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Title 15 WATERS AND SEWERS							

Chapter 15.50 WATER EFFICIENT LANDSCAPE

15.50.010 Purpose.

- (a) The State Legislature has found:
- (1) That the limited supply of state waters are subject to ever increasing demands;
 - (2) That California's economic prosperity depends on adequate supplies of water;
 - (3) That state policy promotes conservation and efficient use of water;
 - (4) That landscapes provide recreation areas, clean the air and water, prevent erosion, offer fire protection and replace ecosystems displaced by development; and
 - (5) That landscape design, installation and maintenance can and should be water efficient.
- (b) Consistent with the legislative findings, the purpose of this chapter is to:
- (1) Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
 - (2) Establish a structure for designing, installing and maintaining water efficient landscapes in new projects; and
 - (3) Establish provisions for water management practices and water waste prevention for established landscapes. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.015 Applicability.

- (a) This chapter shall apply to all of the following landscape projects:
- (1) New construction projects with a landscape area greater than five hundred square feet requiring a building or landscape permit, plan check or design review;
 - (2) Rehabilitated landscape projects with an aggregated landscape area equal to or greater than two thousand five hundred square feet requiring a building or landscape permit, plan check or design review;
 - (3) Existing landscapes limited to Sections 493, 493.1 and 493.2 of the State Model Water Efficient Landscape Ordinance; and
 - (4) Cemeteries. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries are limited to Sections 492.4, 492.11 and 492.12; and existing cemeteries are limited to Sections 493, 493.1 and 493.2 of the State Model Water Efficient Landscape Ordinance.
- (b) This chapter does 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. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.020 Definitions.

The words used in this chapter have the meaning set forth below:

“Anti-drain valve” or “check valve” means a valve located under a sprinkler head to hold water in the system so it minimizes drainage from the lower elevation sprinkler heads.

“Application rate” means the depth of water applied to a given area, usually measured in inches per hour.

“Applied water” means the portion of water supplied by the irrigation system to the landscape.

“Automatic controller” means a mechanical or solid state timer, capable of operating valve stations to set the days and length of time of a water application.

“Backflow prevention device” means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

“Conversion factor (0.62)” means a number that converts the maximum applied water allowance from acre-inches per acre per year to gallons per square foot per year. The conversion factor is calculated as follows:

$$\begin{aligned} (325,851 \text{ gallons}/43,560 \text{ square feet})/12 \text{ inches} &= (0.62) \\ 325,851 \text{ gallons} &= \text{one-acre foot} \\ 43,560 \text{ square feet} &= \text{one acre} \\ 12 \text{ inches} &= \text{one foot} \end{aligned}$$

To convert gallons per year to 100-cubic-feet per year, another common billing unit for water, divide gallons per year by 748.

$$(748 \text{ gallons} = 100 \text{ cubic feet})$$

“Ecological restoration project” means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

“Effective precipitation” or “usable rainfall” means the portion of total precipitation that is used by the plants. Precipitation is not a reliable source of water, but can contribute to some degree toward the water needs of the landscape.

“Emitter” means drip irrigation fittings that deliver water slowly from the system to the soil.

“Established landscape” means the point at which plants in the landscape have developed roots into the soil adjacent to the root ball.

“Establishment period” means the first year after installing the plant in the landscape.

“Estimated applied water use” means the portion of the estimated total water use that is derived from applied water. The estimated applied water use shall not exceed the maximum applied water allowance. The estimated applied water use may be the sum of the water recommended through the irrigation schedule, as referenced in Section 15.50.030(b)(3).

“Estimated total water use” means the annual total amount of water estimated to be needed to keep the plants in the landscaped area healthy. It is based upon such factors as the local evapotranspiration rate, the size of the landscaped area, the types of plants, and the efficiency of the irrigation system, as described in Section 15.50.030(c)(4).

“ET adjustment factor” means a factor of 0.8, 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. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. The irrigation efficiency for purposes of the ET adjustment factor is 0.625. Therefore, the ET adjustment factor $(0.8) = (0.5/0.625)$.

“Evapotranspiration” means the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time.

“Flow rate” means the rate at which water flows through pipes and valves (gallons per minute or cubic feet per second).

“Hydrozone” means a portion of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated. For example, a naturalized area planted with native vegetation that will not need supplemental irrigation once established is a non-irrigated hydrozone.

“Infiltration rate” means the rate of water entry into the soil expressed as a depth of water per unit of time (inches per hour).

“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 minimum irrigation efficiency for purposes of this chapter is 0.625. Greater irrigation efficiency can be expected from well designed and maintained systems.

“Landscaped area” means the entire parcel less the building footprint, driveways, non-irrigated portions of parking hardscapes, such as decks and patios, and other nonporous areas. Water features are included in the calculation of the landscaped area. Areas dedicated to edible plants, such as orchards or vegetable gardens are not included.

“Landscape irrigation audit” means a process to perform site inspections, evaluate irrigation systems and develop efficient irrigation schedules.

“Lateral line” means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

“Main line” means the pressurized pipeline that delivers water from the water source to the valve or outlet.

“Maximum applied water allowance” means, for design purposes, the upper limit of annual applied water for the established landscaped area as specified in Section 15.50.030(b)(2). It is based upon the area’s reference evapotranspiration, the ET adjustment factor and the size of the landscaped area. The estimated applied water use shall not exceed the maximum applied water allowance.

“Mined-land reclamation projects” means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

“Mulch” means any material such as leaves, bark, straw or other materials left loose and applied to the soil surface for the beneficial purpose of reducing evaporation.

“Operating pressure” means the pressure at which a system of sprinklers is designed to operate, usually indicated at the base of a sprinkler.

“Overhead sprinkler irrigation systems” means those with high flow rates (pop-ups, impulse sprinklers, rotors, etc.)

“Overspray” means the water which is delivered beyond the landscaped area, wetting pavements, walks, structures, or other non-landscaped areas.

“Plant factor” means a factor that when multiplied by reference evapotranspiration, estimates the amount of water used by plants. For purposes of this chapter, the average plant factor of low water using plants ranges from 0 to 0.3, for average water using plants the range is 0.4 to 0.6, and for high water using plants the range is 0.7 to 1.0.

“Rain sensing device” means a system which automatically shuts off the irrigation system 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 of active play or recreation such as sports fields, school yards, picnic grounds, or other areas with intense foot traffic.

“Recycled water,” “reclaimed water,” or “treated sewage effluent water” means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation; not intended for human consumption.

“Reference evapotranspiration” or “ET_o” means a standard measurement of environmental parameters which affect the water use of plants. ET_o is given in inches per day, month, or year as represented in Section 15.50.050, and is an estimate of the evapotranspiration of a large field of four to seven-inch tall, cool-season grass 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.

“Rehabilitated landscape” means any relandscaping project that requires a permit.

“Run off” means water which is not absorbed by the soil or landscape to which it is applied and flows from the area. For example, run off may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a severe slope.

“Soil moisture sensing device” means a device that measures the amount of water in the soil.

“Soil texture” means the classification of soil based on the percentage of sand, silt and clay in the soil.

“Sprinkler head” means a device which sprays water through a 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.

“Turf” means a surface layer of earth containing mowed grass with its roots. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore paspalum, St. Augustine grass, Zoysia grass and Buffalo grass are warm-season grasses.

“Valve” means a device used to control the flow of water in the irrigation system.

“Water conservation concept statement” means a one page checklist and a narrative summary of the project as shown in Section 15.50.030(b)(1). (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.030 Provisions for new or rehabilitated landscapes.

(a) Landscape Documentation Package.

(1) A copy of the landscape documentation package conforming to this chapter shall be submitted to the city. No permit shall be issued until the city reviews and approves the landscape documentation package.

(2) A copy of the approved landscape documentation package shall be provided to the property owner or site manager along with the record drawings and any other information normally forwarded to the power owner or site manager.

(3) A copy of the water conservation concept statement and the certificate of substantial completion shall be sent by the project manager to the local retail water purveyor.

(4) Each landscape documentation package shall include the following elements, which are described in subsection (b) of this section:

- (A) Water conservation concept statement;
- (B) Calculation of the maximum applied water allowance;
- (C) Calculation of the estimated applied water use;
- (D) Calculation of the estimated total water use;
- (E) Landscape design plan;
- (F) Irrigation design plan;
- (G) Irrigation schedules;
- (H) Maintenance schedule;
- (I) Landscape irrigation audit schedule;
- (J) Pesticides, herbicides and fertilizers;
- (K) Grading design plan;
- (L) Soil preparation, mulch and amendments; and
- (M) Certificate of substantial completion (to be submitted after installation of the project).

(5) If effective precipitation is included in the calculation of the estimated total water use, then an effective precipitation disclosure statement from the landscape professional and the property owner shall be submitted with the landscape documentation package.

(b) Elements of Landscape Documentation Package.

(1) Water Conservation Concept Statement. Each landscape documentation package shall include a cover sheet, referred to as the water conservation concept statement. An example of said statement is on file in the offices of the City Clerk, City of King, 212 South Vanderhurst Avenue, King City, California 93930, and is open to inspection by the public during regular business hours. It serves as a checklist to verify that the elements of the landscape documentation package have been completed and has a narrative summary of the project.

(2) The Maximum Applied Water Allowance.

(A) The formula for calculating the maximum applied water allowance and examples of calculations are on file in the offices of the City Clerk, City of King, 212 South Vanderhurst Avenue, King City, California 93930, and are open to inspection by the public during regular business hours.

(B) Portions of landscaped areas in public and private projects such as parks, playgrounds, sports fields, golf courses, or school yards where turf provides a playing surface or serves other recreational purposes are considered recreational areas and may require water in addition to the maximum applied water allowance. A statement shall be included with the landscape design plan designating recreational areas to be used for such purposes and specifying any needed amount of additional water above the maximum applied water allowance.

(3) Estimated Applied Water Use.

(A) The estimated applied water use shall not exceed the maximum applied water allowance.

(B) A calculation of the estimated applied water use shall be submitted with the landscape documentation package. It may be calculated by summing the amount of water recommended in the irrigation schedule.

(4) Estimated Total Water Use.

(A) A calculation of the estimated total water use shall be submitted with the landscape documentation package. The estimated total water use may be calculated by summing the amount of water recommended in the irrigation schedule and adding any amount of water expected from effective precipitation (not to exceed twenty-five percent of the local annual mean precipitation) or may be calculated from a formula such as the following:

The estimated total water use for the entire landscaped area equals the sum of the estimated water use of all hydrozones in that landscaped area.

$$\text{EWU (hydrozone)} = \frac{(\text{ETo}) (\text{PF}) (\text{HA}) (.62)}{(\text{IE})}$$

EWU (hydrozone) = Estimated water use (gallons per year)

ETo = Reference evapotranspiration (inches per year)

PF = Plant factor

HA = Hydrozone area (square feet)

(.62) = Conversion factor

IE = Irrigation efficiency

(B) If the estimated total water use is greater than the estimated applied water use due to precipitation being included as a source of water, an effective precipitation disclosure statement such as the one in Section 15.50.050 shall be included in the landscape documentation package.

(5) Landscape Design Plan. A landscape design plan meeting the following requirements shall be submitted as part of the landscape documentation package.

(A) Plant Selection and Grouping.

(i) Any plants may be used in the landscape, providing the estimated applied water use recommended does not exceed the maximum applied water allowance and that the plants meet the specifications set forth in subsection (b)(5)(A)(ii)—(iv) of this section. To encourage the efficient use of water, the following is recommended:

1. Protection and preservation of native species and natural vegetation.
2. Selection of water-conserving plant and turf species.
3. Selection of plants based on disease and pest resistance.

(ii) Plants having similar water use shall be grouped together in distinct hydrozones.

(iii) Plants shall be selected appropriately based upon their adaptability to the climatic, geologic and topographical conditions of the site. Protection and preservation of native species and natural areas is encouraged. The planting of trees is encouraged wherever it is consistent with the other provisions of this chapter.

(iv) Turf is not allowed on slopes greater than twenty-five percent where the toe of the slope is adjacent to an impermeable hardscape and where twenty-five percent means one foot of vertical elevation change for every four feet of horizontal length (rise divided by run x 100= slope percent).

(v) Fire prevention needs shall be addressed in areas that are fire prone. Information about fire prone areas and appropriate landscaping for fire safety is available from local fire departments or the California Department of Forestry.

(vi) The use of invasive and/or noxious plant species is strongly discouraged.

(vii) 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.

(B) Water Features.

(i) Recirculating water shall be used for decorative water features.

(ii) Where available, recycled water shall be used as a source for decorative water features.

(iii) Surface area of a water feature shall be included in the high-water use hydrozone area of the water budget calculation.

(iv) Pool and spa covers are encouraged.

(C) Landscape Design Plan Specifications. The landscape design plan shall be drawn on project base sheets at a scale that accurately and clearly identifies:

(i) Designation of hydrozones by number, letter, or other method;

(ii) Identify each hydrozone as low, moderate, high water, or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation;

(iii) Landscape materials, trees, shrubs, groundcover, turf and other vegetation. Planting symbols shall be clearly drawn and plants labeled by botanical name, common name, container size, spacing and quantities of each group of plants indicated;

(iv) Property lines and street names;

(v) Streets, driveways, walkways and other paved areas;

(vi) Pools, ponds, water features, fences and retaining walls;

(vii) Existing and proposed buildings and structures, including elevation, if applicable;

(viii) Natural features including, but not limited to, rock outcroppings, existing trees, shrubs that will remain;

(ix) Tree staking, plant installation, soil preparation details and any other applicable planting and installation details;

(x) A calculation of the total landscaped area;

(xi) Designation of recreational areas;

(xii) Identify areas permanently and solely dedicated to edible plants;

(xiii) Identify areas irrigated with recycled water;

(xiv) Identify type of mulch and application depth;

(xv) Identify soil amendments, type, and quantity;

(xvi) Identify type and surface area of water features;

(xvii) Identify hardscapes (pervious and non-pervious);

(xviii) Identify location and installation details, and twenty-four-hour retention or infiltration capacity of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Stormwater best management practices are encouraged in the landscape design plan and examples include, but are not limited to:

1. Infiltration beds, swales, and basins that allow water to collect and soak into the ground,
2. Constructed wetlands and retention ponds that retain water, handle excess flow, and filter pollutants, and
3. Pervious or porous surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff;

(xix) Identify any applicable rain harvesting or catchment technologies (e.g., rain gardens, cisterns, etc.);

(xx) Include the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan"; and

(xxi) Bear the signature of the person authorized to design a landscape.

(6) Irrigation Design Plan. An irrigation design plan meeting the following conditions shall be submitted as part of the landscape documentation package.

(A) Irrigation Design Criteria.

(i) Runoff and Overspray. Soil types and infiltration rate shall be considered when designing irrigation systems. All irrigation systems shall be designed to avoid runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Proper irrigation equipment and schedules, including features such as repeat cycles, shall be used to closely match application rates to infiltration rates therefore minimizing runoff.

Special attention shall be given to avoid runoff on slopes and to avoid overspray in planting areas with a width less than ten feet, and in median strips.

No overhead sprinkler irrigation systems shall be installed in median strips less than ten feet wide.

(ii) Irrigation Efficiency. For the purpose of determining the maximum applied water allowance, irrigation efficiency is assumed to be 0.625. Irrigation systems shall be designed, maintained and managed to meet or exceed 0.625 efficiency.

(iii) Equipment.

1. Water Meters. Separate landscape water meters shall be installed for all projects except for single-family homes or any project with a landscaped area of less than five thousand square feet.

2. Controllers. Automatic control systems shall be required for all irrigation systems and must be able to accommodate all aspects of the design.

3. Valves. Plants which require different amounts of water shall be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use shall be used in that area. Anti-drain (check) valves shall be installed in strategic points to minimize or prevent low head drainage.

4. Sprinkler Heads. Heads and emitters shall have consistent application rates within each control valve circuit. Sprinkler heads shall be selected for proper area coverage, application rate, operating pressure, adjustment capability and ease of maintenance.

5. Rain Sensing Override Devices. Rain sensing override devices shall be required on all irrigation systems.

6. Soil Moisture Sensing Devices. It is recommended that soil moisture sensing devices be considered where appropriate.

(B) Recycled Water.

(i) The installation of recycled water irrigation systems (dual distribution systems) shall be required to allow for the current and future use of recycled water, unless a written exemption has been granted as described in the following paragraph (B)(ii) of this subsection.

(ii) Irrigation systems shall make use of recycled water unless a written exemption has been granted by the local water agency, stating that recycled water meeting all health standards is not available and will not be available in the foreseeable future.

(iii) The recycled water irrigation systems shall be designed and operated in accordance with all local and state codes.

(C) Irrigation Design Plan Specifications. Irrigation systems shall be designed to be consistent with hydrozones. The irrigation design plan shall be drawn on project base sheets. It shall be separate from, but use the same format as, the landscape design plan. The scale shall be the same as that used for the landscape design plan described in subsection (b) (5)(C) of this section.

The irrigation design plan shall accurately and clearly identify:

(i) Location and size of separate water meters for the landscape;

(ii) Location, type and size of all components of the irrigation system, including automatic controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers 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 (psi) for each station;

(v) Recycled water irrigation systems as specified in subsection (b)(6)(B) of this section.

(7) Irrigation Schedules. Irrigation schedules satisfying the following conditions shall be submitted as part of the landscape documentation package.

(A) An annual irrigation program with monthly irrigation schedules shall be required for the plant establishment period, for the established landscape and for any temporarily irrigated areas.

(B) The irrigation schedule shall:

(i) Include run time (in minutes per cycle), suggested number of cycles per day and frequency of irrigation for each station; and

(ii) Provide the amount of applied water (in one hundred cubic feet, gallons, or in whatever billing units the local water supplier uses) recommended on a monthly and annual basis.

(C) The total amount of water for the project shall include water designated in the estimated total water use calculation plus water needed for any water features, which shall be considered as a high water using hydrozone.

(D) Recreational areas designated in the landscape design plan shall be highlighted and the irrigation schedule shall indicate if any additional water is needed above the maximum applied water allowance because of high plant factors (but not due to irrigation inefficiency).

(E) Whenever possible, irrigation scheduling shall incorporate the use of evapotranspiration data such as those from the California Irrigation Management Information System (CIMIS) weather stations to apply the appropriate levels of water for different climates.

(F) Whenever possible, landscape irrigation shall be scheduled between two a.m. and ten a.m. to avoid irrigating during times of high wind or high temperature.

(8) Maintenance Schedules. A regular maintenance schedule satisfying the following conditions shall be submitted as part of the landscape documentation package:

(A) Landscapes shall be maintained to ensure water efficiency. A regular maintenance schedule shall include, but not be limited to, checking, adjusting and repairing irrigation equipment; resetting the automatic controller; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning and weeding in all landscaped areas. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

(B) Whenever possible, repair of irrigation equipment shall be done with the originally specified materials or their equivalents.

(C) Irrigation systems shall be properly maintained to prevent water waste from leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures. Repair of all irrigation equipment shall be done with the originally installed components or equivalents.

(9) Landscape Irrigation Audit Schedules. A schedule of landscape irrigation audits, for all but single-family residences, satisfying the following conditions shall be submitted to the city or county as part of the landscape documentation package.

(A) At a minimum, audits shall be in accordance with the State of California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook, the entire document, which is hereby incorporated by reference. (See Landscape Irrigation Auditor Handbook (June, 1990) Version 5.5 [formerly Master Auditor Training].)

(B) The schedule shall provide for landscape irrigation audits to be conducted by certified landscape irrigation auditors at least once every five years.

(10) Pesticides, Herbicides and Fertilizers. Provisions shall be made to reduce the discharge of pesticides, herbicides and fertilizers.

(A) No application of pesticides, herbicides or fertilizers shall occur during irrigation or within forty-eight hours of predicted rainfall with greater than fifty percent probability as predicted by the National Oceanic and Atmospheric Administration (NOAA).

(B) Application of pesticide and herbicide should be limited to the least amount feasible, and manual weed and insect removal methods should be employed where practicable.

(11) Grading Design Plan. Grading design plans satisfying the following conditions shall be submitted as part of the landscape documentation package.

(A) A grading design plan shall be drawn on project base sheets. It shall be separate from, but use the same format as, the landscape design plan.

(B) The grading design plan shall indicate finished configurations and elevations of the landscaped area, including the height of graded slopes, drainage patterns, pad elevations and finish grade.

(12) Soil Preparation, Mulch and Amendments.

(A) Prior to the planting of any materials, compacted soils shall be transformed to a friable condition.

(B) Soil amendments shall be incorporated according to the recommendations of the soil management report in paragraph (12)(C) of this subsection and what is appropriate for the plants selected.

(C) In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant, or his or her designee, as follows:

(i) A soil analysis satisfying the following conditions shall be submitted as part of the landscape documentation package;

(ii) Determination of soil texture, indicating the percentage of organic matter;

(iii) An approximate soil infiltration rate (either measured or derived from soil texture/infiltration rate tables). A range of infiltration rates shall be noted where appropriate;

(iv) Measure of pH, and total soluble salts;

(v) Recommendations.

(D) For landscape installations, compost at a rate of a minimum of four cubic yards per one thousand square feet of permeable area (unless contradicted by soil test) shall be incorporated to a depth of six inches into the soil. Soils with greater than twenty-five percent organic matter in the top six inches of soil are exempt from adding compost.

(E) A mulch of at least three inches shall be applied to all planting areas except turf.

(F) Organic mulch materials should take precedence over inorganic materials in instances where it is suitable, ecologically possible, and the material does not pose a fire hazard. Composted organic material, in particular that which includes post-consumer material, should be considered over more compacted products such as bark, wood chips, etc.

(13) Certification.

(A) Upon completing the installation of the landscaping and the irrigation system, an irrigation audit shall be conducted by a certified landscape irrigation auditor prior to the final field observation. (See Landscape Irrigation Auditor Handbook as referenced in subsection (b)(9)(A) of this section.)

(B) A licensed landscape architect or contractor, certified irrigation designer, or other licensed or certified professional in a related field shall conduct a final field observation and shall provide a certificate of substantial completion to the city. The certificate shall specifically indicate that plants were installed as specified, that the irrigation system was installed as designed, and that an irrigation audit has been performed, along with a list of any observed deficiencies.

(C) Certification shall be accomplished by completing a certificate of substantial completion and delivering it to the city, to the retail water supplier, and to the owner of record. A sample of such a form is on file in the offices of the city clerk, city of King, 212 South Vanderhurst Avenue, King City, California 93930, and is open to inspection by the public during regular business hours.

(c) Public Education.

(1) Publications.

(A) Local agencies shall provide information to owners of all new, single-family residential homes regarding the design, installation and maintenance of water efficient landscapes.

(B) Information about the efficient use of landscape water shall be provided to water users throughout the community.

(2) Model Homes. At least one model home that is landscaped in each project consisting of eight or more homes shall demonstrate via signs and information the principles of water efficient landscapes described in this chapter.

(A) 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 contribute to the overall water efficient theme.

(B) Information shall be provided about designing, installing and maintaining water efficient landscapes. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.040 Provisions for existing landscapes.

(a) Water Management. All existing landscaped areas to which the city or county provides water that are one acre or more, including golf courses, green belts, common areas, multifamily housing, schools, businesses, parks, cemeteries, and publicly owned landscapes shall have a landscape irrigation audit at least every five years. At a minimum, the audit shall be in accordance with the California Landscape Water Management Program as described in the Landscape Irrigation Auditor Handbook, the entire document which is hereby incorporated by reference. (See Landscape Irrigation Audit Handbook, as referenced in Section 15.50.030(b)(9)(A).)

(1) If the project's water bills indicate that they are using less than or equal to the maximum applied water allowance for that project site, an audit shall not be required.

(2) Recognition of projects that stay within the maximum applied water allowance is encouraged.

(b) Water Waste Prevention. Cities shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, or structures. Penalties for violation of these prohibitions shall be established locally. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.050 Effective precipitation.

If effective precipitation is included in the calculation of the estimated total water use, an effective precipitation disclosure statement shall be completed, signed and submitted with the landscape documentation package. No more than twenty-five percent of the local annual mean precipitation shall be considered effective precipitation in the calculation of the estimated total water use. A sample of the precipitation disclosure statement is on file in the offices of the City Clerk, City of King, 212 South Vanderhurst Avenue, King City, California 93930, and is open to inspection by the public during regular business hours. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.060 Reference evapotranspiration.

The schedule showing the evapotranspiration for the counties situated in the state of California is on file in the offices of the City Clerk, City of King, 212 South Vanderhurst Avenue, King City, California 93930, and is open to inspection by the public during regular business hours. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

15.50.070 Stormwater management.

Landscape-related stormwater management practices can reduce runoff and improve water quality when properly designed and constructed. The following standards apply to the design of landscape areas used as bioretention facilities:

(a) Facility Sizing. Bioretention facilities shall be designed to manage stormwater from the drainage management area. Sizing shall be in accordance with the city's stormwater permit and as codified elsewhere in the King City Municipal Code.

(b) Plant Selection. Plants used in bioretention facilities shall be selected for tolerance to both periodic inundation, as well as prolonged dry periods. Plants shall be non-invasive and should be native to the region whenever possible, so as to reduce the demand for excessive irrigation and pesticide/herbicide application. A list of suitable plant species is on file with the King City community development department. Plants shall be selected according to the surface grade and the incidence of periodic surface water inundation. Plants selected for Zone A should tolerate periodic surface water inundation as well as seasonal dry periods. Plants selected for Zone B should tolerate the planting on side slopes and surface water runoff.

(c) Hydrozone Grouping and Irrigation. Installed plants within rain gardens and other bioretention facilities shall be grouped into hydrozones based on similar water usage. During plant establishment, temporary irrigation shall use separate

valves for each hydrozone. All irrigation shall be removed or disconnected from the bioretention facility at the end of plant establishment.

(d) Planter Edge and Curb Design. Bioretention facilities are intended to receive and treat stormwater runoff. Edge treatments shall be designed not to impede sheet flow from surrounding areas. See standard design details contained in the King City Standard Drawings.

(e) Compost. Compost application, quantity, and composition for bioretention facilities shall be as specified in the design details contained in the King City Standard Drawings. (Ord. 772 § 5, 2019; Ord. 757 § 2, 2018)

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