



**Fine Twig Dieback** measures the percentage of dieback in a tree's crown. The rating applies as a percentage of the live crown area. Do not include self-pruning (natural dieback of lower or inner branches) or large, dead branches.

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| Class | % Dieback | Class | % Dieback |
|-------|-----------|-------|-----------|
| 1     | 0-1%      | 55    | 51-55%    |
| 5     | 2-5%      | 60    | 56-60%    |
| 10    | 6-10%     | 65    | 61-65%    |
| 15    | 11-15%    | 70    | 66-70%    |
| 20    | 16-20%    | 75    | 71-75%    |
| 25    | 21-25%    | 80    | 76-80%    |
| 30    | 26-30%    | 85    | 81-85%    |
| 35    | 31-35%    | 90    | 86-90%    |
| 40    | 36-40%    | 95    | 91-95%    |
| 45    | 41-45%    | 100   | 96-100%   |
| 50    | 46-50%    |       |           |



Fine twig dieback of a London plane tree. Area pruned for powerline is not included in Fine Twig Dieback estimate.

**Leaf Discoloration** is the percentage of total leaf surface area with different coloration than a healthy tree of the same species.

Possible symptoms include dark spots on leaves, leaves that are yellow, brown, or lighter in color than a healthy tree of that species.

| Class | Definition   |
|-------|--------------|
| 1     | 0-1% (trace) |
| 2     | 2-25%        |
| 3     | 26-50%       |
| 4     | 51-75%       |
| 5     | 76-100%      |

Does not include cultivars with normally variegated or colored leaves. Applies to the total % of crown that is discolored, not the % of leaves that are discolored.

**Leaf Defoliation** applies to the percentage of the crown with holes in leaves or missing sections of leaves.

This can be due to herbivory, hail damage, or disease.

| Class | Definition   |
|-------|--------------|
| 1     | 0-1% (trace) |
| 2     | 2-25%        |
| 3     | 26-50%       |
| 4     | 51-75%       |
| 5     | 76-100%      |

The rating applies to the total percentage of the tree's leaf surface area that is defoliated – not the percentage of leaves with some defoliation.

**Crown Light Exposure** measures the number of sides of a tree that receive sunlight. A side counts as receiving full light if at least 1/3 of the side is unshaded.

| Class | Definition   |
|-------|--|
| 0     | The tree receives no light because it is shaded by trees, buildings, or other vegetation |
| 1     | The tree receives full light from the top or 1 side                                      |
| 2     | The tree receives full light from the top and 1 side (or 2 sides without the top)        |
| 3     | The tree receives full light from the top and 2 sides (or 2 sides without the top)       |
| 4     | The tree receives full light from the top and 3 sides (or 4 sides without the top)       |
| 5     | The tree receives full light from the top and 4 sides                                    |

To measure, consider 5 sides: the top of the tree, and 4 equal, vertical sides.





**Crown Vigor** is a measure of overall tree health, based on fine twig dieback, leaf discoloration, and defoliation. Trees are sorted into 5 classes, on the right.

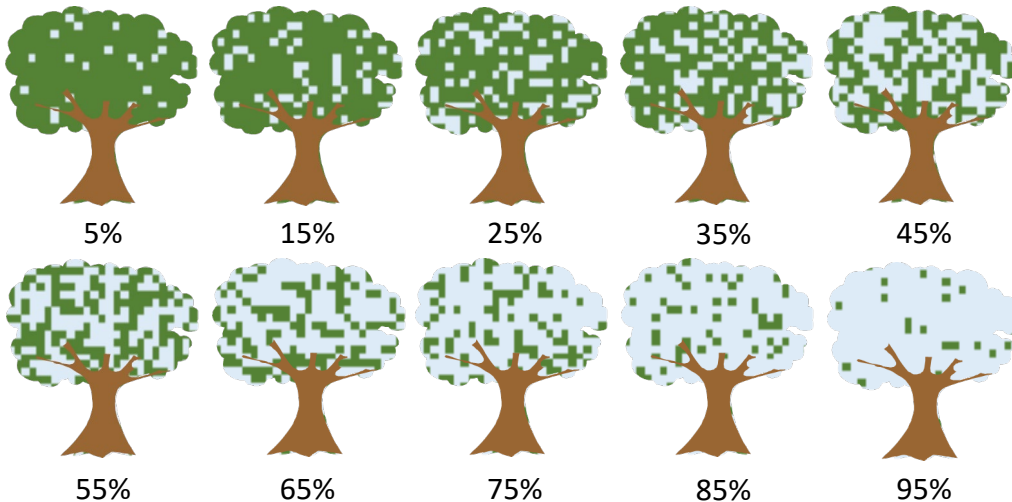


**Tree Portrait** is a photo of the entire tree. This may require stepping back from the tree – be mindful of hazards, especially traffic.

| Class | Definition  |
|-------|---|
| 1     | <ul style="list-style-type: none"> <li>• <b>Less than 10%</b> cumulative fine twig dieback, leaf discoloration, and leaf defoliation</li> <li>• Tree is in reasonably good health</li> <li>• No major branch mortality</li> </ul>   |
| 2     | <ul style="list-style-type: none"> <li>• <b>10-25%</b> cumulative fine twig dieback, leaf discoloration, and leaf defoliation</li> </ul> <p><b>And/Or</b></p> <ul style="list-style-type: none"> <li>• <b>25% or less</b> crown area missing due to broken or dead large branches</li> </ul>        |
| 3     | <ul style="list-style-type: none"> <li>• <b>26-50%</b> cumulative fine twig dieback, leaf discoloration, and leaf defoliation</li> </ul> <p><b>And/Or</b></p> <ul style="list-style-type: none"> <li>• <b>50% or less</b> crown area missing due to broken or dead large branches</li> </ul>        |
| 4     | <ul style="list-style-type: none"> <li>• <b>More than 50%</b> cumulative fine twig dieback, leaf discoloration, and leaf defoliation</li> </ul> <p><b>And/Or</b></p> <ul style="list-style-type: none"> <li>• <b>Over 50%</b> of crown area missing due to broken or dead large branches</li> </ul> |
| 5     | <ul style="list-style-type: none"> <li>• Tree (over 4.5 feet tall) <b>is dead</b>.</li> <li>• Can be standing or down</li> </ul>  |

**Crown Transparency** is an early, visual symptom of decline. It is quantified by estimating the percentage of skylight visible through a tree's crown. Observations of the crown should be made from below and from the sides of the tree. The rating applies to the total percentage of the crown that unblocked light passes through. Estimates are rounded to the nearest percentage class.

| Class | Definition | Class | Definition |
|-------|------------|-------|------------|
| 1     | 5%         | 6     | 55%        |
| 2     | 15%        | 7     | 65%        |
| 3     | 25%        | 8     | 75%        |
| 4     | 35%        | 9     | 85%        |
| 5     | 45%        | 10    | 95%        |



**Estimating percentages** can be difficult, and each tree will look different. These diagrams are examples of what each **Crown Transparency** class can look like.