Water Efficient Landscape and Irrigation Standards

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The following standards apply to the design, installation and maintenance of landscape and irrigation systems in the City of Santa Monica per the Santa Monica Municipal Code (SMMC) 8.108.

These requirements are based on the California Department of Water Resources State Model Water Efficient Landscape Ordinance and the Irrigation Association’s *Turf & Landscape Irrigation Best Management Practices, 2014 edition* and tailored to the ordinances, policies and climate of the City of Santa Monica.
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Section 1: Definitions

For purposes of the Water-Efficient Landscape and Irrigation Standards, the following words or phrases shall be defined as follows:

A. **Alternate Water Supply or Source.** Non-potable water supply such as, but not limited to, graywater, municipal recycled water, rainwater, and urban runoff.

B. **Anti-Siphon Valve.** Backflow device configured with a single moving part, a float, which moves up or down to allow atmospheric air into the piping system to prevent back siphoning of water from irrigation lines into the drinking water. Must be installed at least six inches (6") above the highest sprinkler, elevated piping or emission outlet.

C. **Artificial turf.** A surface of synthetic fibers made to look like natural grass.

D. **As-builts.** A set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other information furnished by the contractor.

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

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

G. **Bubbler.** Water emission device that tends to bubble water directly to the ground or that throw water a short distance, on the order of one foot, (300 mm) before water contacts the ground surface at a flow rate of half gallon per minute (0.50 gpm) or less.

H. **Certified Irrigation Designer.** A person certified to design irrigation systems by an accredited academic institution, a professional trade organization or other program such as, but not limited to, the US Environmental Protection Agency’s WaterSense Irrigation Designer Certification program and Irrigation Association’s Certified Irrigation Designer program.

I. **Check Valve or Anti-drain Valve.** A one-way valve located in an irrigation system, including but not limited to, the lateral line, sprinkler head, or drip emitter, designed to hold water in the system to prevent drainage from the system when the remote control valve is deactivated.

J. **Compost.** The safe and stable product of controlled biologic decomposition of organic materials that is beneficial to plant growth.

K. **Container Planting.** Pots or containers, not permanently installed, containing soil for growing plants.

L. **Commercial Landscape.** Landscapes associated with commercial, industrial, and institutional properties, and mixed-use development projects.
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M. **Drip Irrigation.** Method of micro irrigation wherein water is applied to the soil surface as drops or small streams through emitters on or within polyethylene tubing at a rate of two (2) gallons per hour or less.

N. **Drip Irrigation Zone.** The landscape area irrigated by a drip irrigation system.

O. **Drip Irrigation System.** All the equipment required to convey water to a drip irrigation zone including but not limited to the backflow prevention assembly, valve, filter, pressure regulator, pipe, lateral line, tubing, emitters, stakes and flushing mechanism.

P. **Edible Plants.** Plants grown for the sole purpose of being consumed as food by human beings.

Q. **Emission outlet or emission device.** A watering device or location where water is discharging from an emitter or watering device.

R. **Establishment Period.** The first six to eight weeks after installing plant material in the landscape area, containers, or planters.

S. **Existing Landscapes.** A landscape area in which the plant material has developed significant root growth after one year.

T. **Flow sensor.** An inline device installed at the supply point of the irrigation system that produces a repeatable signal proportional to flow rate. Flow sensors must be connected to an automatic irrigation controller, or flow monitor capable of receiving flow signals and operating master valves.

U. **Graywater.** Untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. Graywater includes, but is not limited to, wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but does not include wastewater from kitchen sinks or dishwashers.

V. **Green Roof.** A roof of a building that is partially or completely covered with vegetation and a growing medium planted over a waterproof membrane.

W. **Hydrozone.** A portion of the landscaped area having plants that are grouped according to similar water needs based on microclimate, irrigation type, and plant water requirements among other factors.

X. **Impermeable Hardscape.** Any form of pavement or other surface which is not designed to permit water to pass through it to the soil below.

Y. **Institutional Landscapes.** Commercial landscapes associated with a private school, church, hospital or public institution.

Z. **Irrigated Landscape.** Any portion of the landscape area that contains a water emission outlet or emission device, such as sprinkler heads or drip irrigation systems, and any area that receives water from such outlet or device.
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AA. **Irrigation System.** Any system, excluding water features, for distribution of water through a pressurized system within the landscape area, including but not limited to any system in which any portion is installed below grade or affixed to any structure.

BB. **Landscape water service meter.** An inline device installed at the irrigation point of connection that measures the flow of water into the irrigation system to record water use. “Dedicated” landscape water service meters are installed and maintained by the City of Santa Monica.

CC. **Landscaping.** Modification of the ground surface, planters, containers or raised beds with live planting materials such as trees, shrubs, turf, groundcover or other horticultural materials; as well as non-living materials such as, but not limited to, artificial turf, mulch, permeable hardscape, or stone.

DD. **Lateral line.** The water delivery pipeline that supplies water downstream from the valve to the emitters or sprinklers.

EE. **Maintenance.** The upkeep of any landscaped area, landscaping or irrigation system.

FF. **Manual Shut-off Valve.** A valve manually operated and installed at the irrigation point of connection which controls water flow into the irrigation system and when closed, water will not be supplied to the irrigation system to minimize water loss in case of an emergency (such as a main line break) or to perform repairs.

GG. **Master Shut-off Valve.** An automatic valve installed at the irrigation point of connection upstream from the remote control valves which controls water flow into the irrigation system and when closed, water will not be supplied to the remote control valves to minimize water loss when excessive flow conditions from a leak or broken emission device are detected by a flow sensing device.

HH. **Micro-Spray.** Method of low pressure, low volume micro-irrigation in which water is applied in a very fine spray or stream.

II. **Mixed-Use Development.** The development of a parcel or building with two or more different land uses such as, but not limited to, a combination of residential, office, manufacturing, retail, public or entertainment in a single or physically integrated group of structures as defined by Section 9.04.02.030.500.

JJ. **Modifications.** Replacement or addition to any existing landscaping or irrigation system.

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

LL. **Multi Outlet Emitter.** A point source emission device consisting of two or more drip emitters connected to one quarter inch (1/4”) or one eighth inch (1/8”) distribution
Section 1: Definitions

- tubing.

MM. **New Development.** New construction projects as defined by Article 9 of the Santa Monica Municipal Code.

NN. **Overhead Irrigation.** Method of irrigation in which the water is sprayed, or sprinkled, through the air to the ground surface, including but not limited to spray heads, rotors, and micro-sprays.

OO. **Parkway.** The portion of the public right-of-way as defined by Section 7.24.030 of this Code.

PP. **Peak Demand Month.** Month with highest reference evapotranspiration and least amount of rainfall.

QQ. **Permeable Hardscape.** Any form of pavement or other surface that allows the passage of water and air through the material and into the underlying soil, such as but not limited to, driveways, walkways, patios, streets and alleys.

RR. **Plant Factor or Plant Water Use Factor.** A factor, when multiplied by the reference evapotranspiration (ETo), estimates the amount of water needed by plants. For purposes of these Standards, the plant factor range for very low water use plants is 0 to 0.1, the plant factor range for low water use plants is 0.1 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the California Department of Water Resources (DWR) publication Water Use Classification of Landscape Species. Plant factors may also be obtained from horticultural researchers from academic institutions or professional associations as approved by DWR.

SS. **Plant Material.** Living plants, trees, shrubs, groundcovers, grasses, bulbs and edible plants excluding those made from plastic or man-made products.

TT. **Planter.** Permanently installed planting structures with an impermeable bottom and drain, excluding green roofs.

UU. **Point of Connection.** Location where irrigation system is connected to the water supply.

VV. **Pond.** A human-controlled body of water, artificial lake, or reservoir used to provide aquaculture purposes and is not intended for human swimming, wading or body emersion.

WW. **Plantable Landscape Area.** Any areas containing plant material which could include but is not limited to turf areas, planter beds, green roofs or walls, planters, raised beds and vegetated paths. It also includes pervious hardscapes like sidewalks, driveways, decks, patios, gravel or stone walks and other areas designated for non-development (e.g., open spaces and existing native vegetation). The plantable landscape area does not include pools, spas, ponds, and water features.
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XX. **Precipitation Rate.** The rate at which water is applied to a landscape area by an irrigation system or watering device measured in inches per hour. Also known as the application rate.

YY. **Public Right-of-Way.** As defined by SMMC Section 6.28.020.

ZZ. **PVC.** Polyvinyl chloride.

AAA. **Raised Bed.** A planting bed that has been raised above the surface of the ground, typically enclosed by some type of barrier such as wood or stones, for the intent of growing edible plants.

BBB. **Recreational Area.** Landscape areas, excluding residential areas, designated for active play, recreation, and public assembly such as in parks, sports fields, picnic grounds, and amphitheaters.

CCC. **Recreational Turfgrass.** Landscape areas, excluding residential areas, dedicated to active play such as courtyards, parks, sports fields, and golf courses where turf provides a surface for active play and public assembly.

DDD. **Remote Control Valve.** Valve which is actuated by an automatic controller by electric or hydraulic means.

EEE. **Residential Landscape.** Landscapes associated with single and multi-family homes or units.

FFF. **Soil Moisture Sensing Device or Soil Moisture Sensor.** A device that measures the amount of water in the soil. The device may also suspend or initiate an irrigation event.

GGG. **Soil Texture.** The classification of soil based on its percentage of sand, silt, and clay.

HHH. **Spray Head.** A sprinkler head that does not rotate.

III. **Sprinkler.** Any watering device which distributes water by projecting it into the air.

JJJ. **Sprinkler Irrigation Zone.** The landscape area irrigated by a sprinkler irrigation system.

KKK. **Sprinkler Irrigation System.** All the equipment required to convey water to a sprinkler irrigation zone including but not limited to the backflow prevention assembly, valve, pipe, lateral line, risers, swing joint, and sprinkler or spray head.

LLL. **Subsurface Drip Irrigation:** Drip irrigation installed below grade.

MMM. **Turfgrass.** Also called turf or lawn. Any plant material listed as turf in WUCOLS or a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.
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NNN. Urban Runoff. Water and suspended or dissolved materials deposited on surfaces and washed by storms or other sources of flowing water, through the flood control system.

OOO. Water Feature. A design element in which open water performs an aesthetic or recreational function. Water features may include waterfalls, fountains, and streams, where water is artificially supplied. Constructed wetlands used for on-site wastewater treatment or stormwater best management practices that are not irrigated and are used solely for water treatment or stormwater retention are not water features. Ponds, hot tubs, spas, permanent swimming or wading pools are not considered water features.

PPP. Watering Device. Any device for distribution of pressurized water to landscaping.

QQQ. WUCOLS. Water Use Classification of Landscape Species, an evaluation of the irrigation water use needs of select plants, published by the California Department of Water Resources.

RRR. Valve. A device that opens and closes to allow pressurized water to flow through pipes.
Section 2: New Development Project Plan Submittal Requirements

The following items will be required prior to the issuance of a building permit for all new development projects. Any revisions to the city-approved plans will require re-submittal and approval. Do not include landscape plants, hardscape, or irrigation systems within the parkway on the plan set.

A. General Plan requirements
   a. Cover Sheet With Required Plan Submittal Notations*
   b. Landscape Planting Plan with construction and planting details and specifications*
   c. Landscape Elevation Drawings * (optional for Single Family Homes)
   d. Hydrozone Matrix **
   e. Irrigation Plan with details and specifications**

* Must bear the signature of a licensed architect, licensed landscape architect, licensed landscape contractor, licensed engineer or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.)

** Must bear the signature of a certified irrigation designer, licensed architect, licensed landscape architect, licensed landscape contractor, licensed engineer or any other person authorized to design a landscape. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code.)

B. Plan requirements for landscapes without permanent automated irrigation systems
   a. Landscapes installing new plant material but without a permanent, automated irrigation system, where water is accessed only through a hose bib or quick coupler connection, are not required to submit a hydrozone matrix, an irrigation plan, or an irrigation detail and specifications plan. On the Landscape Planting Plan add this note: “No permanent, automated irrigation system to be installed. Any future irrigation system installation will require a full landscape plan submittal for City of Santa Monica review and approval prior to installation.”
   b. Individual single family dwellings installing no new landscaping, other than mulch and artificial turf, and no new irrigation system, shall be required only to submit a construction plan with this note: “No new permanent, automated irrigation system to be installed. A minimum 3 inch (3”) layer
of mulch shall be applied on all exposed soil surfaces of existing planting areas except in turf areas, over creeping or rooting groundcovers, or in direct seeding applications, where mulch is not appropriate. Any revisions to approved plans will require re-submittal and approval and must comply with the current Water-Efficient Landscape and Irrigation Standards. Call (310) 458-8405 to schedule an inspection."

i. If designating insect habitat, up to five percent (5%) of the landscape area may be left without mulch. Designated insect habitat must be clearly identified on the construction plan.
Section 3: New Development Project General Requirements

A. Any revisions to approved plans will require re-submittal and approval by City staff prior to installation.

B. 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 and plans have been approved.

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

D. Open Trench Inspection
   a. An open-trench inspection by City staff is required prior to covering below grade pipes, laterals, and mains. The designer of the landscape, or their designee, and general contractor performing the installation must attend the open trench inspection.

E. Prior to Final Inspection
   a. Installer shall test the irrigation system to verify that it meets the approved design and specifications.
   b. Installer must program the irrigation controller.

F. Final Inspection
   a. A final inspection by City staff is required prior to Certificate of Occupancy to ensure that the system was built to approved plans and specifications. The following items will be required at final inspection prior to the issuance of a Certificate of Occupancy:
      i. Post-installation soil test results which must contain the percentage (%) of organic matter; may also include but is not limited to soil texture; infiltration rate or soil texture infiltration rate table; pH; total soluble salts; sodium; and recommendations determined by laboratory test. Exception: Landscapes contained entirely in planters are exempt from this requirement.
      ii. A detailed irrigation controller map must be installed inside or near the irrigation controller with at minimum a description for each zone including: plant material, watering device, valve or station number, run time for peak demand month and precipitation rate.
      iii. Irrigation schedules including establishment period start and end dates, must be posted inside the irrigation controller housing unit by the installer.
      iv. Electronic submission of an As-Built set of plans to the City is required if requested by City inspector.
Section 4 Water Feature Requirements

A. Any outdoor water feature installed in any landscaped area after the effective date of these Standards shall:
   a. Use a water recirculation system;
   b. Not have any water that is sprayed into the air visibly land outside the water features; and
   c. Not have any water spray or run onto surrounding landscape or impermeable hardscape areas.

B. The total cumulative surface area of all water features on a site may not exceed 25 square feet unless the feature uses water from an approved alternative water source and delivery system. The total cumulative surface area of all water features includes both vertical and horizontal non-submerged surface areas of the water features.

C. Existing water features may be repaired but the cumulative surface area may not increase.

D. Public agencies shall be exempt from this requirement.
Section 5: Residential Landscapes

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A. Plant Material Requirements
   a. The total maximum area permitted for installation of turfgrass and high water need plants defined for Region 3 in the current edition of the Water Use Classification for Landscape Species (WUCOLS) issued by the California Department of Water Resources (DWR) is twenty percent (20%) of the total plantable landscape area, including existing plant material. Alternative documentation of water use from horticultural researchers at academic institutions or professional associations as approved by DWR may be presented for plants not listed in WUCOLS.
   b. The total cumulative landscape area of all high and moderate water using plants, including existing plant material, shall not exceed forty percent (40%) of the total plantable landscape area, excluding edibles and areas watered with an approved alternate water supply.
   c. Turfgrass, including existing plant material, is not allowed on slopes greater than twenty-five percent (25%) where the toe of the slope is adjacent to an impermeable hardscape and where twenty-five percent (25%) means one foot (1’) of vertical elevation change for every four feet (4") of horizontal length (rise divided by run x 100 = slope %).
   d. Plant material categorized as ‘High’ in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization are prohibited, including existing plant material, except for known non-fruiting, non-invasive, sterile varieties, cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited.
   e. Plant material shall be grouped together into hydrozones based on similar watering needs.

B. Amendments and Mulch Requirements
   a. For landscape installations, compost at a rate of a minimum of four cubic yards (4 yd³) per one thousand square feet (1000 ft²) of permeable area shall be incorporated to a depth of six inches (6") into the soil. Soils with greater than six percent (6%) organic matter in the top six inches (6") of soil are exempt from adding compost and tilling. A post installation soil test must show a six percent (6%) organic matter content or greater.
Section 5A: Residential Landscapes
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b. A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, over creeping or rooting groundcovers, or in direct seeding applications where mulch is not appropriate. To provide habitat for beneficial insects and other wildlife, up to five percent (5%) of the landscape area may be left without mulch. Designated insect habitat must be clearly identified on the construction or landscape plan.

c. No mulch shall be applied within six inches (6") of the base of trees.

d. No plant material shall be installed within twenty-four (24") inches of the base of a tree.

e. Areas designated as mulch on approved landscape plans, including areas covered by wood chips, gravel, stone, decomposed granite, and areas designated as artificial turf on approved landscape plans cannot be replaced with turfgrass or high water use plants as defined in the current edition of WUCOLS, once mulch or artificial turf has been installed.

C. Irrigation System Requirements
a. General Irrigation Requirements
   i. All existing sprinklers and spray heads shall be removed.
   ii. The installation of new sprinkler irrigation systems are prohibited, including parkways. Exception: Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.
   iii. Hoses used for irrigation shall be equipped with an automated, shut off nozzle.
   iv. Hose bibbs shall be equipped with cross-connection control.
   v. Drip irrigation and bubblers must be on separate valves.
   vi. Design landscape and irrigation systems in parkways according to all local, state, and federal laws and regulations. Installation of an irrigation system within a parkway cannot result in the damage of the roots of any existing street trees.
   vii. Trees shall be irrigated on a separate valve unless the tree is located in a planter.
   viii. Graywater irrigation systems must conform to Chapter 16 of the California Plumbing Code.
   ix. Root vegetables shall not be irrigated with graywater.
   x. Alternate water supply irrigation systems must conform to all local, state, and federal laws and regulations.
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xi. Low-head drainage is prohibited. Anti-drain valves or check valves in drip emitter devices are required to prevent low-head drainage.

xii. Static water pressure, dynamic or operating pressure and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

xiii. Specify pressure regulation to ensure that the dynamic pressure at each emission device is within the manufacturer’s recommended pressure range for optimal performance. If the water pressure is below the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is not required.

xiv. Pressure regulation may include a single master pressure regulator and may be used for the entire system if the dynamic pressure at each emission device has the same manufacturer’s recommended pressure range for optimal performance. It must be located after the master backflow prevention device, if present.

xv. A single large capacity master filter may be used but must be located after the master backflow prevention device and master pressure regulator, if present.

b. Water Supply, Meter & Valve Requirements

i. Label all types of water proposed including potable and alternative water supplies per local, state and federal laws and regulations.

ii. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply.

iii. A master shut-off valve is required for all automatic irrigation systems except in systems that make use of technologies that allow for leak detection and control or the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features. A master shut off valve should be installed as close as possible to the point of connection of the water supply but upstream from the remote control valve(s) which control(s) water flow into the irrigation zones.
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iv. Cross-Connection Prevention (Backflow Prevention) as required by SMMC Section 7.12.370.

v. Dedicated landscape water service meters shall be installed on residential landscape areas with greater than five thousand square feet (5,000 ft²) of irrigated landscape.

vi. A flow sensor that detects high flow conditions created by system damage or malfunction is required for all automatic irrigation systems except in systems that make use of technologies that allow for leak detection and control.

vii. All irrigation valves must be appropriately tagged and labelled in accordance with all local, state, and federal laws and regulations.

viii. Valve boxes, if installed, must be large enough to service irrigation equipment inside and be installed over a layer of coarse stone or gravel while maintaining an air space between valves and the layer of stone.

c. Pipe Requirements

i. Specify main and lateral pipe sizes that will result in the velocity of water moving through these pipes at a rate not exceeding five feet (5') per second for pipes under three inch (3") in diameter and not exceeding seven feet (7') per second for pipes three inch (3") or greater in diameter.

ii. Use Schedule 40 or Class 315 solvent weld-type PVC pipe for mains, below grade laterals, or piping under roadways. Class 125 pipe is not permitted.

iii. IPS flexible PVC pipe or flexible HDPE pipe may be substituted for rigid PVC pipe below grade in lateral lines only to avoid underground obstructions encountered during trenching or tunneling.

iv. Use Schedule 40 UV resistant PVC, Schedule 80 PVC or metal piping for all above grade pipes.

v. Pipe in the same trench must be laid side-by-side and not overlapped. Provide three inch (3") vertical and horizontal clearance between irrigation lines and six inch (6") clearance between lines of other work. Do not install parallel lines directly over any other line.

vi. PVC fittings must be of the same chemical compound as pipe on which they are installed.
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vii. PVC cement must be have the proper adhesive value for the pipe on which it is used.
viii. Backfill shall not have rocks or debris greater than half inch (½”) in size next to the pipe.
ix. Under vehicle paving or sidewalks, install a sleeve made of permanent rigid material (PVC Sch 40 or Class 160) that is twice the size of the pipe it will hold and should extend one foot (1’) beyond the edge of the hard surfaces.
x. Properly identify any applicable alternative water supply discharge piping, system components and area(s) of distribution.
xii. Trench or tunnel depth must be sufficient to obtain a minimum depth of cover over the installed pipe and control wire which conforms to the following dimensions. Where pipe and/or conduit are placed below paving or hardscape, the minimum burial depths are:

<table>
<thead>
<tr>
<th>Description</th>
<th>Minimum Burial Depth (in)</th>
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<tbody>
<tr>
<td>Pressure Lines ≤2 inches in landscaping</td>
<td>12</td>
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<tr>
<td>Pressure Lines &gt;2 inches in landscaping</td>
<td>18</td>
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<tr>
<td>Pressure Lines under non-vehicular paving</td>
<td>18</td>
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<tr>
<td>Pressure Lines under vehicular paving</td>
<td>24</td>
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<tr>
<td>Non-pressure Lines ≤2 inches in landscaping</td>
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d. Automatic Irrigation Controller Requirements
   i. Refer to the California Green Building Standards Code (Cal Green)

e. Drip Irrigation Requirements
   i. If installing new irrigation zones or systems, drip irrigation is required for all plant material.
Section 5A: Residential Landscapes
Requirements for Residential New Development Projects

1. Exception:
   a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for trees of a size twenty-four inch (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.
   b. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

ii. Drip irrigation shall have a minimum operational emission uniformity of eighty-one percent (81%).

iii. Drip irrigation emitters shall emit no more than two gallons per hour (2 gph).

iv. Multi-outlet emitters are prohibited.

v. Only container plantings, raised beds, and edible plant areas irrigated with micro-spray may use one quarter inch (1/4") or one-eighth inch (1/8") solid tubing (also referred to as “spaghetti tubing”).

vi. Drip irrigation valve assemblies are required for each drip irrigation zone and must include:
   1. Anti-siphon valve, if a master backflow protection device is not specified;
   2. In-line remote control valves only if there is a master backflow prevention device at the point of connection;
   3. Pressure regulator, if a master pressure regulator for the entire irrigation system is not specified;
   4. Filter with a one hundred-fifty to two hundred (150 – 200) mesh, wye or tee filter, if a master filter for the entire irrigation system is not specified;
   5. Pressure regulator and remote control valve must have a minimum flow rate that is lower than the zone flow rate.

vii. A flushing mechanism for each drip irrigation zone is required.

viii. For sub-surface drip irrigation zones, an operational indicator is required.

ix. Wire stakes shall be U-shaped galvanized steel wire stakes and shall be installed at minimum every three feet (3’).

x. Drip tubing shall be made of polyethylene or PVC.
Section 5B: Residential Landscapes
Modifications to Existing Residential Landscaped Areas Excluding New Development Projects

There is no landscape permit or plan submittal requirement. The following requirements apply when new plant materials and/or irrigation are installed on existing landscapes or existing plant materials and/or irrigation are replaced:

A. Plant Material Requirements For Modified Landscaped Areas
   i. The total square footage of turfgrass and high water need plants defined for Region 3 in the current edition of the Water Use Classification for Landscape Species (WUCOLS) issued by the Department of Water Resources (DWR) shall not exceed eighty percent (80%) of the plantable landscape area. Alternative documentation of water use from horticultural researchers at academic institutions or professional associations as approved by DWR may be presented for plants not listed in WUCOLS.
   ii. Turfgrass installations are not allowed on slopes greater than four percent (4%) where the toe of the slope is adjacent to an impermeable hardscape or property line and where four percent (4%) means one foot (1') of vertical elevation change for every twenty-five feet (25') of horizontal length (rise divided by run x 100 = slope %).
   iii. Plant material categorized as 'High' in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization are prohibited, except for known non-fruiting, non-invasive, sterile varieties, cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited.
   iv. When replacing diseased or dead plant materials, these plants may be replaced in kind or may be replaced with plant materials that have lower water needs, as rated in the current edition of the Water Use Classification of Landscape Species published by the California Department of Water Resources, or equivalent documentation.

B. Amendments and Mulch Requirements For Modified Landscaped Areas
   i. A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, over
creeping or rooting groundcovers, or in direct seeding applications where mulch is not appropriate. To provide habitat for beneficial insects and other wildlife, up to five percent (5%) of the landscape area may be left without mulch.

ii. No mulch shall be applied within six inches (6") of the base of trees.

iii. No plant material shall be installed within twenty-four (24") inches of the base of a tree.

C. Irrigation System Requirements For Modified Landscaped Areas

a. Requirements for New Irrigation Systems or Replacement of Existing Irrigation Systems

i. The installation of new sprinkler irrigation systems are prohibited, including parkways. Exception: Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.

ii. Hoses used for irrigation shall be equipped with an automated, shut off nozzle.

iii. Hose bibbs shall be equipped with cross-connection control.

iv. All new irrigation systems must conform to SMMC Section 7.12.370 Cross-Connection Prevention and SMMC Section 7.16.020 Water Conservation Requirements.

v. Specify pressure regulation to ensure that the dynamic pressure at each emission device is within the manufacturer’s recommended pressure range for optimal performance.

vi. Pressure regulation may include a single master pressure regulator and may be used for the entire system if the dynamic pressure at each emission device has the same manufacturer’s recommended pressure range for optimal performance. It must be located after the master backflow prevention device, if present.

vii. A single large capacity master filter may be used but must be located after the master backflow prevention device and master pressure regulator, if present.

viii. Low-head drainage is prohibited. Anti-drain valves or check valves in sprinkler heads and drip emitter devices are required to prevent low-head drainage.
Section 5B: Residential Landscapes  
Modifications to Existing Residential Landscaped Areas Excluding New Development Projects

ix. Design landscape and irrigation systems in parkways according to all local, state, and federal laws and regulations. Installation of an irrigation system within a parkway cannot result in the damage of the roots of any existing street trees.

x. Alternate water supply irrigation systems must conform to all local, state, and federal laws and regulations.

xi. Root vegetables shall not be irrigated with graywater.

xii. For new plant material where a new irrigation system is installed for that hydrozone, the irrigation system must be a drip irrigation system.

1. Exception:
   a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for new tree sizes twenty-four inch (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.
   b. Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to new edible plants.
   c. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

xiii. For existing plant material where a new irrigation system is installed for that hydrozone, the irrigation system must be a drip irrigation system.

1. Exception:
   a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for tree sizes twenty-four inch (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable. Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.
Section 5B: Residential Landscapes
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b. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

xiv. Newly planted trees shall be irrigated on a separate irrigation valve unless in a planter or where the existing irrigation layout makes it impractical. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for tree sizes twenty-four inch (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.

xv. Drip Irrigation Zone:
1. The installation of new drip irrigation systems require drip valve assemblies for each drip irrigation zone and must include:
   a. Anti-siphon valve if a master backflow protection device is not specified;
   b. In-line remote control valves only if there is a master backflow prevention device at the Point of connection;
   c. Pressure regulator if a master pressure regulator is not specified for the entire irrigation system;
   d. Filter with a one hundred-fifty to two hundred (150 – 200) mesh, wye or tee filter, if a master filter for the entire irrigation system is not specified;
   e. Pressure regulator and remote control valve must have a minimum flow rate that is lower than the zone flow rate.
2. A flushing mechanism for each new drip irrigation zone is required.
3. For subsurface drip irrigation zones, an operational indicator is required.

xvi. Drip Tubing:
1. Drip tubing shall be made of polyethylene or PVC.
2. Drip irrigation emitters shall emit no more than two gallons per hour (2gph).
3. Only container plantings, raised beds and edible plant areas
irrigated with micro-spray may use one quarter inch (1/4”) or one eighth inch (1/8”) solid tubing (also referred to as “spaghetti” tubing).

4. Wire stakes shall be U-shaped galvanized steel wire stakes and installed every three feet (3’).

5. The installation of multi-outlet emitters is prohibited.

D. **Automatic Irrigation Controller Requirements**

Refer to the California Building Standards Code (Cal Green).
Section 5C: Residential Landscapes

Maintenance Requirements for Existing Residential Landscaped Areas

A. General Maintenance Requirements
   a. Irrigation systems must be maintained according to the manufacturers’ specifications and in accordance with all local, state and federal laws and regulations.
   b. When replacing diseased or dead plant materials, replacements may be in kind or may be replaced with plant materials that have lower water needs, as rated in the current edition of the Water Use Classification of Landscape Species published by the California Department of Water Resources, or equivalent documentation.

B. Requirements for Replacement of Existing Sprinkler Heads and Sprinkler Systems
   a. Individual sprinkler heads, nozzles or valves in need of repair may be replaced; however, the installation of a new sprinkler irrigation system is prohibited, including parkways. Exception: Micro-sprays not exceeding thirty gallons per hour (30gph) may be installed on areas solely dedicated to edible plants.
   b. All replaced sprinkler heads on the same valve shall have matched precipitation rates.
   c. Repaired sprinkler irrigation zones shall have a minimum operational lower quarter distribution uniformity of seventy-five percent (75%).
   d. Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.
Section 6: Commercial Landscapes

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Section 6A: Commercial Landscapes
Requirements for Commercial New Developments

A. Plant Material Requirements
   a. Turfgrass and high water need plants, including existing plant material, defined for Region 3 in the current edition of the Water Use Classification for Landscape Species (WUCOLS) issued by the Department of Water Resources (DWR) are prohibited, excluding areas watered by graywater, captured rain on site or other approved alternative water sources. Alternative documentation of water use from horticultural researchers at academic institutions or professional associations as approved by DWR may be presented for plants not listed in WUCOLS.
      i. Exception:
         1. Institutional landscapes and Mixed-Use Development projects may install recreational turfgrass areas.
            a. High water using turf grass as defined by WUCOLS is not allowed on slopes greater than four percent (4%) where the toe of the slope is adjacent to an impermeable hardscape or property line and where four percent (4%) means one foot (1’) of vertical elevation change for every twenty-five feet (25’) of horizontal length (rise divided by run x 100 = slope %).
            b. Turfgrass is prohibited in spaces with an average width of ten feet (10’) or less.
   b. The total maximum area permitted for installation of moderate water need plants, including existing plant material, defined for Region 3 in the current edition of the WUCOLS issued by the Department of Water Resources is thirty percent (30%) of the total plantable landscape area, excluding edibles and areas watered with recycled water or other approved alternative water sources. Alternative documentation of water use from horticultural researchers at academic institutions or professional associations as approved by DWR may be presented for plants not listed in WUCOLS.
   c. Plant material categorized as 'High' in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization, including existing plant material, are prohibited, except for known non-fruiting, non-invasive, sterile varieties or cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited.
Section 6A: Commercial Landscapes
Requirements for Commercial New Developments

d. Plant material shall be grouped together into hydrozones based on similar watering needs.

B. Amendments and Mulch Requirements
a. For landscape installations, compost at a rate of a minimum of four cubic yards (4 yd$^3$) per one thousand square feet (1,000 ft$^2$) of permeable area shall be incorporated to a depth of six inches (6") into the soil. Soils with greater than six percent (6%) organic matter in the top six inches (6") of soil are exempt from adding compost and tilling. A post installation soil test must show a six percent (6%) organic matter content or greater.
b. A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, over creeping or rooting groundcovers, or in direct seeding applications where mulch is not appropriate. To provide habitat for beneficial insects and other wildlife, up to five percent (5%) of the landscape area may be left without mulch. Designated insect habitat must be clearly identified on the construction or landscape plan.
c. No mulch shall be applied within six inches (6") of the base of trees.
d. No plant material shall be installed within twenty-four (24") inches of the base of a tree.
e. Areas designated as mulch on approved landscape plans, including areas covered by wood chips, gravel, stone and decomposed granite, and areas designated as artificial turf on approved plans cannot be replaced with turfgrass or high water use plants as defined in the current edition of WUCOLS, once mulch or artificial turf has been installed.

C. Irrigation System Requirements
a. General Irrigation Requirements
   i. All existing sprinklers and spray heads shall be removed.
   ii. The installation of new sprinkler irrigation systems are prohibited, including parkways.
      1. Exceptions:
         a. Micro-sprays not exceeding thirty gallons per hour (30gph) may be used on areas solely dedicated to edible plants.
         b. Recreational turfgrass areas for Institutional and Mixed-Use Development project landscapes.
Section 6A: Commercial Landscapes
Requirements for Commercial New Developments

c. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

   iii. Hoses used for irrigation shall be equipped with an automated, shut off nozzle.

   iv. Hose bibbs shall be equipped with cross-connection control.

   v. Sprinkler, drip irrigation, and bubblers must be on separate valves.

   vi. Design landscape and irrigation systems in parkways according to all local, state, and federal laws and regulations. Installation of an irrigation system within a parkway cannot result in the damage of the roots of any existing street trees.

   vii. Trees shall be irrigated on a separate valve unless the tree is located in a planter.

   viii. Graywater irrigation systems must conform to Chapter 16 of the California Plumbing Code.

   ix. Root vegetables shall not be irrigated with graywater.

   x. Alternative water supply irrigation systems must conform to all local, state, and federal laws and regulations.

   xi. Low-head drainage is prohibited. Anti-drain valves or check valves in sprinkler heads and drip emitter devices are required to prevent low-head drainage.

   xii. Static water pressure, dynamic or operating pressure and flow reading of the water supply shall be measured at the point of connection. These pressure and flow measurements shall be conducted at the design stage. If the measurements are not available at the design stage, the measurements shall be conducted at installation.

   xiii. Specify pressure regulation to ensure that the dynamic pressure at each emission device is within the manufacturer’s recommended pressure range for optimal performance. If the water pressure is below the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is not required.

   xiv. Pressure regulation may include a single master pressure regulator and may be used for the entire system if the dynamic pressure at each emission device has the same manufacturer’s recommended pressure range for optimal performance. It must be located after the
Section 6A: Commercial Landscapes
Requirements for Commercial New Developments

master backflow device, if present.

xv. A single large capacity grade master filter may be used but must be located after the master backflow device and master pressure regulator, if present.

b. Water Supply, Meter & Valve Requirements

ix. Label all types of water proposed including potable and alternative water supplies per local, state and federal laws and regulations.

x. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply.

xi. A master shut-off valve is required for all automatic irrigation systems except in systems that make use of technologies that allow for leak detection and control or the individual control of sprinklers that are individually pressurized in a system equipped with low pressure shut down features. A master shut off valve shall be installed as close as possible to the point of connection of the water supply but upstream from the remote control valve(s) which control(s) water flow into the irrigation zones.

i. Cross-Connection Prevention (Backflow Prevention) as required by SMMC Section 7.12.370.

ii. Dedicated landscape water service meters shall be installed on commercial landscape areas, unless landscape area is completely contained in a planter(s) or containers.

iii. A flow sensor that detects high flow conditions is required for all automatic irrigation systems except in systems that make use of technologies that allow for leak detection and control.

iv. All irrigation valves must be appropriately tagged and labelled in accordance with all local, county and state laws and regulations.

v. Any valve or set of valves installed below grade shall be enclosed in a valve box. Valve boxes must be large enough to service irrigation equipment inside and be installed over a layer of coarse stone or gravel while maintaining an air space between valves and the layer of stone.

c. Pipe Requirements

i. Specify main and lateral pipe sizes that will result in the velocity of
water moving through these pipes at a rate not exceeding five feet (5') per second for pipes under three inch (3") in diameter and not exceeding seven feet (7’) per second for pipes three inch (3") or greater in diameter.

ii. Use Schedule 40 or Class 315 solvent weld-type PVC pipe for mains, below grade laterals, or piping under roadways. Class 125 pipe is not permitted.

iii. IPS flexible PVC pipe or flexible HDPE pipe may be substituted for rigid PVC pipe below grade in lateral lines only to avoid underground obstructions encountered during trenching or tunneling.

iv. Use Schedule 40 UV resistant PVC, Schedule 80 PVC or metal piping for all above grade pipes.

v. Pipe in the same trench must be laid side-by-side and not overlapped. Provide three inch (3") vertical and horizontal clearance between irrigation lines and six inch (6") clearance between lines of other work. Do not install parallel lines directly over any other line.

vi. PVC fittings must be of the same chemical compound as pipe on which they are installed.

vii. PVC cement must have the proper adhesive value for the pipe on which it is used.

viii. Backfill shall not have rocks or debris greater than half inch (½") in size next to the pipe.

ix. Under vehicle paving or sidewalks, install a sleeve made of permanent rigid material (PVC Sch 40 or Class 160) that is twice the size of the pipe it will hold and should extend one foot (1’) beyond the edge of the hard surfaces.

x. Properly identify any applicable alternative water supply discharge piping, system components and area(s) of distribution;
Section 6A: Commercial Landscapes
Requirements for Commercial New Developments

xi. Trench or tunnel depth must be sufficient to obtain a minimum depth of cover over the installed pipe and control wire which conforms to the following dimensions. Where pipe and/or conduit are placed below paving or hardscape the minimum burial depths are:

<table>
<thead>
<tr>
<th>Type of Line</th>
<th>Minimum Burial Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Lines ≤2 inches in landscaping</td>
<td>12 inch</td>
</tr>
<tr>
<td>Pressure Lines &gt;2 inches in landscaping</td>
<td>18 inch</td>
</tr>
<tr>
<td>Pressure Lines under non-vehicular paving</td>
<td>18 inch</td>
</tr>
<tr>
<td>Pressure Lines under vehicular paving</td>
<td>24 inch</td>
</tr>
<tr>
<td>Non-pressure Lines ≤2 inches in landscaping</td>
<td>12 inch</td>
</tr>
<tr>
<td>Non-pressure Lines &gt;2 inches in landscaping</td>
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<td>Conduit in landscaping</td>
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</tr>
<tr>
<td>Conduit under vehicular paving</td>
<td>24 inch</td>
</tr>
</tbody>
</table>

d. Automatic Irrigation Controller Requirements
   i. Refer to the California Green Building Standards Code (Cal Green)

e. Sprinkler Irrigation Requirements for Institutional and Mixed Use Development Landscapes with Recreational Turfgrass Areas
   i. Sprinklers shall have a minimum operational lower quarter distribution uniformity of seventy-five percent (75%).
   ii. No sprinklers shall be located within twenty-four inches (24") of any trees or impermeable hardscape, including but not limited to sidewalks, driveways, alleys, streets, walkways, fencing.
   iii. Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.
   iv. Sprinkler heads on the same valve shall have matched precipitation rates.
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v. Sprinkler heads with or without multi-stream, multi-trajectory rotating nozzles, shall have built-in pressure regulation in the body or stem or shall have pressure regulating swing joints.

vi. Sprinkler heads shall have swing joints or other riser-protection components.

vii. Sprinkler heads must have a minimum of head-to-head coverage (minimum of fifty percent (50%) of diameter). Wind de-rating, if used, should be based on wind criteria for the time period that the system is normally operated.

f. Drip Irrigation Requirements

i. If installing new irrigation zones or system, drip irrigation is required for all plant material.
   1. Exceptions:
      a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for new trees of a size twenty-four inch (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.
      b. Recreational turfgrass in Institutional and Mixed-Use Development project landscapes.
      c. Micro-sprays not exceeding thirty gallons per hour (30gph) may be used on areas solely dedicated to new edible plants.
      d. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

ii. Drip Irrigation Zone:
   1. The installation of new drip irrigation systems require drip valve assemblies for each drip zone and must include:
      a. Anti-siphon valve if a master backflow protection device is not specified;
      b. In-line remote control valves only if there is a master backflow prevention device at the Point of connection;
      c. Pressure regulator if a master pressure regulator is not specified for the entire irrigation system;
### Section 6A: Commercial Landscapes

#### Requirements for Commercial New Developments

d. Filter with a one hundred-fifty to two hundred (150 – 200 mesh), wye or tee filter if a master filter for the entire irrigation system is not specified;

e. Pressure regulator and remote control valve must have a minimum flow rate that is lower than the zone flow rate.

2. Drip irrigation shall have a minimum operational lower quarter emission uniformity of eighty-one percent (81%).

3. A flushing mechanism for each new drip irrigation zone is required.

4. For subsurface drip irrigation zones an operational indicator is required.

iii. Drip Tubing:

1. Drip tubing shall be made of polyethylene or PVC.

2. Drip irrigation emitters shall emit no more than two gallons per hour (2gph).

2. Only container plantings, raised beds and edible plant areas irrigated with micro-spray may use one quarter inch (1/4”) or one eighth inch (1/8”) inch solid tubing (also referred to as "spaghetti" tubing).

3. Wire stakes shall be U-shaped galvanized steel wire stakes and installed every three feet (3’).

4. Multi-outlet emitters are prohibited.
Permits and submittal of plans may be required under certain circumstances. The following requirements apply when new plant materials or irrigation are installed on an existing landscape or existing plant materials or irrigation are replaced:

### A. Plant Material Requirements For Modified Landscaped Areas

#### a. The installation of new turfgrass and high water need plants defined for Region 3 in the current edition of the Water Use Classification for Landscape Species (WUCOLS) issued by the Department of Water Resources (DWR) is prohibited, excluding areas watered by graywater, captured rain on site or other approved alternative water sources. Alternative documentation of water use from horticultural researchers at academic institutions or professional associations as approved by DWR may be presented for plants not listed in WUCOLS.

    i. **Exception:**

        1. Institutional and Mixed-Use Development projects may install new recreational turfgrass areas.

        a. High water using turf grass as defined by WUCOLS is not allowed on slopes greater than 4% where the toe of the slope is adjacent to an impermeable hardscape or property line and where four percent (4%) means one foot (1') of vertical elevation change for every twenty-five feet (25') of horizontal length (rise divided by run x 100 = slope %).

        b. Turfgrass is prohibited in spaces with an average width of ten feet (10') or less.

    b. Plant material categorized as ‘High’ in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization are prohibited, except for known non-fruiting, non-invasive, sterile varieties or cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited.

    c. Root vegetables shall not be irrigated with graywater.

    d. When replacing diseased or dead plant materials, replacements may be in kind or may be replaced with plant materials that have lower water needs, as rated in the current edition of the Water Use Classification of Landscape Species published by the California Department of Water Resources.
Section 6B: Commercial Landscapes
Modifications to Existing Landscaped Areas Excluding Commercial New Development

Resources, or equivalent documentation.

B. Amendments and Mulch Requirements For Modified Landscaped Areas
   a. A minimum three inch (3”) layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, over creeping or rooting groundcovers, or in direct seeding applications where mulch is not appropriate. To provide habitat for beneficial insects and other wildlife, up to five percent (5%) of the landscape area may be left without mulch. No mulch shall be applied within six inches (6”) of the base of trees.
   b. No plant material shall be installed within twenty-four (24”) inches of the base of a tree.
   c. No mulch shall be applied within six inches (6”) of the base of trees.

C. Irrigation System Requirements For Modified Landscaped Areas
   a. General Irrigation System Requirements
      i. The installation of new sprinkler irrigation systems are prohibited, including parkways.
         1. Exception:
            a. Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.
            b. Recreational turfgrass areas of Institutional and Mixed-Use Development project landscapes.
      ii. Hoses used for irrigation shall be equipped with an automated, shut off nozzle.
      iii. Hose bibbs shall be equipped with cross-connection control.
      iv. All new irrigation systems must conform to SMMC Section 7.12.370 Cross-Connection Prevention and SMMC Section 7.16.020 Water Conservation Requirements.
      v. Specify pressure regulation to ensure that the dynamic pressure at each emission device is within the manufacturer’s recommended pressure range for optimal performance. If the water pressure is below the recommended pressure of the specified irrigation devices, the installation of a pressure regulating device is not required.
vi. Pressure regulation may include a single master pressure regulator and may be used for the entire system if the dynamic pressure at each emission device has the same manufacturer’s recommended pressure range for optimal performance. It must be located after the master backflow device, if present.

vii. A single large capacity grade master filter may be used but must be located after the master backflow device and master pressure regulator, if present.

viii. Design landscape and irrigation systems in parkways according to all local, state, and federal laws and regulations. Installation of an irrigation system within a parkway cannot result in the damage of the roots of any existing street trees.

ix. Low-head drainage is prohibited. Anti-drain valves or check valves in sprinkler heads and drip emitter devices are required to prevent low-head drainage.

b. Requirements for New Irrigation Systems or Replacement of Existing Irrigation Systems

i. For new plant material where a new irrigation system is installed for that hydrozone, the irrigation system must be a drip irrigation system.

1. Exception:
   a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for new tree sizes twenty-four inch (24”) box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.
   b. Micro-sprays not exceeding thirty gallons per hour (30gph) may be used on areas solely dedicated to new edible plants.
   c. Sprinkler irrigation may be used on new recreational turfgrass areas only.
   d. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.
Section 6B: Commercial Landscapes
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ii. For existing plant material where a new irrigation system is installed for that hydrozone, the irrigation system must be a drip irrigation system.
   1. Exception:
      a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for tree sizes twenty-four inch (24”) box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.
      b. Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.
      c. Sprinkler irrigation may be used on recreational turfgrass areas only.
      d. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

iii. Newly planted trees shall be irrigated on a separate irrigation valve unless located in a planter. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for tree sizes twenty-four inch (24”) box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.

iv. Drip Irrigation Zone:
   1. The installation of new drip irrigation systems require drip valve assemblies for each drip zone and must include:
      a. Anti-siphon valve if a master backflow protection device is not specified;
      b. In-line remote control valves only if there is a master backflow prevention device at the Point of connection;
      c. Pressure regulator if a master pressure regulator is not specified for the entire irrigation system;
      d. Filter with a one hundred-fifty to two hundred (150 – 200 mesh), wye or tee filter if a master filter for the entire irrigation system is not specified;
      e. Pressure regulator and remote control valve must
Section 6B: Commercial Landscapes
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have a minimum flow rate that is lower than the zone flow rate.

2. A flushing mechanism for each new drip irrigation zone is required.

3. For subsurface drip irrigation zones an operational indicator is required.

v. Drip Tubing:
   1. Drip tubing shall be made of polyethylene or PVC
   2. Drip irrigation emitters shall emit no more than two gallons per hour (2 gph).
   3. Only container plantings, raised beds and edible plant areas irrigated with micro-spray may use one quarter inch (1/4”) or one eighth inch (1/8”) solid tubing (also referred to as "spaghetti" tubing).
   4. Wire stakes shall be U-shaped galvanized steel wire stakes and installed every three feet (3’).
   5. Multi-outlet emitters are prohibited.

c. Requirements for Replacement of Existing Sprinkler Heads on Institutional and Mixed Use Development Projects with Recreational Turfgrass Areas
   i. Sprinklers shall have a minimum operational lower quarter distribution uniformity of seventy-five percent (75%).
   ii. Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.
   iii. When a sprinkler head is changed, all of the sprinkler heads on the same irrigation valve must be changed to the same manufacturer make and type.
   iv. All replaced sprinkler heads on the same valve shall have matched precipitation rates.
   v. All replaced sprinkler heads must have a minimum head-to-head coverage (minimum of fifty percent (50%) of diameter). Wind de-rating, if used, should be based on wind criteria for the time period that the system is normally operated.
vi. All replaced sprinkler heads, with or without multi-stream, multi-trajectory rotating nozzles, shall have built-in pressure regulation in the body or stem or shall have pressure regulating swing joints.

vii. All replaced sprinkler heads shall have swing joints or other riser-protection components.

d. **Automatic Irrigation Controller Requirements**
   
i. Refer to the California Building Standards Code (Cal Green).
Section 6C: Commercial Landscapes
Maintenance Requirements for Existing Commercial Landscaped Areas

A. General Maintenance Requirements
   a. Irrigation systems must be maintained according to the manufacturers’ specifications and in accordance with all local, state and federal laws and regulations.
   b. When replacing diseased or dead plant materials, replacements may be in kind or may be replaced with plant materials that have lower water needs, as rated in the current edition of the Water Use Classification of Landscape Species published by the California Department of Water Resources, or equivalent documentation.

B. Requirements for Replacement of Existing Sprinkler Heads
   a. Individual sprinkler heads, nozzles and valves in need of repair may be replaced however the installation of a new sprinkler irrigation system is prohibited.
      i. Exception:
         1. Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.
         2. Recreational turfgrass areas of Institutional and Mixed-Use Development project landscapes.
   b. Sprinkler irrigation zones shall have a minimum operational lower quarter distribution uniformity of seventy-five percent (75%).
   c. All replaced sprinkler heads on the same valve shall have matched precipitation rates.
   d. Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.
Section 7:
City of Santa Monica Public Landscapes

Section 7A: City of Santa Monica Public Landscapes: Requirements for City of Santa Monica Public Landscape New Development Projects
                                                                                       pgs 43-49

Section 7B: City of Santa Monica Public Landscapes: Modifications to Existing City of Santa Monica Public Landscape Areas Excluding New Development Projects
                                                                                       pgs 50-53

Section 7C: City of Santa Monica Public Landscapes: Maintenance Requirements for City of Santa Monica Public Landscape Areas
                                                                                         pg 54
New Landscaping Requirements - The following requirements apply when landscape is designed for and installed by City of Santa Monica Public Landscape Areas, including but not limited to parks, open spaces, and medians:

A. Landscape and Irrigation Design
   a. The Director of Public Works may specify plant material, soil amendments or irrigation device requirements for new public landscape sites that reduce overall water use on the site, including new plant cultivars, products, or technologies that may be used in pilot demonstration projects to verify best management practices.

B. Plant Material Requirements
   a. Turfgrass defined for Region 3 in the current edition of the Water Use Classification for Landscape Species (WUCOLS) issued by the Department of Water Resources shall be limited to recreational turfgrass areas only. All other plant material with the exception of trees, shall have an average plant factor of 0.4 or below.
   b. Turfgrass is prohibited in public street medians and spaces with an average width of ten feet (10’) or less.
   c. Plant material categorized as ‘High’ in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization are prohibited, except for known non-fruiting, non-invasive, sterile varieties or cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited.
   d. Plants shall be grouped together into hydrozones. Maximize the number of hydrozones based on plant water needs, soil infiltration rates, water windows, and the hydraulic demands of the irrigation system.

C. Amendments and Mulch Requirements
   a. For landscape installations, compost at a rate of a minimum of four cubic yards (4 yd³) per one thousand square feet (1,000 ft²) of permeable area shall be incorporated to a depth of six inches (6”) into the soil. Soils with greater than six percent (6%) organic matter in the top six inches (6”) of soil are exempt from adding compost and tilling. A post installation soil test must show a six percent (6%) organic matter content or greater.
   b. A minimum three inch (3”) layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, over creeping or
rooting groundcovers, or in direct seeding applications where mulch is not appropriate. To provide habitat for beneficial insects and other wildlife, up to five percent (5%) of the landscape area may be left without mulch. Designated insect habitat must be clearly identified on the construction or landscape plan.

c. No mulch shall be applied within six inches (6") of the base of trees.

d. Organic mulch shall be applied in a minimum two foot (2') radius around the tree base.

e. No plant material shall be installed within twenty-four (24") inches of the base of a tree.

D. Irrigation System Requirements

a. General Irrigation Requirements

i. Sprinklers, drip irrigation and bubblers must be on separate valves.

ii. Graywater irrigation systems must conform to Chapter 16 of the California Plumbing Code.

iii. Approved alternate water supply irrigation systems must conform to all local, state, and federal laws and regulations.

iv. Low-head drainage is prohibited. Anti-drain valves or check valves in sprinkler heads or drip emitter devices are required to prevent low-head drainage.

v. Specify pressure regulation to ensure that the dynamic pressure at each emission device is within the manufacturer’s recommended pressure range for optimal performance.

vi. For drip irrigation zones, pressure regulation may include a single master pressure regulator and may be used for the entire system, and must be located after the master backflow device. Pressure regulators that can tolerate constant pressurization must be used.

vii. For drip irrigation zones, a single large capacity grade master filter may be used but must be located after the master backflow device and master pressure regulator, if present. Filters that can tolerate constant pressurization must be used.

viii. For overhead and bubbler irrigation zones, pressure regulation shall be at the zone valve by use of a valve pressure regulating module or similar device that achieves pressure regulation at the valve.
Section 7A: City of Santa Monica Public Landscapes
Requirements for New Landscaped Areas for Public Landscape Areas

b. Water Supply, Meter & Valve Requirements
   i. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, and at each valve manifold, to minimize water loss in case of an emergency (such as a main line break) or routine repair.
   ii. Cross-Connection Prevention (Backflow Prevention) as required by SMMC Section 7.12.370.
   iii. A dedicated landscape meter is required for new landscape areas.
   iv. All irrigation valves must be appropriately tagged and labelled in accordance with the local, state, and federal laws and regulations.
   v. Valve boxes, if installed, must be large enough to service irrigation equipment inside and be installed over a layer of coarse stone or gravel while maintaining an air space between valves and the layer of stone.
   vi. All valve box lids must be labelled with the appropriate valve, program and station numbers.
   vii. Quick coupler valves must be specified according to site conditions that ensure proper maintenance of the area.
   viii. A master shut-off valve shall be installed whenever corresponding irrigation controller has master shut-off valve operation capability, unless the system is utilizing another technology that allows for leak detection and control.
   ix. A flow sensor shall be installed whenever corresponding irrigation controller has flow sensing capability unless the system is utilizing another technology that allows for leak detection and control.
   x. Scrubber or ‘dirty water’ valves are required if the water source for the irrigation system uses approved alternate water supply.

c. Pipe Requirements
   i. Specify main and lateral pipe sizes that will result in the velocity of water moving through these pipes at a rate not exceeding five feet (5’) per second for pipes under three inch (3”) in diameter and not exceeding seven feet (7’) per second for pipes three inch (3”) or greater in diameter.
   ii. Use Schedule 40 or Class 315 solvent weld-type PVC pipe for mains, below grade laterals, or piping under roadways. Class 125 pipe is not permitted.
Section 7A: City of Santa Monica Public Landscapes
Requirements for New Landscaped Areas for Public Landscape Areas

iii. IPS flexible PVC pipe or flexible HDPE pipe may be substituted for rigid PVC pipe below grade in lateral lines only to avoid underground obstructions encountered during trenching or tunneling.

iv. Use Schedule 40 UV resistant PVC, Schedule 80 PVC or metal piping for all above grade pipes.

v. Pipe in the same trench must be laid side-by-side and not overlapped. Provide three inch (3") vertical and horizontal clearance between irrigation lines and six inch (6") clearance between lines of other work. Do not install parallel lines directly over any other line.

vi. PVC fittings must be of the same chemical compound as pipe on which they are installed.

vii. PVC cement must have the proper adhesive value for the pipe on which it is used.

viii. Backfill shall not have rocks or debris greater than half an inch (½") in size next to the pipe.

ix. Under vehicle paving or sidewalks, install a sleeve made of permanent rigid material (PVC Sch 40 or Class 160) that is twice the size of the pipe it will hold and should extend one foot (1’) beyond the edge of the hard surfaces.
Section 7A: City of Santa Monica Public Landscapes
Requirements for New Landscaped Areas for Public Landscape Areas

x. Trench or tunnel depth must be sufficient to obtain a minimum depth of cover over the installed pipe and control wire which conforms to the following dimensions. Where pipe and/or conduit are placed below paving or hardscape the minimum burial depths are:

<table>
<thead>
<tr>
<th>Pipe Type</th>
<th>Minimum Burial Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Lines ≤2 inches in landscaping</td>
<td>12 inch</td>
</tr>
<tr>
<td>Pressure Lines &gt;2 inches in landscaping</td>
<td>18 inch</td>
</tr>
<tr>
<td>Pressure Lines under non-vehicular paving</td>
<td>18 inch</td>
</tr>
<tr>
<td>Pressure Lines under vehicular paving</td>
<td>24 inch</td>
</tr>
<tr>
<td>Non-pressure Lines ≤2 inches in landscaping</td>
<td>12 inch</td>
</tr>
<tr>
<td>Non-pressure Lines &gt;2 inches in landscaping</td>
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</tr>
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<td>Conduit under non-vehicular paving</td>
<td>18 inch</td>
</tr>
<tr>
<td>Conduit under vehicular paving</td>
<td>24 inch</td>
</tr>
</tbody>
</table>

d. Automatic Irrigation Controller Requirements
i. A weather-based irrigation controller (WBIC) with central control capability and soil moisture sensors (SMS) readiness is required, site parameters permitting. Then only Smart Water Application Technologies tested and published WBICs and SMSs or EPA Watersense labeled WBICs or SMSs are permitted and must be compatible with existing City infrastructure. Once installed disabling the climate-based sensor or moisture-based sensor features on the controller is prohibited.

e. Sprinkler Irrigation Requirements
i. Sprinklers shall have a minimum operational lower quarter distribution uniformity of seventy-five percent (75%).
ii. No sprinklers shall be located within twenty-four inches (24”) of any trees or impermeable hardscape, including but not limited to sidewalks, driveways, alleys, streets, walkways, fencing.
Section 7A: City of Santa Monica Public Landscapes
Requirements for New Landscaped Areas for Public Landscape Areas

iii. Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.

iv. Sprinkler heads on the same valve shall have matched precipitation rates.

v. Sprinkler heads with or without multi-stream, multi-trajectory rotating nozzles, shall have built-in pressure regulation in the body or stem or shall have pressure regulating swing joints.

vi. Sprinkler heads shall have swing joints or other riser-protection components.

vii. Sprinkler heads must have a minimum of head-to-head coverage (minimum of fifty percent (50%) of diameter). Wind de-rating, if used, should be based on wind criteria for the time period that the system is normally operated.

f. Drip Irrigation Requirements

i. Drip irrigation is required for all new plant material except groundcovers, including turfgrass, and trees.

   1. Exception:

      a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for new trees of a size twenty-four inch (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.

      b. Micro-sprays not exceeding thirty gallons per hour (30gph) may be used on areas solely dedicated to edible plants.

      c. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

ii. Trees shall be irrigated on a separate valve.

iii. Drip Irrigation Zone:

   1. The installation of new drip irrigation systems require drip valve assemblies for each drip zone and must include:

      a. In-line remote control valves connection;
Section 7A: City of Santa Monica Public Landscapes
Requirements for New Landscaped Areas for Public Landscape Areas

b. Pressure regulator if a master pressure regulator is not specified for the entire irrigation system or pressure regulating filter is not specified;
c. Filter with at minimum, an one hundred-fifty to two hundred (150-200) mesh, wye or tee filter if a master filter for the entire irrigation system or a pressure regulating filter is not specified; disc filters may be used if the water source for the irrigation system is reclaimed, recycled, rain water or greywater.
d. Pressure regulator and remote control valve must have a minimum flow rate that is lower than the zone flow rate.

2. Drip irrigation shall have a minimum operational lower quarter emission uniformity of eighty-one percent (81%).
3. An air relief valve for each drip irrigation zone is required.
4. A manual flushing mechanism for each new drip irrigation zone is required.

iv. Drip Tubing:
1. Drip tubing shall be made of polyethylene or PVC.
2. Drip irrigation emitters shall emit no more than two gallons per hour (2 gph).
3. Only container plantings, raised beds and edible plant areas irrigated with micro-spray may use one quarter inch (1/4”) or one eighth inch (1/8”) solid tubing (also referred to as "spaghetti" tubing).
4. Drip tubing shall be designed for sub-surface installation unless site conditions are prohibit below grade installation.
5. Wire stakes shall be U-shaped galvanized steel wire stakes and installed every five feet (5').
6. Multi-outlet emitters are prohibited.
Section 7B: City of Santa Monica Public Landscapes
Modifications to Existing Landscaped Areas for Public Landscape Areas

Existing Landscaping Requirements - The following requirements apply when existing landscaping is replaced by City public landscape agencies:

A. Landscape and Irrigation Improvements
   The Director of Public Works may specify plant material, soil amendments or irrigation device requirements for new public landscape sites that reduce overall water use on the site, including new plant cultivars, products, or technologies that may be used in pilot demonstration projects to verify best management practices.

B. Plant Material Requirements
   a. If turfgrass defined for Region 3 in the current edition of the Water Use Classification for Landscape Species (WUCOLS) issued by the Department of Water Resources that is not designated recreational turfgrass is removed, it must be replaced with plant material, with the exception of trees, that have an average plant factor of 0.4 or below or with mulch.
   b. Plant material categorized as ‘High’ in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization are prohibited, except for known non-fruiting, non-invasive, sterile varieties or cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited.

C. Amendments and Mulch Requirements
   a. A minimum three inch (3") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers, or direct seeding applications where mulch is contraindicated. To provide habitat for beneficial insects and other wildlife, up to five percent (5%) of the landscape area may be left without mulch.
   b. No mulch shall be applied within six inches (6") of the base of trees.
   c. No plant material shall be installed within twenty-four (24") inches of the base of a tree.

D. Irrigation System Requirements
   a. General Irrigation System Requirements
      i. Hoses used for irrigation shall be equipped with an automated, shut off nozzle.
Section 7B: City of Santa Monica Public Landscapes
Modifications to Existing Landscaped Areas for Public Landscape Areas

- All new irrigation systems must conform to SMMC Section 7.12.370 Cross-Connection Prevention and SMMC Section 7.16.020 Water Conservation Requirements.
- Specify pressure regulation to ensure that the dynamic pressure at each emission device is within the manufacturer’s recommended pressure range for optimal performance.
- Pressure regulation may include a single master pressure regulator for the entire system, and must be located after the master backflow device. Pressure regulators that can tolerate constant pressurization must be used.
- Low-head drainage is prohibited. Anti-drain valves or check valves in sprinkler heads and drip emitter devices are required to prevent low-head drainage.

b. Requirements for Replacement of Existing Sprinkler Heads
   - Sprinklers shall have a minimum operational lower quarter distribution uniformity of seventy-five percent (75%).
   - Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.
   - All replaced and existing sprinkler heads on the same zone shall have matched precipitation rates.
   - When replacing or repairing a remote control valve on a sprinkler zone, the zone must be equipped with pressure regulating device(s) to insure that the dynamic pressure at each emission device is within the manufacture’s recommended pressure range for optimal performance.
   - All replaced sprinkler heads shall have swing joints or other riser-protection components.

b. Requirements for New Irrigation Systems or Replacement of Existing Irrigation Systems
   - For existing plant material that is one (1) gallon or larger, excluding groundcovers, and a new irrigation system is installed for that hydrozone, the irrigation system must be a drip irrigation system.
     1. Exception:
Section 7B: City of Santa Monica Public Landscapes
Modifications to Existing Landscaped Areas for Public Landscape Areas

a. Sub-surface tree bubblers or stream bubblers installed on a pop-up sprinkler body emitting half a gallon per minute (0.5 gpm) or less may be used for tree sizes twenty-four (24") box or larger. Bubblers must have fixed emission outputs and cannot be variable or adjustable.

b. Micro-sprays not exceeding thirty gallons per hour (30 gph) may be used on areas solely dedicated to edible plants.

c. Green roof landscape installations may use overhead irrigation with an alternative water source authorized by law.

ii. Drip Irrigation Zone:
1. The installation of new drip irrigation systems require drip valve assemblies for each drip zone and must include:
   a. In-line remote control valves connection;
   b. Pressure regulator if a master pressure regulator is not specified for the entire irrigation system or pressure regulating filter is not specified;
   c. Filter with at minimum, an one hundred-fifty to two hundred (150-200) mesh, wye or tee filter if a master filter for the entire irrigation system or a pressure regulating filter is not specified; disc filters may be used if the water source for the irrigation system is reclaimed, recycled, rain water or greywater.
   d. Pressure regulator and remote control valve must have a minimum flow rate that is lower than the zone flow rate.

2. Drip irrigation shall have a minimum operational lower quarter emission uniformity of eighty-one (81%).

3. Drip irrigation emitters shall emit no more than two gallons per hour (2 gph) unless using for approved alternate water supply irrigation.

4. An air relief valve for each drip irrigation zone is required.

5. A manual flushing mechanism for each new drip irrigation zone is required.

iii. Drip Tubing:
1. Drip tubing shall be made of polyethylene or PVC.
2. Drip irrigation emitters shall emit no more than two gallons per hour (2gph).
3. Only container plantings, raised beds and edible plant areas irrigated with micro-spray may use one quarter inch (1/4”) or one eighth inch (1/8”) solid tubing (also referred to as “spaghetti” tubing).
4. Drip tubing shall be designed for sub-surface installation unless site conditions are prohibit below grade installation.
5. Wire stakes shall be U-shaped galvanized steel wire stakes and installed every five feet (5’).
6. Multi-outlet emitters are prohibited.
Section 7C: City of Santa Monica Public Landscapes
Maintenance Requirements for Public Landscape Areas

A. Irrigation systems must be maintained according to the manufacturers’ specifications and in accordance with all local, state and federal laws and regulations.
B. Landscapes shall be maintained to ensure water use efficiency using sustainable or environmentally-friendly practices for overall landscape maintenance.
C. Chemical products used for plant pest control or fertilizing plant material shall meet EPA approval.
D. Irrigation shall not runoff nor overspray onto impermeable surfaces including but not limited to buildings, fencing, property line, public right-of-way.