LOCATION OF WORK	WRITTEN BY:	APPROVED BY:	DATE:	LAST REVISION
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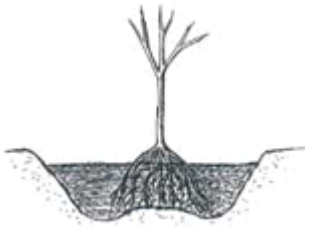
HAZARDS PRESENT	PERSONAL PROTECTION EQUIPMENT (PPE)	ADDITIONAL REQUIREMENTS
• Sun burns • Cuts from debris in soil • Dry skin • Sore knees / back	• Safety glasses • Protective footwear • Protective gloves • Long pants • Long sleeves • High vis. Vest • Hat	• Tie back long hair

SAFE WORK PROCEDURE

TREE PLANTING:

1. Don personal protective equipment.
2. As a general rule, trees should be transplanted no deeper than the soil in which they were originally grown. The width of the hole should be at least 3 times the diameter of the root ball or container or the spread of the roots in the case of bare root trees. This will provide the tree with enough worked earth for its root structure to establish itself.
3. Avoid glazing when digging in poorly drained clay soil. Glazing occurs when the sides and bottom of a hole become smoothed forming a barrier, through which water has difficulty passing. To break up the glaze, use a fork to work the bottom and drag the points along the sides of the completed hole. Also, raising the centre bottom of the hole slightly higher than the surrounding area. This allows water to disperse, reducing the possibility of water pooling in the planting zone.

<u>Planting Balled and Bur-lapped Trees</u>.

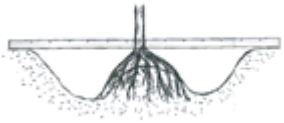


1. Balled and bur-lapped (B & B) trees, although best planted as soon as possible, can be stored for some time after purchase as long as the ball is kept moist and the tree stored in a shady area.
2. **Lift a B & B tree by the ball, never by the trunk**. Use proper lifting techniques, lift with your legs not your back.
3. The burlap surrounding the ball of earth and roots should either be cut away completely (mandatory, in the case of synthetic or plastic burlap) or at least pulled back from the top third of the ball (in the case of natural burlap).
4. Remove any string or twine.
5. Push or shovel backfill soil (combinations of peat moss, composted manure, topsoil, etc.) into the hole surrounding the tree just to the height of the ball or slightly lower to allow for some settling. Be careful not to compress the back fill soil as this may prevent water from reaching the roots and the roots from expanding beyond the ball.

Planting Container Trees.

1. Container trees (though subject to greater heat and drying conditions than B and B) can also be stored for a brief period of time after purchase as long as the soil in the container is kept moist and the tree stored in a shady spot. The procedure for planting container trees is similar to that for B & B trees. In the case of metal or plastic containers, remove the container completely. In the case of fiber containers, tear the sides away.
2. Carefully remove the tree from the container, check the roots. If they are tightly compressed or 'pot bound', use your fingers or a blunt instrument (to minimize root tearing) to carefully tease the fine roots away from the tight mass and then spread the roots prior to planting. In the case of extremely woody compacted roots, it may be necessary to use a spade to open up the bottom half of the root system. The root system is then pulled apart or 'butterflied' prior to planting. Loosening the root structure in this way is extremely important in the case of container plants. Failure to do so may result in the roots 'girdling' and killing the tree. At the very least, the roots will have difficulty expanding beyond the dimensions of the original container.
3. If roots were found pot bound, lightly break up the soil outside the planting zone. This will allow the roots that quickly move out of the planting zone to be more resilient as they anchor into existing surrounding soil conditions.
4. Once the tree is seated in the hole, the original soil is then back-filled into the hole to the soil level of the container. Again, remember not to overly compress the back-filled soil especially by tramping it with your feet. Compress gently using your hands instead.

Planting Bare-Rooted Trees.



1. Planting bare-rooted trees is a little different as there is no soil surrounding the roots. Most importantly, the time between purchase and planting is a more critical issue.
2. Plant as soon as possible.
3. Inspect the roots to ensure that they are moist and have numerous lengths of fine root hairs (healthy). Care should be taken to ensure that the roots are kept moist in the period between purchases and planting. Prune broken or damaged roots but save as much of the root structure as you can.
4. To plant, first build a cone of earth in the centre of the hole around which to splay the roots. Make sure that when properly seated on this cone the tree is planted so that the 'trunk flare' is clearly visible and the 'crown', where the roots and top meet, is about two inches above the soil level. This is to allow for natural settling.

TRANSPLANTING TREES :

There is always danger in moving plant material from one location to another. Root material is sacrificed, and depending on the previous state of the plant, this can be a severe stress. If necessary, it is possible to transplant trees from one area of your property to another. **The key lies in ensuring that the tree to be transplanted has a good healthy root ball and that the tree and ball together are not unmanageably heavy.**

1. Tie the branches together loosely.
2. Dig a two-foot deep trench around the tree at least one foot larger than the size of the root ball (or as much intact viable root material as practical). Once the trench is dug, undercut around the shrub. Carefully prune the roots extending from the ball as you dig down.
3. When the ball is partially exposed, begin to wrap the ball in burlap starting from the base of the tree down using twine to secure the wrapping. Keep digging until the ball is undercut and sitting on a soil pedestal.
4. Carefully tilt the tree and ball and finish wrapping and securing the burlap underneath.
5. To help your tree establish itself when transplanted, treat the planting area with **mycorrhizal fungi**, a **specially formulated fertilizer** and **biostimulant**.
6. The do-it-yourself approach is useful only for small trees. For large trees, hire a professional who has the specialized equipment and knowledge to do the job safely.

WATERING:

- Newly planted trees should be watered at the time of planting. In addition, during the first growing season, they should be watered at least once a week in the absence of rain, more often during the height of the summer. However, care should be taken not to overwater as this may result in oxygen deprivation.
- If you are uncertain as to whether a tree needs watering, dig down 6-8 inches at the edge of the planting hole. If the soil at that depth feels powdery or crumbly, the tree needs water. Adequately moistened soil should form a ball when squeezed.
- Regular deep soakings are better than frequent light wettings. Moisture should reach a depth of 12 to 18 inches below the soil surface to encourage ideal root growth.

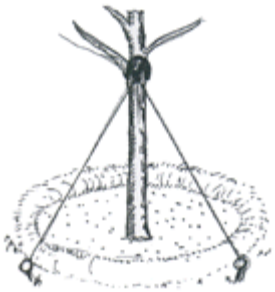
MULCHING:

1. To conserve moisture and promote water and air penetration, the back filled soil surrounding newly-planted trees can be covered with mulch consisting of material such as bark, wood chips or pine needles (although the acidity associated with pine needles is not suited for many plants).
2. Mulch depth should be between 3 to 4 inches.
3. Do not, under any circumstances, cover the area surrounding the tree with plastic sheeting since air and water movement are prevented. Porous landscape fabric can be used since it freely allows water and air penetration.

STAKING AND GUY-WIRING :

Young trees should be able to support their own weight, but when they are transplanted, they often need time to reestablish themselves.

Once a tree is planted, it will concentrate its energy on standing upright. If it is unable to do so, try thinning out the upper branches to reduce wind resistance. If that is not enough the tree will have to be staked as follows:



1. Only stake the tree long enough for it to be able stand on its own.
2. Stakes should not be too tight - there should be room for the tree to sway in the wind.
3. Stakes should not be too loose - the tree should not rub against the stakes.
4. Stakes should be buried at least 1.5 feet underground to provide ample support.

PRUNING :

1. Use restraint when pruning your newly-planted trees.
2. Prune only to remove damaged or broken branches.
3. Do not prune the top of the tree as this may alter the structure of the tree excessively (check species requirements) and may hamper carbohydrate production.
4. Do not paint the cuts with compounds (e.g. Latex) that prevent air from accessing the wound, thereby slowing the healing process.

REGULATORY REQUIREMENTS

- WS&H Act W210, Section 4, 5, 7, 7.1
- Mb. Workplace Safety & Health Regulations 217/2006, Part 16, Sections 16.1 – 16.18
  - 2.1 Safe Work Procedures
  - 6.1 Personal Protective Equipment
  - 8.0 Musculoskeletal Injuries
  - 35.0 WHMIS
  - 36.0 Chemical Biological Substances
  - Safe Work Tip – Out Door Heat Stress