How to Plant the Tree



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Introduction

As the Waterford Lakes ecosystem matures, small trees that the developers planted are becoming large tree, causing problems to paved areas and underground pipes. This document is part of a set of pamphlets offering suggestions about avoiding problems with new trees and coping with problems from existing trees. The pamphlets describe:

- Selecting and Locating a Tree
- How to Plant the Tree
- Coping with Tree Problems

Disclaimer

The information contained in this document is based on advice from tree experts and is presented in good faith and believed to be correct, but it is General in nature and should never be used as a substitute for paid advice from a qualified professional such as an arborist. All information in this document is provided "as is" without warranties, representations, or guarantees of any kind.

The Waterford Lakes Long Range Planning Committee developed this document and is solely responsible for its content. Recommendations made in this document are those of the Committee, and do not represent official positions of the Waterford Lakes Community Association or its Architectural Review Committee.

How to Plant a Tree

The information in this section was taken from WikiHow <http://m.wikihow.com/Plant-a-Tree>

Select the right time of year for planting the tree. Do not plant in late Spring or early Summer because the heat will stress the plant and cause it to die. The best time to plant a tree is fall or early Spring.

Check to see if there are any local requirements concerning digging deep holes if you need to dig near telephone or other cable lines. Dial 8-1-1 for the Sunshine Network 811, or go to www.call811.com, and soon technicians will fill your lawn with little flags. Make sure you are cleared to dig the hole.

Choose a suitable tree for the region, climate, and space. (See *Which Tree to Plant*.) Research local cultivars of species native to your area. If you are willing to plant a non-native species, consider your selection carefully.

Prepare the hole.

Take a suitable shovel and dig a hole that is 4-5 times the width of the root ball more than enough so it will fit, and give room for the fresh roots to grow without stress. This lets the roots ease in more easily and begin to grow outwards into the soil.

Try to dig the hole with a small "pedestal" of dirt in the center of the hole where the root ball sits. This pedestal prevents the root ball from sitting continuously in water. Any excess water will naturally flow to the deeper areas of the hole around the edges where the roots can drink from if needed. Having a pedestal in the center of the hole is very important since one of the major reasons why trees die from drowning (because the root ball is sitting in water).

The point where the tree comes out of the ground should be slightly higher than the ground around it. Slightly higher means ¼ to ½ inch. This prevents water collecting from the base of the trunk which will cause the tree to rot. Use the garden cultivator to loosen the dirt all around the hole to make it easier for the roots to spread.

Prepare the tree for planting.

The process is slightly different for a small tree vs. the large tree.

If it is a small tree, then you can turn it upside down gently to get it out of the pot. You can also cut plastic containers away from the tree. Examine the root ball to ensure that it is not pot-bound. If roots encircle the root ball inside the pot they will not extend outward after the tree is planted and the tree will have a difficult time establishing a stable structural base.

If the tree is larger its root ball will be packed in a net, a hessian (canvas) bag, a rope bag, a wire basket, or some combination of these. The root packing materials serve two purposes: it keeps the root ball together with its soil during shipping and planting, and it provides a means for lifting the tree by the root ball so that the tree is not lifted by strapping on the trunk. Lifting the entire weight of a tree by strapping directly around trunk can cause damage to the trunk and cambium.

Since most or all of this packing material will be removed after the tree is placed in the hole, inspect the packing to plan for the removal. You might need to use large scissors, a sharp knife, and/or wire cutters to cut through the packaging.

Avoid handing the tree with the burlap off. The goal is to keep as much dirt around the roots as possible; moving the tree more than absolutely necessary can easily cause air to get to the roots and dry them out, even inside the root ball. Do not leave a tree's roots out of its container or burlap for too long, especially in sun and wind, it could dry out the roots.

Place the tree into the hole gently.

Be sure the hole isn't too deep or too shallow. The ground level of the pot or the top of the root ball should match up with the ground level after you fill the hole in. You can place the handle of your shovel flat across the hole from one side to the other to measure whether the crown is level with the surrounding soil before filling in the hole.

Lower the tree into the hole, handling the tree by its root ball or its packaging materials for larger trees. Partially backfill to support root ball, then remove twine, burlap, and wire baskets as much as possible. Backfilling as you remove these materials can help hold the root ball together.

Experts disagree about the need to remove the packaging from the root ball after planting. Some advise leaving the wire baskets intact while others advocate the removal of all packaging materials[1]. Treated burlap (the kind you're most likely to encounter) will not decay quickly (can take decades) and, though roots may grow through it, those roots may be damaged or constricted as they grow in diameter. To be safe, remove wire baskets and all burlap except for the very bottom of the root ball.

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[1] *Do I remove root ball packing materials? What do the experts say?* by Michael Kuhns, Extension Forestry Specialist, Utah State University and Brook Lee, Community Forester, Utah Division of Forestry, Fire & State Lands

Continue backfilling but do not bury over the crown (where the stem changes to root) or leave any roots exposed.

Use some compost or composted manure if needed, if the soil that you currently have is not rich; backfill three quarters of the hole with existing dirt, one quarter with compost or composted manure.

A great benefit to new trees is an organic mixture that includes micorrhizae, beneficial fungi that enhance a tree's uptake of soil nutrients. It may also include rock phosphate, a natural root-growth enhancer. Resist commercial fertilizers they tend of over boost roots.

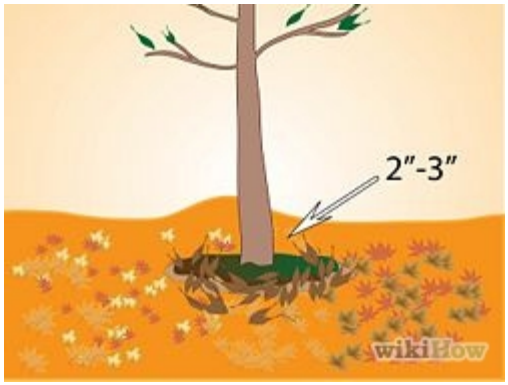
Water the newly planted tree.

Allow settling, backfill the remaining soil, and water again. This will eliminate air pockets. Water one gallon for every six inches of tree height (2.5 liters for every 10 cm). Water the newly planted tree. Allow settling, backfill the remaining soil, and water again. This will eliminate air pockets.

Keep watering your tree for the first few years as it gets established. Depending on the climate, you will need to water once a week. To form strong roots, water deeply, a long slow trickling will do more than a quick sprinkle. Deep roots will help your tree to be drought resistant.

Mulch, mulch, mulch.

Cover the planting hole with 1-3 inches (2-8 cm) of shredded hardwood or leaf much. Keep the mulch 2-3 inches (5-8 cm) away from the trunk or the trunk will rot. Don't over-mulch either; a few inches are enough to keep the moisture in and the weeds out. Mulch a circle out to the drip line (outer perimeter of the trees leaves). This will remind people not to mow or use a string trimmer close to the tree.



Staking and Guying Trees.

Stake the tree if necessary, for about the first year. Make sure that the stakes are loose around the tree. This also will remind people not to mow or trim close to the trunk. It will also protect the tree from blowing down from the wind. This should be good for the first year. The Florida Department of Transportation has the guidelines below for staking and guying trees:

Strapping Materials

Use wide plastic, rubber or other flexible strapping materials to support the tree to stakes or ground anchors that will give as the tree moves in any direction up to 30 degrees. Do not use rope or wire through a hose. Use guy cords, hose or any other

thin bracing or anchorage material which has a minimum 12 inches (30 cm) length of high visibility flagging tape secured to guys, midway between the tree and stakes for safety.

1 to 2-inch Caliper Trees

Stake trees larger than 1 inch and smaller than 2 inches (2 to 5 cm) caliper (diameter) with a 2 by 2 inch (5 x 5 cm) stake, set at least 2 feet (0.6 m) in the ground and extending to the crown of the plant. Firmly fasten the plant to the stake with flexible strapping materials as noted above.

2 to 3.5-inch Caliper Trees

Stake all trees, other than palm trees, larger than 2 inches caliper and smaller than 3 1/2 inches (5 - 9 cm) caliper (diameter) with two 2 by 4 inch (5 by 10 cm) stakes, 8 feet (2.4 m) long, set 2 feet (0.6 m) into the ground. Place the tree midway between the stakes and hold it firmly in place by flexible strapping materials as noted above.

Large Trees

Guy all trees, other than palm trees, larger than 3 1/2 inches (9 cm) caliper (diameter), from at least three points, with flexible strapping materials as noted above. Anchor flexible strapping to 2 by 4 by 24 inches (5 by 10 by 60 cm) stakes, driven into the ground such that the top of the stake is at least 3 inches (8 cm) below the finished ground.

Palm Trees

Special Requirements for Palm Trees: Brace palms which are to be staked with three 2 by 4 inch (5 by 10 cm) wood braces, toe-nailed to cleats which are securely banded at two points to the palm, at a point one third the height of the trunk. Pad the trunk with five layers of burlap under the cleats. Place braces approximately 120 degrees apart and secure them underground by 2 by 4 by12 inch (5 by 10 by 30 cm) stake pads.

Overly tight staking or leaving ties to the stakes on too long prevent a tree from moving and developing trunk strength. If the ties are not removed after the first year, trees begin to grow *around* them. Those ties can become embedded in the tree and block the transport of water and nutrients taking place just below the bark. Overly tight ties will stress the tree and create a weakened point on the trunk where it becomes susceptible to breakage.

University of Florida, Extension adds that in all but exceptional cases, anchor stakes or guys should be removed within one year after planting since most trees should have developed enough new roots to anchor the tree. Unfortunately, this does not always happen and trees have died due to the trunk girdling effects of attached wires and other supports.

All stakes should be capped to prevent injuries.