A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas

**TREE HAZARD EVALUATION FORM** 2nd Edition

<table>
<thead>
<tr>
<th>HAZARD RATING:</th>
<th>Failure + Size + Target = Hazard Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Immediate action needed</td>
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<tr>
<td></td>
<td>Needs further inspection</td>
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<tr>
<td></td>
<td>Dead tree</td>
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</tbody>
</table>

**Site/Address:**

**Map/Location:**

**Owner:** public _____ private _____ unknown _____ other _____

**Date:** __________ **Inspector:** __________

**Date of last inspection:** __________

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**TREE CHARACTERISTICS**

**Tree #:** __________ **Species:**

**DBH:** __________ **# of trunks:** __________ **Height:** __________ **Spread:** __________

- Form: □ generally symmetric □ minor asymmetry □ major asymmetry □ stump sprout □ stag-headed
- Crown class: □ dominant □ co-dominant □ intermediate □ suppressed
- Live crown ratio: _____ % **Age class:** □ young □ semi-mature □ mature □ over-mature/senescent
- Pruning history: □ crown cleaned □ excessively thinned □ topped □ crown raised □ pollarded □ crown reduced □ flush cuts □ cabled/braced
- Special Value: □ specimen □ heritage/historic □ wildlife □ unusual □ street tree □ screen □ shade □ indigenous □ protected by gov. agency

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**TREE HEALTH**

- Foliage color: □ normal □ chlorotic □ necrotic □ Epicormics? □ Y □ N
- Foliage density: □ normal □ sparse **Leaf size:** □ normal □ small
- Annual shoot growth: □ excellent □ average □ poor **Twig Dieback?** □ Y □ N
- Woundwood development: □ excellent □ average □ poor □ none □ multiple pruning events **Approx. dates:**
- Vigor class: □ excellent □ average □ fair □ poor
- Major pests/diseases:

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**SITE CONDITIONS**

- Site Character: □ residence □ commercial □ industrial □ park □ open space □ natural □ woodland/forest
- Landscape type: □ parkway □ raised bed □ container □ mound □ lawn □ shrub border □ wind break
- Irrigation: □ none □ adequate □ inadequate □ excessive □ trunk wetted
- Recent site disturbance? □ Y □ N **Construction** □ Soil disturbance □ Grade change □ Line clearing □ Site clearing
- % dripline paved: 0% □ 10-25% □ 25-50% □ 50-75% □ 75-100% **Pavement lifted?** □ Y □ N
- % dripline w/ fill soil: 0% □ 10-25% □ 25-50% □ 50-75% □ 75-100%
- % dripline grade lowered: 0% □ 10-25% □ 25-50% □ 50-75% □ 75-100%
- Soil problems: □ drainage □ shallow □ compacted □ droughty □ saline □ alkaline □ acidic □ small volume □ disease center □ history of fail □ clay □ expansive □ slope ___° aspect: __________
- Obstructions: □ lights □ signage □ line-of-sight □ view □ overhead lines □ underground utilities □ traffic □ adjacent veg. □ __________
- Exposure to wind: □ single tree □ below canopy □ above canopy □ recently exposed □ windward, canopy edge □ area prone to windthrow
- Prevailing wind direction: __________

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**TARGET**

- Use Under Tree: □ building □ parking □ traffic □ pedestrian □ recreation □ landscape □ hardscape □ small features □ utility lines
- Can target be moved? □ Y □ N **Can use be restricted?** □ Y □ N
- Occupancy: □ occasional use □ intermittent use □ frequent use □ constant use

The International Society of Arboriculture assumes no responsibility for conclusions or recommendations derived from use of this form.
**TREE DEFECTS**

**ROOT DEFECTS:**

- Suspect root rot: Y N  
  Mushroom/conk/bracket present: Y N ID: 
- Exposed roots:  
  - severe  
  - moderate  
  - low  
  Undetermined:  
  - severe  
  - moderate  
  - low  
- Root pruned:  
  Distance from trunk:  
  Root area affected:  
  % Buttress wounded: Y N When:  
- Restricted root area:  
  - severe  
  - moderate  
  - low  
  Potential for root failure:  
  - severe  
  - moderate  
  - low  
- **LEAN:**  
  Deg. from vertical:  
  - natural  
  - unnatural  
  - self-corrected  
  Soil heaving: Y N  
- Decay in plane of lean: Y N  
  Roots broken: Y N  
  Soil cracking: Y N  
- Compounding factors:  
  Lean severity:  
  - severe  
  - moderate  
  - low  

**CROWN DEFECTS:** Indicate presence of individual defects and rate their severity (S = severe, M = moderate, L = low)

<table>
<thead>
<tr>
<th>DEFECT</th>
<th>ROOT CROWN</th>
<th>TRUNK</th>
<th>SCAFFOLDS</th>
<th>BRANCHES</th>
</tr>
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<tbody>
<tr>
<td>Poor taper</td>
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<tr>
<td>Bow, sweep</td>
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<tr>
<td>Codominants/forks</td>
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<td>Multiple attachments</td>
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<tr>
<td>Included bark</td>
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<tr>
<td>Excessive end weight</td>
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<tr>
<td>Cracks/splits</td>
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<td>Hangers</td>
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<td>Girdling</td>
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<td>Wounds/seam</td>
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<tr>
<td>Decay</td>
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<tr>
<td>Cavity</td>
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<tr>
<td>Conks/mushrooms/bracket</td>
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<tr>
<td>Bleeding/sap flow</td>
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<tr>
<td>Loose/cracked bark</td>
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<tr>
<td>Nesting hole/bee hive</td>
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<tr>
<td>Deadwood/stubs</td>
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<tr>
<td>Borers/termites/ants</td>
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<tr>
<td>Cankers/galls/burls</td>
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<tr>
<td>Previous failure</td>
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**HAZARD RATING**

Tree part most likely to fail:  
Inspection period: annual biannual other  
Failure Potential + Size of Part + Target Rating = Hazard Rating  
Failure Potential: 1 - low; 2 - medium; 3 - high; 4 - severe  
Size of part: 1 - <5" (15 cm); 2 - 6-18" (15-45 cm); 3 - 18-30" (45-75 cm); 4 - >30" (75 cm)  
Target rating: 1 - occasional use; 2 intermittent use; 3 - frequent use; 4 - constant use  

**HAZARD ABATEMENT**

Prune:  
- remove defective part  
- reduce end weight  
- crown clean  
- thin  
- raise canopy  
- crown reduce  
- restructure  
- shape  
Inspect further:  
- root crown  
- decay  
- aerial  
- monitor  
Remove tree: Y N Replace? Y N Move target: Y N Other:  
Effect on adjacent trees:  
- none  
- evaluate  
Notification:  
- owner  
- manager  
- governing agency  
Date:  

**COMMENTS**