**NEBRASKA FOREST SERVICE**

**STORM DAMAGE SERIES**

**This series of ten publications is designed to help homeowners and arborists with tree issues related to severe storm damage.**

1. **IMMEDIATE CARE FOR STORM DAMAGED TREES**
2. **HOW TO SELECT AN ARBORIST OR TREE SERVICE**
3. **PRUNING STORM DAMAGED TREES**
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**Additional Information**
For more information contact your local University of Nebraska County Extension Office or visit the Nebraska Forest Service web site (http://www.nfs.unl.edu/).

**Nebraska Forest Service Storm Damage Bulletin No. 1**
**June 2004**

# IMMEDIATE CARE FOR STORM DAMAGED TREES

Trees damaged by storms generally require some degree of immediate attention (removal of low hanging branches, clearance from utility lines, etc). Homeowners working on their trees need to be careful to watch out for safety concerns and to consider the best approach for dealing with the tree they are trying to save. Chain saw work off the ground, and other heavy work (essentially all work on large trees) should be done only by professional arborists. This bulletin provides information to help deal with the problem of Storm Damaged trees.

## ***Hazardous Trees***

Loose or loosely attached branches and split trunks are obvious safety concerns that should be taken care of as soon as possible to avoid the possibility of injuring someone or damaging property later when the branch or that part of the tree falls. Broken but firmly attached branches that pose no immediate danger of falling can be pruned whenever convenient after the more hazardous loose branches have been removed. Trunks split down the middle are very difficult to brace adequately, and trees with split trunks should be removed or taken care of by a professional arborist.

## ***Power Lines***

Branches hanging over power lines are a major safety hazard from any standpoint. Special training is required to prune branches over power lines safely. Homeowners should **not** attempt to prune these branches themselves. Contact your local power company or an arborist trained in electrical line clearance to have these branches removed.

## ***Leaning Trees***

The heavy weight of snow or ice may tip a tree over by breaking some of the roots. Trees leaning from root breakage usually do not survive well. If a tree tips in a storm, it often means the tree had damaged or poorly developed roots before the storm pushed it over. If a tipped tree does survive, it often becomes a hazard from the damage it could cause if it were to fall.

Mature trees rarely survive attempts to pull them back into place after being tipped over by a storm. These generally should be removed and replaced with new trees. Very young trees may survive if the trees are gently pulled back to their vertical positions. If this is done, avoid additional damage to the remaining roots if possible, press out any air spaces that may have formed in the loosened soil, water the area of the root system twice each week in the absence of rain during the fall, spring, and summer, cover the root area with two to four inches of wood chip mulch, and stake the tree for the first year to prevent the tree from falling again. Do not use rope, wire, wire in garden hose, or any narrow band of material to tie around the tree during the growing season. These will

injure the trunk and could kill the tree as it tries to grow. Use a broad strap or other fabric at least one inch wide and inspect and adjust the location of the strap once each week during the growing season to minimize any injury the strap might cause to the bark.

### ***Pruning***

The only pruning that should be done at this time is the removal of broken branches. Leave the fine pruning and finishing cuts until later. All pruning cuts will dry out to some degree during the winter. Dieback of the inner bark around a pruning cut can be minimized if the final pruning is left until just before the tree begins to grow in the spring. Have a trained arborist make the finishing cuts.

Branches that have pulled away from the trunk should be removed at the bottom of the split. Avoid causing any additional damage to the trunk. Remove any loose bark, but do not cut into bark that is living and still attached.

Never top trees. Topping creates serious hazards and dramatically shortens the life of a tree.

Never use paint or wound dressing to cover wounds. These materials do no good for the tree and actually interfere with the tree's wound sealing process.

### ***Avoid Fertilizing***

Fertilizers sometimes have negative effects on trees. Nitrogen has harmful effects when it is present in excess of what the tree needs. Excess nitrogen in the soil will create a fast growing, very green tree, but the same tree will have a poorly developed root system and will be more susceptible to drought conditions and problems from insects and diseases. Trees generally do not need more than one pound of actual nitrogen per 1000 sq. feet of root area per year. If you fertilize the lawn under your tree, your tree gets plenty of fertilizer already. Any additional fertilizer should be applied only if you know the tree has a nitrogen deficiency problem, which you would determine most easily from a soil analysis that indicated nitrogen was present at a level below about ten pounds per acre.

Do not assume trees damaged from storms will benefit from a fertilizer application. In most cases they will not, and the fertilizer will only inhibit the ability of the tree to recover. If trees are removed completely and new trees are planted, do not fertilize the new trees at all for the first three years. Newly transplanted trees need to regenerate the 90 to 95% of their root system they lost while being dug up. Nitrogen applications at planting time may only slow the root regeneration process.

### ***Be Conservative***

Do not prune or remove more than you have to at this time. Remove hazards, but save other decisions on pruning and removals for later. While the damage may look severe at this time, concentrate more on how to can save trees rather than making quick decisions on cutting them down. Many cities across the country have lost trees to major

snow and ice storms in recent years...Nebraska City in October of 1991, Omaha and Lincoln in October of 1997. Even after just a few years, the damage becomes much less noticeable.

Keep in mind why you wanted your trees. The trees may still be able to serve that function. Don't be too hasty to make a decision to remove a tree if you can delay that decision to the spring or even a year from now. You may decide later the tree was not damaged as badly as you thought.

**Nebraska Forest Service Storm Damage Bulletin No. 2**

**June 2004**

## HOW TO SELECT AN ARBORIST OR TREE SERVICE

As clean up from any storm swings into high gear, many Nebraska communities begin to deal with the problem of removing and repairing severely damaged, surviving trees. In most cases, this kind of work should be done by professional arborists. This bulletin deals with how to hire professional tree-care help.

Hiring an arborist deserves careful consideration. A qualified arborist will do tree work properly and safely, but an unqualified person may further damage the tree, and more importantly may not be insured, leaving the liability burden to the client. This liability could run into the tens of thousands of dollars.

Remember the following points when hiring or contracting with an arborist:

- Check your telephone directory's yellow pages under "Tree Service" for a listing of those businesses that do tree work in your area. While anyone can be listed in the phone book, a listing at least indicates some degree of permanence. Be cautious of any arborist that advertises "topping" as a service. **"Topping" is not an approved tree maintenance practice.**

- Ask for proof of certification by either the Nebraska Arborists Association or the International Society of Arboriculture. Certification is not required by the State of Nebraska but it does indicate that the arborist has a high degree of knowledge.

- If the arborist you are considering is not certified, determine if he/she is a member of any professional organizations, such as the Nebraska Arborists Association, the International Society of Arboriculture or the National Arborists Association. Membership in these and other professional organizations does not guarantee quality, but does indicate professional commitment.

- Ask for certificates of insurance, including proof of liability for personal and property damage and worker's compensation. Then, contact the insurance company to make sure the policy is current. Under some circumstances, you can be held financially responsible if an uninsured worker is hurt on your property or if the worker damages a neighbor's property.

- Ask for local references. Take a look at some of the work, and if possible, talk with former clients. Experience, education and a good reputation are signs of a good arborist.

- Don't rush into a decision just because you are promised a discount if you sign an agreement now. Be sure you understand what work is to be done for what amount of money. It is not generally a good idea to pay in full until the work is completed.

- Most reputable tree care companies have all the work they can handle without going door to door. People who aren't competent arborists may solicit tree work after

storms, seeing an opportunity to earn quick money.  Storm damage creates high-risk situations for both workers and property. Legitimate arborists never ask for payment in advance.

- If possible, get more than one estimate.
- A conscientious arborist will not use climbing spikes except when removing a tree. Climbing spikes open unnecessary wounds that could lead to decay.
- Good tree work is not inexpensive. A good arborist must carry several kinds of insurance as well as pay for expensive and specialized equipment. Beware of estimates that fall well below the average. There may be hidden costs or the arborist may not be fully insured or trained.

**Nebraska Forest Service Storm Damage Bulletin No. 3**
**June 2004**

# PRUNING STORM DAMAGED TREES

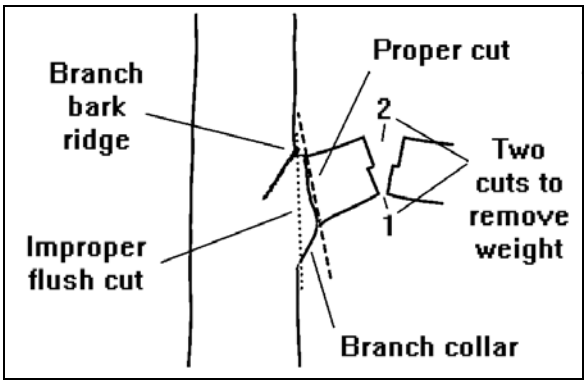
For the trees that survive a severe storm, the job of repairing them and bringing them back to good health critical. Before broken branches are removed, they should be examined carefully, and proper pruning methods should be used to minimize the damage from the pruning cuts. Trees too large to handle from the ground should be pruned only by professional arborists. (See bulletin no. 2 for information on how to hire an arborist.)

## ***Branches to Remove***

Safety is the first consideration in removing branches from storm-damaged trees. All branches that are loose should be removed as soon as possible to eliminate the chance of injury or damage if they were to fall. Other branches that are cracked or broken should be removed after the loose branches are gone. Branches that did not break under the weight of snow, ice or some other damage, but were bent over may have internal cracks or other hidden damage, especially if these branches have not returned to their original upright positions. These branches may become hazards in the future and should be considered for removal. A branch (or trunk) that was partially stripped of its bark when an attached branch pulled away should be removed if more than a third of the original circumference is lost. These branches will always be structurally weak and may become serious hazards if they are allowed to remain and gain weight.

## ***Making Pruning Cuts***

Pruning cuts should be made so that only branch wood is removed and the trunk or supporting stem is not injured. If only branch wood is removed, the wound is smaller, the tree will be able to seal the wound more effectively, and the chance of problems with wood decay will be greatly reduced.




To locate the proper place to make a pruning cut, look for the "branch bark ridge" on the upper surface of the union of the branch with the supporting stem. This is a line of bark that has been pushed up as the branch and supporting stem have grown. Some branch unions will not have this if they did not form properly. Instead they will have the branch simply pressing into the supporting stem, forming a sharp V-shaped union. At the base of the branch, and mostly on the underneath side, look also for the "branch collar," which is a slightly

swollen area of stem tissue that wraps around the base of the branch. A proper pruning cut begins just outside the branch bark ridge and angles down and slightly away from the stem, avoiding injury to the branch collar. Do not make flush cuts that remove the branch collar. Wounds created by flush cuts will cause substantially more injury to the tree than wounds left by proper pruning. Branches should be pruned using a series of three cuts as shown in the figure: two to remove the weight of the branch (first under then over the branch), then the final pruning cut.

Branches that have pulled away from the trunk should be removed at the bottom of the split. Avoid causing any additional damage to the trunk. Remove any loose bark, but do not cut into bark that is living and still attached.

## ***When to Prune***

The only pruning that should be done at this time is the removal of broken branches. Leave the fine pruning and finishing cuts until later. All pruning cuts will dry out to some degree during the winter. Dieback of the inner bark around a pruning cut can be minimized if the final pruning is left until just before the tree begins to grow in the spring.

## ***Pruning "Don'ts"***

**Never top trees.** Topping creates serious hazards and dramatically shortens the life of a tree. Never use paint or wound dressing to cover wounds. These materials do not help the tree and actually interfere with the tree's wound sealing process.

## ***Additional Information***

More information about pruning can be found in the following resources:

University of Nebraska publication Pruning Shade Trees (EC 1224), available at extension offices.

USDA Forest Service publication How to Prune Trees, available on the Internet at http://www.na.fs.fed.us/spfo/pubs/howtos/ht_prune/prun001.htm

**Nebraska Forest Service Storm Damage Bulletin No. 4**
**June 2004**

# LARGE TREE PRUNING AND CARE

Storm damage to large trees can cause larger problems. These problems can exist immediately after the storm or become evident many months or even years after the storm. Since large trees involve large branches and heavy weight, it is best to leave this kind of storm repair to qualified professional arborists (Refer to Storm Damage Bulletin #2, How to Select an Arborist). Here are some things that you can do to help larger trees recover from storm damage.

## ***Tree Inspection***

Inspect trees carefully following any heavy storm, particularly if the tree in question has suffered previous storm damage. Look for splits and cracks in the trunk or major limbs. Make note of any areas where water appears to be seeping from within the tree. Inspect the root collar area to look for uplifted soil or disturbed roots. If any of these conditions exist then it is important to have your tree inspected by a qualified professional arborist.

## ***Pruning***

Pruning large trees should be left to a professional arborist. Working in larger trees can be dangerous due to the heavy weights of branches. In addition, larger trees may be located near or under utility transmission lines. Working around utility lines is also dangerous. Special training is required for arborists to prune trees when a utility line is involved. If you suspect your tree needs pruning contact a qualified professional arborist. If utility lines are involved contact your local utility company immediately.

The top priority for pruning after a storm should be to make the tree safe (Refer to Storm Damage Bulletin #1, Immediate Care for Storm Damaged Trees). After this has been accomplished the tree should be evaluated for reconstructive pruning needs. The object is to maintain as many live branches in the crown of the tree as possible so that sufficient leaf cover is maintained to return the tree to normal vigor. At the same time it is important to removed severely damaged branches and minimize open wounds that will lead to decay.

Severely damaged branches should be pruned back to live laterals using proper pruning cuts (Refer to Storm Damage Bulletin #3 - Pruning Storm Damaged Trees)

## ***Mulching***

Mulching is good for large trees as well as small trees. Stressed trees can be assisted by providing a mulched area around the tree. Spread mulch to a distance of at least two to three feet from the base of the tree. Wood or bark chips are the best mulch.

Maintain a depth of about 2 to 4 inches and do not pile mulch up against the trunk.

## ***Fertilization***

Fertilization is not recommended for damaged or stressed trees. Use of fertilizer can upset the natural defense mechanisms of a tree and can cause more harm than good.

## ***Removal***

Determining whether or not a tree should be removed is a difficult decision for most homeowners. Major splits or cracks in the main trunk or in one or more major limbs may render the tree unsafe and require removal. In some cases, cable and brace work may be a viable option. Cable and bracing should only be done by a qualified arborist. If done improperly, the tree will remain in an unsafe condition.

If more than 50% of the tree's living crown has been destroyed then removal may be recommended. Be aware, however that if the root system of the tree is intact, then the crown will re-grow. Think carefully about the function that your tree performs in the landscape. If this function (screening, shade, wind protection) is still being performed, then you may want to try to salvage the tree for a few more years while you plan for and begin replanting.

Although tree removal is a last resort, there are circumstances when it is necessary. An arborist can help decide whether or not a tree should be removed. Professionally trained arborists have the skills and equipment to safely and efficiently remove trees.

## ***Professional Arborists***

In all cases where larger trees are involved it is best that homeowners seriously consider the use of a professional arborist. Lists of certified arborists can be obtained through the Nebraska Arborists Association, Box 81414, Lincoln, NE 68501-1414 (402-476-3852) or the International Society of Arboriculture, Box 3129, Champaign, IL 61826-3129 (217-355-9411). Many cities require licensing of arborists. Call and ask for a list of licensed arborists in your community.

**Nebraska Forest Service Storm Damage Bulletin No. 5**
**June 2004**

# DON'T TOP TREES

Many of the trees damaged by severe storms will have large broken branches. Repairing trees damaged like this is often difficult and more time consuming than the simpler job of Atopping@ the trees. Topping is a very destructive approach to pruning trees and is **NOT** recommended. Here are some things to consider if a tree worker talks to you about topping your tree.

## ***What is Topping?***

Topping is the indiscriminate cutting of large branches back to long stubs. Topping cuts are made without regard to the locations of side branches.

## ***If Topping is Recommended to You***

The most appropriate response to a tree worker who recommends topping is to decline their services and look for another tree service. Topping is never recommended by anyone with a good understanding of trees.

## ***What Topping Does***

- Topping removes a major portion of a tree's leaves, which are needed to produce food. This damaging practice can begin an irreversible decline in the tree.
- Topping makes a tree more susceptible to insect pests and diseases by reducing the ability of the tree to produce chemical defenses.
- Branches left after topping become decayed and create a hazardous situation that may cause serious injury or property damage if the branch breaks.
- Cuts made by topping stimulate the development of many epicormic shoots (water-sprouts) just below the cut, which are weakly attached and are easily broken off in storms.
- Topping destroys the natural form of a tree and wastes money.

**Nebraska Forest Service Storm Damage Bulletin No. 6**
**June 2004**

# RECOGNIZING AND CORRECTING TREE HAZARDS

Looking for hazards in trees is something that needs to be kept foremost in mind as trees are cleaned up after a storm. Some hazards have a high immediate potential for serious injury or property damage if the branch or tree were to fall. Others may have a lower immediate potential, but the long-term risk of significant injury or damage may still be too great to allow the questionable branch or tree to remain.

Hazards in trees need to be eliminated by either the removal of the tree or the affected branches, or by some kind of corrective treatment. This bulletin describes the kinds of hazards that are common in trees damaged by storms and what can be done about them.

## ***Electrical Hazards***

Branches hanging over power lines are a major safety hazard from the standpoint of the person working in the tree. Special training is needed to prune branches over power lines safely. Homeowners who have branches that rub or that may break power lines should contact their local power company or arborist trained in power line clearance to have the branches removed.

## ***Structural Hazards***

Trees and branches are hazards if they have a good potential for falling and causing personal injury or property damage. For many hazards, the only practical solution is to remove the damaged branch or tree. Cabling and bracing are sometimes used to strengthen high-value trees, but these techniques are not routinely recommended, and they should be done only by trained arborists.

Following a severe storm, homeowners should check their trees for several kinds of hazardous defects that commonly occur:

- **Loose or broken branches** -- These should be removed before they fall.
- **Split trunks** -- Trees with split trunks will likely fail completely in a later storm. They should be removed, or they can be cabled and braced if they have especially high value.
- **Trunks or branches with more than a third of their circumference lost** -- This occurs on the trunk or a large branch where a branch was pulled out. The tree has a high risk for breaking at this point in a later storm. This kind of damage cannot be adequately strengthened, and the tree or branch should be removed.
- **Leaning trees** -- If a tree did not lean before a storm, a new lean indicates a

major root failure has occurred. Even a slight lean with a small area of raised soil at the base can mean a significant potential exists for additional failure. Trees leaning from the result of a storm should be removed.

***What NOT to Do***

- Do not do any corrective pruning that cannot be done from the ground. Trees too large for this should be pruned only by professional arborists.
- Do not try to support a damaged tree with rope, cable, wire, bolts, or similar materials. The effort will probably NOT increase the safety of the tree. If cabling and bracing are necessary, they should be done only by a trained arborist.
- Do not try to save a tree that was pushed over by a storm unless it was recently planted. The tree's roots will likely never develop well enough to adequately support the tree again.
- Do not top trees. Over the years, this will make trees even more of a hazard.
- Do not use paint or wound dressing to cover wounds. These actually interfere with the tree's natural wound sealing process.
- Do not fertilize damaged trees. The use of nitrogen can make a stressed tree even more susceptible to insect pests and diseases and reduce the ability of the tree to deal with the damage that has occurred.

**Nebraska Forest Service Storm Damage Bulletin No. 7**
**June 2004**

# TREE SELECTION AND PLACEMENT

*(Some of the information contained in this bulletin is courtesy of the International Society of Arboriculture)*

Lessons are learned when storms strike. One lesson that is learned is where to place trees properly in the landscape. Damage to life and property can be minimized if thought is given to mature tree size at planting time.

Successful tree and shrub planting requires knowledge of growth characteristics, site requirements and intended landscape function of each selected species. Landscape trees and shrubs are not difficult to plant, but proper species selection and planting techniques are necessary to ensure success.

## ***Planting Locations***

The selection of planting locations is one of the most critical decisions made during the planting process. If a location is selected that will eventually cause the plant to have to be removed, then the planting was a failure. Specific items to consider are overhead and underground utilities, future construction sites, and the mature size of the plant. The mature size of a plant must be considered when selecting planting locations. Trees often have to be removed because they have grown too large for the site. Large landscape sized trees should be planted a minimum of 15 to 20 feet away from buildings or other obstructions. Overhead and underground utilities must be considered in order to avoid potential conflicts. Large trees should be planted a minimum of 20 to 25 feet from overhead power lines. Shrubs should be planted a minimum of 5 feet away from any potential conflict. These distances are minimums and greater distances would be preferable in most cases. When selecting your planting location it is also necessary to consider the plant's requirements to grow and survive, such as exposure to sunlight and soil drainage needs.

## ***Design***

Generally speaking, landscape design is a matter of personal taste. Many full service nurseries offer professional landscape design help as a part of their tree planting services. There are also certified landscape architects that can help you design a landscape to fit your needs.

## ***Conflicts With Utilities***

When deciding what type of tree to plant, remember to look up and look down to determine where the tree will be located in relation to overhead and underground utility lines. Overhead lines can be either electric, telephone, or cable television. Underground lines include these three plus water, sewer, and natural gas. The location of these lines should have a direct impact on your tree and planting site selection. The ultimate mature height of a tree to be planted must be within the available overhead

growing space. Just as important, the soil area must be large enough to accommodate the particular rooting habits and ultimate trunk diameter of the tree. Proper tree and site selection will provide trouble-free beauty and pleasure for years to come.

The biggest danger to underground lines occurs during planting. Before you plant, make sure that you are aware of the locations of any underground utilities. Most communities now offer a Aone call@ service to locate underground utilities. In many instances this is required by city or state law. Never assume that these utility lines are buried deeper than you plan to dig. In some cases utility lines are very close to the surface.

## ***Things to Consider***

Here are some items to consider when making decisions about tree selection and placement:

- Consider your neighbor=s view and their existing plantings. Try not to be in conflict.
- For proper root development and to minimize damage to the house or building, plant large trees at least 20 feet away.
- Use smaller trees to Aframe@ your home. Remember to plan for shrubs if you so desire.
- When planting in the public right of way, contact your local municipal offices. Some cities require a planting permit to plant in this area. This allows better control over the kinds and sizes of trees that are planted.
- Smaller trees can be used where growing space is limited. This is particularly true in some older sections of most towns were lot sizes are smaller. Smaller trees can provide useable shade.
- Evergreens can be used on the west or north side of the house for wind protection. Be sure not to plant too close to the house. Remember that evergreens provide shade all year. Shading the drive with evergreens will not allow sunlight to penetrate to help melt snow and ice.
- To help cool in the summer and warm the house in the winter, plant deciduous (autumn leaf-dropping) trees on the south or west side.

Remember that careful planning prior to planting will help you to be sure that the right tree is planted in the right place. Proper tree selection and placement will enhance your property value and prevent costly maintenance trimming and damage to your home. Good landscaping utilizes shrubs and low-growing trees that are compatible with utility lines so they will not create public safety hazards, cause service interruptions or require severe pruning.

**Nebraska Forest Service Storm Damage Bulletin No. 8**
**June 2004**

## TREE PLANTING

Tree losses from severe storms can be heavy. Many homeowners will lose large trees or trees that have sentimental value. These kinds of trees cannot be replaced. Properly planted and cared for trees and shrubs add beauty, protection, diversity and value to almost any property. Trees and shrubs provide these benefits whether they are planted in a park, in front of your house, or along a street or highway.

Successful tree and shrub planting requires knowledge of growth characteristics, site requirements and intended landscape function of each selected species. Landscape trees and shrubs are not difficult to plant, but proper species selection and planting techniques are necessary to ensure success.

Here are some tips to help you select and plant trees in your yard:

- Consider your location and watch for overhead and underground utilities. Remember that small trees grow into big trees.
- Foresters, arborists and nursery professionals are a good source of technical information when selecting and planting trees.
- It is best to select plants that have been grown within your hardiness zone. Plants with seed sources grown in southern areas may find it difficult if not impossible to adjust to Nebraska's climate. As a general rule of thumb nursery suppliers north of Interstate 70 provide the best stock for Nebraska=s climate. Ask your nursery professional where the stock originated.
- While large planting stock does have an immediate impact, smaller trees (2 2 inches or less in diameter) will recover from transplant shock more quickly and will catch up within 5 years.
- Locate all underground utilities before digging.
- Dig the planting hole substantially wider than the root system of the tree or shrub to be planted. The finished hole should be narrower at the bottom than at the top and be at least one or two feet wider than the root mass.
- Plant the tree slightly higher than the nursery level and mound the soil up to the top of the root ball. The root ball should be placed on solid soil.
- **Do not** use soil amendments.
- After the plant is set at the proper level in the hole and sufficient backfill is placed in the hole to prevent any movement of the ball, the twine holding the burlap should be cut and the burlap removed from around the root collar. If the plant is in a wire basket, the wire should be cut and removed where possible, as long as damage to the root ball can be prevented. The burlap should be laid back around the sides of the ball and removed. Containers (even peat pots) should be

completely removed before planting. If girdling roots are present, they should be loosened by hand and spread out as much as possible or cut with pruning shears. Backfill soil should be added in layers and water used to help settle the soil. Care must be taken not to tamp or otherwise work the soil after the plant has been watered or the soil will become too compacted.

- Trees should be pruned at planting time only to remove branches damaged during handling and transplanting. The main leader on single stemmed trees should not be pruned unless it has been damaged. Lower branches should not be removed completely because they manufacture critically needed food and help protect the lower trunk.
- If at all possible, staking and guying systems should not be used, but in Nebraska this practice is sometimes valid on windy sites. If used, all guying materials should be removed at the end of the first growing season to prevent trunk girdling.
- Do not wrap tree trunks.
- Water two or three times per week to keep soil moist but not saturated. Sprinkler systems that run daily will kill trees.
- Mulch with a 2-4 inch layer of wood chips or other organic material. Do not use grass clippings. Mulching conserves moisture, reduces weed competition and insulates roots from temperature extremes.
- Do not fertilize trees for three years after planting. After that, normal turf fertilization should be sufficient.

## ***Additional Information***

More information about tree planting and care can be obtained in the following University of Nebraska Extension Publications:

NebGuide G91-1050-A - Woody Landscape Plants: Selection and Planting

NebGuide G94-1195-A - Care of Newly Planted Trees

**Nebraska Forest Service Storm Damage Bulletin No. 9**
**June 2004**

# CARE OF NEWLY PLANTED TREES

Many cultural practices for newly planted trees have changed drastically in recent years. Here are some tips that will give your newly planted trees a better chance for survival.

Mulching is the most important post-planting practice that you can do to improve the health and vitality of your landscape plant. Wood chip mulch can nearly double plant growth in the first few years after planting. In addition, mulching helps eliminate grass or weed competition and prevents damage from mowers and weed trimmers. Apply a layer of 2 to 4 inches of wood chip mulch to a diameter of 3 to 4 feet.

Trees and shrubs should be pruned at planting time only to remove branches damaged during handling and transplanting. Lower branches should not be removed because they manufacture critically needed food. Inspect plants after 12 months and remove dead and crossing branches. Trees do not need to be pruned to Abalance@ root and top.

Water is critical to the success of any tree or shrub planting. However, over-watering is a major cause of tree failure in many Nebraska communities. Heavy clay soils that have been compacted during the construction process severely restrict the natural percolation of water. Newly planted trees should receive no more than an inch of surface water per week during the growing season. Water no more than two or three times per week. Operating automatic irrigation systems for 20 to 30 minutes per day will cause severe damage to the root system and can kill the tree.

For many years it was recommended that tree trunks be wrapped to protect them from sun scald or freeze injury, rodent feeding, mower and weed trimmer damage, and other assorted problems. Research has shown that tree wraps may not always protect trunks from damage, and in fact, can cause, hide and increase problems. Since the problems that can occur with the use of tree wraps can be very damaging, the routine use of wraps is not recommended. Tree wraps should be used only if a nursery guarantee requires it, if the tree species is known to be susceptible to winter sun scald damage on the trunk, and during the time that the tree is being transported and needs protection from mechanical damage. If used, wrap should be on the tree only during the first winter, and should be removed completely the following spring. Wrap left on the tree during the growing season may girdle the tree as the trunk grows in diameter.

Damage from rodents, mowers and weed trimmers can be prevented by using plastic guards. A simple, yet effective guard can be made using perforated drain tile cut in 12-inch sections and split down the side so that it can be placed around the tree trunk. Plastic guards should be monitored regularly and removed before rubbing or girdling problems occur.

Staking and guying trees is not usually necessary unless the tree is a larger specimen or is planted on an open, wind swept site. If used, staking and guying materials should be strong enough to provide support, but flexible enough to allow some movement. Guying materials should have a broad surface at the point of contact with the tree to prevent damage from rubbing. Plastic horticultural tape or canvas webbing that is at least an inch and a half wide are examples of good guying materials. All guying materials should be removed at the end of the first growing season to prevent trunk girdling. Any trees that do not establish within a year will more than likely never establish a strong root system.

Fertilizers are generally not recommended at planting time since most Nebraska soils contain sufficient levels of available nutrients to supply the requirements of newly planted landscape trees. Once trees have been established, determination of nutrient needs should be made based upon the condition and vitality of the plants and analysis of soil samples.

## ***Additional Information***

For more detailed information about tree care refer to the following University of Nebraska Extension Publications:

NebGuide G91-1050A - Woody Landscape Plants: Selection and Planting

Nebguide G94-1195A - Care of Newly Planted Trees

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**June 2004**

## STORM DAMAGE RESOURCES

There are many resources available for communities and individuals looking for more information about storm damage as it relates to trees and landscapes. These resources range from government publications to forestry and arboricultural organizations to web sites.

### ***Publications***

Nebraska Forest Service Storm Damage Bulletins

UNL-Cooperative Extension Service Publications

NebGuide G91-1050-A - Woody Landscape Plants: Selection and Planting

NebGuide G94-1195-A - Care of Newly Planted Trees

EC 1224 - Pruning Shade Trees

### ***Organizations***

There are several national and statewide organizations that provide tree related information.

National Arbor Day Foundation
100 Arbor Avenue
Nebraska City, NE 68410
402-474-5655

International Society of Arboriculture
Box 3129
Champaign, IL 61826-3129
217-355-9411

Nebraska Arborists Association
Box 81414
Lincoln, NE 68501-1414

American Forests
Box 2000
Washington, DC 20013
202-955-4500

Nebraska Forest Service
101 Plant Industry
UNL-East Campus
Lincoln, NE 68583-0714
402-472-2944

Nebraska Statewide Arboretum
Box 830715
Lincoln, NE 68583
402-472-2971

***Internet Sites***

Nebraska Forest Service (http://www.nfs.unl.edu)
North Central Forest Experiment Station (http://www.na.fs.fed.us/spfo/)
University of Georgia, Forestry (http://www.forestry.uga.edu/)
TreeLink (http://www.treelink.org/)
Ohio State University (http://hcs.osu.edu/)
The International Society of Arboriculture (http://www.isa-arbor.com/)
The National Arbor Day Foundation (http://www.arborday.org/)
American Forests (http://www.amfor.org/)
Tree Care Industry Association (http://www.natlarb.com/)
The USDA Forest Service (http://www.fs.fed.us/)