

CHAPTER 7-28  
WATER EFFICIENT LANDSCAPE

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- 7-28-101. SHORT TITLE.

This Title shall be known as the “West Valley City Water Efficient Landscape Ordinance.” This Title shall also be known as “Title 7-28, West Valley City Code.” It may be cited and pleaded under either designation.

(Ord. No. 02-44 Added 08/06/2002)

7-28-102. PURPOSE AND INTENT.

The City has developed the regulations set forth in this Chapter for the purpose of:

(1) Addressing the public interest to conserve public water resources and to promote water efficient landscaping.

(2) Protecting and enhancing the community’s environmental, economic, recreational, and aesthetic resources by promoting efficient use of water in the community’s landscapes.

(3) Reducing water waste.

(4) Establishing a structure for the design, installation, and maintenance of water efficient landscapes throughout the City.

(Ord. No. 02-44 Added 08/06/2002)

7-28-103. DEFINITIONS.

(1) Administrative Standards means the set of rules, procedures and requirements set forth in a landscape ordinance associated with making permit application, assembling materials for public review, meeting the requirements of the landscape ordinance, seeking approvals, enforcement, conducting site inspections and filing reports.

(2) Bubbler means an irrigation head that delivers water to the root zone by “flooding” the planted area, usually measured in gallons per minute. Bubblers exhibit a trickle, umbrella or short stream pattern.

(3) Designer means a Landscape Architect, Landscape Contractor (General Engineering Contractor), Professional Engineer, or Architect as set forth by State law.

(4) Drip Emitter means irrigation fittings that deliver water slowly at the root zone of the plant, usually measured in gallons per hour.

(5) Evapotranspiration means the quantity of water evaporated from adjacent soil surfaces and transpired by plants during a specific time, expressed in inches per day, month or year.

(6) Extra-Drought Tolerant Plant means a plant that can survive without irrigation throughout the year once established, although supplemental water may be desirable during drought periods for improved appearance and disease resistance.

(7) Grading Plan means a plan showing all finish grades, spot elevations as necessary and existing and new contours within the developed landscaped area.

(8) Ground Cover means live and mineral materials used in such a way as to form a continuous cover over the ground that can be maintained at a height of not more than twelve (12) inches. Living ground cover may include: vegetative vines, low-spreading shrubs, perennial flowering or foliage plants. Mineral ground cover may include: rocks, boulders, gravel, or brick.

(9) Hardscape means patios, decks, and paths. Does not include driveways and sidewalks.

(10) Irrigated Landscaped Area means all portions of a development site to be improved with planting and irrigation. Natural open space areas shall not be included in the Irrigated Landscaped Area.

(11) Irrigation Efficiency means the measurement of the amount of water beneficially applied, divided by the total amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system hardware characteristics and management practices.

(12) Irrigation Contractor means a person who has been certified by the Irrigation Association (IA) to install irrigation systems.

(13) Irrigation Plan means the plan that shall show the components of the irrigation system with water meter size, backflow prevention, precipitation rates, flow rate and operating pressure for each irrigation circuit, and identification of all irrigation equipment.

(14) Landscape Architect means a person who holds a license to practice landscape architecture in the state of Utah.

(15) Landscape Education Package means a set of documents which is intended to inform and educate new homeowners in the City about water efficient landscapes. The package includes the principles of water efficient landscape design, information about the Water Check program, a listing of Water-Conserving Plants, a listing of Designers and certified Landscape Irrigation Contractors, an information packet about Jordan Valley Water Conservancy District's Demonstration Garden and classes, and an information packet about the Water Purveyor's water rates, billing format for water use, and the economics of installing and maintaining a water efficient landscape.

(16) Landscape Irrigation Auditor means a person who has been certified by the Irrigation Association to conduct a landscape irrigation audit.

(17) Landscape Plan Documentation Package means the preparation of graphic and written criteria, specifications, and detailed plans to arrange and modify the effects of

natural features such as plantings, ground and water forms, circulation, walks and other features to comply with the provisions of this ordinance. The Landscape Plan Documentation Package shall include a project data sheet, a Planting Plan, an Irrigation Plan, a Grading Plan, a Soils Report, a Landscape Water Allowance, and an Irrigation Schedule.

(18) Landscape Water Allowance means for design purposes, the maximum annual applied water for the established landscaped area. It is based upon the local Reference Evapotranspiration Rate, the ETO adjustment factor and the size of the landscaped area.

(19) Landscape Zone means a portion of the landscaped area having plants with similar water needs, areas with similar microclimate (i.e., slope, exposure, wind, etc.) and soil conditions, and areas that will be similarly irrigated. A landscape zone can be served by one irrigation valve, or a set of valves with the same schedule.

(20) Landscaping means the improvement of property through the addition of plants and eradication of weeds and other deleterious material. Landscaping includes any combination of living plants, such as trees, shrubs, vines, ground covers, flowers, or grass; natural features such as rock, stone, or bark chips; and structural features, including but not limited to, fountains, reflecting pools, outdoor art work, screen walls, fences, benches, or berms. All elements of the landscaping shall be combined in a harmonious manner to make the land more attractive for users, to screen unattractive uses, or to act as buffers to visually separate different types of uses.

(21) Microclimate means an area within the overall landscape which shares similar elements such as slope, exposure, wind, soil conditions, etc.

(22) Mulch means any material such as bark, wood chips or other materials left loose and applied to the soil.

(23) Non-Drought Tolerant Plant means a plant that will require regular irrigation for adequate appearance, growth and disease resistance.

(24) Planting Plan means a plan that shall clearly and accurately identify and locate new and existing trees, shrubs, ground covers, turf areas, driveways, sidewalks, hardscape features, and fences, and which includes a planting schedule showing graphic symbols (if applicable), botanical names, common names, quantity, and plant size.

(25) Precipitation Rate means the depth of water applied to a given area, usually measured in inches per hour.

(26) Rain Shut-Off Device means a device wired to the automatic controller that shuts off the irrigation system when it rains.

(27) Reference Evapotranspiration Rate or ETO means a standard measurement of environmental parameters which affect the water use of plants. ETO is expressed in inches per day, month or year and is an estimate of the evapotranspiration of a large field of four to seven-inch tall, cool season grass that is well watered. The average annual ETO for the West Valley City area is 31.17 inches.

(28) Rehabilitated Landscaping means site alternations of 75% or more.

(29) Runoff means irrigation water that is not absorbed by the soil or landscape area to which it is applied and which flows onto other areas.

(30) Secondary or Reuse Water means non-potable water suitable for irrigation purposes. This water would be available in a pressurized system.

(31) Soils Report means a report by a soils laboratory indicating soil type(s), soil depth, uniformity, composition, bulk density, infiltration rates, and pH for the topsoil and subsoil for a given site. The soils report also includes recommendations for soil amendments.

(32) Spray Sprinkler means an irrigation head that sprays water through a nozzle.

(33) Stream Sprinkler means an irrigation head that projects water through a gear rotor in single or multiple streams.

(34) Turf means a surface layer of earth containing mowed grass with its roots.

(35) Water Conserving Plant means a plant that can generally survive with available rainfall once established although supplemental irrigation may be needed or desirable during spring and summer months.

(36) Water Audit means an on-site survey and measurement of irrigation equipment and management efficiency, and the generation of recommendations to improve efficiency.

(Ord. No. 02-44 Added 08/06/2002)

7-28-104. COMMERCIAL, INDUSTRIAL AND  
MULTI-FAMILY DEVELOPMENT.

(1) Applicability. The provisions of this section shall apply to all new and rehabilitated landscaping for public agency projects, private development projects, developer-installed landscaping in multi-family residential projects, and developer-installed landscaping in single-family projects that require a review process. Homeowner-provided landscaping at single family projects is discussed in Section 7-28-105, "Residential Single-Family Development."

(2) Documentation. Landscape Plan Documentation Package. A copy of a Landscape Plan Documentation Package shall be submitted to and approved by the City prior to the issuance of any permits. A copy of the approved Landscape Plan Documentation Package shall be provided to the property owner or site manager and to the local retail water purveyor. The Landscape Plan Documentation Package shall be prepared by a Designer who certifies that the package satisfies the requirements of the West Valley City Water Efficient Landscape Ordinance (7-28) and its contents have been prepared or reviewed by individuals meeting State Code regulations. The Landscape Plan Documentation Package shall consist of the following items:

(a) Project Data Sheet. The Project Data Sheet shall contain the following:

(i) Project name and address;

(ii) Applicant or applicant's agent's name, address, phone and fax number;

(iii) Designer's name, address, phone and fax number; and

(iv) Landscape contractor's name, address, phone and fax number, if

available at this time.

- (b) Planting Plan. A detailed Planting Plan shall be drawn at a scale that clearly identifies the following:
  - (i) Location of all existing trees and plant materials to be removed and retained and all new plant materials with a planting schedule;
  - (ii) Property lines and street names;
  - (iii) Existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements;
  - (iv) Designation of Landscape Zones, and
  - (v) Details and specifications for tree staking, soil preparation, and other planting work.
- (c) Irrigation Plan. A detailed Irrigation Plan shall be drawn at the same scale as the planting plan and shall contain the following information:
  - (i) Layout of the irrigation system and a legend summarizing the type and size of all components of the system, including manufacturer name and model numbers;
  - (ii) Static water pressure in pounds per square inch (psi) at the point of connection to the public water supply;
  - (iii) Flow rate in gallons per minute and design operating pressure in psi for each valve and precipitation rate in inches per hour for each valve with sprinklers; and
  - (iv) Installation details for irrigation components.
- (d) Grading Plan. A Grading Plan shall be drawn at the same scale as the Planting Plan and shall contain the following information:
  - (i) Property lines and street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements; and
  - (ii) Existing and finished contour lines and spot elevations as necessary for the proposed site improvements.
- (e) Soils Report. A Soils Report will be required where a site's irrigated landscaped areas exceed 2,500 square feet total. The Soils Report shall describe the depth, composition, and bulk density of the topsoil and subsoil at the site, and shall include recommendations for soil amendments. The Planting Plan shall incorporate the recommendations of the Soils Report into the planting specifications.
- (f) Landscape Water Allowance Worksheet. The annual Landscape Water Allowance shall be calculated using the following equation:

Landscape Water Allowance = ETO x 1.0 x 0.62 x A, where:

- Landscape Water Allowance is in gallons per year
- ETO = Reference Evapotranspiration in inches per year
- = ETO adjustment factor, 100% of turf grass ETO (water year adjustment factor)
- 0.62 = conversion factor (to gallons per square feet)
- A = total Irrigated Landscape Area in square feet

NOTE: refer to the worksheet packet for formula data.

(g) Irrigation schedule. A monthly Irrigation Schedule shall be prepared that covers the initial 120-day plant establishment period and the typical long-term use period. This schedule shall consist of a table with the following information for each valve:

- (i) Plant type (for example, turf, trees, low water use plants);
- (ii) Irrigation type (for example, sprinklers, drip, bubblers);
- (iii) Flow rate in gallons per minute;
- (iv) Precipitation rate in inches per hour (sprinklers only);
- (v) Run times in minutes per day;
- (vi) Number of water days per week, and
- (vii) Cycle time to avoid Runoff.

(3) Landscape Design Standards. Plant Selection. Plants selected for landscape zones shall consist of plants that are well-suited to the microclimate and soil conditions at the project site. Plants with similar water needs shall be grouped together as much as possible.

- (a) For projects located at the interface between urban areas and natural open space (non-irrigated), Extra-Drought Tolerant Plants shall be selected that will blend with the native vegetation and are fire resistant or fire retardant. Plants with low fuel volume or high moisture content shall be emphasized. Plants that tend to accumulate excessive amount of dead wood or debris shall be avoided.
- (b) Areas with slopes greater than 33% shall be landscaped with deep-rooting, Water Conserving Plants for erosion control and soil stabilization.
- (c) Mulch. After completion of all planting, all irrigated non-turf areas shall be covered with a minimum four (4)-inch layer of Mulch to retain water, inhibit weed growth, and moderate soil temperature. Non-porous material shall not be placed under the mulch.
- (d) Soil Preparation. Soil preparation will be suitable to provide healthy

growing conditions for the plants and to encourage water infiltration and penetration. Soil preparation shall include scarifying the soil to a minimum depth of six (6) inches and amending the soil with organic material as per specific recommendations of the Landscape Designer/Landscape Architect based on the Soils Report (when applicable).

(4) Irrigation Design Standards. Irrigation design standards for this Ordinance shall be as outlined in the latest version of the “Minimum Standards for Efficient Landscape Irrigation System Design and Installation” prepared by the Utah Irrigation Association. In addition, the following portions of this Section shall also be applicable:

- (a) Pressure Regulation. A pressure regulating valve shall be installed and maintained by the consumer if the static service pressure exceeds 80 pounds per square inch (psi). The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and shall be set at the manufacturer’s recommended pressure for the sprinklers.
- (b) Landscape Water Meter. A water meter which is separate from the water meter installed for indoor use, shall be installed for landscape irrigation systems when required by the local retail water purveyor for secondary water systems. The size of the meter shall be determined based on irrigation demand.
- (c) Automatic Controller. All irrigation systems shall include an electric automatic controller with multiple program and multiple repeat cycle capabilities and a flexible calendar program. All controllers shall be equipped with an automatic rain shut-off device, and the ability to adjust run times based on a percentage of maximum ETO.
- (d) On slopes exceeding 33 percent, the irrigation system shall consist of Drip Emitters, Bubblers or sprinklers with a maximum Precipitation Rate of 0.85 inches per hour and adjusted sprinkler cycle times to eliminate Runoff.
- (e) Each valve shall irrigate a landscape zone with similar site, slope and soil conditions and plant materials with similar watering needs. Turf and non-turf areas shall be irrigated on separate valves. Drip Emitters and sprinklers shall be placed on separate valves.
- (f) Parking strips and other landscaped areas less than eight (8) feet wide shall be landscaped with Water-Conserving Plants. Drip Emitters or a Bubbler shall be provided for each tree. Bubblers shall not exceed 1.5 gallons per minute per device. Bubblers for trees shall be placed on a separate valve unless specifically exempted by the City due to the limited number of trees on the project site.
- (g) Sprinklers shall have matched Precipitation Rates with each control valve circuit.
- (h) Check valves shall be required where elevation differences will cause low-head drainage. Pressure compensating valves and sprinklers shall be required where a significant variation in water pressure will occur within the irrigation

system due to elevation differences.

- (i) Drip irrigation lines shall be underground, except for Drip Emitters and where approved as a temporary installation. Filters and end flush valves shall be provided as necessary.
- (j) Valves with spray or stream sprinklers shall be scheduled to operate between 9 p.m. and 8 a.m. to reduce water loss from wind and evaporation.
- (k) Program valves for multiple repeat cycles shall be required where necessary to reduce runoff, particularly on slopes and soils with slow infiltration rates.
- (l) When secondary or reuse water is available from the local water purveyor, it shall be used in the irrigation system.

(5) Plan Approval, Construction Inspection and Post-Construction Monitoring. As part of the Building Permit approval process, a copy of the Landscape Plan Documentation Package shall be submitted to the City for approval before construction begins. With the Landscape Plan Documentation Package, a copy of the Landscape Water Allowance Work-sheet shall be completed by the Designer and submitted to the City. Once approved, the Landscape Water Allowance Worksheet will be transmitted to the local water purveyor.

- (a) All Landscape Plan Documentation Packages submitted must be certified by a Designer.
- (b) All landscape irrigation systems shall be installed by an IA-certified Irrigation Contractor, or under the direct supervision of the Designer. The certified person representing the contracting firm shall be a full-time employee of the firm and shall be directly involved with the project including, at least, weekly site visits.
- (c) All installers, Designers, and auditors shall meet state and local license, insurance, and bonding requirements, and be able to show proof of such.
- (d) After the landscaping has been installed, the property owner is encouraged to contact a certified water auditor and request a Water Audit. The Water Audit will determine the irrigation system efficiency and make recommendations for improvements.
- (e) The City reserves the right to perform site inspections at any time before, during or after the irrigation system and landscape installation, and to require corrective measures if requirements of this Ordinance are not satisfied.

(Ord. No. 02-44 Added 08/06/2002; Ord. No. 05-47 Amended 11/1/2005)

7-28-105. RESIDENTIAL SINGLE-FAMILY  
DEVELOPMENT.

(1) Applicability. The provisions of this Section shall apply to all new and rehabilitated landscaping for single-family residential dwellings.

This section does not apply to:

- (a) Residential developments with developer-installed landscapes (refer to Section 7-28-104); or
- (b) Registered historical sites.

(2) Provisions for New or Rehabilitated Landscapes. A Landscape Education Package shall be given to all new single-family homeowners by the Water Purveyor at the time water connection is made by the resident. The Landscape Education Package shall consist of, but not be limited to, the following items:

- (a) Principles of Water Efficient Landscape Design.
- (b) Listing of Water Conserving Plants.
- (c) Information about the Water Check program.
- (d) Listing of Designers and certified Landscape Irrigation Contractors.
- (e) Information Packet about the Jordan Valley Water Conservancy District Demonstration Garden and classes offered in water wise landscaping.
- (f) Listing of indoor and outdoor water conservation tips.
- (g) Information Packet about the Water Purveyor's water rate schedule, billing format for water use, and the economics of installing and maintaining a water efficient landscape.

(3) Post Installation. After the landscaping has been installed, the homeowner is encouraged to contact a certified water auditor and request a Water Check. The Water Check will determine the irrigation system efficiency, make recommendations for improvements, and provide the homeowner with an irrigation schedule.

(Ord. No. 02-44 Added 08/06/2002)

7-28-106. ENFORCEMENT AND PENALTY FOR VIOLATIONS.

(1) Enforcement Authority. The West Valley City Code Enforcement Director and other employees of the Code Enforcement Division of the Community and Economic Development Department are authorized to enforce all provisions of this Chapter.

(2) Violation of this Chapter. The consumer who violates any provisions of this Chapter shall be issued a written notice of violation. The written notice shall be affixed to the property where the violation occurred and mailed to the consumer of record and to any other person known to the City who is responsible for the violation and its corrections. Such notice shall describe the violation and order that it be corrected, cured, or abated immediately or within such specified time as the City determines is reasonable under the circumstances. Failure to receive such notice shall not invalidate further actions by the City. If the order is not complied with, the City may issue fines and/or a class "C" misdemeanor citation.

(Ord. No. 02-44 Added 08/06/2002)