



Department of
Environmental
Conservation

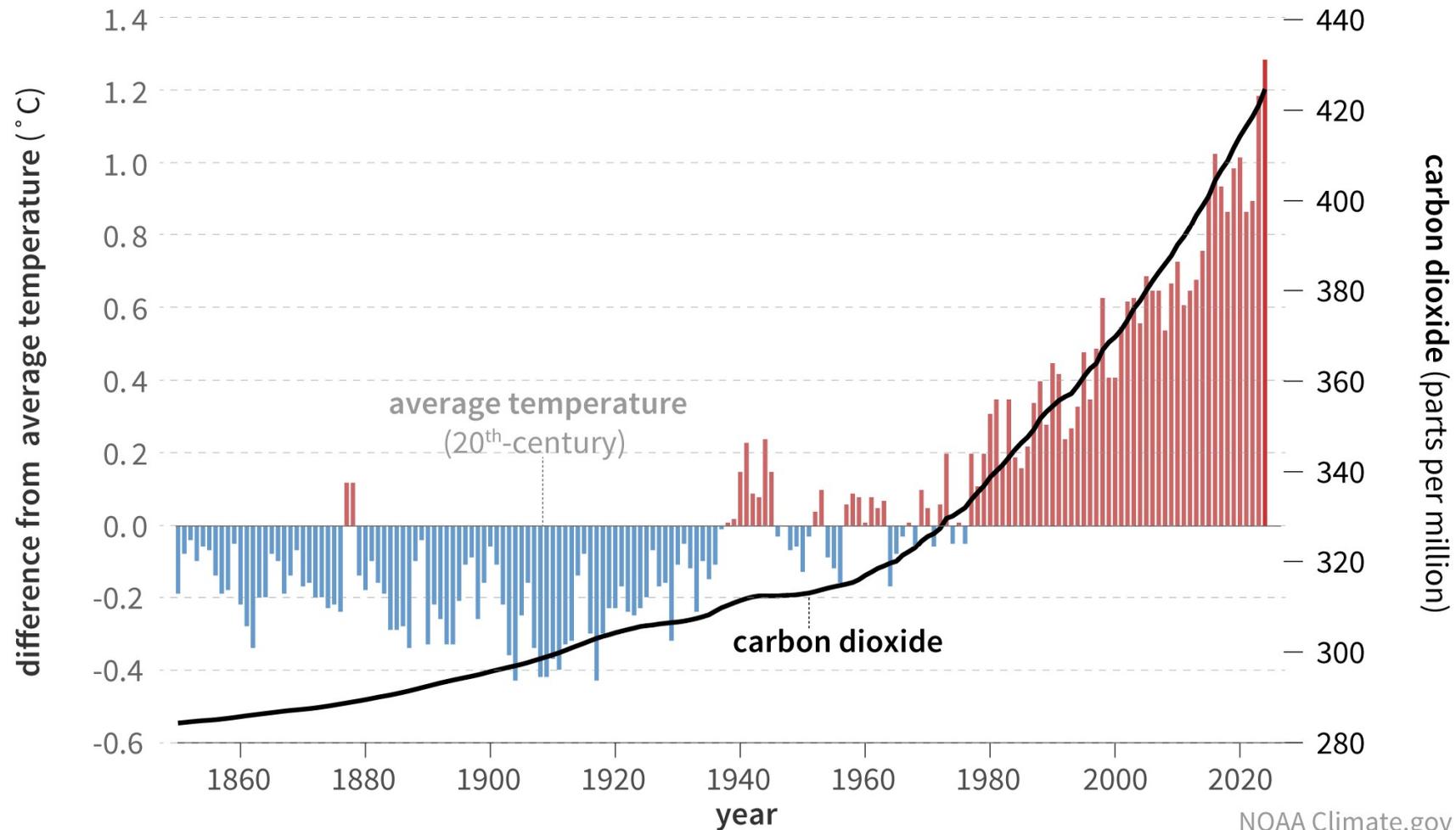
FORESTS AND TREES AS NATURAL CLIMATE SOLUTIONS

Reforestation Opportunity for New York

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New York State Department of Environmental Conservation
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CLIMATE CHANGE

Increases in atmospheric carbon dioxide and global temperature (1850-2024)



NOAA Climate.gov
Data: NOAA, IAC

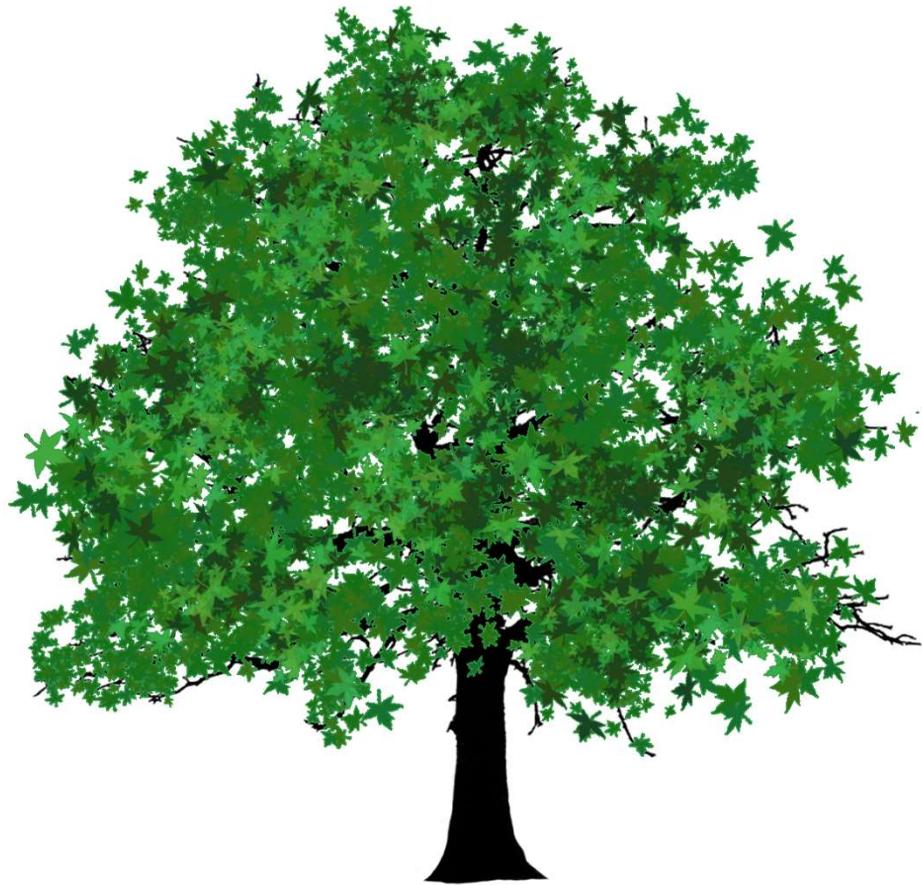
- Hotter temperatures
- Increased annual rainfall
- More intense rain events and flooding
- Mid-summer droughts
- More severe storms
- Sea level rise



CLIMATE CHANGE HAS CROSS-SECTORAL IMPACTS

Impact	Agriculture	Buildings	Ecosystems	Energy	Humans	Transportation
Increased average temperatures	↑	↓	↓			
Extreme heat	↓	↓	↓	↑	↓	
Reduced snowpack	↑	↑	↓			↑
More severe storms	↓	↓	↓	↓	↓	
Heavy rain events	↓			↓	↓	↓
Flooding	↓	↓		↓	↓	↓
Short-term droughts	↓		↓	↓		
Late spring freezing	↓					
Sea level rise		↓			↓	↓
Increased pest pressure	↓		↓		↓	
Changes to air quality					↓	

HOW DO TREES FIT INTO THIS?



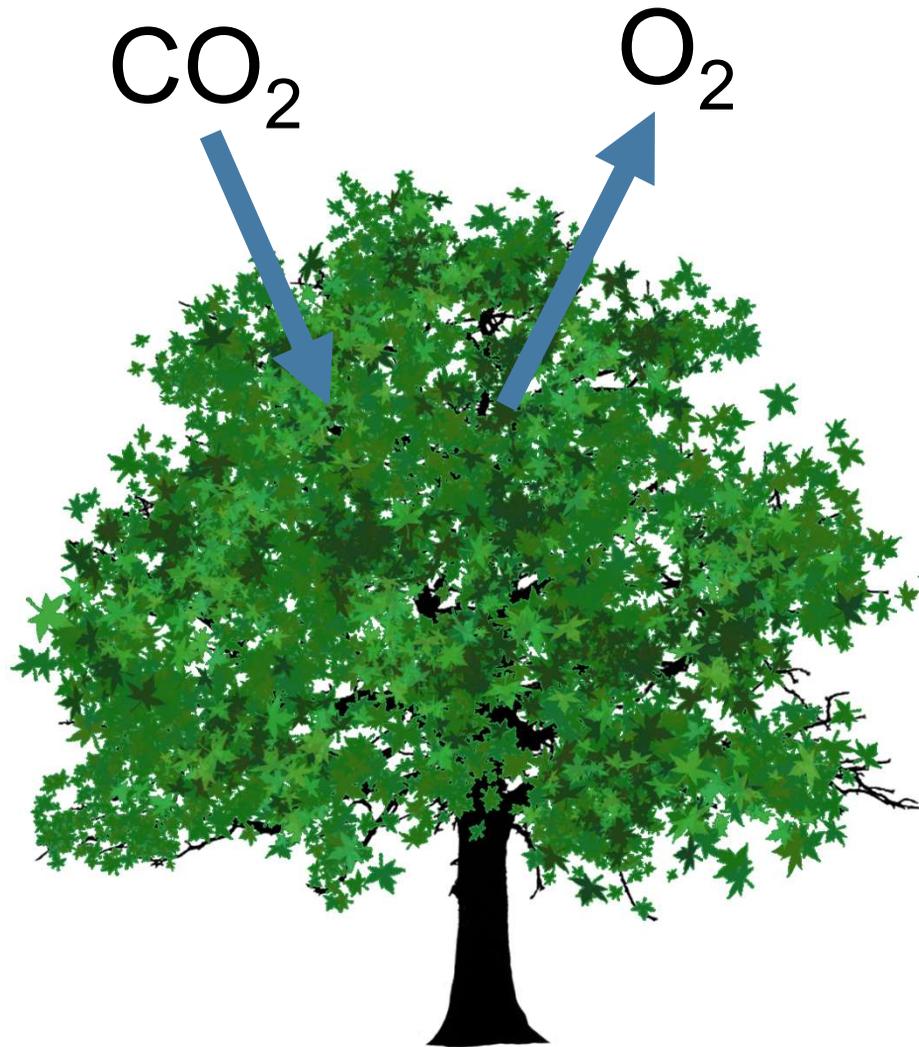
HOW DO TREES FIT INTO THIS?



Trees improve community climate resilience

- Shade buildings and people
 - Reduce energy costs for cooling
 - Shaded areas can be 20+ degrees cooler
- Mitigate flood events
 - Slow rainfall with canopies
 - Reduce runoff
 - Reduce soil erosion
 - Increase soil stabilization

HOW DO TREES FIT INTO THIS?

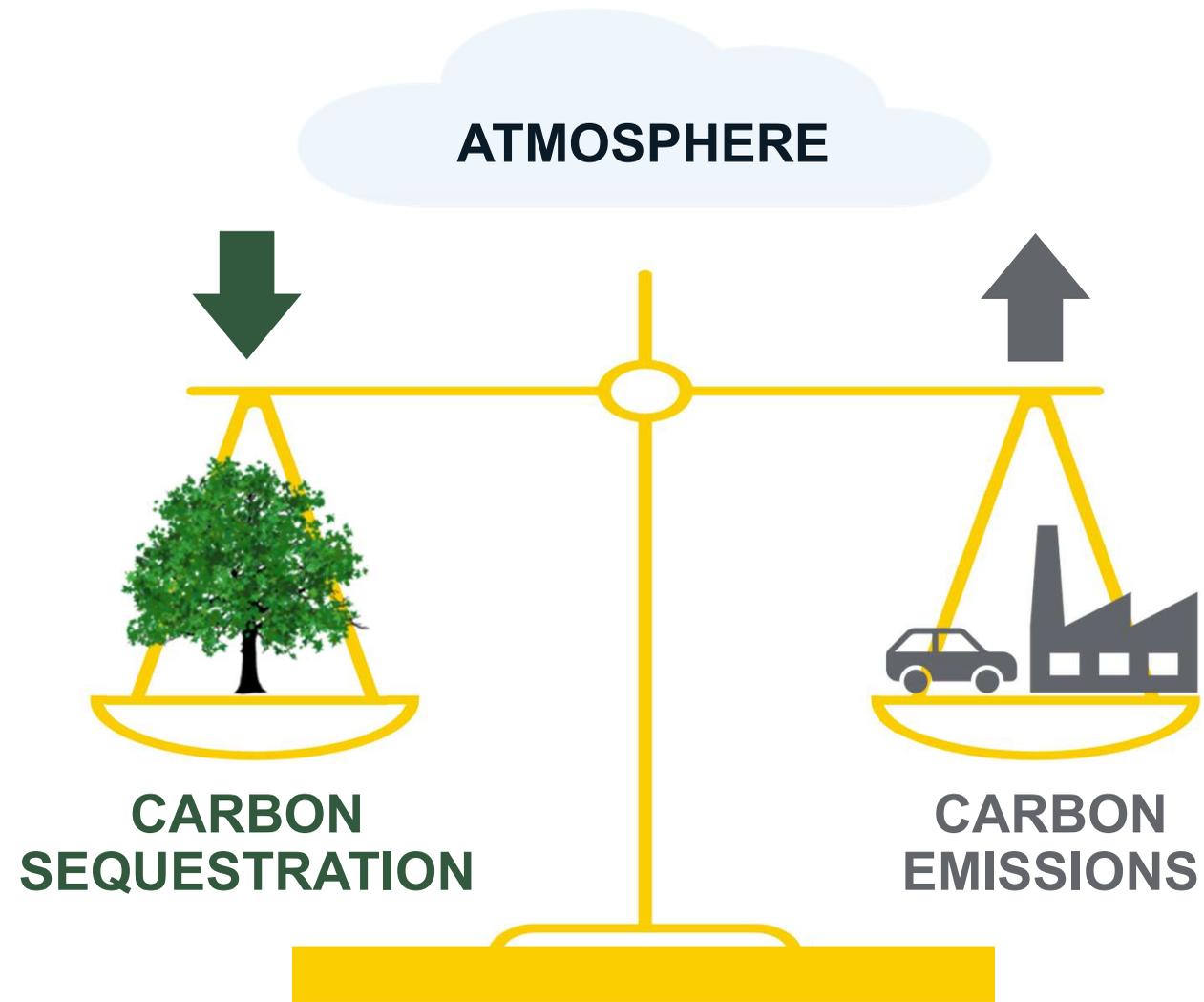


Trees and forests mitigate climate change

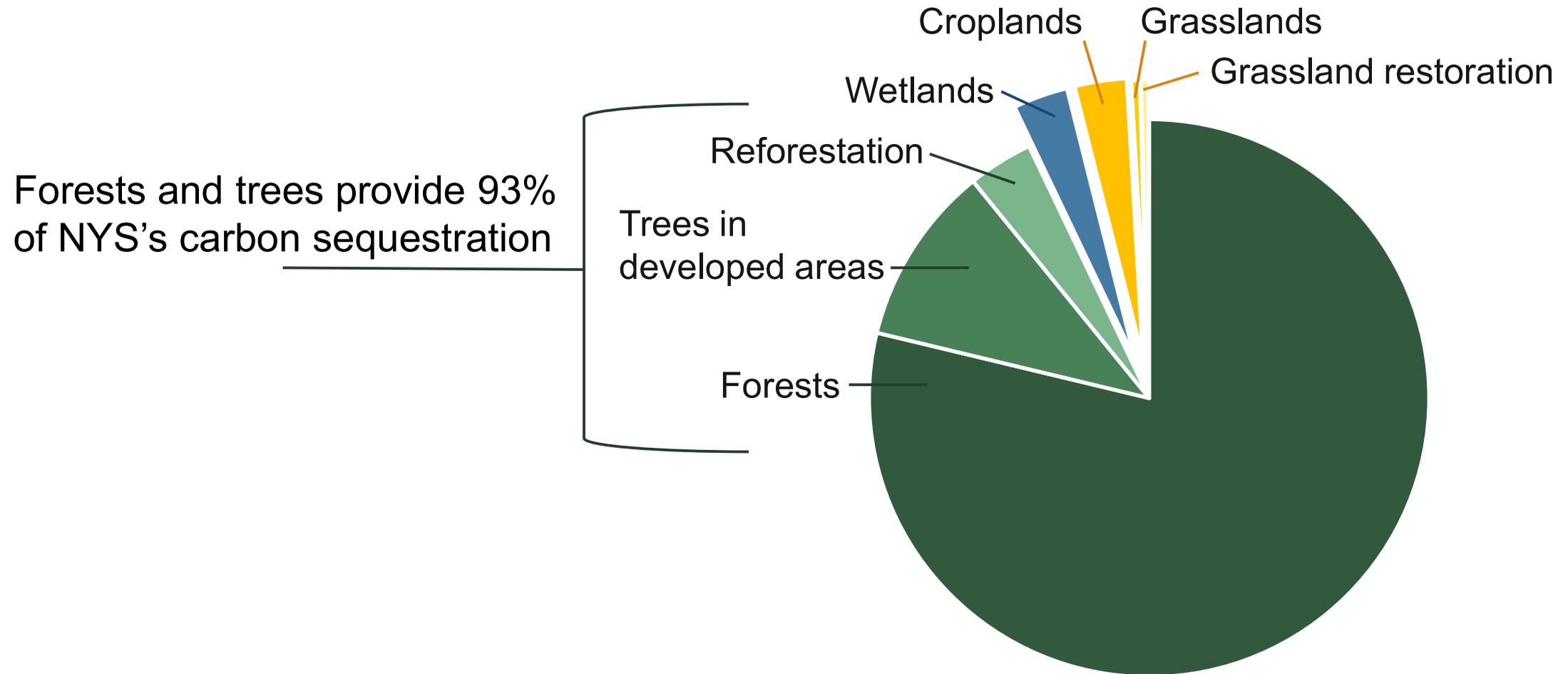
- Sequester carbon dioxide from the air
- Carbon stored in wood, roots, leaves, other parts of ecosystem
- Some carbon eventually emitted back into atmosphere
 - Dynamics naturally vary over time



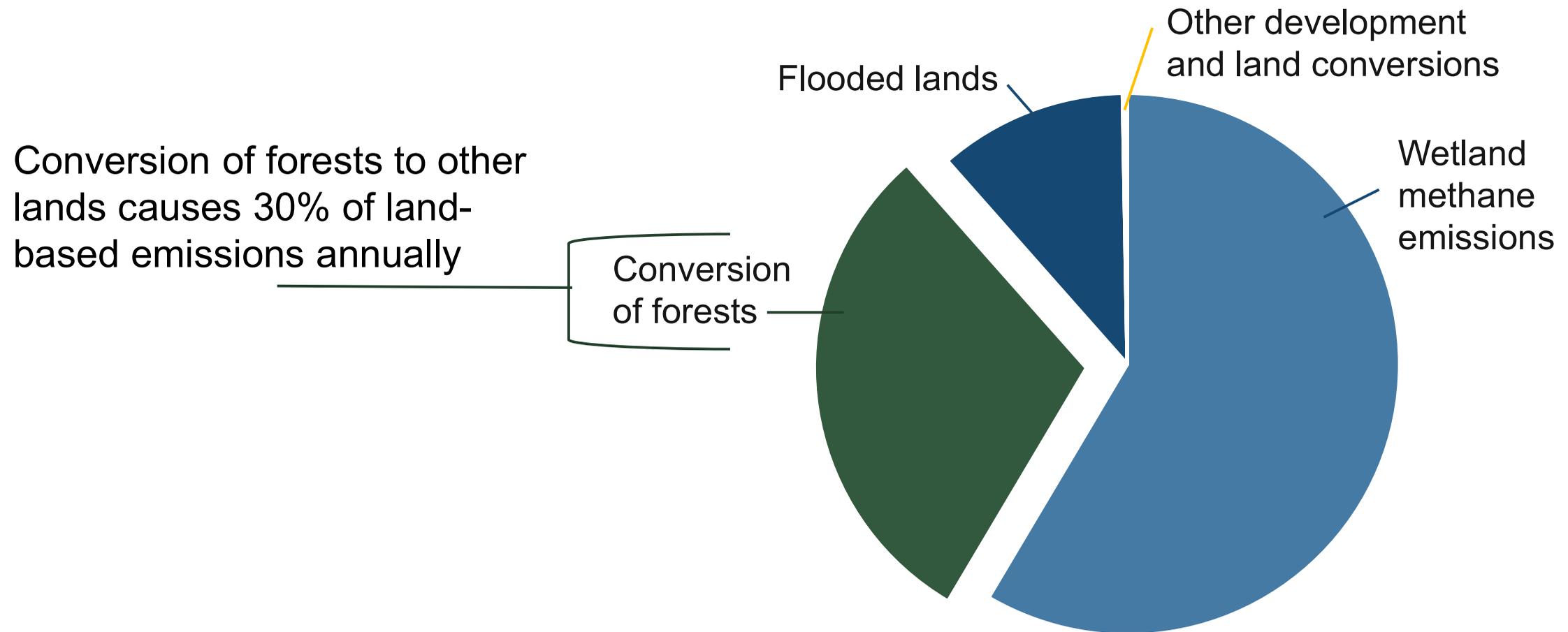
CLIMATE MITIGATION



ANNUAL CARBON SEQUESTRATION OF LANDS



ANNUAL CARBON EMISSIONS OF LANDS

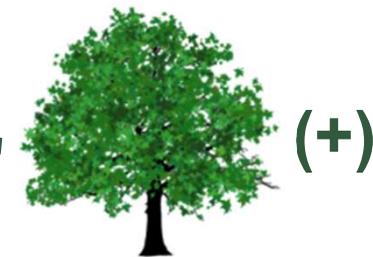


NY Climate Act

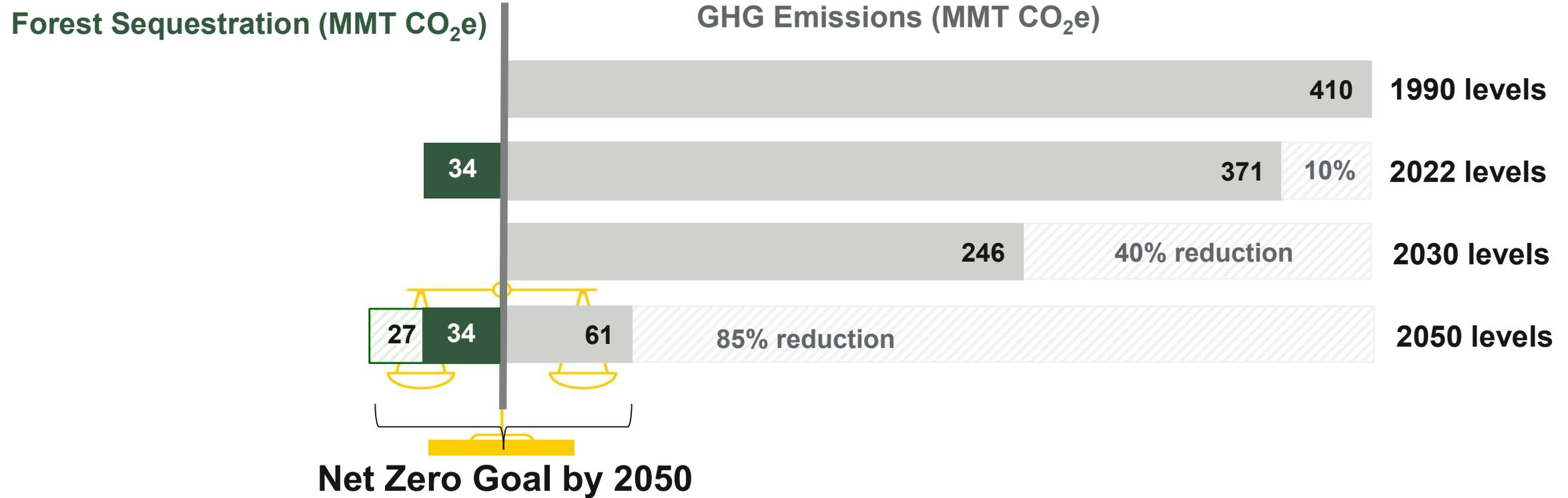
CLIMATE LEADERSHIP & COMMUNITY PROTECTION ACT (Climate Act)

- Enacted in 2019
- Established targets to reduce greenhouse gas emissions
 - 70% renewable energy by 2030
 - 100% zero emissions from electricity generation by 2040
 - 85% reduction in GHG (from 1990) by 2050

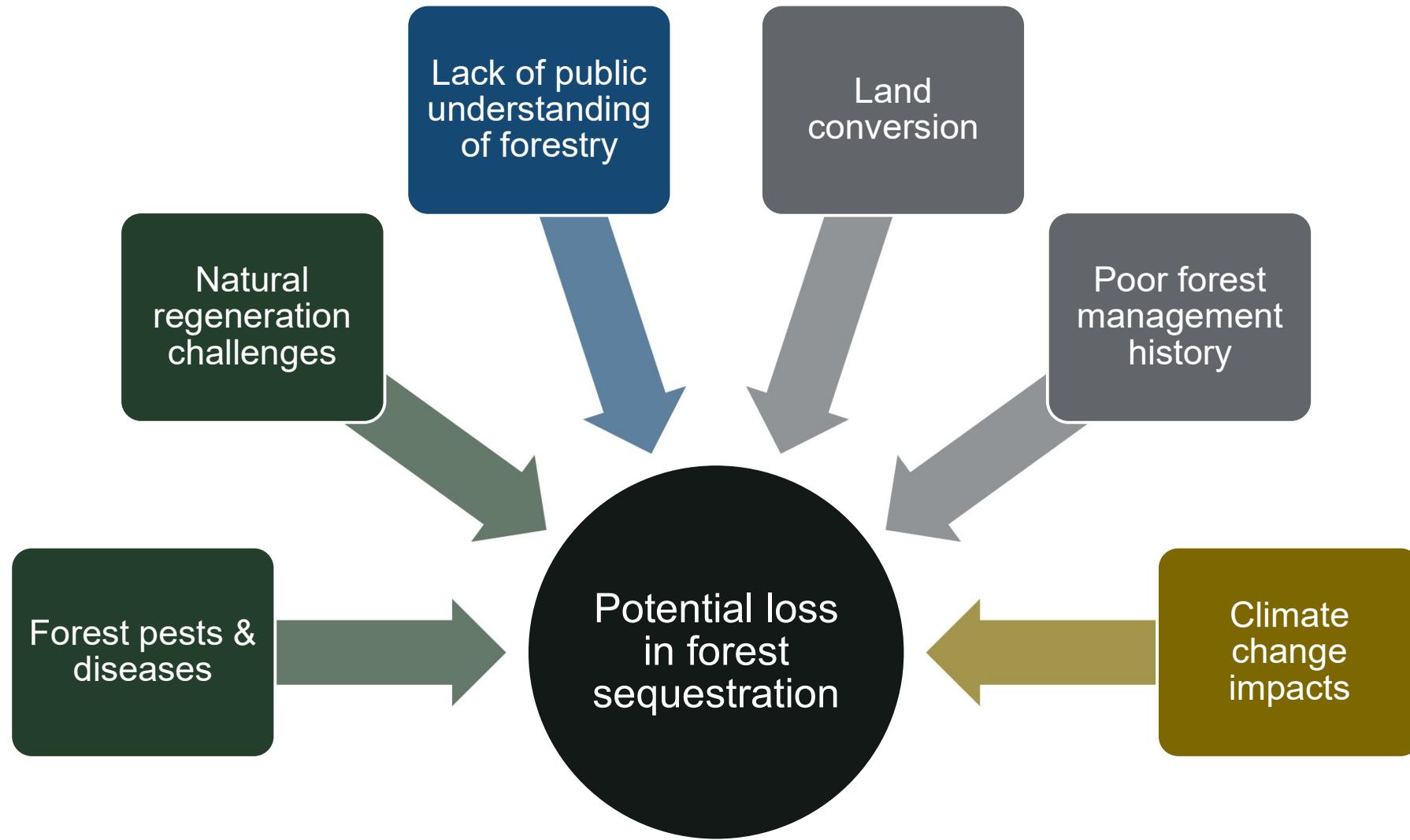
- Goal of 100% **net zero emissions** by 2050
 - Sequestration “cancel out” remaining GHG (15%)



NET ZERO EMISSIONS

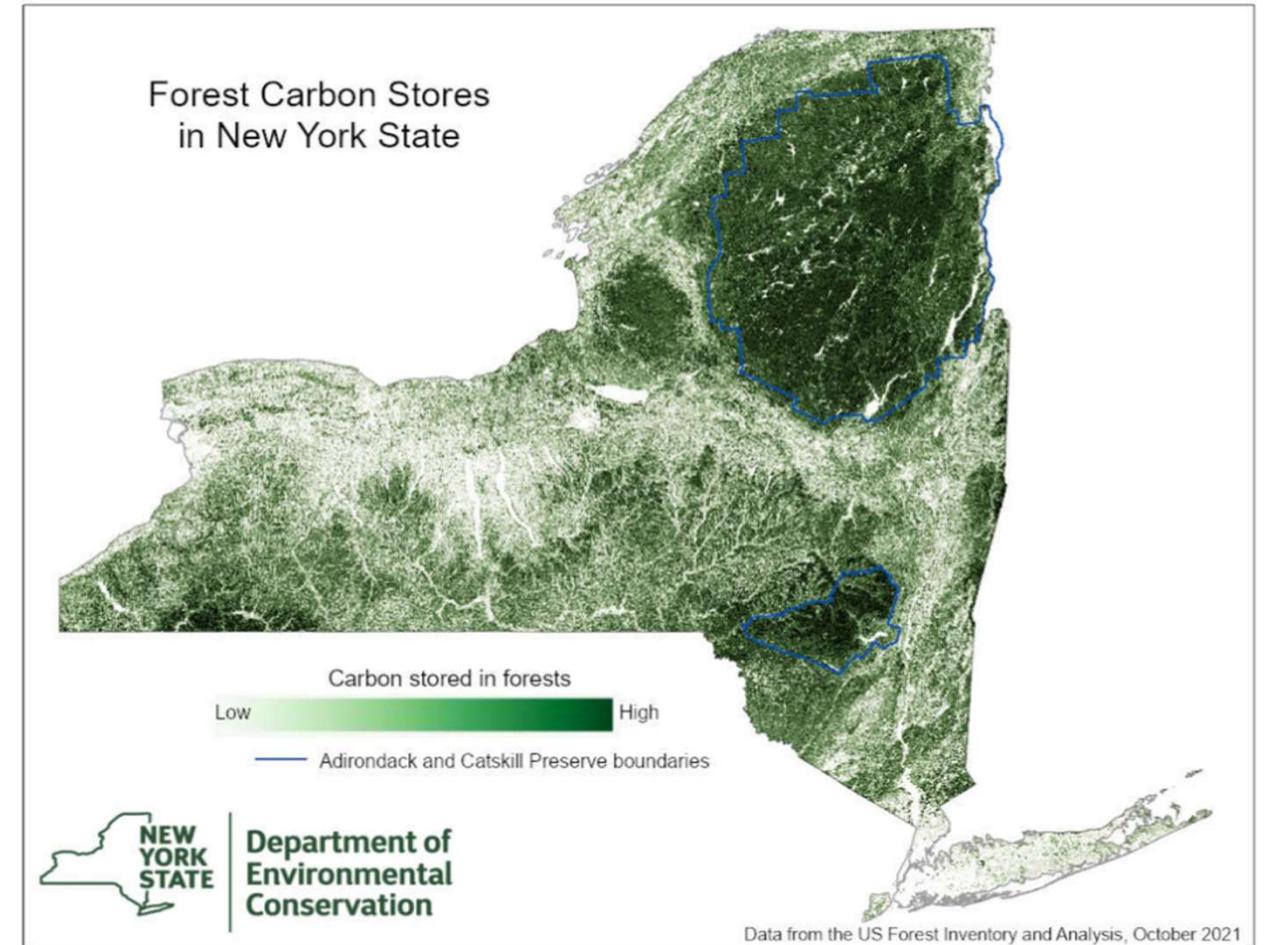


CHALLENGES TO INCREASING FOREST SEQUESTRATION



NATURAL CLIMATE SOLUTION STRATEGIES

1. Keep forests as forests
2. Reforestation
3. Promote sustainable forest management
4. Address forest pests & diseases
5. Climate informed forestry & restoration
6. Wood recycling & reclamation
7. Biofuels and other uses for residual wood
8. Extend life of urban street trees



REFORESTATION

- Re-establishment of forests through tree planting and practices that support the natural regeneration of forests.
- All projects that establish trees contribute to reforestation, from individual tree plantings to projects that support forest growing back on their own



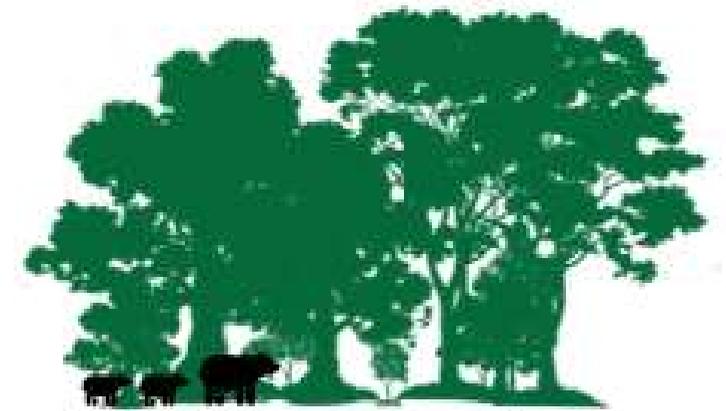
*Individual trees planted
in communities*



*Small groups of trees
planted in open spaces*

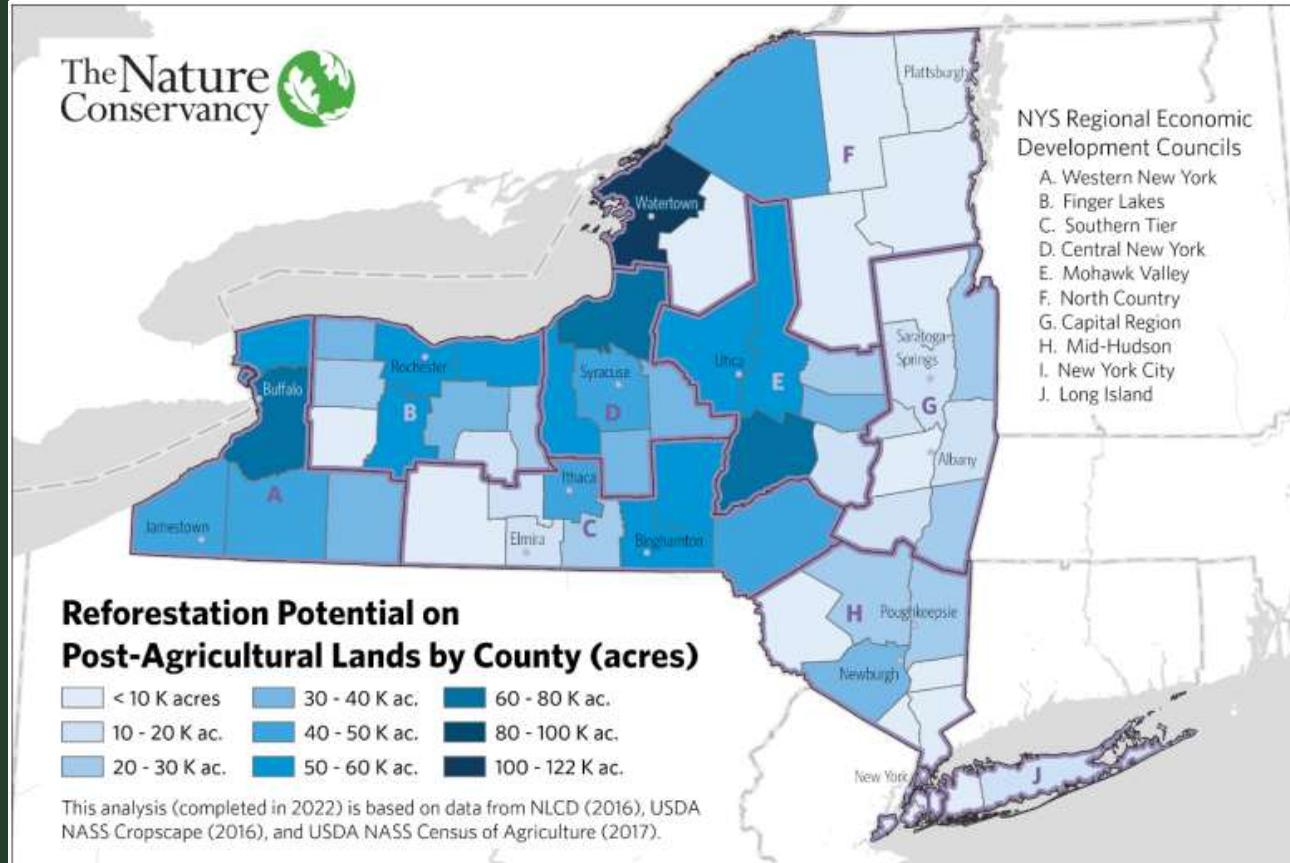


*New forests planted
or established on
open lands*

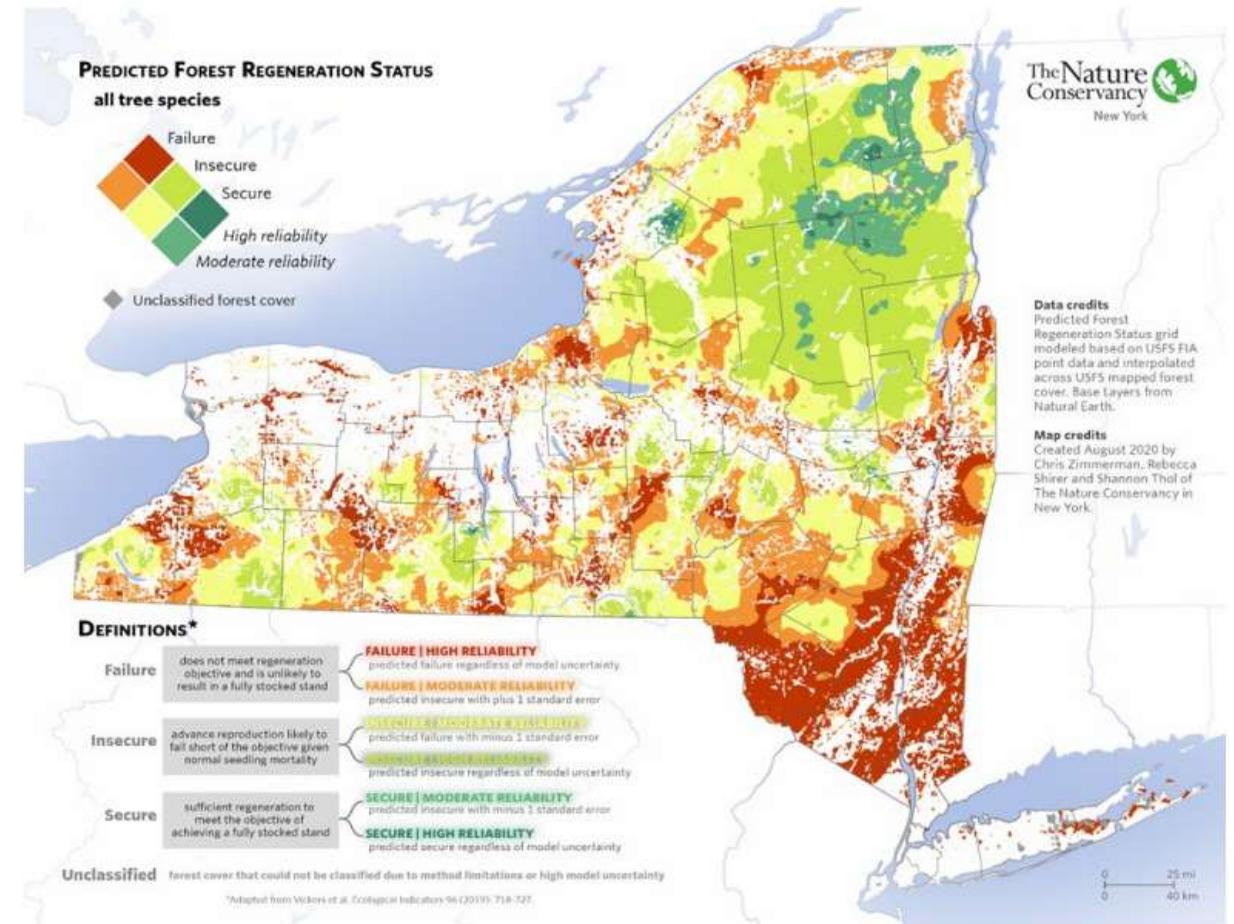


*Forests restored with
actions that increase health
and natural regeneration*

OPPORTUNITY FOR REFORESTATION



Open post-agricultural lands (blue)



At-risk existing forests (red-yellow)

DRAFT NEW YORK STATE REFORESTATION PLAN (in progress)



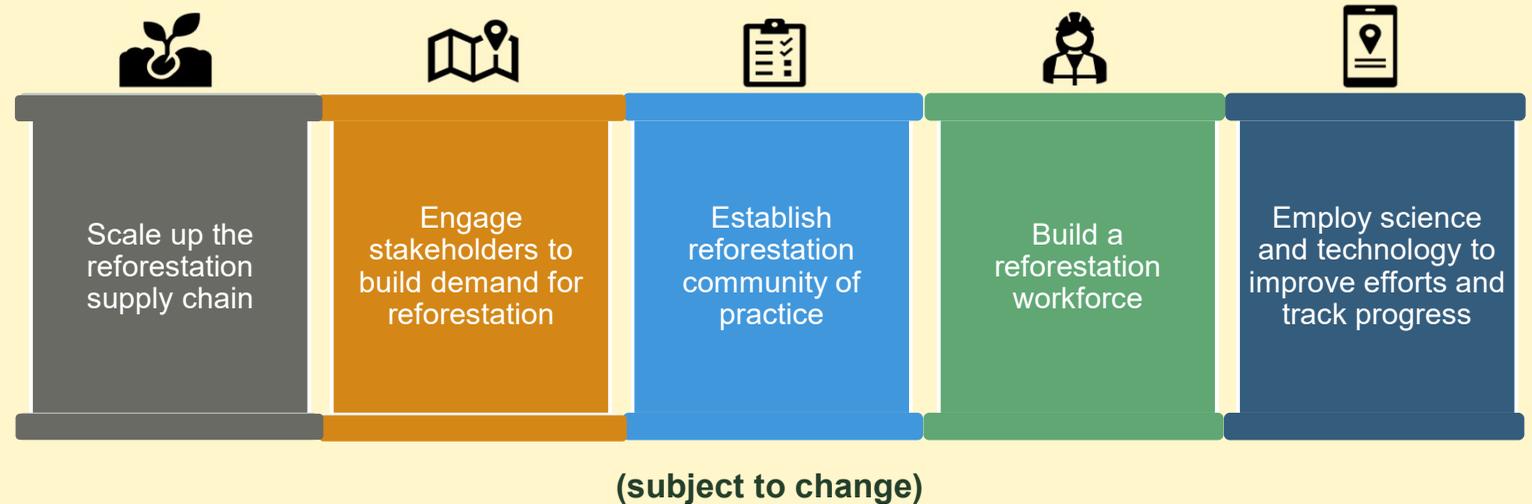
New York State Reforestation Plan A COLLABORATIVE CALL TO ACTION

Kathy Hochul, Governor | Amanda Leffon, Commissioner



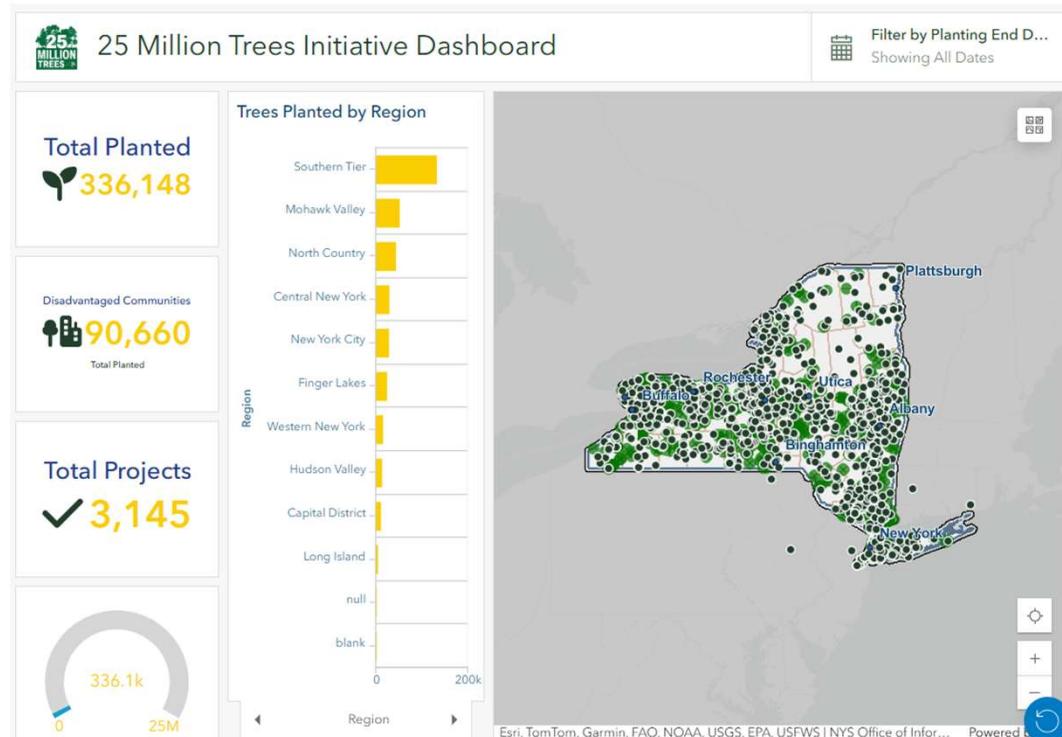
- More than 200 stakeholders
- More than 100 agencies & organizations
- Planning for future public comment period

Draft Pillars of Action



25 Million Trees Initiative

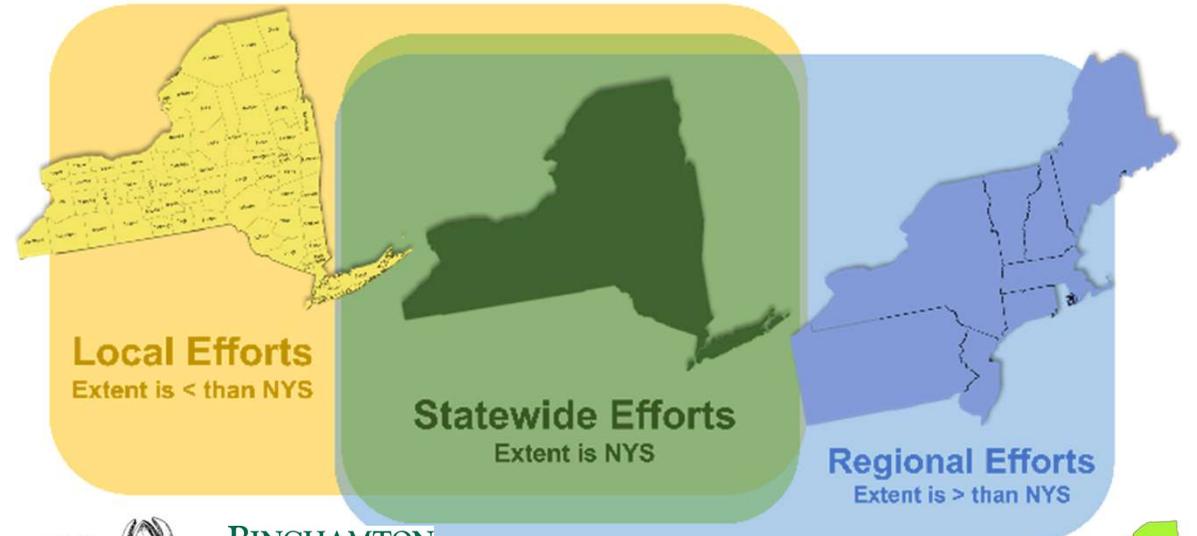
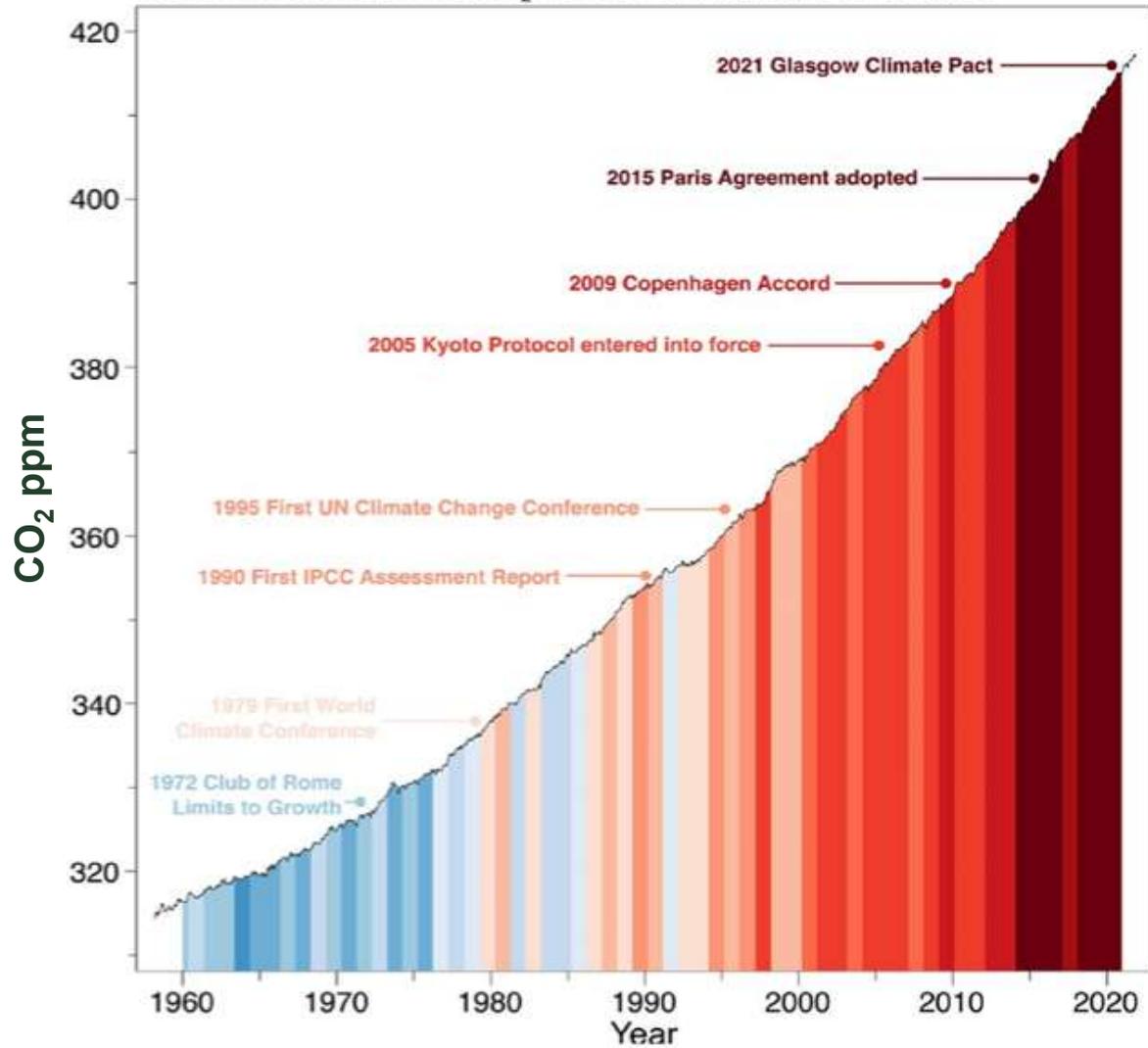
- Announced in 2024
- Plant 25 million trees by 2033
 - Support for DEC Saratoga Nursery
 - Community Reforestation grant program



TREE TRACKER: RECORD YOUR TREE PLANTING [↗](#)

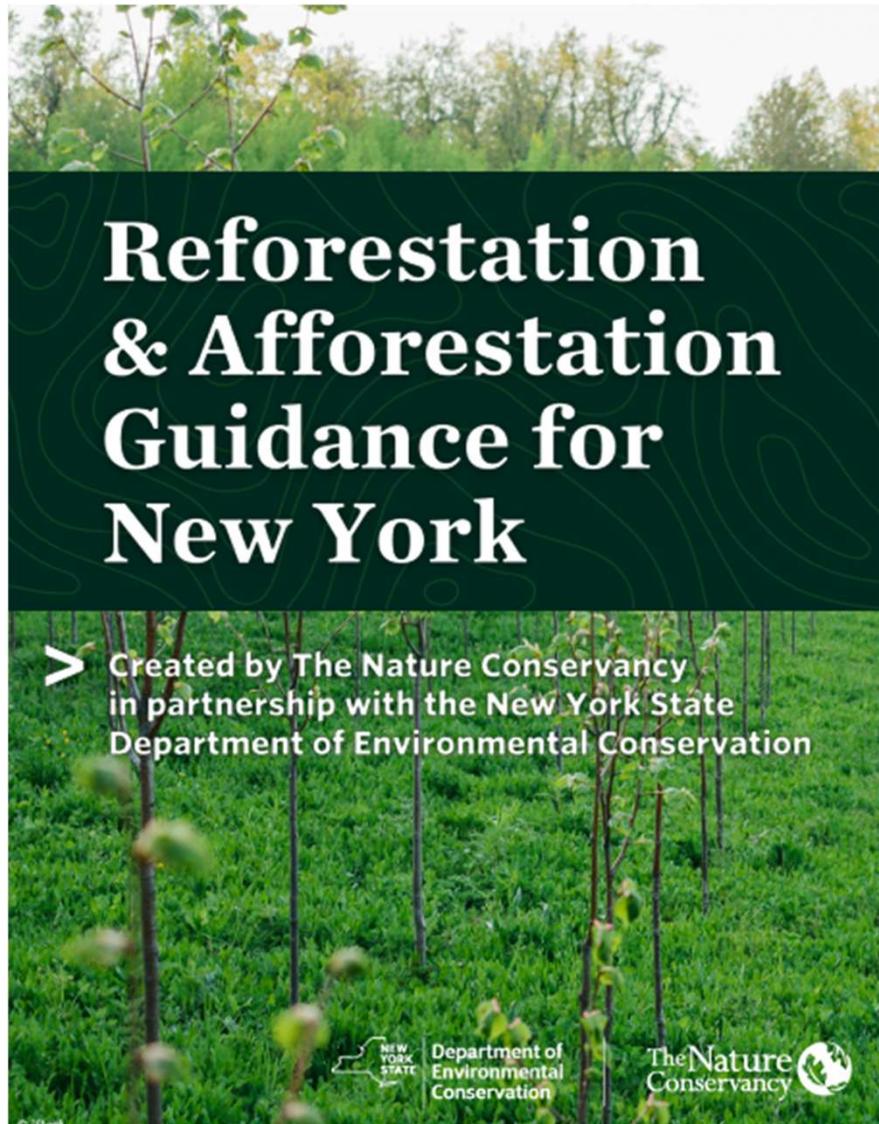
CALL TO ACTION

Trends in Atmospheric CO₂ vs Global Temperature Change



AND MANY MORE...

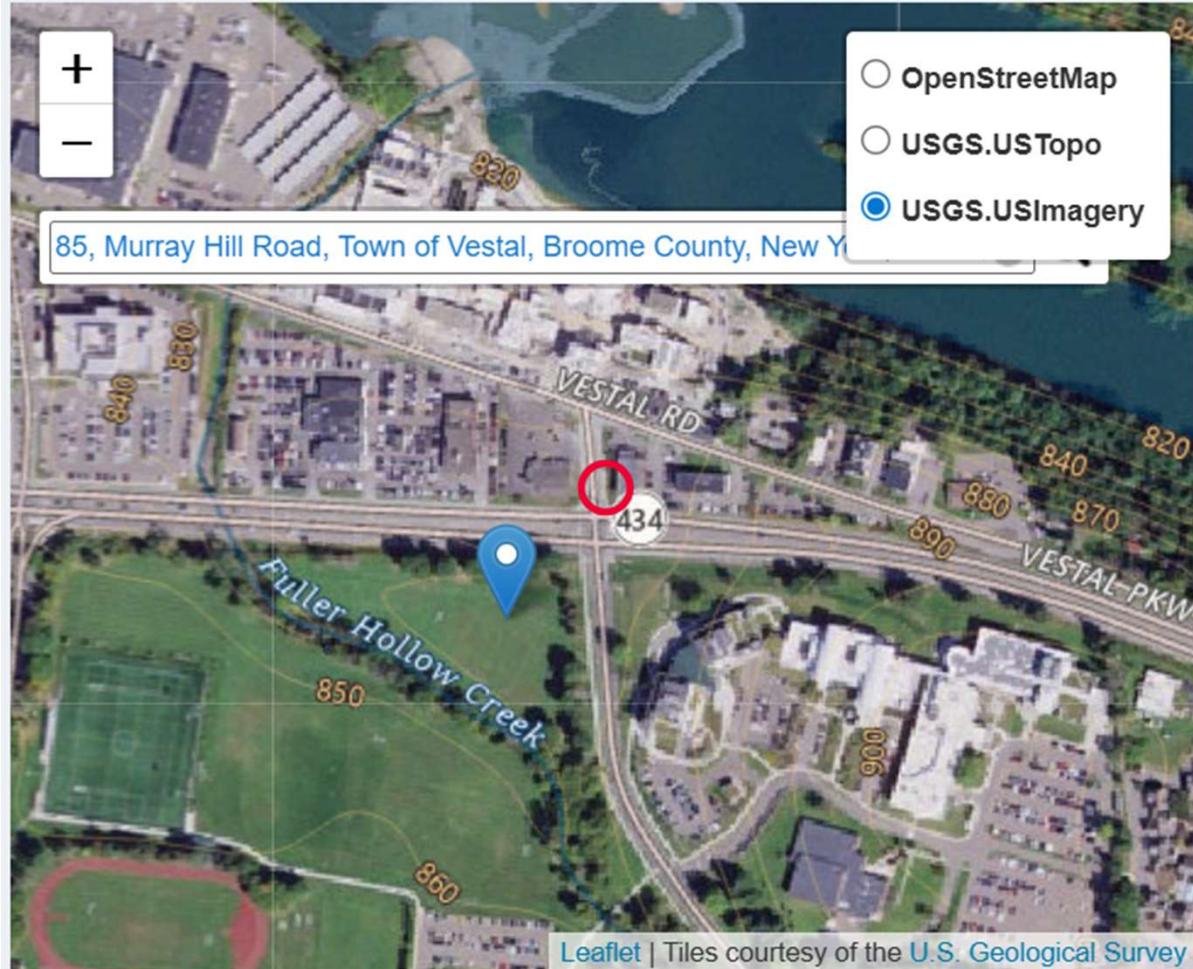
RESOURCES: NEW REFORESTATION GUIDE



- Available as a link on the 25 Million Trees webpage
- Starting point for tree planting reforestation projects
- Information on:
 - Planning a project
 - Assessing a site for needs
 - Selecting tree species and stock type
 - Maintenance & monitoring

RESOURCES: REFORESTATION SPECIES TOOL (in progress)

Begin by using the map below to select where you would like to work:



- Clickable map processes site conditions in background to filter natural communities
- Provides list of potential suitable species

<i>Acer negundo var. negundo</i>	box elder, ash-leaved maple		
<i>Acer pensylvanicum</i>	striped maple	Part Sun-Shade	Avg
<i>Acer rubrum var. rubrum</i>	common red maple	Sun	Moist-Avg
<i>Acer saccharinum</i>	silver maple	Part Sun-Shade	Moist-Avg
<i>Acer saccharum</i>	sugar maple	Sun	Avg
<i>Acer spicatum</i>	mountain maple		
<i>Betula alleghaniensis</i>	yellow birch	Sun-Part Shade	Moist-Avg
<i>Betula lenta</i>	black birch	Sun-Part Shade	Avg
<i>Betula nigra</i>	river birch	Sun	Moist-Avg

THANK YOU

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Climate Forestry and Carbon Unit
Division of Lands and Forests

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