

# The Right Tree for Your Lawn-Planting Trees to Help Improve Chesapeake Bay Water Quality

Everyone has a role in restoring water quality in the Chesapeake Bay and what better way to help than by planting trees? It is easy to forget just how much we depend on trees. They provide life-giving oxygen and food, regulate temperatures, sequester carbon, and yield raw materials for building. Trees also are a source of simple beauty, season by season, year after year.

Trees utilize nutrients as they grow. If you look at the cost of buying and maintaining trees, they are a pretty good bargain when it comes to improving water quality in the Chesapeake Bay.

## Trees Come in all Sizes, Shapes, and Colors, so How do I Decide on What to Plant?

Consider where you want to plant your trees and how big they will grow. Avoid planting too close to sidewalks, driveways, foundations, septic systems, as roots can buckle concrete or asphalt or get into a septic field. Do not plant under utility lines since limbs can interfere with power lines.



If you are looking for trees that can serve as a privacy screen, consider ones that are evergreen and/or do not grow as tall. If you want trees to shade your house to reduce summer temperatures and decrease energy usage, consider species that have a wide crown and grow quickly. As a tree grows, it should not restrict visibility near intersections or driveways. Think about any spring flowers the trees might produce or the color of their fall foliage.



## Your Budget and the Number of Trees You Intend to Plant Will Determine What Size Trees to Buy

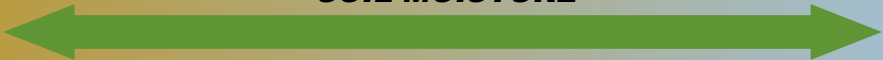
Whether you are purchasing native species of trees (Table 1) from a local nursery or online, you will need to know what size and quantity to buy. Table 2 summarizes some of the advantages and disadvantages of each type of tree.



For large areas such as a field, bare root seedlings may be the most cost effective choice. They are inexpensive, easily transported, and simple to plant. However, seedlings also are easily mowed over and prone to animal predators, such as deer. Tree tubes or flags may be necessary to minimize damage.

Small container-grown trees such as quart or gallon containers, are relatively inexpensive and easily transported. Larger container-grown trees, such as 10-gallon 'pots' are more costly and difficult to transport.

**Table 1.** Select a native species of tree in Maryland based on soil moisture.

<b>SOIL MOISTURE</b>				
<b>DRIER</b>				<b>WETTER</b>
Chestnut Oak	American Wild Plum	Alternate-leaf Dogwood	Loblolly Pine	Atlantic White Cedar
Common Persimmon	Chinquapin Oak	American Beech	Pin Oak	Bald Cypress
Eastern Chinkapin	Eastern Redbud	American Holly	Red Maple	Black Gum
Eastern Red Cedar	Eastern White Pine	Choke Cherry	Serviceberry	River Birch
Pitch Pine	Pignut Hickory	Common Hackberry	Silver Maple	Swamp Cottonwood
Southern Red Oak	Slippery Elm	Sugar Maple	Sweet Gum	Swamp White Oak
Virginia Pine	White Oak	Tulip Poplar	Willow Oak	Sweetbay Magnolia

**Table 2.** Bare root trees are least expensive; balled and burlapped cost the most.

Type	Approx. Cost	Approx. Height	Advantages	Disadvantages
Bare Root Trees	\$1.00 to \$10.00	1' to 2'	Inexpensive for large areas. Easily planted.	Easily mowed over. Dry out quickly. Eaten by animals.
Small Container	\$2.00 to \$30.00	2' to 4'	Inexpensive. Easy to transport and plant.	Easily mowed over. Can be root-bound in the container. Some animal damage.
Large Container	\$15.00 to \$100.00	4' to 8'	Relatively easy to transport and plant.	Larger hole required than smaller types. Can be root-bound in the container.
Balled and burlapped	\$30.00 and up	6' on up	Larger size gives a mature appearance to a project.	Requires a large hole for planting. Larger sizes are difficult to transport. Costly to replace if they die.

Larger balled and burlapped trees can be very heavy and you may need additional assistance or special equipment to transport and plant them.

## How You Plant Your Tree is as Important as What You Plant

- ▶ **Dig a hole.** A good rule-of-thumb is to dig the hole at least twice the size of the container. It is better to slope the sides of the hole because it is easier to adjust the tree’s position in the hole and properly pack the soil around the roots. The hole should not be deeper than the “root collar” which is the point at the base of the where tree begins to widen out (figure 1). The root collar indicates where the top of the soil was while the tree was growing at the nursery.
- ▶ **Prepare the tree.** It is important to keep bare root trees moist until ready for planting. While you are digging the hole, you can place them root side down

in a bucket of water for up to 3 hours to prevent the roots from drying out.

Place container-grown plants next to the hole on their side and gently press on the outside of the container to make it easier to remove the tree. Once out of the container, break up the soil and root matrix that formed while the plant was in the container before filling the hole. This will ensure maximum root contact with the soil.

If the roots remain wrapped in the shape of the container on smaller plants, use a knife or garden trowel to score it evenly around the sides and in an X on the bottom to free up the roots (figure 2).

- ▶ **Set the tree.** Place the tree at the bottom of the hole in the center. You may need someone to hold bare root or balled and burlapped trees in place and

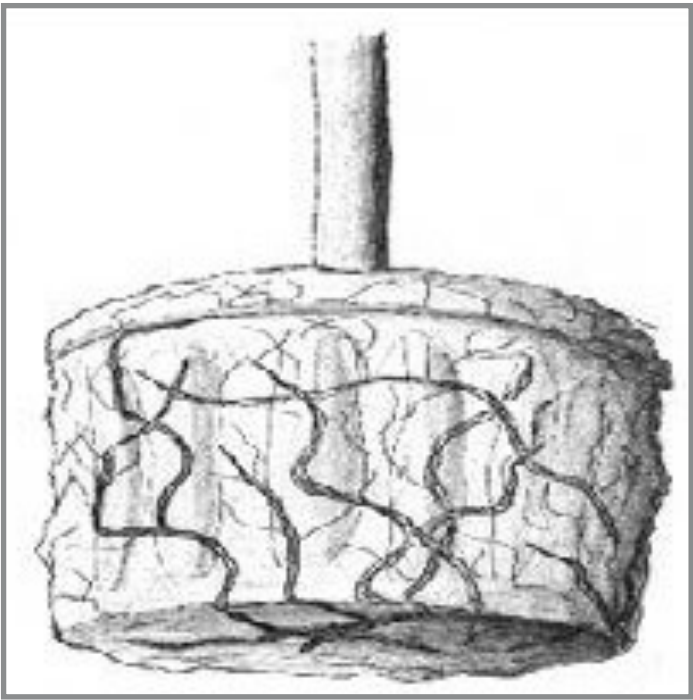
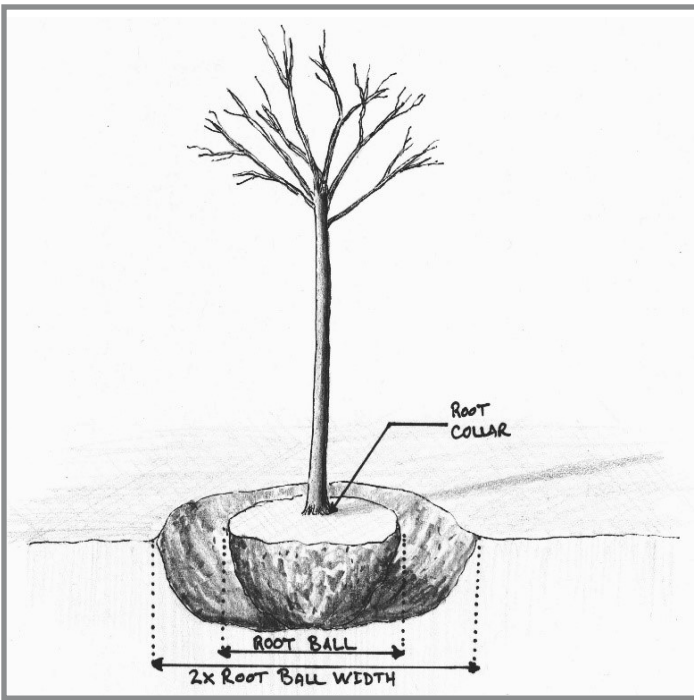


Figure 1. Dig the hole for the tree twice the size of the root ball and center the tree in the hole.

Figure 2. Make sure the tree is not root-bound

straight. Dig out or fill in the hole until the root collar is even with the top edge of the hole.

- ▶ **Replace the soil.** Once the hole is the right depth, gently place the soil back in the hole making sure there are no large clumps of soil or air pockets around the root ball. Periodically press the soil firmly into place, especially against the roots to ensure there are no open areas which can affect the roots or cause the soil to slump.

As you fill in the hole, make sure the tree remains vertical. If it needs to be adjusted, compact the soil again after it has been moved. Once you completely fill in the hole, water the tree until the soil is saturated.

- ▶ **Mulch around the tree.** Mulch helps reduce weed growth and maintain soil moisture. Once the water has soaked into the ground, place a 2 to 3-inch deep layer of mulch around the tree. Do not place mulch up against the base of tree since this can affect bark development and create an environment where certain insects and fungus can damage the tree. It is best to leave an area about 3 to 4 inches wide around the trunk with no mulch.

## Your Tree will Need Regular Watering to Survive

- ▶ **Watering.** Until the roots become established, be sure to gently water the tree regularly during the growing season, especially during hot, dry periods. During the first year, weekly watering of approximately 1 inch is recommended. Apply the water slowly to allow it to soak into the soil, ensuring that the soil is moist and the water gets down to the roots. Overwatering can make the soil loose and may harm the tree.
- ▶ **Fertilizing.** University of Maryland Extension does not recommend fertilizing newly planted trees.
- ▶ **Staking.** The decision to stake a newly planted tree depends on its size. Larger trees are more easily affected by wind. If you stake your tree, do not use uncovered rope or wire that can cut into the bark. The University of Maryland Extension Home and Garden Information Center has a fact sheet (HG 24 - *Planting Tips for Trees* <https://extension.umd.edu/resource/planting-tree-or-shrub/>) that offers information on tree staking dos and don'ts.



- ▶ **Pruning.** Each tree species responds differently to pruning so it is best to consult with the nursery where you bought the tree or with a professional arborist before pruning.

## Additional Resources

University of MD Extension Home and Garden Information Center. <https://extension.umd.edu/resource/trees-and-shrubs-home-garden>

Arbor Day Foundation, *How to Plant Your Trees*. <http://www.arborday.org/trees/planting/>

MD Dept. of Natural Resources Trees webpage. <http://www.dnr.state.md.us/forests/Pages/default.aspx>

Slattery, Britt E., Kathryn Reshetiloff, and Susan M. Zwicker. 2003. *Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed*. U.S. Fish & Wildlife Service, Chesapeake Bay Field Office, Annapolis, MD. 82 pp. <https://www.fws.gov/sites/default/files/documents/native-plants-for-wildlife-habitat-and-conservation-landscaping-in-the-chesapeake-bay-watershed.pdf>

ERICK BUEHL  
ebuehl@umd.edu

JENNIFER  
DINDINGER  
dinding@umd.edu

AMANDA ROCKLER  
arockler@umd.edu

JACQUELINE  
TAKACS  
takacs@umd.edu

KRISZTIAN VARSA  
kvarsa@umd.edu

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