

# **CALIFORNIA PUBLIC UTILITIES COMMISSION**

Water Division

## **INSTRUCTIONS FOR WATER CONSERVATION, RATIONING AND SERVICE CONNECTION MORATORIA**

Standard Practice U-40-W

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**SAN FRANCISCO, CALIFORNIA**

**July 2007**

## INSTRUCTIONS FOR WATER CONSERVATION, RATIONING AND SERVICE CONNECTION MORATORIA

### **A—PURPOSE AND SCOPE**

1. The purpose of this standard practice is to provide guidance to Water Division staff, to the public and to utilities as to steps to be taken when the utility suffers from a water shortage. The three levels of action are voluntary rationing, mandatory rationing and a service connection moratorium.

### **B—BACKGROUND**

2. General Order 103, Chart 1, and Standard Practice U-22-W, Determination of Water Supply Requirements of Water Systems, address water supply requirements, but supply can be affected temporarily due to drought or decreased production of a utility's wells. When this happens, utilities may have to resort to mandatory conservation or may have to institute a service connection moratorium.

3. Parties may also protest service area extensions (see Standard Practice U-14-W) over concern that the available supplies may be inadequate to serve the new customers, which would be the equivalent of a service connection moratorium (see Section F)<sup>1</sup>.

4. The position of the Commission in overall water supply planning was set forth in Decision 99-04-061, April 22, 1999 (see Appendix A to this Standard Practice).

### **C—DEVELOPMENT OF CONSERVATION AND RATIONING**

5. In mid-1976, due to a drought, the Commission opened an Order Instituting Investigation (OII, Case No. 10114, June 8, 1976) to determine what actions to take. In early 1977, the Commission issued an emergency decision that allowed water utilities to distribute water conservation kits and to implement cost effective water conservation programs.

6. The Commission was once again faced with drought conditions in mid-1988. The Commission opened OII 89-03-005 that allowed all classes of water utilities to file a water conservation and rationing plan consisting of two distinct parts: Rule 14.1 (a "voluntary conservation" program) and Schedule 14.1 (the mandatory rationing and penalty part). This plan was based primarily upon the Department of Water Resources and Metropolitan Water District's model plans, but also

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<sup>1</sup> In Resolution No. 4154, August 5, 1999, the Sierra Club protested Valencia Water Company's Advice Letters 84 and 85 for service area extension. The Commission found in the favor of Valencia, that it had adequate supplies, but ordered the utility to file its Water Management Program by application so the long-term water availability issues could be heard.

incorporated aspects of the North Marin Water District, East Bay Municipal Utility District, and California Water Service Company's existing conservation and rationing plans. The main objective of Rule 14.1 and Schedule 14.1 was to have a plan readily available for any utility that needed conservation and/or rationing methods. This plan allowed regulated utilities to achieve conservation of 17.5% to 26%.

7. The drought was officially declared over in February 1993 and the OII was closed. Because history shows that drought occurs in California about once every ten years, Rule 14.1 has remained in place. When conditions become severe, the utility may file an advice letter to institute Schedule 14.1. The Commission must approve implementation of this schedule by resolution.

### **D—VOLUNTARY RATIONING**

8. Voluntary rationing consists of the steps described in Rule 14.1 (Appendix B). This Tariff Rule should be in the tariff book of every utility that might suffer from a water shortage.

### **E—MANDATORY RATIONING**

9. Mandatory rationing consists of the steps described in Schedule 14.1. The utility adds schedule 14.1 to its tariff book by filing an advice letter with full justification. Staff will prepare a resolution for consideration by the Commission. The Commission must approve the imposition of mandatory conservation.

10. Schedule 14.1 may be modified to fit the needs of the utility and its particular water shortage situation. The following provisions are examples of what might be included in a typical Schedule 14.1:

- A. Prohibit nonessential and unauthorized water use, including:
  - i. use for more than minimal landscaping in connection with new construction;
  - ii. use through any meter when the company has notified the customer in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the customer has failed to effect such repairs within five days;
  - iii. use of water which results in flooding or runoff in gutters or streets;
  - iv. use of water through a hose for washing cars, buses, boats, trailers or other vehicles without a positive automatic shut-off valve on the outlet end of the hose;
  - v. use of water through a hose for washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas;
  - vi. use of water to clean, fill or maintain levels in decorative fountains;

- vii. use of water for construction purposes unless no other source of water or other method can be used;
  - viii. service of water by any restaurant except upon the request of a patron; and
  - ix. use of water to flush hydrants, except where required for public health or safety.
- B. Establish customer water allocations at a percentage of historical usage with the corresponding billing periods of a non-drought year being the base.
  - C. Establish an allocation of a percentage of historical usage with the corresponding billing periods of a non-drought year being the base for consumption for users of process water (water used to manufacture, alter, convert, clean, grow, heat or cool a product, including water used in laundries and car wash facilities that recycle the water used).
  - D. Establish a minimum allocation of a number of Ccf per month (one Ccf is one hundred cubic feet) for any customer regardless of historical usage.
  - E. Establish an exceptions procedure for customers with no prior billing period record or where unusual circumstances dictate a change in allocation.
  - F. Establish a penalty ("conservation fee") of \$2.00 per Ccf for usage over allocated amounts, provided, however, that banking of underusage from month to month is allowed.
  - G. Provide that penalty funds are not to be accounted for as income, but are to be kept in a separate reserve account for disposition as directed by the Commission.
  - H. Provide that, after written warning for nonessential or unauthorized water use, for subsequent violations the utility may install a flow restrictor to be left in a minimum of three days. The second time a flow restrictor is installed it may be left in until rationing ends.
  - I. Establish charges of \$25, \$50, or actual cost depending on meter size for removing restrictors, and provide that continuing nonessential or unauthorized use may result in disconnection.
  - J. Establish an appeal procedure first through the utility, then to the Commission staff through the Executive Director, then to the Commission via a formal complaint.

## **F—SERVICE CONNECTION MORATORIUM**

11. A service connection moratorium is sometimes imposed by the California Department of Health Services. The California Water Code, Section 350 et seq.,

provides that any public water supplier may, after public notice and hearing, declare a water shortage emergency within its service area whenever it determines that the ordinary demands and requirements of its consumers cannot be satisfied without depleting the water supply to the extent that there would be insufficient water for human consumption, sanitation, and fire protection. After it has declared a water shortage emergency, it must adopt such regulations and restrictions on water delivery and consumption as it finds will conserve its water supply for the greatest public benefit. Section 357 requires that suppliers which are subject to regulation by the CPUC shall secure its approval before making such regulations and restrictions effective.

12. Section 2708 of the Public Utilities Code states:

**2708.** Whenever the commission, after a hearing had upon its own motion or upon complaint, finds that any water company which is a public utility operating within this State has reached the limit of its capacity to supply water and that no further consumers of water can be supplied from the system of such utility without injuriously withdrawing the supply wholly or in part from those who have theretofore been supplied by the corporation, the commission may order and require that no such corporation shall furnish water to any new or additional consumers until the order is vacated or modified by the commission. The commission, after hearing upon its own motion or upon complaint, may also require any such water company to allow additional consumers to be served when it appears that service to additional consumers will not injuriously withdraw the supply wholly or in part from those who theretofore had been supplied by such public utility.

13. To establish a service connection moratorium the utility must:

- a. Hold a public meeting under Section 350 and 351 of the Water Code
- b. Add the following language to each service schedule:

**“MORATORIUM**

No service shall be provided to any premises not previously served within the \_\_\_\_\_ Service Area as defined on the Service Area Map filed as a part of these tariffs.”

**G—EXEMPTIONS**

14. Some decisions to impose a moratorium contain exceptions. For example in Citizen’s Utilities (CUCC) Montara District:

“The moratorium shall not apply to owners of real property who are customers of CUCC on or before the date of this order, or their successors in interest, if any change in the use of their property

will not increase their demand upon the system.” (D.86-05-078, Ordering Paragraph 3.)

15. D.86-05-078 also provided that prospective customers could seek an exemption from the moratorium by filing an application with the Commission showing that extraordinary circumstances required an exemption.

16. In D.00-06-020, June 8, 2000 the Commission granted an application and authorized Citizens Utilities to install a water service connection to applicant’s property at APN 037-278-090 following cessation of service at applicant’s property at 888 Ocean Boulevard in Montara. Costs were to be borne by applicant. The order made it clear that water service could not be reinstated at 888 Ocean Boulevard absent a lifting or easing of the moratorium. Such determinations were also delegated to staff<sup>2</sup>.

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<sup>2</sup> D.86-05-078, May 28, 1986, Ordering Paragraph 4.

### The Commission's Role in Water Planning

The two state agencies primarily responsible for overseeing water planning are the California Department of Water Resources, which manages the State Water Project and produces the California Water Plan, and the State Water Quality Control Board and Regional Water Quality Control Boards which have authority over water allocation and water quality protection.

In addition to the state agencies which have broad planning and management powers, local government also has a part in water use decisions. For example, county boards of supervisors, county water agencies, land use planning agencies, city governments, municipal water districts and many special districts all have a role in the use of water in California.

In this context, the Commission has recognized the futility of one party taking unilateral action to protect a groundwater basin:

Rehabilitation of the Santa Maria Groundwater Basin is not the responsibility of, and is beyond the physical and financial resources of any single individual, company, or agency. Even if [Southern California Water Company] were to stop drawing from the basin entirely and injected into the basin the entire 7,900 AFY it desires to obtain from the [Central Coast Water Authority], the basin's fundamental problems of declining quantity and water quality would not be solved. Most simply put, the basin's salvation as a water resource requires the immediate, undivided, sincere and selfless attention of all its users.

(Re Southern California Water Company, 48 CPUC2d 511, 519 (D.93-03-066)(emphasis in original).)

The Commission's role is limited to ensuring that each jurisdictional water utility provides its customers with "just and reasonable service, . . . and facilities as are necessary to promote the safety, health, comfort and convenience of its patrons, employees, and the public." (§ 451.) The Commission has further delineated the service standard in its General Order 103 where it proscribes Standards of Service

including water quality, water supply, and water pressure, as well as many other details of service.

The Commission has not, however, dictated to investor-owned utilities what method of obtaining water must be used to meet its present and future responsibility of providing safe and adequate supply of water at reasonable rates. (Southern California Water, 48 CPUC2d at 517.)

Which is not to suggest that the Commission ignores issues of water availability in its regulation of water utilities. The Commission requires that all water utilities prepare, file, and update a water management plan which includes identification of water sources as well as consumption projections over 15 years. These plans are updated by the utility as part of its general rate case.



RULE NO. 14.1  
WATER CONSERVATION AND RATIONING PLAN

GENERAL INFORMATION

If water supplies are projected to be insufficient to meet normal customer demand, and are beyond the control of the utility, the utility may elect to implement voluntary conservation using the portion of this plan set forth in Section A of this Rule after notifying the Commission's Water Division of its intent. If, in the opinion of the utility, more stringent water measures are required, the utility shall request Commission authorization to implement the mandatory conservation and rationing measures set forth in Section B.

The Commission shall authorize mandatory conservation and rationing by approving Schedule No. 14.1, Mandatory Water Conservation and Rationing. When Schedule No. 14.1 has expired, or is not in effect, mandatory conservation and rationing measures will not be in force. Schedule No. 14.1 will set forth water use violation fines, charges for removal of flow restrictors, and the period during which mandatory conservation and rationing measures will be in effect.

When Schedule No. 14.1 is in effect and the utility determines that water supplies are again sufficient to meet normal demands, and mandatory conservation and rationing measures are no longer necessary, the utility shall seek Commission approval to rescind Schedule No. 14.1 to discontinue rationing.

In the event of a water supply shortage requiring a voluntary or mandatory program, the utility shall make available to its customers water conservation kits as required by Rule 20. The utility shall notify all customers of the availability of conservation kits.

(continued)

RULE NO. 14.1  
(continued)

WATER CONSERVATION AND RATIONING PLAN

A. CONSERVATION - NON-ESSENTIAL OR UNAUTHORIZED WATER USE

No customer shall use utility-supplied water for non-essential or unauthorized uses as defined below:

1. Use of water through any connection when the utility has notified the customer in writing to repair a broken or defective plumbing, sprinkler, watering or irrigation system and the customer has failed to make such repairs within 5 days after receipt of such notice.
2. Use of water which results in flooding or run-off in gutters, waterways, patios, driveway, or streets.
3. Use of water for washing aircraft, cars, buses, boats, trailers or other vehicles without a positive shut-off nozzle on the outlet end of the hose. Exceptions include washing vehicles at commercial or fleet vehicle washing facilities operated at fixed locations where equipment using water is properly maintained to avoid wasteful use.
4. Use of water through a hose for washing buildings, structures, sidewalks, walkways, driveways, patios, parking lots, tennis courts, or other hard-surfaced areas in a manner which results in excessive run-off or waste.
5. Use of water for watering streets with trucks, except for initial wash-down for construction purposes (if street sweeping is not feasible), or to protect the health and safety of the public.
6. Use of water for construction purposes, such as consolidation of backfill, dust control, or other uses unless no other source of water or other method can be used.
7. Use of water for more than minimal landscaping in connection with any new construction.

(continued)

RULE NO. 14.1  
(continued)

WATER CONSERVATION AND RATIONING PLAN

A. CONSERVATION – NON-ESSENTIAL OR UNAUTHORIZED WATER USE (CONT.)

8. Use of water for outside plants, lawn, landscape, and turf areas more often than every other day, with even numbered addresses watering on even numbered days of the month and odd numbered addresses watering on the odd numbered days of the month, except that this provision shall not apply to commercial nurseries, golf courses and other water-dependent industries.
9. Use of water for watering outside plants, lawn, landscape and turf areas during certain hours if and when specified in Schedule No. 14.1 when the schedule is in effect.
10. Use of water for watering outside plants and turf areas using a hand-held hose without a positive shut-off valve.
11. Use of water for decorative fountains or the filling or topping off of decorative lakes or ponds. Exceptions are made for those decorative fountains, lakes, or ponds which utilize recycled water.
12. Use of water for the filling or refilling of swimming pools.
13. Service of water by any restaurant except upon the request of the patron.

B. RATIONING OF WATER USAGE

In the event the conservation measures required by Section A are insufficient to control the water shortage, the utility shall, upon Commission approval, imposed mandatory conservation and rationing. Rationing shall be in accordance with the conditions set forth in Schedule No. 14.1 as filed at the time such rationing is approved by the Commission.

Before mandatory conservation and rationing is authorized by the Commission, the utility shall hold public meetings and takes all other applicable steps required by Sections 350 through 358 of the California Water Code.

(continued)

RULE NO. 14.1

(continued)

WATER CONSERVATION AND RATIONING PLAN

C. ENFORCEMENT OF MANDATORY CONSERVATION AND RATIONING

1. The water use restrictions of the conservation program, in Section A of this rule, become mandatory when the rationing program goes into effect. In the event a customer is observed to be using water for any nonessential or unauthorized use as defined in Section A of this rule, the utility may charge a water use violation fine in accordance with Schedule No. 14.1.
2. The utility may, after one verbal and one written warning, install a flow-restricting device on the service line of any customer observed by utility personnel to be using water for any non-essential or unauthorized use as defined in Section A above.
3. A flow restrictor shall not restrict water delivery by greater than 50% of normal flow and shall provide the premise with a minimum of 6 Ccf/month. The restricting device may be removed only by the utility, only after a three-day period has elapsed, and only upon payment of the appropriate removal charge as set forth in Schedule No. 14.1.
4. After the removal of the restricting device, if any non-essential or unauthorized use of water shall continue, the utility may install another flow-restricting device. This device shall remain in place until water supply conditions warrant its removal and until the appropriate charge for removal has been paid to the utility.
5. If, despite installation of such flow-restricting device pursuant to the provisions of the previous enforcement conditions, any such non-essential or unauthorized use of water shall continue, then the utility may discontinue water service to such customer. In such latter event, a charge as provided in Rule No. 11 shall be paid to the utility as a condition to restoration of service.
6. Any monies collected by the utility through water use violation fines shall not be accounted for as income, but shall be accumulated by the utility in a separate account for disposition as directed or authorized from time to time by the Commission.
7. The charge for removal of a flow-restricting device shall be in accordance with Schedule No. 14.1.

(continued)

RULE NO. 14.1  
(continued)

WATER CONSERVATION AND RATIONING PLAN

D. APPEAL PROCEDURE

Any customer who seeks a variance from any of the provisions of this water conservation and rationing plan shall notify the utility in writing, explaining in detail the reason for such a variation. The utility shall respond to each such request.

Any customer not satisfied with the utility's response may file an appeal with the staff of the Commission. The customer and the utility will be notified of the disposition of such appeal by letter from the Executive Director of the Commission.

If the customer disagrees with such disposition, the customer shall have the right to file a formal complaint with the Commission. Except as set forth in this Section, no person shall have any right or claim in law or in equity, against the utility because of, or as a result of, any matter or thing done or threatened to be done pursuant to the provisions of this water conservation and rationing plan.

E. PUBLICITY

In the event the utility finds it necessary to implement this plan, it shall notify customers and hold public hearings concerning the water supply situation, in accordance with Chapter 3, Water Shortage Emergencies, Sections 350 to 358, of the California Water Code. The utility shall also provide each customer with a copy of this plan by means of billing inserts or special mailings; notification shall take place prior to imposing any fines associated with this plan. In addition, the utility shall provide customers with periodic updates regarding its water supply status and the results of customers' conservation efforts. Updates may be by bill insert, special mailing, poster, flyer, newspaper, television or radio spot/advertisement, community bulletin board, or other appropriate methods.

SCHEDULE NO. 14.1  
MANDATORY WATER CONSERVATION AND RATIONING

APPLICABILITY

This schedule applies to all water customers served under all tariff rates schedules authorized by the Commission. It is only effective in times of rationing, as required by Rule No. 14.1, and only for the period noted in the Special Conditions section below.

TERRITORY

This schedule is applicable within the entire territory served by the utility.

WATER USE VIOLATION FINE

When this schedule is in effect, the water use restrictions of the conservation program, in Section A of Rule 14.1, become mandatory. If a customer is seen violating the water usage restrictions, as outlined in Rule No. 14.1 and the Special Conditions below, the customer will be subject to the following fine structure:

|                           |                             |
|---------------------------|-----------------------------|
| First offense -           | written warning             |
| Second offense -          | \$25                        |
| (of the same restriction) |                             |
| Third offense -           | \$50                        |
| (of the same restriction) |                             |
| Each additional offense - | \$25 more than the previous |
|                           | fine imposed.               |
| (of the same restriction) |                             |

Offenses for separate water use restrictions will each start at the warning stage.

The water use violation fine is in addition to the regular rate schedule charges.

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SCHEDULE NO. 14.1  
MANDATORY WATER CONSERVATION AND RATIONING (CONT.)

FLOW RESTRICTOR REMOVAL CHARGE

The charge for removal of a flow-restricting device shall be:

| <u>Connection Size</u>  | <u>Removal Charges</u> |
|-------------------------|------------------------|
| 5/8" to 1" . . . . .    | \$25.00                |
| 1-1/2" to 2" . . . . .  | \$50.00                |
| 3" and larger . . . . . | Actual cost            |

SPECIAL CONDITIONS

1. This tariff schedule shall remain in effect for period of six (6) months from the effective date set forth below.
2. There shall be no use of utility-supplied water for outside plants, lawn, landscape, and turf areas between the hours of 3:00 a.m. to 8:00 p.m., regardless of address or day of the month.
3. Water use violation fines may be applied to violations of Section A of Rule No. 14.1, which prohibits non-essential and unauthorized uses of water.
4. Water use violation fines must be separately identified on each bill.
5. All bills are subject to the reimbursement fee set forth on Schedule No. UF.

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## **Chapter 15.64 WATER-EFFICIENT LANDSCAPING**

### Sections:

- [15.64.010](#) Findings and purpose.
- [15.64.020](#) Definitions.
- [15.64.030](#) Applicability and review process.
- [15.64.040](#) Landscape design guidelines.
- [15.64.050](#) Irrigation guidelines.

### **15.64.010 Findings and purpose.**

#### A. The City of San Carlos finds and declares that:

1. The limited supply of state waters are subject to ever-increasing demands;
2. Landscape, design, installation and maintenance can and should be water efficient; and
3. Government Code Sections 65591, 65591.5 and 65597 mandate the adoption of water-efficient landscape ordinance either locally or through the State Model Ordinance.

#### B. The establishment of water-efficient landscape guidelines is necessary to:

1. Promote the conservation and efficient use of water;
2. Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
3. Establish a structure for designing, installing and maintaining water-efficient landscapes;
4. Establish provisions for water management practices and water waste prevention for landscapes;
5. Promote the use and maintenance of California native plants;
6. Discourage the use of water-intensive plants; and
7. Encourage the preparation of educational materials by community organizations for distribution at permit inquiry and application stages of development regardless of applicability. (Ord. 1122 § 1 (part), 1993; Ord. 1115 § 1 (part), 1992)

### **15.64.020 Definitions.**

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

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

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

"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 nonirrigated 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).

"Landscaped area" means the entire parcel less the building footprint, driveways, nonirrigated portions of parking lots and 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.

"Overspray" means the water which is delivered beyond the landscaped area, wetting pavements, walks, structures or other nonlandscaped areas.

"Rain sensing override devices" means a system which automatically shuts off the irrigation system when it rains.

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

"Sprinkler head" means a device which sprays water through a nozzle.

"Turf" refers to the 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. Bermudagrass, Kikuyugrass, seashore paspalum, St. Augustinegrass, Zoysiagrass, and buffalo grass are warm-season grasses.

"Valve" means a device used to control the flow of water in the irrigation system. (Ord. 1122 § 1 (part), 1993; Ord. 1115 § 1 (part), 1992)

#### **15.64.030 Applicability and review process.**

A. This chapter establishes guidelines for all landscape plans submitted as required in Section [18.116.135](#) of this Code or as otherwise specified in the planning approval for a project.

B. The Planning Department shall provide a "landscape and irrigation design checklist" of information required for review of a landscape plan as noted in Section [15.64.030](#)(A) of this chapter.

C. Any appeal of a landscape and irrigation plan determination shall be made in accordance with Chapter 18.132 of this Code. (Ord. 1122 § 1 (part), 1993; Ord. 1115 § 1 (part), 1992)

**15.64.040 Landscape design guidelines.**

The following guidelines, if reflected in the landscape plan required in Section [18.116.135](#) of this Code, may serve as a basis upon which to grant approval of a landscape plan's water efficiency:

- A. Where feasible, plants should be drought resistant. Native plants are preferred. A list of recommended drought resistant and native plants is available at the City's Planning Department.
- B. Plants having similar water use should be grouped together in distinct hydrozones.
- C. Plants should 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. Removal of native species and natural areas is discouraged, unless necessary. The planting of trees is encouraged wherever it is consistent with the other provisions of this Code.
- D. Turf may be used where it provides a playing surface or serves other recreational purposes such as at parks, playgrounds, sports fields or schoolyards. Low groundcovers or other organic materials should be used instead of turf where practical.
- E. The combined size of turf areas should not be more than twenty-five percent of the total developed landscape area. Turf areas should not be used in strip plantings less than ten feet in width or on slopes exceeding twenty-five percent.
- F. Fire prevention needs should be addressed in areas that exhibit a high fire danger or risk. For projects located at the interface between urban areas and natural open space, water-conserving plants should be selected that will blend in with the native vegetation and are fire resistant or fire retardant. Plants with low fuel volume or high moisture content are encouraged. Plants that tend to accumulate an excessive amount of deadwood or debris should be avoided. Further information about fire-prone areas and appropriate landscaping for fire safety is available from the South County Fire Authority or the California Department of Forestry.
- G. Recirculating water should be used in decorative water features.
- H. Pool and spa covers are encouraged to reduce water loss through evaporation.
- I. Plants selected for slope areas should be water-conserving plants suitable for erosion control.
- J. Commercial and industrial areas should utilize vegetation which will minimize heat gain and allow winter solar access to the walls of a structure. Where feasible, deciduous trees, tall shrubs or vines should be provided on the east and west exposures of structures in a ratio of one tree, or equivalent, per each twenty-five feet of horizontal exposure. Plantings which shade any solar energy system are discouraged.
- K. Where feasible, parking lots should provide a minimum ten-gallon tree for every four parking spaces. Sufficient unpaved area should remain around each tree to allow for

water infiltration, gas exchange and to avoid conflicts between trees and cars or irrigation devices. Curbing should not be utilized where it would impede the flow of surface water to any groundwater recharge area. (Ord. 1122 § 1 (part), 1993; Ord. 1115 § 1 (part), 1992)

#### **15.64.050 Irrigation guidelines.**

##### **A. Design.**

1. Soil types and infiltration rate should be considered when designing irrigation systems. All irrigation systems should be designed to avoid runoff, low head drainage, overspray, or other similar conditions where water flows onto adjacent property, nonirrigated areas, walks, roadways or structures. Proper irrigation equipment and schedules, including features such as repeat cycles, should be used to closely match application rates to infiltration rates therefore minimizing runoff.
2. Special attention should 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.
3. No overhead sprinkler irrigation systems should be installed in median strips less than ten feet wide.
4. Exposed soil surfaces of nonturf areas within the developed landscape area should be mulched with a minimum two inch deep layer of organic material. Nonporous material should not be placed under the mulch.
5. Drip-irrigation systems should be used where appropriate and feasible.

##### **B. Equipment.**

1. Separate landscape water meters are encouraged for all projects except for single-family homes or any project with a landscaped area of less than five thousand square feet.
2. Automatic control systems should be incorporated into all irrigation systems.
3. Plants which require different amounts of water should be irrigated by separate valves. If one valve is used for a given area, only plants with similar water use should be used in that area. Anti-drain (check) valves should be installed in strategic points to minimize or prevent low-head drainage.
4. Heads and emitters should have consistent application rates within each control valve circuit. Sprinkler heads should be selected for proper area coverage, application rate, operating pressure, adjustment capability, and ease of maintenance.
5. The use of rain sensing override devices are encouraged for all irrigation systems.
6. It is recommended that soil moisture sensing devices be considered where appropriate.

7. Irrigation systems should be designed to be consistent with hydrozones.
8. The installation of recycled water irrigation systems (dual distribution systems) shall be encouraged to allow for the current and future use of recycled water in accordance with applicable Health Code regulations and the Graywater Use Guidelines developed by the California Department of Water Resources Ad Hoc Gray-water Committee to be incorporated into the Uniform Plumbing Code.

C. Schedules.

1. 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.
2. Landscape irrigation systems should be maintained on a continual basis to ensure water efficiency and prevent leakage.
3. Whenever possible, repair of irrigation equipment shall be done with the originally specified materials or their equivalents. (Ord. 1122 § 1 (part), 1993; Ord. 1115 § 1 (part), 1992)

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**This page of the San Carlos Municipal Code is current through Ordinance 1420, passed June 14, 2010.**

Disclaimer: The City Clerk's Office has the official version of the San Carlos Municipal Code. Users should contact the City Clerk's Office for ordinances passed subsequent to the ordinance cited above.

City Website: <http://www.cityofsancarlos.org/>  
City Telephone: (650) 802-4222  
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