

## Care for Hurricane Damaged Plants and Trees

The aftermath of a hurricane poses continued safety issues for you and your plants. Obviously, the sooner you react on some of this, the better. Follow these steps, always keeping safety in mind, because cleanup can be very hazardous too.

1. Survey the site and begin to formulate a plan. Identify the hazards and know your limitations; many tasks should be left to a professional. Chain saws are especially dangerous and only a professional should use them to work above ground level. It's important to closely follow instructions for their operation.
2. Call the power company to report tree limbs fallen on power lines.
3. Take photographs of your property in case they are needed for insurance purposes.

### Once the water recedes:

4. Remove dangerous trees – those that are leaning, those with the soil lifting on one side, with cracks and with a significant number of major branches gone. Remove branches that are dangling.
5. Protect the roots of small trees and plants that have fallen over or otherwise been uprooted, until you are able to replant them. Cover exposed roots with soil, moist burlap sacks, or moist sphagnum moss.
6. Even if trees and shrubs remain upright following the hurricane, winds may have rocked them back and forth, creating hollow depressions around major roots. Add soil and water it in to eliminate air pockets around the roots.
7. Clear lawn grasses of fallen leaves, silt, mud and debris, which would smother the grass. Grasses and plants that have been under water should resume their growth once the water is drained away.
8. Remove mulch from plants to help water evaporate.
9. Clear debris from downspouts and drainage paths to help water recede, especially before doing the next step.
10. Saltwater from flooding and ocean water carried on the wind can damage plants in several ways. In the soil, salt displaces the nutrients plants need and will pull moisture out of the roots, causing desiccation. Salt can also burn foliage, causing leaves to die and drop. For plants that have been exposed to saltwater, irrigate them with freshwater as soon as possible. Apply more water, and water more frequently than under normal conditions. Spray the foliage off with fresh water.
11. Re-plant small trees that have fallen over. Make the hole large enough to fit the tree roots back in. Remove damaged sections of root, making a clean cut. Pull the tree upright and fill the hole in with the soil you removed. Water the tree in and continue watering with 3 gallons per inch of trunk diameter, three times weekly. Stake the tree, adjust regularly and remove stakes once the tree is stable.
12. Prune broken branches on shrubs.
13. Prune perennials back to undamaged stems. Bulbs and tubers should return the following spring, but annuals probably won't survive.

14. Begin work on trees you have identified as good candidates for restoration. These would be trees which don't have cracks in major limbs or their trunk. They should not be leaning, the ground lifting on one side, or their roots exposed, unless they are small trees recently planted, or have a trunk diameter smaller than 4 inches. They may have major or total leaf loss and some major branch loss (generally less than half) and still survive and leaf out the following spring. Trees with broken branches less than 4 inches in diameter can easily be pruned and have a good chance of recovering. Young trees with a diameter of less than 10 inches are easier to restore than older, larger trees. Tree species that are decay resistant will also have a better chance.
15. Remove any dead, broken and hanging branches that weren't addressed in #4. This will reduce entry points for disease and insects. Trim inside ragged breaks on small stems and remove entire branches when the main structural branches break. If bark is stripped or damaged, chisel it to form neat edges.  
If a broken branch is larger than 1" in diameter, you should follow this pruning procedure to avoid further damage to the tree and create a cut which heals easily:
  - Starting a couple feet from the trunk, cut a notch at least ¼ of the way through the bottom of the limb.
  - Make the second cut just outside the notch and all the way through, to remove the weight of the branch.
  - Correctly done, the third and last cut allows the tree to properly heal itself. It should be made just outside the collar (the slightly swollen area where trunk meets limb and trunk bark usually transitions to smoother branch bark).
16. **Wait before pruning live branches**, which would put more stress on the tree. It may take a year to determine whether a tree is recovering or declining. Pruning a damaged tree often needs to occur in stages with different types of cuts and sprout management. A certified arborist or tree care professional may be needed for a long-term action plan.
17. To restore a palm:
  - Remove dead fronds (entirely brown in color). These were likely dying or died before the storm.
  - Remove fronds that cover the bud. Broken fronds crossing the top of the palm can prevent the growth of new fronds that will restore the canopy.
  - Leave any bent, green or partially green fronds that are still attached, if they are not covering the bud. These fronds are important energy reserves for the palm.
  - Establish a fertilization program to correct nutrient deficiencies which may become more pronounced when the palm is under stress. Aside from macronutrients nitrogen, phosphorus and potassium, palms need regular micronutrient supplements of magnesium, boron, iron and manganese. These deficiencies show in leaf changes and yellowing leaves. Don't remove these yellowing leaves until they are brown - they are still providing energy for the palm.
18. Finish your cleanup by replacing mulch in beds and around plantings, that was blown or floated away.