



Forest Health Protection, Southern Region

URBAN TREE DECLINE

Importance. - Among the problems leading to urban tree decline are: air pollution, soil compaction, mower- and machinecaused injuries, poor pruning, heat reflected from streets and buildings, direct root damage from excavations and turf cultivation, paving, improperly applied herbicides, potting above and below ground level, overplanting, and lack of understanding about tree growth and development. For these and other reasons, urban trees generally suffer a diseased existence and must be frequently replaced. Those that survive are often aesthetically unpleasing.

Identifying the Cause. - In addition to the above, a variety of fungi can attack trees that have been weakened. Most are heart, butt, and root rotting fungi that can affect trees structurally, making them unsafe. Others attack the roots, causing the tops to die back. Only rarely will all the causal agents in urban decline be identified.

Identifying the Injury. - Identifying the injury is usually easy. Affected trees show a dieback of the crown, beginning with the uppermost and outermost branches first. In the final stages, the trees may have only a few green sprouts and leaves attached to the main stem.



Maple declining from paving - and possibly other factors.



Elm declining from construction and compaction.

Biology. - Tree crowns most frequently begin to die back when the roots have been damaged or are diseased. This is due to the fact that plants grow with a carefully balanced root/ shoot ratio. When a portion of the roots ceases to function, a portion of the crown dies as well.

Often, disease fungi enter the weakened portion of the tree and further damage it.

Control. - Protect, fertilize, and irrigate trees that are declining. Plant trees that are resistant to air pollution injury and drought, and provide trees with adequate root space and aeration. Remove dying trees to avoid danger to people and property.
