New Jersey Conservation
FOUNDATION

Natural Climate Mitigation Solutions & Vibrant Healthy Communities

Tom Gilbert

Co-Executive Director

- **U.S. Climate Alliance States commit to:**
- identify best practices to reduce GHG emissions and increase resilient carbon sequestration;
- advance programs, policies, and incentives to reduce GHG emissions and enhance resilient carbon sequestration;
- integrate priority actions and pathways into state GHG mitigation plans within two years of joining this challenge.

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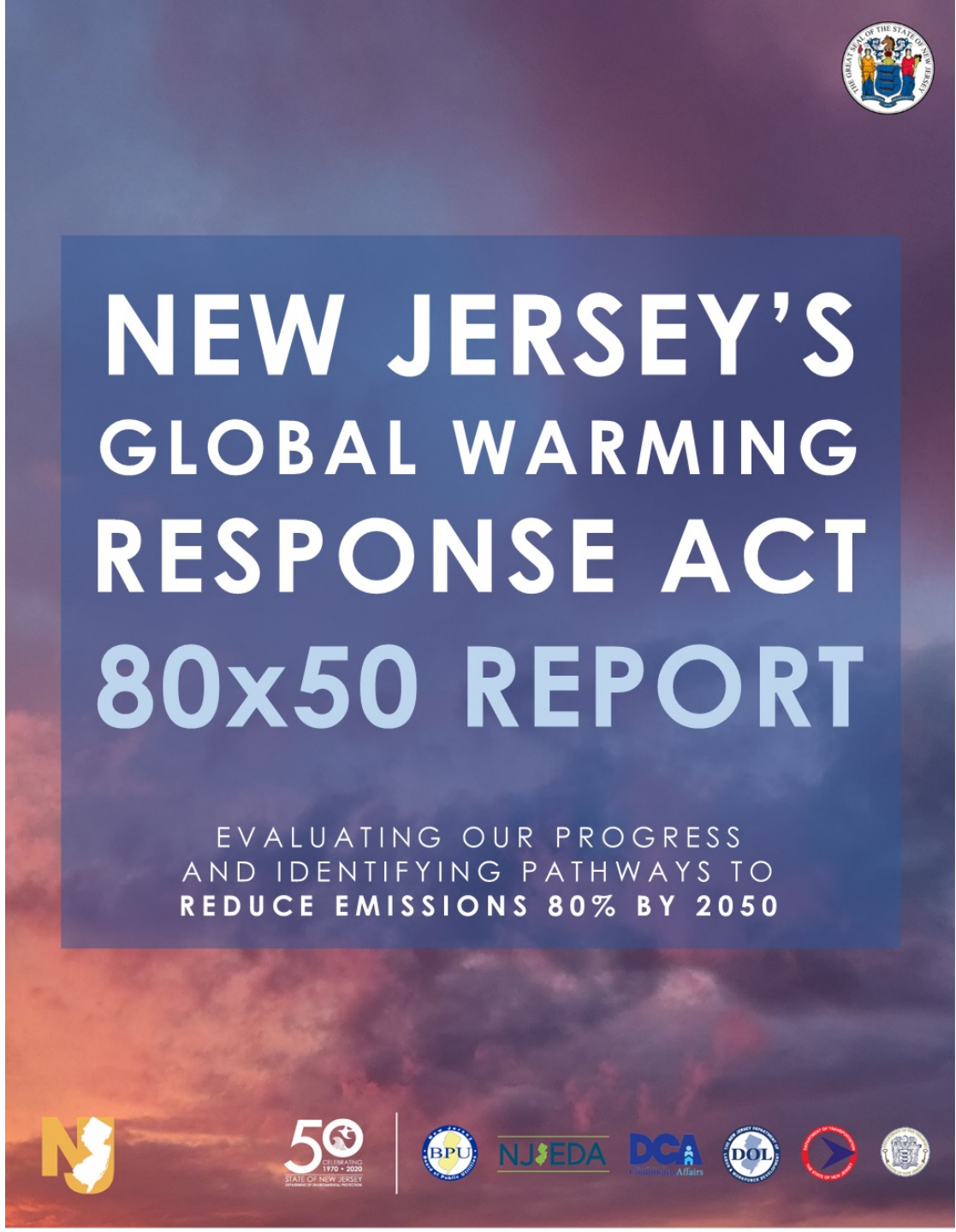
- NJ's natural lands sequester 8.1 MMT CO2e (2018, 97 MMT)
- Additional 2-3 MMT CO2e through **reforestation**, avoided conversion, salt marsh and sea grass restoration, conservation management of ag lands, proactive forest management

<u>Recommendations</u>

- Statewide sequestration plan
- Minimum forest cover standards
- Private forest conservation program
- Expand urban & community forestry
- Incent climate-friendly ag practices
- Monitor blue carbon pilot projects



Goal: Sequester 10.8 MMT CO2e

- Scoping Document Dec. 2021
- Stakeholder Sessions 2023

<u>NWLS Land Types</u>

- Forests
- Agriculture and Aquaculture
- Grasslands
- Wetlands
- Developed Lands
- Aquatic Resources and Habitats

2021

NATURAL AND WORKING LANDS STRATEGY

SCOPING DOCUMENT

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NJCCA Work Group: Natural & Working Land Strategies

NJCCA Reports

2022

- **Wetland Resource Considerations for A New Jersey Natural and Working Lands Strategy.** February 2022. The New Jersey Climate Change Alliance Natural and Working Lands Workgroup.
- **Forest Resource Considerations for A New Jersey Natural and Working Lands Strategy.** February 2022. The New Jersey Climate Change Alliance Natural and Working Lands Workgroup.

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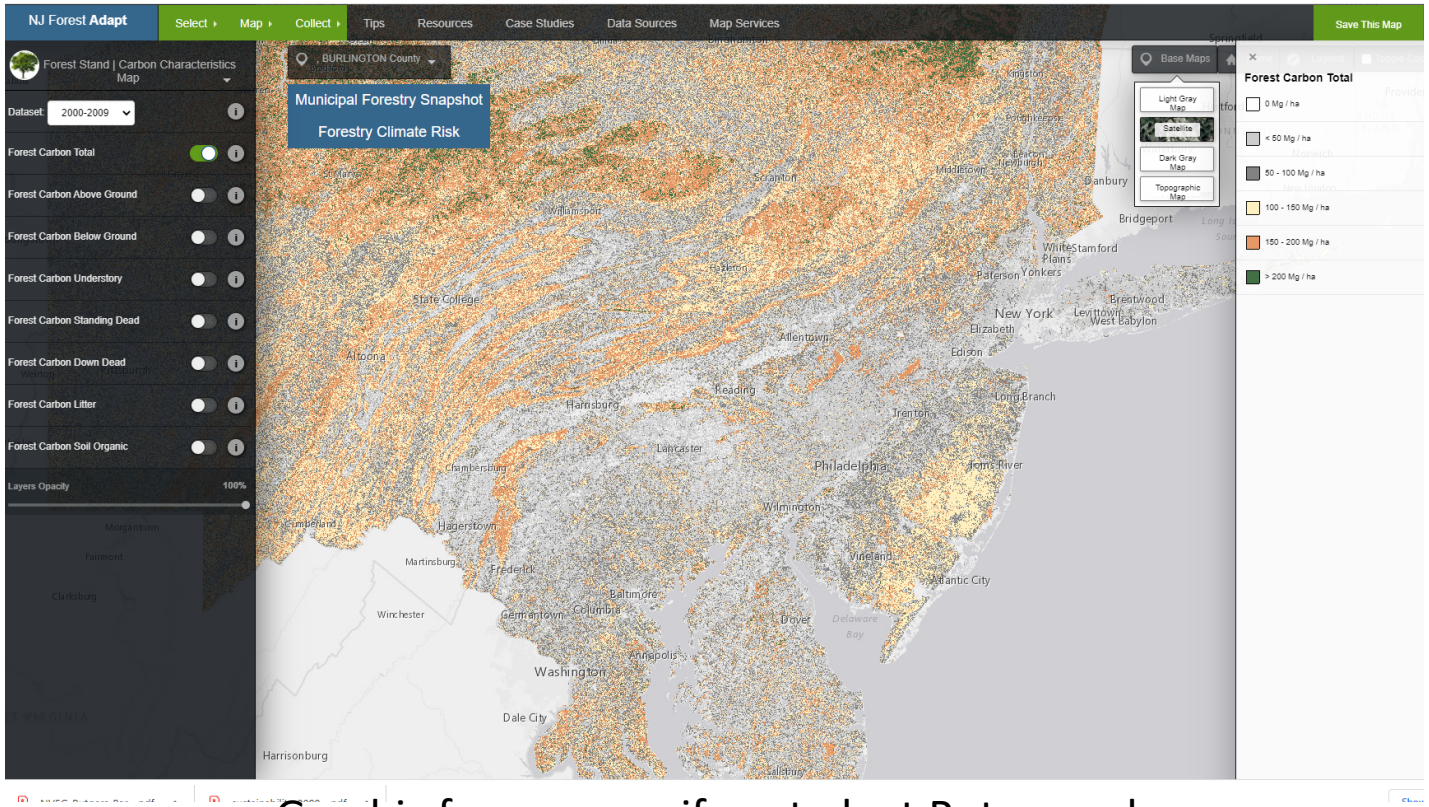
Forest Carbon



Graphic from www.njforestadapt.Rutgers.edu

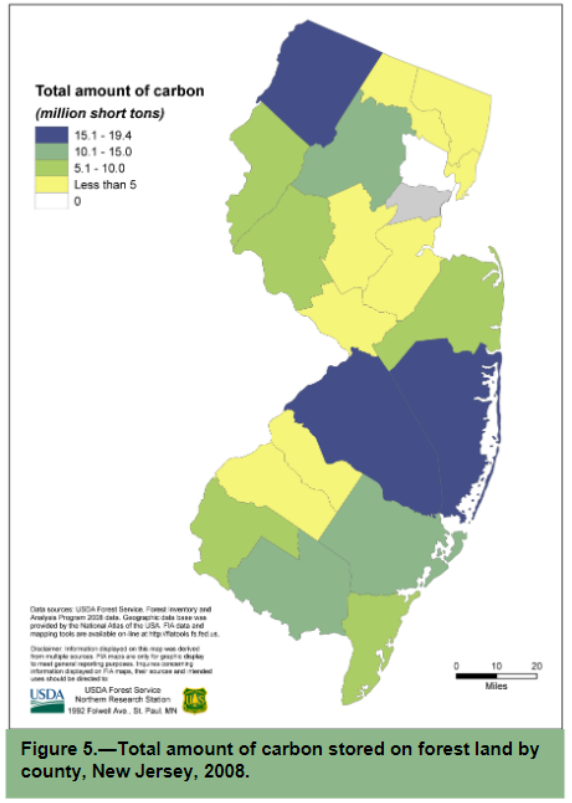


Figure 5.—Total amount of carbon stored on forest land by county, New Jersey, 2008.

Above-ground biomass (i.e., tree trunks and branches) and soils represent the two largest pools of carbon in NJ forests.

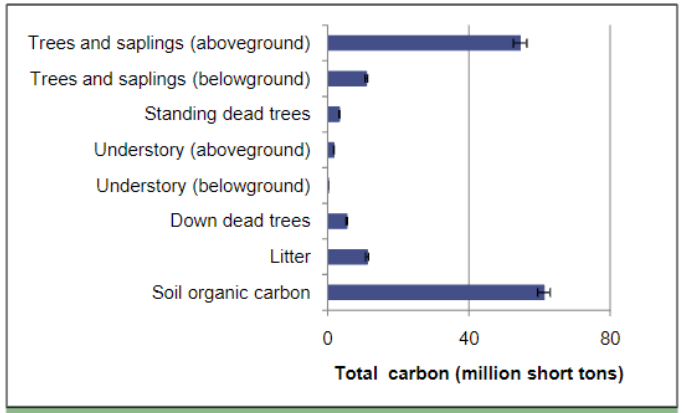


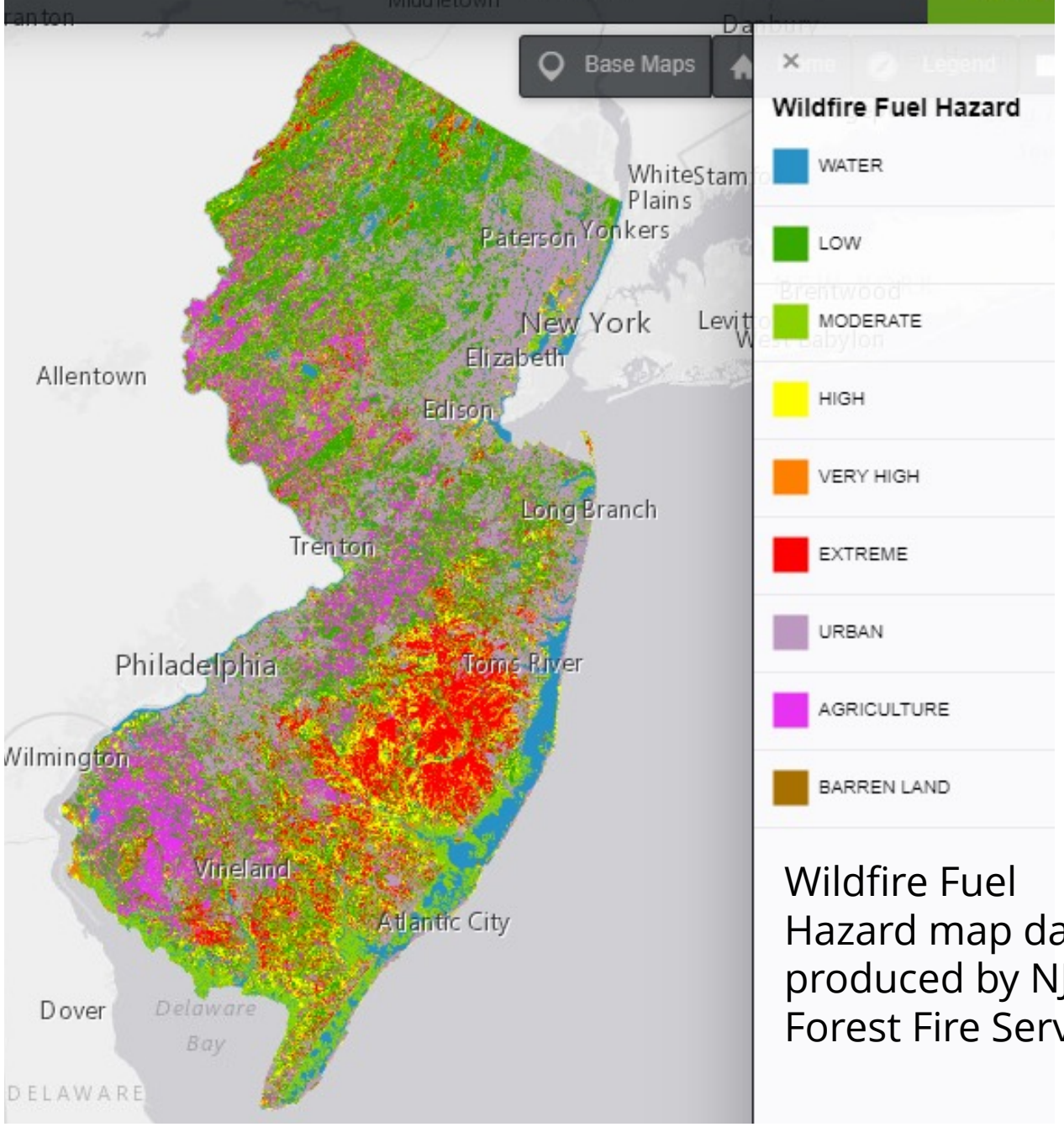
Figure 6.—Amount of carbon stored on forest land by stock, New Jersey, 2008. Note: 1 short ton = 2000 pounds.

The Ridge & Valley, Highlands and Pinelands region contain the largest stocks of forest carbon.

USDA Forest Service, US Department of Agriculture
Northern Research Station

Wildfire Fuel Hazard

The US Forest Service Fire Behavior Fuel Model describes the central Pinelands forests as having High to Very High fuel loads, with dense finely branched woody shrubs with fine dead fuel, 4-6 feet tall, that results in a high wildfire spread rate and flame height



Wildfire Fuel Hazard map data produced by NJ Forest Fire Service

Graphic from www.njforestadapt.Rutgers.edu

RUTGERS

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December 2021

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New Jersey Agricultural
Experiment Station

Management Practices and Methods to Increase Soil Organic Carbon

- Production fields also have potential to contribute to climate mitigation with management practices that increase carbon inputs and/or reduce carbon loss from soils.

Table 1. Examples of agricultural management practices that can increase organic carbon storage in soil and promote a net removal of CO_2 from the atmosphere and their main modes of action on the SOC balance (adapted from Paustian, 2014).

Management Practice	Increased Carbon Inputs	Reduced Carbon Losses
Increased productivity and residue retention	X	
Cover crops	X	
No-till and other conservation tillage	X	X
Manure and compost addition	X	
Conversion to perennial grasses and legumes	X	X
Agroforestry	X	X
Rewetting organic soils		X
Improved grazing management	X	X

  - Combining multiple practices increases beneficial effects.
  - Results are dependent on soil type and prior condition, climate, crop, combination of practices implemented, & time.

Co-benefits of Increasing Soil Organic Carbon

- Providing additional Ecosystem Services
  - Soil health benefits of soil organic matter
    - Fertility & nutrient-holding capacity
    - Water-holding capacity
    - Soil structure development – implications for infiltration/runoff & erosion
    - Biological diversity
  - Resilience/Risk avoidance
  - Water quality, air quality
  - Waste reduction – cycles/recycling

Confluence of Raritan and Millstone Rivers. raritanbasin.org

Inflation Reduction Act of 2022

- Nearly $20 billion for climate-friendly agricultural practices through USDA & NRCS programs
- $700 million for state grants through the Forest Legacy Program
- $1.5 billion in grants to states, local govts and tribes through Urban & Community Forestry Program
- 2.6 billion in support to states for coastal conservation (NOAA)

NJ Natural Climate Solutions Grants

- $15 million for blue and green carbon projects (RGGI)
- Living shorelines
- Restoring flows in tidal wetlands
- Tidal saltmarsh restoration
- Submerged aquatic veg restoration
- Forest and woodland restoration
- Urban forest and H2O quality enhancement

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Thank you!
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