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Environmental and
Energy Study Institute



US Nature
4Climate

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The Future of Forestry in the Farm Bill

Wednesday, June 07, 2023



US Nature 4Climate

U.S. Nature4Climate is a coalition of 26 organizations dedicated to advancing implementation of Natural Climate Solutions in the United States.

Together, these organizations are raising awareness of the numerous economic, health, and environmental benefits provided by Natural Climate Solutions, and ensuring that the potential of America's natural and working lands are fully integrated into broader climate action efforts.



© Olivia Hutcherson/TNC Photo Contest 2022

Subscribe to their newsletter
& join their network of
decision-makers driving
climate action.



SCAN ME

About EESI



Non-partisan Educational Resources for Policymakers

A bipartisan Congressional caucus founded EESI in 1984 to provide non-partisan information on environmental, energy, and climate policies

Direct Assistance for Equitable and Inclusive Financing Program

In addition to a full portfolio of federal policy work, EESI provides direct assistance to utilities to develop “on-bill financing” programs

Commitment to Diversity, Equity, Inclusion, and Justice

We recognize that systemic barriers impede fair environmental, energy, and climate policies and limit the full participation of Black, Indigenous, people of color, and legacy and frontline communities in decision-making

Sustainable Solutions

Our mission is to advance science-based solutions for climate change, energy, and environmental challenges in order to achieve our vision of a sustainable, resilient, and equitable world.

Polycymaker Education



Briefings and Webcasts

Live, in-person and online public briefings, archived webcasts, and written summaries

Climate Change Solutions

Bi-weekly newsletter with everything policymakers and concerned citizens need to know, including a legislation and hearings tracker



Fact Sheets and Issue Briefs

Timely, objective coverage of environmental, clean energy, and climate change topics



Social Media (@EESIOnline)

Active engagement on Twitter, Facebook, LinkedIn, and YouTube



EESI Farm Bill Resources



Briefing Notice
Agriculture and Climate Series

The climate crisis and years of unsustainable farming in the United States have resulted in soil erosion, pollinator loss, farmworkers and livestock exposed to extreme heat, and other harmful impacts. In 2019, 20 percent of U.S. greenhouse gas emissions came from agriculture. At the same time, farmers and the land they work are vulnerable to climate impacts such as drought and extreme weather. EESI's Agriculture and Climate series covers five sustainable agricultural practices: cover crops, agroforestry, no-till farming, sustainable livestock grazing, and soil conservation.

Congressional Hearings Leading up to the 2023 Farm Bill
By [S. Chase Parker](#) and [Savannah Burkhard](#)
April 16, 2022

Over the course of the next year or so, the 2023 Farm Bill will take shape on Capitol Hill. Roughly every few years, Congress develops a new farm bill. This article provides an environmental lens on the development of the upcoming bill.

Key Changes

- This resource will be updated as the House and Senate legislative Farm Bill texts are released.

Legislative Side-By-Side		
Current Law <i>Public Law 117-103 (October 2022)</i>	House Version	Senate Version
<p>§6 Purpose The purpose of this section is to help local families and small businesses achieve cost savings by granting loans to qualified consumers for equipment durable and effective energy efficiency measures.</p> <p>§6 Definitions In this section: (A) "eligible entity" means— (i) any public power district, public utility district, or similar entity, or any electric cooperative described in section 10332(d) or (d)(1)(B) of title 16, that borrowed and repaid, applied for, or is paying an electric loan made or guaranteed by the Rural Utilities Service for any production agriculture; (ii) any entity primarily owned or controlled by 1 or more entities described in subsection (A); or (iii) any other entity that is a eligible borrower of the Rural Utilities Service, as determined under section 1716(B) of title 7, Code of Federal Regulations (or successor regulations); (B) "energy efficiency measure" means "The term "energy efficiency measure" means, for an entity owned by an eligible entity, structural improvements and investments in cost-effective, commercial technologies to increase energy</p>	<p>This resource will be updated as the House legislative Farm Bill text is released.</p>	<p>This resource will be updated as the Senate legislative Farm Bill text is released.</p>

- Congressional briefings
- Articles and podcasts
- *Climate Change Solutions* newsletter special editions
- Farm Bill hearing tracker
- Legislative side-by-side-by-sides

All resources available at: www.eesi.org/2023-farm-bill

Briefing Series: Farm Bill in Focus



EESI
Environmental and
Energy Study Institute

Every Other Wednesday

The Process and Path Forward for Passing a Bipartisan Farm Bill | Recording Available

Climate, Energy, and Economic Win-Wins in the Farm Bill | Recording Available

Unlocking Rural Economies: Farm Bill Investments in Rural America | Recording Available

The Future of Forestry in the Farm Bill | June 07, 2:00-3:30 PM EDT

Conservation Practices from Farms to Forests and Wetlands | June 21, 2:00-3:30 PM EDT

BETTER
CHOICES
FOR PEOPLE AND THE PLANET

FARM BILL IN FOCUS

THE FUTURE OF FORESTRY
IN THE FARM BILL



LAUREN T. COOPER

Chief Conservation Officer
Sustainable Forestry Initiative



Founder
Forest Carbon and Climate Program Michigan State University

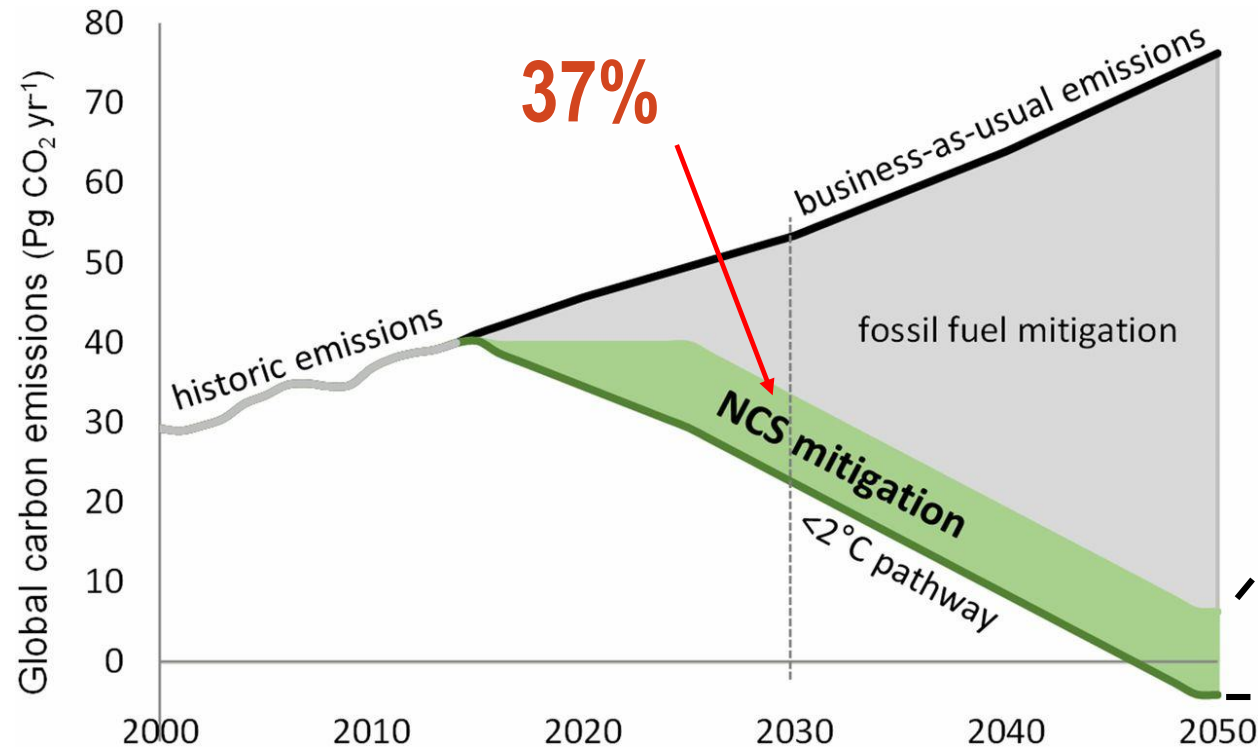


JUNE 7, 2023

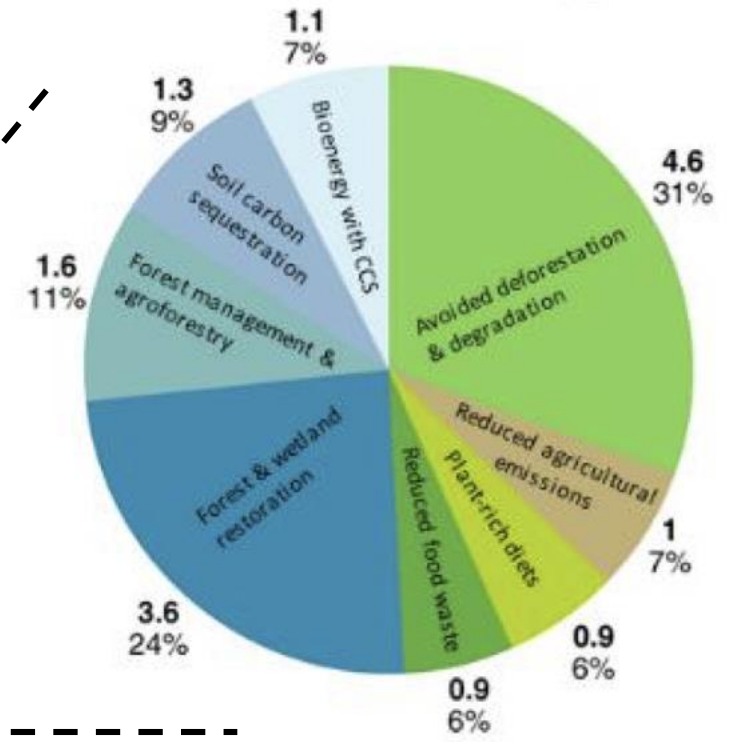
CARBON AND CLIMATE AND FORESTS

SCIENCE INTRO

CONTRIBUTION OF NATURAL CLIMATE SOLUTIONS TO BELOW 2°C

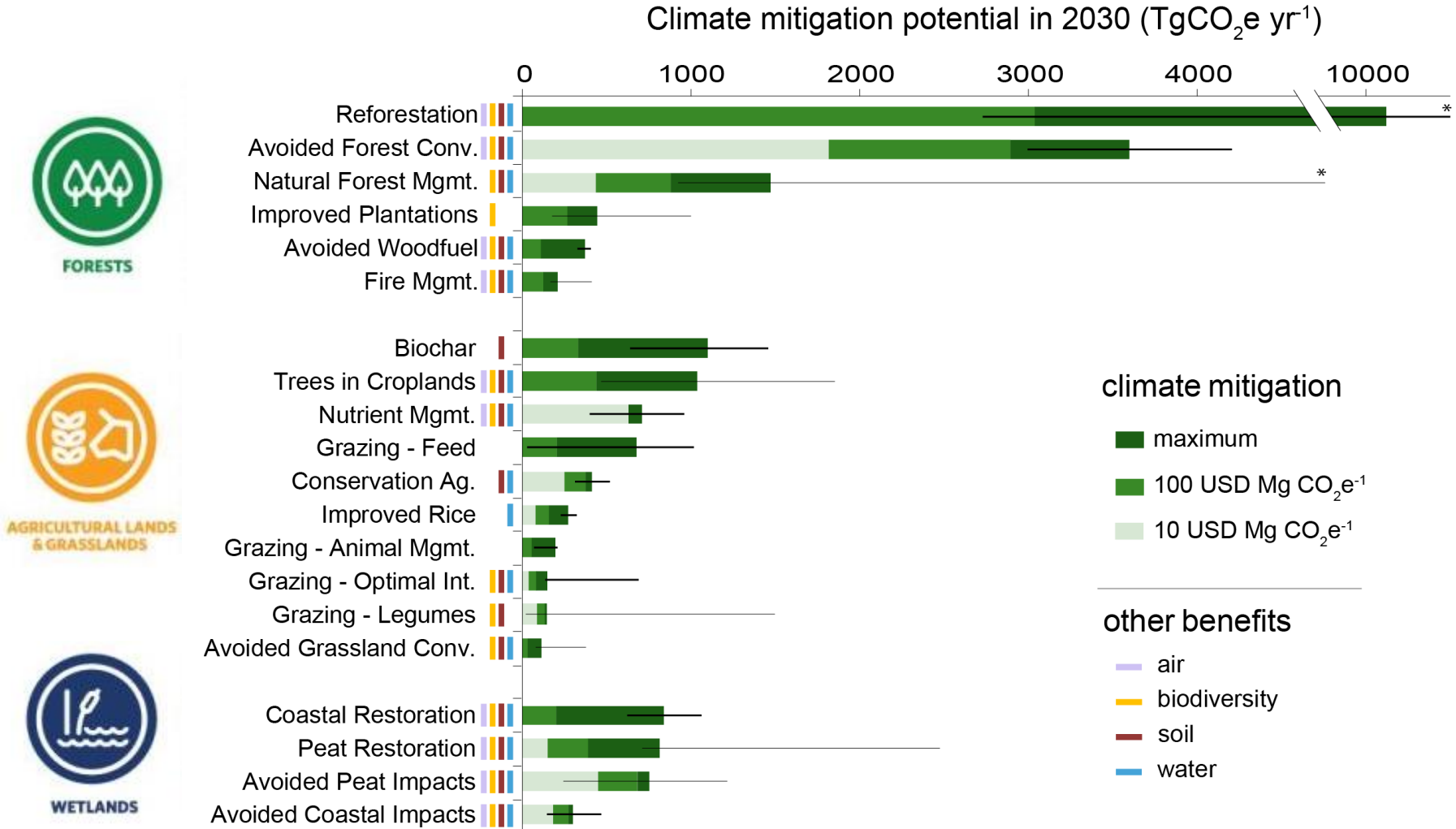


Land sector in 2050 (wedges in GtCO₂e yr⁻¹)



(Fargione et al. 2018, Griscolm et al. 2017, Roe et al. 2019)

NATURE-BASED SOLUTIONS



(Griscoll et al. 2017)

SOLUTIONS

ADVANCING ON FORESTS + CLIMATE

FOREST-BASED STRATEGIES FOR CLIMATE CHANGE

(MSU FCCP, 2022)



**INCREASE OR MAINTAIN
FORESTLAND**

**Avoiding Deforestation and
increasing Reforestation**



**MAINTAIN OR INCREASE
CARBON STOCKS**

**Changing Management Plan;
Adapting to Climate Change**



**INCREASE SUSTAINBLE
WOOD USE**

**Substituting Wood for Energy-
intensive Building Materials**

CONCERN

- Total forest area in the United States is projected to decrease by approximately 23 million acres by 2050, a 3% reduction from the 1997 forest area (USDA)
- Projected slow net decline in U.S. forestland area, private timberland area is likewise projected to decline
- Abundant restoration opportunity

OPPORTUNITY

- Public, private, tribal, and urban lands

TACTICS

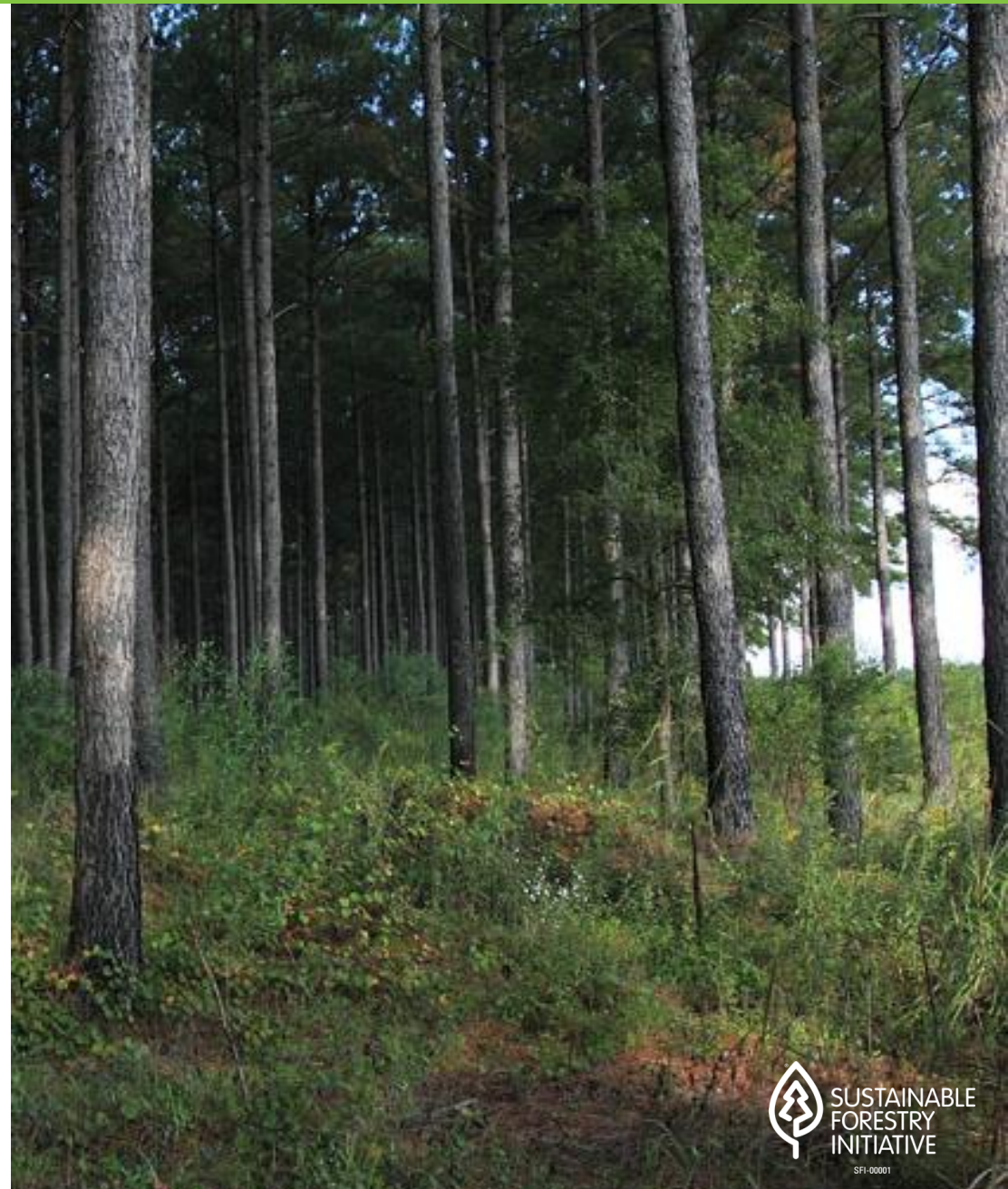
Avoided conversion
(deforestation)
Reforestation
Afforestation



BOLSTERING DEMAND FOR WORKING FORESTS

ECONOMICS DRIVE LAND USE DECISIONS

- Keeping working forests as forests – minimizing incentives to develop and convert or agricultural
- Make restocking and reforestation more attractive to landowners



- Large and cost-effective mitigation opportunities
 - Improve resilience (avoid carbon loss)
 - Increase trees and tree age (future adapted trees, older trees and forests)
- Many can be implemented rapidly by working with current landowners
- Activities Include
 - Restoration
 - Improved forest management
 - Agroforestry & Urban forestry
 - Avoiding degradation
 - Climate change adaptation



CLIMATE CHANGE AS A “THREAT MULTIPLIER”

DROUGHT

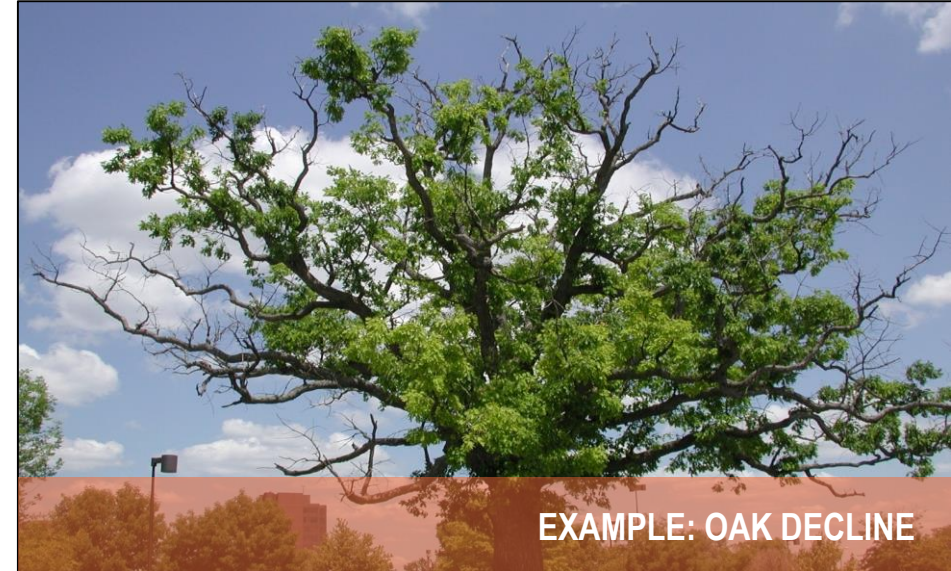
- Moisture stress in trees and reduces their resistance to other disturbances (i.e., pests & diseases)

PESTS

- Warming winters provide better conditions for insect outbreaks
- Forests with high levels of insect-induced mortality have increased wildfire risk

FIRE

- Burned stands loss carbon immediately and over time



EXAMPLE: OAK DECLINE



EXAMPLE: CATASTROPHIC FIRE (USFS)

PRIMARY APPROACHES

1. Harvested Wood Products (HWPs)
 - Stores carbon in woody material
2. Materials substitution
 - Using less emission-intensive materials (steel, plastics, concrete)
3. Energy production
 - Co-firing
4. Efficiency improvements
 - Waste material, recycling



EXAMPLE: MSU STEM MASS TIMBER

Two structures with glulam columns and beams, CLT floors to former power plant

CARBON STORAGE

- Stores ~1856 metric tons of CO₂
- = 4.5 million vehicle miles OR
- = 394 cars driven for 1 year

ADDITIONAL CLIMATE BENEFITS

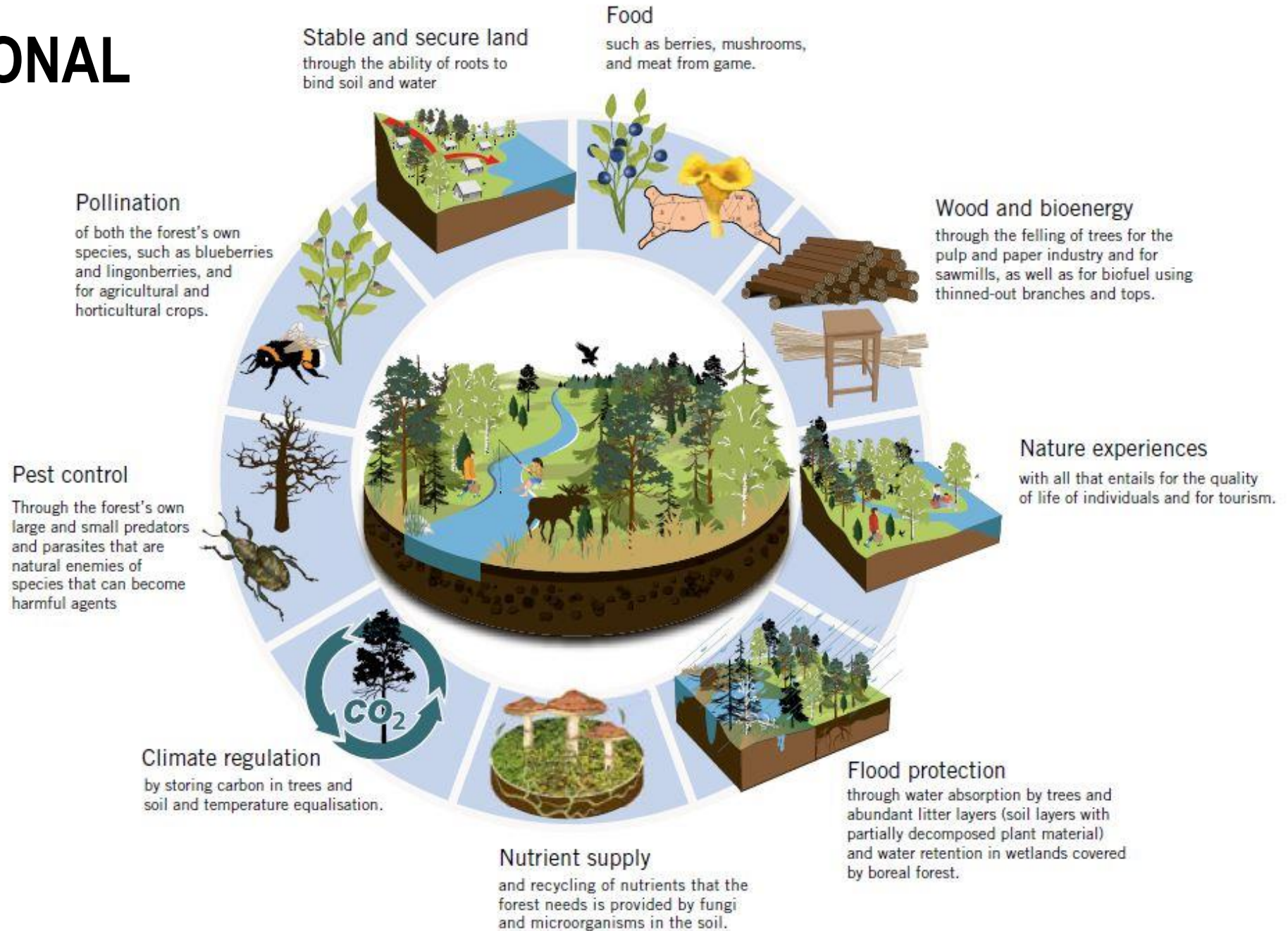
- Avoids emissions of steel & concrete
- Efficient construction times
- Potential for greater performance efficiency (e.g., energy use over time)



TAKING ACTION

AMBITIOUS POLICY AGENDA WITH SAFEGAURDS

TRANSFORMATIONAL BIOECONOMY



STRATEGIES FOR THE FARM BILL

- **Expert organization and coalitions provide focused recommendations**
 - Forest-Climate Working Group (FCWG)
 - Forests in the Farm Bill Coalition (FIBC) – recently released detailed recommendations for 2023
- **Forest Management**
 - Restoration, reducing fire risk (e.g., via controlled burning), adaptation strategies
 - Partnerships across jurisdictions (Good Neighbor Authority)
 - Protect forestlands from conversion
- **Forestry Research – federal, private, and academia**
 - Supporting Forestry Inventory and Analysis program
 - Funding for collaborative, impactful, and interdisciplinary research
- **Advance Markets for Forests and products**
 - Traditional (wood and fiber) and non-traditional (carbon, biodiversity, water credits, non-timber forest products))
 - Wood innovation – facilities, processing, market development, regional hubs and strategies
 - Increasing efficiency and reducing waste
- **Workforce development**
 - Skilled Labor, Diversity in jobs and professionals
- **Urban and community forestry**
 - Equity and social justice
 - Climate resilience



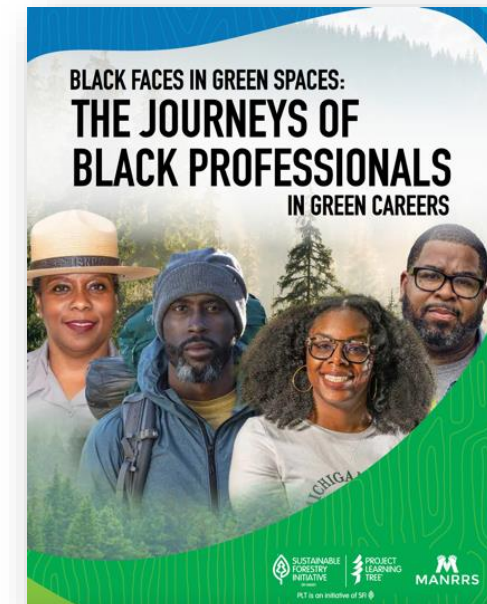
FIFB RECOMMENDATIONS AND POLICY SOLUTIONS

The purpose of this document is to provide justification for recommendations and proposed solutions to be considered in the Farm Bill. Recommendations below correspond with the summarized recommendations document to provide details of the need for public policy changes and proposed solutions to address the gap in legislation.

FORESTRY

Incentivize ways to have USDA use the tools and funds Congress previously provided to increase the pace and scale of forest restoration, and to work across boundaries to reduce risks posed by wildfire.

JUSTIFICATION: The 2018 Farm Bill amended section 103 of the Healthy Forests Restoration Act (16 U.S.C. § 6513), providing a new authority (8401 Promoting Cross Boundary Wildfire Mitigation) for the Forest Service to spend up to \$20 million on grants to state foresters for hazardous fuel reduction projects that cross land ownership boundaries, particularly in priority landscapes or identified in state Forest Action Plans (FAPs). While the new authority is working



BEST PRACTICES AND TRADEOFFS

Forests are complex – and interventions have impacts

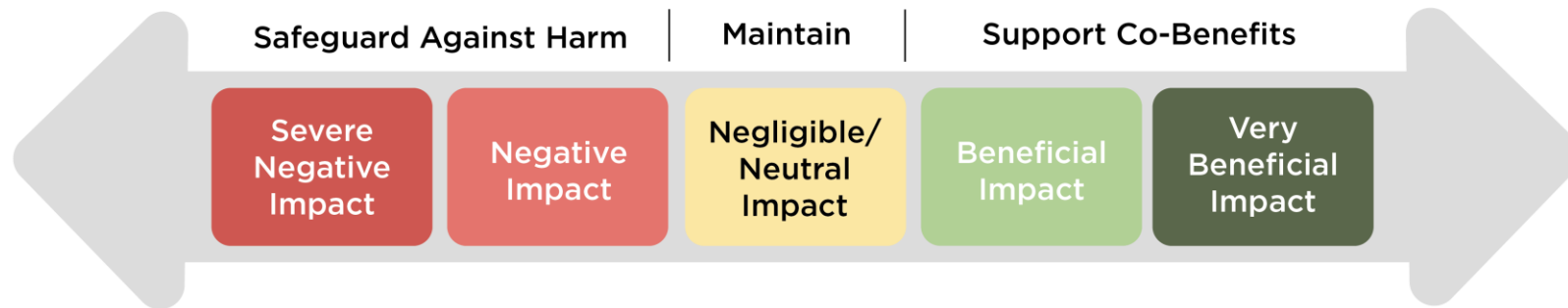
Co-occurring global biodiversity crisis (!)

Safeguards limit harm and unintended consequences and nurture best outcomes

Key is identifying indicators and metrics

Example:

Michigan has a recovering Elk population (MI DNR 2020)



SAFEGUARD TOOLS: CERTIFICATION

THE SFI URBAN AND COMMUNITY FOREST SUSTAINABILITY STANDARD



SFI recognizes the importance of access to green spaces and improving public health and wellness through our standards, initiatives, and partnerships.

APPROVED MAY 2023

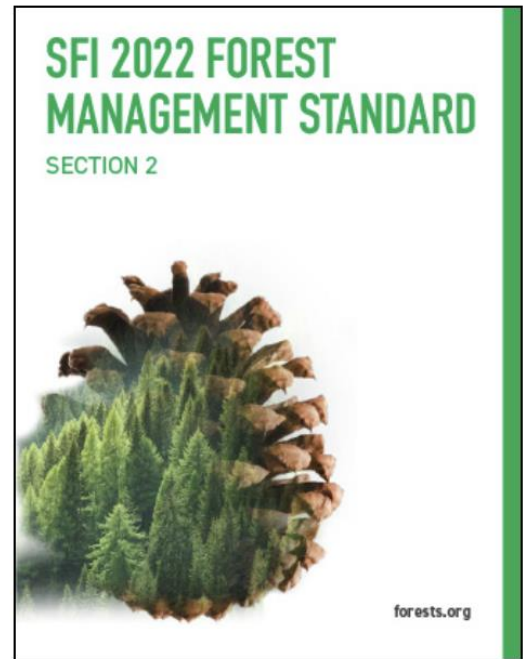


ALL COMMUNITIES
DEPEND ON
**URBAN
FORESTS**

SAFEGUARD TOOLS: CERTIFICATION

SFI STANDARDS SUPPORT CLIMATE-SMART FORESTRY

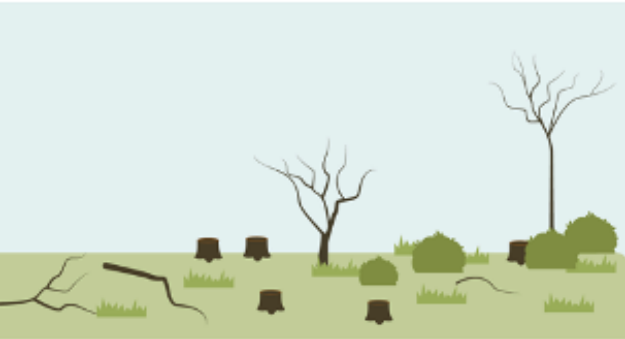
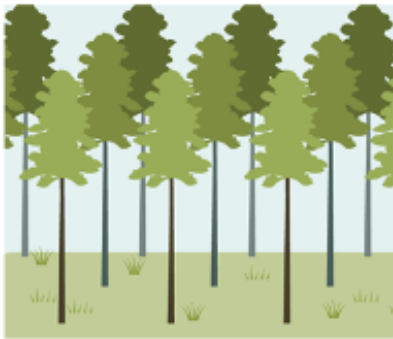


The SFI 2022 Forest Management Standard contains new climate-smart forestry objective that requires forest managers to identify climate change risks and tackle them through reducing emissions from their operations or increasing carbon capture.



Identify and address climate change risks to forest and forest operations and the development of adaptation objectives and strategies.

Identify and address opportunities to mitigate effects associated with its forest operations on climate change.

ADVANCING STRATEGIES WITH POLICIES

				
Starting condition	Deforested Degraded	High Intensity management Low Intensity management	Minimal to no interventions	
Carbon potential	Low storage, Low Sequestration	Low storage, med/high sequestration Medium storage, med/high sequestration	High storage, Medium/low sequestration	
Potential strategy	Afforestation / Reforestation	Improved Forest Management Reduced Impact Logging	Avoided Conversion	

published today!

COOPER AND MACFARLANE, 2023. CLIMATE-SMART FORESTRY: PROMISE AND RISKS FOR FORESTS, SOCIETY, AND CLIMATE. *PLOS CLIMATE*.

THANK YOU

Lauren.cooper@forests.org



SUSTAINABLE
FORESTRY
INITIATIVE

SFI 00001



The Future of Forestry in the Farm Bill

Environmental and Energy Study Institute (EESI) and U.S. Nature4Climate (USN4C)

June 7, 2023

Connecting everyone to the outdoors™







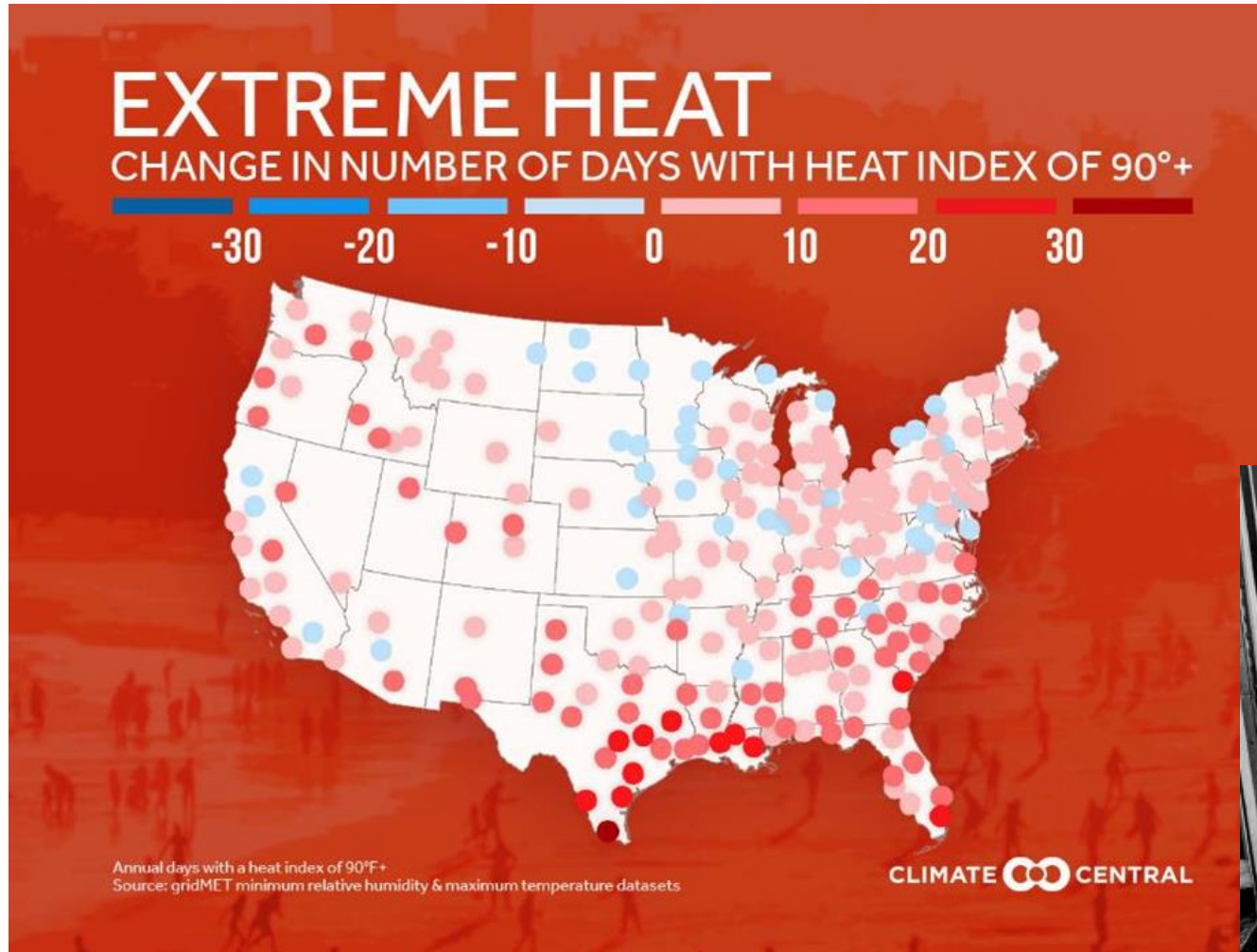








We need shading canopy to combat rising heat.

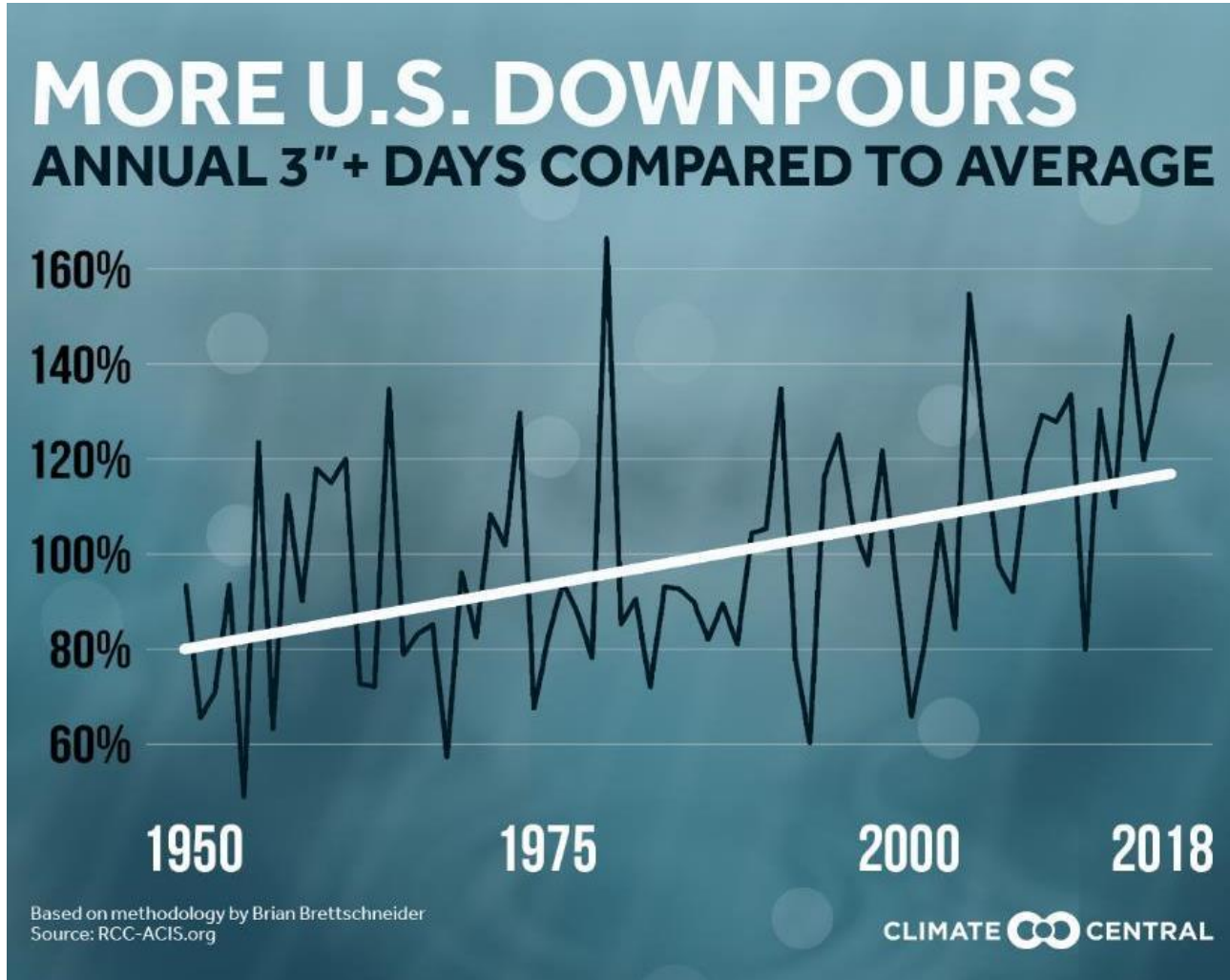


Burlington, VT days above 100 Heat Index

- Zero (Historic 1971-2000)
- 8 (Mid-century 2036-2065)
- 25 (Late century 2070-2099)



We need robust canopy to reduce flood intensity.



Jacksonville

THE POWER OF TREES

2771

MILLION
GALLONS

STORM RUNOFF AVOIDED

22

MILLION
POUNDS

AIR POLLUTION ABSORBED

1.3

MILLION
TONS CO₂e

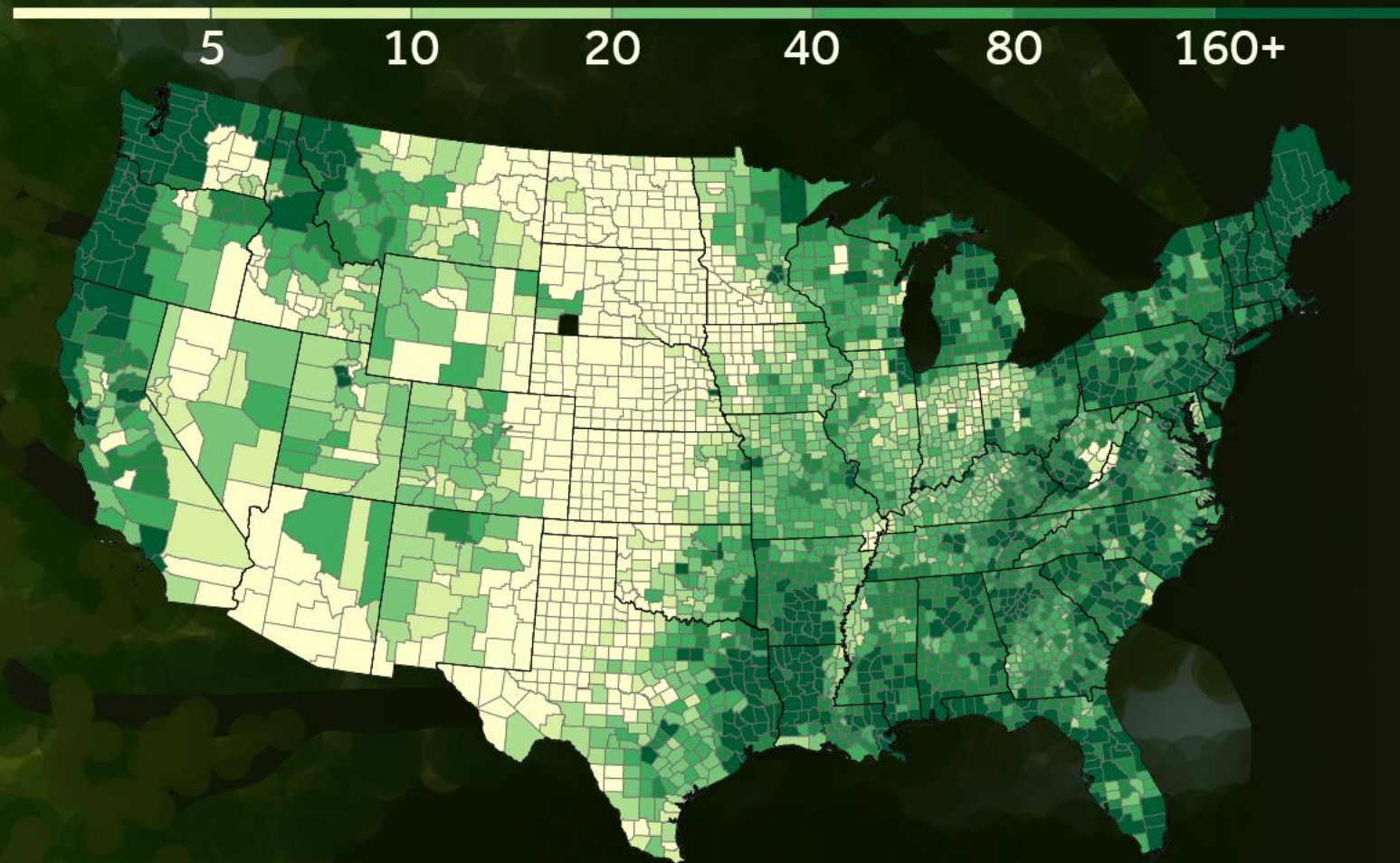
CARBON POLLUTION REMOVED

Estimates for Duval County
Source: U.S. Forest Service i-Tree County Tool

CLIMATE  CENTRAL

RUNOFF AVOIDED BY TREES

Million gallons per year

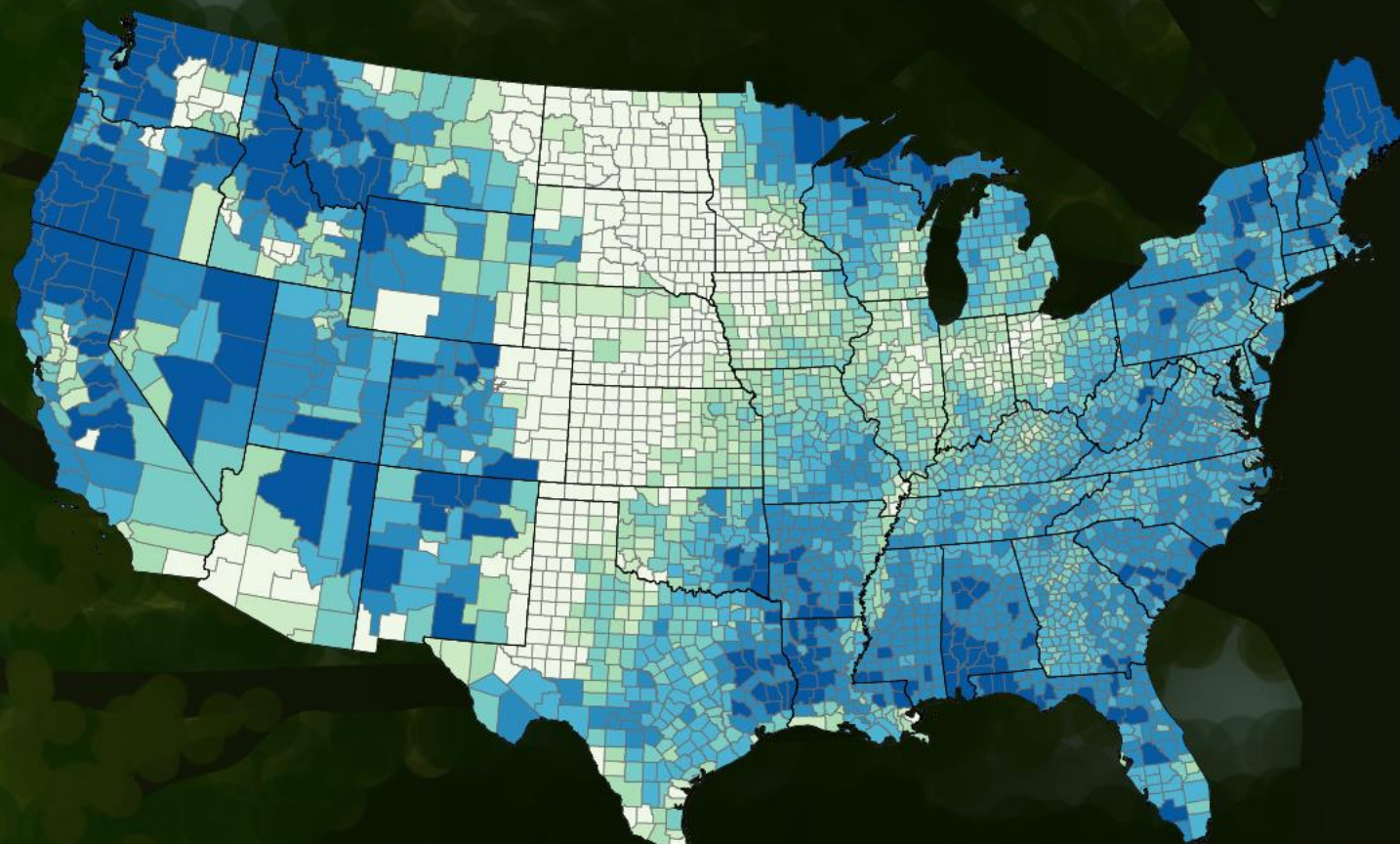


Annual county-level estimates based on 2010 census data.
Source: U.S. Forest Service i-Tree County Tool

AIR POLLUTION ABSORBED BY TREES

Million pounds per year

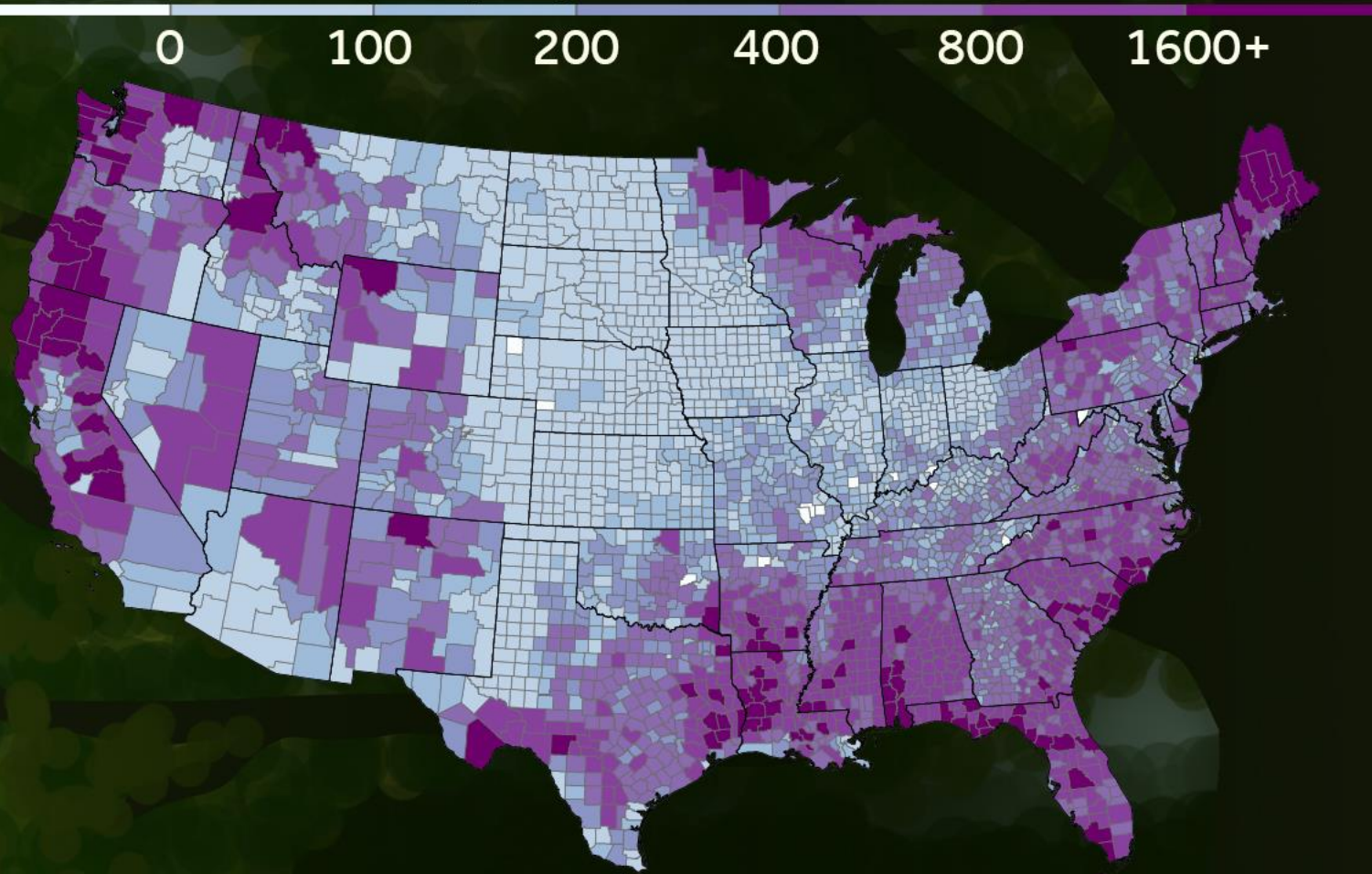
1 2 4 8 16 32+



Annual county-level estimates based on 2010 census data.
Source: U.S. Forest Service i-Tree County Tool

CARBON POLLUTION REMOVED BY TREES

Thousand tons CO₂e per year



Annual county-level estimates based on 2010 census data.
Source: U.S. Forest Service i-Tree County Tool

CLIMATE  CENTRAL



Trees in communities have a global climate impact.

15% of all forest carbon sequestered in the United States is from trees in settlements (urban and community).



Trees improve public health and equity.

- “Healthy Trees, Healthy Lives” – tree canopy strengthens the body, nourishes the mind, boosts healing, and improves financial health
- Increased canopy can reduce citywide temperatures and decrease illness and death.
- As tree canopy increases, mental health disparities for poor communities decrease.
- How does your tree canopy and access to parks compare? Visit American Forests' [TreeEquityScore.org](https://www.americanforests.org/tree-equity-score) and TPL's [ParkServe.tpl.org](https://www.trustforpublicland.org/parkserve).

Trees increase park usage



PLAYGROUNDS
WITH
MATURE
TREES
HAVE 2X
THE USERS

National Study of Playgrounds (2023) – NIH (NHLBI # R01HL114432)



Critical community tree cover is declining.

- 127 million acres of canopy in urban areas (5.5 billion trees)
- \$18.3 billion value air pollution capture and prevention, water pollution, reduced energy use, carbon capture
- **BUT...**we are losing 175,000 acres (36 million trees) a year
- **AND...**historically redlined “class D” communities have ½ the canopy today of “class A” communities

Moving forward – Policy Recommendations

- **Urban and Community Forestry Program –**
 - Continue historic investment and tools to reach those with greatest need
 - maintain funding levels and waiver of match requirements
- **Community Forest Program –**
 - Remove barriers to entry/participation for Tribes and historically underserved communities
 - reduce match requirements
 - revise forest cover requirement
 - increase flexibility in public access requirements
- **(Proposed) Forest Conservation Easement Program –**
 - Use the Farm Bill to protect private working forests that benefit rural and urban communities:
 - 72 percent of annual carbon sequestration from all U.S. forests
 - filter 30 percent of the nation’s drinking water
 - provide habitat for 60 percent of at-risk species
 - support 2.5 million jobs



Since 1972, TPL has protected 4 million acres of public land; created 5,364 parks, trails, schoolyards, and iconic outdoor places; raised \$93 billion in public funding for parks and public lands; and connected nearly 9.4 million people to the outdoors.

To learn more, visit [tpl.org](https://www.tpl.org).

Connecting everyone to the outdoors™

BRENDAN SHANE
CLIMATE DIRECTOR
Brendan.shane@tpl.org
202-494-6839

Thanks to EESI and USN4C



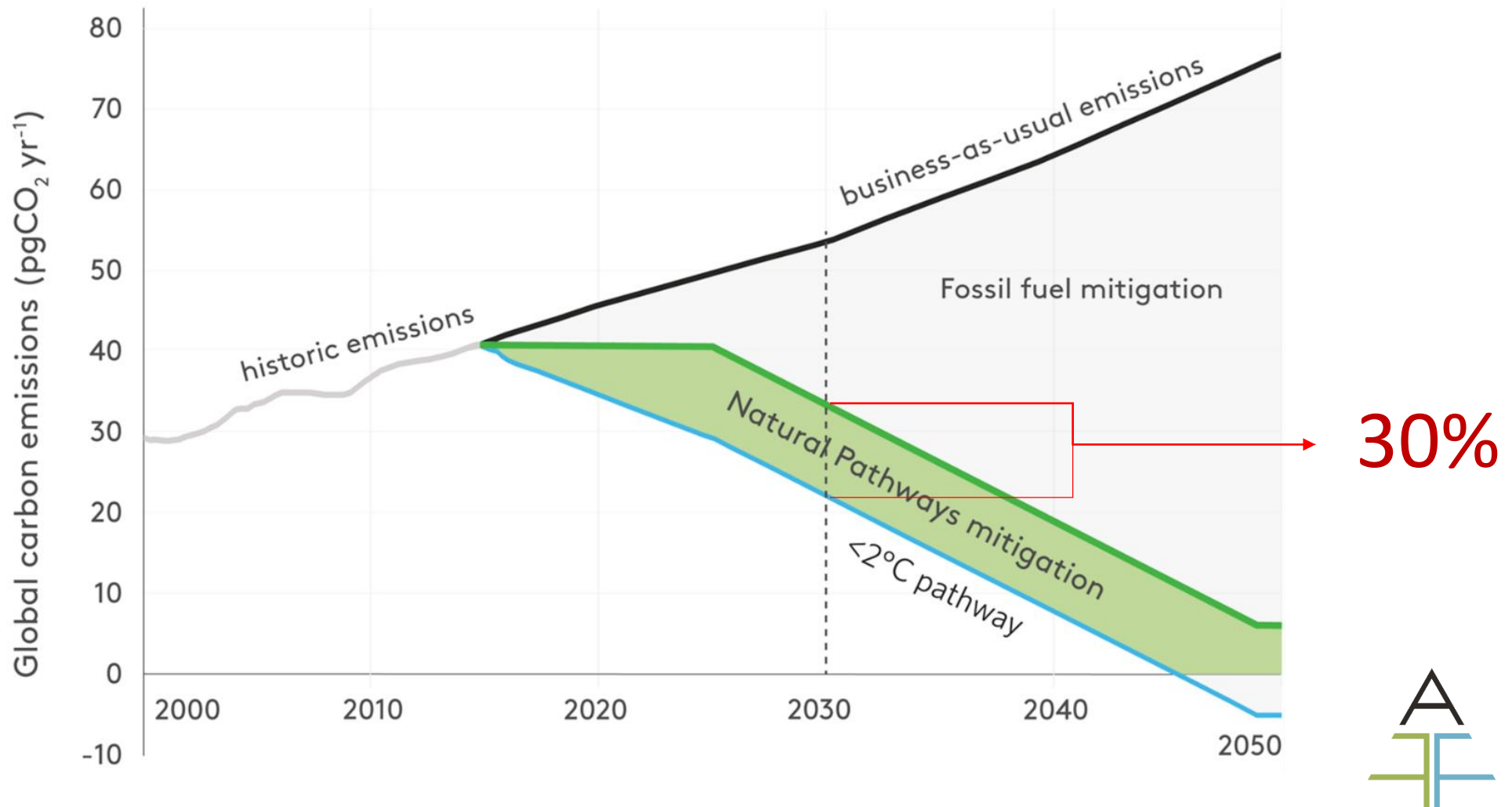
Carbon Markets & The Farm Bill

Christine Cadigan | EVP of Carbon Origination

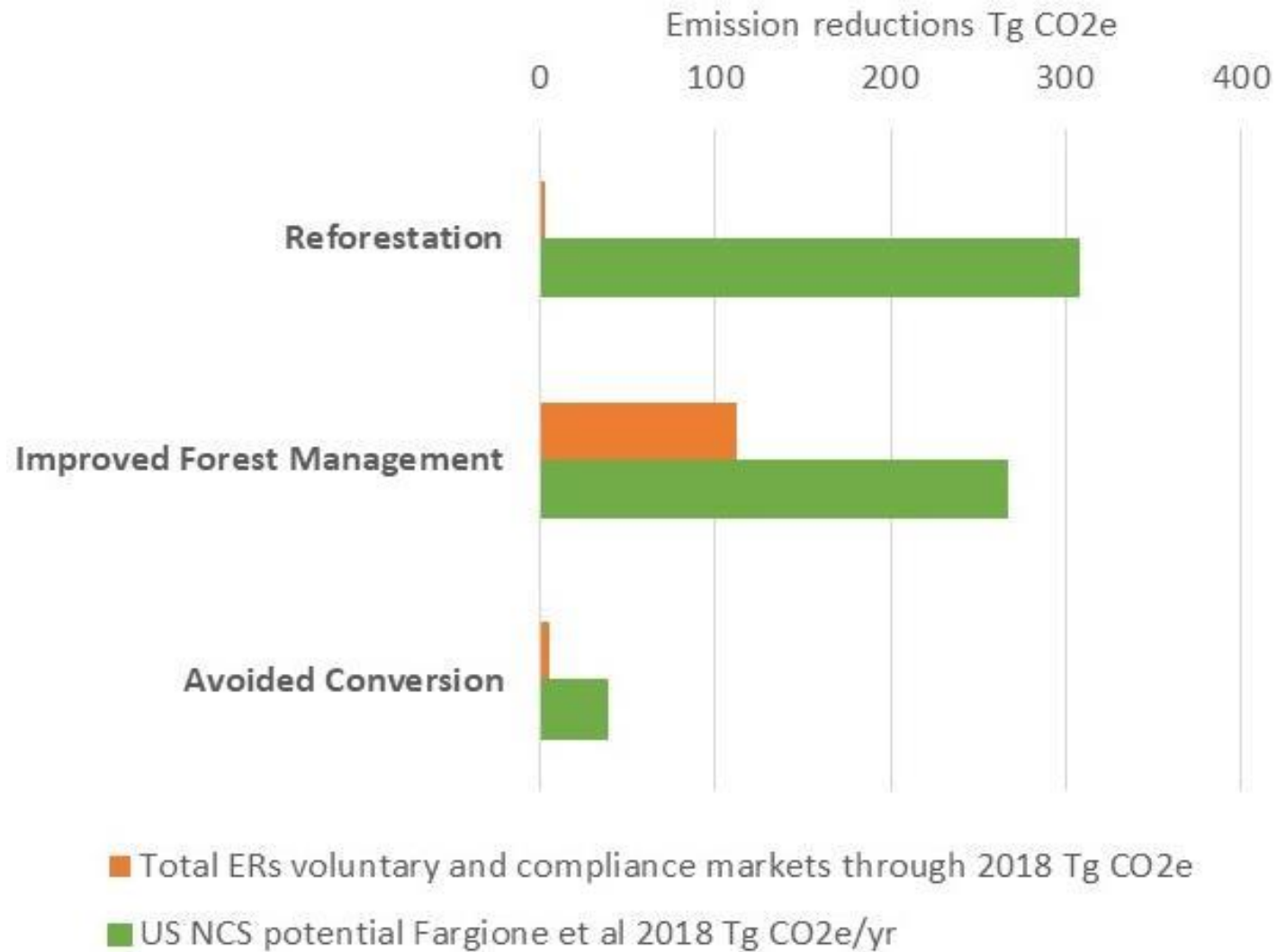


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Foundation

The Need for Natural Climate Solutions



Marketplace Opportunity



Family Forests' Climate Potential...

39% of all U.S. forests are owned by family forest owners

1 in 4 rural Americans own forestland

15% of U.S.'s emissions are sequestered by rural America

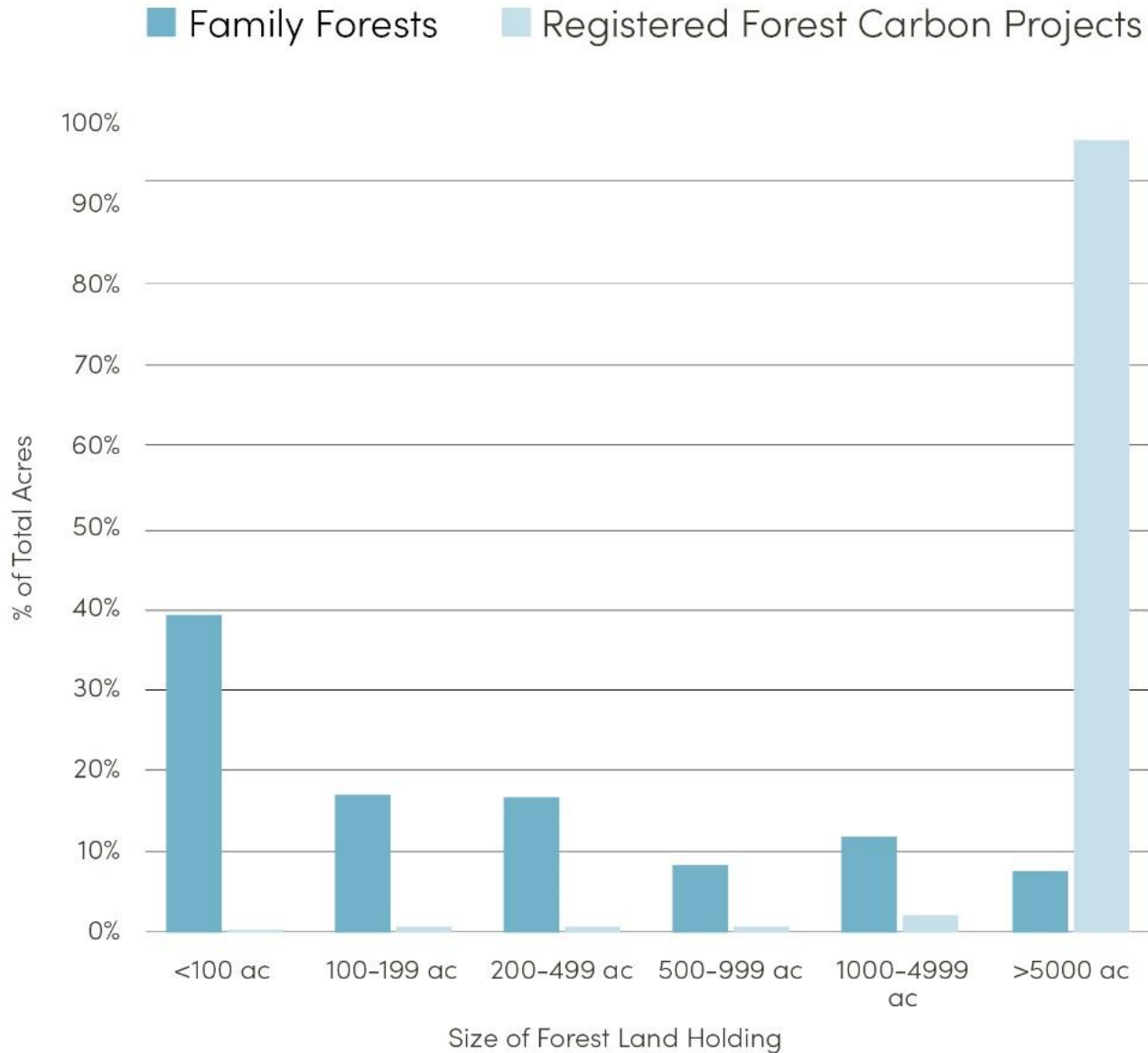
Natural climate solutions could

double

family forests' carbon sink potential through climate-smart forestry



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Forest
Foundation



...But Missed Opportunity

Barriers to Market Entry:

- High up-front costs
- Lack of technical assistance
- Risk of market volatility

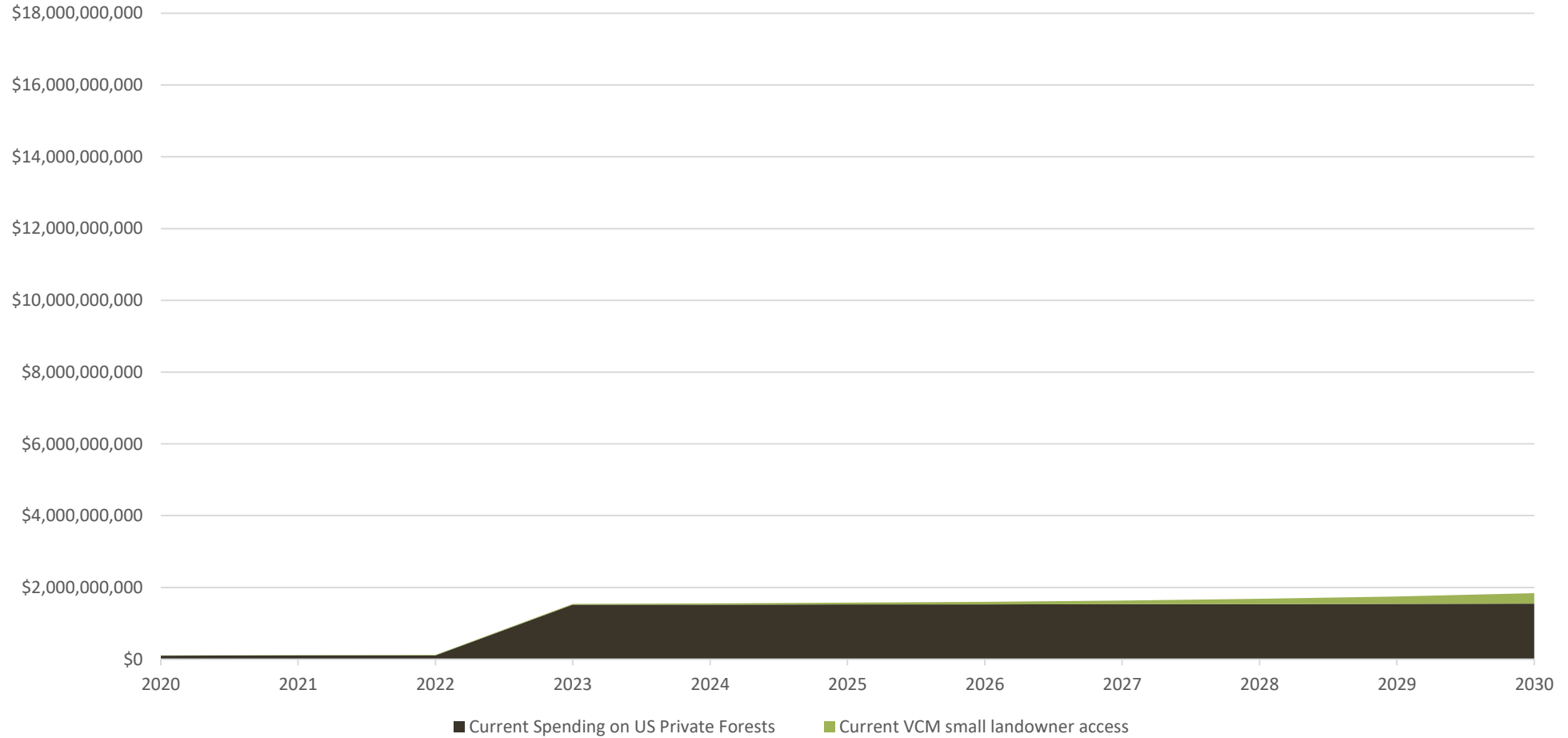
The Government's Role

One-time grants



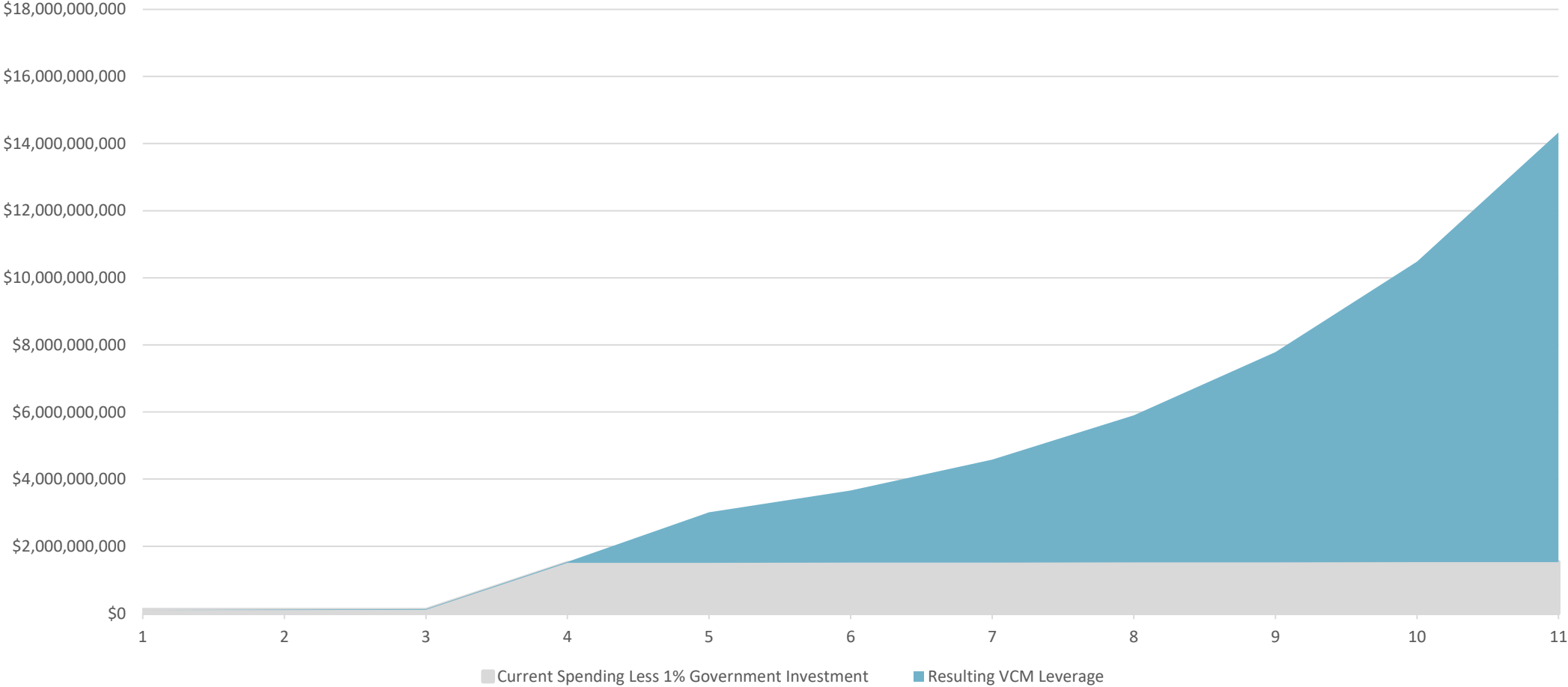
**Long-term
catalyst**

Current Investments in Small Forest Landowners





Potential Leveraged Impact



Protect IRA Investments in the Farm Bill

- Historic level investments in small and underserved landowners
- USFS Landscape Scale Restoration; NRCS EQIP and CSP



Administrative Flexibilities

- Billions in IRA and BIL are administratively hindered from being delivered **equitably**
- Streamline RCPP delivery
- Landowner enrollment flexibility



Rural Forest Markets Act (RFMA)

- Leverage federal investments with private capital
- \$150 million in loan guarantees
- Allows the U.S. to significantly scale climate impact



Questions?



American
Forest
Foundation



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