

# South Carolina Forestry Commission

## *South Carolina 2014 Forestry Report*

SC Code 48-23-90

*Protecting and Developing SC's Forest Resource*

Gene Kodama  
SC State Forester  
February 27, 2014



# Forest Values

**Wood Products**

**Jobs**

**Water Treatment**

**Quality of life**

**Scenic Beauty**

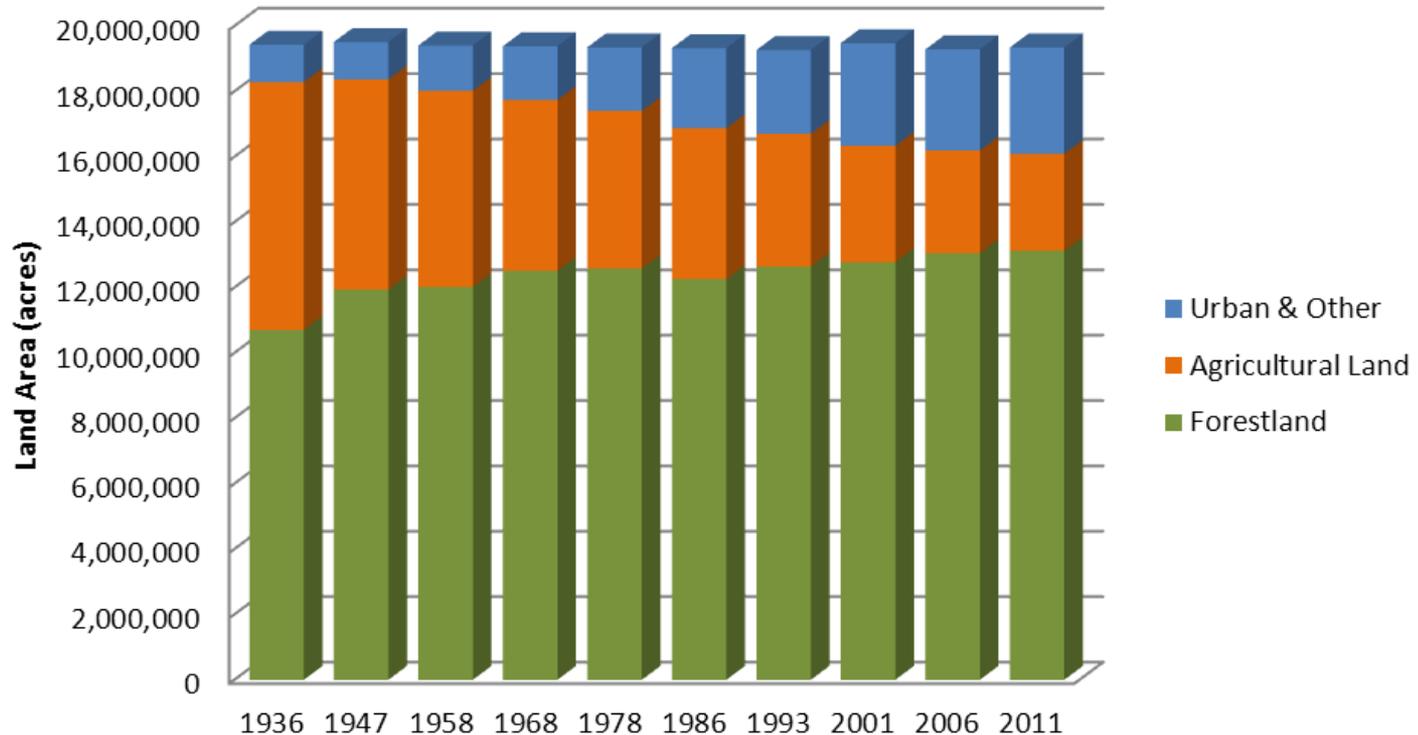
**Wildlife**

**Oxygen**

**Carbon Storage**

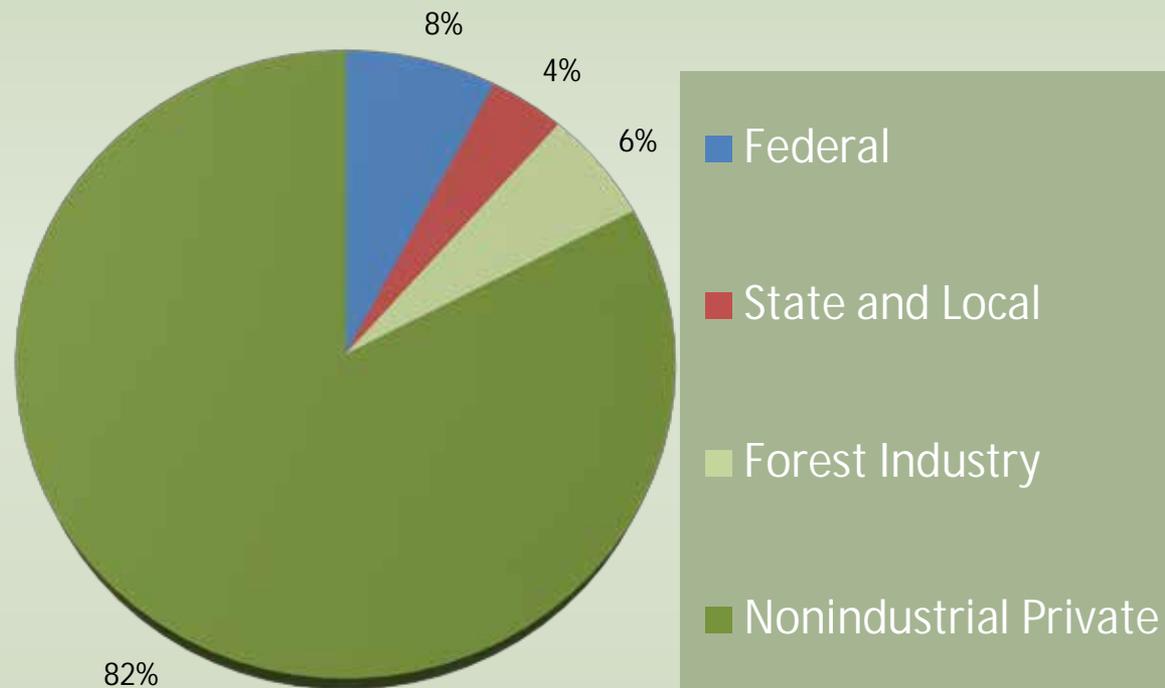
# 13.1 million Timberland Acres

## South Carolina Land Use Trends 1936 to 2011



# Private non-industrial landowners are the key to wood supply

Area of South Carolina Timberland by Ownership Group, 2010



# Forestry Commission State Forests

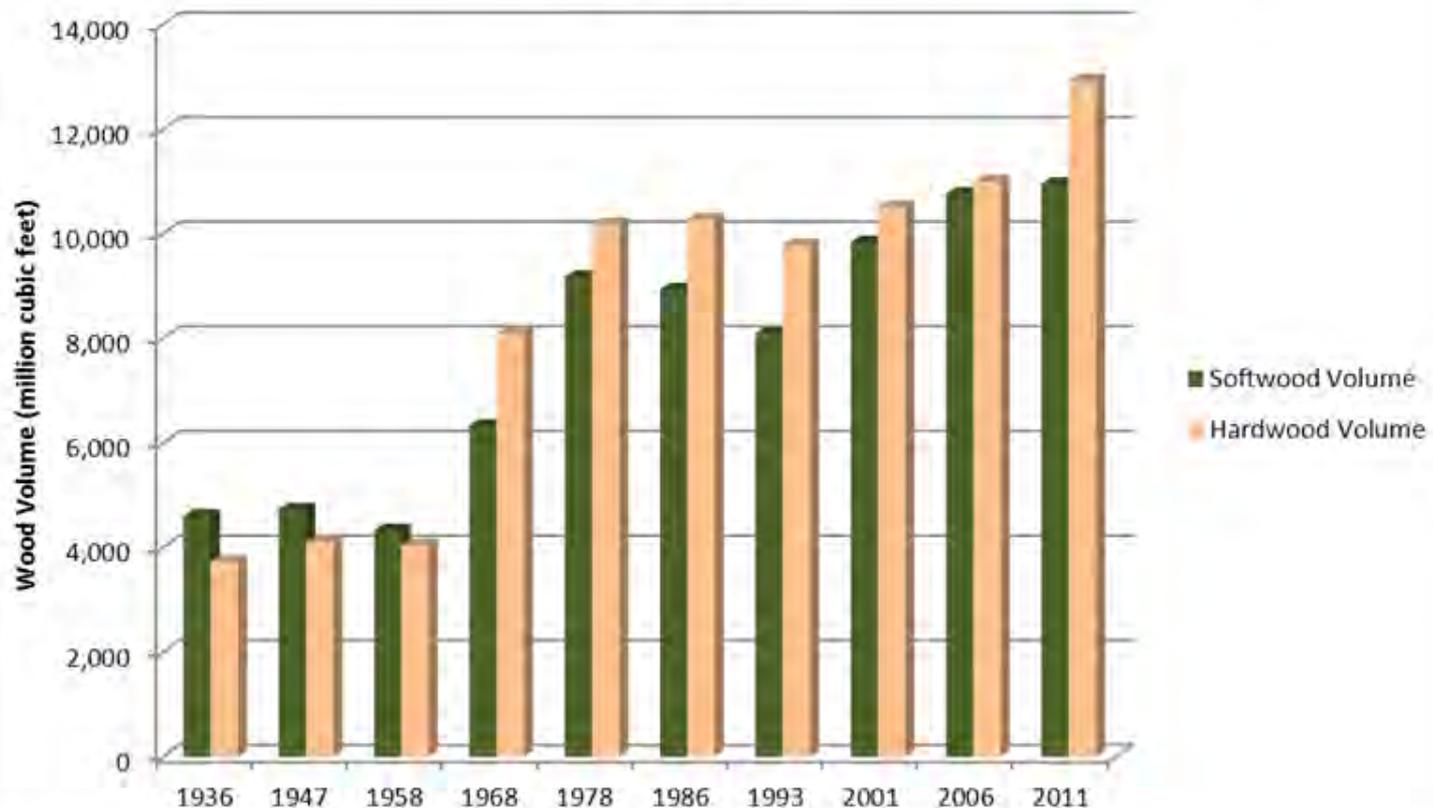


1. Actively managed for timber, wildlife, and recreation
2. **94,000 acres in 5 forests.**
3. Generate about \$3.5 million annually, \$37/acre.
4. **Self sufficient on 75% of revenue generated.**
5. 25% of revenue given to school systems in counties of origin, \$1 million in 2010.
6. **Certified sustainable by Sustainable Forestry Initiative and American Tree Farm System.**

SC's forests contain more wood than ever recorded!

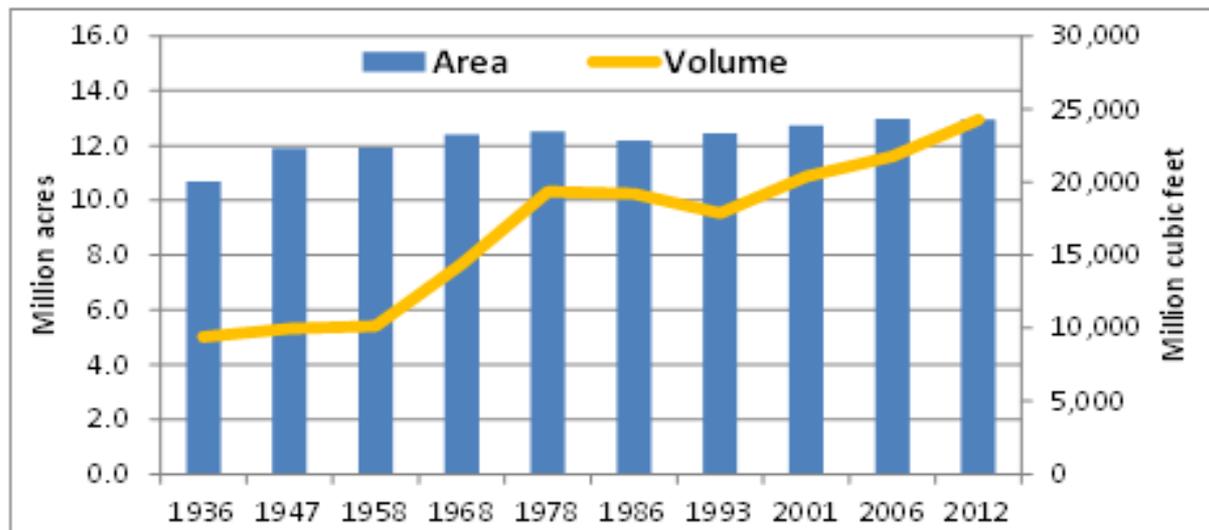
### Total Wood Volume on South Carolina Timberlands

1936 - 2011



More than double the wood on “same” acreage

**Timberland Area and Volume by Survey Year, South Carolina**



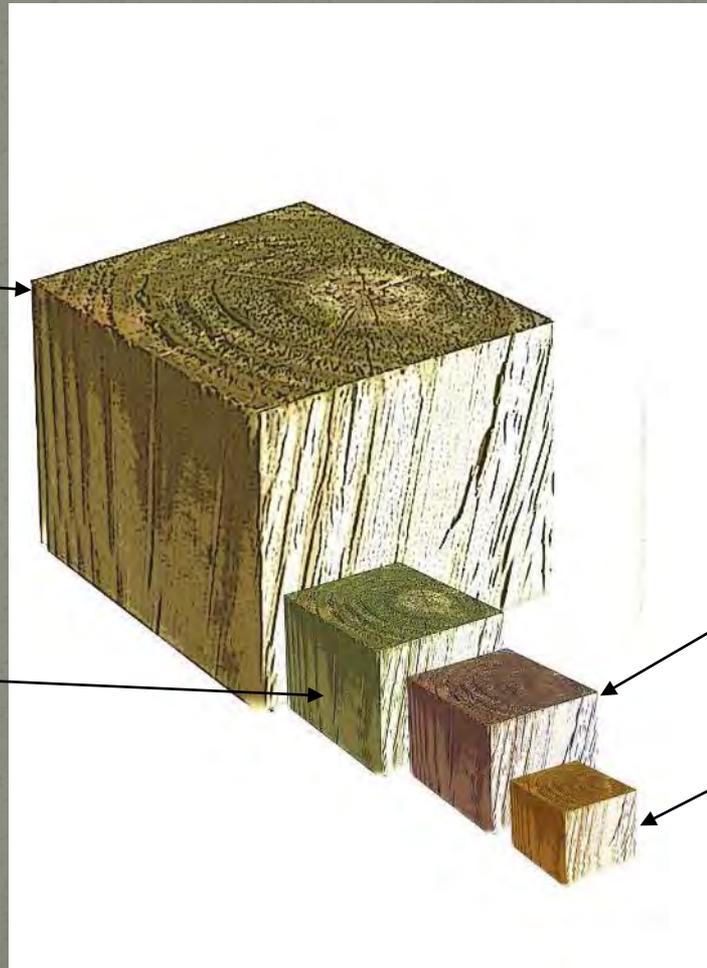
SC's forests are growing 1.9% per year.

**Total Growing Stock Inventory**

**Annual Gross Growth (6.3%)**

**Annual Removals (3.8%)**

**Annual Mortality (0.6%)**



# Forest Protection: Wildfire Suppression

1. Thank you for recent staffing and equipment funding.
2. 23 of 100 total vacancies filled and 19 more to be filled this year (42 total)
3. Within 10% of manned dozers goaled (160).
4. 21 of 160 open cab dozers replaced and 15 more will be replaced this year (36 total).
5. Additional capital funds needed to replace 124 open-cab dozers faster.
6. Protection for forest resource investments, homes, and the public is improving.

# Forestry's Economic Impact

#1 manufacturing industry in jobs & wages

\$17.4 billion total economic impact

\$1.4 billion in forest products export

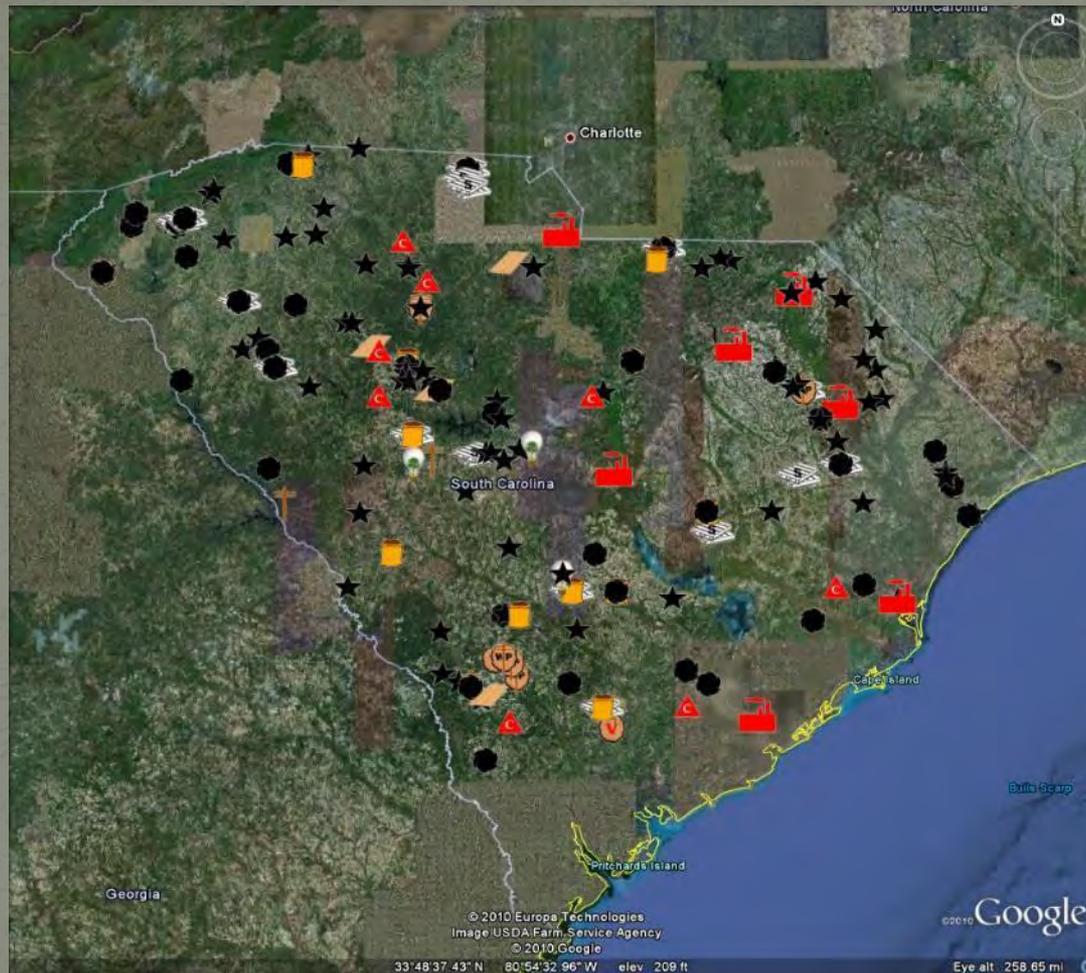
#1 export from Charleston port

#1 rural commodity in SC

*"There is no more well-defined cluster (than forest industry) that has a bigger impact on the state's economy."*

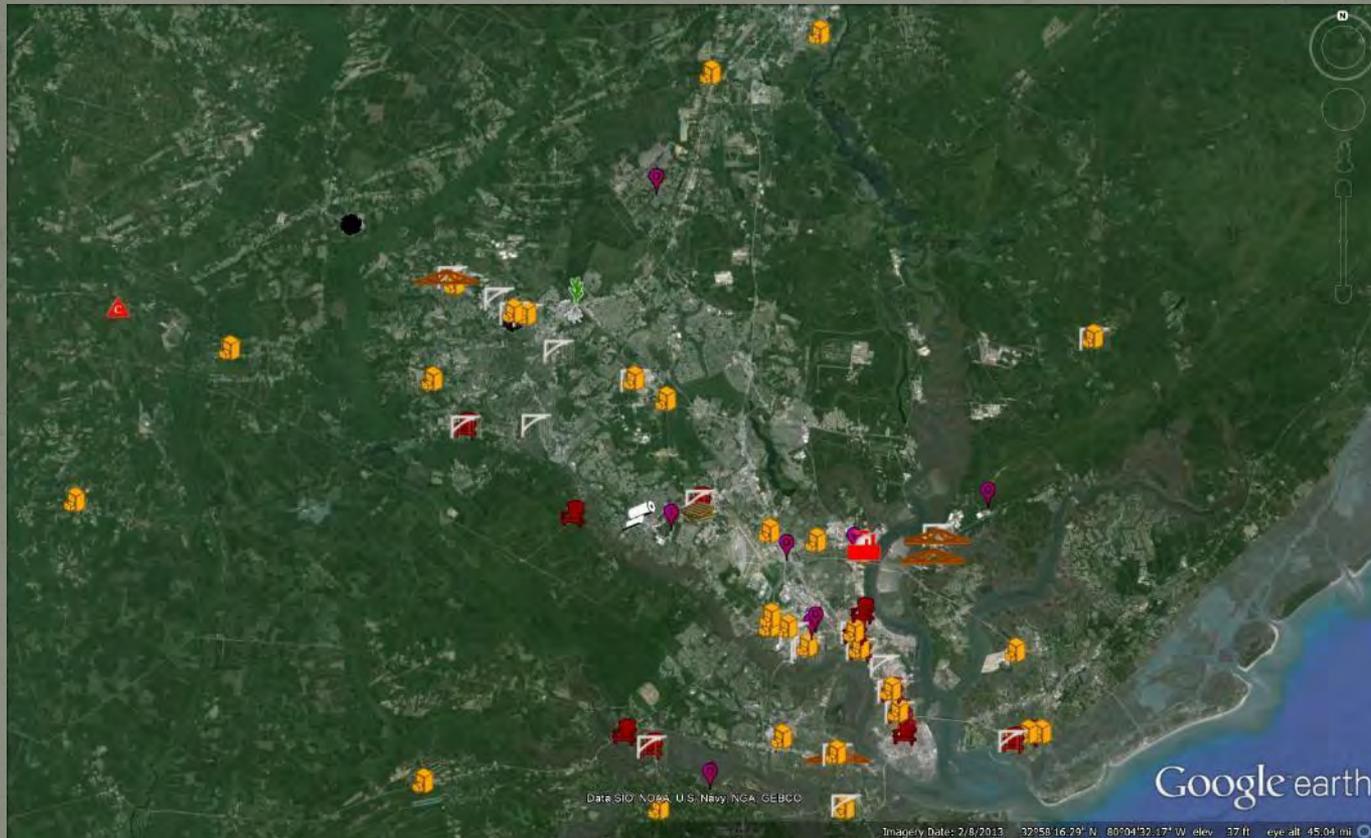
*Dr. Doug Woodward, USC Moore School of Business*

# Primary Mill Directory



<http://www.state.sc.us/forest/prod.htm>

# Secondary Mill Directory



<http://www.state.sc.us/forest/prod.htm>

# The 20 by 15 Vision

Grow forest industry from \$17 to \$20 billion in total economic impact by 2015.

---

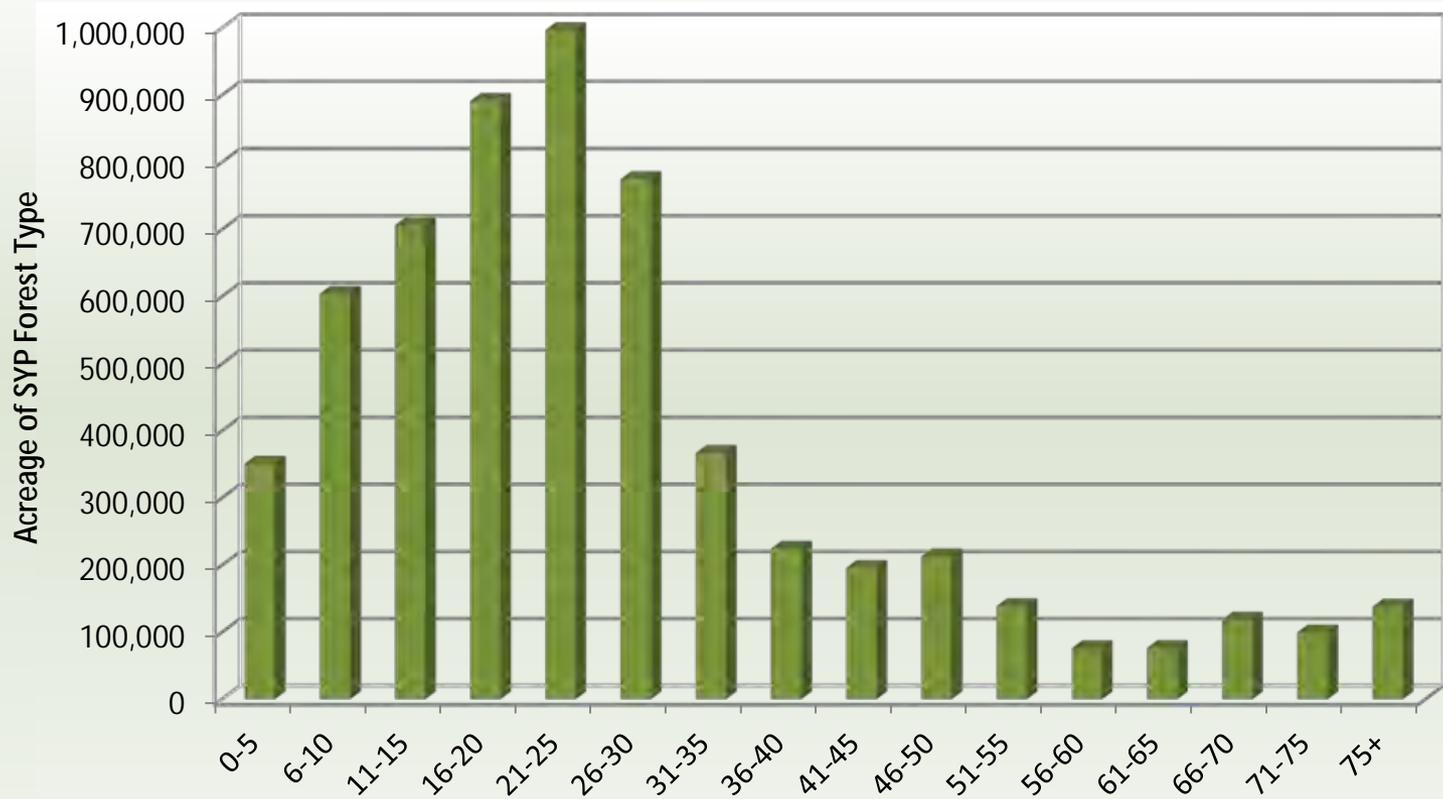


## 20/15 Committees

1. Retain & strengthen forest industry
2. Assess the present and future forest resource.
3. Increase wood supply through applied Research & Development
4. Address infrastructure needs.
5. Promote SC forest products and business opportunities.
6. Better protect forest resource and business investments.

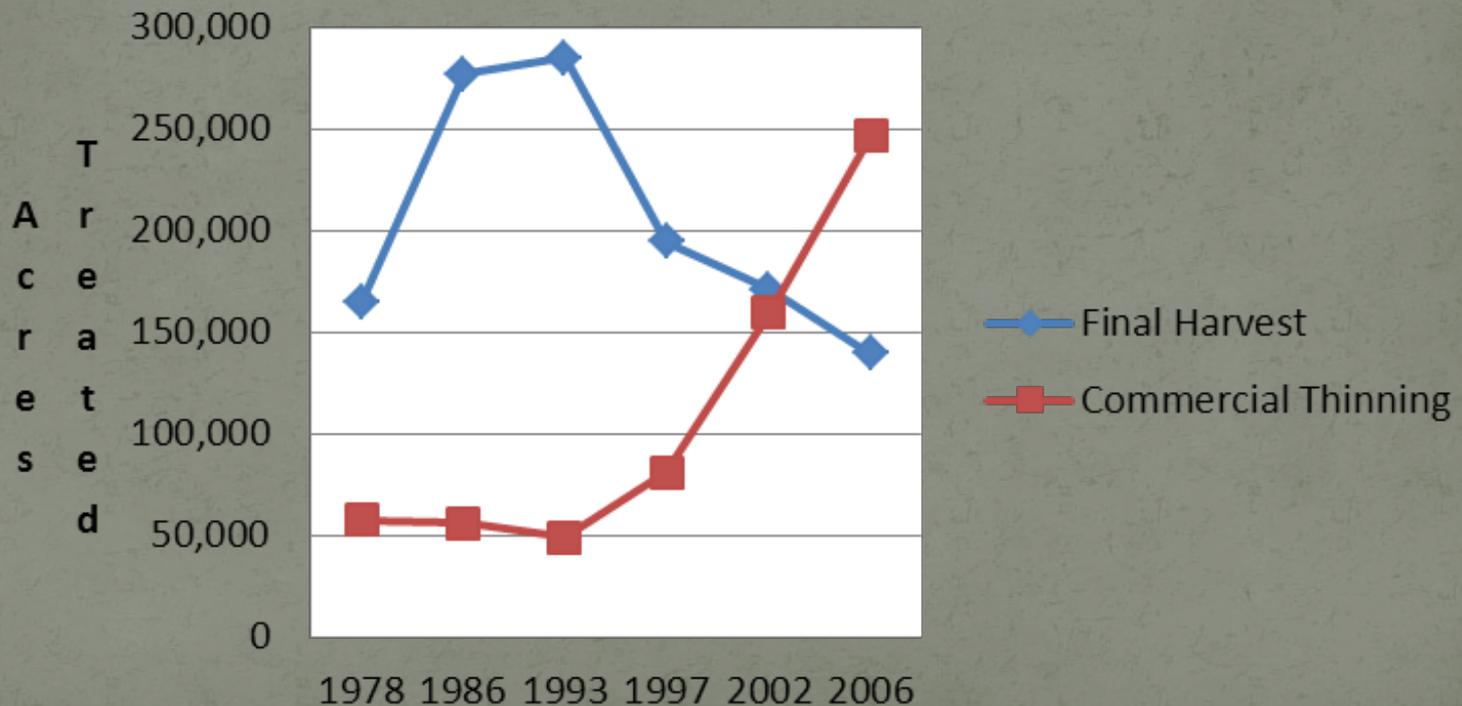
# Hurricane Hugo, CRP, and recession created an uneven age structure.

Pine Acreage by 5-Year Age Bracket, SC Forestland 2010

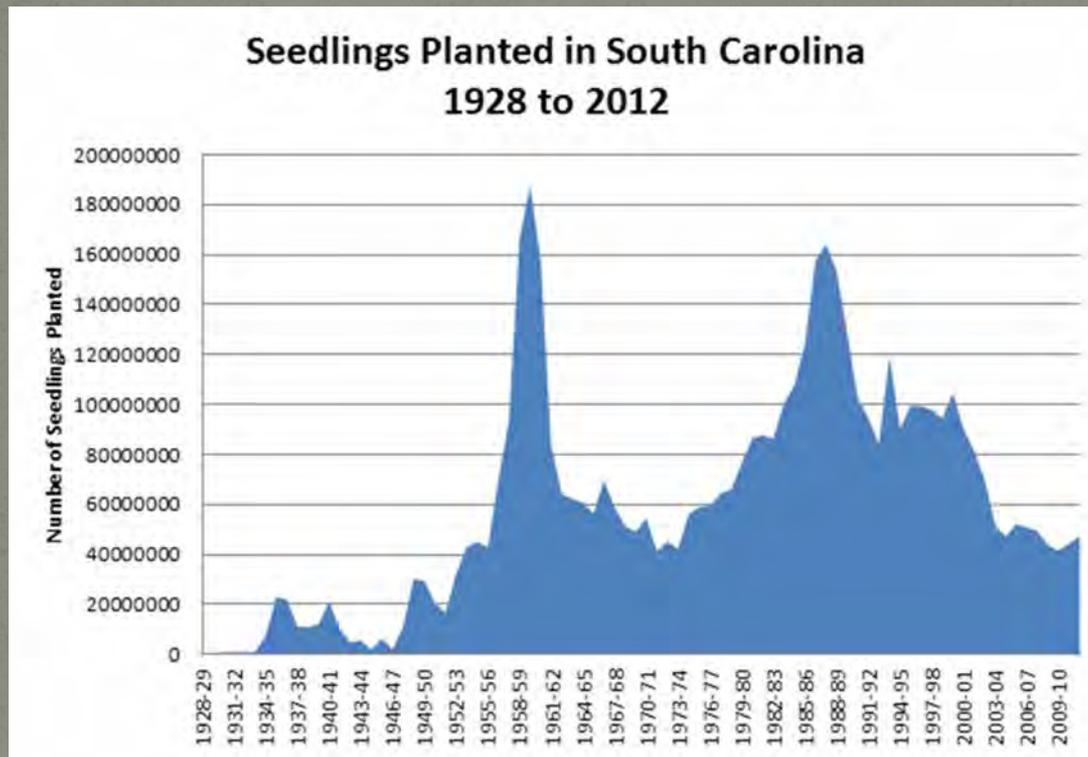


More acres are being thinned than receiving final harvest.

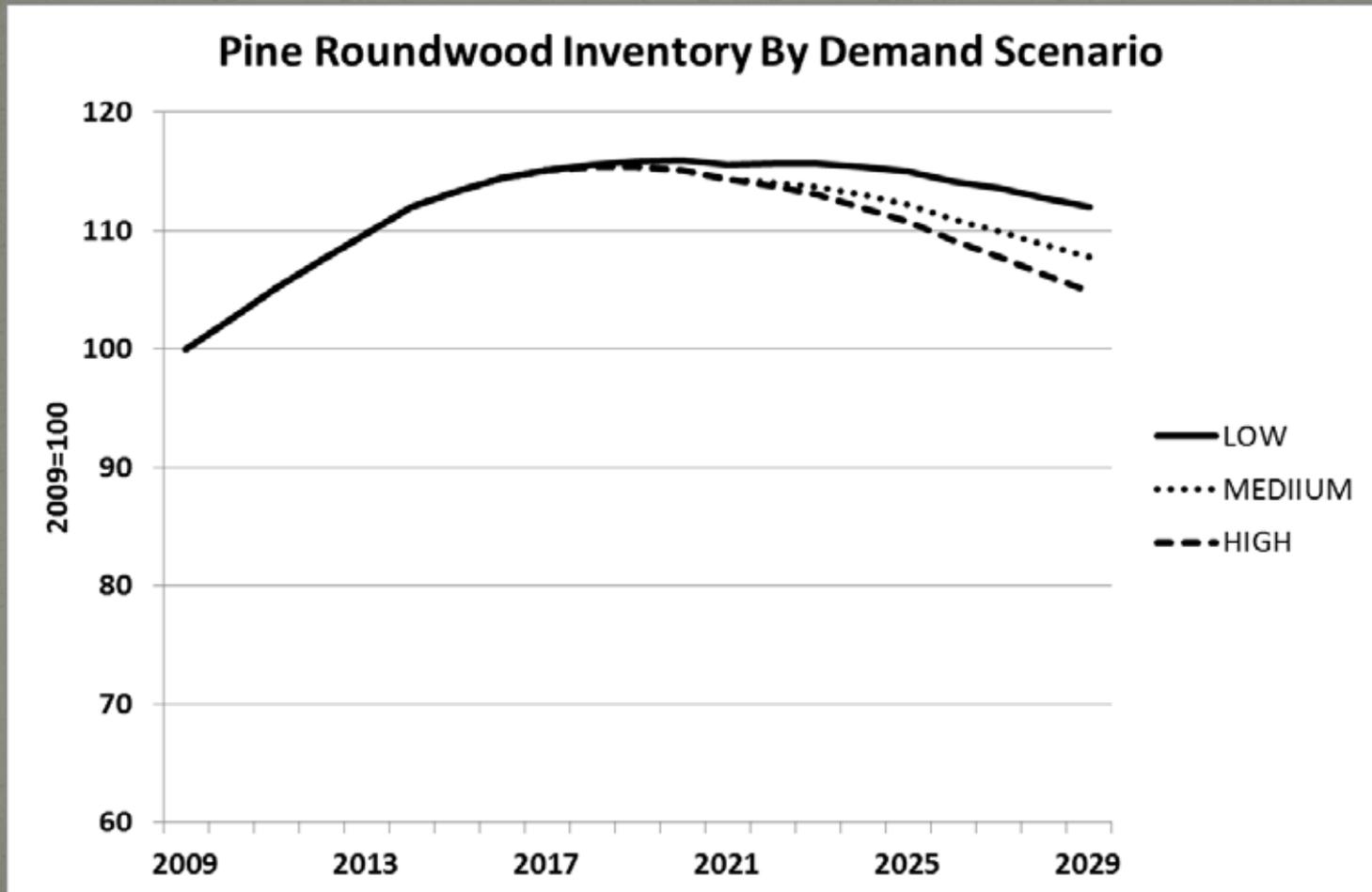
## Area of Timberland Harvested Hardwoods and Softwoods



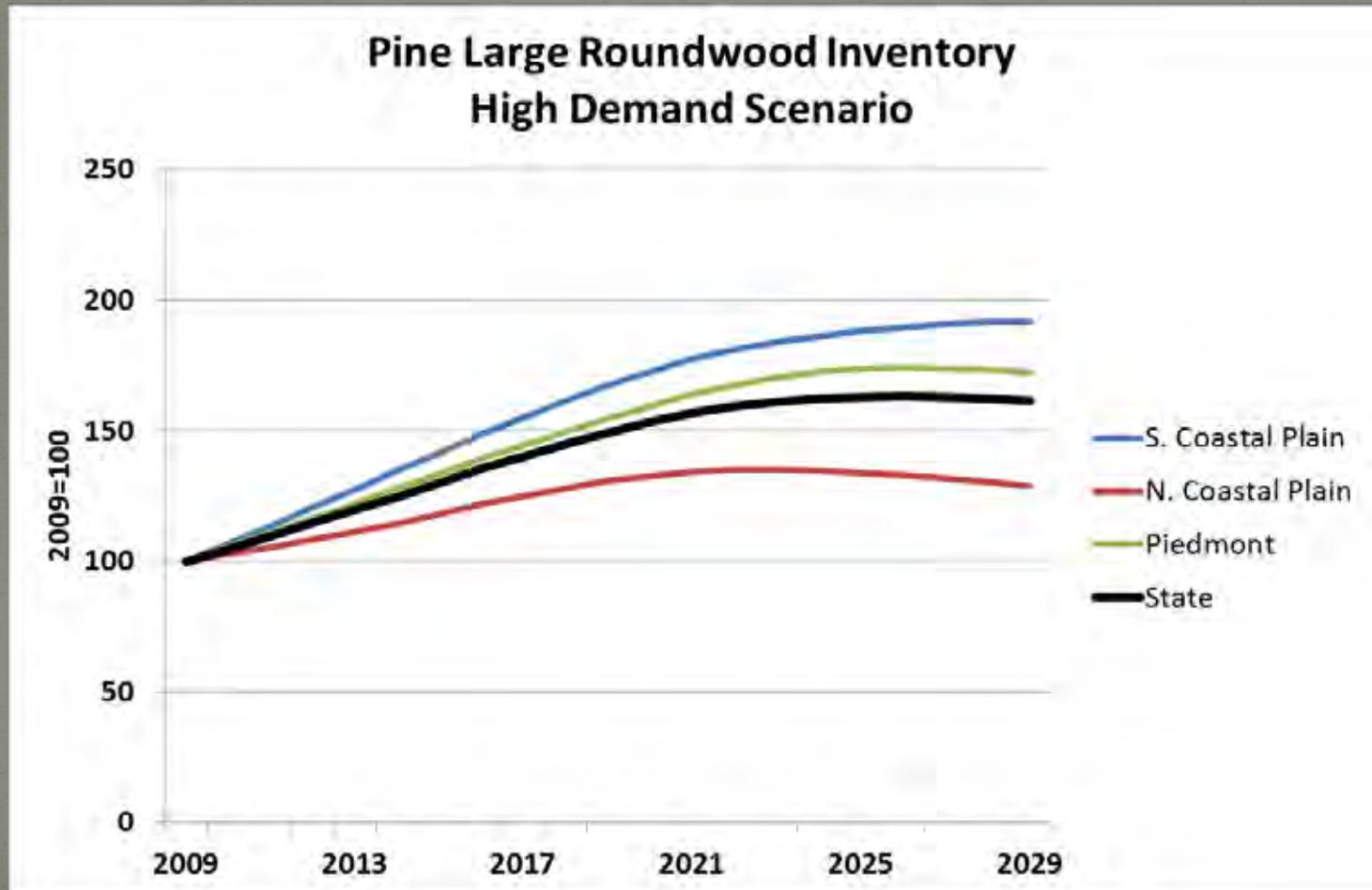
Tree planting is at a 40-year low and needs to increase.



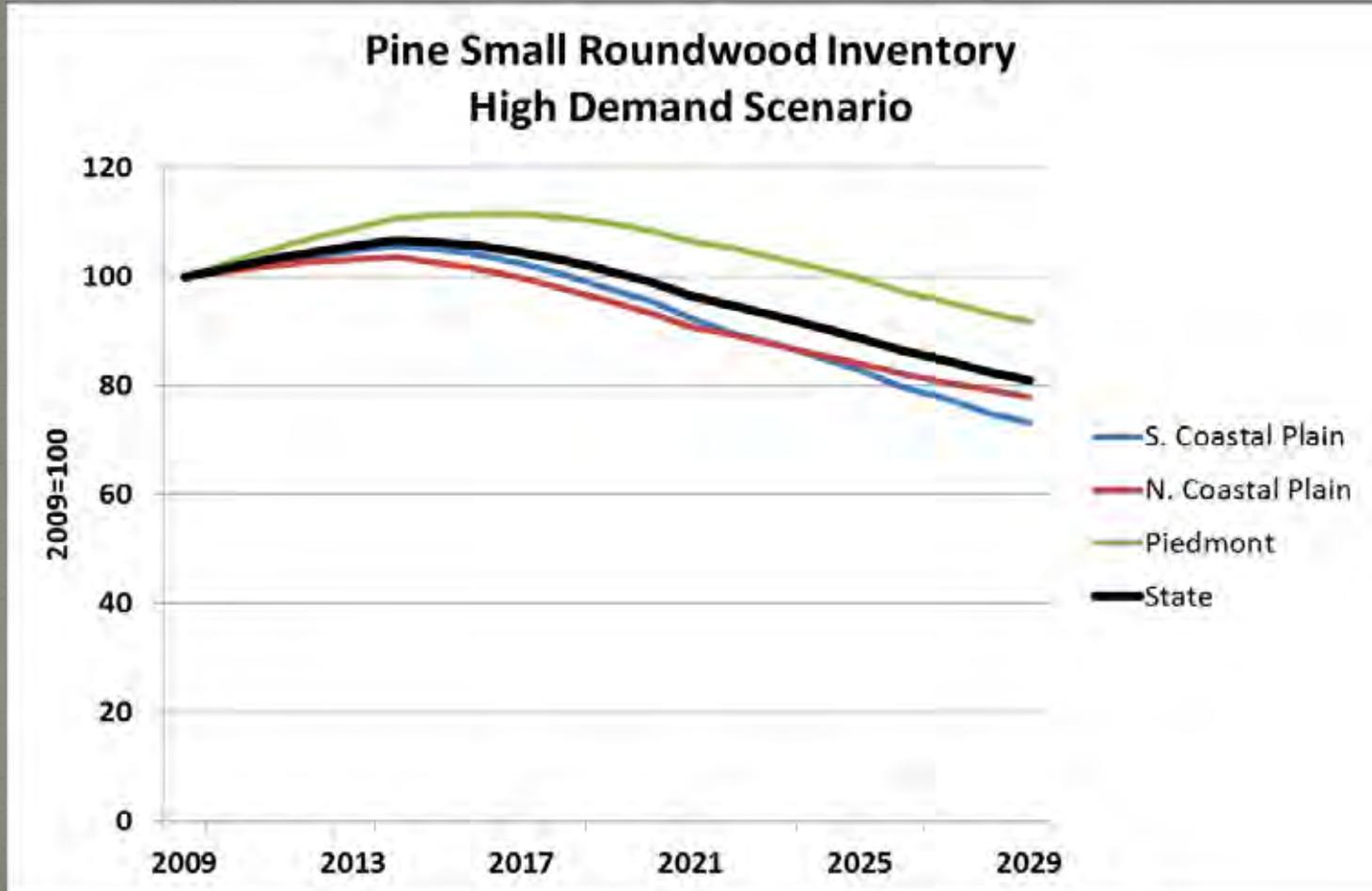
Total wood inventory will continue to grow in the near future...



Supply of large diameter pines will continue to grow.

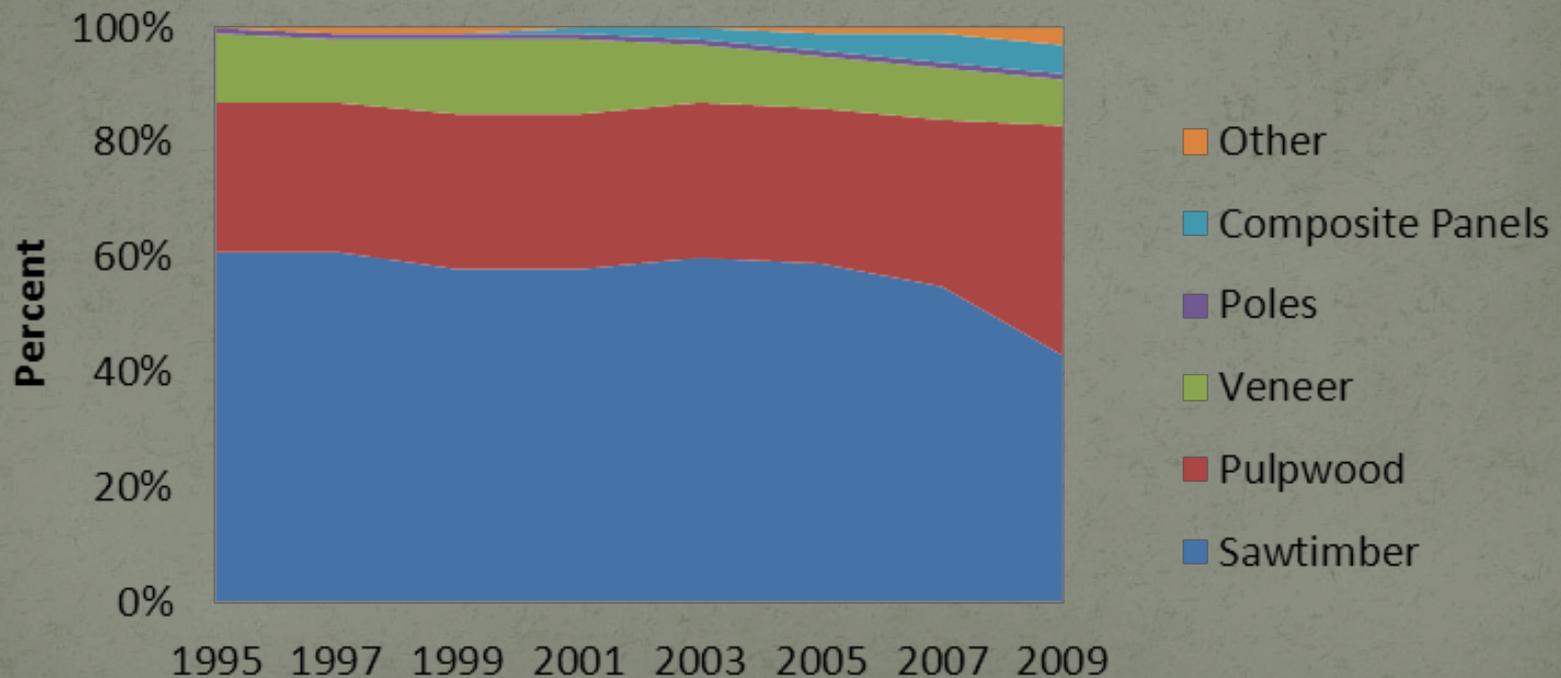


# Supply of small-diameter trees will peak soon then decline.

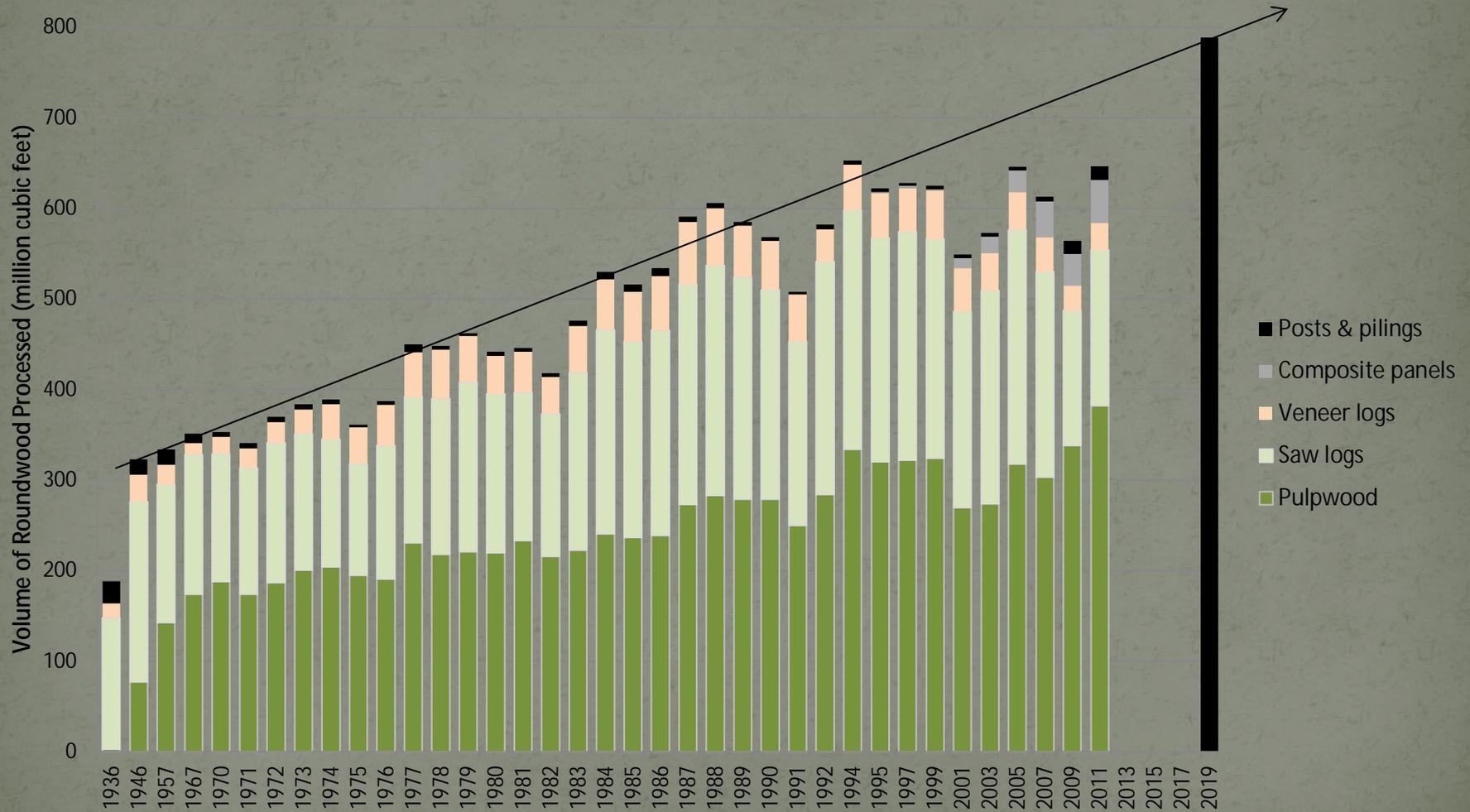


The amount of pulpwood coming from large diameter trees is growing.

## Softwood Sawtimber-Sized Tree Use by Product in South Carolina



# South Carolina Production of Primary Timber Products (1936-2011) with Projections through 2020



# Recent industry expansion.

“**Sonoco** unveils \$75 million biomass boiler.” (1/17/14)

“**Canfor Southern Pine** to expand Darlington lumber facility.”  
(12/18/13)

“**EDF Renewable Energy** opens 2 biomass facilities in  
Harleyville and Allendale.” (12/17/13)

“**Associated Hardwoods** locating new facility in Cherokee  
County.” (9/13/13)

“**Georgia-Pacific** to begin operating Clarendon OSB mill.”  
(3/1/13)

Plus large increases in production at existing sawmills.

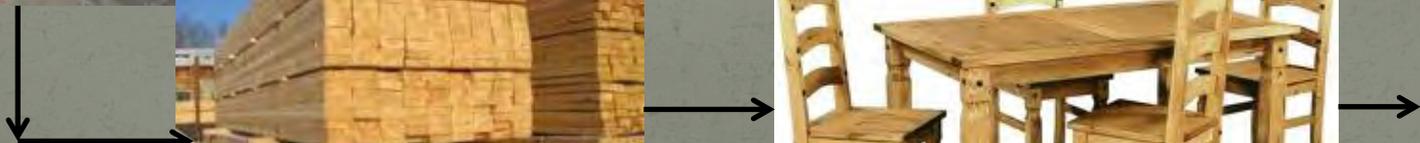
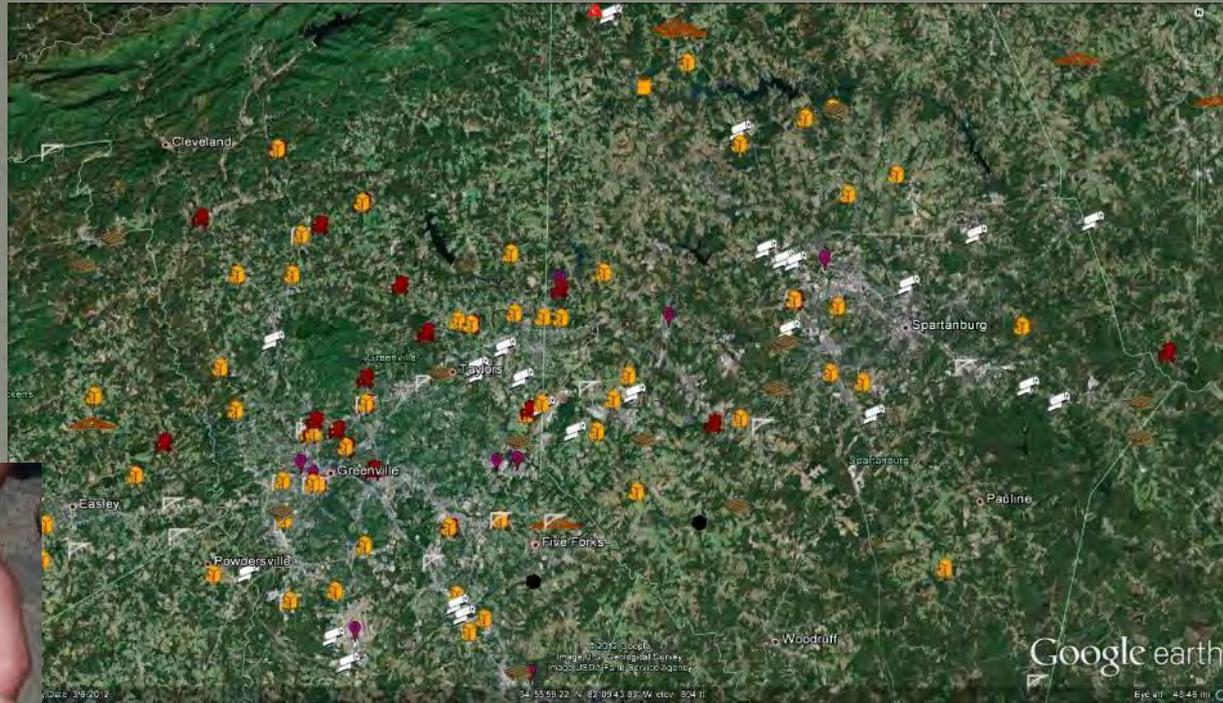


# Expansion needed in sawmilling segment.

- Utilize available timber
- Create more value-added jobs
- Produce more wood chips to fill shortage of pulpwood
- Improve cash flow to landowners
- Increase economic impact



# Secondary forest product manufacturing needs to grow.



# Growing exports helps to meet 20/15 goals.

## South Carolina Forest Products Export

Based on information gathered from 2007 to 2010



### Forest Products: A Growing Industry

- South Carolina exports about \$1.3 billion in forest products annually.
- The forest industry's economic impact on the state's economy is over \$1.7 billion annually.
- Forestry ranks #1 among the state's manufacturing industries in jobs (90,624) and payroll (\$4.1 billion).
- Timber is South Carolina's #1 cash crop at \$678 million annually.

### Export Transportation Infrastructure

Overall, exports of forest products have doubled since 2001, from exports valued at \$604 million in 2001 to more than \$1.3 billion in 2010. However due to the recession in 2009, there was a slight decrease in exports but the figures have since improved (Figure 1).

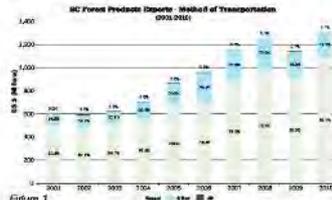


Figure 1

Most of South Carolina forest products leave the state via vessels; but ground transportation has remained steady in the recent years for wood products, paper/paperboard and pulp/paper machinery.

Forest products (paper and paperboard, wood pulp and logs/lumber) remain as the number one export moved through the port of Charleston, accounting for more than 30% of the total cargo volume in 2010. Less than 1% of all forest products are being exported by air.

### Global Demand on the Rise for S.C. Products

South Carolina forest products are in demand around the world (Figure 2). Our customers are well diversified across many countries, illustrated by the fact that the top five foreign destinations for forestry products account for only 38% of the total forest products exports to foreign nations.

Total exports to Canada during the four-year period between 2007 and 2010 amounts to about \$843 million. Exports to Germany (\$367m), Italy (\$299m), Netherlands (\$357m) and China (\$240m) complete the list of the top five export destinations.<sup>1</sup>

Product Category	World #1	Wood and Articles of Wood	Wood Furniture	Prefabricated Buildings	Wood-Based Chemical Products	Pulp/Paper Processing Machinery
1	Canada (2)	Canada (1)	China (1)	Canada (1)	China (1)	Canada (2)
2	Germany (1)	Japan (1)	France (1)	Italy (1)	Germany (1)	Italy (1)
3	Germany (1)	China (1)	Germany (1)	France (1)	Germany (1)	Germany (1)
4	USA (1)	Australia (1)	China (1)	USA (1)	USA (1)	USA (1)
5	USA (1)	USA (1)	USA (1)	USA (1)	USA (1)	USA (1)
6	USA (1)	China (1)	Russia (1)	Germany (1)	Rep. of South Africa (1)	India (1)
7	China (1)	Japan (1)	Malaysia (1)	Angola and Republic (1)	Malaysia (1)	Germany (1)
8	France (1)	Mexico (1)	Germany (1)	China (1)	Canada (1)	Taiwan (1)
9	Denmark (1)	Poland (1)	New Zealand (1)	Australia (1)	India (1)	Turkey (1)
10	Taiwan (1)	Netherlands (1)	USA (1)	China (1)	India (1)	Indonesia (1)

Figure 2

<sup>1</sup> The figures represent the value which accounts for the most commodities in 2010. (1) = amount ranked up or down in rank from 2009 to 2010, total net exports = 2009.   
<sup>2</sup> This study includes export figures for the following major forest products: paper and paperboard, wood pulp, wood furniture, wood-based chemical products, pulp and paper processing machinery and prefabricated buildings.

# Forest products are being exported worldwide

**Top Markets for Wood Products in 2010 - Country/Commodity Matrix**

Rank	Paper/ Paperboard	Wood Pulp	Wood and Articles of Wood	Wood Furniture	Prefabricated Buildings	Wood-Based Chemical Products	Pulp/Paper Processing Machinery
1	Canada (n)	Italy (n)	Canada (n)	Czech Republic (-3)	Canada (-1)	China (n)	Canada (n)
2	Netherlands (-2)	Germany (n)	Japan (-2)	Panama (n)	Russia (n/a)	Switzerland (n/a)	Pakistan (-20)
3	Germany (-1)	S. Korea (-4)	China (-1)	Germany (n)	Trinidad and Tobago (n/a)	Finland (n/a)	Colombia (-5)
4	UK (-4)	India (-5)	Australia (-2)	Canada (-5)	Thailand (n/a)	S. Korea (-1)	Malaysia (-25)
5	Mexico (n)	Belgium (n)	Taiwan (-3)	India (-7)	Bahamas (-2)	UK (n)	Mexico (n)
6	Turkey (-3)	China (-3)	South Korea (-5)	Russia (-12)	Germany (n/a)	South Africa (-4)	Poland (-14)
7	China (-1)	Japan (-1)	Vietnam (n)	Ecuador (-2)	Antigua and Barbuda (-3)	Nigeria (n/a)	Germany (-2)
8	France (-2)	Mexico (-2)	Germany (-6)	Jordan (n/a)	Chile (-1)	Canada (-4)	Taiwan (-7)
9	Ecuador (-2)	Poland (-3)	New Zealand (-5)	Saudi Arabia (-2)	Australia (n/a)	India (-1)	Turkey (-17)
10	Taiwan (-7)	Netherlands (-4)	UK (n)	Dominican Republic (-4)	N/A	Indonesia (-8)	Indonesia (n/a)

■ North America 
 ■ Asia 
 ■ European Union 
 ■ South America 
 ■ Middle East 
  Other

\* Top Markets represent countries which account for the most commodity sales in 2010 (in \$ Sales)

(+/-): amount moved up or down in ranking from 2009 to 2010, (n/a): no exports in 2009

# Panama Canal expansion and Charleston Port deepening will increase exports



Manufacturing and jobs are positioned to expand with timber growth and new markets.



# SC Forest Manufacturing's Economic Impact



- #1 in jobs (90,000)
- #1 in wages paid (\$4.1B)
- #1 commodity (\$759mm)
- #1 Charleston port export
- \$1.4 billion export total
- \$17.4 billion in total economic impact

...while providing clean water and air, wildlife habitat, recreation, and desirable quality of life.

**“An Ideal Industry”**

# SC Forest Manufacturing's Economic Impact Multipliers



- \$17.4 billion in economic impact
- From 23.4 MM tons
- \$744/ton economic impact
- One job per 260 tons
- One job per 10.4 log truck loads
- 2009 production: 20.4 MM tons
- 2011 production: 23.4 MM tons  
(A 15% increase)

...while providing clean water and air, wildlife habitat, recreation, and desirable quality of life.

**“An Ideal Industry”**

# SC Forestry Cycle



- \$17.4 B economic impact
- 23.4 M tons of wood
- 90,000 jobs

# Economic Impact Relationships



- **\$17.4 B and 90k jobs from 23.4 M tons of wood**
- **One ton = \$744 impact**
- **260 tons = one job**
- **10.4 log trucks = one job**



# Forestry Expansion Opportunity



## 20/15 Project

- \$20 B economic impact by 2015
- Increase production to 26.9 M tons
- And/or increase value to \$855/ton
- Adds 14,000 jobs, 104,000 total

# Protect the forest resource and the public.



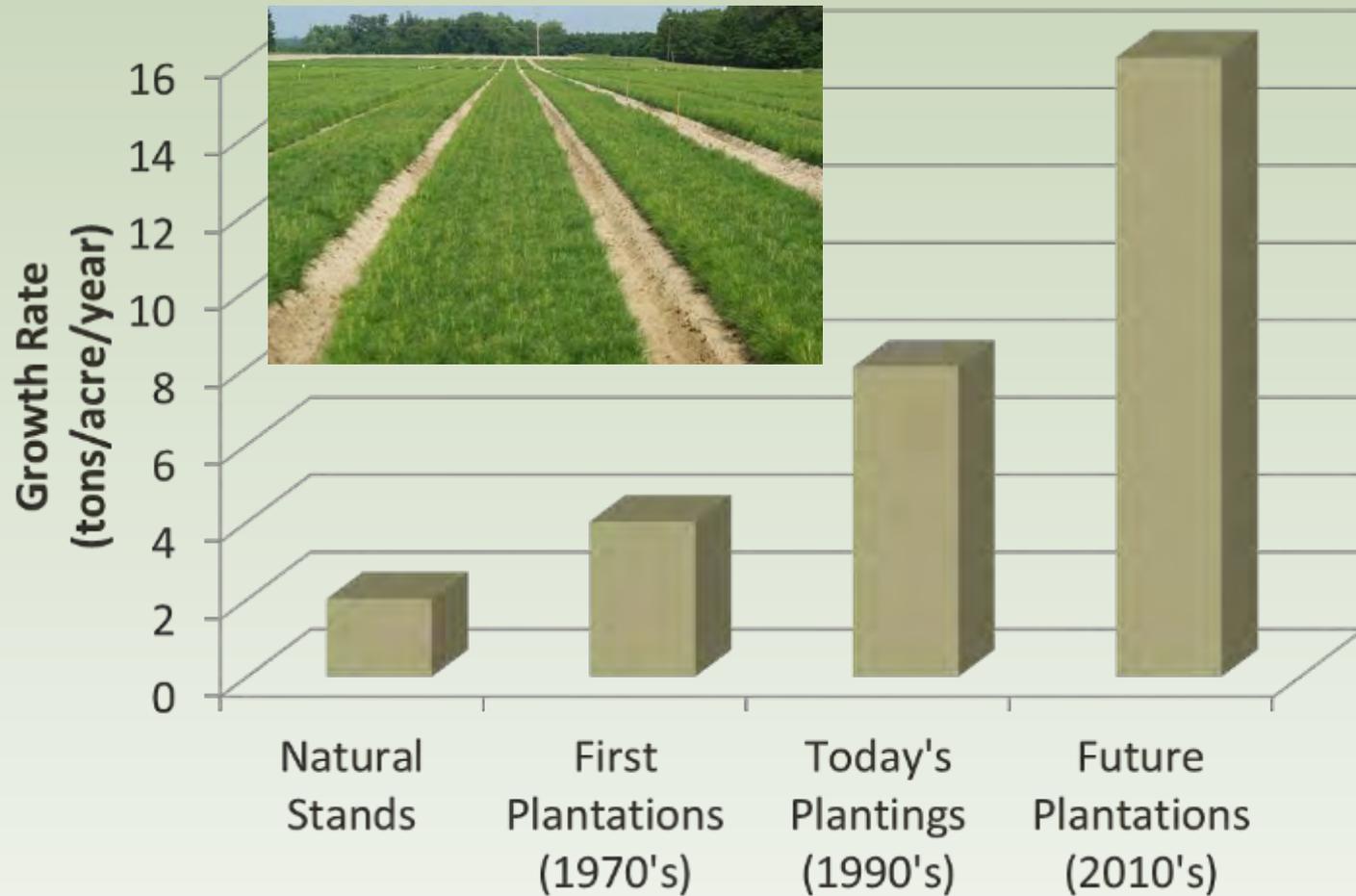
Encourage and incent private landowners to produce more timber.



Plant trees on idle agricultural land.



# Utilize improved tree genetics and known silvicultural techniques.



# Increase secondary manufacturing.





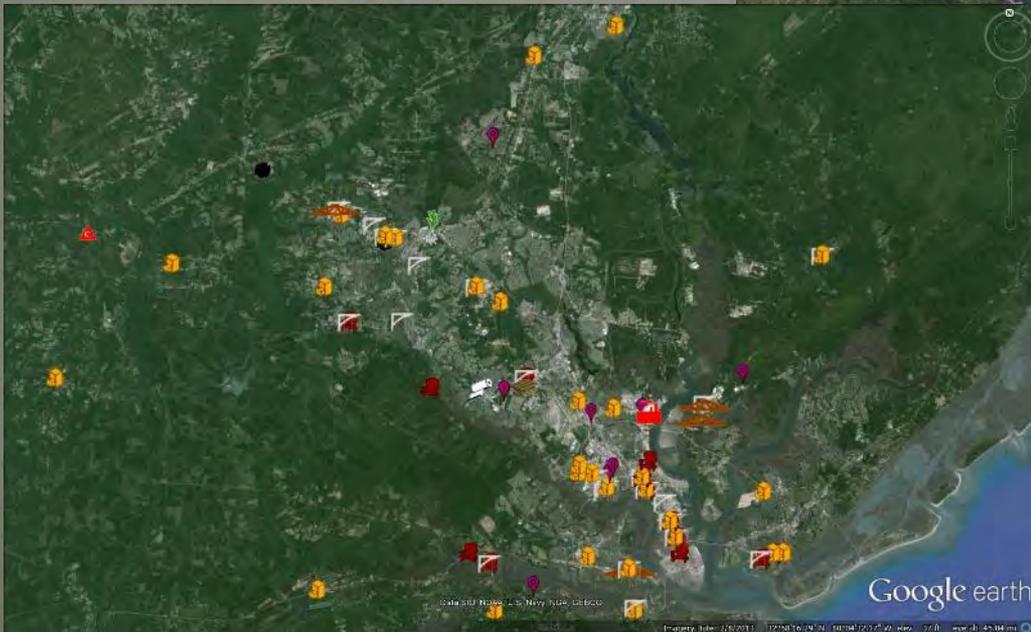
**South Carolina has a wonderful forest resource  
and a bright forestry future!**

# SC Forestry Commission

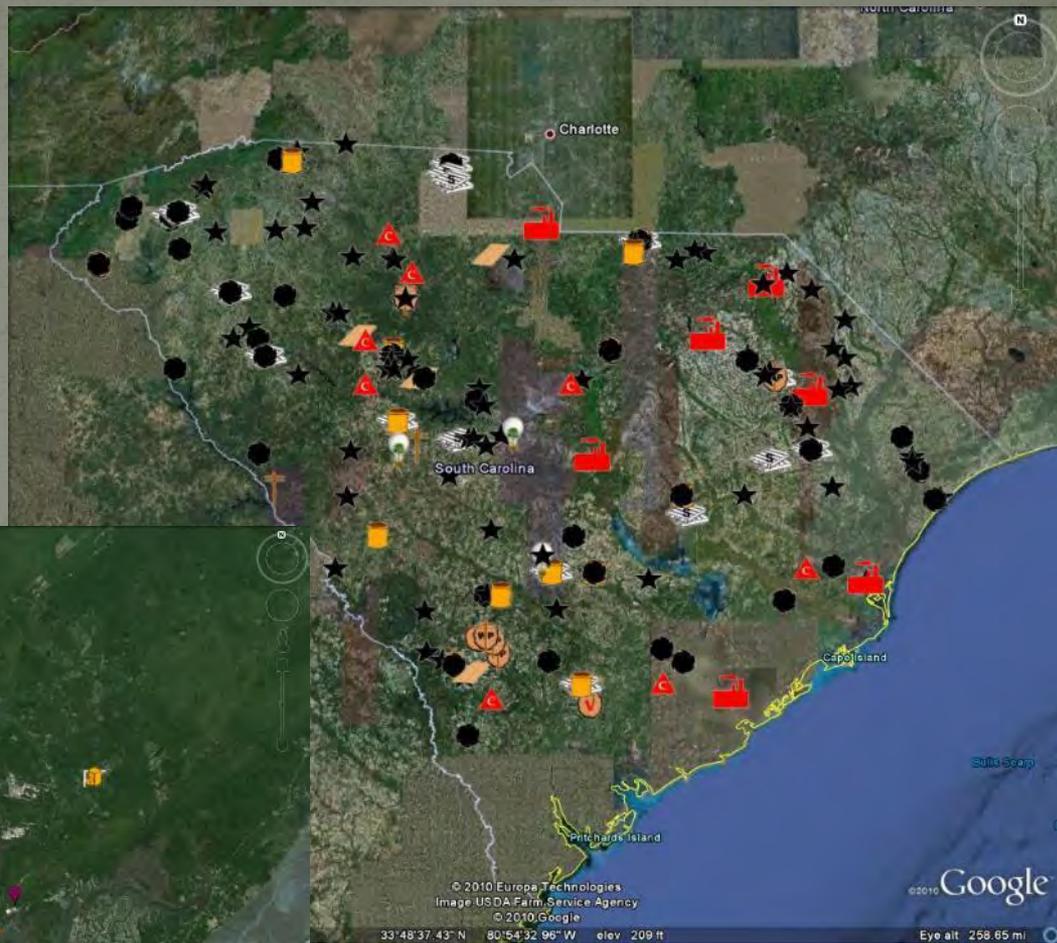
## 2014 Ice Storm Impact to Forest Resource

# Forest Industry Mills

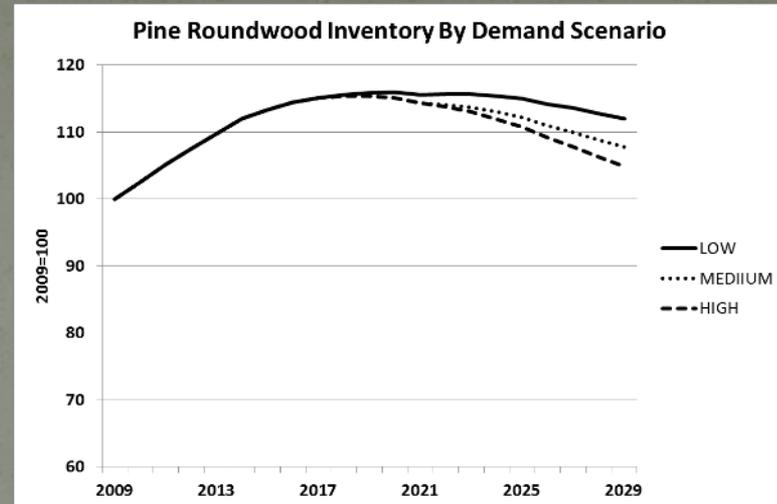
Secondary Mills  
(Charleston area)



Primary Mills

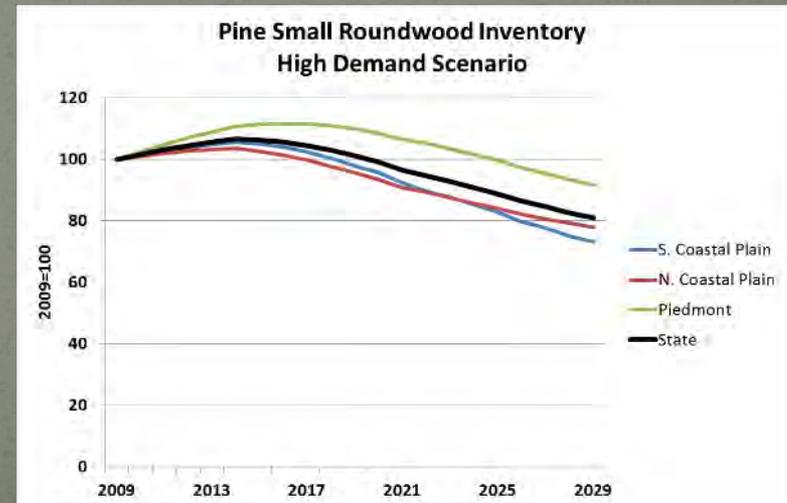
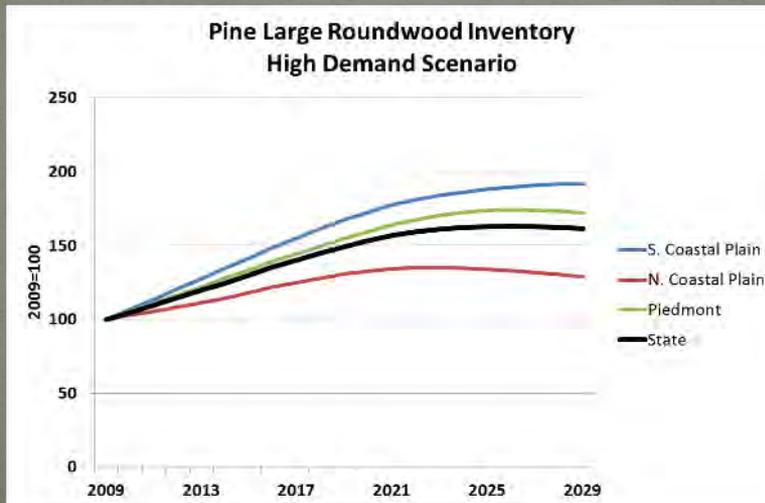


Total wood inventory grows,  
but not across all age classes

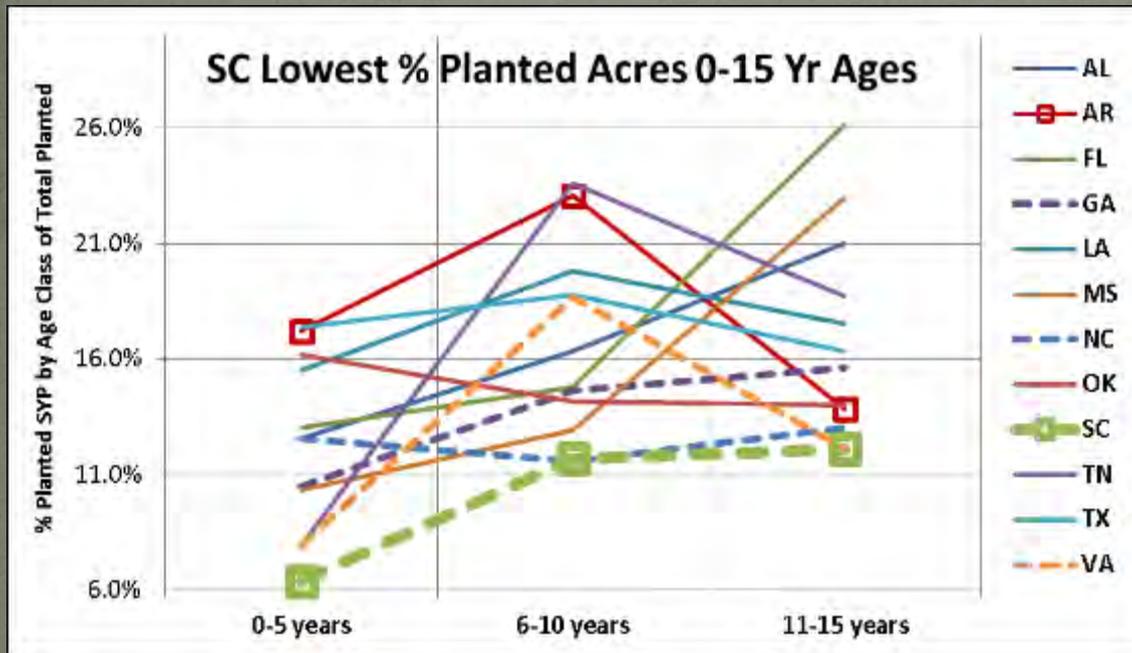


Sawtimber supply grows.

Pulpwood peaks soon, then declines



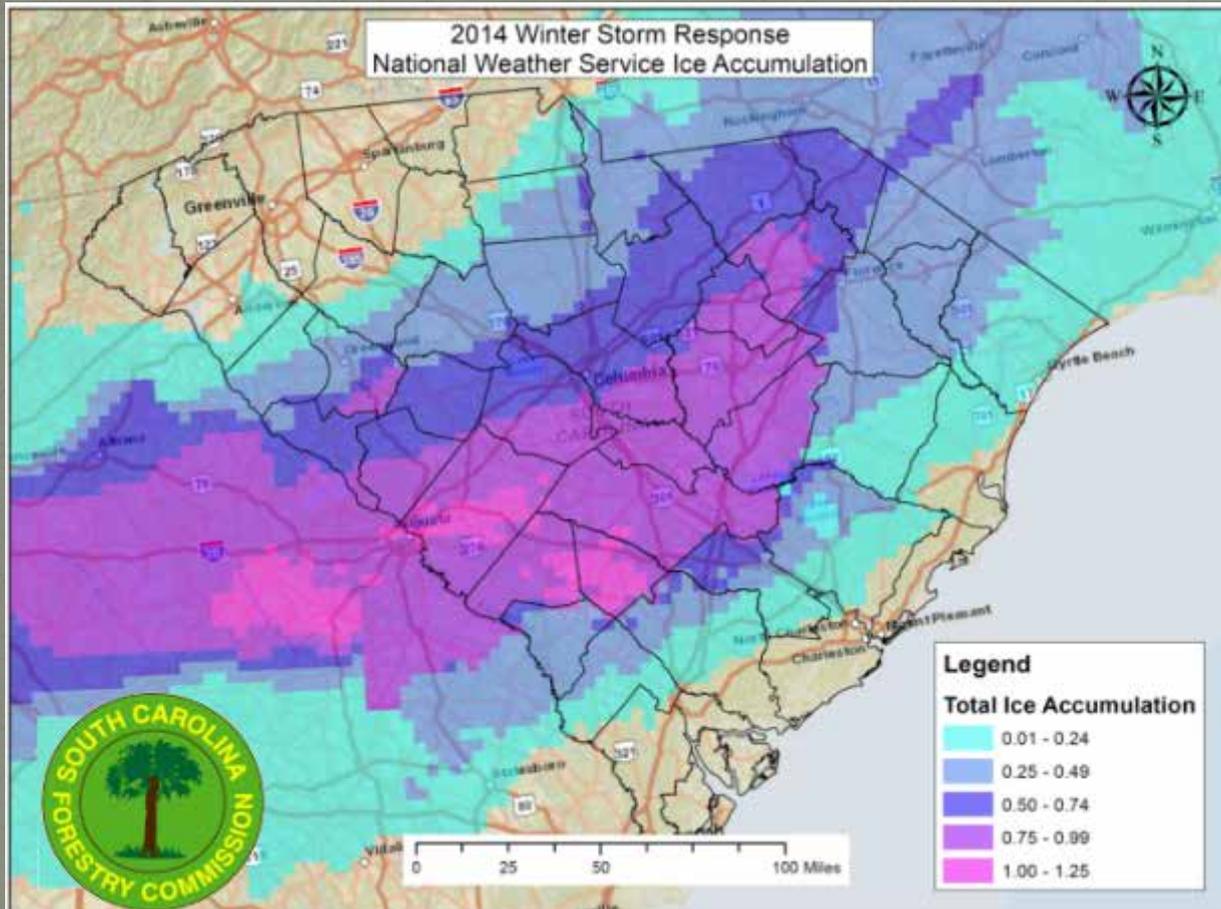
# SC Has Lowest % Planted Acreage in 0-15 Age Class of any Southeastern State



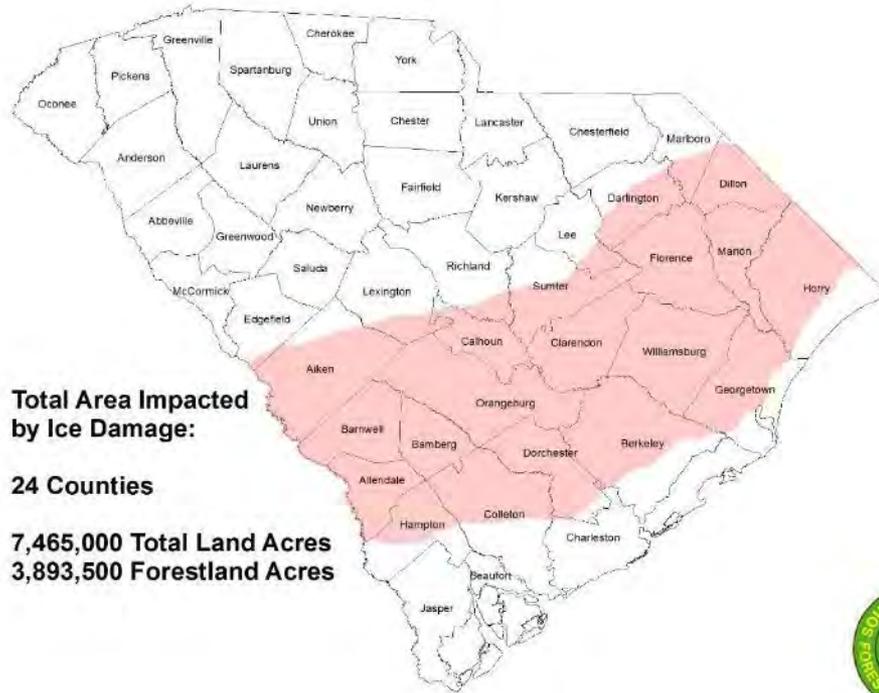
% Planted SYP Acres in 0-15 Ages, Avg Yrs 1993-2008		
Best State - Arkansas		54.1%
Top 8 - Florida/Alabama West		50.5%
Lowest 4 - East Coast, Virginia to Georgia		36.7%
Lowest - South Carolina		30.2%

% Planted SYP Acres in 5-year Age Classes					Avg Yrs 1993-2008
Rank	State	0-5 years	6-10 years	11-15 years	0-15 years
1	AR	17.2%	23.1%	13.9%	54.1%
2	FL	13.0%	14.8%	26.1%	54.0%
3	LA	15.5%	19.8%	17.6%	52.9%
4	TX	17.4%	18.8%	16.3%	52.5%
5	TN	8.0%	23.6%	18.7%	50.3%
6	AL	12.5%	16.4%	21.0%	49.9%
7	MS	10.3%	12.9%	23.0%	46.2%
8	OK	16.2%	14.2%	14.0%	44.4%
9	GA	10.5%	14.7%	15.6%	40.7%
10	VA	7.9%	18.7%	12.1%	38.7%
11	NC	12.6%	11.6%	13.0%	37.2%
12	SC	6.4%	11.7%	12.1%	30.2%

# 2014 Ice Storm



# 2014 Ice Storm Damage Corridor



**Total Area Impacted  
by Ice Damage:**

**24 Counties**

**7,465,000 Total Land Acres  
3,893,500 Forestland Acres**



Produced  
02/25/2014

# Pine Plantation Damage



# Pine Plantation Damage



# Pine Plantation Damage





# South Carolina Forestry Commission

803-896-8800

[scfc@scfc.gov](mailto:scfc@scfc.gov)

[www.trees.sc.gov](http://www.trees.sc.gov)

---