

GODERICH TREES PROJECT

DAMAGED TREES - REPAIR and REGENERATION

Why are Trees Important to Goderich?

Aside from beauty, shade, air quality, shelter from wind and privacy, trees are very important to Goderich. Goderich is a peninsula surrounded on 3 sides by steep lake-banks and steep riverbanks. The Town itself is built on the above tableland.

Water (rain, snowmelt etc.) naturally filters into the ground and drains from the highest point, the Courthouse, to the banks where it emerges as springs along the banks. Through their root systems, trees absorb this ground water and prevent the springs from becoming flowing streamlets erupting along the banks.

Trees prevent erosion of both the banks and top of bank public parks by reducing the flow of groundwater to the banks. The roots not only draw water but also stabilize the soil and hold the banks together, preventing the 'shrinkage' of both tableland and top of bank parks due to erosion.

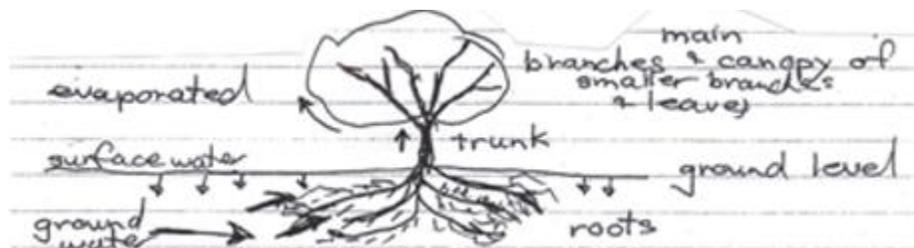


Diagram 1): Trees in the Landscape. The left side shows how trees absorb and evaporate water. The right side shows major parts of a tree.

Due to the loss of trees from the F3 Tornado and the cutting down of both damaged and undamaged trees, we will experience increased erosion and shrinkage of the tableland. Planting new trees and repairing and regenerating older damaged trees can reduce this erosion.

Repair and Regeneration:

The payback from repairing and regenerating damaged trees is DOUBLE that of new plantings. This is because older trees have larger, more developed, root systems that draw huge quantities of groundwater and will continue to draw water as the tree regenerates.

Rule #1: If a tree has withstood an F3 Tornado and is more or less vertical, it deserves the chance to live. Wait until late Spring to see if nature regenerates the tree through new growth. Do not cut it down.

Is this tree Dead?

If a tree looked healthy before the F3 Tornado, chances are it is still healthy despite total leaf loss and broken branches (whether removed or still there).

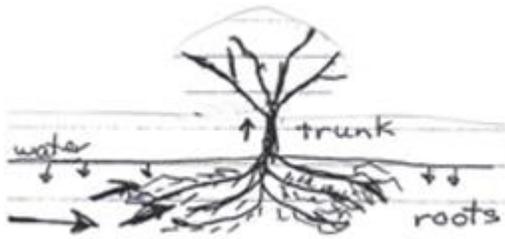


Diagram 2): Damaged Tree? Same tree as 1) above, except it has no canopy.

The tree in Diagram 2) is the same as in Diagram 1) except that it has no canopy of leaves and smaller branches. Whether pulled off by the F3 Tornado or the result of pre-winter dormancy (all deciduous trees lose their leaves in late autumn) this tree is absolutely healthy. This tree will bounce back in the Spring as if nothing happened.

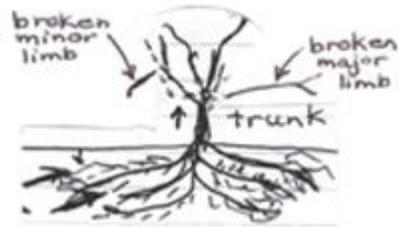


Diagram 3): Damaged Tree? Same tree as 1) above, with major & minor limb damage.

The tree in Diagram 3) has been damaged by the F3 Tornado but is still healthy. Repairs would be proper cutting (dashed line) of the 1 major limb and 1 minor limb that are broken. These cuts should be at the 'branch collar' as shown in Diagram 4) and are equal to pruning a healthy tree. If major limbs on only one side were damaged, the 'balancing cuts' shown in Diagram 5) may be needed to help prevent future leaning and possible breakage. Both trees will bounce back in the Spring without difficulty.

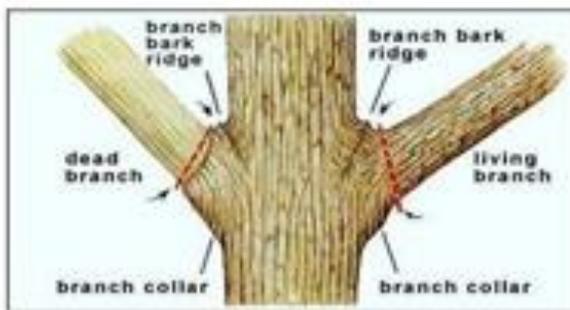


Diagram 4): Branch Collar Cut to preserve the tree's energy.

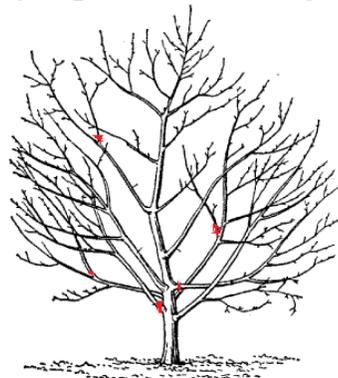


Diagram 5): Balancing Cuts so tree grows vertical, reduces future leaning & breakage.

If the cuts have not yet been made, unless there is a safety issue, simply leave the tree alone until early Spring. But these cuts should be done so that the tree's growth goes into regenerating itself with new growth. Otherwise the tree will waste energy attempting to self-repair, or contain the damage, to the broken limbs. All trees attempt to seal damaged areas rather than heal them. Proper cutting aids the tree in sealing.

Rule #2: Don't cut down a healthy tree to find out what is wrong with it. Even with no canopy and major & minor limb damage a healthy tree will bounce back. Proper cutting helps the tree regenerate itself.

Trees in Stress?

If a tree has sustained major damage to more than two-thirds (66%) of its major limbs, the tree is in stress and may have suffered 'catastrophic injuries'. That tree is in shock and needs to be repaired, or helped, to regenerate itself. Proper cuts and repairs are done so the tree will use its energy toward new growth and will regenerate itself.

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Proper cuts involve clean cuts to broken limbs, so the limbs and trunk do not bleed out and so tree pests (bugs, bacteria etc.) do not enter. 'Catastrophic injuries' such as vertical tears to the tree's trunk, where major limbs have torn off, and major areas of exposed trunk should be cut back to solid wood.

Rule #3: Major injuries need to be repaired immediately in the Spring to help the tree regenerate itself. Remember that the tree's roots are its source of energy and are not damaged.

Above all be patient. Some trees that are in stress may actually skip one growing season to conserve energy. "July or August of this summer may be too soon to make an accurate assessment of the tree's overall health and ability to regenerate itself." Be patient and wait for the second growing season.

Our preliminary assessment is that there are probably 500 – 1,000 damaged trees still standing on the Goderich tableland in various states of disrepair, including many mature trees. "The vast majority of damaged trees are capable of regeneration if properly repaired." About 80% of these are on private property with the remaining 20% on public boulevards (not including the lake-bank slopes with extensive tree damage).

Arborists:

If you have questions regarding the health of trees and proper repair techniques you can consult an "arborist", preferably an ISA Certified Arborist.

Arborists are tree specialists who, among other things, know how to cut and repair damaged trees so that the overall health of the tree is maximized. They have an apprenticeship and are tested and certified by the ISA (International Society of Arboriculture). Certified arborists are retested every 2 years. Their focus is the health of trees and of the environment surrounding them, and they are prepared to make sensitive and sensible judgements about trees. They are tree surgeons. *

There are two Certified Arborists in the Goderich area: Ontario Tree Specialists and Huron Tree Service.

LET'S REGENERATE GODERICH TOGETHER

Repair and Regenerate Damaged Trees

* Prepared by Gord Garland (Honours BA, MA) and Chris Sallows (Journeyman Arborist) with review and input from Michael Ormston-Holloway (BSc, MScP, GDHort, MLA) who is an ISA Certified Arborist. Michael spoke about these issues in the Friday and Saturday evening summary sessions to the 'Goderich Master Plan Design Workshop' January 12-14, 2012.