



WATER EFFICIENT LANDSCAPE REGULATIONS

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PURPOSE AND INTENT OF WATER LANDSCAPE REGULATIONS:

The water efficient landscape regulations adopted by the La Mesa City Council are intended to achieve the following goals:

- A. Promote the values and benefits of landscapes while recognizing the need to utilize water and other resources as efficiently as possible.
- B. Establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction.
- C. Promote the use, when available, of tertiary treated recycled water, for irrigating landscaping.
- D. Use water efficiently without waste by setting a Maximum Applied Water Allowance (MAWA) as an upper limit for water use and reduce water use to the lowest practical amount.
- E. Encourage water users of existing landscapes to use water efficiently and without waste.

PROPERTIES SUBJECT TO WATER EFFICIENT LANDSCAPE REGULATIONS:

- A. The water efficient landscape regulations are applicable to the following projects requiring a building permit or a discretionary permit:
 1. A project for an industrial, commercial, institutional or multi-family residential use where the landscaped area is greater than or equal to 2,500 square feet.
 2. Developer installed residential and common area landscapes where the total landscaped area for the development is greater than or equal to 2,500 square feet.
 3. A new single family residence with homeowner provided landscaping, where the landscaped area is greater than or equal to 5,000 square feet.
 4. A model home that includes a landscaped area.
 5. A public agency project that contains a landscaped area of 2,500 square feet or more.
 6. A rehabilitated landscape for an existing industrial, commercial, institutional, public agency or multi-family use where a building permit or discretionary permit is being issued and the applicant is installing or modifying 2,500 square feet or more of landscaping.
- B. These requirements do not apply to individual single-

family residences with a landscape area of less than 5,000 square feet, or to a registered historical site.

REQUIREMENTS FOR LANDSCAPE DOCUMENTATION PACKAGE:

Building permit applications for projects subject to water efficient landscape regulations shall include a landscape documentation package that contains the following information:

- A. **Soil Management Report** – This report analyzes the soil within each landscaped area of the project and makes recommendations regarding the type and quantity of soil additives necessary to foster plant growth and survival using efficient irrigation techniques. The report shall also identify the type and amount of mulch for each area where mulch is applied. A minimum two-inch layer of mulch shall be applied on all exposed soil surfaces.
- B. **Planting and Irrigation Plans** that describe the landscaping and irrigation for the project. The plans shall:
 1. Include the MAWA (Maximum Applied Water Allowance) calculations and ETWU (Estimated Total Water Use) calculations for the project based upon the formula set forth in Ordinance 2009-2805 on file in the office of the City Clerk.
 2. Include a statement signed by the person who prepared the plans that provides, "I am familiar with the requirements for landscape and irrigation plans contained in the City of La Mesa Water Efficient Landscape Regulations. I have prepared this plan in compliance with those regulations. I certify that the plan implements those regulations to provide efficient use of water."
 3. Demonstrate compliance with best management practices required by the City of La Mesa Storm Water Management and Discharge Control Ordinance.
 4. Address fire safety issues, avoid the use of fire prone vegetation and demonstrate compliance requirements for defensible space around buildings and structures.

The planting plan shall meet the following requirements:

1. The plan shall include a list of all vegetation by common and botanical plant name, which exists in the proposed landscaped area. The plan shall state what vegetation will be retained and what will be removed.

2. The plan shall include a list of all vegetation by common and botanical plant name which will be added to each landscaped area. No invasive plant species shall be added to a landscaped area. The plan shall include the total quantities by container size and species. If the applicant intends to plant seeds, the plan shall describe the seed mixes and applicable purity and germination specifications.
3. The plan shall include a detailed description of each water feature that will be included in the landscaped area.
4. The plan shall be accompanied by a drawing showing on a page or pages, the specific location of all vegetation, retained or planted, the plant spacing and plant size, natural features, water features, and hardscape areas. The drawing shall include a legend listing the common and botanical plant name of each plant shown on the drawing.
5. All plants shall be grouped in hydrozones and the irrigation shall be designed to deliver water to hydrozones based on the moisture requirements of the plant grouping. A hydrozone may mix plants of moderate and low water use or mix plants of high water use with plants of moderate water use. No high water use plants shall be allowed in a low water use hydrozone. The plan shall also demonstrate how the plant groupings accomplish the most efficient use of water.
6. The plan shall identify areas permanently and solely dedicated to edible plants.
7. The plan shall demonstrate that landscaping when installed and at maturity will be positioned to avoid obstructing motorists' views of pedestrian crossings, driveways, roadways and other vehicular travel ways. If the landscaping will require maintenance to avoid obstructing motorist's views, the plan shall describe the maintenance and the frequency of the proposed maintenance.
8. The plan shall avoid the use of landscaping with known surface root problems adjacent to a paved area, unless the plan provides for installation of root control barriers or other appropriate devices to control surface roots.
9. Plants in a transitional area shall consist of a combination of site adaptive and compatible native and/or non-native species. No invasive species shall be introduced or tolerated in a transitional area. The irrigation in a transitional area shall be designed so that no overspray or runoff shall enter an adjacent area that is not irrigated.
10. On a project other than a single-family residence, the plan shall identify passive and active recreational areas.

The Irrigation Plan shall meet the following requirements:

1. The plan shall show the location, type and size of all components of the irrigation system that will provide water to the landscaped area, including the controller, water lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators, and backflow prevention devices.
2. The plan shall show the static water pressure at the point of connection to the public water supply and the flow rate in gallons, the application rate in inches per hour and the design operating pressure in pressure per square inch for each station.
3. The irrigation system shall be designed to prevent runoff, overspray, low-head drainage and other similar conditions where irrigation water flows or sprays onto areas not intended for irrigation. The plan shall also demonstrate how grading and drainage techniques promote healthy plant growth and prevent erosion and runoff.
4. The plan shall identify each area irrigated with recycled water.
5. The plan shall provide that any slope greater than 25 percent will be irrigated with an irrigation system with a precipitation rate of .75 inches per hour or less to prevent runoff and erosion. As used by the ordinance, 25 percent grade means one foot of vertical elevation change for every four feet of horizontal length. An applicant may employ an alternative design if the plan demonstrates that no runoff or erosion will occur.
6. The plan shall provide that all wiring and piping under a paved area that a vehicle may use, such as a parking area, driveway or roadway, will be installed inside a PVC conduit.
7. The plan shall provide that irrigation piping and irrigation devices that deliver water, such as sprinkler heads, shall be installed below grade if they are within 24 inches of a vehicle or pedestrian use area. The Director may allow on-grade piping where landform constraints make below grade piping infeasible.
8. The plan shall provide that only low volume or subsurface irrigation shall be used to irrigate any vegetation within 24 inches of an impermeable surface unless the adjacent impermeable surfaces are designed and constructed to cause water to drain entirely into a landscaped area.
9. The irrigation system shall provide for the installation of a manual shutoff valve as close as possible to the water supply. Additional manual shutoff valves shall be installed between each zone of the irrigation system and the water supply.

10. The irrigation system shall provide that irrigation for any landscaped area will be regulated by an automatic irrigation controller.
11. The irrigation system shall be designed with landscape irrigation efficiency necessary to meet the MAWA.
12. The plan shall describe each automatic irrigation controller the system uses to regulate the irrigation schedule and whether it is a weather based system or moisture detection system. The plan shall depict the location of electrical service for the automatic irrigation controller or describe the use of batteries or solar power that will power valves or a smart controller.

C. **A water efficient landscape worksheet** that calculates the MAWA (Maximum Applied Water Allowance) and ETWU (Estimated Total Water Use) for the project, shall contain the following:

1. A hydrozone information table that contains a list of each hydrozone in the landscaped area of the project. For each hydrozone listed, the table shall identify plant types and water features in the hydrozone, the irrigation methods used, the square footage, and the percentages of the total landscaped area of the project that the hydrozone represents. The plant types shall be categorized as turf, high water use, moderate water use or low water use.
2. Water budget calculations, which meet the following requirements:
 - a. The plant factor used shall be from WUCOLS III. The plant factor shall be 0.1 for very low water use plants, 0.3 for low water use plants, 0.5 for moderate water use plants, and 0.8 for high water use plants. A plan that mixes plants in a hydrozone that require a different amount of water shall use the plant factor for the highest water using plant in the hydrozone.
 - b. Temporarily irrigated areas shall be included in the low water use hydrozone.
 - c. The surface area of a water feature, including swimming pools, shall be included in a high water use hydrozone.
 - d. The calculations shall use the formula for the MAWA and for the ETWU set forth in Ordinance 2009-2805.

Special landscaped areas, such as areas dedicated to edible plants, or areas irrigated with recycled water, or an area dedicated as turf area within a park, sports field or golf course where turf is a passive or active recreational surface, shall be identified on the worksheet and the area's water use calculated using an ETAF of 1.0.

- D. **A grading design plan** that describes the grading of the project. The grading on the project site shall be designed for the efficient use of water by minimizing soil erosion, runoff and water waste resulting from precipitation and irrigation. The plan shall show the finished configurations and elevations of each landscaped area including the height of graded slopes, the drainage pattern, pad elevations, finish grade and any storm water retention improvements.

IRRIGATION SCHEDULE

An irrigation schedule shall be prepared and provide a description of the automatic irrigation system that will be used for the project, the evapotranspiration (RTo) data relied on to develop the irrigation schedule, the time period when overhead irrigation will be scheduled (no overhead irrigation shall be used between 10:00 a.m. and 6:00 p.m.), and the parameters used in setting the irrigation system controller for watering times for:

1. The plant establishment period.
2. Establishing irrigated areas.
3. Temporarily irrigated areas.
4. Different seasons of the year.

In addition, the irrigation schedule shall provide the consideration used for each station for the following factors:

1. The days between irrigation.
2. Station run time in minutes for each irrigated event, designed to avoid runoff.
3. Number of cycle starts required for each irrigation event, designed to avoid runoff.
4. Amount of water to be applied on a monthly basis.
5. The root depth.
6. The plant type setting.
7. The soil type.
8. The slope factor.
9. The shade factor.

See separate handout entitled "Water Efficient Landscape Worksheet" for an example hydrozone information table.

THE MAXIMUM APPLIED WATER USE (MAWA)

A landscape project subject to the water efficient landscape regulations shall not exceed the MAWA. The MAWA for a landscape project is determined by the following calculation:

$$\text{MAWA} = (\text{ETo})(0.62)[0.7 \times \text{LA} + 0.3 \times \text{SLA}].$$

See Ordinance 2009-2805 or the separate handout entitled "Water Efficient Landscape Worksheet" for additional information to calculate the MAWA.

Note that rock and stone and pervious design features, such as decomposed granite, that is adjacent to a vegetated area may be included in the calculation of the MAWA and ETWU provided that the features are integrated into the design of the landscape area and the primary purpose of the feature is decorative.

THE ESTIMATED TOTAL WATER USE (ETWU)

An applicant for a landscape project subject to the water efficient landscape regulations shall calculate the ETWU for each landscaped area and the entire project using the following equation: $ETWA = (ET_o)(0.62)[PF \times HA / IE + SLA]$.

See Ordinance 2009-2805 or the separate handout entitled "Water Efficient Landscape Worksheet" for additional information to calculate the ETWU.

USE OF TURF ON LANDSCAPED AREAS

Only low volume or subsurface irrigation shall be used for turf in a landscaped area 1) on a slope greater than 25 percent grade where the toe of the slope is adjacent to an impermeable hardscape; and 2) where any dimension of the landscaped area is less than six feet wide. No turf shall be allowed in a landscaped area that cannot be efficiently irrigated, such as avoiding runoff or overspray.

On a commercial, industrial, institutional or multi-family project, no turf shall be allowed on the center island median strip or on a parking lot island.

A ball field, park, golf course and other similar use shall be designed to limit turf in any portion of a landscaped area not essential for the operation of the facility.

PROJECTS WITH MODEL HOMES

Each model home site shall provide an educational sign in the front yard that states "This model home uses water efficient landscaping and irrigation." See Ordinance 2009-2805 for additional requirements.

RECYCLED WATER

A person using recycled water shall install a dual distribution system for water received from a public water purveyor (Helix Water District). Pipes carrying recycled water shall be purple. A person who uses recycled water shall be entitled to an ET Adjustment Factor (ETAF) of 1.0

LANDSCAPING AND IRRIGATION INSTALLATION AND MAINTENANCE

A person issued a landscape approval for a project, other than a single family residence where the landscaped area of the project is less than 5,000 square feet, shall install the approved landscaping and irrigation system before final inspection of the project.

A maintenance schedule shall be provided for the landscaping and irrigation system on the project. The schedule shall provide for:

1. Routine inspection to guard against runoff and erosion and detect plant or irrigation system failure.
2. Replacement of dead, dying and diseased vegetation.
3. Eradication of invasive species.
4. Repairing the irrigation system and its components.
5. Replenishing mulch.
6. Soil amendment when necessary to support and maintain healthy plant growth.
7. Fertilizing, pruning and weeding and maintaining turf areas.
8. Maintenance to avoid obstruction of motorists' view.

The schedule shall also identify who will be responsible for maintenance.

After approval of a landscape plan, the owner is required to:

1. Maintain and operate the landscaping and irrigation system on the property consistent with the MAWA.
2. Maintain the irrigation system to achieve efficiency that meets or exceeds the MAWA.
3. Replace broken or malfunctioning irrigation system components with components of the same materials and specifications, their equivalent or better.
4. Ensure that when vegetation is replaced, replacement plantings are representative of the hydrozone in which the plants were removed and are typical of the water use requirements of the plants removed, provided that the replaced vegetation does not result in mixing high water use plants with low water use plants in the same hydrozone.

CERTIFICATE OF COMPLETION

A person issued a landscape approval for a project, other than a single family residence where the landscape area of the project is less than 5,000 square feet, shall submit:

1. A signed certificate of completion, under penalty of perjury, on a form provided by the City of La Mesa within 10 days after installation.
 - a. The certificate shall include a statement verifying that the landscaping and irrigation were installed as allowed in the approved landscape and irrigation plan, all approved soil amendments were implemented, the

installed irrigation system is functioning as design and approved, the irrigation control system was properly programmed in accordance with the irrigation schedule, and the person operating the system has received all required maintenance and irrigation plans.

- b. Where there have been significant changes to the landscape plan during the installation of landscaping or irrigation devices or irrigation system components, the professional of record for the landscape design shall submit "as built" plans that show the changes.
 - c. The certificate shall be signed by the professional of record for the landscape design.
- 2. An irrigation schedule that describes the irrigation times and water usage for the project.
 - 3. A landscaping and irrigation systems maintenance schedule.
 - 4. A soil management report if the applicant did not submit the report with the landscape documentation package.

WASTE WATER PREVENTION

No person shall use water for irrigation that, due to runoff, low head drainage, overspray or other similar condition, water flows onto adjacent property, non-irrigated areas, structures, walkways, roadways or other paved areas.

No person whose landscape is subject to a landscape approval shall apply water to the landscape in excess of the MAWA.