


NC STATE EXTENSION College of Natural Resources

NC Forest Product Markets

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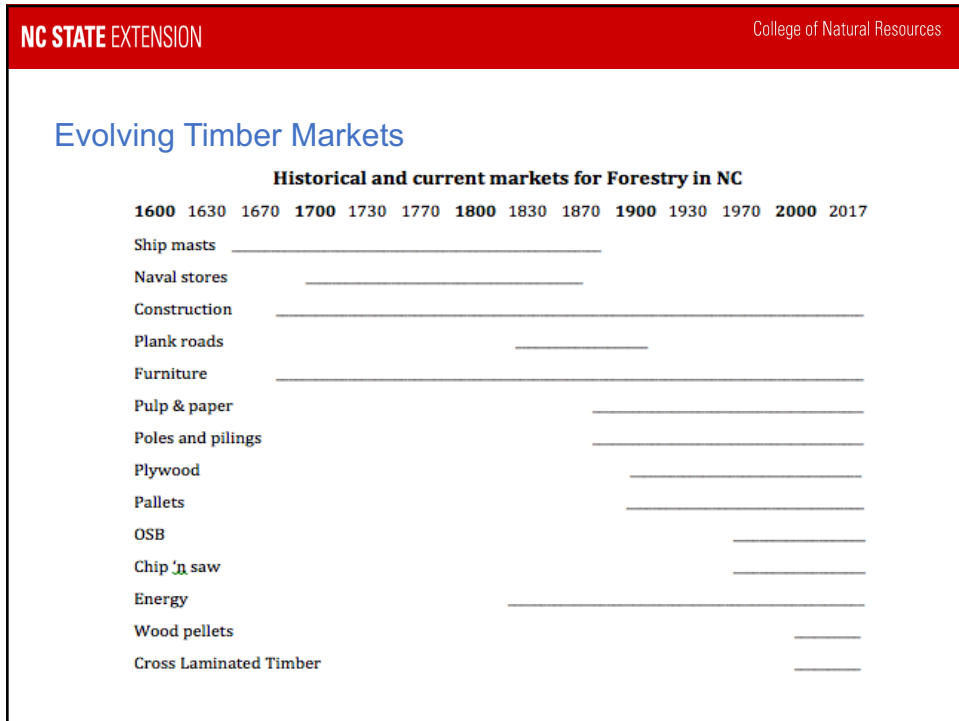
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Outline

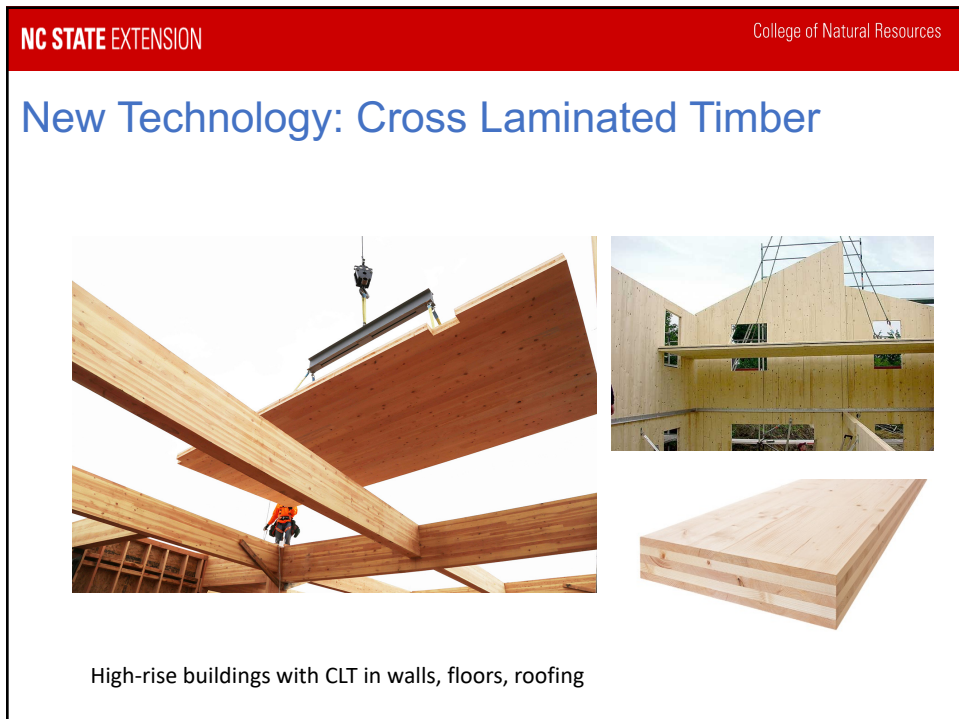
- Forestry in NC
- Recent economic trends
- COVID-19 impacts
- Timber markets in NC
- Forest Management Considerations
- Market prospects



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MASS TIMBER

A 100% mass timber construction project is under way in North Carolina

Swinerton's Timberlab is supplying the components for the 67,000-sf structure within the Live Oak Bank campus in Wilmington, N.C.

BY JOHN CAULFIELD, SENIOR EDITOR | MARCH 19, 2023

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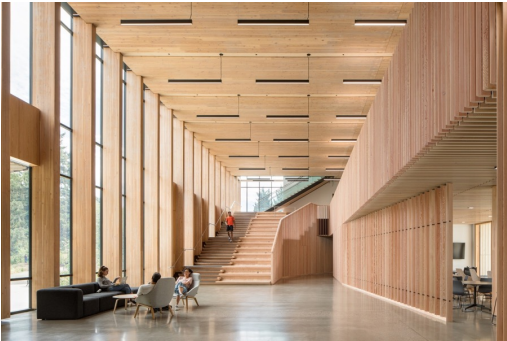
The first all-mass timber office building in Wilmington, N.C., is under construction. Rendering courtesy LS3P

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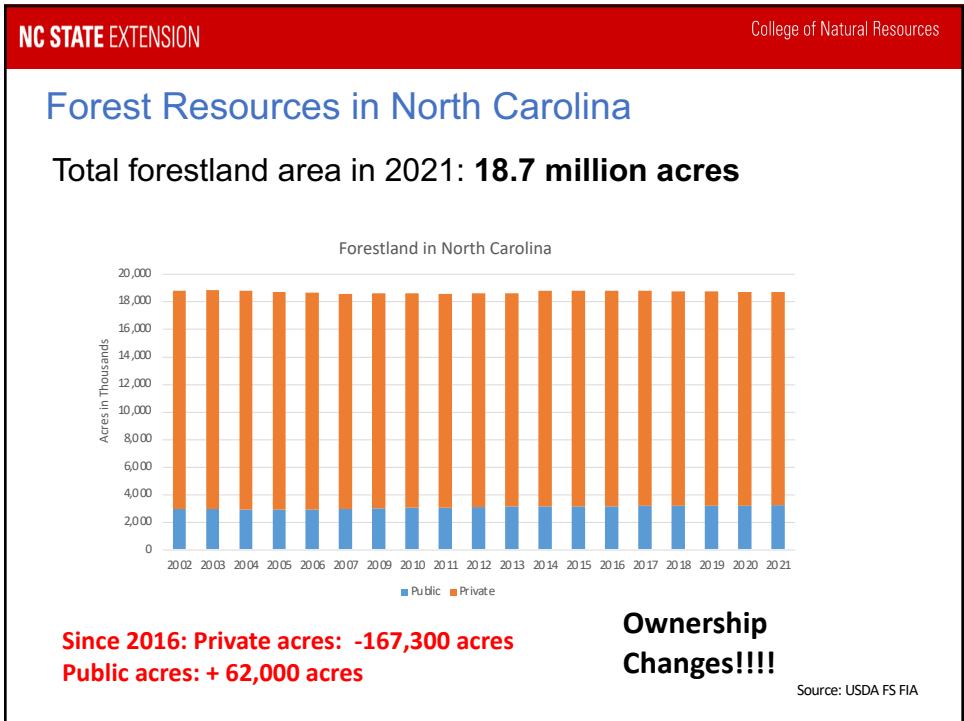
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New Technology: Cross Laminated Timber

More attention in CLT from southern yellow pine in the US South lately-
New CLT mills in Alabama and Arkansas



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North Carolina By the Numbers

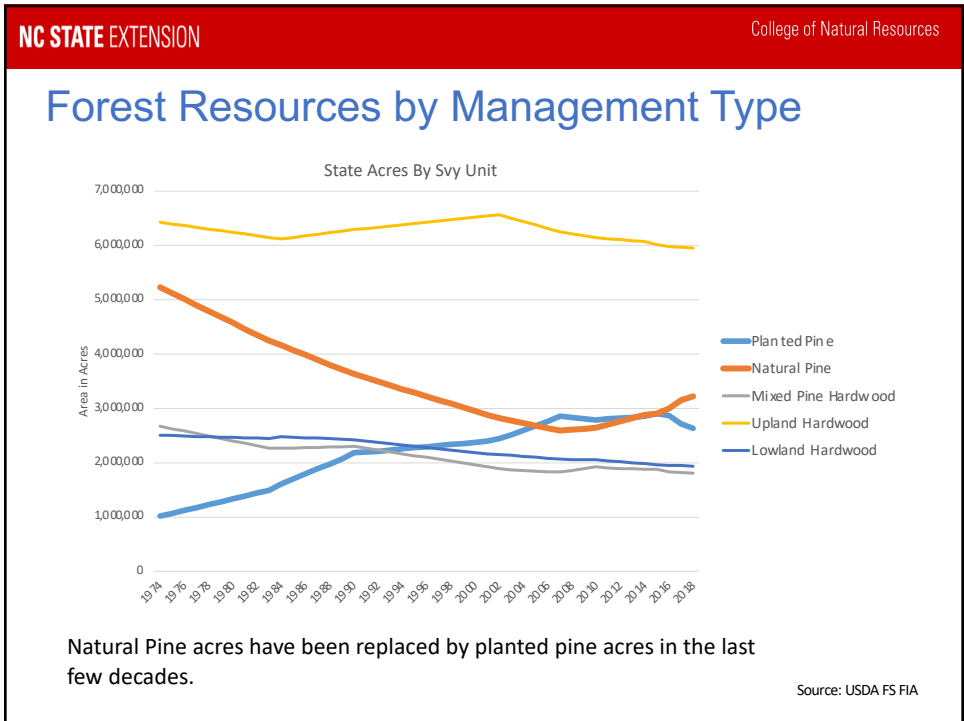
53,675 acres of nonforest revert back to forest annually

73,993 acres of forest land convert to non forest annually

391,208 acres of forest land are treated by cutting annually

Forests of North Carolina, 2021, USDA Forest Service 2022

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Timber Harvests dropped slightly in 2021

- In 2021, the value of timber harvests (**stumpage value**) in NC was \$578 million, down \$12 million (2.2%) from 2020.

<https://content.ces.ncsu.edu/2021-income-of-north-carolina-timber-harvested-and-delivered-to-mills>

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Economic Contribution of the NC Forest Sector in 2021 (NEW NUMBERS!!)

In 2021, the forest sector in North Carolina, including forestry, logging, and sawmills, furniture:

139,700 full- and part-time jobs

\$8.9 billion in payrolls.

\$35 billion in industry output



[Parajuli and Bardon, 2023](#)

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NC Forestry Rebounded to the Pre-Pandemic Level

Compared to 2020, the NC forest sector in 2021 realized nearly **\$2.5 billion gain** in total economic activities, which was more than the aggregate decline in total economic output in 2020.



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NC Forest Sector in 2021

Change in Total Contribution from 2019

	Employment (jobs)	Labor Income (million \$)	Gross State Product (million \$)	Industry Output (million \$)
Forestry operations	-1.6%	13.0%	14.2%	15.0%
Logging	3.8%	30.8%	37.4%	32.6%
Primary solid wood mills	3.4%	16.6%	46.1%	29.7%
Secondary solid wood mills	2.5%	8.5%	13.8%	9.7%
Primary paper and paperboard mills	-9.0%	-4.9%	-5.2%	-7.0%
Secondary paper and paperboard mills	1.9%	7.1%	8.1%	5.1%
Total	1.1%	7.6%	12.6%	7.5%

The forest sector in 2021 was back on top among manufacturing sectors in the state, which was slightly behind the food manufacturing sector in 2020

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Recent Housing Markets

Housing starts: About 1.46 million units in Dec 2023 and stabilizing, Up about 7.6% from last year (Dec 2022)

New Residential Construction
(Seasonally Adjusted Annual Rate)

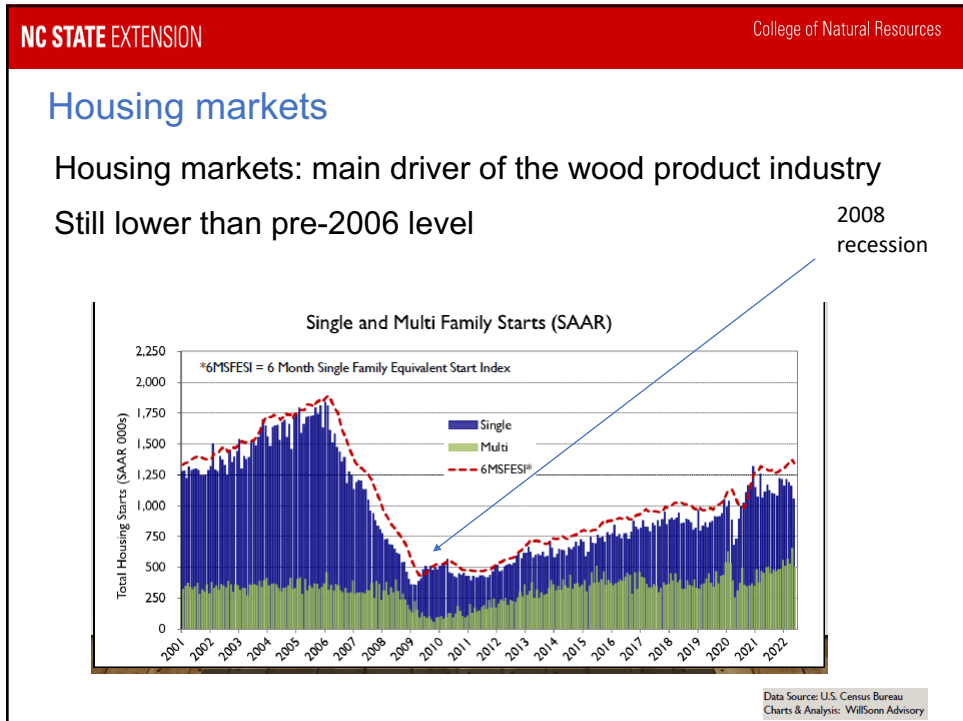
Thousands of Units

Dec-18 Dec-19 Dec-20 Dec-21 Dec-22 Dec-23

Source: U.S. Census Bureau, HUD, January 18, 2024

Dip in the first few months of the Pandemic

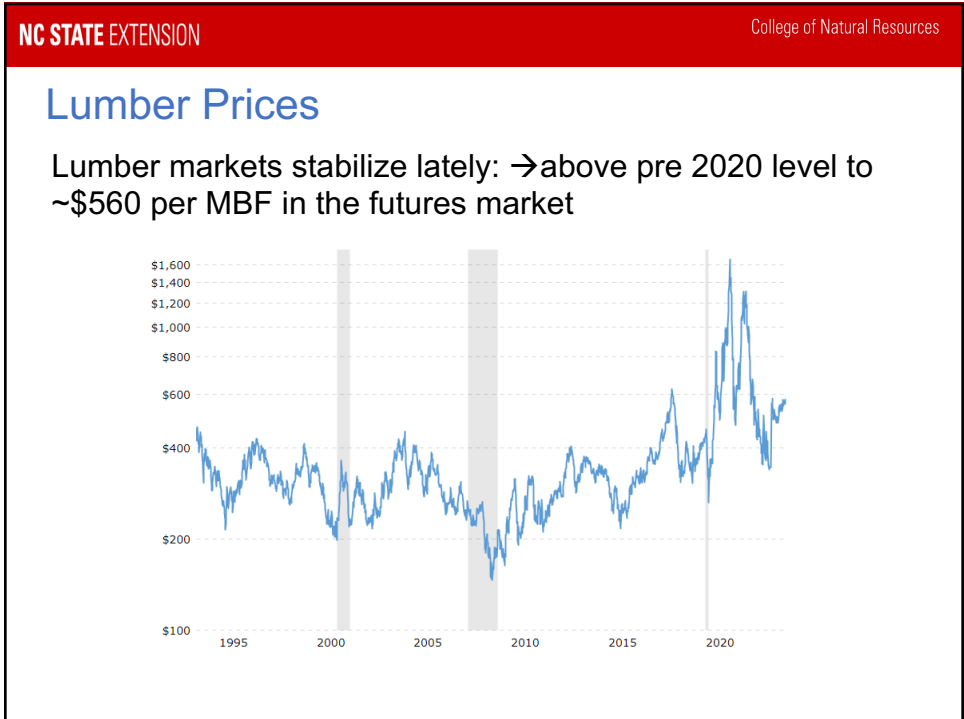
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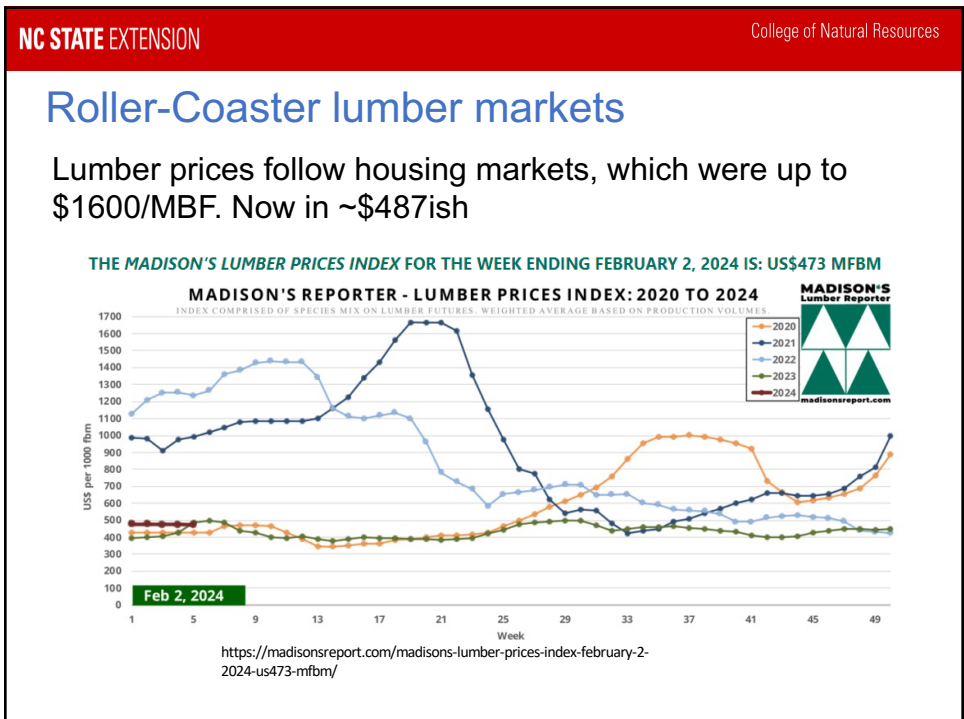
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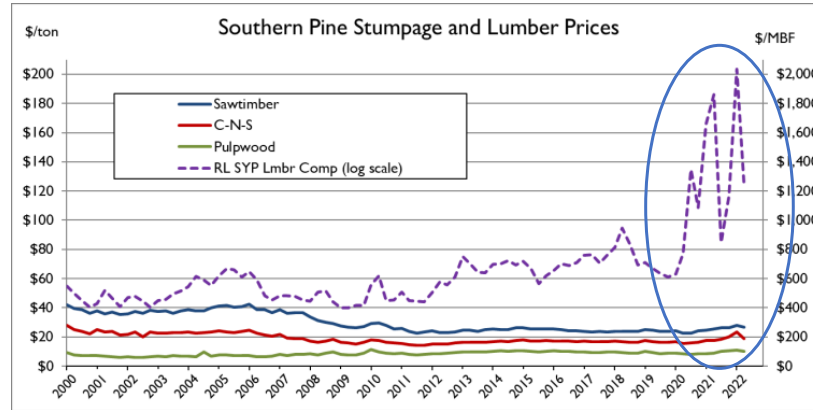


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Disconnect between lumber and timber



Oversupply situation: **wall of wood** in the market is considered a primary reason behind the flat timber markets while lumber prices were skyrocketing

Data Source: U.S. Census Bureau
Charts & Analysis: WillSonn Advisory

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Wall of wood! Who's to Blame?

Forest growth gains...More wood in less time!

Genetically improved seedling, CRP in early 1990s

Recession 2008

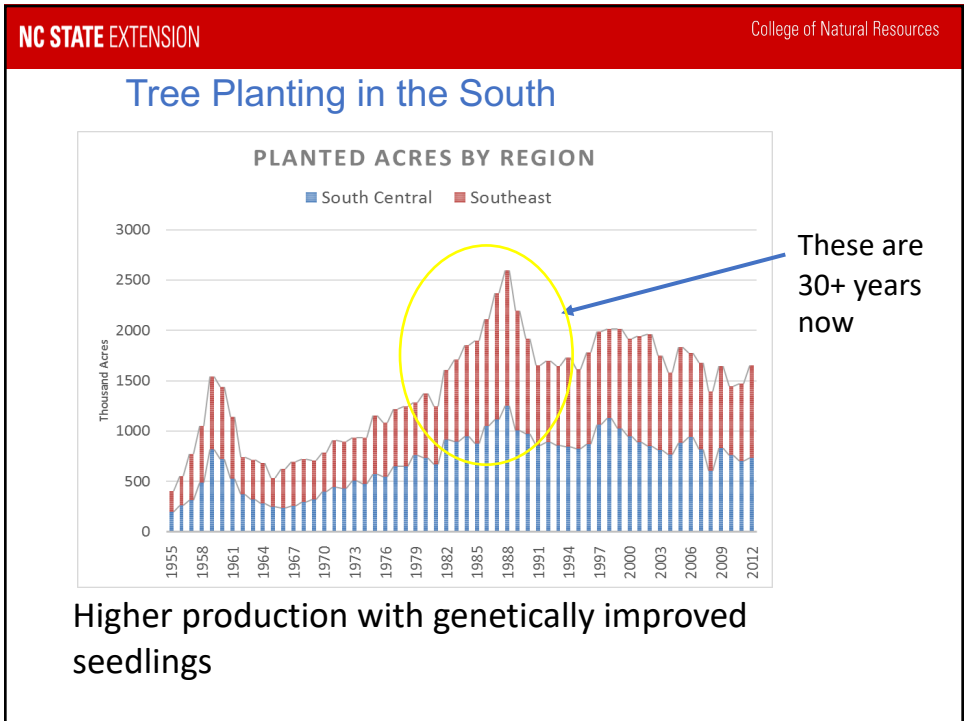
Sawmill efficiency (local mill:23% less to yield an MBF)

- Technology driven

Fewer, **Larger** Capacity Mills

- Less Competition for your Sawtimber

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Access to Forest Markets

Location!
Location!
Location!

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How Markets Affect Management?

Can change timing of harvest

- Are you managing for long term high value trees or younger, pulpwood and chip-n-saw trees?

How much do you have to invest to establish your stand?

- Limit high intensity management to highly productive stands
- Try to reduce costs as much as possible early on.

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How Markets Affect Management?

What products can I expect to harvest off my property in the future?

What are my goals for the property?

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Expected Rate of Return on Forestland

Medium Sites- Minimal inputs: 7.08%

High Quality Sites- High Inputs: 6.04%

Inflation and rising wages have increased establishment costs ahead of increase in expected growth

Economic analysis done by Dr. Fred Cabbage

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How to plan for an uncertain future?

- Seek for cost-reduction options- Federal and State Programs available
- Traditional Forestry is proven to be a safe bet.
- Higher value products sell!
- Tap into alternative income streams available to your region: firewood, specialized logs, straw, NTFPs or **carbon**

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Focus on the Management for the Long-term NOT Quarterly Price Reports

Quarter to Quarter Change in Price for Standing Timber by Product Class (%)

Product Class	Change (%)
Pine Pulpwood	-6%
Pine Chip-N-Saw	-8%
Pine Sawtimber	-4%
Pine Ply Logs	0%
Hardwood Pulpwood	-5%
Mixed Hardwood Sawtimber	1%
Oak Sawtimber	15%

Think of forestry as an investment in the stocks market: ups and downs in the long run

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Timber Markets in NC

Average timber prices are also trending down in recent months due mostly to the inflation, higher mortgage rate, and cooling off housing markets followed by lumber

Average stumpage prices*(\$/ton) 4th Quarter 2023

Product	Price	Previous quarter	Percent change
Pine pulpwood	\$ 7.38	\$ 7.15	3.3%
Pine chip-N-saw	\$ 20.10	\$ 19.50	3.1%
Pine sawtimber	\$ 27.99	\$ 28.67	-2.4%
Hardwood pulpwood	\$ 4.70	\$ 4.27	10.1%
Mixed hardwood sawtimber	\$ 29.96	\$ 29.07	3.0%
Oak sawtimber	\$ 47.18	\$ 47.57	-0.8%

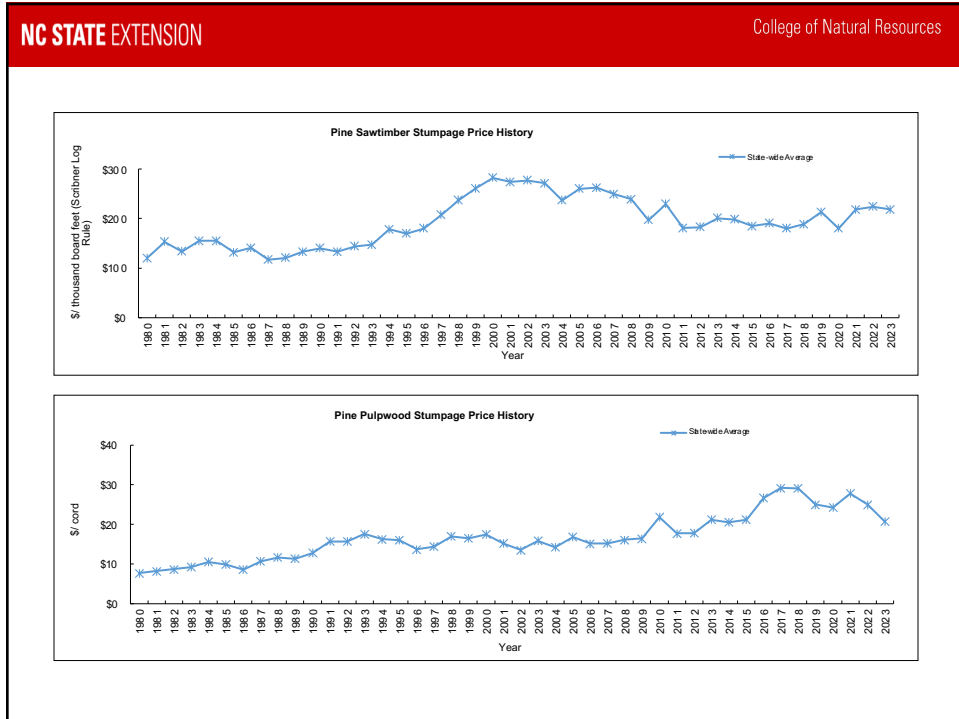
Quarterly stumpage price trend

Pulpwood price trend (\$/ton)

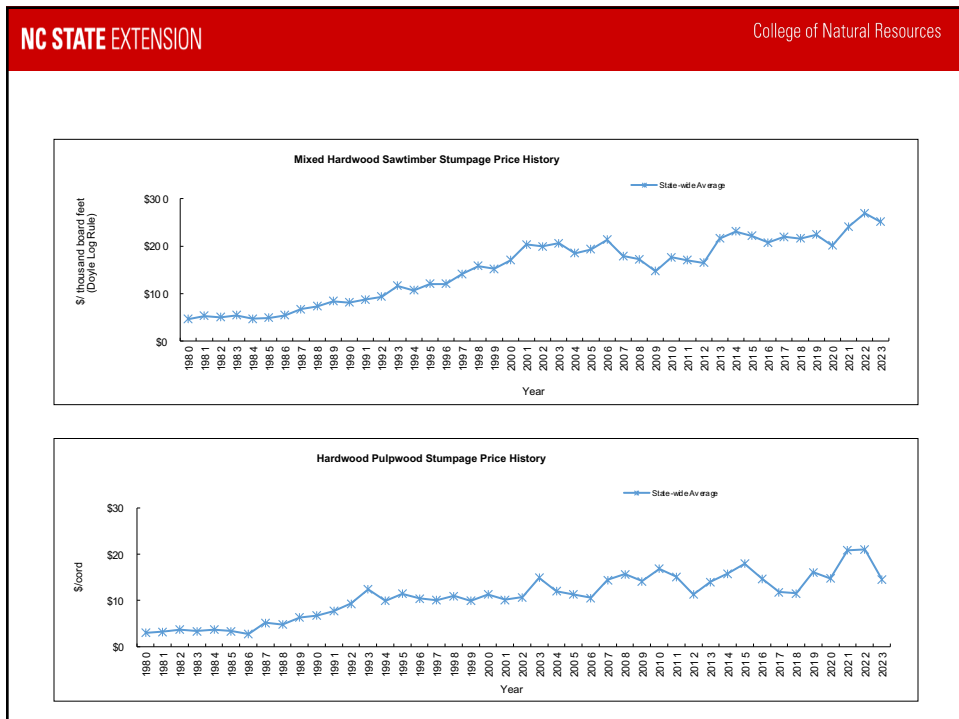
Pine Sawtimber/CNS price trend (\$/ton)

NCSU Extension Forestry published a quarterly NC timber price report every quarter

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Papermills have had a hard year (2023)

LOCAL

Canton paper mill bell sounds for final time, signaling an end after 115 years

Iris Seaton Asheville Citizen Times
Published 5:13 a.m. ET May 25, 2023 | Updated 10:20 a.m. ET May 25, 2023

[f](#) [X](#) [e](#) [r](#)

The Washington Post
Ownership: Amazon.com

BUSINESS

Wood pellet producer Enviva files for bankruptcy and plans to restructure

By James Pollard | AP
March 13, 2024 at 6:31 p.m. EDT

International Paper to cut production in Riegelwood, lay off 200

By Chris Roush 10/18/2023

Mill's closure will impact the local economy for decades

The full effects of the mill's closing on the local economy have yet to be fully realized, but will likely reverberate for decades – especially for local governments. Next year,

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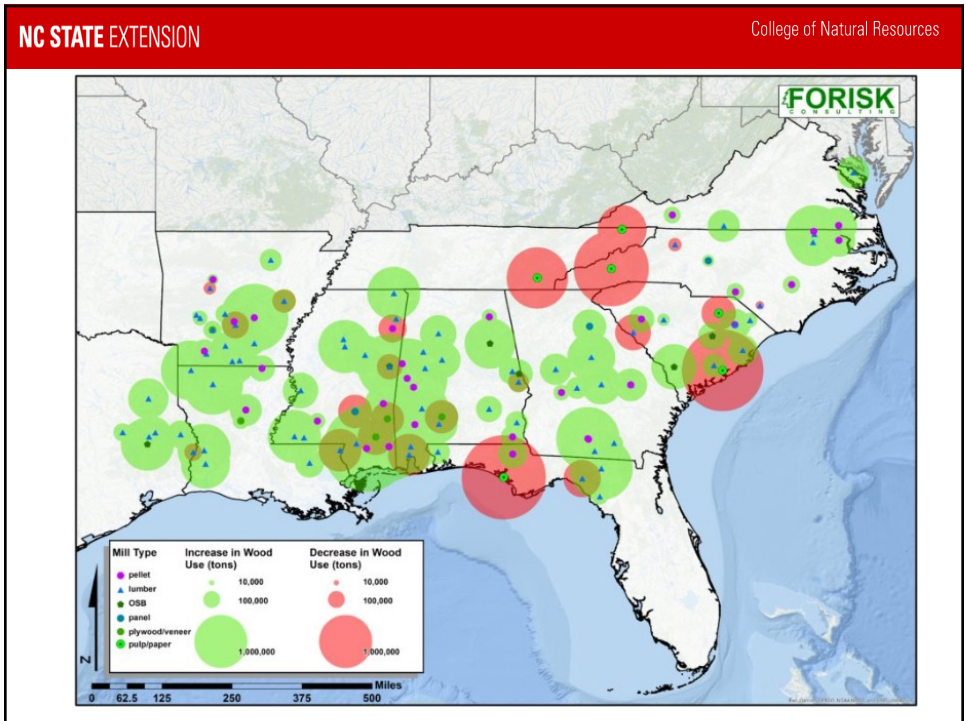
Pulp/Paper Mills use a lot of wood

“Closures at pulp/paper mills account for nearly 60% reduction in wood use in the Southeast region” –Forisk Consulting

Export Category	Forestry, Logging, and Supporting Activities	Paper Manufacturing	Wood Products Manufacturing	Wood Furniture Manufacturing
Domestic Exports	~1,000	~5,800	~1,800	~4,000
Foreign Exports	~100	~1,200	~200	~100
Total Exports	~1,100	~7,000	~2,000	~4,100

Figure 14. Export-based sales (producer value) of North Carolina's forest products, 2013.

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(Some) Causes of Pulp/Papermill Closures

Recycling Efficiencies

Ageing facilities-
Catan mill was 115 years old

Reduced profitability

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Two HUGE Sawmills Expected to Start soon in eastern NC

The Binderholz Group, headquartered in Austria, purchased Klausner 2 mill.

It has a sawing capacity of over **200 million** board feet per year in Enfield NC

These mills could change the markets dramatically for the long period of time



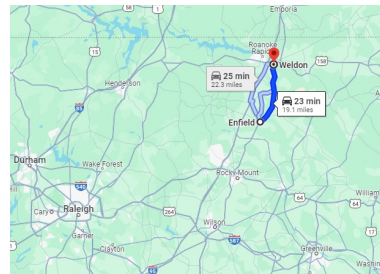
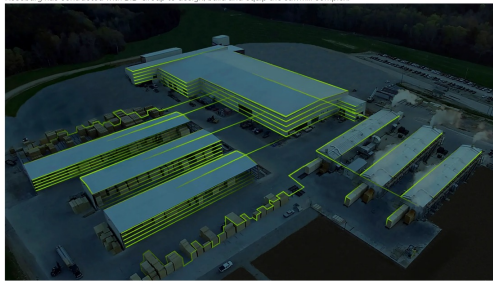
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Two Large Sawmills Expected to Start soon

Roseburg Forest Products' Roanoke Valley Lumber—400 million board feet of dimensional lumber/year in **Weldon NC**

Expected to start operating Q4 of 2024

Roseburg has contracted with BID Group to design, build and equip the sawmill complex.



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(Some) Causes of Openings

Lots of untapped potential for wood products in Southeast

Changes in global market

Outlook on wood availability is strong

New and emerging forest products

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ENVIVA in the Domestic Market

- Ever growing overseas export markets
- Enviva to supply 750k tons/year of wood pellets to Alder, a domestic sustainable aviation fuel (SAF) producer.

- Additional 10-15% demand for wood pellets

Could have a huge impact on feedstock markets

Step 6

Alder Fuels and Enviva Partner to
Further Scale and Commercialize
Sustainable Aviation Fuel Supply Chains

 enviva | ALDER FUELS

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A Note on Carbon Credits

Requirements:

- **Permanence**
 - GHG removal enhancements - maintained for **100 years**
 - Periodic third-party verification
- **Additionality**
 - Forest project must sequester more carbon than '*business as usual*'
- **No-leakage**
 - Leakage - GHG reductions in one area results in an unintended increase in GHG emissions in another location.

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Carbon Markets Contin.

Carbon price: is it high enough?

Average price per forest carbon credit:

- Voluntary markets: \$4-\$6 for forestry and land-use projects.
- Compliance markets: \$15-\$17

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Emerging carbon markets

- **Forest Carbon Works (FCW)** — 40 acre minimum, 125-year contract, harvesting permitted after 6 years
- **Core Carbon**— developed a digital platform that estimates carbon using geospatial and remotely sensed data. 40 acre minimum, harvesting permitted



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Takeaways

Forestry is long-term- The market today will not be the market in 20 years

Knowing why you have forest land is very important!

Steward land in a way that will make the trees healthy and valuable for the next generation.

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Questions?

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Extension Forestry <https://forestry.ces.ncsu.edu>

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Upcoming Webinars

April 18
**Domestic and Global
Hardwood Market Update**
Tim Knol
Hardwood Review

May 16
Pond Management
Sam Williams and Roger Pittman
Triangle Pond Management



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