NATURAL DISASTER PLANNING
FOR THE CAMPUS FOREST
AT THE
UNIVERSITY OF NORTHERN COLORADO

Introduction

Natural Disasters include floods, tornadoes, and related high-velocity winds, as well as ice storms. Preparing for these natural disasters should involve the cooperative effort of a wide array of agencies, private enterprise and *Southern Miss* services. We must be prepared for the disasters that will come when we least expect it. They won't wait for us to get ready.

So, how do we get ready? The following is a *Preparedness Checklist* that I compiled after attending the *"Storms over the Urban Forest"* Conference (May 18-20,1998) at the Arbor Day Foundation in Nebraska City, Nebraska:

☐　　　　　　 **1. Establish a Hazard Tree Policy**
　　　　 This policy will establish legal ownership of the Trees, especially when dealing with adjacent City trees. Having a policy in place will reduce the University's liability. It indicates a demonstrated *"Reasonable Care; a good faith effort"*.
Such a policy will spread the risk to the highest levels. FEMA favors such a policy.

☐　　　　　　 **2. Tree inventory Software**

　　　　　 ☐　　　 **Maintenance records**
　　　　　 ☐　　　 **Tree History**
　　　　　 ☐　　　 **Damage Survey Estimates Capability**

☐　　　　　　 **3. Prominent Urban Forestry Division or Program**

　　　　　 ☐　　　 **Adequate Staffing***
　　　　　 ☐　　　 **Adequate Capital Equipment & Supplies**

　　　　 * *See Campus Forester Proposal*

　　　　　 ☐　　　 **Proper Tree Selection Evident**
　　　　　 ☐　　　 **Proper Tree Care Evident**
　　　　　 ☐　　　 **Procedures in place that will reduce risk, tree losses and damage**

☐   **4. <u>Establish Tree Protection Policy</u>**

- ☐ **draft**
- ☐ **Approval**
- ☐ **Education/training of University Staff**
- ☐ **Pre-Planning Construction Strategies in place**
- ☐ **Enforcement of Policy**

☐   **5. <u>Tree Hazard Program</u>**

- ☐ **Criteria established**
- ☐ **Evaluation Forms**
- ☐ **Inspection Schedules**

☐   **6. <u>Establish Pre-Existing Contracts For Emergencies</u>**

- ☐ **Guarantee priorities with penalty clauses**
- ☐ **Guarantee prices (pre-disaster/locked-in)**
- ☐ **Bonded; insured; licensed**
- ☐ **Identify Vendors**
  - ☐ **Line clearance Arborists**
  - ☐ **Commercial Tree Services**
  - ☐ **Stump Removal Services**
  - ☐ **Certified Arborists Preferred**
- ☐ **Identify Large Equipment Contractors/operators**
  - ☐ **Local; regional**
- ☐ **Accounting & Documentation Requirements**
  - ☐ **University Audit Standards**
  - ☐ **State Audit Standards**
  - ☐ **Federal/FEMA Audit Standards and Requirements**

☐   **7. <u>Establish Mutual Aid Agreements</u>**

- ☐ **Weld County**
- ☐ **Adjacent Counties**
- ☐ **City of Greeley**
- ☐ **Public Utilities**
- ☐ **MDOT**
- ☐ **Regional Campuses?**
- ☐ **Other Universities or Junior Colleges**

8. Establish Procurement Procedures

- ☐ **Designate Who Will be Responsible**
- ☐ **Forecasting Supply**
  - ☐ **Difficult to acquire items**
  - ☐ **chainsaws, generators**
  - ☐ **brush chippers**
  - ☐ **Safety Supplies/PPE**
- ☐ **Stocking Levels of Materials**
- ☐ **Establish Vendor File for Emergencies**
  - ☐ **Establish Agreemeents (Pre-Disaster)**
  - ☐ **Equipment Repair**
  - ☐ **Chainsaw Repair & Parts**
  - ☐ **Debris Hauling Services**
- ☐ **Establish Resource-Sharing Initiatives**
  - ☐ **City of Hattiesburg**
  - ☐ **Forrest County**
  - ☐ **Public Utility Companies**
  - ☐ **Line Clearance Companies**
  - ☐ **Mississippi Forestry & Natural Resources**
  - ☐ **State Universities**
  - ☐ **Regional Campuses**

☐ ## 9. Establish Emergency Procedures

- ☐ **Define** *"Critical Personnel".* **So that everyone understands their role during an emergency.**
- ☐ **Establish Call-out Procedures**
- ☐ **Establish Emergency Priorities**
  - ☐ **Life-Threatening**   ☐ **Communications**
  - ☐ **Power Restoration** ☐ **Accessibility**
- ☐ **Establish Command Center**
  - ☐ **Establish Chain-of -Command**
  - ☐ **Who is in Charge?**
  - ☐ **Communication Links**
  - ☐ **State & Federal Interface**
- ☐ **Evacuation Routing**
- ☐ **Emergency Vehicle Routing**
- ☐ **Damage Assessment**
- ☐ **Establish Documentation Procedures**
  - ☐ **FEMA Forms**
  - ☐ **Maintain Journal or work logs**
  - ☐ **Photos; videos**

- ☐ **Utility/Power Companies Interface**
- ☐ **Mobilization of Contractual Assistance**
- ☐ **Initiate Mutual Aid Agreements**

☐ **10. <u>Establish Emergency Documentation Procedures</u>**

☐ **Tracking & Recovery**
☐ **Error Correction Measures** *(The ways and means to correct errors in real time, as opposed to post disaster outcomes)*
☐ **Establish Codes**
    ☐ **Locations**   ☐ **Materials/supplies**
    ☐ **Payrates**   ☐ **Vehicles**
    ☐ **Chainsaws**   ☐ **Equpment**
☐ **Codes for Work Type**
    ☐ **Hazard Abatement**   ☐ **Tree Removals**
    ☐ **Debris Hauling**   ☐ **Street Clearance**
    ☐ **Debris Management at Disposal Site**

☐ **Develop EXCEL Format for Emergency Documentation**

☐ **11. <u>Determine Debris Disposal / Utilization Measures</u>**

☐ **Determine Responsible Person**

☐ **Determine Storage Sites**
    ☐ **Accessibility to Large Equipment**
    ☐ **Heavy Traffic**
    ☐ **Permits?**
☐ **Establish Debris Processing Contracts (Tub Grinding Operators)**
    ☐ **Pre-disaster quote prices**
    ☐ **Bonded, Certified, Insured**
☐ **Alternative Disposal/Utilization Methods**

    ☐ **Burning**
        ☐ **Fire & Safety**
        ☐ **Permits**
        ☐ **Environmental and Public Concerns**

    ☐ **Firewood**

    ☐ **Sawlogs**
    ☐ **Contact Sawmills**
    ☐ **Contact ColoradoForestry**
    ☐ **Contact US Forest Service**

☐ **12. <u>Establish Disaster / Email Address File / NET Connections</u>**

☐ **FEMA**   ☐ **ColoradoUrban Forest Council**
☐ **IDNR/ State Forester**   ☐ **Colorado Environmental Management**
☐ **REM**   ☐ **Govenor of CO (Disaster declaration)**
☐ **University Relations**   ☐ **UNC News Service**
☐ **Arbor Day Foundation**   ☐ **Storms Conference Roster**
☐ **"TREELINK**   ☐ **Mirror, Greeley Tribune**
☐ **See Listing provided**

- ☐ **13. <u>Response & Recovery Measures</u>**

  - ☐ **Mobilize Command Center**
  - ☐ **Review Documentation Procedures with Emergency Personnel**
    - ☐ **Prior to Clean-up efforts**
    - ☐ **Forms for each assigned Vehicle (clipboards)**
    - ☐ **Follow-up on thoroughness of data at end of each day**
    - ☐ **Utilize code system for location & equipment**
    - ☐ **Assign Record-keeper for each vehicle**
  - ☐ **Establish Communication links**
    - ☐ **Families of Emergency Personnel**
    - ☐ **HomePage Disaster Update to inform UNC Community**
  - ☐ **Recovery Efforts**
    - ☐ **Funding Alternatives**
      - ☐ **FEMA**
      - ☐ **IDNR Grants**
      - ☐ **Local Foundations**
      - ☐ **Service Clubs**
      - ☐ **Private Gifts**
      - ☐ **Disaster Assistance Programs (Federal)**
      - ☐ **USM Development**
      - ☐ **Bank Trusts / Grants**
      - ☐ **PRF**
      - ☐ **State Legislature**
      - ☐ **Class Gifts**
    - ☐ **Planting New Trees**
      - ☐ **Facilities Planning / Landscape Architect**
      - ☐ **Impact on Landscape Masterplan**
      - ☐ **Tree Selection**

- ☐ **<u>Follow-Up / Critique</u>**

  - ☐ **Infrastructure impacts / Changes**
  - ☐ **Level of Destruction**
  - ☐ **Overall Effectiveness**
    - ☐ **Initial Assessment**
    - ☐ **Initial Response**
    - ☐ **Documentation**
    - ☐ **Federal / State Interface issues**
    - ☐ **Audits . Record keeping**

  - ☐ *HOW PREPARED WERE WE? AND WHAT ARE WE GOING TO DO BETTER THE NEXT TIME WE HAVE TO RESPOND?*