

TREE RISK ASSESSMENT – FIELD TECHNIQUES

WAYNESBORO TREE HEALTH CARE WORKSHOP

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Terms to Know

- **Risk** – exposure to the possibility of loss, injury, or other adverse circumstance
Risk = Likelihood of occurrence × Consequence of occurrence
- **Failure** – breakage of tree parts, or loss of mechanical support in the root system
- **Target** – people or property that could be harmed by the failure of a tree or its parts
- **Hazard** – situation that poses an unreasonable threat to life, property, or environment

Tree Hazards

Hazardous Trees

- **Mitigation** – actions taken to address hazards and thereby reduce risk
- **Residual Risk** – risk remaining after mitigation actions have been taken

Tree Defects

Definition: A feature, condition, or deformity in a tree or its parts that indicates weak structure and predisposes a tree to failure.

- Dead parts
- Root problems
- Poor architecture
- Weak branch unions
- Cracks
- Cankers & Decay

Severity Terminology

- Minor defect
- Moderate defect
- Major defect
- Critical defect

Tree Risk Rating

Likelihood of Failure

- Species tendencies
- Defect location and severity
- Site conditions

Consequence of Failure

- Target value
- Target exposure (proximity/frequency)
- Size of defective tree parts

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Structure Assessment Practices

- **Objectives** – defined based on context, intended site use, and scope of assignment
- **Qualifications** – those assessing risk shall have appropriate training and experience
- **Scope of Work** – subject trees, assessment method, report content, report mode
- **Level of Assessment** – the manner and detail employed based on scope of work
 - Level 1** Limited visual assessment from specified perspective for obvious defects
Individual trees or populations of trees; ground-based or aerial
 - Level 2** Ground-based, 360° visual inspection of tree and site
Shall include identification of conditions that suggest latent defects
Use of basic investigative tools is not precluded
 - Level 3** Shall include all Level 2 requirements
Used when advanced methods are needed to evaluate conditions detected in a level 2 assessment
Aerial assessment and/or sub-surface assessment may be necessary
- **Target Identification** – consult to identify target type, value, and exposure.
- **Risk Analysis/Reporting** – data, documentation, recommendations, disclosures

Risk Assessment Flowchart

