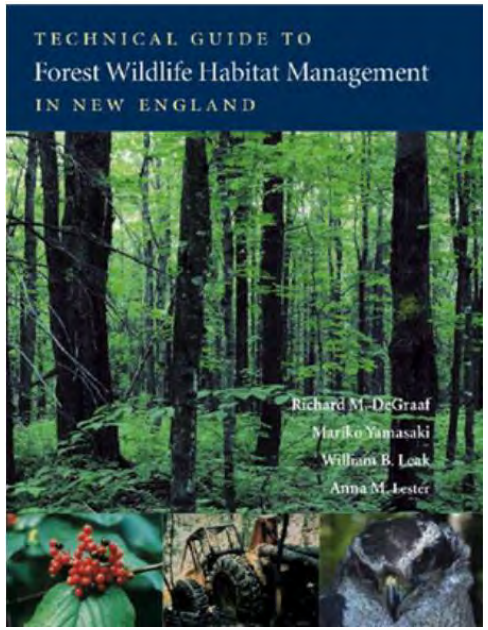


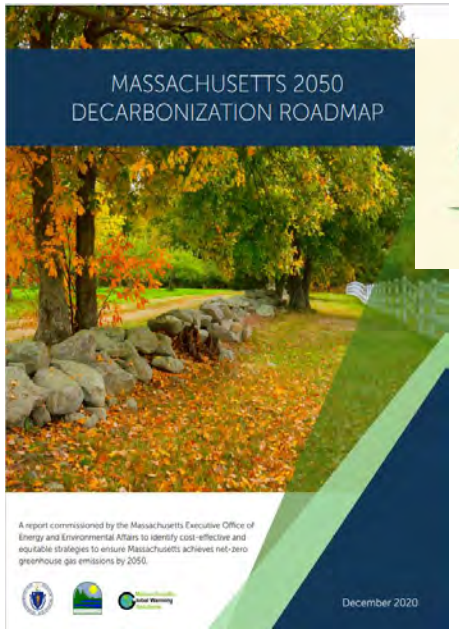
Guiding External Documents

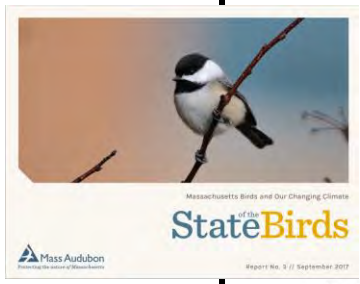
- Massachusetts Climate Change Adaptation Report
- Massachusetts 2050 Decarbonization RoadMap
- Massachusetts State Wildlife Action Plan
- Massachusetts State of the Birds Report
- Bio Map 2
- Northern Institute of Applied Climate Science
- USFS Forest Wildlife Habitat Management in New England.

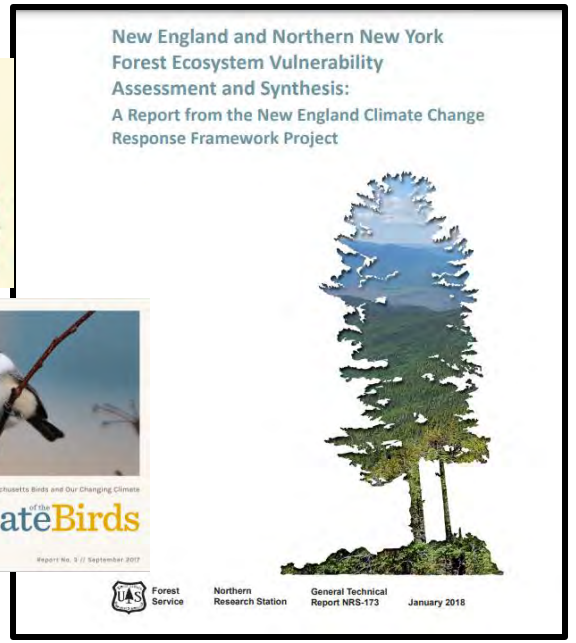


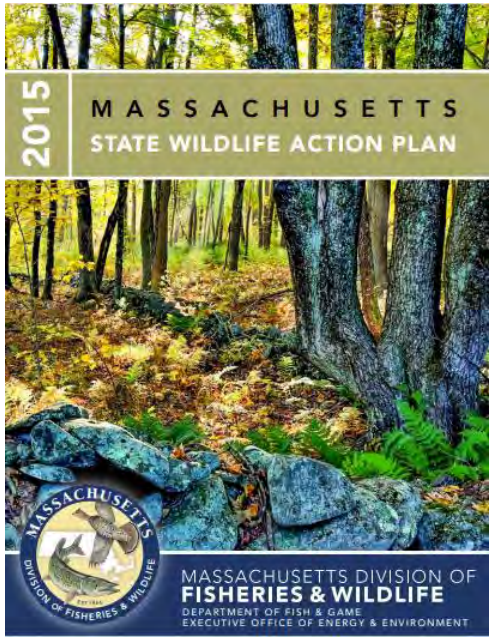












The 2020 Forest Action Plan goals for Massachusetts forests are:

- Goal 1: Increase resistance and resilience of trees and forests to mitigate and adapt to the effects of climate change
- Goal 2: Manage forest ecosystem health and biodiversity
- *Goal 3: Support and enhance forest economy*
- Goal 4: Maintain and increase urban tree canopy
- *Goal 5: Enhance the connection between forests and people*
- Goal 6: Increase land base of conserved forests (keep forests as forests)
- Goal 7: Advocate for a legal and institutional framework pertinent to the conservation and management of trees and forests
- *Goal 8: Maintain and enhance soil, water, and air resources*
- *Goal 9: Support the role and use of prescribed fire in the landscape*
- *Goal 10: Cultivate and support partnerships with forestry and conservation stakeholders*

Prioritization of Goals for 2022 DCR Forest Management Proposals

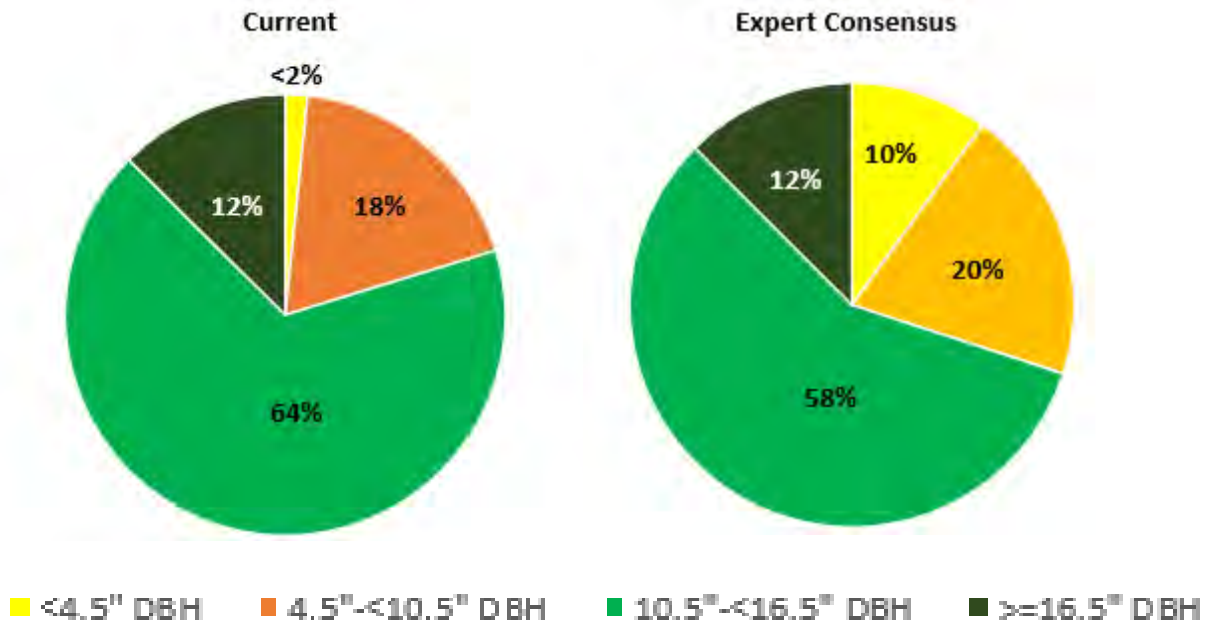
Goal 1: Increase resistance and resilience of trees and forests to mitigate and adapt to the effects of climate change.

- Diversify forest stage class structure and species composition on the landscape for resiliency.
- Improve forest ecosystem carbon sequestration rates via forest thinning.
- Increase long term carbon storage in both live trees and renewable wood products.

Goal 2: Manage forest ecosystem health and biodiversity

- Diversify forest stage class structure and interspersion across the landscape.
- Increase amount of young forested habitat and improve conditions to increase pioneer plant and tree species populations.
- Increase structural complexity and other late-successional characteristics through retention of snags and large coarse woody debris.

DCR Forest Stage Class Distribution



Ecosystem Conservation Based on Natural Disturbance Processes

Pre-Contact Forest Disturbance Processes

Severe Windstorms, Ice Storms, Insect Damage across many forestlands

Wildfires & Planned Fires by Indigenous People on Driest Sites

Ubiquitous Beaver Flooding along all streams of moderate slope

Flooding & Ice Scouring Along Rivers

***Timeline**:*

Project Development to Contract Award 1 year

Contract award to Project completion 1 to 2 years

DCR project process

District Foresters assess Priority Attributes & identify Proposed Treatment Areas

INTERNAL REVIEW

DFW, NHESP, Cultural, Parks, Operations

Edits, adjustments

Presentations to Senior Staff

Commissioner review and approval for projects with openings over 1/3 acre

Notification of projects to towns and elected officials

Public presentations and 45-day public comment period

Detailed site analysis and prescription development

Prescription development and approval by Forest Management Program Supervisor

Chapter 132 plan development and review by Service Forestry, NHESP, and Conservation Commission

Pre-forest management tour for general public

Contract development and bid process

Contract Award Estimated timeline from project development 1 Year

Project commencement and administration, supervision for compliance

Project completion and close-out. Estimated 2 years from Contract award

Priority Attributes for DCR Project Locations

Climate Resiliency

- Forest Areas with Low Carbon Storage
- Forest Areas with Low Rates of Carbon Sequestration
- Forest Areas of High Vulnerability to Climate Change
  - Spruce/Fir
  - Rich Mesic Forest
  - Pitch Pine/droughty/fire prone

Habitat/Biodiversity

- Invasive Exotic Insect Infestations
- Native Insect Infestations
- Areas of Low Species Diversity
  - Plantations of Exotic Tree Species
- Potential Natural Community Restoration Sites
  - Degraded Pine Barrens
  - Degraded Oak Woodlands
  - Aspen/Birch Forests
- Areas of Invasive Plant Occurrence Threatening Native Biodiversity

2022 DCR Proposed Project Sites

	District	Town	Area
Savoy Mountain SF – Climate Resiliency Project	1 – Northern Berkshires	Savoy	629 (over 3 years)
Dubuque SF – Transfer Station	4 – Western CT Valley	Savoy	102
Dubuque SF – Scott Road	4 – Western CT Valley	Savoy	±175
Bryant Mountain – Berkshire Snow Basin	2 – Central Berkshires	Cummington	234
October Mountain SF – Ant Lot	2 – Central Berkshires	Washington	447
Sandisfield SF – Hyde Karlson Lot	3 – Southern Berkshires	Sandisfield	234
Otis SF – Geisler Swamp Project	3 – Southern Berkshires	Otis	88
Warwick SF – Bass Road West Project	5 – Eastern CT Valley	Warwick	123
Myles Standish SF – Settler's Green Fuels Reduction	8 – Southeast	Carver	17
Manuel Correllus SF – Plantation Mitigation/Barrens Restoration	8 – Southeast	Edgartown	175
Townsend SF – Old Turnpike Road Project	7 – Northeast	Townsend	112

Ecosystem Services at 2022 DCR Priority Sites

	Climate Resiliency	Habitat/ Biodiversity	Forest Products	Recreation	Rural Economy	Clean Air	Clean Water
Savoy Mountain SF – Climate Resiliency Project	√	√	√	√	√	√	√
Dubuque SF – Transfer Station	√	√	√	√	√	√	√
Dubuque SF – Scott Road	√	√	√	√	√	√	√
Bryant Mountain – Berkshire Snow Basin	√	√	√	√	√	√	√
October Mountain SF – Ant Lot	√	√	√	√	√	√	√
Sandisfield SF – Hyde Karlson Lot	√	√	√	√	√	√	√
Otis SF – Geisler Swamp Project	√	√	√	√	√	√	√
Warwick SF – Bass Road West Project	√	√	√	√	√	√	√
Myles Standish SF – Settler's Green Fuels Reduction	√	√	√	√	√	√	√
Manuel Correllus SF – Plantation Mitigation/Barrens Restoration	√	√	√	√	√	√	√
Townsend SF – Old Turnpike Road Project	√	√	√	√	√	√	√

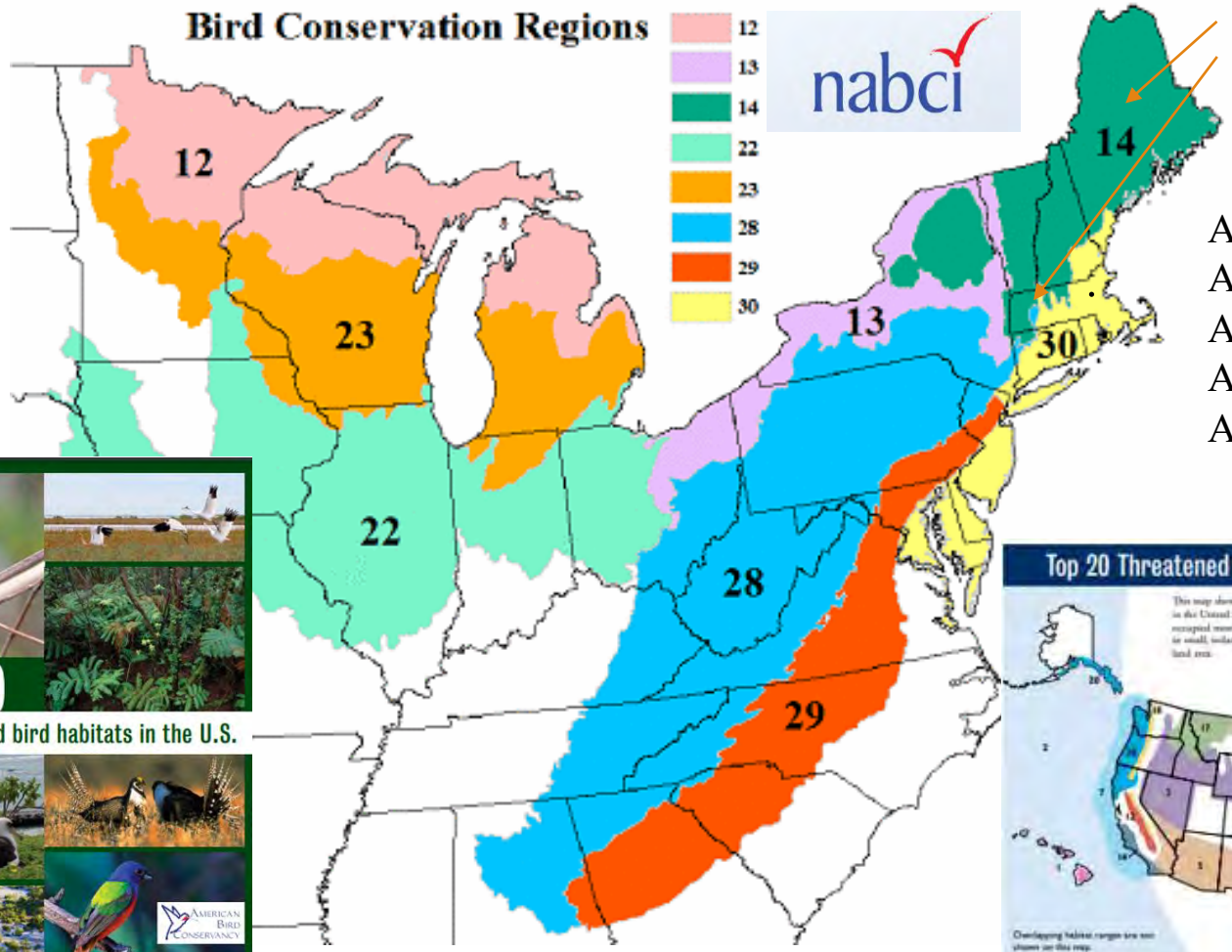
US Forest Service

Landscape Scale Restoration (LSR) Grant

Program Purpose:

“To encourage collaborative, science-based restoration of priority rural forest landscapes.”

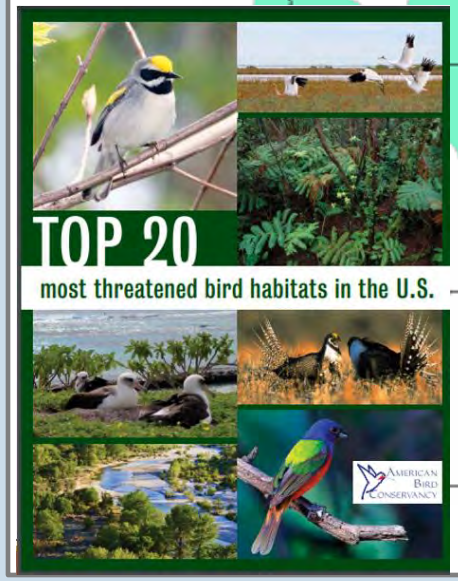
Developing Focal Areas in Mass for the LSR Initiative



North American Bird Conservancy Initiative

BCR 14: Atlantic Northern Forests

Area easily definable.
Area with high concentration of conservation land.
Area where conservation success can be measured.
Area with rural communities.
Areas with threatened habitats.



LSR Initial Focal Areas

DCR Projects Within the LSR Grant Area


NIACS
Northern Institute of
Applied Climate Science
NORTHERN INSTITUTE OF APPLIED CLIMATE SCIENCE
&
ADAPTATION WORKBOOK
wildadirondacks.org

NORTHERN INSTITUTE OF APPLIED CLIMATE SCIENCE (NIACS)

- Part of the Climate Response Framework: A collaborative, cross-boundary approach among scientists, managers, and landowners to incorporate climate change considerations into natural resource management.

Charter Members

Additional Members

Federal Partners **Tribal Partners** **Municipal Partners** **State Agency Partners** **Private & Non-Profit Partners**

PARTNERS

From 7 Charter Members to Over 130 Partners

TRIBAL

1854 Treaty Authority
Bad River Band of the Lake Superior Chippewa Indians
Bay Mills Indian Community
Fond du Lac Band of Lake Superior Chippewa
Forest County Potawatomi Community
Grand Portage Band of Lake Superior Chippewa
Great Lakes Indian Fish and Wildlife Commission
Institute for Tribal Environmental Professionals
Inter-Tribal Council of Michigan
Keweenaw Bay Indian Community
Lac du Flambeau Band of Lake Superior Chippewa
Little Traverse Bay Bands of Odawa
Mashantucket Pequot Tribe
Menominee Tribal Enterprises
Nottawaseppi Huron Band of Potawatomi Indians
Pokagon Band of Potawatomi
Red Cliff Band of Lake Superior Chippewa
Red Lake Nation
Saginaw Chippewa Tribe
Saint Regis Mohawk Tribe
Sault St. Marie Tribe of Lake Superior Chippewa
Stockbridge-Munsee Band of Mohican Indians
Sokaogon Chippewa Community

FEDERAL

Bureau of Indian Affairs

National Park Service:
Climate Change Response Program
National Parks and Units: Apostle Islands National Lakeshore, Sleeping Bear Dunes National Lakeshore, Marsh-Billings-Rockefeller National Historical Park, Ozark National Scenic Riverways, Mississippi River National Recreation Area
Northeast Climate Adaptation Science Center

Natural Resources Conservation Service

USDA Forest Service:
Eastern Region
National Forests: Allegheny, Chequamegon-Nicolet, Chippewa, Green Mountain-Finger Lakes, Hiawatha, Hoosier, Huron-Manistee, Mark Twain, Monongahela, Ottawa, Shawnee, Superior, Wayne, White Mountain, Midewin National Tallgrass Prairie
Northeastern Area State and Private Forestry
Northern Research Station
U.S. Fish and Wildlife Service:
Wildlife Refuges: Crab Orchard, Big Oaks, and National Tallgrass Prairie, Patoka River, and Cypress Creek National Wildlife Refuges
U.S. Geological Survey

PARTNERS

State Natural Resource Agencies:

Connecticut
Delaware
Illinois
Massachusetts
Maine
Maryland
Michigan
Minnesota
Missouri
New Jersey
New Hampshire
New York
Ohio
Pennsylvania
Rhode Island
Vermont
Wisconsin
West Virginia

Counties:

Illinois: Cook, Kane, Lake
Minnesota: Carlton, Hennepin, Lake, St. Louis, Washington
Wisconsin: Bayfield, Florence

Municipal/Regional Organizations:

Boston Metropolitan Area Planning Commission
City of Cambridge, MA
Twin Cities Metropolitan Council
Providence Water

Private and Non-Profit

Aldo Leopold Foundation
American Bird Conservancy
American Forests
American Forest Foundation
Chicago Botanic Garden
Ducks Unlimited
The Field Museum
The Forest Stewards Guild
Heart of the Lakes
Holden Arboretum
LAD Foundation
Lake Erie Allegheny Partnership (LEAP)
Longwood Gardens
Manomet
Massachusetts Audubon
Minnesota Shade Tree Advisory Committee
Mississippi Park Connection
Missouri Botanical Garden
The Morton Arboretum
New England Forestry Foundation
The Nature Conservancy
Rajala Companies
Renewable Resource Solutions
Trout Unlimited
Trust for Public Land
The Trustee of Reservations
Vermont Land Trust
The Wildlife Conservation Society

PARTNERS

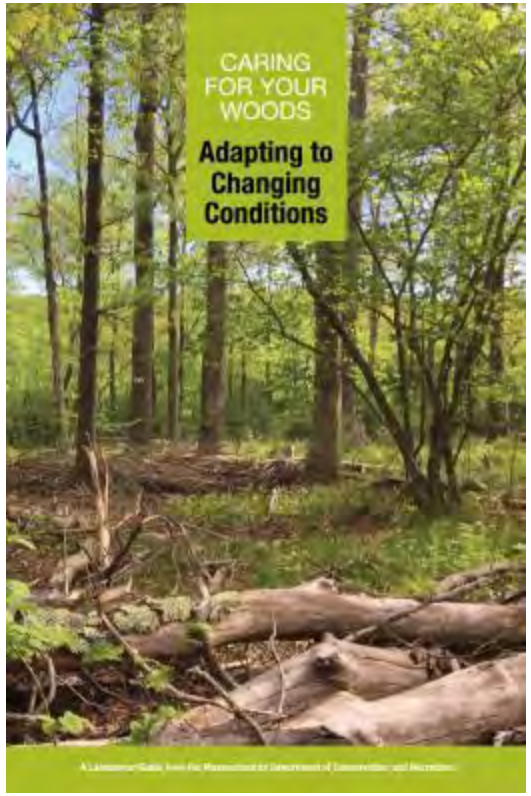
Institutes and Cooperatives

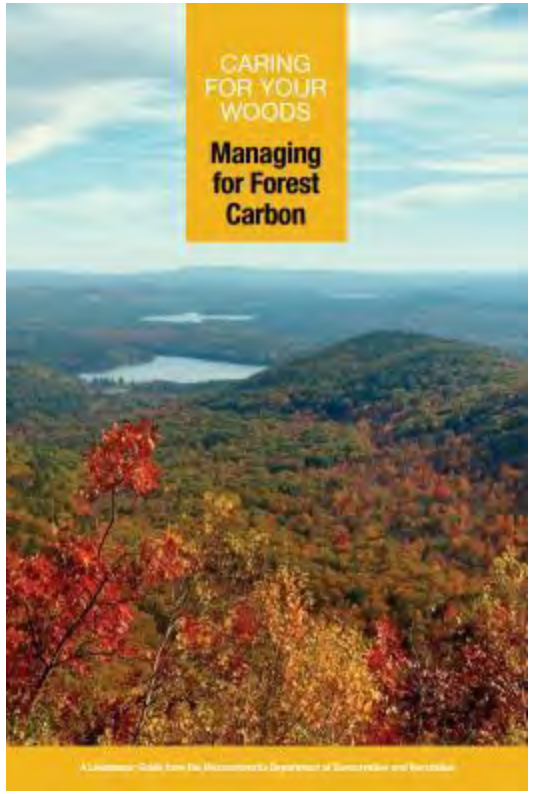
Boston Metro Mayors Coalition
Center for Land Use and Sustainability
Central Hardwoods Joint Venture
Chicago Region Trees Initiative
Chicago Wilderness
Cloquet Forestry Center
Center for First American Forestlands
Collaborative Oak Management in Ohio's Appalachian Forests
Delaware River Basin Project
Illinois Natural History Survey
Massachusetts Woodlands Institute
Michigan Climate Coalition
Minnesota Forest Resources Council
Minnesota Forest Resources Partnership
Minnesota Shade Tree Advisory Council
Pinchot Institute
Rhode Island Woodland Partnership
Schoodic Institute at Acadia National Park
Superior Watershed Partnership
Sustainable Forests Education Cooperative
Wisconsin Initiative on Climate Change Impacts

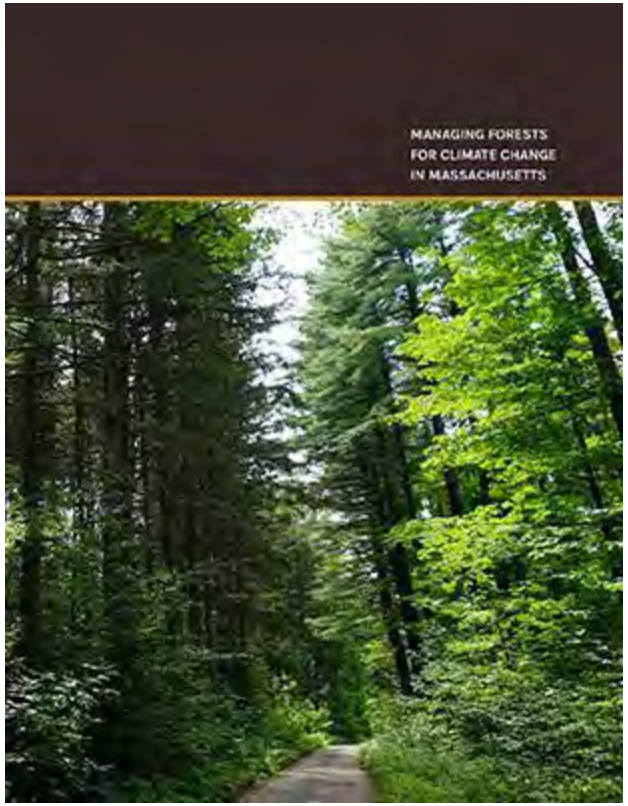
Colleges and Universities

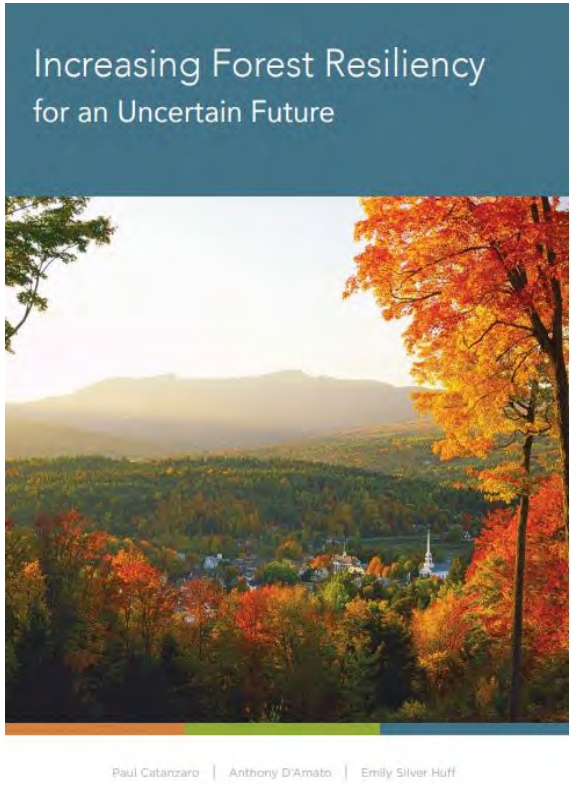
College of Menominee Nation
Cornell University
DePaul University
Delaware State University
George Washington University
Indiana University
Massachusetts Institute of Technology, Office of Sustainability
Michigan Technological University
Michigan State University
Northland College
Ohio State University
Paul Smith's College
Penn State University
Purdue University
Rutgers University
Shippensburg University
University of Delaware
University of Connecticut
University of Maryland
University of Massachusetts
University of Maine
University of Michigan
University of Minnesota
University of Missouri-Columbia
University of Missouri-St. Louis
University of New Hampshire
University of Rhode Island
University of Vermont
University of Wisconsin-Madison
Western Illinois University
West Virginia University

Examples of Publications and Work with the Commonwealth









ADAPTATION WORKBOOK

- Management Forestry - Forest Resiliency Demonstration Projects:
  - Protecting Riparian Zones with a Focus on Stream Crossings
  - Sykes Mountain Timber Harvest
  - Bristol Lot Timber Sale
  - Tannery Road Timber Sale

- Management Forestry- Forest Resilience w/ Carbon Focus Demonstration Projects:
  - Savoy Mountain State Forest Landscape Resiliency Project

District 1 – North Berkshire District

Savoy/Windsor State Forests - 629 Acres

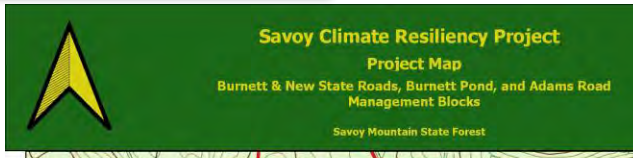
Forest Ecosystems: Spruce Fir- Northern Hardwoods
Northern Hardwood-Hemlock-White Pine

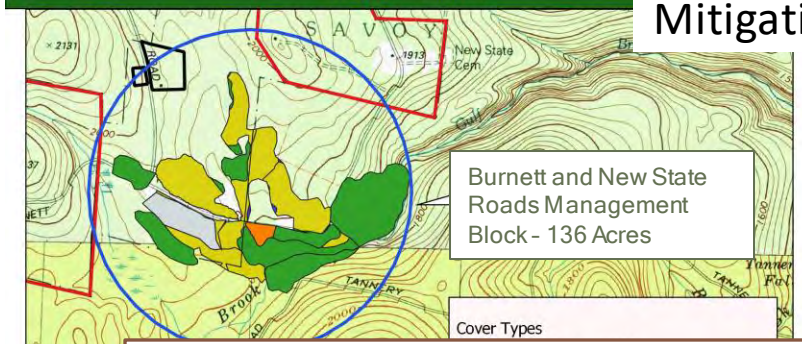
Climate Change

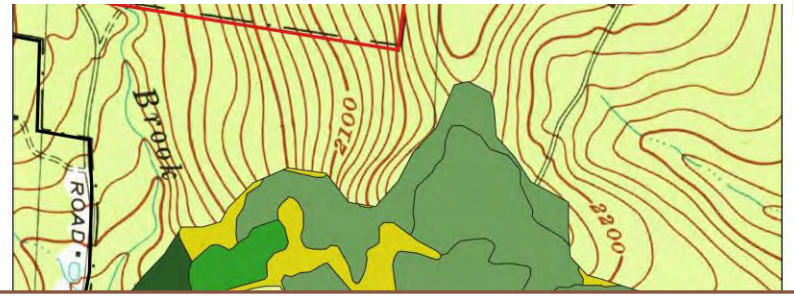
Resilience: Diversify Forest Stage Class Structure

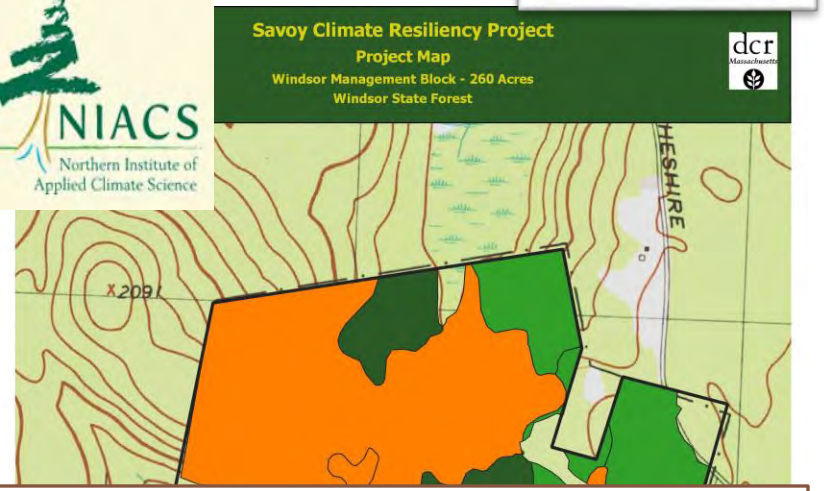
Assisted Migration - Plantings

Mitigation: Improving Sequestration

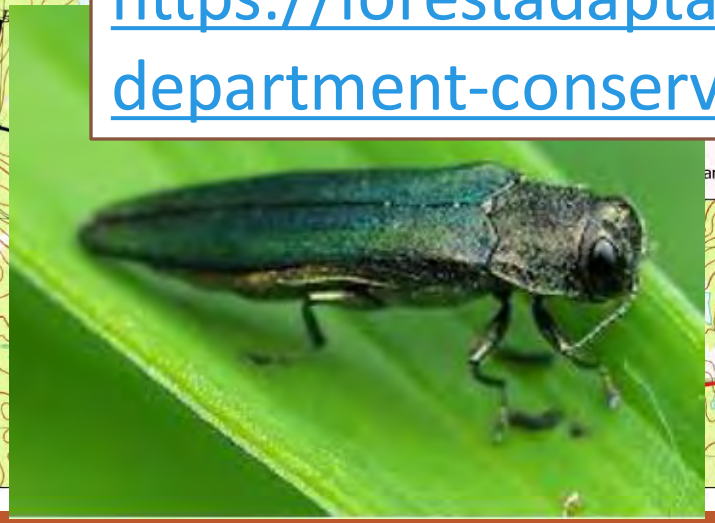


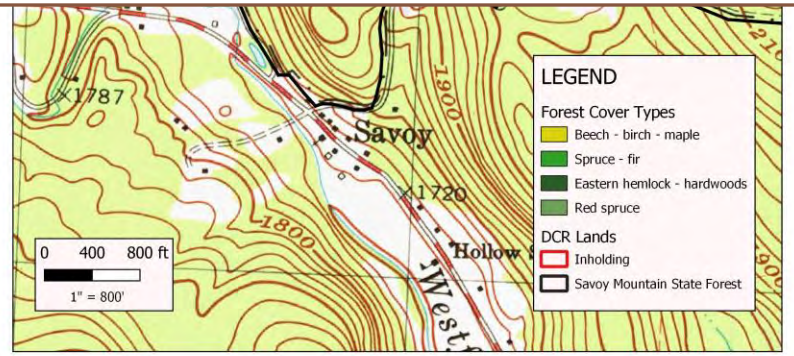






https://forestadaptation.org/adapt/demonstration-projects/massachusetts-department-conservation-and-recreation-savoy-mountain

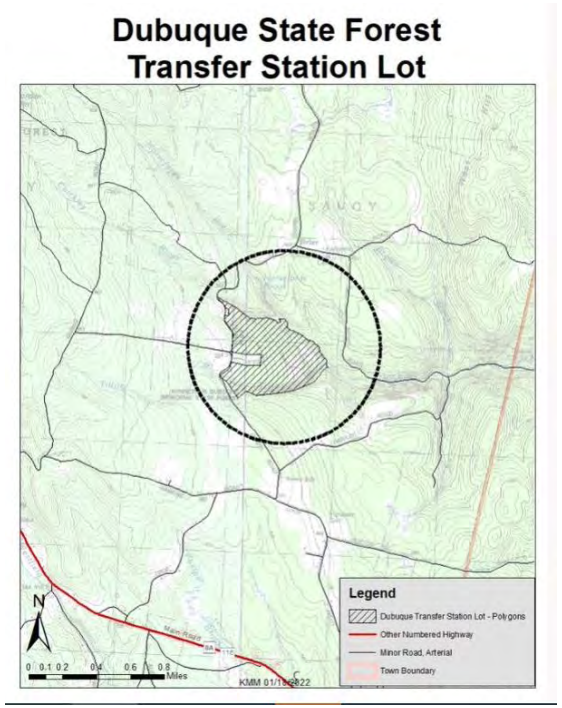




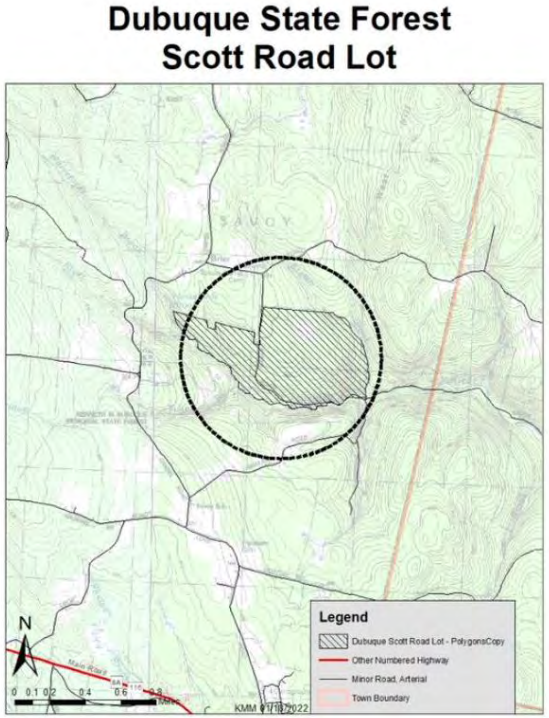
Young Forest SWAP Species

D4 Western CT Valley
District Savoy

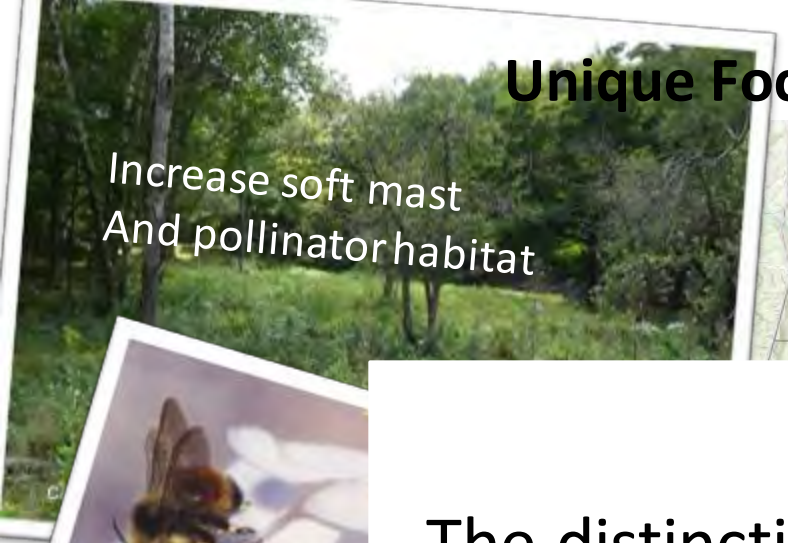
Climate Change:
Resilience: Diversify Forest Stage Class Structure;
Maintain Sugar Maple in Ecosystem

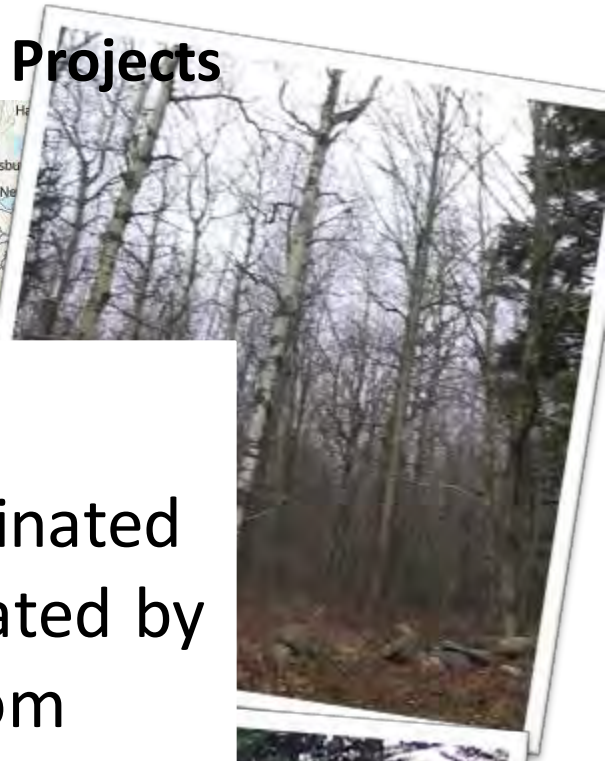


Scott Road 175 acres
Forest Ecosystem: Northern Hardwoods, Hemlock, White Pine
Group Selection
Thinning
Aspen/Old field habitat
With Soft Mast Retention
and Regeneration

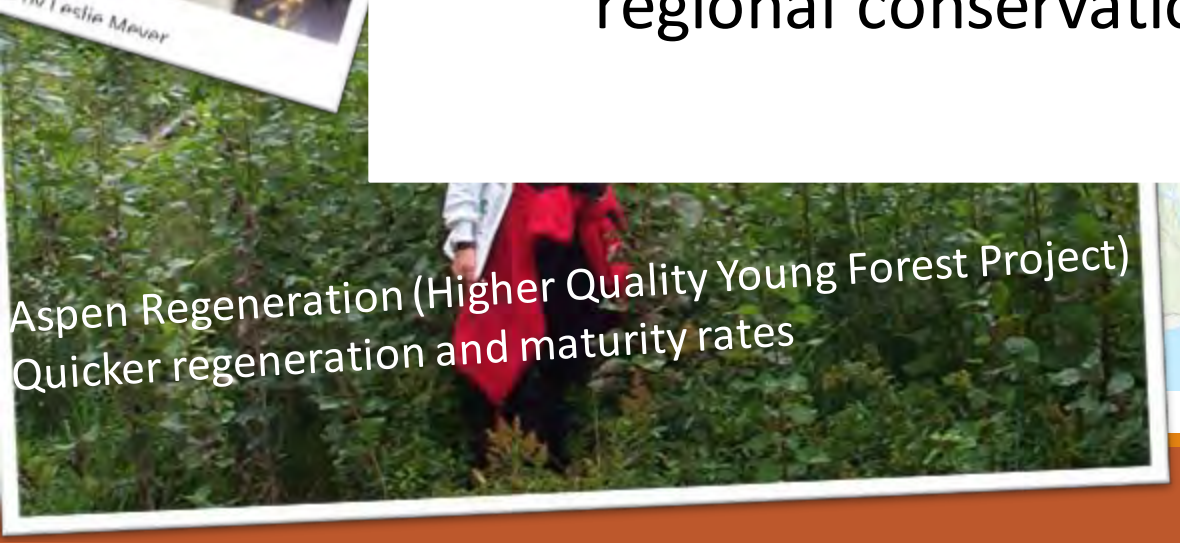


Unique Focus Savoy and Dubuque Forest Management Projects



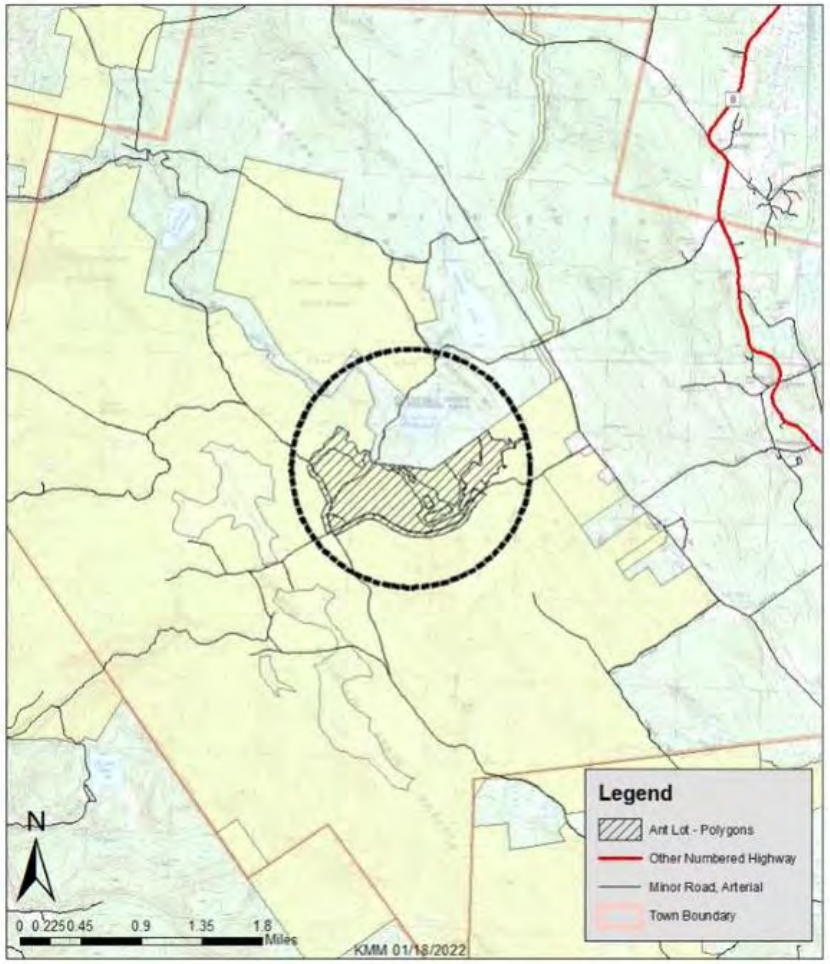


The distinction between young-forest habitat dominated by late-successional species and shrublands dominated by pioneer species has received little attention from researchers but may prove to be a key consideration in regional conservation planning (Askins 2001).

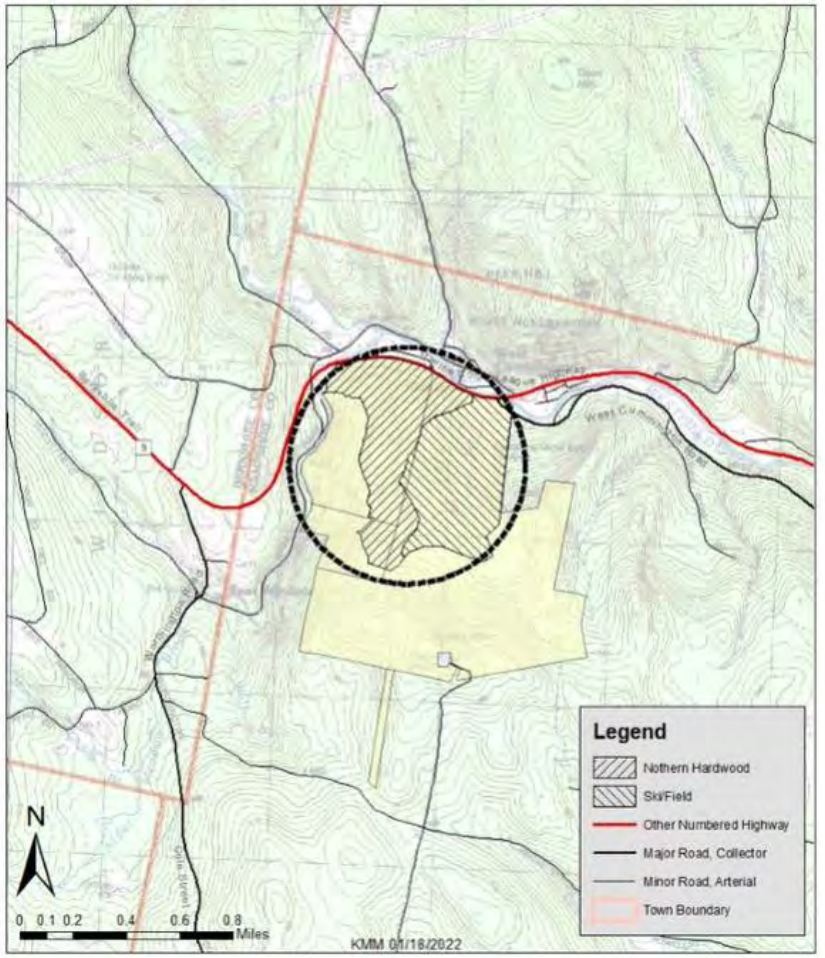


D2 Central Berkshire County, Washington, Cummington

October Mountain State Forest- Ant Lot Locus Map



Bryant Mountain - Berkshire Snow Basin Forest Slalom Project



Forest Ecosystem: Northern Hardwoods-Hemlock-White Pine

Climate Change

Resilience
Poor non-functioning or not needed culverts are causing ecological damage.

Facilitated
Treat northern hardwood stands to reduce risks of warmer climate and increase composition of species suited for potential change.

Resistance
Retaining and promoting climate affected species such as red spruce, hemlock, and balsam fir in the mixed wood stands

softwood component

Health/Invasives

Emerald Ash Borer
Hemlock Wooly Adelgid
Beech Bark Disease
Barberry
MF Rose
Honeysuckle
Asiatic Bittersweet

SWAP Species

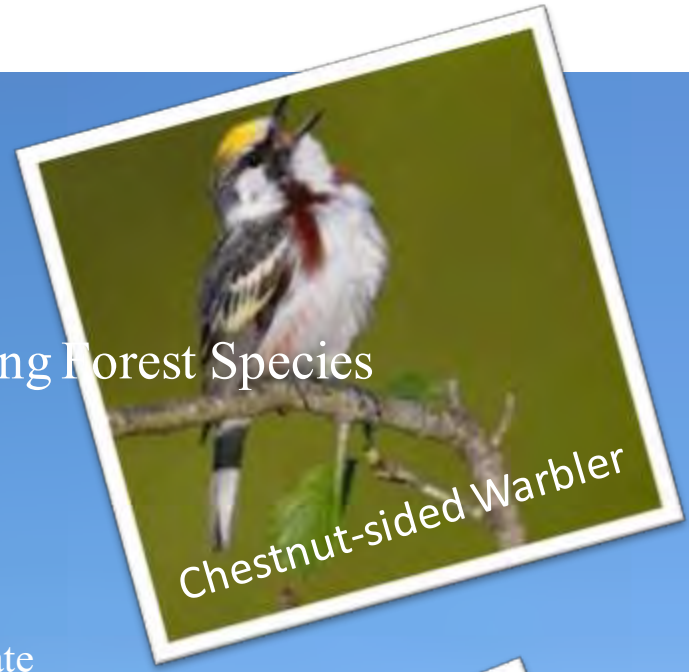
October Mountain SF, Ant Lot

Forest Ecosystem: Northern Hardwood-Hemlock-White Pine Spruce- Fir-Northern Hardwoods

Health Invasive Issues:

Ice Storm Damage
EAB
Barberry
Asiatic Bittersweet

American Woodcock



Chestnut-sided Warbler

High Elevation Young Forest Species

Climate Change

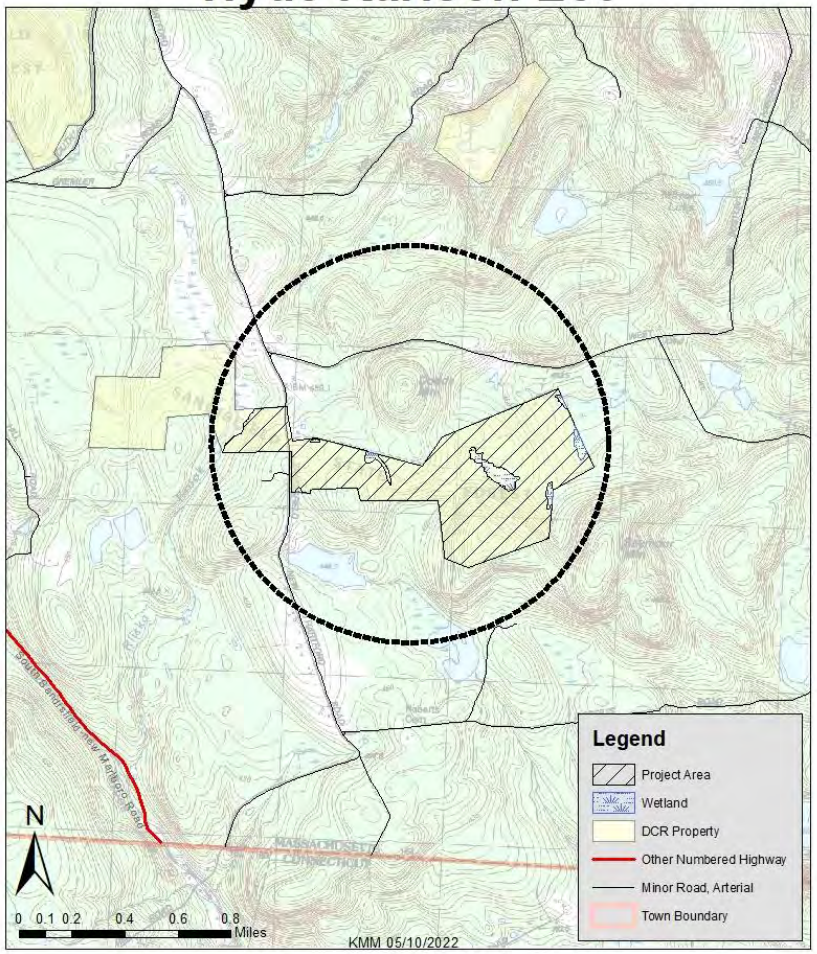
Resistance
Retaining and promoting climate affected species such as red spruce, hemlock, and balsam fir in the mixed wood stands.

Facilitated
Apply silvicultural treatments to provide growing conditions favorable to oak in portions of project area suited for the species. Where existing seed trees are not available look into planting

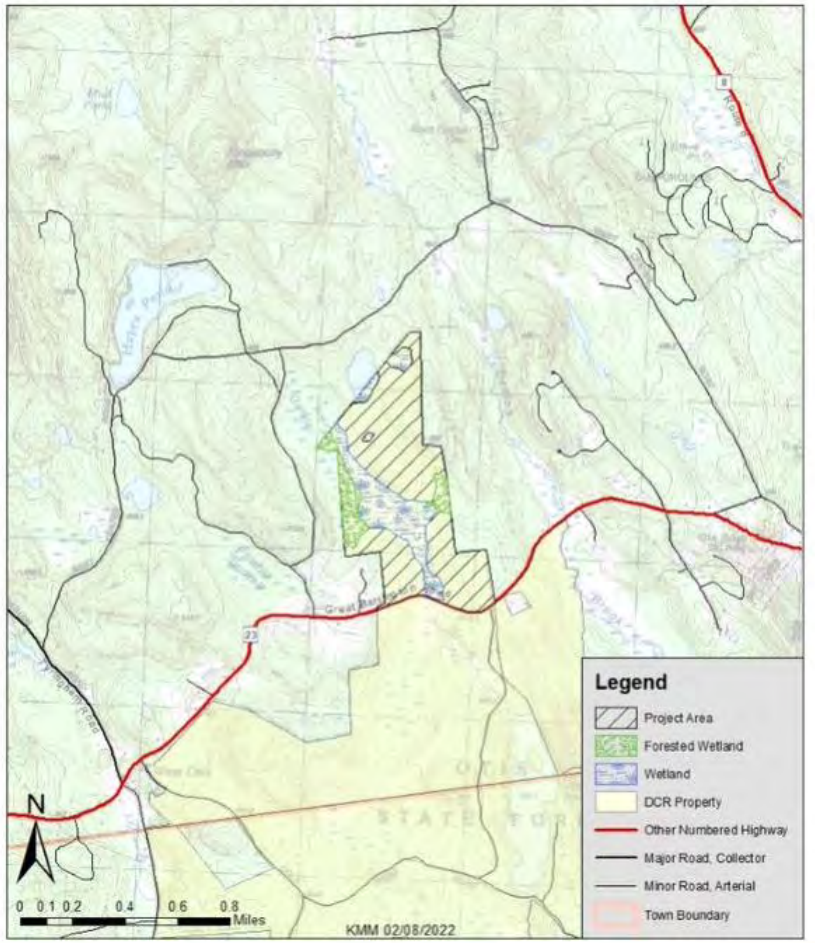
Spot-winged glider dragonfly

D3 South Berkshire County, Sandisfield, Otis

Sandisfield State Forest
Hyde Karlson Lot

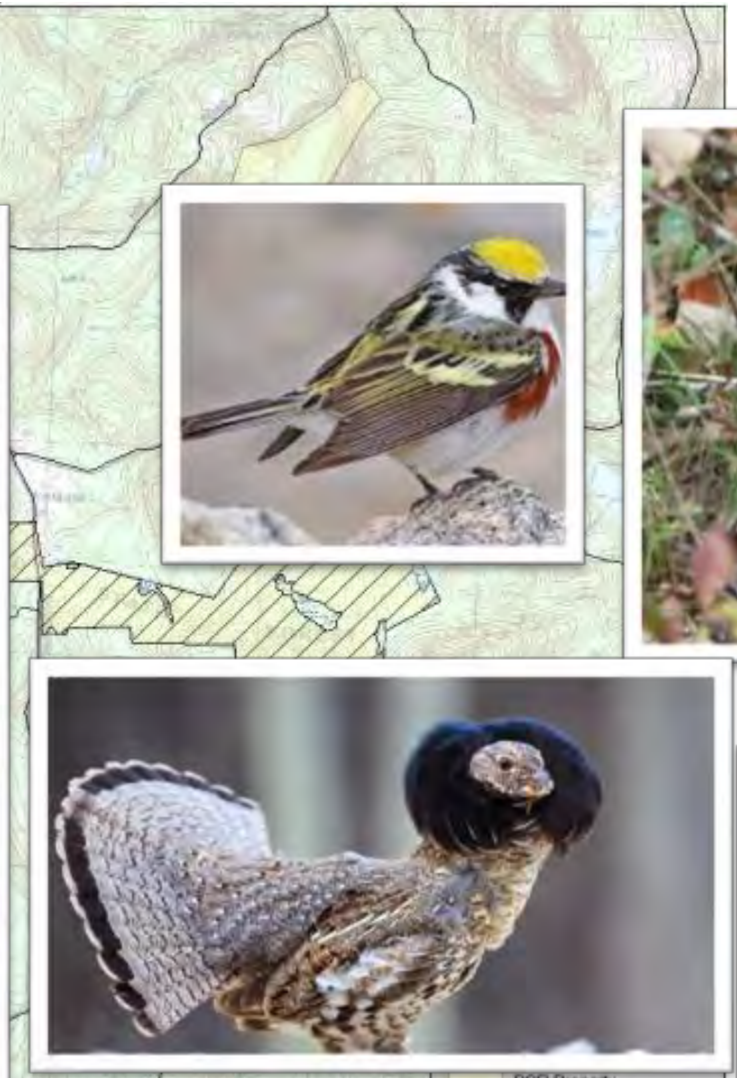


Otis State Forest
Geisler Swamp Project



Sandisfield State Forest, Hyde Karlson Project, 234 Acres

Forest Ecosystem: Transition Hardwoods-White Pine-Hemlock



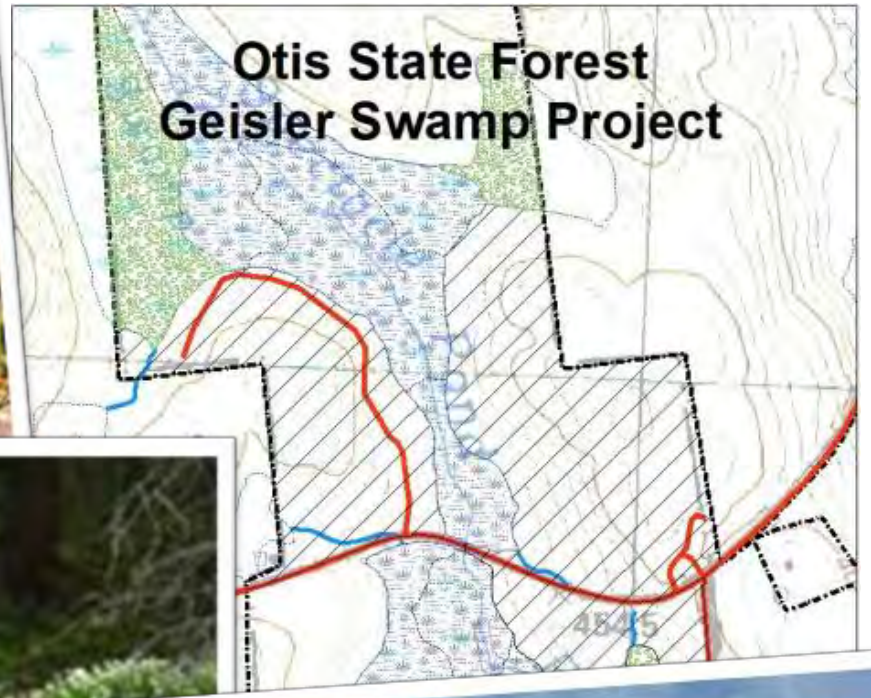
SWAP Species affected:
Young Forest,
Large Unfragmented Landscapes
NEC Focal Area

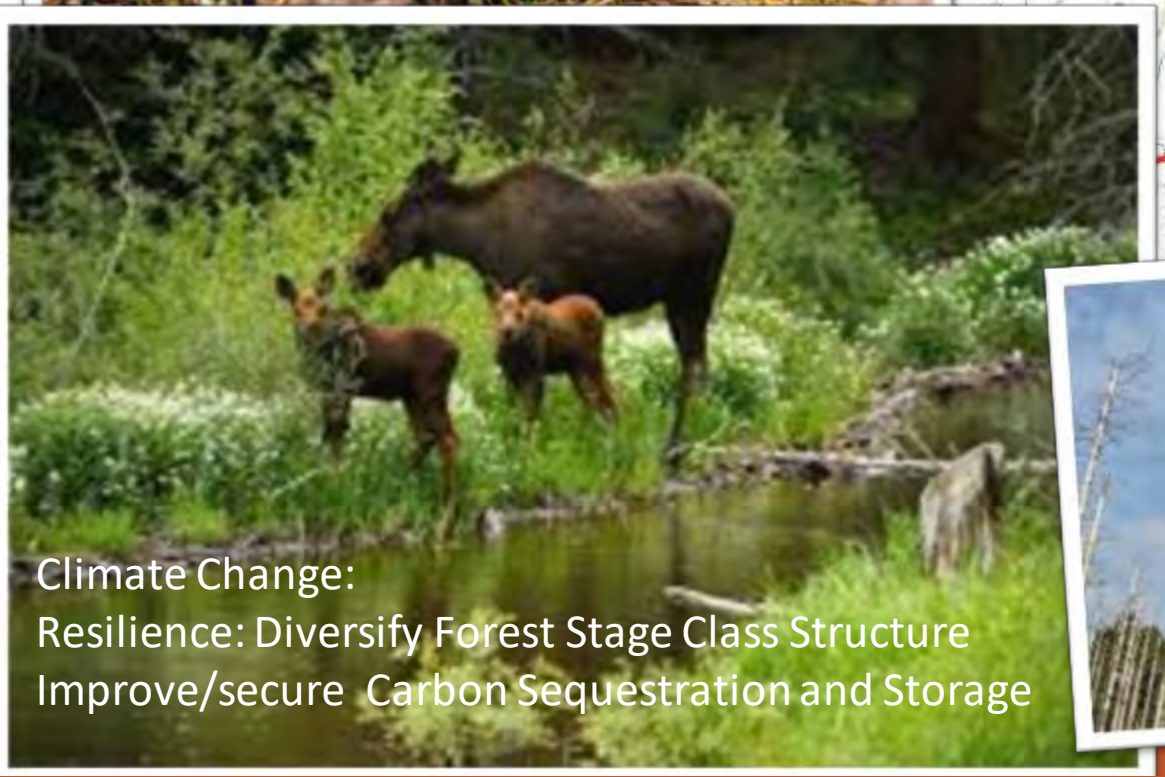
Climate Change:
Resilience: Diversify Forest Stage Class Structure
Improve/secure Carbon Sequestration and Storage

Geisler Swamp, Otis State Forest

Forest Ecosystem: Northern Hardwood-Hemlock-White Pine

88 Acres Shelterwood

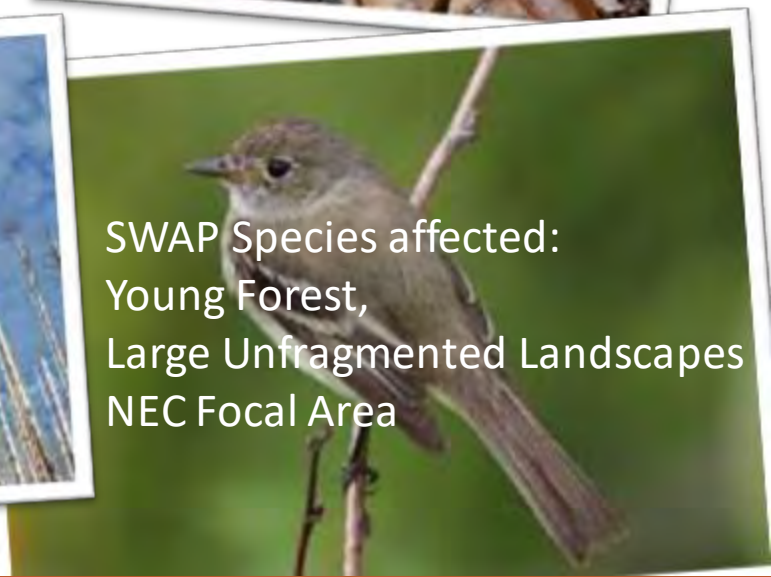




Climate Change:
Resilience: Diversify Forest Stage Class Structure
Improve/secure Carbon Sequestration and Storage

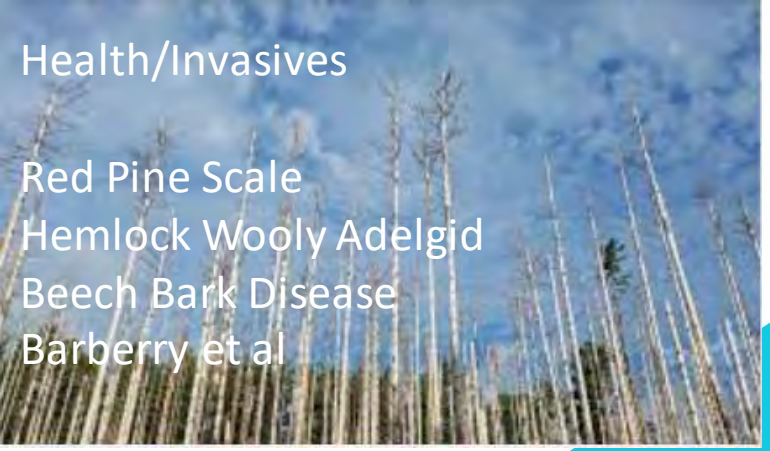
Health/Invasives

Red Pine Scale
Hemlock Wooly Adelgid
Norway Spruce decline



SWAP Species affected:
Young Forest,
Large Unfragmented Landscapes
NEC Focal Area

D5 Eastern CT Valley Warwick, Bass Road, West, 123 Acres
Forest Ecosystem: Transition Hardwoods-White Pine-Hemlock



Health/Invasives

Red Pine Scale
Hemlock Wooly Adelgid
Beech Bark Disease
Barberry et al

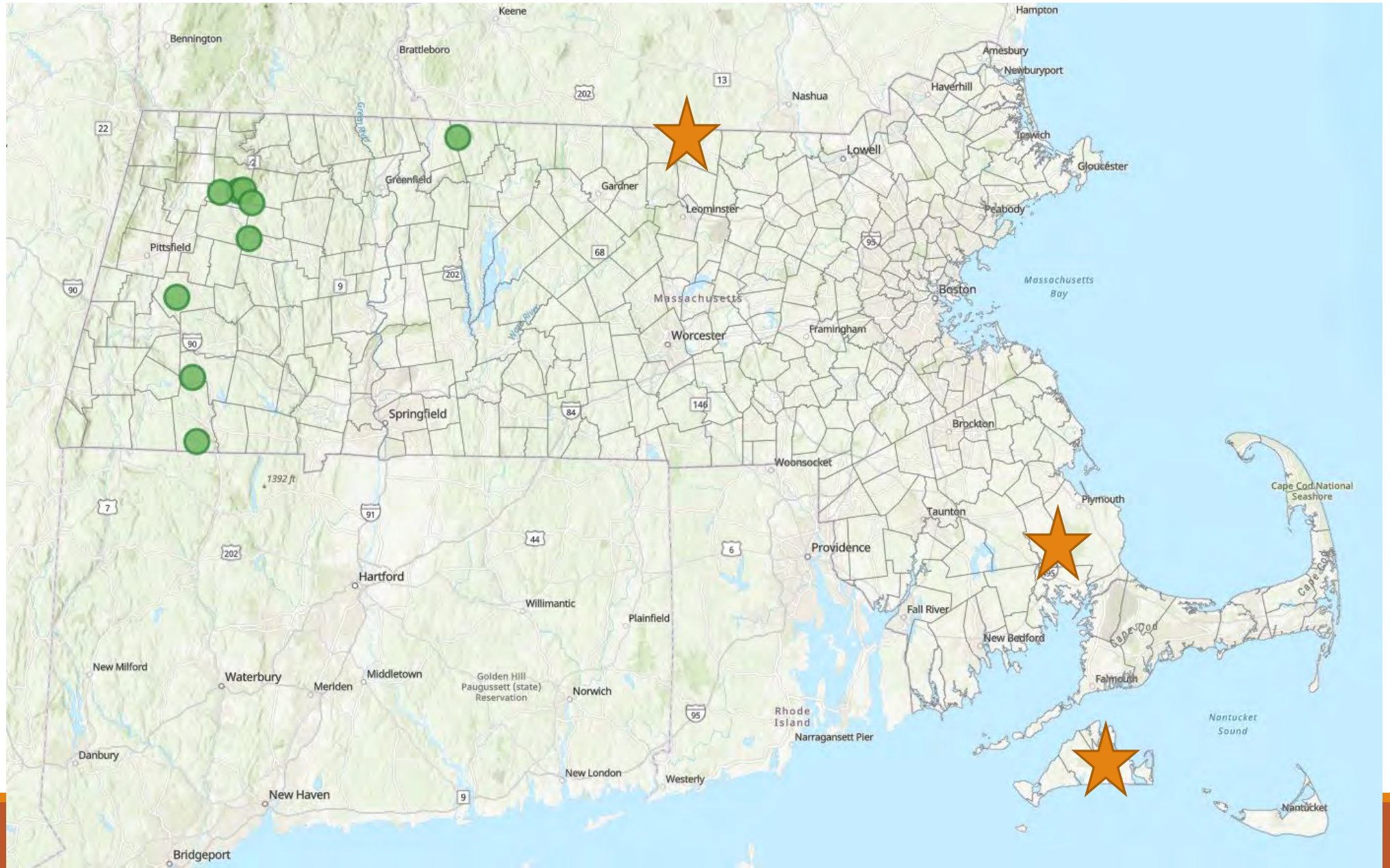
SWAP Species affected:
Young Forest,
Large Unfragmented Landscapes
NEC Focal Area

NIACS
Northern Institute of Applied Climate Science

Climate Change

Resistance: Diversification of Forest Stage Structure And Species Composition via Irregular Shelterwoods and Clear-cuts with Retentions

Projects Outside the LSR Grant Area

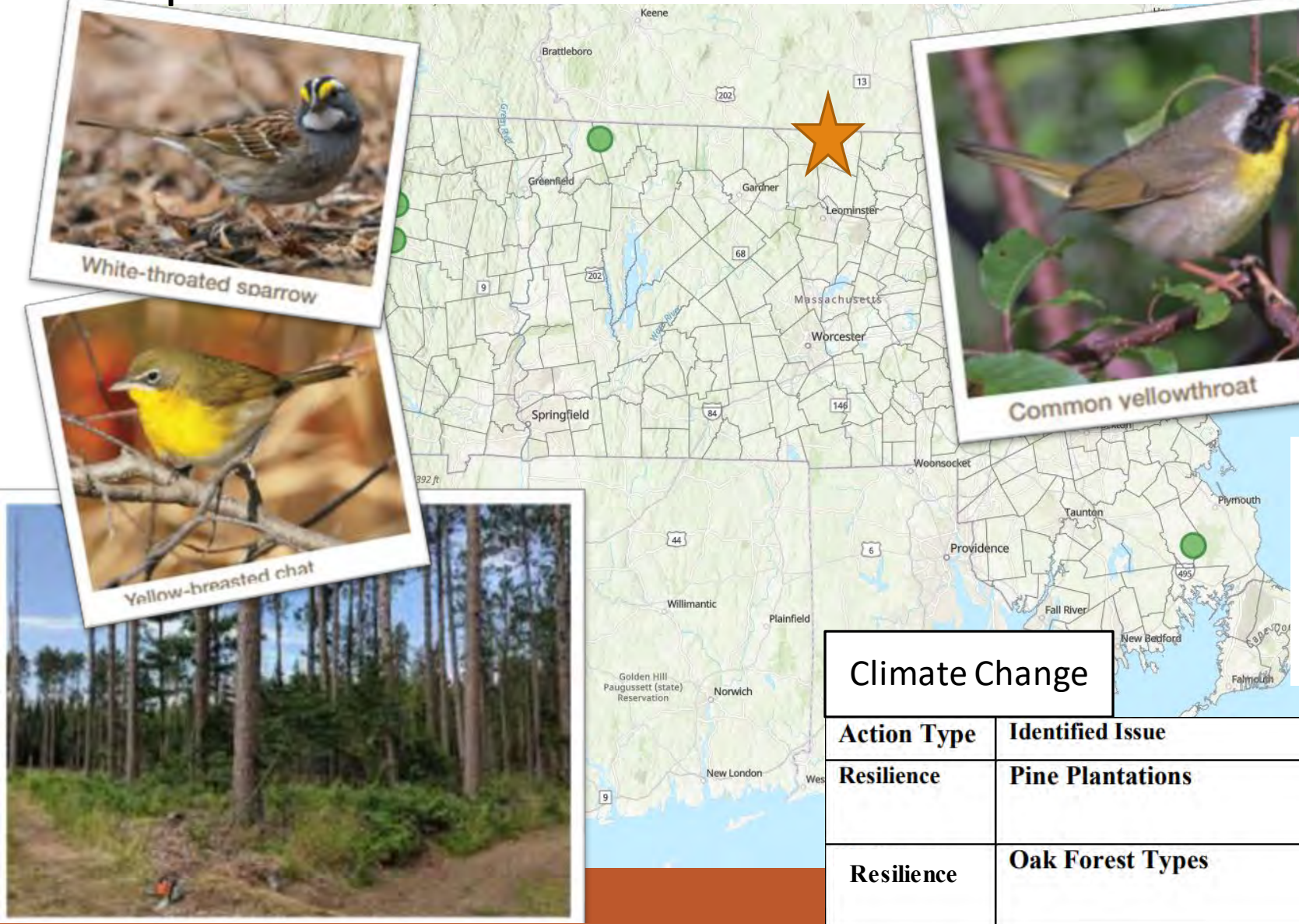


District 7 - Northeast District

Old Turnpike Road, Townsend State Forest, 112 Acres

Forest Ecosystem: Transition Hardwoods-White Pine-Hemlock

SWAP Species



Forest Heath and Invasive Species

Red Pine scale.
Spongy Moth
Glossy Buckthorn
Asiatic Bittersweet

Climate Change

Action Type	Identified Issue	Action Description
Resilience	Pine Plantations	Silvicultural treatments that convert monotypic forest types to a diverse forest type of native plant species.
Resilience	Oak Forest Types	Silvicultural treatments that maintain and expand opportunities for Oak recruitment across the project area.

D8 Southeast District

Settler's Green Fuels Reduction Buffer 17 Acres
Forest Ecosystem: Pitch Pine- Oak
Primary goal, Public Safety

SWAP/SGCN
Pine Barrens

Health/Invasives

Climate Change

Resiliency: Treatments will reduce high fuel hazards to protect subdivision, increase public safety, provide safe access for firefighters and fire apparatus, provide future opportunities for prescribed burning, and will promote and enhance regeneration of native species.

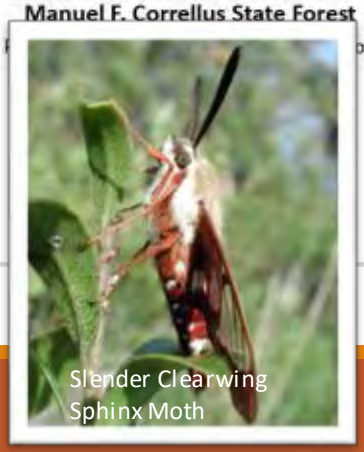
Manny Correllus Pine Plantation Mitigation/ Barrens Restoration 175 Acres
Forest Ecosystem: Pitch Pine- Oak

Health/Invasives

SWAP Species
SGCN

Climate Change
Resilience

Restore native sandplain heathlands and pitch pine – scrub oak barrens habitats through the removal of existing non-native conifer plantations and subsequent application of prescribed fire. Restoring these fire dependent natural communities will provide habitat for a diversity of rare species.



Review

1) DCR Ecosystem Services Framework
   - DCR Priority Attributes for Project Locations
   - Forest Carbon & Climate Change
   - Forest Diversity & Resilience
   - Wildlife Habitat for Species of Greatest Conservation Need
   - Recreation & Renewable Wood Products
     - Jobs & Rural Economy
     - How Much Wood Do We Use?

2) Massachusetts Major Forest Ecosystem Types

3) DCR Guidance Documents for Management
   - 2020 DCR Forest Action Plan Goals
   - MA Climate Change Adaptation, Wildlife Action Plan

4) DCR Forest Management Flow Chart

5) DCR 2022 Forest Managment Proposal Priority Attributes
   - Project Sites
   - Ecosystem Services at Priority Sites

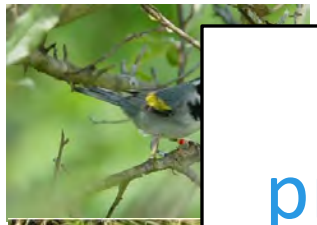
6) U.S. Forest Service Landscape Scale Restoration (LSR) Grant

7) Northern Institute of Applied Climate Science (NIACS)
   - Climate Adaptation Workbook
   - Climate Response Framework

8) DCR 2022 Forest Management Proposal Highlights

https://www.mass.gov/guides/forest-management-projects#-forest-management-projects-proposed-2022-

DCR Management Forestry Program
2022 Project Proposals



https://www.mass.gov/guides/forest-management-projects#-forest-management-projects-proposed-2022-

Comments send to Forestry.Comments@Mass.Gov