

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

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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	

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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.

23. **Low-flow Point Applicators.** Irrigation applicators with output less than 60 gallons per hour (gph).
24. **Low Water Use Plants.** Plants that do not need supplemental water beyond natural rainfall, or are so identified by a regulatory agency having jurisdiction.
25. **Microclimate.** The climate of a specific area in the landscape that has substantially differing sun exposure, temperature, or wind, than surrounding areas or the area as a whole.
26. **Microirrigation (low volume).** 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 spray irrigation, previously referred to as trickle irrigation, low volume, or low flow irrigation.
27. **Moderate Water Use Plants.** Plants that need supplemental water during seasonal dry periods.
28. **Moisture Sensing Device or Soil Moisture Sensor.** A device to indicate soil moisture in the root zone for the purpose of controlling an irrigation system based on the actual needs of the plant.
29. **Mulch.** Non-living, organic or synthetic materials customarily used in landscape design to retard erosion and retain moisture.
30. **Native Vegetation.** Any plant species with a geographic distribution indigenous to all, or part, of the State of Florida as identified in: Wunderlin, R. P. 1998. *Guide to the Vascular Plants of Florida*. University Press of Florida, Gainesville.
31. **Pervious Paving Materials.** A porous asphaltic, concrete or other surface and a high-void aggregate base which allows for rapid infiltration and temporary storage of rain on, or runoff delivered to, paved surfaces.
32. **Plant Bed.** A grouping of trees, shrubs, ground covers, perennials or annuals growing together in a defined area devoid of turfgrass, normally using mulch around the plants.
33. **Plant Communities.** An association of native plants that are dominated by one or more prominent species, or a characteristic physical attribute.
34. **Point of Connection (POC).** The location where an irrigation system is connected to a water supply.
35. **Planting Plan.** Specifications and installation details for plant materials, soil

- amendments, mulches, edging, gravel, and other similar materials.
36. **Pop-up Sprays.** Spray heads that pop up with water pressure and provide a continuous spray pattern throughout a given arc of operation.
 37. **Pressure Tank.** A pressurized holding tank for irrigation water coming from wells to minimize cycling of the water pump.
 38. **Pump Cycling.** Irrigation pump coming on and shutting off frequently during operation of irrigation systems.
 39. **Rain Sensor Device.** A low voltage electrical or mechanical component placed in the circuitry of an automatic irrigation system that is designed to turn off a sprinkler controller when precipitation has reached a pre-set quantity.
 40. **Runoff.** Water that is not absorbed by the soil or landscape and flows from the area.
 41. **Site Appropriate Plant.** A plant that after establishment, will thrive within the environmental conditions that are normal for a specific location without artificial supplements such as irrigation.
 42. **Soil Moisture Sensor.** See Moisture Sensing Device.
 43. **Soil Texture.** The classification of soil based on the percentage of sand, silt, and clay in the soil.
 44. **Turf and/or Turfgrass.** A mat layer of monocotyledonous plants such as Bahia, Bermuda, Centipede, Paspalum, St. Augustine, and Zoysia.
 45. **Valve.** A device used to control the flow of water in the irrigation system.
 46. **Water Use Zone.** See "Hydrozone".
 47. **"Xeriscape™" or "Florida-friendly landscape".** Quality landscapes that conserve water and protect the environment and are adaptable to local conditions and which are drought tolerant. The principles of Xeriscape™ include planning and design, appropriate choice of plants, soil analysis which may include the use of solid waste compost, efficient irrigation, practical use of turf, appropriate use of mulches, and proper maintenance. (Ref. 373.185 F.S.)

9. GENERAL PROVISIONS AND DESIGN STANDARDS

When the construction upon or the development of a new site or the redevelopment, reconstruction, upgrading, expansion or change in use of a previously developed site is such that site plan review by the (to be inserted by the Local Government) is required prior to the issuance of a building permit, the provisions of 9A-F of this ordinance shall be applied to

newly disturbed areas of such site. [**Guidance:** *It is intended that for expansion or remodeling of existing sites, only new or modified areas would be subject to these provisions.*]

A. Site Planning and Design

Site designs and landscape construction documents shall be prepared in accordance with the requirements of all applicable Florida Statutes. All landscape and irrigation system designs shall be consistent with the principles expressed in section 9F.

The site plan shall consider natural drainage features to minimize runoff. The use of pervious surfaces and areas is preferred, therefore impervious surfaces and materials within the landscaped area shall be limited to borders, sidewalks, step stones, and other similar materials, and shall not exceed (To be inserted by the local government) % of the landscaped area. Use of pervious paving materials is strongly encouraged, and relative imperviousness will be considered.

[Guidance: Site planning and design can affect the management and maintenance of lawns and landscapes. Some communities may wish to have detailed landscape construction documents submitted to and reviewed by the local building department. Due to the variation in local government organization, staff, and existing codes, it is not possible to develop specific language in these guidelines. As guidance, the word “should” is used in several areas below where “shall” may be more appropriate in an actual ordinance; Specific choices need to be made by the local government involved. If such plan reviews are desired, the following topics should be considered.

- *Site plans should identify all vegetated areas to be preserved.*
- *All invasive exotic plant species should be removed from each site prior to the beginning of construction. For purposes of determining plant species to remove, refer to Department of Agriculture and Consumer Services “Noxious Weeds” rule Chapter 5B-57, F.A.C.*
- *Gravel, river rock, shell and similar materials should not be used as a major landscape ground cover or mulch. In no case may these materials occupy over (To be inserted by the local government) % of the landscape surface area as they increase the need for herbicide use, have no habitat value, reflect rather than absorb heat, and do not produce oxygen like plants.*
- *The solar orientation of the property and its relationship to other properties should be considered as this may produce different microclimate exposures (e.g., sun vs. shade, southern vs. northern exposure, surrounded by heat-reflective surfaces, etc).*

If landscape construction documents are required, they should include, but not be limited to the following:

- *Location of all underground and overhead utilities;*
- *Existing and proposed trees, shrubs, ground covers and turf areas within the developed landscape area;*
- *Plants by botanical and common name, and where applicable, cultivar name; spacing,*

- and quantities of each type of plant by container size and by mature height and spread;*
- *Existing and proposed property lines, streets, street names and public utilities;*
- *Existing and proposed hardscape features such as driveway(s) and sidewalk(s) as necessary;*
- *Existing and proposed structures such as pool(s), fountain(s), fence(s) and retaining wall(s);*
- *Existing and proposed buildings;*
- *Indicate in a table the total square footage(s) of the various landscape hydrozones on the plan. If more than one water meter serves the site, the total hydrozone square footages of the various hydrozones must be identified with each Point of Connection (POC) and meter providing water service.*

Irrigation plans must be designed to recognize differential irrigation requirements of the landscape as described in Section F. It is suggested that As-Built construction documents be submitted prior to issuance of the Certificate of Occupancy, with a copy delivered to the homeowner. This will help to prevent later damage from digging by utility workers or the homeowner and assist the owner with understanding the system design. The irrigation plan should show the following:

- *Irrigation point(s) of connection and design capacity;*
- *Water service pressure at irrigation POCs;*
- *Water meter size;*
- *Reduced-pressure-principle backflow-prevention devices for each irrigation POC on potable water systems;*
- *Major components of the irrigation system, including all pumps, filters, valves, and pipe sizes and lengths.*
- *Precipitation rate expressed in inches per hour for each valve circuit. The preparer must attach to the Project Data Sheet the calculations for deriving precipitation rates for each irrigation valve circuit;*
- *Total flow rate (flow velocity not to exceed 5 feet per second) in gallons per minute (gpm) and operating pressure (psi) for each individual overhead and bubbler circuit, and gallons per hour (gph) and operating pressure for low-flow point irrigation circuit;*
- *Irrigation legend will have the following elements: Separate symbols for all irrigation equipment with different spray patterns and precipitation rates and pressure compensating devices; general description of equipment; manufacturer's name and model number for all specified equipment; recommended operating pressure per nozzle and bubbler and low-flow emitter; manufacturer's recommended overhead and bubbler irrigation nozzle rating in gallons per minute (gpm), or gallons per hour (gph) for low flow point applicators; minimum (no less than 75% of maximum spray radius) and maximum spray radius per nozzle; and manufacturer's rated precipitation rate per nozzle at specified psi;*
- *Recycled-water piping and guidelines as required; Reclaimed or non-potable water should be used for irrigation if an acceptable source is determined to be available by the (City/County) Engineer.*
- *Identify location of rain shut-off devices or soil moisture sensors.*

- *The irrigation system must take any existing slopes over 10% into account.*

If a grading plan is desired, it shall indicate all finish grades, spot elevations as necessary, drainage, and existing and new contours within the developed landscape area.]

B. Soils

Soils vary from site to site and even within a given site. Soil analysis information is needed for proper selection of plants and, if needed, soil amendments. A soil analysis based on random sampling is required and will be performed by a reputable soil testing lab or University of Florida/IFAS Cooperative Extension facility.

[Guidance: If a landscape design is required, a soil analysis satisfying the following conditions shall be submitted:

- *Determination of soil texture, indicating the percentage of organic matter.*
- *Measurement of pH, and total soluble salts.*
- *Estimated soil infiltration rate.]*

Existing horticulturally suitable topsoil shall be stockpiled and re-spread during final site grading.

Any new soil required shall be similar to the existing soil in pH, texture, permeability, and other characteristics, unless convincing evidence is provided that a different type of soil amendment approach is justified.

The use of solid waste compost as a soil amendment is encouraged where it is appropriate.

C. Standards for land clearing and preservation of native vegetation

This section shall apply to all development permitted upon approval of this regulation. Parcels or lots independent of larger developments that are less than X acres (to be determined by local govt.) in size shall not be subject to these set-aside requirements. Individual single-family lots are exempt from this requirement; however, single family and planned unit developments are not exempt. Tree preservation ordinances and all other landscape requirements shall remain applicable to all development as described in the tree preservation and landscape ordinances.

This ordinance mandates a total of X% percent of a site planned for development be set aside for preservation. When clearing, X% (to be determined by local govt.) of the native vegetation on the site shall be preserved. If vegetation is not present on site, established open space zoning and landscape ordinance criteria shall be followed.

Vegetation that is set aside for preservation shall be protected from all on-site construction. Protective barriers shall be installed along the perimeter of all preserve

areas. Protective barriers shall be constructed at such intervals to prevent machinery from passing between them. No equipment or materials shall be permitted to be stored within the set-aside areas, and dumping of excess soil, liquids, or any other construction debris within the preservation areas is prohibited. Removal or re-grading of soils within preservation areas is prohibited. Any damaged vegetation within the set-aside areas shall be replaced with vegetation equivalent to the vegetation destroyed before any certificates of occupancy or other approvals may be issued

Utilities, stormwater easements and right-of-ways are exempt but should avoid preserved areas. Although not specifically required, creative alternatives to common practice in these areas may be eligible for incentives.

Areas that are considered to be of *high ecological importance* should be given highest priority for protection. These areas include, but are not limited to, areas that have occurrences of federal and state listed species of flora and fauna, areas of high biological diversity, and areas that are in aquifer recharge zones.

If more than one native terrestrial plant community is present on the site, areas representing all existing plant communities shall be preserved onsite unless preserving more of one particular community is more ecologically beneficial.

High-quality areas placed in preservation shall be retained in entirety, in their current or improved natural state, and protected into perpetuity regardless of ownership. This requirement may be negotiated to create contiguous preservation among plant communities. The developer shall prove to the reviewer, through exhibits provided during the site approval process, that the highest ecologically valued land is being retained first in order to satisfy the set-aside requirement. If the preservation of the highest ecologically valued land produces undue burden on the development of the property, it is also the developer's responsibility to prove such hardship and provide an acceptable alternative for approval.

Areas set aside for preservation should be contiguous parcels of land that are interconnected and considered viable habitat for wildlife to the extent practical. Small fragmented areas of preservation should be avoided when possible.

Rights-of-way and areas determined to be future rights-of-way in the comprehensive plan, and utility or drainage easements shall not be allowed as designated set-aside areas.

D. Appropriate Plant Selection, Location, and Arrangement

Plant selection should be based on the plant's adaptability to the existing conditions present at the landscaped area and native plant communities, particularly considering appropriate hardiness zone, soil type and moisture conditions, light, mature plant size, desired effect, color and texture. Plant species that are drought and freeze tolerant are preferred. For purposes of determining prohibited and controlled plant species refer to

the Department of Agriculture and Consumer Services rule, Chapter 5B-57 Florida Administrative Code. Plants named in this rule may not be used except as allowed in Chapter 5B-57.

Plants shall be grouped in accordance with their respective water and maintenance needs. Plants with similar water and cultural (soil, climate, sun, and light) requirements shall be grouped together. The water use zones (hydrozones) shall be shown on the irrigation, layout, and planting plans (where required). Where natural conditions are such that irrigation is not required, the presence of site appropriate plants shall not be considered a high water use hydrozone.

The combined size of all high water use hydrozones shall be limited to X% (to be determined by local govt.) of the total landscaped area. In landscapes irrigated with recycled water, the allowable size of all high water-use zones shall be increased to not more than X% (To be determined by local government.) of the total landscaped area. These high water-use limits do not apply to landscaped areas requiring large amounts of turf for their primary functions, e.g., ballfields and playgrounds.

E. Turf Areas

The type and location of turf areas shall be selected in the same manner as with all the other plantings. Irrigated turf areas, as opposed to non-irrigated turf areas, are considered to be a high water use hydrozone. Irrigated turf shall not be treated as a fill-in material but rather as a planned element of the landscape. Turf shall be placed so that it can be irrigated using separate zones. While turf areas provide many practical benefits in a landscape, how and where it is used can result in a significant reduction in water use.

Irrigated turfgrass areas shall be consolidated and limited to those areas on the site that receive pedestrian traffic, provide for recreation use, provide cover for septic tank drainfields and required drainfield reserve areas, or provide soil erosion control such as on slopes or in swales; and where turfgrass is used as a design unifier, or other similar practical use. No turfgrass that requires mowing shall be allowed on slopes greater than 4:1 or within 6 feet of the waters edge, except where adjacent to seawalls and bulkheads or needed to control erosion. Turf areas shall be identified on the landscape plan (where plan is required).

One of the most common reasons for turf failure is over-irrigation. Irrigation systems shall be designed and operated in accordance with section F.

F. Efficient Irrigation

If an irrigation system is desired, it shall be designed and constructed in accordance with the technical standards contained in Appendix F of the plumbing volume of the Florida Building Code or Florida Irrigation Society (FIS) Standards, and operated and maintained according to the *Florida Green Industries Best Management Practices for Protection of*

Water Resources in Florida (2002) or (for homeowners) the *Florida Yards and Neighborhood* program. [**Guidance:** *Use only if this optional provision (Appendix F) of the building code or FIS standards have been adopted by local government, otherwise construction and design also per the BMPs*]. Water can be conserved through the use of a properly designed and managed irrigation system. Irrigation scheduling information, with instructions for seasonal timer and sensor changes, shall be provided to the owner at the time of installation. An irrigation valve site map detailing valve locations, gallons per minute demands, precipitation rates, plant types within valve circuits, and operating pressure requirements for each valve shall be developed. This map 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.

The irrigation system shall be designed to correlate to the organization of plants into zones as described in (C) above. The water use zones shall be shown on the Irrigation Plan (where plan is required). All plants (including turf) require watering during establishment. Temporary facilities may be installed to facilitate establishment.

Irrigation must also be conducted in accordance with WMD restrictions.

Moisture sensing and/or rain shut-off switch equipment shall be required on automatic irrigation systems to avoid irrigation during periods of sufficient soil moisture. Said equipment shall consist of an automatic mechanical or electronic sensing device or switch that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.

The installation of tracer wire along main lines and laterals is strongly encouraged to permit easy location and prevent inadvertent cutting of pipes.

If the water supply for the irrigation system is from a well, a constant pressure flow control device or pressure tank with adequate capacity shall be required to minimize pump "cycling".

Check valves must be installed at irrigation heads as needed to prevent low head drainage and puddling.

Nozzle precipitation rates for all heads within each valve circuit must be matched to within 20% of one another.

No water spray from irrigation systems shall be applied under roof overhangs.

Irrigated areas shall not be less than 4 feet wide, except when next to contiguous property or using micro or drip irrigation.

A pressure-regulating valve shall be installed and maintained if static service pressure exceeds 80 pounds per square inch. The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and set at not more than 50 pounds per square inch when measured at the most elevated fixture in the structure served. This requirement may be waived if satisfactory evidence is

provided that high pressure is necessary in the design and that no water will be wasted as a result of high-pressure operation. *[Guidance: The purpose of this requirement is twofold, to protect against system failure during pressure surges, and to avoid wasted water due to operation of the system significantly above commonly used design values.]*

G. Yard Waste Management, Composting and Use of Mulches

Yard wastes shall not be disposed of or stored by shorelines, in ditches or swales, or near storm drains. *[Guidance: Yard wastes release nutrients as they decompose which may pollute the receiving water. Improper disposal of yard wastes can also contribute to flooding by causing stormwater runoff to backup in drainage systems. In addition, improper disposal may lead to spreading of invasive plants to new areas.]*

Shredded yard clippings and leaves should be used for mulch or be composted for use as fertilizer. However, diseased material should not be mulched and should be properly disposed of to avoid spreading disease.

Composting of yard wastes provides many benefits and is strongly encouraged. The resulting materials are excellent soil amendments and conditioners. Other recycled solid waste products are also available and should be used when appropriate. *[Guidance: Most Florida communities have these programs at their landfill. Incentives may be created to encourage their use, such as a tonnage credit for dumping based on use of composted material.]*

Grass clippings are a benefit to lawns, replacing nutrients drawn from the soil and as mulch that helps retain moisture, lessening the need to irrigate. Grass clippings should be left on your lawn. Mulching mowers are recommended, because the grass clippings are chopped very finely by special blade and shroud configurations. If a conventional mower equipped with a side discharge chute is used, the following practices should be employed. When mowing near the shoreline, direct the chute away from the waterbody. When mowing upland areas, direct the chute back onto the yard, not onto the road or driveway.

Mulches applied and maintained at appropriate depths in planting beds assist soils in retaining moisture, reducing weed growth, and preventing erosion. Mulch can also be used in places where conditions aren't adequate for or conducive to growing quality turf or ground covers. Mulches are typically wood bark chips, wood grindings, pine straws, nut shells, small gravel, and shredded landscape clippings.

A layer of organic mulch 3" deep shall be specified on the landscape plans in plant beds and around individual trees in turfgrass areas. Use of byproduct or recycled mulch is recommended. Mulch is not required in annual beds. Mulch rings should extend to at least 3 feet around freestanding trees and shrubs. All mulch should be renewed periodically. Mulches should be kept at least 6 inches away from any portion of a building or structure, or the trunks of trees. Plastic sheeting and other impervious materials shall not be used under mulched areas.

H. Fertilizer Management

All applications of fertilizer, other than by private homeowners on their own property, should (*shall*) be made in accordance with the most current version of the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida* and recommendations of the University of Florida Cooperative Extension Service.

[Guidance: Re: should/shall. BMPs are written to be voluntary practices. In certain cases, local governmental bodies may deem it necessary to mandate practices in environmentally sensitive areas. This is a local decision.]

Private homeowners are encouraged to utilize the recommendations of the University of Florida IFAS *Florida Yards and Neighborhoods* program and the University of Florida IFAS Fact Sheet ENH-860.

I. Pesticide Management

All landscape applications of pesticides for hire should be made in accordance with State and Federal Law and with the most current version of the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida*. *[Guidance: The use of “should” in the preceding sentence is required, because “shall” would create a violation of 487.051(2), Florida Statutes. Regulation of Pesticides is Pre-empted to the Florida Dept. of Agriculture and Consumer Services (FDACS) by state law.]*

Property owners and managers are encouraged to use an Integrated Pest Management Strategy as currently recommended by the University of Florida Cooperative Extension Service publications.

When utilizing pesticides, all label instructions are state and federal law and must be adhered to. **The Florida Department of Agriculture and Consumer Services is responsible for enforcement of pesticide laws.**

J. Landscape and Irrigation Maintenance

[Guidance: Proper landscape and irrigation maintenance will preserve and enhance a quality landscape and help to ensure water-efficiency.]

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.

Landscape maintenance for hire should be performed in accordance with recommendations in the *Florida Green Industries Best Management Practices for Protection of Water Resources in Florida*.

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