

# THE FUTURE USE OF FOREST RESOURCES

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**EESI**

Environmental and  
Energy Study Institute



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Environmental and  
Energy Study Institute

- Founded in 1984 by a bipartisan Congressional caucus as an independent non-profit organization (but receives no Congressional funding)
- Source of non-partisan information on energy and environment policy development for Congress and other policymakers
- [Climate change](#) is one of the most serious problems facing civilization today — impacting infrastructure, water supply, agriculture, public health and natural ecosystems

# U.S. Forests Provide Multiple Co-Benefits:

- Species habitat
- Clean water and air
- Food
- Fuel
- Fiber
- Construction material
- Carbon dioxide (CO<sub>2</sub>) sequestration
- Jobs and economic opportunity
- Recreation and tourism industry

All of these benefits are threatened by climate change



# Multiple threats to forest co-benefits:

- Climate change impacts
- Underfunded wildfire and forestry management budgets
- Declining U.S. timber industry
- Lack of cohesive policies to promote forest resiliency, productivity and preservation

# Federal resources on forestry climate adaptation:

- White House Climate Action Plan (CAP) 2013
  - USDA Climate Hubs
- Department of Interior National Strategy 2014
  - Joint effort between USDA and DoI to develop cohesive wildfire strategy
- The National Climate Assessment 2014
  - Breaks down U.S. climate impacts by region and sector; includes forestry, land use change and rural climate impacts

# Key findings of the U.S. National Climate Assessment:

1. Climate change is increasing the vulnerability of many forests
2. U.S. forests and associated wood products currently absorb and store the equivalent of about 16% of all carbon dioxide (CO<sub>2</sub>) emitted by fossil fuel burning in the U.S.
3. Bioenergy could emerge as a new market for wood and could aid in the restoration of forests

# Climate change impacts to wildfire frequency:

- For every 1.8 degrees F of surface temperature rise, the Western wildfire area may quadruple – NCA
- Wildfire season lasts 2 months longer and burns twice as much land as compared to 40 years ago



Sun Valley, Idaho 2007

Photo Credit: view\_camper/ Flickr

# A declining U.S. timber industry has meant:

- Declining economic opportunity in rural economies
- Accumulated fuel
- Increased wildfire risk



Bastrop, Texas 2011

Photo Credit: Joe Wolf/ Flickr

# **2013: Underfunded wildfire and forestry management budgets**

- In 10 years, fire suppression has grown from 13% of U.S. Forest Service to over 40% in 2014
- 2009 FLAME Act is underfunded
- U.S. Forest Service began 2013 season with 500 fewer firefighters and 50 fewer fire engines due to the sequester
- 2013 wildfire season cost over \$1 billion

# What will the 2014 season bring?

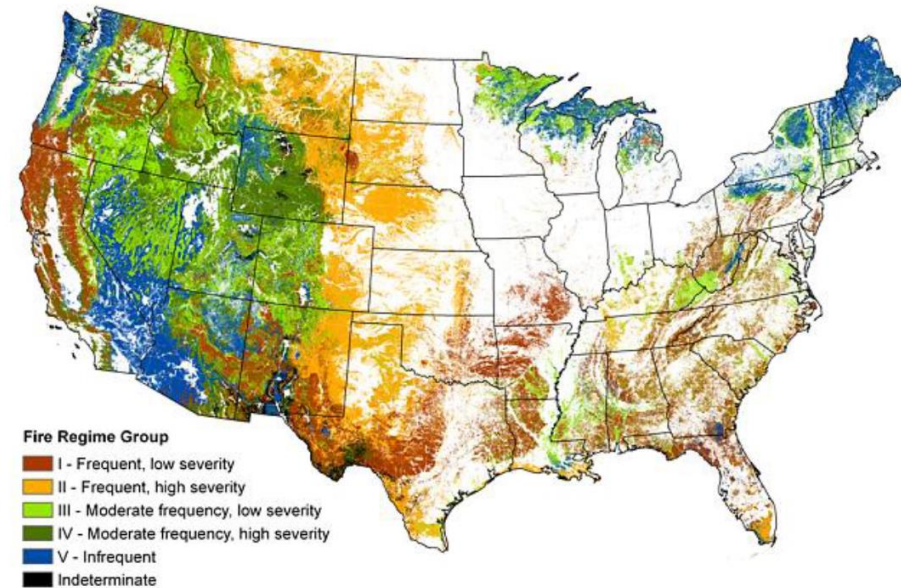
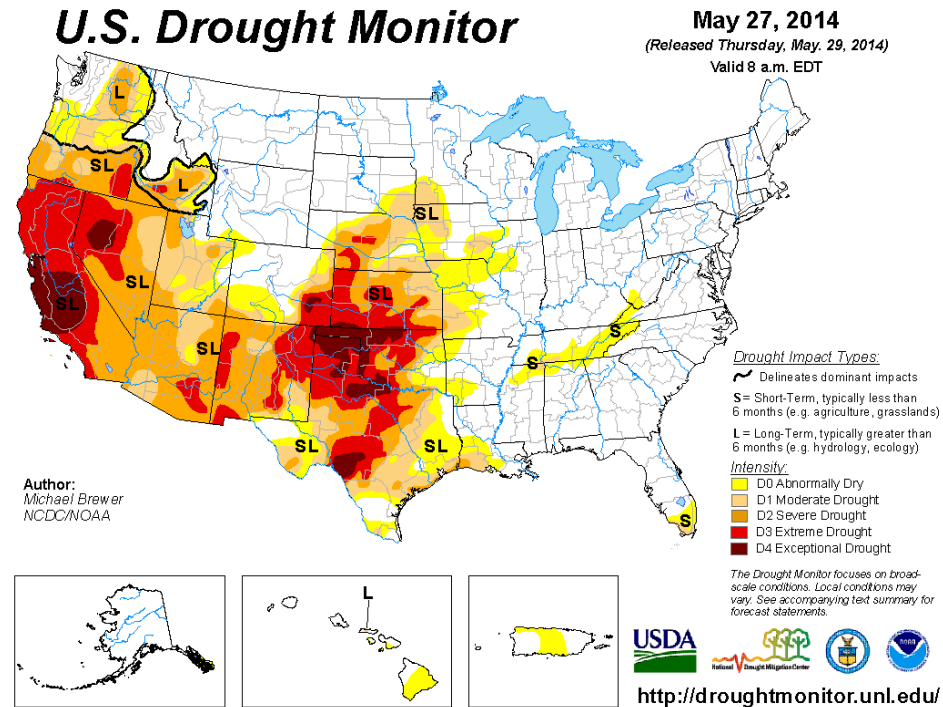


Figure 3.2. Historical fire regime group values in areas currently dominated by natural vegetation

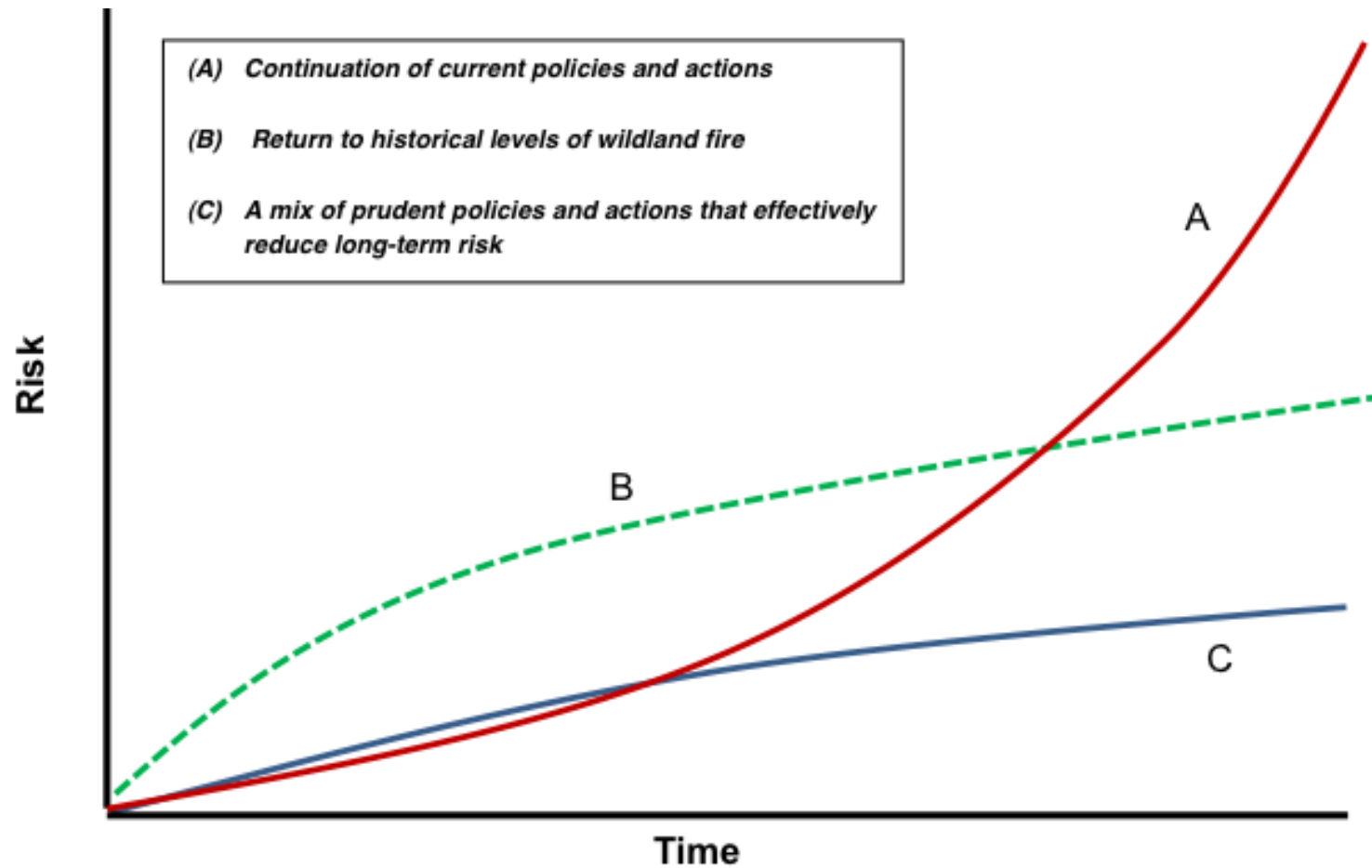
Source: DoI National Strategy



The 2014 season is already expected to be \$1.6 billion -- \$500 million over budget



# Looking forward

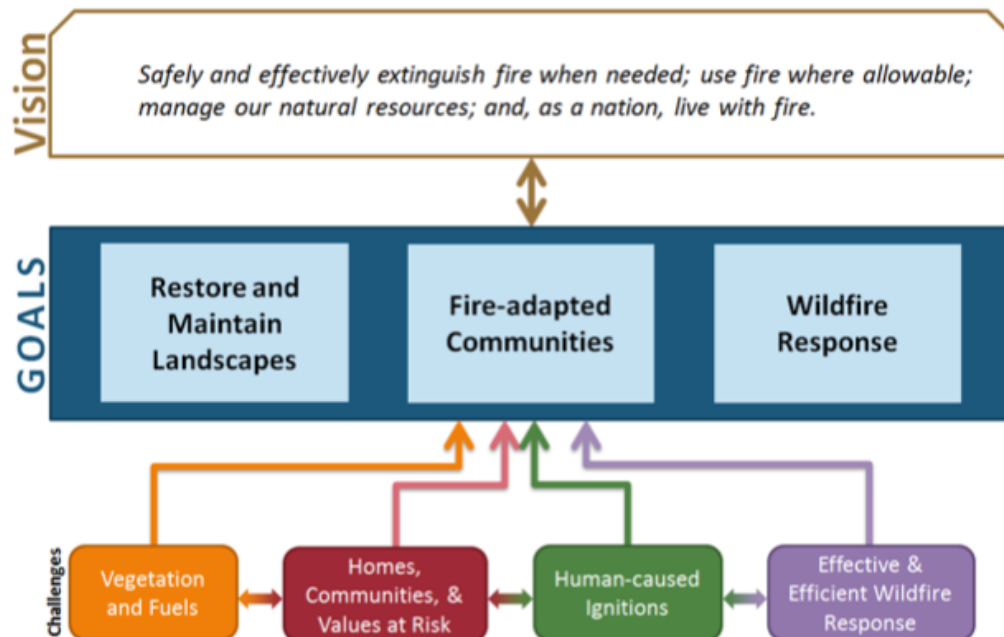


**Figure 4.1. Three hypothetical scenarios for temporal trends in risk nationwide**

Source: DoI National Strategy

# What policies support a multi-functioning forest?

- 2014 DoI National Cohesive Wildland Fire Management Strategy emphasizes:
  - 1) Safe and effective response to wildfires
  - 2) Vegetation and fuels management



Source: DoI National Strategy

# Healthy forests are climate resilient forests

Forestry management policies should:

- Realize economic value of hazardous fuel reduction practices
- Realize carbon sequestration and fossil fuel use offset by wood construction materials and biofuels
- Realize benefits to habitat diversity through areas of actively managed forest

# Forestry in the 2014 Farm Bill

## Forestry Title (VIII)

### •Cooperative Forestry Assistance Act (CFAA)

- \$10 million mandatory funding per year through FY2018 to carry out state-wide assessment and strategies for forest resources

### •Healthy Forests Restoration Act of 2003 (HRFA)

- 2014 Farm Bill eliminates mandatory funding for HRFA but authorizes \$12 million annually, subject to appropriations
- Amendment to HRFA Sect. 602 *Designation of Treatment Areas*: Requires USDA to designate treatment areas in at least one national forest in each state, if requested by the Governor of the state. Authorizes appropriations of \$200 million annually through FY2024



# Bioenergy in the 2014 Farm Bill

**Energy Title (IX): \$694 million in mandatory funding over 5 years**

- Sec. 9002 Biobased Markets Program
- Sec. 9003 Biorefinery Assistance
- Sec. 9004 Repowering Assistance Program
- Sec. 9005 Bioenergy Program for Advanced Biofuels
- Sec. 9006 Biodiesel Fuel Education Program
- Sec. 9007 Rural Energy for America (REAP)
- Sec. 9008 Biomass Research and Development Initiative (BRDI)
- Sec. 9010 Biomass Crop Assistance
- Sec. 9012 Community Wood Energy Program (no mandatory funding)



# **EPA Clean Air Act Section 111(d): Existing Source Performance Standards**

- “Sustainable forestry and agriculture can improve resiliency to climate change .. contribute to climate change mitigation by acting as a ‘sink’ for carbon.”
- “Burning biomass-derived fuels for energy recovery can yield climate benefits as compared to burning conventional fossil fuels.”
- “We anticipate that states ... consider biomass-derived fuels in energy as a way to mitigate the CO2 emissions attributed to the energy sector.”



# 111(d): biogenic carbon rule forthcoming

- “EPA expects that [it] will be a resource that could help inform states in the development of their CAA section 111(d) plans.”
- Senators advocating for “simple and implementable” regulations recognizing the utility of bioenergy in CO<sub>2</sub> in letter to Gina McCarthy.
  - Jeff Merkley (D-OR), Debbie Stabenow (D-MI), Mark Begich (D-AK), Angus King (I-ME), Amy Klobuchar (D-MN), Mark Udall (D-CO), Al Franken (D-MN), Ron Wyden (D-OR), Patty Murray (D-WA), Tammy Baldwin (D-WI) and Jeanne Shaheen (D-NH)



# Proposed federal policies: Wildfire funding

- The President's 2015 budget proposal calls for \$954 million in funding for separate, FEMA administered fund
- Would address the largest 1% of wildfires, which account for 30% of the budget
- Supported by The White House, Senators Wyden (D-OR) and Crapo (R-ID)

# Additional grants and policies

- **2013 Hazardous Fuels Wood-to-Energy Grant**
  - USFS Forest Products Laboratory
  - \$2.8 million for design of wood-energy facilities
  - \$1.7 million for Statewide Wood Energy Team
- **Chiefs' Joint Landscape Restoration Partnership**
  - U.S. Forest Service and the Natural Resources Conservation Service
  - \$30 million for 13 projects
- **The Biomass Thermal Energy Act (BTU Act) proposed by Senator King (I-ME)**
  - Would provide further incentives for wood bioenergy
  - Provides renewable tax-credits to thermal biomass



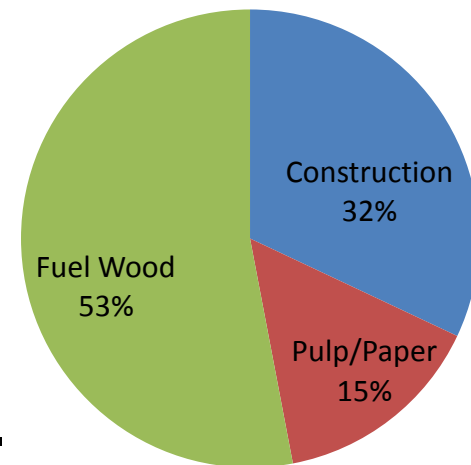
**“More CO2 can be sequestered synergistically in the products or wood energy and landscape together than in the unharvested landscape.”**

– Dr. Oliver et al., *Journal of Sustainable Forestry*

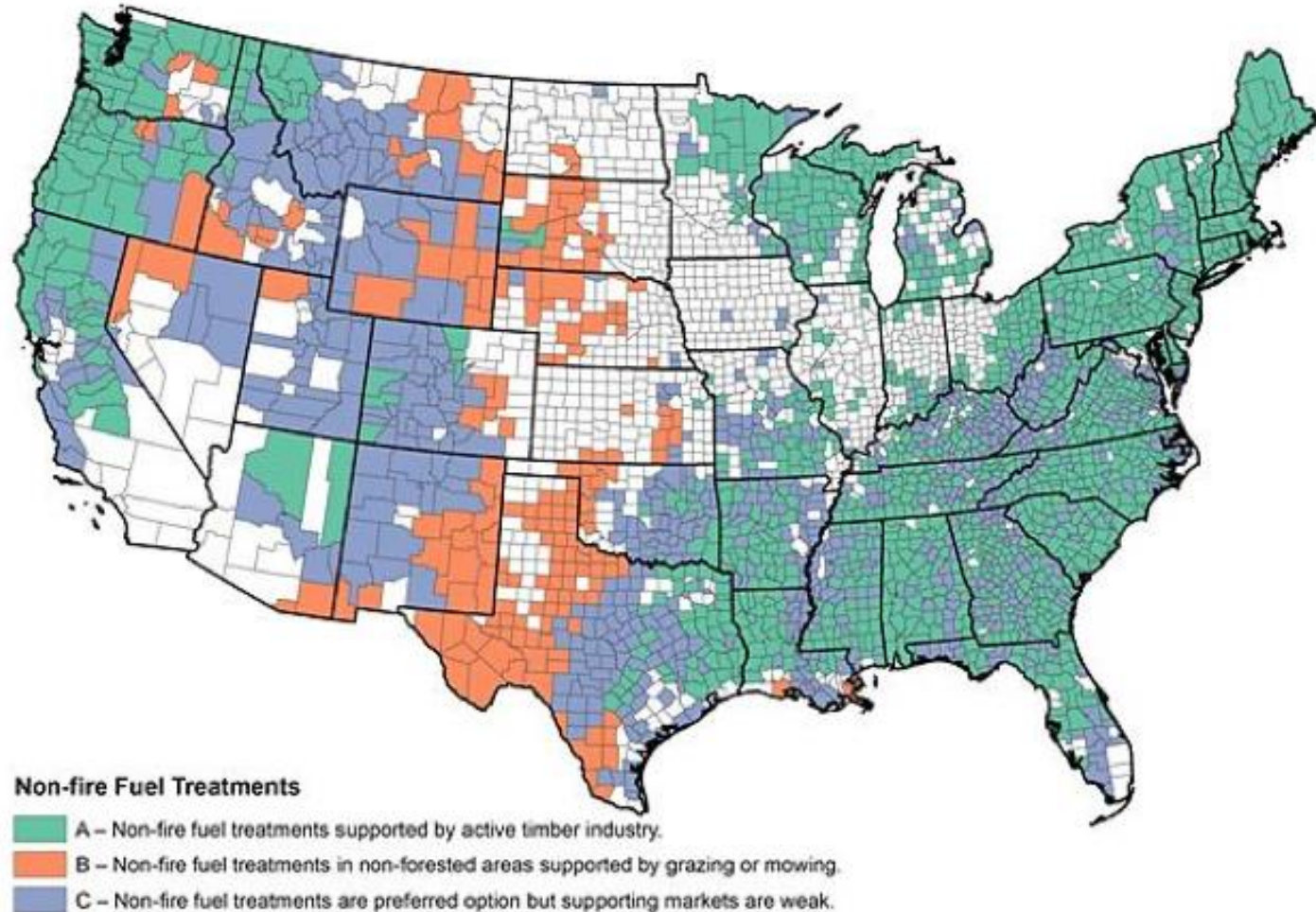
- 3.4 billion meters<sup>3</sup>/year of wood is harvested per year globally = 0.9 meters<sup>3</sup>/hectare – UN Food and Agriculture Organization

- Forests could sustainably support additional wood harvesting, but we must break the cycle of wildfires that reduces the health of forests.

**Global wood harvest**  
– UN Food and Agriculture Organization



# Realizing the economic value of mechanical thinning of hazardous fuels



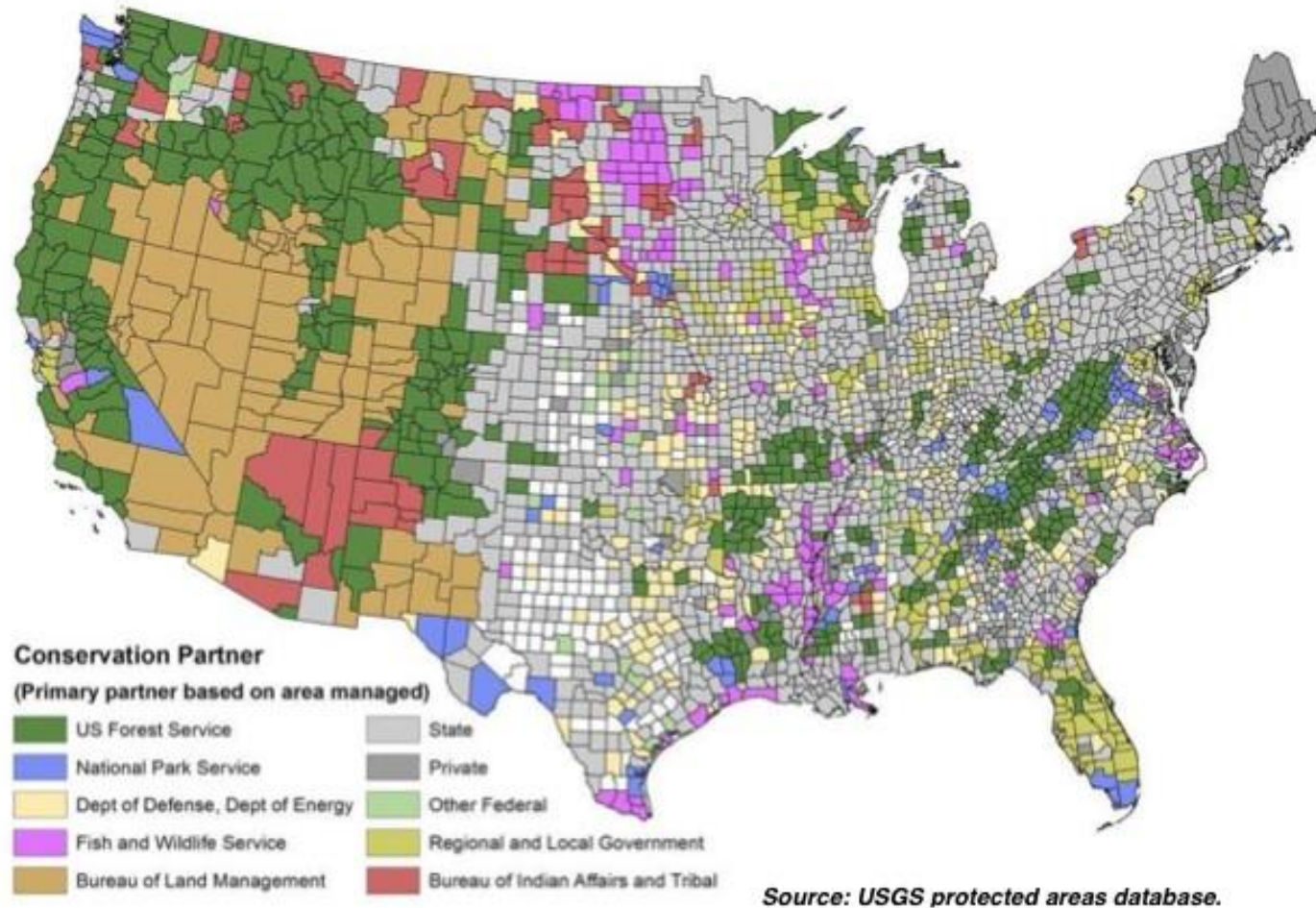
**Figure 3.5. Non-fire Fuel Treatments. Spatial distribution of counties where mechanical, biological, or other non-fire treatments might be useful**

Source: DoI National Strategy

# Sustainable wood construction materials

- Provide more GHG offsets as compared to woody biomass energy
  - Displaces fossil fuels used to manufacture steel and concrete
  - Sequesters carbon in long-lived wood construction materials
- Additional potential for wood recovery from demolition – diverts from landfill where it would emit methane

# Who is responsible for forests?



Source: DoI National Strategy

# Committees responsible for forests: Senate

- Agriculture, Nutrition and Forestry
- Appropriations subcommittee on Interior, Environment and Related Agencies
- Environment and Public Works
- Energy and Natural Resources
- Finance subcommittee on Energy, Natural Resources, and Infrastructure
- Small Business and Entrepreneurship
- Indian Affairs

# Committees responsible for forests: House

- Agriculture subcommittee on Conservation, Energy and Forestry
- Appropriations
  - Subcommittee on Agriculture, Rural Development, FDA and Related Agencies
  - Interior, Environment and Related Agencies
- Energy and Natural Resources
- Energy and Commerce
- Natural Resources
- Small Business subcommittee on Agriculture, Energy and Trade



# Recent Congressional Hearings

- **“Farming, Fishing, Forestry, and Hunting in an Era of Changing Climate”**, June 3, 2014
  - Senate Environment and Public Works, Subcommittee on Green Jobs and the New Economy
- **“Keeping the Lights On and Reducing Catastrophic Forest Fire Risk: Proper Management of Electricity Rights of Way on Federal Lands”**, May 7, 2014
  - House Committee on Natural Resources
- **“Shortchanging Our Forests: How Tight Budgets and Management Decisions Can Increase the Risk of Wildfire”**, Nov. 5, 2013
  - Senate Agriculture, Nutrition and Forestry, Subcommittee on Conservation, Forestry and Natural Resources



## Recent EESI Briefings

- **National Landmarks at Risk: How Rising Seas, Floods, and Wildfires Are Threatening The United States' Most Cherished Historic Sites**
  - Highlights a Union of Concerned Scientists report about the climate impacts to national landmarks.
- **Drier and Hotter: Managing Climate Risks in the Southwest**
  - Draws from the regional findings of the National Climate Assessment

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# THANK YOU

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