

ENVIRONMENTALLY FRIENDLY LANDSCAPING FOR FLORIDA YARDS

A Guide to Environmentally Friendly
Landscaping for the Floridian and Their
Yard

Sustainable Design + Consulting

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ENVIRONMENTALLY FRIENDLY LANDSCAPING:
A Guide to Environmentally Friendly Landscaping for the
Floridan and Their Yard
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Sustainable Design+Consulting

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INTRODUCTION

If you were to take a drive in any neighborhood in Florida, one would observe swaths of green grass. The occasional brown lawn should be an alarming indicator that something is not quite right about putting sod on sand. The continued use of irrigation and mass amounts of water used to keep those lawns green would be another indicator that things aren't quite right. If there were a need to replace the grass with sod, because it dried up or received damage from pests, the cost for the average homeowner could be thousands of dollars. Then there is the continued need to water the grass, even after it is established. That in itself is very expensive. But there are alternatives to grass replacement in the form of environmentally friendly landscaping.

This guide is meant as a standard for residents and neighbors as a plan for alternative landscape to the irrigation requiring, water loving lawns and plants that have proliferated the suburban landscape for so long. This guide will direct owners to plants that will thrive in their yard environment, with little maintenance and water and will be a far more better choice than the water hungry ornamental.

This guide will also help owners with wiser decision making in the landscape as they will be better informed. Owners can then be more environmentally friendly conscious with the landscape in their yards. Not only will the suggestions beautify the yard, but this guide will increase property values, lessen replacement cost, lessen maintenance, reduce turf cost, attract and increase wildlife interaction, beautify a yard, lessen the impact to the environment, and lessen the need for water requirements. These benefits are achieved through small changes and by incorporating environmentally friendly planting practices.

There is great importance of using environmentally friendly planting practices in a landscape that goes just beyond the owner's wants and needs. Using the right plant in the right place, or the use of native or adapted plants, greatly affects beyond the boundaries of one's yard. This decision affects also the larger picture and is beneficial to the greater environment in which the yard sits. A reduction in the use of water for irrigation draws less water from the Florida Aquifer. If no pesticides are used for inappropriate imported ornamentals, wildlife, such as birds and butterflies will proliferate. The less the grass is mowed, the less



trips to the gas station for gas for the mower, the less pollution, the energy expanded. For millennia, man has planted plants to benefit humankind's needs, including everything from creating crop fields to sodding with beautiful green grass. The Egyptian queen Hatshepsut created irrigation canals to water her groves of trees, not indigenous to that part of Egypt, fifteen hundred years before the birth of Christ. More recently, parts of the Everglades State and National Treasure, were planted with the invasive Melalucchai tree in an attempt to dry up those parts. Human needs and desires were accelerated with the continued rise of civilization. These needs and desires ranged from survivability with the need to harvest food for consumption to the simplistic aesthetic need of providing beauty with ornamental plants. These needs and desires gave rise to the development of advanced technology and having been left unabated, the environment has suffered.

Luckily for our planet and our selves, through the conservation minded efforts of people like Teddy Roosevelt and Rachel Carson, people became educated in our limited resources and what an impact mankind has on the planet. We, as a people, became a bit more conscious of the "footprint" we were leaving for future generations and our choices in life changed. Some choices were changed by overbearing government regulation, but other changes came from ourselves. And like a grass roots effort, every little contribution to the cause helps. One of the biggest contributions is awareness and the willingness to share and pass that on to

others. Another is the action an individual takes; and that action can come in many forms. One of those actions that homeowners have taken, has been the choice of plant material they place in their yards, that being native and adapted plants.

One of the main attractions to using native and adapted plants is passed directly to the owner of the property. To put it bluntly, there is little to do. It is not necessary to get in the car to go to the gas station for more gas for the mower, nor to go by the hardware store to acquire the special fertilizer that is required of the special ornamental in the front yard. And less time is spent in the yard maintaining, as the right plants, placed in the right place, are in an environment that is conducive to their growth and proliferation thus requiring less attention.



XERISCAPING

Environmentally friendly landscaping is just what the title suggests. Through native and adapted plants which use less water and fewer pesticides, landscaping becomes beneficial to the environment. Another name for environmentally friendly landscaping is known as Xeriscaping. Xeriscaping was the first resolute effort to reduce water usage in the landscape. Taking the word landscape and the Greek term “Xeros”, which means dry, the term xeriscape was created by the Denver Water Department in 1981 to conserve water in the dry Denver area. Xeriscaping advises using seven principles for best practice.

7 Principles of Xeriscaping

1. Proper planning and designing
2. Limiting turf areas
3. Selecting and zoning plants appropriately
4. Improving the soil
5. Using mulch
6. Irrigating efficiently
7. Maintaining the landscape

After nearly thirty years the term **Xeriscape** is commonly used, making the practice of a low-water-use landscaping an easily recognized concept. Unfortunately, the term has conjured images of swaths of gravel mulch, barrel cactus and succulents with no grass, as one might find in the deserts of Arizona. That is appropriate for Arizona or Colorado, but not places like Florida. And the imagery of a cactus garden is ill perceived. Xeriscaping can be a lush green vibrant landscape that one would not expect to see in a traditionally water hungry landscape, Xeriscaping can create a beautiful botanical garden.

Florida-Friendly Landscaping™

The State of Florida developed its own program of conserving water and treating the environment. This program doesn't focus solely on plants, but also environmentally friendly, sustainable practices. Entitled appropriately Florida Friendly Landscaping™ (FFL), Florida's Program takes into consideration storm water run off, appropriate and correct use of pesticides and fertilizer, and protection of the waterfront among other sustainable issues. There is a total of nine Florida Friendly Landscape Principles and all easily implemented. These principles will be examined in detail a bit later in the document.

A new Florida law, effective July 1, 2009, gives homeowners greater rights concerning their yards and installing -friendly landscaping.

Section 373.185 Florida Statutes, "Florida-friendly landscaping ordinances", defines Florida-friendly landscaping as "quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant."

Paragraph (3) (b) states: "A deed or covenant may not prohibit or be enforced so as to prohibit any property owner from implementing Florida-friendly landscaping on his or her land...." This means that you can landscape your lawn by replacing swaths of grass with Florida Friendly landscaping, even if you live in a homeowners association. Nothing requires that you have maintain a front lawn of only green grass. Homeowners still have to maintain an aesthetic standard found with in the neighborhood. Also, Homeowners associations may require you submit a landscaping plan as some homeowners covenants and restrictions require a landscape proposal for any changes one does to a lawn.



Florida Statutes > Title XXVIII > Chapter 373 > Part I > § 373.185. Local Florida-friendly landscaping ordinances

(1) As used in this section, the term:

(a) “Local government” means any county or municipality of the state.

(b) “Xeriscape” or “Florida-friendly landscape” means quality landscapes that conserve water and protect the environment and are adaptable to local conditions and which are drought tolerant. The principles of Xeriscape include planning and design, appropriate choice of plants, soil analysis which may include the use of solid waste compost, efficient irrigation, practical use of turf, appropriate use of mulches, and proper maintenance.

(2) Each water management district shall design and implement an incentive program to encourage all local governments within its district to adopt new ordinances or amend existing ordinances to require Xeriscape landscaping for development permitted after the effective date of the new ordinance or amendment. Each district shall adopt rules governing the implementation of its incentive program and governing the review and approval of local government Xeriscape ordinances or amendments which are intended to qualify a local government for the incentive program. Each district shall assist the local governments within its jurisdiction by providing a model Xeriscape code and other technical assistance. A local government Xeriscape ordinance or amendment, in order to qualify the local government for a district’s incentive program, must include, at a minimum:

(a) Landscape design, installation, and maintenance standards that result in water conservation. Such standards shall address the use of plant groupings, soil analysis including the promotion of the use of solid waste compost, efficient irrigation systems, and other water-conserving practices.

(b) Identification of prohibited invasive exotic plant species.

(c) Identification of controlled plant species, accompanied by the conditions under which such plants may be used.

(d) A provision specifying the maximum percentage of turf and the maximum percentage of impervious surfaces allowed in a xeriscaped area and addressing the practical selection and installation of turf.

(e) Specific standards for land clearing and requirements for the preservation of existing native vegetation.

(f) A monitoring program for ordinance implementation and compliance.

The districts also shall work with local governments to promote, through educational programs and publications, the use of Xeriscape practices, including the use of solid waste compost, in existing residential and commercial development. This section may not be construed to limit the authority of the districts to require Xeriscape ordinances or practices as a condition of any consumptive use permit.

(3) A deed restriction or covenant entered after October 1, 2001, or local government ordinance may not prohibit any property owner from implementing Xeriscape or Florida-friendly landscape on his or her land.

A Word on Natives/Adapted Plants

There is a continuing discussion about whether the use of natives is better than the use of non natives/adapted that are adapted to the Florida Environment. There exist a coalition of native purist that insist that everything hence forth should be planted in native plants. And then there are those like myself that argue that the use of only natives is very limiting and not always the best choice for aesthetic pleasure. Natives do offer beauty, and you absolutely can and have a beautiful yard with only natives. But there is no reason to limit one's paint palette to 8 different crayons when you can have 24.

And there is a misconception that abounds that once natives are planted, they need no maintenance. In order to attain and maintain any command of appearance, plants need to be pruned, shaped and pruned again. A homeowner simply cannot plant the right plant for the right place and turn their backs on the yard, unless they are attempting the natural look, but the neighbors might not appreciate that, nor the Homeowners Association. Just because we are allowed by law to plant natives, it does not mean we can forgo any maintenance. Natives, like all plants will need maintaining, but will not be as labor intensive and as often.

Because you simply choose a native plant to the State of Florida, doesn't mean it is particularly suited to the conditions it is placed in. Florida has an abundance of plants and ecosystems that are suited to those plants and therefore you can't mix plants and ecosystems. Plants require certain conditions to love in. Conditions have to be right and they include proper sunlight/shade requirements, the correct soil type, weather it prefers moist or dry soil, etc etc. A purple blooming pickerelweed would not last a day in suburban front yard, as it is only suited to wetland edges and water bodies.



Florida Friendly Landscaping

The Florida Friendly landscaping is a guide to creating and having a low impact landscape in the great state of Florida, but the principles are universal and can be applied elsewhere in the nation or the world. The intention of the principles of the Florida Friendly landscape is to simply implement environmentally sound landscape design as well as environmentally friendly maintenance techniques.

9 Principles of the Florida Friendly Landscape

- 1. Right Plant, Right Place**
- 2. Water Efficiently**
- 3. Fertilize Appropriately**
- 4. Mulch**
- 5. Attract Wildlife**
- 6. Manage Yard Pest Responsibly**
- 7. Recycle**
- 8. Reduce Storm Water Runoff**
- 9. Protect the Waterfront**



Right Plant, Right Place

The key for having a newly installed plant thrive and survive in a particular location is that the site and plant must be compatible. Just like two people in a relationship. If a couple don't agree with on another and are annoyed with the other, they will not be attracted to each other. The same is true with plants and the environment in which it is placed. There exist a number of factors that determine whether a plant will do well were it is placed.

Wet or Dry

Florida has an abundance of many different flora for it's many different ecosystems. A wetland loving plant will only survive in areas in which the root zone is saturated and a plant that prefers it's roots to stay dry would rather reside on a high berm or dry spot. If a dry loving plant were placed in too wet of an environment its roots might get a disease and would be more prone to pest, as the plant is in a weakened state.

Dry loving plants would do well along the unshaded southern and western walls of houses, were the sun shines the longest amount of time. Wet loving plants should be planted along the lake edge and with areas of poor drainage.

Shade

If you have areas of shade that you keep trying to get the grass to grow, then stop it. Grass normally doesn't grow well in real shady areas. New grasses are being developed for the shade, but until we get there, it's best not to waste money by continuing to plant shade intolerant grass.

Instead, plant the area with shade tolerant shrubs or ground covers, a making a planting bed of the area.

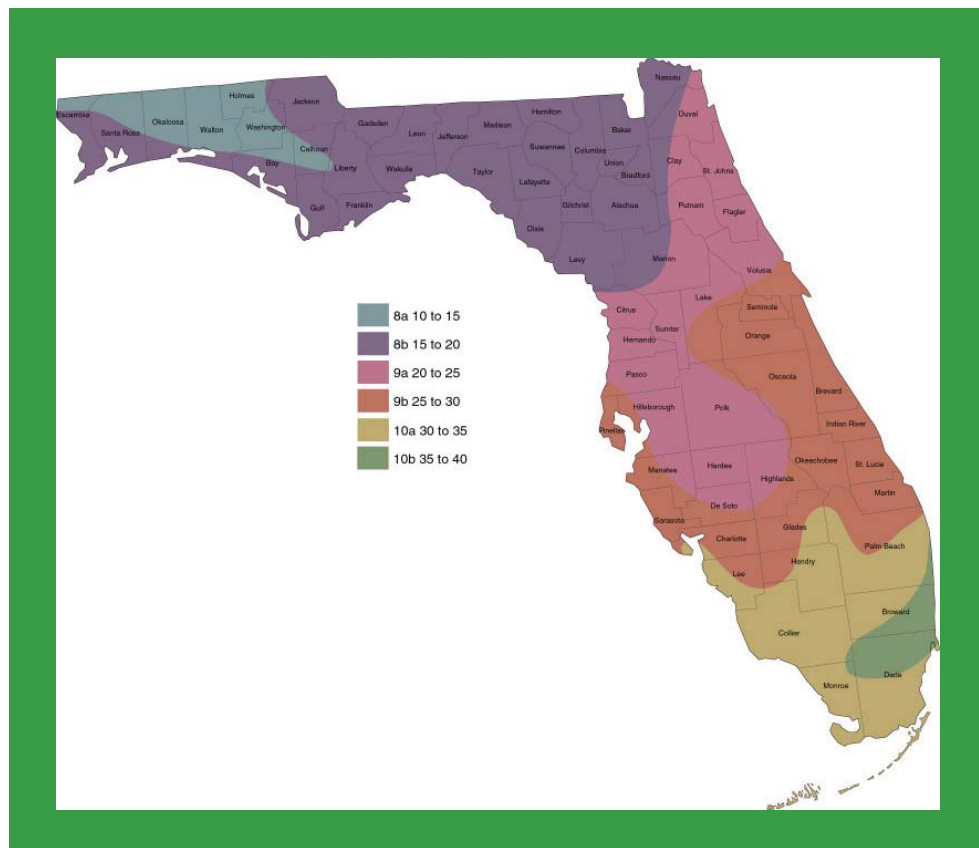
Shade loving plants will not do well in the sun. They often get sunburn and are more susceptible to pet and disease in their weakened state. You can use shade to cool your house. The sun is most extreme on the southern and western facades of our houses. Though many of the houses may have adequate insulation, it doesn't hurt to provide any additional shade for the house on those sides. Plant deciduous trees (trees that loose their leaves in fall and winter) along those walls. In the summer, when the trees are full of leaves, the will shade the house. During our tolerable winter, the sun will pass through the leafless branches and warm the house. This situation allows for savings in cooling cost during the summer and heating cost during the winter.



Zones

The United States Department of Agriculture compiled a map with that differentiate the various plant hardiness zones of the United States. Hardiness Zones refer to the growing and climate conditions a plant can tolerate specifically as it relates to heat and cold. Plants do best within their specific hardiness zone.

Plants that are planted outside of their hardiness zone would easily die and therefore it is important to place the a plant in it's perspective zone. Recently the American Horticulture Society refined the USDA's Hardiness Zone which gives greater specificity to the zones and plants. Florida falls under zones 8-10.



Florida Hardiness Zone Map

<http://www.hort.purdue.edu/newcrop/cropmap/florida/default.html>

Soil pH

Soil pH is a measure of the acidity or basicity in soils. The pH scale ranges from 0 and 14. A pH of 7 is neutral and pH below 7 is acidic and above 7 is basic. pH is important in soil definition as it determines the availability of nutrients that the plant receives. Soil pH can be changed manually by adding lime to increase soil pH or aluminum sulfate to decrease the pH. Eventually the added material will leach out of the native existing soil and the material will need to be added again.

For ease of maintenance, it's simply better to place the right plant determined by the conditions and pH of the receiving soil, rather than temporary improving the soil with additives.

Most plants are in the range between 6 and 8.

pH	Examples
0	Battery Acid
1	Stomach Acid
2	Lemon Juice
3	Soda
4	Tomatoe Juice
5	Coffee
6	Saliva
7	Water
8	Ocean Water
9	Baking Soda
10	Milk of Magnesium
11	Ammonia
12	Soapy Water
13	Bleach
14	Drain Cleaner

pH Scale

Instant Gratification Just Means More Work

In our society and culture, we crave and expect instant gratification, which is saying, we want what we want and we want it now. When we determine that we want in a landscape, we want it to be full and lush and immediately. Plants that grow quickly need more maintenance, as they are having to be clipped and pruned to maintain any sort of form and beauty. This can lead to perpetual maintenance. Slow growth plants might not give you the instant results, but they will last longer and take less work. Always plan for growth.



Plants and Plant Coding

The following pages are plant suggestions for the Florida Friendly Yard. They are not listed in any order or priority and in no way are these suggestions the full palate of plant material to choose from. There are numerous other plants available.

The common plant name is listed followed by the scientific name. If the plant is native to Florida, the scientific name will be followed by the letter "N".

Next, it is listed what part of Florida the plant can live with the indication of the Zone.

The plants maximum possible growth size is listed as the height x the width (50x60 indicates that the plant might grow 50 feet tall, by 60 feet wide), This is the expected size the plant can get at the peak of it's life. If the plants are trimmed and maintained, they will not reach an exaggerated height.

Then it is listed what lighting conditions the plant does best in, The last bit of information, it is listed additional information of the plant, including flowers and fruit.

Common Name (*Scientific Name*) N=Native

Location in Florida it Grows, Hardiness Zone

Height X Width of Plant, Soil Type, Wet/Dry Conditions

Sun/Shade Conditions

Additional Information



Trees



http://imgsrv.gardening.ktsa.com/image/ktsag/UserFiles/Image/E_Images/American_elms_1024.jpg

American Elm (*Ulmus americana*) N
North Central Florida , Zone 8-9,
50x60, any soil type, well drained to wet soil
sun to partial shade
attracts butterflies, long lived, vulnerable to wind
damage



<http://www.cf.edu>

Live Oak (*Quercus virginiana*) N
North Central South Florida , Zone 8-9,
60x120, any soil type, well drained to wet soil
sun to partial shade
attracts butterflies and birds, long lived, not for
small lots



<http://www.duncannurseries.com/images/TREES/Magnolia.jpg>

Southern Magnolia (*Magnolia grandiflora*) N
North Central South Florida , Zone 8-9,
40x50, any soil type, well drained to medium drained
sun to partial shade
attracts birds, long lived, beautiful white fragrant
flowers



http://www.cirrusimage.com/Trees/red_maple_1.jpg

Red Maple (*Acer rubrum*) N
North Central South Florida , Zone 8-9,
80x35 , any soil type, well drained to wet soil
sun to partial shade
attracts birds, beautiful red fall foliage, good for
wet areas, not to be placed near septic systems



Trees

Sweet Gum (*Liquidambar styraciflua*) N

North Central Florida , Zone 8-9,
100x60, any soil type, medium to wet soil
sun to partial shade
attracts birds



http://www.meridian.k12.il.us/Middle%20School/student_work/Clint_native_trees/sweet-gum.jpg

Sycamore (*Platanus occidentalis*) N

North Central Florida , Zone 8-9,
90x70 any soil type, medium to wet soil
sun to partial shade
good for southern and western facades, sheds, low
wind resistance



http://www.meridian.k12.il.us/middle%20school/student_work/JordanStogner

Yaupoon Holly (*Ilex vomitoria*) N

North Central Florida , Zone 8-9,
30x40 any soil type, medium to wet soil
sun to partial shade
attracts birds



<http://choateirrigationusa.com/Trees/HollyYaupon.jpg>

Wild Olive (*Osmanthus americanus*) N

North Central Florida , Zone 8-9,
30x40 any soil type, medium to wet soil
sun to partial shade
white flowers, fruit attracts birds



http://hort.ifas.ufl.edu/treesand-powerlines/images/osmanthus_americanus_winter.jpg

Shrubs



<http://www.tytyga.com/product/image6/986/2.jpg?1249506078>Plants/callicarpadichotoma_mb_1_lg.jpg

Anise (*Illicium floridanum*) N

North Central South Florida , Zone 8-9
10x10 , any soil type, well drained to medium
sun to partial shade
flowers



http://www.imegardening.com/CMS/uploadedImages/Images/Gardening/Plants/callicarpadichotoma_mb_1_lg.jpg

Beautyberry (*Callicarpa americana*) N

North Central South Florida , Zone 8-9
7x7, any soil type, well drained to medium
partial shade to shade
beautiful purple fruits, attract birds



<http://theflowerstation.com/wp-content/uploads/2009/03/butterfly20bush.jpg>Plants/callicarpadichotoma_mb_1_lg.jpg

Butterfly Bush (*Buddleia lindleyana*)

North Central South Florida , Zone 8-9
6x4, any soil type, well drained to medium
sun
purple spire blooms attracts butterflies



<http://theflowerstation.com/wp-content/uploads/2009/03/butterfly20bush.jpg>Plants/callicarpadichotoma_mb_1_lg.jpg

Confederate Rose (*Hibiscus mutabilis*)

North Central South Florida , Zone 8-9
12x12, any soil type, well drained to medium
sun to partial shade
attractive blooms

Shrubs

Coral Bean (*Erythrina herbacea*) N

North Central South Florida , Zone 8-10,
15x10 , any soil type, well drained to medium
partial shade to shade
flowers attract butterflies and hummingbirds
toxic seeds



<http://www.kevinwoodlandscapes.com/images/fullsize/PlantPalette/CoralBean.png>

Duranta (*Durnata erecta*)

Central South Florida , **Zone** 9-10,
15x15 , any soil type, well drained
sun to partial shade
flowers attracts birds, butterflies and hummingbirds



http://www.oramsnurseries.com.au/duranta_GoldForm.jpg

Firbush (*Hamelia patens*)

Central South Florida , Zone 9-10,
20x8 , any soil type, well drained to medium
sun to shade
red flowers attracts, birds butterflies and hummingbirds



http://www.betterlawns.com/images/firebush0209_lg.jpg

Gallberry (*Ilex glabra*) N

North Central South Florida , Zone 5-10,
15x10 , any soil type, prefers low pH well drained
to medium
sun to partial shade
fruit attract birds



http://farm1.static.flickr.com/190/457745149_f3a776311b_z.jpg?zz=1

Shrubs



http://farm3.static.flickr.com/2803/4464184575_a2ef9d1cbc_z.jpg

Dwarf Yaupoon Holly (*Ilex vomitoria*) N

North Central South Florida , Zone 8-9
3x3, any soil type, well drained
sun to partial shade
compact shrub



http://farm5.static.flickr.com/4003/4464187139_e600e9487d_z.jpg

Simpson Stopper (*Myrcianthes fragrans*) N

Central South Florida , Zone 9-10
12x12, any soil type, well drained to medium
sun to partial shade
attractive white blooms that attracts birds and butterflies



<http://theflowerstation.com/wp-content/uploads/2009/03/butterfly20bush.jpg>Plants/callicarpadichotoma_mb_1_

Walter viburnum (*Viburnum obovatum*) N

Central South Florida , Zone 9-10
15x15, any soil type, well drained
sun to shade
attractive flowers, birds attracted to fruit



<http://theflowerstation.com/wp-content/uploads/2009/03/butterfly20bush.jpg>Plants/callicarpadichotoma_mb_1_lg.jpg

Wax Myrtle (*Myrica cerifera*) N

North Central South Florida , Zone 8-10
25x25, any soil type, well drained to medium
sun to partial shade
attracts birds and butterflies

Groundcovers

Perennial Peanut (*Arachis glabra*)

North Central South Florida , Zone 8-11,
6 inches high, sandy soil,
well drained to medium
sun
yellow orange flowers, damaged by frost, substitute
for grass



http://3.bp.blogspot.com/_KYbtNqEEgXc/TB-7lwxuPqI/AAAAAAAAAnk/Y4eYWFZPE14/s1600/Perennial+pnut+lawn.JPG

Periwinkle (*Catharanthus roseus*)

Central South Florida , Zone 9-11
1 foot high , any soil type, well drained to medium
sun to partial shade
flowers



<http://www.kevinwoodlandscapes.com/images/fullsize/PlantPalette/CoralBean.png>

Lantana (*Lantana montevidensis*)

Central South Florida , Zone 9-10,
1-3 high , any soil type, well drained
sun to shade
flowers of different colors if different species, at-
tracts, butterflies



http://www.oramsnurseries.com.au/duranta_GoldForm.jpg

Sensitive Mimosa (*Mimosa pudica*) N

Central South Florida , Zone 9-10,
6 inches, any soil type, well drained to medium
sun to shade
pink flowers that attract butterflies



http://www.betterlawns.com/images/firebush0209_lg.jpg

Vines



http://www.wildflower.org/image_archive/640x480/JAM6151/6151_IMG03255.JPG

Trumpet Vine (*Campsis radicans*) N

North Central South Florida , Zone 8-10
varies, any soil type, well drained
sun to shade
orange red flowers that attract butterflies and hummingbirds



http://thenaturejunkie.com/wp-content/uploads/2010/06/CoralHoneysuckle-Cropped.jpge600e9487d_z.jpg
http://Plants/callicarpadichotoma_mb_1_

Coral Honeysuckle (*Lonicera sempervirens*) N

Central South Florida , Zone 9-10
varies, any soil type, well drained to medium
sun to partial shade
attractive white blooms that attracts birds and butterflies



<http://www.phillipoliver.net/sccarolinajessamine.jpg>
http://Plants/callicarpadichotoma_mb_1_lg.jpg

Carolina Jessamine (*Gelsemium sempervirens*) N

Central South Florida , Zone 9-10
varies, any soil type, well drained
sun to partial shade
attractive yellow flowers attract hummingbirds



http://2.bp.blogspot.com/_L4JA51eFoMo/SeVM-_b33Jl/AAAAAAAAEE4/Q8ANcFa3Dbs/s400/4,15,+Confederate+jasmine.jpg

Confederate Jasmine (*Trachelospermum jasminoides*) N

North Central South Florida , Zone 8-10
varies, any soil type, well drained to medium
sun to partial shade
attractive white fragrant flowers attract hummingbirds

Grasses

Fakahatchee Grass (*Tripsacm dactyloides*) N

North Central South Florida , Zone 8-11,
4 x4, any soil, well drained to medium
sun to partial shade
yellow orange flowers, damaged by frost, substitute for
grass



http://farm3.static.flickr.com/2588/3784892175_74a59688a7_z.jpg

Purple Love Grass (*Eragrostis spectabilis*) N

North Central South Florida , Zone 8-10
3x3 high, any soil type, well drained to medium
sun
red purple flowers



<http://www.oaklandwildflowerfarm.com/thumbs/Purple%20Love%20Grass%20Thumb.jpg>

Muhly Grass (*Muhlenbergia capillaris*) N

North Central South Florida , Zone 8-11,
3x3 high , any soil type, well drained to medium
sun
Pink flowers



http://pazgrowers.com/images/Muhl_Muhly_Pink_Muhly_Grass.jpg

Sand Cord Grass (*Spartinia bakerii*) N

North Central Florida , Zone 8-9,
3x3 sandy soil, well drained to wet
sun



http://farm3.static.flickr.com/2461/3784927633_8013e201cc_z.jpg

Aquatic Plants



http://www.lakewacowetlands.com/images/plants/Duck_Potato-L.jpg

Duck Potatoe (*Sagittaria latifolia*) N

North Central South Florida , Zone 8-10

3, any soil type, wet

sun

white flowers, grows in mass



<http://www.bing.com/images/search?q=Bulrush%2c&view=detail&id=368BB9C774E84646E3769B9F9F0F45E34826>

Bullrush (*Scirpus spp*) N

North Central South Florida , Zone 8-10

4, any soil type, wet

sun

Grows in mass



[http://www.plantplaces.com/photos/Cephalanthus.occidentalis.Moonlight.Fantasy\(Small\).JPGchotoma_mb_1_lg.jpg](http://www.plantplaces.com/photos/Cephalanthus.occidentalis.Moonlight.Fantasy(Small).JPGchotoma_mb_1_lg.jpg)

Buttonbush (*Cephalanthus occidentalis*) N

Central South Florida , Zone 9-10

6, any soil type, wet

sun to partial shade

white flowers



http://www.joesnowaquaticplants.com/pickerel.jpgAAAAAAAAAEE4/Q8ANcFa3D-bs/s400/4,15,+Confederate+jasmine.jpg.jpgPlants/callicarpadichotoma_

Pickerlweed (*Pontederia cordata*) N

North Central South Florida , Zone 8-10

3, any soil type, wet

sun

purple spire flower



Butterfly Plants

Candy Corn Cuphea (*Cuphea micropetala*) N

North Central South Florida , Zone 8-11,
4 x4, any soil, well drained to medium
sun
Yellow orange flowers



<http://toptropicals.com/pics/garden/c20/1127.jpg>

Milkweed (*Asclepias curassavica*)

North Central South Florida , Zone 8-10
3x3 high, any soil type, well drained to medium
sun
red and orange flowers



<http://reddirtrablings.com/wp-content/uploads/2009/01/tropical-milkweed.jpg>

Porterweed (*Stachytarpheta jamaicensis*) N

North Central South Florida , Zone 8-11,
3x3 high , any soil type, well drained to medium
sun
Blue flowers



<http://www.almostedenplants.com/shopping/images/full/Stachytarpheta%20jamaicensis.jpg>

Salvia (*Salvia coccinea*) N

North Central Florida , Zone 8-9,
3 sandy soil, well drained to wet
sun
Red flowers



<http://www.curtismartingroup.com/SalviaRed.jpg>

Water Efficiently

It is estimated that households spend over 50% of their water usage on the lawn and it's watering needs. If the landscape is designed and planted properly with native and adapted plants, the water requirements will be small to none. By using less water, the money savings could be great. And the less water used, the better for the environment and the Florida Aquifer.

Irrigation Tips

If you do have an irrigation system, establish appropriate irrigation zones, separating turf zones from shrub bed and tree zones. Turf requires more water than shrubs and trees.

Be aware of your specified watering days established in your municipality and always mind the restrictions imposed.

A mandatory rain sensor should be installed on your irrigation system. This allows it to shut off when rain has fallen, usually set to half an inch of rain.

When designing for installation of plants, group together plants with similar water needs.

Only water when grass shows signs of distress. Signs of distress include: bluish gray color, folded leaf blades, wilted appearance.

Don't water at the hottest times of the day, which are 10 am- 4 pm. The heat of the day and any wind increases evaporation. Optimum water times are between 4am and 7 am.

Turf, plants and trees require less water, because of less evaporation, during the cooler months of the year from November to March.

Irrigation systems, like plants, require maintenance. Regularly check for leaks and broken heads. And check that the system is uniformly covering the areas intended.

Consider using or converting to a micro irrigation system. This is a type of irrigation system that uses considerably less water and the water is directly applied to the plant with less over spray. A micro irrigation system delivers small volumes of water directly to the root zone through low-flow emitters, such as micro-spray jets, bubblers, or drip tubes.



Fertilize Appropriately

The different aspects of your lawn require different fertilizer types. Some fertilizer is specific for your grass. Other fertilizer is specific for palms, while others are specific for woody plants.

Proper fertilization is essential. If one over fertilizes, not only will you pollute the environment unnecessarily, the plants or grass can become damaged, susceptible to pest and disease and even die. Too little fertilization means your just wasting your money and teasing your plants.

When natives are used, little if no fertilizer is typically needed, as nature provides the plants with what it needs.

Fertilizers Primer

Fertilizer bags are easily recognized by the three numbers on the front of the package, that usually read something like 10-10-10 or 16-2-8. You can typically recognize fertilizer by the smell, a sulphuric odor that is distinctive. These three numbers indicate the percentage amount of chemical nutrients of the contents. The first number indicates nitrogen, the second number represents phosphorus, the third number represents potassium. Nitrogen, Phosphorus and Potassium are also referred to as N-P-K. A 50 pound bag of 16-2-8 fertilizer means that 16% is nitrogen (8lbs in a 50 lb page) , 2% is phosphorous (1 lb phosphorous) and 8 % is potassium, (4 pounds is potassium) . The other weight is made of inert chemicals.

Nitrogen benefits the plant or turf by “greening” it up. Phosphorous helps with root growth and is beneficial to the blooming of the flowers of a plant. Potassium is important in the manufacture of sugar, starches and proteins, which directly contribute to photosynthesis, fruit quality and plant health, and specifically, maintenance of defense systems to ward off diseases and pest. Each chemical contributes beneficially to the plants robustness and strength in it different ways. It is the nitrogen and phosphorous that are most detrimental to the Florida Aquifer and contribute to it's pollution.



Selecting Fertilizer

When selecting fertilizer, the most important point is that a slow release fertilizer is best for your plants and the environment. With slow release, chemicals are not leached in mass into the soil and are not lost. A slow release formula, over time, benefits the plants it is applied to. This is particularly important to a lawn, as a quick release fertilizer can cause quick growth and ultimately lead to more thatch in grass and long gangly shoots in plants.

Inorganic or Organic Fertilizer

Inorganic fertilizers are mined and pulled from the earth from non living material. Inorganic fertilizers are derived from animal and plants. Organic fertilizer can come in the form of compost and manure. One can create their own fertilizer through the compost from kitchen and yard waste.

Obviously choosing an organic fertilizer is the better choice for the environment, but not always cheaper.

Preventing Pollution from Fertilizers

Use slow release fertilizer

Don't spill fertilizer on drive or walk ways. Otherwise it will more easily wash into storm drains and thus into water bodies of the florida aquifer. If you do get the fertilizer on the hard surfaces, sweep it up and use it on the intended plant or plants.

If you spill a large amount of fertilizer on the grass or in a bed, gather as much as you can up.

Do not fertilize within ten feet of any waterway, as this will further prevent fertilizer from contaminating the water systems.



Manage Yard Pest Responsibly

Because of the increasing dangers of pesticides to humans and our environment, the pest management industry is changing. With the mass disappearance of pollinating insects and the concern for polluting our self's and our world, practices have changed drastically. The best approach to managing pest is Integrated Pest Management or IPM. This practice centers on a combination of environmentally friendly pest management practices that focus on pest prevention.

Ways to Prevent Pest

Plant the right plant in the right place. Plants that are in the right location will be healthier and less stressed than those not.

Keep plants healthy by proper watering and fertilization. By keeping plants healthy, insects will stay away and gravitate to the weaker plants that are more susceptible.

Not too much water or fertilizer. Both water and fertilizer in amounts that exceed the recommended usage will cause excessive growth or weaken the plants which open them up for attack from insects or diseases.

Inspection. As part of maintenance, and personal exercise and enjoyment, take walk through the yard and visually inspect the plants for signs of disease and pest.

Mow grass at the proper height. If your mower settings are too low, it may scalp the grass and will weaken it.

Treating Pest Problems

Remove the pest by hand as well as the affected leave or plant part.

Be aware of beneficial bugs, the good guys. They prey on the bad guys and help eliminate them. They include lady bugs, predaceous thrips and mites. Therefore do not use a broad spectrum pesticide that is a kill all, in that it kills all bugs that it is used on. Always treat for the specific pest.

Read all product labels carefully and abide by them.



Mulch

Mulch serves many purposes in the landscape. First and foremost, it is used to hold moisture in the soil to benefit the plants that are mulched. It is also used for weed control. Mulch prevents weed seeds from germinating and growing. Aesthetically mulched provides defined bed spaces by contrasting and complimenting with the color and texture of the grass areas. By creating a buffer area from the grass areas that are mowed, mulch prevents damage from weed trimmers and mowers to the plants. Natural mulch also helps with the plant nutrients as it decompresses, it adds nutrients and organic matter. Most mulches are the by product or cast off products of another industry. Because of this, this is a form of recycling what would normally be a waste product.

Types of Mulch

Pine bark

A byproduct of the forestry industry.

Pine needles

A byproduct of the forest industry.

Melaleuca mulch

Made from the invasive exotic trees. Because this is coming from an invasive species, it is helping eradicate the invasive species. Make sure this mulch is heat treated to exterminate any melaleuca seeds.

Mixed hardwood mulch-

A byproduct of the lumber industry , made from scrap lumber.

Eucalyptus mulch

Derived from fast growing trees specifically grown for the purpose of mulch.

Utility mulch

Comes from tree trimming services and utility line companies trimming trees away from utility lines, this mulch, often free, contains a mixture of trees. Because it is not treated, it may have seeds.



Organic Mulch vrs Inorganic Mulch

It is best to use organic mulches in the landscape. There are alternatives for mulch that are inorganic which include recycled rubber, sea shell and gravel. None of these offer the organic or nutrient value of the organic mulch. Mulches from stone or gravel do nothing to retain soil moisture and during the summer retain heat which is detrimental to the plants. Rubber mulches may leach chemicals into the lawn and planting beds which are harmful to the plants and natural ecosystem. Limestone and shell will raise the soil pH. If not prescribed for the plants, it is not beneficial and might harm plants.

There are a number of organic mulches on the market that can be purchased in bags or by the bulk yard. Among the available mulches include cypress mulch. It is recommended that this type of mulch not be used. Though some of this mulch is simply the byproduct waste from items used for to build with cypress wood, it all comes from the ecologically sensitive wet lands that should not be disturbed by the harvesting of the trees.

Mulching Tips

- Mulch should be spread 2-3" deep for proper moisture retention and weed prevention,
- Mulch should not be placed against the trunk of trees and shrubs, but rather 2 inches away from the base of the plant. Mulch placed against the base may cause excessive moisture and rot.
- Mulch to a tree/shrub drip line.

How Much Mulch

Unless you buy mulch in bags, you purchase it in bulk quantities. To determine the appropriate amount of mulch you will need, measure the area in square feet. For our example we will say the bed is 100 square feet. Now determine the depth of mulch you are wanting and convert that into a fraction of a foot. If you want 3" of mulch, that would be divided by 12" which is .25'. Now multiply this by the square foot measurement ($100 \times .25 = 25$ cubic feet) Now to determine the cubic yards you must convert cubic feet to cubic yards. This is done by the cubic feet by 27 ($25/27 = .926$) Therefore you will need .926 cubic yard of mulch. When ordering, you would specify a cubic yard of mulch.

Attract Wildlife

As Florida becomes ever more developed and the natural areas are reduced, so is the wildlife that was once so prolific. Our continued reliance and use of pesticides that we spray to keep the bad bugs off, also keeps the good bugs away.

By including a few Florida Friendly, wildlife attracting plants and features, one's yard can be an oasis of not only flora, but of fauna. Incredibly a yard planted in Florida Friendly can be a safe haven for wildlife that includes rabbits, turtles, birds, bees, butterflies and caterpillars. The more diverse the landscape, the greater the variety of wildlife that will appear, utilize and habitat in ones yard.

Features that Attract Wildlife

Food

Food can come in the form of seed you put out for birds. Food may also come in the form of plants that will feed animals from bearing seeds and berry's for birds, nectar for butterflies or foliage for caterpillars. Some animals, like squirrels eat acorns, other animals eats fruits.

Water

Another essential for survival of species, water can attract a number of wildlife forms. A simple birdbath can attract birds for a mid afternoon bath or drink of water. It will also attract other wildlife including butterflies, squirrels and bees.

Plants that Attract Animals

Shrubs that Attract Birds:

Beautyberry, Blueberry, Elderberry, Florida Privet, Holly's, Serviceberry and Wax Myrtle.

Trees that Attract Birds::

Sweet gums, Tulip's, Oaks, Hackberry, Magnolia, Hickory, persimmon, Mulberry and pine.

Trees that Attract Butterflies

Tulip Popular, Golden Shower, Fringe Tree and Bottlebrush

Shrubs That Attract Butterflies:

Paw paw, Buddleia, Fiddlewood, Glossy Abelia, Buttonbush, Firebush and

Perennials That Attract Butterflies

Milkweed, Tickseed, Firecracker Plant and Mexican Sage



Recycle

Regular maintenance of the lawn and yard produces waste on a consistent basis that can be used in a recycling capacity which yields valuable nutrients and soil structure back to the lawn.

There is really no need for you to place your yard waste by the curb and for it to be hauled away, unless your removing large amounts of shrubs or a tree. Yard waste should be processed on property in the form of compost. There is no need to fill a landfill up with what can in turn be used to benefit in your yard.

Benefits of Composting

- Reduces landfill need
- Improves soil structure
- Improves soil texture
- Improves soil aeration
- Improves soil nutrients and fertility
- Loosens compact soils

Tips on Composting

Do not bag your grass clippings, leave them where they lie and let them decomposes, returning nutrients back to the soil. This practice can lead to 50% reduction of the use of nitrogen fertilizer.

Mulching Blades reduce the size of the grass clipping's expediting the decomposition process.

Let leaves and pine straws that fall in beds stay there. It is simply natures way of mulching itself.

A composting system doesn't need to be an elaborate bin or series of bins. A compost area can simply be a pile or a hole dug in the yard.

Kitchen waste that can be composted include discarded fruit peelings, vegetable waste, paper towels, egg shells and coffee grounds. No meat or bones.

Household waste that can be composted include vacuum cleaner waste, newspaper (crumpled up), discarded paper, (crumpled up and shredded), old mail (crumpled up and shredded, no glossy mail pieces or translucent windows).

When you prune shrubs and trees, toss the cuttings into a compost area. For larger pieces, that may take longer to decompose, place them in their own pile.

Factors of Successful Composting

Moisture

Some moisture is required to for the decomposition process to take place, but not too much moisture.

Oxygen

Composting can take as long as two years or as short as four weeks, depending on the perfect conditions. To facilitate the decomposition of the material, turn the pile with a pitchfork to mix and aerate the material.

Nitrogen and Carbon

Combine a mixture of Nitrogen and Carbon (green and brown material, such as grass clippings and dried leaves).



Reduce Storm Water Runoff

Storm water is a cause of alarm for pollution. Pollution from storm water is referred to as a nonpoint source pollutant (NPS). NPS cannot be attributed to one particular source. Over time, the pollutants such as gasoline, fertilizer, pesticides build up. This water runoff from impervious surface, such as drives, walks and roads, and excess water from saturated soil, transports sediments and pollutants to nearby waters.

The ideal solution would be to capture all the rain that fell on your property and have it properly soak into the soil on site. This is sometimes not possible as the roof diverts mass amounts of water to several particular areas of the yard and a lot of soils in subdivisions are simply compacted due to the building process of the house and cannot properly soak in the soil and thus run off.

Ways to Reduce Storm Water Runoff

Landforms

You can create land forms that direct water runoff that would otherwise wash from your yard. By constructing swales and berms, you can create natural looking attractive landforms.

Rain Collector

An old technology, the use of rainwater holding features in the landscape goes, back far.

Rain barrels are typically made from 55 gallon drum barrels with a hole at the top to receive the gutter downspout and a spigot at the bottom to control the outflow of water.

Cisterns are larger in size and hold much more water. This usually requires a bit more thought in planning and logistics as it takes up much more space.

Porous Surface

Porous surfaces allows water to seep through to the ground and not collect on the surface. They include the use of bricks, pavers, gravel, mulch.



Protect the Waterfront

Florida Waters play an important role in the state of Florida and the ecosystem. It is imperative that we protect them as they are an important factor in the balance of the natural cycle of the environment.

The main consideration for lakes, ponds and streams is to protect at least 10' between the shoreline's water body and the lawn. In this 10' space it is recommended that you plant it in a natural planting with no mowing, fertilizing or using pesticides. With the natural planting, it will be easy to maintain. This natural zone needs to be able to slow the velocity of storm water runoff, filter nutrients and sediments from runoff and hold the soil in place with no erosion. If you do not live on a lake or pond, there is of course no need to adhere to this Florida Friendly landscaping principle.

Suggested plants for the Waterfront

Arrowhead,
Pckerelweed,
Crinum Lily,
Duck Potato
Bulrush
Sand Cord Grass
Bullrush
Buttonbush
Thalia



Creating a Florida Friendly Yard

The Design Process

The 9 Principles of the Florida Friendly Landscape should be the determining factors that lead you in your design. By following these principles, you can create a beautiful environmentally friendly landscape that will be easy to maintain and a pleasure to experience. The principles will dictate and lay out a proper plan of action that one can take and adhere in the installation, life and management of the landscape.

The design process gives a structured logical organized order to the solution of a landscape design by determining the appropriate needs in a prioritized order.

1. Become Educated

In order to have a successful sustainable landscape that will last and flourish for years to come, it is best to become educated in matters concerning Florida Friendly yard and to also become familiar with plants.

There is no great mystery to plants. Typically people have bad luck with plants simply do not make an initial commitment that is necessary for plants to survive, It is typically the problem of lack of water that determines the death of a plant in the initial period after planting. Once plants are established, they take little care to keep alive.

Owners simply have to make a commitment for the initial period after the plant goes into the ground.

To implement and practice the nine principles of the Florida Friendly landscape would be for the benefit of you, your yard and the environment. They are all easily achievable.

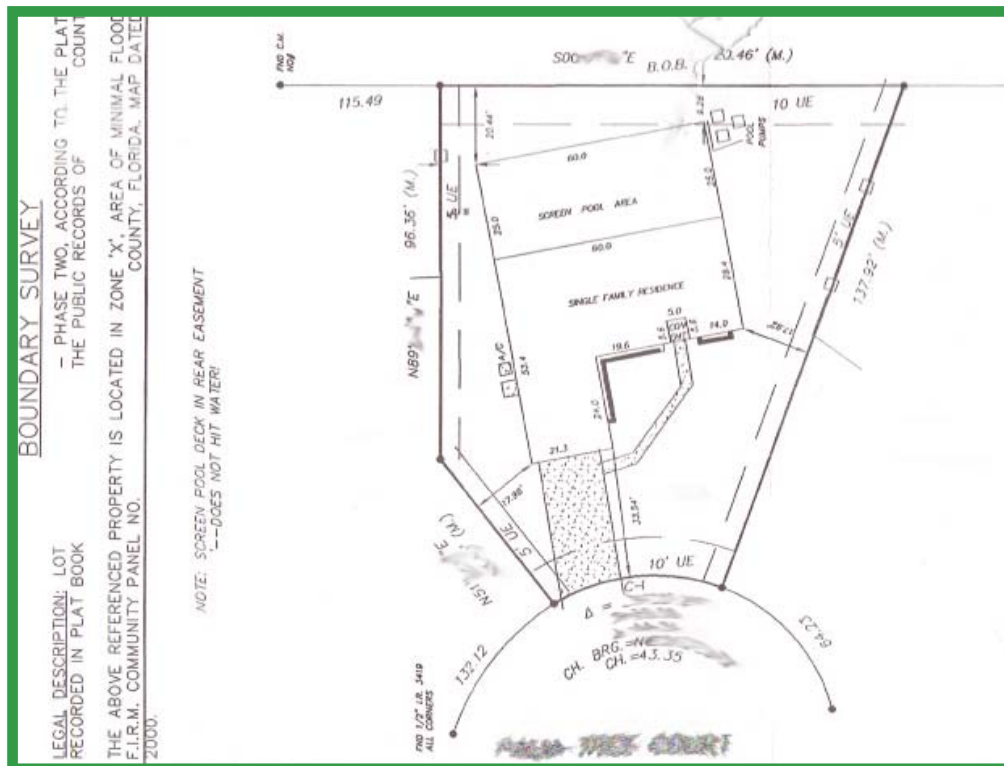


2. Site Analysis

Site analysis is the initial step of the process in which the site is examined. All the existing information is observed and gathered. In order to perform a proper site analysis, one should have a base plan as well as have performed a site inventory.

a. Base plan preparation

i. A base plan will be needed to sketch the final design plan, but will also be helpful in locating the existing elements of the site. A base plan is simply an overhead view of the yard with house and drive located on it. It is much like a bird's view of the site would be if it were flying over. The base plan can be a survey of the plot or one can sometimes obtain the survey by accessing the County Property Appraiser's website. An overhead view shot can also be accessed through map websites such as yahoo maps or google earth. If these are not available, one can simply measure and sketch the plan one's self.



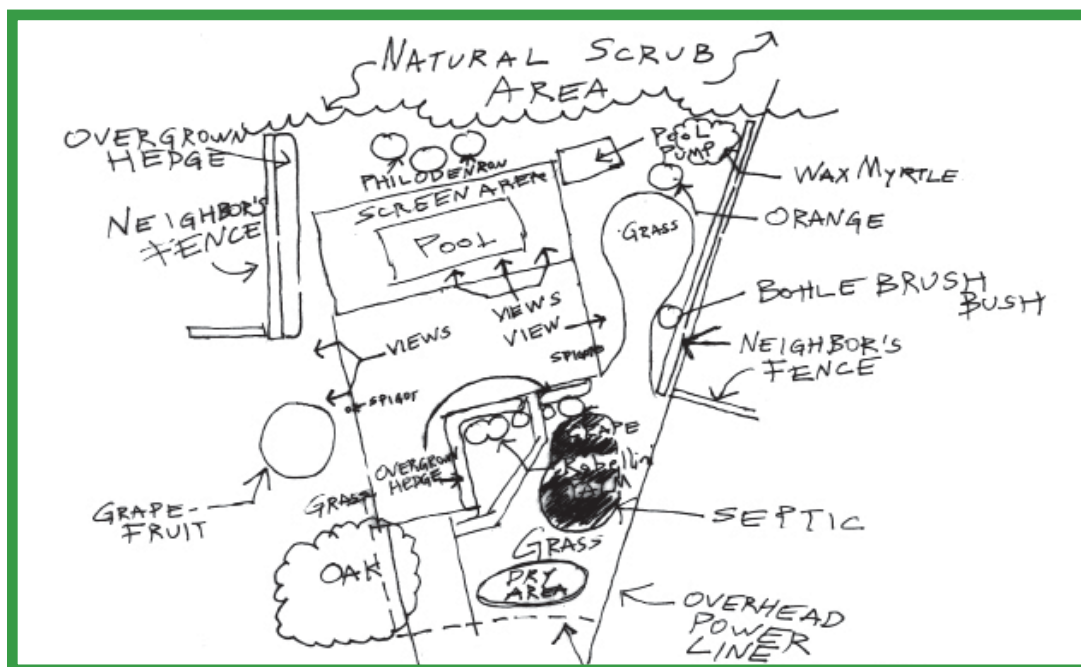
Survey of a typical lot



b. Site Inventory

- i. Site inventory is a list of existing elements on the site. These include such obvious things as property lines and existing trees. Others items to consider are topography, all vegetation, poor drainage areas, overhead power lines, telephone poles, street lights, sewer lines, septic tanks, the views from the windows of the house, the curb appeal, outside water spigots, air conditioning units, walks, poor drainage areas, dry spots.
- ii. Such important factors need to be determined such as soil type. Is the soil sandy as it is in most of Florida? Or is there large amounts of clay in it? And what of the ph of the soil? Is it acidic or alkaline? The determination of soil is important when picking plants, as certain soil types are a necessity in some plant choices. Soil test kits can be obtained from local hard ware store and be purchased for about ten dollars
- iii. Also of great importance is to identify environmental factors such as wind direction, sun direction and sun path.
- iv. Site Inventory also takes into accounts the adjacent off site conditions, such as roads, other properties, and what conditions exist there, such as overflow drainage.
- vi. Locate underground utility lines by calling the national "Call Before You Dig" number, 811. This is important so you do not cut utility lines, loose service or get injured.

In order to better organize one's thoughts in this step of the inventory that will be transformed into an analysis, it's a good idea to make a copy of the base plan and take the inventory notes on it.



Site Analysis of lot

4. Determination of Needs

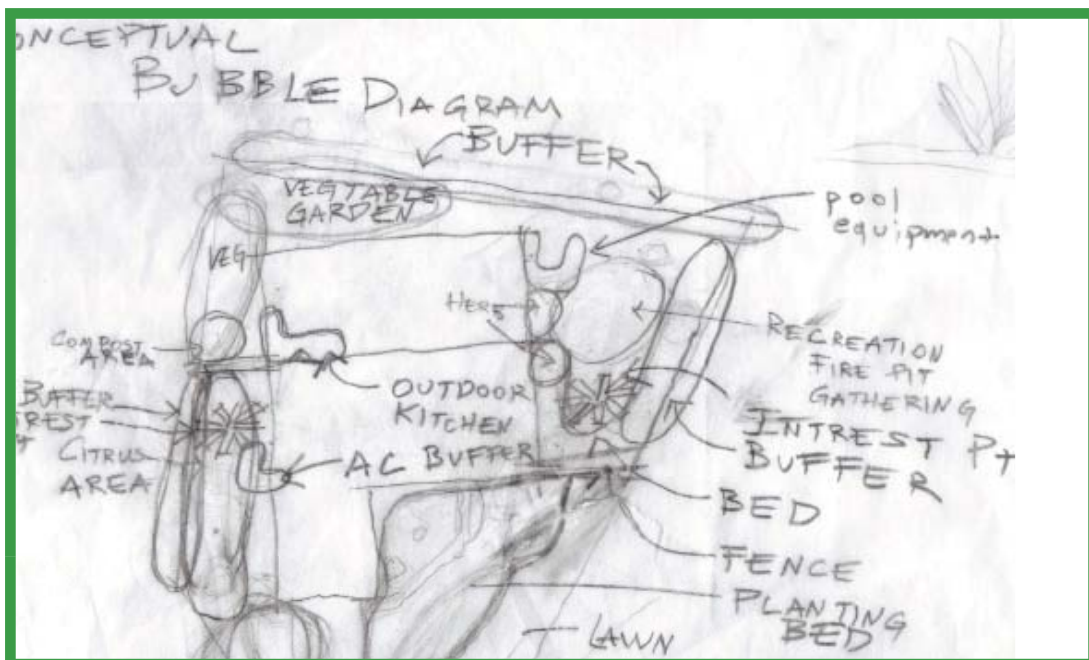
What are your goals for the yard? Do you plan on having a recreational area for the children? What of a relaxing/meditation area with a hammock or seating area under shade? What about an entertaining area to host friends and have barbeque and drinks? What about a garden for vegetables and herbs?

Make a list of the goals of your yards in order of priority. One of the most important factors to consider is of course the budget. A budget needs to be determined in order to know the availability of funds for the items wanted. If you can't afford to do it all at once, you can later phase in the other elements or areas of your yard.

As a designer, I would hope that everyone's desire is too have a beautiful yards. It would also be hoped that everyone would use their yards in recreation and activity, but we live in a culture where television dominates and outside time is dwindling. Some folks simply want to have a carefree lawn, where they do not have to spend time outside or if they must, minimal time. A properly designed space would afford and allow homeowners an opportunity to want to spend time in the designed exterior environment.

5. Bubble Diagram

Once a Site Analysis is completed and the needs and wants of the yard are determined, a homeowner can take the base map and create a bubble diagram indicating areas of the yard where they want the specific desires. You will decide if your meditation garden will go next to the fence or not, where to place the entertaining area, the vegetable garden. These decisions will be based on the site analysis.



Bubble Diagram Derived from Site Analysis

6. Create a landscape plan

Put to paper, overlain over the survey or a copy of the survey, your landscape plan, taking into account the information you discovered from the site analysis and your desires you sketch on your bubble diagram. Draw where you want plants: Groundcovers, shrubs, and trees.

Tips on Designing

Plants should be placed in odd numbers when grouping them.

Repeat plants species and color throughout the yard for continuity.
Don't plant plants too close to the house, allow proper circulation .
Place larger plants to the back and or center of beds to lead the eye.
Remember to keep in mind that the at the time of planting, the plants will grow and will need the room to do so. So don't plant too close together.

Incorporate the elements of design: line, rhythm, shape, texture, color, form, mass, color.

Use the Principles of Design: Unity, Focal points, emphasis, balance, scale, contrast movement, rhythm, pattern, variety.

Use different textures in beds to create interest and diversity.

Use different colors to create interest.

SUSTAINABLE STRATEGIES IN DESIGNING

- Rain collection elements such as cistern and rain barrels
- Protect and preserve existing trees
- Recycle plants that are existing
- Integrate visually and physically accessible rainwater/stormwater features to the site in an aesthetically pleasing way.
- Eliminate all invasive species. Invasive species are a bully plant, crowding out other productive plants. They inhibit the plants that are beneficial to wildlife and the functions of the ecosystem. They compete for the available moisture and nutrients.
- Plant deciduous shade trees on the south, east and west sides of your house to cast shade in summer which can reduce cooling cost by 50% and this strategy lets warming light enter windows in winter, reducing heating cost.
- To further lower air conditioning costs, shade the outside condensing unit but be careful to allow sufficient room for air circulation.
- Shade in the yard also reduces plants' water needs by reducing evaporation
- Use porous pavement or other hardscape material that allows water to drain efficiently
- Use hardscape material that is recycled, reclaimed or reprocessed.

Resources

Below are links to helpful and useful resources.

Nurseries Specializing in Native and Adapted Plants

Biosphere Nursery <http://biospherenursery.com/>
14908 Tilden Road
Winter Garden, FL 34787
TEL: 407-656-8277

Green Images
1333 Taylor Creek Rd
Christmas, Florida
TEL: 407-568-1333

Websites Specializing in the Florida Yard

Florida Association of Native Nurseries
<http://www.afnn.org/>

florida friendly landscape
<http://fyn.ifas.ufl.edu/>

The Florida Yard
<http://www.floridayards.org/>

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