



Storm Mitigation Planning



03/07/2017

November 3rd
2022

GA Tree Council
2022 Annual
Conference

Rome, GA

Seth Hawkins

U&CF
Coordinator

Georgia
Forestry
Commission



What We Will Cover

- **Why Plan Before Storms?**
- **Storm Readiness Cornerstones**
 - Pre-Contracts
 - Debris Staging Areas
 - Tree Risk Assessment and Mitigation
- **Available Resources**





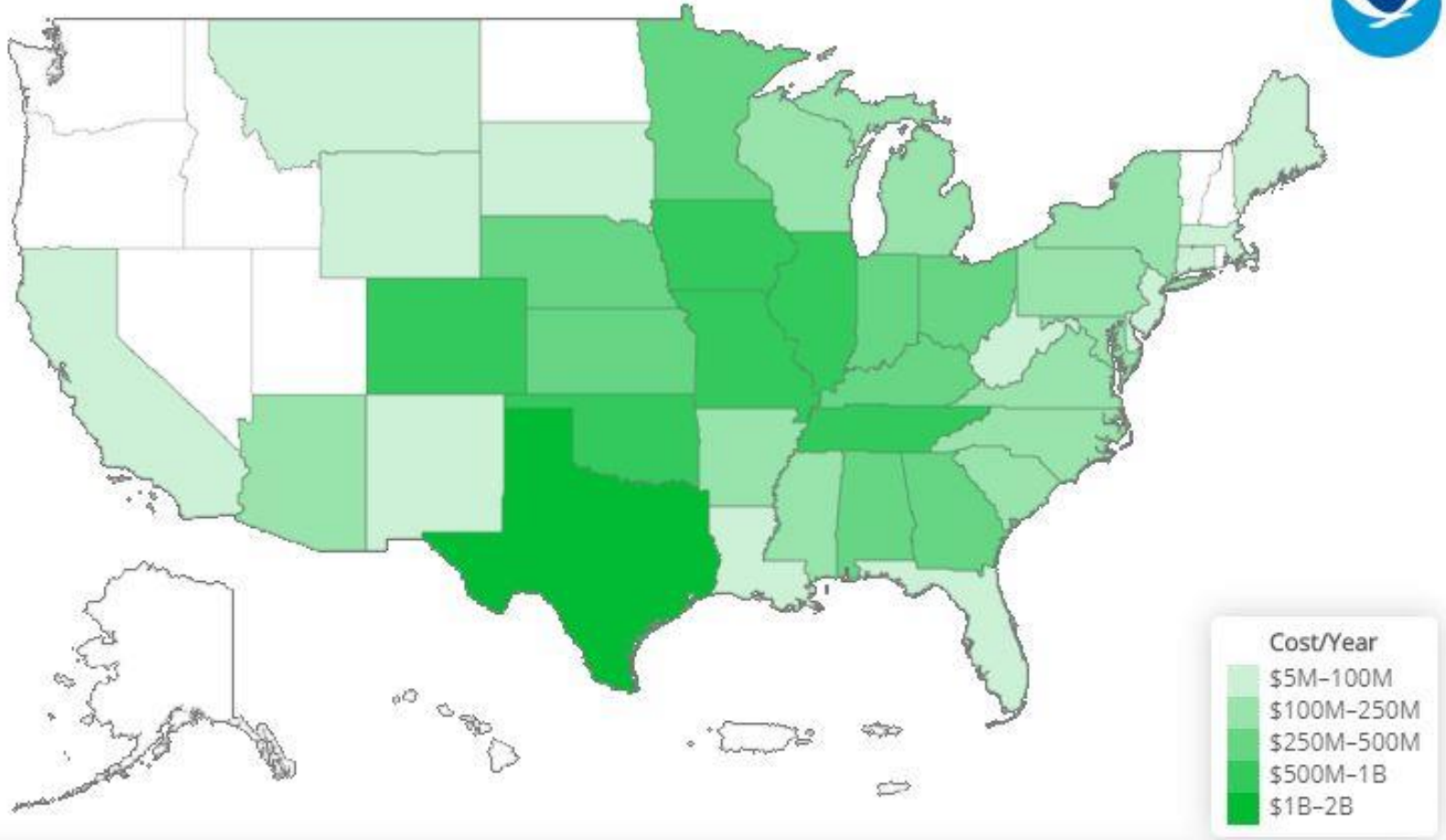
Protecting Our Forest ASSETS!

- **Ecosystem services**
- **Municipal budgets**
 - FEMA Reimbursement
- **Public Safety**
- **Socioeconomic benefits**



Costs of Being Unprepared

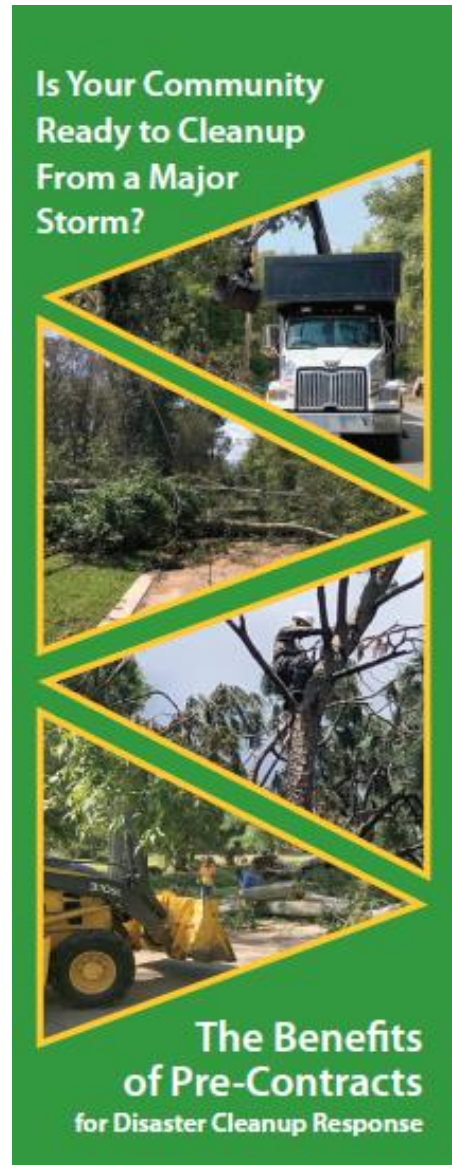
2000-2020* Billion-Dollar Severe Storm Disaster Cost/Year (CPI-Adjusted)



Link: <https://www.ncdc.noaa.gov/billions/mapping/freq/1981-2001>

An Ounce of Prevention...

- **Case Study from GIC highlighting differences in storm response costs between Hurricanes Gustav and Laura**
- **The difference for Alexandria was having pre-existing contracts in place before Laura**



**Pre-Contracts
Brochure from GIC**

<http://www.gicinc.org/PDFs/Storm%20Ready%20Brochure.pdf>

Don't leave money on the table...

- Hurricane Laura caused \$3.6 million in damage in Alexandria
- 85% of costs reimbursed by FEMA!!!
- No relatable data from Gustav, other than millions more in overall damage to City, with little to no FEMA reimbursement for forest damage

Is Your Community Ready?

*The Importance of Pre-Contracts
in the Disaster Cleanup Response*



November 1, 2021

A Case Study of Alexandria, Louisiana

by the Green Infrastructure Center Inc.

<http://www.gicinc.org/PDFs/Alexandria%20Case%20Study.pdf>



Storm Readiness Cornerstones

- 1. Develop pre-positioned (also known as advanced readiness) contracts**
- 2. Develop a debris management plan**
- 3. Conduct a tree risk assessment on public trees**



Debris Management Plans

These are technically not required by FEMA but are *strongly* encouraged

A strong debris plan should:

- 1. Divert as much debris away from landfills through legitimate options.**
- 2. Utilize volume reduction techniques.**
- 3. Consider alternative technologies.**
- 4. Use approved debris management sites**





Debris Management Sites

Identify debris management sites and secure state permits in advance

Factors that should influence where to locate a debris management site:

- **Centrally located to both the response and disposal facilities**
- **Proximity to major roads. Ease of access**
- **Utility hookups for managing the operation**
- **Secure location or ability to install fencing**
- **A large enough site to handle debris**
- **Make sure to acquire state environmental permits for debris management sites in advance!**

Benefits of Pre-Contracts

- 1. Avoid delays**
- 2. Can affect federal reimbursement**
- 3. Allows for more diversion away from landfills**
- 4. Can reduce canopy loss post-event**
- 5. No obligation unless you need the services**



Types of Pre-Contracts

1. Hauling debris

**2. Monitoring
debris**

**3. Disposal
(tipping fees)**



Federally Compliant Contracts

- 1. Must be of reasonable cost, competitively bid, and comply with Federal, State, and local procurement standards**
- 2. Must score and rank applicants on an established set of criteria. Price *must* be a selection criteria for an RFP**
- 3. Required to state contractor is subject to FEMA reporting requirements**
- 4. For contracts over \$100,000 must follow minimum bonding requirements (44 CFR Part 13.36(h))**





Where to Start with Pre-Contracts

- **Start by researching other cities of a similar size and exposure to natural disasters**
- **Research required FEMA elements and state elements**
- **Involve your procurement specialist and legal staff early**
- **Connect with your emergency manager both at the local and state level**
- **Utilize GFC and GIC Resources!!**



Tree Risk Assessments

- If complete inventory data not available, risk assessments in ROW of designated “critical routes”
- Level 1 Visual, assign higher level as needed
- Follow up with the needed pruning!!!



Tree Risk Assessments

- **Simple**
- **Useable**
- **Practical**
- **Acheivable**
- **GFC can help!!**





Storm Readiness Cornerstones

1. Develop pre-positioned (also known as advanced readiness) contracts

Fast deployment times and great FEMA reimbursement

1. Develop a debris management plan

Better coordination among departments

2. Conduct a tree risk assessment on public trees

Reduced liability and reduced canopy loss

Public Information and Outreach

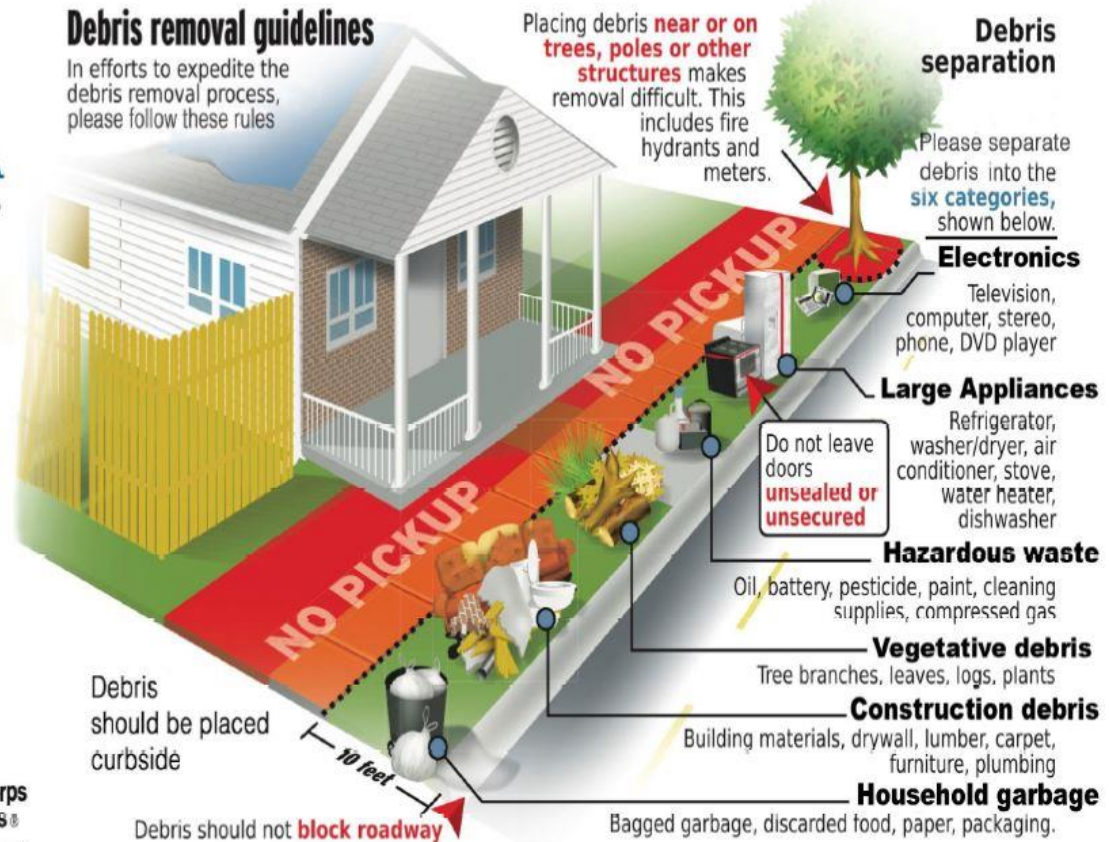
By having materials and messages ready, you can inform the public on what is happening and how they can be more safe in helping with the cleanup response.

FAQ for the public to aid in answering questions.

Example: where can I find an arborist?

<https://www.treesaregod.org/findanarborist>

Infographics to educate the public on debris sorting and eligibility.





Communication with the Public

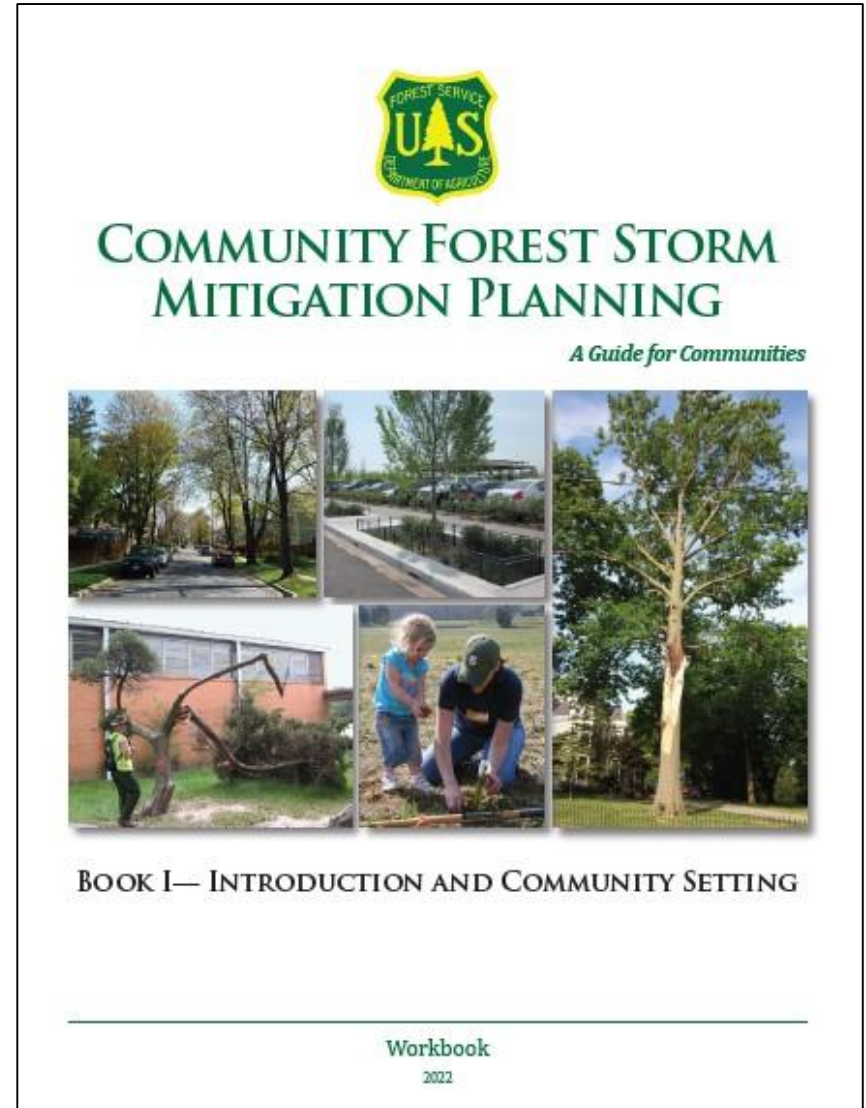
Sample Priority Ranking of Storm Calls:

- 1. Tree down, injured people caught in car or home**
- 2. Trees down, blocking arterial streets**
- 3. Trees blocking exit from individual residences**
- 4. Trees split or rocking, which have a high probability of falling, causing personal injury or property damage**
- 5. Trees or branches fallen and fully blocking non-arterial streets**
- 6. Trees fallen and at rest on homes and/or automobiles**

–Rachel Barker, ArborMetrics

Forest Storm Mitigation Manual

- **Community Setting**
- **Storm Preparation**
Tree Canopy Assessment, Public tree inventory, tree risk assessment, storm mitigation map, and more
- **Storm Response**
Debris diversion and cleanup, hazard tree removal and pruning
- **Storm Recovery**
Summary of tree loss, planting site inventories, replacement plan, species selection





Community Forestry Academy



COMMUNITY LEADER COURSE RESOURCES

SGSF UFST Website

FEMA Debris Guide

When a Storm Hits, Are You Ready?

National Weather Service Storm Track Data
(ArcGIS)

Interactive Severe Weather Maps & Apps

National Hurricane Center

COMMUNITY PLANNING FOR STORM EVENTS

<https://communityforestry.academy/>

- Southern Group of State Foresters
- Series of **free** training videos including why a community should plan for storms.
- **Free** resources and guides for developing plans and assessments.



Links from Today...

- **GFC - <https://gatrees.org/urban-community-forestry/trees-storm-safety/>**
 - **Workbook and template – Abridged version coming soon from GIC**
- **GIC Storms - http://www.gicinc.org/storm_mit.htm**
 - **Workbook and template – Abridged version coming soon from GIC**
- **Alexandria Case Study - <http://www.gicinc.org/PDFs/Alexandria%20Case%20Study.pdf>**
- **Pre-Contracts Flyer - <http://www.gicinc.org/PDFs/Storm%20Ready%20Brochure.pdf>**
- **Community Forestry Academy - <https://communityforestry.academy/>**



Questions?

Seth Hawkins
Community Forester
Georgia Forestry Commission
478-951-8286
shawkins@gfc.state.ga.us

