



United States Department of Agriculture

Prioritizing shared stewardship investments to achieve cross-boundary outcomes

Assessments, tools and models

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Forest Service



Shared Stewardship

United States Department of Agriculture

SHARED STEWARDSHIP LANDSCAPES MIGRATION FOREST MANAGEMENT TREATMENTS
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 STAKEHOLDERS
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Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy






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Leadership Corner

Shared stewardship is the way forward for improving forest conditions

August 17, 2018 at 1:45pm

Earlier this week I joined Secretary Sonny Perdue as he visited California to meet with citizens and see firsthand forested communities ravaged by recent wildfires. It was a fitting prologue to the Secretary's announcement yesterday of a new strategy that aims to improve the condition of America's forests—across all boundaries.

Expansive work is needed to reduce fuels and threats from insects and diseases on all forests. Poor conditions demand treatments at a scale that match the immensity of the problem. But we can't do it alone. We need to set priorities at a state-level scale. Secretary Perdue's announcement of a new strategy for "true shared stewardship" calls for stronger collaborative decision-making with states and partners, and it employs new technology we can share. Together they will help us to invest in high-priority lands that actually can make a difference in conditions across the entire landscape. It will take us beyond the successful, local preventive treatments that don't measure up to the scale needed for lasting impacts. My visits this week to communities in the Northwest gave sharp focus to the need for a strategy that lines up with the realities we see on the ground. "Toward Shared Stewardship Across Landscapes: An Outcome-Based Investment Strategy" sets us on a course to do just that.

Shared stewardship simply means we share decision space with states, partners and tribes. Together we choose the right tools, the right places and the appropriate scale to invest our resources. We jointly set priorities that incorporate each other's knowledge, skills and personnel.

Recently, I toured the Colville National Forest in Washington, where I saw work that embodied this strategy: the extraordinary and innovative cross-boundary active management our hard-working employees are doing with partners.

This week I headed to Redding, California, to join Secretary Perdue and Interior Secretary Zinke in touring the areas affected by the Carr Fire. This fire ignited July 23 and has burned 218,598 acres, including nearly 1,600 homes. More than 4,000 people have deployed to fight this fire as it continues to burn Shasta-Trinity National Forest. The secretaries toured the wildland urban interface in Whiskeytown and learned about fire dangers resulting from the ongoing drought and over-vegetation. They also had the opportunity to meet with our employees and other firefighters serving on the front lines of the fires, as well as with members of the community who have suffered damage from lost homes and businesses.



Interim Chief Vicki Christiansen, USDA
Forest Service

Prioritization of land investments

- “A key component of the Forest Service’s new shared stewardship strategy is to prioritize investment decisions directly with states using the most advanced science tools”
- ...”set priorities together and combining our mutual skills and assets to achieve cross-boundary outcomes desired by all”
- Idaho MOU: “Doing the right work in the right places at the right scale. We will use new mapping and decision tools to locate treatments where they can do the most good, thereby protecting communities, watersheds and economies where the risks are greatest”

Priorities determine outcomes

Agency assessment can help prioritize investments

- Insect and disease
- Watershed conditions
- Wildfire hazard
- Forests to faucets
- Terrestrial conditions
- Potential harvest volume

The collage features five key documents:

- Mapping forest vegetation for the western United States using modified random forests vegetation of PIA forest plots** (Ecography)
- Wildland Fire Potential: A Tool for Assessing Wildfire Risk and Fuel Management Needs** (USDA Forest Service)
- Terrestrial Condition Assessment for National Forests of the USDA Forest Service in the Continental US** (Sustainability, MDPI)
- 2013 - 2027 NATIONAL INSECT AND DISEASE FOREST RISK ASSESSMENT** (USDA Forest Service)
- From the Forest to the Faucet: Drinking Water and Forests in the US** (USDA Forest Service)
- Watershed Condition Classification Technical Guide** (USDA Forest Service)

Combine agency and stakeholder assessments for shared stewardship

Agency assessments



GIS overlay tools and models



Stakeholder assessments (e.g. Forest Trends)

Catalyzing Shared Investments in Working Forests

A Story Map

Introduction Forest Carbon Habitat Conservation Wetland Restoration Multiple Benefits Opportunities for Working Forests Get Involved

Shared Investments in Sustainably Managed State, Private and Tribal Working Forests

The United States Forest Service (USFS) is working to increase and unlock funding for forest stewardship, restoration, and protection by collaborating with the conservation finance sector.

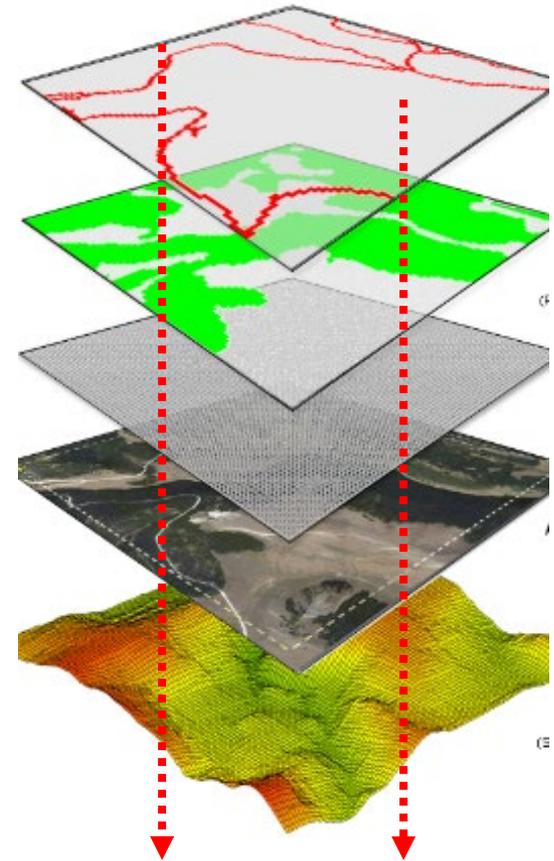
A better understanding where opportunities exist to generate revenues from the multiple conservation values of sustainably forest management will help USFS and its partners design and target technical assistance to managers of working forests.

Mapping opportunities for shared investments

USFS partnered with the Environmental Protection Agency's *EnviroAtlas* team and the nonprofit *Forest Trends' Ecosystem Marketplace* to develop a screening tool to identify key opportunities for catalyzing shared investments in sustainably managed working forests.

This use case provides details of our research approach and summary results.

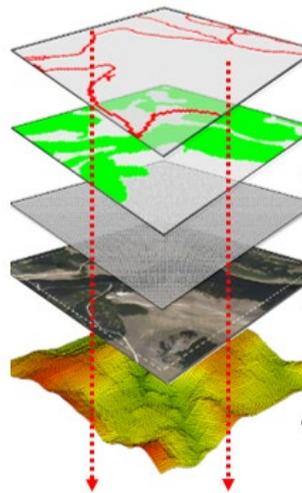
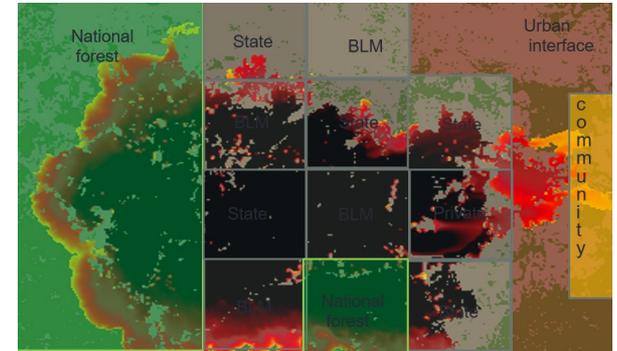
Click the tabs to see maps of conservation investment opportunities investigated by our team. You may need to wait a moment for map data to load depending on your system.



Map of priority areas

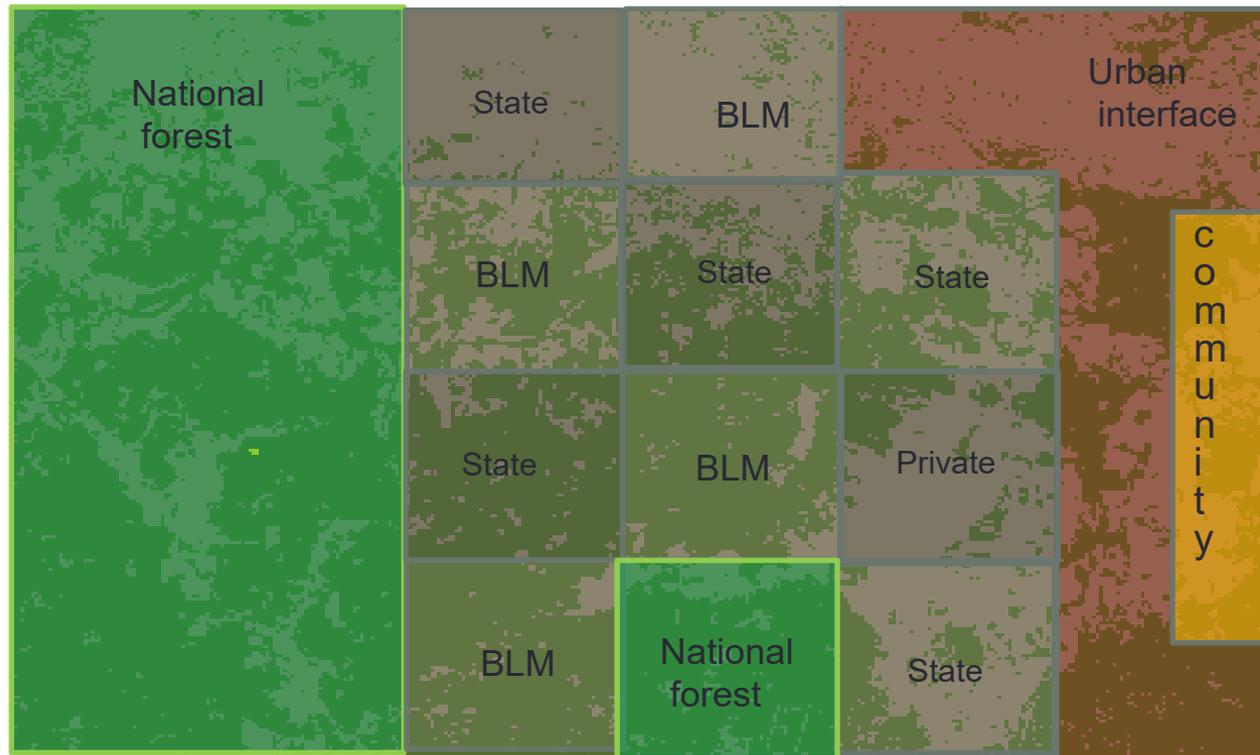
Gaps and potential improvements to prioritization process

1. We lack systematic assessment of the **cross boundary fire and community exposure**
2. We need tools to translate assessments into cross boundary action on the ground and potential outcomes

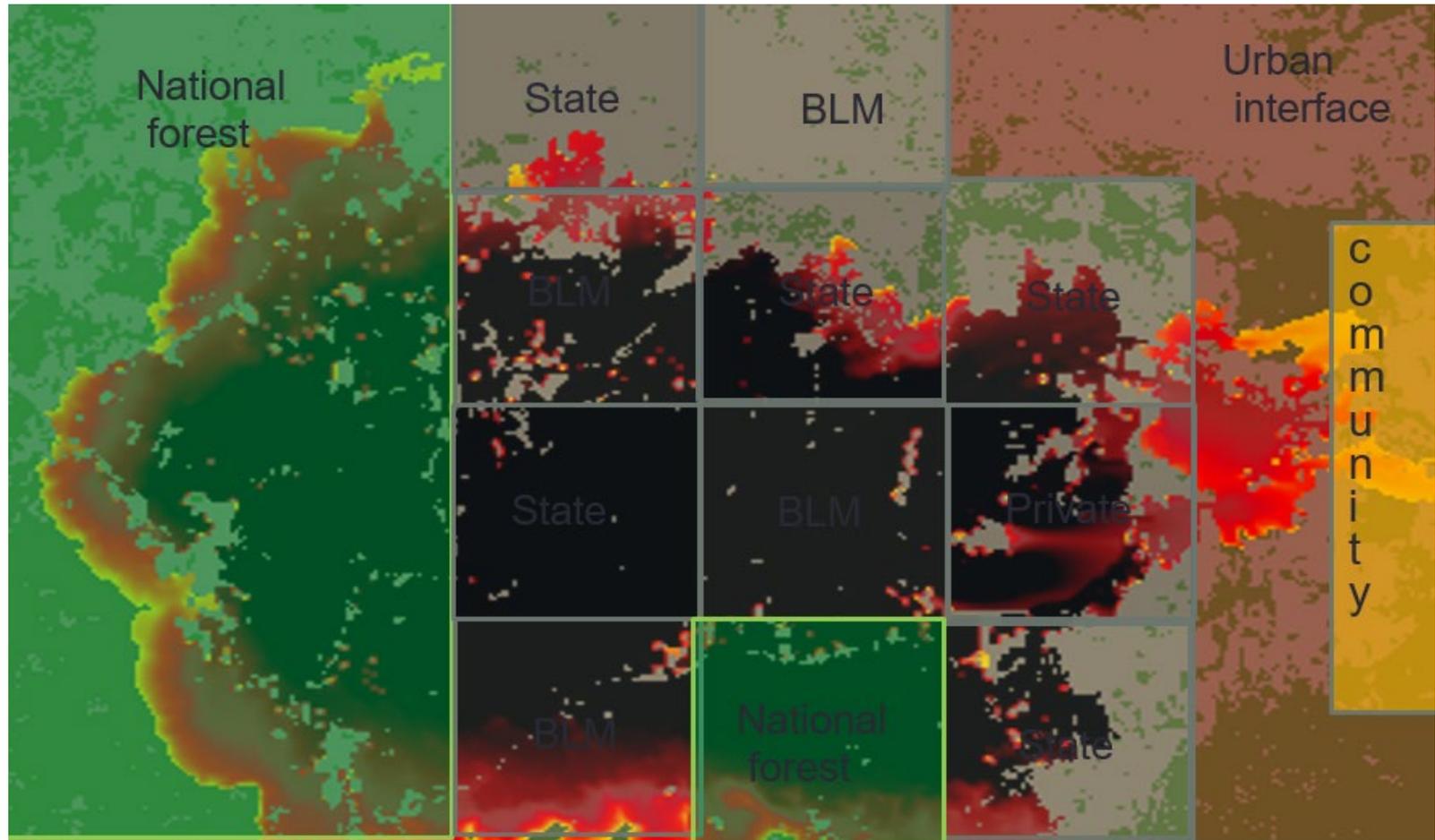


Outcomes?

Measuring cross boundary fire and community exposure

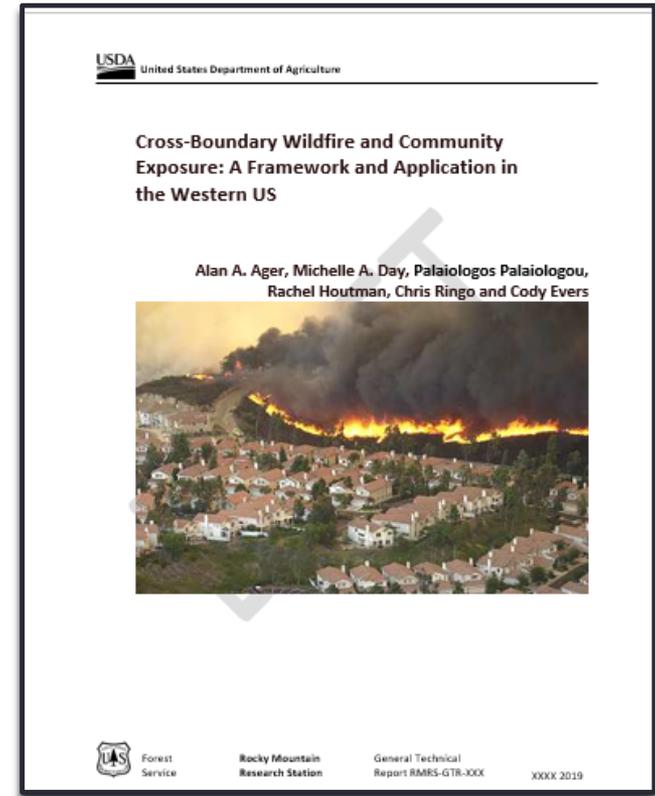
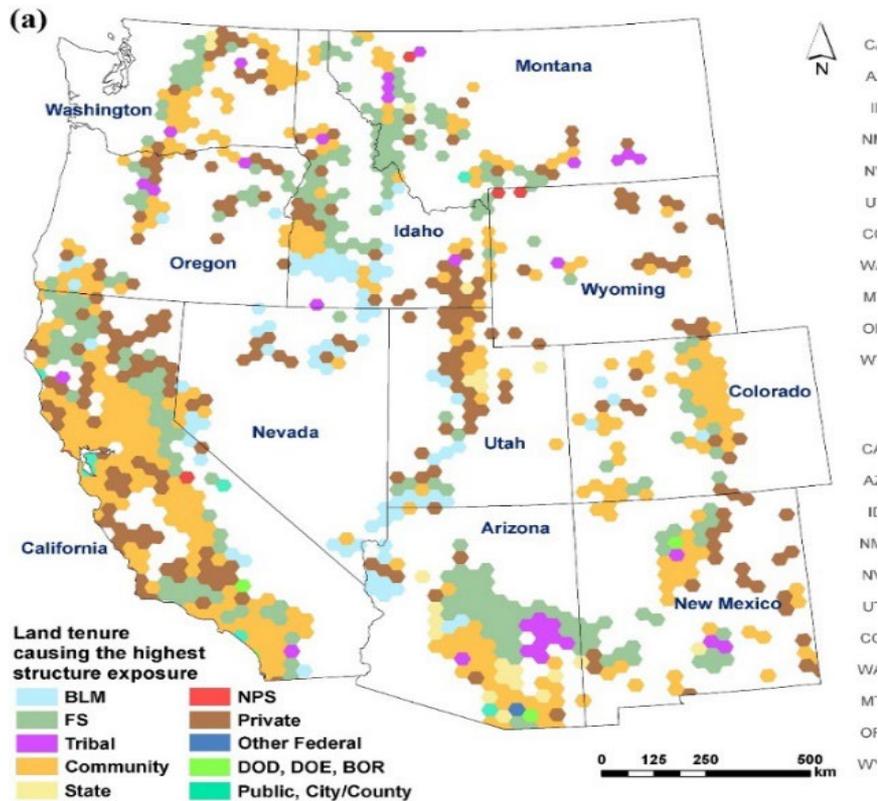


Measuring cross boundary fire and community exposure



Assessment of community exposure

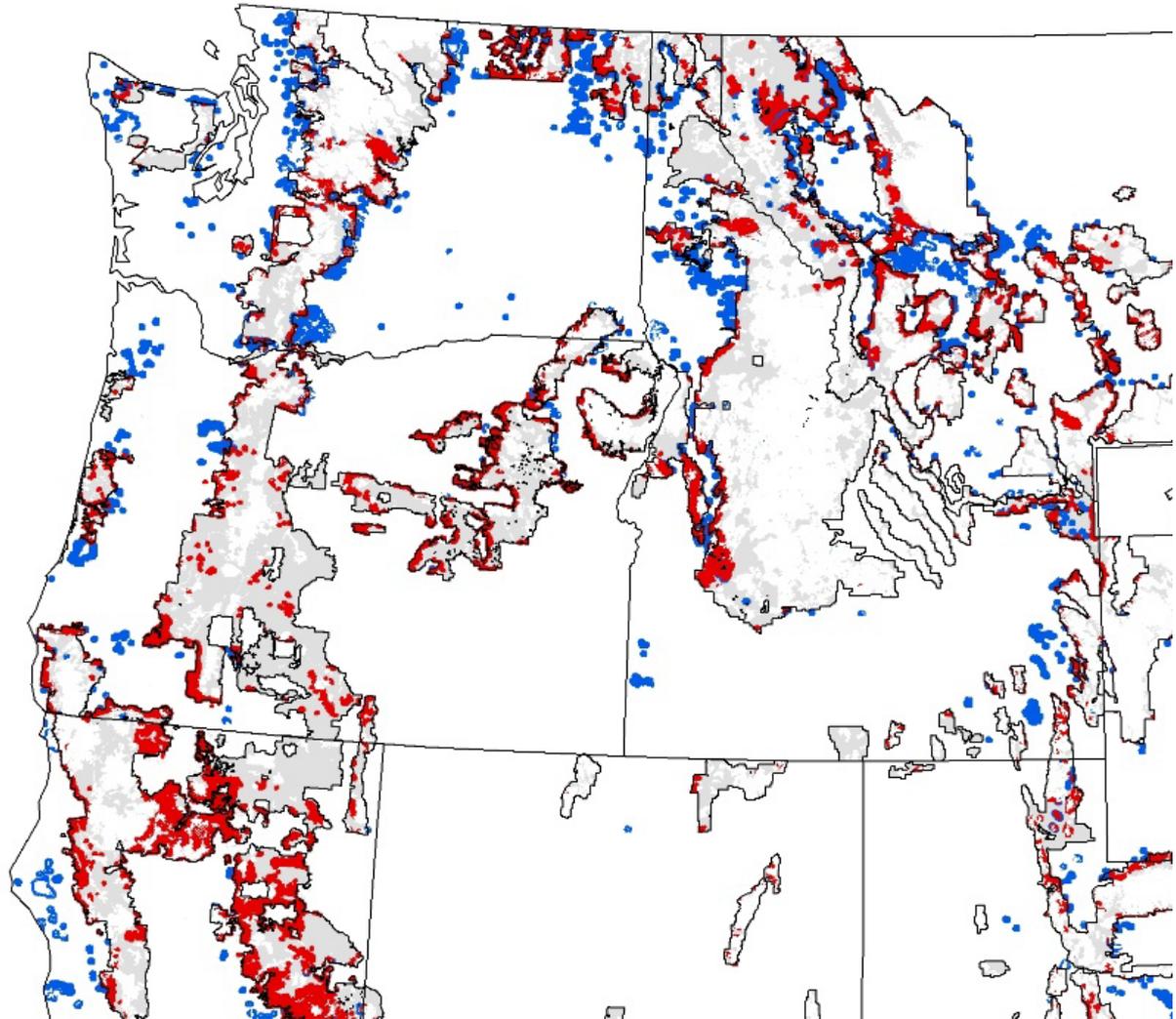
- Identified 1,800 communities in the western US could be significantly impacted by future wildfires
- Wildfires from national forest lands could affect about 500 of these communities



Source of community exposure

Cross boundary wildfire - Where do national forests exchange fire with state lands

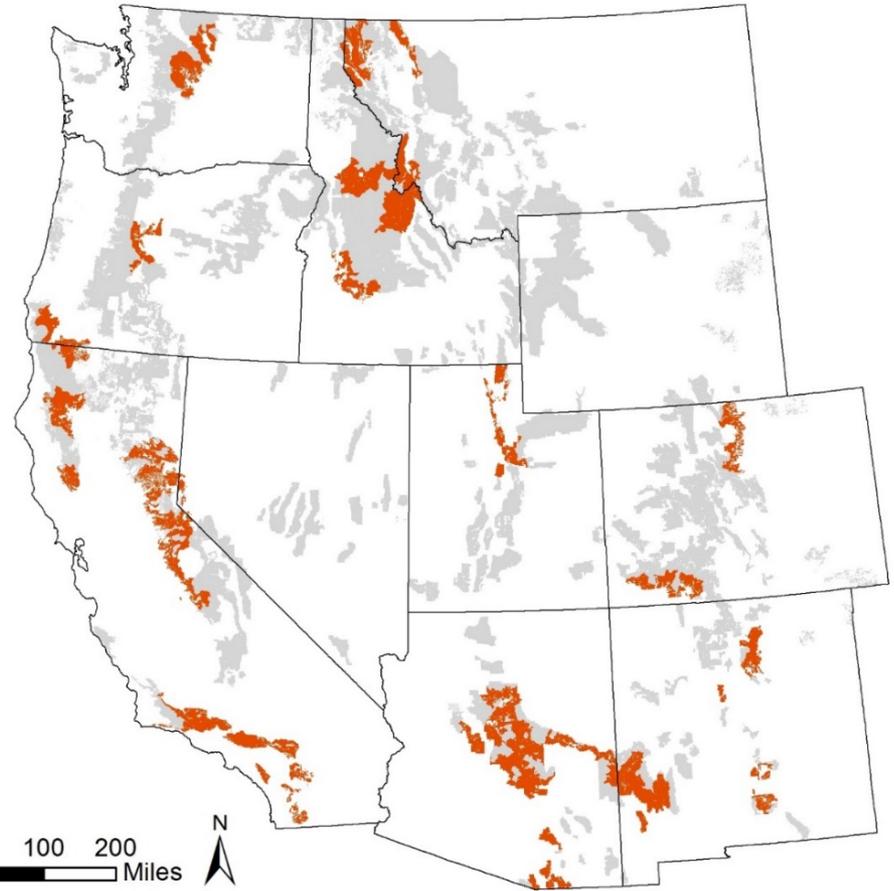
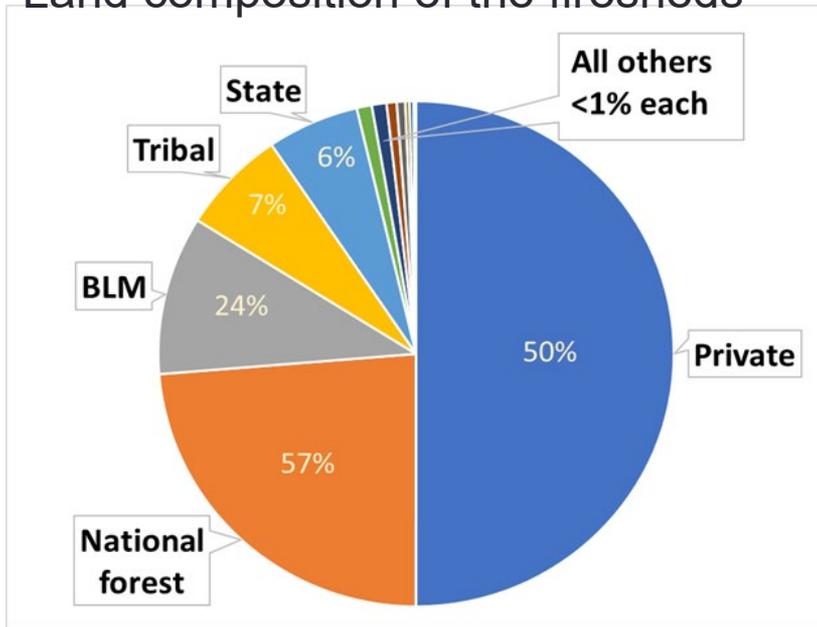
- **Red** = national forest lands that receive fire from state lands
- **Blue** = state lands that receive fire from national forests



Mapping Forest Service “community firesheds”

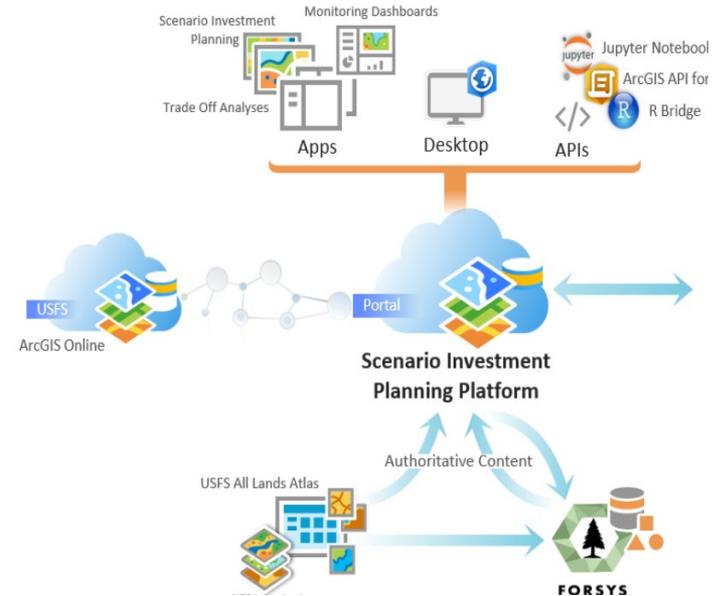
- These firesheds account for 80% of the total fire exposure from National Forests to communities in the western US
- Firesheds measures the **scale of risk** to communities

Land composition of the firesheds

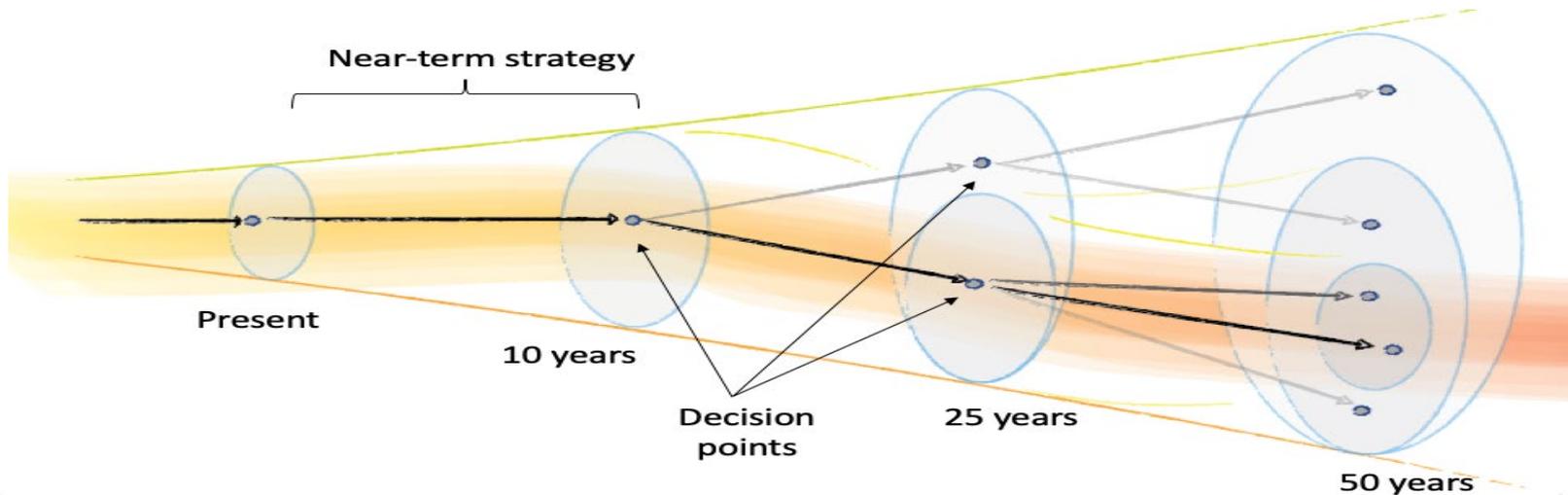


2. From assessments to measuring outcomes

- USFS Scenario investment planning project (SIPP)
- “Forest Service has developed a science-based decision support framework to simulate specific investment strategies”
- “To help stakeholders better prioritize activities to achieve desired outcomes on the National Forest System and adjacent lands in each State”

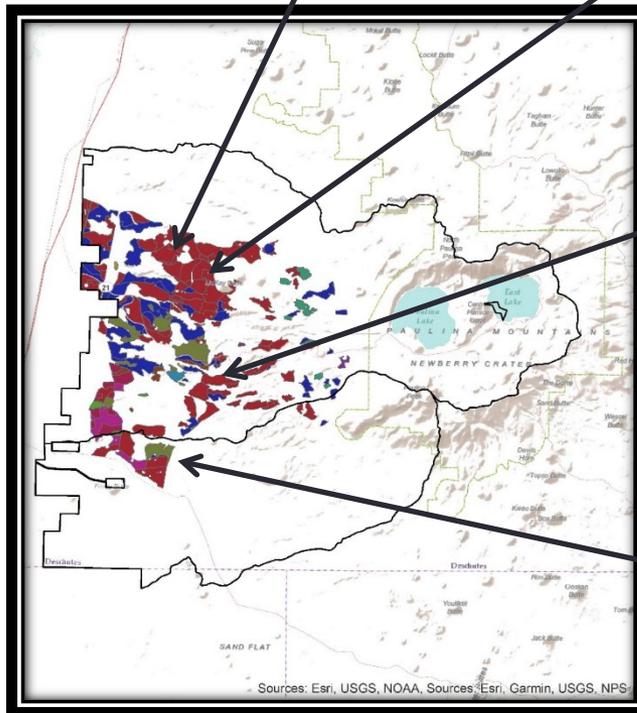


Scenario Investment Planning

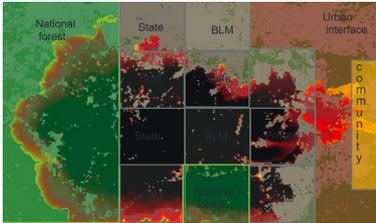


How does it work?

- We use priorities from assessments to implement on the ground activities
- Measure progress towards goals and outcomes from treatments

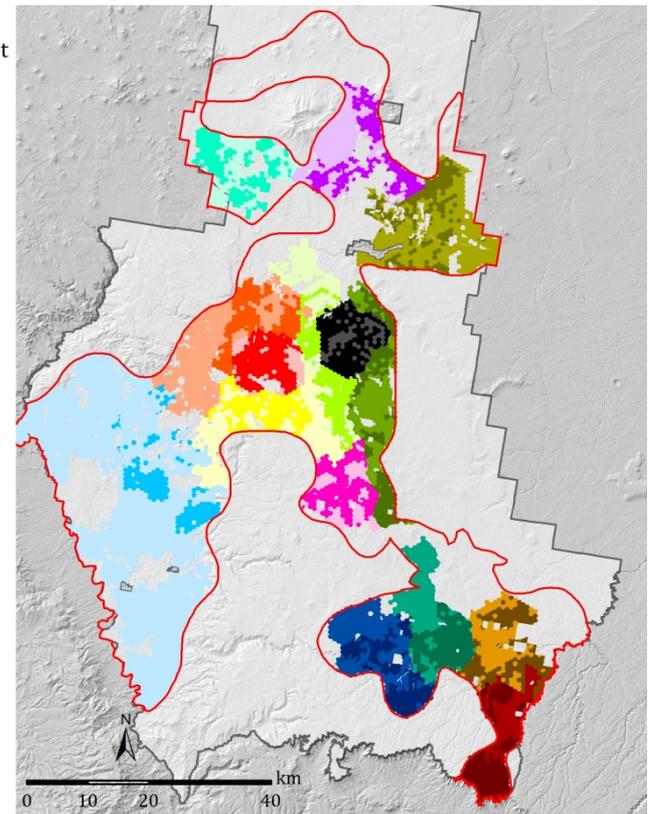
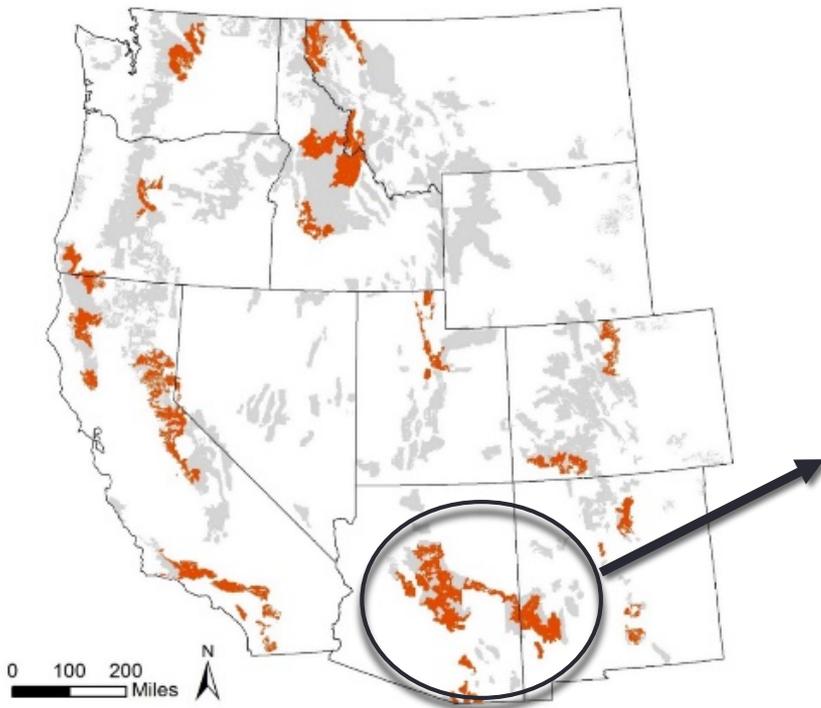


Scenario for reducing wildfire risk to the WUI



Sequence of planning areas to most efficiently treat wildfire exposure to the WUI

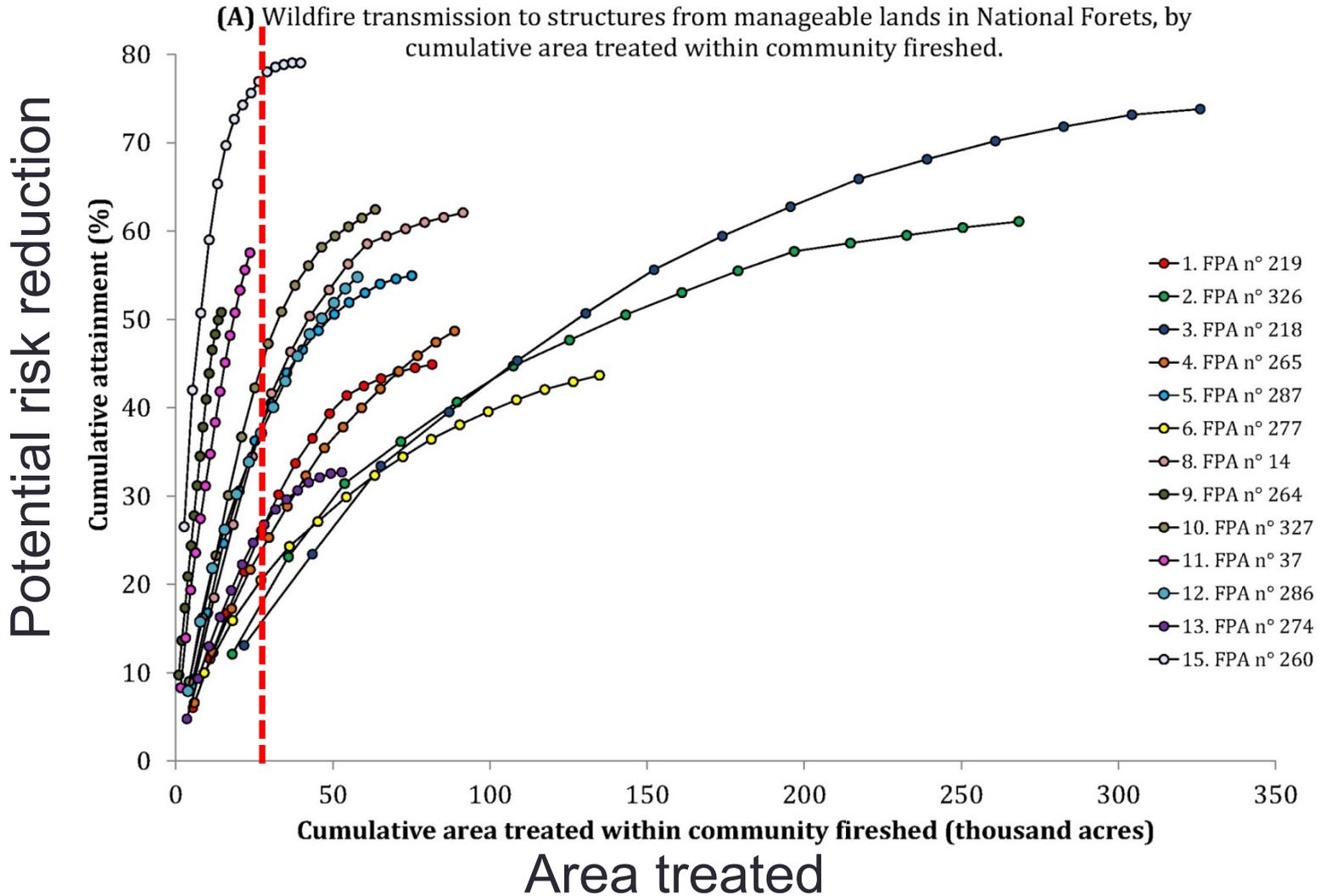
Core community firesheds



Management priority order: 2nd
Fireshed Planning Area 326 (Coconino NF, AR)

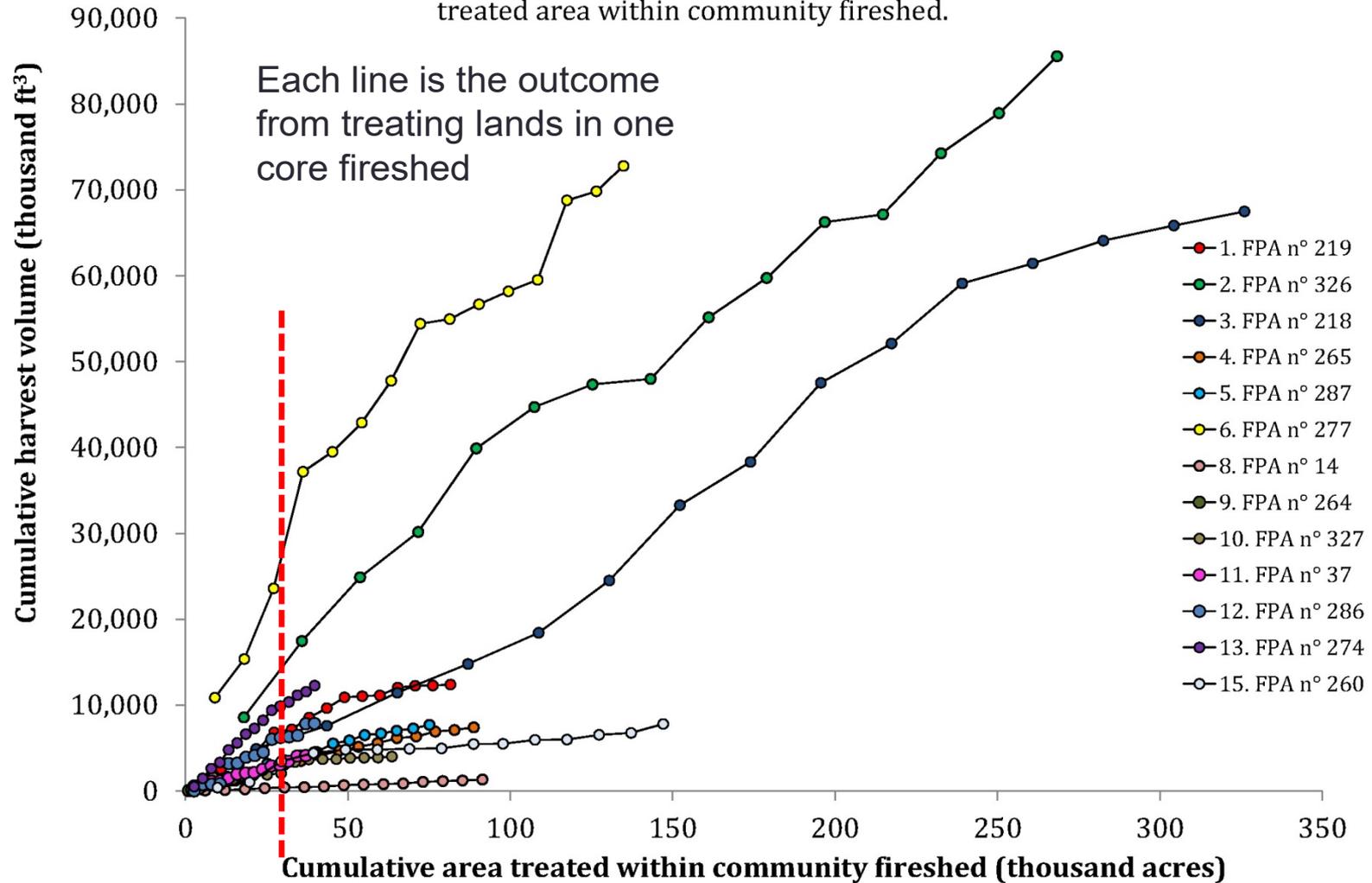
Predicted outcomes— reduction in exposure

Each line is the cumulative risk treated as projects are implemented within a core fireshed



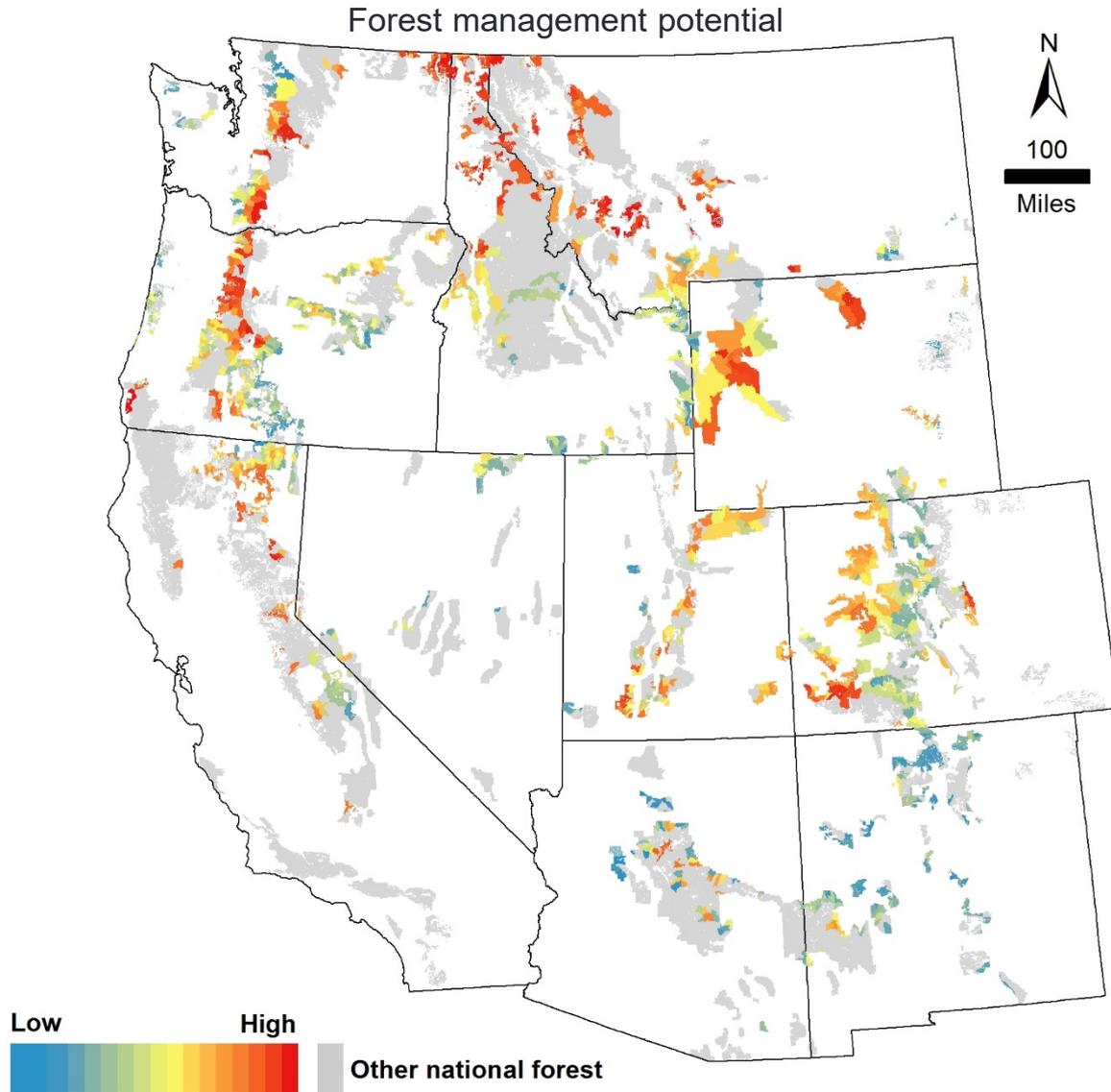
Predicted outcomes – harvest volume

(C) Harvest volume from manageable land thinning in National Forests, by cumulative treated area within community fireshed.

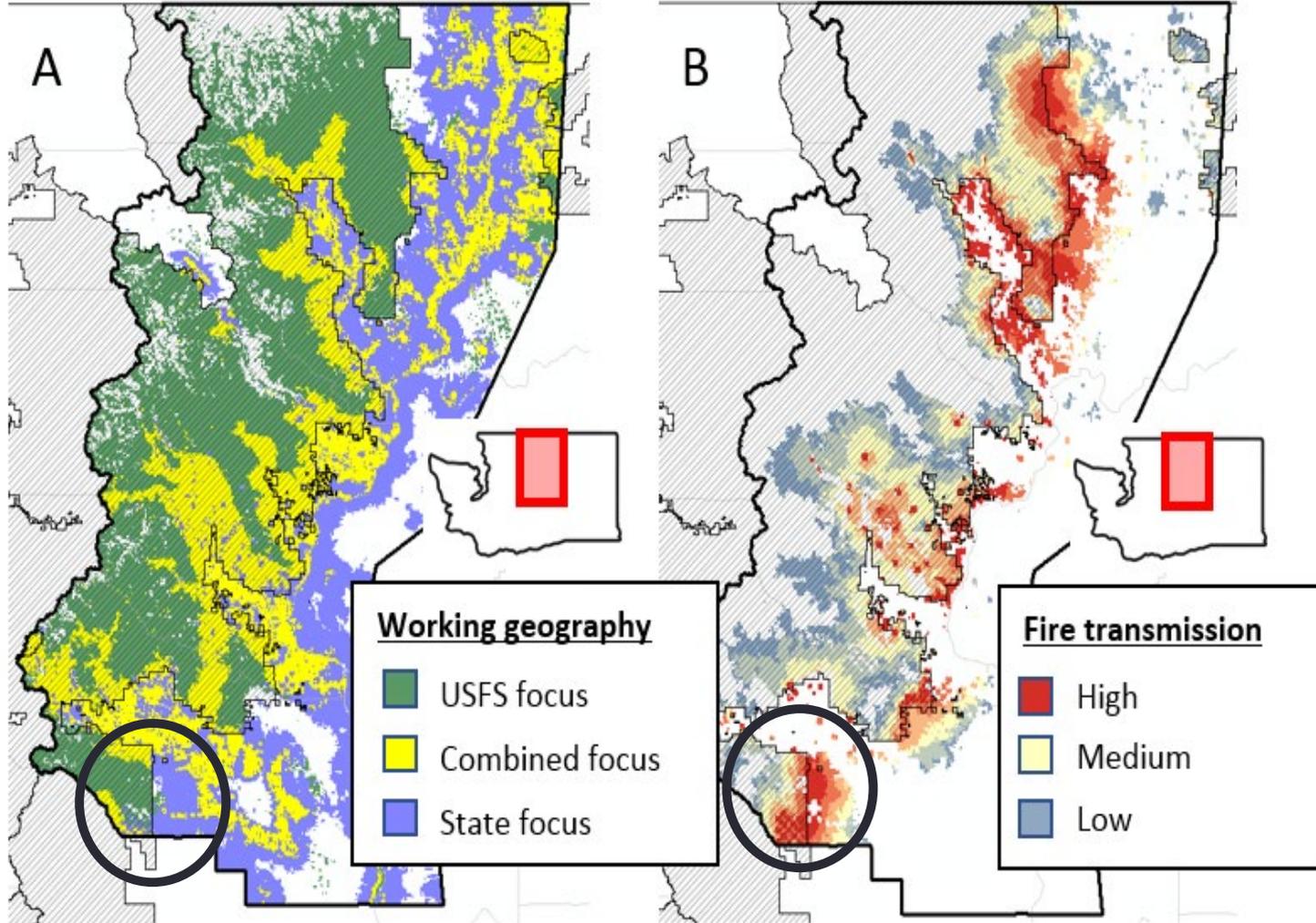


Another scenario - Improve forest health and resiliency

- Prioritize planning areas based on insect and disease risk AND high potential harvest volume
- Area implemented for mechanical thinning = 6.1 million acres
- Potential sawlog volume from treatments = 5.3 bbf
- Treatments will reduce structure exposure from Forest Service wildfires on manageable lands by 64 percent
- Treatments improve terrestrial conditions on 4.3 million acres



Are we working in the right places to address cross boundary issues ?



To be continued.....

USDA UAS Home Explore the Data Visualize and Analyze Additional Resources

Scenario Investment Planning Platform

A Collaborative Approach to Forest Management

Agency Strategy

Managers and owners of forests across the Nation face urgent challenges, among them catastrophic wildfires, invasive species, drought, and epidemics of forest insects and disease. Of particular concern are longer fire seasons and the rising size and severity of wildfires, along with the expanding risk to communities, natural resources, and the safety of firefighters. Accordingly, at the U.S. Department of Agriculture, Forest Service, we are rethinking our approach to land management. We will work closely with States to set landscape-scale priorities for targeted treatments in areas with the highest payoffs.

[Learn More](#)

Scenario Investment Planning Resources

Explore Open Data, Rapid Visualization Analysis Tools and other Information Products associated with the Shared Stewardship Initiative.

Explore the Data
Download Initiative Data

Visualize & Analyze
Rapidly Visualize Priority Objectives.

Work Products
Explore Maps and Apps.

