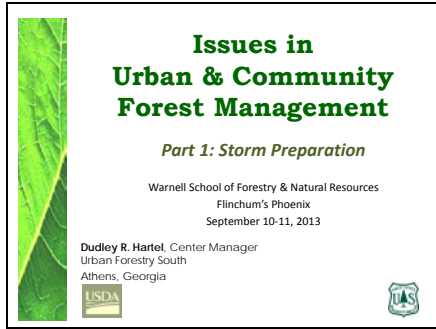


Slide 1



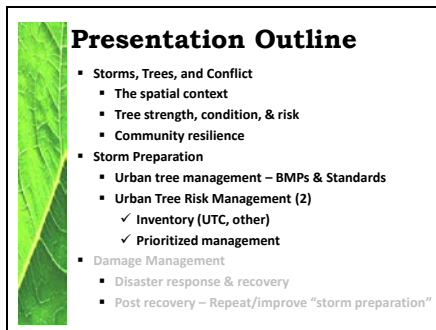
Issues in Urban & Community Forest Management
Workshop (September 10-11, 2013, Athens, Georgia)

Storm Preparation

Dudley Hartel – Center Manager
Urban Forestry South
Athens Georgia.

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

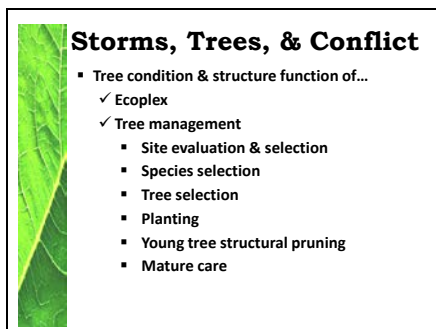


In this presentation we will cover a general introduction to the UF issues of significance during disasters...

- The spatial relationship of trees, people, and property
- Tree (wood) strength, tree condition, and risk
- The strength of the community

Following that, the presentation will focus on UF management practices that influence the impact that disasters have on a community and its urban forest. We'll discuss a comprehensive approach to urban forest risk management.

Slide 3



Dr. Coder has introduced elements of the spatial issues or spatial context that we enjoy with trees when he discussed the complexity of the ecoplex...

His and other discussion previously in this workshop identified urban forest management that can play a critical role in storm preparation:

- the ecoplex (Coder)
- sustainability
- site evaluation/selection/mitigation
- species selection
- tree selection
- proper planting
- young tree care (structural pruning)
- mature tree care

Comprehensive management cannot eliminate all failures, but will significantly reduce them

Slide 4



Storms, Trees, & Conflict

- Comprehensive (management) programs
 - ✓ Professional component
 - ✓ Tree resilience (strength)
- Community resilience
 - ✓ Professional capacity
 - ✓ Community support
- Disaster preparedness
- Disaster response
- Disaster recovery

Comprehensive management (strong trees) AND strong communities cannot eliminate all failures, but will significantly reduce them. Strong communities determine success in response and recovery.

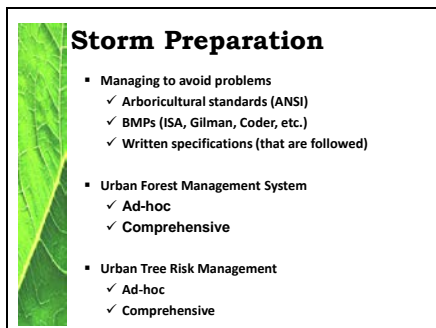
Tree failures (in storm events that are normal or abnormal) occur when...

- Load exceeds strength for the tree or a part of the tree

The community's resilience has a lot to do with:

- urban forest management style & extent
- the community's support
- disaster preparedness
- disaster response
- extent of recovery & mitigation following a storm

Slide 5



Storm Preparation

- Managing to avoid problems
 - ✓ Arboricultural standards (ANSI)
 - ✓ BMPs (ISA, Gilman, Coder, etc.)
 - ✓ Written specifications (that are followed)
- Urban Forest Management System
 - ✓ Ad-hoc
 - ✓ Comprehensive
- Urban Tree Risk Management
 - ✓ Ad-hoc
 - ✓ Comprehensive

As previous speakers have discussed (or alluded), standards, BMPs, and written specifications are an essential component of an (your) urban forest management system;. Regardless of the sophistication of that system.

From the arboricultural side, urban tree risk management is the additional component that "rounds out" your storm preparedness portfolio.

Slide 6



ANSI Standards

- American National Standards Institute (ANSI)
- Development of American National Standards (ANS) by accrediting the procedures of standards developing organizations
- Tree Care industry Association (TCIA)
 - ANSI A300 standards are voluntary industry consensus standards (arboriculture)
 - ANSI A300 Standards are divided into multiple parts, each focusing on a specific aspect of woody plant management
- www.TCIA.org

ANSI (American National Standards Institute) accredits organizations to develop voluntary standards for their industry or profession.

TCIA is the accrediting organization for arboriculture and organizes the (ANSI Standards Committee) ASC A300 committee with representatives from a broad and diverse group of industrial and governmental organizations.

Slide 7



Arboriculture Standards


- Part 1: Pruning (2008)
- Part 2: Soil Management (2011)
- Part 3: Supplemental Support Systems
- Part 4: Lightning Protection Systems
- Part 5: Management
- Part 6: Planting & Transplanting
- Part 7: Integrated Vegetation Management
- Part 8: Root & Root Zone Management
- Part 9: Tree Risk Management (2011)
- Part 10: Integrated Pest Management
- Part 11: Urban Forest Products

Developed (green), under development (blue), and being revised (red).

Visit: <http://www.tcia.org/business/ansi-a300-standards> for descriptions and status

Of greatest importance, day-to-day, are Parts 1, 2, 6, & 9.

Slide 8



Standards vs Specifications

- Standards are **performance standards**
- **NOT** used as job **specifications**
- **Job specifications** should be clearly stated and detailed and contain measurable criteria
- Writing specifications can be simple or complex
 - written in a format that suits your company/job
 - specifications consist of two sections
 - general
 - detailed
- ANSI A300 Part 9 Section 1.2 Purpose
 - **"for developing written specifications"**
- Used by:
 - federal, state, municipal, and private entities

The "standard" clearly identifies the performance standards used to develop arboricultural specifications specific to your job or contract and appropriate for all levels of ownership and consulting.

You should not say "Perform a tree risk assessment to the **ANSI A300 (Part 9)-2011 Tree Risk** standard" in an RFP, RFB, proposal, or quotation for professional services.

See Section 1.2 Purpose "for developing written specifications."

Developing and consistently using a risk specification based on the ANSI A300 Standard will:

- reduce misunderstandings related to the scope of the risk evaluation for a tree owner
- clearly define the qualifications of the arborists
- clearly define the assessment techniques to be used
- provide better contract compliance
- reduce the chance for misinterpretation of results (i.e. the written reports)
- help arborists become more consistent with their risk assessments and with colleagues assessments over time

Slide 9



Standard Components - Risk

- ANSI A300
 - Scope
 - Purpose
 - Application
- Part 9 – Tree Risk
 - Purpose
 - Reason
 - Implementation
- Safety
- Normative References (e.g. Z133 Safety)
- Definitions

The “common “ format for all ANSI A300 parts follow this outline (using Part 9 – Risk) as an example...

The “standards”:

- review the ANSI system and
- introduce the tree risk standard (Part 9).
- covers safety, other standards that apply, (normative references) and
- include applicable definitions.

Slide 10



Urban Forestry BMPs & Disaster Planning

BMP development & adoption

- internal to your municipality or organization
- professional organization developed (i.e. TCIA, ISA)
- borrowed & tailored to your situation

From these sources build your manual of accepted practices

Every community (and urban forest manager) should have a set of specifications developed from the standards.

Slide 11



Urban Forestry BMPs & Disaster Planning

BMP short list should match your tree/forest health objectives

- site evaluation requirements/techniques
- key species selection criteria
- minimum acceptable tree standards
- tree planting specifications
- first year care – mulch, water, remove stakes
- young tree care – structural pruning cycle(s)

The essential BMPs and specs.

Slide 12



A brief pause for questions, comments, and discussion!

Three major components to disaster preparedness...

- urban forest/tree management for strong trees
- strong communities that includes professional capacity
- comprehensive management

Tree ordinances can play a role also. (protecting tree space)

Slide 13



Getting to healthy trees...

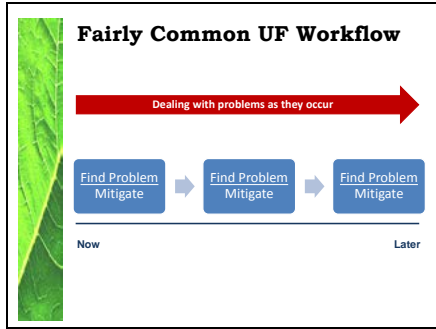
If the objective of the urban forest management program is to optimize tree benefits:

- highest productivity (biomass, shade, stormwater capacity, air pollution)
- lowest investment

Several components:

- site selection & evaluation
- species selection
- tree selection at the nursery (i.e. standards)
- proper planting
- first year care – primarily watering & protection (elapsed time through this step is about 18 months)
- young tree care - structural pruning & protection (add another 3 years for each pruning cycle planned – e.g. 3 prunings will add 9 years)
- mature tree care

Slide 14

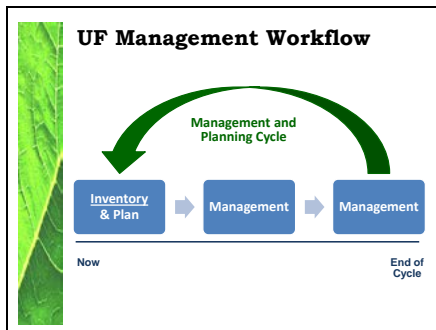


A common approach to urban forest management (workflow or timeline):

- 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!).

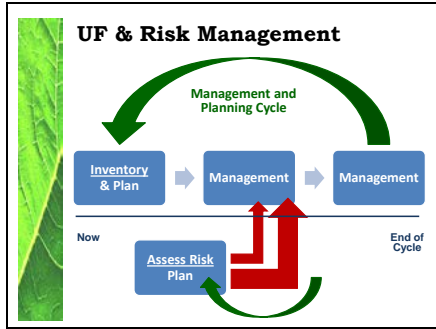
Slide 15



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)
- implies,,, goals, objectives, strategy, priorities (and budgets)

Slide 16



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 17



Assess and mitigate to avoid consequences...

- damage (to property)
- interruption (of services like electricity, emergency response, water, communications)
- injury (or death) to people

Slide 18

Why Manage Tree Risk

- Eliminate urban forestry “feast and famine”...



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

- Budget implications
- Workforce scheduling implications

Slide 19

Why Manage Tree Risk

- Sustain environmental services...



Even without property or personal damage, storm damage affects environmental services... The reason we plan for and manage urban trees.

Slide 20

Storms, Trees, & Conflict

- Risk is a spatial issue – Location! Location! Location!
 - ✓ No (human) targets, no issue?
Not quite!
 - ✓ Risk includes losses of several types
 - Damage to people & property
 - ✓ Response & recovery issues (1)
 - Loss of tree canopy – environmental services
 - ✓ Response & recovery issues (2)

Managing urban forests has spatial implications. And we often think that “no targets – no risk” is our only concern.

When managing trees for disaster we must approach two primary issues:

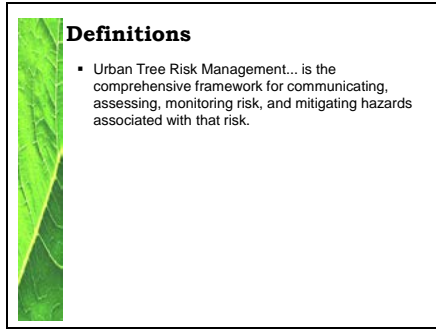
- direct damage to people and property (conflicts between trees and anything that is near them)
- damage to the production of environmental services (lost of trees or reduction in productive capacity)

Both of these “losses” have their own We shouldn’t view disaster preparation only as a function of tree risk...

But, incorporate to primary components:

- tree risk (to people & property)
- tree health

Slide 21



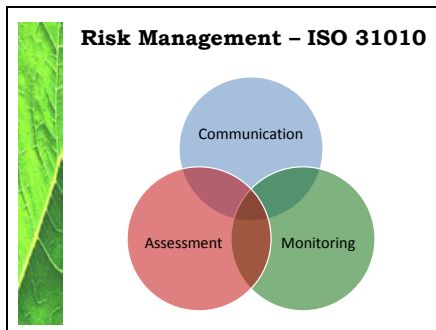
Definitions

- Urban Tree Risk Management... is the comprehensive framework for communicating, assessing, monitoring risk, and mitigating hazards associated with that risk.

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




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

- communication and consultation
- risk assessment
- monitoring and review

For arboriculture these include:

- ANSI A300 (Part 9)-2011 Tree Risk Assessment; a. Tree Structure Assessment, Tree Care Industry Association, Inc., Londonderry, NH
- Best Management Practices: Tree Risk Assessment (2011), Smiley, E.T., and N. Matheny, S. Lilly, International Society of Arboriculture, Champaign, IL
- Tree Risk Assessment - Manual (2013), Dunster, J. and E.T. Smiley, N. Matheny, and S. Lilly, International Society of Arboriculture, Champaign, IL (i.e. TRAQ)

Slide 23



Risk Mitigation Results

- Reduced claims as they relate to trees by 72%
- Reduced work order complaints and/or request for services by over 55%
- Reduced 911 and overtime expenditures for tree cleanup by over 69%

Five year period 2001-2006
Columbus, Georgia (R. Barker)

Measured results from an aggressive tree risk management program in Columbus, Georgia (from Rachel Barker).

Slide 24




Resources: Tree Risk Management

- ANSI A300 (Part 9)-2011 Tree Risk Assessment; a. Tree Structure Assessment, Tree Care Industry Association, Inc., Londonderry, NH [<http://bit.ly/U904tj>]
- Best Management Practices: Tree Risk Assessment (2011), Smiley, E.T., and N. Matheny, S. Lilly, International Society of Arboriculture, Champaign, IL [<http://bit.ly/PMCimj>]
- Tree Risk Assessment - Manual (2013), Dunster, J. and E.T. Smiley, N. Matheny, and S. Lilly, International Society of Arboriculture, Champaign, IL (i.e. TRAQ)

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

Slide 25




Resources: Tree Risk Management

- Urban Tree Risk Management: A Community Guide to Program. Design and Implementation, NA-TP-03-03, J.D. Pokorny (Coordinating Author), 2003, St. Paul, MN [<http://1.usa.gov/OHL8QV>]
- Primer on Risk Analysis: Decision Making Under Uncertainty (Chapter 1) – CRC Press - Charles Yoe - 2012

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

Slide 26



Tree Risk Management

Communities can deal with risk & their identified hazards in several ways:

1. Risk Avoidance
2. Risk Management

Your community decides how to management trees to reduce undesirable consequences.

IN summery, 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 27



Pre-Storm Planning
With a Comprehensive Framework


UF Management & Tree Risk
Discussion & Questions!

Dudley R. Hartel, Center Manager
Urban Forestry South
Athens, Georgia



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

Slide 28



Urban Tree Risk Management


How many of you, regardless of profession (planner, emergency manager, urban forester, arborist, municipal staff), are directly involved with a tree risk management program in your community?

- a) Not at all
- b) It has been discussed
- c) We have started a tree risk management program
- d) This is a totally new concept for me

Now that I have very briefly defined urban tree risk management that is the basis for the GIS model... How many of you, regardless of profession (planner, emergency manager, urban forester, arborist), are directly involved with a tree risk management program in your community?

- Not at all
- It has been discussed
- We have started a tree risk management program
- This is a totally new concept for me

Slide 29



Urban Tree Canopy

Disaster Mitigation, Response & Recovery

- Right-of-way debris management
- Urban tree risk management
- Debris estimation
- Priority planting areas

Urparian - vegetated areas around roads and sidewalks

Comprehensive Management Plans

- Local
- Regional
- State

A relatively simple measurement component to view your potential for storm related risk is urban tree canopy.

Why UTC ?

Urban Tree Risk Management – Identifying and reducing tree risk prior to storms, estimating your level of risk (including debris)

Urparian - Urparian describes the vegetated areas around roads and sidewalks. The term comes from combining urban and riparian to form a single word. In less urbanized systems, the corridor around streams (the riparian zone) is extremely important for water quality. This area of vegetation captures and processes pollutants before they can make it into surface waters. In urban areas, however, riparian zones are often less effective at removing pollutants. One reason is that urban streams tend to be deeply incised, causing the riparian zone to be disconnected from the stream below. Secondly, the streams in many urban areas have been functionally replaced with storm sewers. In this context, the soil and vegetation around roads and sidewalks is the new riparian zone. By increasing tree canopy in the urparian zone, we can return some of the environmental benefits of riparian areas to urban systems.

Comprehensive Management Plans – Local plans are essential, and regional plans come into play when local capacity is exceeded (e.g. state mutual aid programs).

Slide 30


Inspection Guidelines and Schedule

Table 1.2: Inspection guidelines for riparian and urparian areas

Tree Type	Inspection Frequency	Inspection Method	Inspection Focus
Very High	Annual	Walk by	Visual tree inspection
High	Biennial	Walk by	Visual tree inspection
Medium	3-5 years	Walk by	Visual tree inspection
Low	5-10 years	Walk by	Visual tree inspection
Very Low	10+ years	Walk by	Visual tree inspection

Tree Risk Zone Map

- Design measures to assess all riparian risk zone
- Prioritize risk inspection and maintenance activities



UTC can help communities develop maps for risk, to prioritize risk assessment and mitigation.

The results of an urban tree risk management program would include risk zone classification and prioritization. (from Pokorny)

In the UTRI model, specific street segments are identified (and ranked) based on the critical disaster response components:

- critical facilities
- public access (emergency response)
- presence of people
- trees near the ROW (right-of-way) or facility

Urparian areas!

Slide 31




Collaborative Strategies

- How to incorporate urban forestry into Emergency Management and Debris Management
 - Meet FEMA standards for mitigation, planning, response, and recovery **AND** arboriculture industry performance standards



We will now look at collaborative strategies and opportunities to incorporate urban forestry into emergency management and debris management while meeting the industry standards of both professions.

Slide 32




Opportunities

Examples

- Comprehensive Plan
- Hazard Mitigation Plan
- Emergency Response Plan and Exercises
- Debris Management Plan
- **Vegetative Risk Management (the New link)**
- UF Management Plan
- Tree Risk Management Plan(s)

These are some of the plans that are often developed and are shown here on the same scale from a general down to detail. There are plenty of opportunities for collaboration with Urban Foresters and Emergency Managers in all of these with the Vegetative Risk Management Plan being the new link. The link that the two professions can work hand in hand developing.

Slide 33



Tree Risk & Disaster

Identify & Assess:

- region of interest (county, multi-county)
- important facilities to support disaster response
- access routes (to, from, and within)
- population centers (day and night)
- presence of tree canopy

Process & Outcomes:

- cursory and detailed assessments
- disaster & safety mitigation
- improved public safety
- reduction in "problems" & improved response

Remember Location! Location! Location!

A risk management plan does not have to be based on a detailed tree assessment [Pokorny]; the "big picture" is OK. This is the UTRI (Urban Tree Risk Index) approach for initial work for disaster planning.

Disaster related UF and EM objectives should be identified. Guiding principals:

- increase public safety
- reduce disaster related interruptions & problems
- promote tree health & sustainability

Tree risk zones:

- trees
- roads & streets
- occupancy
 - ✓ people
 - ✓ places or sites (buildings)

Risk zones are based on the principal component of transportation as it affects public safety and response. Street segments (i.e. from intersection to intersection) are the primary component of analysis; but the tree canopy resolution (e.g. 30 meters) determines the detail of the final UTRI rating map.

The tree canopy layer substitutes initially as the "trigger" for areas of potential risk (related to vegetation).

These characteristics are ranked and then summed (a GIS process) to create rating for each street segment.

The "No target, No risk" concept applies for disaster planning. Targets in the disaster context are narrowly defined. In addition, streets and facilities with little or no tree canopy are rated as "low risk" in the UTRI model.

Disaster-related outcomes from a well designed and implemented tree risk management plan, or from the UTRI "fast track".


Outcome based measurements & evaluation:

- increased public safety
- improved tree health

Indicators (for measurement):

- decline in number of high-risk trees over time
- reduction in number of trees needing hazard pruning
- reduction in number of "interruptions" during a disaster
- reduction in storm damage (debris)

Slide 34



Tree Risk & Emergency Management

- County (or regional) Scale
 - Generalized approach to tree risk assessment
- Working with Emergency Management
 - Reduce information to issues of interest
 - Planning/Mitigation
 - Woody debris (how much, where)
 - Response (cleanup)
 - Recovery
 - Prioritization of effort (big picture)

In this portion of the presentation, I will discuss how we used a landscape scale assessment of tree risk to develop information useful to local emergency managers – Vegetation Management.

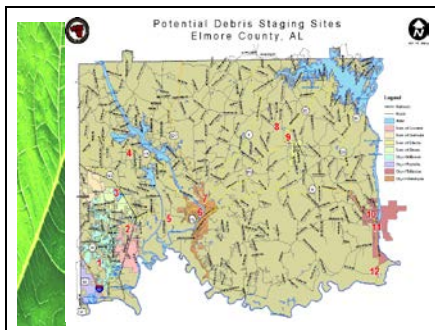
As discussed earlier, we are specifically developing a regional (planning) approach to emergency management support that includes input from professional urban foresters.

In working with EM, we focus on the primary AOI for emergency planning.

These include:

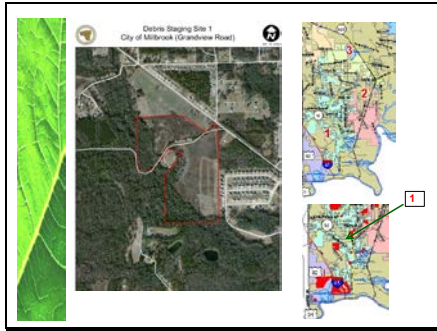
- planning/mitigation
- potential debris (not volume but an index)
- information that will support response (debris removal)
- recovery

Slide 35



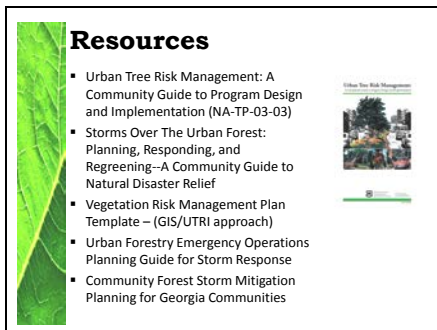
This slide shows the 12 most viable debris staging sites as they relate to population, tree canopy and road access.

Slide 36



This is an example within the City of Millbrook. This site is currently owned by the school board for a future school. It is open pasture primarily with access to a state highway.

Slide 37



Resources:

- **Urban Tree Risk Management: A Community Guide to Program Design and Implementation**
<http://www.urbanforestrysouth.org/resources/library/ttresources/urban-tree-risk-management-a-community-guide-to-program-design-and-implementation/?searchterm=community%20guide%20pokorny>

[An] illustrated, easy to read training manual for community leaders, administrators, city foresters, parks and public works staff, and private tree care practitioners. The manual is designed to assist communities with the design, adoption and implementation of tree risk management programs, and train field staff to detect, assess, and correct hazardous defects in urban trees. A team of experts in urban forestry, plant pathology and forest health collaborated to produce this manual. Consulting arborists, city foresters, and educators provided extensive review to ensure the information applies to communities of varying sizes and budgets. Examples of tree defects, risk rating systems, and species selection were chosen to depict tree species and conditions that occur in the Northeastern U.S." [from the Preface]

- Storms Over The Urban Forest: Planning, Responding, and Regreening--A Community Guide to Natural Disaster Relief

<http://www.urbanforestrysouth.org/resources/library/ttresources/storms-over-the-urban-forest-planning-responding-and-regreening-a-community-guide-to-natural-disaster-relief/?searchterm=storms%20over%20the%20urban>

Natural disasters that can occur in the United States include floods, hurricanes, tornadoes, and related high-velocity winds, as well as ice storms. Preparing for these natural disasters, which strike urban forests in large cities and small communities, should involve the cooperative effort of a wide array of municipal agencies, private arboricultural companies, utilities, and volunteers. Principles and methods determining how to mitigate or minimize the impact of natural disasters are critical in determining the capability of communities to respond. Similarly, replanting the uprooted urban forest also requires a closely coordinated effort of key civic leaders, elected officials, community foresters, and managers of municipal agencies. This manual is intended to assist community leaders and governmental agencies to prepare for natural disasters, respond appropriately when these natural disasters occur, and recover from the subsequent loss of vegetation." (from the Executive Summary, Second Edition)

- **Vegetation Risk Management Plan Template - with UTRI/GIS Attachment**

<http://www.urbanforestrysouth.org/resources/library/ttresources/vegetation-risk-management-plan-template-with-attachment/view>

<http://www.urbanforestrysouth.org/resources/library/ttresources/vrmp-and-utri-links-for-documents-archived-webinars>

The Vegetation Risk Management Plan (VRMP) is developed as a tool to help increase public safety after a storm event, maintain optimum urban tree canopy, promote tree health, provide for effective emergency and arboricultural management, and decrease emergency management costs.

Following this plan will decrease emergency management costs, reduce the likelihood of damage from trees, reduce tree debris, and

reduce the overall impact of major storms on the urban forest. Trees and the debris accumulated from their destruction is the number one cost to emergency management. The VRMP is a proactive approach to identifying and mitigating trees that are in need of pruning, removal, or inspection. This plan will establish a schedule for areas that are most prone to limit or block access to critical infrastructure located on or associated with major transportation routes, including areas with the highest population.

- **Urban Forestry Emergency Operations Planning Guide for Storm Response**

www.smarttreespacific.org

<http://www.urbanforestrysouth.org/resources/library/ttresources/urban-forestry-emergency-operations-planning-guide-for-storm-response>

Section 1: provides urban forestry professionals concrete approaches when preparing for natural disasters that impact the urban forest.

Section 2: describes the process used to develop the guide and includes information about the survey, the interviews, the expert meeting and next steps.

- **Community Forest Storm Mitigation Planning for Georgia Communities**

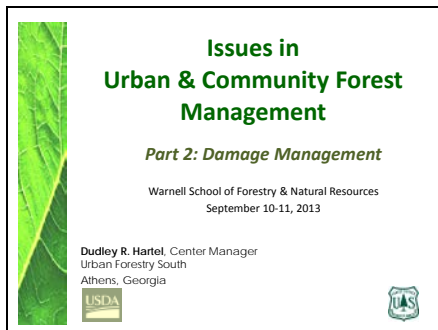
<http://www.urbanforestrysouth.org/resources/library/ttresources/community-forest-storm-mitigation-planning-for-georgia-communities/?searchterm=Community%20Forest%20Storm%20Mitigation%20Planning%20for%20Georgia%20Communities>

<http://www.gatrees.org/community-forests/management/trees-storm-safety/>

Workbook and template to guide community planning and preparation for urban tree mitigation prior to natural disasters. "This Community Forest Storm Mitigation Planning Workbook and the accompanying Community Forest Storm Mitigation Plan Template are intended as tools for Georgia communities to use in assessing their community forest storm readiness, mitigating tree risk and reducing tree-related storm damage, and developing a community forest storm mitigation plan. The

workbook guides you through filling in the template, which serves as a basic framework for developing your Community Forest Storm Mitigation plan." [Workbook Introduction]

Slide 38



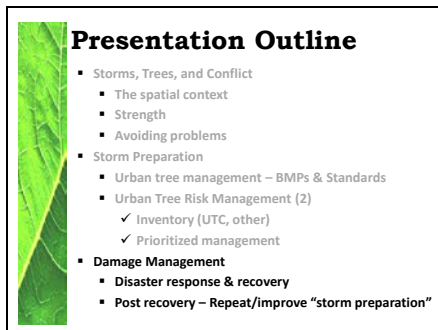
Issues in Urban & Community Forest Management workshop (September 10-11, 2013, Athens, Georgia)

(Tree & Urban Forest) Damage Management

Dudley Hartel
Center Manager
Urban Forestry South
Athens Georgia.


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 39



In this portion of the presentation we will discuss...

Slide 40



Response

- **As the storm approaches** – Review your plan with key participants and staff (include state level)
- **First 72 hours** – Initial damage assessment (IDA) to your local Emergency Manager
- **Work begins** – Clear roads, power lines, evacuation
- **Damage assessment** – Preliminary damage assessment (PDA)


Responding to disasters...

- as the storm approaches
- first 72 hours – let the governor know how bad things are... Federal Declarations (IDA)
- critical emergency response
- a better assessment of damage (PDA)

IDA and PDA is the terminology used by the Virginia Department of Emergency Management (VDEM).

The PDA is used to request resources needed by the community for (late) response phase & (initial) recovery

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Short-term Recovery

- **Assessments** – Eliminate risk, keep ecosystem services
- **Debris removal** – Cut and prune damaged trees
- **Closeout with FEMA** – If federally declared

Short-term Recovery

- **Assessments** – NOT (generally) supported by FEMA when done by the communities – Role for professionals here... with preparation and planning

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Long-term Recovery

- **Education** – Community; all sectors
- **Evaluation** – What species & practices worked best – disaster protocol also
- **Replanting** – BMPs for planting the right tree in the right spot
- **Mitigation** – Young tree and mature tree pruning

Long-term Recovery


Education: Value of the resource and value of good practices – to residents, staff, and elected officials – professional & non-professional

Evaluation: Look at the cultural practices, sites, and species that work best during the storm (i.e. fewest problems & losses); also look at your disaster response protocol for improvements

Replanting: Back to basics; follow BMPs and specifications – get “restarted” on the right track

Mitigation: Prepare for the next storm – includes risk management and risk assessments – removals and pruning

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Urban Forest Strike Teams

- **Key components:**
 - ✓ Assist communities with response and recovery efforts following a storm event
 - ✓ Develop an in-state and regional capacity to respond to disasters
 - ✓ Develop response protocol based on and compatible with ICS
 - ✓ Professional arborists, trained for risk assessment for deployment through EMAC

Urban Forest Strike Teams (UFST)

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Why Certified Arborists

- Familiar with working with local communities
- Experienced and knowledgeable about professional standards
- Familiar with tree risk evaluation protocol



Urban Forest Strike Teams (UFST)

Damage MAY be obvious.

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Why Certified Arborists

- However... these may not be so obvious



Urban Forest Strike Teams (UFST)

Not ALL storm related damage is as obvious!

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Unnecessary Tree Removal

- One of the tragedies of Katrina was removal of trees like these (at great expense!) that should have been retained.



Urban Forest Strike Teams (UFST)

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Why be concerned about trees following a Storm?

- Residual trees may pose a threat to public safety



Urban Forest Strike Teams (UFST)

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Why be concerned about trees following a Storm?

- There are significant costs in dealing with residual trees after a storm




Urban Forest Strike Teams (UFST)

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Urban Forest Strike Teams

- **What do they do:**
 - ✓ Risk evaluation of public trees remaining following initial ground debris clean-up



Urban Forest Strike Teams (UFST)

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Urban Forest Strike Teams

- **Community benefit:**
 - ✓ Communities that lack the capacity or professional expertise will benefit during the immediate response phase of the disaster
 - ✓ Trained, experienced, Certified Arborists will be assisting communities with decisions that affect their urban forest




Urban Forest Strike Teams (UFST)

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Urban Forest Strike Teams

- **Community benefit:**
 - ✓ Tree risk management information can be obtained in a timely manner for response & recovery
 - ✓ With the project based on the ICS, communities are familiar with the disaster assistance process
 - ✓ Assistance can be provided at the stage of disaster response most suitable for the community



Urban Forest Strike Teams (UFST)

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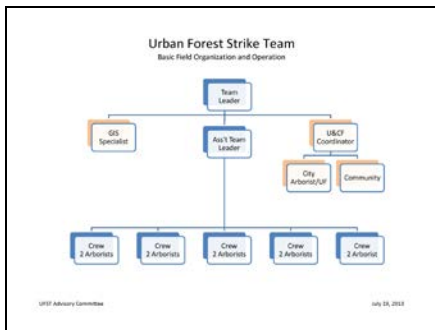
Urban Forest Strike Teams

- Community benefit:
 - ✓ Good public relations opportunity
 - ✓ UFST members viewed positively in communities where dispatched
 - ✓ UFST members viewed as unbiased experts here to help



Urban Forest Strike Teams (UFST)


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ICS-like structure of UFST.

Role of the state U&CF Coordinator is crucial.

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Please feel free to contact me.

Visit www.UrbanForstySouth.org and search for “risk”, “UFST”, or “Issues in UF” to find this presentation.