



# Forestry and Forest Industry in Virginia

Charlie Becker

Utilization and Marketing Manager





# Virginia Forest Cover

## Virginia Forest Cover

61.5% Forest

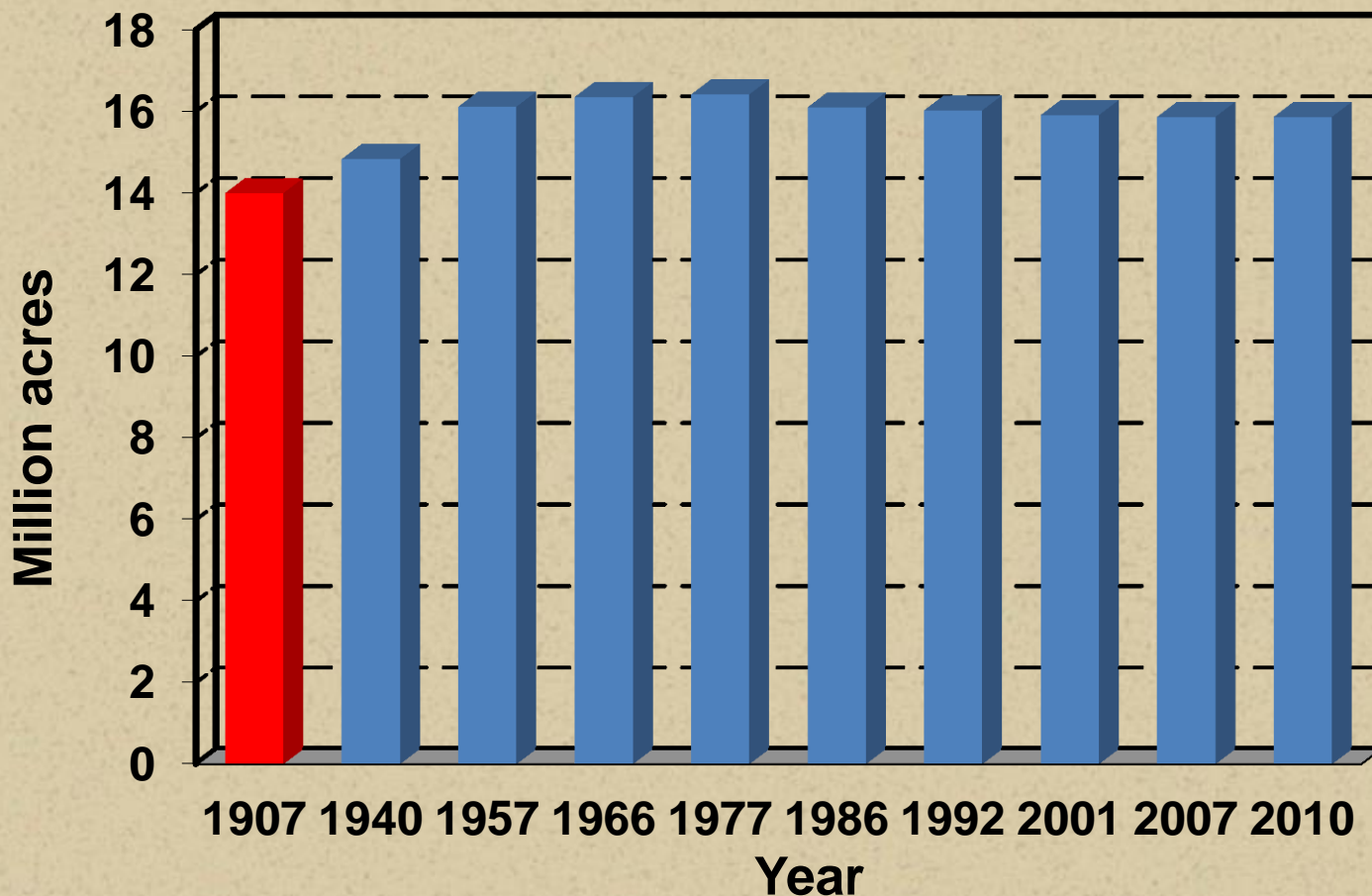
**15.9 Million Acres**



*From year 2004-2006 Landsat satellite imagery, classified by the Virginia Department of Forestry*

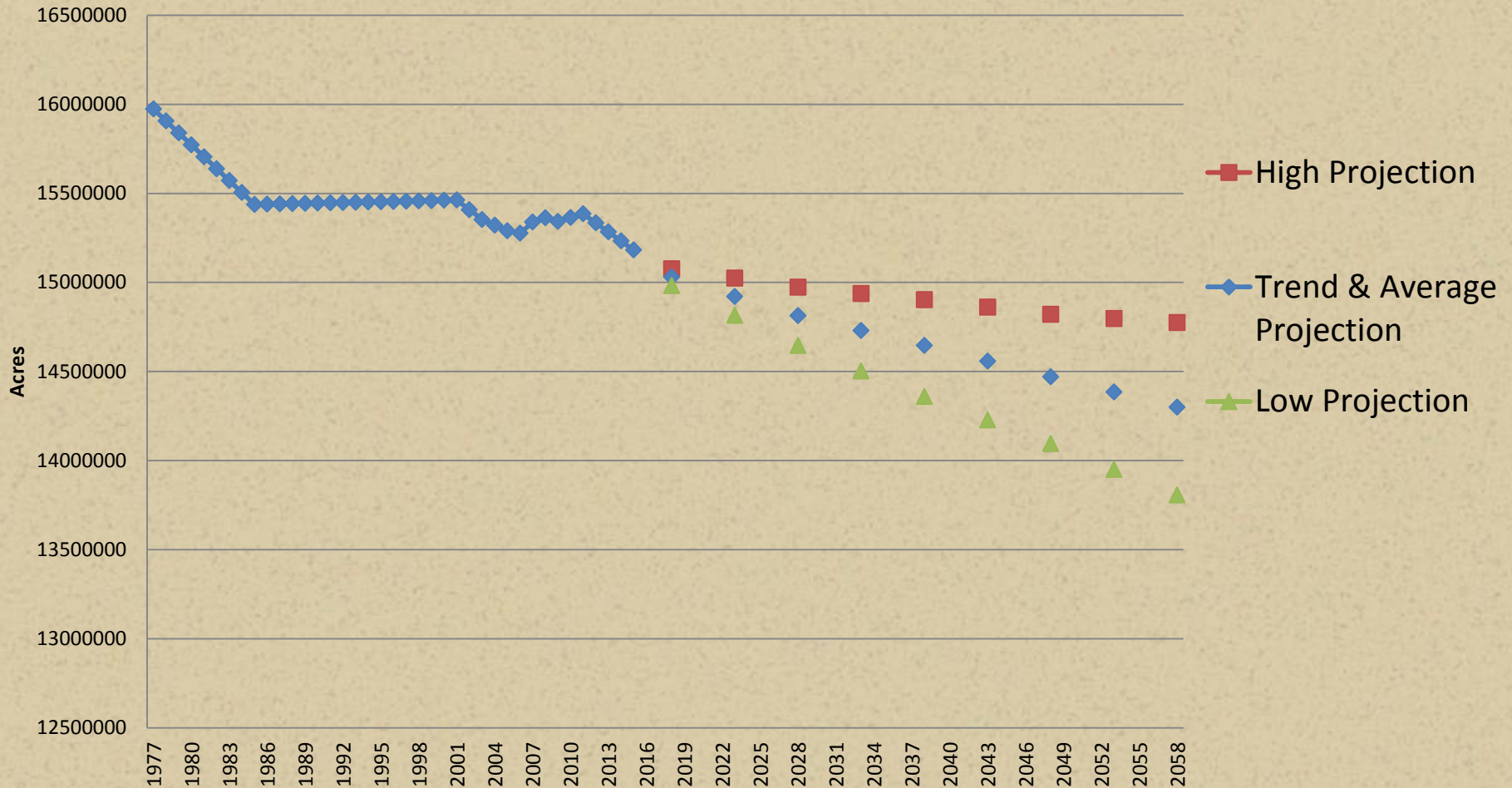


# Virginia Forestland Acres



# Trend & Projection of Timberland area for Virginia

## (Southern Forest Futures Project & FIA)



SFFP Projection for average annual loss of timberland in VA is 20,800 acres with a high projection of 30,600 acres and a low projection of 11,300 acres.

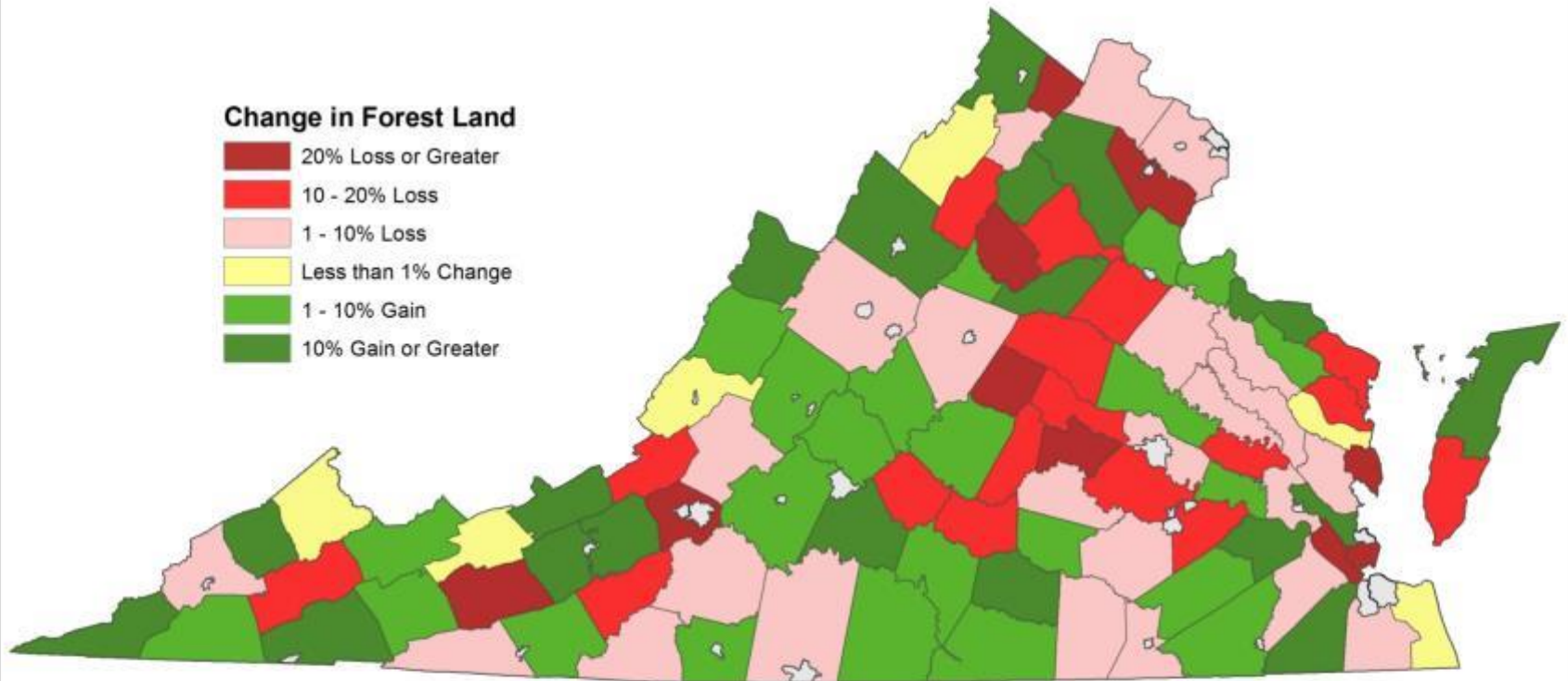


# Loss and Gain of Forestland in Virginia, 1992 - 2011



## Change in Forest Land

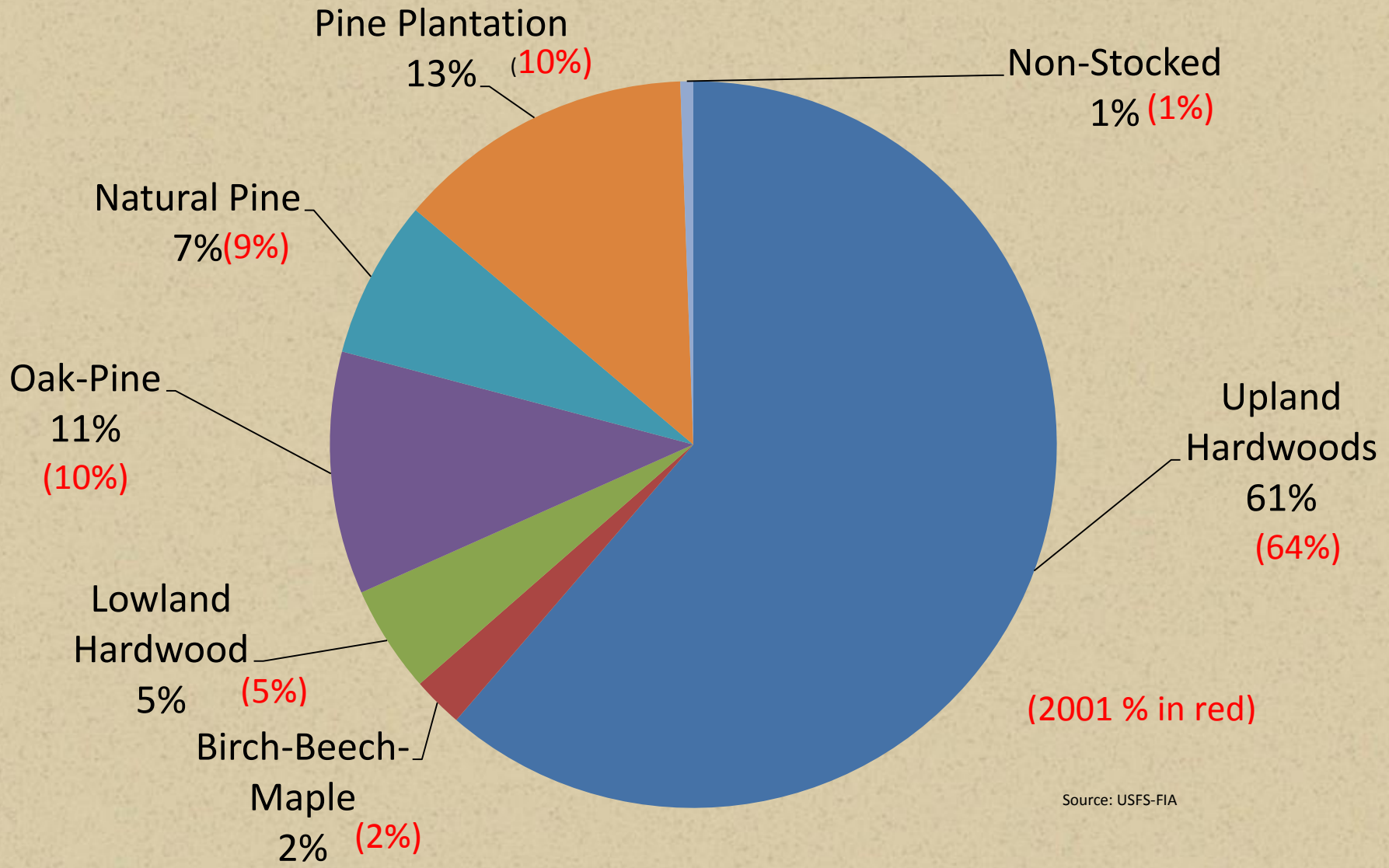
- 20% Loss or Greater
- 10 - 20% Loss
- 1 - 10% Loss
- Less than 1% Change
- 1 - 10% Gain
- 10% Gain or Greater



Source: USFS - FIA



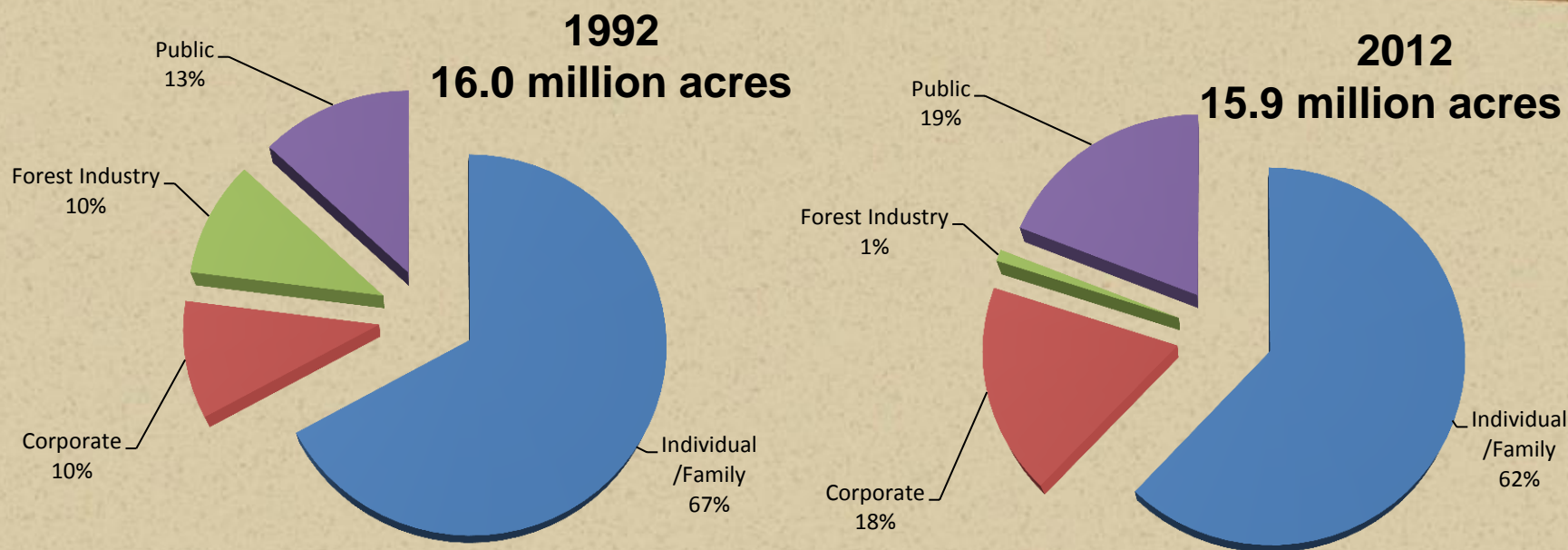
# Forest Type Groups, Virginia 2012



Source: USFS-FIA



# Forest Ownership



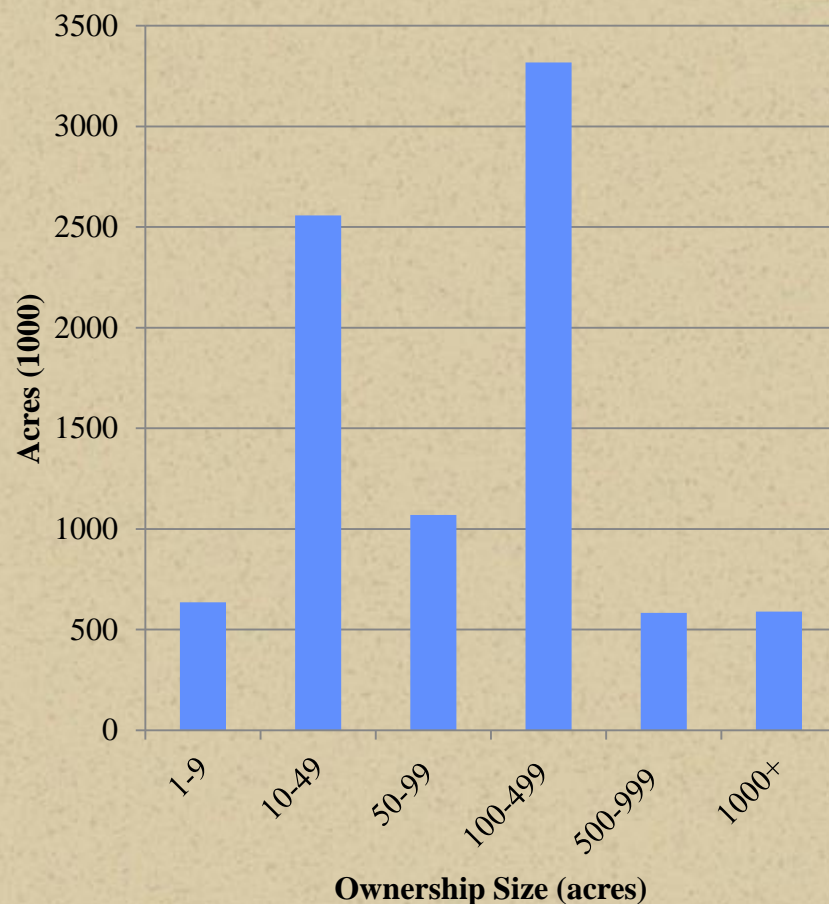
- Reduction in total acres since 1992.
- Most significant reduction of ownership has been with forest industry.





# Non-Industrial Private Forest Ownership

- 374,000 landowners
- 1/3 of private forest land is in tract of less than 50 acres
- Reasons for owning: beauty, protect environment, land investment, home site
- Availability and cost of raw material impacts markets and products



# 2010 Population Density and Forest Lands

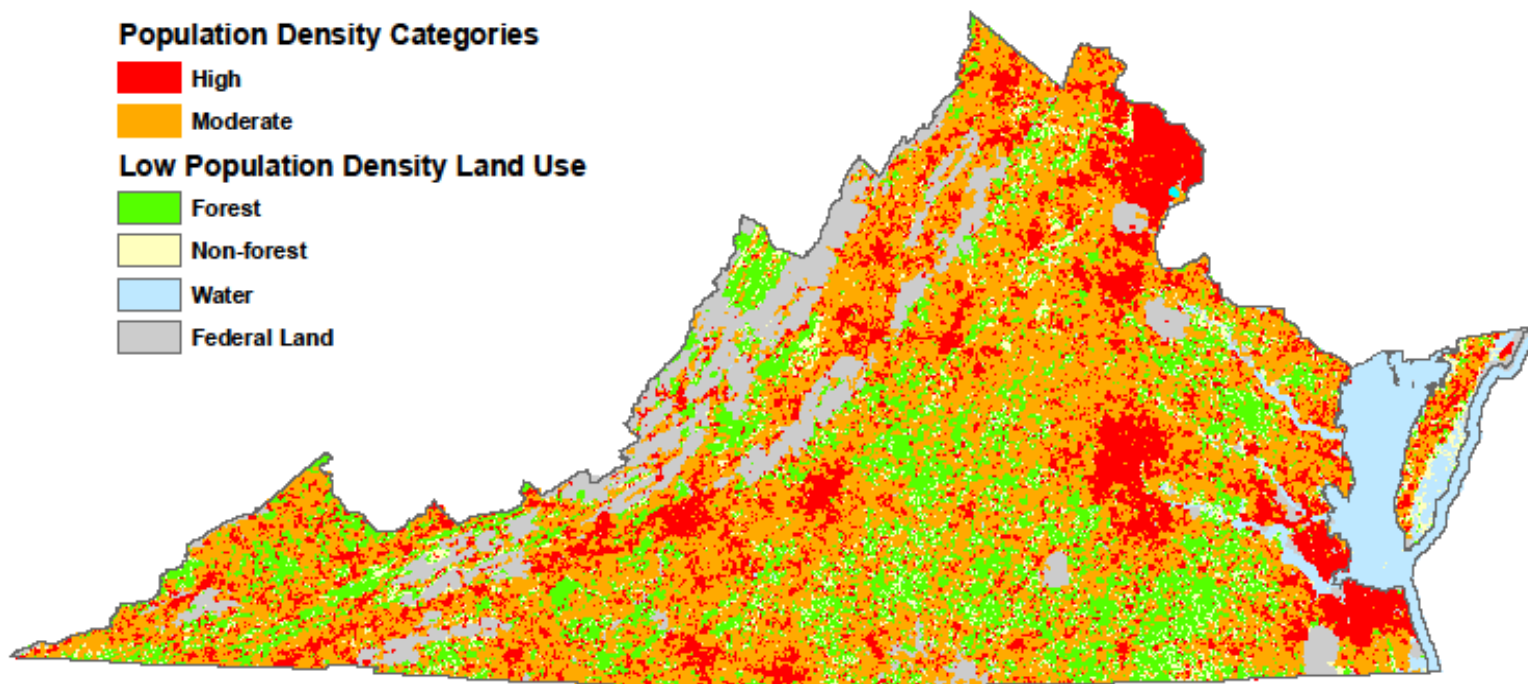
## Legend

### Population Density Categories

- High
- Moderate

### Low Population Density Land Use

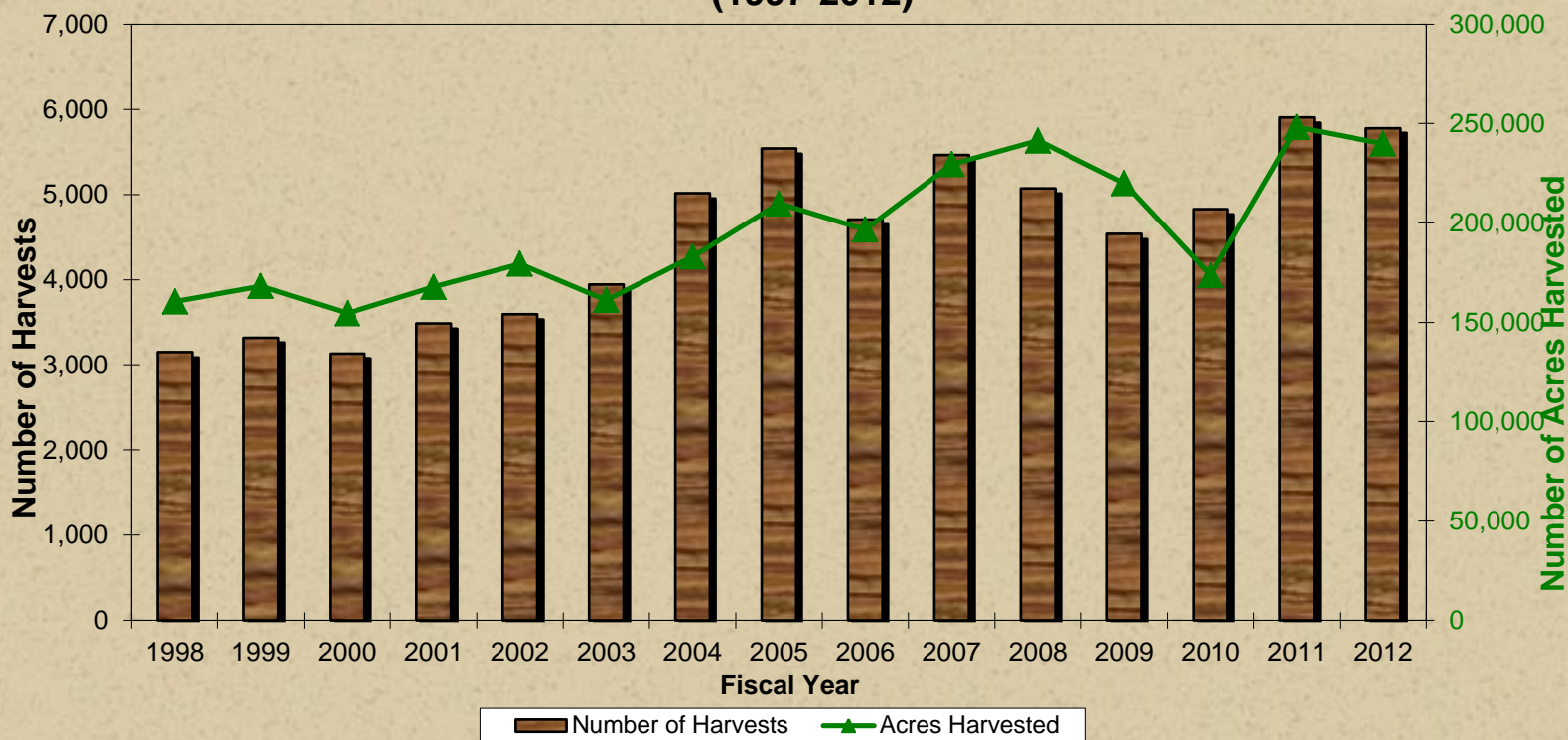
- Forest
- Non-forest
- Water
- Federal Land





# Protecting Virginia's Water Quality

## Timber Harvests in Virginia (1997-2012)

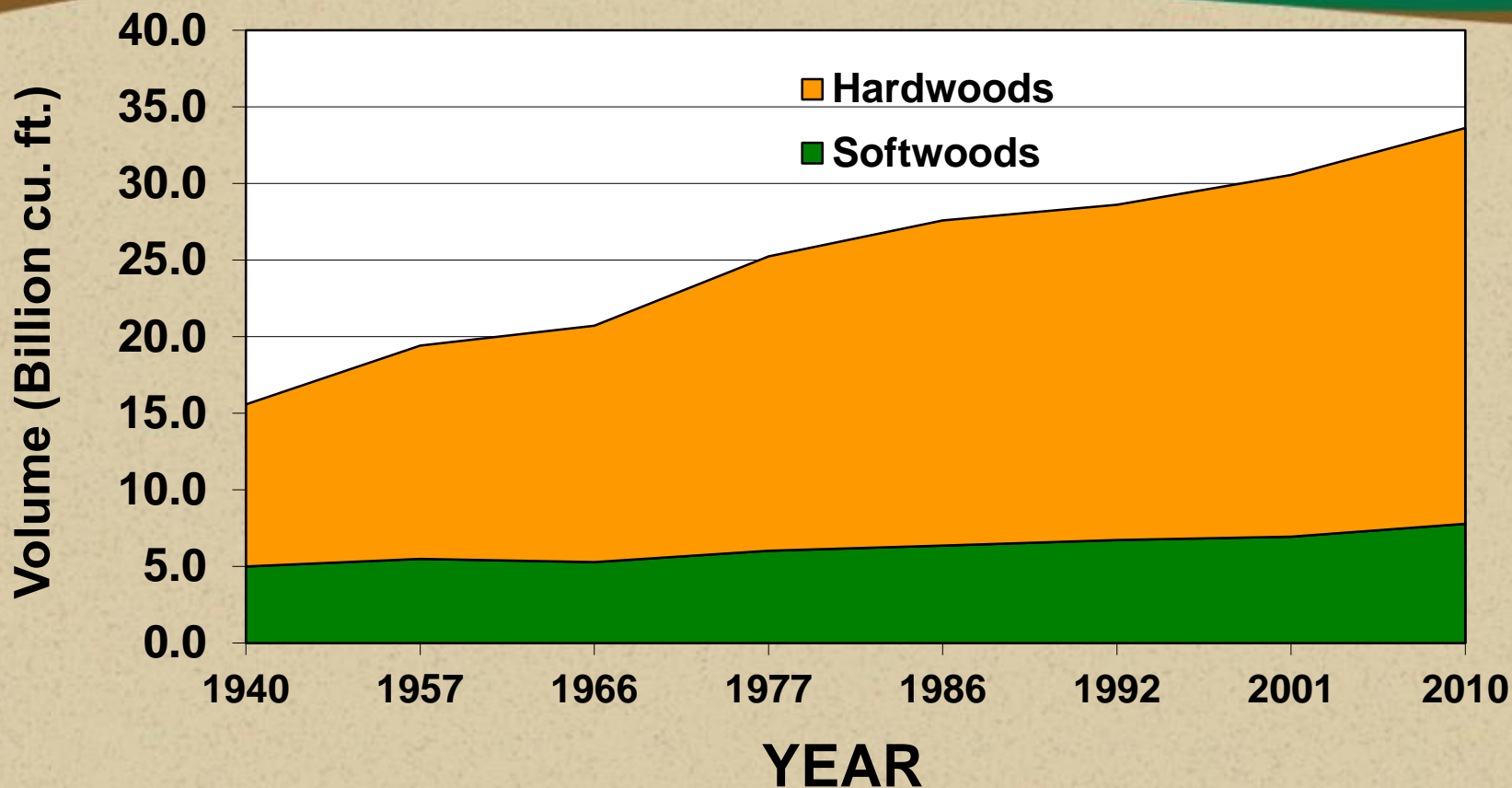


**VDOF inspects over 5,000 harvests annually with an average size of 40 acres.**



# Forest Growth

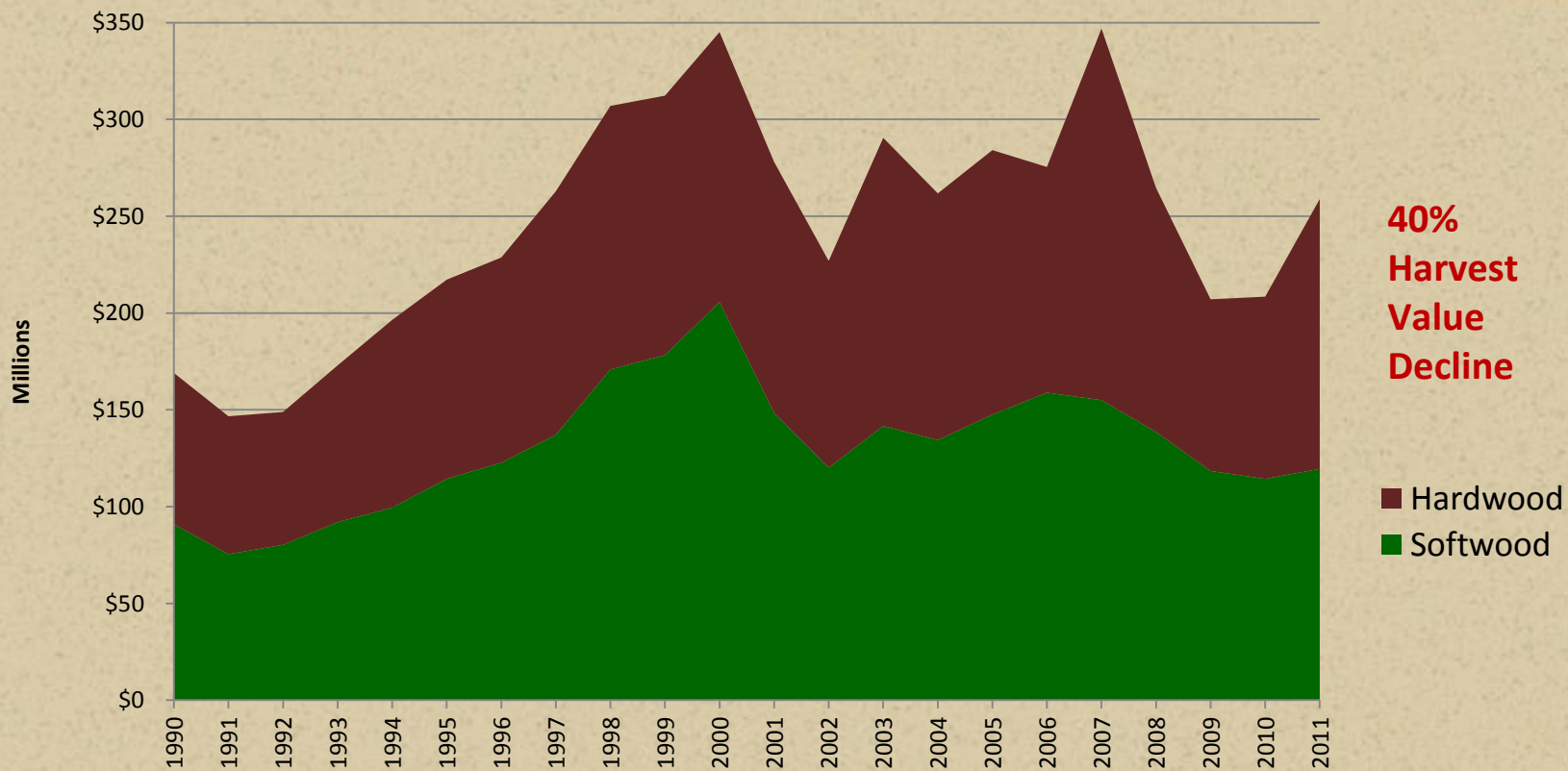
(Volume of Live Trees on All Timberland)



Since 1940, total volume has more than doubled from 15.5 to 33.6 billion cubic feet.

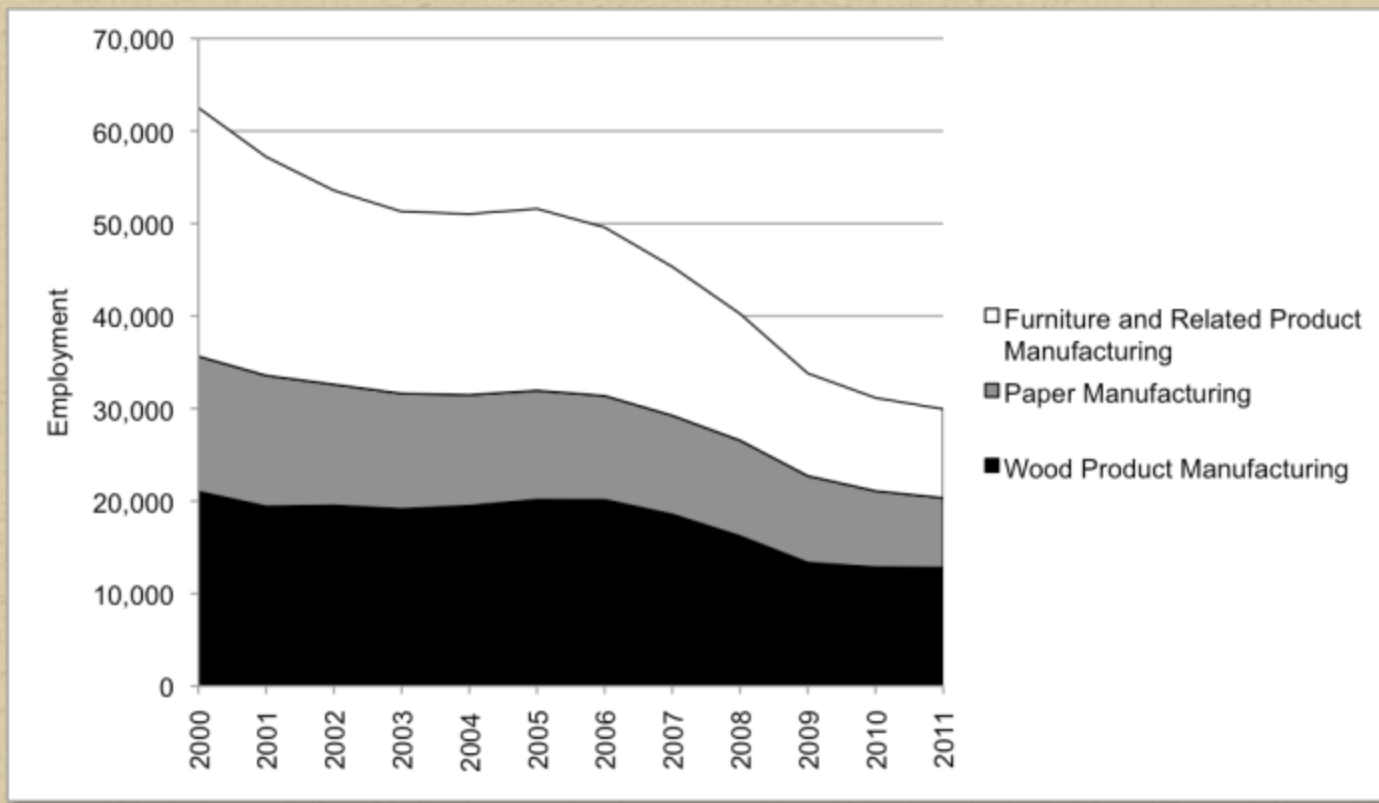


# Stumpage Values



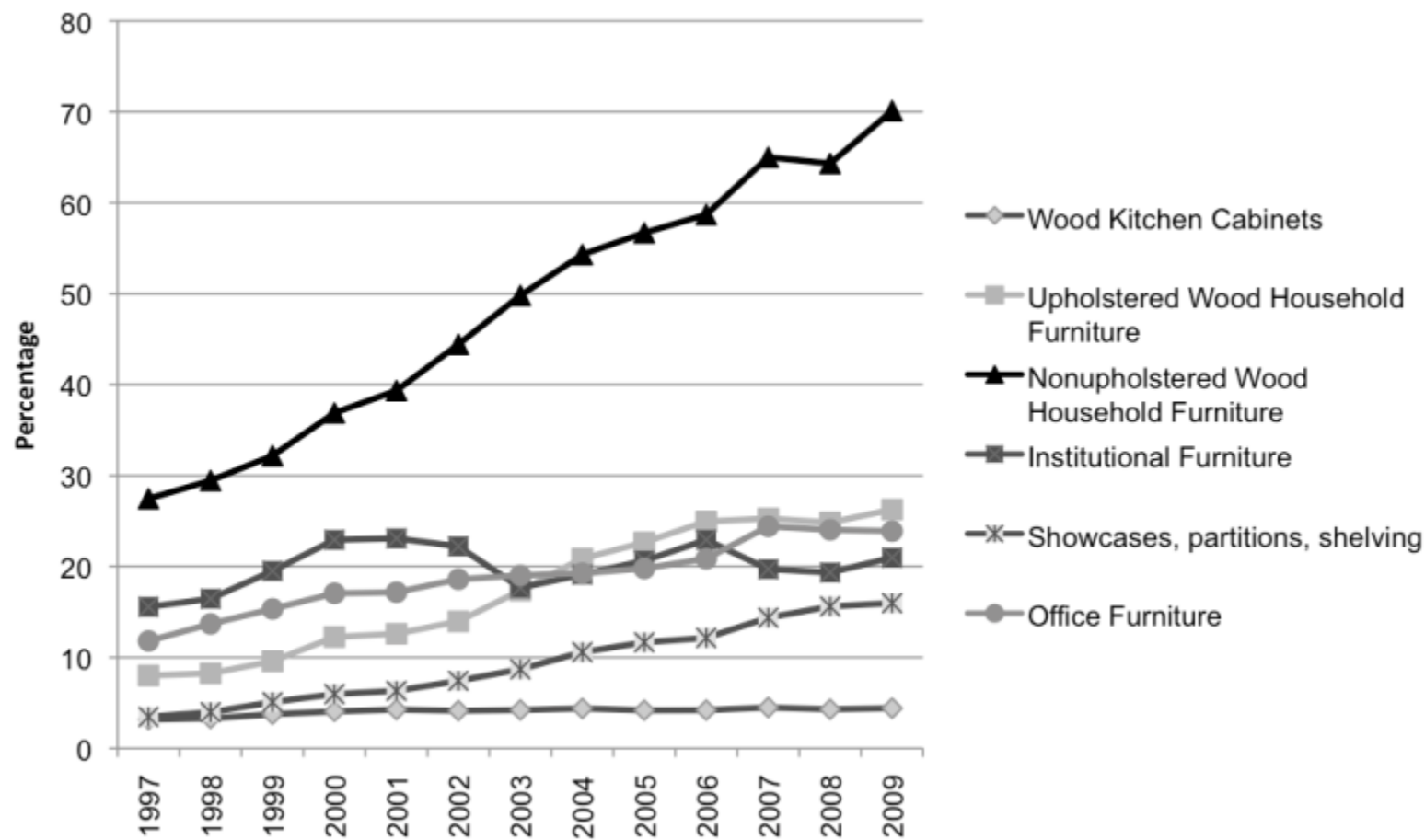


# Industry Trend





# Imports





# Industry Trend

## Number of wood-using mills by type, Virginia, 1992-2009

	<b>Sawmills</b>	<b>Veneer or plywood mills</b>	<b>Pulpmills</b>	<b>Composite panel mills</b>	<b>Other mills</b>
<b>1992</b>	<b>276</b>	<b>9</b>	<b>9</b>	<b>3</b>	<b>14</b>
<b>1995</b>	<b>254</b>	<b>8</b>	<b>9</b>	<b>3</b>	<b>15</b>
<b>1999</b>	<b>254</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>16</b>
<b>2001</b>	<b>217</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>14</b>
<b>2003</b>	<b>204</b>	<b>5</b>	<b>9</b>	<b>3</b>	<b>13</b>
<b>2005</b>	<b>168</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>13</b>
<b>2007</b>	<b>155</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>9</b>
<b>2009</b>	<b>129</b>	<b>3</b>	<b>8</b>	<b>3</b>	<b>8</b>





# Impacts of Forestry-Related Industries

Impact	Output (Million \$)	Employment	Value-added (Million \$)
Direct	8,855	37,704	3,154.0
Indirect	2,231	14,010	1,407.0
Induced	6,131	52,133	4,187.0
Total	17,217	103,848	8,748.0
Multiplier	1.94	2.75	2.77



# Exports

## Direct, Indirect, and induced Impacts of Impact of Virginia's Forestry-Related Industry Exports, 2011

Forestry Total	Output (Million \$)	Employment	Value Added (Million \$)
Direct Effect	789.3	2,723	275.0
Indirect Effect	319.3	2,114	175.1
Induced Effect	473.8	3,987	331.7
Total Effect	1582.4	8,824	781.9



# Expected New User of Forest Resource

- Enviva Pellet Mills (1 VA, 2 NC) & Export Facility
- IP Franklin Mill (270,000 tons fluff pulp)
- Franklin Sawmill (60 mmbf)
- Klausner Number 2 Sawmill (300 mmbf)(NC)
- 4 Dominion Biomass Power Plants (200 mw)
- NOVEC Biomass Power Plant (50 mw)
- MeadWestvaco Biomass Power Project (68 mw)
- Piedmont BioProducts (wood pyrolysis – oil)



# Forest-Related Takeaways

- Continued loss and fragmentation of forest land, along with other competing forest uses will affect future availability of wood resources.
- Invasive species will have varying degrees of impact on forest products and industry. ex. Emerald Ash Borer, Thousand Cankers Disease, Southern Pine Beetle, Ailanthus, Asian Longhorn Beetle, Hemlock Woolly Adelgid, Sirex, Gypsy Moth, etc.
- Improved seedlings and growing techniques can offset some of these concerns by growing more and specialized wood on fewer acres.



# VDOF – VA Tech

## Forest Products-Related Projects

- Several projects funded through USDA Grants (FS Redesign, EAP, RD, RC&D, etc.)
- Most require applied part to project. Usually education, demos, pilot project.
- Focus is mostly on improving utilization and marketing of Virginia's forest products
- Several focused on developing markets to also improve forest management and health.



# Sample of Projects

- Analysis of manufacturing wood waste/residues and markets
- Feasibility of utilizing small diameter logs for hardwood lumber
- Controlling invasive species through utilization (Ailanthus)
- Developing Community Wood Energy
- Forest resource analyses



# Sample of Projects

- Increasing urban and wood waste utilization
- Primary and secondary forest industry directories development
- VA Forest-Based Economic Development Council
- Forest certification, chain of custody
- International marketing of forest product
- Cross-Laminated Timber (CLT) panels
- Specialty Forest Products – Charcoal/biochar



# Additional Information

**Charles W. Becker III, CF**  
**Utilization & Marketing Manager**  
**Virginia Department of Forestry**  
**900 Natural Resources Dr., Suite 800**  
**Charlottesville, VA 22903**  
**434-220-9115**  
**434-296-2369 fax**  
**[charlie.becker@dof.virginia.gov](mailto:charlie.becker@dof.virginia.gov)**  
**[www.dof.virginia.gov](http://www.dof.virginia.gov)**