

Huntsville Botanical Garden

Natural Disaster Plan - Plant Collections Management

Reviewed January 2020

Resources

- **Staff contact list verify safety and coordinate recovery after a disaster**
 - [maintain list of appropriate personnel and contact information]
- **Clean-up effort resource list of contractors/vendors**
 - [maintain list of preferred contractors for work that exceeds available resources]
- **List local emergency responders and horticultural contacts (both in and outside of the region) to call for help/aid after an event.**
 - [maintain list of contact information for volunteers and societies that may be impacted to inform them of closures for safety and repair schedules]

Risks

- **Hazards**
 - Tornadoes, Severe Thunderstorms
 - Drought
 - High Winds
 - Ice Storms, big temperature swings from freezing to mid-70's in 24 hours
 - Seasonal and flash flooding
 - Fire
- **Collections and/or plants of high value or worth**
 - *Rhododendron* (emphasis on native azaleas)
 - *Trillium*
 - Other collections: *Acer*, *Camellia*, *Cornus*, *Hexastylis*, *Hydrangea*, *Ilex*, *Lagerstroemia*, *Magnolia*, Bulbs (emphasis on *Crinum*, *Lycoris*, and *Narcissus*)
- **Prioritize Salvage**
 - Level 1
 - Federally Listed Species, State Listed Species, Candidates for listing
 - Rare plants from extirpated populations
 - Level 2
 - Rare plants
 - Unique hybrids
 - Charismatic focal plants
 - Level 3
 - Labeled Specimens
 - Plants of known provenance
 - Level 4
 - Unlabeled Specimens
 - Plants of unknown provenance

Disaster Planning Strategy for Botanical Collections

Adapted from FEMA 386-6 by Jackie Bergquist of the Longwood Graduate Program

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Mitigation Plan

- Back up plant records in multiple locations on an ongoing basis (external drive, cloud storage).
- Duplicate propagules for listed, rare, unique, and other accessioned plants of interest in on-site and off-site locations (i.e. private gardens and other public gardens).
- Reduce soil compaction damage by limiting access of heavy machinery.
- Keep about 10 yards of mulch on hand to minimize drought stress.
- Disaster preparation when *storm is imminent*:
 - Tornadoes, Severe Thunderstorms
 - Check calendar, cancel events, drop/break-down tents so they do not become a hazard.
 - Cut power to systems that may be damaged by lightning strike.
 - Push 1 gallon and smaller containers together to keep them from blowing around in nursery areas.
 - Power off computers.
 - Drought
 - Maintain mulch
 - Increase frequency of field checking for stressed plants
 - Adjust irrigation where present
 - High Winds
 - Check calendar, cancel events, drop/break-down tents so they do not become a hazard
 - Push 1 gallon and smaller containers together to keep them from blowing around in nursery areas
 - Ice storms and wildly fluctuating temperatures
 - Apply additional mulch to any marginal plants or recently installed, use floating row covers to protect exposed containers and nursery stock.
 - Use irrigation and hose bib cut-offs to prevent pipe damage.
 - Fire
 - Know location of fire extinguishers in every building (attach floorplans)
 - Be prepared to call 911 and/or contact Fire Dept 256-722-7120

Mitigation Plan

- *After event*:
 - First priority is making Garden safe for staff, volunteers, and visitors. Caution-tape off any areas deemed unsafe for entry until work can be done to make it safe. Communicate pathway and section closings to Visitor Services.
 - Before paths are cleared or heavy equipment brought in assess and document damage; and check for listed, rare, and unique plants important to the collection.
 - Use best pruning practices and other horticulturally appropriate triage measures on damaged plants.
 - Consider removal or renovation of level 4 plants.
 - Some specimens have back up plants at other gardens to avoid total loss of an accession. Replace dead specimens from these sources if possible.

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Mitigation Plan Responsibilities

- Team-based responsibilities
 - [define teams of appropriate personnel and assign procedures to follow before and after event, this will differ depending on the structure of your staff and volunteers]
 - Director of Horticulture initiates disaster preparation before an imminent disaster.
 - Horticulture managers will be responsible for safeguarding the highest priorities.
 - Director or manager will be the first person back on scene.
 - Horticulture managers are the initial recovery group that will immediately document damage and assess safety of the damaged area before others (especially volunteers) are let back in.
 - Curators and Azalea Trail volunteers will assess the Azalea collection
 - Curators and Trillium Collection volunteers will assess the Trillium collection
 - Horticulture specialists and other available employees can assess the rest of the woody plant collection, structures, and facilities

Implement the Plan and Monitor its Progress

- Write the plan
 - Keep it in a safe *accessible* place (shared drive).
- Interagency coordination
 - Agreements with local, regional and out-of-region organizations and businesses that could help the garden prepare or recover if necessary.
 - Contact local university extension offices, and county agencies to find regional disaster research and planning materials for horticulture/arbiculture.
- Updates (performed January each year)
 - Review staff contact lists and responsibility designations.
 - Account for priority plants that were acquired or died.
 - Have annual review during the same week every year so that it becomes routine.
 - Do a “walk through” with local emergency responders, and or horticultural contacts to build relationships during this week.
 - Test the plan and adjust accordingly.
 - Evaluate the effectiveness of the plan after a disaster event.
 - Communicate the disaster plan to new staff members.

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Date:

Event:

Preparations:

Effectiveness:

Disaster Assessment

Initial Damage report:

Safety Assessment:

Collections and Accessions assessments:

Structures and Exhibit assessments:

Salvage Priorities:

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