



Forestry Note:

Tornado Damage – Managing Damaged Forest Stands A Guide for Oklahoma Landowners

June, 25, 2013

The devastating tornadoes and floods of 2013 damaged many acres of forestlands in central Oklahoma. Tree damage ranged from “light,” where small branches in treetops were broken, to “heavy,” where trees snapped off, toppled over or lost most of their branches. Forest damage was highly variable and depended upon tree species, stand age, location and other factors. Owners are now faced with the task of assessing their forest damage and making decisions about their future. The level of damage and your personal ownership objectives will help dictate the best follow-up measures to take to restore the health and productivity of your forests. This bulletin will help you categorize the damage that occurred in your forests and evaluate follow-up treatment needs.

Use Professional Help: One good piece of advice is to use professional foresters to provide you the best information and guidance available. Oklahoma Forestry Services has foresters stationed across the State to provide technical assistance or a list of private consulting foresters is available on request. More information can be found at www.forestry.ok.gov.

Safety: Your first consideration should be safety. When evaluating your stands, watch for loose, hanging branches in the tops of trees, trees bent over and under stress, or leaning trees that can fall quickly and without warning. Wear your safety gear and stay out of the woods when it is windy.

Forest Protection: Fallen trees and branches will create high fire risk when dry. Establish fire lines and take extra precautions to minimize wildfire risk this summer and fall. Many forest pests are opportunistic and thrive in areas where trees are damaged or under stress. Two years of drought followed by a major storm can open the door for insect problems, especially bark beetles and wood borers. These pests are difficult to eliminate, so be on the lookout for them and, if found, take appropriate action to minimize their spread. Check forest stands for pest problems and potential fire danger the next few growing seasons.



Salvage: Salvage operations may be justified in commercial forest areas where local markets exist and where there is enough merchantable timber on the ground or in standing but severely damaged trees to justify harvesting. Because of decay and pest problems, salvage operations should be done within the next six months if market conditions permit. Avoid damaging the remaining trees as much as possible, follow the forest water quality best management practices and practice safety first. Follow a salvage operation with an evaluation to determine other actions needed to restore the health of your forest.

Timber Stand Improvement: Removing hazardous or cull trees, and thinning, will help damaged stands recover more quickly. Evaluate stands again for TSI needs in 3 to 5 years.

Some very general guidelines follow to help you determine the severity of damage and what to do next, depending upon the extent of the damage.

Cross Timbers and Other Upland Hardwoods

Minor Damage – In general, only small and medium-sized branches are affected and less than half the crown is damaged on most trees.

What To Do – Although unsightly, the impact on most of these trees will be fairly small. For trees suffering only minor damage in rural areas, follow-up treatment is probably not warranted. Check higher-value individual trees and woodlands annually for forest insects or diseases, consult a forester when problems are detected and take action if warranted.

Moderate or Heavy Damage – On average, more than half the crown is affected, large branches were lost, trunks were split or entire trees were uprooted.

What To Do – Salvaging large branches or fallen trees for firewood or wood products may offset recovery costs, reduce hazardous fuel loads and help small trees grow into your next forest. Remove hazard trees (and invasive species if present), favor desirable species and consider a forest stand improvement practice (FSI) in 3 to 5 years. Retain some large, non-hazard trees for wildlife cavities and nesting sites. Minimize soil disturbance and water quality impacts.

Streamside (Riparian) Hardwoods

Minor Damage – Generally, small and medium-sized branches are affected and less than half the crown is damaged on the majority of trees, even susceptible species such as elm, willow, maple and pecan. Soil exposure is minimal and protection of streambanks is maintained.

What To Do – The impact on most of these trees will be fairly small. For most trees suffering only minor damage along rivers and streams, follow-up treatment is probably not warranted.

Moderate or Heavy Damage – Most trees lost more than half their crowns or have broken tops, large branches were lost or entire trees were uprooted or twisted.

What To Do – Salvaging fallen trees or woody debris for wood products may offset costs and aid stand recovery. Remove hazard trees, except on stream banks, and evaluate the area for a forest stand improvement practice (FSI) in 3 to 5 years. Retain some large, non-hazard trees for wildlife cavities. Plant new trees if necessary to protect water quality by restoring tree canopy and vegetative cover within at least the 50 foot zone on both sides of the streambank.

Replant, if needed: If timber has been salvaged and hazardous trees have been removed, consider replanting. Seek advice from a professional forester to determine if additional site preparation is needed and what tree species to replant to restore your hardwood forests and help achieve your primary ownership objectives. The many benefits that these forests provided before the storm can be restored through time, patience and intentional woodland management.

Don't panic!

Stop, think and be patient!

Practice safety first!

Get professional advice.



For more Information:

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