

A landscape photograph showing rolling hills covered in green and yellow vegetation under a clear sky, serving as a background for the top portion of the slide.

# **Senate Finance Economic Development & Natural Resources Subcommittee**

May 9, 2011

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State Forester

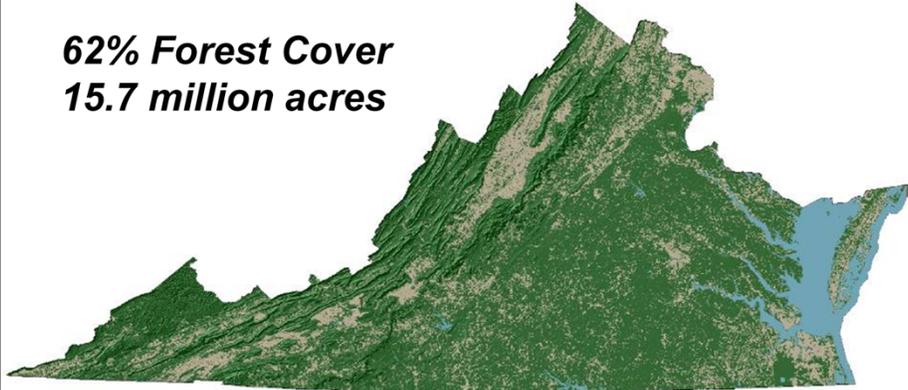
# Our Mission for Forestry in Virginia

**“We protect and  
develop healthy,  
sustainable forest  
resources for  
Virginians”**



# Virginia Forest Cover

**62% Forest Cover**  
**15.7 million acres**

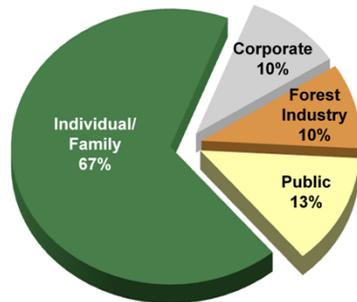


◆ No major change since the last report.

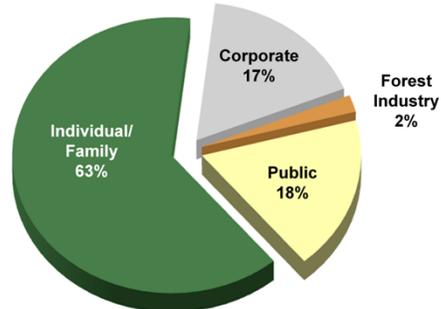


# Forest Ownership

1992  
16.0 million acres



2010  
15.8 million acres



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



More than 373,000 individuals or families together own more than 10.1 million acres.

About half of this 12.2 million acres is in parcels of 75 acres or less.

Industry ownerships declined 500,000 acres from 1991 to 2010.

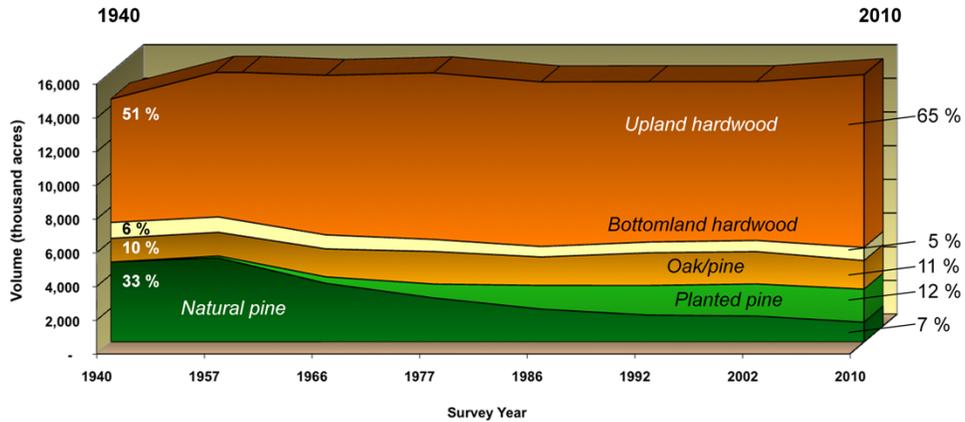
Timberland Investment Management Organization (TIMOs) and Real Estate Investment Trusts (REITS) ended up with half of divested industry land.

# Forest Benefits

- ◆ More than **\$27.5 billion** generated annually to the Virginia economy by forest products industry and related activities
- ◆ **\$350 million** paid to forest landowners for the harvest of products
- ◆ **144,000 jobs** in forest product industries
- ◆ Forest-related societal and ecological benefits contribute more than **\$4.1 billion** annually



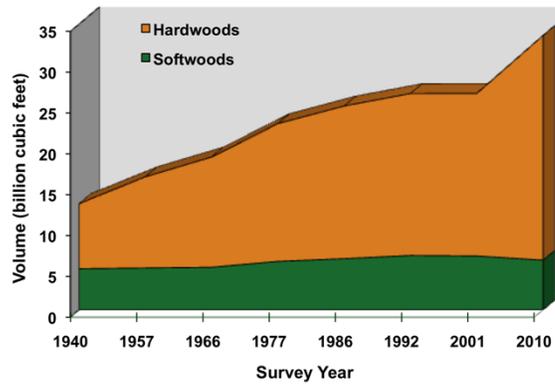
# Forest Types



- ◆ Since 1940, pine types have declined from 33% to 19% of the forest.
- ◆ Planted pines now account for more than half of the total pine area.
- ◆ Upland hardwoods have increased from 51% to 65%.

VA's forests are highly diverse ranging from a mixed upland oak-hickory to bottomland gum-cypress swamps and from natural stands of old pines to intensively managed pine plantations.

# Forest Growth



- ◆ Since 1940, total volume has more than doubled from 12.6 to 33.6 billion cubic feet.



Age structure is maturing.

Sawtimber stands have increased from 45% to 72% of the forest area.

In the 1992-2010 period, net growth of live volume exceeded removals by a ratio of 1.82 : 1.00.

Average stocking increased from 2,700 to 7,900 board feet per acre or almost tripled.

# Forest Sustainability

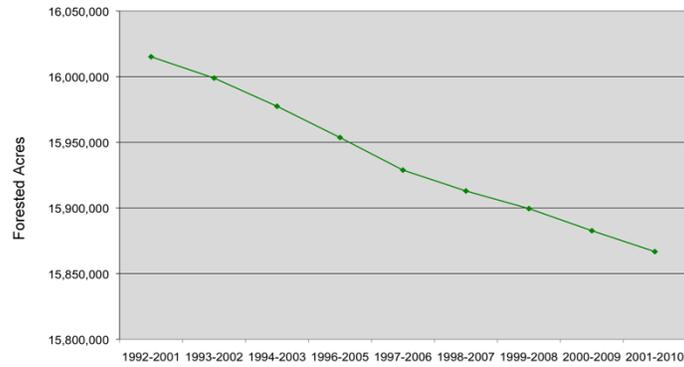
YEAR	ALL	HARDWOOD	SOFTWOOD
2001	1.59	1.85	1.24
2005	1.21	1.21	1.21
2006	1.18	1.22	1.11
2007	1.27	1.29	1.23
2008	1.34	1.46	1.14
2009	1.57	1.93	1.13
2010	1.82	2.26	1.34

- ◆ Current net growth of live volume exceeds removals by a ratio of 1.82 : 1.00.
- ◆ Growth to drain ratios have continued to the positive over the years.

# Current Trends Impacting What We Do and How We Do It



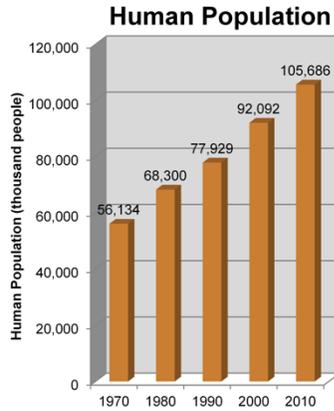
# Virginia's Forested Acres



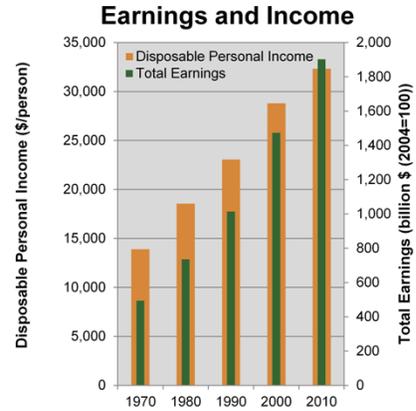
- ◆ On a rolling 10-year average, Virginia is losing an estimated 16,000 acres annually.



# Population and Income

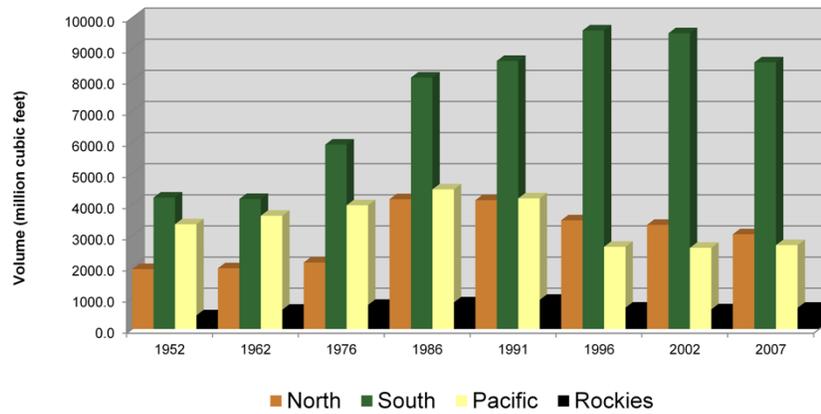


(Southeast U.S. Data)



- ◆ Since 1970, population and income in the South have grown at rates greater than for the entire U.S.
- ◆ Average disposable income has more than doubled.
- ◆ Population has grown by 90%.

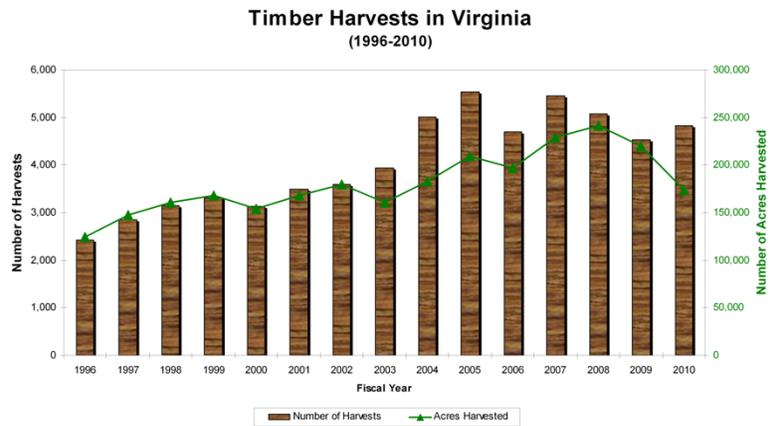
# U.S. Timber Harvests



- ◆ The South is **THE** wood basket of the U.S.
- ◆ Total timber production more than doubled, peaking in the late 1990s.

Shift to the South started in the late 1960s.

# Virginia Timber Harvests

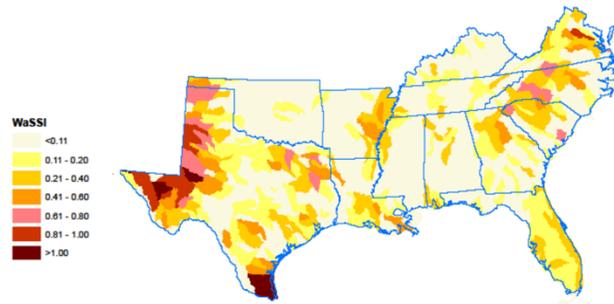


- ◆ The number of harvests is increasing, while harvested acres is decreasing.
- ◆ Increased harvests require greater water quality monitoring and inspections.



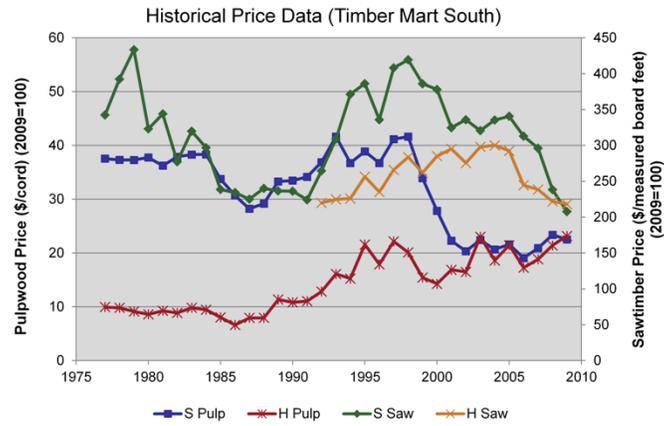
# Water Demands

Water Supply Stress Index (1995-2005)



- ◆ Strong urban population growth and land use changes lead to higher water demands and a growing need for clean water.

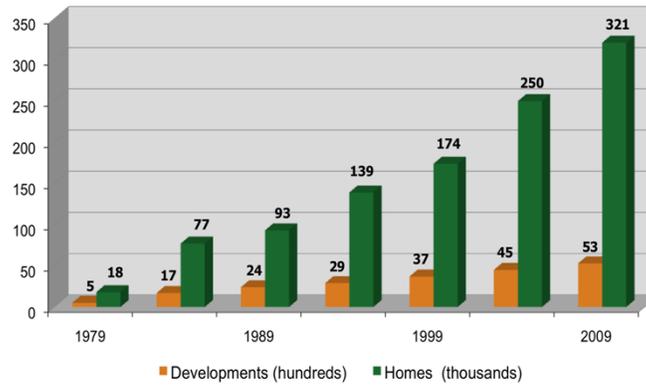
# Forest Markets



◆ Market prices peaked in the late 1990s.



# Fire Risk – VA Woodland Homes



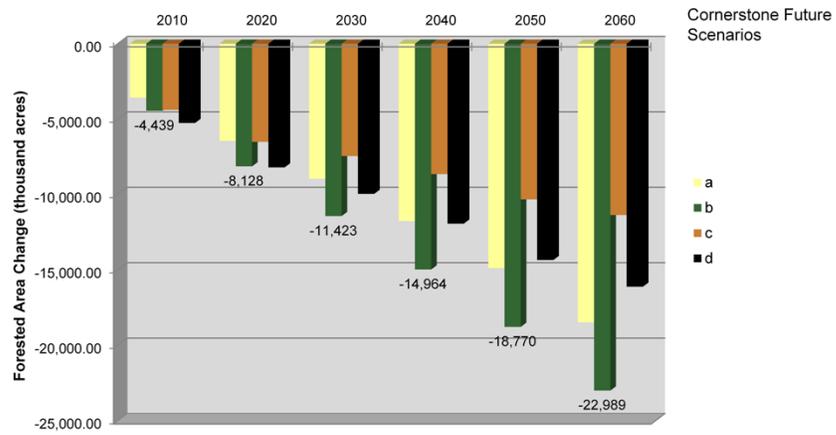
## ◆ Virginia's 10-year averages:

- 1,180 fires on 11,332 acres;
- 13 homes and 50 other structures damaged/destroyed;
- 920 homes and 463 other structures protected for an estimated \$132,828,099 structural value as a direct result from Agency fire response efforts.

# Predictions for the Future of Forestry

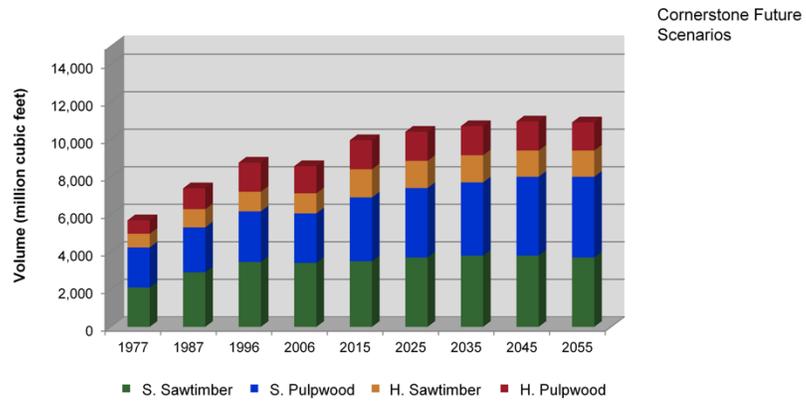


# Forested Area



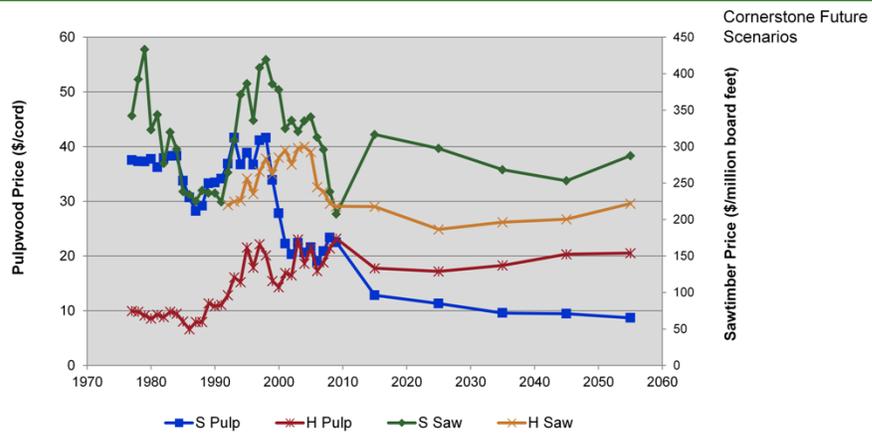
- ◆ In every model used, southern forested land is predicted to rapidly decline.
- ◆ Virginia is losing an estimated 16,000 acres annually.

# Forest Markets



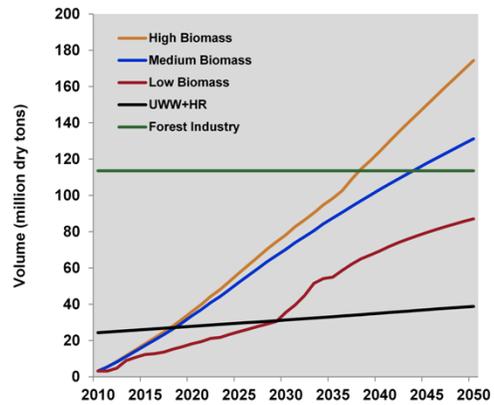
- ◆ Models are showing the ability to meet substantial new demands.
- ◆ Productive capacity has expanded, especially in the southeastern Coastal Plain and more so in the pine pulpwood markets.

# Forest Markets



- ◆ A return to peak harvest levels of the late 1990s would not cause a return to the peak prices of that period due to expanded forest inventories.
- ◆ Strong price increases approaching historical highs would require a substantial expansion of wood product demands.

# Bioenergy Demands

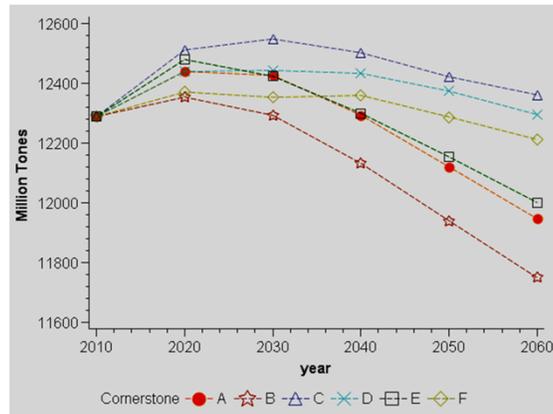


Cornerstone Future Scenarios

- ◆ Bioenergy demands would lead to additional harvests of raw material especially for softwood pulpwood.



# Carbon Inventories



- ◆ Loss of forest area will result in a decline in the amount of carbon that would be stored in forests.
- ◆ Futures with stronger timber markets yield more carbon for a given socioeconomic climate future.

## Concerns for the Future of Forestry

- ◆ Urbanization could reduce the forested area – up to 23 million acres, the size of South Carolina – and change its character;
- ◆ More people are expected to demand additional goods and services from a smaller forest base;
- ◆ Population growth and forecasted land use changes would stress water supplies and impact water quality;
- ◆ Wildfire potential increases – more numerous and more severe fires are forecasted;
- ◆ Challenges to community and forestry wildfire organizations could increase;
- ◆ The spread of plant, insect and disease pests could severely affect native species, forest productivity and wildlife;
- ◆ More than 1,000 plant and wildlife species of conservation concern could be threatened by urbanization, climate change and invasive species, and,
- ◆ Forests could support higher levels of timber harvest than present, but demands are uncertain, especially for bioenergy.

