ORDINANCE NO. 5659

ORDINANCE OF THE COUNCIL OF THE CITY OF ROSEVILLE REPEALING CHAPTER 19.67 OF ARTICLE IV OF TITLE 19 OF THE ROSEVILLE MUNICIPAL CODE REGARDING WATER EFFICIENT LANDSCAPING, AND ADDING CHAPTER 14.18 OF TITLE 14 OF THE ROSEVILLE MUNICIPAL CODE REGARDING WATER EFFICIENT LANDSCAPING

THE CITY OF ROSEVILLE ORDAINS:

SECTION 1. Chapter 19.67 of Article IV of Title 19 of the Roseville Municipal code is hereby repealed in its entirety.

SECTION 2. Chapter 14.18 of Title 14 of the Roseville Municipal Code is hereby added to read as follows:

Chapter 14.18

WATER EFFICIENT LANDSCAPING

14.18.010 Purpose.

A. Intelligent design and water management can enable citizens of Roseville to enjoy a well landscaped community, while at the same time conserving resources. Skillful planting and irrigation design, appropriate use of plants, and intelligent landscape management, can ensure that excessive water demands are reduced and allow the community to be less vulnerable during periods of severe drought. Efficient design practices such as: irrigation systems that apply water at a usable rate within the root zone of the plants, automatic irrigation controllers that allow early morning watering when there is less heat and wind allowing more efficient irrigation, and properly maintained moisture sensors that override automatic irrigation when the soil is already moist or wet are all measures that can reduce water demands, yet at the same time provide sufficient moisture to maintain the City's climate-appropriate landscaping.

B. The purpose of these requirements is to comply with the Water Conservation in Landscaping Act of 2006, Government Code Sections 65591 et. seq, and to define the standards and procedures for the design, installation, and management of landscaping. This is intended to utilize available plant, water, land and human resources to the greatest benefit of Roseville residents. Water resources are a finite resource. Therefore, in times of water shortages, water cutbacks may be required, combined with limits to landscaping installation and water usage, as specified in the Roseville Municipal Code Chapter 14.09 (Water Conservation).

C. Landscapes that are planned, designed, installed, managed and maintained with the watershed based approach can improve California's environmental conditions and provide benefits and realize sustainability goals. Such landscapes will make the urban environment

resilient in the face of climatic extremes. Consistent with the legislative findings and purpose of the Ordinance, conditions in the urban setting will be improved by:

1. Creating the conditions to support life in the soil by reducing compaction, incorporating organic matter that increases water retention, and promoting productive plant growth that leads to more carbon storage, oxygen production, shade, habitat and esthetic benefits.

2. Minimizing energy use by reducing irrigation water requirements, reducing reliance on petroleum based fertilizers and pesticides, and planting climate appropriate shade trees in urban areas.

3. Conserving water by capturing and reusing rainwater and graywater wherever possible and selecting climate appropriate plants that need minimal supplemental water after establishment.

4. Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.

5. Protecting existing habitat and creating new habitat by choosing local native plants, climate adapted non-natives and avoiding invasive plants. Utilizing integrated pest management with least toxic methods as the first course of action.

14.18.020 Authority and Relationship to other Documents.

A. Consistency with specific plans and other design guidelines. Landscape and irrigation plans shall be designed consistent with this Chapter and any adopted specific plans or other planning area design guidelines, if applicable. Where any inconsistencies arise between this Chapter and other adopted policy documents, the more restrictive requirement shall govern.

B. Water use consumption information for specific plant species. Should conflicts arise between the water use information contained in the Water Use Classification of Landscape Species publication, as defined in Section 14.18.040, and the Specific Plan or planting area design guidelines, the Water Use Classification of Landscape Species publication shall govern.

14.18.030 Applicability.

A. The provisions of this Chapter shall apply to all of the following landscape projects:

1. New Construction and Rehabilitated Projects. New construction and rehabilitated landscape projects requiring a building permit, plan check or Design Review Permit (DRP).

2. Developer-Installed or Homeowner Provided Landscaping Less than 2,500 Square Feet in Single-Family Residential Projects. Any single-family or two-

family landscape project that is developer installed or homeowner provided with an aggregate landscape area of 2,500 square feet or less requiring a building permit, plan check or DRP, may comply with the performance requirements of this ordinance or conform to the prescriptive measures contained below.

a. Compliance with the following items is mandatory and must be documented on a landscape plan in order to use the prescriptive compliance option:

(i.) Date;
(ii.) project applicant;
(iii.) project address (if available, parcel and/or lot number(s));
(iv.) total landscape area (square feet), including a breakdown of turf and plant material;
(v.) project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed);
(vi.) water supply type (e.g., potable, recycled, well) and identify the local retail water purveyor if the applicant is not served by a private well;
(vii.) contact information for the project applicant and property owner;
(viii.) applicant signature and date with statement, "I agree to comply with the requirements of the prescriptive compliance option to the MWELO".

b. Incorporate compost at a rate of at least four cubic yards per 1,000 square feet to a depth of six inches into landscape area (unless contra-indicated by a soil test);

c. Plant material shall comply with all of the following:

(i.) Install climate adapted plants that require occasional, little or no summer water (average WUCOLS plant factor 0.3) for 75% of the plant area excluding edibles and areas using recycled water;

(ii.) 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.

d. Turf shall comply with all of the following:

(i.) Turf shall not exceed 25% of the landscape area;
(ii.) Turf shall not be planted on sloped areas which exceed a slope of 25%;
(iii.) Turf is prohibited in parkways less than 10 feet wide, unless the parkway is adjacent to a parking strip and used to enter and exit

vehicles. Any turf in parkways must be irrigated by sub-surface irrigation or by other technology that creates no overspray or runoff.

e. Irrigation systems shall comply with the following:

(i.) Automatic irrigation controllers are required and must use evapotranspiration or soil moisture sensor data and utilize a rain sensor;

(ii.) Irrigation controllers shall be of a type which does not lose programming data in the event the primary power source is interrupted;

(iii.) Pressure regulators shall be installed on the irrigation system to ensure the dynamic pressure of the system is within the manufacturers recommended pressure range;

(iv.) 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;

(v.) 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;

(vi.) 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.

f. At the time of final inspection, the permit applicant must provide the City and owner of the property with a certificate of completion, certificate of installation, irrigation schedule and a schedule of landscape and irrigation maintenance.

3. Graywater Systems. For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 sq. ft. of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D section (5).

4. Existing Landscaping. Landscaping constructed prior to the effective date of the ordinance codified in this chapter and not rehabilitated shall only be required to comply with the requirements contained in Section 14.18.130.

5. Cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries shall only be required to comply

with the requirements contained in Sections 14.18.050(B)(2), 14.18.070, and 14.18.080. Existing cemeteries shall comply with the requirements contained in Section 14.18.130.

6. Homeowners Associations and Common Interest Developments. The architectural guidelines (i.e., CC&Rs) of a common interest development, which may include community apartment projects, condominiums, planned developments, stock cooperatives, or single-family subdivisions governed by a homeowners association shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group. Further, said guidelines shall not prohibit the removal of turf, nor restrict or prohibit the reduction of turf in lieu of more water efficient alternatives (Civil Code Section 1353.8).

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

1. Registered local, state or federal historical sites;

2. Ecological restoration projects that do not require a permanent irrigation system;

3. Mined-land reclamation projects that do not require a permanent irrigation system; or

4. Existing plant collections, as part of botanical gardens and arboretums open to the public.

14.18.040 Definitions.

For the purposes of this Chapter, the following definitions shall apply:

"**Applied Water**" means the portion of water supplied by the irrigation system to the landscape.

"**Backflow Prevention Device**" means a safety device used to prevent pollution or contamination of the City water supply due to the reverse flow of water from the irrigation system.

"**Check Valve or Anti-Drain Valve**" means a valve located under a sprinkler head or other location in the irrigation system to hold water in the system to prevent drainage from sprinkler heads when the system is off.

"**Conversion Factor (0.62)**" means the number that converts acre-inches per acre per year to gallons per square foot per year.

"**Certificate of Completion**" means the document required under Section 14.18.060.

"**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 United States Environmental Protection Agency WaterSense irrigation auditor certification program, licensed landscape architect, and Irrigation Association Certified Landscape Irrigation Auditor program.

"**Certified Irrigation Designer**" means a person certified to design irrigation systems by an accredited academic institution, or a professional trade organization or other program such as the United States Environmental Protection Agency WaterSense irrigation designer certification program and Irrigation Association Certified Irrigation Designer program.

"**Common Interest Developments**" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1353.8

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

"**Controller**" means a timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers are able to self-adjust and schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.
[OD1]
"**Distribution uniformity**" means the measure of the uniformity of irrigation water over a defined area.

"**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.

"**Ecological Restoration Project**" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

"**Effective Precipitation or Usable Rainfall (EPPT)**" means the portion of total precipitation that is used by the plants.

"**Emitter**" means a drip irrigation emission device that delivers water slowly from the irrigation system to the soil.

"**Environmental Utilities Department**" means the Department within the City of Roseville that is responsible for providing utility service with the City. The Roseville water utility is a division within the Department responsible for providing retail water service.

"**Established Landscape**" means the point at which plants in the landscape have developed significant roots growth to support themselves. Typically, most plants are established after one (1) or two (2) years of growth.

"**Establishment Period of the Plants**" means the first year after installing the plant in the landscape, or the first two (2) years if irrigation will be terminated after establishment. Native habitat mitigation areas and trees may need three to five years for establishment.

"**Estimated Total Water Use (ETWU)**" means the annual total water used for the landscape as described in Section 14.18.050(B)(2).

"**Evapotranspiration (ET)**" means the loss of water to the atmosphere by the combined processes of evaporation and transpiration.

"**ET Adjustment Factor (ETAF)**" means a factor of 0.55 for residential areas and 0.45 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. The ETAF for new and existing (non-rehabilitated) Special Landscape Area shall not exceed 1.0. The ETAF for existing, non-rehabilitated landscaping is 0.8.

"**Evapotranspiration (ET) Rate**" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

"**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.

"**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. This combination flow sensor/controller may also function as a landscape water meter or submeter.

"**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.

"**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.

"**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. Health and Safety Code Section 17922.12.

"**Hardscapes**" means any durable surface material (pervious and non-pervious).

"**Homeowner-Provided Landscaping**" means landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner.

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

"**Infiltration Rate**" means the rate of water entry into the soil expressed as a depth of water per unit of time (i.e., inches per hour).

"**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 species may be regulated by county agricultural agencies as noxious species. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.

"**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 run off 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.

"**Irrigation Efficiency**" 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 systems.

"**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.

"**Irrigation Water Use Analysis**" means an analysis of water use data based on meter readings and billing data.

"**Landscape Package**" means the documents required under Section 14.18.050.

"**Landscaped Area (LA)**" means all of 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 non-pervious hardscapes, and other non-irrigated areas designated for nondevelopment (e.g., open spaces and existing native vegetation).

"**Landscape Architect**" means a person who holds a license to practice landscape architecture in the state of California (Business & Professions Code Section 5615).

"**Landscape Contractor**" means a person licensed possessing a valid C-27 license by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

"**Landscape Project**" means the total area of landscape in a project as defined in "landscape area," for the purposes of this Chapter, meeting the requirements under Section 14.18.030.

"**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.

"**Lateral Line**" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve. This pipeline is typically downstream of the zone control valve and non-pressurized when irrigation is not occurring.

"**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. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

"**Main Line**" means the pressurized pipeline that delivers water from the water source to the valve or outlet. This pipeline is typically pressurized at all times.

"**Master Shut-Off Valve**" is an automatic valve installed at the irrigation supply point which controls water flow into the irrigation system. When this valve is closed water will not be supplied to the irrigation system. A master valve will greatly reduce any water loss due to a leaky station valve.

"**Maximum Applied Water Allowance (MAWA)**" means the upper limit of annual applied water for the established landscaped area as specified in Section 14.18.050(B)(2). MAWA is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscaped area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0. MAWA = (ETo) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]

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

"**Microclimate**" means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as: wind, sun exposure, plant density or proximity to reflective surfaces.

"**Mulch**" means any organic material such as leaves, bark, straw or other 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.

"**New Construction**" means a new building with a landscape or other new 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.

"**Operating Pressure**" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

"**Overhead Sprinkler Irrigation Systems or Overhead Spray Irrigation Systems**" means systems that deliver water through the air (e.g., spray heads and rotors, etc.).

"**Overspray**" means the irrigation water which is delivered beyond the target area.

"**Parkway**" means the area between a sidewalk and the curb or traffic lane. It may be planted or unplanted, and with or without pedestrian egress.

"**Permit**" means any authorizing document issued by the City of Roseville for new construction or rehabilitated landscaping.

"**Pervious**" means any surface or material that allows the passage of water through the material and into the underlying soil.

"**Plant Factor or Plant Water Use Factor**" means a factor, when multiplied by the ETo, 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 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." 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).

"**Project Applicant**" means the individual or entity submitting a Landscape Documentation Package required under Section 14.18.050 to request a permit, plan check or design review from the City. A project applicant may be the property owner or his/her designee.

"**Rain Sensor or Rain Sensing Shutoff Device**" means a component which automatically suspends an irrigation event when it rains.

"**Record Drawing or As-Builts**" means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

"**Recreational Area**" means areas, excluding private single family residential areas, designated for active play, recreation or public assembly in parks, sports fields, picnic grounds, amphitheaters or golf courses tees, fairways, roughs, surrounds[OD2] and greens.

"**Recycled Water, Reclaimed Water, or Treated Sewage Effluent Water**" means treated or recycled wastewater of a quality suitable for non-potable uses such as landscape irrigation. This water is not intended for human consumption.

"**Reference Evapotranspiration (ETo)**" means a standard measurement of environmental parameters which affect the water use of plants. ETo is given in inches per day, month, or year as represented below, and is an estimate of the evapotranspiration of a large field of four- to seven-inch tall, cool season turf that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated. Refer to Section 14.18.050(B)(2) for City of Roseville ETo.

"**Rehabilitated Landscaping**" means any re-landscaping project that requires a building permit, improvement plan approval, or design review and meets the requirements of Section 14.18.030,.

"**Residential Landscape**" means landscapes surrounding single or multi-family homes.

"**Runoff**" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area. For example, runoff may result from water that is applied at too great a rate or too great a volume (application rate exceeds infiltration rate) or when there is a slope.

"**Slope**" means the steepness, incline, gradient, or grade of a straight line. A higher slope value indicates a steeper incline.

"**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.

"**Soil Texture**" means the classification of soil based on its percentage of sand, silt, and clay in the soil.

"**Special Landscape Area (SLA)**" means an area of the landscape dedicated solely to edible plants, recreational areas, areas irrigated with recycled water, or water features using recycled water. [OD3]

"**Sprinkler Head or Spray Head**" means a device which delivers overhead watering through a spray nozzle.

"**Static Water Pressure**" means the pipeline or municipal water supply pressure when water is not flowing.

"**Station**" means an area served by one valve or by a set of valves that operate simultaneously.

"**Stormwater Quality Design Manual**" means the most recent version of the design manual for the Sacramento and South Placer regions which sets forth the design criteria and operation and maintenance requirements for stormwater control measures.

"**Swing Joint**" means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

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

"**Temporarily Irrigated Areas**" means either: (1) Landscaping which is reliant on irrigation for a temporary duration of time to allow plant root establishment; or (2) areas such as unfinished building pads, or other areas approved for future development, in which landscaping is planted on an interim basis.

"**Turf**" means a groundcover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are common cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are common warmseason grasses.

"**Valve**" means a device used to control the flow of water in the irrigation system.

"**Water Conserving Plant Species**" means a plant species identified as having a low plant water use factor.

"**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). The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and used solely for water treatment or stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

"**Watering Window**" means the time of day irrigation is allowed.

"**WUCOLS**" means Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources, and the Bureau of Reclamation, as may be amended.

14.18.050 Submittal Requirements.

A. Landscape Package Submittal Required. Prior to issuance of a building permit or improvement plans, the project applicant shall submit a landscape package to the city for review and approval. The landscape package shall contain the information required by subsection B, and shall be incorporated into the improvement plan and/or landscape plan set in a form determined acceptable to the Environmental Utilities Director or his designee.

B. Elements of the Landscape Package. The landscape package shall include the following six elements, which shall be incorporated into the landscape plan set in a form determined acceptable to the Environmental Utilities Director or his designee:

1. Project Information
    a. Date;
    b. Project applicant;
    c. Project address (if available, parcel and/or lot number(s));
    d. Total landscape area (square feet);
    e. Project type (e.g., new, rehabilitated, public, private, cemetery, homeowner-installed);
    f. Water supply type (e.g., potable, recycled, well) and the identity of the local retail water purveyor if the applicant is not served by a private well;
    g. Checklist of all documents in Landscape Documentation Package;
    h. Project contacts to include contact information for the project applicant and property owner;
    i. Applicant signature and date with the following statement: "I agree to comply with the requirements of the Water Efficient Landscaping Ordinance and submit a complete landscape documentation package."

2. Water Efficient Landscape Worksheet. The worksheet will be a form provided by the City, and shall include information on the plant factor, irrigation method, irrigation efficiency, and area associated with each hydrozone. Calculations are then made to show that the evapotranspiration adjustment factor (ETAF) for the landscape project does not exceed a factor of 0.55 for residential areas and 0.45 for non-residential areas, exclusive of Special Landscape Areas. The ETAF for a landscape project is based on the plant factors and irrigation methods selected. The Maximum Applied Water Allowance is calculated based on the maximum ETAF allowed (0.55 for residential areas and 0.45 for non-residential areas) and expressed as annual gallons required. The Estimated Total Water Use (ETWU) is calculated based on the plants used and irrigation method selected for the landscape design. ETWU must be below the MAWA.

In calculating the maximum applied water allowance and estimated total water use, a project applicant shall use the following ETo values:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Annual ETo**
1.1	1.7	3.1	4.7	6.2	7.7	8.5	7.3	5.6	3.7	1.7	1.0	**52.2**

a. Water budget calculations shall adhere to the following requirements:

(i.) The plant factor used shall be obtained from the most recent Water Use Classification of Landscape Species publication or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR). The plant factors ranges shall be calculated as follows:

a. 0 to 0.1 for very low water use plants;
b. 0 to 0.3 for low water use plants;
c. 0.4 to 0.6 for moderate water use plants; and
d. 0.7 to 1.0 for high water use plants.

(ii.) All water features shall be included in the high water use hydrozone.

(iii.) Temporarily irrigated areas shall be designed as low water use hydrozones.

(iv.) Special landscape areas shall be clearly identified and their water use calculated as shown in the Water Efficient Landscape Worksheet. Water use for new and existing (non-rehabilitated) special landscape areas shall be calculated with an ETAF not to exceed 1.0.

b. The landscape project's Maximum Applied Water Allowance (MAWA) shall be calculated as follows:

(i.) MAWA = (ETo) (0.62) [(ETAF x LA) + (1-ETAFx SLA)], where:

a. MAWA = Maximum applied water allowance (gallons per year);
b. ETo = Reference evapotranspiration (inches per year) (as provided in subsection (B)(2) above);
c. ETAF = ET adjustment factor (.55 for residential and .45 for non-residential);

d. LA = Landscaped area includes special landscape area (square feet);
e. 0.62 = Conversion factor (to gallons per square foot);
f. SLA = Portion of the landscape area identified as special landscape area (square feet);

3. Soil Management Report. In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant or designee, as follows:

a. Submit soil sample(s) to a laboratory for analysis and recommendations.

(i.) Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants; and

(ii.) 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 for appropriate amendment.

(iii.) In projects with multiple landscape installations (i.e. production home developments) a soil sampling rate of 1 in 7 lots or approximately 15% of the landscape area will satisfy this requirement.

b. The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape and irrigation design plans to make any necessary adjustments.

c. Any soil management or amendment recommendations shall be included with the design plans for city review.

d. Upon completion of construction and prior to issuance of an occupancy permit, the project applicant or designee shall submit documentation verifying implementation of soil analysis report recommendations within the landscaped area to the city with the certificate of completion.

4. Landscape Plan. Landscape plans, including plant selection, shall be designed consistent with the applicable specific plan or special planning area design guidelines. At a minimum, landscape design plans shall address the following:

a. Plant Materials. The estimated total water use for plants selected for the landscaped area shall not exceed the maximum applied water allowance. The landscape plan shall identify landscape materials, trees, shrubs, groundcover, turf, etc. Planting symbols shall be clearly drawn and plants shall be labeled by botanical name, common name, container size, spacing, and quantities or each group of plants indicated. Planting areas dedicated permanently and solely to edible plants should be clearly delineated. High water use plants, characterized by a plant factor of 0.7 to 1.0, are prohibited in street medians. Methods to achieve water efficiency shall include one or more of the following:

(i.) Protection and preservation of native species and natural vegetation;
(ii.) Selection of water-conserving plant, tree and turf species, especially local native plants;
(iii.) Selection of plants based on local climate suitability, disease and pest resistance;
(iv.) Selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area;
(v.) Selection of plants from local and regional landscape program plant lists.
(vi.) Selection of plants from local Fuel Modification Plan Guidelines.

b. Plant Selection. Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. Methods to achieve water efficiency shall include one or more of the following:

(i.) Use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
(ii.) Recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure [e.g., buildings, sidewalks, power lines]; allow for adequate soil volume for healthy root growth; and
(iii.) Consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

c. Hydrozone Information. Each hydrozone shall contain plant materials with similar water use needs. Hydrozones shall be designated as low, moderate, high water, or mixed water use and shall be labeled by number, letter, or other method. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget

calculation. Areas irrigated with recycled water should be clearly delineated. For hydrozones with plants of mixed water use, refer to subsection (B)(5)(b).

d. Water Features. Water features may be permitted, subject to design review, and the provisions of Chapter 14.09 (Water Conservation).

(i.) All water features shall incorporate recirculating water systems.
(ii.) Where available, recycled water shall be used as a source for decorative water features.
(iii.) The surface area of a water feature shall be indicated on the plans and included in the high water use hydrozone area of the water budget calculation.

e. Limitations on Turf.

(i.) Turf shall not be permitted on slopes greater than 1 foot of vertical elevation change for every 4 feet of horizontal length.
(ii.) Turf shall not comprise greater than 25 percent of the front yard planting area of developer-installed single-family landscaping.
(iii.) With the exception of special landscape areas, turf shall not comprise greater than 25 percent of nonresidential landscaped area.
(iv.) Turf shall not be permitted within the protected zone radius of any native oak tree, as defined in Chapter 19.66.

f. Soil Preparation, Mulch and Amendments.

(i.) 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.
(ii.) 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 groundcovers or direct seeding applications where mulch is not advisable. The plans shall identify the type of mulch and application depth. Shredded (i.e., "gorilla") mulch is not acceptable. To provide habitat for beneficial insects and other wildlife, up to 5% of the landscape area may be left without mulch. Designated insect habitat must be included in the landscape design plan as such.
(iii.) For landscape installations, compost at a rate of a minimum of four cubic yards per 1,000 square feet of permeable area shall be incorporated to a depth of six inches into the soil. Soils with greater than 6% organic matter in the top 6 inches of soil are exempt from adding compost and tilling.
(iv.) Organic mulch materials made from recycled or post-consumer shall take precedence over inorganic materials or virgin forest

products unless the recycled post-consumer organic products are not locally available. Organic mulches are not required where prohibited by local Fuel Modification Plan Guidelines or other applicable local ordinances.

(v.) Stabilizing mulching products shall be used on slopes greater than 1 foot of vertical elevation change for every 3 feet of horizontal length.

(vi.) Required soil amendments and quantities shall be clearly denoted on the plans. Soil amendments shall be incorporated based on the recommendations of the soil report and what is appropriate for the plants selected (see subsection (B)(3)).

g. Other Design Considerations. The landscape design plan, at a minimum, shall:

(i.) Delineate property lines, utilities and utility easements, streets, driveways, walkways, and other paved areas or hardscapes (pervious or impervious);

(ii.) Identify buildings and structures including pad elevation(s) if applicable;

(iii.) Identify natural features to remain, including rock outcroppings, existing oak and ornamental trees, shrubs, etc.;

(iv.) Identify recreational or other special landscape areas, as defined in Section 14.18.040;

(v.) Identify the location, installation details and any applicable stormwater best management practices. Projects shall refer to the requirements of the City's Stormwater Quality Design Manual;

(vi.) Identify any applicable rain harvesting or catchment technologies as discussed in Section 14.18.120 and their 24-hour retention or infiltration capacity.

(vii.) Identify any applicable graywater discharge piping, system components and area(s) of distribution;

(viii.) A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches. Refer to the local Fuel Modification Plan guidelines.

(ix.) The use of invasive plant species, such as those listed by the California Invasive Plant Council, is strongly discouraged.

(x.) The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

h. Verification. The landscape plan shall contain the following statement: "I have complied with the criteria of the Water Efficient Landscaping Ordinance and applied such criteria for the efficient use of water in the landscape design plan," which shall be signed by a licensed landscape architect, licensed landscape contractor or any other person authorized to design a landscape plan pursuant to Sections 5500.1, 5615, 5641 et seq., 6701, and 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.

5. Irrigation Plan. This section applies to landscaped areas requiring permanent irrigation, not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an automated 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.

a. System Requirements.

(i.) Landscape water meters defined as either a dedicated water service meter or private submeter, shall be installed for all non-residential irrigated landscapes of 1,000 sq. ft. but not more than 5,000 sq. ft. (the level at which Water Code 535 applies) and residential irrigated landscapes of 5,000 sq. ft. or greater. A landscape water meter may be either:

a. A customer service meter dedicated to landscape use provided by the local water purveyor; or
b. A privately owned meter or submeter.

(ii.) 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. For single family residential properties, controller shall have a minimum of 8 stations or be upgradable to 8 stations or more. An exception for additional stations may be provided for front yard landscapes that will be maintained by a homeowner's association.

(iii.) If the water pressure is below or exceeds the recommended pressure of 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.

a. If the static 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.

b. 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.
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. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have a rain sensor input. Irrigation should 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 shall be provided as required by the environmental utilities department to protect the water supply from contamination by the irrigation system.
f. Flow sensors that detect high flow conditions created by system damage or malfunction are required for all on non-residential landscapes and residential landscapes of 5000 sq. ft. or larger.
g. Master shut-off valves are required on all projects except landscapes 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.
h. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways, or structures.
i. Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

j. The design of the irrigation system shall conform to the hydrozones delineated on the landscape design plan.
k. The irrigation system shall be designed and installed to meet irrigation efficiency criteria as described in subsection (B)(2) regarding the maximum applied water allowance.
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 must document a distribution uniformity low quarter of 0.65 or higher using the protocol defined in ASABE/ICC 802-2014.
m. Low volume irrigation shall be used in mulched planting areas to maximize water infiltration into the root zone.
n. Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
o. Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
p. Swing joints or other riser-protection components shall be provided on all risers subject to damage that are adjacent to hardscapes or in high traffic areas of turf grass.
q. Check valves or anti-drain valves are required on all sprinkler heads where low point drainage could occur.
r. Landscape areas less than ten feet in width in any direction shall be irrigated with subsurface irrigation or low volume irrigation technology or other means that produces no runoff or overspray.
s. 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 volume 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:

    i. The landscape area is adjacent to permeable surfacing and no overspray and runoff occurs; or
    ii. The adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
    iii. The irrigation designer specifies an alternative design or technology as part of the landscape package, and clearly demonstrates strict adherence

to irrigation system design criteria in subsection (B)(5). Prevention of overspray and runoff must be demonstrated and confirmed during the irrigation audit.

t. Slopes greater than 1 foot of vertical elevation change for every 4 feet of horizontal length 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 landscape designer specifies an alternative design or technology, as part of the landscape package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be demonstrated and confirmed during the irrigation audit.
u. Irrigation design plans that incorporate use of recycled water shall comply with the requirements of the city's design standards for on-site recycled water systems.

b. 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 their appropriateness for the plant type within that hydrozone.
(iii.) Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf to facilitate the appropriate irrigation of trees. The mature size and extent of the root zone shall be considered when designing irrigation for the tree.
(iv.) Individual hydrozones that mix plants of moderate and low water use or moderate and high water use may be allowed if:

a. The plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or
b. The plant factor of the higher water using plant is used for calculations.

(v.) Individual hydrozones that mix high and low water use plants shall not be permitted.
(vi.) 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, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table (see Water Efficient Landscape Worksheet). This table can also assist with the irrigation audit and programming the controller.

c. The irrigation plan, at a minimum, shall identify:

i. Location and size of separate water meters for landscape;

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. Recycled water irrigation systems as specified in Section 14.18.100.

d. The irrigation plan shall contain the following statement: "I have complied with the criteria of the Water Efficient Landscaping Ordinance and applied such criteria for the efficient use of water in the irrigation plan," which shall be signed by a licensed landscape architect, certified irrigation designer, irrigation consultant, licensed landscape contractor or any other person authorized to design an irrigation system pursuant to Sections 5500.1, 5615, 5641 et seq., 6701, and 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.

6. Grading and Drainage Plan. For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff and water waste. A grading and drainage plan shall be submitted as part of the Landscape Documentation Package. The grading and drainage plan prepared by a civil engineer and submitted for improvement plan review in association with a development project may also satisfy this requirement.

a. In addition to other city grading design standards, the grading plan shall include the following information:

(i.) Height of graded slopes;
(ii.) Drainage patterns;
(iii.) Proposed underground and in-ground drainage improvements;
(iv.) Pad elevations; and
(v.) Finish grade.

b. Stormwater retention or treatment improvements, if applicable.

c. Verification. The grading and drainage plan shall contain the following statement: "I have complied with the criteria of the Water Efficient Landscaping Ordinance and applied such criteria for the efficient use of

water in the grading and drainage plan," which shall be signed by a licensed professional as required by law.

C. Approval Required. Upon approval of the landscape package by the city, and provided all other applicable city requirements are met, the project applicant shall:

1. Receive from the city a permit or approval and record the date of the permit or approval in the certificate of completion; and

2. Submit a copy of the approved landscape package along with the record drawings, and any other information to the property owner or designee.

14.18.060 Landscape Certificate of Completion.

A. Prior to issuance of a certificate of occupancy, a signed landscape certificate of completion shall be submitted to the Planning Division on a form prescribed by the Environmental Utilities Director or his designee that shall include the following information and documentation:

1. Date, project name, project address, applicant name, telephone, and mailing address;

2. Property owner name, telephone, and mailing address;

3. Certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved landscape package:

   a. Where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification;

   b. A diagram of the irrigation plan showing hydrozones shall be kept with the irrigation controller for subsequent management purposes.

4. Irrigation audit report (see Section 14.18.080);

5. Scheduling parameters used to set the irrigation controller (see Section 14.18.070);

6. Landscape and irrigation maintenance schedule (see Section 14.18.070); and

7. Soil analysis report, if not initially submitted with the landscape package, and documentation verifying implementation of soil management report recommendations.

B. The project applicant shall ensure that copies of the approved landscape certificate of completion are submitted to the City and property owner or his/her designee.

C. Following receipt and review, the City shall either approve or deny the landscape certificate of completion. If the landscape certificate of completion is denied, the City shall not be obligated to issue an occupancy permit and will provide information to the project applicant regarding necessary corrections, appeal, or other assistance.

14.18.070 Irrigation Scheduling and Maintenance.

A. Irrigation Scheduling. For the efficient use of water, all irrigation schedules shall be developed, managed and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:

1. Irrigation scheduling shall utilize automatic irrigation systems and evapotranspiration data.

2. Overhead irrigation using potable water shall be scheduled between 8:00 p.m. and 10:00 a.m. unless it is demonstrated that weather conditions are unfavorable or would result in detriment to plant health. Operation of the irrigation system outside the normal watering window is permitted for auditing and system maintenance.

3. The irrigation schedule shall factor irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance.

4. Using an appropriate controller, an annual irrigation program with monthly irrigation schedules shall be developed and submitted to the City for each of the following:

    a. The plant establishment period;

    b. The established landscape; and

    c. Temporarily irrigated areas.

5. Irrigation schedules shall consider the following:

    a. Irrigation interval (days between irrigation);

    b. Irrigation run times (hours or minutes per irrigation event to avoid runoff);

    c. Number of cycle starts required for each irrigation event to avoid runoff;

d. Amount of applied water scheduled to be applied on a monthly basis;

e. Application rate setting;

f. Root depth setting;

g. Plant type setting;

h. Soil type;

i. Slope factor and shade factor setting;

j. Irrigation uniformity or efficiency setting.

B. Landscape and Irrigation Maintenance

1. Landscaping shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the landscape certificate of completion.

2. A regular maintenance schedule shall include, but is not limited to: routine inspection; auditing; adjustment and repair of the irrigation system and its components; aerating and de-thatching turf areas; top dressing with compost; replenishing mulch; fertilizing; pruning; weeding in all landscaped areas and removing any obstruction to emission devices.

3. Irrigation equipment shall be repaired or replaced with the originally installed components or equivalents or with components with greater efficiency.

4. A project applicant is encouraged to implement established landscape industry sustainable Best Practices for all landscape maintenance activities.

14.18.080 Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

A. All landscape irrigation audits shall be conducted by a third party certified landscape irrigation auditor. Landscape audits shall not be conducted by the person who designed the landscape or installed the landscape.

B. In large projects or projects with multiple landscape installations (i.e. production home developments) an auditing rate of 1 in 7 lots or approximately 15% of the project's irrigation valves will satisfy this requirement.

C. For new construction and rehabilitated landscape projects installed after December 1, 2015, as described in Section 14.18.030.

1. The project applicant shall submit an irrigation audit report with the Certificate of Completion to the local agency that 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 programming;

2. The City shall administer programs that may include, but not be limited to, irrigation water use analysis, irrigation audits, and irrigation surveys for compliance with the Maximum Applied Water Allowance.

14.18.090 Irrigation Efficiency.

For the purpose of determining the Estimated Total Water Use, average irrigation efficiency is assumed to be 0.75 for overhead spray devices and 0.81 for drip system devices.

14.18.100 Use of Recycled Water for Irrigation.

A. In addition to the requirements contained in this Chapter, landscape and irrigation plans for sites utilizing recycled water shall be designed consistent with the requirements of Chapter 14.17 (Recycled Water Service), and the City's Rules and Regulations for Use of Recycled Water.

B. Irrigation systems shall be designed and constructed to allow the use of recycled water where such recycled water is available or may become available in the future.

C. Irrigation systems shall use recycled water, if available, unless a written exemption has been granted by the City stating that recycled water meeting all public health codes and standards is not available and will not be available for the foreseeable future.

D. Landscaping using recycled water are considered Special Landscape Areas. The ET Adjustment Factor for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

14.18.110 Use of Greywater Systems.

Graywater systems promote the efficient use of water and are encouraged to assist in on-site landscape irrigation. All graywater systems shall conform to the California Plumbing Code and any applicable City ordinance standards. Refer to 14.18.030for the applicability of this ordinance to landscape areas less than 2,500 square feet with the Estimated Total Water Use met entirely by graywater.

14.18.120 Stormwater Management and Rainwater Retention.

A. Stormwater management best practices incorporated into the landscape shall comply with the requirements of the City's Stormwater Quality Design Manual.

B. All planted landscape areas are required to have friable soil to maximize water retention and infiltration. Refer to Section 14.18.050(4)(f).

C. It is strongly recommended that landscape areas be designed for capture and infiltration capacity that is sufficient to prevent runoff from impervious surfaces (i.e. roof and paved areas) from either: the one inch, 24-hour rain event or (2) the 85th percentile, 24-hour rain event, and/or additional capacity as required by any applicable local, regional, state or federal regulation.

D. It is recommended that storm water projects incorporate any of the following elements to improve on-site storm water and dry weather runoff capture and use:

1. Grade impervious surfaces, such as driveways, during construction to drain to vegetated areas.

2. Minimize the area of impervious surfaces such as paved areas, roof and concrete driveways.

3. Incorporate pervious or porous surfaces (e.g., gravel, permeable pavers or blocks, pervious or porous concrete) that minimize runoff.

4. Direct runoff from paved surfaces and roof areas into planting beds or landscaped areas to maximize site water capture and reuse.

5. Incorporate rain gardens, cisterns, and other rain harvesting or catchment systems.

6. Incorporate infiltration beds, swales, basins and drywells to capture storm water and dry weather runoff and increase percolation into the soil.

7. Consider constructed wetlands and ponds that retain water, equalize excess flow, and filter pollutants.

14.18.130 Public Education.

A. The City shall make available information regarding the design, installation, management, and maintenance of water efficient landscaping based on a water budget in permitted renovations or new single family residential homes. Said information may be provided in the form of print, electronic, or similar media deemed practical by the City.

B. Model Homes. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water efficient landscaping described in this Chapter.

1. Signs shall be used to identify the model as an example of a water efficient landscape and featuring elements such as hydrozones, irrigation equipment and others which that contribute to the overall water efficient theme. Signs shall include information about the site water use as designed per the local ordinance; specify who designed and installed the water efficient landscape; and demonstrate low water use approaches to landscaping such as using native plants, graywater systems, and rainwater catchment systems.

2. Information shall be provided regarding designing, installing, managing, and maintaining water efficient landscaping.

14.18.140 Provisions for Existing Landscaping installed prior to December 1, 2015.

A. Irrigation Water Use Analysis and Monitoring.

1. For all existing landscaping installed prior to December 1, 2015 with a dedicated or mixed-use water meter that is one acre or more, including golf courses, green belts, common areas, multifamily housing, schools, businesses, parks, cemeteries and publicly owned landscaping, the City shall offer programs that may include, but not be limited to, irrigation water use analyses, and irrigation surveys to verify that landscape water use does not exceed the Maximum Applied Water Allowance for existing landscaping. The City may require mandatory irrigation audits conducted at property owners' expense to demonstrate that existing landscaping comply with the Maximum Applied Water Allowance.

2. For all existing landscaping over one (1) acre in size that do not have a meter, the City shall offer programs that may include irrigation surveys and irrigation audits that verify proper operation of the irrigation system and prevent water waste.

B. Maximum Applied Water Allowance for existing landscaping shall be calculated as: MAWA = (0.8)(ETo)(LA)(0.62).

C. Required landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

D. Effective Precipitation. The City may consider Effective Precipitation (not to exceed 25% of annual precipitation) in tracking water use and may use the following equation to calculate Maximum Applied Water Allowance for landscaping installed before December 1, 2015:

1. MAWA= (ETo - Eppt) (0.62) [(0.55 x LA) + (0.45 x SLA)] for residential areas.

2. MAWA= (ETo-EPPT) (0.62) [(0.45 x LA) + (0.55 x SLA)] for non-residential areas.

14.18.150 Enforcement.

A. It shall be the duty of the Environmental Utilities Director or his designee to enforce the provisions of this Chapter. All departments, officials and public employees vested with the duty or authority to issue permits or licenses shall not issue a permit or license for uses, buildings or purposes in conflict with the provisions of this Chapter and any such permit or license issued in conflict with the provisions of this Chapter shall be null and void. The Environmental Utilities Director or his designee may delegate enforcement responsibilities to other City employees.
B. Any landscaping that is installed, constructed, altered, enlarged, converted, moved, or maintained contrary to the provisions of this Chapter, or failure to comply with any of the conditions of a permit or variance granted under this Chapter is declared to be unlawful. The City Attorney may initiate an action or proceeding to enforce the provisions of this Chapter, as appropriate.

14.18.160 Penalties.

Any property owner, person, firm, or corporation, whether as principal, agent, employee or otherwise, violating any provision of this Chapter shall be guilty of a misdemeanor, and upon conviction thereof shall be punishable by a fine of not more than $500.00 or by imprisonment in the County Jail for a term not exceeding six (6) months, or by both. The City Attorney in his or her discretion may reduce any violation of this Chapter to an infraction, punishable by a fine of not more than $250.00. Any property owner, person, firm, or corporation shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this Chapter is committed, continued or permitted by such person, firm or corporation, and shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this Chapter is committed, continued or permitted by such person, firm or corporation, and shall be punishable as provided herein. Penalties under the administrative enforcement provisions of Chapter 2.52 of this code may be imposed in lieu of, but not in addition to, penalties imposed by the court for any single violation.

14.18.170 Reporting.

The City shall report on implementation and enforcement of the WELO by December 31, 2015. Subsequently, reporting for the City will be done by January 31st of each year. Reports shall be submitted to the Department of Water Resources (DWR) and address the criteria requested by DWR.

SECTION 3. This ordinance shall be effective at the expiration of thirty (30) days from the date of adoption.

SECTION 4. The City Clerk is hereby directed to cause this ordinance to be published in full at least once within fourteen (14) days after it is adopted in a newspaper of general circulation in the City, or shall within fourteen (14) days after its adoption cause this ordinance to be posted in full in at least three (3) public places in the City and enter in the Ordinance Book a certificate stating the time and place of said publication by posting.

PASSED AND ADOPTED by the Council of the City of Roseville this 16th day of March, 2016, by the following vote on roll call:

AYES COUNCILMEMBERS: Gore, Herman, Roccucci, Garcia

NOES COUNCILMEMBERS: None

ABSENT COUNCILMEMBERS: Rohan

MAYOR

ATTEST:

City Clerk