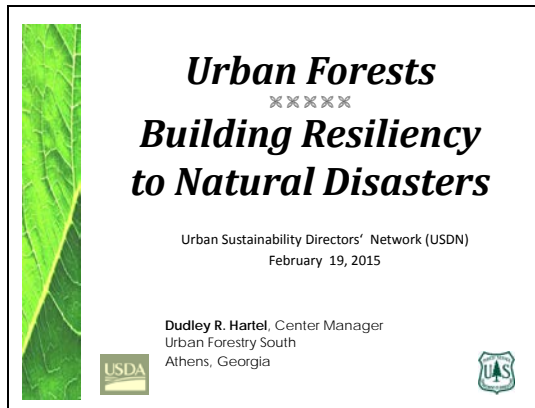


Slide 1



Urban Sustainability Directors' Network (USDN) –  
Group Call

Thursday, February 19, 2015 – 2:00pm

The call in information is below:

Dial In Number (US): 877-273-4202

Participant Access Code: 14-60-574

***Urban Forests: Building Resiliency to Natural Disasters***

This presentation is designed for municipal managers in a wide range of professional disciplines. The presentation will discuss the key elements to urban forest resiliency and mitigation that can occur pre-storm or during recovery.

Some ideas, concepts, and slides presented are attributed to Rachel Barker (formally with Central Alabama Regional Planning and Development Commission) who is now a utility arborist with ArborMetrics Solutions (transmission and distribution vegetation management services) based on work she did from 2010-2013 and earlier as Deputy Director of Public Works in Columbus, Georgia. This included the Vegetation Risk Management Plan (VRMP) and the Urban Tree Risk Index (UTRI) GIS tool.

Dudley Hartel – Center Manager of Urban Forestry South in 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.


This entire presentation with my notes are available for download from [www.UrbanForestrySouth.org](http://www.UrbanForestrySouth.org).

•2015 USDN Urban Forests - Resiliency and Response to Natural Disasters (18Feb15 v1.0).pdf

In the 'search site' box (base of page header on the right) type USDN for a list of downloads related to my presentation.

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Slide 2



### Presentation Outline

- **Resilience Strategies**
  - ✓ Urban forest & tree health (long-term)
  - ✓ Risk management
- **Community Tools**
  - ✓ Standards
  - ✓ Best Management Practices
  - ✓ Urban Tree Risk Management (Mitigation)
- **Disaster Recovery**
  - ✓ UFST (Mitigation)
  - ✓ Rebuilding to Standards & Practices

2


The overarching elements of this presentation are the concepts of long-term urban forest (and tree) health, and management of tree risk.

I will outline and discuss professional standards and practices that are available to any community; and then outline urban forest risk management and tree risk management.

Next, I'll introduce you to the Urban Forestry Strike Team (UFST) program and how it can play an important role for your community during disaster recovery.

And finally, a few closing words on re-establishing your community's urban forest based on the standards and practices discussed earlier.

Slide 3



### Develop a Strategy

- Healthy trees are resilient
  - ✓ Strength
  - ✓ Vigor
- Practices promote healthy trees
  - ✓ ANSI A300 Standards
  - ✓ BMP to Standards
- Management guides practice
  - ✓ UF Management Plan w/ Specs
  - ✓ Urban Tree Risk Management

3

Community strategies to increase urban forest resiliency should "flow" from:

- The detailed end result (healthy trees)
- Supported by practices developed from arboricultural standards
- That are defined in the management plan(s)

Slide 4

A slide titled "Arboriculture Standards" with a green leaf graphic on the left. It lists 11 parts of the standards, each with a star icon indicating its status: Part 1 (red star), Part 2 (blue star), Part 3 (blue star), Part 4 (blue star), Part 5 (blue star), Part 6 (blue star), Part 7 (blue star), Part 8 (blue star), Part 9 (red star), Part 10 (blue star), and Part 11 (blue star).

**Arboriculture Standards**

- Part 1: Pruning (2008) ★
- Part 2: Soil Management (2011) ★
- Part 3: Supplemental Support Systems (2013) ★
- Part 4: Lightning Protection Systems (2014) ★
- Part 5: Management (2012) ★
- Part 6: Planting & Transplanting (2012) ★
- Part 7: Integrated Vegetation Management (2012) ★
- Part 8: Root Management ★
- Part 9: Tree Risk Management (2011) ★
- Part 10: Integrated Pest Management ★
- Part 11: Urban Forest Products ★

4

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

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.

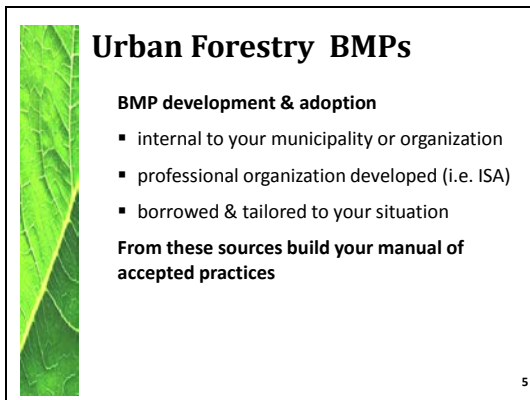
Disaster Preparedness Impact:

- Immediate – 9 – Tree Risk (Pre & post-storm Mitigation) (red star)
- Short-term – 1 (mature tree and young tree structural) – Tree Structure (strength) (dark blue star)
- Longer-term – 1 (young tree structural), 2 & 6 - Tree Health (Strength & Vigor)(light blue stars)

Adopt needed and appropriate standards to support disaster planning, preparedness, and mitigation.

From <http://tcia.org/business/ansi-a300-standards/current-projects> (02Oct2014)

Slide 5

A slide titled "Urban Forestry BMPs" with a green leaf graphic on the left. It discusses BMP development & adoption and provides instructions on how to build a manual of accepted practices.

**Urban Forestry BMPs**

**BMP development & adoption**

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

**From these sources build your manual of accepted practices**

5


From the standards, specifications and practices are developed.

Focus can be on disaster; practices that support long-term healthy urban forests will support disaster preparedness.

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

ISA is the International Society of Arboriculture

Slide 6



### Urban Forestry BMPs

**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)
- tree risk management

6

The essential BMPs and specifications to develop from standards and professional resources.

To develop a long-term strategy for resilient & sustainable urban forests.

Slide 7



### Focus on UF Basics

- **Healthy UF management program & healthy trees**
  - ✓ Implement “key” program components
  - ✓ May NOT be a comprehensive approach
- **Manage tree risk**
  - ✓ Adopt, train, and use a “standard”
  - ✓ Prioritize, assess, and mitigate
  - ✓ May NOT be a comprehensive Urban Tree Risk Management Program

7

To be effective...

- arborists need to focus on urban forestry & arboricultural basics that can positively affect disaster outcomes, **because...**
- disaster planning & preparedness for your community is a huge task, and
- involvement of a range of professionals is critical.

Healthy trees and identification and mitigation of tree risk are the essential components related to disaster preparedness.

Slide 8




### Storms, Trees, & Conflict

- **Tree risk in a disaster context is a spatial issue**
  - ✓ Critical facilities
    - Hospitals
    - Public safety
    - Water & sewer
    - Communications
  - ✓ Transportation (emergency response)
  - ✓ Population centers (response & recovery)

8

Applying our arboricultural background and interest to benefit our community viz a viz disasters.

Slide 9



### Tree 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)

9

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

Slide 10



### Urban Forest Strike Teams


**Key components:**

- Assist communities with recovery efforts following a storm event
- Develop a local, in-state and regional capacity to respond to disasters
- Develop response protocol based on and compatible with Incident Command System
- Professional arborists, trained for tree risk assessment and deployment through EMAC and/or in-state mutual aid

10

Urban Forest Strike Teams (UFST) – Overview elements. An evolution since 2007.


Slide 11



### Urban Forest Strike Teams

**Community benefit:**

- Communities that lack the capacity or professional expertise will benefit during the recovery phase of the disaster
- Trained, experienced, Certified Arborists will be assisting communities with decisions that affect their urban forest – risk & retention

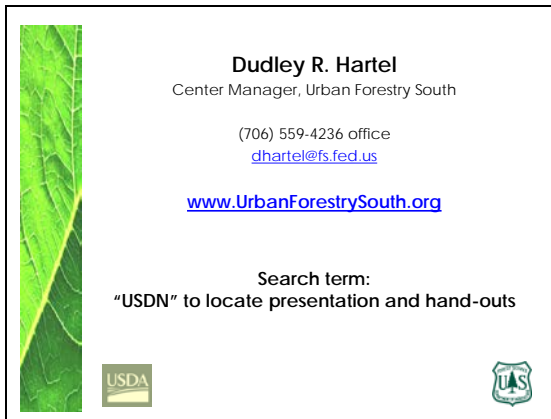


- Risk evaluation of public trees remaining following initial ground debris clean-up
- Data for FEMA Public Assistance (PA)

11

Urban Forest Strike Teams (UFST)

Slide 12





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Search term:  
"USDN" to locate presentation and hand-outs



Please feel free to contact me with questions or comments.

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Extra, discussion slides follow...