

ORDINANCE NO. 732

ORDINANCE OF THE CITY COUNCIL OF THE TOWN OF HILLSBOROUGH AMENDING CHAPTER 15.29 OF THE HILLSBOROUGH MUNICIPAL CODE REVISING WATER CONSERVATION IN LANDSCAPE REQUIREMENTS

THE CITY COUNCIL OF THE TOWN OF HILLSBOROUGH DOES HEREBY ORDAIN as follows:

Section 1. Chapter 15.29 of the Hillsborough Municipal Code is hereby amended in its entirety to read as follows:

15.29.10 Purpose

The purpose of this chapter is to establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in applicable new construction and rehabilitated projects and to establish provisions for water management practices and water waste prevention for existing landscapes, pursuant to California State Assembly Bill 1881, Section 65597, "The Water Conservation in Landscaping Act".

15.29.20 Applicability

- A. The provisions of this Ordinance shall apply to all of the following landscape projects:
- i. Tier 1 Landscapes: All new construction, "tear downs" (as defined in Section 2.12.070) and rehabilitated landscapes with irrigated landscape areas between 2,500 square feet and 5,000 square feet requiring a building or landscape permit, plan check or design review, or requiring new or expanded water service.
 - ii. Tier 2 Landscapes: All new construction, "tear downs" (as defined in Section 2.12.070) and rehabilitated landscapes with irrigated landscape areas greater than 5,000 square feet requiring a building or landscape permit, plan check or design review or requiring new or expanded water service.
 - iii. Existing landscapes, shall only be subject to the provisions for existing landscapes provided for in Section 15.29.130 "Provisions for Existing Landscapes Over One Acre in Size;" and
 - iv. Any landscape renovation, restoration, or new construction where there is natural lawn, turf, or grass area greater than 2500 square feet.
 - v. For landscapes under 5,000 square feet or projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 10,000 square feet of landscape and meets the lot or parcel's landscape requirement (Estimated Total Water Use) entirely

with treated or untreated graywater or through stored rainwater captured on site is subject only to the Town's Prescriptive Compliance Option.

vi. Requirements of Section 13.16.035 of this Code regarding mandatory conservation for new landscapes requiring a building permit apply.

B. The provisions of this Ordinance shall not apply to:

- i. Landscapes, or portions of landscapes, that are only irrigated for an establishment period;
- ii. Registered local, state or federal historical sites where landscaping establishes a historical landscape style, as determined by a public board or commission responsible for architectural review or historic preservation;
- iii. Ecological restoration or mined-land reclamation projects that do not require a permanent irrigation system; or
- iv. Community gardens or plant collections, as part of botanical gardens and arboretums open to the public, agricultural uses, commercial nurseries and sod farms.

15.29.30 Definitions

- A. "applied water" means the portion of water supplied by the irrigation system to the landscape.
- B. "automatic irrigation controller" means an automatic timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.
- C. "backflow prevention device" means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.
- D. "certified irrigation designer" means a person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.
- E. "certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency's WaterSense Landscape Irrigation Certification Program, the Irrigation Association's certified landscape water conservation professional programs and

the California Landscape Contractors Association's Certified Water Manager Program.

- F. "certified professional" or "authorized professional" means a certified irrigation designer, a certified landscape irrigation auditor, a licensed landscape architect, a licensed landscape contractor, a licensed professional engineer, or any other person authorized by the state to design a landscape, an irrigation system, or authorized to complete a water budget.
- G. "conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year
- H. "drip irrigation" means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.
- I. "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
- J. "effective precipitation" or "usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.
- K. "establishment period" means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth.
- L. "Estimated Total Water Use" (ETWU) means the total water used for the landscape as described in Section VIII "Water Budget Calculations."
- M. "ET adjustment factor" (ETAF) means a factor of 0.55 for residential and .45 for non-residential areas, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing non-rehabilitated landscapes shall not exceed 0.8.
- N. "evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.
- O. "flow rate" means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.
- P. "hardscapes" means areas located beneath a roof or covered by manufactured, non-plant pervious or impervious materials.

- Q. "hydrozone" means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.
- R. "invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. "Noxious weeds" means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.
- S. "irrigation audit" means an in-depth evaluation of the performance of an irrigation system. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule.
- T. "irrigation efficiency" (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average irrigation efficiencies for purposes of this Ordinance are .75 for overhead spray devices and .81 for drip systems.
- U. "irrigation survey" means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.
- V. "irrigation water use analysis" means an analysis of water use data based on meter readings and billing data.
- W. "landscape architect" means a person who holds a license to practice landscape architecture in California as further defined by the California Business and Professions Code, Section 5615.
- X. "landscape" and "landscape area" means all the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or impervious hardscapes, other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation), agricultural uses, commercial nurseries and sod farms.
- Y. "landscape contractor" means a person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.
- Z. "landscape project" means the total area comprising the landscape area, as defined in this Ordinance.

- AA. "lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.
- BB. "low volume irrigation" means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines, and bubblers.
- CC. "low water use plant" means a plant species whose water needs are compatible with local climate and soil conditions. Species classified as "very low water use" and "low water use" by WUCOLS, having a regionally adjusted plant factor of 0 to 0.1 for very low water using plants, 0.1 through 0.3, shall be considered low water use plants. "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in "Water Budget Calculations."
- DD. "mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.
- EE. "mulch" means any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature, and preventing soil erosion.
- FF. "new construction" means the construction of a new building or structure containing a landscape or other new land improvement, such as a park, playground, or greenbelt without an associated building.
- GG. "no-water using plant" means a plant species with water needs that are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established.
- HH. "operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
- II. "overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).
- JJ. "overspray" means the irrigation water which is delivered beyond the target area.
- KK. "permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.
- LL. "pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

- MM. “plant factor” or “plant water use factor” is a factor, when multiplied by ETo, estimates the amount of water needed by plants.
- NN. “precipitation rate” means the rate of application of water measured in inches per hour.
- OO. “project applicant” means the individual or entity submitting a Project Landscape Application required under Section VI, to request a permit, plan check, design review, or new or expanded water service from the Town of Hillsborough. A project applicant may be the property owner or his or her designee.
- PP. “rain sensor” or “rain sensing shutoff device” means a component which automatically suspends an irrigation event when it rains.
- QQ. “recreational area” means areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.
- RR. “reference evapotranspiration” or “ETo” means a standard measurement of environmental parameters which affect the water use of plants.
- SS. “rehabilitated landscape” means any re-landscaping project that requires a permit, plan check, design review, or requires a new or expanded water service application.
- TT. “runoff” means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area.
- UU. “soil moisture sensing device” or “soil moisture sensor” means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.
- VV. “Special Landscape Area” (SLA) means an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, and golf courses, where turf provides a playing surface.
- WW. “sprinkler head” means a device which delivers water through a nozzle.
- XX. “station” means an area served by one valve or by a set of valves that operate simultaneously.
- YY. “turf” means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, and Buffalo grass are warm-season grasses. Turf shall be considered a high water use plant.
- ZZ. “valve” means a device used to control the flow of water in the irrigation system.

- AAA. "water feature" means a design element where open water performs an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied).
- BBB. "WUCOLS" means the current version of the Water Use Classification of Landscape Species current edition published by the University of California Cooperative Extension, the Department of Water Resources.
- CCC. "Soil Survey" means a soil analysis and grading report", including a date, signature, and license number of the preparing professional, undertaken for the purpose of assisting the applicant in reviewing existing conditions at their project site evaluating opportunities to maximize water savings benefits, consistent with a form prescribed by the Town.

15.29.40 Water Conservation in Landscaping Ordinance Requirements

- A. All owners of new construction and rehabilitated landscapes of applicable sizes shall: (1) complete the Landscape Project Application and (2) comply with the Landscape and Irrigation Maintenance Schedule requirements of this Ordinance.
- B. All owners of existing landscapes over one acre in size, even if installed before enactment of this Ordinance, shall: (1) comply with Town programs that may be instituted relating to irrigation audits, surveys and water use analysis, and (2) shall maintain landscape irrigation facilities to prevent water waste and runoff, and shall comply with Statewide and local conservation and reduction requirements.

15.29.50 Compliance with Ordinance

- A. The Town shall:
- i. Provide the project applicant with the Ordinance and Landscape Project Application requirements and the procedures for permits, plan checks, design reviews, or new or expanded water service;
 - ii. Review the Landscape Project Application submitted by the project applicant;
 - iii. Approve, conditionally approve, or deny the project applicant's Landscape Project Application submittal;
 - iv. Issue or approve a permit, plan check or design review that complies with the approved landscape project application or approve a new or expanded water service application that complies with the approved Landscape Project Application.
- B. The project applicant shall:

- i. Prior to construction, submit all portions of the Landscape Project Application, except the Landscape Audit Report, to the Town's Planning/Building Department; and
- ii. After construction, submit the Landscape Audit Report portion of the Landscape Project Application to the Building Division.

15.29.60 Landscape Project Application

A. The elements of a landscape must be designed to achieve water efficiency and comply with the criteria described in this Ordinance. In completing the Landscape Project Application, project applicants may choose one of two options to demonstrate that the landscape meets the Ordinance's water efficiency goals. Regardless of which option is selected, the applicant must complete and comply with all other elements of the Ordinance. The options include:

i. Planting restrictions:

- a. Landscapes shall not use turf or high water using plants unless, the project applicant develops a site-specific water budget and the ETWU of the landscape area does not exceed the MAWA; and
- b. At least 80% of the plants in non-turf landscape areas shall be low-water or no-water using plants, unless the project applicant develops a site-specific water budget and the ETWU of the landscaped area does not exceed the MAWA; or the

ii. Water budget calculation option pursuant to Section 15.29.80.

B. The Landscape Project Application shall include the following elements:

- i. Project Information;
- ii. Outdoor Water Use Efficiency Checklist;
- iii. Water budget calculations, if applicant selects to use a water budget approach rather than comply with the turf area limitations or specified plant type restrictions;
- iv. Landscape and Irrigation System Design Plans; and
- v. Landscape Audit Report for Tier 2 projects.
- vi. Soil Survey for Tier 2 projects

15.29.70 Outdoor Water Use Efficiency Checklist

The Town of Hillsborough has developed an Outdoor Water Use Efficiency Checklist (Checklist), based on the criteria described below. For Tier 1 projects, either the project applicant or a certified or authorized professional shall complete the Checklist and submit it to the Town of Hillsborough along with the Landscape and Irrigation Design Plan. For Tier 2 projects, the Checklist shall be completed by a certified or authorized professional and submitted to the Town of Hillsborough along with the Landscape and Irrigation Design Plan.

A. Plant Material

- i. Each hydrozone shall have plant materials with similar water use that are selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.
- ii. Landscapes shall not use turf or high water using plants unless the project applicant develops a site-specific water budget and the ETWU of the landscape area does not exceed the MAWA; and
- iii. Turf shall not be planted on slopes greater than 15% and in areas that are less than eight feet wide, unless irrigated with subsurface irrigation or a low volume irrigation system.
- iv. At least 80% of the plants in non-turf landscape areas shall be low-water or no-water using plants, unless the project applicant develops a site-specific water budget and the ETWU of the landscaped area does not exceed the MAWA.
- v. A defensible space around a building or structure is required in wildland urban interface areas per Public Resources Code Section 4291 (a) and (b).
- vi. Fire-prone plant materials and highly flammable mulches should be avoided.
- vii. The use of invasive and/or noxious plant species is strongly discouraged.
- viii. The architectural guidelines of a common interest development shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

B. Mulch

A minimum three-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting ground covers, or direct seeding applications where mulch is contraindicated.

C. Irrigation System

An irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related

components shall be planned and designed to allow for proper installation, management, and maintenance.

- i. Dedicated landscape water meters and California State approved backflow devices shall be required for new construction with landscape areas greater than 5,000 square feet.
- ii. Tier 2 Landscapes are required to have automatic irrigation controllers that utilize either evapotranspiration or soil moisture sensor data for irrigation scheduling.
- iii. Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems.
- iv. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions.
- v. Low-volume irrigation is required in mulched areas, in areas with slope greater than 15%, or in narrow or irregularly shaped areas that are less than eight feet in width in any direction.
- vi. Overhead irrigation shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:
 - a. the landscape area is adjacent to permeable surfacing and no runoff occurs; or
 - b. the adjacent non-permeable surfaces are designed and constructed to drain entirely to the landscaping; or
 - c. the irrigation designer specifies an alternative design or technology, as part of the Landscape Design Plan and clearly demonstrates that overspray and runoff will be avoided. Prevention of overspray and runoff must be confirmed during the irrigation audit.
- vii. Average irrigation efficiency is assumed to be 75% for overhead spray and 81% for drip systems; for the purposes of calculating Estimated Total Water Use in Water Budget calculations. Irrigation systems shall be designed, maintained, and managed to meet or exceed these irrigation efficiencies.

- viii. Irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m., unless unfavorable weather prevents it or otherwise renders irrigation unnecessary.
- ix. Tier 2 Landscapes are required to have pressure regulators and master shut-off valves.
- x. Tier 2 Landscapes are required to have flow sensors that detect and report high flow conditions due to broken pipes and/or popped sprinkler heads for landscaped areas greater than 5,000 square feet.

D. Hydrozone

- i. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
- ii. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.
- iii. Where feasible, trees shall be irrigated by separate valves from shrubs, groundcovers, and turf.
- iv. Individual hydrozones that mix plants with different water uses may be allowed if a water budget is performed, and the plant factor calculation is based on the proportion of the respective plant water uses or the plant factor of the higher water using plant is used.

E. Water Features

- i. Recirculating water systems will be used for water features.
- ii. The wet surface area of a water feature will not exceed 10% of the softscape area, as defined in Hillsborough Municipal Code Section 17.32.060(A)(3), and will be counted as a high-water using plant for purposes of a water budget calculation.
- iii. Pool and spa covers are required on any newly constructed pool or spa. The surface area of a pool or spa equipped with a cover will be counted as a moderate-water using plant for purposes of a water budget calculation.

F. Soil Amendments

Soil amendments, such as compost, shall be incorporated according to the soil conditions at the project site and based on what is appropriate for the selected plants.

Project applicant may elect to complete a water budget calculation for the landscape project. A Tier 1 water budget may be developed and completed by the project applicant. A Tier 2 water budget calculation must be completed by a certified or authorized professional. Water budget calculations, if prepared, shall adhere to the following requirements:

- A. The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR). The plant factor ranges from 0 to 0.1 for very low water using plants, 0.1 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.
- B. Requests to adjust a plant's WUCOLS listed plant factor, due to site-specific microclimate conditions, will be considered on a case-by-case basis by the building official. Requests to adjust a plant factor shall be prepared by a certified or authorized landscape professional, submitted in writing with the Water Budget and detailed on the submitted Landscape Design Plan. The certified professional will describe the site conditions, irrigation design, irrigation schedule and other considerations that support the request for the plant factor adjustment. The conditions in the submitted request will be confirmed by an authorized professional during the irrigation audit. Plant factor adjustments not supported by the irrigation audit will revert to their WUCOLS listed plant factor.
- C. The wet surface areas of all non-covered water features shall be included in the high water use hydrozone, and temporarily irrigated areas shall be included in the low water use hydrozone. The covered, wet surface areas of pools and spas equipped with covers shall be included in the medium use hydrozone.
- D. All Special Landscape Areas (SLA) shall be identified and their water use included in the water budget calculations.
- E. The reference evapotranspiration adjustment factor (ETAF) for SLA shall not exceed 1.0. The ETAF for all other landscaped areas shall not exceed .55 for residential areas and 0.45 for non-residential areas.
- F. Maximum Applied Water Allowance (MAWA) shall be calculated using the equation below:

$$\text{MAWA} = (\text{ETo}) (0.62) [(.55 \times \text{LA}) + (.45 \times \text{SLA})] \text{ for residential areas.}$$

$$\text{MAWA} = (\text{ETo}) (0.62) [(.45 \times \text{LA}) + (.55 \times \text{SLA})] \text{ for non-residential areas.}$$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ETo = Reference Evapotranspiration (inches per year)

0.62 = Conversion Factor (to gallons)

0.55 = Reference Evapotranspiration Adjustment Factor (ETAF)

LA = Landscape Area including SLA (square feet)

0.45 = Additional Water Allowance for SLA

0.55 = Additional Water Allowance for SLA
SLA = Special Landscape Area (square feet)

- G. The Town or project applicant may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate the MAWA:

MAWA = (ET_o) (0.62) [(0.55 x LA) + (.45 x SLA)] for residential areas.
MAWA = (ET_o) (0.62) [(0.45 x LA) + (.55 x SLA)] for non-residential areas.

- H. Estimated Total Water Use (ETWU) will be calculated using the equation below. The sum of the ETWU calculated for all hydrozones will not exceed the MAWA.

$$ETWU = (ET_o)(0.62) \left(\frac{PF \times HA}{IE} + SLA \right)$$

Where:

ETWU = Estimated Total Water Use per year (gallons)
ET_o = Reference Evapotranspiration (inches) _____
PF = Plant Factor from WUCOLS (see Section 491)
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
0.75 = Irrigation Efficiency (IE) for overhead spray devices
0.81 = Irrigation Efficiency (IE) for drip system devices
SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor
IE = Irrigation Efficiency (minimum 0.70)

15.29.90 Landscape and Irrigation Design Plans

- A. Tier 1 Landscapes: The Landscape and Irrigation Design Plan may be prepared by, and bear the signature of, the project applicant, or that of a certified or authorized professional.
- B. Tier 2 Landscapes: The components of the Landscape and Irrigation Design Plan shall be prepared as follows:
- i. The landscape design portion shall be prepared by, and bear the signature of, a licensed landscape architect, licensed landscape contractor, or that of a certified or authorized professional; and
 - ii. The irrigation design portion shall be prepared by, and bear the signature of, a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or that of a certified or authorized professional.
- C. The landscape design portion of the Landscape and Irrigation Design Plan, at a minimum, shall:
- i. Delineate and label each hydrozone;

- ii. Identify each hydrozone as low, moderate, high water, or mixed water use;
- iii. Identify Special Landscape Areas (i.e., recreational areas; areas permanently and solely dedicated to edible plants; areas irrigated with recycled water);
- iv. Identify type of mulch and application depth;
- v. Identify type and surface area of water features, and any covers;
- vi. Identify hardscapes (pervious and impervious); and
- vii. Contain the following statement: "I have complied with the criteria of the Water Conservation in Landscaping Ordinance and applied them for the efficient use of water in the Landscape and Irrigation Design Plan."

D. The irrigation design portion of the Landscape and Irrigation Design Plan, at a minimum, shall contain:

- i. Location and size of water meter(s);
- ii. Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices;
- iii. Static water pressure at the point of connection to the public water supply;
- iv. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;
- v. Irrigation schedule;
- vi. The following statement: "I have complied with the criteria of the Water Conservation in Landscaping Ordinance and applied them accordingly for the efficient use of water in the Landscape and Irrigation Design Plan"

E. Grading

If the Landscape Project will be graded, then the grading shall be designed to minimize soil erosion, runoff, and water waste. All grading shall be conducted to:

- i. Maintain all irrigation and normal rainfall within property lines and avoid drainage on to impermeable hardscapes;
- ii. Avoid disruption of natural drainage patterns and undisturbed soil;

- iii. Avoid soil compaction in landscape areas; and
- iv. Be consistent with National Pollution Discharge Elimination System and other applicable grading requirements.

15.29.100 Landscape Audit Report

- A. Tier 1 Landscapes: Landscape irrigation audits for new or rehabilitated landscapes installed after the Ordinance effective date shall be conducted after the landscaping and irrigation systems have been installed. The audit may be conducted by the project applicant or by a certified landscape irrigation auditor.
- B. Tier 2 Landscapes: Landscape irrigation audits for new or rehabilitated landscapes installed after the Ordinance effective date shall be conducted by a local agency landscape irrigation auditor or a third party certified irrigation auditor after the landscaping and irrigation system have been installed.
- C. The Landscape Audit Report shall include, but is not limited to:
 - i. Inspection to confirm that the landscaping and irrigation system were installed as specified in the Landscape and Irrigation Design Plan, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule.
 - ii. Certification to confirm that testing was performed for infiltration rate; that soil texture was recorded; that soil color at depths of 2", 6", and 12" was recorded, and that toxic materials previously existing on-site were noted; and that remedial measures were employed to address each with results submitted to the building official.
 - iii. Certification to confirm that the approved grading plan was installed as designed, and meets criteria established by the building official.
- D. The Landscape Audit Report shall include the following statement: "The landscape and irrigation system has been installed as specified in the Landscape and Irrigation Design Plan and complies with the criteria of the Ordinance and the permit", with a date, signature, and license number of the report preparer.
- E. The Town shall administer on-going programs that may include, but not be limited to, post-installation landscape inspection, irrigation water use analysis, irrigation audits, irrigation surveys and water budget calculations to evaluate compliance with the MAWA.

15.29.110 Landscape and Irrigation Maintenance Schedule

Landscapes shall be maintained to ensure water use efficiency.

- A. A regular maintenance schedule shall include, but not be limited to, routine inspection; adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; weeding in all landscape areas; and removing obstructions to emission devices.
- B. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.
- C. A Project applicant is encouraged to implement sustainable or environmentally-friendly practices for overall landscape maintenance.

15.29.120 Stormwater Management

Stormwater best management practices shall be incorporated into the landscape and grading design plans to minimize runoff and to increase on-site retention and infiltration and shall be consistent with the National Pollution Discharge Elimination System and other applicable stormwater management requirements.

15.29.130 Provisions for Existing Landscapes Over One Acre in Size

This section shall apply to all existing landscapes that were installed before Ordinance effective date and are over one acre in size.

- A. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.
 - i. For landscapes that have a water meter, the Town shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the MAWA for existing landscapes. The MAWA for existing landscapes shall be calculated as:

$$\text{MAWA} = (0.8)(\text{ETo})(\text{LA})(0.62).$$
 - ii. For landscapes that do not have a meter, the Town shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.
 - iii. All landscape irrigation audits for existing landscapes that are greater than one acre in size shall be conducted by a certified landscape irrigation auditor.

B. Water Waste Prevention.

Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape due to low head

drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures.

15.29.140 Penalties

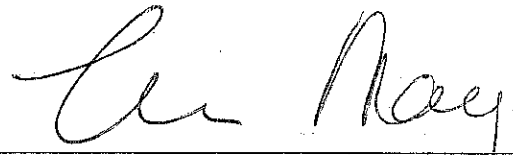
If the building official determines that the responsible party has not complied with this chapter, then the project shall be determined to be non-compliant, and the responsible party shall be subject to a penalty of up to ten times the permit fee, as set forth in Section 15.04.070 C.1.

15.29.150 Public Education

The Town shall provide information to all applicants regarding the design, installation, management, and maintenance of water-efficient landscapes and irrigation systems.

Section 2. If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held to be unconstitutional or otherwise invalid by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council of the Town of Hillsborough hereby declares that it would have adopted the remainder of this ordinance, including each section, subsection, sentence, clause, phrase, or portion irrespective of the invalidity of any other article, section, subsection, sentence, clause, phrase, or portion.

Section 3. This ordinance shall be printed and posted upon the three official bulletin boards of the Town of Hillsborough and shall be effective thirty days after adoption by the City Council.



Mayor of the Town of Hillsborough



Attest: City Clerk

ORDINANCE NO. 732 of the TOWN OF HILLSBOROUGH introduced on January 11, 2016, and adopted on February 8, 2016, by the following vote of the City Council:

AYES: Councilmembers May, Chuang, Benton, Christianson, Royse

NOES: Councilmembers None

ABSENT: Councilmembers None

ABSTAIN: Councilmembers None

