

Title 20

ENERGY AND WATER CONSERVATION

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Chapter 20.04

ENERGY AND WATER CONSERVATION REGULATIONS

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- 20.04.050 Business resource and energy evaluations.

CROSS REFERENCE: Business Licenses Generally, see Ch. 5.02 CVMC. Electrical Code and Regulations, see Ch. 15.24 CVMC. Plumbing Code, see Ch. 15.28 CVMC.

20.04.010 Intent and purpose of provisions.

The conservation of energy and natural resources including water, air quality and open space has been determined to be a legitimate and worthy function of the City. The provisions of this chapter are intended to decrease dependence upon fossil fuels and other nonrenewable energy sources that contribute to the City's greenhouse gas emissions by encouraging and, in some instances, requiring best management practices including the installation of devices, structures or materials for the efficient generation, distribution and use of energy and water on certain structures within the City. (Ord. 3145 § 1, 2009; Ord. 3135 § 1, 2009; Ord. 3119 § 1, 2008; Ord. 1973 § 1, 1982).

20.04.020 Conflict with other provisions.

Portions of this chapter which are in conflict with other sections of the municipal code are intended to be exceptions to those sections and shall take precedence over such sections. (Ord. 3145 § 1, 2009; Ord. 3135 § 1, 2009; Ord. 3119 § 1, 2008; Ord. 1973 § 1, 1982).

20.04.025 Definitions.

The following words and phrases, when used in this chapter, shall be construed as defined in this section:

A. "Energy and water conservation" means reduction of energy and water use achieved by relying on changes to behavior.

B. "Energy and water efficiency" means activities or programs that reduce energy and water use by upgrading to more efficient equipment or controls.

C. "Evaluation" means a written evaluation of a facility's energy and water use from building systems, appliances and office equipment.

D. "Greenhouse gas emission" means the direct or indirect emission of one or more of the gases identified by the Intergovernmental Panel on Climate Change and/or the state of California.

E. "Nonrenewable" means an energy resource such as, but not limited to, fossil fuels that is not replaced or is replaced only very slowly by natural processes.

F. "Renewable" means an energy resource such as, but not limited to, wind and solar that is replaced by natural resources.

G. "Solar photovoltaic" means a method of capturing energy from sunlight and converting it to electricity.

H. "Solar water heater" means a method of heating domestic water by allowing solar energy collection devices to transfer solar heat energy to water. (Ord. 3145 § 1, 2009; Ord. 3135 § 1, 2009; Ord. 3119 § 1, 2008).

20.04.030 Solar water heater preplumbing.

All new residential units shall include at least the plumbing specifically designed to encourage the later installation of a system which utilizes solar energy as the primary means of heating domestic potable water. The purpose of this section is to facilitate the safe, cost-effective installation of residential solar water heating systems, while removing structural and regulatory barriers. No building permit shall be issued unless the plumbing required pursuant to this section and the Chula Vista Solar Water Heater Pre-Plumbing Installation Requirements are incorporated into the approved building plans.

Exception: The provisions of this section can be modified or waived when it can be satisfactorily demonstrated in writing to the City Manager, or designee, that potential pre-existing constraints affecting the use of solar hot water heating cannot be reasonably overcome. (Ord. 3145 § 1, 2009; Ord. 3135 § 1, 2009; Ord. 3119 § 1, 2008; Ord. 1973 § 1, 1982).

20.04.040 Solar photovoltaic rewiring.

All new residential units shall include at least the electrical conduit specifically designed to encourage the later installation of a system that utilizes solar photovoltaic or other renewable energy resource as a means of generating electricity. The purpose of this section is to facilitate the safe, cost-effective installation of renewable energy systems

as residents' primary electricity source, while removing structural and regulatory barriers. No building permit shall be issued unless the requirements of this section and the Chula Vista Photovoltaic Pre-Wiring Installation Requirements are incorporated into the approved building plans.

Exception: The provisions of this section can be modified or waived when it can be satisfactorily demonstrated in writing to the City Manager, or designee, that potential pre-existing constraints affecting the use of solar photovoltaic or other renewable energy systems cannot be reasonably overcome. (Ord. 3145 § 1, 2009; Ord. 3135 § 1, 2009).

20.04.050 Business resource and energy evaluations.

All commercial and industrial businesses in the City of Chula Vista are required to participate in a free resource and energy evaluation of their facilities to help them identify energy and water efficiency and conservation opportunities that potentially reduce participants' recurring utility costs and corresponding greenhouse gas emissions. Evaluations are required when a new business license is issued and not more frequently than once every three years or less frequently than once every five years for a renewed business license. Businesses are required to cooperate with City staff or their delegate(s) by providing: (A) a date and time for the evaluation convenient for the business, (B) access to their facilities for the evaluation during their regular business hours, (C) authorization to review their historical energy and water usage, and (D) a signature by the business's on-site representative on a completed evaluation form acknowledging that the business has received a completed evaluation and relevant information about voluntary energy and water efficiency improvement opportunities. Businesses are not required to complete evaluations for facility areas beyond their operational control. The intent of this section is to provide businesses with a no-cost evaluation.

A. Evaluation Notification Process. For existing licensed businesses, the City will send a written notice not more than once every three years through the annual business license renewal package distributed by January 1st. The notice will inform businesses of their evaluation requirement for that calendar year and provide information allowing them to schedule an appointment at their convenience. Businesses will be required to schedule an evaluation for the calendar year by March 1st. For newly licensed businesses, the City will

send a written notification about their evaluation requirement for that calendar year and shall provide them with the contact information needed to schedule an evaluation assessment within 60 days. If an existing or newly licensed business does not set an appointment during the initial 60-day scheduling period, the City shall set an evaluation date and time for the business during their regular business hours. If desired, the business may reschedule the evaluation appointment for some time during that calendar year or the next 90 days, whichever is greater.

B. Evaluation Deliverables. The evaluation findings, provided to the participating business on a form established by the City Manager in conjunction with the local utility and business representatives, may include a chart of their historical energy and water consumption, identified conservation and efficiency opportunities, potential utility cost savings and an estimate of the corresponding greenhouse gas emission reductions. The assessment may also review alternative transportation and other sustainable practices which the business could implement and/or promote to its employees and customers and an estimate of the resulting greenhouse gas emission reductions. The City may also provide information and assistance regarding federal, state and local rebate programs for efficiency retrofits and low-cost financing options to help reduce the business's time and cost of implementing the voluntary measures. The City may also provide contact information for the local utilities' account and program staff and utility-approved Chula Vista contractors that may provide services identified in the evaluation.

C. Enforcement. Businesses which do not respond to the appointment notification process and provide access for the on-site evaluation shall be sent a follow-up notice with a 30-day opportunity to cure. Unresponsive businesses will be sent a second 30-day reminder notice. Businesses which do not cooperate after the second reminder notice will be assessed a fine that shall be set in the Master Fee Schedule. The fine will be collectable on the following year's business license and incur a six percent interest rate per annum. Staff may administratively reduce or eliminate any portion of the fine for any business that completes the process. Failure to participate in the assessment process shall not result in the suspension of a business license or permit to occupy the business premises. Any fines collected through ordinance enforcement will be appropriated to a Business Conservation Fund which will be used to purchase devices

to distribute to businesses to help them voluntarily reduce their energy and water costs.

D. Exemptions. Home offices, mobile businesses and other business entities that do not have a commercial utility gas or electric meter are exempt. Businesses occupying a facility which has had a completed evaluation within at least three years through the City's program or through a similar energy audit program (SDG&E or other City-recognized program) will be exempt, including facilities having multiple business licenses. The City will also provide an exemption to businesses that participate in a greenhouse gas emissions reporting program (Federal Environmental Protection Agency, the Climate Registry, or other City-recognized program) or possess a current City of Chula Vista CLEAN Business certification. Finally, the City shall grant any business with an exemption of at least three years when occupying newly constructed or remodeled facilities that have an approved Title 24 Energy Efficiency Report with its building plans. These exemptions do not preclude any licensed business with a commercial electrical or gas meter from requesting a free resource and energy evaluation at the business's sole discretion. (Ord. 3145 § 1, 2009; Ord. 3135 § 1, 2009; Ord. 3119 § 1, 2008).

Chapter 20.08

MUNICIPAL SOLAR UTILITY*

Sections:

- 20.08.010 Purpose.
- 20.08.020 Practices and procedures – Established.
- 20.08.030 Definitions.
- 20.08.040 Permit required.
- 20.08.050 Regulatory framework.
- 20.08.060 Consumer protection measures.
- 20.08.070 Violations.

* For other municipal utilities, see CVMC Title 13.

20.08.010 Purpose.

The purpose of this chapter is to grant the right to establish a municipal solar utility. Notwithstanding the foregoing, nothing in this chapter shall preclude a residential or commercial property owner from voluntarily participating in programs established pursuant to California Assembly Bill 811 (Contractual Assessments: Energy Efficiency Improvements) or Assembly Bill 474 (Contractual Assessments: Water Efficiency Improvements) commonly referred to as Property Assessed Clean Energy (PACE) or similar programs. These programs, authorized by federal, state, and/or local agencies, are created to provide free and willing property owners with the option of funding energy and water efficiency and renewable energy property improvements with third-party financing that is secured by the property and repaid through a surcharge placed on the improved property's tax rolls. Typically, these programs are designed so that the debt service is offset by the resulting energy and water cost savings generated by the project improvements and the financing period does not exceed the projected life of the improvements.

The welfare of Chula Vista residents has been jeopardized in the past by shortages of natural gas, petroleum, propane and electric power. The shortage of available energy supplies will continue during the coming decade unless measures are established to conserve the energy available for the economy and the residents of Chula Vista. It is declared to be the policy of the City to encourage and promote the use of solar energy in order to prevent or reduce an adverse impact upon the economy of Chula Vista and in order to prevent interruption of employment of the residents of Chula Vista in commerce and industry and in order to prevent injury to the health and welfare of the residents of

Chula Vista due to the shortage and high cost of energy in their homes and places of work.

It is also declared the policy of Chula Vista to improve the economics of solar energy use by facilitating the leasing of solar energy devices. This policy is premised on a finding that the initial cost of purchasing and installing a solar energy device is the primary economic barrier to expanded solar energy use. California law currently provides that taxpayers who lease a solar energy system from a municipal utility or from any lessor granted a permit from a municipal solar utility shall receive a tax credit for the first three years of operation or until the solar tax credit allowance terminates, whichever occurs first.

Upon the establishment of the Chula Vista municipal solar utility, residents of Chula Vista who lease solar energy devices through such utility should be able to obtain tax credits. However, as legal title to such solar energy devices is held by a person other than the resident-user, the latter is particularly susceptible to harm caused by consumer deception, safety hazards and the interruption of service. To help prevent such harm from occurring and to promote the economic feasibility of solar energy use within the City, leasehold interests in solar energy devices may be marketed within the City's jurisdiction by complying with the provisions of this chapter and any rules and regulations promulgated by the City Manager to implement any provisions of this chapter. Persons not participating in the municipal solar utility are not subject to any of the procedures and provisions of this chapter. (Ord. 3152 § 2, 2010; Ord. 2012 § 1, 1982).

20.08.020 Practices and procedures – Established.

The City Manager shall by rules and regulations establish practices and procedures designed to implement the policies set forth in this chapter. Such practices and procedures shall be known as the "Chula Vista municipal solar utility." (Ord. 2012 § 2, 1982).

20.08.030 Definitions.

The following definitions apply to those persons who will be participating in the municipal solar utility:

- A. "City" means the City of Chula Vista.
- B. "Energy office" or "office" means the office, under the direction of the City Manager, responsible for managing the Chula Vista municipal solar

utility and performing the City's obligations under this chapter.

C. "Lease arrangement" means a contract between a lessee and an investor for the leasing of solar energy devices, owned by the investor and leased and possessed by the lessee, which is affixed to or located at and servicing the real property owned or occupied by the lessee.

D. "Lease arrangement installer" or "installer" means any person, properly licensed under the provisions of the California Contractors License Law, including any solar specialty license, installing, removing or servicing solar energy devices subject to a lease arrangement.

E. "Lease arrangement marketing company" or "leasing company" means any person advertising, marketing, placing, and arranging, pursuant to a lease arrangement, for installation and servicing of solar energy devices for a fee.

F. "Lessee" means any person leasing a solar energy device on or affixed to the real property owned or occupied by such person.

G. "Management company" means any person serving as agent of an investor for purposes of collecting leasehold payments, making payments for obligations incurred in lease arrangements, and maintaining accounting records of collections and payments for solar energy devices.

H. "Municipal solar utility" or "MSU" means a program conducted by a local government or its authorized agent to promote the utilization of renewable energy and energy conservation technologies.

I. "Permittee" means any leasing company, installer or installation company, or management company, that has complied with all necessary requirements and obtained a permit to participate in the MSU solar leasing program.

J. "Person" means any natural person, partnership, corporation, business trust, association, company or other legal entity.

K. "Solar energy device" includes equipment and materials (and parts solely related to the functioning of such equipment) that is intended to be located on or affixed to real property within the City and that uses solar energy directly to (1) generate electricity, (2) heat or cool a building or structure, (3) provide hot water for domestic service, recreational or therapeutic purpose, or (4) provide process heat or mechanical energy. Generally, these functions are accomplished through the use of equipment such as collectors (to absorb sunlight and create hot liquids or air), thermostats (to activate pumps or fans which circulate the hot liquids

or air), and heat exchangers (to utilize hot liquids or air to create hot air or water).

L. "Tax incentives" means California or Federal investment tax credits, solar tax credits, accelerated depreciation, tax deferral and other tax benefits accruing through the leasehold of solar energy devices under existing State and Federal tax law. (Ord. 2012 § 3, 1982).

20.08.040 Permit required.

No person shall attempt to operate as a leasing company, installer, or management company in the municipal solar utility within the City without having a valid permit from the City. (Ord. 2012 § 4, 1982).

20.08.050 Regulatory framework.

The City Manager is authorized and directed to undertake the following actions to develop, implement, and administer the City's MSU solar leasing program:

A. Develop, in cooperation with the city attorney, all documents necessary to administer and operate the MSU solar leasing program.

B. Prepare application procedures and eligibility criteria governing participation by leasing companies, installers, and management companies in the MSU solar leasing program. Any entity satisfactorily meeting such eligibility criteria shall be issued an annual permit to participate in the MSU program.

1. As a prerequisite to application for a permit, the city manager may require the inspection of all appropriate records of the applicant including, but not limited to, financial information and investment transactions pertinent to determining whether or not the applicant satisfies all eligibility criteria. All financial records of the applicant shall be deemed to be private and confidential and not subject to public review. All such records of applicants not granted a permit may be returned to the applicant upon request by the applicant within 10 days of the denial of the permit. Records of all persons granted a permit shall be subject to such review and audit by other public agencies as may be required by law.

2. The city manager shall compile a list of all firms, known as "permittees," who obtain permits to participate in the MSU solar leasing program.

3. The city manager shall develop and implement procedures to be used for revoking the permit of any permittee failing to comply with the ordinance codified in this chapter and any rules and regulations promulgated to implement this chapter.

All criteria and procedures proposed by the city manager shall be subject to review by the city attorney and approval of the city council.

4. The city manager shall review and approve all lease terms proposed by leasing companies prior to granting the leasing company a permit to participate in the MSU solar leasing program.

C. Monitor and review all transactions and contractual relationships between permittees and consumers to ensure compliance with program requirements and other applicable federal, state or local laws.

D. Prepare, in cooperation with appropriate departments and other public agencies, manufacturing, operating, maintenance and aesthetic standards for all solar equipment to be utilized under the leasing program.

E. Assess, in cooperation with the finance department, the feasibility of developing billing procedures to be utilized in invoicing solar lessees, collecting monthly lease payments, and disbursing the payments to the relevant permittees. Such procedures may include utilization of the city's computer system or such other system as may be determined to be cost effective. The city manager will establish a reasonable fee to be charged to recover all costs of the billing system, and establish regulations for the operation of the billing system.

F. Prepare any other procedures, rules, regulations and fee schedules deemed reasonably necessary to facilitate the implementation and ongoing operation of the leasing program. (Ord. 2012 § 5, 1982).

20.08.060 Consumer protection measures.

A. No person may take or use the primary residence of a lessee as security for any lease payment or other indebtedness incurred through the lease arrangement.

B. The city manager shall develop bonding requirements for leasing companies, installers and management companies participating in the MSU solar leasing program. Required bonds must be posted with the city prior to a permit being granted for participation in the program. All bonds shall be permittee bonds secured for an initial term of at least one year.

C. Permittee bonds shall guarantee full performance of the permittee's responsibilities as a participant in the program. Permittee bonds shall be held by the city and shall be used to compensate lessees for loss or damage suffered as a result of the permittee's failure to perform under the conditions of the permit and according to procedures set forth

herein and in any rules and regulations promulgated to implement any provisions of this chapter.

D. All solar energy devices installed under the MSU solar leasing program must receive required building permits. Special fees may be established, if necessary, for solar energy devices based on type and size to defray the special inspection costs they entail.

E. The city may establish an arbitration board to hear and resolve any controversy or claim arising out of or relating to the lease arrangement or installation of solar energy systems leased under the MSU solar leasing program. If the arbitration board is established, all permittees and lessees must agree to use the arbitration board to resolve disputes, claims or controversies. The arbitration board's award shall be final and binding on all parties, except as provided by state law, and judgment upon the award may be entered in any court having jurisdiction thereof. (Ord. 2012 § 6, 1982).

20.08.070 Violations.

Any violation of this chapter may be enforced by the city in any manner provided by law, including injunctive relief. Except as otherwise noted herein, nothing in this chapter shall be construed to prohibit any person from pursuing other remedies in law or equity. (Ord. 2012 § 8, 1982).

Chapter 20.12

LANDSCAPE WATER CONSERVATION

Sections:

- 20.12.010 Purpose.
- 20.12.020 Definitions.
- 20.12.030 Applicability.
- 20.12.040 Exemptions.
- 20.12.050 City of Chula Vista Landscape Manual.
- 20.12.060 Landscape documentation package.
- 20.12.070 Title sheet.
- 20.12.080 Soil management report.
- 20.12.090 Planting plan.
- 20.12.100 Landscape construction plan.
- 20.12.110 Irrigation plans.
- 20.12.120 Grading plans.
- 20.12.130 Irrigation system design.
- 20.12.140 Maximum applied water allowance (MAWA).
- 20.12.150 Estimated total water use (ETWU).
- 20.12.160 Water allowance/water use comparison.
- 20.12.170 Limitations on the use of water features.
- 20.12.180 Turf regulations.
- 20.12.190 Public education and model homes.
- 20.12.200 Recycled water and gray water.
- 20.12.210 Landscape installation.
- 20.12.220 Landscape and irrigation maintenance.
- 20.12.230 Modified approvals.
- 20.12.240 Statement of substantial conformance.
- 20.12.250 City's right to inspect.
- 20.12.260 Waste water prevention.

20.12.010 Purpose.

The state Legislature determined in the Water Conservation in Landscaping Act (the "Act"), Government Code Sections 65591 et seq. that the state's water resources are in limited supply. The Legislature also recognized that while landscaping is essential to the quality of life in California, landscape design, installation, maintenance and management must be water efficient. The general purpose of this chapter is to establish water use standards for landscapes in Chula Vista that implement the landscape design requirements established by the Act. Consistent with the Legislature's findings, the purpose of this chapter is to:

A. Promote the values and benefits of landscapes while recognizing the need to utilize water and other resources as efficiently as possible.

B. Establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new and rehabilitated landscapes.

C. Promote the use of recycled water, gray water and captured rainwater for irrigation landscaping when it is available.

D. Use of water efficiently, and without waste, by setting a maximum applied water allowance as an upper limit for water use at the lowest practical amount. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.020 Definitions.

“Applicant” means an individual or entity submitting a landscape documentation package to request a permit, plan check, or design review from the City of Chula Vista.

“Applied water” means the portion of water supplied by the irrigation system to the landscape.

“Building permit” means a permit to engage in a certain type of construction on a specific location.

“City” means the City of Chula Vista.

“Cool-season turf” means a type of turf that remains green in the winter months.

“Discretionary permit” means any permit requiring a decision-making body to exercise judgment prior to its approval, conditional approval or denial.

“Ecological restoration project” means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.

“Established,” in the context of landscape, means the point at which plants in the landscape have developed significant root growth into the site. Typically most plants are established after one or two years.

“Estimated total water use (ETWU)” means the total water used for the landscape area of the project.

“ET adjustment factor (ETAF)” means a factor that when applied to reference evapotranspiration, adjusts for plant water requirements and irrigation efficiency, two major influences on the amount of water required for healthy landscapes.

“Evapotranspiration rate” means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time. See also “reference evapotranspiration.”

“Gray water” means the wastewater generated from domestic activities such as dish washing, laundry and bathing.

“Hardscape” means any durable surface material, pervious or impervious.

“High water usage” means a plant species identified as having a high plant factor in the context of plant selection.

“Homeowner provided” means installed either by a private individual or installed by a licensed contractor hired by the homeowner.

“Hydrozone” means a portion of the landscape area having plants with similar water needs. A hydrozone may be irrigated or nonirrigated.

“Infiltration rate” means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).

“Irrigation audit” means an in-depth evaluation of the performance of an irrigation system conducted 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)” means the measurement of the amount of water beneficially used divided by the water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices.

“Irrigation survey” means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test, and written recommendations to improve performance of the irrigation system.

“Landscape architect” means a person who holds a license to practice landscape architecture in the state of California, pursuant to Business and Professions Code Section 5615.

“Landscape area” means an area with outdoor plants, turf and other vegetation that uses water provided by the Otay Water District, the Sweetwater Authority or other local water purveyor. A landscape area includes water features either in an area with vegetation or that stands alone. A landscape area does not include the footprint of buildings, structures, decks, patios, sidewalks, driveways, gravel or stone walkways void of plant materials, paved portions of parking lots or other hard landscape. A landscape area does not include an area without irrigation designated for non-development such as designated open space or area with existing natural vegetation or a transition zone.

“Landscape documentation package” means a package of drawings and other documents that are required to be submitted to the City for approval in

order to demonstrate that the landscape design complies with the requirements of this chapter.

“Landscape Manual” means the City of Chula Vista Landscape Manual as may be amended from time to time.

“Low head drainage” means a sprinkler head or other irrigation device that continues to emit water to the zone in which it is located after it has shut off.

“Low volume irrigation” means any equipment that uniformly delivers a low volume of water to the landscape such as 0.5 inches, 0.7 inches and 1.0 inch per hour.

“Low water usage” means a plant species identified as having a low plant factor in the context of plant selection.

“Maximum applied water allowance (MAWA)” means the maximum allowed water use for a specific landscape area based on the square footage of the area, the ETAF and the reference ETo.

“Mulch” means an organic material such as leaves, bark, straw or inorganic mineral materials such as rocks, gravel or decomposed granite left loose as applied to the soil surface to reduce evaporation, suppress weeds, moderate soil temperature or prevent erosion.

“Multifamily residential development” means condominiums, apartments and mobile homes.

“New construction” means, for the purposes of this chapter, a new building with a landscape or other new landscape, such as a park, playground, or greenbelt without an associated building.

“Outdoor watersmart package” means a document/documents, for example leaflets and a checklist of recommendations, describing landscape water conservation principles and techniques appropriate to small landscape design and installation.

“Overspray” means the water from irrigation or that is delivered outside an area targeted for the irrigation and makes contact with a surface not intended to be irrigated.

“Pervious” means any surface or material that allows the passage of water through the material and into underlying soil.

“Plant factor” means a factor that, when multiplied by the ETo, estimates the amount of water a plant needs for healthy growth.

“Point of connection” means the source of water for a specific irrigation system.

“Precipitation rate” means the rate of application of water measured in inches per hour.

“Record drawing” or “as-built” means a reproducible drawing which shows significant changes

in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

“Recreation area” means an area dedicated to active play such as parks, sports fields, and golf courses.

“Recycled water” means water that has been treated at the highest level required by the California Department of Health Services for water not intended for human consumption. “Tertiary treated recycled water” means water that has been through three levels of treatment including filtration and disinfectant. “Recycled water” is sometimes referred to as “reclaimed water.”

“Reference evapotranspiration” or “ETo” means a standard measurement of environmental parameters that affect the water use of plants. ETo is given in inches per day, month or year and is an estimate of the evapotranspiration of a large field of four-inch- to seven-inch-tall, cool-season turf that is well watered. Reference evapotranspiration is used as the basis of determining the MAWA so that regional difference in climate can be accommodated.

“Rehabilitated landscape” means any re-landscaping project, that requires a permit, plan check, or design review, in accordance with the applicability criteria of this chapter, where 50 percent of the total landscape area, and the modifications are completed within one year. In the case of single-family homes, only those construction projects that have impacts to landscaped areas shall be deemed to be rehabilitated landscapes.

“Residential development” means development of single-family or multifamily homes.

“Runoff” means water that is not absorbed by the soil or landscape to which it is applied and flows from the landscaped area. For example, runoff may result from water that is applied at too great a rate (application rate exceeds infiltration rate) or when there is a slope.

“Smart controller” means a weather-based or soil moisture-based irrigation controller that monitors and uses information about environmental conditions for a specific location to automatically adjust watering schedules.

“Soil” means the growing medium available for plant growth.

“Soil moisture sensing device” or “soil moisture sensor” means a device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

“Soil texture” means the classification of soil based on its percentage of sand, silt, and clay.

“Special landscaped area” means an area of landscape that falls into one of the following categories:

1. Is used for growing edible plants, including community gardens.
2. Is irrigated with recycled water.
3. Is used for active play or recreation, such as a park, sports field or turf on a golf course that provides a playing surface or a culturally significant community space, as determined by the city manager.

“Sprinkler head” means a device which delivers water through a nozzle.

“Statement of substantial conformance” references the form administered by landscape inspectors.

“Static water pressure” means the pipeline or municipal water supply pressure when water is not flowing.

“Station” means an area served by one valve or by a set of valves that operate simultaneously.

“Turf” means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, perennial rye grass, red fescue, and tall fescue are cool-season grasses. Bermuda grass, kikuyu grass, seashore paspalum, St. Augustine grass, zoysia grass, and buffalo grass are warm-season grasses.

“Valve” means a device used to control the flow of water in the irrigation system.

“Vegetated area” means an area with vegetation that is irrigated.

“Warm-season turf” means a type of turf that grows during warm weather but becomes dormant during cold weather.

“Water feature” means a design element where open water provides an aesthetic or recreational function. Water features include ponds, lakes, waterfalls, fountains, artificial streams, spas, and swimming pools (where water is artificially supplied). The surface area of water features is included in the high water use hydrozone of the landscape area. Constructed wetlands used for on-site wastewater treatment or storm water best management practices that are not irrigated and used solely for water treatment or storm water retention are not water features and, therefore, are not subject to the water budget calculation.

“WUCOLS” means 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, as may be amended from time to time. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.030 Applicability.

After January 1, 2010, this chapter shall apply to any project requiring a building permit, discretionary permit, or City approval of landscape and irrigation plans that is within the following categories:

A. New construction and rehabilitated landscapes for public agencies and private development projects with a proposed cumulative landscape area equal to or greater than 2,500 square feet. These include, but are not limited to, industrial, commercial, cemetery, public, quasi-public, institutional, multifamily residential development and developer installed front yards. Applicants shall submit a landscape documentation package to the City for approval, by City signature, prior to the installation of the landscape improvements.

B. New construction and rehabilitated landscapes for public agencies and private development projects including, but not limited to, industrial, commercial, cemetery, public, quasi-public, multifamily residential development and developer installed front yards with a cumulative landscape area in the range of zero square feet through 2,499 square feet. These applicants shall receive an outdoor watersmart package from the City.

C. New and rehabilitated construction of landscapes which are homeowner provided or contractor installed on behalf of the homeowner with a total landscape area of equal to or greater than 5,000 square feet. Applicants shall submit a landscape documentation package to the City for approval, by City signature, prior to the installation of the landscape improvements.

D. New and rehabilitated construction of landscapes which are homeowner provided or contractor installed on behalf of the homeowner with a total landscape area in the range of zero square feet to 4,999 square feet. These applicants shall receive an outdoor watersmart package from the City.

E. A model home that includes a landscape area where the home is served by either the Otay Water District, the Sweetwater Authority or the California American Water Company. Applicants shall submit a landscape documentation package to the City for approval, by City signature, prior to the installation of the landscape improvements.

This chapter shall apply to new applications and applications that have been through one City plan check by City officials. Applications that have had two or more plan checks are grandfathered in, with their current landscape design concept. However, it is recommended that the applicant voluntarily

modify landscape proposals that are high in water use. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.040 Exemptions.

This chapter does not apply to the following:

- A. Registered local, state or federal historical sites.
- B. Ecological restoration projects that do not require a permanent irrigation system.
- C. Mine land reclamation projects that do not require permanent irrigation systems.
- D. Plant collections, as part of botanical gardens and arboretums open to the public. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.050 City of Chula Vista Landscape Manual.

The City of Chula Vista Landscape Manual is incorporated into the Chula Vista Municipal Code by reference. The City of Chula Vista Landscape Manual may be periodically updated by the Director of Development Services. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.060 Landscape documentation package.

Project applicants shall submit the necessary information on required landscape and irrigation plans in a form and manner prescribed by the Director of Development Services. Necessary information shall include:

- A. Title sheet;
- B. Soil management report;
- C. Planting plan;
- D. Landscape construction plan;
- E. Irrigation plan;
- F. Grading plan. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.070 Title sheet.

The title sheet shall contain items as described in the City of Chula Vista Landscape Manual. The title sheet shall also contain the applicant's signature and a date along with the statement:

I am familiar with and agree to comply with the requirements for landscape improvement plans as described in Chapter 20.12 of the Municipal Code. I have prepared this plan in compliance with those regulations. I certify that the plan implements the regulations to provide efficient landscape water use.

(Ord. 3146 § 1 (Exh. A), 2009).

20.12.080 Soil management report.

The soil management report shall be prepared by a licensed landscape architect, licensed civil engineer or licensed architect and contain the information described in subsections (A) and (B) of this section. The soil management report shall be based on site conditions after grading operations have been completed. The soil management report information shall either be submitted as one of the sheets in the planting plan set or as a separate document.

A. An analysis of the soil for the proposed landscape area of the project covering information about soil texture, soil infiltration rate, pH, total soluble salts, plant sodium, percent organic matter and horticultural suitability.

B. Recommendations for soil amendments that may be necessary to allow healthy plant survival and growth in the landscape area using efficient irrigation techniques. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.090 Planting plan.

The planting plan shall be prepared by a licensed landscape architect, licensed civil engineer or licensed architect and contain, but not be limited to, the following information:

A. A list/legend of all vegetation by botanical and common name that exists or is proposed to be planted in the landscape area(s). For new planting include the quantities, container size at planting, the location of each plant and the associated hydrozone. Identify existing vegetation to remain and existing vegetation to be removed.

B. The planting design shall group plants in hydrozones based on the moisture requirements of those plants. A hydrozone may mix plants of moderate and low water usage or plants with high water usage with plants of moderate water usage. No hydrozone shall mix plants with high water usage with plants with low water usage. Plant factors are available from WUCOLS.

C. Plant selection shall take into account suitability of the soil and climatic attributes as well as the availability of supplemental water available through irrigation.

D. The planting plan set shall include planting details, specifications, maintenance specifications and responsibilities.

E. Plant selections for all properties adjacent to a wild land-urban interface or open space area shall comply with current Chula Vista Fire Department guidelines and regulations.

F. The plan shall demonstrate compliance with best management practices required by Chapter 14.20 CVMC. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.100 Landscape construction plan.

The landscape construction plan shall include all elements of hard landscape, paving and drainage not shown on civil engineering plans. It shall include physical layout, specifications and details. The landscape construction plan shall include plans, details and specifications of any water features that comprise the overall landscape improvements. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.110 Irrigation plans.

The irrigation plans shall be prepared by a licensed landscape architect, licensed civil engineer, licensed architect or an irrigation consultant. The irrigation plans shall include, but are not be limited to, the following information:

A. The location, type and size of all components of the irrigation system that will provide water to the landscape area, including, but not limited to, controller, water lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators and backflow devices.

B. The irrigation water source and type (potable or recycled), point of connection, the static water pressure at the point of connection, the application rate in inches per hour and the design operating pressure in pounds per square inch for each station.

C. Irrigation schedule information including typical irrigation schedules that demonstrate that landscape can thrive using the MAWA calculated as part of that package. Include specification notes for routine inspection, repair and replacement of equipment and state the party responsible for maintenance.

D. A table that identifies MAWA for the improvements, including the calculations used to determine the MAWA. The calculations shall be based on the formula in CVMC 20.12.140. Temporarily irrigated areas shall be included in the low water use hydrozone. The surface area of a water feature or pool shall be included in the high water use areas for the purposes of water budget calculation.

E. A table that identifies ETWU for the improvements and includes the calculations used to determine the ETWU. The calculations shall be based on the formula in CVMC 20.12.150. Temporarily irrigated areas shall be included in the low water use hydrozone. The surface area of a water

feature or pool shall be included in the high water use areas for the purposes of water budget calculation.

F. The plan shall demonstrate compliance with best management practices required by Chapter 14.20 CVMC. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.120 Grading plans.

Grading plans shall include site grading information including, but not limited to, elevations, slope heights, drainage patterns, pad elevations, storm water management, and finish grade. Previously approved grading plans that comply with Chapter 15.04 CVMC, as-built grading plans or grading plans undergoing the grading permit approval process are acceptable submittals. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.130 Irrigation system design.

The following techniques and practices shall be incorporated into the design of irrigation systems:

A. The irrigation system shall be designed to conform to the hydrozones of the plants specified in the planting plan.

B. The irrigation system shall be designed to prevent runoff, overspray, low-head drainage and other similar conditions where irrigation water flows or sprays onto area not intended for irrigation, and use low volume irrigation for mulched areas wherever feasible.

C. Portions of irrigation systems containing slopes greater than 25 percent shall utilize a precipitation rate of 0.75 inches per hour or less to prevent runoff.

D. Sprinkler heads and other low emission devices shall be selected based on what is appropriate for the plant type in the hydrozone and shall have matched precipitation rates unless otherwise directed by the manufacturer's recommendations.

E. Sprinkler spacing shall be designed to achieve the highest possible distribution uniformity.

F. The system shall provide that only low volume irrigation is used to irrigate any vegetation within 24 inches of an impermeable surface unless the adjacent impermeable surfaces are designed and constructed to cause water to drain entirely into landscaped areas.

G. The irrigation system shall be regulated by means of a smart controller (either evapotranspiration, weather-based, soil moisture-based or similar).

H. Irrigation projects equal to or greater than 5,000 square feet shall include the installation of a

master valve and flow sensor to prevent water waste associated with mainline breaks and other failures.

I. Where feasible, trees shall be placed on separate valves from shrubs, groundcover and turf. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.140 Maximum applied water allowance (MAWA).

All applicable landscapes shall not exceed the MAWA calculated for the project using the following formula:

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

In which the following abbreviations apply:

A. MAWA = Maximum applied water allowance in gallons/year.

B. ETo = Evapotranspiration in inches per year.

C. 0.62 = Conversion factor to gallons per square foot.

D. 0.7 = ET adjustment for plant factors and irrigation efficiency (ETAF).

E. LA = Landscape area including SLA.

F. SLA = Portion of the landscape area identified as special landscape areas. Measured in square feet.

G. 0.3 = The additional ET adjustment factor for special landscape areas (1.0 - 0.7 = 0.3).

The City reserves the right to reduce the ET adjustment factor for special landscape areas that are the responsibility of the City to maintain. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.150 Estimated total water use (ETWU).

All applicable landscape shall calculate the ETWU for each project using the following formula:

$$\text{ETWU} = (\text{ETo})(0.62)((\text{PF} \times \text{HA} / \text{IE}) + \text{SLA})$$

In which the following abbreviations apply:

A. ETWU = Estimated total water use in gallons per year.

B. ETo = Evapotranspiration in inches per year.

C. 0.62 = Conversion factor to gallons per square foot.

D. PF = Plant factor from WUCOLS.

E. HA = Hydrozone area in square feet. Each HA shall be classified according to its water use, high, medium, or low, according to the legends on the planting plans.

F. IE = Irrigation efficiency (Minimum average 0.71).

G. SLA = Special landscape area in square feet. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.160 Water allowance/water use comparison.

Irrigations plans shall state, in close proximity on the sheet, the MAWA and the ETWU for each point of connection, thereby demonstrating that the ETWU does not exceed the MAWA. Any sets of plans where the ETWU does exceed the MAWA shall not be approved by the City of Chula Vista. (ETWU shall be equal to or less than MAWA.) (Ord. 3146 § 1 (Exh. A), 2009).

20.12.170 Limitations on the use of water features.

The total of all water features for a project, other than single-family homes with a landscape area of less than 5,000 square feet and a homeowners association or apartment building swim complex that serves a residential project, shall be limited to 15 percent of the total landscape area of the project. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.180 Turf regulations.

The following regulations shall apply to all projects that are required to submit a landscape design package to the City for approval:

A. Turf shall not be used on slopes greater than 25 percent where the toe of the slope is adjacent to an impermeable surface.

B. Only low volume irrigation shall be used for turf in a landscape area where any dimension of the landscape area is six feet or less wide.

C. On commercial, industrial or multifamily landscape no turf shall be installed in a median, parking lot island or parkway unless, if determined by the city manager, limited use of turf is necessary to provide safe access for pedestrians leaving a parked vehicle to reach the sidewalk.

D. On commercial, industrial or multifamily landscape no turf shall be installed on any portion of the site that is inaccessible or unusable to a person who uses the site.

E. On commercial or industrial projects, decorative cool season turf shall not be used. The use of warm season turf shall not exceed 15 percent of the total landscape area of a project.

F. An athletic field, park, golf course, cemetery or other similar use shall be designed to limit the use of turf to only those areas where it is essential for the operation of the facility, as determined by the city manager. Areas where turf is not essential to the operation of the facility shall be landscaped

with plants with lower water use requirements than turf.

G. No turf shall be allowed in a landscape area that cannot be efficiently irrigated, for example where overspray and runoff cannot be avoided. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.190 Public education and model homes.

All model homes shall clearly display a sign, visible from the roadway adjacent to the home, using black writing (two inches high minimum) on a white sign stating, "THIS MODEL HOME USES WATER EFFICIENT LANDSCAPE AND IRRIGATION." Developers shall provide homebuyers with an outdoor watersmart package at move-in and information about the City of Chula Vista Naturescape Program. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.200 Recycled water and gray water.

Newly constructed and rehabilitated landscapes for public agencies and private development projects with a landscape area equal to or greater than 2,500 square feet including, but not limited to, industrial, commercial, cemetery, public, quasi-public, institutional and multifamily residential development shall use recycled water for irrigation purposes where it is available.

Use of recycled water or gray water for irrigation purposes does not excuse a person from complying with all state and local laws and regulations related to recycled water use or gray water use. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.210 Landscape installation.

An approved landscape design package shall be fully installed prior to final inspection. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.220 Landscape and irrigation maintenance.

Once the landscape on all projects, approved as a result of these regulations, is established, it shall be maintained to ensure compliance with the approved MAWA by the party responsible for landscape maintenance. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.230 Modified approvals.

An applicant may submit an application to modify part or all of their landscape documentation package. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.240 Statement of substantial conformance.

For all projects approved by the City, the landscape architect of record shall state in writing that the landscape improvements have been installed in compliance with the approved landscape documentation package. They shall be satisfied that the irrigation system has been functionally tested, by testing, irrigation survey or irrigation audit, for, but not limited to, the following: distribution uniformity, overspray and runoff have been addressed, and water use can match the included calculations once plants are established with the irrigation provided.

The City shall receive the signed landscape architect's statement prior to final inspection and City issuance of a certificate of completion of the project. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.250 City's right to inspect.

The City has the right, but not the obligation, to inspect any landscape installation for which it has an approved landscape documentation package. (Ord. 3146 § 1 (Exh. A), 2009).

20.12.260 Waste water prevention.

No new irrigation system (since the approval of the ordinance codified in this chapter) shall allow irrigation water to flow onto adjacent property, nonirrigated areas, structure, walkways, roadways or other paved areas whether the cause is runoff, low-head drainage or other similar condition. Penalties for violating any provisions of this chapter will be issued pursuant to CVMC 1.41.100 et seq. (Ord. 3146 § 1 (Exh. A), 2009).

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