

CU IN THE WOODS

Clemson Extension Forestry and Wildlife Newsletter



Decision Making for Landowners With Storm-Damaged Timber

By Derrick Phinney

Occasionally, South Carolina landowners experience storm damage to standing timber. When this occurs, landowners have many questions about what to do with their damaged trees. The following information provides guidelines for quick decision-making and priority setting. There are no simple guidelines that fit all situations.

Damage after storms or weather events can occur in many different forms. Both pine and hardwood stands experience breakage, bent trees, wounds, twisted trunks, root damage, and standing water. Many of these damaged trees can still be utilized for wood and paper products, but their values have been greatly reduced. Decisions can include leaving the stand in its current condition, removing damaged trees at the next scheduled harvest, or conducting salvage operations.

Working in and around damaged timber is dangerous and special precaution needs to be taken prior to entering the timber stand. Forest landowners should seek the assistance of a consulting forester, the South Carolina Forestry Commission, or Clemson Extension.

An assessment of the damaged area must first be conducted. This will give you an idea of the extent of damage and the course of action that needs to take place. Priorities for salvage will depend on location, amount and type of damage, and management objectives. In areas where a large amount of storm damage has occurred, harvesting and processing firms will not be able to handle all of the available timber before insects and fungi degrade the quality or make it totally useless.

Landowners need to be concerned with getting the greatest value from their damaged timber. This does not mean shopping for the best price but getting the highest value materials removed first. Salvage harvest of some damaged timber will be difficult or hazardous. All of these factors will affect the prices paid for the damaged timber.



Stand of pines leaning and uprooted during Hurricane Helene. Photo credit: Jaime Pohlman, Clemson Extension.

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Events and More

Upcoming Events

Find out about all of our upcoming events by visiting our events page:

<https://www.eventbrite.com/o/clemson-extension-forestry-and-wildlife-75733679603>

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blogs.clemson.edu/fnr

decision making for landowners with storm damaged timber cont.

When establishing priorities for salvaging storm-damaged trees, the first and highest priority should be given to:

- Timber with the highest potential product value (sawtimber and veneer)
- Timber that is the easiest to cut (blown or bent in the same direction)
- Timber which is most susceptible to pest damage (usually pine)

In order to minimize the cost associated with the salvage, sawtimber and pulpwood should be removed during the same operation.

General Guidelines:

- Trees that do not have to be removed for salvage include undamaged trees, slightly debarked trees, pine trees with broken tops that have at least three to five good limbs remaining, trees leaning less than 45 degrees, and trees with roots still in the ground. Landowners can delay the decision or salvage of these trees for several months.
- Harvesting should begin as soon as possible for uprooted trees, heavily debarked trees, and trees with broken trunks with fewer than three to five good limbs remaining.
- When only a few trees per acre are damaged, no action may be necessary.
- For the most part, hardwood trees are able to adapt better to storm damage than pines. In hardwood stands with breakage, most harvesting can be delayed until the next scheduled harvest. Bent hardwood trees are not usually attacked by insects or disease because they are not in a stressed condition. Hardwoods with root damage should be removed as soon as possible.



Pine trees snapped during Hurricane Helene. Photo credit: Jaime Pohlman, Clemson Extension.

Physical Damage to Trees:

- Trees that have tops broken out of them may not be usable for lumber because of wood splintering and internal separation.
- Leaning or uprooted trees usually can be sawn for lumber.
- Badly splintered trees present problems in debarking and chipping prior to pulping or conversion to particleboard.
- Fungi and insects require time to degrade the quality

of timber. Rapid harvest and removal is the most effective method to prevent pest damage.

- The attached table is only a guideline for pest invasion and utilization timelines.

For additional information or questions, please contact a consulting forester, South Carolina Forestry Commission or Clemson Extension.

Table 1. The sequence of pest invasion in storm damaged timber

Timber	Pests	Time
Pine	engraver beetles, blue stain fungi	3-6 weeks
	ambrosia beetles, Sawyers	4-8 weeks
	soft rot fungi	1 year
	decay fungi	2 years
Hardwoods	wood borers, ambrosia beetles, stains	2-3 months
	soft rot fungi	1 year
	decay fungi	2 years

Table 2. Utilization guidelines for storm damaged timber

Product	Harvest by	Comments
lumber, appearance & veneer (pine & hardwood)	3-6 weeks	stains prohibit use if left longer
lumber, framing (pine)	3-4 months	should be kiln-dried, do not use if toughness is important
posts (pine)	4-6 weeks	blue stain will affect toughness and preservative treatability
poles; pilings	not recommended	
pulp, hardboard	12 months	stain fungi, decay, and low moisture content may affect pulping process and it should be mixed with sound wood.
fuel wood (pine & hardwood)	12 months	low moisture content increases heat value

Does It Still Pay to Grow Trees?

By Janet Steele

“Money doesn’t grow on trees” is a saying often heard by those who are spendthrifts. However, for many of South Carolina’s forest landowners, money has grown from their trees for many decades and provided a reliable source of income for their families. Unfortunately, South Carolina’s timber industry has had its share of bad news over the last year following changes at several major wood processing facilities. The 2023 closure of the almost 90-year-old WestRock paper mill in North Charleston and the Pactiv Evergreen paper mill in Canton, North Carolina, impacted pulpwood markets across the Lowcountry and Upstate. An initial significant drop occurred in the statewide average for pine and hardwood pulpwood stumpage, which is the amount a landowner is paid for their wood. More recently, the announcement of the indefinite closure of the Interfor pine sawmill in Summerville and the reduction in shifts or operating hours at Canfor pine sawmills in Darlington and Estill has raised even more concerns from forest landowners on whether growing trees in the state can still be profitable.

Tim Adams, Division Director for Resource Development with the South Carolina Forestry Commission, can provide insight into the drop in pulpwood stumpage and what has led to the most recent sawmill closure announcements. Adams describes the 2023 drop in pulpwood stumpage prices as a “knee-jerk” reaction to the paper mill closure announcements but feels that these prices are stabilizing at a lower price point. The statewide average at the end of the second quarter of this year was \$7.55 per ton for pine pulpwood. Hardwood pulpwood stumpage has increased over the last year and was \$9.92 per ton at the end of the second quarter of this year. Forest landowners and those in the timber industry in certain regions of the state fortunately still have access to pulpwood markets and other processing facilities that use smaller round wood. The former Georgia-Pacific oriented strain board mill in Allendale purchased by WestFraser in 2021 continues to increase production, providing an additional market for pulpwood stems in the western coastal plain.



Stand of thinned pine trees. Photo credit: Janet Steele, Clemson Extension.

Adams explained that the loss of lumber-producing capacity in the state is more complicated. “The price of construction materials, such as lumber, plywood and

oriented strand board (OSB), is affected by factors such as the interest rates, housing starts, and manufacturing capacity. Although the US is reported to have a large housing deficit, the increase in housing starts has faltered recently as interest rates were increased to bring down inflation due to stimulus spending. Declining lumber prices have resulted in announced lumber mill closures and reduced output. Pricing for other wood products, such as pine plywood and OSB, has been more stable than lumber pricing.”

The statewide average for pine chip-and-saw and sawtimber has held steady the last year, at about \$18.50 and \$24 per ton, respectively. However, the potential impacts of the most recent pine sawmill closures and reductions in production have not yet been reported. Hardwood sawtimber stumpage can fluctuate seasonally and was reported at the end of this year’s second quarter as \$21.75 per ton. South Carolina grows over 30% more wood than is harvested each year. Therefore, prices are not expected to increase significantly until the state’s high supply of sawtimber stumpage begins to be balanced by removals.

Landowners concerned about the economics of continuing to grow timber should consider some important factors. The first is that South Carolina’s forest industry continues seeking ways to expand wood fiber markets locally, regionally, and globally. New products continue to be developed from wood by emerging industries in the state, such as mass timbers and glulam. These engineered wood products are designed to replace concrete and steel in construction and for specific architectural designs where exposed wood is desired. South Carolina also has a strong export market for wood and wood products, including logs, pulp and paper, solid wood, and even wood chemicals. Also, non-timber commodities such as carbon offsets and timberland management to protect forested watersheds in municipal drinking water source areas will continue to become emerging markets.

Also, a critical consideration for landowners concerned about the wisdom of growing trees is the importance of maintaining the health of their existing forests. Although stumpage prices continue to fluctuate, standing timber is still money in the bank. Landowners planning a timber sale soon need to weigh the decreased stumpage price they may be offered for their pulpwood against the detrimental impacts to their forest of not conducting the sale, particularly if it is a first thinning. Properly timed thinnings in natural and planted pine stands can generate income, improve habitat for wildlife species, and, most importantly, maintain a healthy, productive forest. One of the most critical considerations for

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does it still pay to grow trees cont.

conducting thinning operations when needed is that it will maintain a healthy forest with a reduced risk of insect attack, primarily from pine bark beetles.

Pine stands that are overstocked and have surpassed the target age for a thinning have less resistance to beetle attack, particularly those on drier soils during periods of extended drought. While thinning does not guarantee that a pine stand will not be attacked during a bark beetle outbreak, it can lessen the impacts since the stand will grow more hardy trees with less competition for site resources. Also, thinned stands will have more significant air movement, which dilutes bark beetle pheromones and reduces the attraction of additional insects to the trees. Dr. David Coyle, Associate Professor and State Extension Specialist for Forest Health and Invasive Species at Clemson University, stresses the importance of reducing the potential for pine beetle outbreaks. “With the prevalence of pine in any area, landowners should be on the lookout for southern pine beetle outbreaks.” Pine bark beetle outbreaks can also be due to *Ips* engraver beetles, which target stressed, diseased, or damaged trees, particularly during hot, dry weather.

Coyle also emphasizes the impacts of invasive plants on South Carolina’s forest resources. “Invasive plants like the

Elaeagnus species may not directly kill trees, but their competition for resources can have a big impact on tree growth, and it can cost a landowner significant effort and resources to manage these pests.” Another emerging forest health concern in South Carolina is the potential impacts of non-native insects. Coyle continues to encourage forest landowners to be on the lookout for two species that are working their way south. One is the spotted lanternfly, which feeds on over 70 different species and can damage various hardwood species and decimate agricultural groups such as tree fruits, berries, and grapes. This insect, native to China, has been found in Virginia. Another emerging threat is the elm zigzag sawfly, native to China and Japan. It can severely defoliate elm species and was found in North Carolina in 2022.

South Carolina’s 12.9 million acres of forestland provide jobs, clean air, clean water, wildlife habitat, recreational opportunities, and timber and non-timber resources. Growing trees is a long-term investment of time and money, but factors other than current timber markets should be considered.

County Forestry Associations

Abbeville County Forest Landowners Association

Contact: Stephen Pohlman

Aiken County Forestry Association

Contact: Janet Steele

Anderson Forestry & Wildlife Association

Contact: Carolyn Dawson

Calhoun-Orangeburg Forest Landowners Association

Contact: Janet Steele

Chesterfield County Forestry Club:

Contact: Robert Carter

Darlington/Florence Landowners Association

Contact: TJ Savereno

Edgefield County Forestry Association

Contact: Stephen Pohlman

Greenville Forestry & Wildlife Society

Contact: Carolyn Dawson

Greenwood County Forestry Association

Contact: Stephen Pohlman

Kershaw County Forest Landowner Association

Contact: Robert Carter

Laurens County Forest Landowners Association

Contact: Jeff Fellers

Lexington County Forestry Association

Contact: Janet Steele

Lowcountry Landowners Association (Beaufort, Colleton, Hampton, Jasper)

Contact: Derrick Phinney

McCormick County Forestry Association

Contact: Stephen Pohlman

Newberry County Forestry Association

Contact: Jeff Fellers

Salkehatchie Forestry Association (Allendale, Bamberg and Barnwell)

Contact: Janet Steele

Saluda County Forestry Association

Contact: Stephen Pohlman

Sumter County Forest Landowner Association

Contact: Robert Carter

Tri-county Forestry Association (Berkeley, Charleston, Dorchester)

Contact: Tancey Belken

Williamsburg County Forest Landowners Association

Contact: Tancey Belken

**Contact the Association nearest to you to
find out about upcoming meetings!**

This October, Go Batty for Bats!

By Tancey Belken

National Bat Week is October 24th-31st! Installing a bat house is one way to encourage bats on your property.

Bat houses can come in various shapes and sizes, from thin boxes mounted on homes or buildings to rectangular towers mounted on poles. Thin box-shaped houses are called nursery boxes and often contain multiple layers called roost chambers. Having multiple roost chambers will allow for larger colonies and help the bats to regulate their temperature. If the box is only a single layer, mounting it on a wood or brick building will help to keep a more constant temperature inside. Tall tower-shaped



A bat house provides a roosting site for bats in the home landscape.
N Jordan Franklin, ©2018, Clemson Extension

boxes, called rocket boxes, are mounted on poles and let the bats move around the box as needed to regulate their temperature.

When determining where to install a bat house, consider how much sun the house will receive. Colony roosting bats like it hot, between 80 and 100 degrees inside the roost. With the South Carolina heat, a vent will be necessary to prevent overheating, but you want to look for an area that

receives at least 6 hours of direct sunlight daily. Color can impact how much heat the house retains since darker colors absorb more heat. Cooler parts of the state, like the mountains or Upstate, may need to paint houses black or dark brown, while the hottest parts of the state may want to look at using natural color wood.

The house should be mounted at least 12 feet high, but higher is better. Houses mounted on buildings or poles get used faster and more often than houses mounted on trees. Tree-mounted houses are more challenging to find and less predator-resistant. If you mount the bat house on a pole, a predator guard can help protect the roosting bats. Keeping brush or trees away from the pole will also help prevent predation. Proximity to a water source is also important. Successful bat houses are often within a quarter mile of a river, stream, pond or other water source.

A bat house that meets all the requirements will usually be occupied the first summer after installation. A house put up this fall may not receive its first occupants until next summer. If you do not have bats after a year, check for drafts and move the house to a new location.

Visit www.batweek.org for more information on making a bat-friendly space.

Meet Our New Agent Robert Carter



Robert Carter is a South Carolina native with degrees in forestry from Clemson University and Auburn University.

He has experience in higher education with Mississippi State University Extension and teaching and research with Jacksonville State University. Most recently, he was the Outdoor Educator for the Catawba Indian Nation in Rock Hill. Robert is happy to be back with Clemson and looks forward to serving the people of South Carolina.

Robert will be based out of the Kershaw County office and will cover Chesterfield, Kershaw, Lancaster, Sumter, Richland, York counties.

Stumpage Price Trends in South Carolina for Q3, 2024

By Puskar Khanal

Pulpwood Stumpage Trends in Q3, 2024

South Carolina statewide average pine pulpwood prices were \$8.66/ton, and the hardwood pulpwood prices were \$10.18/ton in the 3rd quarter of 2024. Compared to the pine and hardwood pulpwood prices in the previous quarter (Q2 of 2024), it is an increase of 14% and 2%, respectively.

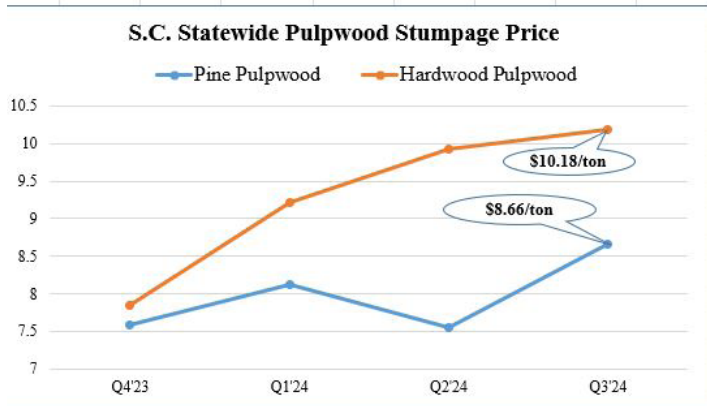


Figure 1. Graph of South Carolina statewide pulpwood stumpage prices for Q4'23 to Q3'24. Graph credit: Puskar Khanal, Clemson University.

Pine pulpwood prices increased over 10% this quarter, while hardwood prices have been trending upward since Q4 of 2023. Hardwood pulpwood is getting higher prices than pine trees in SC, unlike our neighboring states, GA and NC. Please see the figure above for pulpwood price trends in SC over the last four quarters.

Sawtimber Stumpage Trends in Q3, 2024

The statewide sawtimber prices for pine and mixed hardwood had a different trajectory this quarter. The stumpage prices for pine sawtimber declined about 5%, while hardwood prices increased by about 19% in Q3 of 2024. The current price of pine sawtimber is lower than the rates observed in the Q4 of 2023 – prices were up for the Q1 and Q2 of 2024 but have declined sharply this quarter.

Unlike pine sawtimber, the hardwood prices were lowest in the last quarter (Q2 of 2024) but have sharply rebounded this quarter to an all-time high for this year so far. The current stumpage prices of hardwood are higher than the stumpage rates for pine trees in SC – these price curves switched places this quarter. Please see the figure above for sawtimber price trends in SC over the last four quarters.

The statewide sawtimber prices for pine and mixed

hardwood had a different trajectory this quarter. The stumpage prices for pine sawtimber declined about 5% while hardwood prices increased about 19% in the Q3 of 2024. The current price of pine sawtimber is lower than the rates observed in the Q4 of 2023 – prices were up for the Q1 and Q2 of 2024 but have declined sharply this quarter. Unlike pine sawtimber, the hardwood prices were lowest in the last quarter (Q2 of 2024) but have sharply rebounded this quarter to an all-time high for this year so far. The current stumpage prices of hardwood are higher than the stumpage rates for pine trees in SC – these price curves switched places this quarter. See figure below for sawtimber price trends in SC over the last four quarters.

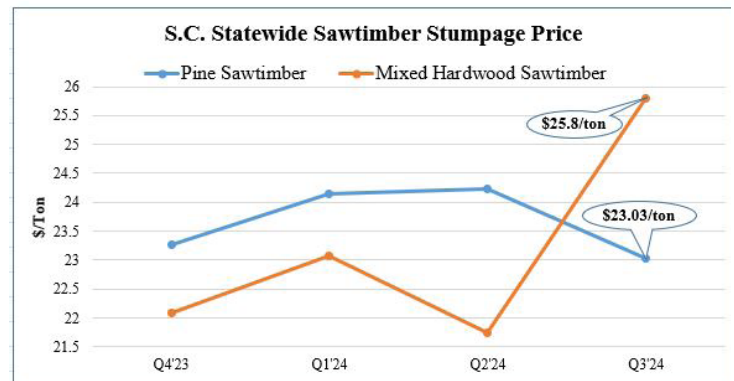


Figure 2. Graph of South Carolina statewide sawtimber stumpage prices for Q4'23 to Q3'24. Graph credit: Puskar Khanal, Clemson University.

Data credit: The sawtimber and pulpwood price data included in this newsletter are published with permission from TimberMart-South Athens, GA 30605 email tmart@timbermart-south.com.

WOOD MARKET IS LOCAL. Stumpage prices for both sawtimber and pulpwood in your local markets could vary significantly as compared to the above statewide averages depending on size and species composition, quality of timber, total acres and volume, logging operability, distance from nearby mills, and overall market condition.

Contact our Agents:

Agent	Email	Counties Covered
Tancey Belken	tanceyc@clemson.edu	Berkeley, Charleston, Florence, Georgetown, Horry, Marion, Williamsburg
Robert Carter	rec4@clemson.edu	Chesterfield, Fairfield, Kershaw, Lancaster, Sumter, Richland
Carolyn Dawson	dawson4@clemson.edu	Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg
Jeff Fellers	fellers@clemson.edu	Chester, Laurens, Newberry, Union, York
Derrick Phinney	dphinne@clemson.edu	Statewide Program Team Leader
Jaime Pohlman	jaimc@clemson.edu	McCormick, Statewide Communications Responsibilities
Stephen Pohlman	spohlma@clemson.edu	Abbeville, Edgefield, Greenwood, McCormick, Saluda
TJ Savereno	asavere@clemson.edu	Clarendon, Darlington, Dillon, Florence, Lee, Marlboro
Janet Steele	jmwatt@clemson.edu	Aiken, Bamberg, Barnwell, Calhoun Lexington, Orangeburg
Vacant		Allendale, Beaufort, Charleston, Colleton, Dorchester, Hampton, Jasper

Specialist	Background
Lance Beecher	Aquaponics, Aquaculture and Fisheries
Dave Coyle	Forest Health and Invasive Species
Cory Heaton	Wildlife Management
Patrick Hiesl	Forest Operations and Forest Products
Puskar Khanal	Forest Economics
Marzieh Motallebi	Ecological Economics and Carbon Credits



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