

Level 2 Basic Tree Risk Assessment: Process for Assessing Decay

1. Is decay present?

Potential indicators of decay:

- old wounds and injuries
- response growth swellings
- cracks and seams
- oozing
- dead or loose bark
- sunken areas in the bark

Definite indicators of decay or missing wood:

- cavity openings
- nesting holes
- internal bee hives
- fungal fruiting structures
- carpenter ants

2. What is the significance of decay?

Basic assessment techniques to assess decay may include sounding and probing.

To determine the severity of decay, evaluate the following:

Load:

- crown density and area
- live crown ratio, taper
- wind strength and direction
- precipitation (e.g., rain, ice, snow)
- location of load
- response growth to load
- length of lever arm

Location and extent of decay:

- location (e.g., heartwood, sapwood, basal, root)
- in relation to cross section (e.g., center, off-center, cavity opening)
- in relation to defect or other condition (e.g., between codominant stems, tension side of lean)

Species profile:

- ability to compartmentalize
- wood density
- failure patterns

Response growth to decay:

- type of response growth (e.g., tension, compression, flexure wood, woundwood)
- amount of response growth (e.g., significant, minor, none)
- vigor of tree (consider tree species and age)
- age of tree wound or condition

Fungal profile:

- type of decay (e.g., white rot, brown rot, soft rot)
- aggressiveness of fungal species
- ability to penetrate Wall 4 of CODIT

Tree health:

- vigor of tree (consider tree species and age)
- dieback
- opacity (foliage density)
- live crown ratio

3. How does the significance of the decay affect likelihood of failure?

Increased likelihood of failure:

- significant load
- poor tree health
- insufficient response growth
- poor ability to compartmentalize
- aggressive fungal species
- critical location of decay

Decreased likelihood of failure:

- minor load
- good tree health
- significant response growth
- significant ability to compartmentalize
- slow-spreading fungal species
- non-critical location of decay

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