Managing Storm Damaged Woods

Strong winds, ice, snow and tornadoes are natural occurrences in Wisconsin forests. When severe, storms can cause extensive damage to forests by uprooting, wounding, bending and breaking trees. Storm damage management should involve a quick assessment to determine the extent of the damage, the need and potential for salvage, and woodland management efforts to return the woodland to a productive status.

When evaluating woodland damage, be safe. Watch for hanging branches or broken limbs which may fall when in the woods. Wear a hard-hat when working and stay out of the woods when windy. Broken branches are easier to see when the leaves have fallen. Unless you are experienced with chainsaws, do not attempt to fell storm damaged trees yourself.

Assessment

Consider mapping the damaged area. Walk your property and note the extent of the damage on your maps or photos. Draw boundaries to help determine the size of the area impacted. Note species, size, type of damage, quality of trees, etc. Types of damage are:

Breakage: This is the most common type of storm damage. Its impact depends on the degree and pattern of damage as well as the species involved. Trees with less than 50% crown (branches and leaves) loss will most likely recover; trees with more than 75% crown top loss are likely to die and be a greater risk for both insects and diseases; trees with 50% to 75% crown loss should be maintained but may develop stain and decay loss to the wood and should reevaluated in 4 to 6 years. Trees with structural damage to the main trunk, including splits and fractures, should be removed.

Uprooted: Trees that are completely uprooted will be degraded quickly by insects, stain and fungi. Trees which are partially uprooted and their crowns are still green with leaves will last longer.

Major Wounds: Storms often cause major wounding. If these wounds are more than two inches deep and affect more than 25% of the circumference of the trees trunk, they are major sites for stain and decay and should be salvaged. Smaller wounds do not represent major damage to trees.

Bent: Trees are often bent over after major storms. These trees often have cracks or fractures in the trunk and major limbs. If the cracks or fractures extend down more than 25% of the trees trunk, harvesting is recommended. Trees less than 15 feet tall with small cracks will usually straighten and recover.

Salvage Potential

The potential for salvaging the damaged woodland parallels the marketability of non-damaged forests in Wisconsin. Tree value is determined by species, size quality. Generally, trees less than 10 inches in diameter have no sawtimber value, and instead are utilized as pulpwood or other products. Large trees are more valuable than small trees and trees with fewer defects are more valuable than trees with more defects.

If salvageable trees are still standing and have branches with green leaves, they will not degrade significantly in the next 6 to 12 months. Trees which have blown over or are not standing should be salvaged before next spring. Wood on the ground begins to degrade

immediately; there are some differences in species as to how fast stain and decay enter the wood.

Loggers are not interested in removing small number of trees because of the costs of bringing in equipment and labor. There needs to be sufficient quantity as well as quality of timber to attract buyers. If less than 50 trees are damaged, consider salvaging for your own use by transporting to a sawmill for custom sawing or using a small portable sawmill. For larger number of trees, consider working with a consulting forester to mark the salvage as a timber sale and seek competitive bids for optimum prices.

There may be some affects on log markets in Wisconsin due to these storms. Normally, prices go down as supplies increase, although this should be mostly a temporary price trend. It is wise to not rush into salvage, but talk with neighbors, foresters and loggers about timber prices.

Woodland Management

Don't abandoned good forestry practices when working with damaged woodlands. Don't remove too many trees; keep the stocking up in stands even if this means leaving some damaged trees to occupy the sites. Storms often cause damage in small areas or patches. If damage is severe in small patches, consider small group clearcutting to both remove the damage vegetation and provide sunlight for seedlings to grow and reoccupy the site. This may reduce future storm damage by removing exposed trees susceptible to blow down. Work with your forester to evaluate reproduction needs before harvesting. Initially, work first in sawtimber stands for salvaging; often young pole sized or smaller stands will recover better from storm damage. When salvaging trees, avoid causing additional damage during logging.

The storms may provide some opportunity to improve wildlife habitat in woodlands. Small clearings may benefit some species. Trees with broken tops and little economic value will probably develop into good den or snag trees during the next few years.

Each stand is unique and each landowner has special goals and objectives for their forest property. How the woodland responds and recovers is dependent on both its natural ecological characteristics and how the damage is handled. Remember that Wisconsin's woodlands will respond with woody vegetation to fill vacant positions caused by the storm and will remain a woodland; woodlands are resilient and recover from damage through additional growth and reproduction. Through proper harvesting and removal of damaged trees, the speed of recovery will be increased and how the woodland responds can be partially directed.

Several publications are available on timber values and marketing at the Owning Wisconsin Woodlands section of www.woodlandinfo.org. Contact your local DNR Forester for specific recommendations regarding your situation.

This publication was adapted by William Klase, UWEX Educator, Rhinelander, WI from the Iowa State University Extension publication "Managing Storm Damaged Trees" by Paul H. Wray, Extension Forester and John Walkowiak & Jerry Kemperman, Iowa DNR Foresters