



Woody Biomass: An Untapped Resource

Working with the Federal Sector

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US Department of the Interior



GovEnergy
www.govenergy.gov

Obligatory Fire Photo



Color Country Interagency Fire Management



**Blue Springs Fire
approaches
Harmony Heights
Subdivision**

**Community Fire Plan
provides for
orderly evacuation**



Strategic Fire Management



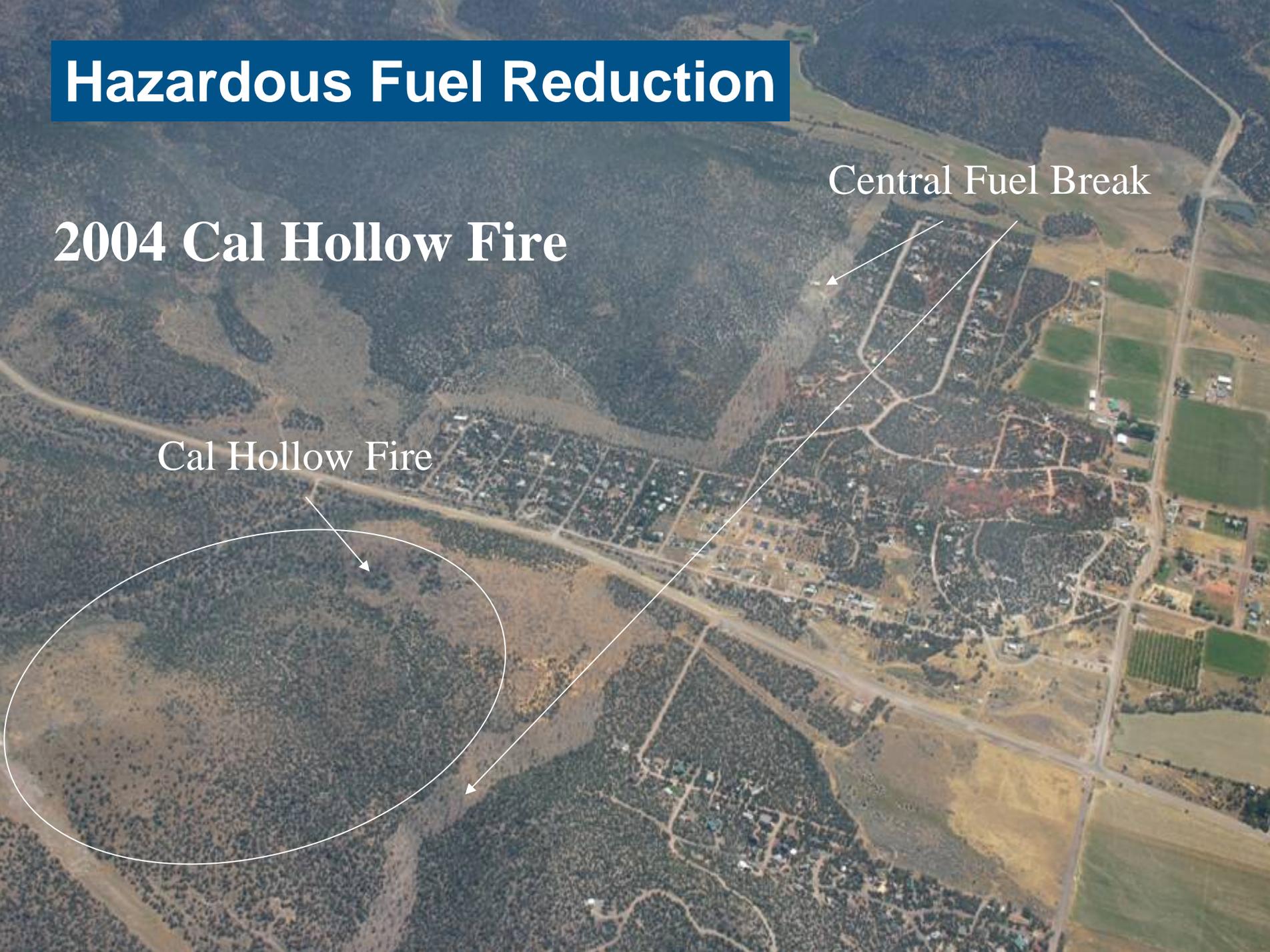
Suppression alone is not enough to save communities

Hazardous Fuel Reduction

2004 Cal Hollow Fire

Central Fuel Break

Cal Hollow Fire



DFPZ Pre-Treatment



DFPZ Post-Thinning, Pre-Fire



**Cone Fire
Blacks Mountain Exp Forest
September 2002**

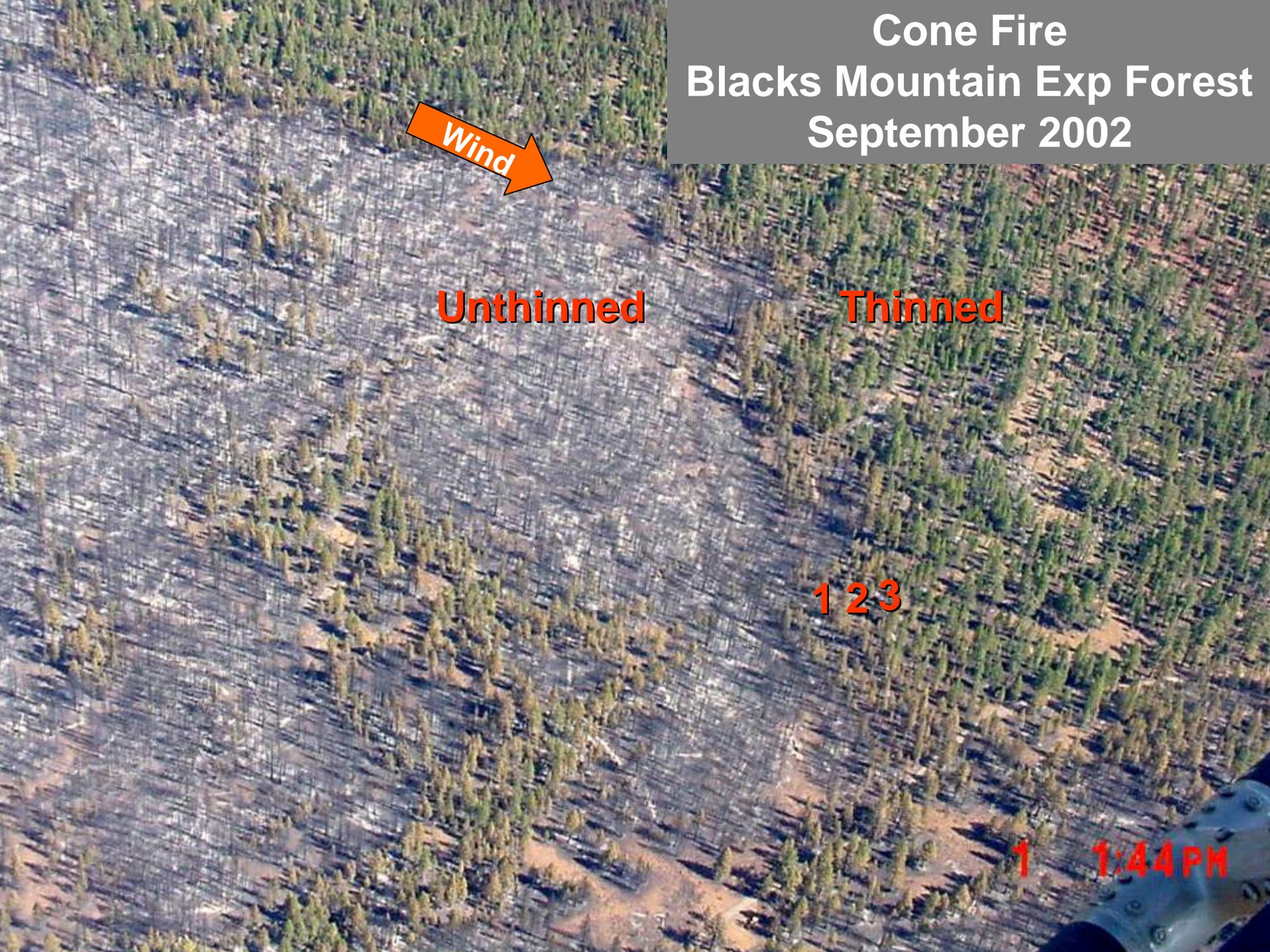


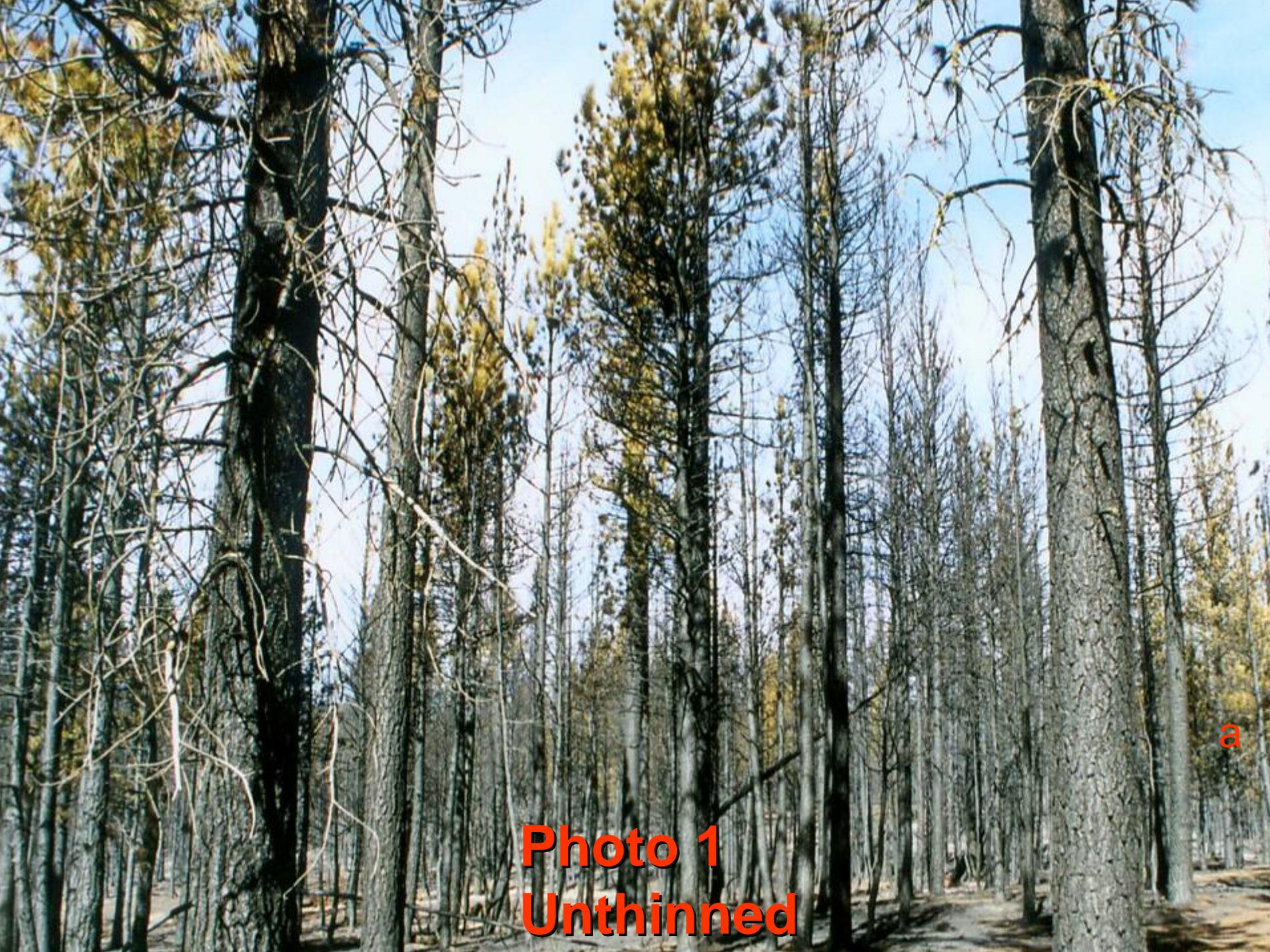
Unthinned

Thinned

1 2 3

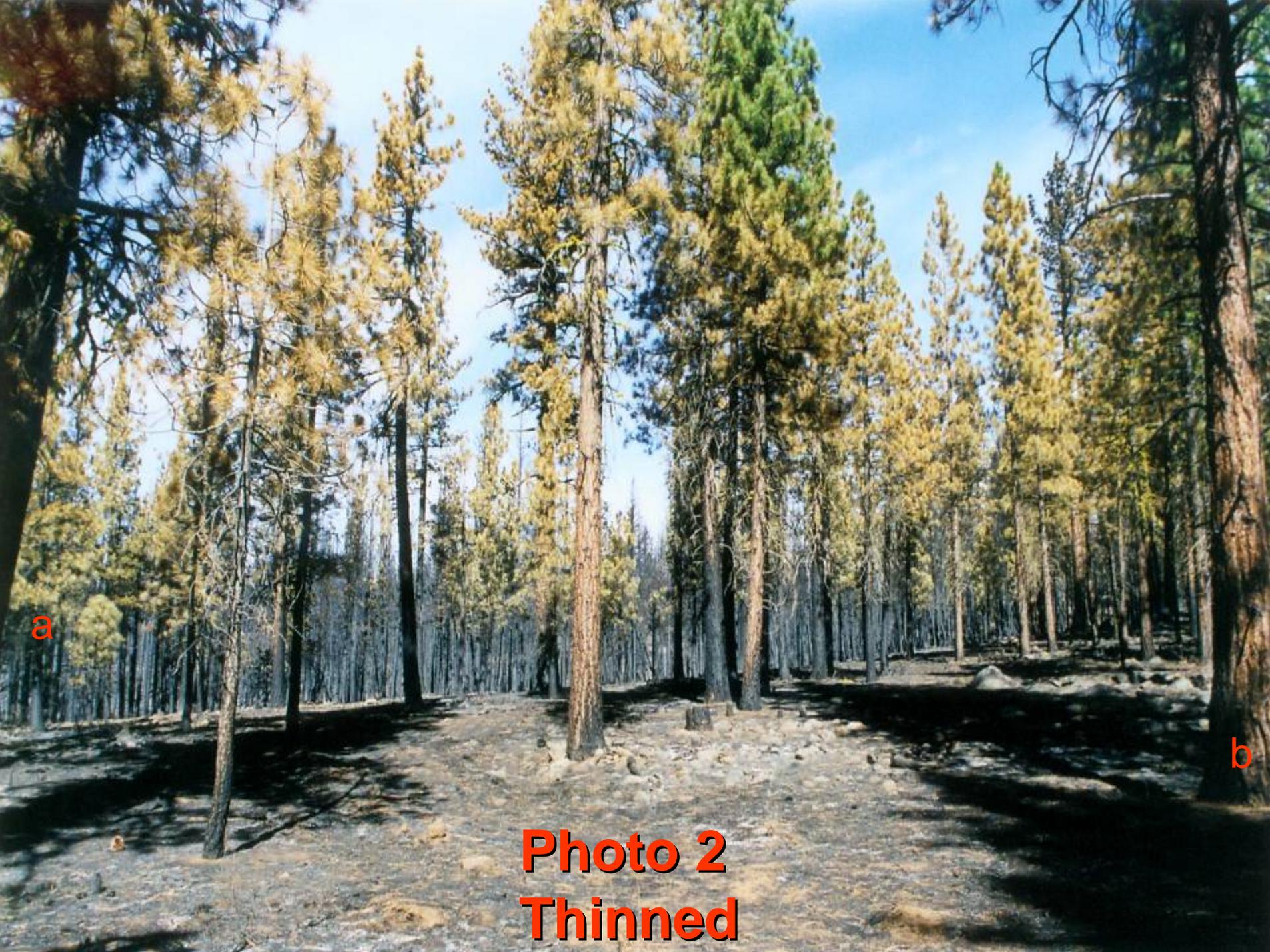
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a

Photo 1
Unthinned



a

b

Photo 2
Thinned

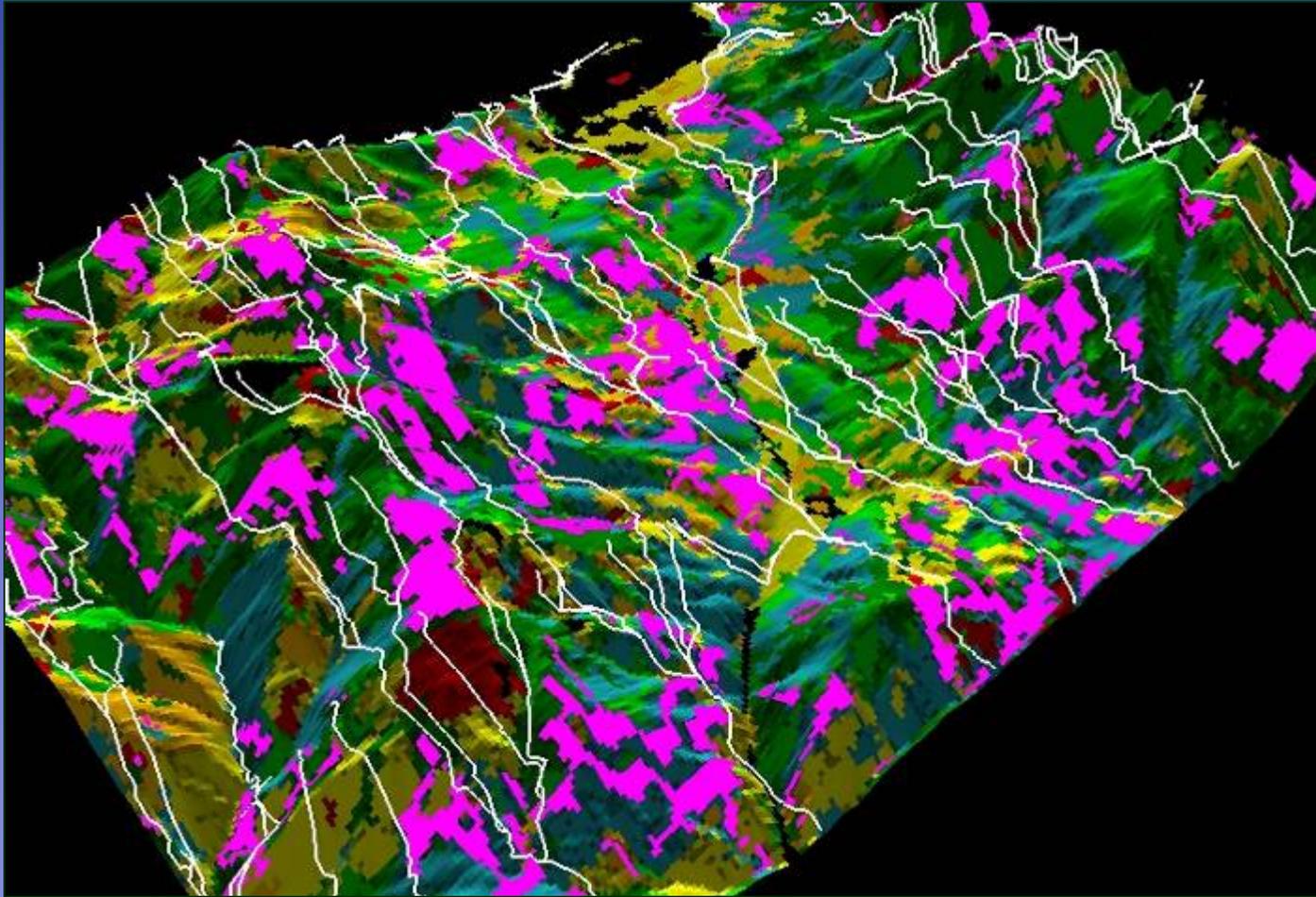


b

c

Photo 3
Thinned

PLACING TREATMENTS

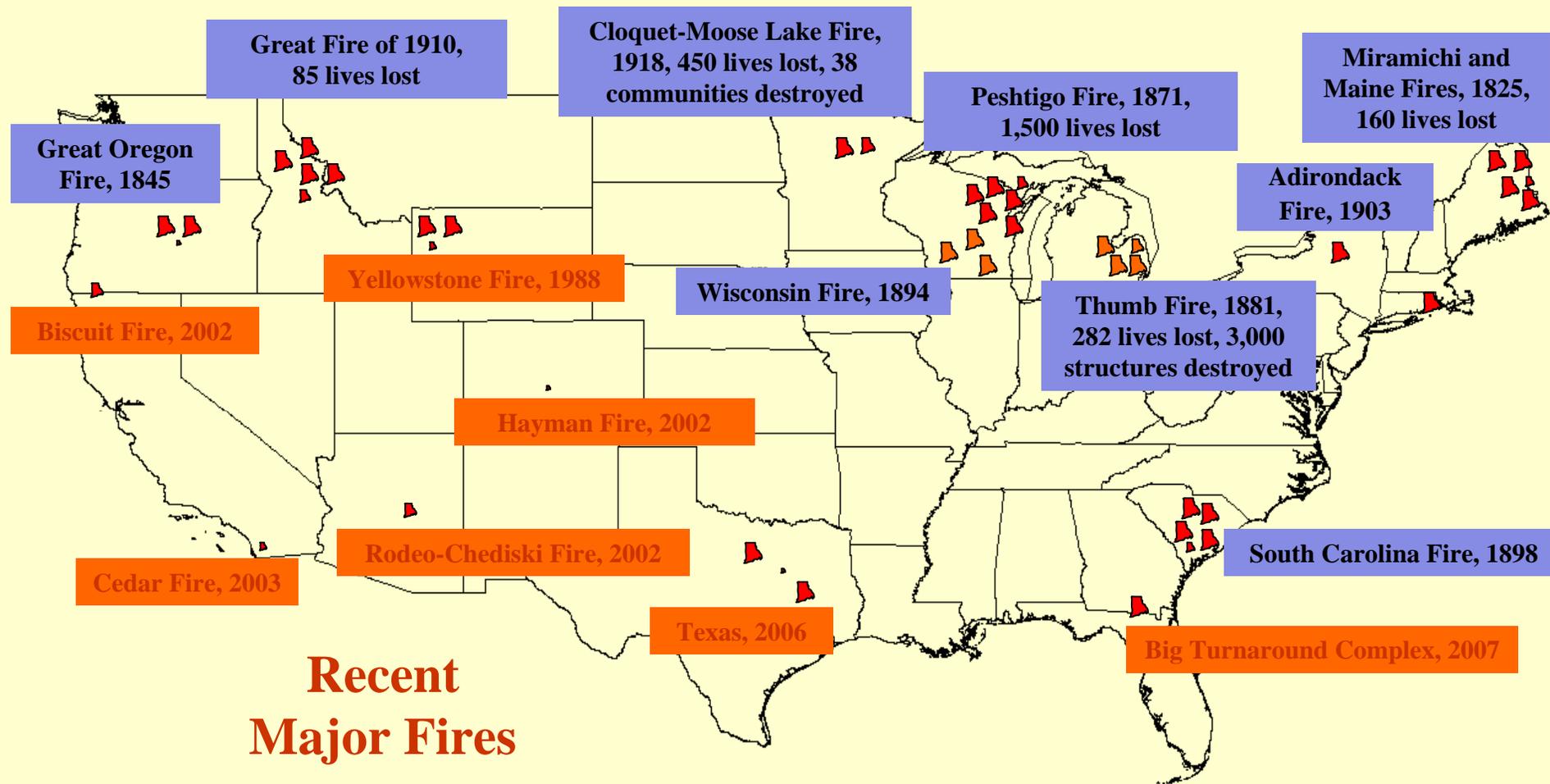




Wildland fire use – federal ownership

Fuel break – private ownership

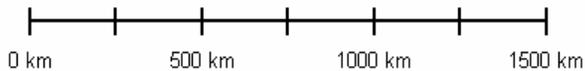
Historically Significant Wildfires



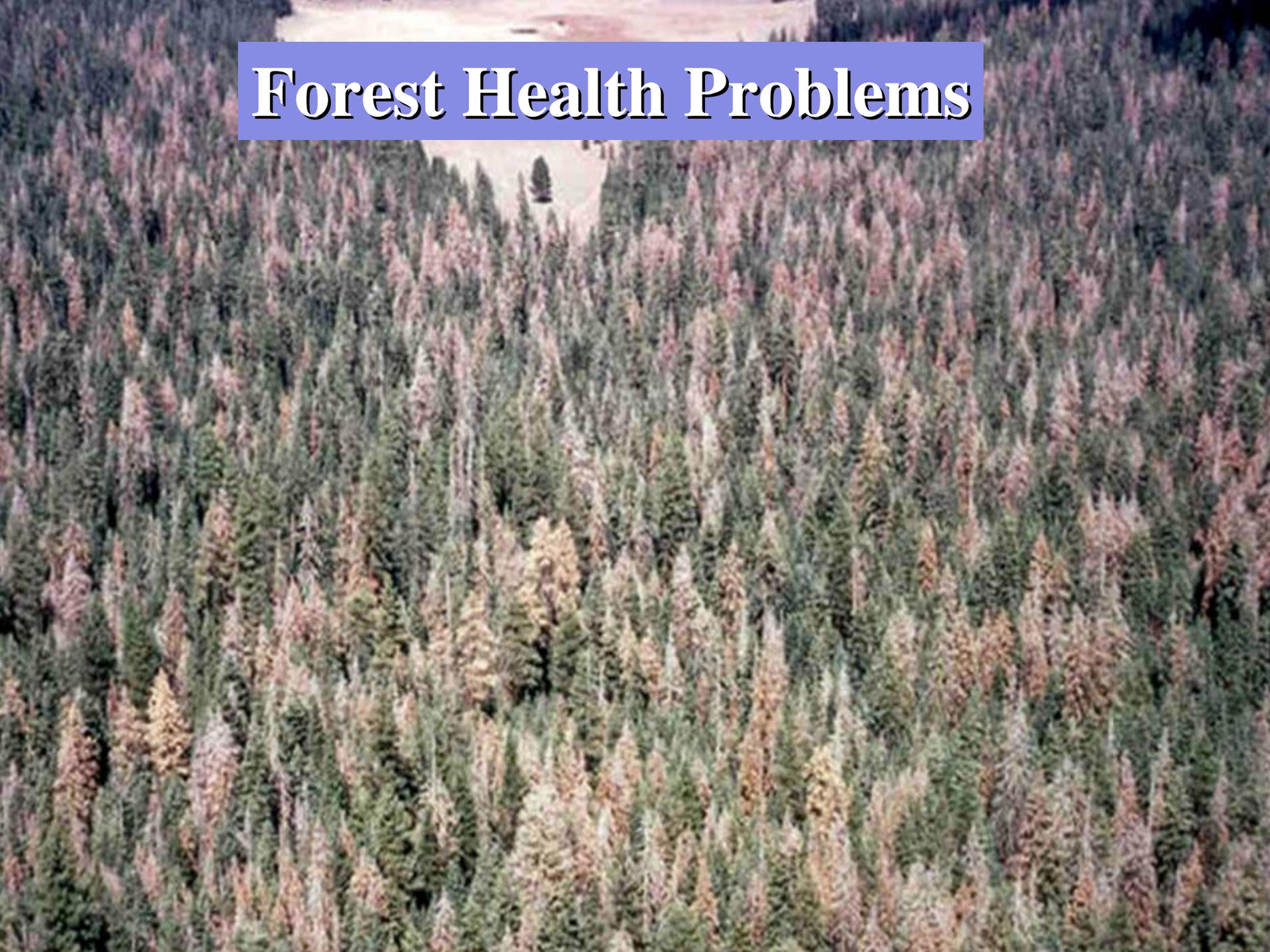
Recent Major Fires

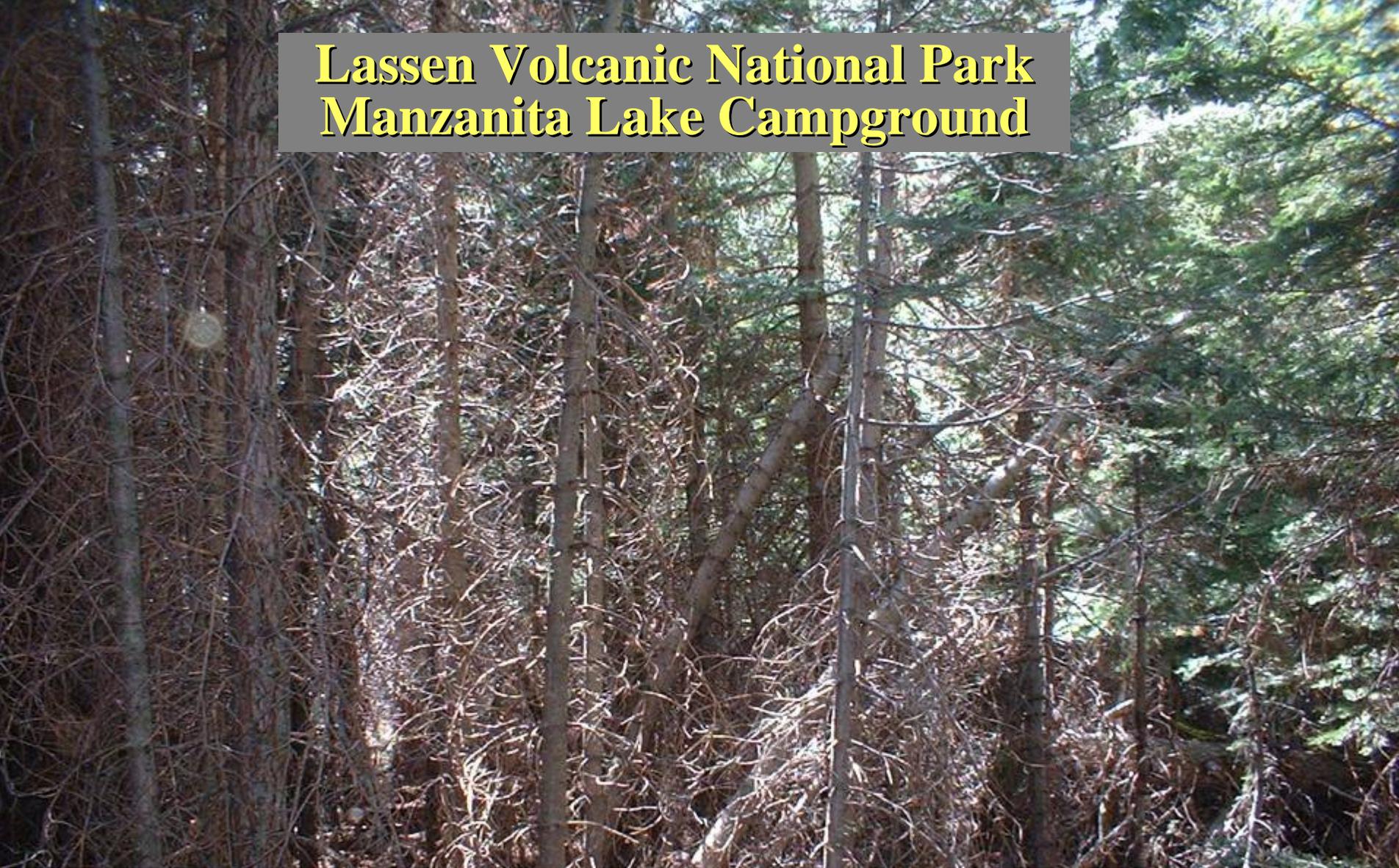


Fire Boundaries are represented by the number or portion of the land area in the State of Rhode Island (669,000 acres each)



Forest Health Problems





Lassen Volcanic National Park Manzanita Lake Campground

Low visual quality from this trail, declining forest health conditions, and wildfire threats must be addressed or all forest structures (including adjacent old growth) will be lost.

Lassen Volcanic National Park

Manzanita Lake Campground

**Tree mortality is due
to the dense
understory, coupled
with bark beetles and
disease problems
which have weakened
the older trees.**



Lassen Volcanic National Park

Manzanita Lake Campground

Dense stocking of white fir provides visual screening, but is well above natural levels for this forest type. This poses a significant threat of crowning in the event of a wildfire.

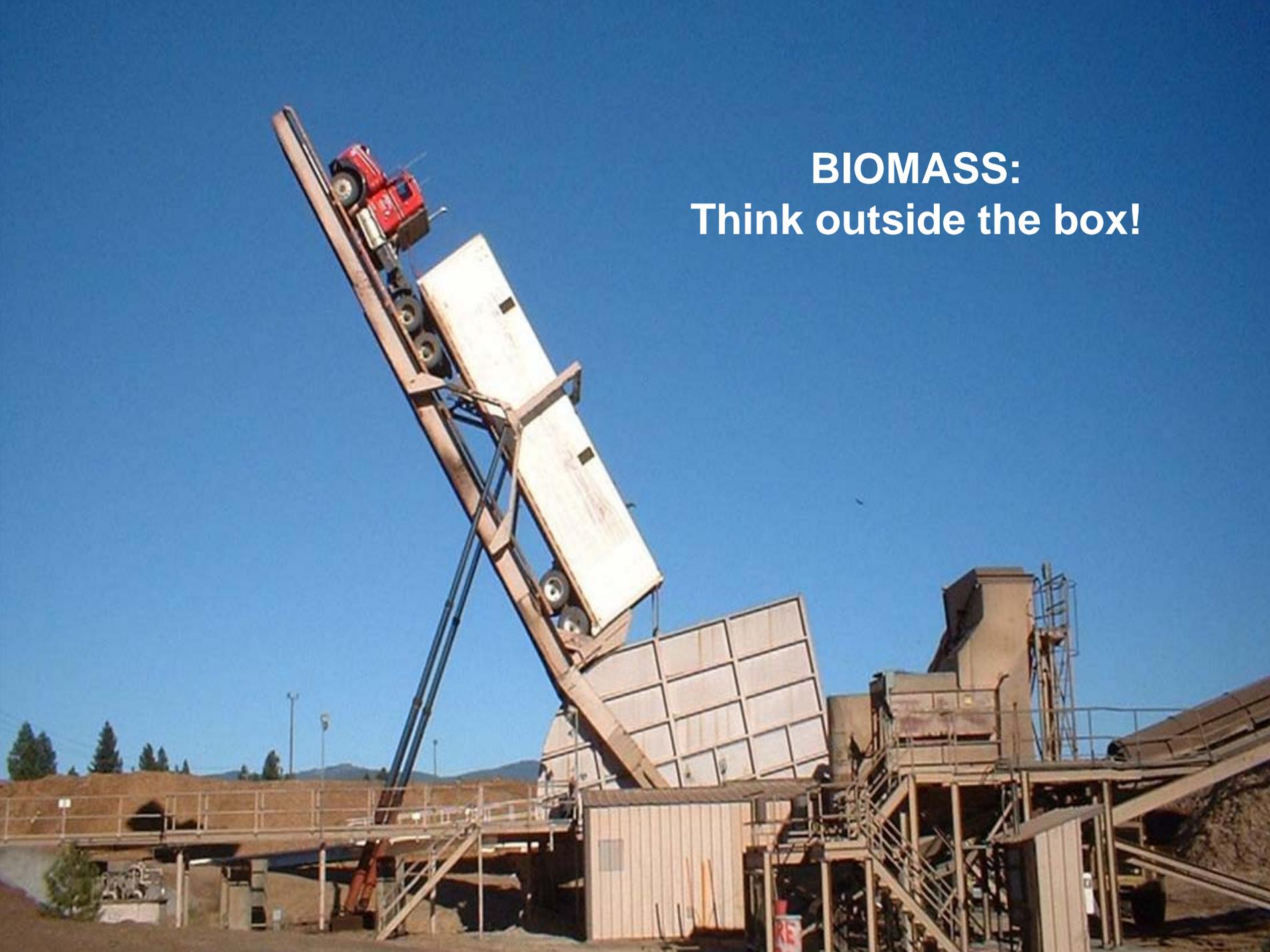


Healthy Forests Restoration Act of 2003



President George W. Bush signs the Healthy Forests Restoration Act of 2003 at the Department of Agriculture Wednesday, December 3, 2003.
White House photo by Tina Hager

**BIOMASS:
Think outside the box!**



Developing a Reliable Biomass Supply

Billion Ton Report (National)

25x'25 studies (National)

CROP studies (Regional/Project)

Feasibility/Due Diligence Studies (Project)

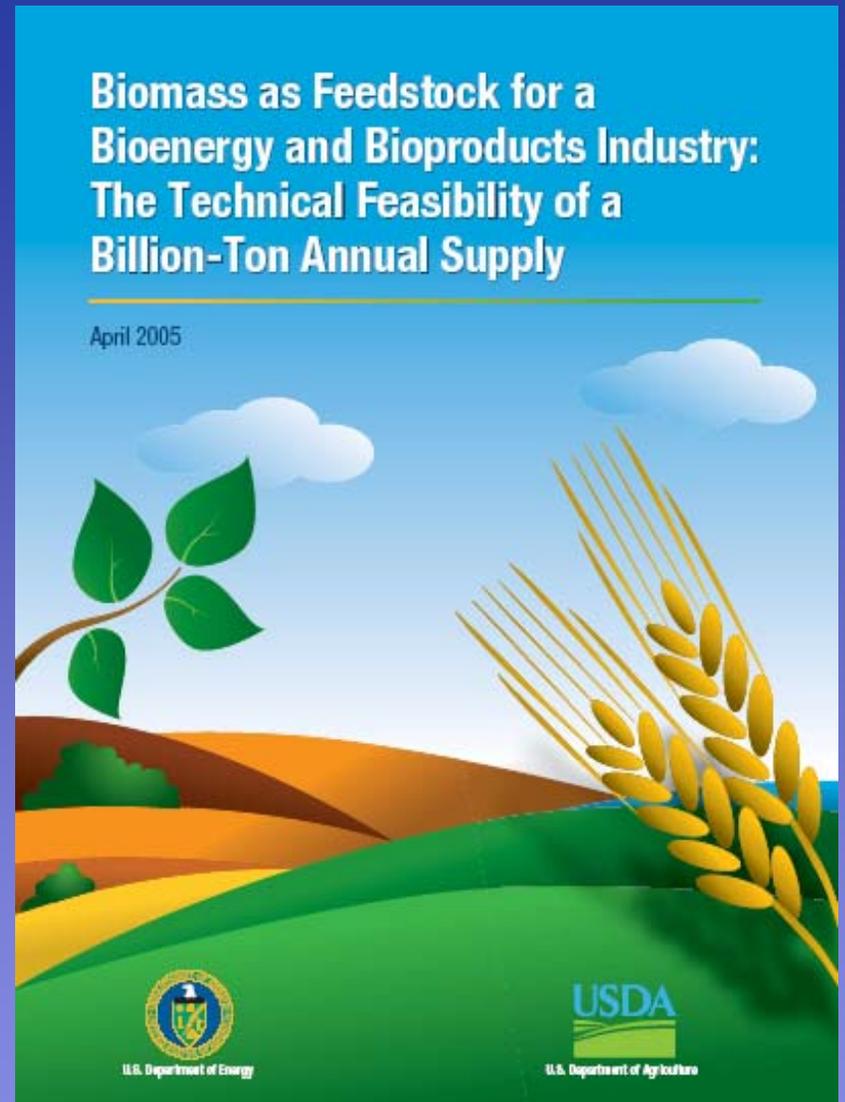
Stewardship contracts (Project/Operational)

“Serial contracts” (Project/Operational)

Robert D. Perlack
Lynn L. Wright
Anthony F. Turhollow
Robin L. Graham
Oak Ridge National
Laboratory

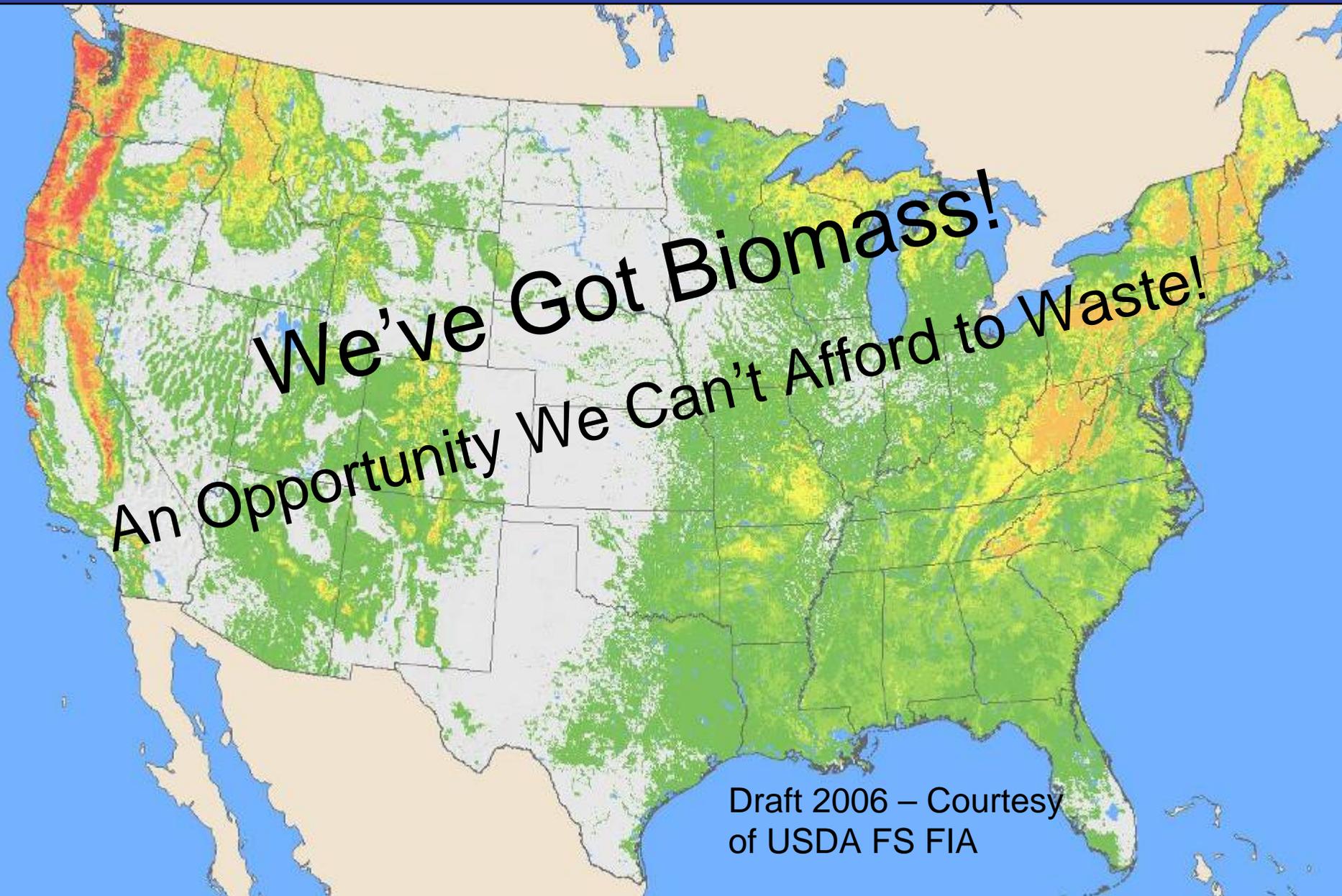
Bryce J. Stokes
USDA - Forest Service

Donald C. Erbach
USDA - Agricultural
Research
Service



http://feedstockreview.ornl.gov/pdf/billion_ton_vision.pdf

USDA Forest Inventory & Analysis Nationwide Forest Biomass Map

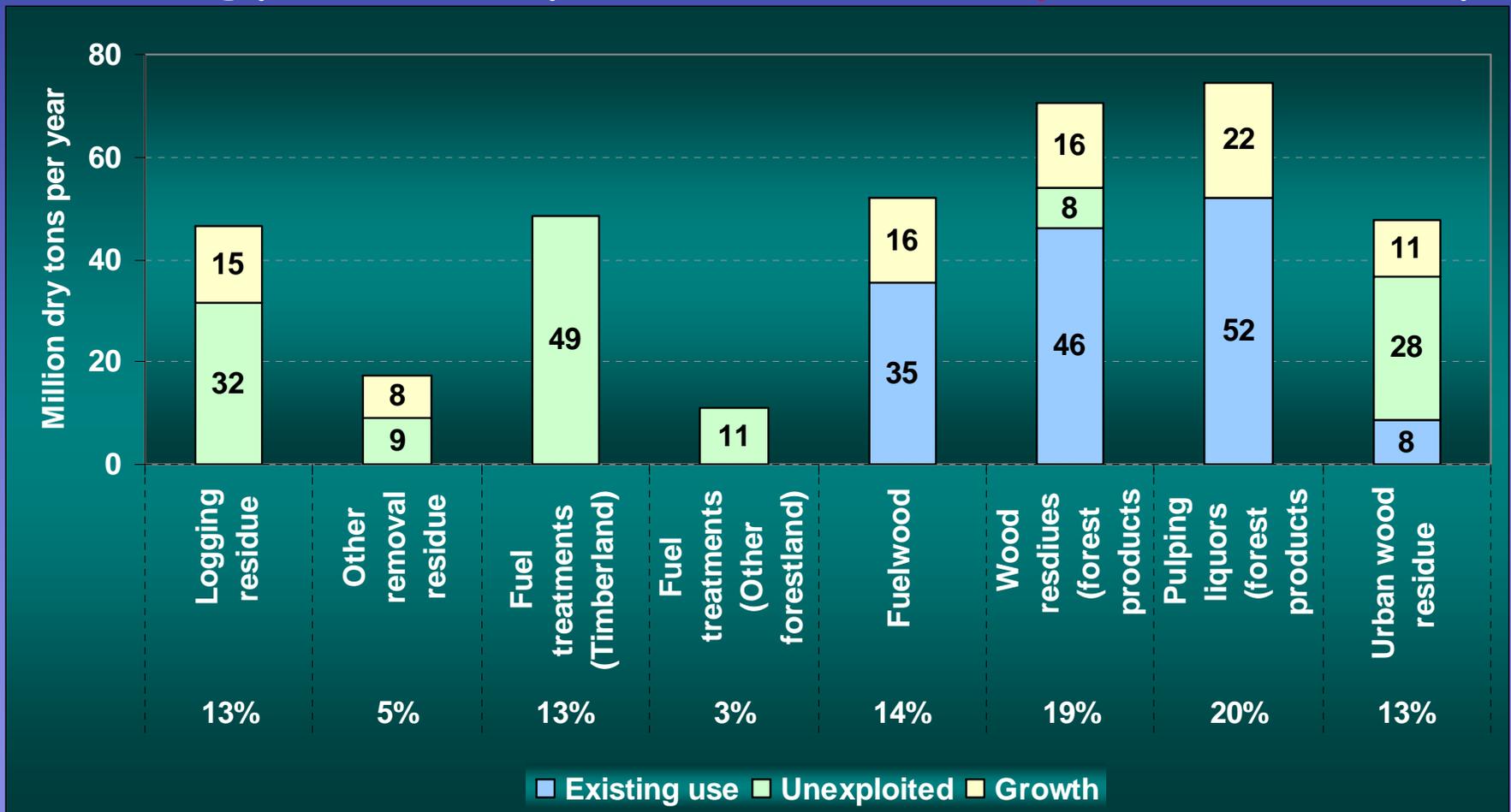


We've Got Biomass!
An Opportunity We Can't Afford to Waste!

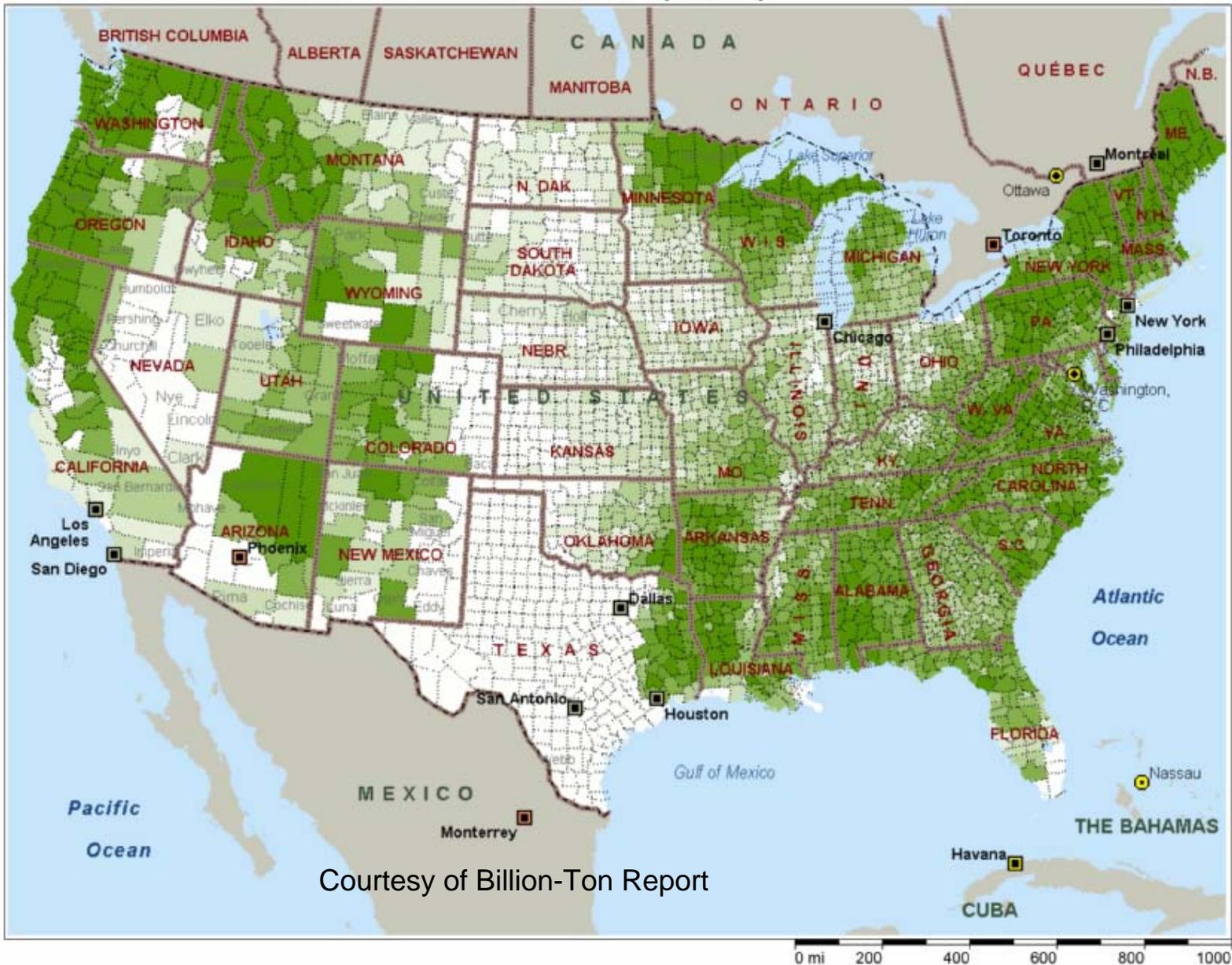
Draft 2006 – Courtesy
of USDA FS FIA

Forest Resource Analysis

The sustainable forest resource potential for energy is nearly **370 million dry tons** annually

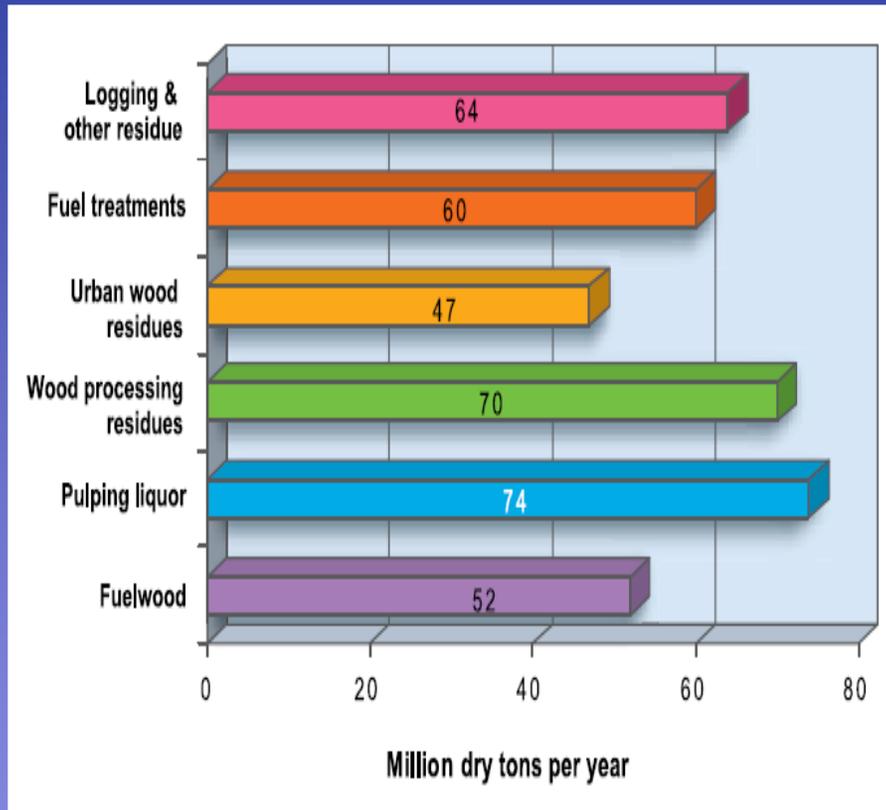


Total Fuel Treatment Residues by County



Courtesy of Billion-Ton Report

Billion Ton Feedstock Study



Oakridge National Lab
conducted this
study for USDA and DOE

Estimate **368 Million BDT**
per year available from
509 million acres
(including meeting all
environmental constraints)

http://feedstockreview.ornl.gov/pdf/billion_ton_vision.pdf

New Totals

Item	Million Dry Tons per Year
Original	368
Utilization and Recovery Assumptions	71
Recover Mortality	47
Thinnings	18
Dedicated energy crops	184
Total	688

Note: Half of current mortality and 3x southern thinning projections; dedicated energy crops assumed half of potential biomass from perennial crops is wood and all of the woody biomass goes to energy or biobased products.

WBU Feedstock Potential (Millions of BDTs Annually)

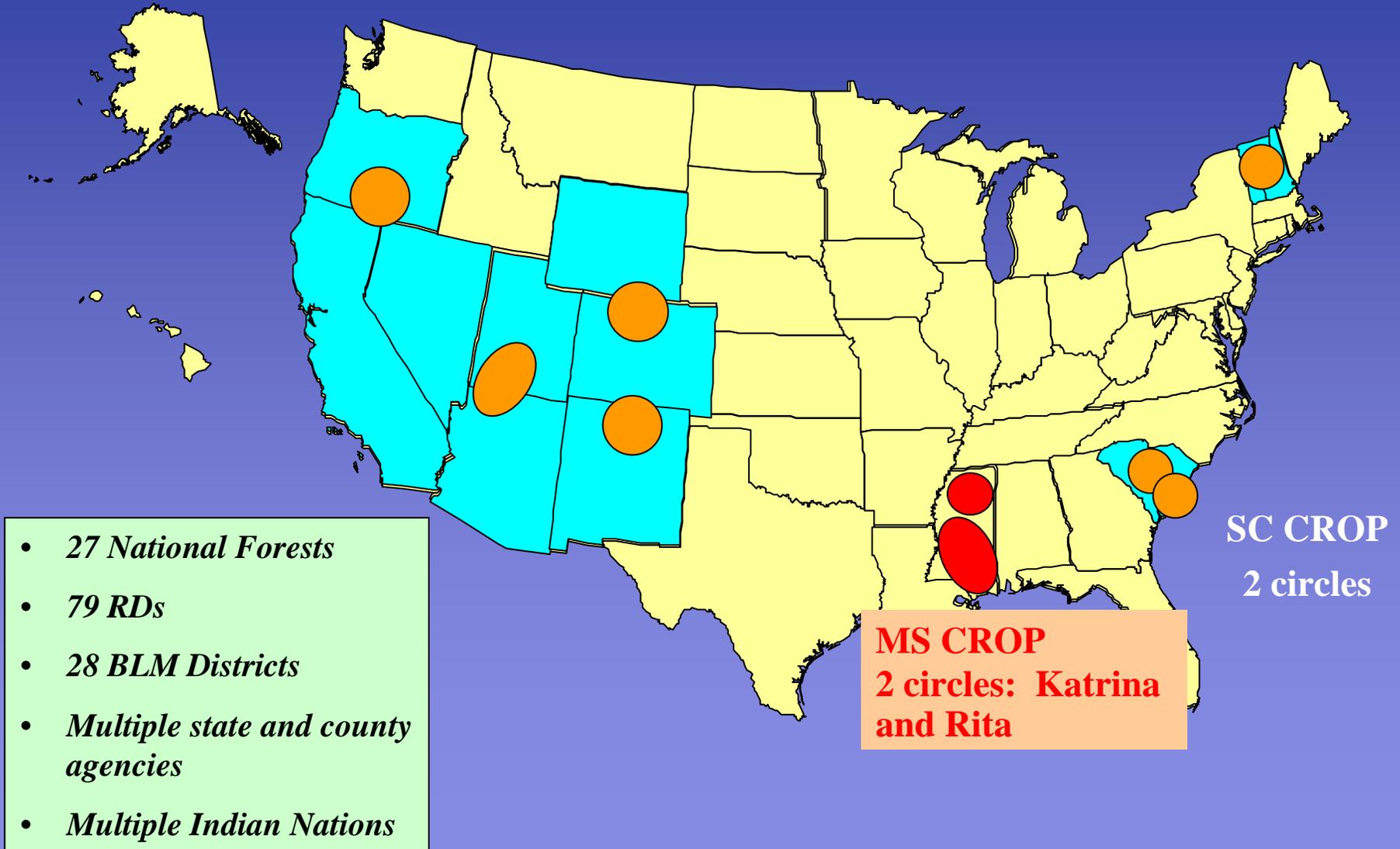
- Electricity:
- 8,500 Bone Dry Tons = One Megawatt/Hour for an entire Year of Electricity (1 MWY)
- Original 368 Million BDT = 43,294 MW Years
- **Potential:** 688 Million BDT = 80,941 MW Years
- One Megawatt = 1000 Households
- Original: 43,294 MWY = 43.3 Million Households
- **Potential:** 80,941 MWY = 80.9 Million Households

- Ethanol*:
- One BDT = 80 gallons (Range 65-100 gallons)
- Original 368 Million BDT = 29.4 Billion Gallons of Ethanol per Year
- **Potential:** 688 Million BDT = 55.0 Billion Gallons of Ethanol per Year
- Current production is about 3.5 billion gallons per year (mostly corn)

* **Potential only, further research and technology development needed**

“Levelized Supply Analysis”

2006 National CROP Pilots



CROP 1:
 Center Point: Mt. Olive, MS
 (100 miles N/S; 60 miles E/W) radius

Mississippi CROP

CROP 2:
 Center Point: Banner, MS
 (60 mile radius)

CROP Circle 1: Centerpoint: Mt. Olive

43 Counties:

Sharkey	Issaquena	Warren
Claiborne	Jefferson	Franklin
Amite	Pike	Lincoln
Copiah	Hinds	Madison
Yazoo	Humphreys	Holmes
Attala	Leake	Rankin
Scott	Simpson	Smith
Lawrence	Jefferson Davis	Covington
Walthall	Marion	Lamar
Pearl River	Hancock	Harrison
Jackson	Stone	George
Forrest	Perry	Greene
Wayne	Jones	Jasper
Clarke	Lauderdale	Newton
Neshoba		

4 National Forests:

DeSoto NF:
 Chickasawhay RD DeSoto RD

Delta NF
 Delta RD

Bienville NF
 Bienville RD

Homochitto NF
 Homochitto RD

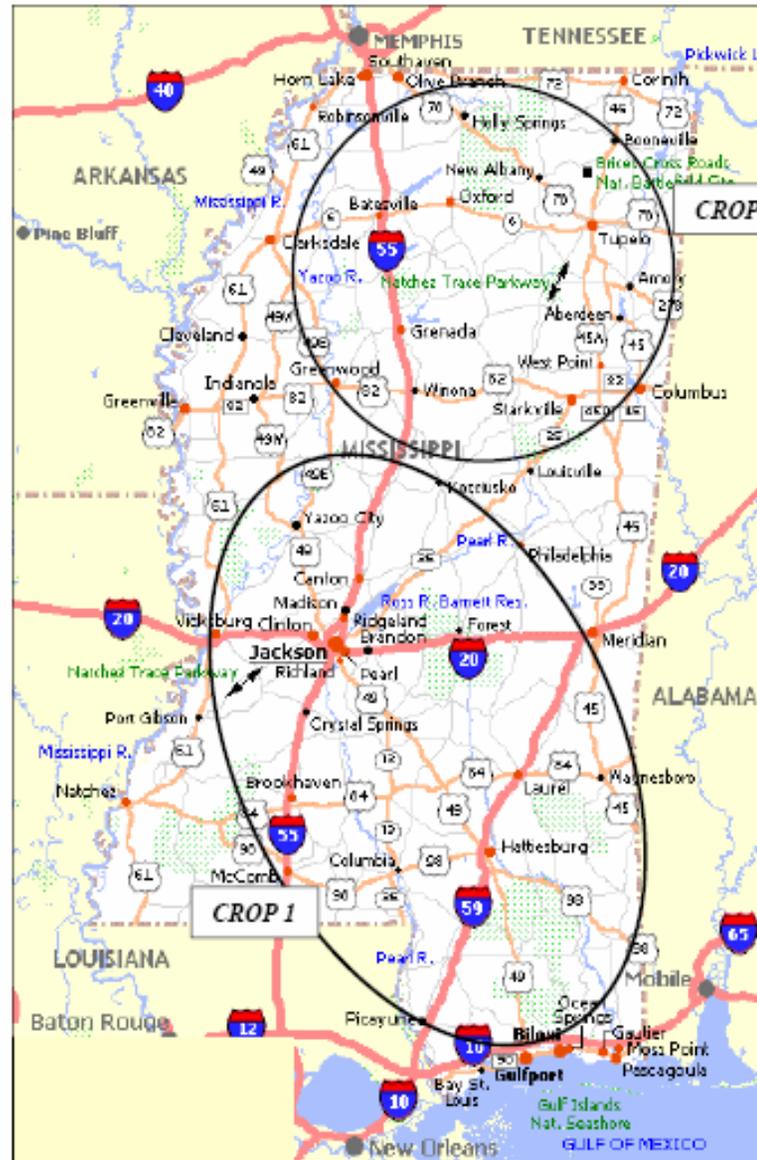
Indian Lands:

Mississippi Choctaw IR

State Lands:

Mississippi Forestry Commission
 Mississippi Public Lands Division

MDOT



CROP Circle 2: Centerpoint: Banner

27 Counties:

Attala	Choctaw
Oktibbeha	Clay
Webster	Montgomery
Carroll	Leflore
Grenada	Tallahatchie
Quitman	Panola
Tunica	Tate
Marshall	Benton
Tippah	Prentiss
Union	Lafayette
Pontotoc	Lee
Itawamba	Monroe
Chickasaw	Calhoun
Yalobusha	

2 National Forests:

Holly Springs NF
 Holly Springs RD

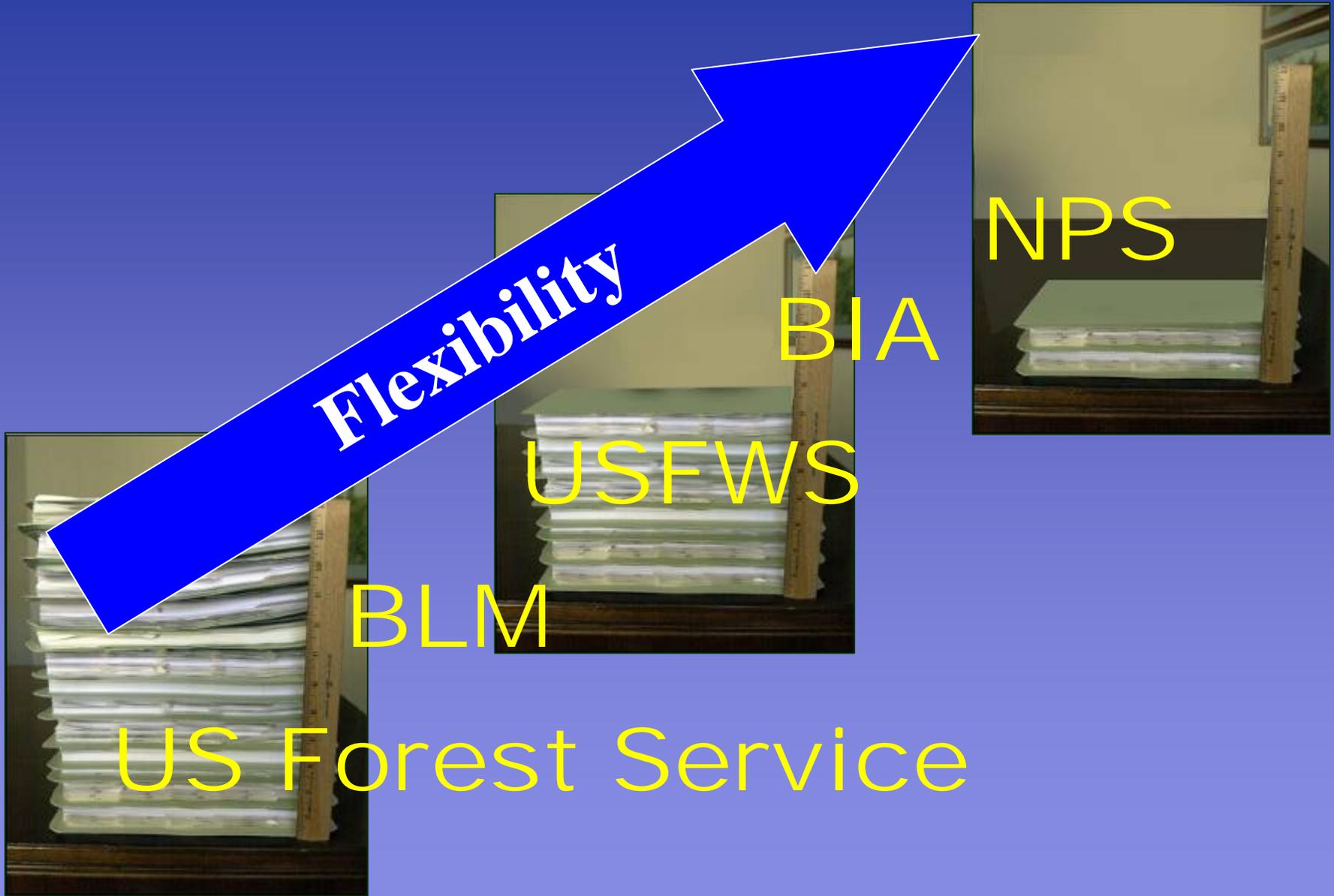
Tombigbee NF
 Tombigbee RD

State Lands:

Mississippi Forestry Commission
 Mississippi Public Lands Division

MDOT

Federal Agency Contract Authorities



Commercial timber

\$ Timber Sale Contracts

\$ or ¢ Stewardship Contracts

No timber value

¢ Service Contracts

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Contract Stipulations

Submerchantable Material:

- Mandatory thinning of submerchantable material concurrent with thinning commercial sawlogs
- Purchaser Select Below 7" DBH – Exhibit S Stipulations
- No cutting of preferred species ie: sugar pine, ponderosa pine, D-F
- Whole Tree Yarding

Landing Material (3 Different Clauses Have Been Used)

- Mandatory chipping of landing piles
- Incentive clause for chipping landing piles. The Purchaser receives a reduction in the total contract price if landing piles are chipped
- Optional – Purchaser choice. No mandatory requirement to chip the landings.

Additional Costs To Purchaser:

- Submerchantable Material and subsequent costs reduces receipts from 20-35% (general estimate).

Reasons not to work with the Federal agencies

Legal: Appeals (41 ¢); litigation; changing Public Law or Regulation; Courts and Injunctions (to the Nth degree)

Administrative: Contracts and contract administration can be burdensome; bonding procedures

Why should you?

Legal: fair, open process; Contract Disputes Act

Administrative: CDA; Administrative Review Board

Civic Duty: CWPP on private; NACD examples of success; demonstrate good forest management (“demo”) to the feds; these are YOUR public lands, 😊

Community Wildfire Protection Plans

- Authorized under the Healthy Forests Restoration Act of 2003
- Developed locally to address local wildfire threats
- Funding available through your State Forester with National Fire Plan grants
- Survey done by NACD and NARC&DC
- For further information check the Society of American Foresters web site at SAFnet.org

Challenges

- **Funding to plan & implement projects**
- **Experienced personnel with technical and scientific knowledge**
- **Community acceptance of active forest restoration and hazardous fuel reduction**
- **Understanding the risks associated with a “no-action” alternative; forests continue to grow and threaten our homes and valued natural resources as we debate action**



**It's too late to think about
Community Wildfire Protection Plans**



San Diego, October 2003





For More Information

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Don't forget to fill out and drop off your session evaluations!



GovEnergy
www.govenergy.gov



New Orleans
August 5-8