



Creating New Opportunities for Shared Investments in Working Forest Lands

ACES Conference
December 6, 2018

Agenda

- **Introduction:** USFS Conservation Finance Team's emerging strategy
- **Opportunities for Shared Investments:** Results from an initial screening tool
- **Practitioner's Perspective:** Views from the Pinchot Institute
- **Q&A**
- **Break-out Discussion:** Small-group discussions and presentations from each group
- **Town Hall:** Open-ended discussion on ways to increase investment and development of PES projects in the US

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- 1. Introduction US Forest Service – 10 minutes**
2. Use Case Presentation: Forest Trends' Ecosystem Marketplace – 15 minutes
3. Practitioner Perspective: Pinchot Conservation – 10 minutes
4. Q&A – 10 minutes
5. Breakout Groups – 15 minutes
6. Townhall Discussion – 30 minutes





Nathalie Woolworth
National Partnership Coordinator

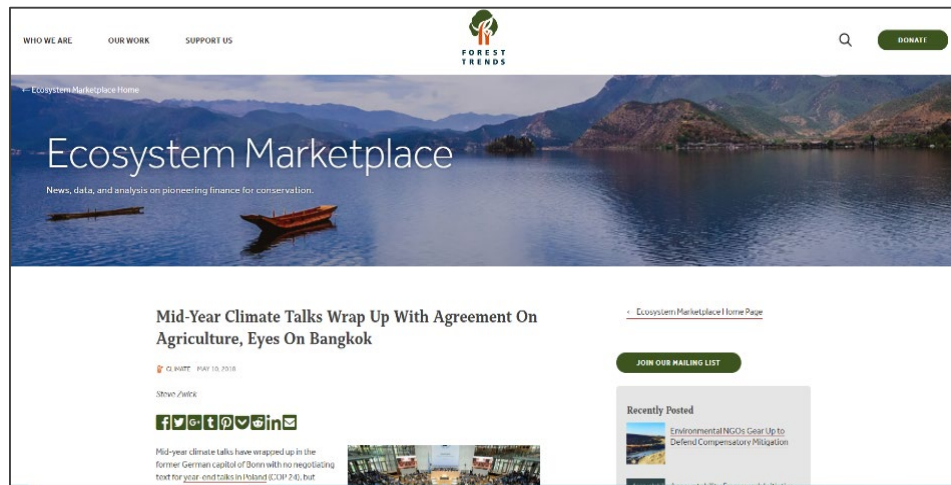


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Who is Ecosystem Marketplace?



Forest Trends' Ecosystem Marketplace Initiative is the leading global source of information on environmental finance, markets, and payments for ecosystem services.

<https://www.forest-trends.org/ecosystem-marketplace>

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What is the EnviroAtlas?

The screenshot displays the EnviroAtlas Interactive Map interface. At the top, the title "EnviroAtlas Interactive Map" is visible, along with "Contact Us" and "Help" links. Below the title is a navigation bar with icons for home, map, layers, and search. The main map area shows North America with various environmental layers overlaid, including "Ecosystem Services and Biodiversity" and "Ecosystem Markets". A sidebar on the left contains a list of layers with toggle switches, such as "Carbon Storage", "Crop Productivity", "Ecosystem Markets", "Energy Potential", "Engagement with Outdoors", "Health and Economic Outcomes", "Impaired Waters", "Land Cover: Near-Water", "Land Cover: Type", "Landscape Pattern", "Near-Road Environments", "Pollutant Reduction: Air", "Pollutant Reduction: Water", "Pollutants: Nutrients", "Pollutants: Other", "Protected Lands", "Species: At-Risk and Priority", "Species: Other", "Water Supply, Runoff, and Flow", "Water Use", "Weather and Climate", and "Wetlands and Lowlands". Below the sidebar is a search bar for "Search All Layers". The map itself shows major cities, rivers, and mountain ranges, with a "Settings" button in the bottom left corner. The bottom right corner of the map area says "POWERED BY".

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EnviroAtlas Use Cases

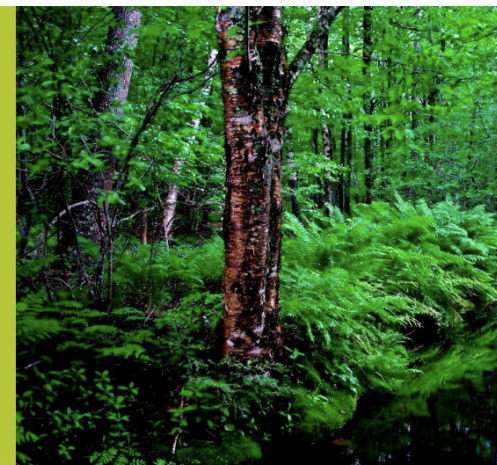
ENVIROATLAS USE CASE Mapping Potential Demand for Water Quality Trading in the United States

OCTOBER 2018



ENVIROATLAS USE CASE Screening New Market Opportunities for Sustainably Managed State, Private and Tribal Working Forests

NOVEMBER 2018



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FOREST CARBON

Forest Carbon: Existing Projects



Location of Forest Carbon Offset Projects in the United States. Source: EnviroAtlas.

Forest Carbon: Indicators for Future Projects

INDICATORS

Forested areas

Improved forest management (IFM) projects can only occur in forested areas.

Baseline forest carbon stocks compared to regional average carbon stocks for ecotype

IFM projects generate more offsets in forests with higher than average carbon storage.

Competitiveness with timber

IFM projects often compete with traditional timber harvesting methods, and will be more competitive in places that are more difficult to harvest.

ASSUMPTIONS

Increased % of forested area

= Better potential for IFM projects

Increased % of average biomass by ecoregion (compared to HUC 12 averages)

= Better potential for IFM projects

Less sawmills within the same county

= Better potential for IFM projects

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Remove all lands already protected by conservation easements

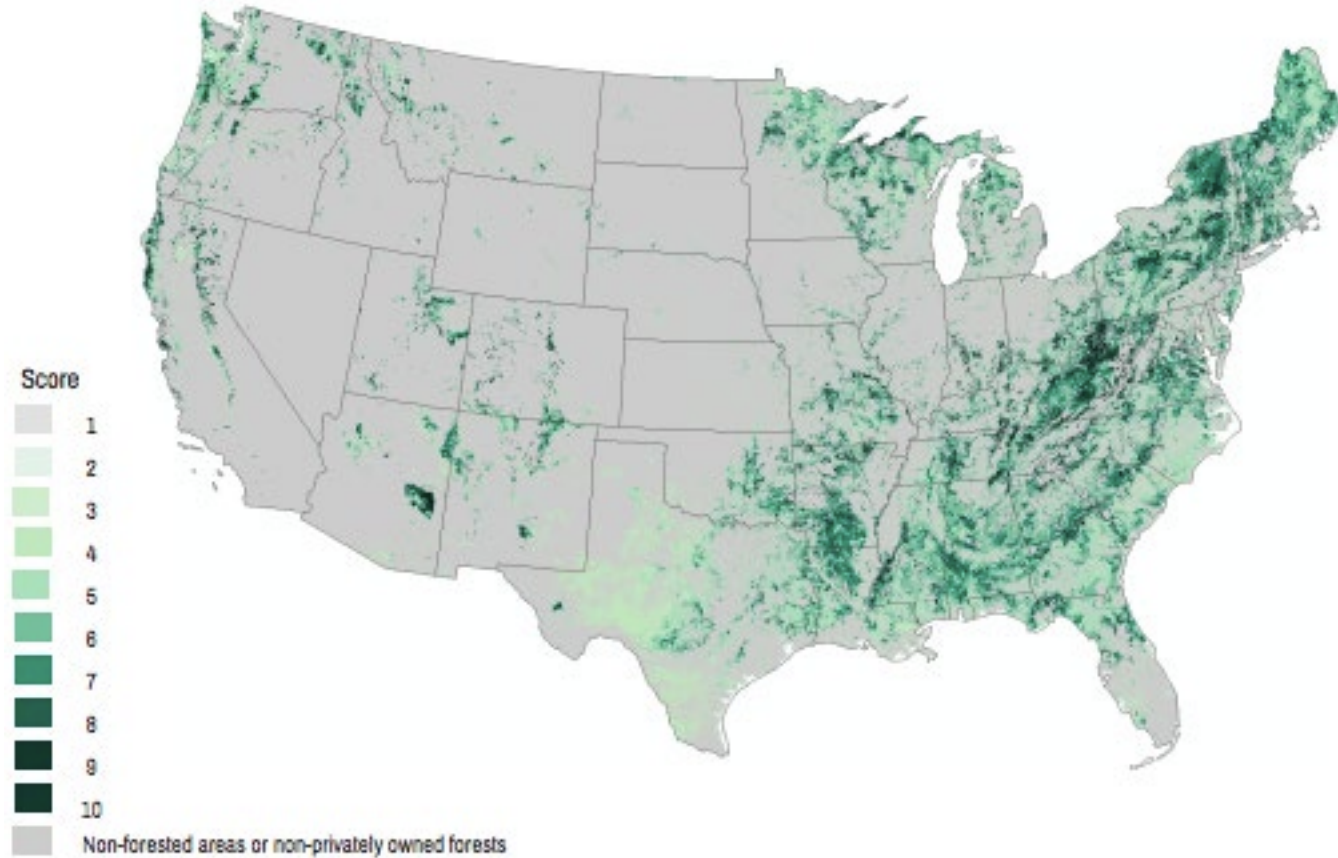
Forest Carbon: Indicators for Future Projects

INDICATORS



Forest Carbon: Ideal Locations for Future Projects – State, Private and Tribal Lands

Results: Forest Carbon Opportunities on State, Private, and Tribal Lands



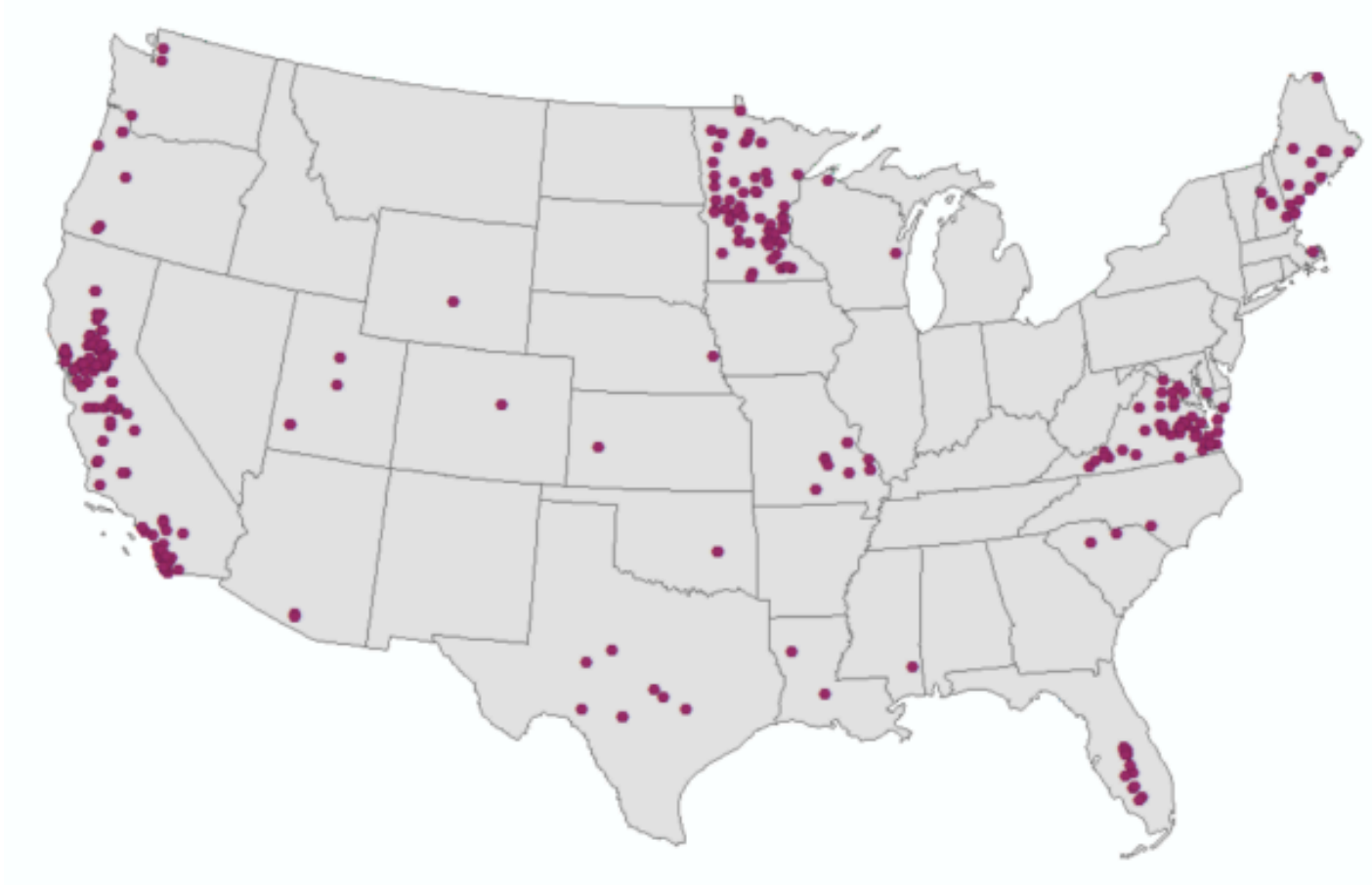
Forest Carbon: Existing Projects



Location of Forest Carbon Offset Projects in the United States. Source: EnviroAtlas.

HABITAT CONSERVATION

Habitat Conservation: Existing Projects



Location of Conservation Banks and Habitat Crediting Projects in the United States. Source: EnviroAtlas.

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Habitat Conservation: Indicators for Future Projects

INDICATORS

Forested areas

This screening tool focuses on habitat conservation opportunities in forested areas only.

Presence of threatened or endangered species

The more threatened or endangered species present, the greater the need for habitat conservation.

Land designated as Critical Habitat

Land that the USFWS has designated as critical habitat has a greater need for conservation.

Waterway designated as Critical Habitat

Waterways that the USFWS has designated as critical habitat have a greater need for conservation.

ASSUMPTIONS

Increased % of forested area

= Better potential for projects

Increased # of threatened or endangered species

= Better potential for projects

Increased % of land designated as USFWS Critical Habitat

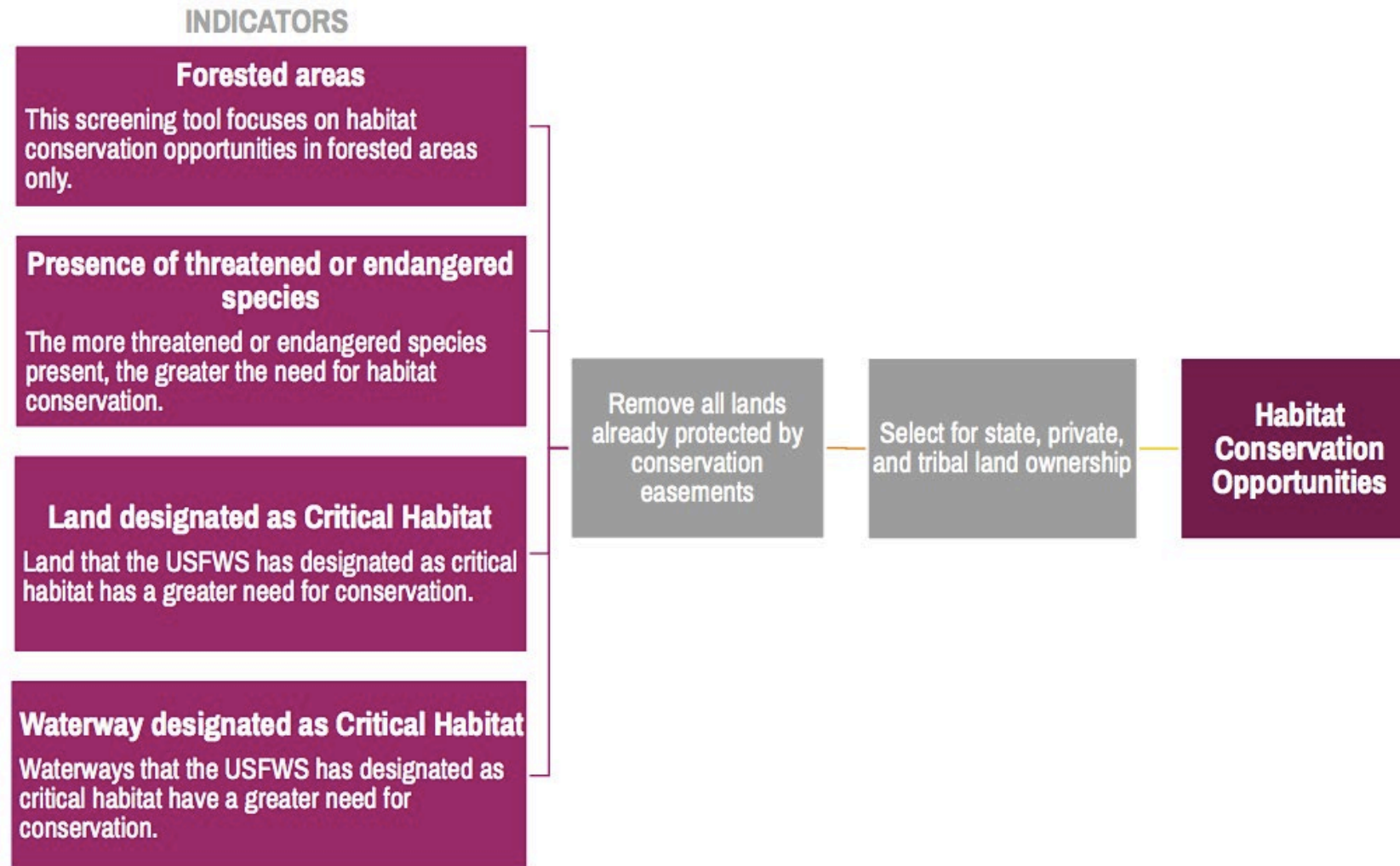
= Better potential for projects

Increased # of designated kilometers designated as USFWS Critical Habitat

= Better potential for projects

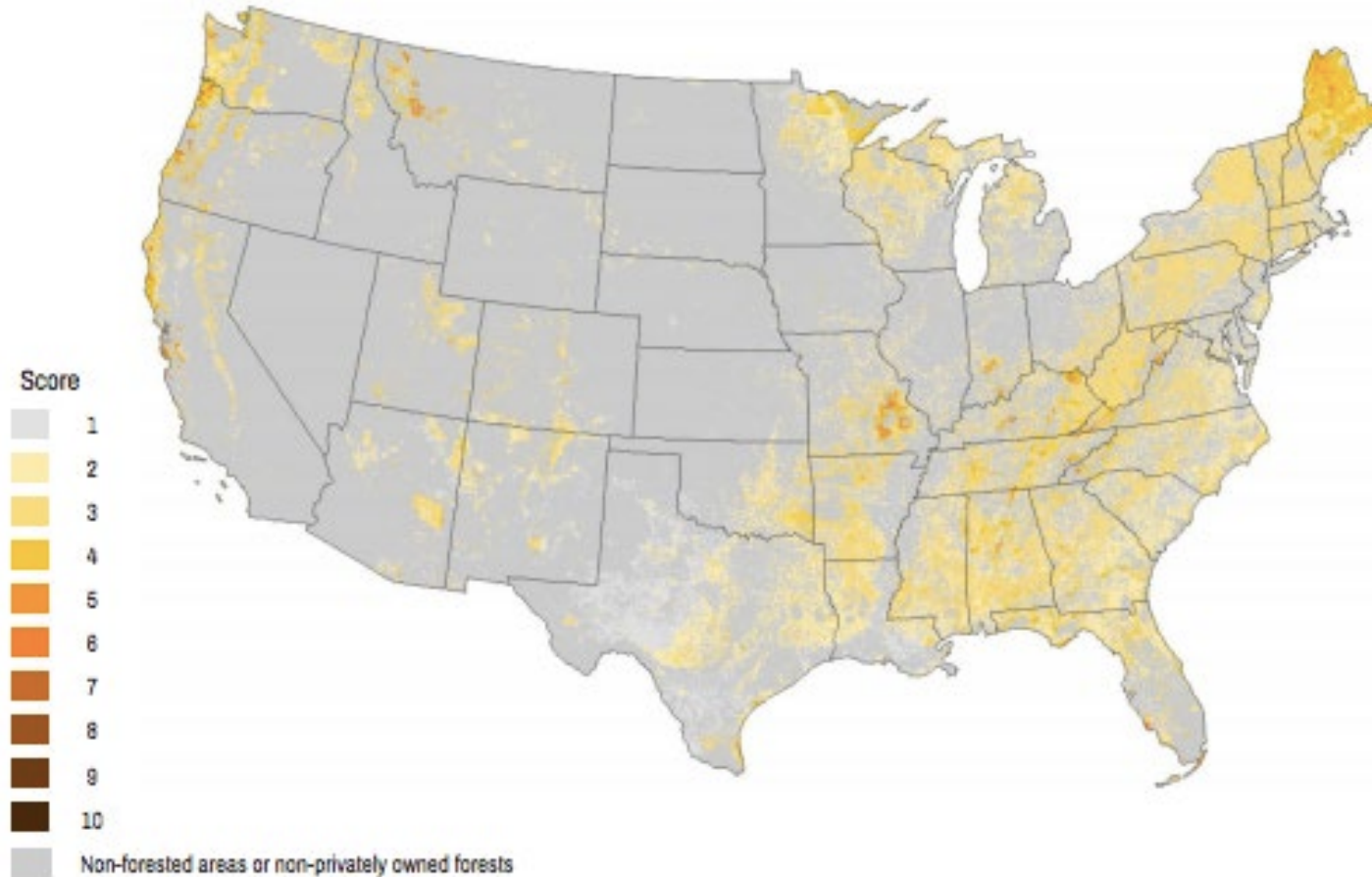


Habitat Conservation: Indicators for Future Projects



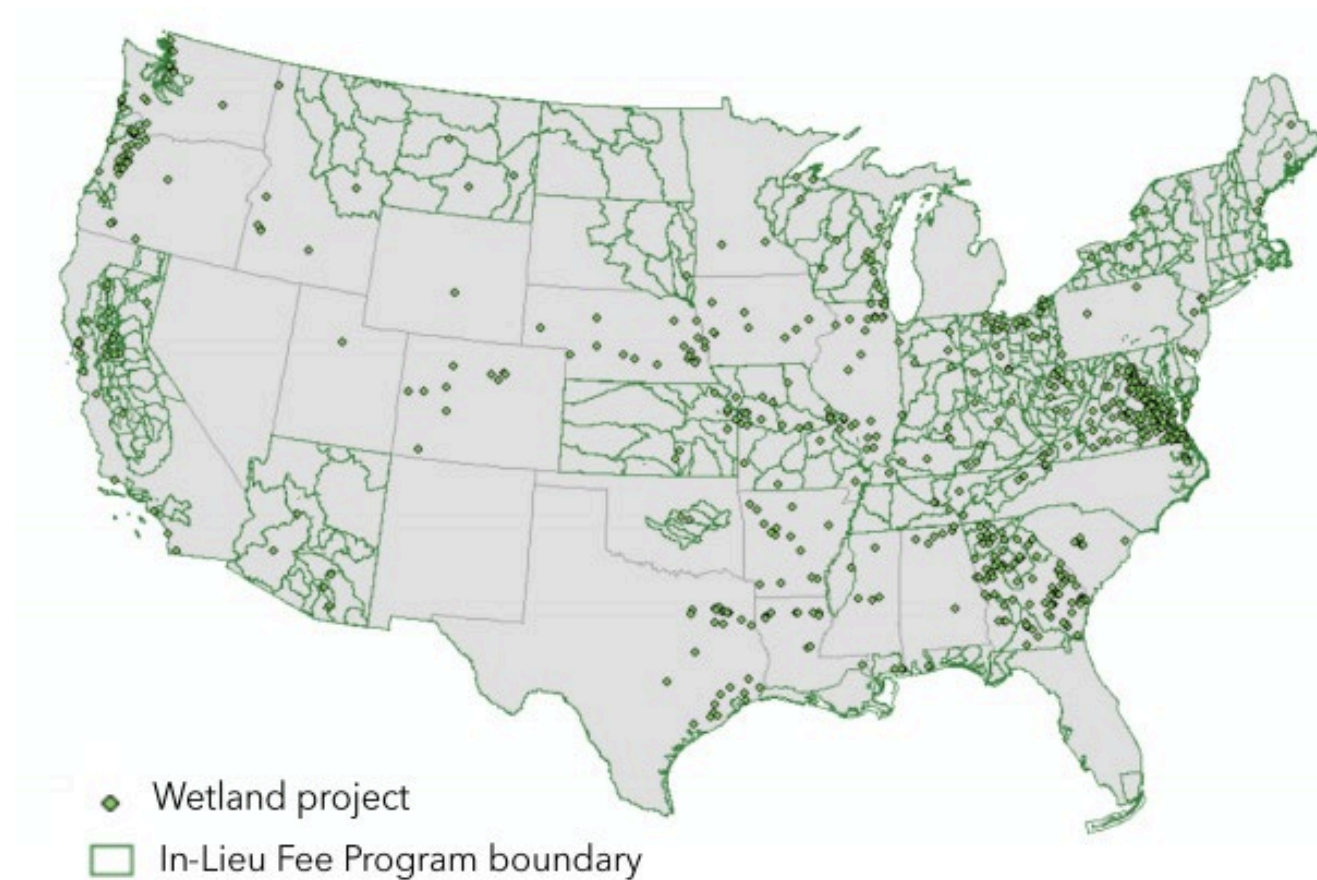
Habitat Conservation: Potential Opportunities for Future Projects – State, Private and Tribal Lands

Results: Habitat Conservation Opportunities on State, Private, and Tribal Forested Lands



WETLAND RESTORATION

Wetland Restoration: Existing Projects



**Location of Wetland Bank Projects and In-Lieu Fee Program Boundaries
in the United States. Source: EnviroAtlas.**

Wetland Restoration: Indicators for Future Projects

INDICATORS

Indicator: Forested areas

This screening tool focuses on wetland restoration opportunities in forested areas only.

Indicator: Potential wetland areas

In order to be a good location for wetland restoration, the project site must be suitable for wetlands, based on topography, soil drainage, and elevation.

Indicator: Presence of exotic/invasive species

These species make it more difficult to restore wetland areas, so the fewer exotic/invasive species present, the better candidate an area is for restoration.

ASSUMPTIONS

Increased % of forested area

= Better potential for projects

High potential for wetlands, as defined by EnviroAtlas

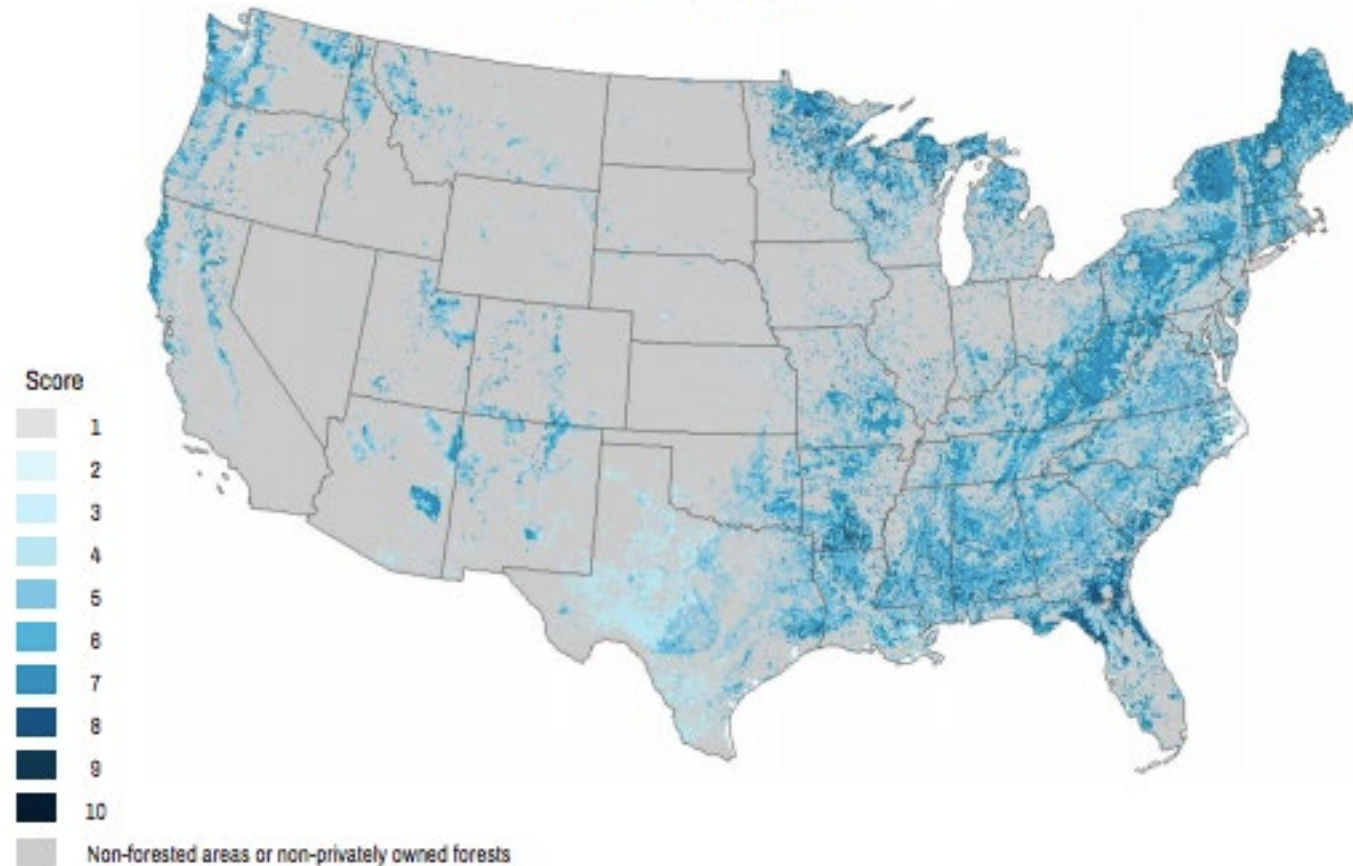
= Better potential for projects

Fewest # of introductions or observations and nonindigenous species

= Better potential for projects

Wetland Restoration: Potential Opportunities for Future Projects – State, Private and Tribal Lands

Results: Wetland Restoration Opportunities on State, Private, and Tribal Forested Lands



TOTAL ECOSYSTEM SERVICE POTENTIAL

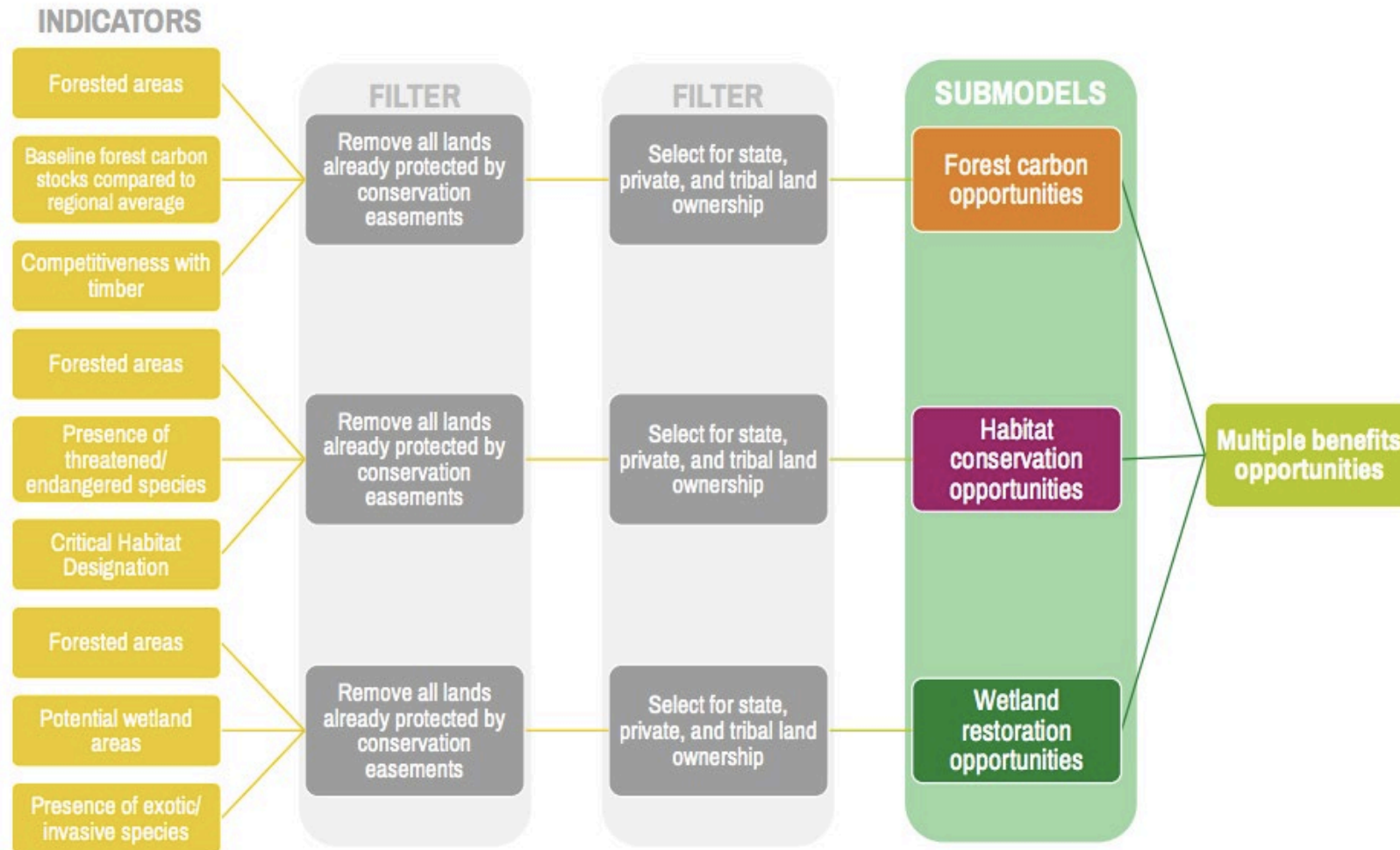
Current Ecosystem Markets in the US

	Market Value (annually)*	Land Area (acres)
Forest Carbon	\$74M	616,745
Habitat Conservation	\$354M	3,337
Wetlands Restoration	\$3,500M	13,149

*Based on latest data collected by Ecosystem Marketplace (2016, 2017)

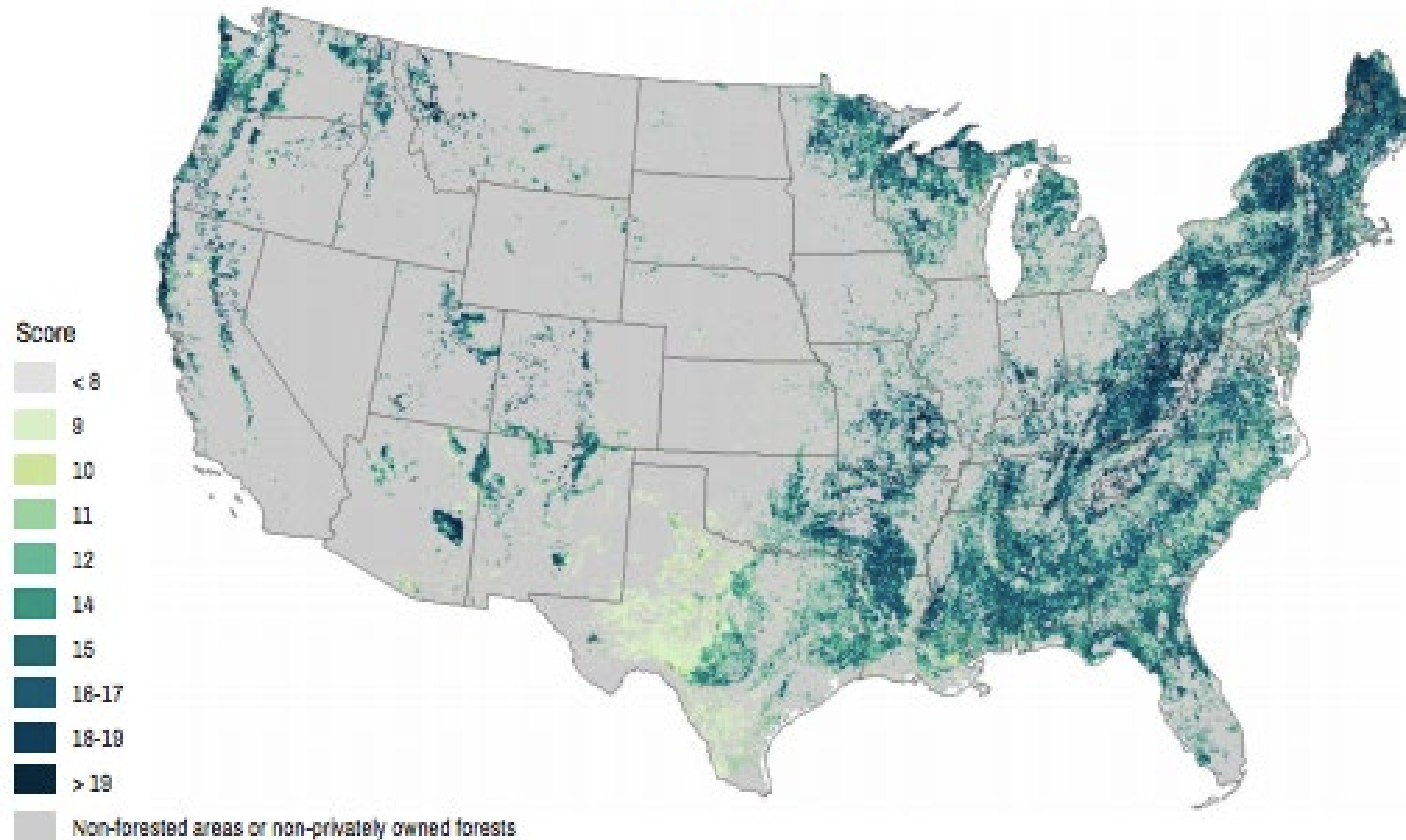


Putting it All Together: Final Methodology



All Ecosystem Services: Potential Opportunities for Future Projects – State, Private and Tribal Lands

Multiple Benefits Opportunities on State, Private, and Tribal Forested Lands



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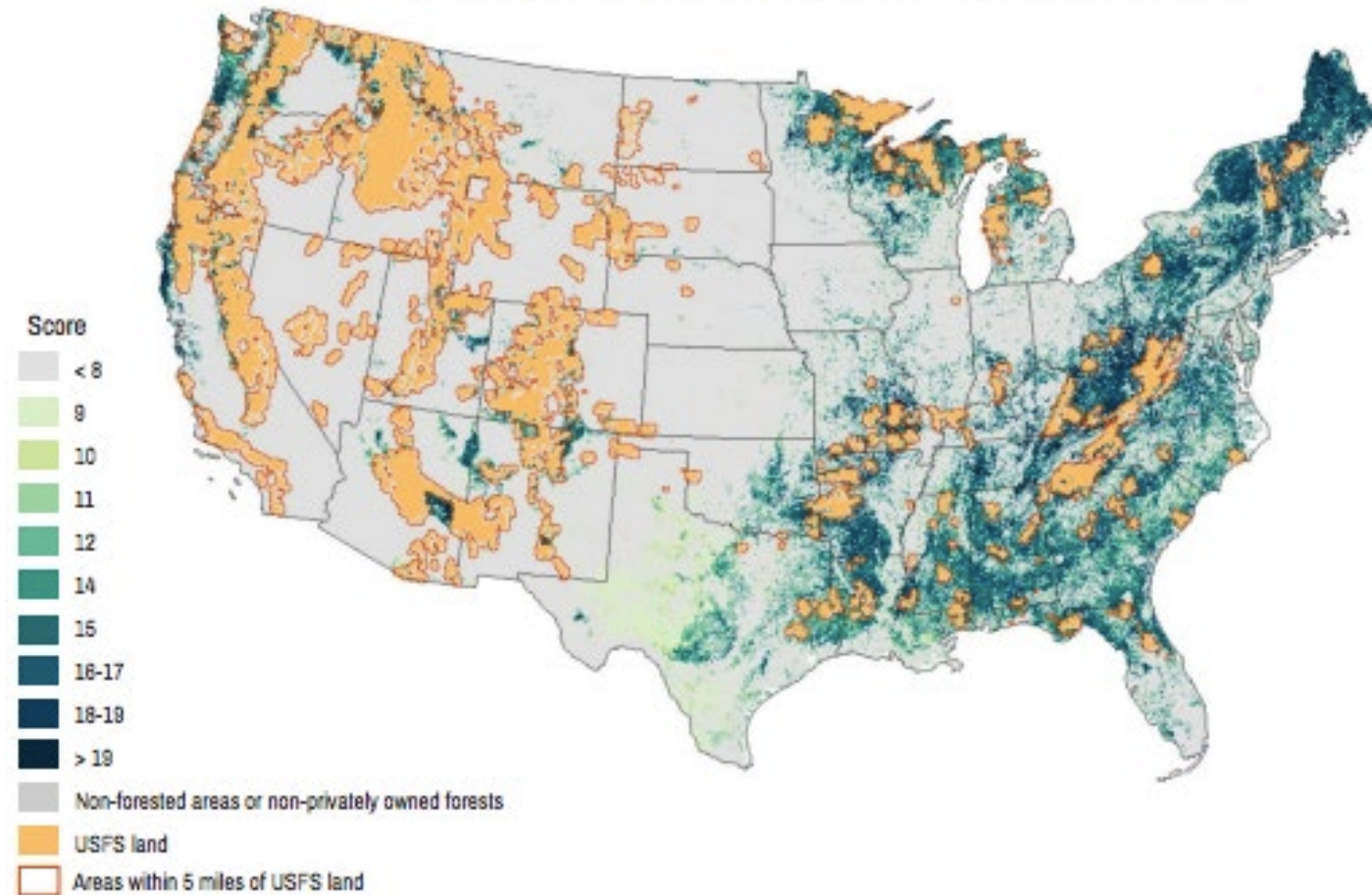
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All Ecosystem Services: Potential Opportunities for Future Projects – State, Private and Tribal Lands

Cross-Boundary Shared Investments: USFS Administrative Boundaries and Multiple Benefits Opportunities on State, Private, and Tribal Forested Lands



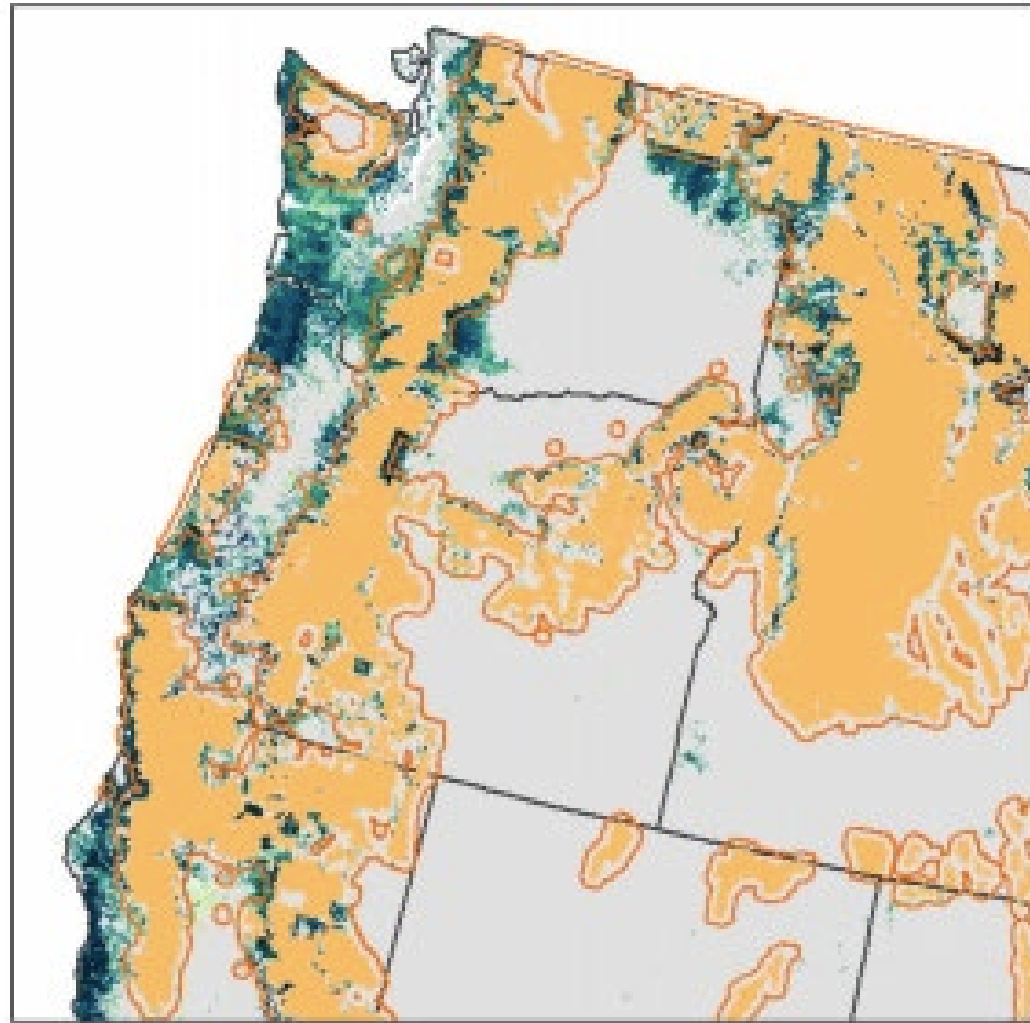
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Northern Pacific Coast, Cascades-Sierra Mountain Province, and Northern Rockies



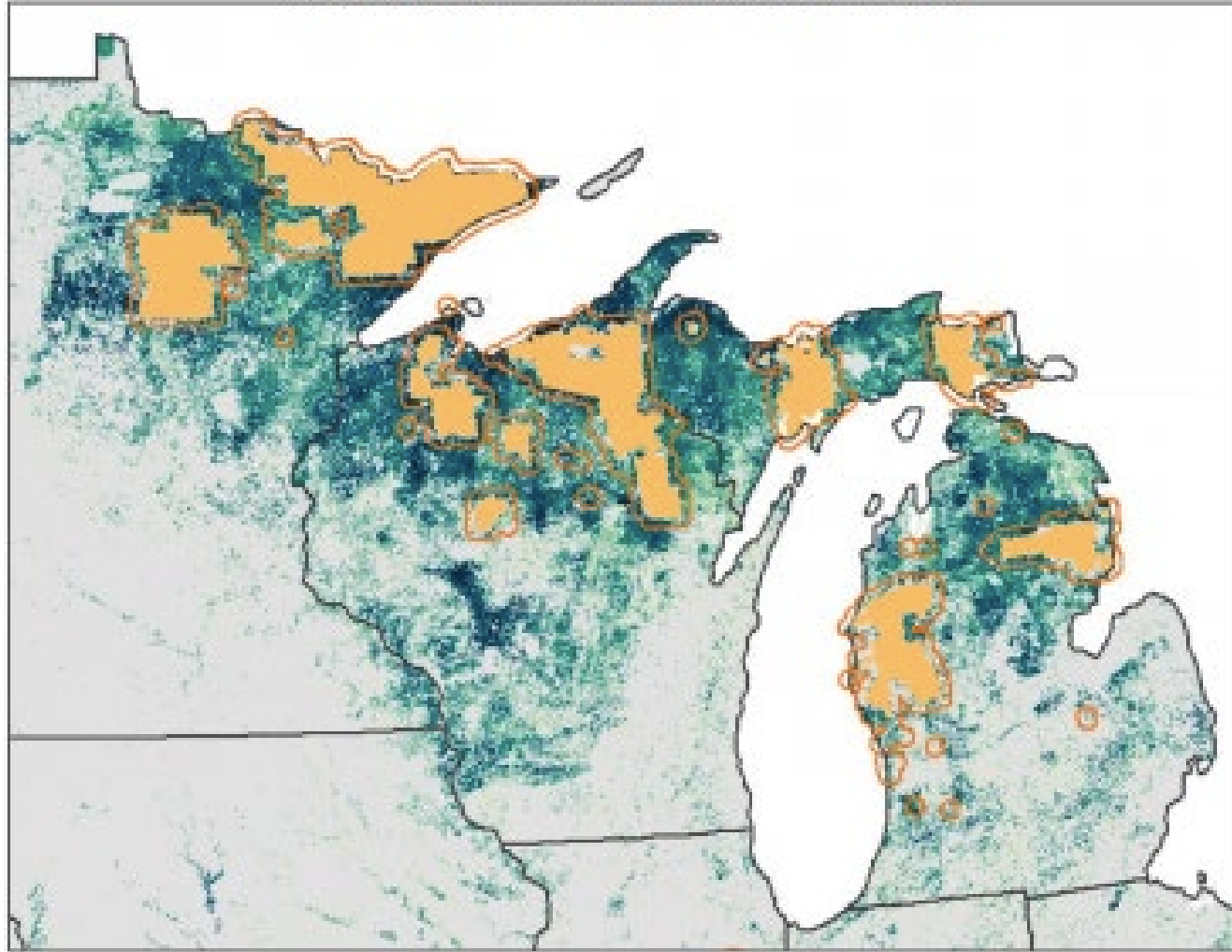
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Northern Mixed-Wood and Softwood Shield



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The Northern Forest



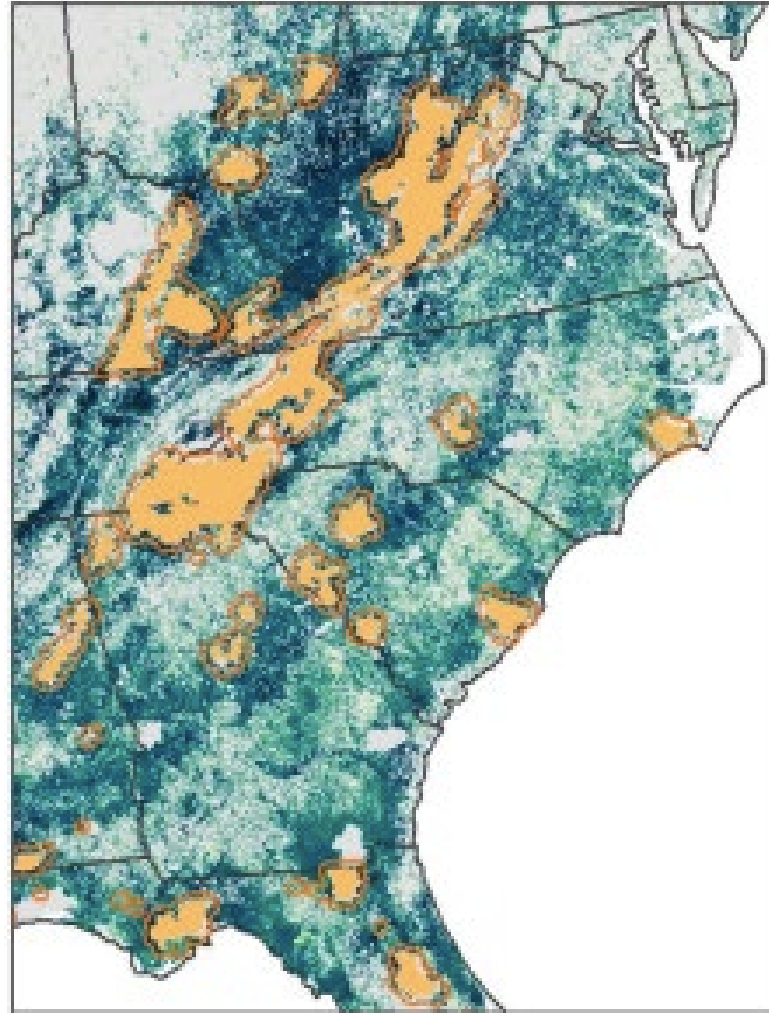
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Southern Appalachia and Southern Forests



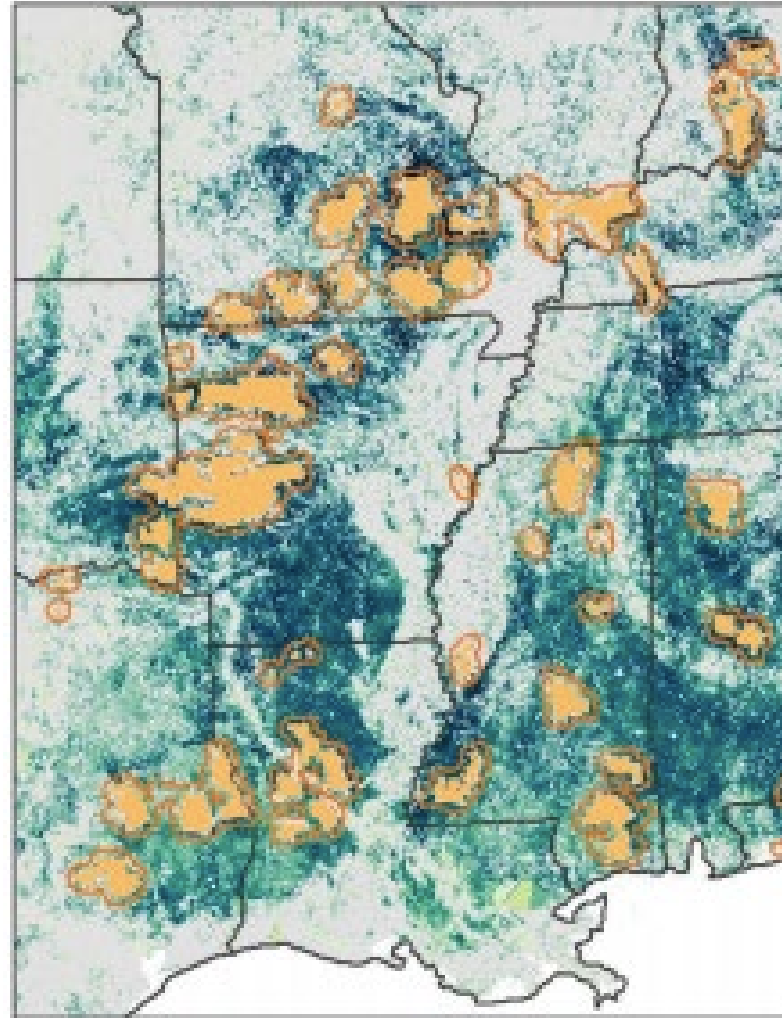
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Southeastern and Mississippi Alluvial Planes



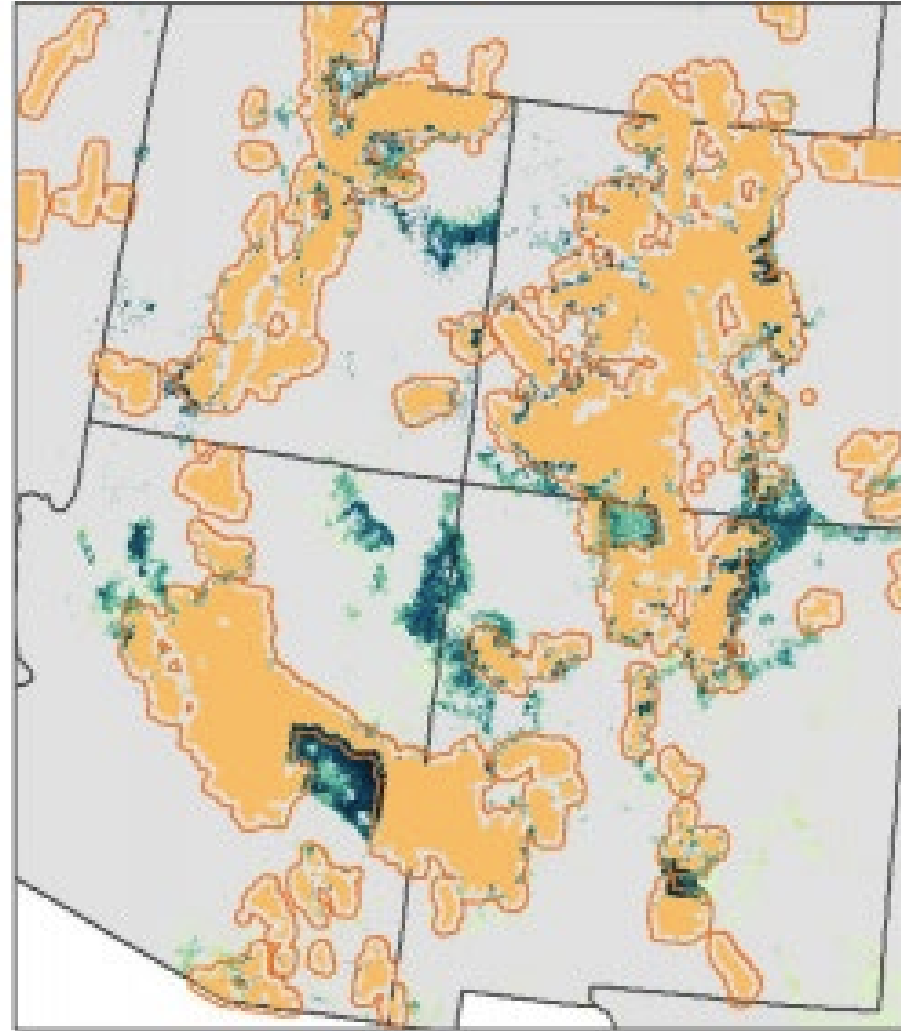
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Four Corners



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Next Steps

GOAL: To encourage investment and development of new ecosystem service projects in the US

1. Receive feedback on the usefulness of this analysis
2. Identify new datasets or needed data (especially at a local or regional level)
3. Develop partnerships to conduct additional, in-depth analysis of specific local and regional opportunities
4. Develop partnerships to conduct additional analysis of market demand and enabling conditions, or of other markets entirely
5. Evaluate USFS opportunities for targeting technical assistance to landowners pursuing projects
6. Pilot innovative investment models



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PINCHOT
INSTITUTE
FOR CONSERVATION

William C. Price
President



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Discussion Groups

Project Developers or Investors (For-profit, Not-for-Profit)

1. Have you currently developed any projects in the US? What data does your organization use when making a decision to develop (or what data would be needed for your organization to start developing conservation investments)?
2. Would this tool help you make decisions around conservation investments in the US?
3. How could this tool be improved? What additional data is needed?
4. Do you currently stack or blend finance from different ecosystem services? What are current challenges to this?
5. Do you currently receive any assistance or incentives from government programs in your work?
6. What additional assistance (technical, financial, legal, etc) is needed?
7. Overall: What conditions are needed to increase conservation investments for projects in the US?

Discussion Groups

Government

1. Does your office work on conservation investments? In what capacity?
2. Does your office have any current partnerships with the private or non-profit sector to increase conservation investments for projects in the US? What has worked well? What hasn't?
3. Would this tool help you make decisions around conservation investments in the US?
4. How could this tool be improved? What additional data is needed?
5. Besides better data, what is needed to scale up conservation investments for projects in the US? What are current barriers at the state & federal level?
6. Overall: What conditions are needed to increase conservation investments for projects in the US?

Discussion Groups

Academics

1. Do you currently partner with any organizations to implement conservation investments for projects in the US?
2. Do you currently collect any data/indicators relevant to conservation investments?
3. How could this tool be improved? What additional data is needed?
4. Besides better data, what is needed to scale up conservation investments for projects in the US?
5. Overall: What conditions are needed to increase conservation investments for projects in the US?



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A photograph of a forest scene. In the center, a tree trunk with peeling bark stands vertically. The foreground is filled with vibrant green ferns. The background is a dense thicket of trees and foliage, creating a lush, green environment.

THANK YOU

**Questions or comments: Contact me at
khamrick@ecosystemmarketplace.com**