CALIFORNIA PUBLIC UTILITIES COMMISSION

Water Division

INSTRUCTIONS FOR WATER CONSERVATION, RATIONING AND SERVICE CONNECTION MORATORIA

Standard Practice U-40-W

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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)[1].

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

[1] 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[2].

[2] 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 is 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 N0. 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 N0. 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 N0. 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 N0. 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 N0. 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 - (of the same restriction)	$25
Third offense - (of the same restriction)	$50
Each additional offense - (of the same restriction)	$25 more than the previous fine imposed.

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.

(continued)

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:

Connection Size	Removal Charges
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 15.32: WATER CONSERVATION

Section

15.32.010 Findings and determinations.

15.32.020 Definitions.

15.32.030 Prohibitions on water use.

15.32.050 Emergency suspension of water service.

15.32.060 Violation–Penalty.

15.32.010 Findings and Determinations.

A. The 1993 water supply available to Santa Clara County markedly exceeds that of the previous six years of droughts; and

B. Since 1989, the citizens of Santa Clara County have responded admirably to the mandatory water conservation programs requested and implemented by the Board of Directors of the Santa Clara Valley Water District; and

C. With continued good conservation practices, implementation of ultra low flush toilet rebate and other plumbing retrofit programs, further development and refinement of the water efficient landscaping ordinances, landscape guidelines, reclamation projects, and other best management practices, 1993 countywide conservation efforts are anticipated to result in a ten percent to twenty percent reduction in water usage as compared to 1987 usage.

(Ord. 1622, (part), 1993; Ord. 1587, (part), 1992; Ord. 1580, (part), 1992; Ord. 1558, § 1, 1991; Ord. 1524, § 1, 1990; Ord. 1513, § 1, 1990)

15.32.020 Definitions.

As used in this chapter

A. “Customer” means any person who pays for service to the Cupertino Municipal Water Utility.

B. “Person” means any individual, firm, partnership, association, corporation, trust, governmental body or other organization or entity.

C. “Water” means potable water.

D. “Water provider” means the California Water Service and/or San Jose Water Company.

(Ord. 1776, (part), 1998; Ord. 1622, (part), 1993: Ord. 1587, (part), 1992; Ord. 1580, (part), 1992; Ord. 1558, § 2, 1991; Ord. 1524, § 2, 1990; Ord. 1513, § 2, 1990)

15.32.030 Prohibition on Water Use.

The following water uses shall be prohibited throughout the City until such time as a declaration is officially made by the Santa Clara Valley Water District that a drought condition no longer exists within Santa Clara County.

A. No person shall waste water, including, but not limited to flooding or runoff on sidewalks or gutters.

B. No person shall use water through a hose for washing motor vehicles or recreation vehicles or other types of vehicles without a positive automatic shutdown valve on the outlet end of the hose.

C. No person shall waste water through the nonrepair of defective plumbing, sprinkler, watering or irrigation systems.

D. No restaurant shall serve water unless specifically requested by a customer.

E. No person shall use water for single pass cooling process for new building construction.

F. New landscaping to conform to City’s Xeriscape Guidelines.

(Ord. 1622, (part), 1993; Ord. 1587, (part), 1992; Ord. 1580, (part), 1992; Ord. 1558, § 3, 1991; Ord. 1524, § 3, 1990; Ord. 1513, § 3, 1990)

15.32.050 Emergency Suspension of Water Service.

In the event of an emergency involving broken or defective plumbing, sprinkler, watering or irrigation systems where in the opinion of the Public Works Director water is being or will be lost in considerable quantity, the City may require that the water provider immediately suspend water service without notice or hearing to any customer pending repairs. The water provider shall attempt to give notice to the customer or customers affected as soon as practical. Subject to other provisions of this chapter, service shall be restored as soon as possible.

(Ord. 1622, (part), 1993; Ord. 1587, (part), 1992:

15.32.060 Violation–Penalty.

Any person who violates any provision of this chapter shall be guilty of a misdemeanor and upon conviction thereof shall be punished as provided in Chapter 1.12 of this code.

(Ord. 1776, (part), 1998; Ord. 1622, (part), 1993; Ord. 1587, (part), 1992; Ord. 1580, (part), 1992; Ord. 1558, § 4.01, 1991; Ord. 1524, § 4.01, 1990; Ord. 1513, § 4.01, 1990)

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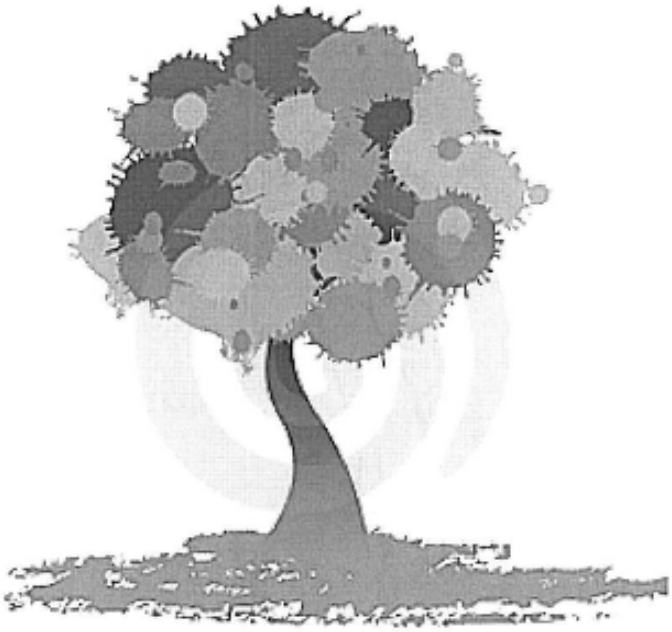
WATER CONSERVATION IN LANDSCAPING REGULATIONS



CITY OF MOUNTAIN VIEW

COMMUNITY DEVELOPMENT DEPARTMENT

Ref: SH-17

Adopted: 5/25/2010

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CHAPTER 1
PURPOSE

The purpose of the Water Conservation in Landscape Regulations is to reduce water waste in landscaping by promoting the use of region-appropriate plants that require minimal supplemental irrigation and by establishing standards for irrigation efficiency.

These regulations supplement the City of Mountain View's Zoning Ordinance (Title 36 of the Municipal Code) by providing detailed requirements for landscaping and irrigation systems for select new and rehabilitated landscape areas. These regulations further the City's current water conservation efforts, reduce future water demands and comply with State water conservation requirements.

CHAPTER 2
APPLICABILITY

A. The provisions of these regulations apply to the following:

1. New and/or rehabilitated landscaping associated with any project requiring a Zoning Permit, where the affected landscape area is 1,000 square feet or greater.

2. New and/or rehabilitated landscape projects at City facilities where the affected landscape area is 1,000 square feet or greater.

B. The provisions of these regulations shall not apply to the following:

1. Any project requiring a Zoning Permit, or at a City facility, where new and/or rehabilitated landscaping is less than 1,000 square feet.

2. Registered local, State or Federal historical sites where landscaping establishes a historical landscape style as determined by a public board, committee or commission responsible for architectural review or historic preservation.

3. Ecological restoration projects that do not require a permanent irrigation system.

4. Community gardens, demonstration gardens or plant collections open to the public.

5. Any commercial cultivation of agricultural products; including, but not limited to, products of farms, orchards, production nurseries and forests.

CHAPTER 3
DEMONSTRATION OF LANDSCAPE WATER EFFICIENCY

Applicants of projects subject to these regulations may choose one of the following two options to demonstrate that a landscape proposal meets the water efficiency goals of these regulations. In both cases, applicants must meet all other applicable design criteria listed in Chapter 4 (Water-Efficient Design Elements) and all maintenance requirements listed in Chapter 5 (Landscape and Irrigation Maintenance). Demonstration of landscape water efficiency shall only be for the affected landscape area under review and not total available landscape area.

A. **Plant-Type Restriction Option:** The Landscape Project Submittal and any accompanying documentation must demonstrate all of the following as a means of achieving water efficiency. In addition, all other applicable design criteria of Chapter 4 (Water-Efficient Design Elements) shall be met:

   1. The total area of high-water-use plants (e.g., turf and water features) shall not exceed 25 percent of the landscape area.

   2. At least 80 percent of the remaining landscape area shall be native plants or low-water-using plants.

B. **Water Budget Option:** Project applicants may elect to prepare a Water Budget Calculation, per the provisions of Chapter 10 (Water Budget Calculation), as a means of demonstrating water efficiency.

CHAPTER 4
WATER-EFFICIENT DESIGN ELEMENTS

The elements of a landscape design shall be designed to achieve water efficiency consistent with the intent of these regulations. Applicants of projects subject to these regulations shall demonstrate water efficiency through the preparation of a Landscape Project Submittal, pursuant to Chapter 6 (Components of a Landscape Project Submittal).

A. **Plant Material:**

   1. Plants shall be chosen and arranged appropriately based upon the site's climate, soil characteristics, sun exposure and other factors. Plants with similar water needs shall be grouped (within hydro zones).

2. The total area of high-water-use plants (e.g., turf and water features) shall not be more than 25 percent of the landscape area, unless a Water Budget Calculation is developed and the estimated total water use (ETWU) of the landscape area does not exceed the maximum applied water allowance (MAWA).

3. A minimum of 80 percent of the remaining landscape area shall be native plants or low-water-using plants, unless a Water Budget Calculation is developed and the ETWU of the landscape area does not exceed the MAWA.

4. Turf shall not be planted on slopes greater than 25 percent, except as part of a defined amphitheater.

5. Turf areas shall not be less than eight feet (8') wide, unless irrigated with subsurface irrigation or other low-volume irrigation system.

6. The horticultural attributes of plant species (e.g., mature plant size, invasive roots, structural attributes) shall be considered in order to minimize the potential for damage to property or infrastructure (e.g., buildings, septic systems, sidewalks, power lines).

7. Fire-prone plant materials and highly flammable mulches are strongly discouraged.

8. Installation of invasive plant species and noxious weeds is strongly discouraged.

9. The architectural guidelines, conditions, covenants or restrictions (CC&Rs) of a common-interest development shall not supersede these regulations by either prohibiting low-water-use plants or including conditions that have the effect of restricting the use of low-water-use plants and/or irrigation systems.

B. **Irrigation System:** An irrigation system shall meet all the requirements listed in this chapter and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management and maintenance. Single-family residential projects that are submitted by or for an individual homeowner are not required to have irrigation systems (i.e., hand-watering is allowed). In addition:

1. Dedicated landscape water meters shall be required for landscape areas greater than 2,500 square feet (5,000 square feet for single-family homes).

2. All irrigation systems shall be equipped with automatic irrigation controllers utilizing weather or soil-moisture data.

3. Rain-sensing shutoff devices, either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems.

4. The irrigation hardware for each hydro zone shall have a separate valve. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers and turf.

5. The irrigation system shall be designed to prevent runoff, low head drainage, overspray or other similar conditions.

6. Low-volume irrigation shall be required in the following areas: on slopes greater than 25 percent (except in defined amphitheaters), within twenty-four inches (24") of a nonpervious surface (except adjacent to internal pathways) or in any narrow or irregularly shaped area that is less than eight feet (8') in width in any direction.

7. Average irrigation efficiency is assumed to be 70 percent. Irrigation systems shall be designed, maintained and managed to meet or exceed an average landscape irrigation efficiency of 70 percent.

8. Irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m. in order to prevent evaporative water loss from irrigation, unless unfavorable weather prevents it or otherwise renders irrigation unnecessary. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.

C. **Mulch:**

1. A minimum three-inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas in order to prevent evaporative water loss from exposed soil, except in areas of direct seeding application (e.g. hydroseed).

D. **Hydro Zones:**

1. Hydro zones shall group plant materials of similar water use and shall generally demarcate areas of similar slope, sun exposure, soil and other site conditions appropriate for the selected plants.

2. The flow of water to each hydro zone shall be controlled by a separate valve.

3. Sprinkler heads and other water emission devices shall be selected based on what is appropriate for the plant type within that hydro zone.

4. Within a hydro zone, low- and moderate-water-use plants may be mixed, but all plants within that hydro zone shall be classified as moderate water use for MAWA calculations. High-water-use plants shall not be mixed with low- or moderate-water-use plants.

E. **Water Features:**

1. Recirculating water systems shall be used for water features.

2. The wet-surface area of a water feature shall be counted as an area of high-water-using plants for purposes of the plant-type restriction and the water budget calculation.

3. Pool and spa covers are highly recommended to prevent evaporative water loss from the exposed water surface.

CHAPTER 5
LANDSCAPE AND IRRIGATION MAINTENANCE

Landscapes shall be maintained to ensure successful establishment following installation and to ensure the efficient use of water consistent with these regulations.

A. Maintenance shall include, but not be limited to, the following: routine inspection; pressure testing, adjustment and repair of the irrigation system; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; replanting of failed plants; weeding; pest control; and removing obstructions to water emission devices.

B. Failed plants shall be replaced with the same or functionally equivalent plants that may be size-adjusted as appropriate for the stage of growth of the overall installation. Failing plants shall either be replaced or be revived through appropriate adjustments in water, nutrients, pest control or other factors as recommended by a landscaping professional.

C. Failed irrigation hardware components shall be replaced with the same or functionally equivalent components.

CHAPTER 6
COMPONENTS OF A LANDSCAPE PROJECT SUBMITTAL

The Landscape Project Submittal for all projects subject to these regulations shall contain the following items and shall be submitted to the City of Mountain View Planning Division as part of the zoning permit application:

A. **Water-Efficient Design and Maintenance Checklist** (Chapter 8).

B. **Landscape and Irrigation Design Plans** (Chapter 9).

C. **Water Budget Calculation** (Chapter 10). Not required if plant-type restriction option is utilized.

D. **Certification of Installation** (Chapter 11). Shall be submitted following installation of landscaping materials and irrigation hardware.

CHAPTER 7
PREPARATION OF A LANDSCAPE PROJECT SUBMITTAL

The Landscape Project Submittal for all projects subject to these regulations shall be prepared by the following individual(s):

A. For a project with a landscape area of at least 1,000 square feet but less than 2,500 square feet, the Landscape Project Submittal may be prepared by the project applicant or by a certified or authorized professional(s).

B. For a project with a landscape area of 2,500 square feet or greater, the Landscape Project Submittal must be prepared by a certified or authorized professional(s).

CHAPTER 8
WATER-EFFICIENT DESIGN AND MAINTENANCE CHECKLIST

A completed water-efficient design and maintenance checklist is required of all projects subject to these regulations. The checklist shall serve as a self-certification of consistency with the water-efficiency requirements of these regulations.

CHAPTER 9
LANDSCAPE AND IRRIGATION DESIGN PLANS

Landscape and Irrigation Design Plans are required of all projects subject to these regulations. The Landscape and Irrigation Design Plans shall be prepared as follows:

A. Landscape and Irrigation Design Plans shall incorporate all applicable elements of Chapter 4 (Water-Efficient Design Elements).

B. The landscape design portion of the Landscape and Irrigation Design Plans, at a minimum, shall:

1. Provide basic project information, such as applicant name, project contacts, site address, total landscape area, total turf area and irrigation water source (e.g. municipal, recycled).

2. Identify, in table form, all plants to be installed as part of the project. The table shall include the following:

   i. Symbol (representing the plant on the plan).

   ii. Common name.

   iii. Botanical name.

   iv. Container size.

   v. Quantity.

   vi. Type (e.g. grass, succulent, vine, shrub, tree).

   vii. Water-efficient species identification. All "native" and "low-water-use" plant species (defined in Chapter 17) shall be labeled.

   viii. Unique physical specifications of plants (e.g., bare-root, field-potted, multi-trunk), if applicable.

3. Delineate and label each hydro zone.

4. Identify each hydro zone as low water, moderate water, high water, or mixed (low/moderate) water use.

5. Identify special landscape areas.

6. Identify type of mulch and application depth.

7. Identify type and wet-surface area of water features.

8. Identify hardscapes (pervious and nonpervious).

C. The irrigation design portion of the Landscape and Irrigation Design Plans, at a minimum, shall contain:

1. Location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture-sensing devices, rain sensors, quick couplers, pressure regulators and backflow prevention devices.

2. Static water pressure at the point of connection to the public water supply.

3. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station.

4. Irrigation schedule.

5. Location and size of separate water meters for landscape (if applicable).

D. **Grading.** If the landscape area will be graded, then, at a minimum, grading contours and quantities shall be shown on the landscape portion of the Landscape and Irrigation Design Plans. Grading shall meet all applicable requirements of the City of Mountain View Standard Design Criteria.

E. **Storm Water Management.** Storm water Best Management Practices shall be incorporated, as appropriate, into the landscape installation, the details of which shall be shown on the landscape portion of the Landscape and Irrigation Design Plans. Installation shall be subject to the City of Mountain View's National Pollutant Discharge Elimination System (NPDES) storm water discharge permit requirements.

CHAPTER 10
WATER BUDGET CALCULATION

A Water Budget Calculation worksheet will be developed by the City of Mountain View and provided by the Planning Division to all project applicants. Applicants may elect to complete a Water Budget Calculation for the project. When a Water Budget is prepared

for landscape areas equal to or greater than 2,500 square feet, it must be completed by a certified or authorized professional. A Water Budget Calculation shall adhere to the following requirements:

A. The plant factor shall be based on the species evaluation list from the Water Use Classification of Landscape Species (WUCOLS), and shall be 0.3 for low-water-use plants, 0.5 for moderate-water-use plants and 0.8 for high-water-use plants.

B. The wet-surface area of a water feature shall be counted as an area of high-water-using plants for purposes of a Water Budget Calculation.

C. Where low- and moderate-water-use plants are to be mixed within a single hydro zone, the entire hydro zone area shall be classified as moderate water use for purposes of a Water Budget Calculation. High-water-use plants shall not be mixed with low- or moderate-water-use plants.

D. All special landscape areas (SLA) shall be identified and their water use included in the Water Budget Calculation.

E. The reference evapotranspiration adjustment factor (ETAF) for SLAs shall not exceed 1.0. The ETAF for the remaining landscaped area shall not exceed 0.7.

F. Irrigation system efficiency shall be greater than or equal to 70 percent.

G. MAWA shall be calculated using the equation below:

Use this section only if the project includes a Special Landscape Area

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

Where:

MAWA	=	Maximum Applied Water Allowance (gallons per year)
ETo	=	Reference Evapotranspiration (inches per year)
0.62	=	Conversion Factor (inches per square foot to gallons)
0.7	=	Reference Evapotranspiration Adjustment Factor (ETAF)
LA	=	Landscape Area including SLA (square feet)
0.3	=	Additional Water Allowance for SLA
SLA	=	Special Landscape Area (square feet)

An ETo of 43" per year shall be used in Water Budget Calculations for all projects located within the City of Mountain View.

H. ETWU shall be calculated for each hydro zone using the equation below. The sum of the ETWU calculated for all hydro zones shall not exceed the MAWA.

Use this section only if the project includes a Special Landscape Area

$$ETWU = (43)(0.62)\left(\frac{PF\ x\ HA}{IE}\right) + (43)(0.62)(SLA)$$

Where:

ETWU	=	Estimated Total Water Use per year (gallons per year)
ETo	=	Reference Evapotranspiration (inches per year)
PF	=	Plant Factor from WUCOLS
HA	=	Hydro Zone Area [high-, medium-, low- and mixed-water-use areas] (square feet)
SLA	=	Special Landscape Area (square feet)
0.62	=	Conversion Factor (inches per square foot to gallons)
IE	=	Irrigation Efficiency (minimum 0.70)

An ETo of 43" per year shall be used in Water Budget Calculations for all projects located within the City of Mountain View.

CHAPTER 11
CERTIFICATION OF INSTALLATION

A completed Certification of Installation form, provided by the Planning Division, shall be submitted to the Planning Division for all projects within 60 days of installation of the landscape material and irrigation hardware. The Certification of Installation shall verify the following: inspection to confirm that the landscaping and irrigation system was installed as specified in the landscape and irrigation design plan; system test with distribution uniformity; system tune-up to reduce overspray or runoff that causes overland flow; and preparation of a recommended irrigation schedule.

CHAPTER 12
AUDIT OF EXISTING LANDSCAPES

The City of Mountain View shall be authorized to require irrigation audits to evaluate water use on established landscapes larger than one (1) acre. Such audits may also be initiated as a coordinated effort between the City of Mountain View and another entity (e.g., Santa Clara Valley Water District or the Bay Area Water Supply and Conservation Agency), as part of an established outdoor water conservation program. When an irrigation audit is required, it must be completed by a certified landscape irrigation auditor.

CHAPTER 13
PUBLIC EDUCATION

A. The City of Mountain View shall provide to all project applicants and members of the public information regarding the design, installation, management and maintenance of water-efficient landscapes and irrigation systems.

B. All model homes that are landscaped shall have signs installed that provide information identifying the common and biological names of plants and the principles of water-efficient landscaping used at the site.

CHAPTER 14
PENALTIES

The penalties for violations set forth in Sections 1.7 and A36.92.050 of the City of Mountain View Municipal Code shall apply to violations of the provisions of these regulations.

CHAPTER 15
EXCEPTIONS

Exceptions to these regulations shall be subject to review and approval by the City Council.

CHAPTER 16
RELATIONSHIP TO THE ZONING ORDINANCE

Standards stated in the Zoning Ordinance (Title 36 of the Mountain View Municipal Code) that are not specified in this section shall remain applicable. In the case of conflict between these regulations and the Zoning Ordinance, the standards contained herein shall govern.

CHAPTER 17
DEFINITIONS

The definitions of terms in this Chapter shall apply wherever these terms appear within these regulations.

Applied Water. The portion of water supplied by the irrigation system to the landscape.

Amphitheater. An open-air venue for sports, concerts or theatrical performances.

Automatic Irrigation Controller. An automatic timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

Backflow Prevention Device. A safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.

Certified Irrigation Designer. A person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as the U.S. Environmental Protection Agency's WaterSense irrigation designer certification program and Irrigation Association's Certified Irrigation Designer program.

Certified Landscape Irrigation Auditor. A person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the U.S. Environmental Protection Agency's WaterSense irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

Certified or Authorized Professional. A certified irrigation designer, certified landscape irrigation auditor, licensed landscape architect, licensed landscape contractor, licensed professional engineer or any other person authorized by the State of California to design a landscape, an irrigation system or authorized to complete a water budget.

Conversion Factor. The number (0.62) that converts inches per square foot to gallons per square foot.

Dedicated Landscape Meter. A water meter used to measure water use in landscape areas. May also include ancillary potable uses such as drinking fountains.

Ecological Restoration Project. A project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

Estimated Total Water Use (ETWU). The total water used for the landscape as described in Chapter 10: Water Budget Calculation.

Evapotranspiration Adjustment Factor (ETAF). A factor of 0.7 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. ETAF for a SLA shall not exceed 1.0.

Gray Water. Untreated wastewater of a quality suitable for nonpotable uses (e.g., has not been contaminated by toilet discharge or food products). Gray water includes, but is not limited to, wastewater from bathtubs, showers, bathroom wash basins, clothes washing machines and laundry tubs. Gray water does not include wastewater from toilets, kitchen sinks or dishwashers.

Hardscape. Any constructed feature in a landscape built of concrete, stone, wood or other such pervious or nonpervious durable material. Includes, but is not limited to, patios, walkways and retaining walls.

High-Water-Use Plant. A plant species classified as "high water use" by WUCOLS, having a regionally adjusted plant factor of 0.7 through 0.9.

Hydro Zone. A portion of the landscaped area having plants with similar water needs. A hydro zone may be irrigated or nonirrigated.

Internal Pathway. A permeable or nonpermeable hardscape used for walking, driving or biking through a large landscape area.

Invasive Plant Species. Species of plants listed in the invasive plant inventory of the California Invasive Plant Council (IPC) that have been identified as invasive to areas within the IPC-delineated Central West (CW) region.

Irrigation Audit. An in-depth evaluation of the performance of an irrigation system performed by a certified landscape irrigation auditor. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow and preparation of an irrigation schedule.

Irrigation Efficiency (IE). 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 average irrigation efficiency for purposes of these regulations is 70 percent. Greater irrigation efficiency can be expected from well-designed and maintained systems.

Landscape Architect. A person who holds a license to practice landscape architecture in California as further defined by the California Business and Professions Code, Section 5615.

Landscape Area. All of the affected planting areas, turf areas and water features in a landscape installation. The landscape area does not include existing plants or water features, footprints of buildings or structures, sidewalks, driveways, parking lots, decks,

patios, gravel or stone walks, pervious or nonpervious hardscapes, and other nonirrigated natural landscape areas (e.g., existing wild-land vegetation).

Landscape Contractor. A person licensed by the State of California to construct, maintain, repair, install or subcontract the development of landscape systems.

Lateral Line. The water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

Low-Water-Use Plant. A plant species whose demonstrated water needs are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established. Species classified as "very low-water-use" and "low-water-use" by WUCOLS, having a regionally adjusted plant factor of 0.0 through 0.3, shall be considered low-water-use plants.

Low-Volume Irrigation. The application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines and bubblers. Low-volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

Maximum Applied Water Allowance (MAWA). The upper limit of annual applied water for the established landscaped area as specified in Chapter 10 (Water Budget Calculation).

Model Home. A home or group of homes used to display homes for sale in a subdivision. A model home is used to show the living space and features of different models of homes available to the consumer.

Mulch. Any organic material such as leaves, bark, straw, compost, or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature and preventing soil erosion.

Native Plant. A plant indigenous to a specific area of consideration. For the purpose of these regulations, the term will refer to plants indigenous to the coastal ranges of Central and Northern California, and more specifically to such plants that are suited to the ecology of the present or historic natural community of the project's vicinity.

Nonpotable Water. Includes recycled water, gray water or rainwater. For the purposes of these regulations, nonpotable water does not include private groundwater supplies.

Noxious Weed. Any weed designated by the weed control regulations in the Weed Control Act and identified on a regional district noxious weed control list.

Operating Pressure. The pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

Overspray. Irrigation water that is delivered beyond the target area.

Plant Factor. A numerical factor, when multiplied by reference evapotranspiration (ETo), estimates the amount of water needed by plants. Plant factors are based on the publication "Water Use Classification of Landscape Species" (WUCOLS).

Project Applicant. The individual or entity submitting a Landscape Project Submittal. A project applicant may be the property owner or his or her designee.

Rain Sensor or Rain-Sensing Shutoff Device. A component that automatically suspends an irrigation event when it rains.

Recycled Water. Treated wastewater of a quality suitable for nonpotable uses, including landscape irrigation and water features.

Reference Evapotranspiration (ETo). A standard measurement of environmental parameters that affect the water use of plants. ETo is an estimate of the evapotranspiration of a large field of four-inch (4") to seven-inch (7") tall, cool-season grass that is well-watered. For the purpose of a Water Budget Calculation, an ETo of 43" shall be used for projects located within the City of Mountain View.

Rehabilitated Landscape. Modification of existing landscapes; includes any area where new landscape is installed.

Runoff. Water that is not absorbed by the soil or landscape to which it is applied and flows from the landscape area.

Single-Family Home. A detached building designed for and/or occupied exclusively by one family.

Soil Moisture Sensor. A device that measures the amount of water in the soil.

Special Landscape Area (SLA). An area of the landscape dedicated solely to edible plants, areas irrigated with nonpotable water, water features using nonpotable water and areas dedicated to active play such as parks, sports fields, golf courses and where turf provides a playing surface. Front and back lawns of private residences are not considered Special Landscape Areas.

Sprinkler Head. A device that delivers water through a nozzle.

Station. An area served by one valve or by a set of valves that operate simultaneously.

Turf. A ground cover surface consisting of nonnative grass species that is customarily mowed. Annual bluegrass, Kentucky bluegrass, perennial ryegrass, red fescue and tall fescue are examples of cool-season turf grasses. Bermuda grass, kikuyu grass, seashore paspalum, St. Augustine grass, zoysia grass and buffalo grass are warm-season turf grasses.

Valve. A device used to control the flow of water in the irrigation system.

Water Feature. A landscape design element where open water performs an aesthetic or recreational function. Water features include swimming pools, spas, ponds, fountains, waterfalls and artificial streams. Water features do not include manually operated water play areas in public parks.

Wet-Surface Area. The surface area of that portion of a water feature that functions to contain water, such as the water surface of a swimming pool, spa or garden pond. For a fountain or other feature with flowing water, wet-surface area shall be measured as a two-dimensional plane bounded by the perimeter of the area where water has been designed to flow.

WUCOLS. The "Water Use Classification of Landscape Species" published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2000.

Zoning Permit. A legal document that gives permission for a use or development on a particular piece of land, including, but not limited to, Development Review Permits, Planned Unit Development Permits, Planned Community Permits and Conditional Use Permits.

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WATER CONSERVATION IN LANDSCAPING REGULATIONS "GETTING STARTED"

The following steps are intended to help you get started with the City of Mountain View's new Water Conservation in Landscaping Regulations. In order to fully comply with the regulations, you will need to obtain a complete package from the City of Mountain View Planning Division.

Step 1: Determine whether you are subject to the regulations.

If your project requires a Planning Permit and has new or rehabilitated landscape area of 1,000 square feet or more, your project is likely subject to the Water Conservation in Landscaping Regulations. If your project's affected landscape area is 2,500 square feet or more, you will need the help of a certified or authorized professional to complete the required documentation.

Step 2: Choose whether to restrict turf area or calculate a water budget.

If your project is subject to the Water Conservation in Landscaping Regulations, you have two options for complying with the regulations. These options are listed below as *Option 1* and *Option 2*. Irrespective of which option you choose, you must also do the following:

A. Adhere to the Water-Efficient Design Elements and Landscape Irrigation Maintenance requirements, and

B. Complete all components of a Landscape Project Submittal.

Details of the Water-Efficient Design Elements, Landscape Irrigation Maintenance requirements and the Landscape Project Submittal can be found in the Water Conservation in Landscaping Regulations.

Option 1: Plant-type restriction option

The simplest way to comply with the Water Conservation in Landscaping Regulations is to meet the following two restrictions:

A. High-water-use plants (e.g., turf) may not exceed 25 percent of the landscape area, and

B. At least 80 percent of nonturf plantings must be California native or low-water-use plants.

Option 2: Water budget option

If you would like more high-water-use plants than is allowed under the plant-type restriction option (*Option 1*), you may elect to complete a Water Budget Calculation instead of complying with the plant-type restriction option. The results of your Water Budget Calculation must demonstrate that your proposed landscape will not use more water than an equivalent-sized landscape with equal parts high-, low-, and moderate-water-use plants. A complete explanation how to prepare a Water Budget Calculation can be found in Chapter 10 of the Water Conservation in Landscaping Regulations and in the Water Budget Calculation Worksheet provided by the City.

Step 3: Prepare a Landscape Project Submittal.

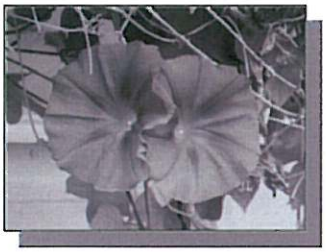
Your Landscape Project Submittal must contain the following items:

A. Water-Efficient Design and Maintenance Checklist

B. Landscape and Irrigation Design Plans

C. Certification of Installation

D. Water Budget Calculations (if *Option 2* is chosen during Step 2)



A complete description of the required elements of a Landscape Project Submittal is contained in the Water Conservation in Landscaping Regulations.

CITY OF MOUNTAIN VIEW

WATER-EFFICIENT DESIGN AND MAINTENANCE CHECKLIST

Applicant Name:	Phone:	E-mail:
Project Site Address:		
Total Landscape Area (square feet):	Turf Area:	Nonturf Plant Area:
Special Landscape Area:	Water Feature Wet Surface Area:	

Water-Efficient Design

Parameter	Requirements	Compliance
Plantings	Total area of high water use plantings (including turf and water features) is less than 25 percent of the landscape area	☐ Yes ☐ No—See Water Budget
	At least 80 percent of nonturf area is native or low-water-use plants	☐ Yes ☐ No—See Water Budget
Turf	All turf areas are greater than 8' wide (unless irrigated with subsurface irrigation or other low volume irrigation system)	☐ Yes
	All turf is planted on slopes less than 25 percent (except in defined amphitheaters)	☐ Yes
Hydro Zones	Plants are grouped by hydro zones	☐ Yes
	Each hydro zone is controlled by a separate irrigation valve	☐ Yes
Mulch	At least 3" of mulch is used on exposed soil surfaces	☐ Yes
Irrigation System	Designed to avoid overspray and runoff	☐ Yes
	Automatic irrigation controllers (e.g., utilizing weather or soil-moisture data)	☐ Yes
	Rain sensor shutoffs	☐ Yes
	No overhead irrigation is used in the following locations: on slopes greater than 25 percent (except in defined amphitheaters), within 24" of a nonpervious surface (except adjacent to internal pathways), or in any narrow or irregularly shaped area that is less than 8' in width in any direction.	☐ Yes
	System only operates between 8:00 p.m. and 10:00 a.m.	☐ Yes
Metering	Separate irrigation meter for landscape areas of 2,500 square feet or more (5,000 square feet for single-family homes)	☐ Yes ☐ Not Applicable
Water Features	Recirculating	☐ Yes ☐ Not Applicable
	Pool/spa cover	☐ Yes ☐ Not Applicable

I certify that information provided on this checklist is correct and meets the specified requirements of the Water Conservation in Landscaping Regulations.

Signature of Project Applicant or Authorized Representative *Date*

Landscape and Irrigation Maintenance

Pursuant to the City of Mountain View's Water Conservation in Landscaping Regulations, landscapes and irrigation systems shall be maintained to ensure successful establishment following installation, and to ensure the efficient use of water. Maintenance shall be performed regularly and must include, at a minimum, the following components:

Parameter	Components	
Irrigation System	System check (every six months)	☐
	Routine inspection (monthly)	☐
	Adjustment and repair	☐
	Failed irrigation hardware components shall be replaced with the same or functionally equivalent components	☐
Landscape	Replenish mulch	☐
	Fertilize	☐
	Prune	☐
	Weed control	☐
	Pest control	☐
	Aeration and dethatching of turf areas	☐
	Failed plants shall be replaced with the same or functionally equivalent plants	☐

To the best of my ability, the landscape and irrigation systems installed as part of this project will be maintained on a regular basis and in compliance with the Water Conservation in Landscaping Regulations.

_____ _____

Signature of Project Applicant or Authorized Representative *Date*

Staff Evaluation *(to be completed by City of Mountain View staff)*

Documentation	Completed by Project Applicant	Completed by Certified or Authorized Professional
Water-Efficient Design and Maintenance Checklist	☐	☐
Landscape and Irrigation Design Plans	☐	☐
Certification of Installation (submitted within 60 days of installation)	☐	☐
Water Budget Calculation (optional)	☐	☐

☐ Single-Family ☐ Multi-Family ☐ Commercial ☐ Institutional ☐ Irrigation Only ☐ Industrial ☐ Other: _____

Number of Units (residential): _____ Number of Meters: _____

☐ Approved ☐ Not Approved	**Staff Comments:** *Signature:* *Date:*

CITY OF MOUNTAIN VIEW

WATER BUDGET CALCULATION WORKSHEET

Applicant Name: Phone: E-mail:

Project Site Address:

This worksheet is an optional element of the Landscape Project Submittal. If your project has elected to use the water budget option, please complete all sections (A, B, and C) of the worksheet. Please refer to the Water Conservation in Landscaping Regulations for definitions of terms used in this worksheet.

SECTION A. MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

Please complete the information for each hydro zone listed in Table A-1. Use as many tables as necessary to provide the square footage of landscape area per hydro zone. Information entered into this table will be use for the calculations for the Maximum Applied Water Allowance (MAWA) below.

Table A-1. Hydro Zone Area Information

Plant Water Use Type[a]	Plant Type[b]	Hydro Zone Area *square feet*

Summary of Hydro Zone Area Information

Summary Area		Area *square feet*
Sum of Low-Water-Use Areas		
Sum of Moderate-Water-Use Areas		
Sum of High-Water-Use Areas		
Sum of Special Landscape Areas	*[use this value for Table A-2]*	
Sum of all Landscape Areas	*[use this value for Table A-2]*	

(a) Plant Water Use Type
HW = High-Water-Use Plants
MW = Moderate-Water-Use Plants (includes mixed moderate-low plants)
LW = Low-Water-Use Plants (includes very low-water-use plants)
SLA = Special Landscape Area

(b) Plant Type
May include categories such as:
- Native garden
- Boxwood
- Roses
- Turf
- Sports Field

SECTION A. MAXIMUM APPLIED WATER ALLOWANCE (MAWA) (CONTINUED)

The project's Maximum Applied Water Allowance shall be calculated using the following equation:

$MAWA = (43)\ (0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]$

Where:

MAWA	= Maximum Applied Water Allowance (gallons per year)
43	= Reference Evapotranspiration (ETo) for the City of Mountain View (inches per year)
0.62	= Conversion Factor (to gallons per square foot)
0.7	= ET Adjustment Factor (ETAF)
LA	= Landscaped Area (includes Special Landscape Area; in square feet)
0.3	= The Additional ET Adjustment Factor for Special Landscape Area (1.0 - 0.7 = 0.3)
SLA	= Portion of the Landscape Area Identified as Special Landscape Area (square feet)

Use Table A-2 below to identify the input values for the MAWA calculation.

Table A-2. Input Values for the MAWA Calculation

ETo *inches*	Conversion Factor	Landscape Area (LA) *square feet*	Special Landscape Area (SLA) *square feet*
43	0.62	*[enter from Table A-1]*	*[enter from Table A-1]*

Show calculations for the Maximum Applied Water Allowance.

$MAWA = (43)\ (0.62)\ [(0.7 \times LA) + (0.3 \times SLA)]$

Maximum Applied Water Allowance = _____ gallons per year.

SECTION B. ESTIMATED TOTAL WATER USE (ETWU)

Please complete the plant factor and irrigation system information for your landscape. Use as many tables as necessary. Information entered into the tables below will be use for Estimated Total Water Use (ETWU) calculations below.

Table B-1. Plant Factor and Irrigation System Information

	Plant Water Use Type[a]	Plant Type[b]	Plant Factor (PF) [c]	Hydro Zone Area (HA) *square feet*	Irrigation Method[d]	Irrigation Efficiency (IE) [e] *[minimum of 70%]*
1						
2						
3						
SLA	SLA		1.0			

(a) Plant Water Use Type
Plant water use types shall be obtained from the species evaluation list in WUCOLS (Region 1)
- HW = High-Water-Use Plants
- MW = Moderate-Water-Use Plants (includes mixed moderate-low plants)
- LW = Low-Water-Use Plants (includes very low-water-use plants)
- SLA = Special Landscape Area

(b) Plant Type
May include categories such as:
- Native garden
- Boxwood
- Roses
- Turf
- Sports Field

(c) Plant Factor
The following plant factors shall be used:
- LW = 0.3
- MW = 0.5
- HW = 0.8
- SLA = 1.0

(d) Irrigation Method
- MS = Micro-spray
- S = Spray
- R = Rotor
- B= Bubbler
- D= Drip
- O = Other (specify)

(e) Irrigation Efficiency
Below are typical irrigation efficiencies:
- MS = 65%
- S = 65% (for turf) or 80% (for shrubs)
- R = 75%
- B = 85%
- D = 85%

The project's Estimated Total Water Use shall be calculated using the following equation:

Use only if the project includes a Special Landscape Area

$$ETWU = (43)(0.62)\left(\frac{PF\ x\ HA}{IE}\right) + (43)(0.62)(SLA)$$

Where:

ETWU	= Estimated Total Water Use Per Year (gallons per year)
43	= Reference Evapotranspiration (ETo) for the City of Mountain View (inches per year)
0.62	= Conversion Factor (to gallons per square foot)
PF	= Plant Factor
HA	= Hydro Zone Area (square feet)
IE	= Irrigation Efficiency (minimum 0.7)
SLA	= Special Landscape Area (square feet)

SECTION B. ESTIMATED TOTAL WATER USE (ETWU) (CONTINUED)

Show calculations for the ETWU below (use as many pages as necessary).

$$ETWU_1 = (43)(0.62)\left(\frac{PF_1 \; x \; HA_1}{IE_1}\right) =$$

$$ETWU_2 = (43)(0.62)\left(\frac{PF_2 \; x \; HA_2}{IE_2}\right) =$$

$$ETWU_3 = (43)(0.62)\left(\frac{PF_3 \; x \; HA_3}{IE_3}\right) =$$

$$ETWU_{SLA} = (43)(0.62)(SLA) =$$

Sum of ETWU	

Estimated Total Water Use =_____ gallons.

SECTION C. COMPARISON OF ETWU AND MAWA

Use this section to compare the calculated ETWU to the MAWA. The calculated ETWA may not exceed the calculated MAWA.

MAWA = _____ > ETWU = _____

[from Section A] *[from Section B]*

EXAMPLE WATER BUDGET CALCULATION

SECTION A. MAXIMUM APPLIED WATER ALLOWANCE (MAWA)

Table A-1. Hydro Zone Area Information

Plant Water Use Type	Plant Type	Hydro Zone Area *square feet*
LW	Native Garden	1,500
MW	Boxwood	500
MW	Roses	500
HW	Turf	1,000

Summary of Hydro Zone Area Information

Plant Water Use Type		Area *square feet*
Sum of LW Areas		1,500
Sum of MW Areas		1,000
Sum of HW Areas		1,000
Sum of Special Landscape Areas	*[use this value for Table A-2]*	0
Sum of all Landscape Areas	*[use this value for Table A-2]*	3,500

Table A-2. Input Values for the MAWA Calculation

ETo *inches*	Conversion Factor	Landscape Area (LA) *square feet*	Special Landscape Area (SLA) *square feet*
43	0.62	3,500	0

Calculations:

MAWA = (43) (0.62) [(0.7 x LA) + (0.3 x SLA)]

= (43) (0.62) [(0.7 x 3,500) + (0.3 x 0)]

= 65,317

Maximum Applied Water Allowance = 65,317 gallons per year.

SECTION B. ESTIMATED TOTAL WATER USE (ETWU)

Table B-1. Plant Factor and Irrigation System Information

	Plant Water Use Type	Plant Type	Plant Factor (PF)	Hydro Zone Area (HA) *square feet*	Irrigation Method	Irrigation Efficiency (IE) *[minimum of 70%]*
1	LW	Native Garden	0.3	1,500	D	0.85
2	MW	Boxwood	0.5	500	S	0.80
3	MW	Roses	0.5	500	D	0.85
4	HW	Turf	0.8	1,000	S	0.65
SLA	SLA	NA	1.0	0	NA	NA

Calculations:

$$ETWU_1 = (43)(0.62)\left(\frac{PF_1 \, x \, HA_1}{IE_1}\right) \qquad ETWU_1 = (43)(0.62)\left(\frac{0.3x1{,}500}{0.85}\right) \qquad = 14{,}114$$

$$ETWU_2 = (43)(0.62)\left(\frac{PF_2 \, x \, HA_2}{IE_2}\right) \qquad ETWU_2 = (43)(0.62)\left(\frac{0.5x500}{0.80}\right) \qquad = 8{,}331$$

$$ETWU_3 = (43)(0.62)\left(\frac{PF_3 \, x \, HA_3}{IE_3}\right) \qquad ETWU_3 = (43)(0.62)\left(\frac{0.5x500}{0.85}\right) \qquad = 7{,}841$$

$$ETWU_4 = (43)(0.62)\left(\frac{PF_3 \, x \, HA_3}{IE_3}\right) \qquad ETWU_4 = (43)(0.62)\left(\frac{0.8x1{,}000}{0.65}\right) \qquad = 32{,}812$$

$$ETWU_{SLA} = (43)(0.62)(SLA) \qquad ETWU_{SLA} = (43)(0.62)(0) \qquad = 0$$

Sum of ETWU	63,098

Estimated Total Water Use = 63,098 gallons.

SECTION C. COMPARISON OF ETWU AND MAWA

MAWA = 65,317 > ETWU = 63,098

CITY OF MOUNTAIN VIEW

CERTIFICATION OF INSTALLATION

Applicant Name: _____ Phone: _____ E-mail: _____

Project Site Address: _____

Parameter	Requirements	Compliance
Landscape	Conforms with the Landscape Design Plan	☐ Yes
Irrigation System	Conforms with the Irrigation Design Plan	☐ Yes
	Performed system test and distribution uniformity	☐ Yes
	Performed system tune-up to reduce overspray and runoff	☐ Yes
	Prepared recommended irrigation schedule	☐ Yes

I certify that that, based upon periodic site observations, the landscape and irrigation system has been installed as specified in the Landscape and Irrigation Design Plans and complies with the criteria of the Water Conservation in Landscaping Regulations.

_____ _____

Signature of Project Applicant or Authorized Representative *Date*

Chapter 12.34. WATER CONSERVATION RESTRICTIONS

12.34.010. Purpose and application.

The purpose of this chapter is to identify and restrict nonessential water uses which, if allowed, would constitute wastage of the water supply of the city. The provisions of this chapter shall apply to all persons or entities using water obtained from the city of Sunnyvale both in and outside the city of Sunnyvale and within the city's water service area, and regardless of whether any person or entity using water has a contract for water service with the city. Use of water by the city itself shall be in conformance with a water conservation plan to be presented by the city manager to the city council for approval, and which shall essentially conform to the provisions of this chapter. This chapter is adopted pursuant to the provisions of Water Code Section 350, et seq., the city charter and the common law. (Ord. 2433-93 § 1 (part)).

12.34.020. Nonessential uses prohibited.

The following uses, methods, types or techniques of uses of water are hereby determined and declared nonessential, and except as expressly provided to the contrary, are hereby prohibited:

(a) Allowing or maintaining broken or defective plumbing, sprinklers, watering or irrigation systems which permit the escape or leakage of potable water.

(b) Using potable water in any manner which causes, allows or permits the flooding of any premises, or any portion thereof, or which causes, allows or permits water to escape from any premises or any portion thereof and flow into gutters, streets, or any surface water drainage system.

(c) Using any hose or similar device using potable water for washing automobiles, trucks, buses, boats, trailers, equipment, recreational vehicles, mobilehomes or other vehicles or machinery, unless the hose or device is equipped with a positive automatic shutoff valve.

(d) Using potable water to wash sidewalks, driveways, filling station aprons, patios, parking lots, porches or other paved or hard surfaced areas, unless there is a positive automatic shutoff valve on the outlet end of the hose.

(e) The service of water by any restaurant or other eating or refreshment establishment to any patron, except upon the specific request by a patron for such services.

(f) Installation of any single pass cooling process in new construction.

(g) Any use of nonpotable water not in compliance with all federal, state and local laws, rules and regulations. Use of reclaimed water from the city's water pollution control plant shall be subject to the discretion of the director of public works. (Ord. 2433-93 § 1 (part)).

12.34.030. Exceptions.

(a) The director of public works is hereby authorized to grant to any user an exception to the prohibitions set forth in Section 12.34.020, upon a finding by the director that such exception is necessary to prevent an emergency condition affecting the health, sanitation or fire protection of such user, and that the user to whom such adjustment or exception pertains has adopted or used all practicable water conservation measures.

(b) Exceptions permitted hereunder shall be made only upon written application submitted to the director

setting forth a statement of justification for such exception. The director may attach conditions, specifications or other qualifying provisions to any exception granted. (Ord. 2433-93 § 1 (part)).

12.34.040. Penalty—Flow restricting devices.

(a) Upon a determination by the director of public works that a user has continuously or repeatedly violated or failed to comply with one or more provisions of Section 12.34.020, or of any conditions of any exception granted pursuant to the provisions of Section 12.34.030, the director may issue an order to cease and desist from continued or repeated violation, and further order such user to comply forthwith with such provisions or terms of exception, or otherwise to take appropriate remedial or preventive action. If after the issuance of such cease and desist order, such user continues to consume or use, or again consumes or uses water in violation of any such provision or condition of exception, the director may order the installation of a flow restricting device upon the water service line to the premises of such user. Such flow restricting device shall be installed and maintained for a period of not less than three days nor more than ten days for a first violation, and shall be installed and maintained for not less than ten days for each succeeding violation, and may be ordered to remain installed and maintained for a period of up to three months upon a finding by the director that any user is habitually in violation of any of the provisions of this chapter, or the provisions of any exception granted pursuant to Section 12.34.030.

(b) Prior to installation of any such flow restricting device, the director shall give written notice of intent to install such device, including the reasons for the proposed installation. The notice shall specify the date, time and place at which the user or other interested party may appear before the director to present any evidence or reasons why such installation should not occur. Instead of appearing, the user or other interested party may present written material to the director at or before the time specified. The installation of a flow restricting device shall not occur less than twenty-four hours after the time specified in the notice. The written notice shall be delivered personally, or by posting with the United States mail service, first class postage prepaid, certified mail, and addressed to the last known address of the user to whom given. Copies of the notice shall also be delivered personally or by mail as specified above, to the owner of the property on which the flow restrictor is proposed to be installed as shown on the last equalized assessment roll of the county assessor, county of Santa Clara, and to the person or entity shown on the latest city records as being responsible for payment of utility charges on such property, if either or both is different from the user to whom the notice is sent.

(c) There are hereby established, and there shall be imposed and levied charges in the amount of fifty dollars for each installation and fifty dollars for each removal of flow restricting devices under this section. (Ord. 2433-93 § 1 (part)).

12.34.050. Implementation.

The director of public works is authorized to delegate authority granted under this chapter to such deputies, officers, employees or agents of the city as the director shall designate, and to establish such rules, regulations and procedures, and to prepare or furnish such forms as the director deems necessary or appropriate to carry out the provisions of this chapter. (Ord. 2433-93 § 1 (part)).

12.34.060. Notices.

Except as otherwise provided, notices required to be given pursuant to the provisions of this chapter shall be in writing, may be combined with water service bills or other written communication, and shall be delivered personally, or by posting with the United States mail service, first class postage prepaid, and addressed to the last known address of the user to whom given, or to the owner of the premises to which the water service of such

user pertains, shown on the last equalized assessment roll of the county assessor, county of Santa Clara. (Ord. 2433-93 § 1 (part)).

12.34.070. Violations.

It is unlawful for any person, firm, partnership, association, corporation or political entity to use water obtained from the water system of the city of Sunnyvale in violation of any provision of this chapter or in violation of the conditions of any exception granted pursuant to Section 12.34.040 of this chapter. Use of water by any user in accordance with the provisions of any exception granted by the director shall not be deemed in violation of this chapter. Violations of this chapter shall be punishable as infractions. (Ord. 2433-93 § 1 (part)).

12.34.080. Remedies cumulative.

The remedies and penalties provided for in this chapter shall be cumulative and not exclusive, and shall be in addition to any or all other remedies available to the city. (Ord. 2433-93 § 1 (part)).