

Mitigating Climate Change

Energy & Water Conservation

Air Quality

Social Benefits

Crime & Safety

Economic & Health Benefits

Benefits of Trees

According to an Urban Forest Effects Analysis completed in 2007, Kelowna's current tree canopy is approximately 13%, while the recommended tree cover for our area is 25%. Other threats to the urban forest such as pine beetle, wildfire or development could further reduce our already low tree cover.

NeighbourWoods has been designed to help overcome some of these obstacles while providing many benefits including:

▶ Mitigating Climate Change:

Trees absorb carbon dioxide, the primary gas causing global climate change. Planting new trees remains one of the cheapest, most effective means of drawing excess CO₂ from the atmosphere. The average Canadian urban tree is estimated to remove about 200 kg of carbon over an 80 year period.

▶ Energy conservation:

Trees properly placed around buildings can reduce air conditioning needs by 30 percent and can save 20 - 50 percent in energy used for heating. Studies show that summer daytime temperatures can be up to 3 degrees Celsius cooler in neighbourhoods with mature tree canopies when compared to newly developed areas. By reducing energy usage, additional carbon emissions from power plants are also avoided.

▶ Water conservation:

Trees intercept significant amounts of precipitation. This reduces the costs associated with storm water management as well as reducing runoff which carries salts, fertilizers, and other pollutants into creeks and lakes.

▶ Air Quality:

Air pollution can be a serious threat to human health, and trees produce many net benefits for overall air quality improvement.

▶ Social Benefits:

Trees and well-landscaped grounds are among the most important factors considered when individuals choose a place to live. Workers with a view of nature from their desk were found to have better overall health, increased job satisfaction, less frustration with tasks and overall higher feelings of life satisfaction.

▶ Crime and Safety:

In a study of inner city neighbourhoods in the US, greener residences had lower crime rates. Neighbourhoods with well-cared-for landscapes contribute to reduced feelings of fear and violence.

▶ Economic Benefits:

Numerous studies have documented a significant increase in property values and rental income associated with attractive tree cover and landscaping.

▶ Health Benefits:

Trees and green spaces can help ease the everyday pressures of life. Even brief encounters with nature can improve one's ability to concentrate. Patients with views of trees from their hospital bed spend less time in the hospital than those with no view.

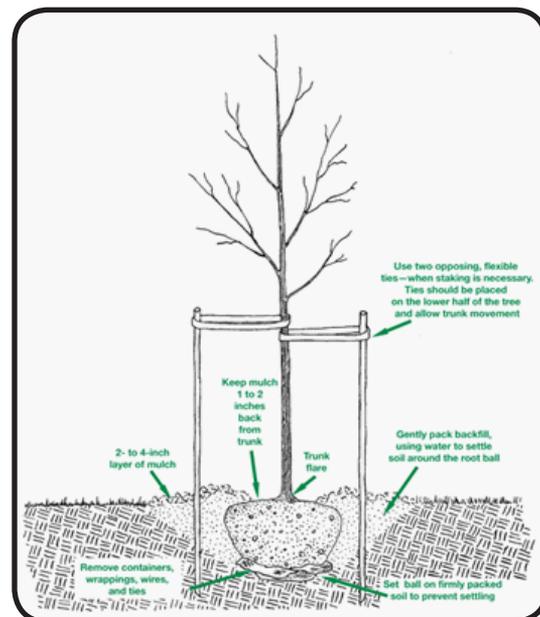
Water the tree for the first three years of establishment, about once a week during the growing season (more often during hot weather). Keep the soil moist but not soaked.

The main reasons trees die after transplanting are underwatering, overwatering and when they are planted too deeply.

Tree Planting Tips

This information is adapted from the International Society of Arboriculture.

- ▶ The ideal time to plant trees is during the dormant season (fall or early spring).
- ▶ Exercise care in storage and transport of nursery stock, to avoid stress or mechanical damage. Lift the tree by the root ball, not by the trunk. Do not allow roots to dry out.
- ▶ Before digging, locate all underground utility wires. Call (800) 474-6886. Please try to plant tree where it will shade your home.
- ▶ Dig a shallow, broad planting hole with the hole widest at the top and sloping sides; at least 450-600mm (18-24 in) wider than the root ball diameter (or 3-5 times wider than root ball diameter in compacted soils). Dig only to the same depth as the root ball. Identify the trunk flare (point where the roots spread at the base of the tree) to determine the proper depth of the hole.
- ▶ Water tree in pot. Remove the pot. Score and loosen the roots. Place the tree in the hole, at the proper height. Do not plant the tree lower than the trunk flare; it is better to plant a few inches higher than the trunk flare to allow for some settling. Straighten the tree and gently backfill the hole.
- ▶ When backfilling use the same soil that came out of the hole; if a different type of soil is used to fill the hole, this may result in problems with drainage around the root ball. If the native soil is extremely poor, topsoil or soil amendments may be necessary but mix at least 50% of the native soil in with any additional amendments; topsoil should match the same texture as the native soil and the hole should be much wider to allow for growth.
- ▶ Firm the soil but do not pack. Water thoroughly. Remaining soil may be mounded into a berm to collect water in the root zone (leave a gap in the berm if the soil is clay). Fertilizer application at the time of planting is not recommended.
- ▶ Stake the tree only if necessary, as



staked trees tend to develop weaker trunks and smaller root systems. Remove support staking after the first year of growth to avoid girdling the stem.

- ▶ Mulch the base of the tree with 50-100mm (2-4 in) of organic matter (e.g. straw, bark, peat moss, wood chips, leaf litter) to hold in moisture and protect against extreme soil temperatures. Keep mulch at least 25-50mm (1-2 in) away from the trunk to prevent decay. Do not apply too much mulch.
- ▶ Water the tree for the first three years of establishment, about once a week during the growing season (more often during hot weather). Keep the soil moist but not soaked.
- ▶ Prune sparingly after planting; corrective pruning should not be done until the tree has experienced a full year of new growth.
- ▶ Tree spacing will vary depending upon the geometry of the site and landscaping objectives. Consider the volume of soil available to each tree. If the soil volume is too low (then trees will be competing with each other for available water and nutrients. Keep in mind the mature size of the tree so that tree canopies will not become too closely packed as they grow.

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