MVP Winter Webinar Series 2024 #3

Natural Working Lands:
Natural Climate Solutions & Municipal Opportunities

MVP
Municipal Vulnerability Preparedness

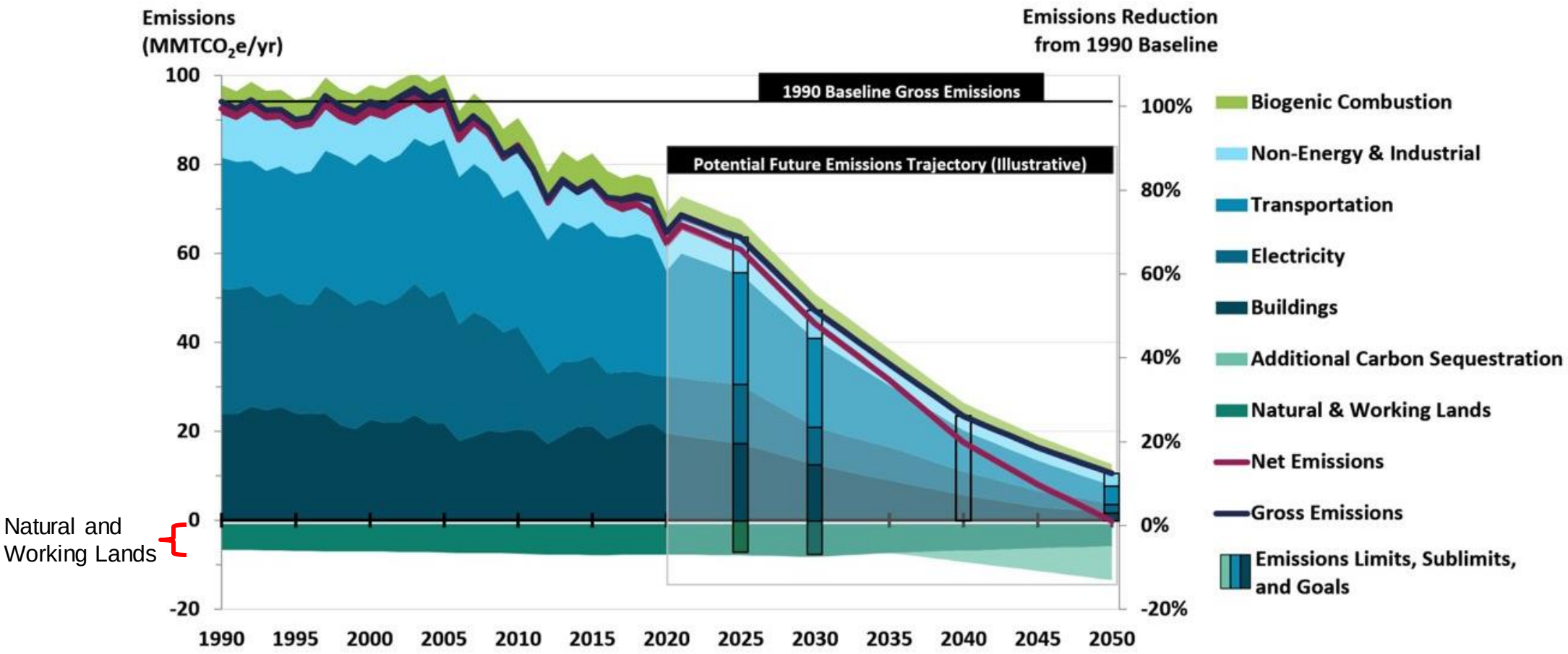
Webinar Information

- **Housekeeping**
  - Please remain on mute unless called upon to allow for presenters to speak without interruption.
  - This meeting will be recorded and posted on the EEA's YouTube page.
  - Please Introduce yourself in the chat!
- **Q&A**
  - Please feel free to ask any questions you have in the chat or the Q&A. We will answer questions after the presentation.
- **Additional Questions after the webinar**
  - Contact Patrick.Forde@mass.gov

Agenda

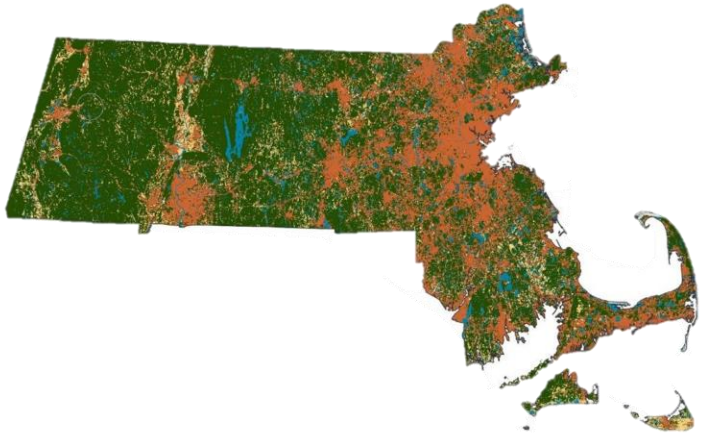
- **Introductions**
- **Natural Working Lands (NWL) Sector Background**
  - Massachusetts' Path to Net Zero
  - NWL Ecosystems
  - NWL Strategies and Goals
  - NWL Programs and Initiatives
- **Forest as Climate Solutions Initiative**
- **Forests and Urban Trees Programs**
- **Q&A**
- **Rowe MVP Case Study**
- **Q&A**

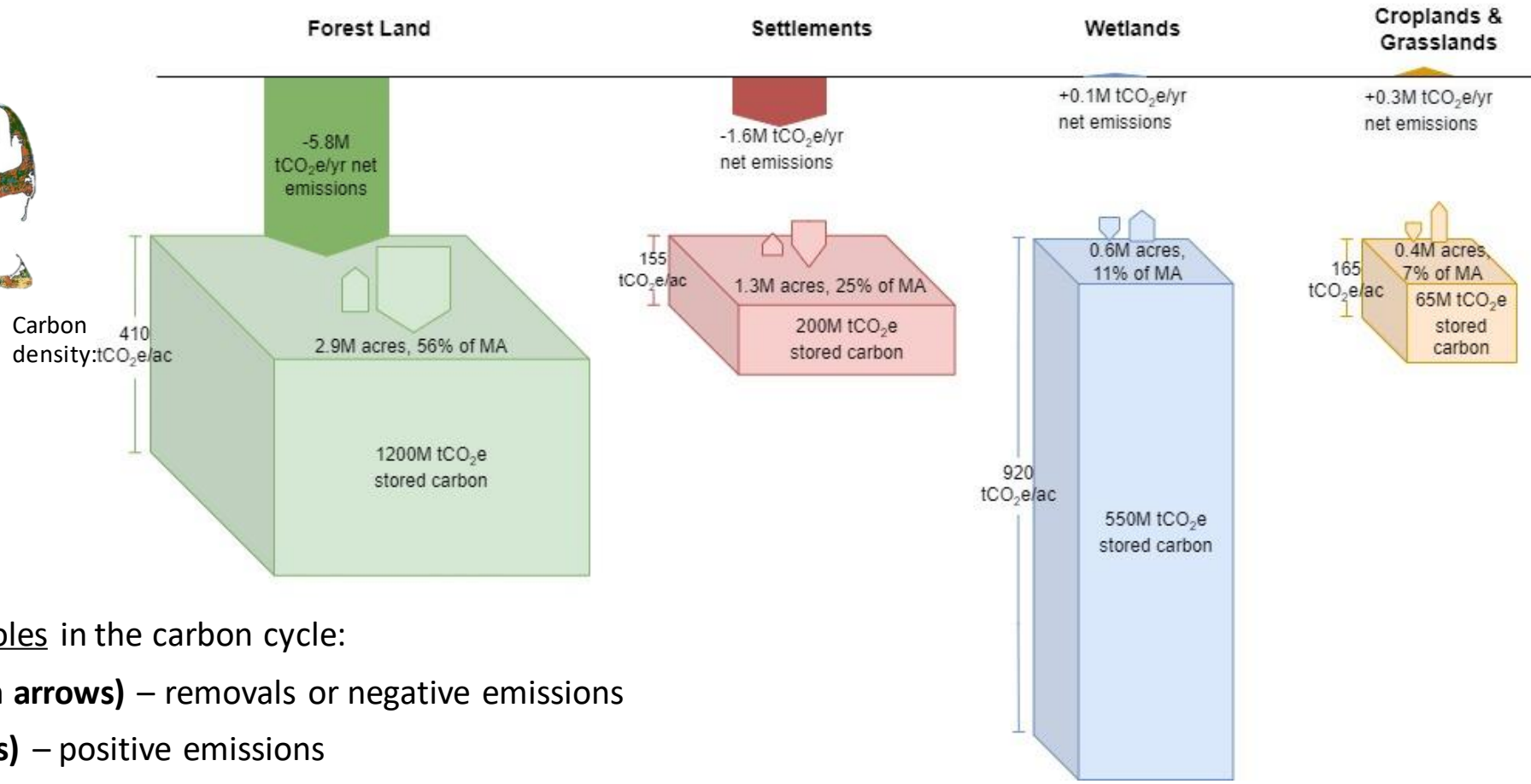
Massachusetts' Path to Net Zero



- **Natural and working lands (NWL) in MA are currently a net carbon sink** (-7.1 $MMTCO_2e$ in 2021), offsetting approximately 10% of statewide GHG emissions.

Natural and Working Lands (NWL) Ecosystems





- NWL play <u>3 distinct but related roles</u> in the carbon cycle:
  - **1) Carbon sequestration (down arrows)** – removals or negative emissions
  - **2) Carbon emissions (up arrows)** – positive emissions
  - **3) Carbon storage (volume of boxes)** - reservoirs
- **NWL land area (box top area) and land area change** also drives carbon dynamics

Note: Wetlands are particularly diverse and complex, and include GHG sinks (e.g. most salt marshes), GHG sources (e.g. most inland water bodies), and many unknowns.

NWL Climate Strategies & Goals

1. **Protect NWL,** from degradation and conversion to non-NWL and lower carbon land uses
   - 28% of MA permanently conserved by 2025, 30% by 2030, 40% by 2050
2. **Manage NWL**, to sustainably sequester carbon and enhance resilience to future carbon losses
   - 20% of private forests & farms adopting climate-smart practices by 2030
   - 5% improvement between 2025-2030 in durable wood product recovery of harvested timber
3. **Restore NWL**, to reduce GHG emissions and recover lost carbon storage capacity on degraded NWL
   - 5,000 acres of new riparian/urban trees by 2025, 16,100 acres by 2030, and 64,400 acres by 2050
   - No net loss of carbon storage in wetlands by 2030
4. **Explore additional carbon sequestration,** to balance residual GHG emissions and achieve Net Zero in 2050

NWL Programs and Initiatives

- Resilient Lands Initiative
- Forest As Climate Solutions Initiative
- Executive Order 618 on Biodiversity Conservation
- MVP Action Grants (up to $3M/year) for greening and nature-based projects to increase carbon storage and urban cooling
- Other grants and resources for NWL conservation, climate-oriented management, and/or restoration
- CANOPY 2024: Forests, Climate, Innovations Forum *MARCH 21, 2024*
- Forest Carbon Study
- No Net Loss of Wetlands Carbon Study

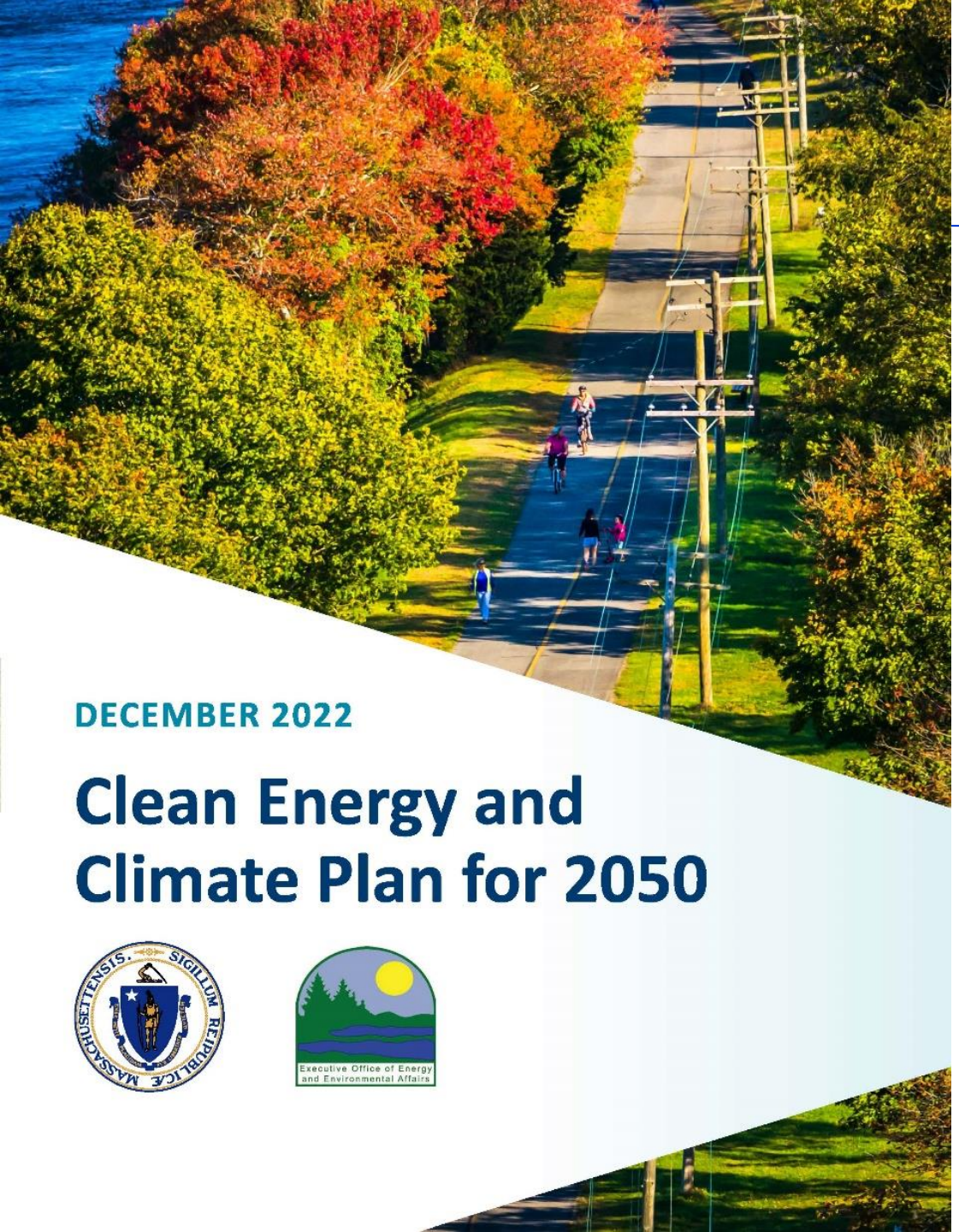
Forests as Climate Solutions Initiative

- Introduction & Policy Context
- Forests as Climate Solutions Initiative
  - Goals
  - Four Branches
    - Climate-Oriented Guidelines
    - Land Conservation & Forest Reserves
    - Landowner & Business Incentives
    - Forest Data
  - Climate Forestry Committee Recommendations
  - Status & Next Steps
  - Branch # 2 “In Depth” - Land Conservation, Reduced Conversion, & Reserves
  - Branch # 3 “In Depth” - Climate Forestry & Landowner, Business, & Community Support

Forests as Climate Solutions Initiative

Announced June 7, 2023:

"The Healey-Driscoll Administration today announced a new initiative to ensure Massachusetts' forests are managed to optimize carbon sequestration and mitigate climate harms as part of meeting the state's aggressive climate goals. "Forests as Climate Solutions" will expand existing state programs, invest in forest conservation, enhance a network of forest reserves, and develop forest management guidelines based on the latest climate science. These guidelines will apply to state lands, and the administration will also provide incentives for private landowners to use them to maximize the climate benefits of their forests."



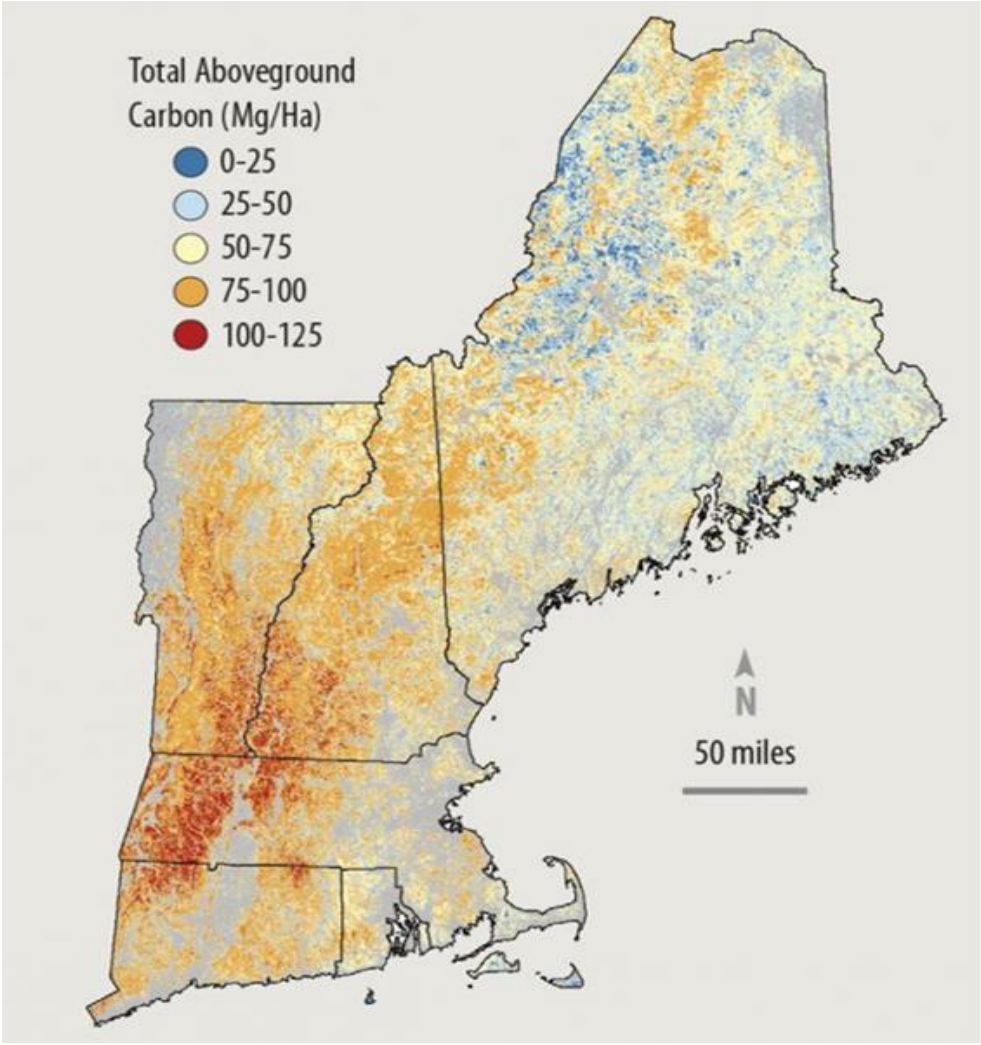
2050 Clean Energy and Climate Plan: Forest Recommendations

- Protect 40% of the Commonwealth's land by 2050 (currently 27%)
- Expand the protection, management, & restoration of Natural and Working Lands and their capacity to remove and store carbon
- Incent sustainable forest management practices that will allow us to produce forest products over the long term
- Encourage use of more durable forest products from local forests
- Create a Forest Viability Program to strengthen local sawmills and the forest economy

Context: Massachusetts Forests

- **Massachusetts: 5,175,349 acres**

- **Forested Land: 2,984,347 acres or 57%**
  - Private Land: 1,911,815 acres
  - Public Land: 1,072,532 acres
    - State Lands: 525,377 acres
      - » DCR State Parks
      - » DCR Water Supply Protection
      - » DFW Fisheries & Wildlife
      - » About 1,450 acres or <1% of state forests are harvested per year
      - » About 150,000 acres are currently designated as reserves



Foster, D.R. et al. 2017 Wildlands and Woodlands, Farmlands and Communities: Broadening the Vision for New England

Forests as Climate Solutions – “Branch” #1

Climate-Oriented Forest Management Guidelines

To ensure future land management decisions fully account for climate mitigation & resilience:

- Develop new climate-oriented guidelines to be applied to all state forest management projects;
- Climate Forestry Committee of experts convened to make guideline recommendations;
- Active forest management paused for six months beginning in June; and
- Forestry project review to resume with issuance of recommendations.

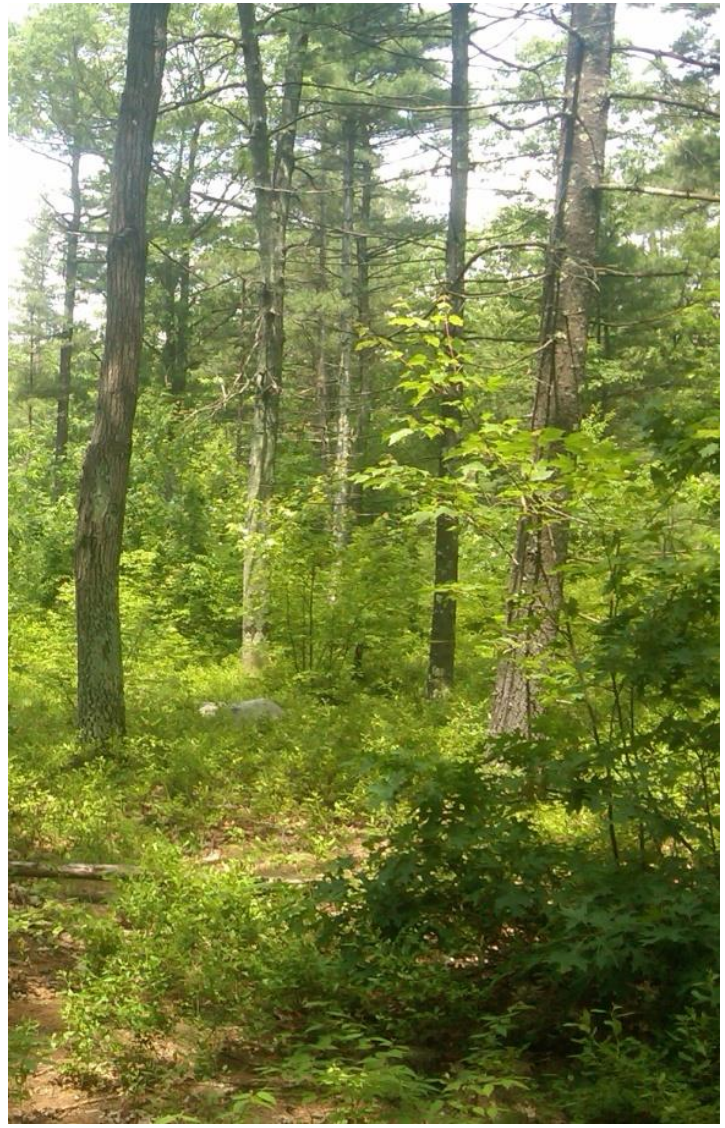
Forests as Climate Solutions – “Branch” #2

Conservation: Reduce Forest Land Conversion & Increase Permanent Forest Land Conservation

Strategically conserve additional forest land to permanently preclude conversion to other uses and improve land use to minimize forest loss.

Expand Forest Reserves

Pursue new focus on and investment in public and private forest reserves. These are areas where nature largely takes its course for carbon sequestration and storage, habitat, & other benefits.



Forests as Climate Solutions – “Branch” #3

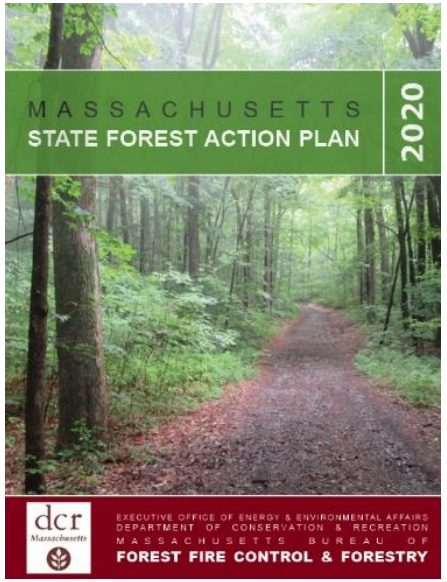
Incentives: Support Forest Landowners, Businesses, & Rural Communities

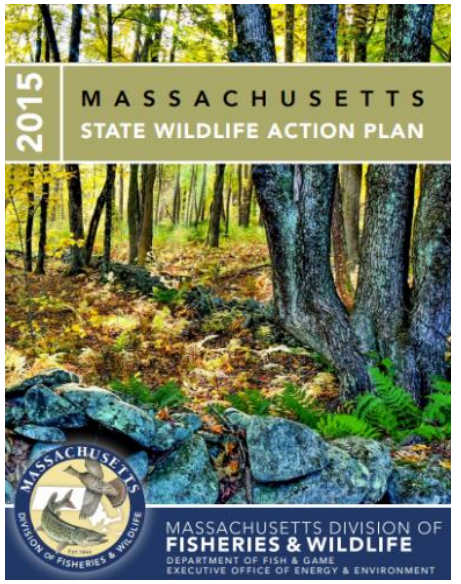
- Expand incentives and programs to protect private and municipally-owned forests.
- Encourage landowners to manage them using climate-oriented forestry techniques.
- Support forest-based businesses and rural communities.

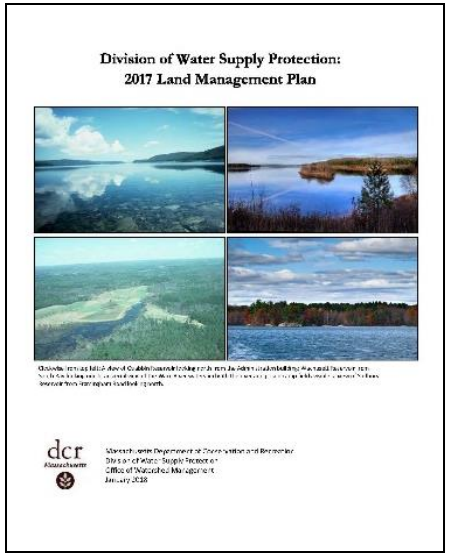
Forests as Climate Solutions – "Branch" #4

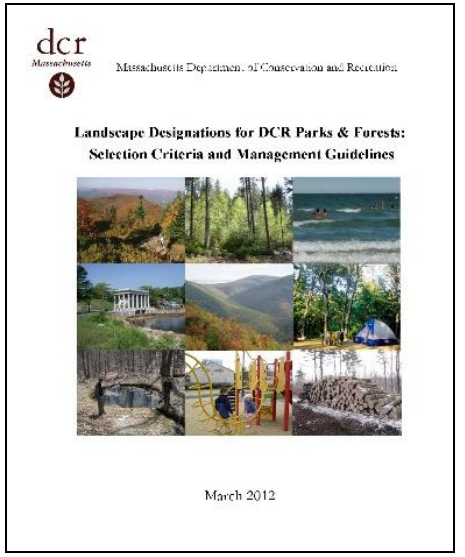
Data: Integrate & Make Public Best Science, Research, & Management Practices

- Acquire and expand capacity to collect more field data
- Systematically integrate research into conservation & management practices
- Make data and information publicly available in a user-friendly format.









Climate Forestry Committee

Committee Charge

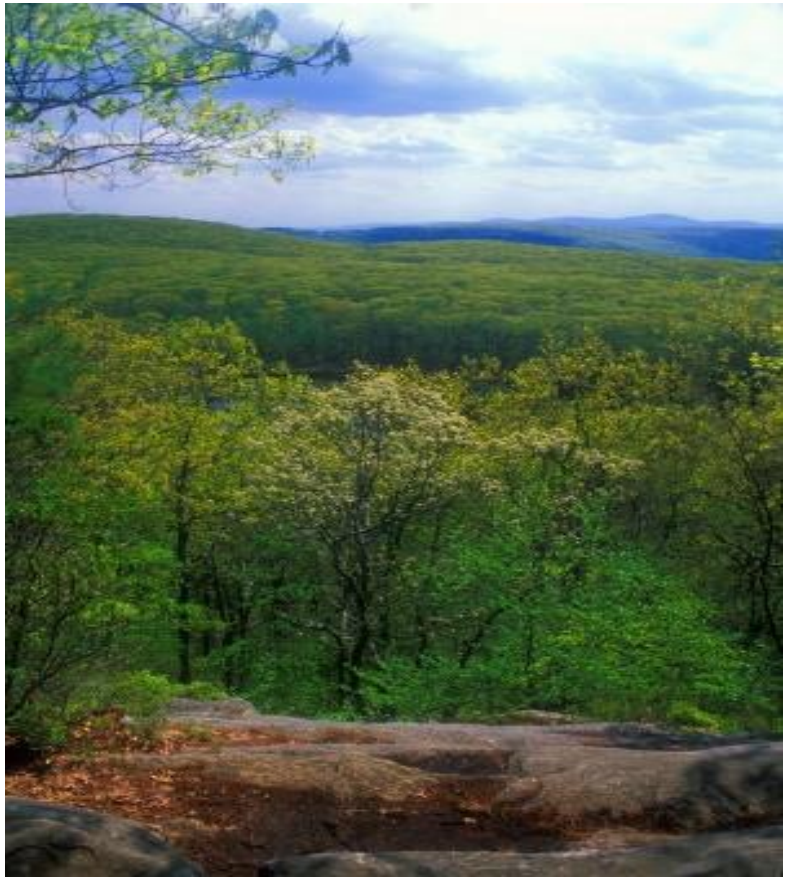
- Define goals and objectives of climate-oriented forestry for Massachusetts, including clarifying the range of objectives that should be considered relevant;
- Evaluate best practices for climate-oriented forestry and the science supporting them;
- Assess current climate-oriented practices and guidelines in place for state lands; and
- Develop a set of recommended climate-oriented management guidelines to be implemented through incorporation into land management plans and forestry approaches for Massachusetts state lands, as well as advanced through incentive programs for forestry on land held by others.

- Richard Birdsey, Senior Scientist, Woodwell Climate Research Center
- Paul Catanzaro*, State Extension Forester & Professor, UMass Amherst
- Tony D'Amato*, Professor, Forestry Program Director, Univ. of Vermont
- David Foster, Former Harvard Forest Director; Professor, Harvard University
- Ali Kosiba*, Extension Assistant Professor of Forestry, Univ. of Vermont
- Meghan MacLean, Lecturer of Quantitative Ecology, UMass Amherst
- Laura Marx, Climate Solutions Scientist, The Nature Conservancy
- William Moomaw, Professor Emeritus, International Environmental Policy, Fletcher School, Tufts University & Distinguished Visiting Scientist Woodwell Climate Research Center
- Todd Ontl, Climate Adaptation Specialist, U.S. Forest Service
- Christopher Riely*, Forester & Conservationist, Sweet Birch Consulting, LLC
- Jen Shakun*, Bioeconomy Initiative Director, New England Forestry Foundation
- Jonathan Thompson, Research Director & Senior Ecologist, Harvard University/Harvard Forest

** Licensed/Certified Forester*

Recommendations for Climate Oriented Forest Management

- **Passive & Active Management**
  - Continuum - Roles for both, context and goals are important
- **Natural Disturbances**
  - Active Management should mimic natural cycles
  - Limit post-disturbance tree salvage (dead wood has forest structure, carbon, & soil benefits)
- **Carbon Storage**
  - Allowing forests to grow and age is typically best to maximize carbon storage BUT
  - Recognizing rationales for active management and climate-oriented ways to undertake it
    - Example - retaining mature trees
- **Managing for Resilience – Different views**
  - Active management is needed to diversify tree species & age & increase resilience, vs.
  - Passive management is sufficient, our forests are naturally resilient & nature will achieve diversity over time.
- **Managing for Habitat**
  - Consider reduced goal for early successional habitat in light of carbon implications.
- **And more…..Soils, Pests & Pathogens, Invasive Plants, Public Water Supply Management, Wood Production**



Supporting & Complementary Recommendations

Forest Conservation & Forest Reserves

- Reduce Land Conversion
- Increase Permanent Land Conservation
- Recommended Statewide Target of 10% Reserves

Landowner & Business Incentives

Forest Data

Forestry Policy and Practices

Investment in State Agencies

Communications and Collaboration

Status – Public Input & State Response

- **Climate Forestry Committee's work is complete.**

- **EEA sought public comment on CFC recommendations to guide state implementation.**
  - Public Comment period: January 3rd – January 24th
    - Over 100 comments received
  - EEA, DFW and DCR will issue a public response to the Committee's recommendations which will include:
    - How CFC recommendations are being incorporated into state forest management practices, including via existing management plans, practices, procedures, standards, & manuals.
    - Transparency about how individual projects reflect and put into practice the recommendations.

- **Pause is over – what happens next?**
  - Internal review of "paused" forestry projects – applying recommended guidelines.
  - "Paused" projects will be refined as appropriate for consistency.
  - New and revised projects will proceed **AFTER** State considers public comment and issues response to CFC recommendations.

Next Steps & Direction

- Goal: Keep Forests as Forests
  - Public & Private Ownership
  - Passively & Actively Managed
- Implementation
  - Guidelines & Recommendations
  - Statewide Reserves Expansion: Public and Private
  - Accelerated Land Protection (to get to 40%)
  - Support Private Forest Landowners
- Funding - $50 million commitment!
- Monitor & Follow the Science
- Continue Public & Stakeholder Engagement

Branch # 2 “In Depth” - Division of Conservation Services (DCS) Grant Programs

Executive Office of Energy and Environmental Affairs

Land and Water Conservation Fund – Grants for municipalities or state agencies to pursue conservation and recreation projects

PARC Grant Program – Grants for municipalities to protect recreation land and/or develop new or renovate existing parks

LAND Grant Program – Grants for municipalities to protect conservation land

Drinking Water Supply Protection – Grants for municipal water supplier/water districts to protect public water supply lands

Landscape Partnership – Grants for large-scale conservation projects submitted by 2+ partners (including municipalities, state agencies).

Cranberry Bog Acquisition for Restoration Grant – Grants for municipalities and NGO’s to purchase current/former cranberry bogs for subsequent restoration.

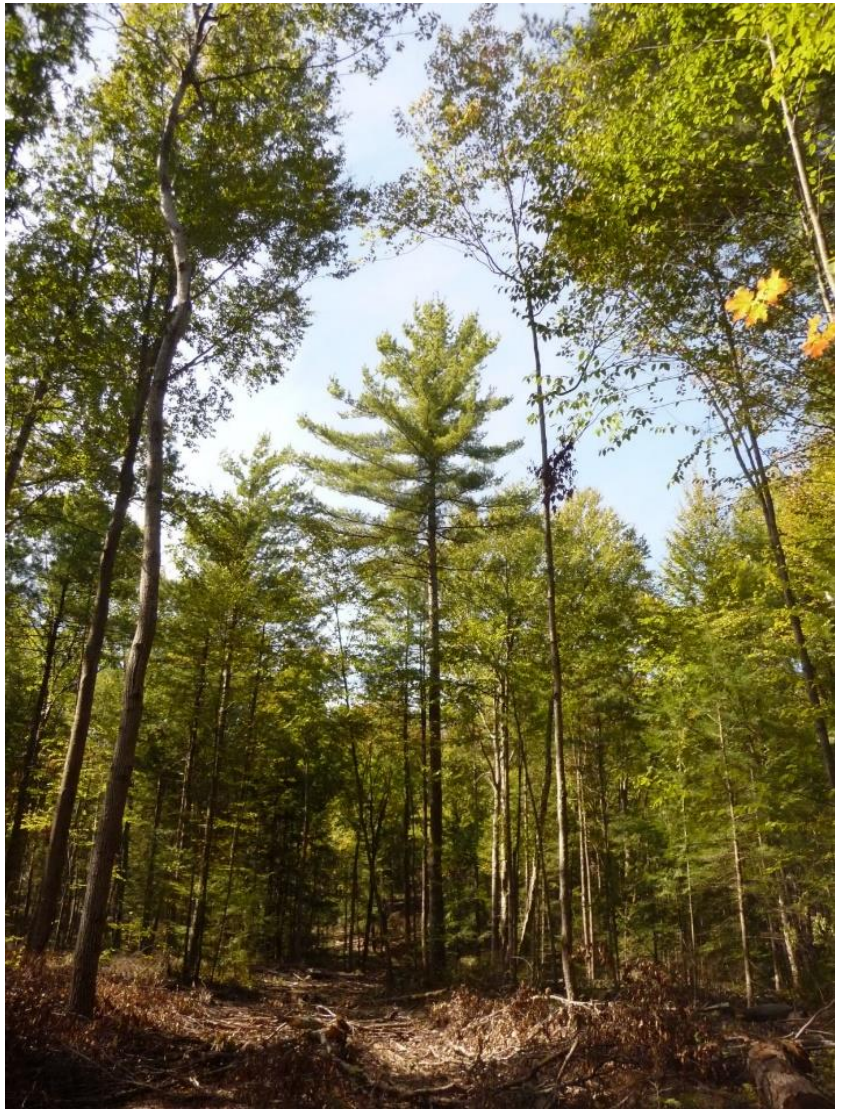
GGCP Implementation and Partnership Grant Programs – Grants for municipalities and NGO’s for Tree Planting for public health benefits in urban settings.

Coming Soon: Capacity Grants – Grants for municipalities and NGO’s to hire consultants to assist with conservation land purchases. **Riparian Tree Planting** – Grants for municipalities and NGO’s to restore riverine areas via tree planting. **Forest Reserves** – Grants for municipalities and NGO’s to establish Forest Reserves.

Massachusetts Resilient Lands Conservation Coalition

Branch # 3 “In Depth” - Climate Forestry & Support for Forest Landowners, Businesses, & Communities

- **Forest Stewardship Program - Climate Planning**
  - Private landowners, municipal forest lands, and NGO lands
  - **Training** private foresters to;
    - Increase their knowledge regarding climate change and anticipated effects on our forests
    - Enhance climate communication skills; &
    - Write climate informed Forest Stewardship plans.
  - Providing forest landowners with **resources**

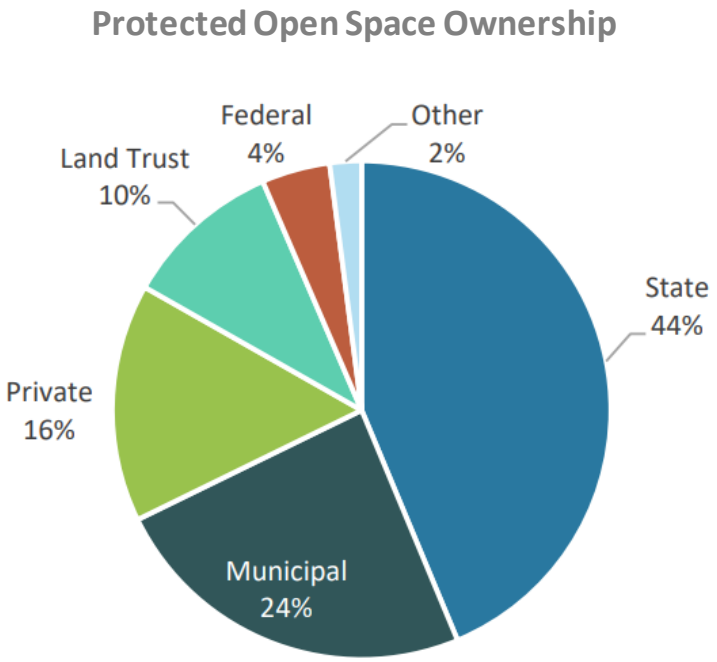


Why create a Forest Stewardship Plan?

- Primarily educational
  - "…supports and encourages private forest landowners' efforts to manage, enjoy, and care for their land using a long-term goal oriented approach."
- Encourage landowners to act
  - "The plan recommends actions that will protect or increase the environmental values of your forest while providing social or economic benefits"
- Provide sufficient detail on forest condition and management recommendations for DCR review
- Meet Ch. 61 requirement for a forest management plan
- May meet requirements of CR
- Any format can be combined
  - stew, stew/ch61, stew/birds, stew/climate, stew/climate/birds

Climate Forestry Resources

- **Community Forest Stewardship Grant Program**
  - Assists municipalities with implementation of their Forest Stewardship Plan.
  - Available to municipalities that have town forest, open space, or water supply land currently enrolled in DCR's Forest Stewardship Program.
  - Pays (via reimbursement) for 75% of the project, with a required 25% match from the municipality.
  - The Outreach Component of the Forest Stewardship Management Plan may also be eligible.
  - Municipalities can apply even if they have received funds in previous years.



Percentages are based on Protected and Recreational OpenSpace data from MassGIS and land use/cover data from the Land Sector Technical Report of the 2050 Roadmap Study

Caring For Your Woods – Publications

SETTING GOALS

- Helping landowners to focus on high-priority goals.
- Questions to ask your forester.
- Developing strategies to achieve success.

ADAPTING TO CHANGING CONDITIONS

Adaptation Strategies to Consider

- Resistance is improving forest defenses against change & disturbance
- Resilience is the capacity of the forest to withstand or recover from disturbance & stress
- Transition is to intentionally facilitate change

MANAGING for FOREST CARBON

- Actions that increase the ability of forests to absorb & store carbon

www.mass.gov/guides/climate-forestry

Why create a Forest Stewardship *Climate* Plan?

- Identify site-specific climate change impacts, challenges and opportunities, and adaptation actions

- *"Climate-informed forest management plans intentionally consider climate change and make <u>linkages</u> between potential climate change <u>impacts</u> and the associated management <u>actions</u>."*

Managing for Climate Change in Massachusetts (2022)

  - Tweaks to management
  - Climate forward
  - *Can be active*

Climate Stewardship Incentive Program (C-SIP) Pilot 2024

for Family Forest Owners, Municipalities, and Natural Resource Professionals

PURPOSE

C-SIP is a branch of the Healey Administration "*Forests as Climate Solutions Initiative*" providing financial encouragement to private forest landowners & municipalities to carry out stewardship practices focused on soil protection, carbon retention, & increasing forest adaptive capacity when pursuing forest management activities.

GOAL

- This cost-share opportunity assists family forest landowners, municipalities, & natural resource professionals with the costs of addressing forests, forest carbon, & the rural economy in the context of climate change.
- C-SIP cost-share funding is for qualifying applicants. Funds are to provide cost-share reimbursement payments to applicants who implement approved C-SIP practice(s).

FUNDING

Funding is provided by the "*Forests as Climate Solutions Initiative*" through the Executive Office of Energy and Environmental Affairs (EOEEA) and is administered as a part of the DCR's Working Forest Initiative (WFI).

Climate Stewardship Incentive Program (C-SIP)

C-SIP 1 Harvest Layout

Proper design and layout of skid roads in the harvesting area prioritizes the protection of soils. Soil compaction, mixing, and erosion can lead to soil carbon loss.

C-SIP 2 Legacy Tree Retention

Biologically old and very large trees are uncommon in our landscape. Their preservation retains carbon, increases stand complexity, and provides refuge to plant and animal species that are slow to colonize new areas.

C-SIP 3 Tree Marking

For Increasing Future Adapted Species and Structural Diversity
Marking allows specific trees to remain standing during a timber harvest to increase forest health, vigor, and regeneration.

C-SIP 4 Invasive Plant Control

A changing climate allows invasive plant species to thrive and spread. Reducing their population increases the health, vigor, and diversity of desirable, native plant populations. This in turn increases the health and resilience of forests.

C-SIP 5 Climate Informed BMP for Forest Operators

Shifts in seasonal temperatures and precipitation patterns lead to unpredictable harvesting conditions. Heavy rain coupled with large equipment in a forest increases the chance of erosion, flooding, and sedimentation in water sources. Best Management Practices for erosion control are proven techniques used to minimize the effect of timber harvests on water and soil quality.

Climate Stewardship Incentive Program (C-SIP)
Pilot 2024

C-SIP Program Contact

Sara Wisner, Program Analyst

DCR.Forestry@mass.gov

(857) 408-4154

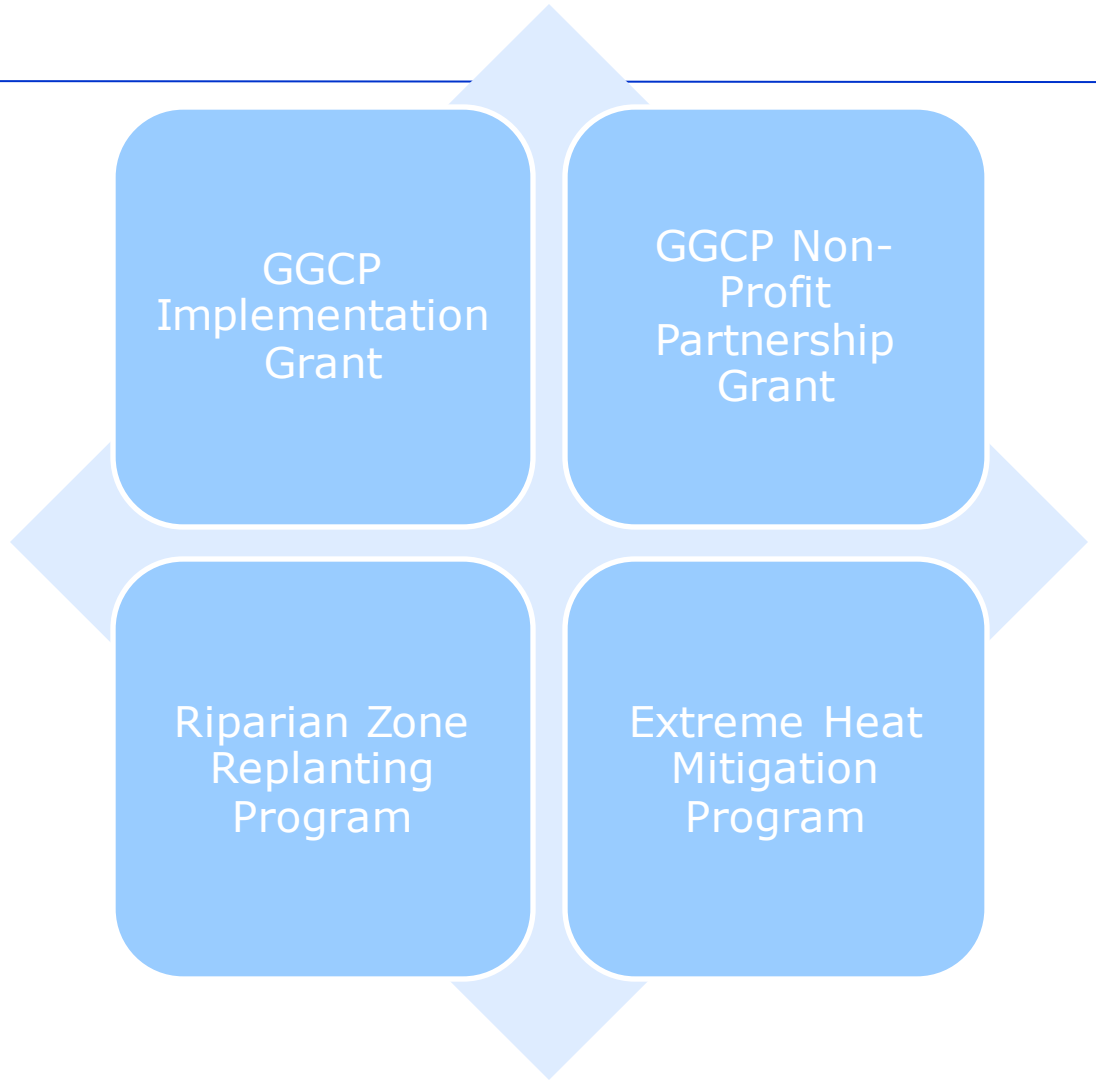
APPLICATION

Accepting Applications

The deadline to complete approved C-SIP practices is MAY 31, 2024

PROGRAM DETAILS AND APPLICATION

SAMPLE TEXT



EEA TREE PLANTING GRANTS

GREENING THE GATEWAY CITIES PROGRAM (GGCP)

- GGCP was initiated in 2014 to plant trees primarily in EJ communities, within Gateway Cities, on private & public properties.
- At its inception, the primary goal of GGCP was to enhance energy efficiency by increasing urban tree canopy.
- GGCP focuses on hiring tree planting laborers from the local community.
- GGCP has expanded to encompass 23 Gateway Cities throughout MA.
- In the past 10 years, DCR tree planting crews & contractors have planted **40,000** trees.

Goals of EEA Implementation & Partnership Grants

Implementation Grants

Eligible Applicants: Gateway Municipalities & Non- Profit Organizations

- Impervious surface removal, to bolster GGCP tree planting
- Proper tree care and maintenance—this is imperative!
- Urban Heat Mitigation
- Creation of Microforests
- Siting trees= Right Tree, Right Place
- Increase tree canopy, focusing on planting shade trees when appropriate
- Increase biodiversity in the urban forest

Non-Profit Partnership Grants

Eligible Applicants: Non-Profit Organizations

- Community engagement & outreach that promotes the GGCP & Urban Forestry
- Door to Door Canvassing to increase resident participation in GGCP
- Conduct outreach events in local community to promote GGCP & tree planting
- Print & Disseminate GGCP outreach materials

Q&A

- **Please put any questions you have in the Q&A section!**
- **Questions to be answered by the EEA Climate & Environment Teams**

Thank you for joining!

- **EEA Climate Newsletter**
  - Stay up to date!
- **Additional Questions after the webinar**
  - Contact Patrick.Forde@mass.gov