

# ***Woody Biomass in Kentucky***

## **Executive Task Force on Biomass and Biofuels**

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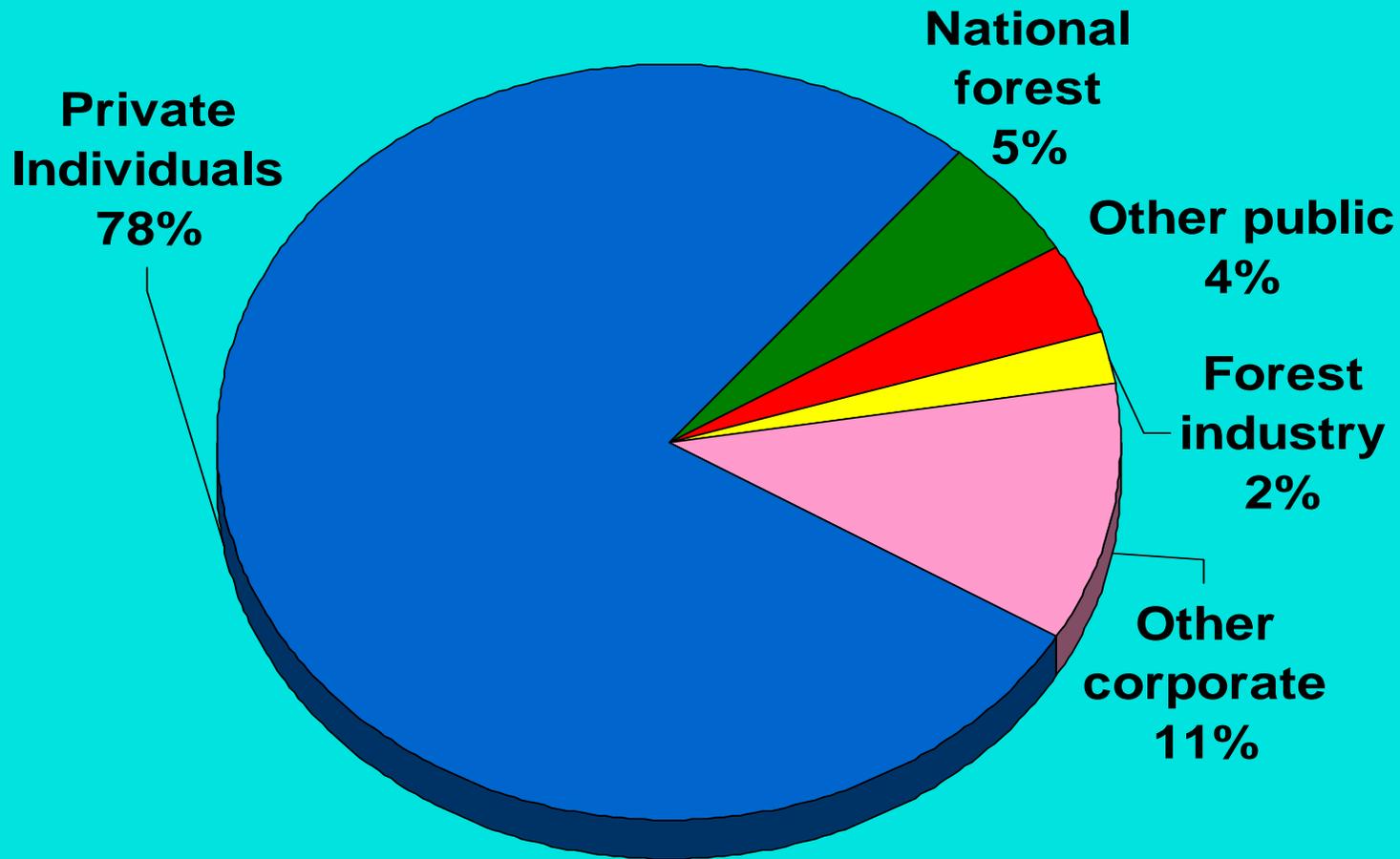
# ***Distribution of Kentucky's Forests***



# *Kentucky Forest Facts*

- **11.9 million acres of forestland – 47 percent of the state's land area**
- **467,000 private forest landowners**
- **Oak-hickory predominant forest-type--8.4 million acres (72 percent) of timberland.**
- **An estimated 7.6 million acres (65 percent) of timberland in sawtimber-size stands.**
- **Annual impact of \$8.7 billion on the economy-second only to horses.**

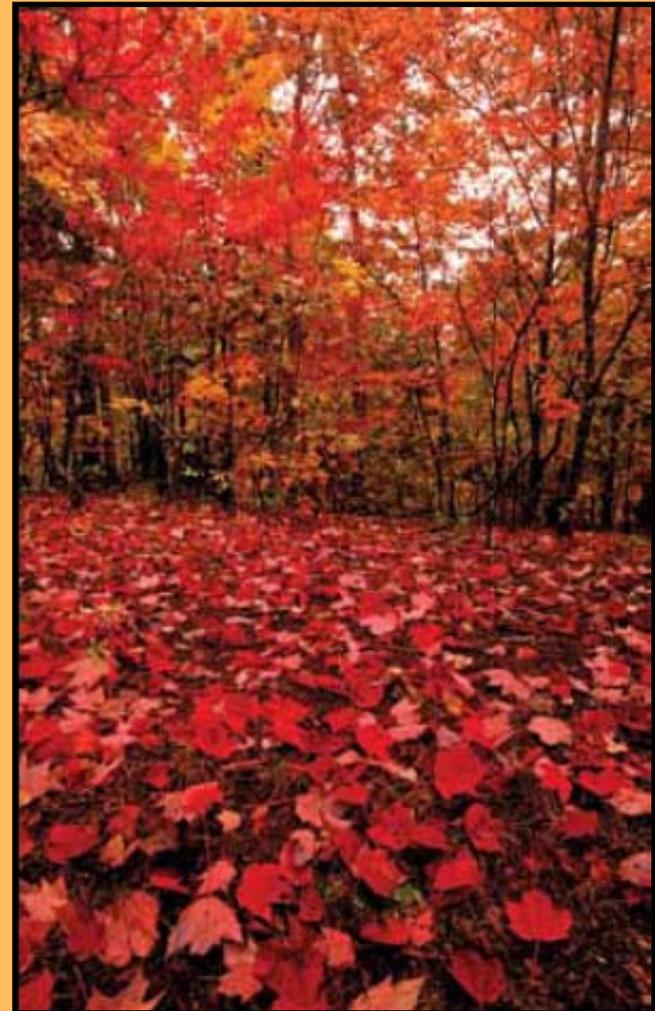
# *Ownership Patterns in KY*



**11.9 million acres**

# *Benefits from KY's Trees and Forests*

- Raw material for traditional forest products
- Wildlife habitat
- Recreational opportunities
- Clean air
- Sequestered carbon
- Clean and abundant water
- Aesthetic beauty
- Energy efficiency
- Source of renewable energy – biofuels, electric and thermal



# *Top 12 Reasons why Private Landowners own Forests*

- Beauty and scenery
- Family heritage
- Part of a home
- Privacy
- Nature protection
- Part of a farm
- Land investment
- Hunting/fishing
- Other recreation
- Timber production
- Firewood production
- Nontimber forest products

# *Primary Industries in Kentucky*

489 companies  
employ 4,608

Top five primary  
industries are:

- Grade lumber
- Pallet lumber
- Crossties/switch ties
- Kiln-dried lumber
- Custom mill work



# *Secondary Industries of Kentucky*



578 companies employ  
18,028\*

Top five secondary  
industries are:

- Custom cabinet makers
  - Millworkers
- Pallets/crate production
- Flooring manufacturers
- Pulp producers

\*Current Information as of Oct. 2009, University of Kentucky

# *Potential Biomass Sources*

Initial estimates—9.18 million dry tons/year

- Wood and bark from current harvests (1.95)
- Woody debris from urban sources (0.34)
- Material from thinnings and other forest improvement treatments (1.21)
- Biomass energy plantings--biomass plantations (3.78)
- Annual net growth currently unused (1.90)



# *Challenges to Development of KY's Biomass Energy Industry*

- Accurate availability estimates
- Effects on established forest industries
- Activities in border states
- Scale issues on management of small family forests
- Ecological effects
- Federal laws

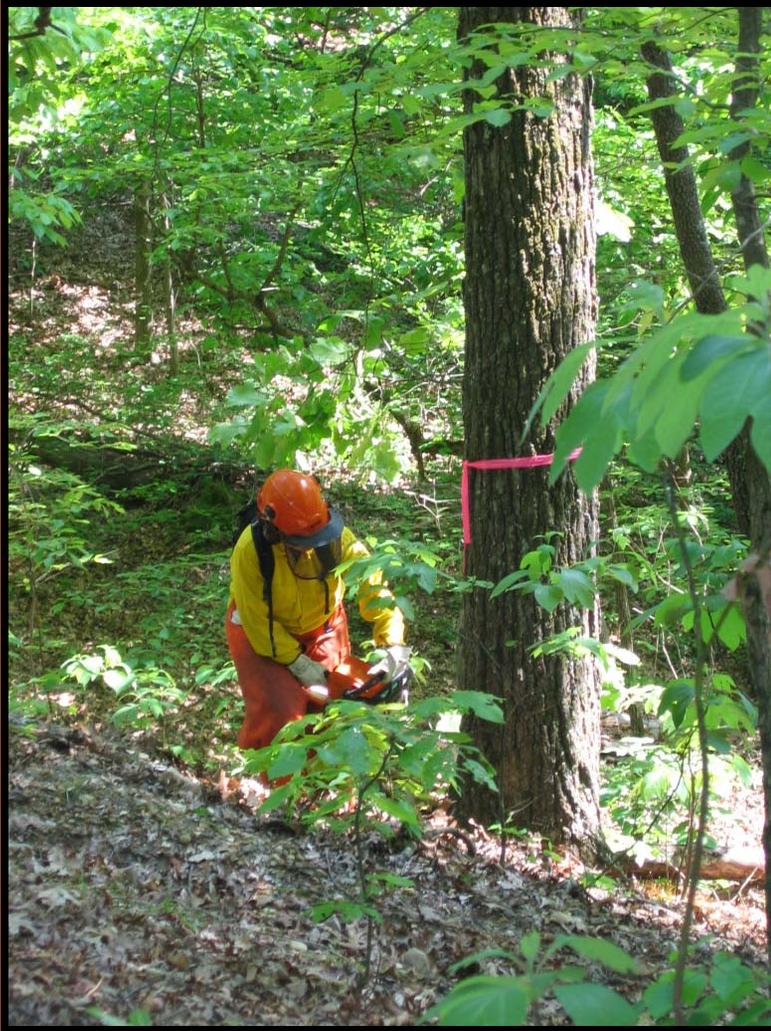


# *How Big of a Slice is Woody Biomass for Energy?*



- **Raw resource for an existing vibrant forest products industry**
- **Every acre of forestland is not available**
- **Landowners do not always respond to increased markets**
- **Sustainability starts with a management plan**

# *Possible Recommendations*



- Accurate woody biomass estimates
- Woody biomass plantation techniques
- Appropriate harvesting technologies and costs
- Incentives to increase forest management

# *Possible Recommendations*

- Harvesting guidelines to reduce ecological impacts
- Improved logging capacity
- Biomass information delivery methods
- Address timber theft
- Increased capacity to monitor forests



An aerial photograph of a city, likely Lexington, Kentucky, during autumn. The scene is dominated by a river in the foreground, with several boats docked along its banks. A large, prominent domed building, the Kentucky State Capitol, is visible in the middle ground. The city is surrounded by dense forests with trees in various shades of green, yellow, and orange. In the background, rolling hills are visible under a clear sky. The word "Questions?" is overlaid in large, white, italicized font in the center of the image.

*Questions?*

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