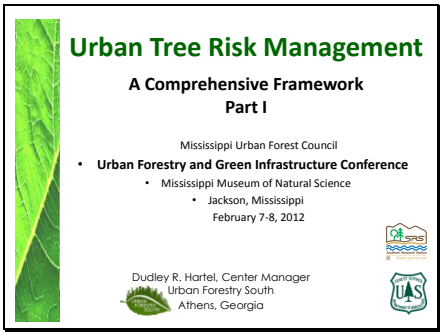
Slide 1



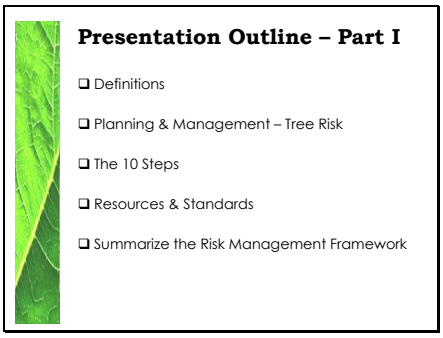
This discussion of a comprehensive risk management program that can support local management & disaster planning is based on **Urban Tree Risk Management: A Community Guide to Program Design and Implementation** (Chapter Two)... and will guide city & urban forest managers through the development & implementation of the current (arboricultural) industry standard program for risk management...

Have any of you seen a tree and thought "that looks dangerous?" or "that might hurt someone?"
If so, you did a risk assessment… What action was taken after your assessment?

This presentation will outline the "framework" for urban tree risk management that moves "assessment" to "mitigation" (i.e. appropriate action).

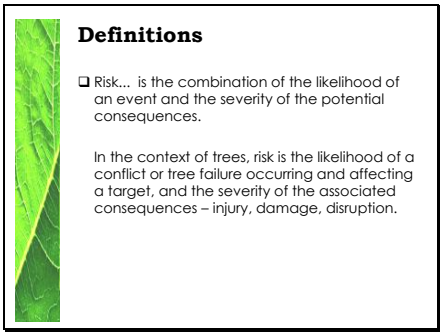
Urban Forestry South is the Southern Region's urban & community forestry Technology Transfer Center which supports U&CF programs through state agencies and municipalities.

Slide 2



In this presentation I'll define the topic of tree risk, discuss tree risk management in a broader context, introduce the steps in the "guide", and conclude with the current list of arboricultural standards related to urban tree risk management. I'll conclude with a definition of urban tree risk management.

Slide 3

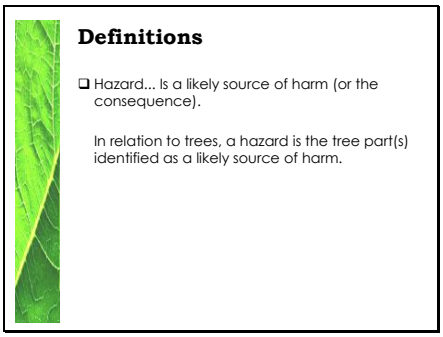


Risk (from ISA BMP: Tree Risk Assessment)…

- Probabilities involved
- An event
- Consequences (harm) with some level of severity (or concern)

Conflict… e.g. tree obstructs stop sign visibility at intersection, or tree limbs/branches touching power distribution lines

Slide 4



Hazard (from ISA BMP: Tree Risk Assessment)…

- What is the likely source (e.g. limb, branch, whole tree) of the assessed harm (i.e. consequence)

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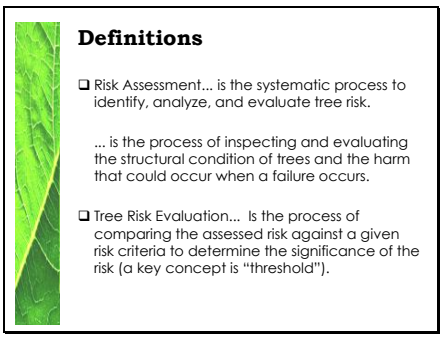


Risk assessment is the "next" step after the urban tree risk management framework "sets the stage"…

Assessment and evaluation (from ISA BMP: Tree Risk Assessment)…

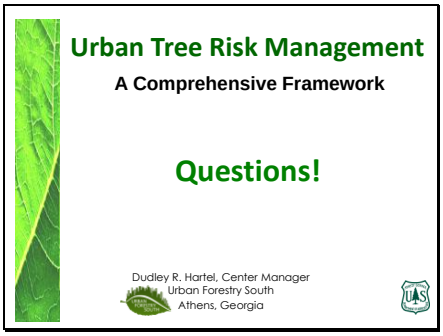
- Systematic process
- Identify
- Analyze
- Evaluate

- There are standards (i.e. ANSI A300 Part 9) that should be followed when developing this assessment process

Evaluation (from ISA BMP: Tree Risk Assessment)…

- Comparing the assessed risk to your experience and/or expectations (i.e. risk threshold; how much harm is acceptable to you)

Slide 6



Any questions or comments...

Slide 7

Assess and mitigate to avoid consequences…

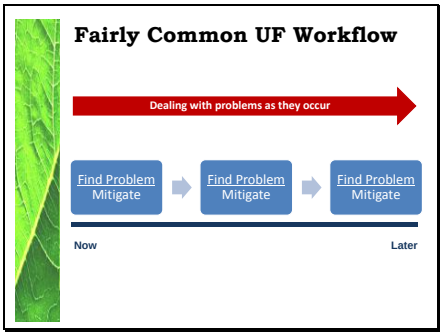
- Damage
- Interruption
- Injury

Slide 8

Take care of trees (i.e. management) on your own schedule…

- Budget implications
- Workforce scheduling implications

Slide 9

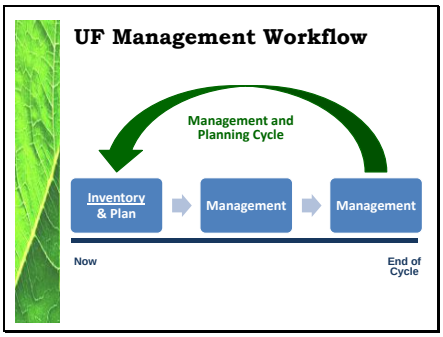


A common approach to urban forest management (workflow or timeline):

•deal with problems as they arise (i.e. "putting out fires")

May be appropriate for very small management areas or ownerships, or as the tree resource changes over time (i.e. there are ways to rationalize this approach!).

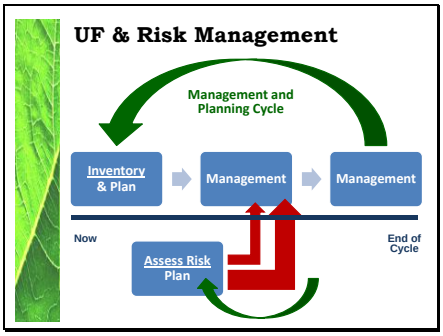
Slide 10



A recommended urban forest management workflow (or timeline):

- inventory the resource of interest (i.e. entire city, a park)
- develop a management plan
  - with short-term action plan for a specific time period (i.e. cycle)
  - plan will have long-term goals, objectives, and strategies
- manage your urban tree resource over the management/planning cycle
  - tree planting
  - mulching
  - young tree pruning
  - pruning mid-aged to mature trees
  - removals (for a variety of reasons; problems (i.e. risk), construction, redesign)
  - special areas or purposes (riparian areas, parks, watershed protection, carbon, pedestrian amenities)

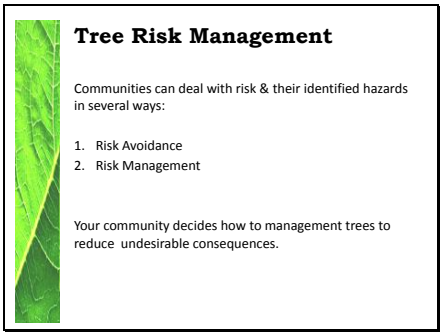
Slide 11



An urban forest management workflow (or timeline) that adds Urban Tree Risk Management:

- inventory the resource of interest (i.e. entire city, a park)
- develop a management plan
    - with short-term action plan for a specific time period (i.e. cycle)
    - plan will have long-term goals, objectives, and strategies
- manage your urban tree resource over the management/planning cycle
    - tree planting
    - mulching
    - young tree pruning
    - pruning mid-aged to mature trees
    - removals (for a variety of reasons; problems (i.e. risk), construction, redesign)
    - **risk mitigation**
    - special areas or purposes (riparian areas, parks, watershed protection, carbon, pedestrian amenities)
- inventory and develop a separate risk management plan
    - this feeds into your management cycle
    - the risk management cycle may be shorter than your urban forest management cycle
    -

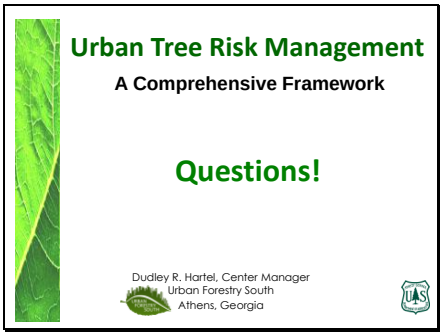
Slide 12



Cities that choose risk avoidance either ignore those risks (i.e. “act of god”), or will eliminate all risk in the area of interest by removing all trees; others will manage tree risk so that benefits of the trees can be retained with some acceptable level of risk that is within the communities threshold of concern.

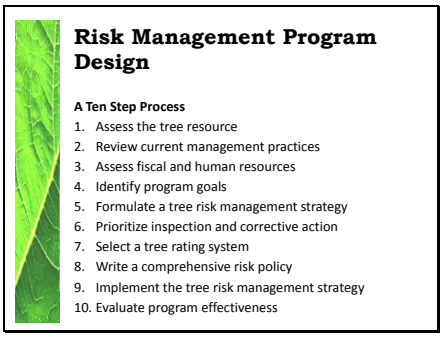
It is **NOT** necessary to practice risk avoidance in order to manage your urban forest, be better prepared for disasters, and maintain UF ecosystem services.

Slide 13



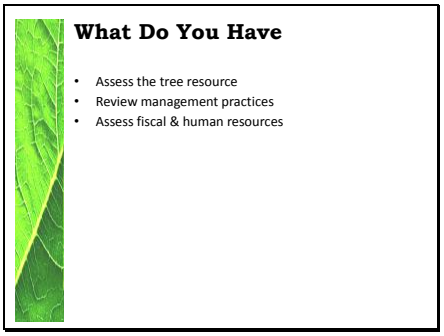
Any questions or comments...

Slide 14



From Urban Tree Risk Management (A Community Guide to Program Design and Implementation)... Jill Pokorny, 2003

Slide 15



A risk management plan does not a have to be a detailed tree assessment; the "big picture" is OK. But, can be the same baseline that supports your UF management plan. With some additional information.

May need to determine value to justify the risk and management strategies; i-Tree Eco, Streets

Assess the tree resource

A planning element & assessment:

- Recent data (current inventory)
- Can be complete inventory or sample
- Baseline study to collect general information:
    - species
    - size classes
    - condition (risk associated)
    - maintenance needs (pruning, removal) & cost
    - Urban forest value (i-Tree Eco/Streets)

For urban forest management:

- Written policy
- Plans
- Ordinances
- Goals & strategies
    - particularly relating to public safety
- Look across all for common goals
    - look at other community departments

Review current tree care budget:

- Look at estimated costs from your assessment
    - deficient?
- Include costs/resources for inspections
- Mitigation at "higher" level
- Improved establishment & young tree care as part of risk management

Slide 16

Locally, develop a "picture" of your community tree risk management program.

Disaster related UF and EM objectives should be identified.

Community working group/tree board:

- What will our risk management program accomplish
- Goals & strategies (get specific)

Guiding principals:

- Increase public safety
- Promote tree health & sustainability

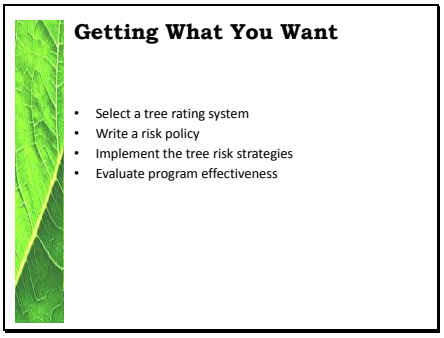
Prevent hazardous defects:

- Sound arboricultural practices
  - site
  - species
  - planting
  - young tree care
  - mature care
- Corrective actions
  - young tree care
  - address target issues
  - prune & remove

Tree risk zones:

- Trees
- Roads & streets
- Occupancy
  - people
  - places or sites (buildings)

Slide 17



Standardizing your risk inspections based on current arboricultural standards:

- Matheny & Clark (1994)
- ANSI A300 (Part 9)-2011 - Tree Risk Assessment – Tree Structure
- Best Management Practices: Tree Risk Assessment

The "No target, No risk" concept applies for disaster planning also.

Importance of standardized method:

- Repeatable
- Reliable
- Easier to maintain trained staff
- Standardize record keeping & data
  - convenience
  - accuracy

Photographic Guide (12 point)

- Target (0-4) – No target, No risk
- Size of part (1-4)
- Probability of failure (1-4)

Critical element!

The act of writing your risk policy is an important step that can refine your objectives, goals, and strategies. It makes it available to other municipal managers and staff, elected officials, and residents.

The tree risk specification that adheres to ANSI A300 (Part 9)-2011 can be the basis for this more detailed policy

Write, adopt, and enforce this policy:

- Must support all other policy & documents
- Community responsibility
- Administration (who is responsible)
- Rating system specified
- Inspection methods and schedules
- Process for corrective actions
- Action appeals
- How to handle violations of the policy

Proper implementation requires resources and demands documentation (see ANSI A300 (Part 9)-2011 Tree Risk Assessment).

Your local EM may have access to state mitigation funds for some of this work identified.

Resources:

- Staff
- Training
- Documentation

Implementation documentation:

- Inspections
- Actions
- Failures

Common outcomes from a well designed and implemented tree risk management plan.

These are disaster-related outcomes also.

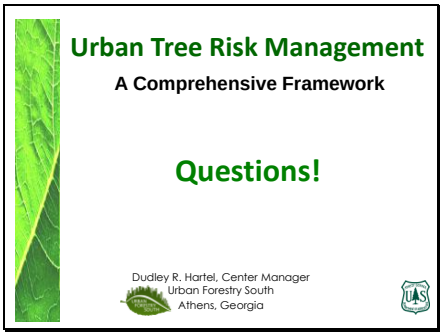
Outcome based measurements & evaluation:

- Increased public safety
- Improved tree health

Indicators (for measurement):

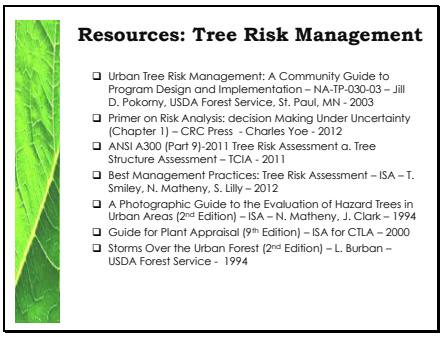
- Decline in number of high-risk trees
- Reduction in number of trees needing hazard pruning
- Reduction in storm damage (debris)

Slide 18



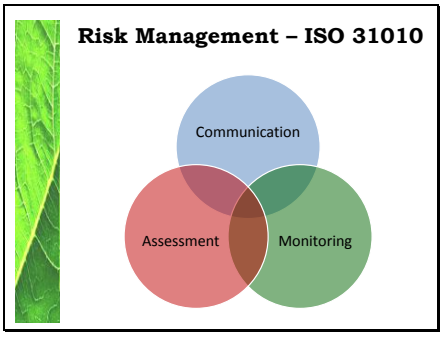
Any questions on the ten steps...

Slide 19



Use current arboricultural standards when developing your urban tree risk management plan

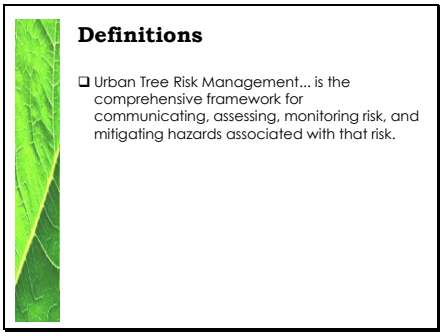
Slide 20



Current standards for risk assessment and management are based on ISO 31010 components:

- Communication and consultation
- Risk assessment
- Monitoring and review

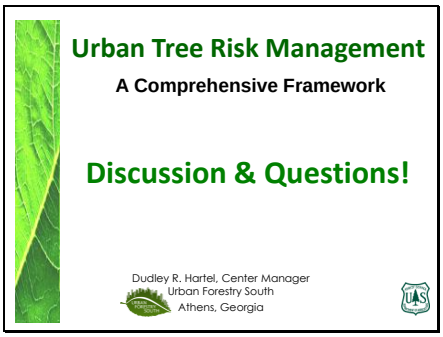
Slide 21



Urban Tree Risk Management defined (drh 2012)…

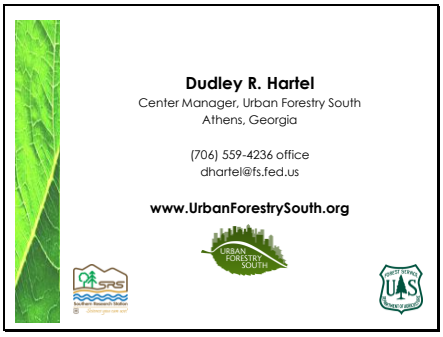
- Comprehensive "framework" (i.e. steps to follow, the recipe)
- Communication of risk (to managers, public)
- Tree risk assessment by qualified, trained, and experienced arborists or urban foresters
- Monitoring risk (i.e. temporal, repetitive, observant)
- Evaluating hazards (to your threshold) and mitigating those hazards
- Important concept is: prioritization

Slide 22



Any final questions or comments about this introduction to urban tree risk management?

Slide 23



A PDF of this presentation will be at www.UrbanForestrySouth.org .

"Quick Search" with 'urban tree risk' (no quotes).