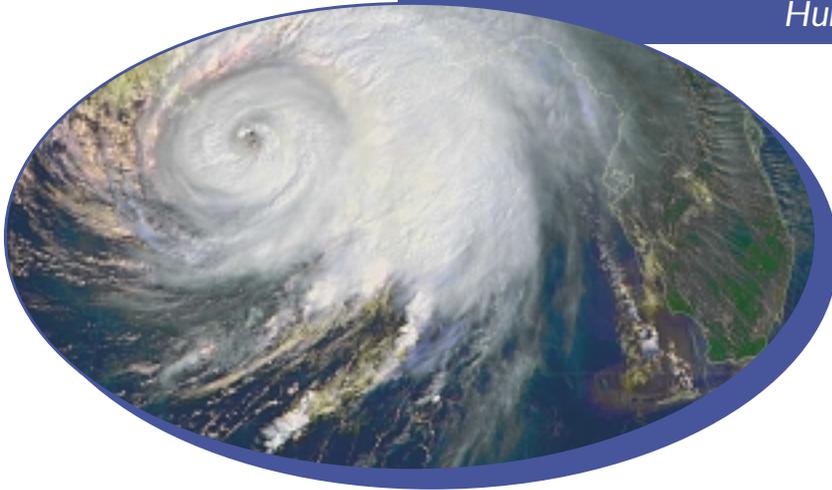


# A Homeowner's Guide

# for Coastal Landscapes

*Hurricane Resistant Landscapes*



## Preparing for the Storm

Southeast Mississippi Resource Conservation & Development Council, Inc.  
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Hattiesburg, MS 39404-5519  
601-296-1187  
email: [council@smrcd.org](mailto:council@smrcd.org)  
website: [smrcd.org](http://smrcd.org)

*Above photo courtesy of NASA/NOAA (GOES project NASA-GSFC)*

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**Mississippi Forestry Commission**

**Mississippi Urban Forest Council**

**USDA Forest Service**

**Southern Group of State Foresters**

**Cooperative Extension Service**

**University of Southern Mississippi Journalism Department**

**USDA Natural Resources Conservation Service**

# Understand Your Plant's Home – The Soil

Identify the soil's properties on your site. Soil surveys<sup>(1)</sup> identify each soil by its name and its characteristics. Match a plant's required growing environment with the soil it will be growing in for best results.

Coastal soils are of an acid sandy nature with internal drainage ranging from very poor to excessively well drained. Water table depths vary from on the surface to six feet below the surface. Highly acidic soils may have a tendency to be subject to aluminum and manganese toxicity.

Test drainage characteristics by digging a hole one (1) foot deep. Fill with water and allow it to soak in, fill hole a second time and check after 10 hours. Water remaining in the hole indicates the need for drainage improvement before planting. Contact the County Soil & Water Conservation District for assistance.

Secure a soil test or analysis. These test results assess the pH level (soil's degree of acidity) and nutrients available for plant growth. In short you will be given the kind and amount of fertilizer and or lime to apply for optimum plant growth. Lab recommendations are based on soil texture, past fertilization/liming history and plant types to be grown.

Self soil test kits may be obtained from local yard and garden stores. Boxes and forms for testing at Mississippi State University can be obtained from the local county extension service.

<sup>(1)</sup> USDA NRCS County Offices, County Soil & Water Conservation District offices, County Extension Service Office

**TIP**

Most plants and trees grow best in well-drained soils.



## Select Plants for Locality Adaptability/Hardiness

Identify the prospective plant's hardiness zone or minimum temperature range. This information can sometimes be found on the plant's identification tag. The hardiness zone indicates the lowest winter temperature the plant can tolerate without freezing.

Temperature wise plants adaptable to the coastal area can withstand temperatures as low as 15°F.

Selection of plants with a minimum temperature range of 25°F will need to be planted on the southern or eastern side of the building and covered during periods of temperature lows below 25°F. Without "tender loving care" you stand a good chance of losing these plants during a hard freeze!

Plants suitable for drier areas of the United States may withstand the low winter temperatures yet lack resistance to diseases of the high humidity areas.

Match plant needs with planting location. Some plant species have special needs that should be met in order for the plant to perform as expected and remain healthy. Specific needs are proper soil characteristics, degree of sunlight<sup>(2)</sup>, shade tolerances and moisture needs. The use of native plants is highly encouraged when and where possible.

You may also locate detailed information on the plants listed or on other desired plants by accessing the web site <http://plants.usda.gov>.

<sup>(2)</sup>1-4 hrs a day; full sun; morning sun; afternoon sun

## Select Wind Resistant Vegetation

US Forest Service studies reveal wind-resistant trees are characterized as compact, possessing a major tap root, complemented by well-developed secondary roots. Trunks are tapered with a low center of gravity. The Live Oak tree is a prime example of a wind resistant tree. On the opposite side of the spectrum are the easily felled trees, which include pine, crape myrtles, pecans and dogwood. Easily felled species possess dense canopy, a high center of gravity, are fast growing, weak wood and shallow-rooted. Urban trees are especially vulnerable to tropical storm winds as they are more inclined to have suffered root damage during construction. Weakened trees also are more susceptible to disease and insect infestation and are easily felled.

**TIP**

Tropical storm winds carry sand, salt spray and other projectiles through the air at high rates of speed. These projectiles sandblast vegetation, shred leaves, expose roots, literally destroy delicate plant tissue and in some cases bury vegetation.



**TIP**

A tree planting tip: Easily felled trees should be established in groups as they have the tendency to reinforce each other.

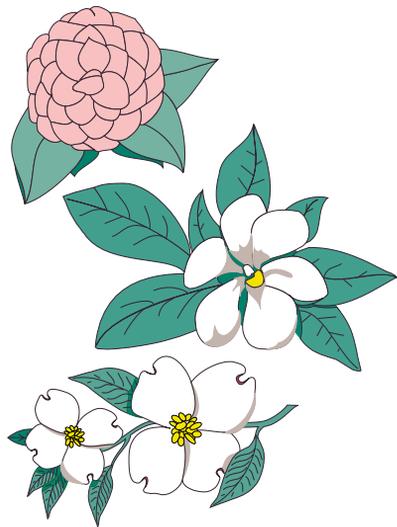
# Native Plants

Native Plants have a much better chance of surviving in tropical storm conditions as they are better suited to the coastal conditions.

All the plants on the right are recommended for use in the Coastal area. These plants do well in acidic soils, which are the soils generally found on the Mississippi Gulf Coast.

Considering these plants for use in your home landscaping will put you in the right direction for a landscape that is more resilient and resistant to the forces of tropical storms.

Information on other plants which are suitable for the coastal area can be obtained from many of the important contacts listed on the back cover of this publication.



<u>NAME</u>	<u>SUN</u>	<u>MOISTURE</u>
<b>Ground Covers, Ferns, Low Shrubs</b>		
Bracken	Shade to Partial	Dry to moist, does not tolerate flooding
Dwarf Palmetto, Bush Palmetto	Shade to Partial	Seasonally wet to moist
<b>Herbaceous Plants</b>		
Pineand Hibiscus	Partial to Full	Moist, tolerates winter flooding
Cooper Iris	Partial to Full	Moist, seasonally flooded
Spiderlily	Partial to Full	Shallow fresh water, 0 to 2 feet deep
<b>Climbing Vines</b>		
Crossvine	Partial to Full	Moist to dry, brief flooding tolerated
Passionflower, Maypop	Partial to Full	Moist to dry
Coral Honeysuckle	Partial to Full	Moist, brief flooding tolerated
<b>Small to Medium Shrubs</b>		
American Beautyberry, French Mulberry	Shade to Full	Dry to moist
Sweetshrub	Shade to Partial	Moist, flooding tolerated
Clethra, Sweet Pepperbush	Partial to Full	Wet
Yellow Azalea	Shade to Full	Moist, tolerates seasonal flooding
Arrowwood	Shade to Full	Dry
<b>Large Shrubs, Small Trees</b>		
Wax Myrtle, Southern Bayberry	Partial to Full	Wet to dry
Yaupon Holly	Shade to Full	Moist to dry
Redbud	Partial to Full	Moist to dry
Flowering Dogwood	Partial to Full	Moist to dry
Fringetree, Graybeard	Partial to Full	Moist to dry
Titi, Leatherwood	Shade to Full	Wet to moist, still or running water
<b>Large Trees</b>		
Red Maple	Partial to Full	Wet to dry
American Holly	Shade to Full	Wet to dry
Bald Cypress	Partial to Full	Wet, can be inundated all year
Blackgum, Black Tupelo	Partial to Full	Moist to wet
Live Oak	Full	Moist to dry
Southern Magnolia	Shade to Full	Dry
Sweetbay	Partial to Full	Wet to moist

# Select Salt Tolerant Plants

Salt deposits occur during a storm event even if the vegetation is not submerged by storm surge. Salt spray can be carried by high winds and deposited on inland vegetation as wind speed decreases. The water droplets on the plant and ground either evaporate or soak into the soil thus leaving salt crystals on the plant foliage and ground. Non or low salt tolerant plants are adversely impacted by salt deposits whether by submersion or by wind.

Results of a Florida Cooperative Extension Service's evaluation of vegetation affected by salt during Hurricane Opal at Navarre Beach, Florida, identifies for this brochure only the vegetation with little or no damage and vegetation with less than 25% top/root damage which fully recovered after one growing season. Salt damage assessments were conducted at 5 1/2 months and again at 11 months following Hurricane Opal.

## Vegetation Receiving Little or No Damage

Chives	Elephant's Ear	Variiegated Shell Ginger	Cardimon
Sweet Autumn Clematis	Wild Red Basil	Umbrella Plant	Blood of Christ
Cherokee Bean	Curly Leaved Ivy	Canary Islands Ivy (Variegated)	Daylilly
Snake's Head Iris	Swamp Rose Mallow	Roman Hyacinth	Spider Lily
Yaupon Holly (No damage)	Star Flower	Easter Lily	Rubrum Lily
Coral Honeysuckle	Fetterbush	Sensitive Plant	Oleander (red)
False Garlic	Firespike	Pink Oxalis	Pittosporum
Indian Hawthorne	Blue Stem Palm	Wild Red Salvia (Recovery from seed [annual])	Mexican petunia
Saw Palmetto	Sensitive Briar	Stokes Aster	Cape Honeysuckle
Confederate Jasmine	Society Garlic	Violet	Bugle Lily
Atamasco Lily	Yaupon Holly		

## Vegetation Receiving Less Than 25% Top or Root Damage Fully Recovered After One Growing Season

Dwarf Red Buckeye	Cast Iron Plant	Japanese Laurel	Bamboo
Blackberry Lily	Buckthorn	Beautyberry	Poppy Mallow
Camellia	Sasqanqua Camellia*	Swamp Mallow (pink)	Hidden Ginger
Sago Palm	Gumi Shrub	Japanese Spurge	Indian Blanket
Cape Jasmine	Gardenia	Little Leaved Ivy	Amaryllis
Chinese Holly	American Holly	Dwarf Crepe Myrtle	Lantana
Ashe Magnolia	Oregon Grape Holly	Turkscap	Wax Myrtle
Oleander (white)	Cinnamon Fern	Garden Phlox	Podocarpus
Leatherleaf fern**	Cherry Laurel	Braken	Needle Palm
Cherokee Rose	Green Rose	Rose	Purple Heart
Horse Sugar	Spiderwort	Coontie (Cycad)	

\*All Camellias flowered profusely after the storm surge

\*\*Died to the ground, but complete recovery

# Pre-Tree Planting Tips

Locate both above and below ground utilities (water, gas, phone, electrical, cable, sewer, septic tank, septic field lines, water well).

Rural water systems locate their lines up to the meter only. YOU are responsible for the line location from the meter to your home.

Visualize the mature height and width of the planned tree. Pose these questions before planting:

Will the tree be too close to electrical, phone, cable?

Will the tree be too close to the house?

Is there adequate space for tree root growth and anchoring? Adequate space helps to reduce a tree's susceptibility to being blown over. To determine what height tree you need to plant, first determine the size of the tree lawn. A tree lawn is the grassy area between the sidewalk and street or driveway. Match the actual tree lawn width to the mature tree height for maximum tree growth and anchoring.

### Tree Lawn Width

2-4 Feet

4-6 Feet

Over 6 feet

### Mature Tree Height

Under 30 Feet

30 – 45 Feet

Over 45 Feet

Tree owners may be responsible for property damage, death or injury from a falling defective tree. It should be noted that once a defective tree is identified, the "Acts

of God" defense is null and void, if that defect results in a falling tree causing property damage, death or injury.

Evaluate trees for dangerous defects on a regular basis. Things to look for include:

Identify dead branches.

Identify dead or dying trees.

Identify forked trunks – they have a tendency to split in high winds.

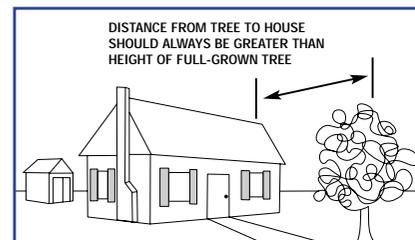
Identify leaning or lopsided trees. This may indicate a breakage or weakening of support roots. Remove promptly.

Identify wounds or cracks

Check for signs of decay in a trunk, branches or roots. Examples of decay are the presence of canker or mushrooms.

Check for severed roots or compacted root areas.

Inspect tree trunks for insect infestation, look for boring insects, small diameter holes, and pitch extruding from borer holes.



# Pre-Storm Checklist for Trees

When assessing your trees for damage, remember that the type of care depends on the tree's age and the type and extent of damage. Older trees have more difficulty recovering from the same damage as that of a younger tree. Possible forms of damage to trees are:

## Broken Limbs

Remove limbs so as to leave a smooth finish with the trunk or branch.

## Wounds

Amount of damage directly affects the plants ability to recover.

## Split Branches

Extensive repair work is sometimes required to ensure a sound recovery and branch removal is not out of the question.

## Leaning Trees

Determine the tree's projected line of fall and potential damage that could occur to structures and utilities along with road blockage.

Some of the roots may be injured or destroyed when this occurs.

Determine if the tree is a candidate to be uprighted or removed.

Consider replanting with a native species should tree removal be necessary.

## Uprooted Trees

Fertilize according to soil test recommendations to promote root growth.

Water tree well and maintain adequate moisture during dry periods.

Selectively prune dead limbs for the next few years.

Maintain guy wires or braces for a minimum of 2 years on up-righted trees.

## Eroded Root Zone

Cover eroded roots with soil to its original ground level. Do not overfill. Overfilling can kill the plant. Apply a 3" inch mulch to prevent root drying. Pine straw is excellent for this.

## Silted root zone

Remove silt deposits to the original level. Mulch to maintain adequate soil moisture.

## Lightning Damage

Damage can range from total tree destruction to no visible effects.

Notify insurance company of the lightning strike in case the tree dies.

Fertilize for root growth as per soil test recommendations and frequently water during dry periods those trees which appear to have sustained limited damage.

Tree species subject to frequent strikes are poplars, oaks, pine and elms.

A lone tree is an excellent target for lightning strike.

# Tree Service Employment Tips

Check your local yellow pages for tree service listings. Contact the city Arborist, Mississippi Forestry Commission, and Bureau of Plant Industry or local nurseries for a listing.

It is a wise idea to determine that the tree service is fully insured for property damage, personal liability and workers' compensation. Ask to see a copy of these certificates. Phone the insurance company to verify the policy is current.

Two or more written bids is always a good idea.

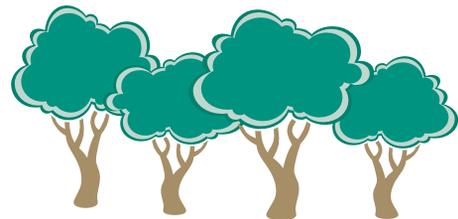
When tree removal is deemed the best option, obtain a clear understanding of who removes the limbs and debris. Determine if the quoted price includes stump removal and/or clean-up.

The tree has commercial value in the form of firewood, saw logs, or chips and their value should be considered in the estimate. During a period of widespread damage, you may discover the value of the tree as an alternate product greatly reduced.

You should ask for local references, take time to talk to a recent client. DO NOT pay in advance. Pay only when completely satisfied. Beware of bargain offers (sign today for a 15% discount).

**TIP**

One in four trees die from lightning strikes. Death can occur from instantly to 12 months later, depending on the degree of both seen and unseen damage.



# Coastal Resource Contacts

<u>Agency</u>	<u>Jackson County</u>	<u>Harrison County</u>	<u>Hancock County</u>
MSU Extension Service	769-3047	865-4227	467-5456
Mississippi Forestry Commission	497-3790	831-3359	255-4885
USDA NRCS & County SWCD	826-2482	831-0881	255-3225
MSU Coastal Research Center	388-4710	388-4710	388-4710
Crosby Arboretum	601-799-2311	601-799-2311	601-799-2311
MS Gulf Coast Horticulture Hot Line: 9-3; M-F March 1 to Nov. 1	1-866-Garden8	1-865-4483	1-866-Garden8
Mississippi One Call	1-800-227-6477	1-800-227-6477	1-800-227-6477
Civil Defense	769-3111	865-4002	467-9226
Biloxi City Arborist		435-6280	
Gulfport City Arborist		868-5715	

## Helpful web sites:

[www2.champaign.isa-arbor.com/consumer/consumer.html](http://www2.champaign.isa-arbor.com/consumer/consumer.html)  
[www.msucares.com](http://www.msucares.com)  
[www.ms.nrcs.usda.gov/plant.htm](http://www.ms.nrcs.usda.gov/plant.htm)  
[www.arbordayfoundation.org](http://www.arbordayfoundation.org)  
<http://plants.usda.gov/>  
[www.mfc.state.ms.us](http://www.mfc.state.ms.us)

**TIP**

**Call Mississippi One Call  
before you dig a hole for a  
tree. 1-800-227-6477**



## Appraisals and Tax Deductions

In order to file a loss on a tax form or have insurance provide for replacement of a tree, homeowners should find a certified appraiser to assess the value of the tree before a storm. Factors such as the species, condition and location of the tree or trees will assist appraisers in making assessments. Further information is available at the local Extension offices.

It is also a good idea for homeowners to save a copy of the local newspaper to document a storm and to take pictures before cleaning up.

