

## Chapter 19.570

# *Water Efficient Landscaping and Irrigation*

### **19.570.010 Purpose**

- A. This Chapter establishes minimum landscape standards for all uses for the purpose of enhancing the appearance of developments, reducing heat and glare, controlling soil erosion, conserving water, providing recreation areas, cleaning the air and water, offering fire protection, replacing ecosystems displaced by development, establishing a buffer and/or screen between residential and non-residential land uses, and ensuring the ongoing maintenance of landscape areas.
- B. This Chapter also implements the California Water Conservation in Landscaping Act (Government Code Article 10.8) by establishing a structure for designing, installing and maintaining water efficient landscapes.
- C. This Chapter promotes the use of recycled water for landscaping.
- D. Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible.
- E. Establish a structure for designing, installing and maintaining water efficient landscapes.

### **19.570.020 Applicability**

- A. Owners and/or occupants of properties fronting on, or adjacent to, any portion of a street shall landscape, irrigate and maintain required yards adjacent to the street and comply with the provisions of this Chapter as well as [Chapters 6.14](#) (Landscape Maintenance) and [13.06](#) (Vegetation Maintenance) of the Municipal Code for any landscaping along said street or within the street right-of-way adjacent to their property fronting on, or adjacent to, any portion of the street.
- B. Any Development that is subject to Design Review (Chapter 19.710) shall also comply with Sections 19.570.040 (Provisions for the Review and Certification of Landscaping and Irrigation) through 19.570.050 (Certificate of Substantial Completion) and 19.570.060 B (Efficient Water Use Educational Program), if applicable.

### **19.570.030 General Landscaping Standards**

These standards shall apply to all lots within the City.

- A. Any landscaping required by this Chapter shall be installed, permanently irrigated and maintained in a healthy and thriving condition
- B. Trees may be planted in any required yard areas.

- C. To safeguard against vehicle, bicycle, and pedestrian collisions caused by visual obstructions at street intersections, a clear cross-visibility area shall be maintained at the intersection of all public rights-of-way pursuant to 19.550.050 (Sight Clearance Requirements).
- D. Landscaping and vegetation throughout the City shall be maintained pursuant to Chapters [6.14](#) (Landscape Maintenance) and [13.06](#) (Vegetation Maintenance) of the Municipal Code.
- E. Landscape planting shall emphasize drought-tolerant and native species, complement the architectural design of structures on the site, and be suitable for the soil and climatic conditions of the site.
- F. All front and visible side yards shall be landscaped consistent with the provisions of this Chapter.

#### **19.570.040 Provisions for the Review and Certification of Landscaping and Irrigation**

##### **A. Applicability**

- 1. Except as provided in subsection B, this Section shall apply to:
  - a. All installations of new landscaping and irrigation for public projects and private development projects that require review and approval by the Zoning Administrator;
  - b. Developer-installed landscaping and irrigation in multifamily projects that require review and approval by the Zoning Administrator.
- 2. Projects subject to this Chapter shall conform to the provisions of this Section and shall be subject to the review and approval of the Zoning Administrator in accordance with Chapter 19.710 (Design Review).

##### **B. Exceptions**

- 1. This Chapter shall not apply to:
  - a. Landscaping and irrigation of single-family dwellings and duplexes;
  - b. Cemeteries;
  - c. Designated historical sites that are subject to review under [Title 20](#);
  - d. Ecological restoration projects that do not require a permanent irrigation system;
  - e. Mined-land reclamation projects that do not require a permanent irrigation system;
  - f. Public parks.

##### **C. Landscaping Submittal Package**

- 1. An application shall be submitted to the Planning Division for review and approval by the Zoning Administrator. No certificate of occupancy or other final City approval

shall be issued until the City reviews and approves the landscape plans and the landscaping and irrigation are installed in accordance with approved plans.

2. A copy of the approved landscape plans and conditions of approval shall be provided to the property owner or site manager along with the record drawings and any other information normally forwarded to the property owner or site manager.
3. Applications submitted to the Planning Division requesting landscaping review shall include the following information:

***Water Conservation Concept Statement:***

- a. The Water Conservation Concept Statement is a cover sheet that shall serve as a checklist to verify that the elements of the Landscape Documentation Package have been completed and as a narrative summary of the project.
- b. Forms for the Water Conservation Concept Statement shall be available at the Planning Division.

***Calculation of the Annual Water Budget:***

- c. The annual water budget is determined by the following formula:  
$$AWB = \frac{(56.65)(0.8)(TLA)}{1200}$$
where:  
AWB = Annual water budget in billing units per year (one billing unit = 100 cubic feet = 748 gallons).  
56.65 = Reference evapotranspiration in inches of water per year.  
0.8 = Allowable percentage.  
TLA = Total landscaped area per water meter in square feet.  
1200 = Conversion factor to produce a formula total in billing units. (To convert the answer to gallons, multiply the formula by 748).
- d. Portions of landscaped areas in public and private projects such as parks, playgrounds, sports fields, golf courses, driving ranges, or school yards where turf serves recreational purposes may require a supply of water in addition to the Estimated Annual Water Budget. A statement shall be included with the Landscape Design Plan, designating those areas to be used for such purposes and specifying any needed amount of additional water above the Annual Water Budget.

***Estimated Annual Water Use:***

- e. A calculation of the estimated annual water use shall be submitted with the landscape documentation package. The estimated annual water use shall be calculated using the following formula:  
$$EAWU = (56.65)(KC)(HA)(DE)(AE)(1200)$$
where:

EAWU =	Estimated annual water use in billing units per year (one billing unit = 100 cubic feet = 748 gallons).
56.65 =	Reference evapotranspiration in inches of water per year.
KC =	Crop coefficient (for a specific plant from the Water Needs of Plants list on file in the Planning Division).
HA =	Hydrozone area in square feet.
DE =	Distribution efficiency of the irrigation system expressed as a decimal as listed in Section 19.570.070 of this Chapter.
AE =	Application efficiency of the irrigation system expressed as a decimal as listed in the 19.570.070 of this Chapter.
1200 =	Conversion factor to produce a formula total in billing units. (To convert the answer to gallons, multiply the formula by 748).

- f. If the Estimated Annual Water Use is greater than the Estimated Annual Water Budget, the Zoning Administrator may require revisions to the landscaping or irrigation specifications or design to achieve greater water efficiency.

***Landscape Design Plan:*** With the exception of projects having a net size of one-half acre or less, all plans required to be submitted under the provisions of this Chapter shall be wet stamped and signed by a landscape architect licensed to practice in the State of California.

- g. **Plant Selection and Grouping:**
- (1) Any plants may be used in the landscape; however, if the estimated annual water use exceeds the annual water budget, the Zoning Administrator may require revisions to the landscape and/or irrigation plans to achieve greater water efficiency.
  - (2) Plants having similar water use shall be grouped together in distinct hydrozones.
  - (3) 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.
  - (4) 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 the Riverside Fire Department or the California Department of Forestry.
  - (5) A mulch of at least two inches shall be applied to all new planting areas except turf as appropriate. Slopes exceeding 4:1 shall receive jute netting or another appropriate means of slope stabilization and water retention.
- h. **Water Features:**
- (1) Decorative water features shall be designed to re-circulate the water and avoid unnecessary flows to waste.
  - (2) Pool and spa covers are encouraged.

- i. Landscape Design Plan Specifications. The landscape design plan shall be drawn on project base sheets at a scale that accurately and clearly identifies:
  - (1) Designation of hydrozones.
  - (2) Landscape materials, trees, shrubs, ground cover, 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.
  - (3) Property line, compass directions and street names.
  - (4) Streets, driveways, walkways, and other paved areas.
  - (5) Pools, ponds, water features, fences, and retaining walls.
  - (6) Existing and proposed buildings and structures including elevations if applicable.
  - (7) Natural features including but not limited to rock outcroppings, existing trees, shrubs proposed to remain and those proposed to be removed.
  - (8) Tree staking, plant installation, soil preparation details, and any other applicable planting and installation details.
  - (9) Calculation of the total landscaped area in square feet.
  - (10) Designation of recreational areas.

***Irrigation Design Plan:*** An irrigation design plan meeting the following conditions shall be submitted as part of the landscape application.

- j. Irrigation Design Criteria:
  - (1) Run-off and overspray.

Soil types and infiltration rate shall be considered when designing irrigation systems. All irrigation systems shall be designed to minimize run-off, 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, thereby minimizing run-off.

Special attention shall be given to minimize run-off on slopes and to minimize 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.
  - (2) Equipment

*Water meters.* Separate developer installed landscape water submeters are recommended for all projects except for single-family homes or any project with a landscaped area of less than five thousand square feet.
  - (3) Controllers.

Automatic control systems shall be required for all irrigation systems and must be able to accommodate all aspects of the design.
  - (4) Valves.

Plants that 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.

(5) 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.

(6) Soil Moisture Sensing Devices.

Soil moisture sensing devices shall be considered where appropriate.

k. Recycled Water:

(1) The installation of recycled water irrigation systems (dual distribution systems) may be required by the Zoning Administrator to allow for the current and future use of recycled water.

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

l. 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 subdivision 4 of this subsection. The irrigation design plan shall accurately and clearly identify:

(1) Location and size of water meters for the landscape.

(2) 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, backflow prevention devices and all other information required by the Zoning Administrator.

(3) Static water pressure at the point of connection to the public water supply.

(4) Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (psi) for each station.

(5) Recycled water irrigation systems as specified in subsection (C)(5)(b).

***Irrigation Schedules:*** Irrigation schedules satisfying the following conditions shall be submitted as part of the landscape documentation package.

m. 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.

n. The irrigation schedule shall:

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











