

MILTON HYDRO DISTRIBUTION INC.

TREE TRIMMING SPECIFICATIONS

1. SCOPE

Milton Hydro is responsible for distributing electricity within the Town of Milton in a safe and reliable manner. As part of its mandate Milton Hydro is required to manage vegetation in proximity to Milton Hydro's power lines.

Milton Hydro's tree trimming efforts are intended to minimize power interruptions and power quality issues resulting from tree contacts.

This specification details Milton Hydro's tree trimming practices in fulfillment of its vegetation management obligation.

The first part of this specification provides a general description of Milton Hydro's tree trimming practices both on public roads and on private property. The second part of this specification (Appendix A) is a more comprehensive set of requirements directed at Milton Hydro's tree trimming contractors.

This specification, as written, will govern all line clearing operations authorized by Milton Hydro unless specifically amended by the substitution of approved clauses or otherwise, to meet special conditions.

2. PLANTING TREES NEAR POWER LINES

To minimize the need for tree trimming Milton Hydro recommends the following restrictions be followed when planting trees in the vicinity of power lines:

- Milton Hydro recommends that no trees be planted directly underneath power lines.
- Any trees planted within 5 metres of power lines should have a maximum mature height of 6 metres or less.
- Trees planted between 5 to 10 metres from power lines should have a maximum mature height of 12 metres.

Trees that exceed these height restrictions are responsible for the majority of tree related power outages. Falling trees and branches can bring down power lines, cause power interruptions and pose a safety hazard.

3. TREE TRIMMING

Trimming trees that encroach on power lines is a critical activity undertaken by Milton Hydro to minimize tree related power outages. By trimming trees along power lines Milton Hydro reduces the possibility that a single tree can affect the power supply to multiple customers

Milton Hydro contracts professional arborists who are fully qualified to assess individual trees and determine the trimming strategy that best delivers the required power line clearances while minimizing the impact on the tree. In some instances the impact on individual trees will be significant including removal of the entire tree.

4. MILTON HYDRO'S RESPONSIBILITY AND RIGHT TO TRIM TREES

Milton Hydro has a regulated responsibility to trim trees near power lines. Ontario Regulation 22/04 and the electrical Distribution System Code both require that Milton Hydro manage vegetation in proximity to Milton Hydro owned electrical power lines. Milton Hydro continually trims trees throughout Milton on a rotational basis to ensure proper separation is maintained between trees and power lines.

Due to the impact of trees on power lines and the power reliability experienced by all customers connected to those power lines, the Government of Ontario has granted utilities the right to trim all trees encroaching on power lines. According to the Electricity Act:

A transmitter or distributor may enter any land for the purpose of cutting down or removing trees, branches or other obstructions if, in the opinion of the transmitter or distributor, it is necessary to do so to maintain the safe and reliable operation of its transmission or distribution system. 1998, c. 15, Sched. A, s. 40 (4)

As part of its normal process Milton Hydro will trim trees that are on, or extend unto, municipal and regional Roads/Right of Ways (ROW). This includes trees that are planted on private property but extend unto the ROW. Milton Hydro will trim trees beyond the ROW limits and unto private property to ensure proper clearances are maintained from Milton Hydro owned power lines.

In some instances it will be necessary to completely remove trees encroaching on power lines. On ROW's trees that must be removed are done so as part of the regularly scheduled tree trimming work.

In some instances Milton Hydro will need to remove or significantly alter the appearance of trees planted on private property. Prior to removing trees planted on private property, Milton Hydro will endeavor to review the proposed work with the property owner. Milton Hydro will make all reasonable efforts to contact the property owner before removing any trees planted on private property. If the tree is identified as a high risk tree, Milton Hydro may remove the tree without prior notice.

5. CUSTOMER OWNED PRIMARY AND SECONDARY SERVICES

Customers are responsible for trimming trees encroaching on customer owned power lines. Tree trimming around customer owned power lines is subject to Electrical Safety Authority (ESA) regulations.

If customer owned power lines are not properly cleared by the customer, Milton Hydro may disconnect the privately owned line from the main distribution system to

preserve the power reliability experienced by all other customers connected to Milton Hydro's power lines.

6. GENERAL TREE TRIMMING REQUIREMENTS

To ensure tree related power quality issues are minimized, Milton Hydro has adopted tree trimming requirements that include:

- 1) Minimum trimming requirements that incorporate tree growth rates and tree trimming cycle times so as to prevent trees from growing into power lines prior to the next trimming cycle
- 2) Clearance requirements that differentiate between branches and tree trunks (with no branches)
- 3) A requirement to remove any diseased or other high risk trees that may fall onto Milton Hydro's power lines (including trees beyond the minimum clearance requirements)
- 4) Milton Hydro posts its tree trimming plans annually at www.MiltonHydro.com. Customers with questions regarding the tree trimming program can contact Milton Hydro at 905-876-4611 or use the customer feedback form available on the web site.

Minimum Clearance Requirements

All branches and limbs will be pruned to provide the minimum clearance from Milton Hydro's primary distribution lines. The minimum clearance shall be as specified in **Table 1 - Tree Clearances from Overhead Lines**.

All high risk limbs that may fall, sway or otherwise contact power lines will be removed.

For transformers and drop leads, the clearance requirements detailed in **Table 1** shall apply except that the minimum clearance requirement for all growth rates shall be 3 meters. Sufficient clearance should also be provided so that guy wires and strain insulators are not in contact with limbs.

In addition, trees will be cleared such that a lineman can climb poles without being obstructed by branches and limbs.

Reduced Minimum Clearance for Bare (no Branches) Tree Trunks

The minimum clearance from Milton Hydro's closest power line to Tree Trunks that are clear of branches shall be 1.0 m provided the required clearances below the conductor, parallel with the conductor, and overhanging the conductor are satisfied, as stipulated in **Table 1 - Tree Clearances from Overhead Lines**

Table 1 - Tree Clearances from Overhead Lines

TREE GROWTH RATE	PRIMARY DISTRIBUTION LINES			SECONDARY LINES
	Growth below conductor (m)	Growth parallel with conductor (m)	Growth overhang of conductors (m)	Growth from all directions (m)
Extremely Fast	3.0	3.0	6.0	1.0
Fast	2.5	2.5	5.0	1.0
Medium	2.0	2.0	4.0	1.0
Slow	2.0	2.0	3.0	1.0

Minimum clearance from Milton Hydro’s power lines to Tree Trunks that are clear of branches shall be 1.0 m – provided all other clearance requirements in Table 1 are satisfied.

For transformers and drop leads the clearance requirements stipulated above shall apply except that the minimum clearance requirement for all growth rates shall be 3 meters.

TREE SPECIES and RATE OF GROWTH

Extremely Fast

Basswood/Linden
 Caroline Poplar
 Cottonwood
 Lombardy Poplar

Fast

Manitoba Maple
 Red Maple
 Silver Maple
 Willow

Medium

Ash
 Aspen
 Beech
 Birch
 Black Cherry
 Elm
 Locust
 Walnut
 White Pine

Slow

Balsam Fir
 Black Spruce
 Hemlock
 Hickory
 Horse Chestnut
 Jack Pine
 Larch
 Norway Maple
 Norway Spruce
 Scotch Pine
 White Cedar
 White Oak
 White Spruce