Model
Water Efficient Irrigation and Landscape Ordinance
Developed
For
Tampa Bay Water Member Governments

Draft 10/02/2001

Section I. Purpose

The purpose of this ordinance is to ensure efficient water use by establishing minimum standards for landscape and irrigation design, recognizing the Tampa Bay watersheds' climate, soils, water resources, land use, and resource planning. Implementation will aid in improving environmental quality and water use efficiency in the Tampa Bay region. Creative site development concepts shall be used in order to promote water conservation. Water requirements may be reduced by providing for:

- The preservation of existing plant communities;
- The use of site specific plant materials;
- The use of pervious paving materials;
- The use of water efficient irrigation; and
- Other environmentally sensitive site development concepts,
- Utilization of applicable best management practices.

Section II. Applicability

A. Compliance with these regulations is required of all office, commercial, industrial, institutional, multi-family, and single-family sites in the following categories:

1. New construction.
2. Newly irrigated landscaped and turf areas.

3. Sports fields, golf courses, cemeteries, and stormwater management systems are exempt from the turf area limitation and micro-irrigation requirements of this ordinance where functional need for turf is demonstrated. All other irrigation and landscape requirements of this Ordinance apply.

A. Alternate methods of compliance may by considered as long as they meet the intent and purpose of this Ordinance.

Section III. Irrigation

The Florida Irrigation Society (FIS) Standards (third edition, February 1996, as amended) should be used for all irrigation design and installation procedures, except where the requirements of this Ordinance supersede the FIS Standards.

Irrigation Zone Design – A site plan, at a readable and defined scale, shall be submitted illustrating the proposed irrigation zones, delineating micro-irrigation zones and areas utilizing irrigation techniques other than micro-irrigation. Fifty (50) percent of the on-site green space shall be allowed to utilize irrigation techniques other than micro-irrigation. Turf areas shall be on separate irrigation zones from other landscape plant zones. The irrigation system should be designed to accommodate separate landscape plant zones based on differing water requirements.

Spacing – Sprinkler spacing shall not exceed 55 percent of the sprinklers' diameter of coverage.

Separate Sprays and Rotors – Sprays and rotors shall not be combined on the same control valve circuit.

Matched Precipitation Rates – Sprays and rotors shall have matching application rates within each irrigation zone.

Overspray/Runoff – All irrigation systems shall be designed to avoid overspray, runoff, low head drainage, or other similar conditions where water flows onto or over adjacent property, non-irrigated areas, walkways, roadways, structures, or water features. Narrow areas (four feet wide or less) shall not be irrigated unless micro-irrigation is utilized.

Control Equipment – Irrigation control equipment shall include an automatic irrigation controller having program flexibility such as repeat cycles and multiple program capabilities. Automatic irrigation controller(s) shall have battery back-up to retain the irrigation program(s). Automatic control systems shall be equipped with an operable rain sensor device.

Section IV. Landscape

Landscape Plan – Using the concept of a "Florida Friendly Landscape" or Xeriscape™, a site plan shall be submitted identifying all existing vegetation to be preserved, proposed turf, and other landscape areas. Installed trees and plants should be grouped together into landscape plant zones according to water and cultural (soil, climate and light) requirements. Plant groupings based on water requirements are as follows: natural, drought tolerant, and oasis.

Turf/Turfgrass - A maximum of 50% of greenspace may be planted with turfgrass configured with a permanent irrigation system. Turfgrass planted in excess of this limitation shall not have a permanent irrigation system. Micro-irrigation shall not be used on turfgrass.

Mulch – A layer of mulch to a minimum depth of three (3) inches shall be specified on the site plan in plant beds and around individual trees in turf areas. Organic mulches are preferred. The

mulch should not be placed directly against the plant stem or tree trunk. Mulch shall not be required in annual beds.

Section V. Maintenance and Management

The landscape and irrigation system shall be maintained and managed to ensure water efficiency, and prevent wasteful practices. This should include, but not be limited to, resetting the automatic controller according to the season, flushing the filters, testing the rain sensor device, monitoring, adjusting, and repairing irrigation equipment such that the efficiency of the system is maintained; replenishing mulch, utilizing turf and landscape best management practices.

Section VI. Definitions

Annual beds – Any landscape where the majority of plants are replaced yearly or more frequently.

Automatic Irrigation Controller – A timer, capable of operating solenoid valves, to set days and lengths of time for proper application of water, in each irrigation zone.

Best Management Practices (BMP's) – Irrigation, lawn, and landscape practices designed to reduce negative impacts on the environment and promote water conservation.

Drought Tolerant Plants – Plants, once established, that survive on natural rainfall with occasional irrigation during dry periods.

Emitter – A device that applies irrigation water. This term is primarily used to refer to the low flow rate devices used in micro-irrigation systems.

Green Space – The entire parcel less the building footprint, driveways, vehicular use areas, hardscapes such as decks, swimming pools, decorative fountains, patios, and other non-porous areas. Stormwater management systems, and wetland conservation areas, lakes, rivers and creeks are excluded in the calculation of green space area.

Irrigation System – A permanent watering system designed to transport and distribute water to plants as a supplement to natural rainfall.

Irrigation Zone – A control valve circuit containing emitters and/or sprinklers with consistent application rates.

Landscape Plant Zone – A grouping of plants with similar water and cultural (sunlight, soil, etc.) needs. Plant groupings based on water use are as follows: natural plants, drought tolerant plants, and oasis plants.

Micro-Irrigation – An irrigation system with a maximum flow rate per emitter of 30 gallons per hour or less. These systems are not approved for turfgrass applications.

Mulch – Any material applied to the soil surface to retain soil moisture, control erosion, inhibit weeds, and/or regulate soil temperatures.

Natural Plants – Plants, once established, that survive on rainfall without irrigation.

Oasis Plants – Plants, once established, requiring frequent irrigation.

Overspray – Water that is delivered beyond the landscape area wetting pavements, walks, structures, or other non-landscaped areas.

Rain Sensor Device – A calibrated device that is designed to measure rainfall and override the irrigation cycle of the irrigation system when a pre-determined amount of rainfall has

occurred. The suggested setting of the rain sensor device for shutoff, as per the University of Florida's Institute of Food and Agricultural Sciences (IFAS), is ½ to ¾ inch.

Runoff – Water, not absorbed by the soil, that flows from the area.

Turf and/or Turfgrass – Continuous plant coverage consisting of grass species appropriately suited to the site where it is planted.

Water Features – features of a site that hold water temporarily or permanently. These may include both natural features (lakes, wetlands, rivers, creeks, etc.), or artificial features (retention and detention ponds, fountains, ditches and canals.)

Xeriscape™ or Florida Friendly Landscape – (as provided for in § 373.185 Florida Statutes) 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.