You have completed your readiness work, and you are prepared for expected and unexpected storm events, minor or significant. A tree-damaging event has occurred. Let’s get to work, but pause and take note:

- **Safety first for you, your staff and the public.**
- **Help is available and willing.**

1. **Initial Damage Assessment, Event Classification**
   - Complete the initial storm damage assessment to ascertain the scope of damage and resource needs.
   - Classify the event according to your event classification.

2. **Mobilization**
   - Secure the resources based on the event classification to fill the task areas required to respond to the event.
   - The team leader briefs the team and assigns task areas of responsibility.

The chart to the right illustrates the chain of command by task areas and tasks to be completed that will take place from now through the response phase.

**Resources: Requesting Regional or State Resources**
- County Emergency Management Agencies
- N.C. Forest Service – Contact your NCFS county ranger. www.ncforestservice.gov

**Tree Work**
- Supervisor
- Tree Crews complete assigned work
- Notify planning of completion

**Planning & Logistics**
- Monitor situation & adjust, event classifications & resource needs
- Organize/Plan Calls on Dispatch log
- Dispatch Calls for Inspections
- Dispatch Calls for work Completion

**Hazard Remediation**
- Call Inspection
- Hazard Survey
- Inspect work, Mgmt& Resource need, Prioritize
- Notify planning of findings

**Tree Damage Inventory**
- Inventoryers assigned by geographic area, mgmt. unit
- Inspect all damaged trees & log management information

**Administrative Support**
- Receive Calls
- Document on Call Log
- Admin Support for all
### 3. Event Action Planning and Operations

The following chart provides event action planning and operational guidance by activity and event class.

- Team leader and planning team work each of the activities according to the event class.
- Increase the event classification and mobilize additional resources as necessary.
- Decrease the event classification as the workload dictates, demobilizing resources until the response phase can be declared finished and the recovery phase begins.

<table>
<thead>
<tr>
<th>Initial Damage Assessment</th>
<th>Event Class</th>
<th>CLASS ONE (1)</th>
<th>CLASS TWO (2)</th>
<th>CLASS THREE (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-call staff receives calls and performs damage assessment.</td>
<td>Damage remediation can be managed by urban forestry response team.</td>
<td>Damage remediation requires all community resources and possibly some outside resources.</td>
<td>Damage remediation requires outside assistance.</td>
<td></td>
</tr>
<tr>
<td>Conducts windshield survey to quantify the damage, scope and resources needed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mobilization</th>
<th>CLASS ONE (1)</th>
<th>CLASS TWO (2)</th>
<th>CLASS THREE (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partial or full urban forestry response team</td>
<td>Community emergency response team</td>
<td>County/State emergency response team</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Full urban forestry response team</td>
<td>Community emergency response team</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May require outside resources</td>
<td>Full urban forestry response team</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Incident Action Plan</th>
<th>Management Units</th>
<th>Storm Damage Assessments</th>
<th>Tree Work</th>
<th>Debris Cleanup</th>
<th>Demobilization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quadrants or not required</td>
<td>Storm Management Units required</td>
<td>Crew(s) dispatched by quadrant and priority if warranted</td>
<td>Completed by tree crews while on-site or based on Dispatch Log reporting.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storm Management Units required</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storm Damage Assessments</td>
<td>Hazard Remediation</td>
<td>Hazard Remediation</td>
<td>Hazard Remediation</td>
<td>Comprehensive Initial Tree Damage Assessment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Call Inspection as call received or by quadrant</td>
<td>• Call Inspection by quadrant or management unit</td>
<td>• Call Inspection</td>
<td>• May be required</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Hazard Survey by management unit may be required.</td>
<td>• Hazard Survey by management unit required</td>
<td>• Hazard Survey required</td>
<td>Hazard Remediation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post-inspection of damaged trees may be warranted.</td>
<td>Tree Damage Inventory</td>
<td>Tree Damage Inventory</td>
<td>Tree Damage Inventory</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• May be required by management unit</td>
<td>Required</td>
<td>Required</td>
<td></td>
</tr>
</tbody>
</table>

- Crews assigned to quadrant/management unit and work dispatched by priority. Primary work is hazard remediation, not debris clean up.

- Crews assigned to management unit and work dispatched by priority. Hazard remediation work only

- Workload reaches point that the event classification can be reduced to Class 1.

- Workload reaches point that the event classification can be reduced to Class 2.
The following details operational information and issues for consideration during the response phase.

**Tree Damage Assessments**

**Initial Damage Assessment and Planning**

Be sure conditions are safe for your workers before you dispatch staff and crews to begin work.

In serious events, downed debris may be blocking roadways, restricting safe access of emergency services and completion of tree damage assessment and tree work. Clearing roadways will obviously be the first priority.

**Hazard Remediation**

Downed tree debris is easy to identify and prioritize. Assessing the safety risk of the various types of tree storm damage requires qualified professionals. That said, a layperson can be trained to inspect damaged trees for outward signs of damage and take action to remedy the hazardous condition and/or call for the qualified professional on your team for consultation. The following are some simple steps an inspector should perform while inspecting a storm-damaged tree as well as typical types of damage to look for.

A common oversight is to just focus on the reported damage.

- View the whole tree at a distance from various vantage points to identify safety issues (electric lines, tree/damage stability) and tree damage.
- Walk around the base of the tree. Inspect the anchor roots up the trunk and main structural branches out to the smaller branches of the tree.
- Look at adjacent trees for damage.

The following photographs below illustrate typical storm damage that may present a safety risk and should be addressed during the emergency or response phase. Also see NCFS Storm Damage Tree Assessment BMP.

**Root Zone** — Leaning tree. Not all leans are dangerous. If the ground around the base is not cracked and moving, have your qualified arborist inspect the tree. If the ground is cracked and moving, remove the tree.

**Trunk** — Cracks that are moving or associated with a cavity or decay are dangerous. Have your qualified arborist inspect the tree.

**Main Scaffold Branch Attachments** — Cracks. Remove tree.

**Branches** — Split or rips as pictured here. Remove the branch.

**Branches** — Broken and hanging in the tree (hanger). Remove hangers.
Crown Loss – The collective total loss of live branches of the tree due to storm damage and storm damage pruning. Trees with crown loss will comprise the largest percentage of standing damaged trees. Collecting good management data will facilitate developing a complete recovery plan (pruning, removal and planting) and challenges that may present themselves with the passage of time and implementation.

Tree Damage Inventory

It is important that the information collected in the tree damage inventory provides the data necessary to make informed management decisions and implement a recovery plan. Being thorough now will minimize the need for reinspections in the near future and facilitate managing challenges that arise with the passage of time and implementing a plan. There are two categories of data that should be collected: location information and tree management data. This inventory work should be completed by an ISA Certified Arborist with tree inventory work experience, and better still, one who is Tree Risk Assessment Qualified. The following tables detail the data that should be collected and why.

<table>
<thead>
<tr>
<th>Category</th>
<th>Reasons</th>
<th>Category</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location Data</td>
<td>Facilitate an inspector or crew to return to the exact tree for inspection or to complete work</td>
<td>Tree Management Data</td>
<td>Management need of the tree at the time of inspection and data to assist in making future management decisions</td>
</tr>
<tr>
<td>Property Location</td>
<td>Property name, street, address, and location of the property. Backup for “poor” GPS coordinates</td>
<td>Management priority</td>
<td>Planning and implementation</td>
</tr>
<tr>
<td>Management Unit</td>
<td>Work planning and implementation</td>
<td>Tree health and structure</td>
<td>Data for making management decisions. Pruning versus Removal</td>
</tr>
<tr>
<td>Tree ID number for tree at site</td>
<td>Unique ID number at the site differentiating one tree from another. Numbered tags nailed on the tree can be used.</td>
<td>Site type, dimensions and quality of site</td>
<td>Poor site – variable in removal decision. Site information for replacement tree planting decisions.</td>
</tr>
<tr>
<td>GPS Coordinates</td>
<td>Locates tree on large properties. Facilitates mapping for planning purposes.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>