Reforestation Hub

2026 Relaunch

www.reforestationhub.org

Susan Cook-Patton

The Nature Conservancy

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Agenda

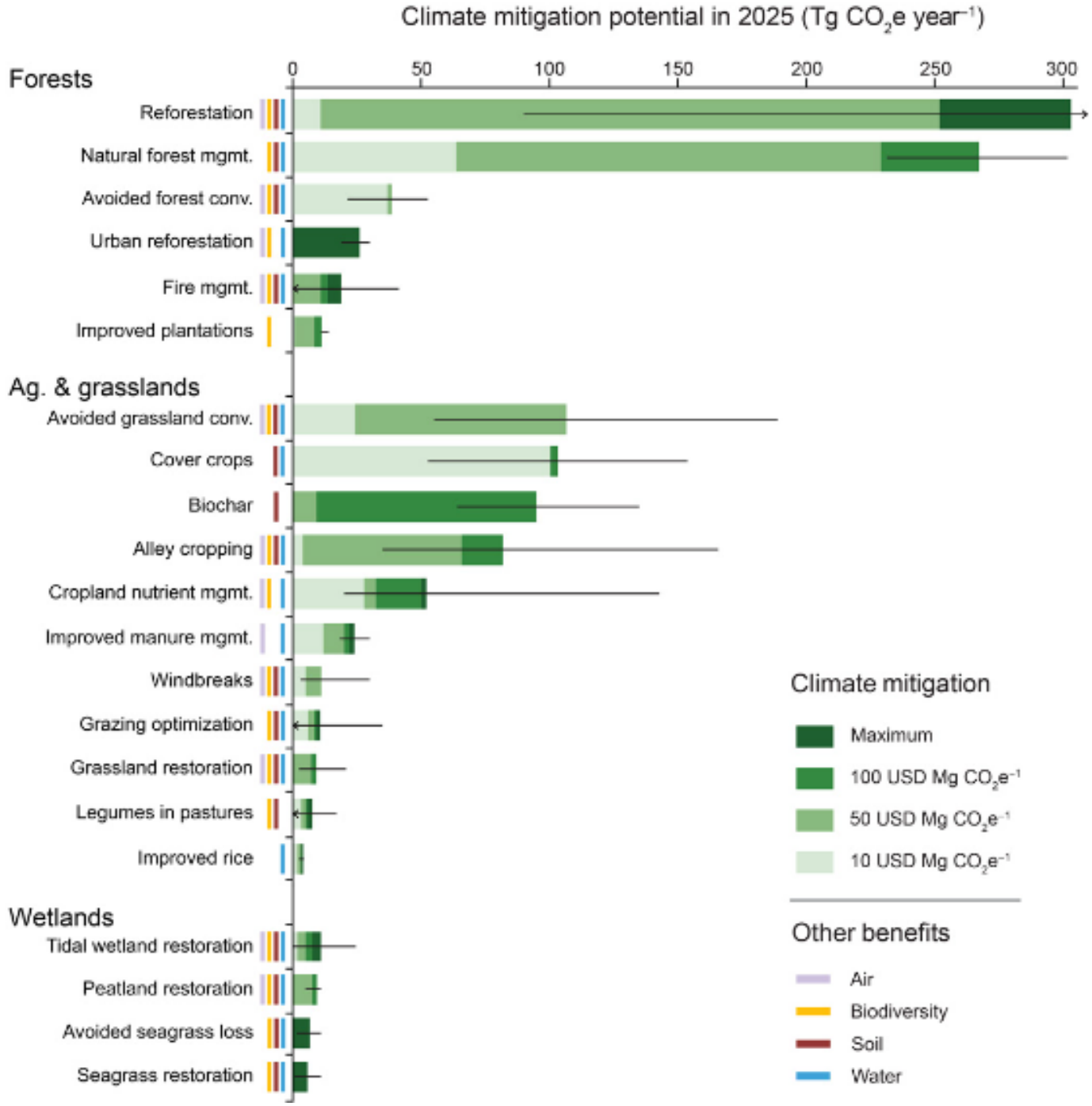
A brief history & overview
Latest data innovations
Tour!

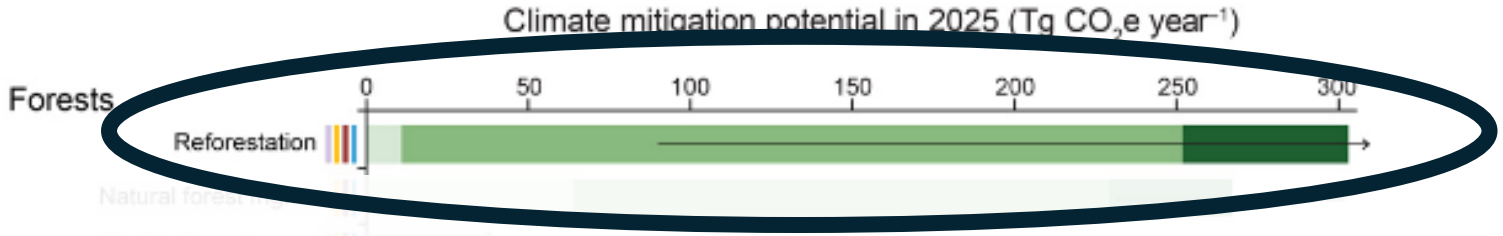
SCIENCE ADVANCES | RESEARCH ARTICLE

ENVIRONMENTAL STUDIES

Natural climate solutions for the United States

Joseph E. Fargione[1]*, Steven Bassett[2], Timothy Boucher[3], Scott D. Bridgham[4], Richard T. Conant[5], Susan C. Cook-Patton[3,6], Peter W. Ellis[3], Alessandra Falcucci[7], James W. Fourqurean[8], Trisha Gopalakrishna[3], Huan Gu[9], Benjamin Henderson[10], Matthew D. Hurteau[11], Kevin D. Kroeger[12], Timm Kroeger[3], Tyler J. Lark[13], Sara M. Leavitt[3], Guy Lomax[14], Robert I. McDonald[3], J. Patrick Megonigal[6], Daniela A. Miteva[15], Curtis J. Richardson[16], Jonathan Sanderman[17], David Shoch[18], Seth A. Spawn[13], Joseph W. Veldman[19], Christopher A. Williams[9], Peter B. Woodbury[20], Chris Zganjar[3], Marci Baranski[21], Patricia Elias[3], Richard A. Houghton[17], Emily Landis[3], Emily McGlynn[22], William H. Schlesinger[23], Juha V. Siikamaki[24], Ariana E. Sutton-Grier[25,26], Bronson W. Griscom[3]


Climate mitigation potential in 2025 (Tg CO_2e $year^{-1}$)
0
50
100
150
200
250
300
Forests
Reforestation
Natural forest mgmt.
Avoided forest conv.
Urban reforestation
Fire mgmt.
Improved plantations
Ag. & grasslands
Avoided grassland conv.
Cover crops
Biochar
Alley cropping
Cropland nutrient mgmt.
Improved manure mgmt.
Windbreaks
Grazing optimization
Grassland restoration
Legumes in pastures
Improved rice
Wetlands
Tidal wetland restoration
Peatland restoration
Avoided seagrass loss
Seagrass restoration
Climate mitigation
Maximum
100 USD Mg CO_2e^{-1}
50 USD Mg CO_2e^{-1}
10 USD Mg CO_2e^{-1}
Other benefits
Air
Biodiversity
Soil
Water



Reforestation is the **single biggest** natural climate solution

Ecologically-appropriate for > 25% tree cover? ✓

Not currently a forest? ✓

Not a city, road, or good agricultural land? ✓

Fargione et al. 2018 Science Advances

CO-BENEFITS

LOWER VALUE

NATURAL LAND USE

NATURAL LAND USE

Natural lands: (1) shrub cover, (2) grassland cover, (3) protected areas (i.e., federal lands), (4) postburn landscapes

LOWER VALUE

Agricultural lands: (5) Challenging croplands and (6) pasture lands (some with challenging soils)

Frequently flooded landscapes: (7) Areas that experience flood events an average of one in five years.

CO-BENEFITS

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Riparian buffers: (8) Areas near streams to help shade and partially protect streams from the impact of adjacent land uses.

Urban open space: (9) Parks, roadsides with room for additional tree cover

Climate Resilient Corridors: (10) Places with microclimate variation that facilitates climate change adaption

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LOWER VALUE

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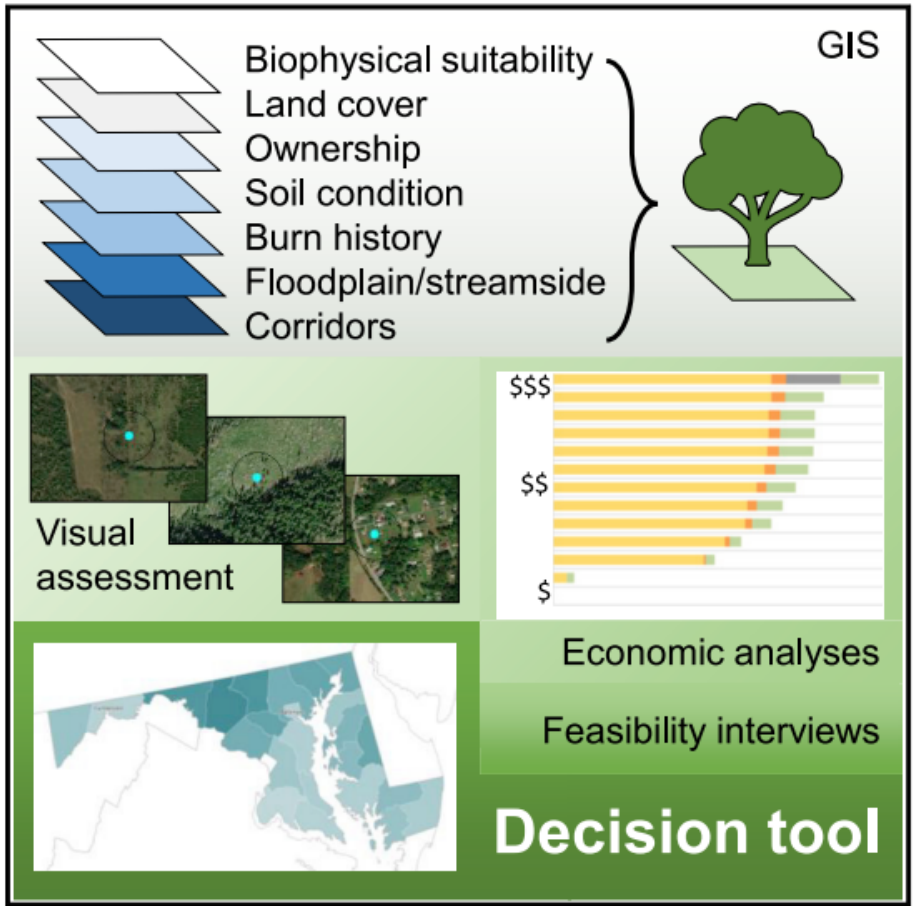
One Earth

Lower cost and more feasible options to restore forest cover in the contiguous United States for climate mitigation

Graphical Abstract



Authors

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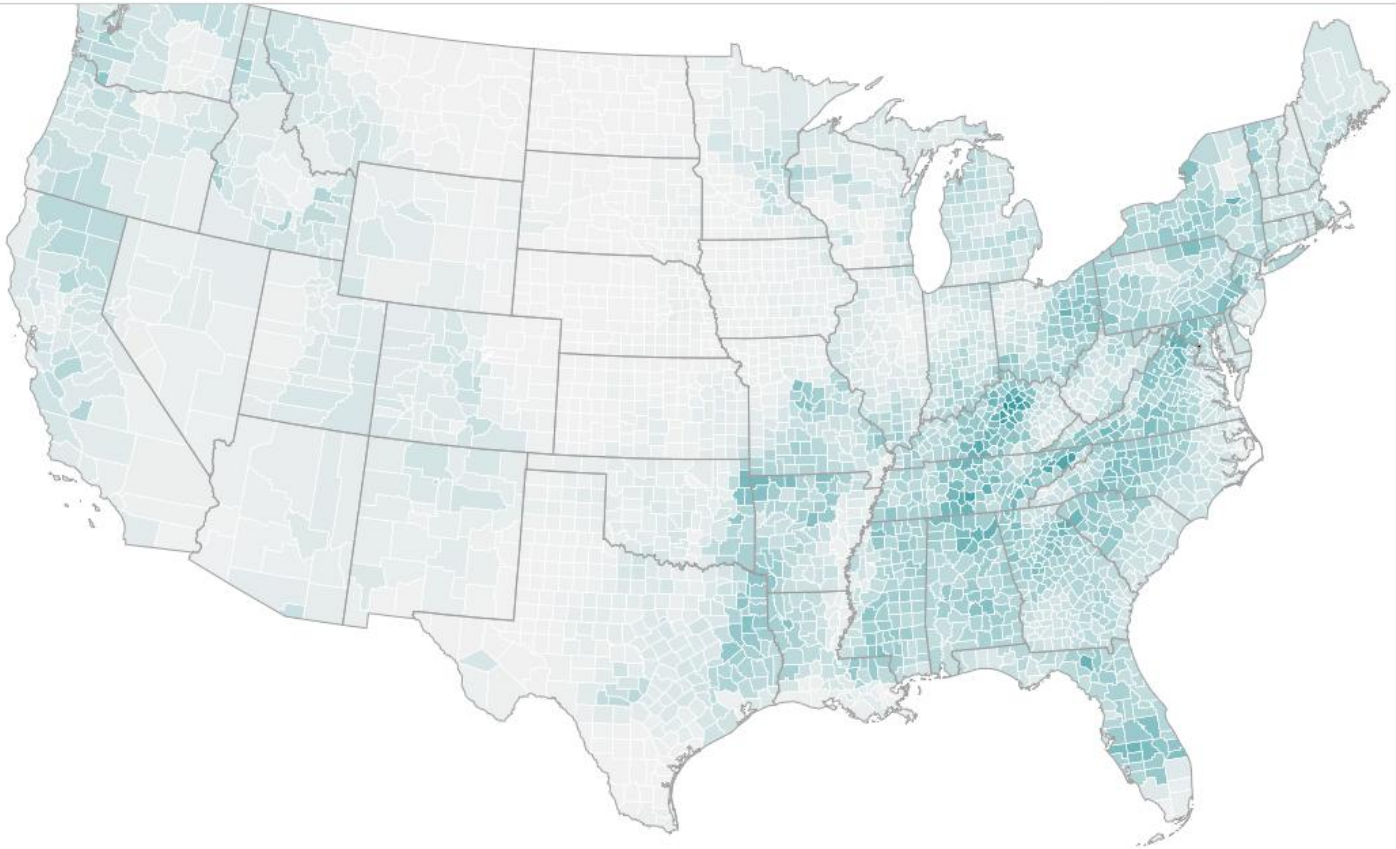
In Brief

To inform decisions about where to deploy restoration of forest cover as a climate solution, we produced maps of opportunities across the contiguous United States. We found up to 51.6 Mha of opportunity for new forest, which we divided into 10 different classes to compare their carbon capture, costs, co-benefits, and feasibility. We found that the opportunity class with the strongest potential differed by state but that many opportunities fall in lower-cost and more

Note: The data on the Reforestation Hub is updated periodically (once or twice a year) based on the latest data and science. Please join our mailing list or check back for the most recent, up-to-date numbers. Data last updated 21 March 2023.

REFORESTATION HUB

About FAQ Select a state



mapbox

There are up to 148 million acres of opportunity in the United States to restore forest cover for climate mitigation.

Reforesting these areas with approximately 76.2 billion trees could capture 535 million tonnes of CO_2 per year, equivalent to removing 116 million cars from the road.

Low High

Total Opportunity Acres

Scale by county area

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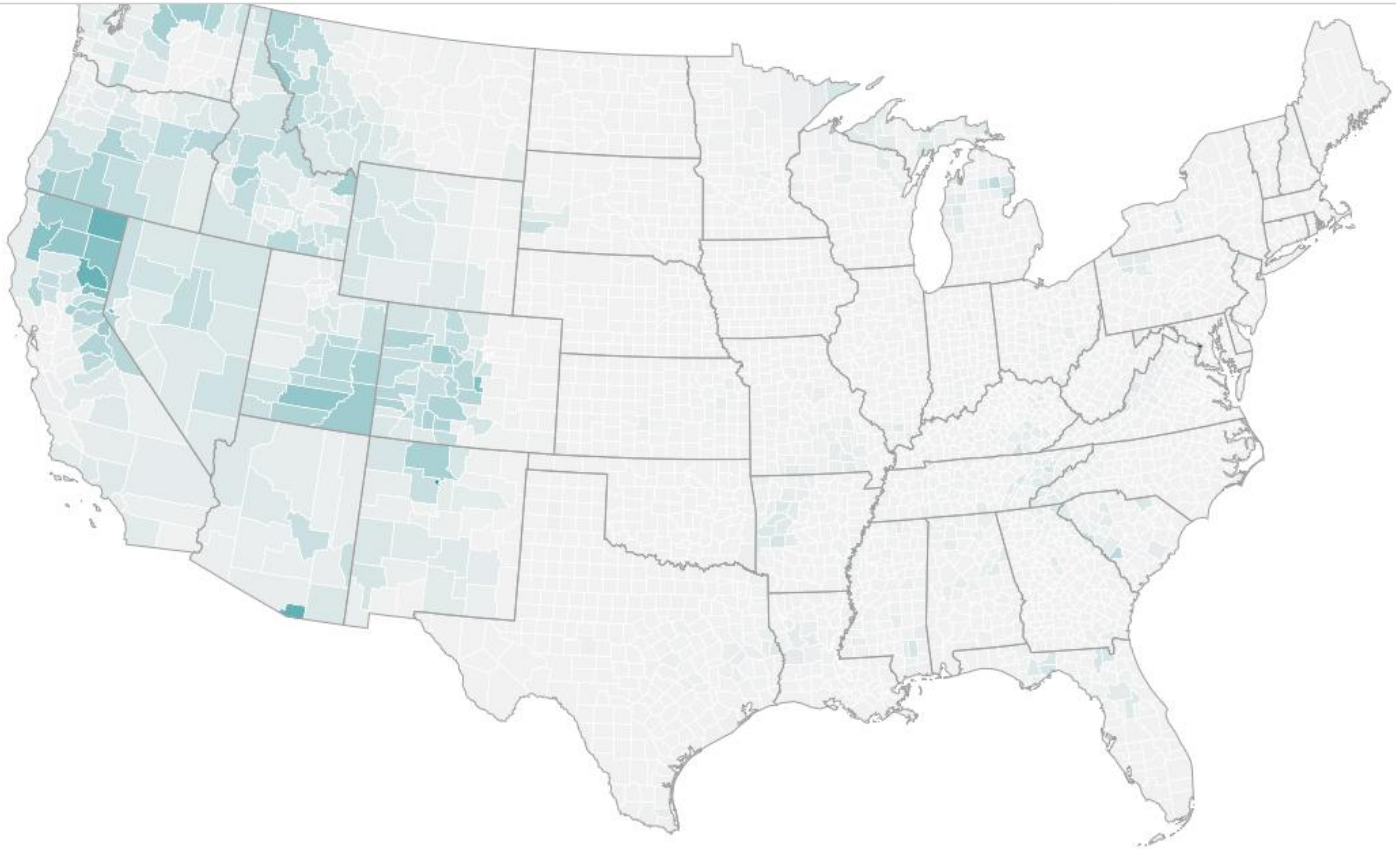

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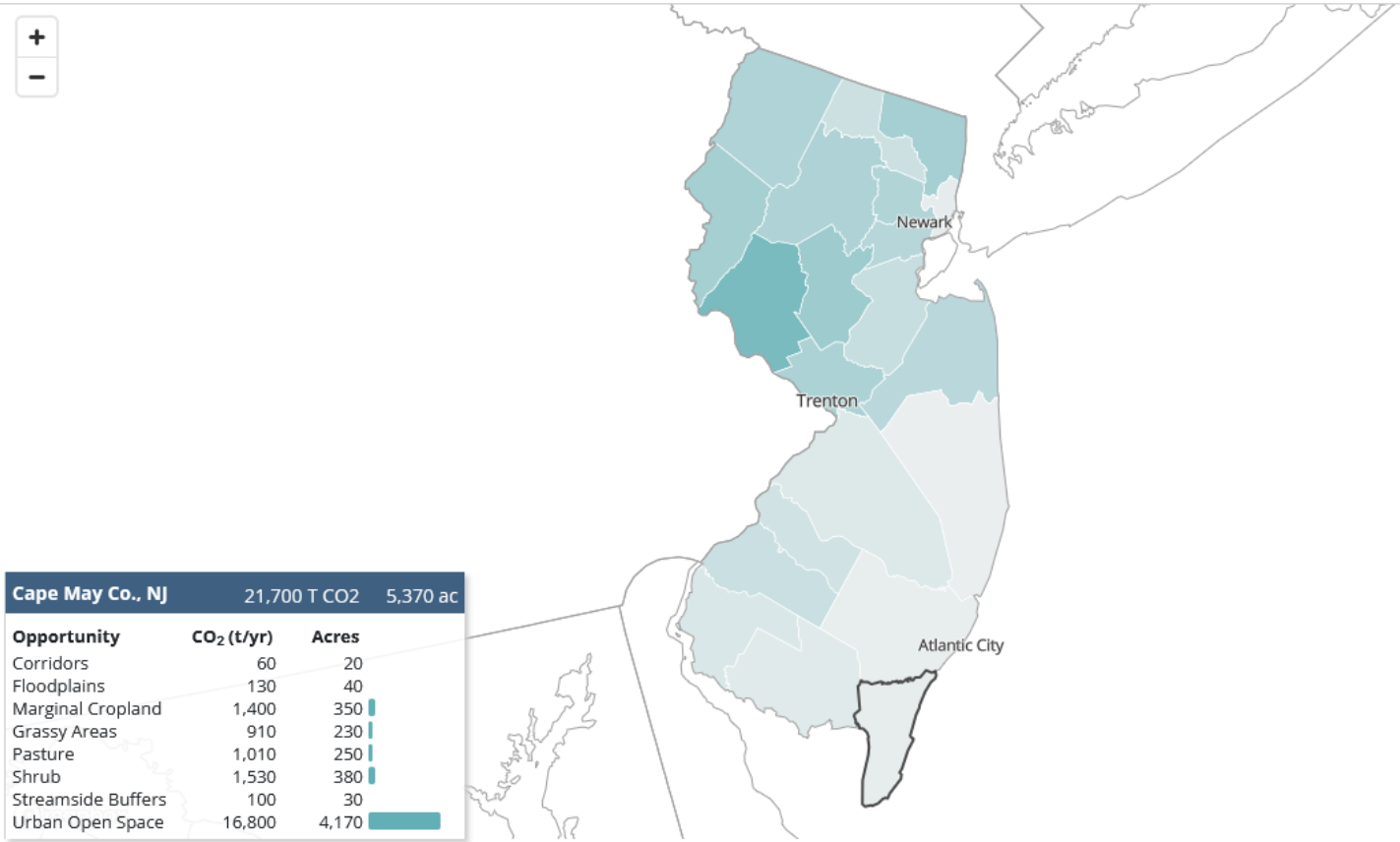
Low High

Federal Acres

Scale by county area

REFORESTATION HUB

About FAQ New Jersey



Cape May Co., NJ	21,700 T CO2	5,370 ac
Opportunity	**CO_2 (t/yr)**	**Acres**
Corridors	60	20
Floodplains	130	40
Marginal Cropland	1,400	350
Grassy Areas	910	230
Pasture	1,010	250
Shrub	1,530	380
Streamside Buffers	100	30
Urban Open Space	16,800	4,170

There are up to 643,000 acres of opportunity in New Jersey to restore forest cover for climate mitigation.

Reforesting these areas with approximately 350 million trees could capture 2.55 million tonnes of CO_2 per year, equivalent to removing 551,000 cars from the road.

Low High

Total Opportunity

Acres

Scale by county area

Scale map colors to NJ

Feedback

This is super useful!

That's a native grassland

Your definitions of [wilderness/marginal land/reforestation need…] doesn't align

The landscape has changed (e.g., fire)

We also need information on [large parcels, nurseries, mill locations…]

The data have improved

Grow the team!

Our Partners

The Nature Conservancy

American Forests

Arbor Day Foundation

National Indian Carbon Coalition

DORIS DUKE FOUNDATION

Forests Canada

Serge Wiltshire

Ciara Hovis

Dan Majka

Major data updates

Land cover data: 2017…2019…2024 National Land Cover Data

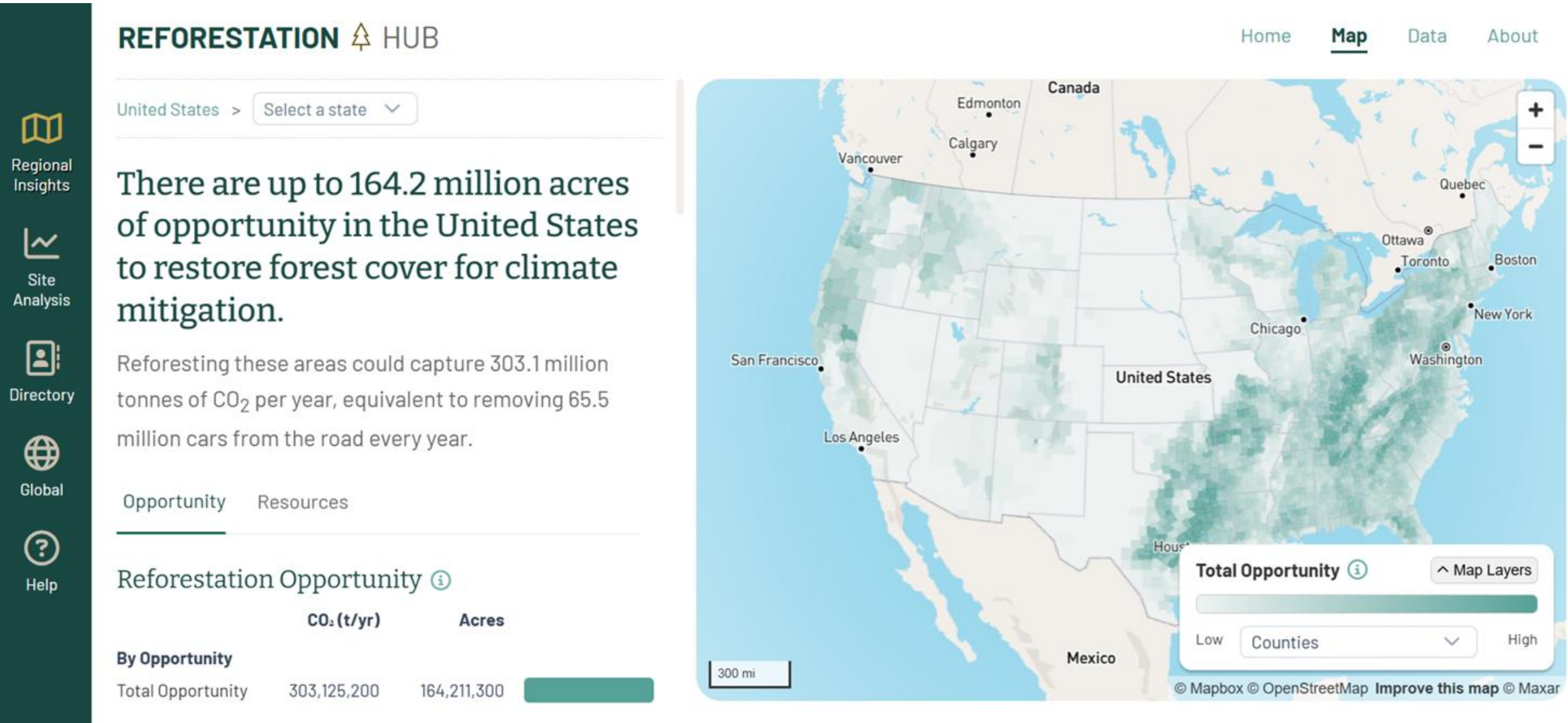
Carbon sequestration: forest type (Smith)…forest type (Hoover)…1-km^2 (Robinson/Wang)

Albedo correction: … … 1-km^2 (Hasler)

Post-burn: Hawbaker…[removed]…Monitoring Trends Burn Severity

Large landowners (>40 acres of opportunity): … … Regrid

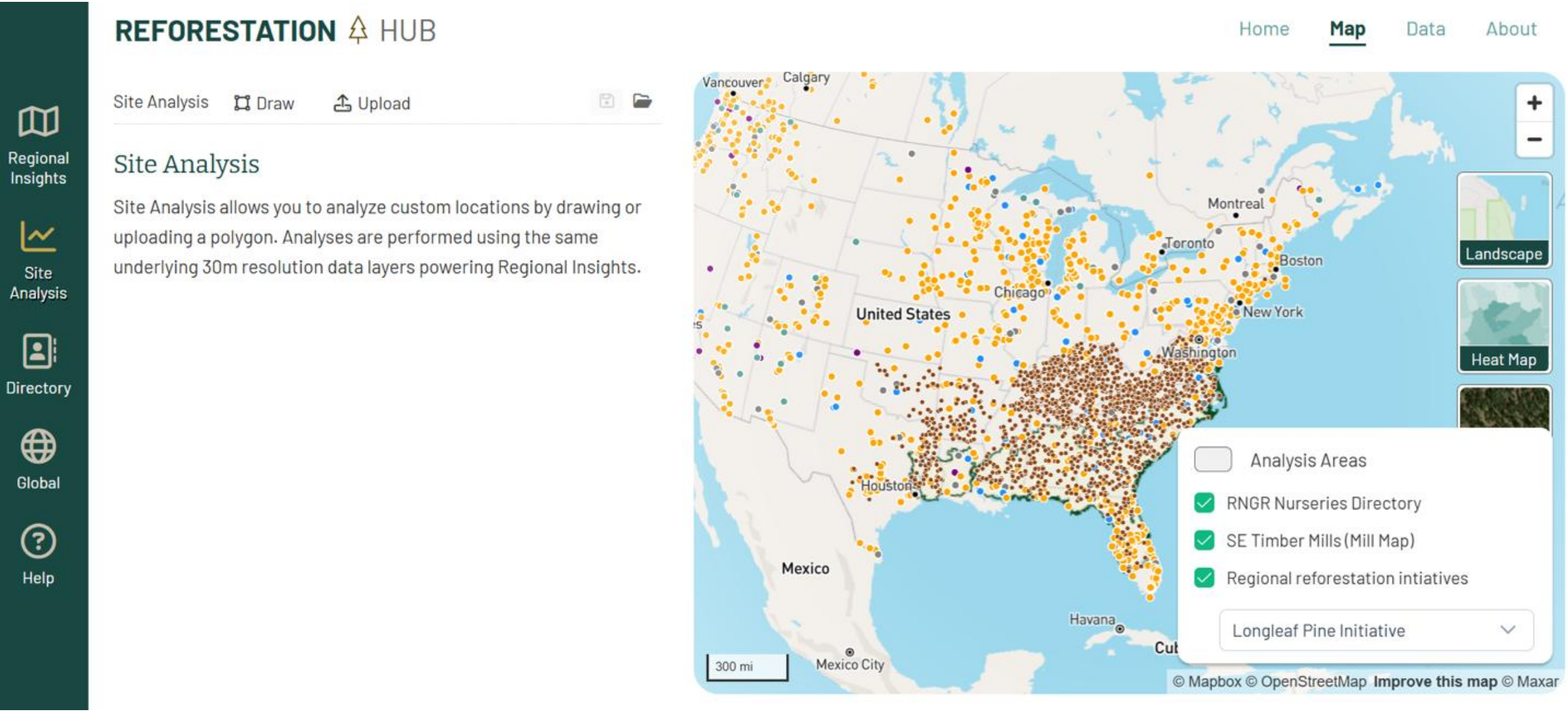
New look, data, and analysis

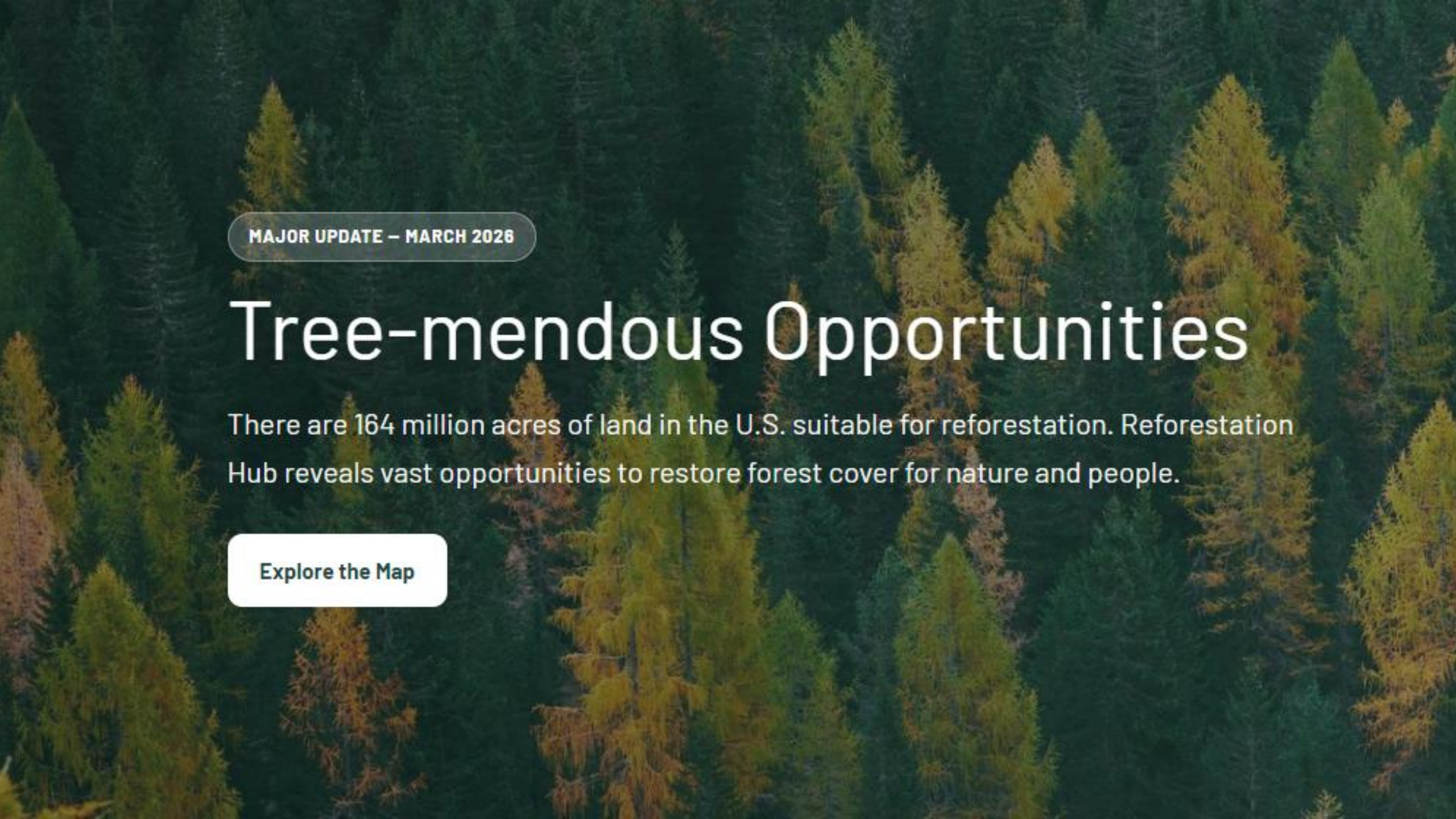


Analysis by...

Country/State/County
Land manager
Watershed
Ecoregions
Congressional district
Cities and Towns
Census tracts
Burn perimeter
Choose your own adventure!

From how much to **how** - partnerships, nurseries, mills




MAJOR UPDATE — MARCH 2026
Tree-mendous Opportunities
There are 164 million acres of land in the U.S. suitable for reforestation. Reforestation Hub reveals vast opportunities to restore forest cover for nature and people.
Explore the Map

Feedback welcome!

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