

10. OLD BUSINESS

b. Water Quality Issues

3. Letter from Department of Environmental Protection (DEP) and South Florida Water Management District (SFWMD)



Jeb Bush
Governor

Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

May 10, 2006

06 MAY 22 AM 11:33

COLLEEN M. CASTILLE
Secretary
ADMIN./LEADS.

The Honorable Carla Johnston
The City of Sanibel
800 Dunlop Rd
Sanibel, Florida 33957

Dear Mayor Johnston:

Governor Bush appreciated the opportunity to meet with you in March regarding freshwater releases from Lake Okeechobee and the health of the Caloosahatchee estuary. The Governor asked that the Department of Environmental Protection (DEP) and South Florida Water Management District (SFWMD) follow up on some of the items you mentioned, including model ordinances for fertilizer application, expediting the implementation of best management practices, cattail eradication and sediment dredging in Lake Okeechobee.

As the State continues implementing its Lake Okeechobee Estuary and Recovery plan, local governments can also play an important role in the recovery of the lake and the estuaries by adopting actions that will reduce nutrients entering the system. One way to accomplish this is through the use of low phosphorus or no-phosphorus fertilizers, the practice of which can be expedited by adopting local ordinances. We are enclosing examples of local ordinance language, which is also available at <http://www.dep.state.fl.us/water/nonpoint/pubs.htm#Model%20Ordinances>. The Department stands ready to assist in developing site specific language.

As you are aware, the Florida Department of Agriculture and Consumer Services (FDACS) is leading the effort to implement best management practices on agricultural lands. FDACS has an aggressive schedule to implement best management practices on all agricultural lands throughout the Lake Okeechobee watershed, including the Istokpoga and the Kissimmee Upper Chain of Lakes Basins, by 2015.

Additionally, FDACS is in the final phase of adopting a rule regarding implementation of the best management rule in the Lake Okeechobee watershed. This rule should be final June 15, 2006. Other FDACS efforts include the development of a row crop best management practices manual. Once adopted, all areas of the state mentioned in the manual and rule will be eligible for cost-share to implement the best management practices, including the Caloosahatchee watershed. For more information, please contact Rich Budell at budellr@doacs.state.fl.us.

"More Protection, Less Process"

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As the State continues implementing its Lake Okeechobee Estuary and Recovery plan, local governments can also play an important role in the recovery of the lake and the estuaries by adopting actions that will reduce nutrients entering the system. One way to accomplish this is through the use of low phosphorus or no-phosphorus fertilizers, the practice of which can be expedited by adopting local ordinances. We are enclosing examples of local ordinance language, which is also available at <http://www.dep.state.fl.us/water/nonpoint/pubs.htm#Model%20Ordinances>. The Department stands ready to assist in developing site specific language.

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May 10, 2006
Page Two

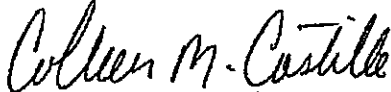
The Florida Fish and Wildlife Conservation Commission (FFWCC) and the SFWMD have been involved with cattail spraying in defined and limited areas of Lake Okeechobee to allow for navigation access. The goal is to open up pathways through the littoral zone and nearshore areas to allow fish migration as a part of their reproductive cycle and to encourage more desirable vegetation to re-establish. The amount of cattail spraying is small compared to the area of the marsh and water quality impacts are expected to be minimal. Of the approximately 2,200 acres of cattails on Lake Okeechobee, 480 acres have been treated in the areas north along the shore of Fisheating Bay, beginning one mile behind a dense cattail wall to the toe of the levee. This effort should be completed in May.

After the cattail and torpedograss treatments are completed, the SFWMD will burn the Northwest marsh to help transport nutrients out of the marsh and open the area to wading birds and fish when the marsh refloods. The SFWMD will likely burn the marsh in June or July.

Finally, the SFWMD and DEP are currently evaluating the feasibility of dredging sediments in Lake Okeechobee. We will be conducting a pilot project in the Eagle Bay area to help improve wildlife habitat. Along with the pilot dredging project, the SFWMD is developing a series of potential projects to examine dredging in the open water areas of the lake, new technologies and the potential of chemicals or other processes to stabilize lake sediments. It is important to note that if a full scale dredging project is under taken it will be many years before water quality improvements are seen in the lake.

Again, thank you for your concern on these important issues. We look forward to working with you on the restoration and recovery of Lake Okeechobee and the Caloosahatchee Estuary.

Sincerely,



Colleen M. Castille
Secretary

Sincerely,



Carol Ann Wehle
Executive Director
South Florida Water Management District

Enclosures

cc: Chuck Aller, FDACS
Ken Haddad, FFWCC

*P.S.
Mayor,
Please consider
the benefits of collaborative
partnerships w/o lawsuits.
CME*

**GUIDELINES FOR
MODEL ORDINANCE LANGUAGE
FOR PROTECTION OF WATER QUALITY AND QUANTITY
USING FLORIDA FRIENDLY LAWNS AND LANDSCAPES**

Rev. 9/5/03 7:02:32 PM

This document is educational in nature and not meant to be adopted without full and public discussion of its provisions. It has been developed by a partnership of industries, agencies, local and regional representatives, and other organizations to provide a sound model for the implementation of local control of water use and nonpoint source pollution issues.

The implementation of this language is not mandated by any state or federal law. Communities have been encouraged, however, by Sections 125.568, 166.048, and 373.185, F.S., to consider adopting water-conserving ordinances. This document is only an educational tool for those communities seeking advice on preparing this type of ordinance. It also addresses issues of nonpoint source pollution not addressed by many conservation ordinances. Other model ordinances exist and should be consulted, and a full evaluation of how various provisions might mesh with existing codes is necessary. Most communities will find some features apply to land development codes, others under occupational licensing, nuisance ordinances, etc. It is not nor does it purport to be a comprehensive landscape ordinance.

The following organizations, and individuals too numerous to mention, have been involved in the creation of this product.

Florida Nurserymen and Growers Association	FDOT
1000 Friends of Florida	FDCA
Green Industry Alliance	FDACS
Florida Turfgrass Association	FDEP
Florida Irrigation Society	UF-IFAS
Landscape Maintenance Association	Northwest Florida WMD
Florida Pest Management Association	Suwannee River WMD
Certified Pest Control Operators	St. Johns River WMD
Florida League of Cities	Southwest Florida WMD
Florida Association of Counties	South Florida WMD
Florida Chapter, American Society of Landscape Architects	

GUIDELINES FOR
MODEL ORDINANCE LANGUAGE
FOR PROTECTION OF WATER QUALITY AND QUANTITY
USING FLORIDA FRIENDLY LAWNS AND LANDSCAPES

September 2, 2003

1. **TITLE**

AN ORDINANCE OF THE (CITY/COUNTY OF) AMENDING OR REPLACING ORDINANCE NO.(s)___ OF THE GENERAL LANDSCAPE REGULATIONS BY REQUIRING FLORIDA FRIENDLY LANDSCAPE PRACTICES AND IRRIGATION SYSTEMS; BY PROVIDING FOR CONSISTENCY WITH STATE LAW AND THE (CITY/COUNTY OF) COMPREHENSIVE PLAN; PROVIDING FOR PURPOSE AND INTENT; PROVIDING FOR DEFINITIONS; PROVIDING FOR AMENDMENT OF EXISTING REGULATIONS; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; PROVIDING FOR CODIFICATION; PROVIDING FOR ENFORCEMENT AND PROVIDING AN EFFECTIVE DATE.

2. **FINDINGS OF FACT**

WHEREAS, the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Florida Statutes, (F.S.), provides for comprehensive plan implementation through the enactment of certain ordinances; and

WHEREAS, pursuant to Sections 125.568, 166.048, and 373.185, F.S., local governments should consider the adoption of water-efficient Landscape Standards and further Section 376.62, F.S., regulates the installation of rain sensor devices on automatic lawn sprinkler systems; and

WHEREAS, the Florida Watershed Restoration Act of 1999 and the NPDES municipal stormwater permitting program require local governments to reduce pollutant loads discharged from their stormwater management systems to better protect and restore surface and ground waters; and

WHEREAS, the (City/County of ___) recognizes the need for the protection of water as a natural resource through the application of Florida Friendly landscape practices; and

WHEREAS, a Florida Friendly landscape promotes the conservation of water by the use of site adapted plants and efficient watering methods which generally results in a long-term reduction of irrigation, fertilizer, and pesticide requirements, costs, energy, and maintenance; and

WHEREAS, a Florida Friendly landscape encourages a reduction of total energy expenditures such as water pumping and treatment, manufacture and shipping of fertilizers,

insecticide, and other gardening chemicals, operation and maintenance of mowers, edgers, blowers and other combustion based yard equipment, as well as labor; and

WHEREAS, community-wide Florida Friendly landscape efforts are designed to save significant amounts of water to preserve local water supplies such that cumulative benefits may reduce or postpone the need for community potable water supply expansion; and

WHEREAS, The Florida Legislature enacted Florida Statutes, Chapter 481, Part II and the Board of Landscape Architecture adopted Rule 61-G-10 Florida Administrative Code, which defines and regulates the practice of landscape architecture to protect the public health, safety, and welfare.

NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE (CITY/COUNTY OF _____), FLORIDA, as follows:

3. SHORT TITLE

This ordinance shall be known and may be referred to as the (City/County of _____) Ordinance for Protection of Water Quality and Quantity Using Florida Friendly Lawns and Landscapes.

4. AUTHORITY

This ordinance is adopted by the (City/County of __) under its home rule powers, its police powers to protect the public health, safety, and welfare, and under powers pursuant to the authority granted by Sections 125.568 (Counties) and 166.048 (Cities), Florida Statutes, in order to implement and enforce the standards, rules and regulations as set forth herein.

5. ADMINISTRATIVE STANDARDS

Whenever, in the course of administration and enforcement of this ordinance, it is necessary and desirable to make any administrative decision, then, unless other standards are in this Ordinance, the decision shall be made so that the result will not be contrary to the spirit and purpose of this ordinance or injurious to the surrounding neighborhood or the community at large.

6. PURPOSE AND INTENT

The purpose of these regulations is to establish minimum standards for the development, installation, and maintenance of landscape areas without inhibiting creative landscape design, construction and management

Specific Best Management Practices (BMPs) have been developed that include water conservation measures, the preservation of natural vegetation where applicable, and appropriate plant selection and location. Best management Practices have also been developed for the use of fertilizers, pesticides and appropriate maintenance practices such as proper pruning techniques, mowing, mulching and composting. Implementation of BMPs

will aid in improving environmental quality and the aesthetic appearance of public, commercial, industrial, and residential areas.

These guidelines and landscape practices are established to help communities, developers, builders, contractors, businesses and homeowners be partners in improving and protecting Florida's environment.

These practices are also based on the premise that the quality of Florida's surface and ground water is affected by stormwater runoff and leachate. Improper landscape design construction and management may contribute to nonpoint source pollution that affects ground and surface water quality. Use of BMPs in proper landscape design and maintenance can reduce pollution and save water, as well as save labor, resources, and money. Application of BMPs will also help to enhance property values, improve Florida's quality of life and protect natural resources for Florida residents well into the future.

This ordinance is based on concepts of Florida Friendly Landscaping and Xeriscape™ and the use of BMPs. The Florida Friendly landscape concept is based on the principles of the *Florida Yards and Neighborhoods (FYN)* and *Environmental Landscape Management (ELM)* programs operated by the University of Florida Cooperative Extension Service, along with the Xeriscape™ programs of the State's Water Management Districts, and BMPs identified in the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida (2002)*.

The *Florida Yards & Neighborhoods Handbook*, the Water Management Districts' *Waterwise Florida Landscape Guide*, *Xeric Landscaping with Florida Native Plants* by the Association of Florida Native Nurseries, FDEP's *Waterfront Property Owners Guide*, the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida*, and *Water Right: Conserving our Water, Preserving our Environment* published by the International Turf Producers Foundation should be referred to before making landscape and other site decisions. In general, all landscapes shall be designed to minimize adverse effects on Florida's natural systems.

No part of these guidelines shall be interpreted to restrict creative designs or the inclusion of landscape elements such as vegetable gardens, fruit trees, arbors, water gardens, or furnishings.

This ordinance incorporates several accepted principles of a Florida Friendly landscape. These principles, listed below, are included within the general provisions section for the purpose of giving guidance and direction for the administration and enforcement of the regulations contained herein. Detailed explanations of the following principles are included in the previously cited documents.

- Site Planning and Design
- Soils
- Land Clearing Standards and Preservation of Native Vegetation
- Appropriate Plant Selection, Location, and Arrangement
- Practical Use of Turf
- Efficient Irrigation
- Yard Waste Management, Composting and Use of Mulches
- Fertilizer Management
- Pesticide Management
- Landscape Maintenance
- Shoreline Considerations

7. APPLICABILITY

The provisions of this ordinance shall apply to the development, redevelopment, rehabilitation, and maintenance of all property within present or future incorporated areas of the (City/County of _____) which are subject to the provisions of Chapter _____, Site Plan Review; Chapter _____, Planned Unit Developments; or Chapter _____, Subdivisions and Plats of the (City/County of _____), Land Development Code. *[Guidance: If adopted by a county, unincorporated areas should also be included where they are subject to development.]*

No permit shall be issued for building, paving, or tree removal unless the landscape construction documents comply with the provisions hereof; and no Certificate of Occupancy shall be issued until the requirements herein are met. *[Guidance: Provided that such documents are required to be submitted.]*

All City/County facilities will be managed in accordance with these practices within one year of the approval of this Regulation. All City/County landscape service contractors will adhere to these practices. All new bid specifications and contracts will reflect this requirement beginning one year after the approval of this regulation.

All new and renovated City/County facility landscapes will be designed in accordance with these principles and be constructed and installed using Florida Friendly landscape materials.

If the provisions of this ordinance conflict with other ordinances or regulations, the more stringent limitation or requirement shall govern or prevail to the extent of the conflict.

Specific application of the provisions shall include, but not be limited to:

- All new, redeveloped, or rehabilitated landscapes for public agency projects and private development projects including but not limited to industrial, commercial, residential, and recreation projects, including new single-family and two-family homes;
- Developer-installed landscapes at entrances into and common areas of single-family and multi-family projects;
- Any development approved prior to the effective date of this ordinance if the governing site development plan is amended;

Exempted from the provisions of this ordinance are the following as applicable:

- Bonafide agricultural activities;
- Golf courses and specialized athletic fields; [*Guidance: These have specialized needs not addressed in the general references, and are usually managed by highly trained professionals. Specialized BMPs for Florida golf courses are expected in late 2004.*]
- Any development that is governed by an approved, final site development plan or a valid building permit issued prior to the effective date of this ordinance is exempted from retrofitting or meeting the specific provisions of Sections 9 A-F. However, existing development is not exempted from those provisions affecting management, maintenance, or the education of maintenance personnel.
- Rights-of-way for public utilities, including electrical transmission and distribution lines, and natural gas pipelines.

Conditional exemption may be granted by (to be inserted by local government) for individual projects if the applicant can demonstrate acceptable reasons for the requested exemption.

8. DEFINITIONS

For the purpose of this ordinance, the following words and phrases shall have the meanings respectively ascribed to them by this section.

All words used in the present tense include the future; all words in the singular number include the plural and the plural the singular; the word "building" includes the word "structure"; the word "shall" is mandatory and the word "person" includes a firm, corporation, county, municipal corporation, or natural person. The term "council" or

"commission" shall mean Council or Commission of the (City/County of _____), and the word "city" or "county" shall mean the (City/County of _____) of the State of Florida. The word "used" shall be deemed to include the words "arranged", "designed", or "intended to be used", and the word "occupied" shall be deemed to include the words "arranged", "designed", or "intended to be occupied". Any word or term not interpreted or defined by this section shall be used with a common dictionary meaning of common or standard utilization.

1. **Aquascape.** The planting of aquatic and wetland plants in the enhancement, restoration, or creation of freshwater, estuarine, or marine systems.
2. **Automatic Controller.** A mechanical or electronic device, capable of automated operation of valve stations to set the time, duration and frequency of a water application.
3. **Best Management Practices (BMPs).** A practice or combination of practices based on research, field-testing, and expert review, determined to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality, conserving water supplies and protecting natural resources.
4. **Constant Pressure/Flow Control.** A device that maintains a constant flow, or pressure, or both.
5. **Developed landscape area.** That portion of the property where pre-development vegetation is to be removed.
6. **Emitter.** This term primarily refers to devices used in microirrigation systems.
7. **Filter.** A device in irrigation distribution systems that separates sediment or other foreign matter.
8. **Florida Friendly.** Describes practices, materials, or actions that help to preserve Florida's natural resources and protect the environment.
9. **Florida Friendly Landscape.** See "Xeriscape™" for statutory definition; A landscape that incorporates the BMPs and philosophies promoted by programs such as Florida Yards and Neighborhoods/Environmental Landscape Management.
10. **Ground Cover.** Low growing plants, other than turfgrass, used to cover the soil and form a continuous, low mass of foliage.
11. **Hardscape.** Areas such as patios, decks, driveways, paths and sidewalks that do not require irrigation.
12. **High Water Use Plants.** Plants that require irrigation to provide supplemental water on a regular basis in addition to natural rainfall, or are so identified by a regulatory agency having jurisdiction. When placed in a naturally high water table area appropriate to the

plant such that irrigation is not required, such plants shall not be considered high water use for the purposes of this ordinance.

13. **Hydrozone.** A distinct grouping of plants with similar water needs and climatic requirements.
14. **Infiltration Rate.** The rate of water entry into the soil expressed as a depth of water per unit of time (inches per hour)
15. **Irrigated landscape area.** All outdoor areas that require a permanent irrigation system.
16. **Irrigation System.** An artificial watering system designed to transport and distribute water to plants.
17. **Irrigation Zone.** A grouping of sprinkler heads or microirrigation emitters operated simultaneously by the control of one valve.
18. **Landscape.** Any combination of living plants (such as grass, ground cover, shrubs, vines, hedges, or trees) and non-living landscape material (such as rocks, pebbles, sand, mulch, walls, fences, or decorative paving materials).
19. **Landscape Construction Documents.** Landscape construction documents may include a planting plan, a landscape layout plan, an irrigation plan, a grading and drainage plan, detail sheets and written specifications. Plans shall be numbered, dated, North arrow indicated, scaled, and sealed by an appropriately licensed professional where required by Florida Statutes Chapter 481, Part II.
20. **Landscape Design.** Means consultation for and preparation of planting plans drawn for compensation, including specifications and installation details for plant materials, soil amendments, mulches, edging, gravel, and other similar materials. Such plans may include only recommendations for the conceptual placement of tangible objects for landscape design projects. Construction documents, details, and specifications for placement of tangible objects and irrigation systems shall be designed or approved by licensed professionals as required by law.
21. **Landscape Layout Plan.** Plans and drawings showing the location of buildings, structures, pedestrian, transportation, or environmental systems, and the detail for placement of site amenities, accessibility components, plantings and other tangible objects. Plans shall be numbered, dated, North arrow indicated, scaled, and sealed by an appropriately licensed professional where required by Florida Statutes Chapter 481, Part II.
22. **Landscaped Area.** The entire parcel; less the building footprint, driveways, hardscapes such as decks and patios, and non-porous areas. Water features are included in the calculation of the landscaped area. This landscaped area includes Xeriscape™ as defined in Chapter 373.185(1)(b), F.S.

Landscape maintenance by homeowners should be performed in accordance with recommendations of the University of Florida Cooperative Extension Service and Florida Yards & Neighborhoods publications.

K. Shoreline Considerations

[Guidance: Ideally, shorelines should remain completely natural to most effectively use or absorb nutrients. Unfortunately, many waterfront property owners have removed beneficial vegetation and formed sandy beaches along their shorelines. This loss of a natural buffer may contribute to shock loads of nutrients and other pollutants affecting the waterbody and may lead to erosion. DEP Rule 62C-20.002 (1) states "No person shall attempt to control, eradicate, remove, or otherwise alter any aquatic plants in waters of the state, including those listed in s. 369.251, F.S., except as provided in a permit issued by the department unless the waters in which aquatic plant management activities are to take place are expressly exempted in Rule 62C-20.0035, F.A.C."

Shoreline vegetation can often be restored through aquascaping. Advice regarding appropriate plants for aquascaping and locating sources for these plants in your area may be obtained by contacting the Department of Environmental Protection's Bureau of Invasive Plant Management, the UF Cooperative Extension Service in each county and/or the UF Center for Aquatics and Invasive Plants. A simple, free of charge permit may be required from DEP's Bureau of Invasive Plant Management for activities involving aquatic plants along freshwater shorelines.

DEP Rule 62C-52.003 (4) states "Only native aquatic plants cultured in a nursery regulated by the Department of Agriculture and Consumer Services or collected from an approved wild collection site shall be used for the revegetation, restoration, or mitigation of wetlands in sovereignty lands. No prohibited or non-native aquatic plant shall be placed in, or knowingly be distributed for use in natural waters, or waters connected to natural waters. Non-native plants not on the prohibited plant list may be used in artificially created ponds and water gardens that are not connected to natural waters."

Vegetation height should extend well above the water level. There is a direct correlation between height and a plant's ability to absorb nutrients. Shoreline plants should not be fertilized or treated with herbicides, except in special cases.

Some developers, water management districts and local governments are designing and building stormwater wet detention systems that closely resemble natural waterbodies. In some cases, developers are offering adjacent property as premium waterfront real estate. While this is generally a very good practice that promotes sophisticated designs, it may cause some problems if people are not aware that the manmade system's purpose is to capture and accumulate pollutants. Consequently, it may appear contaminated if it is simply doing its job. This may prompt misdirected requests for action to clean it up or even protect it. It should also be noted that man-made systems that connect to waters of the state may be regulated as waters of the state.

Education is important so people understand that the rules and expectations for natural and manmade waterbodies are different.]

Grading and design of property adjacent to bodies of water shall conform to Federal, State and Local regulations which may include but is not limited to the use of berms or retention ditches to intercept surface runoff of water and debris that may contain fertilizers or pesticides.

No grasses that require mowing shall be allowed within 6 feet of the water's edge, except where seawalls and bulkheads exist or where needed for erosion control. When mowing near the shoreline, direct the chute away from the water body. Riparian or littoral zone plants that do not require mowing or fertilization should be planted in these areas. See the *Florida Waterfront Property Owners Guide* or the Department of Environmental Protection's Bureau of Invasive Plant Management for more information. Where water levels vary considerably, care must be taken in the selection of these plants.

Decks along the waters edge and into the water shall meet all local and state government regulations and any other lawful requirements. The maximum distance any structure may protrude into the water is X feet (To be inserted by local government) from the normal high water mark on the bank. The maximum total width of a deck structure along the shoreline of any lot is 20% of the waterfront footage of that lot. The remainder of the shoreline should remain as natural as possible. Lot owners located on ditches may add 20' to their front footage for calculation purposes. Special permits may be required. No structures are permitted that obstruct the flow of water.

Mangrove trimming shall be performed in accordance with Sections 403.9321 - 403.9334, Florida Statutes. The *Florida Waterfront Property Owners Guide* published by the Florida Department of Environmental Protection should be referred to for additional information about Florida Friendly shoreline practices.

10. EDUCATION

[Guidance: To assist in public information, the education of its citizens, and the effective implementation of this ordinance, the (City/County) should coordinate its efforts with those of the Water Management District and the (_____ County) Agricultural Extension Service and other agencies. These entities should jointly sponsor workshops on the design principles and standards of Florida Friendly landscapes. Informational signs should be displayed and brochures made available for public use.]

All persons providing landscape maintenance services for hire (including appropriate City/County Maintenance Operations staff) shall be trained in the Florida Yards & Neighborhoods *Environmental Landscape Management Course* and the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida* within one year of the approval of this Regulation. New employees will be trained within 180 days of starting a new position. Government facilities should serve as educational examples and demonstration sites of building, landscape, and/or design principles related to natural resource conservation including water, energy, and landscapes.

11. INCENTIVES

[Guidance: Local governments have a full range of options to offer incentives for development/landscape designs to exceed the design principles and standards set forth and established by this ordinance. Local governments may wish to consider any or all of the following examples, and are free to consider other alternatives.]

Any development that exceeds the water-efficient design principles and standards established by this ordinance shall receive a reduction in the (City/County) permit application fee. *[or stormwater utility rate, etc.]*

Individual home owners or residents who are not required to but voluntarily submit a development/landscape design which meets or exceeds the Florida Friendly design principles and standards established by this ordinance shall receive *[Guidance: a reduction of their stormwater utility water charges; a x% reduction in their building permit fee, property tax reduction, or other incentive within the purview of local government]*. This reduction will remain in effect provided that the landscaped areas are consistently maintained in accordance with Florida Friendly landscape principles and the total monthly water consumption does not exceed X gallons (To be inserted by local government).

Businesses that are not required to but voluntarily utilize the recommended practices shall be recognized annually through (various incentives and public recognition programs to be specified by local government).

[Guidance: These incentives are meant only to be examples. Local governments should consider what incentives are appropriate and meaningful to their constituents.]

12. ENFORCEMENT AND MONITORING

Implementation and enforcement of these regulations shall consist of:

A. Licensing

In order to obtain or renew an occupational license to provide lawn and / or landscape maintenance services, proof is required that a minimum of 4 Professional Development Hours (PDH = 50 minutes of instruction) in principles of Florida Friendly landscape management have been granted within the previous 12 months from an approved training organization. A valid pesticide license issued under Ch. 482 or Ch 487 F.S., or certification as a landscape professional by a recognized professional association or government agency that requires a minimum of 4 PDHs per year (or 8 over a two-year period) to maintain certification, shall be accepted as proof of such training. The _____ Department of the City/County shall maintain a list of approved certification programs and training organizations, including in-house corporate programs.

[Guidance: Some care may need to be taken to modify occupational license ordinances to make this section work, depending on grouping of license classes. Known or expected

statewide providers of such training are: the University of Florida Cooperative Extension Service, the Florida Nurserymen and Growers Association (FNGA), the Florida Irrigation Society (FIS), The Irrigation Association (IA), the Florida Chapter of the American Society of Landscape Architects (FC-ASLA), and the Landscape Maintenance Association (LMA). Some companies may provide such training in-house and some industry suppliers may offer training to their customers.]

B. Inspections

The (City/County) Code Enforcement Officer or designated inspectors shall be authorized and empowered to make inspections at reasonable hours of all land uses or activities regulated by this ordinance, in order to determine if applicable provisions of the Code of Ordinances and regulations relating to Florida Friendly landscaping are being followed.

Inspections may be made without notice, and refusal to allow such an inspection shall be deemed a violation of this ordinance. Such failure to permit an inspection shall be sufficient grounds and probable cause for a court of competent jurisdiction to issue an administrative warrant for the purpose of inspecting, surveying or examining said premises.

In the event a building, structure, or land appears to be vacant or abandoned, and the property owner cannot be readily contacted in order to obtain consent for an inspection, the Code Enforcement Officer or inspector may enter into or upon any open or unsecured portion of the premises in order to conduct an inspection thereof.

The Code Enforcement Officer or inspector shall be provided with official identification and exhibit such identification when making any inspection.

It shall be the duty of all law enforcement officers to assist in making inspections when such assistance is requested by the Code Enforcement Officer or inspector.

C. Notice of Violation, Notice of Hearing and Hearing Procedure

Whenever the Code Enforcement Officer or an inspector determines that there is a violation of this ordinance, the officer or inspector shall follow the procedures established for bringing a case before the Code Enforcement Board or any alternative code enforcement body or shall seek injunctive relief as provided below. A notice to cease a land use activity or permit issued under this ordinance shall not relieve the owner or operator of the obligation to comply with any other applicable state, regional or local code, regulation, rule ordinance, or requirement. Nor shall said notice or permit relieve any owner or operator of any liability of violation of such codes, regulations, rules, ordinances, or requirements.

D. Injunctive Relief

If any person engages in activities regulated by this ordinance without having obtained an approved permit as provided within this ordinance or continues in violation of the provisions of this ordinance or the regulations promulgated pursuant thereto, then the (City/County) may file an action for injunctive relief in a court of competent jurisdiction.

13. FEES

Permit Fees

Prior to the issuance of a permit, the applicant shall pay a fee as set forth by the Resolution No. _____, 20___. Such fee shall be used to defray the cost of monitoring the compliance of this ordinance. [*Guidance:* or may be included in building permit fee]

14. VARIANCES

As provided in Chapter ___ of these Land Development Regulations, the Board of Adjustment is hereby authorized to grant variances in accordance with stated provisions and can attach conditions to variances granted.

15. VIOLATIONS AND PENALTIES

For any violation which does not constitute a threat to life or property, the (City/County) shall have the authority to issue a citation and/or to withhold a certificate of occupancy. The citation shall be in the form of a written official notice issued in person or by certified mail to the owner of the property, or to his agent, or to the person doing the work. The receipt of a citation shall require that corrective action be taken within thirty (30) calendar days, unless otherwise extended at the discretion of the (City/County). If the required corrective action is not taken within the time allowed, the (City/County) may use any available civil or criminal remedies to secure compliance, including revoking a permit.

The (City/County) shall have resource to such civil and criminal remedies in law and equity as may be necessary to ensure compliance with the provisions of this section of this ordinance, including injunctive relief to rejoin and restrain any person from violating the provisions of this section of this ordinance and to recover such damages as may be incurred by the implementation of specific corrective actions.

A conviction for violation of the provisions of this section shall be punishable by a fine or imprisonment, or both such fine and imprisonment as provided in Section 125.69, Florida Statutes.

16. CONFLICTS AND RELATIONSHIP TO OTHER LAWS

Whenever regulations or restrictions imposed by this ordinance conflict with other ordinances or regulations, or are either more or less restrictive than regulations or restrictions imposed by any governmental authority through legislation, rule or regulation, the regulations, rules or restrictions which are more restrictive or which impose the highest standards or requirements shall govern. Regardless of any other provision of this ordinance, no land shall be used and no structure erected or maintained in violation of any state or federal pollution control or environmental protection law or regulation.

17. SEVERABILITY

This ordinance and the various parts, sections, subsections and clauses thereof, are hereby declared to be severable. If any part, sentence, paragraph, subsection, section or clause is adjudged unconstitutional or invalid, it is hereby provided that the remainder of the ordinance shall not be affected thereby. If any part, sentence, paragraph, subsection, section or clause be adjudged unconstitutional or invalid as applied to a particular property, building, or other structure, it is hereby provided that the application of such portion of the ordinance to other property, buildings, or structures shall not be affected thereby.

18. INCLUSION IN CODE, CODIFICATION, SCRIVENERS ERRORS

The provisions of this ordinance shall become and be made a part of or replace the existing landscape regulations of the (City/County of _____). Sections of the ordinance may be renumbered or relettered and the word "ordinance" may be changed to "section", "chapter", "article", or such other appropriate word or phrase in order to accomplish such intentions. Sections of this ordinance may require the correction of typographical errors which do not affect the intent. Such corrections may be authorized without need of a Public Hearing, by filing a corrected or recodified copy of same with the clerk of the (City/County of _____).

19. REPEAL

The existing regulations of the (City/County of _____), being Chapter _____ of the City/County Code as amended, are hereby repealed. The adoption of this ordinance; however, shall not affect nor prevent any pending or future prosecution of, or action to abate, any existing violation of said Chapter, as amended, if the violation is also a violation of the provisions of this ordinance.

[**Guidance:** repeal is only necessary if existing ordinances conflict with the new ordinances.]

20. EFFECTIVE DATE

This ordinance shall take effect _____, 20__.

PASSED ON FIRST READING _____ (Date)

PASSED ON SECOND AND
FINAL READING AND ADOPTED _____ (Date)

(Signature) (Name)
Mayor-Commissioner or Chairman

Attest:
_ (Signature)
(Name)
City Clerk or Clerk of Circuit Court

Approved as to form and correctness:

_ (Signature)
(Name)
City or County Attorney

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

LANDSCAPE WATER CONSERVATION ORDINANCE GUIDELINES

This document provides guidelines for the development of local government landscape water conservation ordinances. Local governments are required by Sections 125.568 and 166.048, Florida Statutes (*FS*), to consider adopting ordinances that require water-conserving landscapes. Section 373.185, *FS*, requires each water management district to provide a model ordinance to provide guidance to local governments in ordinance development. Local governments are not required by SJRWMD to adopt an ordinance based on these guidelines.

These guidelines were prepared with the assistance of a committee consisting of representatives from city and county governments, including elected officials and staff involved with planning, zoning, code enforcement, water conservation, utility operation and management, and senior management; professional and special interest organizations, including Florida Native Plant Society, Florida Irrigation Society, Florida Build Green Coalition, Florida Nursery Growers and Landscape Association, Florida Sod Growers Cooperative; landscape architects, the land development community, environmentalists, and concerned citizens; and government agencies, including Florida Department of Environmental Protection, Florida Department of Agriculture and Consumer Services, University of Florida Institute of Food and Agricultural Sciences Agricultural Extension Service and Lake County Water Authority.

The guidelines focus on issues that affect water use and do not address aesthetics, water quality, soil erosion control, fire resistance, and other considerations which may be included in comprehensive landscape regulations. Additional regulations may be needed to protect water quality or to assure aesthetically acceptable and safe landscapes.

Recommended Provisions for Local Landscape Water Conservation Ordinances

- ◆ **Landscapes (model ordinance provisions provided)**
 - Prior to installation, landscape plans meeting Florida-friendly landscape principles must be certified by appropriately licensed design professionals.
 - Newly installed landscapes must be inspected by appropriately licensed design professionals to ensure that they were installed as designed.
 - Landscape maintenance must be performed in accordance with recommendations in the current edition of *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida* or the *Florida Yards & Neighborhoods Handbook*.
 - A person providing landscape installation or maintenance services for hire must be appropriately licensed.
 - Demonstration landscapes must be provided.

- ◆ **Irrigation Systems (model ordinance provisions provided)**
 - Permanent irrigation systems must meet design and construction standards in Appendix F of the Florida State Building Code and the Florida Irrigation Society's (FIS) January 1, 2002 or most current version of *Standards and Specifications for Irrigation Systems* for any features not treated in Appendix F.
 - Irrigation systems must be designed and installed by appropriately licensed professionals.
 - Overhead or spray irrigation may be used only for turfgrass and other ground covers that normally have a mature or maintained height no greater than one foot. Trees, shrubs, and other plants may be irrigated only with low volume irrigation at the base of the plant.
 - Overhead or spray irrigation is limited to 70 percent or less of the landscapable area. A lower percentage is recommended for areas identified as Priority Water Resource Caution Areas in SJRWMD's District Water Supply Plan.
 - Installation of non-potable water lines must be required when a source is available or anticipated to become available.
 - Irrigation systems must be connected to available non-potable water supply systems.
 - Irrigation systems connected to reclaimed water supply systems must be metered.
 - Irrigation systems must be operated and maintained in accordance with the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida* (2002 or the most current edition) or the *Florida Yards and Neighborhood Handbook*.

- ◆ **Licensing and Certifications (model ordinance provisions provided)**
 - The state-licensed professionals allowed to perform regulated services should be identified.
 - If other than state-licensed professionals can perform regulated services, the appropriate certification and training must be specified.

◆ Site Design Standards

- Existing native vegetation must be preserved on a site percentage basis and/or by targeting specific vegetative communities for preservation.
- Land clearing regulations must protect native vegetation prior to and during land development activities.
- Plants prohibited by Florida Department of Agriculture and Consumer Services rule, Chapter 5B-57 *F.A.C.*, must be removed from the site.
- Impervious surface areas are limited by zoning or future land use category.

◆ Inspection and Enforcement

- Enforcement of this set of regulations includes the issuance of citations, the treatment of each day a violation occurs as a separate offense, the imposition of fines that are significant and progressive, and the suspension or revocation of licenses or certifications.
- Inspections are required to assure compliance with the provisions of the ordinance.

Before enacting an ordinance a local government should determine whether or not the ordinance is consistent with or implements the local government's comprehensive plan. If the local government determines that the ordinance is not consistent with or does not implement its comprehensive plan, then appropriate comprehensive plan amendments should be adopted before proceeding with ordinance adoption.

MODEL ORDINANCE PROVISIONS

The following model ordinance provisions are examples on which a local ordinance may be based. The local ordinance need not duplicate the exact wording of these examples as long as the required provisions are satisfactorily addressed.

I. LANDSCAPES

1. In general

New landscapes or substantially replaced landscapes shall meet the standards established in this section. Maintenance of all landscapes shall comply with maintenance standards of this section.

2. Landscape Design

All landscapes shall be designed to use water efficiently and follow Florida-friendly landscape principles. The most current versions of *Florida Yards & Neighborhoods Handbook*, the Water Management Districts' *Waterwise Florida Landscapes*, *Xeric Landscaping with Florida Native Plants* by the Association of Florida Native Nurseries, the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida*, and *Water Right: Conserving our Water, Preserving our Environment* published by the International Turf Producers Foundation shall guide landscape designs.

A landscape design certified by a landscape design professional shall be submitted to the City/Town/County prior to landscape installation. Landscape design documents shall include a landscape layout and planting plan, and if irrigation is provided, an irrigation plan completed in accordance with the irrigation system design requirements of this ordinance. Landscape design professionals shall meet the licensing and certification requirements of this ordinance.

3. Landscape installers

Any person providing landscape installation services for hire is a landscape installation professional and shall meet the licensing and certification requirements of this ordinance.

4. Appropriate plant selection and location

Plant selection for landscaped areas shall be based on the plant's adaptability to the existing conditions present at the site, and shall consider the appropriate hardiness zone, soil type and moisture conditions, exposure to sun, and mature plant size. Plants selected must be suited to withstand the soil and physical growing conditions found in the microclimate of each location on a site with supplemental irrigation only during periods in which rainfall has been less than one inch in the last seven days.

Plants shall be grouped in accordance with their respective water and maintenance needs to provide for efficient irrigation. Plants with similar water soil, climate, sun, and light requirements shall be grouped together.

Plants prohibited by Florida Department of Agriculture and Consumer Services rule, Chapter 5B-57 *F.A.C.*, shall not be used for landscaping purposes. Controlled plants named in Chapter 5B-57, *F.A.C.*, may not be used except as allowed by Chapter 5B-57, *F.A.C.*

5. Use of mulches

Mulches with a minimum depth of two inches shall be used in all planting beds.

6. Landscape certification

The completed landscape installation shall be certified by a landscape design professional who meets the licensing and certification requirements of this ordinance. When the landscape installation is part of a construction project, the certification is required before issuance of the Certification of Occupancy or its equivalent. The certification shall indicate that plants were installed as specified in the landscape design documents, that an irrigation audit has been performed, and that the audit confirmed that the system functions properly.

7. Landscape maintenance standards

Landscape maintenance shall be performed in accordance with the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida*, the University of Florida Cooperative Extension Service and with the *Florida Yards & Neighborhoods Handbook*.

8. Landscape maintenance professionals

Any person providing services for hire regarding any aspect of landscape maintenance including the application of fertilizer and pesticide is a landscape maintenance professional and must meet the licensing and certification requirements of this ordinance.

9. Demonstration landscapes

The City/Town/County shall provide demonstration landscapes at government facilities. Developers of single family residential subdivisions, PUDs, or any non-residential development, which include model buildings, shall provide demonstration landscapes at the site of at least one model building. Information about Florida-friendly landscape principles shall be provided at demonstration landscape sites and signs shall identify the sites as examples of water efficient landscapes.

II. IRRIGATION SYSTEMS

1. In general

Installation of an irrigation system is not required by this ordinance. A construction permit is required if an irrigation system is installed or substantially replaced.

2. Irrigation system design

A new or substantially replaced irrigation system shall be designed and constructed in accordance with the technical standards contained in Appendix F of the Florida State Building Code and the Florida Irrigation Society's (FIS) January 1, 2002 or most current edition of *Standards and Specifications for Irrigation Systems* for any features not treated in Appendix F.

An irrigation system plan certified by an irrigation design professional shall be provided prior to issuance of a permit. Plans shall be clearly readable, to reasonable scale, show the entire site to be irrigated, and include all improvements and equipment specifications. Irrigation design professionals must meet the licensing and certification requirements of this ordinance.

3. Irrigation system installation

Irrigation installation professionals meeting the licensing requirements of this ordinance may install irrigation systems. An irrigation valve site diagram detailing valve locations, gallons per minute demands, precipitation rates, plant types within valve circuits, and operating pressure requirements for each valve shall be developed by the installer. This diagram shall be attached inside each irrigation controller or be kept in another readily available location if it is not practical to insert it in a small controller. Irrigation scheduling information, with instructions for seasonal timer and sensor changes, and a regular irrigation system maintenance schedule shall be provided to the owner by the installer or by the builder to the owner at the sale of newly constructed building.

4. Limits to in-ground irrigation system installation

Overhead or spray irrigation may be used only for turfgrass and other ground covers that normally have a mature or maintained height no greater than one foot. Trees, shrubs, and other plants may be irrigated only with low volume irrigation at the base of the plant. Permanent in-ground overhead or spray irrigation shall be limited to 70 percent of the landscapable area on a site. Lower percentages may be required in the development review process as part of the approval criteria for developments to be awarded additional density, or for specific large scale development approval such as developments of regional impact. The remainder of the landscapable area on a site may be irrigated with a drip or other low volume irrigation system.

5. Meters required on in-ground irrigation systems using reclaimed water.

All newly installed in-ground irrigation systems connected to a reclaimed watersupply shall be equipped with meters at the time of installation to measure water usage.

6. Mandatory connection of irrigation system to non-potable water supply

All irrigation systems shall be connected to a non-potable water supply such as reclaimed water, storm water, or surface water, if such supply is available.

7. Non-potable water lines

Site plans and plans for subdivisions and planned unit developments shall include transmission and distribution lines for non-potable water, such as reclaimed water, storm water, or surface water for landscape irrigation if a supply of such water is available or is anticipated to become available to the area. The lines shall be installed prior to construction.

8. Operation and maintenance

All irrigation systems shall be operated and maintained in accordance with the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida* (2002 or the most current edition) or the *Florida Yards and Neighborhood* program, and in accordance with the irrigation scheduling information and with the system maintenance schedule provided by the builder to the owner at the sale of newly constructed building, by the installer at the time of installation, or by an existing owner to a new owner at the time of sale. A regular irrigation maintenance schedule shall include but not be limited to checking, adjusting, and repairing irrigation equipment; and resetting the automatic controller according to the season.

To maintain the original performance and design integrity of the irrigation system, repair of the equipment shall be done with the originally specified materials or their equivalents.

The irrigation system, including automatic rain sensor shutoff device, must be certified by an irrigation system installation professional to be operating properly and in good repair at such time as the property may be resold.

III. LICENSING AND CERTIFICATIONS

1. In general

The license or certification specified in this section is required to provide the corresponding services regulated in this ordinance.

2. Landscape design professionals

Landscape design professionals shall include landscape architects licensed in the State of Florida, and landscape designers certified by the Florida Nurserymen Growers and Landscapers Association, the Florida Yards & Neighborhoods program or comparable program.

3. Landscape installation professionals

Landscape installation professionals shall include landscape architects licensed in the State of Florida, and landscape contractors certified by the Florida Nurserymen Growers and Landscapers Association, the Florida Yards & Neighborhoods program, or comparable program.

4. Landscape maintenance professionals

Landscape maintenance professionals shall include landscape architects licensed in the State of Florida, landscape contractors certified by the Florida Nurserymen Growers and Landscapers Association, the Florida Yards & Neighborhoods program, or comparable program, and holders of a valid pesticide license issued under Ch. 482 or Ch 487, *FS*, (for pesticide applications only).

5. Irrigation design professionals

Irrigation design professionals shall include state-licensed plumbers operating within the limits of the Florida Building Code, professional engineers or landscape architects registered in the State of Florida, and irrigation designers certified by the Irrigation Association or Florida Irrigation Society.

6. Irrigation Installation and Maintenance Professionals

Irrigation installation and maintenance professionals shall include state-licensed plumbers operating within the limits of the Florida Building Code, and specialty contractors licensed by the City/Town/County and certified by the Irrigation Association or the Florida Irrigation Society.

7. Training

The professionals listed above must annually complete a minimum of 4 professional development hours (PDH) in principles of Florida-friendly landscaping from an approved training organization unless their license or certification requires a minimum of 4 PDH per year or 8 PDH over a two-year period to maintain licensing or certification. 50 minutes of instruction equals a PDH.

IV. DEFINITIONS

For the purpose of this ordinance, the following words and phrases shall have the meanings respectively ascribed to them by this section.

Automatic Controller. A mechanical or electronic device, capable of automated operation of valve stations to set the time, duration, and frequency of a water application

Best Management Practices (BMPs). A practice or combination of practices based on research, field-testing, and/or expert review, determined to be the most effective and practicable on-location means, including economic and technological considerations, for improving water quality, conserving water supplies, and protecting natural resources.

Ground cover. Low growing plants, other than turfgrass, used to cover the soil and form a continuous, low mass of foliage.

Florida-friendly landscape. Quality landscapes that conserve water and protect the environment, and are adaptable to local condition. Florida-friendly landscape principles include planning and design, appropriate choice of plants, soil amendments, efficient irrigation, practical use of turf, appropriate use of mulches, and proper maintenance.

Landscapable area. The area of a site less the building area, natural water features, driveways, paved walkways, and hardscapes such as decks, patios, and fountains, but including areas set aside for the preservation of native vegetation, swales, retention and detention basins.

Low volume irrigation (Microirrigation). The application of small quantities of water directly on or below the soil surface, usually as discrete drops, tiny streams, or miniature sprays through emitters placed along the water delivery pipes (laterals). Microirrigation encompasses a number of methods or concepts including drip, subsurface, bubbler, and trickle irrigation.

Turf or turfgrass. A mat layer of monocotyledonous plants such as Bahia, Bermuda, Centipede, Paspalum, St. Augustine, and Zoysia.

ADMINISTRATIVE REGULATIONS	AR NO	DATE APPROVED
SUBJECT: FLORIDA YARDS & NEIGHBORHOODS ENVIRONMENTAL LANDSCAPE MANAGEMENT EDUCATIONAL PROGRAM	ORIGINATING AGENCY: Community Services	DEPARTMENT: Community Services
Page 1 of 2		

POLICY:

It is the intent of the Board of County Commissioners to set the proper example for the citizens of Citrus County by implementing procedures that will result in the reduction of nitrate infiltration into ground and surface waters, and to encourage practice changes by employees and citizens through education.

PURPOSE:

To establish guidelines for managing existing and future turf and landscapes at all Citrus County facilities utilizing the educational guidelines of the University of Florida Extension's Florida Yards & Neighborhoods Program, Environmental Landscape Management (ELM) principles and Best Management Practices (BMP).

PROCEDURES:

A. Education

1. All appropriate Maintenance Operations staff will be trained and certified in the Florida Yards & Neighborhoods Environmental Landscape Management Course within one year of the approval of this Regulation. New employees will be trained within 90 days of starting a new position. The University of Florida Citrus County Extension Service Urban Horticulture Educator will schedule and conduct all training.
2. Training and certification in the Florida Yards & Neighborhoods Environmental Landscape Management Course will be offered to commercial landscape contractors.
3. Division of Extension Services staff will present public education classes.
4. The Extension Office facility will serve as an educational example and demonstration site of building, landscape, and/or design principles related to natural resource conservation including water, energy, and landscapes.
5. Demonstration landscaping areas will be developed at various other County facilities to enhance the public's awareness of landscaping options. Informational signs will be displayed and brochures will be made available for public use.

ADMINISTRATIVE REGULATIONS	AR NO	DATE APPROVED
SUBJECT: ENVIRONMENTAL LANDSCAPE MANAGEMENT PROGRAM	ORIGINATING AGENCY:	
	Community Services	
DEPARTMENT:		Community Services
Page 2 of 2		

B. Facility Design and Maintenance

1. All County facilities will be managed by ELM/Florida Yards and Neighborhoods BMP practices within one year of the approval of this Regulation.
2. Within one year of the approval of this Regulation, all commercial landscapers will be required to have a Citrus County Environmental Landscape Course Certification to be eligible to bid on County projects.
3. All County landscape service contractors will adhere to ELM/BMP practices. All new bid specifications and contracts will reflect this requirement beginning one year after the approval of this regulation.
4. All future new and renovated County facility landscapes will be designed to facilitate BMP principles and planted using Florida friendly landscape materials. Extension Services staff will participate in the plan review of all new facilities.

C. Community Incentives

1. Local businesses and consumers who utilize the recommended ELM practices will be recognized annually through various incentives and public recognition.

ATTACHMENT "A"

WATERING

Class I & II Turf:

- Automatic systems will have a rain cut-off device installed, tested, and maintained.
- All irrigation delivery systems will be calibrated and timed to deliver $\frac{3}{4}$ to 1 inch of water per irrigation. If no timer is installed, employees must monitor the irrigation cycle manually. Employees must be familiar with both automatic and manual controls.
- During summer months, and at other times when nighttime low temperatures exceed 60° F, the turfgrass will be inspected at least twice weekly for wilt symptoms. When wilt symptoms involve 40% or more of the area, $\frac{3}{4}$ to 1 inch of irrigation will be applied.
- During the months when nighttime low temperatures are less than 60° F, one inch of water will be applied once a week, excepting when the turf is totally dormant, during which time the interval will be extended to once every 10 days. Any time during the 10-day period when a half-inch or more of rain has fallen will mark the beginning of another 10-day cycle.
- When appropriate according to the label directions, irrigation may be applied after fertilizer or pesticide application, not to exceed $\frac{1}{3}$ inch unless more is specifically called for on a pesticide label.
- Automated irrigation will habitually be scheduled to take place between the hours of 12:01 a.m. – 6:00 a.m.
- When possible, manual irrigation will take place during the hours between sunset and sunrise. If irrigation must take place in daylight, it shall be completed by 10:00 a.m.
- Irrigation by small amounts associated with fertilizer and/or pesticide application may occur at any time of the day and should occur as soon after the application as possible.
- Maximum use of low volume irrigation shall be made around landscape trees and shrubs.

FERTILIZING

Class I Turf

- All fertilization will conform to University of Florida BMP.

Class II Turf

- Class II turfgrass will be fertilized twice yearly in the spring and fall. Spring fertilization will take place during the period March 20 - April 10. Fall fertilization will take place during the period September 1 - September 20.
- Fertilizer material will consist of 16-4-8 containing a minimum of 50% water-insoluble Nitrogen (N) or Sulphur-coated Urea, or a combination of the two that comprises at least one half of the total N. Fertilizer will be applied at the rate of one-half pounds of N (three pounds of 16-4-8) per thousand square feet. The fertilizer will be applied over the entire landscape area, and not to the turf alone.
- If a deeper green color is desired during the summer, a spray of an iron sulfate solution may be applied at the discretion of the supervisor.
- Immediately after application, fertilizers will be watered with no more than $\frac{1}{3}$ inch of water. Fertilizers will not be applied when heavy rain is expected within 24 hours.

Class III Turf

- As a normal rule, Class III turf will not be fertilized.

DEFINITIONS

Class I Turf – Bermuda grass; Athletic fields

Class II Turf – Irrigated turfgrass areas

Class III Turf – Non-irrigated turfgrass areas

MOWING AND MULCHING

Mowing

- Mowing will always be done with a sharp blade
- Mowing heights will be kept to the minimum heights as follows: St. Augustine grass and Bahia grass – 4 inches; Bermuda grass – 1 ½ inches.
- Mowing of all classes of grass shall be scheduled to take place frequently enough so that no more than one-third of the total leaf blade is removed at any single mowing.
- Clippings will be left on the turf.
- Sharp turns, high speeds, and repetitive mowing patterns shall be avoided.
- Class I turf will be mowed with a reel-type mower, Class II and III turf with a rotary-type mower.

Mulching

- All landscape plants will be mulched to a depth of 2 to 4 inches.
- Mulch rings will extend to at least 3 feet around freestanding trees and shrubs.
- Normally, mulch from the landfill will be used.
- Where appearance is a critical factor, a thin layer of commercial mulch may be spread over the landfill material.
- All mulch will be renewed periodically.
- Mulches will be kept at least 6 inches away from any portion of a building or structure.

INTEGRATED PEST MANAGEMENT (IPM)

Pest Control: ELM Standards

- Employees will monitor all turf areas and plants at least once a week, and report any pest problems to the appropriate supervisor who shall communicate with the Pest Control Operator (PCO) under contract.
- The contractor (PCO) will monitor all turf areas and plants at least once a month.
- If a pest is detected, the PCO will examine for damage and for the presence of beneficial organisms and determine the probability of the beneficials exerting satisfactory control. If such control by beneficials seems possible, the PCO will recheck in 5 days and determine whether to spray or not based upon the damage threshold having been reached. If the damage threshold is already reached and no beneficials are found, then a control will be applied as soon as possible.
- The PCO will select the least toxic control agent that will be effective.
- The PCO will spot treat insect damage 10 feet around and through the affected areas unless the damage threat is widespread. Disease control agents will be applied as spot-treatment or area treatments depending on the diagnosis and current IFAS recommendations.
- If the pesticide label requires the application of water, the PCO will immediately so advise the appropriate County employee who is responsible for applying irrigation water.
- Frequent coordination and communication between the PCO and the employee having supervisory authority over the landscape areas are essential to the successful implementation of this program, and will be required as a condition of compliance.

PRUNING TREES AND SHRUBS

General

- In general, no more than 30% of a plant will be removed at any one time when pruning occurs.
- The practice of pruning shade trees that is called topping, heading back or buckhorning will not be employed.
- The practice of shearing shrubs will not be employed.
- Management of a shrub's size will be accomplished by the practice known as selective thinning.
- Pruning paint will only be used when cosmetics are important.
- Times for pruning vary for different landscape plants. If in doubt, the supervisor will consult with the Extension Office to determine the best time to prune the various trees and shrubs.
- All tools must be kept sharp and in good repair.
- Whenever possible, trimmings and organic debris will be recycled through the County landfill.