

# Georgia Forestry Commission

GEORGIA FORESTRY  
COMMISSION



**Tree Risk Management Workshop**  
**Lawrenceville, Georgia – March 16, 2017**

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## Session 1

### Concepts of Risk Management



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# General Principles of Risk Management



**Risk Assessment** is the technical process for evaluating what unexpected things could happen, how likely they are to occur, and consequences if they were to occur.

# General Principles of Risk Management

A **Tree Risk Assessment** should result in the following outcomes:

1. An overall risk rating for the subject tree.
2. Mitigation options to address the risk identified.



# General Principles of Risk Management

**Risk Management** is the process by which an agency assesses and monitors its risks and selects and implements measures to address those risks.



# General Principles of Risk Management



**Risk Management** is about making choices at the system level in the presence of uncertainty.

# General Principles of Risk Management

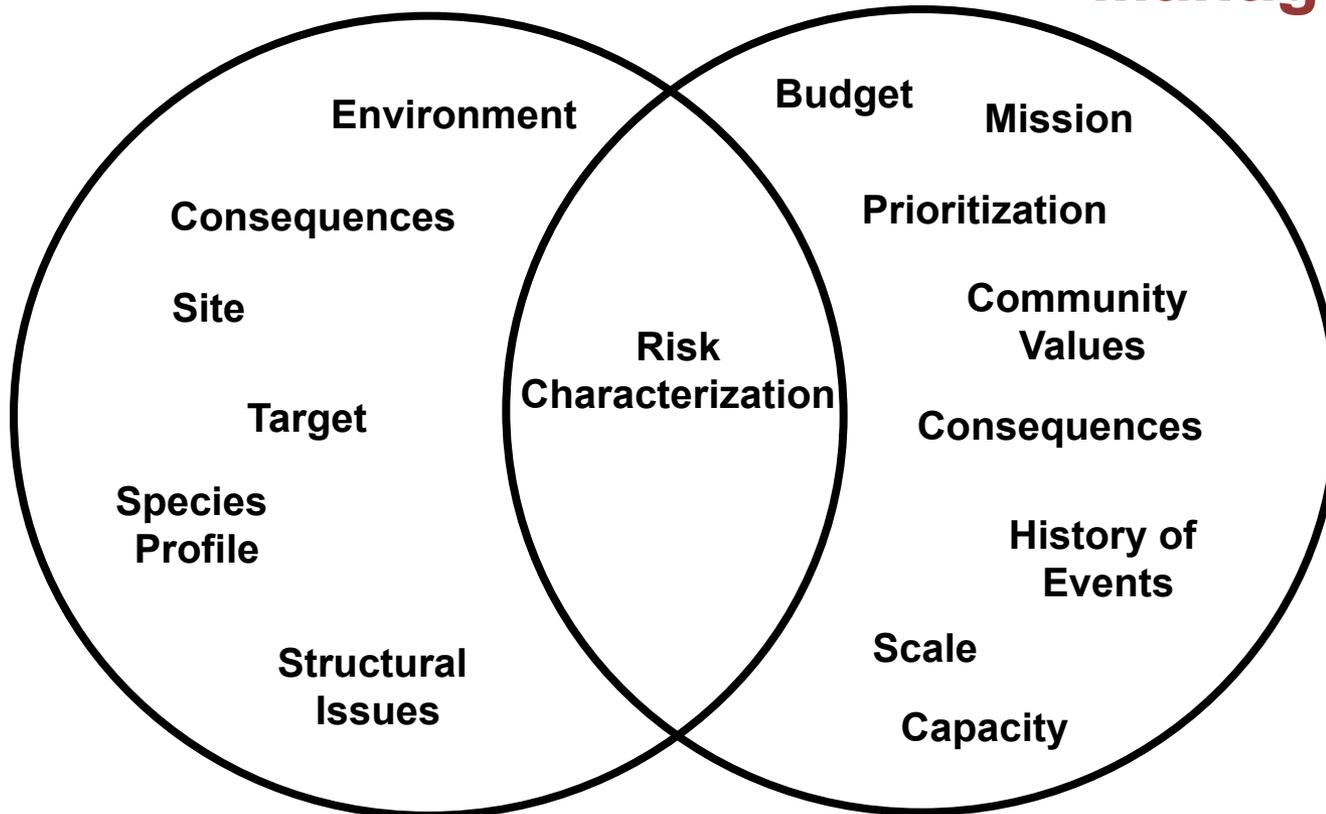
A risk assessor may not have the background, knowledge, or information to provide system level opinions that are required within the larger risk management arena.



# General Principles of Risk Management

**Risk  
Assessment**

**Risk  
Management**



# Perceptions of Risk

## Significant Tree Failure Events:



- Receive significant media attention
- Heighten public concern for the presence of trees
- Increases our fear of liability exposure
- Incorrectly informs on our understanding of risk.

# Perceptions of Risk



Our discussions on tree risk are dominated by images of tree part failures that cause harm.

# Perceptions of Risk



## Focus on Tree Biomechanics:

- Focusing solely on tree part failure as a determinant of risk.
- Burden of anticipating all failures before they occur.
- Incorrectly informs on our understanding of risk.



# Actual Risk Associated with Trees

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Depends on the likelihood of two events happening at almost concurrent moments:

- The likelihood of a tree part failure (1) within a given time frame (2).
- If the part fails, the likelihood of striking a target (3).

## Consequences

- If the part fails and if a target is struck what are the potential consequences (4).

# Risk Management Process



# General Principles of Risk Management

## Risk Control Strategies

Risk Avoidance

Risk Reduction

Risk Transfer

Risk Retention



# Risk Control

Risk Avoidance – by avoiding the activity, the possibility of loss is eliminated.

Example: not placing structures or limiting public access within the fall zone of a tree with structural defects

# Risk Control

Risk Reduction – Minimize the impact of losses.

Examples: Training climbers to perform aerial rescues and developing storm response systems.

# Risk Control

Risk Transfer – contract with private or non-profit organizations. The degree of risk transfer depends on the ability of the contractor to bear responsibility.

Examples: contracting with a consultant to perform tree risk assessments or with a non-profit to implement a planting program.

# Risk Control

Risk Retention – The risk is retained and managed.

Examples: A culturally significant tree with some structural issues that is retained and managed.



# **The Confluence of Risk Management and Litigation**

**In tree-related litigation, the discussion of whether a tree is a hazard is often defined in simple concepts.**

# Common Themes in Litigation

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1. A tree is viewed as a hazard in absolute terms. In other words, the subject tree was a hazard or not a hazard.



The risk associated with a tree is complex. Every single tree part has some potential to fail.

# Common Themes in Litigation

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2. The context of the non-subject trees are minimized.

The subject tree is not managed in a vacuum. Choices are made as part of a larger system.  
(Assessor vs Manager)



# Common Themes in Litigation

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3. If the tree part was removed prior to it failing, the tree would have been safe.



This implies that a tree can be made absolutely safe.

Risk is never completely eliminated when trees are present.

# Common Themes in Litigation

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4. Post-failure knowledge is used to define a pre-failure understanding of the tree.



We have a bias toward assigning a higher risk to a tree after a failure has occurred than we would have assigned prior to the failure.

# Common Themes in Litigation

5. A high inspection and maintenance rigor is assigned to the subject tree.



The resources required to achieve this level of rigor is, at times, unreasonable and impractical.

# Logical Fallacies



A statement that is presented as true, but lacks important context, making it a false statement.



# Logical Fallacies

Two issues highlight the flaws in logical fallacy statements:

1. There is a linear correlation that is typically untrue.

# Logical Fallacies

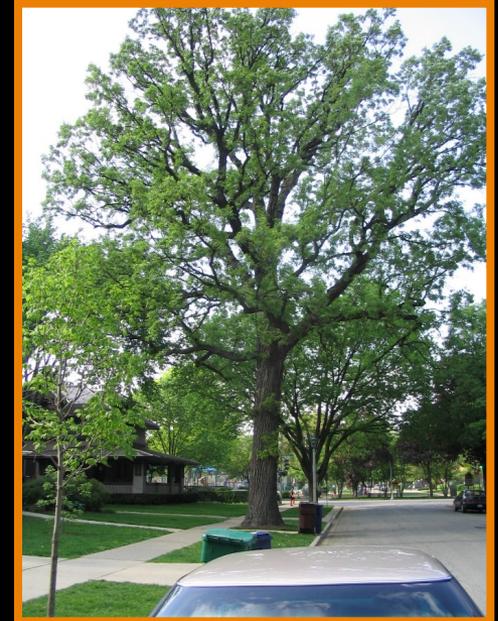
Two issues highlight the flaws in logical fallacy statements:

2. Lack of system context develops a narrow discussion that focuses on risk assessment and minimizes the relevance that risk management plays.

# Logical Fallacies

## **Black or White**

Where two alternatives are prescribed as the only possibilities, when in fact more possibilities exist.



Tree risk in litigation is often viewed in absolute terms – the tree was a hazard or not a hazard.

However, risk and risk management is about making choices in the face of uncertainty.