



CITY OF SAN JOSÉ, CALIFORNIA

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City Clerk

STATE OF CALIFORNIA)
COUNTY OF SANTA CLARA)
CITY OF SAN JOSE)

I, Toni J. Taber, City Clerk & Ex-Officio Clerk of the Council of and for the City of San Jose, in said County of Santa Clara, and State of California, do hereby certify that "**Ordinance No. 29671**", the original copy of which is attached hereto, was passed for publication of title on the **15th day of December, 2015**, was published in accordance with the provisions of the Charter of the City of San Jose, and was given final reading and adopted on the **12th day of January, 2016**, by the following vote:

AYES: CARRASCO, HERRERA, JONES, KALRA, KHAMIS, M. NGUYEN, T. NGUYEN, OLIVERIO, PERALEZ, ROCHA; LICCARDO.

NOES: NONE.


ABSENT: NONE.

DISQUALIFIED: NONE.

VACANT: NONE.

Said Ordinance is effective as of **12th day of February, 2016**.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of the City of San Jose, this **15th day of January, 2016**.

(SEAL) 

TONI J. TABER, CMC
CITY CLERK & EX-OFFICIO
CLERK OF THE CITY COUNCIL

/rmk

ORDINANCE NO. 29671

AN ORDINANCE OF THE CITY OF SAN JOSE AMENDING CHAPTER 15.11 OF TITLE 15 OF THE SAN JOSE MUNICIPAL CODE TO ADD AND AMEND DEFINITIONS, MODIFY LANDSCAPE INSTALLATION REQUIREMENTS, AND EXPAND THE TYPES OF PROJECTS SUBJECT TO LANDSCAPE INSTALLATION REQUIREMENTS, CONSISTENT WITH STATE REGULATIONS GOVERNING LOCAL LANDSCAPE WATER EFFICIENCY ORDINANCES

WHEREAS, the City of San José (“City”) first adopted water efficient landscape standards in 1994; and

WHEREAS, the California Water Conservation in Landscaping Act of 2006, Government Code Section 65591, et seq., (the “Act”), requires cities and counties, including charter cities and charter counties, to adopt landscape conservation ordinances; and

WHEREAS, the Act requires cities and counties to adopt the model ordinance contemplated by the Act (the “Model Ordinance”) or an equivalent document which is “at least as effective as” the Model Ordinance in addressing the efficient use of water in landscaping; and

WHEREAS, on April 30, 2013, the City adopted Ordinance No. 29243, amending its existing water efficient landscape standards to meet the requirements and guidelines of the Model Ordinance and to address certain policy and environmental goals related to the use of recycled water; and

WHEREAS, on April 1, 2015, California Governor Jerry Brown issued Drought Executive Order EO-B-29-15, directing the California Department of Water Resources to update the Model Ordinance through expedited regulation; and

WHEREAS, on July 15, 2015, the California Water Commission approved revisions to the Model Ordinance (the "Revised Model Ordinance"); and

WHEREAS, the regulations adopting the Revised Model Ordinance require local agencies to adopt the Revised Model Ordinance or an equivalent document which is "at least as effective as" the Model Ordinance in addressing the efficient use of water in landscaping; and

WHEREAS, the adoption and enforcement of this Ordinance is necessary to manage the City's potable water supply in the short and long-term, to avoid or minimize the effects of drought and water shortage within the City and is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare; and

WHEREAS, this Ordinance will make the San José Municipal Code consistent with the landscape requirements contained in the Revised Model Ordinance, and will also: 1) provide alternatives that allow landscape projects to meet water efficiency standards mandated by the Act; and 2) facilitate the use of recycled water; and

WHEREAS, the City Council finds and determines this Ordinance is "at least as effective as" the Revised Model Ordinance due to its consistency with the Revised Model Ordinance and the additional provisions which reflect the City's strong commitment to the use of recycled water in the City; and

WHEREAS, the City is the lead agency under CEQA (defined below) for the approval and adoption of this Ordinance, and the City Council is the decision-making body for the City in connection with the approval and adoption of this Ordinance; and

WHEREAS, pursuant to the provisions of the California Environmental Quality Act of 1970, together with state and local implementation guidelines and regulations, including

without limitation Title 21 of the San José Municipal Code, all as amended to date (collectively, "CEQA"), the environmental impacts resulting from the adoption of this Ordinance are described in that certain Final Program Environmental Impact Report prepared for the Envision San José 2040 General Plan, for which certain related findings were made by the City Council through its Resolution No. 76041, adopted on November 1, 2011, and Addenda thereto; and

WHEREAS, the City Council has considered the environmental impacts from the adoption of this Ordinance as described in the Envision 2040 San José General Plan Final Program Environmental Impact Report, together with its related Resolution No. 76041, and Addenda thereto as the CEQA clearance for this Ordinance project prior to taking any approval actions on this Ordinance;

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SAN JOSE:

SECTION 1. Section 15.11.020 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.020 Applicability

- A. The requirements of this Chapter shall apply to the following projects:
1. New Construction projects with a total Landscape Area equal to or greater than 500 square feet that require a Building Permit pursuant to the provisions of Title 24 of this Code or Development Permit pursuant to the provisions of Chapter 20.100 of Title 20 of this Code; or
 2. Rehabilitated Landscape projects with a total Landscape Area equal to or greater than 2,500 square feet that require a Building Permit pursuant to

the provisions of Title 24 of this Code or a Development Permit pursuant to the provisions of Chapter 20.100 of Title 20 of this Code.

- B. Notwithstanding the provisions of Subsection A above, the requirements of this Chapter shall not apply to:
1. Registered Historic Sites;
 2. Ecological Restoration Projects that do not require a permanent irrigation system;
 3. Hydraulic Mulch seeding (hydroseeding) for erosion/sedimentation control projects where a permanent irrigation system is not required;
 4. Mined-Land Reclamation Projects that do not require a permanent irrigation system;
 5. Community gardens, and existing plant collections as part of botanical gardens and arboretums open to the public; and
 6. The commercial cultivation of agricultural products including, but not limited to, products from farms, orchards, production nurseries, and forests.
- C. Notwithstanding the provisions of Subsection A above, only Sections 15.11.920, 15.11.1030 and 15.11.1040 shall apply to New Construction and Rehabilitated Landscape Projects within a cemetery.
- D. Notwithstanding the provisions of Subsection A above, only Section 15.11.900.B.1.e shall apply to projects with less than 2,500 square feet of

landscaping that use treated or untreated graywater or groundwater captured on site to meet the project's entire landscape water requirement.

- E. Notwithstanding the provisions of Subsection A above, the provisions of Sections 15.11.970, 15.11.980 and 15.11.990 shall not apply to Landscaped Areas only requiring temporary irrigation solely for the plant Establishment Period.

SECTION 2. Section 15.11.250 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.250 Automatic Irrigation Controller

"Automatic Irrigation Controller" is a timing device used to remotely control Valves that operates an irrigation system. Automatic Irrigation Controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

SECTION 3. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.305 Compost

"Compost" means the safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

SECTION 4. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

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15.11.335 Distribution Uniformity

“Distribution uniformity” means the measure of the uniformity of irrigation water over a defined area.

SECTION 5. Section 15.11.380 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.380 Established Landscape

“Established Landscape” means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one (1) or two (2) years of growth, but native habitat mitigation area and trees may need three (3) to five (5) years for establishment.

SECTION 6. Section 15.11.410 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.410 Evapotranspiration Adjustment Factor (ETAF)

“Evapotranspiration Adjustment Factor” (ETAF) means a factor of 0.55 for Residential Landscape and .45 for Non-residential Landscape, 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 Area. The ETAF for existing non-rehabilitated landscapes is 0.8. The ETAF for a new and existing (non-rehabilitated) Special Landscape Area shall not exceed 1.0.

SECTION 7. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.422 Flow Sensor

“Flow Sensor” means an inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to Flow Rate. Flow Sensors must be connected to an Automatic Irrigation Controller, or flow monitor capable of receiving flow signals and operating master Valves. A Flow Sensor connected to an Automatic Irrigation Controller may also function as a landscape water meter or submeter.

SECTION 8. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.424 Friable

“Friable” means a soil condition that is easily crumbled or loosely compacted down to a minimum depth per planting material requirements, whereby the root structure of newly planted material will be allowed to spread unimpeded.

SECTION 9. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.426 Fuel Modification Plan Guideline

“Fuel Modification Plan Guideline” means guidelines from a local fire authority to assist residents and businesses that are developing land or building structures in a fire hazard severity zone.

SECTION 10. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.428 Graywater

"Graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

SECTION 11. Section 15.11.440 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.440 Hydrozone

"Hydrozone" means a portion of the Landscape Area having plants with similar water needs and rooting depth. A Hydrozone may be irrigated or non- irrigated.

SECTION 12. Section 15.11.460 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.460 Invasive Plant Species

"Invasive Plant Species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive Plant Species may be regulated by county agricultural agencies as noxious species. Lists of Invasive Plant Species are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

SECTION 13. Section 15.11.470 of Chapter 15.11 of Title 15 of the San José

Municipal Code is amended to read as follows:

15.11.470 Irrigation Audit

“Irrigation Audit” means an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. 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. The audit must be conducted in a manner consistent with the Irrigation Association’s Landscape Irrigation Auditor Certification program or other U.S. Environmental Protection Agency “Watersense” labeled auditing program.

SECTION 14. Section 15.11.480 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.480 Irrigation Efficiency

“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 Irrigation Efficiency for purposes of this Chapter is 0.75 for overhead spray devices and 0.81 for Drip Irrigation systems.

SECTION 15. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.535 Landscape Water Meter

“Landscape Water Meter” means an inline device installed at the irrigation supply point

that measures the flow of water into the irrigation system and is connected to a totalizer to record water use.

SECTION 16. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.575 Master Shut-off Valve

“Master Shut-off Valve” is an automatic Valve installed at the irrigation supply point which controls water flow into the irrigation system. When the Master Shut-off Valve is closed water will not be supplied to the irrigation system. A Master Shut-off Valve will greatly reduce any water loss due to a leaky Station Valve.

SECTION 17. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.585 Median

“Median” is an area between opposing lanes of traffic that may be unplanted or planted with trees, shrubs, perennials, and ornamental grasses.

SECTION 18. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.615 Non-residential Landscape

“Non-residential Landscape” means landscapes in commercial, institutional, industrial and public settings that may have areas designated for recreation or public assembly. It also includes portions of common areas of common interest developments with designated Recreational Areas.

SECTION 19. Section 15.11.650 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.650 Plant Factor

“Plant Factor” is a factor, when multiplied by the Reference Evapotranspiration (“ET_o”, measured in inches per year), estimates the amount of water needed by plants. For purposes of this Chapter, the Plant Factor range for very low water use plants is 0.0 to 0.1, the Plant Factor range for low water use plants is 0.1 to 0.3, the Plant Factor range for moderate water use plants is 0.4 to 0.6, and the Plant Factor range for high water use plants is 0.7 to 1.0. Plant Factors cited in this Chapter are derived from the publication “Water Use Classification of Landscape Species” (“WUCOLS”) as may be amended. Plant Factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by the California Department of Water Resources (DWR).

SECTION 20. Section 15.11.680 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.680 Recreational Area

“Recreational Area” means areas, excluding private single-family residential areas, designated for active play, recreation, or public assembly, in parks, sports fields, picnic grounds, amphitheater, or golf courses, tees, fairways, roughs, surrounds and greens.

SECTION 21. Section 15.11.710 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

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15.11.710 Rehabilitated Landscape

“Rehabilitated Landscape” means any re-landscaping project that requires a Development Permit or a Building Permit where the modified Landscape Area is equal to or greater than 2,500 square feet.

SECTION 22. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.715 Residential Landscape

“Residential Landscape” means landscapes surrounding single-family or multifamily homes.

SECTION 23. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.718 Registered Historic Site

Sites and/or structures and/or buildings that are either designated City Landmarks, California Historical Landmarks, or listed in the California Register of Historical Places.

SECTION 24. Section 15.11.750 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.750 Special Landscape Area (SLA)

“Special Landscape Area” (SLA) means an area of the landscape dedicated solely to edible plants, Water Features and areas using Recycled Water, and/or Recreational

Areas.

SECTION 25. Chapter 15.11 of Title 15 of the San José Municipal Code is amended by adding a Section to be numbered, entitled and to read as follows:

15.11.785 Submeter

“Submeter” means a metering device to measure water applied to the landscape that is installed after the primary utility water meter.

SECTION 26. Section 15.11.850 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.850 Water Use Classification of Landscape Species (WUCOLS)

“Water Use Classification of Landscape Species” (WUCOLS) means the Water Use Classification Species published by the University of California Cooperative Extension and the Department of Water Resources 2014, as may be amended.

SECTION 27. Section 15.11.900 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.900 Water Efficiency Design Requirements

- A. Landscape Areas shall be designed to achieve water efficiency as required by this Chapter.
- B. Applicants may choose one of the following options to demonstrate that the Landscape Project meets the water efficiency criteria required by this Chapter:

1. Plant-Type Restriction Option:
 - a. Incorporate compost at the rate of at least four (4) cubic yards per 1,000 square feet to a depth of six (6) inches into the Landscape Area, unless contraindicated by a soil test.)
 - b. Turf shall comply with all of the following:
 - 1) Turf shall not exceed twenty-five percent (25%) of the Landscape Area or 1,250 square feet, whichever is less in Residential Landscape;
 - 2) There shall be no Turf in Non-residential Landscape;
 - 3) Turf shall not be planted on sloped areas which exceed a slope of 1 foot vertical elevation change for every four (4) feet of horizontal length;
 - 4) Turf is prohibited in parkways less than ten (10) feet wide, except for parkways adjacent to a parking strip and used for the entry or exit of vehicles;
 - 5) Any Turf in parkways must be irrigated by subsurface irrigation or by other technology that creates no Overspray or runoff.
 - c. Non-Turf Plant Material shall comply with the following:
 - 1) For Residential Landscape Areas less than or equal to 2,500 square feet low water use, very low water use or no water

- use plants (average WUCOLS Plant Factor of 0.3) shall be installed in at least seventy-five percent (75%) of the portion of the Landscape Area where Turf is not installed, excluding areas planted in edibles and areas using Recycled Water;
- 2) For Residential Landscape Areas greater than 2,500 square feet low water use, very low water use or no water use plants (average WUCOLS Plant Factor of 0.3) shall be installed in at least eighty percent (80%) of the portion of the Landscape Area where Turf is not installed, excluding areas planted in edibles and areas using Recycled Water;
 - 3) For Non-residential Areas, low water use, very low water use or no water use plants (average WUCOLS Plant Factor of 0.3) shall be installed in one hundred percent (100%) of the Landscape Area, excluding areas planted in edibles and areas using Recycled Water; and
 - 4) A minimum of three (3) inch layer of Mulch shall be applied on all exposed soil surfaces of planting areas except Turf areas, creeping or rooting groundcover, or direct seeding applications where Mulch is contraindicated.
- d. If Water Features are installed, the surface area of the Water Features shall not exceed twenty percent (20%) of the Landscape Area.
 - e. Irrigation systems for projects with a Landscape Area of 2,500 square feet or less shall comply with the following, in lieu of the requirements of Sections 15.11.970, 15.11.980 and 15.11.990:

- 1) Automatic Irrigation Controllers are required and must use evapotranspiration or Soil Moisture Sensor data.
 - 2) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted.
 - 3) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range.
 - 4) Manual shut-off Valves (such as a gate Valve, ball Valve, or butterfly Valve) shall be installed as close as possible to the point of connection of the water supply.
 - 5) All irrigation emission devices must meet the requirements set in the ANSI standard, ASABE/ICC 802-2014.
"Landscape Irrigation Sprinkler and Emitter Standard," All Sprinkler Heads installed in the landscape must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
- f. Irrigation systems for projects with a Landscape Area of greater than 2,500 square feet or less shall comply with the requirements of Sections 15.11.970, 15.11.980 and 15.11.990.
- g. For projects with a Landscape Area 2,500 square feet or less, the Applicant, if different than the property owner, must at the time of final inspection, provide the owner of the property with a Certificate

of Completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

2. Water Budget Calculation Option:

- a. The Plant Factor used shall be from WUCOLS, as may be amended. The Plant Factor in 2015 ranges from 0 to 0.1 for very low water use plants, from 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. All Water Features shall be included in the high water use Hydrozone and temporarily irrigated areas shall be included in the low water use Hydrozone.
- c. Where low and moderate water use plants are mixed within a single Hydrozone, the entire Hydrozone area shall be classified as moderate water use for purposes of a Water Budget Calculation. High water use plants shall not be mixed with low or moderate water use plants.
- d. All Special Landscape Areas shall be identified and their water use included in the Water Budget Calculation.
- e. The ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0. The ETAF for existing non-rehabilitated landscapes is 0.8. The ETAF for the remaining Landscape Area shall not exceed 0.55 residential and 0.45 for non-residential.

- f. Irrigation Efficiency shall be 75 % for overhead spray devices and 81% for Drip Irrigation devices.
- g. The Maximum Applied Water Allowance shall be calculated using the equation:

$$\text{MAWA} = (\text{ET}_o) (0.62) [(\text{ETAF} \times \text{LA}) + (1-\text{ETAF}) \times \text{SLA}]$$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ET_o = Reference Evapotranspiration (inches per year).

0.62 = Conversion Factor (to gallons)

Varies see 15.11.410 = Evapotranspiration Adjustment Factor (ETAF)

LA = Landscape Area including SLA (square feet)

1-ETAF = Water Allowance for SLA

SLA = Special Landscape Area (square feet)

- h. Estimated Total Water Use (ETWU) shall be calculated for each Hydrozone and Special Landscape Area using the equation below. The sum of the ETWU calculated for all Hydrozones shall not exceed the MAWA.

Formula for Regular Landscape Areas

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

Formula for Special Landscape Areas

$$ETWU = (ET_o)(0.62)(SLA)$$

Where:

ETWU = Estimated Total Water Use per year (gallons)

ET_o = Reference Evapotranspiration (inches)

PF = Plant Factor from WUCOLS

HA = Hydrozone Area [high, medium, and low water use areas] (square feet)

SLA = Special Landscape Area (square feet)

0.62 = Conversion Factor

IE = Irrigation Efficiency (minimum 0.75 for overhead spray devices and .81 for drip irrigation devices.)

3. Recycled Water Option:

At least 90% of the square footage of the Landscape Area shall be irrigated with Recycled Water.

SECTION 28. Section 15.11.930 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.930 Soil Management Report

In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the Applicant as follows, for any project that has a Landscape Area greater than 2,500 square feet or that uses the water budget calculation option:

- A. Applicant shall submit soil samples to a plant soil laboratory for analysis and recommendations.
 - 1. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.
 - 2. The soil analysis shall include:
 - a. Soil Texture;
 - b. Infiltration Rate determined by laboratory test or Soil Texture Infiltration Rate table;
 - c. pH;
 - d. Total soluble salts;
 - e. Sodium;
 - f. Percent organic matter; and

- g. Recommendations.
- B. In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% will satisfy this requirement. Large landscape projects shall sample at a rate equivalent to 1 in 7 lots.
- C. Applicant shall comply with one of the following:
1. If significant mass grading is not planned, the soil management report shall be performed after grading and the Landscape Areas are prepared for plant installation and submitted as part of the Landscape Documentation Package; or
 2. If significant mass grading is planned, the soil analysis report shall be submitted as part of the Certificate of Completion.
- D. Applicant shall certify that the soil management report will be provided to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.
- E. Applicant shall submit documentation verifying implementation of the soil management report recommendations to the Director with the Certificate of Completion.

SECTION 29. Section 15.11.950 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.950 Landscape Design Plan Criteria - Plant Material, Selection, and Grouping

- A. The landscape design plan shall include Water Conserving Plant Species.
- B. Plant varieties that require large amounts of irrigation water to survive the hot dry summer season shall not be used except when the plant is located within a micro-climate area of the Landscape Project that maintains plant health and appearance.
- C. Each Hydrozone shall have plant materials with similar water use, with the exception of Hydrozones with plants of mixed water use, as specified in Section 15.11.980.
- D. Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the Landscape Project site.
- E. All plant materials used in the Landscape Area shall be chosen to ensure that the estimated Applied Water use recommended does not exceed the MAWA for Applicants who choose the Water Budget Calculation Option described in Section 15.11.900 to demonstrate that the Landscape Project meets the water efficiency criteria required by this Chapter.
- F. If Turf is part of the landscape design plan, the installation shall comply with the following:
 - 1. Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable Hardscape and where 25% means 1 foot

of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent); and

2. Turf areas that are less than ten (10) feet wide shall be irrigated in accordance with Section 15.11.980.
- G. Fire prone plant materials and highly flammable Mulches are prohibited.
- H. The use of Invasive Plant Species and/or noxious plant species is prohibited.
- I. High water use plants, characterized by a Plant Factor of 0.7 to 1.0, are prohibited in Medians.
- J. Soil preparation, amendments and mulching shall comply with the following:
1. Prior to the planting of any materials, compacted soils shall be transformed to a friable condition. On engineered slopes, only amended planting holes need meet this requirement.
 2. For landscape installations, compost at a rate of a minimum of four (4) cubic yards per 1,000 square feet of permeable area shall be added and tilled into the soil to a depth of six (6) inches. Soils with greater than 6% organic matter in the top six (6) inches of soil are exempt from adding compost and tilling.
 3. A minimum three inch (3") layer of Mulch shall be applied on all exposed soil surfaces of planting areas except in Turf areas, creeping or rooting groundcovers, or direct seeding applications where Mulch is contraindicated. To provide habitat for beneficial insects and other

wildlife, up to 5% of the Landscape Area may be left without Mulch.
Designated insect areas must be included in the landscape plan as such.

4. Stabilizing Mulching products shall be used on slopes.
5. The Mulching portion of the seed/Mulch slurry in hydro-seeded applications shall meet the Mulching requirement referenced in Subsection 4 of this Section.
6. Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected.

SECTION 30. Section 15.11.970 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.970 Irrigation Design Plan

An irrigation design plan shall be submitted as part of the Landscape Documentation Package for any project that has a Landscape Area greater than 2,500 square feet or that uses the water budget calculation option. The irrigation design plan shall be consistent with the Hydrozones for the Landscape Areas. The irrigation design plan shall be set forth in a form prescribed by the Director and at a minimum shall contain all of the following:

- A. Location and size of separate water meters for Landscape Areas;
- B. 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;

- C. Static Water Pressure at the point of connection to the public water supply;
- D. Flow Rate (gallons per minute), Application Rate (inches per hour), and design Operating Pressure (pressure per square inch) for each Station;
- E. Recycled Water irrigation systems if applicable as specified in Section 15.11.1000;
- F. The statement: "I agree to comply with, or cause anyone who works on the irrigation design plan to comply with, the requirements of Chapter 15.11 of Title 15 of the San José Municipal Code and to submit a complete irrigation design plan that complies with Chapter 15.11 of Title 15 of the San José Municipal Code"; and
- G. The signature of a Landscape Architect or Certified Irrigation Designer authorized by the property owner or the Applicant to design the irrigation system.

SECTION 31. Section 15.11.980 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.980 Irrigation Design Plan Criteria – System Requirements

For the efficient use of water, an irrigation design plan meeting the following design criteria for irrigation systems shall be included in the irrigation design plan and submitted as part of the Landscape Documentation Package for any project that has a Landscape Area greater than 2,500 square feet or that uses the water budget calculation option:

- A. Relevant information from the soil management plan, such as soil type and Infiltration Rate, shall be utilized when designing irrigation systems.
- B. All irrigation systems shall be designed to avoid Run-off, low head drainage, Overspray and other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways or structures.
- C. The design of the irrigation system shall conform to the Hydrozones of the landscape design plan.
- D. Irrigation systems shall be designed, installed, and maintained to meet, at a minimum, an Irrigation Efficiency of 0.75 for overhead spray devices and .81 for drip system devices.
- E. All Landscape Areas in excess of ten thousand (10,000) square feet shall be designed to allow for the current and future use of Recycled Water except as follows:
 - 1. Landscape Areas in excess of ten thousand (10,000) square feet do not have to be designed to allow for the current and future use of Recycled Water where the Director grants an exemption to the requirement set forth in Subsection E. of this Section on the basis that Recycled Water is not available, and will not be available in the foreseeable future to serve the Landscape Project.
- F. In Mulched planting areas, the use of Low Volume Irrigation is required to maximize water infiltration into the root zone.
- G. Sprinkler Heads and other emission devices shall have matched Precipitation Rates, unless otherwise directed by the manufacturer's recommendations.

- H. Head to head coverage is required at a minimum, with consideration for average wind conditions. However, sprinkler spacing shall be designed to achieve the highest possible distribution using the manufacturer's recommendations.
- I. Areas less than ten (10) feet in width in any direction shall be irrigated with subsurface irrigation or other means that produces no runoff or Overspray.
- J. Overhead Sprinkler Irrigation Systems shall not be permitted within 24 inches of any non-permeable surface. Allowable irrigation within the setback from non-permeable surfaces may include Drip Irrigation, or other Low Volume Irrigation 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:
 - 1. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping;
 - 2. The Landscape Area is adjacent to permeable surfacing and no runoff occurs; or
 - 3. The Certified Irrigation Designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in this Section. Prevention of Overspray and runoff must be confirmed during the Irrigation Audit required by Section 15.11.1040.
- K. Slopes greater than 25% shall not be irrigated with an irrigation system with an application rate exceeding 0.75 inches per hour. This restriction may be modified if the Certified Landscape Designer specifies an alternative design or technology,

as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the Irrigation Audit required by Section 15.11.1040.

- L. Each Valve shall irrigate a Hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
- M. Sprinkler Heads and other emission devices shall be selected based on what is appropriate for the plant type within that Hydrozone.
- N. Trees shall be placed on separate Valves from shrubs, groundcovers, and Turf, where feasible.
- O. Individual Hydrozones that mix plants of moderate and low water use, or moderate and high water use, may be allowed if:
 - 1. The Plant Factor calculation is based on the proportions of the respective plant water uses and their Plant Factor; or
 - 2. The Plant Factor of the higher water using plant is used for calculations.
- P. Individual Hydrozones that mix high and low water use plants shall not be permitted.
- Q. On the landscape design plan and irrigation design plan, Hydrozone areas shall be designated by number, letter, or other designation. On the irrigation design plan, the areas irrigated by each Valve shall be designated and a number assigned to each Valve.

- R. If the water pressure is below or exceeds the recommended pressure for the specified irrigation devices, the installation of a pressure regulating device is required to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.
1. If the Static Water Pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
 2. Static Water Pressure, dynamic or Operating Pressure, and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

SECTION 32. Section 15.11.990 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.990 Irrigation Design Plan Criteria – Equipment

For the efficient use of water, an irrigation design plan meeting the following design criteria for irrigation equipment shall be included in the irrigation design plan and submitted as part of the Landscape Documentation Package for any project that has a Landscape Area greater than 2,500 square feet or that uses the water budget calculation option:

- A. Landscape water meters, defined as either a customer service meter provided by a Local Water Purveyor or privately owned meter submeter, shall be installed for all irrigated Non-residential Landscapes of 1,000 to 5,000 square feet and all

irrigated Residential Landscapes of 5,000 square feet or greater. Irrigated Non-residential Landscapes of more than 5,000 square feet shall provide a separate meter as required by Water Code Section 535, as may be amended or renumbered..

- B. Automatic Irrigation Controllers utilizing either evapotranspiration or Soil Moisture Sensor data utilizing non-volatile memory shall be required for irrigation scheduling in all irrigation systems.
- C. 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, as appropriate for local climatic conditions. Irrigation shall be avoided during windy or freezing weather or during rain.
- D. Manual shut-off Valves (such as a gate Valve, ball Valve, or butterfly Valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a Main Line break) or routine repair.
- E. Backflow Prevention Devices and Automatic Irrigation Controllers shall be installed in all irrigation systems and must be able to accommodate all aspects of the design.
- F. Flow sensors that detect high flow conditions created by system damage or malfunction are required for all Non-residential Landscapes and for Residential Landscapes of 5,000 square feet or larger.
- G. Sprinkler Heads and other emission devices shall have matched Precipitation Rates.

- H. Sprinkler Head spacing shall be head to head.
- I. Swing Joints or other riser-protection components are required on all risers subject to damage that are adjacent to Hardscapes or in high traffic areas of turfgrass.
- J. Check Valves or Anti-Drain Valves are required on all irrigation systems where low point drainage could occur.
- K. Master shut-off Valves are required except for irrigation systems that make use of technologies that allow for the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features.
- L. All irrigation emission devices must meet the requirements set in the American National Standards Institute (ANSI) standard, American Society of Agricultural and Biological Engineers'/International Code Council's (ASABE/ICC) 802-2014 "Landscape Irrigation Sprinkler and Emitter Standard. All Sprinkler Heads installed in the Landscape Area must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.

SECTION 33. Section 15.11.1020 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.1020 Grading Design Plan

- A. For the efficient use of water, grading of the Landscape Project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the Landscape Documentation Package for any project that has a Landscape Area greater than 2,500 square feet or that uses the water

budget calculation option. A comprehensive grading plan prepared by a civil engineer in relation to another City permit application satisfies this requirement.

- B. The Applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the Landscape Area including:
1. Height of graded slopes;
 2. Drainage patterns;
 3. Pad elevations;
 4. Finish grade; and
 5. Stormwater retention improvements, if applicable.
- C. To prevent excessive erosion and runoff, Applicants shall:
1. Grade so that all irrigation and normal rainfall remains within property lines and does not:
 - a. Drain on to non-permeable Hardscapes; or
 - b. Allow for ponding water in violation of applicable law;
 2. Avoid disruption of natural drainage patterns and undisturbed soil; and
 3. Avoid soil compaction in Landscape Areas.

- D. The grading design plan shall contain the following statement: "I agree to comply with, or cause anyone who works on the grading design plan to comply with, the requirements of Chapter 15.11 of Title 15 of the San José Municipal Code and to submit a complete grading design plan that complies with Chapter 15.11 of Title 15 of the San José Municipal Code" and shall bear the signature of a licensed professional as authorized by law.

SECTION 34. Section 15.11.1030 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.1030 Landscape and Irrigation Maintenance Schedule

- A. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted to the Director by the Applicant with the Certificate of Completion.
- B. 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; topdressing with compost; replenishing Mulch; fertilizing; pruning; weeding in all Landscape Areas, and removing any obstructions to emission devices. Operation of the irrigation system outside the Watering Window is allowed for auditing, system maintenance and during plant Establishment Periods.
- C. Irrigation systems shall be tested, adjusted and repaired following the manufacturers' specifications and the recommendations of the landscape professional who signed the Landscape Design Plan.

- D. Failed plants shall be replaced with the same or functionally equivalent plants that may be size-adjusted as appropriate for the stage of growth of the overall installation.
- E. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.
- F. A diagram of the irrigation plan showing Hydrozones shall be kept with the irrigation controller for subsequent management purposes.

SECTION 35. Section 15.11.1040 of Chapter 15.11 of Title 15 of the San José Municipal Code is amended to read as follows:

15.11.1040 Irrigation Audit

- A. The Applicant shall submit an Irrigation Audit report with the Certificate of Completion for any New Construction or Rehabilitated Landscape project that uses the water budget calculation or has a Landscape Area greater than 2,500 square feet. The Irrigation Audit may include, but is not limited to: inspection, system tune-up, system test with distribution uniformity, reporting Overspray or Run-off that causes overland flow, and preparation of an irrigation schedule, including configuring irrigation controllers with Application Rate, soil types, Plant Factors, slope, exposure and any other factors necessary for accurate reprogramming.
- B. All landscape Irrigation Audits shall be conducted by a third party Certified Landscape Irrigation Auditor. Irrigation Audits shall not be conducted by the person who designed or installed the landscaping.

- C. In large projects or projects with multiple landscape installations (e.g. production home developments) an auditing rate of 1 in 7 lots or approximately 15% will satisfy the Irrigation Audit requirement.

PASSED FOR PUBLICATION of title this 15th day of December, 2015, by the following vote:

AYES: CARRASCO, HERRERA, JONES, KALRA, KHAMIS, M. NGUYEN, T. NGUYEN, OLIVERIO, PERALEZ, ROCHA; LICCARDO.
NOES: NONE.
ABSENT: NONE.
DISQUALIFIED: NONE.

ATTEST



TONI J. TABER, CMC
City Clerk



SAM LICCARDO
Mayor