



Supplemental Agenda Related Writings/ Documents Provided To A Majority Of The Ridgecrest City Council / Redevelopment Agency Board Members After Distribution Of The December 2, 2015 Agenda Packet

1. *Item No. 13*
 - a. *Add Supporting Documents*

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City Council Agendas

12-9 - Water Efficient Landscape Ordinance.

12-9.1 - Title.

This section shall be known and may be cited as the Water Efficient Landscape Ordinance.

12-9.2 – Purpose.

This ordinance is adopted for the general purpose of promoting the values and benefits of landscaping practices that integrate conservation and efficient use of water, as outlined in Governor's Executive Order No. B-29-15 (California Code of Regulations 490, et seq.) (hereinafter "Regulations"), which is hereby incorporated into this ordinance in full by this reference.

12-9.3 - Applicability.

(a) After December 1, 2015, this ordinance shall apply to all of the following landscape projects:

(1) New construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review;

(2) Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 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 Regulations;
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 of the Regulations; and existing cemeteries are limited to Sections 493, 493.1, and 493.2 of the Regulations.

(b) For local land use agencies working together to develop a regional water efficient landscape ordinance, the reporting requirements of this ordinance shall become effective December 1, 2015 and the remainder of this ordinance shall be effective no later than February 1, 2016.

(c) Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of this ordinance or conform to the prescriptive measures contained in Appendix D of the Regulations.

(d) For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2500 square feet 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) of the Regulations.

(e) This ordinance 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.

12-9.4 - Definitions.

The terms used in this ordinance have the meaning set forth in section 491 of the Regulations.

12-9.5 - Compliance with Landscape Documentation Package.

Prior to construction, the project applicant shall submit a Landscape Documentation Package to the local agency. If the Landscape Documentation Package is approved by the local agency, the project applicant shall (1) receive a permit or approval of the plan check or design review and record the date of the permit in the Certificate of Completion; (2) submit a copy of the approved Landscape Documentation Package along with the record drawings, and any other information to the property owner or his/her designee; and (3) submit a copy of the Water Efficient Landscape Worksheet to the local water purveyor.

12-9.6 - Elements of the Landscape Documentation Package.

(a) The Landscape Documentation Package shall include the following six (6) elements:

(1) Project information, including (A) date, (B) project applicant, (C) project address, (D) total landscape area in square feet, (E) project type, (F) water supply type (G) checklist of all documents in Landscape Documentation Package, (H) project contacts to include contact information for the project applicant and property owner, and (I) applicant signature and date with the statement: "I agree to comply with the requirements of the water efficient landscape ordinance and submit a complete Landscape Documentation Package."

(2) Water Efficient Landscape Worksheet, including (A) hydrozone information table, (B) water budget calculations (Maximum Applied Water Allowance (MAWA)), and (C) Estimated Total Water Use (ETWU).

- (3) Soil management report.
- (4) Landscape design plan.
- (5) Irrigation design plan.
- (6) Grading design plan.

12-9.7 - Water Efficient Landscape Worksheet.

(a) A project applicant shall complete the Water Efficient Landscape Worksheet, which is attached as Appendix B to the Regulations. A project applicant shall thereafter calculate and ensure 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 ETo values from the Reference Evapotranspiration Table in Appendix A of the Regulations. For geographic areas not covered in Appendix A, use data from other cities located nearby in the same reference evapotranspiration zone, as found in the CIMIS Reference Evapotranspiration Zones Map, Department of Water Resources, 1999.

(b) Water budget calculations shall adhere to the following requirements: (1) The plant factor used shall be from WUCOLS or from horticultural researchers with academic institutions or professional associations as approved by the California Department of Water Resources (DWR) (the plant factor ranges from 0 to 0.1 for very low water using plants, 0.1 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants); (2) all water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone; (3) all Special Landscape Areas shall be identified and their water use calculated as shown in Appendix B of the Regulations; and (4) ETAF for new and existing (non-rehabilitated) Special Landscape Areas shall not exceed 1.0.

12-9.8 - Soil Management Report.

(a) In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant, or his/her designee, in compliance with section 492.5 of the Regulations.

12-9.9 - Landscape Design Plan.

(a) For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package, and shall meet the criteria set forth in section 492.6 of the Regulations.

12-9.10 - Irrigation Design Plan.

This section applies to landscaped areas requiring permanent irrigation, and not areas that require temporary irrigation solely for the plant establishment period. For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan shall be submitted as part of the Landscape Documentation Package, and shall meet the criteria set forth in section 492.7 of the Regulations.

12-9.11 - Grading Design Plan.

(a) For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff, and water waste. A grading plan shall be submitted as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer for other local agency permits satisfies this requirement. The grading plan shall comply with the requirements set forth in section 492.8 of the Regulations.

12-9.12 - Certificate of Completion.

The Certificate of Completion shall include be issued in accordance with the specifications set forth in section 492.9 of the Regulations.

12-9.13 - Irrigation Scheduling.

(a) 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 be regulated by automatic irrigation controllers.

(2) Overhead irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. unless weather conditions prevent it. If allowable hours of irrigation differ from the local water purveyor, the stricter of the two shall apply. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

(3) For implementation of the irrigation schedule, particular attention must be paid to 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 (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.

(4) Parameters used to set the automatic controller shall be developed and submitted following the criteria set forth in section 492.10 of the Regulations.

12-9.14 - Landscape and Irrigation Maintenance Schedule.

(a) Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.

(b) A regular maintenance schedule shall include, but not be limited to, routine inspection; auditing, adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; topdressing with compost, replenishing mulch; fertilizing; pruning; weeding in all landscape areas, and removing obstructions to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

(c) Repair of all irrigation equipment shall be done with the originally installed components or their equivalents or with components with greater efficiency.

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

12-9.15 - Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

(a) All landscape irrigation audits shall be conducted by a local agency landscape irrigation auditor or 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% will satisfy this requirement.

(c) For new construction and rehabilitated landscape projects installed after December 1, 2015, as described in Section 490.1 of the Regulations, (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; and (2) the local agency 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.

12-9.16 - Recycled Water.

(a) The installation of recycled water irrigation systems shall allow for the current and future use of recycled water.

(b) All recycled water irrigation systems shall be designed and operated in accordance with all applicable local and State laws.

(c) Landscapes 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.

12-9.17 - Graywater 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 (Title 24, Part 5, Chapter 16) and any applicable local ordinance standards. Refer to § 490.1 (d) for the applicability of this ordinance to landscape areas less than 2,500 square feet with the Estimated Total Water Use met entirely by graywater.

12-9.18 - Stormwater Management and Rainwater Retention.

(a) Stormwater management practices minimize runoff and increase infiltration which recharges groundwater and improves water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site rainwater retention and infiltration are encouraged.

(b) Project applicants shall refer to the local agency or Regional Water Quality Control Board for information on any applicable stormwater technical requirements.

(c) All planted landscape areas are required to have friable soil to maximize water retention and infiltration.

(d) 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.