



Great Places

Green Spaces

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Key topics: Fall and Winter tree maintenance

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The fall season is a wonderful time of year, when the leaves (as well as the newsletter) turn awe-inspiring shades of red, yellow, and orange! Fall is most notably known as a season of change and gets its name from the trees' falling leaves. The reason for these changes is anticipation of winter. The shortening of days provides less sunlight for the trees to produce the chlorophyll they need to maintain their green color.

Fall can be a time of showers and cooler weather compared to the hot, dry summers we typically see in South Dakota. These weather patterns are very important to the development of the tree system for the other seasons. The cooler weather and moist soils of fall can be a good time for the growth in root systems.



Everything on the planet has its way of preparing for a long and harsh winter. Trees go into a stage of dormancy, similar to animals that hibernate. This dormancy completely slows down the system and helps the tree survive the winter. This edition of the Great Places, Green Spaces newsletter will show you how to provide trees with fall maintenance to prepare them for winter. These four categories can help your trees get ready for winter:

- Water
- Cover
- Prune
- Clean

"I took a walk in the woods and came out taller than the trees" - Henry David Thoreau



Winter Preparation!

Water

Providing your trees with enough water throughout the growing season doesn't just help them grow during the summer. Trees need water to create sugars that can be stored to use as energy during the winter. Making sure that your trees have enough water during the late summer and early fall is crucial for them to have enough time to convert the water into sugars for the winter. These excess supplies can help prevent winter die-off seen in deciduous trees and winter burn that is seen in coniferous trees, which should get a good soaking before winter. This is especially relevant if the tree was planted within the last couple of years. Immature trees are more susceptible for their first three years until they are fully established after planting.

Cover

Mulch is a beneficial tool in the development and health of both new and mature trees. Using organic wood chip mulching is the preferred method for many arborists when providing protection to trees in an urban setting. Wood mulch provides a blanketing effect all year round, reducing temperature fluctuations from affecting the root system, keeping moisture in the soil, and adding organic matter to the topsoil. Mulch should be applied as a donut not a volcano, meaning do not place mulch right up against the trunk of the tree. Mulch may need to be reapplied every year depending on loss from wind, mowers, and decomposition.



INCORRECT Tree is not visible at base



CORRECT Tree is visible at base



Seasonal Maintenance

Cover cont.

Tree tubes are another good form of cover that can protect young trees. The most common use for tree tubes is to prevent trees from being eaten or rubbed on by deer. During the winter, the tree tubes can also provide protection to maple, redbuds, apple, and other trees from cracking on the trunk. This injury happens due to the trees thin bark, or lack of insulation. When trees' trunk cracks during the cold season, this is known as "Southwest injury." It occurs when the trunk of a tree is exposed to direct sunlight during the winter, causing a rapid heating up of the lower portion of the trunk and eventual cracking. The exposed inner wood can then be susceptible to diseases and other forms of rot.



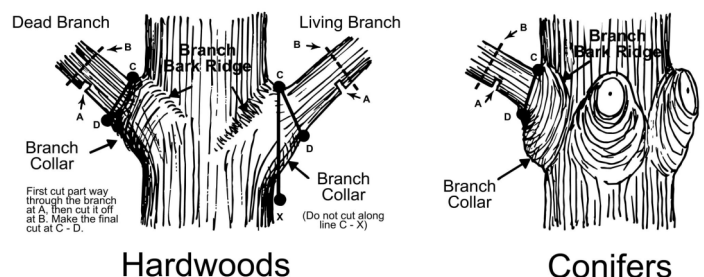
Southwest injury in Birch tree.

Prune

Pruning off dead and diseased limbs can prevent the spread of illnesses to the rest of the branch. You also need to remove branches that may cause damage to the structure of the tree. This includes crossing limbs, codominant leaders, water sprouts and suckers. Late winter and early spring are the best times of year to prune your tree because fungi, insects, and diseases are not as active. The tree will begin the process of covering the wound the following spring when it starts to wake up from its dormancy. It can be difficult during the winter to figure out which limbs are the dead ones because all the leaves fall off the deciduous trees. During the fall you can place markers on the limbs that will need pruning.

The health of the tree is the reason for pruning, but if not pruned properly you can do as much damage as if being left. If pruned incorrectly, the limb could rip a chunk of bark as it falls off the tree. The resulting wound leaves the tree open to more problems. Use the technique shown in the figure below if the branch is too large to use a pruner. For limbs less than 2 inches in diameter, pruning sheers should suffice but anything larger should use a saw and the cutting technique. For large projects with high risk, please contact your local certified arborists on the proper steps of removal.

Proper Pruning Principles





Keep It Clean!

Cleaning

Most people associate cleaning with spring, but fall clean up and yard work is just as important. Some fungi and insects over-winter in the fallen foliage such as leaves or the fruit produced. Cleaning up your yard can help your trees that may have fallen ill this last summer with an insect or disease. The following diseases can be found in the fallen foliage:

- Anthracnose (Commonly found on ash, basswood, elms, maples, oaks, American sycamores, and walnuts.)
- Apple scab
- Pear scab
- Leaf blotch

If you believe your tree may have these diseases, the best action to take when cleaning your lawn is to rake up the leaves and twigs, dispose of them at your local landfill/dump, then mow your lawn. The mower will cut-up the leaves enough that the diseases that over-winter in the fallen foliage.

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Leaf Blotch on Horse Chestnut



Apple Scab on Leaves and Fruit

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"In nature, nothing is perfect and everything is perfect. Trees can be contorted in weird ways, and they're still beautiful" - Alice Walker