



## TREE DECLINE

Hotter, drier summers and severe drought are causing a significant number of trees to decline across the northwest. A WA forest health survey\* has identified over 545,000 acres of trees identified as dying or dead in 2024-2025. Drought stressed trees pose a significant liability to many areas as they provide easy fuel for fires. However, drought is not the only reason for tree decline. Wood-boring insects are drawn to trees that are stressed as the tree has less energy to repel them. Decline will occasionally occur because of a single event, such as a disease or injury. More often, tree decline is a result of stress that has been present for many years and typically, there is more than one stress factor. Trees under stress are predisposed to additional problems, making diagnosis even more difficult.

While all trees are susceptible to decline, Bigleaf Maple, Western Red Cedar, and Conifers are especially impacted.

### SYMPTOMS

(Tree may have one or more of these symptoms)

- Smaller or fewer leaves than normal
- Yellow or brown leaf edges
- Premature autumn coloration or leaf drop
- Short internodal growth (distance between each years' annual bud scars)
- Dead branch tips or branches. (Dead branches may occur next to healthy ones)
- Branches at top of tree wilted or bare of leaves

### CAUSES

#### Injury to trunk from:

- String trimmers or lawn mowers (repeated injury has a cumulative effect)
- Old pruning wounds that didn't heal
- Weather events such as hail, wind, lightning, freezing or very hot temperatures
- Animals feeding on bark (deer, elk, porcupine, mice, vole, etc.)
- Other wounds

#### Injury to roots from:

- Soggy or poorly drained soils or seasonal high water table

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Email: [AskAMasterGardener@SpokaneMG.org](mailto:AskAMasterGardener@SpokaneMG.org)

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#### C114 – Tree Decline

- Excessive heat to surface roots during summer
- Soil compaction
- Insufficient room for root growth
- Change in soil level above the roots
- Recent construction in and around the root zone (sidewalks, sewers, patios, etc.)
- Root rots

#### **Injury to whole plant from:**

- Drought or lack of proper irrigation
- Not being hardy for winter temperature in this area
- Being planted in poor soil or subsoil (especially in new housing developments)
- Improper planting or root damage prior to planting
- Poor fertility
- Chemicals in root zone
- Kinked or circling root

### **REMEDIES FOR ESTABLISHED TREES**

Insufficient water over the course of several years is the most common cause of tree decline. Trees need supplemental irrigation in the dry summer season even if the spring has been wet. Additional irrigation is particularly important for trees transplanted within the past 3 years or that have been stressed from any of the factors listed above. Water deeply and infrequently (once a week) rather than sprinkling lightly for 10 or 20 minutes a day. When the soil feels dry or only slightly damp 4 inches below the surface (a moisture meter is a good tool to have), it is time to water. If possible, water early in the morning or later in the evening. Well-drained, sandy soils need more water more often than loam or clay soil. Trees, especially conifers, often need water during the winter to prevent drying of the needles.

Identify sources of stress and eliminate them if possible. Don't have grass growing right up to the trunk, which requires mowing close to the bark. Instead, use a mulch to prevent weeds and conserve soil moisture. Wood and bark chips work well. Do not use plastic because it interferes with root-soil gas exchange and water infiltration. Spread the mulch in a three-foot circle around the trunk, about 2-4 inches deep. Keep the mulch several inches away from the trunk to prevent molds or rots. Renew yearly if necessary.

Protect trees from bark-chewing animals by using hardware cloth or other wire mesh placed around the trunk.

In public areas, try to re-route walkers or runners to prevent soil compaction in the root zone of trees.

Correctly prune out dead and dying branches to prevent invasion by insects or diseases to healthy branches. A certified arborist can provide the correct way to do this.

Fertilize trees that show symptoms of nutrient deficiencies, such as small, yellow or off-color leaves.

### **CARE FOR NEW TREES**

#### C114 – Tree Decline

Select trees that are hardy for your area and have room to grow to maturity without severe or frequent pruning. (You may plan to do annual pruning, but future property owners may not.) When you prune, take no more than 1/4 of the live tissue from the tree, shrub, or plant per year unless more is required for safety, e.g. power line clearance, fire safety, etc. Pruning is an injury and it needs time to recover.

Plant trees where they will get the sun exposure or shade protection required by the chosen variety.

Transplant properly and water adequately. (See C100, [Planting Landscape Trees and Shrubs](#)) New trees may take 2 or 3 years to become well established in the landscape.

Mulch around trees and water as described above.

#### Additional Resources:

[Why is My Tree Dying](#) Washington Department of Natural Resources  
[Tree Care and Maintenance](#) Arbor Day Foundation  
[Watering Trees in Eastern Washington](#) City of Spokane, WSU Extension