

Date: May 5, 2009

To: Honorable Chairman Dennis C. Moss  
and Members, Board of County Commissioners

Agenda Item No. 7(F)

From: George M. Burgess  
County Manager

Ordinance No. 09-35

Subject: Ordinance Revising Chapter 18A of the Code of Miami-Dade County, the  
Landscape Ordinance.

**This Substitute Item #2 differs from the original item as follows:**

- **Replaces references to "Xeriscape" landscapes with "Florida Friendly" landscapes as promoted by the State.**
- **Updates the definition of "native" plants.**
- **Keeps the native plants requirement to 30% as provided in the current code. Original item increased the native requirement to 50%.**
- **Requires that 50% of the plant material be low maintenance and drought tolerant.**
- **Revises the definition of mulch and the pertinent criteria in order to reflect Florida Friendly landscapes.**
- **Substitute No. 2 differs from Substitute No. 1 in that it complies with the new rule change regarding substitutes and alternates as provided in Ordinance #09-13 adopted on March 3, 2009.**

**Recommendation**

It is recommended that the Board of County Commissioners (BCC) adopt the attached ordinance revising the Miami-Dade County Landscape Ordinance to supplement outdoor water conservation measures in accordance with the Miami-Dade Water Use Efficiency Plan adopted pursuant to Resolution No. R-468-06.

**Scope**

This ordinance is of countywide impact.

**Fiscal Impact/Funding Source**

The proposed ordinance creates no fiscal impact on Miami-Dade County.

**Track Record/Monitor**

Not applicable.

**Background**

On April 25, 2006 the Board adopted Resolution R-468-06 which approves the Miami-Dade Water Use Efficiency Plan (Plan) as a part of a larger effort to improve the management of traditional water supplies while improving the efficiency of the County's current water use. The Plan outlines the County's water efficiency measures and best management practices.

The South Florida Water Management District (District) approved the Plan as a condition of the County's 20-Year Water Use Permit issued on November 15, 2007. During the first year of the Plan, WASD kicked-off its conservation efforts by implementing a series of efficiency projects. It is calculated that the total water use savings from these projects will yield a savings of 20 million gallons a day through 2026, including indoor and outdoor water use.

In addition to the implementation of the Plan, an Advisory Committee was established in 2007 at the request of the Government Operations and Environment Committee Chair with the goal of developing countywide guidelines that address water conservation issues and alternative water supplies to assist the County in meeting the conditions of the 20-Year Water Use Permit.

The Advisory Committee is comprised of several county departments including DERM, GSA, Building, Park and Recreation, Planning and Zoning, Building Compliance, Fire, Public Works, and Water and Sewer. In addition to County staff, the Advisory Committee includes representation from stakeholder groups such as the American Society of Landscape Architects, South Florida Builders Association, Sierra Club, Latin Builders Association, Tropical Audubon Society, Association of Cuban Engineers, South Florida Regional Planning Council, Farm Bureau, South Florida Water Management District and the Greater Miami Chamber of Commerce.

On June 5, 2007, the Advisory Committee summarized its findings and presented them to the BCC. These findings included specific recommendations for indoor and outdoor water conservation measures such as the use of high efficiency plumbing fixtures and the use of Florida Friendly landscape principles and irrigation soil moisture sensors. With regards to landscape irrigation, the Advisory Committee's findings were consistent with the "Landscape Irrigation & Florida-Friendly Design Standards" issued by the Florida Department of Environmental Protection in December 2006.

On February 5, 2008 the BCC adopted Ordinance No. 08-14 establishing indoor water conservation measures. The adopted measures call for the installation of efficient water fixtures, appliances and other water saving measures and equipment in new developments. In order to meet the water conservation goals provided in the Plan, the County must also address outdoor water conservation measures.

The proposed revisions to the attached Landscape Ordinance assist the County in meeting the outdoor water conservation goals specified in the Plan for the duration of the County's 20-Year Water Use Permit. In the development of the proposed revisions to the ordinance, the staff of the Department of Planning and Zoning has been working closely with the membership of the Advisory Committee to address outdoor water conservation issues and alternative water supplies for the development community as well as with the members of the Community Image Advisory Board and its Tree and Landscape Projects Sub-Committees. Consultation with other municipalities was also facilitated through these committees.

The proposed ordinance seeks to address outdoor water conservation measures by amending the countywide Landscape Ordinance (Chapter 18A) in order to revise the required plant material, and update the outdoor irrigation language and criteria.

Section 1 of this ordinance revises the Purpose and Intent section of Chapter 18A in order to add by reference the Florida Friendly landscaping principles.

Section 2 of this ordinance revises the Definitions in order to provide additional definitions including definitions for Florida Friendly and the State's Florida Yards & Neighborhood Program. A definition of the County's newly adopted Street Tree Master Plan is also added to this section.

Section 3 of this ordinance revises the Plans Required section in order to include the location of rain switches and soil moisture sensors on the required plans.

Section 4 of this ordinance amends the Minimum Standards section in order to revise the irrigation, trees, shrubs, mulching and plant quality criteria. More specifically this section:

- Updates and rearranges the irrigation sub-section in order to address the design, operation and maintenance of effective irrigation systems. Efforts are made to minimize free water flow conditions and to maximize the uniformity of the system by considering the emitters type, the head spacing, the sprinkler patterns and the water pressure. The section also requires the use of rain switches such as soil moisture sensors.
- Requires that thirty (30) percent of the required plant material shall be native species. No more than 30% of the required shall be palms.
- Requires that fifty (50) percent instead of the required plant material shall be low maintenance and drought tolerant.
- Requires that eighty (80) percent of the plant material required listed in the Landscape Manual, the Street Tree Master Plan or the University of Florida's Low Maintenance Landscape Plants for South Florida list.
- Requires mulches to be applied and maintained in accordance with Florida Friendly Landscaping.

Section 5 of this ordinance revises the Landscape Plan Review Criteria section in order to provide reference to Florida Friendly landscaping.

This ordinance will be complemented by an ordinance establishing minimum landscaping and irrigation criteria for public rights-of-way.



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Alex Muñoz  
Assistant County Manager




# MEMORANDUM

(Revised)

**TO:** Honorable Chairman Dennis C. Moss  
and Members, Board of County Commissioners

**DATE:** May 5, 2009

**FROM:**   
R. A. Cuevas, Jr.  
County Attorney

**SUBJECT:** Agenda Item No. 7(F)

Please note any items checked.

- "4-Day Rule" ("3-Day Rule" for committees) applicable if raised
- 6 weeks required between first reading and public hearing
- 4 weeks notification to municipal officials required prior to public hearing
- Decreases revenues or increases expenditures without balancing budget
- Budget required
- Statement of fiscal impact required
- Bid waiver requiring County Mayor's written recommendation
- Ordinance creating a new board requires detailed County Manager's report for public hearing
- Housekeeping item (no policy decision required)
- No committee review

Approved \_\_\_\_\_ Mayor  
Veto \_\_\_\_\_  
Override \_\_\_\_\_

Agenda Item No. 7(F)  
5-5-09

ORDINANCE NO. 09-35

ORDINANCE REVISING CHAPTER 18A OF THE CODE OF MIAMI-DADE COUNTY, FLORIDA ("CODE"), MIAMI-DADE COUNTY LANDSCAPE ORDINANCE, AMENDING SECTIONS 18A-2 THROUGH 18A-4 AND SECTIONS 18A-6 THROUGH 18A-7, PROVIDING SEVERABILITY, INCLUSION IN THE CODE AND AN EFFECTIVE DATE

**BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA:**

**Section 1.** Section 18A-2 of the Code of Miami-Dade County, Florida is hereby amended as follows<sup>1</sup>:

**Sec. 18A-2. Purpose and intent.**

It is the intent of this chapter to establish minimum landscape standards for Incorporated and Unincorporated Miami-Dade County that enhance, improve and maintain the quality of the landscape, and to:

- (A) Promote ~~[[xeriscape and]]~~ >>Florida Friendly landscaping<< principles through the use of drought-tolerant ~~[[landscape]]~~ >>plant<< species, grouping of plant material by water requirements, the use of irrigation systems that conserve the use of potable and nonpotable water supplies and restrictions on the amount of lawn areas. >>Florida Friendly landscape principles also promote planting the

<sup>1</sup> Words stricken through and/or ~~[[double bracketed]]~~ shall be deleted. Words underscored and/or >>double arrowed<< constitute the amendment proposed. Remaining provisions are now in effect and remain unchanged.

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right plant in the right place and appropriate fertilization and mulching.<<

\* \* \*

**Section 2.** Section 18A-3 of the Code of Miami-Dade County, Florida is hereby amended as follows:

**Sec. 18A-3. Definitions.**

The definitions contained in Chapters 24 and 33, Code of Miami-Dade County, Florida, shall apply to this chapter except as otherwise changed herein:

\* \* \*

~~[(A)]~~ *Accessways:* The maximum width of an accessway through the perimeter landscaped strip to an off-street parking or other vehicular use area shall be determined according to the Public Works Manual, Part I, Standard Details. No more than one (1) two-way accessway shall be permitted or any street frontage up to one hundred (100) lineal feet or no more than two (2) one-way accessways shall be permitted for any street frontage up to one hundred (100) lineal feet, such standards to be applicable to any property under one (1) ownership. Where such ownership involves over one hundred (100) feet of street frontage, one (1) additional two-way or two (2) additional one-way drives may be permitted for each additional one hundred (100) feet of frontage or major fraction thereof. The balance of such street frontage not involved with access ways shall be landscaped in accordance with the provisions of this chapter.

>>ANSI A300 Standards: Industry-developed standards of practice for tree care. Acronym for American National Standards Institute.<<

~~[(B)]~~ *Automatic irrigation system:* An irrigation system with a programmable controller or timing mechanism.

~~[(C)]~~ *Bonafide agricultural activities:* Land used for the growing of food crops, nurseries for the growing of landscape material, the raising of livestock, horse farms, and other good faith agricultural uses, except any portion of the property not eligible for agricultural exemption.

~~[(D)]~~ *Buffer, perimeter landscape:* An area of land which is set aside along the perimeter of a parcel of land in which landscaping is required to provide an aesthetic transition between different land

uses and to eliminate or reduce the adverse environmental impact, and incompatible land use impacts.

- [[~~(E)~~]] *Caliper*: For trees under four (4) inches in diameter, the trunk diameter measured at a height of six (6) inches above natural grade. For trees four (4) inches and greater in diameter, the trunk diameter measured at twelve (12) inches above natural grade.
- [[~~(F)~~]] *Clearance pruning*: Pruning required to avoid damage or danger related to structures, power distribution and property, as defined in the current ANSI A300 Standards.
- [[~~(G)~~]] *Colonnade*: A roof or building structure, extending over the sidewalk, open to the street and sidewalk, except for supporting columns or piers.
- [[~~(H)~~]] *Common open space*: Area required as open space under Chapter 33 or municipal codes for various zoning districts.
- [[~~(I)~~]] *Controlled plant species*: Those plant species listed in the Landscape Manual which tend to become nuisances because of their ability to invade proximal native plant communities or native habitats, but which, if located and cultivated properly may be useful or functional as elements of landscape design.
- [[~~(J)~~]] *Diameter at breast height (DBH)*: Diameter of a tree's trunk measured at a height four and one-half (4.5) feet above natural grade. In the case of multiple-trunk trees, the DBH shall mean the sum of each trunk's diameter measured at a height of four and one-half (4.5) feet above natural grade.
- [[~~(K)~~]] *Differential operation schedule*: A method of scheduling an irrigation system to apply different quantities of water, and/or apply water at different frequencies as appropriate, for different hydrozones.
- [[~~(L)~~]] *Dissimilar land uses*: Proximate or directly associated land uses which are contradictory, incongruous, or discordant such as higher intensity residential, commercial or industrial uses located adjacent to lower intensity uses.
- [[~~(M)~~]] *Drip line*: An imaginary vertical line extending from the outermost horizontal circumference of a tree's branches to the ground.
- [[~~(N)~~]] *Duplex dwelling*: A residence building designed for, or used as the separate homes or residences of two (2) separate and distinct families, but having the appearance of a single family dwelling house. Each individual unit in the duplex shall comply with the definition for a one-family dwelling.
- >>Emitters: devices which are used to control the discharge of irrigation water from lateral pipes.<<
- [[~~(O)~~]] *Existing development*: ~~[[Existing development shall]]~~ >>Shall<< mean a site with structures that were legally approved through the issuance of a certificate of use and occupancy or a certificate of completion as of the effective date of this chapter.
- [[~~(P)~~]] *Energy conservation zone*: A zone located no more than twenty-two (22) feet from a structure in a one hundred eighty (180) degree band from due east of the northeast point of the structure, to due south, to due west of the northwest point of the structure.
- >>Environmentally Endangered Lands: lands that contain natural forest, wetland or native plant communities, rare and endangered

plants and animals, endemic species, endangered species habitat, a diversity of species, outstanding geologic or other natural features, or land which functions as an integral and sustaining component of an existing ecosystem.<<

- [[Q]] *Facultative*: Plants with a similar likelihood of occurring in both wetlands and uplands, which are not recognized indicators of either wetland or upland conditions.
- >>Florida Friendly Landscaping: practices, materials or actions developed by the Florida Yards & Neighborhood Program that help to preserve Florida's natural resources and protect the environment.
- Florida Yards & Neighborhood Program: Is a partnership of the University of Florida/Institute of Food and Agricultural Sciences, Florida's water management districts, the Florida Department of Environmental Protection, the National Estuary Program, the Florida Sea Grant College Program and other agencies, managed locally by the Miami-Dade Cooperative Extension Division of the Consumer Services Department.<<
- [[R]] *Forbs*: Herbaceous plants other than grasses.
- [[S]] *Geologic feature*: A natural rock or mineral formation.
- [[T]] ~~Gray water~~] >>Graywater<<: That portion of domestic sewage emanating from residential showers, >>residential baths,<< residential bathroom washbasins, or residential clothes washing machines.
- [[U]] *Ground cover*: A dense, extensive growth of low-growing plants, other than turfgrass, normally reaching an average maximum height of not more than twenty-four (24) inches at maturity.
- [[V]] *Hatrack*: To flat-cut the top of a tree, severing the leader or leaders, or the removal of any branch three (3) inches or greater in diameter at any point other than the branch collar.
- [[W]] *Hazard pruning*: The removal of dead, diseased, decayed, or obviously weak branches two (2) inches in diameter or greater.
- [[X]] *Heat island*: An unnaturally high temperature ~~[[microclimate]]~~ >>microclimate<< resulting from radiation from unshaded impervious surfaces.
- [[Y]] *Hedge*: A landscape barrier consisting of a continuous, dense planting of shrubs, not necessarily of the same species.
- [[Z]] *Herbaceous plant*: A plant having little or no woody tissue.
- [[AA]] *Hydromulch*: A sprayed application of seed, mulch and water.
- [[BB]] *Hydrozone*: A zone in which plant material with similar water needs are grouped together.
- [[CC]] *Included bark*: Bark that is >>embedded in a crotch between a branch and trunk or between co-dominant stems<< ~~[[pushed-inside a developing crotch]]~~, causing a weakened structure.
- [[DD]] *Irrigation detail*: A graphic representation depicting the materials to be used and dimensions to be met in the installation of the irrigation system.
- [[EE]] *Irrigation plan*: A plan drawn at the same scale as the landscape plan, indicating location and specification of irrigation system components and other relevant information as required by this chapter.



- [[~~(FF)~~]] *Irrigation system*: A system of pipes or other conduits designed to transport and distribute water to keep plants in a healthy and vigorous condition.
- [[~~(GG)~~]] *Landscape feature*: Trellis, arbor, fountain, pond, garden sculpture, garden lighting, decking, patio, decorative paving, gazebo>>\_<< and other similar elements.
- [[~~(HH)~~]] *Landscape material*: Plants such as grass, ground cover, forbs, shrubs, vines, hedges, trees and non-living material such as rocks, pebbles, sand, mulch, or pervious decorative paving materials.
- [[~~(H)~~]] *Landscape plan*: A plan indicating all landscape areas, stormwater retention/detention areas, areas which qualify to be excluded from maximum permitted lawn area, existing vegetation to be retained, proposed plant material, landscape legend, landscape features, planting specifications, and details, and all other relevant information in compliance with this chapter.
- [[~~(JJ)~~]] *Lawn area*: An area planted with lawn grasses.
- [[~~(KK)~~]] *Manual irrigation system*: An irrigation system in which control valves and switches are manually operated rather than operated by automatic controls.
- [[~~(LL)~~]] *Mixed use*: A mixture of land uses such as provided in Traditional Neighborhood Development (TND), Planned Area Development (PAD), and Planned Development (PD).
- [[~~(MM)~~]] *Moisture and rain sensor switches*: Devices which have the ability to switch off an automatic irrigation controller after receiving a predetermined amount of rainfall or moisture content in the soil.
- [[~~(NN)~~]] *Mulch*: ~~[[Non-living organic materials]]~~ >>Materials<< customarily used in landscape design to retard erosion, weed infestation, and retain moisture and for use in planting areas.
- [[~~(OO)~~]] *Multifamily residential development*: Any residential development other than attached or detached single family or duplex.
- [[~~(PP)~~]] *Multiple single family developments*: Attached and detached single family developments that are planned as a total project and not as a single family unit on a single lot.
- [[~~(QQ)~~]] *Native habitat*: An area enhanced or landscaped with an appropriate mix of native tree, shrub and groundcover species that resembles a native plant community or natural forest community in structure and composition or is naturally occurring.
- [[~~(RR)~~]] *Native plant species*: Plant species with a geographic distribution indigenous to all or part of Miami-Dade County. Plants which are described as being native to Miami-Dade County in botanical manuals such as, but not limited to, "A Flora of Tropical Florida" by Long and Lakela ~~[[and "The Biology of Trees Native to Tropical Florida" by P. B. Tomlinson]]~~, are native plant species within the meaning of this definition. Plant species which have been introduced into Miami-Dade County by man are not native plant species.
- [[~~(SS)~~]] *Native plant community*: A natural association of plants dominated by one (1) or more prominent native plant species, or a characteristic physical attribute.
- [[~~(TT)~~]] *Natural ~~[[forest community]]~~* >>Forest Community<<: All assemblages of vegetation designated as Natural Forest

Communities on the Miami-Dade County Natural Forest Community Maps and approved by the Board of County Commissioners, pursuant to Resolution No. R-1764-84 and further defined in Section 24-~~[[3]]~~<sup>5</sup> of the Miami-Dade County Code.

- ~~[[UU]]~~ *Net lot area*: For the purpose of this chapter, net lot area shall be the area within lot boundaries of all lands comprising the site. Net lot area shall not include any portion of the abutting dedicated streets, alleys, waterways, canals, lakes or any other such dedications.
- ~~[[AA]]~~ *One family dwelling*: A private residence building used or intended to be used as a home or residence in which all living rooms are accessible to each other from within the building and in which the use and management of all sleeping quarters, all appliances for sanitation, cooking, ventilating, heating or lighting are designated for the use of one (1) family only.
- ~~[[WW]]~~ *Overhead irrigation system*: A high pressure, high volume irrigation system.
- ~~[[XX]]~~ *Planting detail*: A graphic representation of the plant installation depicting the materials to be used and dimensions to be met in the placement of plants and other landscape materials.
- ~~[[YY]]~~ *Prohibited plant species*: Those plant species listed in the Miami-Dade Landscape Manual which are demonstrably detrimental to native plants, native wildlife, ecosystems, or human health, safety, and welfare.
- ~~[[ZZ]]~~ *Shrub*: A self-supporting woody perennial plant normally growing to a height of twenty-four (24) inches or greater, characterized by multiple stems and branches continuous from the base.
- ~~[[AAA]]~~ *Site plan*: A comprehensive plan drawn to scale indicating appropriate site elevations, roadways, and location of all relevant site improvements including structures, parking, other paved areas, ingress and egress drives, landscaped open space and signage.
- ~~[[BBB]]~~ *Specimen tree*: A tree with any individual trunk which has a DBH of eighteen (18) inches or greater, but not including the following:
  - (1) All trees listed in Section 24-~~[[60]]~~<sup>49</sup>(4)(f);
  - (2) Non-native fruit trees that are cultivated or grown for the specific purpose of producing edible fruit, including, but not limited to, mangos, avocados, or species of citrus;
  - (3) Non-native species of the genus *Ficus*, and
  - (4) All multitrunk trees in the palm family, except ~~[[Acoelorrhaphe]]~~<sup>Acoelorrhaphe</sup> *wrightii* and *Phoenix reclinata* which have a minimum overall height of fifteen (15) feet.
- ~~[[GGG]]~~ *Spray head*: An irrigation device which applies water to the soil or plant surface by fixed spray or mist nozzles.  
~~>>~~*Sprinkler Head*: a sprinkler head that provides above ground or overhead irrigation.~~<<~~
- ~~[[DDD]]~~ *Stabilized lawn area*: An area of ground underlain with structural support in the form of grass pavers or stabilized soil prepared to withstand the load of intended vehicular use, such as automobiles, fire trucks and garbage trucks.

~~[[EEE]]~~ *Stormwater retention/detention area*: An area designed, built and used for temporary storage of stormwater. For purposes of this chapter, these areas are intended to be permanently exempt from wetland regulations.

>>Street Tree Master Plan: A greenprint for Miami-Dade County as adopted by the Board of County Commissioners on March 6, 2007 as may be amended from time to time.<<

~~[[FFF]]~~ *Tree abuse*. Tree abuse shall include:

(1) Damage inflicted upon any part of a tree, including the root system, by machinery, construction equipment, cambium layer penetration, storage of materials, soil compaction, excavation, chemical application or spillage, or change to the natural grade.

(2) Hatracking.

(3) Girdling or bark removal of more than one-third (1/3) of the tree diameter.

(4) Tears and splitting of limb ends or peeling and stripping of bark resulting from improper pruning techniques not in accordance with the current ANSI A300 Standards.

~~[[GGG]]~~ *Tree canopy ~~[[cover]]~~*: The aerial extent of the branches and foliage of a tree >>as defined by the drip line<<.

~~[[HHH]]~~ *Temporary irrigation systems*: A system including surface distribution elements (hose, pipe, etc.) which may be easily removed when landscape is established.

~~[[HHH]]~~ *Understory*: The complex of woody, fibrous, ~~[[and]]~~ herbaceous >>and graminoid<< plant species that are typically associated with a natural forest community, native plant community, or native habitat.

~~[[JJJ]]~~ *Vegetation required to be preserved by law*: Portions of a site, including but not limited to specimen trees, natural forest communities and native vegetation which are clearly delineated on site plans, plats, or recorded restrictions, or in some other legally binding manner that are to be protected from any tree or understory removal or effective destruction and maintained without any development.

~~[[KKK]]~~ *Vegetation survey*: A drawing provided at the same scale as the landscape plan which includes relevant information as required by this chapter.

~~[[LLL]]~~ *Vehicular use area*: A hard surface area designed or used for off-street parking and/or an area used for loading, circulation, access, storage, including fire trucks, garbage trucks, or display of motor vehicles.

~~[[MMM]]~~ *Vine*: A plant with a flexible stem which normally requires support to reach mature form.

**Section 3.** Section 18A-4 of the Code of Miami-Dade County, Florida is hereby

amended as follows:

**Sec. 18A-4. Plans required.**

\* \* \*

- (D) *Irrigation plans.* An irrigation plan shall be submitted if a sprinkler system is required by Chapter 33, or as required in the individual municipalities or where an irrigation system is to be provided regardless of code requirements. Where a landscape plan is required, an irrigation plan shall be submitted concurrently.
- (1) For a new one-family or duplex dwelling the irrigation plan may be indicated on a plot plan or a separate drawing prepared by the owner or the owner's agent indicating area(s) to be irrigated, location and specifications of lines and heads and pump specifications.
  - (2) All other development other than those provided in a subsection (1) above shall:
    - (a) Be drawn on a base plan at the same scale as landscape plan(s).
    - (b) Delineate landscape areas, major landscape features, and hydrozones.
    - (c) Delineate existing and proposed structures, parking areas or other vehicular use areas, access aisles, sidewalks, driveways, the location of utilities and easements, and similar features,
    - (d) Include water source, design operating pressure and flow rate per zone, total volume required for typical depths of application, and application rate.
    - (e) Include locations of pipes, controllers, valves, sprinklers, back flow prevention devices>>, rain switches or soil moisture sensors,<< and electrical supply.
    - (f) Irrigation details.

**Section 4.** Section 18A-6 of the Code of Miami-Dade County, Florida is hereby amended as follows:

**Sec. 18A-6. Minimum standards.**

The following standards shall be considered minimum requirements unless otherwise indicated:

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(B) *Irrigation.*

(1) All newly-planted and relocated plant material shall be watered by temporary or permanent irrigation systems until such time as they are established >>and subsequently on as needed basis to prevent stress and die off in compliance with existing water use restrictions<<.

(2) Irrigation shall be prohibited within native plant communities and natural forest communities, except for temporary systems needed to establish newly planted material. Temporary irrigation systems shall be disconnected immediately after establishment of plant communities.

~~[[3) Irrigation systems shall be designed to]] conserve water by allowing differential operation schedules based on hydrozone.~~

~~(4) Irrigation systems shall be designed, operated, and maintained to not overthrow or overflow on to impervious surfaces.~~

~~(5) Low trajectory spray heads, and/or low volume water distributing or application devices, shall be used. Overhead irrigation systems shall only be permitted in bonafide agricultural activity areas.~~

~~(6) Gray water shall be used where approved systems are available.~~

~~(7) During dry periods, irrigation application rates of between one (1) and one and one-half (1 1/2) inches per week are recommended for turf areas.~~

~~(8) A moisture or rain sensor device shall be required on all irrigation systems equipped with automatic controls.~~

~~(9) Irrigation systems shall be timed to operate only during hours and on days permitted under Chapter 32 of the Code.~~

~~(10) If an irrigation system is not provided, a hose bib shall be provided within seventy-five (75) feet of any landscape area.]]~~

>>(3) Irrigation systems shall be designed, operated and maintained to:

(a) Meet the needs of all the plants in the landscape.

(b) Conserve water by allowing differential operation schedules based on hydrozone.

(c) Consider soil, slope and other site characteristics in order to minimize water waste, including overspray or overflow on to impervious surfaces and other non-vegetated areas, and off-site runoff.

(d) Minimize free flow conditions in case of damage or other mechanical failure.

(e) Use low trajectory spray heads, and/or low volume water distributing or application devices.

(f) Maximize uniformity, considering factors such as:

- (1) Emitters types,
- (2) Head Spacing,
- (3) Sprinkler pattern, and
- (4) Water pressure at the emitter.

(g) Use the lowest quality water feasible (graywater shall be used where approved systems are available).

(h) Rain switches or other devices, such as soil moisture sensors, shall be used with automatic controls.

Operate only during hours and on days permitted under Chapter 32 of the Code of Miami-Dade County.

(i) Where feasible, drip irrigation or micro-sprinklers shall be used.

(4) During dry periods, irrigation application rates of between one (1) and one and one-half (1 1/2) inches per week are recommended for turf areas.

(5) If an irrigation system is not provided, a hose bib shall be provided within seventy-five (75) feet of any landscape area.<<

(C) *Trees.*

(1) *Tree size.* All trees, except street trees ~~[[and trees located beneath power lines]],~~ shall be a minimum of ten (10) feet high and have a minimum caliper of two (2) inches at time of planting except that thirty (30) percent of the tree requirement may be met by native species with a minimum height of eight (8) feet and a minimum caliper of one and one-half (1 1/2) inches at time of planting.

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(11) ~~[[Thirty (30)]] ~~[[>>Fifty (50)<<]]~~ ~~[[percent of the required trees and/or palms shall be native species.]]~~ >>Of the required trees at least:~~

- (a) Thirty (30) percent shall be native species; and
- (b) Fifty (50) percent shall be low maintenance and drought tolerant; and
- (c) No more than thirty (30) percent shall be palms.<<

>>(12) Eighty (80) percent of the trees shall be listed in the Miami-Dade Landscape Manual, the Miami-Dade Street Tree Master Plan and/or the University of Florida's Low-Maintenance Landscape Plants for South Florida list.<<

~~[(12)]~~ >>(13)<< In order to prevent adverse environmental impacts to existing native plant communities, ~~[[only existing Sabal Palmettes (Cabbage Palms)]]~~ >>cabbage palms (Sabal palmetto) that are harvested from the wild shall not be used to satisfy minimum landscaping requirements.<< ~~[[shall be used to satisfy minimum tree and native plant requirements, except that]]~~ >>Only existing cabbage palms.<< [[Cabbage Palms]] which are rescued from government approved donor sites, transplanted within the site, or commercially grown from seed shall be counted towards the minimum tree and native plant requirements.

~~[(13)]~~ >>(14)<< When trees are planted within the right-of-way, the owners of land adjacent to the areas where street trees are planted must maintain those areas including the trees, plants and sod, using pruning methods specified in this Code. A covenant executed by those owners is required, or a special taxing district must be created to maintain these areas. Where the State, County or municipality determines that the planting of trees and other landscape material is not appropriate in the public right-of-way, they may require that said trees and landscape material be placed on private property.

~~[(14)]~~ >>(15)<< Consideration shall be given to the selection of trees, plants and planting site to avoid serious problems such as clogged sewers, cracked sidewalks, and power service interruptions.

~~[(15)]~~ >>(16)<< Municipalities shall meet all the above requirements in the corresponding zoning districts or land use categories of the particular municipality.

(D) *Shrubs.*

(1) All shrubs shall be a minimum of eighteen (18) inches in height when measured immediately after planting. Shrubs shall be provided at ratio of ten (10) per required tree. ~~[[Thirty (30)]]~~ ~~[[>>Fifty (50)<<]]~~ ~~[[percent of the shrubs shall be native species.]]~~ >>Of the provided shrubs at least:

(a) Thirty (30) percent shall be native species; and

(b) Fifty (50) percent shall be low maintenance and drought tolerant; and

(c) Eighty (80) percent shall be listed in the Miami-Dade Landscape Manual, the Miami-Dade Street Tree Master Plan and/or the University of Florida's Low-Maintenance Landscape Plants for South Florida list.<<

(2) When used as a visual screen, buffer, or hedge, shrubs shall be planted at a maximum average spacing of thirty (30) inches on center or if planted at a minimum height of thirty-six (36) inches, shall

have a maximum average spacing of forty-eight (48) inches on center and shall be maintained so as to form a continuous, unbroken and solid visual screen within one (1) year after time of planting. Shrubs used as a buffer, visual screen, or hedge need not be of the same species.

\* \* \*

(G) *Mulch.*

- (1) ~~[[Weed-free mulch]]~~ ~~[[Environmentally friendly organic mulches]]~~ >>Mulches<< shall be applied and maintained in ~~[[a minimum three (3) inch layer under and around all trees and shrubs, and in a minimum two (2) inch layer under and around all ground cover]]~~ >>accordance with the most recent edition of the Florida Yards & Neighborhoods Handbook titled "A Guide to Florida Friendly Landscaping" by the University of Florida, Institute of Food and Agricultural Sciences (UF/IFAS) and available online at <http://www.floridayards.org/landscape/FYN-Handbook.pdf>.<<  
~~[[{(2) The use of mulch shall be restricted to planting areas. (3)}]]~~ >>(2)<< Cypress mulch shall not be used because its harvest degrades cypress wetlands.

\* \* \*

**Section 5.** Section 18A-7 of the Code of Miami-Dade County, Florida is hereby amended as follows:

**Sec. 18A-7. Landscape plan review criteria.**

In the unincorporated area all landscape plans shall be reviewed by the Department of Planning and Zoning, and where existing trees or ~~[[natural forest communities]]~~ >>Natural Forest Communities or Environmentally Endangered Lands<< are involved, the Department of Environmental Resources Management. In the case of a municipality, landscape plans shall be approved by the department(s) or board(s) as deemed appropriate within the municipality. Landscape plans shall be reviewed in accordance with the following goals and objectives and the guidelines and illustrations provided in the Landscape Manual >>as well as the Guide to Florida-Friendly Landscaping provided by the Florida Yards and Neighborhoods Program<<:

- (A) Landscape design shall enhance architectural features[[,;]]>>\_i<< relate structure design to the site[[,;]]>>\_i<< visually screen dissimilar uses and unsightly views[[,;]]>>\_i<< reduce noise>>\_glare and heat gain<< [[impacts]] from >>paved areas,<< major roadways and incompatible uses[[,;]]>>\_i<< strengthen important vistas and reinforce neighboring site design and architecture.



- (B) Existing specimen trees, native vegetation (including canopy, understory, and ground cover) and Natural Forest Communities shall be preserved to the maximum extent possible and all requirements of Section 24-49 of the Code of Miami-Dade County shall be met. Preserved Natural Forest Community areas shall be deducted from the total area used to calculate minimum landscaping requirements. Native vegetation in these Natural Forest Community areas shall not be used to satisfy minimum landscape requirements.
  
- (C) In order to conserve water, reduce maintenance, and promote plant health, plant species shall be selected and installed based on their water needs, growth rate and size, and resource inputs. Plants with similar water needs shall be grouped in hydrozones. Adequate growth area, including rooting space, based on natural mature shape and size shall be provided for all plant materials.

\* \* \*

**Section 6.** If any section, subsection, sentence, clause or provision of this ordinance is held invalid, the remainder of this ordinance shall not be affected by such invalidity.

**Section 7.** It is the intention of the Board of County Commissioners, and is hereby ordained that the provisions of this ordinance shall become and made a part of the Code of Miami-Dade County, Florida. The section of this ordinance may be renumbered or relettered to accomplish such intention, and the word "ordinance" may be changed to "section", "article" or other appropriate word.

**Section 8.** This ordinance shall become effective ten (10) days after the date of enactment unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

PASSED AND ADOPTED: May 5, 2009

Approved by County Attorney as to form and legal sufficiency:

*APW for RAC*

Prepared by:

*CAK*

Craig H. Coller

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