Using Forest Conservation & Management to Combat Climate Change

MA Land Conservation Conference Webinar

Jennifer Hushaw Shakun

Climate-Forest Specialist

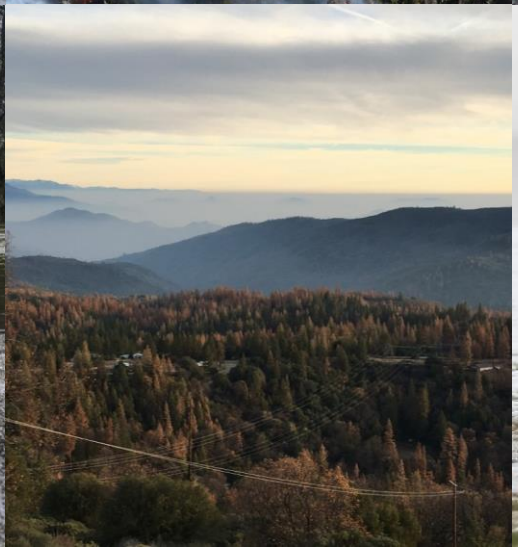
New England Forestry Foundation

NEFF's Mission

Through the application of our core expertise in conserving forestland and advancing Exemplary Forestry, New England Forestry Foundation (NEFF) helps the people of New England to sustain their way of life, protect forest wildlife habitat and ecosystem services, and mitigate and adapt to climate change.








NEFF's Approach

End Forest Conversion to maintain CO_2 already stored

+

Exemplary Forestry to remove and store CO_2

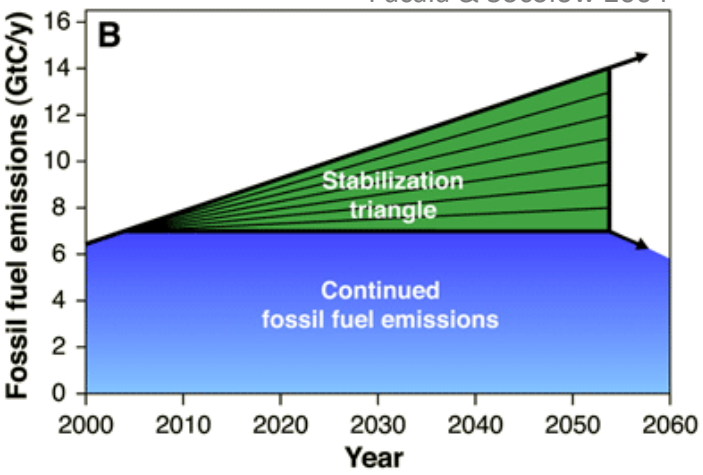
+

Long-lived wood products to reduce emissions and store more CO_2

=

A New Climate Wedge

Pacala & Socolow 2004




End Forest Conversion
to maintain CO_2 already stored
Exemplary Forestry
to remove and store CO_2
Long-lived wood products
to reduce emissions and store more CO_2
A New Climate Wedge

End Forest Conversion to maintain CO_2 already stored + Exemplary Forestry to remove and store CO_2 + Long-lived wood products to reduce emissions and store more CO_2 = A New Climate Wedge

Part 1: End Forest Conversion

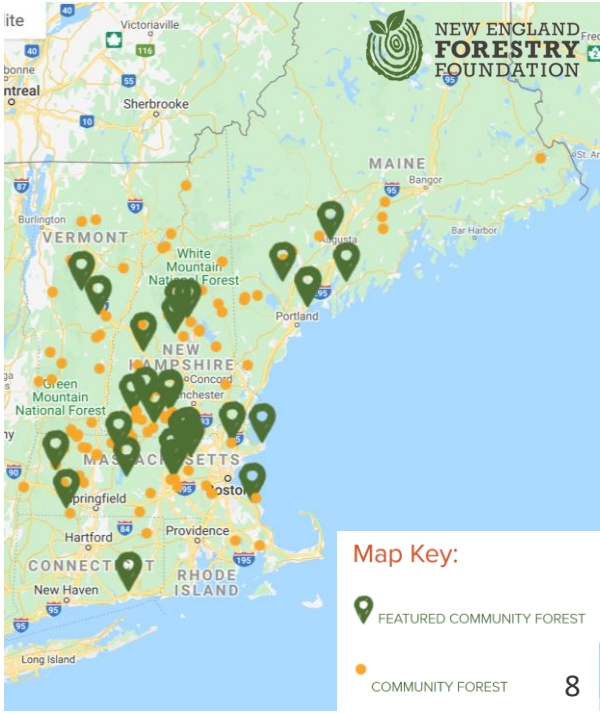
Whether for agriculture in the Amazon or for homes near Amherst deforestation releases carbon already stored and eliminates future potential to store more

Video still from NY Times: https://www.nytimes.com/video/world/americas/100000006721982/amazon-rainforest-fires-burning.html

End Forest Conversion to maintain CO_2 already stored + Exemplary Forestry to remove and store CO_2 + Long-lived wood products to reduce emissions and store more CO_2 = A New Climate Wedge

Part 1: End Forest Conversion

- ✓ ¼ of New England forests have been conserved (8.6M acres)
- ✓ ~40% conserved by non-profit land trusts
- ✓ NEFF lands in MA:
  - 58 community forests
  - 8,154 acres



End Forest Conversion to maintain CO_2 already stored + **Exemplary Forestry** to remove and store CO_2 + Long-lived wood products to reduce emissions and store more CO_2 = A New Climate Wedge

Part 2: Manage Forests Better

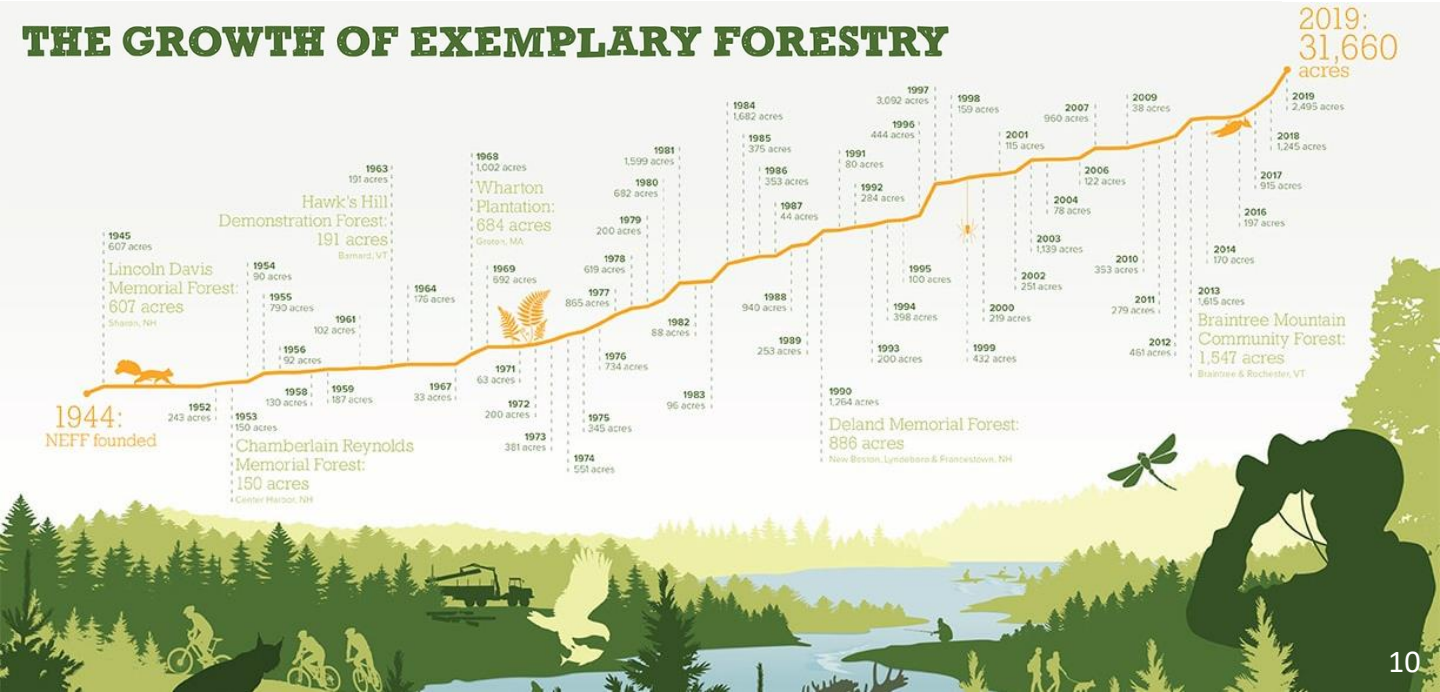
Address climate change through improved forest management on existing forest lands

- ✓ Maintain or increase stocking
- ✓ Increase productivity

Photo by John Brissette, Northeastern Research Station

End Forest Conversion to maintain CO_2 already stored + **Exemplary Forestry** to remove and store CO_2 + Long-lived wood products to reduce emissions and store more CO_2 = A New Climate Wedge

Part 2: Manage Forests Better



End Forest Conversion to maintain CO_2 already stored + **Exemplary Forestry** to remove and store CO_2 + Long-lived wood products to reduce emissions and store more CO_2 = A New Climate Wedge

Exemplary Forestry

- ✓ Three co-equal goals:

Enhance Wildlife Habitat for full suite of species present	**↑ Wood Quality & Quantity** produced & retained in stands over time	**Enhance Role of Forests in Mitigating Climate Change**

- ✓ Operating at landscape scale
- ✓ Specific, measurable metrics
- ✓ Forest mgmt that is positive for full suite of forest values

Up Next…

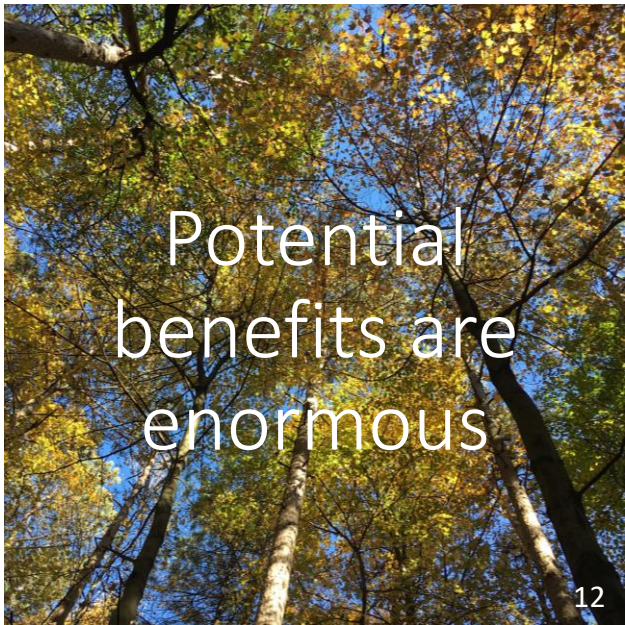
Exemplary Forestry Standards for the North Central Hardwoods Region

End Forest Conversion to maintain CO_2 already stored + **Exemplary Forestry** to remove and store CO_2 + Long-lived wood products to reduce emissions and store more CO_2 = A New Climate Wedge

Part 2: Manage Forests Better

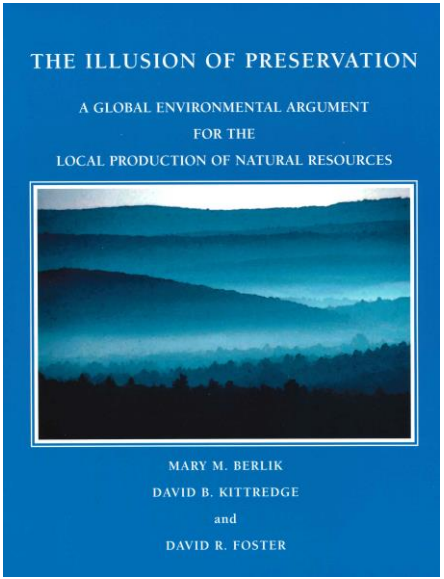
Achieving exemplary forestry outcomes in New England would store 1.9 Gt of CO_2 in new living wood.

If achieved over 20 years this would be equivalent to removing all vehicles in New England from the roads for the same time period or longer.



End Forest Conversion to maintain CO_2 already stored + Exemplary Forestry to remove and store CO_2 + **Long-lived wood products** to reduce emissions and store more CO_2 = A New Climate Wedge

- ✓ Substitute for more carbon-intensive materials (plastic, steel, concrete)
- ✓ Long-term carbon storage in the products themselves



Growing what we need where we live

End Forest Conversion to maintain CO_2 already stored

+

Exemplary Forestry to remove and store CO_2

+

Long-lived wood products to reduce emissions and store more CO_2

=

A New Climate Wedge

Courtesy of John Horner/RISD

Photo courtesy of UBC

LEVER Architecture Firm
Portland, OR

✓ Lower Emissions

✓ Sequestration in the Building

✓ Different Pattern of Development

End Forest Conversion to maintain CO_2 already stored

+

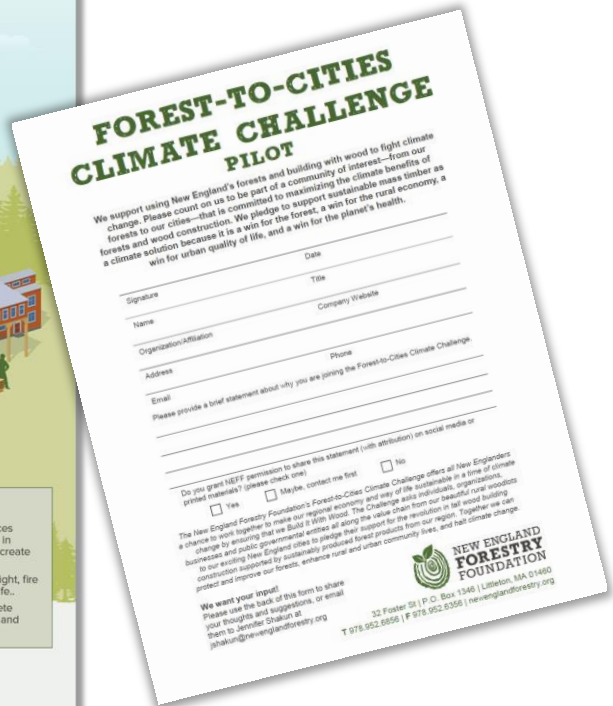
Exemplary Forestry to remove and store CO_2

+

Long-lived wood products to reduce emissions and store more CO_2

=

A New Climate Wedge



- ✓ Traditional land conservation
- ✓ Landowner outreach & education
- ✓ Active forest management
- ✓ Programs to encourage use of local wood

NEW ENGLAND FORESTRY FOUNDATION