

North Dakota Forest Service

Planting and Three-Year Maintenance Plan

Community Tree Planting Projects

January 2023

NOTICE

Successful projects have great tree selection, planting, and care techniques in common. Follow this plan so that your trees will thrive. Failure to select and plant trees according to these instructions may result in replanting recommendations. Replanting is costly and reduces survival, so direct your efforts to select and plant your trees according to the following techniques the first time!

YEAR ONE

Tree Selection:

- See [Recommended Species for ND](#) to assist in selecting diverse yet appropriate species for your tree planting project.
- Trees and shrubs shall be nursery-grown and shall meet American Standard of Nursery Stock standards. Businesses that sell nursery stock must have a valid nursery license.
- Trees must be of good vigor with normal well-developed branches and vigorous root systems; and must be free from injury, pests, disease, nutritional disorders, or root defects.
- Deciduous trees must be a minimum of 1.0 inch caliper (measured 6 inches above ground line). Coniferous trees must be at least 3 feet in height.
- Conservation stock is acceptable only for conservation plantings.
- Understand the terms of the nursery's guarantee.

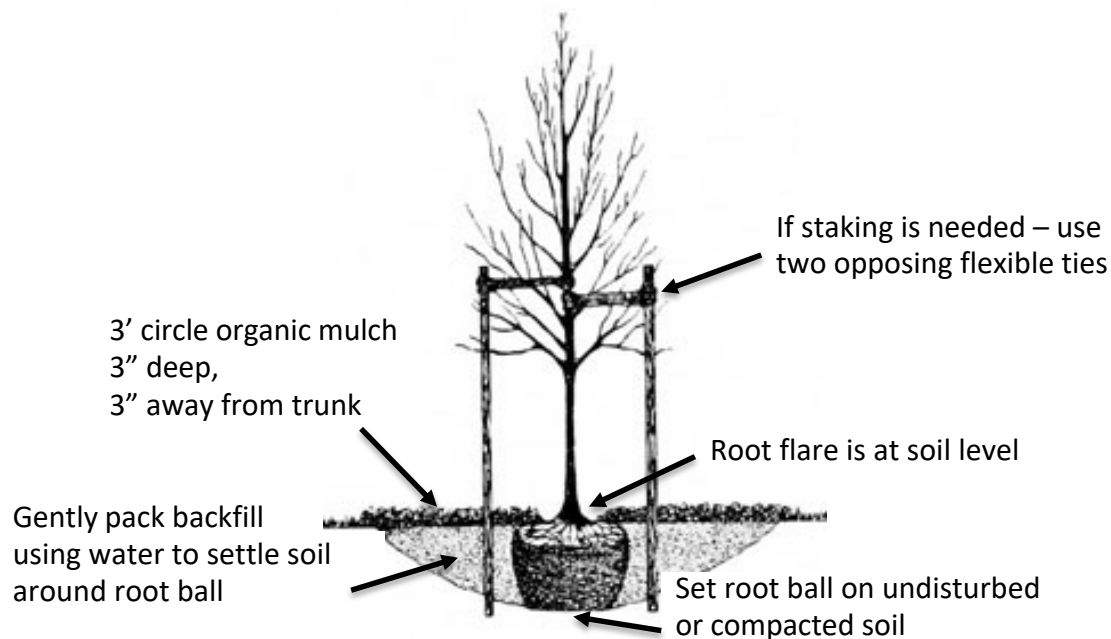
Pre-Planting:

- Locate underground and above utility lines – ND One Call **811** or **800-795-0555**
<http://www.ndonecall.com/>

Tree Planting:

- See diagram following this section.
- Keep roots moist; this is especially critical for bare-root trees.
- Remove turf from planting area.
- Dig planting hole wide and shallow. The hole should be at least 3 times wider than the root spread.
- Remove all twine or rope from trunk and branches.
- Remove planting container and burlap or any other material such as wire or plastic that would constrict root growth.
- If containerized material is to be planted, cut circling roots by slicing the root ball vertically from top to bottom with a sharp knife in 3 or 4 well-spaced lines around the root ball.

- Use the soil that came from the planting hole to backfill, less any rocks or debris.
- Do not use amendments in the planting hole. This discourages roots from expanding outside the planting hole, which can lead to girdling roots.
- Make SURE that root flare is at soil level. Many trees arrive from the nursery with soil on top of the root flare and stem tissues. This extra soil **must** be removed from the top of the root ball in order to expose the root flare. **Planting too deeply is one of the most common reasons for unsuccessful tree planting projects.**
- Water tree at planting to remove large air pockets. After backfilling, gently firm soil –do not pack soil. Heavy packing will remove air spaces and can potentially damage fine roots.
- Do not mound soil against trunk of tree.
- Apply organic mulch such as wood chips or shredded bark 3 inches deep in a 3-foot diameter circle around the trees, keeping the mulch 3 inches away from the trunk.
- Staking is optional and may not be necessary unless the site is extremely windy, the tree has an unusually small root system or an unusually large canopy, or the tree is vulnerable to vandalism.
- Prune dead and broken branches, and remove double leaders.
- Fertilizer is not recommended for newly planted trees.
- **Any tree planted with the top of the root flare below natural ground level shall not meet the requirements for tree planting projects until it is replanted at the proper depth.**



Inspection:

- Contact NDFS Community Forestry Staff:

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After Planting:

- Water tree as needed, especially during dry periods. Deep watering is better than shallow watering. Continue watering until the ground freezes.
- Inspect trees for disease or insect problems.
- Monitor health and vigor of trees.
- In fall, wrap thin-barked trees with tree wrap. Remove the wrap in spring.
 - Thin-barked trees include lindens, mountain-ash, and silver maple. Fruit trees may also benefit from wrapping in fall to prevent rodent damage.

YEAR TWO

- Continue to monitor tree health and vigor. Inspect for disease and insect problems. Inspect evergreen trees for winter injury and fruit trees for rodent damage.
- Notify nursery or contractor to replace any trees that have died. Refer to planting contract for guarantee.
- Remove tree wraps in spring.
- Remove stakes after one year.
- Refresh and extend mulch as needed.
- Begin pruning to train trees for correct form one year after planting. Remove no more than ¼ of the foliage in one season. Retain lower branches on trees to help increase trunk taper more quickly.
- Continue deep watering as needed, until ground freezes.
- Wrap trees as needed for winter protection.

YEAR THREE

- Continue to monitor tree health and vigor. Inspect for disease and insect problems. Inspect evergreen trees for winter injury and fruit trees for rodent damage.
- Replace any trees that have died.
- Remove tree wraps in spring.
- Refresh and extend mulch as needed.
- Continue corrective pruning. Remove no more than ¼ of the foliage in one season. Remove lower branches on trees once they begin to interfere with foot traffic or maintenance equipment.
- Continue deep watering as needed, until ground freezes. Do not over-water.
- If necessary, a fertilizing schedule may begin during third or fourth year.
- Protect trees from mechanical, herbicide, and salt damage.
- Wrap trees as needed for winter protection.

References:

- American Association of Nurserymen. ANSI Z60.1-1990. American Standard for Nursery Stock. 1250 I Street, N.W., Suite 500, Washington, DC 20005
- http://www.treesaregood.com/treecare/resources/New_TreePlanting.pdf
- <http://www.ag.ndsu.edu/pubs/plantsci/trees/h531.pdf>
- Shigo, Alex L. 1991. *Modern Arboriculture*, New Hampshire, Shigo and Trees, Associates, 424 pp.
- Watson, Gary W., and E.B. Himelick. 2005. *Best Management Practices: Tree Planting*. International Society of Arboriculture, Champaign, Il. 41 pp.