Tree Roots

Tree roots tend to seek subsurface drains and will often plug them. Factors which determine if this is a critical problem are the species of tree and whether or not there is continuous flow in the drain. Table 1 shows minimum distances which should be maintained between trees and subsurface drains.

Table 1
Minimum Distances to be Maintained Between Trees and Drains

Type of Tree	Intermittent Flow		Continuous Flow	
	Mains	Laterals	Mains	Laterals
Water-loving Trees	100 feet	75 feet	100 feet	75 feet
Other Trees	50 feet	25 feet	100 feet	75 feet

The following Wisconsin trees are considered to be "water-loving":

- American Elm
- Balsam Poplar
- Bigtooth Aspen
- Black Ash
- Boxelder
- Eastern Cottonwood
- Green Ash
- Lombardy Poplar
- Quaking Aspen
- Red Maple
- Red Elm
- Silver Maple
- White Ash
- Willows

When trees cannot be removed or drains routed to attain the distances shown in Table 1, sealed drains can be installed. These drains, including all joints, must be completely watertight and resistant to root penetration. Examples of sealed drains are continuous lengths of non-perforated corrugated plastic tubing, asbestos cement pipe, bituminized fiber pipe, crimped or welded seam helical corrugated metal pipe with flanged couplings, or smooth steel pipe with welded or threaded joints.

Drains placed in orchards cannot be treated in accordance with the criteria outlined above since little or no protection can be given to lateral lines. Main lines should be kept as far as possible from trees and have sealed joints when flow is continuous. All orchard installations are risky, and the life expectancy and effectiveness of subsurface drainage may be reduced due to tree roots.