

Montana Forest Biomass Supply

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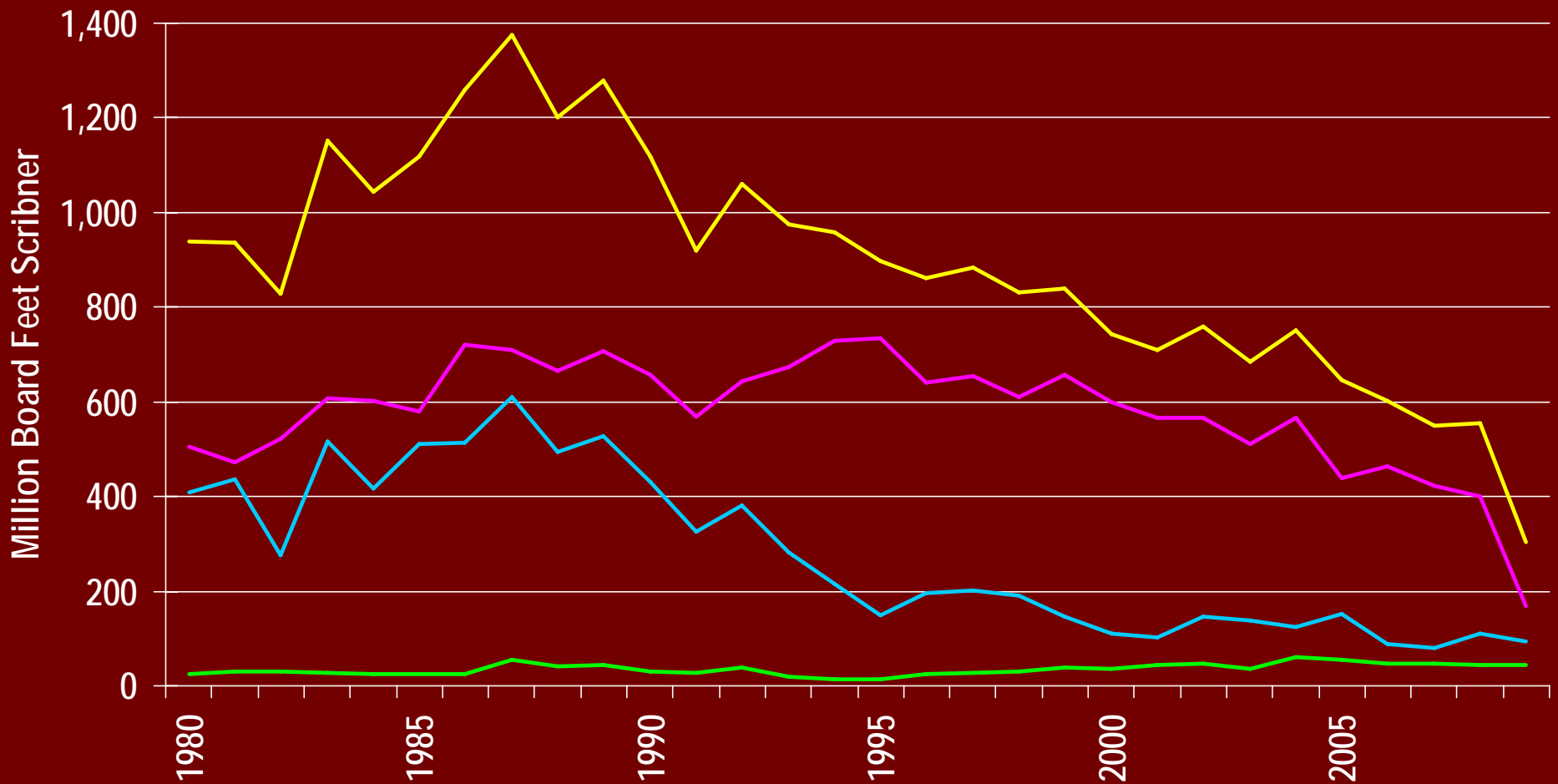
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Environmental Quality Council
Helena, MT**

Montana's Timber Harvest & Forest Products Industry



Montana Annual Timber Harvest 1980-2009

Private & Tribal State Federal Total



Montana's Timber Resource Non-reserved Timberlands 2003-2007

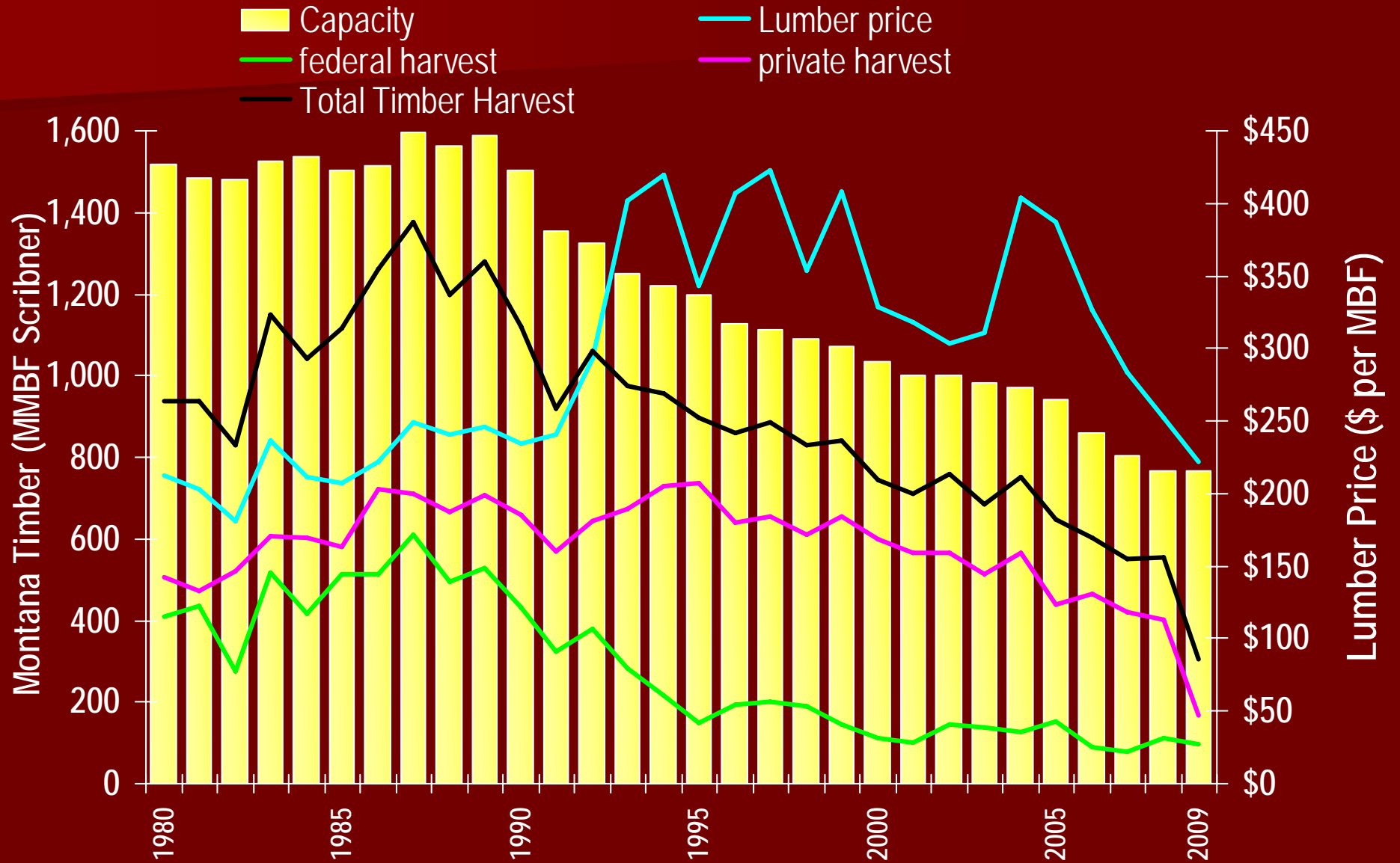
Growing stock volume	36,733 MMCF
Annual (gross) growth	862
Annual mortality	456
Annual harvest (2004)	198
(2007)	147
(2009)	82

Montana's Timber Resource Non-reserved Timberlands 2003-2007

		<u>Public</u>	<u>Private</u>
2007	Net Growth (MMCF/yr)	268	137
	Removals (MMCF)	35	112
	Ratio	7.6 : 1	1.2 : 1

Sources: Miles & Hansen, Fri, Aug 1, 2008: Forest Inventory EVALIDator web-application version 1.0 <http://199.128.173.26/evlidator/tmattribute.jsp>

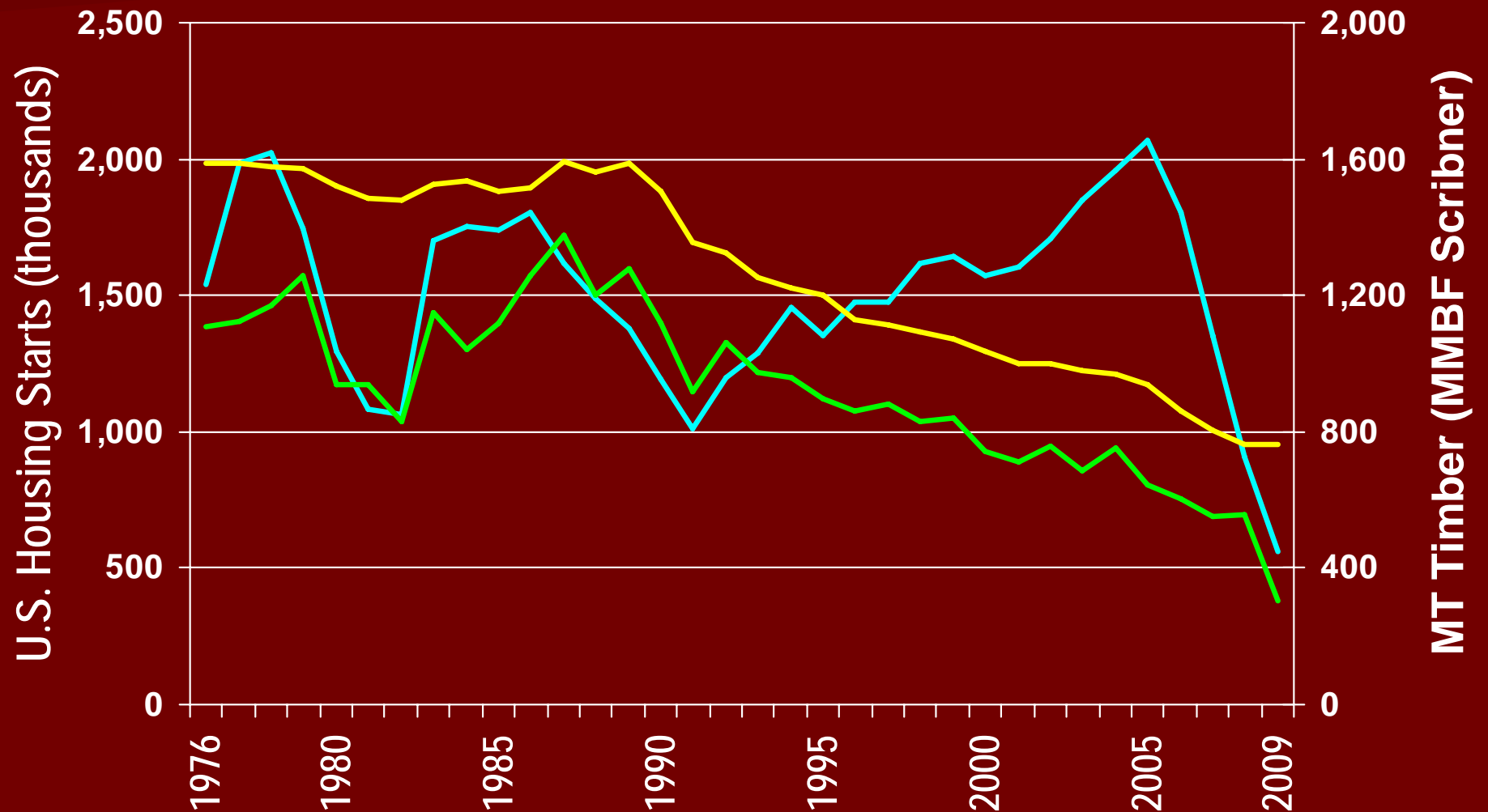
Montana Timber-Processing Capacity & U.S. Lumber Prices, 1980-2008



US Housing & MT Wood, 1976-2009

Sources: U.S. Census Bureau; BBER

— US Housing Starts — MT Capacity — MT Timber Harvest



Forest Biomass Terminology

- **Timberland**
 - **Live tree woody biomass**
 - **Standing dead tree woody biomass**
- **Logging residue**
- **Mill residue**

Montana Forest-based Woody Biomass

- **Current use: ~2.5 million dry tons (MDT) per year**
 - **More than 50% used by one facility**
 - **Less than 50% comes from in-state mill residue**
 - **Biomass & pulpwood < 10% of harvest volume**

Montana Forest-based Woody Biomass

- Logging residue: < 0.6 MDT per year
 - Amount produced is declining
- Mill residue: < 1.5 MDT per year
 - More than 99% already used
 - Amount produced is declining

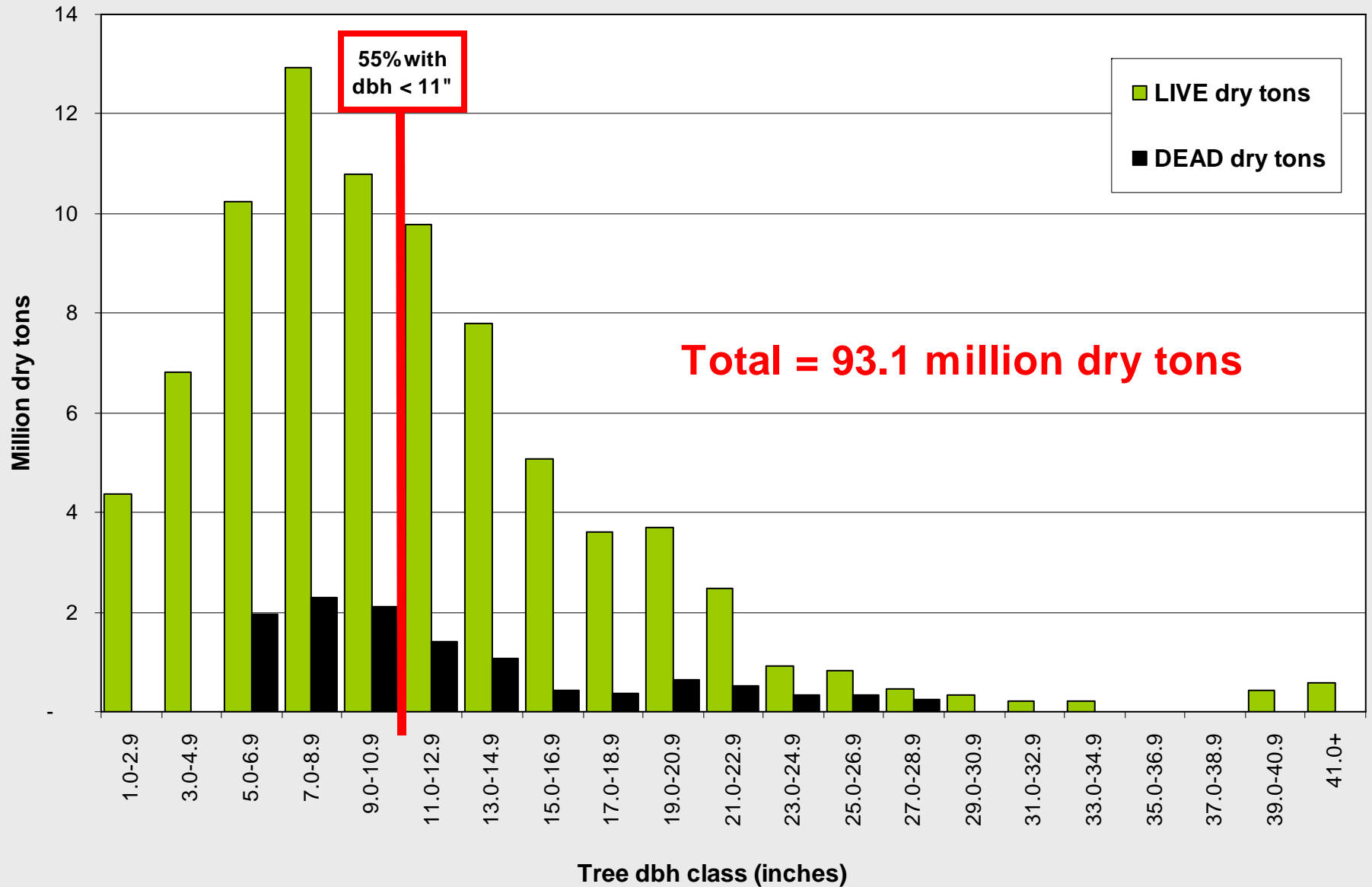
Montana Forest-based Woody Biomass

- **Timberland: 20 million acres**
 - **61% is national forests**
 - **Live trees: 725 MDT**
 - **74% in national forests**
 - **Dead trees: 136 MDT**
 - **85% in national forests**

“Filtered” forest inventory

- Stands within ½ mile of a road**
- Stand ages of 0 to 100 years**
- Slope of 0 to 40%**
- Tree dbh of 5.0 to 10.9 inches**

Figure 1: Live and standing dead tree above-ground woody biomass on Montana non-reserved timberland, 0.5 mile or less from a road, on slope less than 40%, in stand ages 0-100 years.

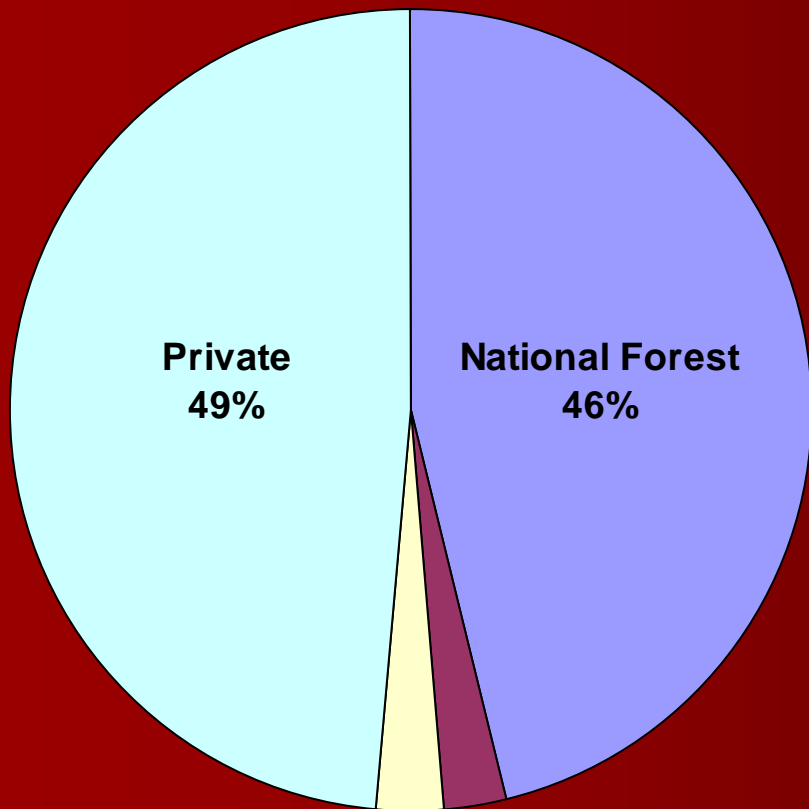


Woody Biomass Opportunity

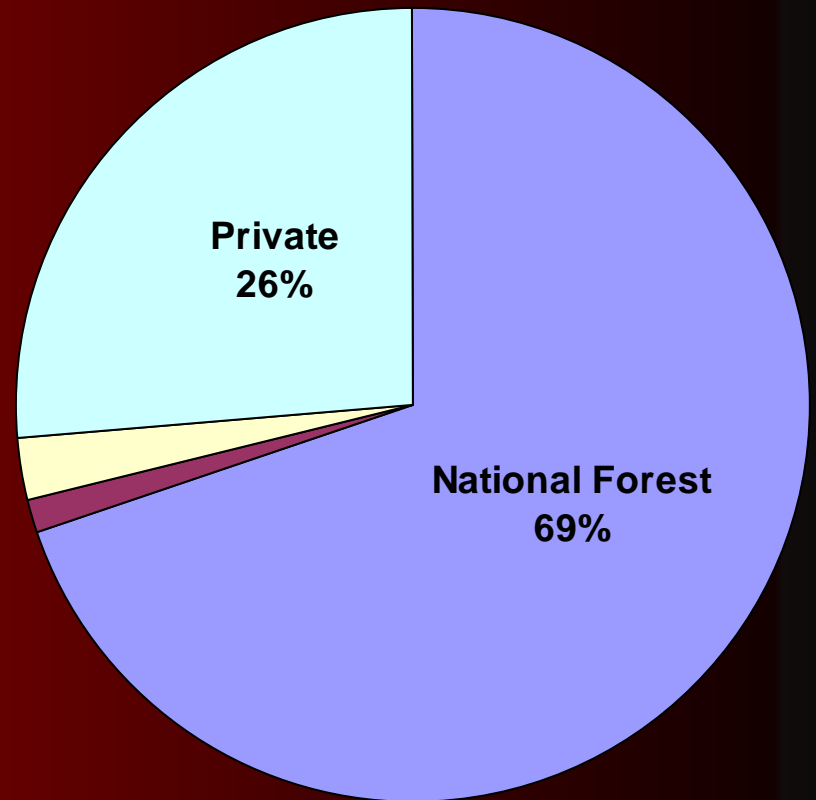
"Potentially available"

- 3.6 million acres
 - 18% of total timberland
 - less than 1/3 of currently roaded
- 40.3 MDT in live & dead trees
 - 70% in national forests
 - 5% of total biomass on timberland

“Potentially Available” Land and Live & Standing Dead Tree Woody Biomass in Montana



3.6 million acres



40.3 million dry tons

Biomass supply is NOT an issue.

Multi-decade supply potentially available.

Availability is an issue!

- **Land ownership & accessibility**
- **National forests are vitally important**

Sawmills need sizeable residue users.

Landowners need small tree & slash users.

**BUREAU OF
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**AND ECONOMIC
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