

Key Components Needed to Classify Trees as Hazardous

Structural defects present among one or more of the following: root plate/root collar, trunk, large stems or scaffolds: defects may be caused by mechanical damage, history of poor management practices, site disruptions/changes, bacterial & fungal issues, pests, senescence

Target (People or Property) that are at risk within range of a possible, probable, or likely failure

Classification as Hazard Tree does not = Removal Required (key component of the TRA form is Mitigation Recommendations and associated Residual Risk)

Key Components Needed to Classify Tree as an Imminent Hazard

Imminent risk is a loose term that is flexible and adjusts to arborists discretion - intended to provide a real life opportunity for in situ field assessment & quick judgement calls to mitigate urgent risks & reduce liability. It should be noted there are pro's & con's to this.

The definition below is problematic as well for some confusing and contradictory statements.

SMC Needs to Better Define term "Imminent"¹

What is an "immediate hazard"? Generally, an immediate tree hazard is when a tree suddenly starts uprooting (cracks appear in the soil) or a tree suddenly starts splitting (fresh, white sapwood is visible in tree cracks) where the main branches connect to the trunk. Dead trees are generally not immediate hazards. If a large branch falls off of a tree, it may be considered a pruning emergency, but if the rest of the tree is still standing solidly it is not considered a tree removal emergency.²

Examples:

ISA (definition) Imminent - failure has started or is most likely to occur in the near future, regardless of weather.³

Tree Solutions (definition) - Imminent Hazard- Tree structural failure in progress with a target within range: Uprooting with noticeable soil fissures, heaving of the root plate, structural root fractures. Tree trunk or large limb breakage, often associated with overburdened weight distribution or leaning. Advanced decay weakening the structural integrity of the tree. Tree parts broken and hanging. Any of the above factors combined with near proximity to a home or business structure, power lines, road or driveway would indicate a dire emergency. Get a tree crew out now for emergency removal, on overtime if necessary.⁴

Hazard/Danger Tree Definition Examples:

A tree that has structural defects in the roots, stem, or branches that may cause the tree or tree part to fail, where such failure may cause property damage or personal injury Tree Defects: Tree defects can be of two kinds: Injury or disease that seriously weakens the stems, roots, or branches of trees, predisposing them to fail or structural problems arising from poor tree architecture, including V-shaped crotches in stems and branches that lead to weak unions, shallow rooting habits, inherently brittle wood, etc..⁵

Tree hazards include dead or dying trees, dead parts of live trees, or unstable live trees (due to structural defects or other factors) that are within striking distance of people or property (a target). Hazard trees have the potential to cause property damage, personal injury or fatality in the event of a failure. ...It has often been common practice to refer to such trees as either "hazard trees" or "danger trees" according to the different settings in which they are found; "hazard trees" near structures or in recreation areas versus "danger trees" along roads. Properly speaking, hazard trees and danger trees are synonymous terms, referring to trees that have the potential to cause death, injury or property damage if they fail. This document uses the two terms interchangeably.⁶

A danger tree / hazard tree is any tree or its parts that will fail because of a defect, and cause injury or death to people.⁷

¹ SDCI Tip 331 B 05/2018 - <http://www.seattle.gov/DPD/Publications/CAM/cam331b.pdf>

² City of Portland 08/2019 - <https://www.portlandoregon.gov/trees/article/497516>

³ TCIA Website 08/2019 - http://www.tcia.org/TCIAPdfs/expo16/goldcard/Tree%20Risk%20Assessment%20and%20Drones%20in%20Arboriculture%20-%20111016_0.pdf

⁴ Tree Solutions Website 08/2019 - http://www.treesolutions.com/pdf/Tree_Risk_Assess_1-22-10.pdf

⁵ Rutgers 2012 - https://urbanforestry.rutgers.edu/docs/urban_tree_risk_management.pdf

⁶ USFS Pac SW Region 2012 - https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5332560.pdf

⁷ OSHA OREGON GOV 2008 - <https://osha.oregon.gov/QSHAPubs/reserve-trees.pdf>

The tree must have uncorrectable defects severe enough to pose present danger to people or buildings under normal conditions as determined by the City Arborist or City Forester.⁸

A "hazardous tree" is defined as those trees with a structural defect, combination of defects or disease resulting in a structural defect that, under the normal range of environmental conditions at the site, will result in the loss of a major structural component of the tree in a manner that will: 1. Damage a residential structure or accessory structure, place of employment or public assembly or approved parking for a residential structure or accessory structure or place of employment or public assembly; or 2. Damage an approved road or utility facility; or 3. Prevent emergency access in the case of medical hardship.⁹

"Hazard tree" shall mean any tree that poses an imminent hazard to person or property. The Director may determine that a tree is a hazard if it or any part of it: (1) appears dead, dangerous, or likely to fall, even after proper maintenance activities are performed to eliminate dead or dangerous parts; (2) obstructs or damages a street, sidewalk, or other existing structure; (3) harbors a serious disease or infestation threatening the health of other trees; (4) interferes with vehicular or pedestrian traffic; or (5) poses any other significant hazard or potential hazard, as determined by the Director; provided, however, that feasible measures have been applied to abate any such hazard, such as applicable maintenance activities listed in Section 802(1) of this Article. The Director's determination shall be in writing.¹⁰

"Hazardous tree" means a tree that, in the opinion of a certified arborist, is defective, diseased, dying, or dead and should be removed; poses a high risk of failure or fracture with the potential to cause injury to people or damage to property and should be removed; or is causing damage to property or structures that cannot be mitigated in any manner other than removal of the tree. In any case, the Mayor shall have the authority to determine that a tree is not hazardous.¹¹

⁸ City of Atlanta FAQ's - <https://www.atlantaga.gov/Home/ShowDocument?id=1538>

⁹ City of Sammamish 02/2018 - https://www.sammamish.us/attachments/pagecontent/36925/TR-2_Hazard_Tree_Removal%202.2018.pdf

¹⁰ SF Environment.org - https://sfenvironment.org/sites/default/files/agenda/attach/public_works_code_groves_explanatory_documents_consolidated.pdf

¹¹ DC Tree code - <https://code.dccouncil.us/dc/council/code/sections/8-651.02.html>

Consider insertion of terms or outlined protocols to support definition & outlined standardized processes:

1. Identification of hazard trees must be performed by qualified professional¹² who possess their current ISA Arborist Certification & Tree Risk Assessment Qualification
2. Performing and documenting a systematic inspection as outlined by ISA standards¹³
3. Maintaining records of inspections and actions taken.
4. Performing the necessary actions to reduce immediate hazards
5. Reporting actions taken to appropriate agency including the following actions:
6. Submitting a retroactive permit for any imminent hazard tree removals taken prior to permit approval or review. This must be completed within a designated time frame 24 hours. These permit applications - should be an abbreviated form, should require photo documentation and a brief arborist memo outlining the cause, observations, actions taken, and reasoning. These should not require a fee to review and process.
7. Complete inspection, prepare a report and file the HTR application. Await review and decision prior to action.
8. All departments involved in tree removal (PPR, SPU, SCL, SDOT, SDCI) should be responsible for recording all tree failures into an approved tracking system to best monitor trends and assess past/current/future urban forest management needs.
9. Program should be compatible with the available resources (personnel and funding).

Additional Resources:

- <https://www.smgov.net/uploadedFiles/Portals/UrbanForest/About/Municipal%202014%20Final%20Report.pdf>

¹² SDCI Tip 331 B 05/2018 - <http://www.seattle.gov/DPD/Publications/CAM/cam331b.pdf>

¹³ PNWISA - <https://pnwisa.org/2017/12/ansi-tree-risk-assessment-standard-updated/>