



# Dig In

Miami-Dade  
County



Department  
of Environmental  
Resources Management (DERM)

# Resource Directory

## Government Resources


University of Florida/Miami-Dade County Extension

Plant advice for individuals & homeowners .....	305-248-3311
Miami-Dade County Extension website .....	miami-dade.ifas.ufl.edu/
Department of Environmental Resources Management (DERM) .....	305-372-6789
DERM and Adopt-a-Tree website.....	www.miamidade.gov/DERM
Miami-Dade DERM Tree Permits .....	305-372-6574
Comments or questions on the Adopt-a-Tree Program .....	3-1-1 or adoptatree@miamidade.gov

## Local Tree Organizations

TREEmendous Miami .....	305-378-1863 or www.treemendousmiami.org
Florida Native Plant Society (Miami-Dade Chapter) .....	305-255-6404
Florida Urban Forestry Council .....	407-872-1738
Grove Tree-Man Trust.....	305-443-1312
Operation Green Leaves.....	305-644-9000
Redland Tropical Gardens .....	305-258-5545

## Botanical Gardens

Doc Thomas House 5330 Sunset Dr., S. Miami .....	305-667-7337
Fairchild Tropical Garden, 10901 Old Cutler Rd., Coral Gables.....	305-667-1651
Fruit & Spice Park, 25801 SW 187th Ave., Miami .....	305-247-5727
Gifford Arboretum, San Amaro Drive, University of Miami.....	305-284-5364
Miami Beach Botanical Garden .....	305-673-7256
 FPL - for a "Right Tree Right Place" Planting Guide and free mulch.....	1-800-Dial FPL
South Florida Water Management District - for a Xeriscaping Guide .....	1-800-432-2045
Sunshine State One - for utilities clearances (call 48 hrs. prior to digging) .....	1-800-432-4770

### Miami-Dade County

Carlos Alvarez, Mayor

BOARD OF COUNTY COMMISSIONERS

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Miami-Dade County provides equal access and equal opportunity in employment and services and does not discriminate on the basis of disability.

# Trees are cool!

Miami-Dade's tree canopy cover is estimated to be 10%, ranging from 1% to 23% tree cover. The land area in an average American city has a 25%-33% tree cover. Of the trees that do remain, only 10% are currently positioned advantageously to save energy and decrease the effects of global warming.

**Many of Miami-Dade residents know the feeling of emptiness that comes after losing trees. There are many ways that trees improve our community...**

- 🌱 A well-forested community can reduce storm water runoff by up to 15%. Trees reduce surface water runoff by making the soil more absorbent. The roots also capture waste material and help clean storm water before it drains into the various bodies of water.
- 🌱 Miami-Dade's trees remove 5,425 tons of carbon from the air each year, improving air quality and combating global warming.
- 🌱 Trees providing shade on windows and walls facing east, west, and south cause the homeowner to use less electricity to cool their home and results in a reduction of home cooling costs by 15-30%.
- 🌱 Trees help stabilize neighborhoods and can add up to 15% to the value of your home. Trees make Miami-Dade County a more attractive destination and make urban areas quieter, cooler and more private. Shaded sidewalks encourage outdoor recreation, more people outside walking, biking and exercising and it is an effective deterrent against crime.
- 🌱 Trees provide food, nesting sites and protection for a wide variety of animals and resident migratory birds.

Planting a tree shows you care about our community, our environment and our future. It's delightful to enjoy tropical fruits grown in your own back yard. Besides, what better way to honor a friend, a loved one, or a special occasion than by planting a tree in their name!

This manual was developed with the collaboration of TREEmendous Miami, tree and leaf Illustrations used with permission from Southern Trees - An Expert System for Selecting Trees, Second Edition CD-ROM by E.F. Gillman, et al. University of Florida; Landscape Plants for Subtropical Climates, Bijan Dehgan, University Press of Florida 1998; Trees for Florida and the Subtropics, revised second edition, Patricia Walden, Great Outdoors Publishing 1996.



# Save Energy - Trees Cool Your Yard

Choosing the right location for trees in your yard can bring you relief from Florida's soaring temperatures and summer electric bills. You can take advantage of the cooling power of trees by using common sense, a compass and a tape measure before you plant your tree.



## Rays Point the Way

Three walls of your house receive the most direct sun: east, west and south. Use a compass and plant at least three shade trees around your house to shade these three sunniest sides. Trees planted on the east side will block the morning sun, the west side blocks the afternoon sun, and trees planted on the south side provide shade throughout the day.

## Cool the Cooler

Choose a location for a tree to shade the entire area around and over your outside air-conditioning unit. Be sure to keep the air intake area clear of branches and leaves.

## Plan Closer Encounters

More home energy is lost from windows than walls, so locate your trees to specifically shade windows. Small trees can be 10'-16' from the house. Large trees can be planted 16'-22' from the house.

## Choose Florida's Favorites

Select trees that are naturally suited for our Florida climate. Talk to your local nursery and learn about the mature size of different trees. Choose shade trees with broad canopies whenever possible. Palm trees don't make much shade, so use them only in very narrow spaces, or in groups.

# Conserve and Save Water

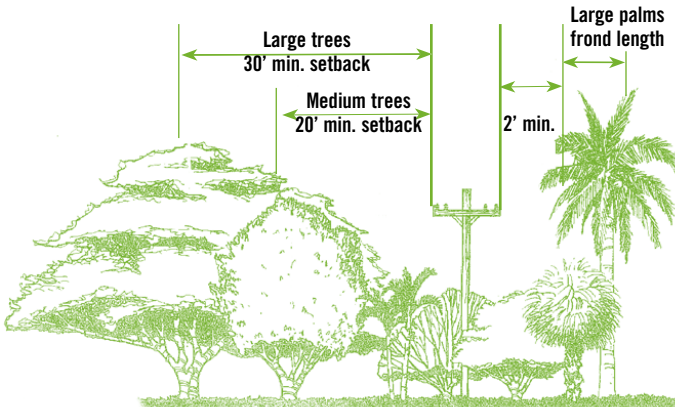
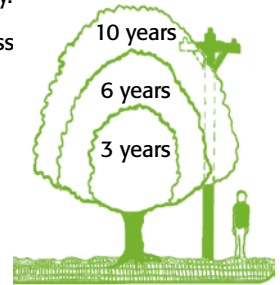
- 🌱 Plan your landscape by grouping together plants with similar water needs.
- 🌱 Improve the soil with organic matter to increase its water- holding capacity in planting beds.
- 🌱 Irrigate efficiently only where and when it is needed.
- 🌱 Use turf grass only where it provides functional benefits
- 🌱 Use drought-tolerant plants, and mulches.
- 🌱 Most older established trees do not need additional water.
- 🌱 Watering plants is best in the early morning or early evening.
- 🌱 Trees are best watered by using a hose with a nozzle rather than with sprinklers.



# Where to Plant Your Tree

Consider each of these variables when deciding where to plant a tree:

- 🌱 Know the mature height, width and growth rate of each type of tree you plant. Look for mature examples of the tree you want to plant.
- 🌱 Know the type of soil and moisture conditions needed for each tree.
- 🌱 Select a site where the tree will provide shade for cooling. In South Florida that is to the south, east and west of your home's windows and walls.
- 🌱 Select a site that will be aesthetically pleasing.
- 🌱 Choose a site that will receive several hours of sun each day.
- 🌱 Under utility lines, plant trees with a maximum height of less than 20 feet.
- 🌱 Plant away from any underground utility lines and septic systems.
- 🌱 Plant with ample space between structures such as fences, walls, pavement and sidewalks. Remember that a tree's root system can extend 10-20 feet from the trunk.
- 🌱 Plantings should not block traffic signs or views of traffic at corners or driveways.
- 🌱 Avoid planting trees so that they block windows or desirable views.
- 🌱 Provide ample space between trees.
- 🌱 Avoid planting trees where the limbs or roots encroach on a neighbor's property.



*General guide for planting trees next to utility lines. Small trees and palms may be planted adjacent to powerlines.*



# How to Plant and

## How to Plant Your Tree ...

### 1. Make a wide, loose planting area



Loosen the soil in a wide area two-three times the width of the root ball and only as deep as the container or root ball. In the center of this area, open a hole wider than the root ball, but no deeper.

### 2. Remove the tree from the container

If in a pot, lay on side and gently pull pot off root ball. Do not pull on the trunk or lift the tree by the trunk - this can damage the roots or cause the soil to fall away. If the root ball is wrapped in burlap, peel back the top third of the burlap.

### 3. Place the tree down gently and accurately!

Place the root ball on solidly packed soil so that the root collar (where the tree's trunk meets the roots) is exactly level with the surrounding soil. Position the tree so that it is straight.



### 4. Refill the hole and start watering!

Fill the hole with the soil taken out. When the hole is half full, saturate with water to remove air pockets, then fill the hole until it is even with the ground level. Lightly push the soil in place around the tree and make a three inch



round around the outer edge of the root ball.

Water the area slowly & thoroughly.

### 5. Spread mulch deeply

Spread a ring of mulch three-four inches deep around the tree, covering the planted area but keeping the mulch from touching the tree trunk so the trunk does not rot.



Get wood chips from a tree service, or buy pine bark chips. Don't buy cypress mulch, which comes from Florida's disappearing cypress wetlands and is illegal to buy in Miami-Dade County. (Each 2.7 square miles of wetlands reduce hurricane storm surge by one foot.)



*Lack of water is the main reason most new trees die.*

### Other tips:

- 🌱 Don't stake the tree unless it can't stand by itself, and don't forget to remove the stake once it can stand on it's own.
- 🌱 Only prune dead, crossed or injured branches. All healthy branches should remain.

# Care For Your New Tree

## Caring For Your Tree...

### Watering

Water every day for the first week. Slow deep watering in the early morning is best. Gradually decrease to every other day for weeks two through five. Water once a week for weeks six - 12. Then water when the soil seems dry, during dry periods or if the leaves wilt.

### Mulching

Replenish the mulch to maintain a ring of three to four inches deep over the entire planted area, keeping the mulch at least two inches from the trunk. The mulch will hold moisture, provide nutrients and minimize grass and weed growth.

### Fertilizing

Do not fertilize between November and March or within six months of planting. Always water the trees the day before and after fertilizing. Never fertilize a tree that is wilted, sickly or has no leaves or use "Weed and Feed" on your lawn as these may kill your tree. Also try to reduce any pesticides, fertilizers, and herbicides as these chemicals can be washed into our storm drains and water bodies by rain, leading to contamination of our surface waters and groundwater, which are our drinking water.

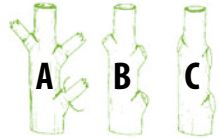
### Protecting Your Tree

Never let a string trimmer or lawn mower hit your tree. Damage to the bark can kill a tree by preventing nutrients from getting to and from the roots and leaves and allowing diseases to enter the tree. Maintain a ring of mulch around the tree. Inspect your trees frequently.

### Pruning Your Tree

A well-shaped urban tree will have a longer, healthier life if not topped or "hat-racked." Remove diseased, dying, broken or crowded branches. Pruning sealants are not recommended. Never remove more than one-third of the canopy at once and don't remove lower branches until the tree trunk is four inches thick. Do not prune your tree within the first year of planting. Remove branches interfering with visibility and pathways, but don't prune near power lines. Call FPL at

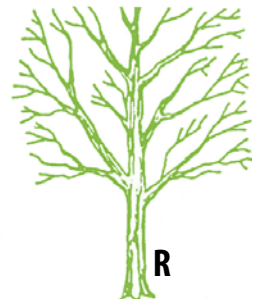
1-800-DIAL FPL for a list of professionals who can prune near powerlines.



*Proper pruning cuts should be made between the arrows (A). Always cut to the outside of the branch collar (B). Never make flush cuts (C). This causes trunk decay.*

### Hat-Racking Violations

Never let anyone top or hat-rack your trees. It creates a heavy canopy, opens the tree to wounds and disease and makes it more susceptible to uprooting in high winds, and is illegal.



*Never "hat-rack" a tree (L), it is harmful to the tree and can cause uprooting in high winds. It is better to thin out the canopy to allow the wind to blow through (R).*

# Trees for South Florida











Below is just a sampling of species that are suitable to plant in Miami-Dade County.

<b>TREE TYPES</b>	 <i>Native</i>	 <i>Flowering</i>	 <i>Fruit bearing</i>
<b>TREE SIZES</b>	<i>Small: Under 12'</i>	<i>Medium: 12'-15'</i>	<i>Large: More than 15'</i>

COMMON NAME	TYPE	SIZE	COMMENTS
(Botanical Name)			
* Avocado (Persea americana)		LG	Fast growing evergreen tree that can be pruned to keep shape. The fruit are shiny green with a nutty-tasting yellow flesh.
* Carambola (Averrhoa carambola)		MED	Also called starfruit. Produces a large, five-ribbed fruit.
* Copperpod (Peltophorum pterocarpum)		LG	Also known as the yellow poinciana, this fast-growing evergreen has fragrant flowers in the spring and summer.
* Dahoon Holly (Ilex cassine)		SM	Smooth, supple, shiny leaves. Female trees have brilliant red berries, excellent food for birds.
* Orange Geiger (Cordia sebestena)		MED	Dense, rounded slow-growing evergreen with stiff leaves and 2" dark orange flowers throughout the year.
* Green Buttonwood (Conocarpus erectus)		LG	A clean, sturdy tree with small, evergreen leaves. Medium growth rate. Small fruits for birds.
* Inkwood (Exothea paniculata)		MED	Also known as Ironwood, has glossy leaves and tiny fragrant blooms in spring and early summer. It has a medium-growth rate and produces red fruit. Provides good shade and resistant to hurricanes.
* Jaboticaba (Myrciaria cauliflora)		SM	A very slow growing bushy tree with multicolored bark. Grape-like fruit that is produced-directly upon the trunk and branches.





COMMON NAME (Botanical Name)	TYPE	SIZE	COMMENTS
* Jackfruit ( <i>Artocarpus heterophyllus</i> )		MED	A fast-growing evergreen tree that produces very large fruit.
* Jamaica Dogwood ( <i>Piscidia piscipula</i> )		LG	A fast-growing tree with showy spreading leaves. It is an evergreen that blooms in the spring. Also known as the fish poison tree, it should not be planted near open water.
* Lancepod ( <i>Lonchocarpus violaceus</i> )		SM/MED	A fast-growing evergreen with a dense canopy reaching 20 feet in height and 12 feet in width. Produces lavender fragrant flowers in October.
* Longan ( <i>Dimocarpus longan</i> )		LG	A fast-growing tree with a small-medium brown colored sweet fruit similar to the lychee.
* Lychee ( <i>Litchi chinensis</i> )		LG	Beautiful specimen tree that grows at a moderate rate and provides aesthetics, shade and a delicious fruit. Can be pruned to keep shape.
Mamey Sapote ( <i>Pouteria sapote</i> )		LG	A fast-growing, spreading tree with excellent sweet to subacid fruit that is often used in milkshakes.
* Mango ( <i>Mangifera indica</i> )		LG	A moderate-growing large evergreen tree that produces a sweet fruit. Can be pruned to keep shape. Sap may irritate skin and leave stains.
* Paradise Tree ( <i>Simarouba glauca</i> )		LG	A slow-growing sturdy tree with a dense, rounded crown. Shiny, leathery leaves. Seeds and fruits can stain. Flowers in spring with pale yellow blossoms.
* Pigeon Plum ( <i>Coccoloba diversifolia</i> )		MED	Dense, rounded evergreen shiny dark green leaves. Fruits that ripen in fall are attractive for birds.
* Queens Crape-Myrtle ( <i>Lagerstroemia speciosa</i> )		LG	Large, showy flowers. A moderate-growing tree with leaves that turn red before falling in winter.



# Trees for South Florida Continued from the previous page

COMMON NAME (Botanical Name)	TYPE	SIZE	COMMENTS
* Red Mulberry ( <i>Morus rubra</i> )		LG	 A fast-growing shade tree with edible messy fruit that will stain. Attracts birds.
* Sapodilla ( <i>Manilkara zapota</i> )		LG	A slow-growing tree. The furry brown fruit is sweet to very sweet pulp that tastes like brown sugar. Fruit is ripe when soft and will ripen off tree. 
* Desert Senna ( <i>Senna polyphylla</i> )		SM	Also known as Desert Cassia, a fast-growing evergreen tree with bright yellow flowers. Flowers in fall and winter. Attracts butterflies.
Sea Grape ( <i>Coccoloba uvifera</i> )		MED/LG	A moderate-growing evergreen tree or shrub with edible fruit. Can grow up to 25 feet and very wide. Good seaside plant. 
Shortleaf Fig ( <i>Ficus citrifolia</i> )		LG	Fast-growing evergreen shade tree that may have an aggressive root system. Be careful of planting location.
* Sugar Apple ( <i>Annona squamosa</i> )		SM	 A moderate-growing open tree with custard-like fruit. Also called the sweetsop or anon. Flowers may need to be hand-pollinated.
* Tamarind ( <i>Tamarindus indica</i> )		LG	A moderate-growing tree with pods that produce a brown, sticky edible pulp with a lemony flavor. 
* Vera Wood ( <i>Bulnesia arborea</i> )		LG	A slow-growing evergreen with bright yellow flowers throughout the year. Mature height of 30 feet and spreads to 25 feet in width.
* White Geiger ( <i>Cordia boissieri</i> )		SM	A small, slow growing tree with white flowers and rough leaves."
* White Sapote ( <i>Casimiroa edulis</i> )		LG	A fast-growing tree with greenish yellow fruit that has a sweet pear-like flavor.
* Wild Tamarind ( <i>Lysiloma latisilqua</i> )		LG	Slender, short trunk topped with long, arching branches forming a light feathery shade. Fast-growing.

# Tree Protection, Removals & Replacements



## Protected Trees\*

The following describes trees that have extra protection and may not be removed without a special permit.

- Trees with a diameter of at least 18", measured at a height of at least 4-1/2 feet.
- Trees located in the Public right-of-way, common areas and multi-family units
- Trees located in coastal or wetland areas
- All mangrove trees
- Vegetation in a natural forest community

## Tree Removal Permits

Removal of trees often requires a tree removal permit, call (305) 372-6574 for more information. Exempted from the permit requirement are:

- Dead trees
- Prohibited and exempt species listed in the Miami-Dade Code (Chapter 24-27.1)
- Trees in yards of existing single family homes, provided the tree is not an 18" or greater diameter specimen tree, or any vegetation within a Natural Forest Community.

## Tree Replacements

All trees that are removed must be replaced with an equal amount (100%) of tree canopy. Specimen sized trees require double replacement of the amount of tree canopy removed.

## Permit to Plant Trees in the Public Right-of-Way

A swale is the grassy area located in front of your home in the public right-of-way. The public right-of-way is usually the area between the sidewalk and the road. The purpose of the swale is to prevent water from accumulating around your house after a heavy rainfall. They may also contain utilities such as sewer and water lines. In order to plant in the swale area, a permit is required to evaluate the location in order to make sure that a tree won't cause traffic visibility problems, and that the tree species selected is right for that location. If approved, you will be asked to sign a Maintenance Covenant.

The trees that you receive from the Adopt-a-Tree program are not big enough to be planted in the swale area and should be planted in your residence's front or backyard areas. If you live in Unincorporated Miami-Dade County and you want to plant a tree in the swale area, please send a letter requesting a "Permit to Plant Trees in the Public Right-of-Way" to:

***Miami-Dade County Public Works Department, Permits Section, 111 NW First Street, Suite 1410, Miami, FL 33128***

**In the cover letter include:**

- location of the proposed street trees • number of trees • types of trees
- height at time of planting • distance from the edge of the pavement

For more information call 305-270-1791.

\* Contact your local municipality directly for specific ordinances regarding landscape issues or planting trees along the public right-of-way.

# Before and during the hurricane season, keep trees in mind



Improperly pruning trees before a storm can cause more damage than people realize. A large amount of fallen and damaged trees are usually seen after a storm. This is the result of improper cutting or pruning of trees prior to a storm. People think that by doing this they will reduce the risk of destruction, but the fact is when a tree is improperly cut its branches are even more vulnerable. The new branch attachment becomes weak, making the tree more likely to break apart which can damage property. Miami-Dade County, other local organizations and experts recommend that you prepare several months prior to hurricane season by doing the following:

- If you must prune trees, do so during the tree species dormant season or during early spring.
- Before doing the work, make sure the lawn care worker/tree trimmer is a certified arborist. Ask to see their registration/license and insurance. Get a quote in writing.
- NEVER “top” or “hatrack” any tree. “Hatracking” is the term used for when a tree is cut or chopped so badly that it is left with few or no leaves on the branches.
- DO NOT remove more than 25% of the tree canopy (the branches and leaves of the tree).
- DO NOT cut the tree root system.
- Remove mainly the interior branches. This will thin the canopy of the tree and allow winds to pass through it easier.
- Make sure to correctly dispose of all tree cuttings since branches and stumps left out in the open can become projectiles during a storm.
- You can even schedule 2 bulky waste pick-ups per fiscal year from the Department of Solid Waste Management. For more information call 3-1-1 or 305-594-1500/ [www.miamidade.gov/dswm](http://www.miamidade.gov/dswm). Be sure to call with enough advance notice to ensure they are able to accommodate your pick-up before a storm arrives.



If residents follow these easy tips, the impact from tree damage during a storm can be reduced. Remember: it is very important for residents not to over-prune trees. This ultimately weakens the new growth and creates a potentially more dangerous condition. It is a violation of Chapter 24 of the Miami-Dade County Code to hatrack or excessively prune trees. A permit is required prior to removing or relocating trees. Many municipalities have additional regulations. Residents can obtain more information by calling 3-1-1 or DERM directly at 305-372-6574 or log on to [www.miamidade.gov/derm](http://www.miamidade.gov/derm)