APGA Disaster Readiness Initiative

Hurricane Disaster Response Checklist

Getting started

This checklist provides a high level overview of key response actions for different phases of a hurricane or tropical storm response. It should be used as follows:

1. Review and understand each section prior to an incident.
2. Use in conjunction with your Disaster Management Plan, particularly the Hurricane section of your plan.
3. Regularly update associated contact lists, resources, and procedures.
4. Practice and drill procedures mentioned in the checklist such as evacuation and communication procedures.
5. Utilize this checklist as a response guideline during a hurricane or tropical storm response as appropriate to meet the current situation and needs of the incident.

Introduction

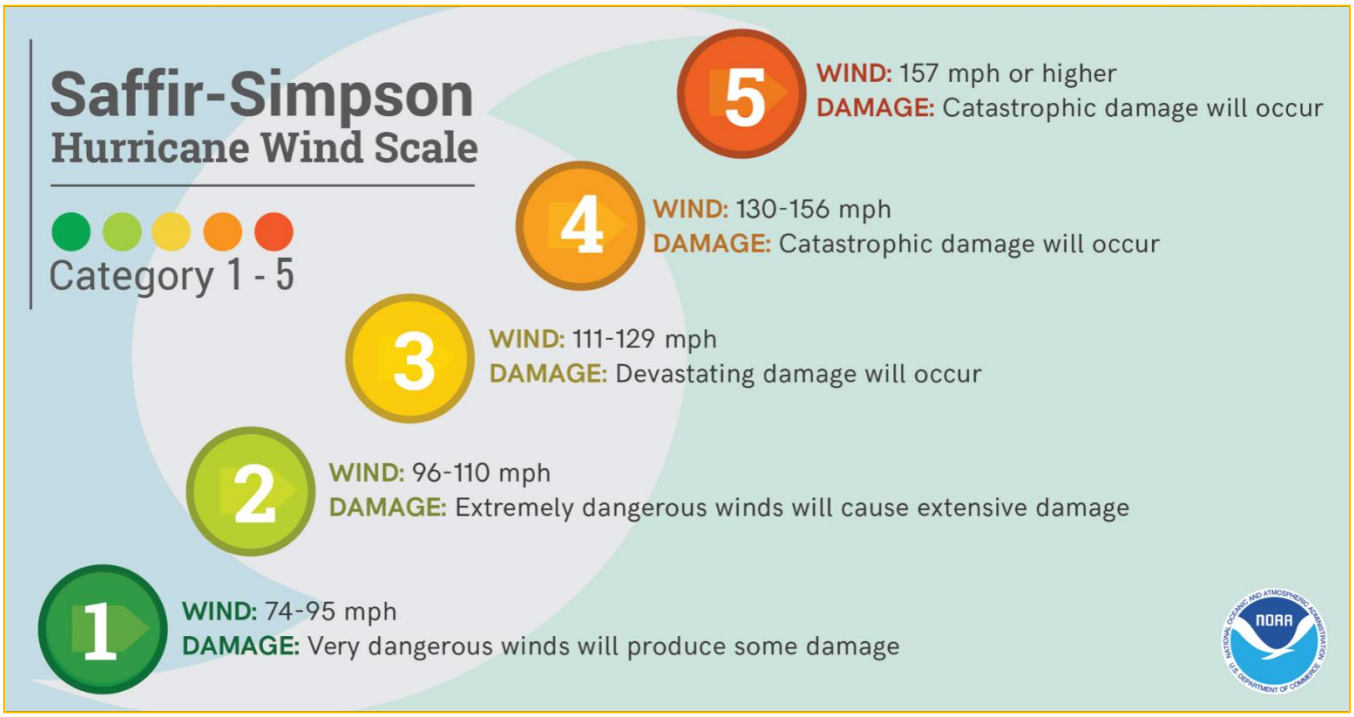
Hurricanes are powerful storms that can cause devastating impacts through high winds, heavy rainfall, storm surge, and flooding. The Atlantic hurricane season runs from June 1 to November 30, with peak activity typically occurring from August to October. Hurricanes are powerful storms that can cause devastating impacts through high winds, heavy rainfall, storm surge, and flooding. The Atlantic hurricane season runs from June 1 to November 30, with peak activity typically occurring from August to October.

These storms are part of a broader category of tropical cyclones, which also includes tropical depressions and tropical storms. Tropical storms develop over warm ocean waters and have sustained winds of 39–73 mph. While they are less intense than hurricanes, tropical storms can still produce heavy rainfall, localized flooding, and damaging winds. Once sustained winds reach 74 mph or higher, a system is classified as a hurricane and is ranked using the Saffir-Simpson Hurricane Wind Scale, which ranges from Category 1 (74–95 mph, some damage) to Category 5 (157+ mph, catastrophic damage). Understanding the difference between a hurricane watch and a hurricane warning is essential. Watches indicate that hurricane conditions are possible within 48 hours, while warnings mean they are expected within 36 hours and that preparations should be finalized.

When tracking tropical storms, several key terms help guide preparedness and response actions. The cone of uncertainty shows the likely path of the storm's center, but dangerous weather conditions can extend far beyond the cone's edges. Storm surge is a rapid rise in

seawater pushed inland by hurricane winds and is often the most deadly aspect of a hurricane, especially in coastal and low-lying areas. High winds can uproot trees, damage structures, and down power lines even in weaker storms. The eye of the hurricane is the calm, clear center, surrounded by the eyewall, where the most intense winds and rainfall occur. It's also important to note the “dirty side” of the storm typically the right side in the Northern Hemisphere tends to bring the heaviest rain, strongest winds, and highest tornado risk, while the left or “dry side” may experience less severe conditions.

For public gardens, hurricanes pose threats to infrastructure, plant collections, and visitor and staff safety. Preparedness requires advance planning, coordination with local emergency services, resilient infrastructure, and clear communication protocols. A comprehensive response plan enables faster recovery, protects critical assets, and minimizes harm to people and the environment.



Hurricane/Tropical Storm Response Objectives

- Protect staff, volunteers, and visitors from wind, rain, and storm surge hazards.
- Safeguard plant collections and essential infrastructure from hurricane damage.
- Maintain coordination with local emergency management and utilities.
- Support continuity of operations through proactive storm preparation.
- Initiate recovery planning early to enable rapid restoration.

Mitigation/Preparedness Considerations

- Develop a Hurricane Response Plan and ensure all staff are trained on its procedures.
- Identify high-risk areas for wind and water damage and prioritize protective measures.
- Install storm shutters, anchor loose objects, and reinforce vulnerable structures.
- Create backup systems for power, water, and communications.
- Maintain emergency supply caches (tarps, generators, fuel, radios, etc.).
- Schedule seasonal inspections of roof structures, tree limbs, and drainage systems.
- Pre-establish contracts with vendors for debris removal and emergency repairs.
- Establish mutual aid agreements with nearby gardens or agencies for post-storm support.

Initial Response (0-12 hours)

- Activate the Disaster Management Plan and Hurricane Response Plan.
- Monitor updates from the National Hurricane Center, NOAA, and local officials.
- Notify staff, volunteers, and visitors of closures, evacuations, or shelter-in-place orders.
- Secure all outdoor items (equipment, signage, benches, containers).
- Protect plant collections by moving potted plants indoors and tying down large specimens.
- Shut down electrical systems and gas lines in areas at risk of damage.
- Fuel vehicles and test generators.
- Ensure emergency kits, radios, and communication tools are charged and distributed.
- Confirm staff sheltering plans and safety protocols.
- Update public-facing communication channels (website, social media, voicemail).

Intermediate Response (12-24 hours)

- Ensure that all staff are accounted for and in a safe location.
- Maintain communication through text alerts or radio (as able).
- Monitor ongoing weather updates and hazards (winds, flooding, tornadoes).
- Refrain from any on-site activities until the all-clear is issued.
- Document any visible external damage (if safe to do so).
- Maintain calm and ensure essential needs are met for any sheltering staff.

Extended Response (Post-landfall, 24+ hours)

- Conduct a safety check of buildings and grounds once conditions allow.
- Identify and report downed power lines, gas leaks, or structural hazards.
- Initiate damage assessment of plant collections and infrastructure.
- Begin debris removal in cleared areas (prioritize safe access routes).
- Communicate with local emergency management about resource needs or support.
- Monitor staff and volunteer well-being; provide rest, hydration, and emotional support.

Demobilization and Recovery

- Deactivate the Disaster Management Plan and transition to the recovery phase.
- Conduct a thorough assessment of damage and document impacts with photos and detailed records.
- Safely remove debris, contaminated soil, and hazardous materials.

- Coordinate repairs to facilities, fencing, irrigation, and power systems.
- Restore critical functions and evaluate losses to plant collections.
- Begin replanting or stabilization efforts for trees and vulnerable areas.
- File insurance claims and seek FEMA, SBA, or grant support as applicable.
- Debrief staff and volunteers; gather lessons learned for future improvement.
- Update emergency response plans based on After Action Reports.
- Replenish used emergency supplies and restore equipment to readiness.

Additional Considerations

- Seasonal Readiness: Conduct hurricane and tropical storm drills before peak season and review checklists annually.
- Tree Risk Management: Prune or remove high-risk trees before hurricane season; document actions taken.
- Partnerships: Work with local officials, utilities, and neighboring institutions for coordinated response.
- Public Education: Share preparedness tips and ecological impacts of hurricanes through signage or programs.