

Tree Risk Evaluations

Blue Gum Eucalyptus Assessment, Highway 101 Median, Leucadia,
CA

RISK MATRICES EXAMPLE

Matrix 1				
This matrix is used to estimate the likelihood of a tree impacting a specified target. This example shows a <i>Likelihood of Failure</i> of "Probable," and a "Medium" <i>Likelihood of Impacting Target</i> , resulting in the category of "Somewhat Likely."				
Likelihood of Failure	Likelihood of Impacting Target			
	Very Low	Low	Medium	High
Imminent	Unlikely	Somewhat Likely	Likely	Very Likely
Probable	Unlikely	Unlikely	Somewhat Likely	Likely
Possible	Unlikely	Unlikely	Unlikely	Somewhat Likely
Improbable	Unlikely	Unlikely	Unlikely	Unlikely

Matrix 2				
This matrix is used to determine the level of risk as the combination of likelihood of a tree/ tree part failing and impacting a target, and severity of the consequences. The <i>Likelihood of Failure and Impact</i> ("Somewhat Likely" in this case) is carried over from the previous matrix and combined with the <i>Consequence</i> of "Severe" to result in a "Moderate" risk level of risk.				
Likelihood of Failure and Impact	Consequences			
	Negligible	Minor	Significant	Severe
Very likely	Low	Moderate	High	Extreme
Likely	Low	Moderate	High	High
Somewhat likely	Low	Low	Moderate	Moderate
Unlikely	Low	Low	Low	Low

Methods

Evaluated 3 blue gum eucalyptus trees

Evaluated on November 18, 2021

Followed BMPs for Tree Risk Assessment (Industry Standard)

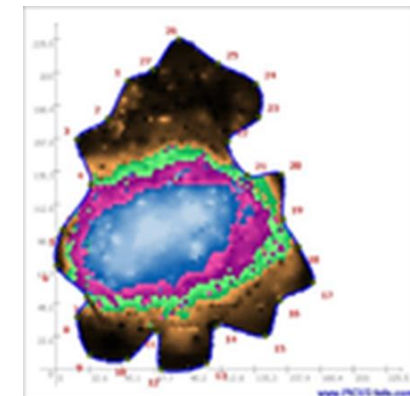
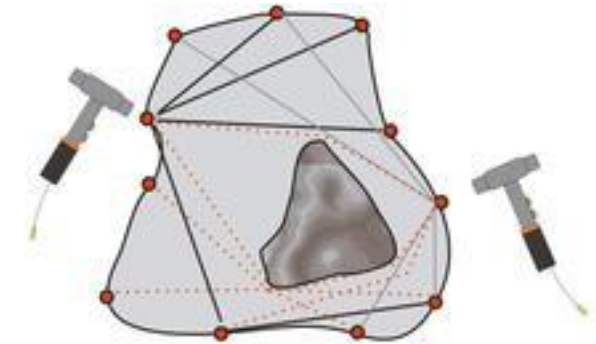
Level 3 Assessment using Sonic Tomography

Ground level visual inspection of the crown, stem, and visible root collar.

Identification of potential targets should failure occur.

Sonic Tomography Overview

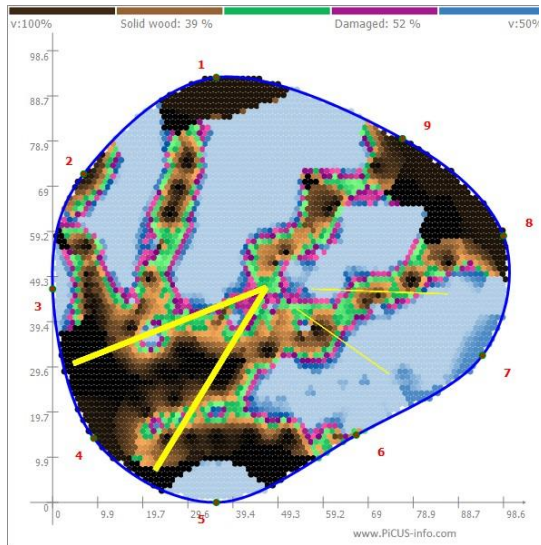
- Used to evaluate the presence and level of decay, cavities, and/or fractures within the trees by measuring the velocity of sound waves as they pass through wood
- Series of evenly spaced measuring points (MPs) are installed around the tree.
- Contact with wood allows for accurate sound transmission.
- Geometry of the tree is recorded precisely using PiCUS calipers
- Once the tree's geometry has been calculated and recorded, sensors are attached to the MPs and sonic measurements are taken.
- These sonic waves reverberate through the tree and the velocity of each wave is recorded at each of the MPs
- Differences in velocity help determine areas of healthy wood and areas of damaged wood, which has less elasticity and density than healthy wood.





Tree 7908 – Blue Gum

- Single stemmed
- 36-inch diameter at standard height (4.5 feet)
- Height – 55 feet
- Fair to poor health and structural condition
- Occurrences of sulfur fungus in the crown
- No defects of concern observed in the crown
- Extensive decay detected 61% damaged wood at 24 inches above ground level
- High risk





Tree 7920 – Blue Gum

- Single stemmed
- 36-inch diameter at standard height (4.5 feet)
- Height – 55 feet
- Fair to poor health and structural condition
- Occurrences of sulfur fungus in the crown
- No defects of concern observed in the crown
- Extensive decay detected 61% damaged wood at 24 inches above ground level
- High risk

