

#### **Overview:**

- Why we do/do not do Tree Risk Assessments
- Factors for predicting Risk
- When you should/should not offer advice on the monetary value of a tree
- How trees are appraised

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Municipal concerns after a



Urbanites have an expectation of absolute safety

#### Why Tree Risk Assessments?

- Client concerned over their tree or their neighbor's tree
- Municipal concerns after a



Urbanites have an expectation of absolute safety

#### Failures are rare,

property damage is very rare, personal injury is so low that it is difficult to calculate

Arborists

Predict:

Likelihood of Failure

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# Likelihood of the hazard striking the target

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#### **Arborists**

- Predict:
  - Likelihood of Failure
  - Likelihood of the hazard striking the target
  - Consequences (\$ cost or harm)



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#### **Tree Risk Assessment Qualification (TRAQ)**

- International Society of Arboriculture (ISA)
- **Qualitative** Assessment (words: Extreme, High, Moderate, Low)
- Assessor offers a risk rating & mitigation options to reduce risk
- Client makes all decisions (assumes all liability)



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#### The Qualified Arborist

• Know the plant material and its species failure profile,

Available on Ky Arborists' Assoc. web site www:Ky-ISA.org



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#### The Qualified Arborist

- Know the plant material and its species failure profile,
- Know and Recognize defects,





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#### The Qualified Arborist

- Know the plant material and its species failure profile,
- Know and Recognize defects,
- Estimate likelihood of failure,

Imminent Probable Possible Improbable







Occasional

Rare

#### The Qualified Arborist

- Know the plant material and its species failure profile,
- Know and Recognize defects,
- Estimate likelihood of failure,
- Assess target occupancy rate,How much harm is likely to occur,

#### Severe Significant Moderate Low



#### The Qualified Arborist

- Know the plant material and its species failure profile,
- Know and Recognize defects,
- Estimate likelihood of failure,
- Assess target occupancy rate,
- How much harm is likely to occur.
- He/she will offer an opinion to the client & suggestions on how to reduce risk & understanding their risk tolerance.



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#### As an Extension Professional:

- Never say, "This tree is safe."
- You can say, "I do <u>NOT</u> think that this tree is safe."
- You can say, "Doing X,Y,Z will reduce the risk of harm."



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#### As an Extension Professional:

Never say, "This tree is safe."You can say, "I do <u>NOT</u> think

that this tree is safe."



- You can say, "Doing X,Y,Z will reduce the risk of harm."
- You are NOT liable for trees that fail that you do not own & have not been employed to assess.
- I <u>never</u> assess trees from images.

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#### Tree Risk Assessment form

- https://www.pdffiller.co m/jsfillerdesk18/?requestHash=2 d6e11c651b4828e39c022 1fcb187d007d5f6e3e751 385eda0af2a1a2334cae5 &cet=12f&projectId=576 677734#ff82e6e2bb71d8 4aa44cf98af5b4d62c
- Or Google: Basic Tree Risk Assessment form

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#### "There is no Tree Risk Assessment Qualified arborist in my county."

- Can we get a 2<sup>1</sup>/<sub>2</sub> day training (for a fee) for your municipal or commercial arborists?
- Are you interested in receiving the information (but not receiving the qualification) – no MG or commercial arborists may attend.



#### Why Tree Appraisal?

- Eminent domain
- Accident
  - auto hit tree chemical drift
- Vandalism
  - intentional
  - treble benefits in KY



#### Assignment

- Why an <u>assessment</u> (≈dollar value) is needed will determine the approach (cost, income, sales) and
- Method used in arriving at an <u>opinion</u> of what a tree is worth.



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#### **Income Approach**





- or yield capitalization
- <u>Consult a CPA</u> (or other financial professional)



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### Sales Approach

- Used for:
- reduced property valuePaired analysis or
- hedonic regression
- <u>Consult a real estate</u> <u>appraiser</u>







#### **Cost Approach**

- Repair
- Reproduction
  - tree to be replaced with
  - <u>same</u> species & size or
  - TFT (trunk formula technique) for large trees
  - CCT (cost compounding technique)
- Functional Replacement



Commonly Available Nursery Tree

## Trunk Formula Technique

- Cost of LCANT (\$ per sq. inch)
- Extrapolate (LCANT) \$/sq. inch up to size of tree lost
- (subtract) Depreciation
- (add) other costs:
  - locating
  - transplanting & permits
  - after care (watering, etc.)
  - your appraisal fee

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Depreciation

- **Condition:** (0-100%)
  - Health
  - Structure (included bark, etc.)Form (true-to-type)
- Functional Limitations (0-100%)
  External Limitations (0-100%)

 <u>Condition</u> % we reconcile (not average) health, structure, & form.

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Depreciation• Condition: (0-100%)• Tree on campus<br/>(harm to students)• Health• H = 15%• Structure (included bark, etc.)• S = 70%• Form (true-to-type)• F = 15%• Functional Limitations (0-100%)• External Limitations (0-100%)

#### Depreciation

- **Condition:** (0-100%)
  - Health
  - Structure (included bark, etc.)
  - Form (true-to-type)
- **Functional Limitations** (0-100%)
- **External Limitations** (0-100%)

(harm to studen	its
□ H = 15%	
□ S = 70%	
□ F = 15%	
Tree @ arboret	ur
(collection)	
□ H = 10%	
□ S = 30%	
□ F = 60%	
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■ Tree on campus





• <u>same</u> species & size or

**Functional Replacement** 

or lower hedge for

screening

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different species or fence

**Cost Approach** 

LCAN'I

Largest

Nursery

Tree

Commonly Available

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