

## Salvaging Timber - Frequently Asked Questions

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### What should I do with my damaged timber?

Every landowner that is facing salvage and management decisions needs answers to three questions (Table 1). Foresters can provide this information by conducting a timber cruise.

**Table 1. Questions facing landowners with salvage and management decisions.**

Question	Information needed for answer
Do I have a manageable timber stand left undamaged?	The basal area (density) of undamaged standing timber.
Will I be able to make a timber sale in the future when prices are better?	The volume or tonnage of undamaged standing timber.
Can I salvage the damaged timber?	The amount of damage – volume or tonnage of damaged timber.

Figure 1 uses the answers to these questions to help landowners make decisions about their timber stands. Remember that poor market conditions, scarcity of professional loggers, and lack of property access may limit salvage operations even when they are recommended. When damage occurs in patches consider making the damaged patches a new stand separate from undamaged patches. Answer the questions above separately for the damaged and undamaged stands.

Advice for salvaging timber - protect undamaged trees! Remember wind damaged trees may not qualify as sawtimber due to the internal damage they suffered. Avoid selling undamaged timber as salvage. Only when a future timber harvest is impossible would this be recommended (see Figure 1). More money can be lost selling good trees in a poor market than is made salvaging damaged trees. Do not allow the salvage operation to damage good trees. Typically, the income from a salvage is small compared to a future harvest when better prices return.



## Who can a landowner contact for help?

A forester is needed to provide estimates of damage and a deductible casualty loss, to help in marketing timber for salvage, and to make management recommendations for the undamaged standing timber. The Mississippi Forestry Commission has foresters in most counties available to help ([www.mfc.state.ms.us](http://www.mfc.state.ms.us)). The Board of Registration for Foresters maintains a listing of consulting foresters ([www.cfr.msstate.edu/borf](http://www.cfr.msstate.edu/borf)).

## How fast do I need to salvage my damaged timber?

Timber deteriorates faster during the hot summer months than in the cold winters. But on average, severely damaged pine sawtimber should be harvested within 2-3 months, before blue stain ruins the wood. Pine pulpwood can be harvested within 6 months for most paper uses. Slightly damaged pines and severely damaged hardwoods may have some value 6 months to a year following damage. Slightly damaged hardwoods may last for several years. Table 2 gives times for harvesting timber for a variety of products.

### Slight Damage

Slight debarking of stem  
4 or more limbs remaining  
Pine stem lean less than 45 degrees off vertical  
Windblown hardwood with roots still attached to soil

### Severe Damage:

3 or less limbs remain  
Heavy debarking  
Pine stem lean over 45 degrees  
Uprooted pine trees

**Table 2. Salvage Times for Forest Products. \***

Product	Harvest Within	Comments
Pine and hardwood veneer and appearance lumber	4-6 weeks	Blue Stain prohibits use if left longer
Pine framing lumber	3-4 months	Should be kiln dried to prevent emergence of secondary insects
Pine Posts	4-6 weeks	Blue stain will affect toughness and preservative treatment
Pine and hardwood pulp, fiberboard, particle board & OSB	8-12 months	As wood begins to decay, pulping process will be affected. Storm damaged wood should be mixed with sound wood.
Pine and hardwood Firewood	8-12 months	As wood dries out, the heat values increases prior to the decay process

\* Adapted from NC State Cooperative Extension Service

## **How should a buyer/operator be selected to salvage my timber?**

A timber buyer or logger should be selected in much the same way as during a normal timber sale operation. Even though this material needs to be harvested in a timely manner, don't rush and select an operator with which you are not comfortable. A contract that clearly states what timber is to be salvaged or harvested is a must. Be sure all parties are clear on what timber is to be removed and what timber it to be left. Remember that even during this time all Best Management Practices should be followed. If approached by a timber buyer ask for and check references. Loggers with good equipment, trained crews, and SFI certification are going to be in high demand. Be sure that loggers operating on your property have both limited liability and workers compensation insurance.

## **What other potential risks is my timber facing during this time?**

The risk for *lps.* engraver beetles, black turpentine beetles, and other wood boring insects in damaged timber has been greatly increased. Fresh pine debris and stressed timber are excellent host trees for breeding populations of these insects. It should be noted that while it is common to find *lps.* engraver beetles in slash material, the southern pine beetles do not typically use this material. Standing damaged trees are at an increased risk for southern pine beetles and need to be monitored over the next two-three years as a build up of bark beetle populations is possible. Continue to inspect standing undamaged timber for signs of beetle attack such as fading crowns and pitch tubes. In an attempt to prevent this problem, harvest the most severely damaged timber first, harvest pines first because they are most susceptible, and spread slash away from healthy trees to prevent build up of insect populations.

The other major risk at this time is fire. Fire danger is extremely high due to the vast amount of debris on the ground. These fuels are drying very quickly in the summer sun; if ignited, the resulting fire could potentially be devastating. The amount of debris on the ground will limit the MFC and volunteer fire fighters ability to control these fires. Follow all recommended burn bans and take great care to prevent forest fires.

## **How can timber value be estimated in damaged timber stands?**

To conduct a timber valuation it is recommended that landowners use the assistance of professional foresters. However the following steps could be used as a guide if you would like to attempt this task yourself.

Timber value = acreage x timber value per acre. To estimate acreage damaged use maps, photos, GPS or another method. The local Tax Assessor or Farm Service Agency may be helpful in determining acreage.

To determine timber value per acre requires a cruise. Hurricane Katrina tended to blow down timber in strips with some areas of timber still standing. Take advantage of this with a two-step timber cruise.

First step, place plots in the least damaged areas to estimate total tonnage and value per acre. Fixed radius plots will work best if some trees are laying down. Measure each tree for dbh and tonnage by product. Generate this useful information:

plot ac. = plot size x # of plots

ba of tree =  $dbh^2 \cdot .005454$

total ba/ac = sum of ba all trees / plot ac.

total tons/ac = sum of tons all trees / plot ac.

tons/ac for product = for each product: [sum of tons all trees / plot ac.]

% of total tons in a product = [product tons / total tons] \* 100%

tons/ba ratio = sum of [tons / ba ratio for each plot] / # plots

Second step, use a prism to do an undamaged stem count by product across the property. Note the basal area factor (BAF) for prism used. Combine the first and second step to estimate:

undamaged ba/ac = [total stem count x BAF] / # of prism points

undamaged tons/ac = for each product {[stem count x BAF] / # prism points} x tons/ba ratio

damaged ba/ac = total ba/ac – undamaged ba/ac

damaged tons/ac = damaged ba/ac x tons/ba ratio

### **How can I use a timber cruise to estimate a timber casualty loss?**

The deductible loss from a casualty is the lesser of the fair market value loss and basis in timber. Casualty losses can be claimed on IRS Form 4684, which is available in IRS Publication 2194, the Disaster Losses Kit. To file IRS Form 4684, Casualties and Theft and claim a loss, a landowner needs three values:

1. Fair market value before hurricane.
2. Fair market value after hurricane.
3. Basis in timber.

Timber basis is the key, if basis is zero, then there is no deductible loss. Hopefully, timber basis has already been established. If not, a retroactive basis may be estimated. Combine the cruise above with growth information collected with an increment borer. Grow the timber backwards till the time property was acquired. See [msucare.com](http://msucare.com) for more information on how to determine basis. Generally basis is worth estimating if a forester's fee is less than 15% of the estimated basis.

Values calculated from cruise needed on IRS Form 4684:

Fair market value before = the sum by product [total tons/ac \* values before hurricane].

Fair market value after = {the sum by product [undamaged tons/ac \* values after hurricane]} + salvage value of damaged trees.