

CITY OF SANTA MONICA

BUILDING AND SAFETY COMMISSION MINUTES

SPECIAL MEETING

Ken Edwards Center, 1527 4th Street

Tuesday, August 28, 2007, 2:30pm

A special meeting of the Santa Monica Building & Safety Commission was called to order by Chair Andresen at 2:41 p.m., on Tuesday, August 28, 2007 at the Ken Edwards Center, 1527 4th Street.

Roll Call: Present: Chair Kristina Andresen
Vice Chair Michael Ishler
Commissioner James Wilson
Commissioner Charles Muttillio

Absent: Commissioner David Schaffer
Mayor Richard Bloom

Also Present: Interim Building Officer Fady Mattar
Senior Land Use Attorney Barry Rosenbaum
Assistant Building Officer Ben Yousefi
Commission Liaison Mara Malch

PLEDGE OF ALLEGIANCE Mara Malch led the assemblage in the Pledge of Allegiance.

APPROVAL OF REGULAR MEETING MINUTES Motion by Commissioner Muttillio, seconded by Commissioner Wilson to approve minutes of the August 21, 2007 meeting. The motion was passed by the following vote:

Ayes: Chair Andresen, Vice Chair Ishler, Commissioners Muttillio and Wilson

Noes: None.

Absent: Commissioner Schaffer

BUILDING OFFICER'S None.

OLD BUSINESS: Recommendations to City Council for Adopting the 2007 California Building Standards Codes and for Adopting a Resolution Making Findings of Local Climatic, Geological and Topographical Conditions as Required to Adopt Local Amendments to the California Building

Standards Code: Discussion ensued and the Commission detailed requests for edits.

There was no one present for public comment.

Motion by Vice Chair Ishler, seconded by Commissioner Muttillo to recommend the proposed language for the 2007 California Building Standards with local amendments as amended by the Commission subject to review and The motion was passed by the following vote:

Ayes: Chair Andresen, Commissioners Schaffer, Muttillo and Wilson

Noes: None.

Absent: Vice Chair Ishler

ADJOURNMENT

On order of the Chair, the Building and Safety Commission meeting was adjourned at 4:12 p.m. to September 26, 2007.

Attest:

Approved:

Mara Malch
Commission Liaison

Kristina Andresen
Chair



Building & Safety Commission Report

Meeting: September 26, 2007
Agenda Item: 8-B

To: Building & Safety Commission

From: Fady Mattar, PE, CBO, Interim Building Officer
Ben Yousefi, SE, CBO, Assistant Building Officer

Subject: Council Recommendation for Proposed Ordinance Requiring Installation of Approved Seismic Gas Shutoff Valves in Certain New and Existing Buildings Including City Council Recommendations

Recommended Action

Staff recommends consideration of suggestions by City Council on the Proposed Ordinance mandating installation of Seismic Gas Shutoff valves in buildings with gas fuel lines.

Discussion

Staff presented the proposed ordinance for the gas shutoff valve to the City Council on September 11, 2007. Council was supportive of the proposed ordinance. However, during the discussion Council recommended to staff to explore the option of adding

provisions that would require installation of such valves on piping located in common areas of the condominium projects. The modified language is shown in part d (1) on page 5 of this report.

Attachment A
Building and Safety Commission Meeting: September 26, 2007
Santa Monica, California

ORDINANCE NUMBER (CCS)
(City Council Series)

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SANTA MONICA
ADDING SECTION 8.32.070 TO THE SANTA MONICA MUNICIPAL CODE
TO REQUIRE THE INSTALLATION OF APPROVED GAS SHUTOFF DEVICES IN
BUILDINGS, STRUCTURES AND MOBILEHOME PARKS
PRIOR TO SALE OR EXCHANGE, WHEN NEWLY CONSTRUCTED OR
WHEN THE COST OF ADDITIONS OR ALTERATIONS EXCEED \$10,000

WHEREAS, it is generally accepted that Santa Monica will experience moderate and severe earthquakes in the foreseeable future; and

WHEREAS, a serious threat to life and property resulting from these earthquakes is the threat of fire resulting from earthquake damage; and

WHEREAS, properly installed gas shutoff valves can reduce the occurrence of fires stemming from moderate and severe earthquakes and thereby reduce the risks to health, safety and welfare of Santa Monica residents caused by such earthquakes; and

WHEREAS, according to Section 19181 of the Health and Safety Code, notwithstanding any other provision of law, the governing body of any city, county, or city and county may enact an ordinance requiring the installation of earthquake sensitive gas shutoff devices in buildings open to the public.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SANTA MONICA
DOES ORDAIN AS FOLLOWS:

SECTION 1. Section 8.32.070 is hereby added to the Santa Monica Municipal Code to read as follows:

8.32.070 Seismic Gas Shutoff Devices

(a) Purpose. The purpose of this Section is to reduce the risks of fires caused by leaks in fuel gas piping caused from earthquakes by use of earthquake-actuated automatic gas shutoff systems.

(b) Scope. The provisions of this section shall apply to:

(1) Any new building, structure or mobilehome park with fuel gas piping, for which an application for permit for construction was first submitted on or after January 1, 2008.

(2) Any existing building or structure or mobilehome park with fuel gas piping for which an application for alteration or addition is submitted on or after January 1, 2008, when such alteration or addition is valued at more than \$10,000.

(3) Any existing building or structure or mobilehome park with fuel gas piping that on or after January 1, 2008 for which an agreement for sale or exchange was first entered into.

(c) Definitions. For the purpose of this Section, certain terms, phrases, words and their derivatives shall be construed as specified in this Section. Where terms are not defined, they shall have their ordinarily accepted meanings within the context with which they are used.

(1) "Agreement of sale or exchange" shall mean any agreement or written instrument which provides that title to any property shall thereafter be transferred from one owner to another owner.

(2) "Customer-owned gas piping" means all parts of the gas piping system downstream of the gas utility point of delivery, including, but not limited to, downstream of the gas utility meter and service tee (also known as a bypass tee).

(3) "Application for Permit" means a written document submitted to the City in order to obtain a permit to erect, construct, enlarge, alter, repair, move, improve, convert or remove a portion of any building, structure or building service equipment including but not limited to combination building permits and single trade permits.

(4) "Seismic gas shutoff device" means a seismic gas shutoff device installed on customer-owned gas piping certified by the State Architect pursuant to Section 19202 of the Health and Safety Code. Notwithstanding any other provision of law, "seismic gas shutoff device" does not include any device installed on a gas distribution system owned or operated by a public utility.

(d) Duty to Install and Maintain Device.

The owner of any building, structure or mobilehome park subject to the provisions of this Section shall obtain a permit, install and maintain a seismic gas shutoff device on the customer owned gas piping when one of the triggering events specified in subsection (b) of this Section occurs.

(1) For agreement of sale or exchange or qualifying alterations or additions to individual condominium units, the owner of the individual condominium shall obtain a permit, install and maintain a seismic gas shutoff device on the portion of the customer owned gas piping that serves the individual condominium unit if such a device does not exist on the customer owned gas piping that serves the entire building. In addition a gas shutoff device shall be installed on all piping that service the facilities located in common areas or which are used by the entire condominium complex.

(2) Seismic gas shutoff devices installed prior to January 1, 2008 on either customer owned gas piping or on a gas distribution system owned or operated by a public utility are deemed to comply with the requirements of this section provided they remain installed and maintained according to the terms of their original approval.

(e) Unreasonable Hardship. The Building Officer may grant exceptions to the provisions of this Section when legal, physical or economic constraints will not allow compliance without creating an unreasonable hardship. Unreasonable economic hardship shall be deemed to exist when the Building Officer determines that the fair market value of the cost of installation of the seismic gas shutoff device exceeds 20% of the valuation of other alterations being proposed.

(f) Effect on Sale and Exchange of Property. No sale or exchange of property shall be invalidated solely because of the failure of any person

to comply with any provision of this Section unless such failure is an act or omission which would be a valid ground for rescission of such sale or exchange in the absence of this Section.

(g) Incentives. Permits issued solely to complete the work required by this Section shall be at no cost to the applicant and all such applications shall receive priority service as defined in Santa Monica Municipal Code Chapter 1.20.

(h) Administrative regulations. The Building Officer shall have the authority to promulgate and or adopt administrative regulations to implement the provisions of this section

SECTION 2. Any provision of the Santa Monica Municipal Code or appendices thereto, inconsistent with the provisions of this Ordinance, to the extent of such inconsistencies and no further, are hereby repealed or modified to that extent necessary to effect the provisions of this Ordinance.

SECTION 3. If any Section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of any competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance, and each and every Section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

SECTION 4. The Mayor shall sign and the City Clerk shall attest to the passage of this Ordinance. The City Clerk shall cause this ordinance, or a summary thereof to be published once in the official newspaper within 15 days after its adoption.

APPROVED AS TO FORM:

MARSHA JONES MOUTRIE
City Attorney



Building & Safety Commission Report

Meeting: September 26, 2007
Agenda Item: 8-A

To: Building and Safety Commission
From: Brenden McEaney, Green Building Program Advisor
Subject: Ordinance amending City of Santa Monica Municipal Code (SMMC) 8.108
[Green Building Design and Construction Standards]

Recommended Action

It is recommended that the Building and Safety Commission approve the attached proposed amendment to the Green Building Ordinance, SMMC 8.108.

Executive Summary

The attached proposed ordinance amends the Green Building Ordinance, SMMC Section 8.108. The proposed amendment will update the City's requirements for energy efficiency, landscaping, and green building materials. The proposed amendment will require single-family and duplex construction to comply with the Green Building Ordinance. 9.04.10.04.100 [Landscape Maintenance and Protection] and SMMC 9.04.10.04.110 [Water Conservation Landscaping] to Article 8.108, the Green Building Ordinance, to consolidate green building requirements in one section of the SMMC.

Discussion

On March 20, 2007, Council approved staff recommendations to amend and update the Green Building Ordinance and to consolidate Landscaping requirements (SMMC 9.04.10.04.100 and 9.04.10.04.110) under the Green Building Ordinance in SMMC 8.108. The amendments to the Green Building Ordinance include updates of energy efficiency requirements for new construction and the inclusion of single family residences under the applicability of the ordinance.

The energy efficiency measures in the attached ordinance were proposed in response to the Title 24 requirements that were adopted in 2005. The City of Santa Monica has traditionally required a standard of energy efficiency performance for new construction that represented an approximate 15% improvement beyond the Title 24 requirements. As the Title 24 efficiency requirements have become more stringent, the City has amended its own energy efficiency requirements. In light of the more stringent standard

set forth in the 2005 Title 24 requirements, the proposed amendment would require new construction to achieve a 10% improvement over Title 24 requirements. The proposed amendment also sets forth a prescriptive method of compliance for new construction. This would be a new development for the Santa Monica energy requirements but it is consistent with the approach used in Title 24. On September 21, 2005, the California Energy Commission approved the measures in the proposed amendment. This approval indicates that the proposed measures met both the energy efficiency and cost effectiveness criteria established by the Commission.

The green building material requirements of Section 8.108.030 are expanded in the proposed amendment to include materials such as zero-VOC paints that may not contain recycled content, but still support healthy and environmentally friendly building construction. The proposed amendment also requires single-family and duplex construction, previously exempt, to comply with the requirements of the Green Building Ordinance.

SMMC 9.04.10.04.100 and 9.04.10.04.110 establish requirements for landscaping that are designed to ensure efficient water usage, planting of native and drought-tolerant species, and efficient irrigation system design and operation. The requirements in these sections do not address aesthetic considerations of landscape design and installation, except indirectly, as in the limitation on the percentage of allowed turfgrass planting. As the Landscaping requirements under consideration in this report are concerned with environmental issues related to construction, staff recommended that those sections of the code be consolidated with the other green building requirements in the Green Building Ordinance.

The text of these sections of the Zoning Code will be incorporated into the *Guidelines for the Design & Construction of Water-Efficient Irrigation Systems in the City of Santa Monica* (Attachment B) published by the Environmental Programs Division of the City of Santa Monica. These Guidelines will be the designated standard for landscaping in the Green Building Ordinance, SMMC 8.108. The sections headings would remain in the Zoning Code with a reference to the Green Building Code to facilitate compliance and to provide a seamless transition from the historical location of the Landscaping requirements.

Prepared by: Brenden McEaney, Green Building Program Advisor

Attachments

- A. Proposed Green Building Ordinance
- B. Guidelines for the Design & Construction of Water-Efficient Irrigation Systems in the City of Santa Monica

ORDINANCE NUMBER _____ (CCS)

(City Council Series)

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
SANTA MONICA AMENDING CHAPTER 8.108 OF THE SANTA MONICA MUNICIPAL
CODE RELATED TO GREEN BUILDING DESIGN, CONSTRUCTION AND
DEMOLITION WASTE HANDLING REQUIREMENTS, AND LANDSCAPE IRRIGATION
AND REORGANIZING AND REPEALING CERTAIN PROVISIONS OF THE SANTA
MONICA MUNICIPAL CODE

WHEREAS, in recent years there has been both worldwide and local concerns raised about escalating energy costs and the effects of global warming;

WHEREAS, buildings consume approximately 70% of the electricity in the United States and building construction and demolition practices unnecessarily consume valuable resources;

WHEREAS, conservation of water is critically important if the City of Santa Monica is to sustain itself;

WHEREAS, irrigation devices and watering practices, particularly related to maintenance of landscapes, needlessly waste ever scarcer water resources;

WHEREAS, the City of Santa Monica has a long standing commitment to leadership in green building standards, sustainable design and construction practices, water and other resource conservation and the reduction of greenhouse gas emissions;

WHEREAS, precious resources can be saved and harmful environmental emissions can be reduced by the inclusion of sustainable construction and demolition practices and by incorporating green building standards, practices and principles into building and landscape design, maintenance, construction and demolition; and

WHEREAS, the City's environmental requirements will be better understood and accessible to the public by consolidating as many as possible into the same Chapter of the Santa Monica Municipal Code,

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SANTA MONICA DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1: Santa Monica Municipal Code Chapter 8.108 is hereby amended to read as follows:

**Chapter 8.108 GREEN BUILDING, LANDSCAPE DESIGN, RESOURCE
CONSERVATION AND CONSTRUCTION AND DEMOLITION WASTE
MANAGEMENT STANDARDS**

8.108.010 Purpose.

The green building, landscape maintenance and irrigation design and building demolition and construction standards established in this Chapter are intended to reduce human exposure to noxious materials; conserve non-renewable energy and scarce materials; minimize the

ecological impact of energy and materials used; use renewable energy and materials that are sustainably harvested; and protect, preserve and restore local air, water, flora and fauna. These standards will help protect the health of building occupants; improve employee productivity; use energy, water and materials more efficiently; incorporate recycled-content building materials; and increase the durability, ease of maintenance, and economy of building operations.

Subpart A – Green Building

8.108.020 Scope.

The provisions of this Chapter shall apply to all new buildings, and existing buildings whose repair, alteration or rehabilitation costs exceed fifty percent of their replacement cost as determined by Section 8.84.040 except qualified historic buildings as defined in the State Historical Building Code.

8.108.030 Use of green construction materials.

All buildings subject to the provisions of the Chapter shall be built with a minimum of five green construction materials selected from a list that has been approved by the Director of Environmental and Public Works Management.

8.108.040 Additional mandatory features.

All buildings subject to the provisions of the Chapter shall comply with the following standards:

(a) **Green Building Checklist.** A green building checklist shall be completed prior to construction and submitted to the Director of Environmental and Public Works Management. For single-family residential and for multi-family residential under four stories, a LEED-Homes checklist, GreenPoint Rated checklist or Santa Monica Residential Green Building checklist may be submitted. For all other buildings, a LEED checklist shall be submitted.

(b) **Solar Water Heating.** Solar collectors shall be the primary source to heat swimming pool, spa and whirlpool water and to preheat industrial process water, including but not limited to, car washes and laundries.

(c) **Pipe Insulation.** All hot water distribution and recirculating system piping shall be thermally insulated from the heater to the end-use fixtures. Pipe insulation shall have R-value equal to R-4 for piping two inches or less in diameter and R-6 for larger piping. The R-value specified shall not be exceeded.

(d) **Heat Traps.** Heat traps shall be provided on the inlets and outlets of non-circulating hot water heaters and tanks to reduce the buoyancy-induced flow of hot water through the piping. If used as a heat

trap, bent piping for heat traps shall have a minimum external diameter of twelve inches.

8.108.050 Priority plan check processing for LEED certified buildings.

(a) New buildings and existing buildings repaired, altered or rehabilitated in an amount exceeding fifty percent of their replacement cost as determined in Section 8.44.040 of this code, that are registered with the United States Green Building Council for certification under the Leadership in Energy and Environmental Design Green Building Rating System (LEED), including LEED for Homes (LEED-H), LEED for New Construction (LEED-NC), and LEED for Core and Shell (LEED-CS), shall receive priority plan check processing by all City departments. Registering for LEED certification for Commercial Interiors (LEED-CI) or LEED for Existing Buildings (LEED-EB) does not qualify projects for expedited plan check processing pursuant to this Section.

(b) All applicants wishing to receive priority plan check processing pursuant to subsection (a) of this Section must submit their LEED checklist to the City indicating all of the credits they intend to pursue. Applicants must also clearly specify the materials, systems and strategies they will use to achieve the credits in the plans submitted to the City for plan check approval.

(c) The City Council may establish, by resolution, a fine to be imposed on projects that fail to achieve LEED certification for any project that received priority plan check processing pursuant to this Section.

8.108.060 Santa Monica Energy Code Compliance requirements.

(a) In addition to and notwithstanding any provisions of the California Energy Code or any other provision of this Code, all buildings subject to this Chapter shall comply either with the performance or a prescriptive approach requirements of this Chapter. The purpose of these approach requirements is to reduce the energy demanded and consumed within the City of Santa Monica so as to protect the public health, safety and welfare of the community, including the protection and enhancement of the environment from greenhouse gases and other emissions.

(1) If a performance approach is selected, the building must demonstrate to the satisfaction of the Director of Environmental and Public Works Management, that the Time Dependent Value (TDV) energy for the project, is at least 10% less than the TDV energy for the Title-24 standard comparison case set forth in the most recent California Title-24 Energy Code standards in effect at the time that approval of compliance is sought.

(2) If a prescriptive approach is selected or if a building does not demonstrate compliance with the performance approach requirements of this Chapter, then the prescriptive approach requirements of this Chapter apply and shall be satisfied.

(b). Prescriptive Requirements

(1) Residential buildings with two or less dwelling units must meet all of the requirements for either option A, B, or C described below:

(A) Option A:

1. Plumbing systems shall be fitted with a drain water heat recovery system that preheats domestic hot water with heat recovered from drain water.

(B) Option B:

1. Domestic water heaters with input capacities less than or equal to 75,000 Btuh must have a minimum energy factor of:

- 0.634 for 40 gallon water heaters
- 0.615 for 50 gallon water heaters
- 0.596 for 60 gallon water heaters
- 0.568 for 75 gallon water heaters
- 0.800 for tankless water heaters

2. Domestic water heaters with input capacities exceeding 75,000 Btuh must have a recovery efficiency no less than 84%.

3. All dishwashers, refrigerators, and clothes washers must have an Energy Star rating

(C) Option C:

1. No mechanical cooling shall be installed for the residence. The residence shall be designed to maintain comfort conditions through natural ventilation, and other envelope measures.

2. All dishwashers, refrigerators, and clothes washers must have an Energy Star rating.

(2) Residential buildings with three or more dwelling units and all hotels or motels as defined in Article 9 of this Code, must meet all of the following three requirements and all of the requirements either for option A, B or C set forth below .:

1. Domestic water booster pumps greater than 2.5 hp shall be controlled with variable speed drives;

2. All commercial transformers installed for the building must have an Energy Star rating;

3. Fans or garage ventilation that are 2.0 hp or greater shall be controlled with variable speed drives and with carbon monoxide (CO) monitoring devices.

(A) Option A:

1. Plumbing systems shall be fitted with a drain water heat recovery system that preheats domestic hot water with heat recovered from drain water.

(B) Option B:

1. All central domestic water heating systems (serving more than three residences per water heater) must have a minimum thermal efficiency of 84%.

2. All individual domestic water heating systems (serving 3 or less residences per water heater, and with input capacities less than or equal to 75,000 Btuh) must have a minimum energy factor of:

- 0.634 for 40 gallon water heaters
- 0.615 for 50 gallon water heaters
- 0.596 for 60 gallon water heaters
- 0.568 for 75 gallon water heaters
- 0.800 for tankless water heaters

3. All individual domestic water heating systems (serving 3 or less residences per water heater, and with

input capacities greater than 75,000 Btuh) must have a minimum recovery efficiency of 84%.

4. All dishwashers, refrigerators, and clothes washers must have an Energy Star rating.

(C) Option C:

1. No mechanical cooling shall be installed for the residences. The residences shall be designed to maintain habitable comfort conditions through natural ventilation and other envelope measures.

2. All dishwashers, refrigerators and clothes washers must be rated Energy Star.

(3) All non-residential commercial buildings, including all hotels and motels, must comply with at least two of the four following measures in the project:

a. All commercial transformers installed for the building must have an Energy Star rating.

b. Fans for garage ventilation that are 2.0 hp or greater shall be controlled with variable speed drives and carbon monoxide (CO) monitoring devices.

c. Ambient lighting for all office spaces smaller than 250 square feet must be controlled with occupant sensor lighting controls.

d. In all spaces greater than 250 square feet classified as “daylit” spaces by Title-24, any ambient lighting provided shall be controlled with photo-sensor controls and stepped or continuous dimming.

(4) Mixed-use buildings must comply both with the applicable residential and commercial standards.

Subpart B Landscape and Water Conservation

8.108.070 Purpose.

These regulations are intended to provide standards for quality and sustainability of landscaping and irrigation systems in all areas of the City consistent with the goals, objectives, and policies of the Sustainable City Plan and the General Plan.

8.108.080 Applicability.

No building, structure, parking lot, storage yard, or other site improvements shall be erected, constructed, converted, established, altered, remodeled, enlarged, or otherwise modified, nor shall any lot or premises be used or occupied until such time as all landscape or irrigation systems of the lot or premises are in conformance with this Chapter. Nothing in this Chapter shall be interpreted as requiring landscaping or irrigation on any lot or premises.

Prior to issuance of a building permit, landscaping and irrigation plans shall be submitted for review and approval in a manner prescribed by this Code.

8.108.090 Definitions

For purposes of Subpart B of this Chapter, the following words or phrases shall be defined as follows:

(a) Impermeable hardscape – Any form of pavement or other surface which does not permit water to pass through it to the soil below;

(b) Irrigation System – Any apparatus for distribution of water in the landscape, including but not limited to any system in which any portion of the apparatus is installed below grade or affixed to any structure;

(c) Landscaping – Modification of the ground surface with live planting materials such as trees, shrubs, turf, groundcover or other horticultural materials; as well as non-living materials such as mulch, synthetic turf or stone;

(d) Parkway – The portion of the Public Right-of-Way (PROW) bounded by the sidewalk and the street;

(e) Precipitation Rate – The rate at which water is applied to the landscape by an irrigation system or watering device measured in inches per hour;

- (f) Sprinkler – Any watering device which distributes water by projecting it into the air;
- (g) Turfgrass – Any plant listed as *turfgrass* in WUCOLS;
- (h) Watering Device – Any device for distribution of water to landscaping;
- (i) WUCOLS – Water Use Classification of Landscape Species published by the California Department of Water Resources.

8.108.100 Requirements

(a) The design and installation of all projects must conform to the current edition of *Guidelines for the Design & Construction of Water-Efficient Irrigation Systems in the City of Santa Monica* issued by the Director of Environmental and Public Works Management (EPWM).

(b) The maximum area permitted for turfgrass shall be twenty percent of the total landscaped area on the site including the parkway if any. Higher percentages may be permitted when turfgrass is an essential component of the development approved in writing by the Building Officer.

Plants used in non-turf areas, rated as having high water needs for Region 3 in the current edition of WUCOLS shall

Deleted: Director of EPWM

be counted as turfgrass for this calculation. Alternative documentation of water use may be presented for plants not listed in WUCOLS.

(c) Plants listed in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council are not permitted. See <http://portal.cal-ipc.org/weedlist/weedlist>.

(d) No sprinkler irrigation shall be permitted to be located within eighteen inches of any impermeable hardscape unless the hardscape is designed and constructed to drain entirely to landscaping.

Deleted: or except as authorized in writing by the Director of EPWM

(e) Watering devices that result in a precipitation rate greater than 0.75 inches per hour shall not be permitted.

(f) Fountains, ponds or other fresh water bodies where water is sprayed into the air shall be prohibited. This subsection does not apply to any such water body approved in writing by the [Building Officer](#) or for facilities utilizing reclaimed water as permitted by law.

Deleted: Director of EPWM

(g) Prior to issuance of a Certificate of Occupancy, the completed irrigation system must be operated and demonstrated as in compliance with this Code. No certificate of occupancy will be issued unless the system has

been installed and operates in full compliance with this Code.

8.108.200 Violation of Chapter

(a) Any violation of this Chapter shall constitute an infraction punishable by a fine of five hundred dollars. Each day that a violation occurs shall constitute a separate offense.

(b) A violation of any provision of this Chapter is declared to be a public nuisance and may be abated pursuant to Santa Monica Municipal Code Chapter 8.96 or by means of a civil action.

(c) The City may enforce the provisions of this Chapter by means of a civil action. The burden of proof in such cases shall be preponderance of the evidence.

(d) Any person who commits an act, proposes to commit an act, or engages in any pattern and practice which violates this Chapter may be enjoined by any court of competent jurisdiction.

(e) The penalties and remedies established by this Chapter are not exclusive, and nothing in this Chapter shall preclude any person from seeking any other remedies, penalties, or procedures provided by law.

8.108.210 **Escrow and other requirements.** No building required to comply with this Chapter shall be sold or otherwise transferred unless all applicable provisions of this Ordinance have been complied with. Compliance with this Ordinance shall be included as a condition of escrow or other sale or transfer documents.

SECTION 2. Santa Monica Municipal Code Section

9.04.10.04.100 is deleted as follows:

9.04.10.04.100 Landscape maintenance and protection.

(a) All interior landscaped areas shall be protected from vehicular damage by raised concrete or other curbing of at least six inches in height.

(b) All newly planted trees shall be planted in permeable soil.

~~(c) Low volume irrigation systems with automatic controllers shall be required. Such irrigation includes, but is not limited to, low volume sprinkler heads, drip emitters, and bubbler emitters.~~

~~(d) Sprinkler spacing for both turf and non turf areas shall be fifty percent of the diameter of the throw.~~

~~(e) Anti drain valves shall be installed in sloping areas with elevation differences of more than five feet.~~

~~(f) Landscape materials which have different watering needs shall be irrigated by separate control valves. Water coverage shall be limited to plant areas only.~~

~~(g) Automatic controllers shall be set to water between five p.m. and ten a.m. to reduce evaporation.~~

~~(h) An annual maintenance program with seasonal water schedule shall be required to assist any landscape manager. The water schedule shall include run time and frequency of irrigation for planted areas with similar characteristics. The watering period shall not exceed the point at which runoff begins. A maintenance program shall not be required for systems with soil moisture sensors that are installed and properly adjusted.~~

~~(i) A minimum of PVC Schedule 40 or equivalent shall be used for main lines and under driveway areas, and a minimum of PVC Schedule 200 or equivalent shall be used for lateral lines.~~

(c) All landscaped areas shall be permanently maintained and kept free of weeds, debris, and litter. All plant materials shall be maintained in a healthy growing condition and diseased or dead plant materials shall be replaced, in kind, pursuant to the approved plans within thirty days.

(d) If, at the time of application for a certificate of occupancy, or final building permit inspection, the required landscaping is not yet in place, the owner shall file with the City a Deferral Completion Agreement secured in a manner acceptable to the City in the sum of four dollars per square foot of required landscaping not yet in place to ensure that such required landscaping shall be installed.

SECTION 3. Santa Monica Municipal Code Section 9.04.10.04.110 is deleted as follows:

~~**9.04.10.04.110 Water conservation landscaping.**~~

~~(a) The maximum area permitted for turf shall be twenty percent of the total area landscaped on the site. Higher percentages may be permitted when turf is an essential part of the development such as playing fields for schools or parks, or as determined by the Architectural Review Board. Large areas of turf shall use soil moisture sensors as part of the irrigation system.~~

~~(b) Turf shall not be permitted in areas difficult to irrigate, such as sidewalk strips, slopes, or narrow pathways.~~

~~(c) Turf usage shall only be permitted when used for highly visual and functional use areas. Lower water usage turf or warm season grasses are recommended for all turf areas.~~

~~(d) Plants used in non-turf areas shall be water conserving plant material. Flowering ornamentals that are not low water using plants shall be counted as turf when calculating turf areas. Appropriate low water plant varieties shall be approved by the Director of General Services.~~

~~(e) Fresh water bodies and fountains where water is sprayed into the air shall be prohibited. The Director of General Services may vary this requirement when the water to be used is not fresh water.~~

SECTION 4 Any provision of the Santa Monica Municipal Code or appendices thereto inconsistent with the provisions of this Ordinance, to the extent of such inconsistencies and no further, is hereby repealed or modified to that extent necessary to effect the provisions of this Ordinance.

Deleted: 5

SECTION 5. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have passed this Ordinance and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the ordinance would be subsequently declared invalid or unconstitutional.

Deleted: 6

SECTION 6 The Mayor shall sign and the City Clerk shall attest to the passage of this Ordinance. The City Clerk shall cause the same to be published once in the official newspaper within 15 days after its adoption. This Ordinance shall become effective 30 days from its adoption.

Formatted: Bullets and Numbering

APPROVED AS TO FORM:

MARSHA JONES MOUTRIE
City Attorney



Environmental Programs Division
Water Efficiency Section
200 Santa Monica Pier Suite K
Santa Monica CA 90401
310 / 458-8972



Guidelines for the Design & Construction of Water-Efficient Irrigation Systems in the City of Santa Monica **Revised 08/08/07**

These requirements are published by the City of Santa Monica Environmental Programs Division (SM/EPD). They are based on the Irrigation Association's *Turf & Landscape Irrigation Best Management Practices*, 2005 edition and tailored to the ordinances, policies and climate of the City of Santa Monica.

Quality Assurance

To assure that a high-quality irrigation system is designed and installed:

1. A qualified irrigation designer should design the system for the efficient distribution of water based on the requirements of the Design Requirements below. "Qualified" means certified, formally trained, licensed or other similar qualification.
2. A qualified contractor should be selected to install the irrigation system based on the Installation Guidelines below. The contractor should test the completed system to verify that the system operates according to the design criteria.
3. The irrigation designer or landscape architect or landscape designer should perform one or more site observations during system installation to check for adherence to the design. The observation should inspect the installation of the backflow prevention assembly, main line, laterals, valves, sprinkler heads, drip irrigation equipment, control wire, controllers, and sensors and should assure that the intent of the irrigation designer has been preserved.

Design Requirements

To ensure that the irrigation system is designed to conserve water resources by efficiently and uniformly distributing the water, the irrigation system designer should:

1. Obtain direct knowledge of site conditions and not rely solely on plot plans to generate a design.
2. Meet all applicable state and local codes including plumbing and electrical codes.
3. Specify manufacturer, model, type, and size of all components to eliminate ambiguity at construction and to facilitate management of the system. The selection of pipe, electrical wire and other materials should be based on design parameters, environmental conditions and code requirements.
4. Design the irrigation system to minimize installation and maintenance difficulties. The selection and placement of irrigation components should anticipate the growth of plants through a minimum three-year establishment period for shrubs and ten years for trees.

5. Provide a complete irrigation design package to the owner of the system.
6. Calculate the maximum safe flow rate using the following three formulas, then use the lowest resulting safe flow rate as the design flow rate:
 - a. The maximum allowable pressure loss through the meter should be less than 10% of the static pressure at the meter.
 - b. The maximum flow rate through the meter should not exceed 75% of the maximum safe flow rate through the meter.
 - c. The velocity of water through the service line supplying the meter should not exceed 7.5 feet per second (fps).
7. Plan a system with an operational watering window of no more than 10 hours per day. Match the system requirements to the site and consider site uses that may dictate different irrigation durations and frequencies, a school campus for example.
8. Specify Cross-Connection Control devices as required by Section 7.12.370 of the Santa Monica Municipal Code.
9. Specify metering devices that measure the total landscape water use separate from other use for all projects where it is practical and economically feasible to do so.
10. Allow for a reduction in static pressure of up 10 pounds per square inch (psi) to accommodate possible expansion in the supply network.
11. Specify pressure regulation wherever necessary to insure that all irrigation devices operate within the manufacturer's recommended pressure range.
12. Specify main and lateral pipe sizes that will result in the velocity of water moving through these pipes at a rate not exceeding five fps.
13. For zones with drip irrigation conform to the current edition of SM/EPD's *Guide to Successful Drip Irrigation for Landscape Professionals*.
14. Design the system and select components to achieve a minimum *operational* lower quarter distribution uniformity (DU_{LQ}) or emission uniformity (EU) as follows:

Type of Zone	Type of Uniformity	Minimum Uniformity
Spray	DU_{LQ}	55%
Rotor	DU_{LQ}	70%
Drip	Emission Uniformity	80%
15. Choose irrigation devices and design the irrigation system to positively prevent runoff or overspray onto impermeable hardscape under all conditions regardless of wind or possible equipment misalignment.
16. Design sprinkler head spacing with a minimum of *head-to-head* coverage (minimum 50% of diameter). Wind derating, if used, should be based on wind criteria for the time period that the system is normally operated.

17. Assign separate station/zones (hydrozones) to areas with dissimilar water or scheduling requirements. For example; separate zones should be designed for trees, shrubs, flowers, shady areas, sunny areas, drip irrigation and sprinklers.

18. Specify watering devices with a manufacturer's published precipitation rate less than 0.75 inches / hour. This applies to all devices: bubbler, drip, spray, microspray and rotor.

19. Locate sprinkler heads based on a thorough evaluation of physical, environmental, and hydraulic site conditions, including wind. The design must not permit sprinklers to overspray onto impermeable hardscape under any condition.

20. Specify drip irrigation for all zones planted in one-gallon or larger size.

21. Specify weather-based irrigation controllers (WBIC) based upon Irrigation Association test results (<http://www.irrigation.org/SWAT/Industry/ia-tested.asp>) See <http://www.smepd.org/landscape> for more information on the use of WBICs in Santa Monica.

22. Specify check valves wherever necessary to prevent low-head drainage.

23. Specify flow measurement equipment where practical and economically feasible.

24. Specify systems to use graywater and/or captured rainwater for irrigation where practical and economically feasible.

25. Landscaping and irrigation in parkways is governed by the Administrative Services Division of the Environmental & Public Works Management Department (EPWM). Design landscape and irrigation systems in parkways according to the current edition of the *Parkway Landscape Policy* published by EPWM.

Installation Requirements

To ensure that the irrigation system is installed to conserve water resources by efficiently and uniformly distributing the water, the irrigation system installer should:

1. Contact all appropriate utility companies prior to beginning installation, to locate underground utilities including gas lines, electrical, telephone, cable, and so forth. State laws require anyone who digs to notify utility companies before starting. The installation should not be started until all underground utilities are located and marked.

2. Prior to beginning installation, verify that the point of connection, flow rate, and static and dynamic pressures meet design criteria.

3. Install Cross-Connection Control devices as required by Section 7.12.370 of the Santa Monica Municipal Code.

4. Install the irrigation system according to the design specifications and manufacturer's published performance standards.

5. Review planting plans prior to installation to minimize conflicts between larger plants and irrigation equipment. Also review construction plans for conflicts between hardscape and sprinkler head placement.
6. Inform the property owner and irrigation system designer of unusual or abnormal soil conditions which may impact the design and management of the irrigation system.
7. Furnish to the owner of the system an *as-built* record set of drawings. Within the record set of drawings, describe the system layout and components including all changes from the original design.
8. Test the irrigation system to verify that it meets the design criteria.
9. After installation perform an irrigation audit using a procedure approved by the *Irrigation Association* or the *Irrigation Training and Research Center of California Polytechnic State University*. Provide the property owner with system specifications and a performance summary report by station/zone that includes the plant type, soil type, average root zone depth, precipitation rate, distribution or emission uniformity (DU_{LQ}/EU), area square footage, target gallons per minute flow rate, recommended operating pressure range, and maximum recommended cycle run time without runoff. Retain a reference of each station/zone's DU_{LQ}/EU, precipitation rate, operating pressure, and flow rate at the controller.
10. Program the weather-based irrigation controller (WBIC) as required.
11. Explain to the property owner or his/her agent the location and operation of all components of the system.
12. Provide the property owner or his/her agent with recommendations for operation of the system for maximum water conservation and the importance of maintaining system components according to the original design.
13. Provide the property owner or his/her agent with keys, tools, warranties and operating instructions for all equipment.