

# Services Guide

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## Tree Service

*\*NOTE 1: This information is pulled from credible sources. This information is a guide. Any information used from this guide must be re-contextualized (no copying and pasting). Re-contextualize information incorporating SEO and business specifics.*

*\*NOTE 2: For MCP websites, stick to general information and avoid specifics.*

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# 1. TREE SERVICE OVERVIEW

## 1.1 GENERAL INFORMATION

[http://www.treesaregood.com/treecare/resources/hire\\_arborist.pdf](http://www.treesaregood.com/treecare/resources/hire_arborist.pdf)

- Well cared-for trees are attractive and can add considerable value to your property
- Poorly maintained trees can be a significant liability
- Pruning or removing trees, especially large trees, can be dangerous (need professional)

## 1.2 SEO

### Keywords (First Row – BEST, Last Row – LEAST)

|                      |                 |                   |                       |
|----------------------|-----------------|-------------------|-----------------------|
| ○ Tree roots         | ○ Stump removal | ○ Tree surgeon    | ○ Stump removal       |
| ○ Stump grinder      | ○ Tree stump    | ○ Lawn fertilizer | ○ Lawn maintenance    |
| ○ Organic fertilizer | ○ Pruning       | ○ Tree service    | ○ Tree planting       |
| ○ Arboriculture      | ○ Tree trimming | ○ Tree removal    | ○ Transplanting trees |

# 2. TREE REMOVAL

[http://www.treesaregood.com/treecare/resources/hire\\_arborist.pdf](http://www.treesaregood.com/treecare/resources/hire_arborist.pdf)

- Performed to eliminate dead/dying trees and those that become hazardous
- Uprooted trees, partially rotten trees, dead trees, trees with broken limbs and trees near power lines can all be incredibly dangerous
- Removal is usually last resort
- Tree removal requires considerable expertise to successfully perform this task

## 2.1 WHEN TO REMOVE A TREE

When the tree is:

- Dead or dying
- Considered an unacceptable risk
- Causing an obstruction that is impossible to correct through pruning

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- Crowding and causing harm to other, more desirable trees
- To be replaced by a more suitable specimen
- Located in an area where new construction requires removal

### 3. STUMP GRINDING / STUMP REMOVAL

[http://www.treesaregood.com/treecare/resources/hire\\_arborist.pdf](http://www.treesaregood.com/treecare/resources/hire_arborist.pdf)

<http://best-stump-grinding.com/stumpfags.html>

<http://www.sydneytreeremovals.net.au/700/stump-removal/advantages-of-stump-grinding/>

<http://www.richmond-tree-service.com/services/stump-grinding.html>

<http://www.dreamworkstrees.com/tree-education/articles/stump-removal-vs-stump-grinding>

| Type                  | Description   | Benefits   |
|-----------------------|---|--|
| <b>Stump Grinding</b> | <ul style="list-style-type: none"><li>○ Tree is cut down to just below ground level with a grinder</li><li>○ Tree stump is then grounded into small pieces</li><li>○ A stump grinder or stump cutter is a power tool or equipment attachment that removes tree stumps by means of a rotating cutting disk that chips away the wood</li><li>○ Process can take up to 2 hours</li></ul> | <ul style="list-style-type: none"><li>○ Less impact on your landscaping</li><li>○ No extra dirt is required to fill the former stump hold</li><li>○ Grindings from the ground out stump can be used as mulch</li><li>○ Minimal damage to landscaping due to machine's accuracy</li><li>○ Decaying stumps can attract pests and insects – if this happens, creatures can spread to other plants and your home</li></ul> |
| <b>Stump Removal</b>  | <ul style="list-style-type: none"><li>○ Entire stump and root ball of the tree is removed, more difficult process than stump grinding</li><li>○ Removing root ball is challenging and time consuming</li></ul>  | <ul style="list-style-type: none"><li>○ Stump grinding is the preferred choice on arborists' websites</li></ul>  |

### 4. PRUNING

[http://www.treesaregood.com/treecare/resources/hire\\_arborist.pdf](http://www.treesaregood.com/treecare/resources/hire_arborist.pdf)

<http://www.treesaregood.org/treeowner/pruningyourtrees.aspx>

An arborist can determine the type of pruning necessary to maintain or improve the health, appearance, and safety of trees. Pruning techniques include removing limbs that:

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- Interfere with utilities or structures
- Obstruct streets or sidewalks
- Are dead, weak, or decayed and pose unacceptable risk
- Are diseased or insect-infested
- Have been damaged by storms
- Will increase light penetration and reduce wind resistance within the canopy upon removal (thinning)

### 4.1 REASONS FOR PRUNING

- Remove dead branches
- To improve form
- Increase light and air penetration to the inside of the tree's crown or to the landscape below
- Mature trees are pruned as corrective or preventive measures, as routine thinning does not necessarily improve the health of a tree

### 4.2 PRUNING TECHNIQUES

| Steps        | Description  |
|--------------|--|
| 1. Cleaning  | <ul style="list-style-type: none"><li>○ Removal of dead, dying, diseased, weakly attached, and low-vigor branches from the crown of a tree</li></ul>   |
| 2. Thinning  | <ul style="list-style-type: none"><li>○ Selective branch removal to improve structure to increase light penetration and air movement through the crown</li><li>○ Proper thinning opens the foliage of a tree, reduces weight on heavy limbs, and helps retain the tree's natural shape</li></ul>   |
| 3. Raising   | <ul style="list-style-type: none"><li>○ Removes lower branches from a tree to provide clearance for buildings, vehicles, pedestrians, and vistas</li></ul>   |
| 4. Reduction | <ul style="list-style-type: none"><li>○ Reduces the size of a tree, often for utility line clearance</li><li>○ Reducing a tree's height or spread is best accomplished by pruning back the leaders and branch terminals to secondary branches that are large enough to assume the terminal roles (at least one-third the diameter of the cut stem)</li><li>○ Compared to topping, reduction helps maintain the form and structural integrity of the tree</li></ul> |

## 5. PLANTING

[http://www.treesaregood.com/treecare/resources/hire\\_arborist.pdf](http://www.treesaregood.com/treecare/resources/hire_arborist.pdf)  
<http://www.treesaregood.org/treeowner/plantingatree.aspx>  
[http://www.treesaregood.org/treecare/resources/Avoiding\\_Conflicts.pdf](http://www.treesaregood.org/treecare/resources/Avoiding_Conflicts.pdf)  
<http://www.treesaregood.org/treecare/resources/ProperMulching.pdf>  
[http://www.treesaregood.org/treecare/resources/New\\_TreePlanting.pdf](http://www.treesaregood.org/treecare/resources/New_TreePlanting.pdf)

- Planted during dormant season – in the fall or early spring
- Cool weather conditions allow plants to establish roots in the new location before spring rains and summer heat stimulate new top growth
- Healthy balled and burlapped or container trees can be planted throughout the growing season with appropriate care

### 5.1 STEPS FOR PLANTING

| Steps   | Description   |
|---|---|
| <b>1. Locate underground utilities</b>                      | <ul style="list-style-type: none"><li>○ Do this prior to digging</li></ul>  |
| <b>2. Identify trunk flare</b>                              | <ul style="list-style-type: none"><li>○ The trunk flare is where the trunk expands at the base of the tree. This point should be partially visible after the tree has been planted</li></ul>                          |
| <b>3. Dig a shallow, broad planting hole</b>                | <ul style="list-style-type: none"><li>○ Holes should be 2-3 times wider than the root ball, but only as deep as the root ball</li></ul>   |
| <b>4. Remove the containers or cut away the wire basket</b> | <ul style="list-style-type: none"><li>○ Inspect container tree root balls for circling roots. Straighten, cut, or remove them</li></ul>   |
| <b>5. Place the tree at the proper height</b>               | <ul style="list-style-type: none"><li>○ Take care to dig the hole to the proper depth – and no more. If the tree is planted too deep, new roots will have difficulty developing because of a lack of oxygen</li></ul> |
| <b>6. Straighten the</b>                                    | <ul style="list-style-type: none"><li>○ Before backfilling, have someone view the tree from several directions to</li></ul>   |

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|                                     |   |
|-------------------------------------|---|
| tree in the hole                    | confirm it is straight  |
| 7. Fill the hole gently, but firmly | <ul style="list-style-type: none"><li>○ Pack soil around the base of the root ball to stabilize it. Fill the remainder of the hole, firmly packing the soil to eliminate air pockets that may dry out roots. Further reduce air pockets by watering periodically while backfilling. Avoid fertilization at the time of planting</li></ul> |
| 8. Stake the tree, if necessary     | <ul style="list-style-type: none"><li>○ Studies have shown that trees establish more quickly and develop stronger trunk and root systems if they are not staked at the time of planting</li></ul>   |
| 9. Mulch the base of the tree       | <ul style="list-style-type: none"><li>○ Mulch is organic matter spread around the base of a tree to hold moisture, moderate soil temperature extremes, and reduce grass and weed competition</li></ul>  |

### 5.2 TRANSPLANTING

<http://extension.psu.edu/plants/gardening/fact-sheets/trees-shrubs/transplanting-or-moving-trees-and-shrubs-in-the-landscape>

<http://www.clemson.edu/extension/hgic/plants/pdf/hgic1055.pdf>

Moving established trees or shrubs from one location to another

| Steps              | Description  |
|--------------------|--|
| 1. Site Evaluation | <ul style="list-style-type: none"><li>○ Evaluate the sustainability of the new planting site by checking growing conditions, including light levels, soil pH, drainage, exposure</li><li>○ Ensure conditions meet the growing requirements of the plant</li></ul>  |
| 2. Root Pruning    | <ul style="list-style-type: none"><li>○ Prune roots to keep most of the roots within a small area</li><li>○ Transplanting established trees and shrubs is somewhat risky because you will damage many of the feeder roots</li><li>○ Root pruning done several months to one year in advance</li><li>○ Pruning the roots will encourage the plant to produce a flush of new feeder roots within the zone of the future root ball that will be moved</li></ul> |
| 3. Transplanting   | <ul style="list-style-type: none"><li>○ Soak the root ball of the plant before moving so that the soil will remain together during the digging process</li><li>○ Dig the soil away from the root ball</li><li>○ Wrap the whole ball in untreated natural burlap</li><li>○ Plant is set at the same depth in the new hole and fill in around the root ball with topsoil</li></ul>   |

- Mulch lightly with three to four inches of mulch

## 5.3 MULCHING

Mulches are materials placed over the soil surface to maintain moisture and improve soil conditions.

### 5.3.1 Types of Mulch

| Type      | Description   | Benefits  |
|-----------|---|---|
| Organic   | <ul style="list-style-type: none"><li>○ Wood chips, pine needles, hardwood and softwood bark, cocoa hulls, leaves, compost mixes, other products derived from plants</li><li>○ Decompose in the landscape</li></ul> | <ul style="list-style-type: none"><li>○ Decomposition process improves soil quality and fertility</li></ul> |
| Inorganic | <ul style="list-style-type: none"><li>○ Various types of stone, lava rock, pulverized rubber, geotextile fabrics, other materials</li></ul>   | <ul style="list-style-type: none"><li>○ Organic is the preferred type of mulch</li></ul>                    |

### 5.3.2 Benefits of Proper Mulching:

- Helps reduce soil moisture loss through evaporation
- Helps control weed germination and growth
- Insulates soil, protecting roots from extreme summer and winter temperatures
- Can improve soil biology, aeration, structure (aggregation of soil particles), and drainage over time
- Can improve soil fertility as certain mulch types decompose
- Inhibits certain plant diseases
- Reduces the likelihood of tree damage from “weed whackers” or the dreaded “lawn mower blight”
- Gives planting beds a uniform, well-cared-for look

## 6. FERTILIZATION

<http://www.isa-arbor.com/myAccount/myEducation/resources/CEU-Aug10.pdf>

<http://www.landscape-and-garden.com/GardenSoil/FertilizerTypes>

Reasons for fertilization:

- Correcting a nutrient deficiency

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- Maintenance fertilization
- Growth promoting fertilization

### 6.1 TYPES OF FERTILIZERS

Different plants require different nutrients and different pH levels in the soil

| Type                               | Description  |
|------------------------------------|--|
| <b>Inorganic Fertilizers</b>       | <ul style="list-style-type: none"><li>○ Contain all 3 major macronutrients: Nitrogen (N), Phosphorous (P), Potassium (K)</li></ul>   |
| <b>Special Purpose Fertilizer</b>  | <ul style="list-style-type: none"><li>○ Formulated to target certain plants' requirements or certain soil deficiencies</li></ul>   |
| <b>Liquid Fertilizers</b>          | <ul style="list-style-type: none"><li>○ Come in a variety of formulations and even include organic fertilizer, complete fertilizer as well as special purpose fertilizer</li></ul> |
| <b>Slow-Release Fertilizers</b>    | <ul style="list-style-type: none"><li>○ Formulated to release their nitrogen at a steady pace</li></ul>  |
| <b>Fertilizer with Insecticide</b> | <ul style="list-style-type: none"><li>○ Prepared and combined with insecticide</li></ul>   |

### 6.2 APPLICATION METHODS

| Method             | Description  | Benefits   |
|--------------------|--|--|
| <b>Broadcast</b>   | <ul style="list-style-type: none"><li>○ Fertilizer is delivered to the surface of the soil</li><li>○ Typically distributed evenly over as much of the rooting zone as possible</li></ul>   | <ul style="list-style-type: none"><li>○ Effective for open grown trees with little or no vegetative understory</li></ul>                             |
| <b>Sub-Surface</b> | <ul style="list-style-type: none"><li>○ Fertilizer is applied 6 to 12 inches (15-30cm) beneath the soil surface in either a liquid or dry formation</li><li>○ Typically employed when there is a high density of competing understory vegetation</li></ul> | <ul style="list-style-type: none"><li>○ Places the fertilizer at a depth that will most benefit the tree and not the understory vegetation</li></ul> |

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|                        |   |  |
|------------------------|---|--|
| <b>Trunk Injection</b> | <ul style="list-style-type: none"><li>○ Also called capsule implants</li><li>○ The technique requires the insertion of a low volume of product directly into the vascular system of the tree</li><li>○ Injections spaced at fixed intervals around the tree at the root flare</li></ul> | <ul style="list-style-type: none"><li>○ Can correct micronutrient deficiencies</li></ul> |
| <b>Foliar</b>          | <ul style="list-style-type: none"><li>○ Fertilizers are sprayed onto the leaf surface</li><li>○ Most successful applications focused on supplementing calcium, potassium, iron, zinc</li></ul>  |  |

## 7. INSECTS & DISEASES

<http://www.treesaregood.org/treecare/resources/InsectAndDisease.pdf>  
<http://www.treehelp.com/about-tree-insects/>

- Most insects are beneficial rather than destructive; they help with pollination or act as predators of more harmful species
- Common types of diseases and insects will vary depending on geographical location and season
- Treatment method used for a particular insect or disease problem will depend on the species involved, the extent of the problem, and a variety of other factors specific to the situation and local regulations

### 7.1 TYPES OF DISEASES

| Type                  | Description  |
|-----------------------|--|
| <b>Infectious</b>     | <ul style="list-style-type: none"><li>○ Transmittable diseases caused by microscopic living agents</li><li>○ Include fungi, protozoa, viruses, bacteria</li></ul>  |
| <b>Non-infectious</b> | <ul style="list-style-type: none"><li>○ Non-transmittable diseases that are inherited or the result of non-living agents</li><li>○ Account for the majority of plant problems in urban areas</li><li>○ Can be caused by such factors as compacted soil, nutrient deficiencies, temperature extremes, vandalism, pollutants, fluctuations in moisture</li></ul> |

- Non-infectious disorders often produce symptoms similar to infectious diseases; therefore it is essential to distinguish between the two to determine proper treatment

## 7.2 TYPES OF INSECTS

| Method                 | Description   | Treatment  |
|------------------------|---|--|
| <b>Chewing Insects</b> | <ul style="list-style-type: none"> <li>○ Defoliating insects migrate to the foliage of a tree and feed on the leaves</li> <li>○ Other chewing insects attack the fruit</li> <li>○ Generally, trees can bounce back from a chewing insect attack</li> <li>○ Repeat infestation will weaken a tree and can eventually kill it by starving it of energy</li> </ul>                                 | <ul style="list-style-type: none"> <li>○ Controlling movement up and down the stem with physical barriers can interrupt the lifecycles of many caterpillars. Insecticides can be used to kill the insects</li> </ul>   |
| <b>Boring Insects</b>  | <ul style="list-style-type: none"> <li>○ Most harmful to trees and if left untreated can cause death</li> <li>○ Cause damage by boring into the stem, roots, or twigs of a tree</li> <li>○ Some lay eggs which then hatch and the larvae burrow more deeply into the wood, blocking off the water-conducting tissues of the tree</li> <li>○ Feed on the vascular tissues of the tree</li> </ul> | <ul style="list-style-type: none"> <li>○ Control is extremely difficult, but steps should be taken to prevent further damage and to stop the spread to surrounding trees</li> </ul>                                    |
| <b>Sucking Insects</b> | <ul style="list-style-type: none"> <li>○ Damage tree by sucking out the liquid from leaves and twigs</li> <li>○ Many are relatively immobile, living on the outside of a branch and forming a hard protective outer coating while they feed on the plant juices</li> </ul>  | <ul style="list-style-type: none"> <li>○ Must be killed on contact to prevent reproduction and achieve effective control</li> <li>○ Prevention is the best approach – maintaining a strong and healthy tree</li> </ul> |

## 8. SOIL AERATION

[https://www.briggsandstratton.com/na/en\\_us/support/maintenance-how-to/browse/aeration-why-how-and-when-to-aerate-your-lawn.html](https://www.briggsandstratton.com/na/en_us/support/maintenance-how-to/browse/aeration-why-how-and-when-to-aerate-your-lawn.html)

- Perforating the soil with small holes to allow air, water and nutrients to penetrate the grass roots
- Helps the roots grow deeply and produce stronger, more vigorous lawn
- The main reason for aerating is to alleviate soil compaction
- Compacted soils have too many solid particles in a certain volume or space, which prevents proper circulation of air, water and nutrients within the soil

### 8.1 WHY SHOULD I AERATE MY LAWN?

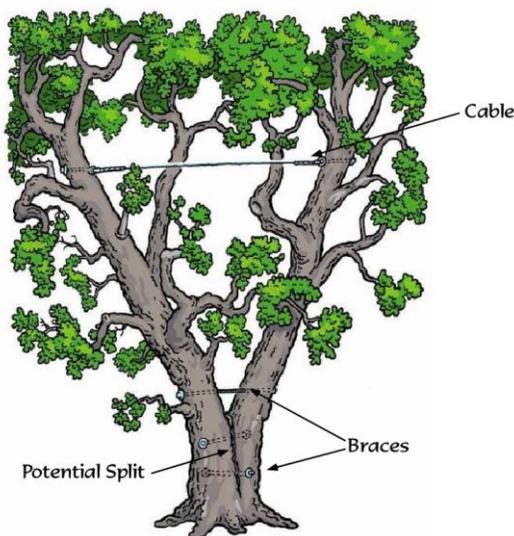
Your lawn is a good candidate for aeration if it:

- Gets heavy use – children/pets running around, contributing to soil compaction
- Was established part of a newly constructed home
- Dries out easily and has a spongy feel
- Was established by sod, and soil layering exists

## 9. CABLING & BRACING

<http://www.umass.edu/urbantree/factsheets/36cablingandbracing.html>

- Two most common forms of structural support for trees
- They involve installing flexible cables or rigid rods to reduce the chances of failure of defective unions



## **9.1 BENEFITS OF CABLING AND BRACING**

- **Prevention:** To reduce the chance of failure on a healthy tree with structural weakness
- **Restoration:** To prolong the existence of a damaged tree
- **Mitigation:** To reduce the hazard potential of a tree

# **10. CERTIFIED ARBORISTS**

[http://www.treesaregood.com/treecare/resources/hire\\_arborist.pdf](http://www.treesaregood.com/treecare/resources/hire_arborist.pdf)

Arborists specialize in the care of individual trees.

## **10.1 WHY HIRE A CERTIFIED ARBORIST?**

- Knowledgeable about the needs of trees
- Trained and equipped to provide proper tree care
- Can determine the type of pruning necessary to maintain or improve the health, appearance, safety of trees
- Can help decide whether a tree should be removed
- Can assist in performing jobs (like tree removal, etc.) in a safe manner while reducing risk of damage to property
- Can recommend plant species appropriate for a particular location – wrong tree in the wrong place can lead to problems such as limited growing space, insects, diseases, poor growth