



CITY OF BEVERLY HILLS

PUBLIC WORKS SERVICES DEPARTMENT

MEMORANDUM

TO: PUBLIC WORKS COMMISSION

FROM: Trish Rhay, Assistant Director of Public Works Services - Infrastructure & Field Operations 
Caitlin Sims, Senior Management Analyst CS

DATE: August 11, 2015

SUBJECT: BUILDING CODE AMENDMENTS TO SUPPORT WATER CONSERVATION

ATTACHMENTS:

1. Conservation Subcommittee Initiatives
2. Commissioner Felsenthal's Letter
3. Beverly Hills Municipal Code 9-4-1 : Water Conserving Plumbing Fixtures
4. Beverly Hills Municipal Code 9-4-4: Water Efficient Landscaping

At its July 9, 2015, meeting, the Public Works Commission voted to recommend that the City Council amend the Building and Safety Code to require future structures, including single-family and commercial dwellings, to have separate water meters for indoor and outdoor use and for multi-family dwellings to have a separate water meter for each unit.

The Commission also directed staff to agendize a discussion item to discuss other possible Building Code Amendments that may further support water conservation efforts which had previously been recommended by the Conservation Subcommittee. For reference, some of these recommendations are included as Attachment 1. Attachment 2 is a letter received from Public Works Commissioner Felsenthal with a similar request for staff to review the City's existing policies related to promoting water conservation.

As background and for reference, the City has some policies and regulations in place that promote water conservation. Attachments 3 and 4 identify the existing requirements for water conserving plumbing fixtures and water efficient landscaping, as identified in the City's Municipal Code.

Given the State declared drought, the State has been evaluating policies. Representatives from the City's Community Development Department will be present during the August 11th, 2015, Commission meeting to provide an update.

SUMMARY OF POTENTIAL WATER CONSERVATION INITIATIVES - The intent of this document is to frame the discussion of possible initiatives in order to prioritize and determine if further analysis warranted.

Area	Initiative	Description	Effort/ Complexity	Cost	Impact
Comm/ Education	Promote Current MWD Rebates	<ul style="list-style-type: none"> • Develop content that describes rebates, process, and benefits • Determine best methods to communicate content to customers <ul style="list-style-type: none"> ○ bill inserts ○ public displays ○ website ○ local newspapers ○ BHTV ○ newsletter ○ school programs 	Low	Low	Low
Comm/ Education	Communicate General Conservation Awareness and Tips	<ul style="list-style-type: none"> • Develop content on water saving strategies and general education on water and conservation <ul style="list-style-type: none"> ○ indoor use - fixtures, behavior ○ outdoor use – percentage of water for landscape use, landscape options, sprinkler options, “overwatering” • Determine communication method 	Low	Low	Low

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Area	Initiative	Description	Effort/ Complexity	Cost	Impact
Comm/ Education	Communicate City Conservation Practices	Describe actions City has taken regarding water conservation. Purpose is to show customers that City is "doing its part". May include recommendations for additional steps such as: <ul style="list-style-type: none"> • More efficient landscape watering, particularly in existing green space. • Modification of areas of existing green space landscape • Leak detection and remediation 	Low	Low	Low
Rebates	Increase Size of Existing MWD Rebates	Add money to existing MWD rebate amounts in order to provide additional incentive to take action	Low	Med	Low/Med
Rebates	Initiate Rebates not Part of Existing MWD Program	Consider providing rebates for items not currently offered by MWD. May include (but not limited to) <ul style="list-style-type: none"> • Drip irrigation • Water efficient sprinkler systems 	Low	Med	Low/Med
Municipal Code	Enhance Code to Encourage Indoor Conservation	Modify municipal code to reduce indoor use of water. Examples might include (but not limited to): <ul style="list-style-type: none"> • 1.28 vs. 1.6 GPF toilets • Require replacements of all fixtures at additional "trigger" events. 	High	Low	Low/Med

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Area	Initiative	Description	Effort/ Complexity	Cost	Impact
Municipal Code	Enhance Code to Encourage Outdoor Conservation	<p>Modify municipal code to reduce outdoor use of water. Examples might include (but not limited to):</p> <ul style="list-style-type: none"> Lower current landscape standards from existing 2500sf threshold. Standards at lower thresholds could include different, possibly less stringent requirements if necessary Adjust Maximum Allowable Water Allowance (MAWA) Factors to reduce water allowance on affected landscapes Limit use of grass and other high water usage plants to a percentage of landscape area Allowance for artificial turf in some areas 	High	Low	Med/High
Municipal Code	Sub Meters	<p>Consider increased use of customer sub meters. Possibilities include individual water meters in multi-family housing as well as separate meters for indoor and outdoor use for all customers. Isolated water meters will allow for more focused evaluation of water usage and increased financial incentive to lower water use.</p>	High	Low	Med/High
Operations	Increase Enforcement of Landscape Watering Schedule	<p>Develop plan to increase enforcement of current watering schedule restrictions of Mon/Wed/Fri and Tues/Thur/Sat</p>	Low/ Med	Med	Low

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Area	Initiative	Description	Effort/ Complexity	Cost	Impact
Operations	Expand Leak Detection and Remediation Program for Customer Accounts	<ul style="list-style-type: none"> Currently target customers with most severe leaks. Letters sent and some limited assistance provided for remediation. This task represents the expansion of this program to include more customers, develop increased communication, and expand level of assistance. 	Low /Med	Med	Med/High
Operations	Expand Leak Detection and Remediation on City Property	Focus in this initiative would be city maintained water lines and water use on city owned properties.	Low/Med	Med	Med/High
Operations	Customer Assistance with Conservation	Offer expanded technical or financial assistance to customers for the implementation of conservation initiatives described in the communication plan.	Med	Med/High	Med

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July 2, 2015

Mr. Ron Shalowitz
Chairman
City of Beverly Hills Public Works Commission
345 Foothill Road
Beverly Hills, CA 90210

Dear Ron,

If our recent efforts to develop, and agree upon, the Ten Year Master Water Plan demonstrated anything, it was that the cost of maintaining and expanding existing water systems is very expensive. While increasing our water supply is a primary priority, I suggest we also focus on the conservation concept that the first place to look for reduction in water use is inside and outside the home. To that end, I think that the most efficient way to reduce water consumption is via building and safety code amendments. I would like to therefore suggest that we agendize time to discuss the following specifics:

- A All new construction, and significant remodel permits, be conditioned on the owner installing two water meters ... one for domestic consumption and the second for outside uses.
- B All future landscape plans that require a permit include provisions for drip irrigation, where appropriate, and "smart" irrigation controllers.
- C All future landscape plans to include an element to demonstrate how rainwater and sprinkler head water moves across the property so as to divert the flow from impervious surfaces.
- D All future landscape plans require an increased percentage of drought resistant landscaping so as to further restrict water demand.
- E Future landscape plans that provide for water reuse – cisterns – reservoir storage – be rewarded in some form.
- F Code be enforced to require water restrictions for accounts that continually ignore conservation goals.
- G Future permits for restaurant and food processing area be conditioned upon installation of energy efficient appliances.

Thank you for your consideration of this request.

Very truly yours,



Jerrold S. Felsenthal

Cc: George Chavez
Mahdi Aluzri
Jeff Wolfe
Sandra Aronberg

Article 1. Water Conserving Plumbing Fixtures

9-4-101: TITLE AND PURPOSE:

This article shall be known as the *WATER CONSERVING PLUMBING FIXTURE REGULATIONS* of the city of Beverly Hills. The council of the city of Beverly Hills, in order to effectively address potential problems concerning existing water supplies and ever increasing wastewater flow in the sewage system, hereby implements a citywide conservation program. (Ord. 91-O-2115, eff. 5-3-1991)

9-4-102: SCOPE:

The provisions of this article shall apply to all residential, commercial, and industrial buildings in the city of Beverly Hills that use water in showers, water closets, or urinals. (Ord. 91-O-2115, eff. 5-3-1991)

9-4-103: DEFINITIONS:

A. Unless the context otherwise requires, the following definitions shall govern the construction of this article:

ADMINISTRATIVE AUTHORITY: The building and safety division of the city of Beverly Hills.

CHANGE OF OWNERSHIP: The transfer, sale or exchange of a fee interest in any residential or commercial real property located in the city of Beverly Hills or served by the environmental utilities division of the city of Beverly Hills. "Change of ownership" shall not mean:

1. The transfer, sale, or exchange of real property between spouses, including, but not limited to, transfers to a trustee for the beneficial use of a spouse, or the surviving spouse of a deceased transferor, or by a trustee of such a trust to the spouse of the trustor; transfers to a spouse which take effect upon the death of a spouse; transfers to a spouse or former spouse in connection with a property settlement agreement or decree of dissolution of a marriage or legal separation; the creation, transfer, or termination, solely between spouses, of any co-owner's interest; and the distribution of a legal entity's property to a spouse or former spouse in exchange for the interest of the spouse in the legal entity in connection with a property settlement agreement

or a decree of dissolution of a marriage or legal separation.

2. The transfer, sale, or exchange of real property between parents and their children, including, but not limited to, voluntary transfers or transfers resulting from a court order or judicial decree.
3. The transfer, sale, or exchange of real property pursuant to state foreclosure proceedings.
4. The transfer, sale, or exchange of real property to a revocable or irrevocable living trust.

EXISTING PLUMBING FIXTURE: Any toilet using more than 1.6 gallons of water per flush, urinals using more than 1.0 gallons of water per flush, showerheads with a flow capacity of more than 2.5 gallons of water per minute, faucets that emit more than 2.2 gallons of water per minute, or a residential reverse osmosis system not equipped with shutoff valves.

FLUSHOMETER TANK: A tank integrated within an air accumulator vessel which is designed to discharge a predetermined quantity of water to fixtures for flushing purposes.

FLUSHOMETER VALVE: A device which discharges a predetermined quantity of water to fixtures for flushing purposes and is actuated by direct water pressure.

LOW FLOW FAUCET: A faucet that allows a maximum flow rate of 2.2 gallons per minute.

LOW FLOW SHOWERHEAD: A showerhead that allows a maximum flow rate of 2.5 gallons per minute.

RETROFIT OR RETROFITTING: The replacement of existing plumbing fixtures with water conserving plumbing fixtures.

TRANSFeree: Any person, persons, or entity to whom a transfer, sale or exchange of any real property is made.

TRANSFEROR: Any person, persons, or entity transferring, selling or exchanging a fee interest in any real property.

ULTRA LOW FLOW URINAL: A urinal that discharges no more than 1.0 gallons of water per flush for flushing purposes.

ULTRA LOW FLOW WATER CLOSET: A water closet that discharges no more than 1.6 gallons of water per flush for flushing purposes.

WATER CLOSET: A flush toilet, a flushometer tank, or a flushometer valve operated toilet.

WATER CONSERVATION AFFIDAVIT: A signed, written statement and declaration by the transferor which declares that water conserving plumbing fixtures have been installed

prior to change of ownership or will be installed within one hundred eighty (180) days following the change of ownership.

WATER CONSERVING PLUMBING FIXTURES: Any ultra low flow water closet, ultra low flow urinal or waterless urinal, low flow showerhead, low flow faucet, or residential reverse osmosis systems equipped with shutoff valves.

WATERLESS URINAL: A waterless urinal, approved for use by the administrative authority pursuant to the requirements of the California plumbing code as an alternative and equivalent (or superior) urinal system, with a vertical trap design that incorporates a cylinder or trap filled with a thin layer of liquid sealant sitting atop the drain area of the urinal. (Ord. 09-O-2561, eff. 2-6-2009)

9-4-104: NEW CONSTRUCTION:

- A. No building permit shall be issued for any new building unless all showerheads, water closets and urinals meet the following requirements:
1. Faucets: All faucets shall be equipped with low flow faucets.
 2. Showerheads: All showers shall be equipped with low flow showerheads.
 3. Water Closets: All water closets shall be ultra low flow water closets.
 4. Urinals: All urinals shall be ultra low flow urinals or waterless urinals. (Ord. 09-O-2561, eff. 2-6-2009)

9-4-105: REPLACEMENT FIXTURES:

If any person replaces a showerhead, faucet, toilet, or urinal in any building served by the environmental utilities division of the city of Beverly Hills, then that showerhead, faucet, toilet, or urinal shall be replaced with a low flow showerhead, low flow faucet, ultra low flow water closet or, in the instance of a urinal, an ultra low flow urinal or a waterless urinal. (Ord. 09-O-2561, eff. 2-6-2009)

9-4-106: REQUIREMENTS PRIOR TO CHANGE OF OWNERSHIP:

- A. Purpose: It is the purpose of this section to reduce sewer flows and decrease the use of

imported, potable water in the city of Beverly Hills by establishing water conservation plumbing standards for plumbing fixtures retrofitted prior to change of ownership.

B. Notification And Retrofit Requirements Prior To Change Of Ownership:

1. Prior to a change of ownership, the transferor shall give written notice of the requirements of this section to the transferee. Where an escrow agreement has been executed in connection with a change of ownership, the transferor shall give written notice of the requirements of this section to the transferee prior to the close of escrow.
2. Prior to a change of ownership or within one hundred eighty (180) days following a change of ownership, the transferor shall retrofit all existing plumbing fixtures in the building and shall sign a water conservation affidavit. If an escrow agreement has been executed in connection with a change of ownership, the transferor shall submit the signed water conservation affidavit to escrow prior to the close of escrow. The cost of compliance with this section may be borne by the transferor, transferee, or both. The transferor of property subject to this section shall provide the transferee with confirmation of compliance with the requirements of this section in the transfer, sale, or exchange agreement.

C. Retrofit Exemption: Notwithstanding section 9-4-108 of this article, the administrative authority may grant an exemption from this section if it is determined that a water conserving plumbing fixture is unavailable to match a well defined historic architectural style (e.g., Victorian or mission) fitted with authentic plumbing fixtures in a local, state or federally designated building of historic significance.

D. Verification Of Compliance:

1. The transferor shall sign the water conservation affidavit, and, where an escrow agreement has been executed in connection with the change of ownership, shall submit the water conservation affidavit to escrow prior to the close of escrow.
2. If retrofitting occurs within one hundred eighty (180) days following a change of ownership, the transferee shall submit a water conservation affidavit confirming that the retrofitting has been completed.
3. The administrative authority shall maintain copies of all executed water conservation affidavits so as to provide future verification of previously installed water conserving plumbing fixtures.
4. Water conservation affidavits shall be provided to those who voluntarily install water conserving plumbing fixtures.

E. Obtaining Permit: Notwithstanding any other provision of this section, all transferors shall

obtain a plumbing permit and comply with all plumbing permit requirements when installing water conserving plumbing fixtures pursuant to this section. (Ord. 09-O-2561, eff. 2-6-2009)

9-4-107: REQUIREMENTS UPON ALTERATION OF BUILDINGS:

If any person obtains a building permit to repair, alter, or remodel a single-family or two-family residential building, and the building permit valuation for the repair, alteration or remodeling exceeds thirty thousand dollars (\$30,000.00), or if any person obtains a building permit to repair, alter or remodel a multiple-family residential, commercial or industrial building, and the building permit valuation for the repair, alteration or remodeling exceeds seventy thousand seven hundred thirty dollars (\$70,730.00), then all showerheads, water closets and urinals in such repaired, altered or remodeled building shall be replaced by low flow showerheads, low flow water closets and ultra low flow urinals. Fixtures with flushometer valves may be retrofitted rather than replaced, if such retrofitted fixtures meet the performance standards of the low flow and ultra low flow fixtures required by this section.

Commencing on July 1, 1991, the building permit valuation amounts set forth in this section shall be adjusted on July 1 of each year based upon the engineering news record construction cost index for the Los Angeles metropolitan area (ENR), or its successor. The director of building and safety shall compute the percentage difference between the ENR on July 1 of each year and the ENR for the previous July 1. The director shall then adjust by such percentage the building permit valuations set forth in this section. The adjusted amounts shall be rounded to the nearest dollar, and these amounts shall constitute the building permit valuations set forth in this section. Should the ENR be revised or discontinued, the director shall use the revised index or a comparable index as approved by the city council for determining fluctuations in the cost of construction. (Ord. 91-O-2115, eff. 5-3-1991)

9-4-108: EXEMPTION:

The director of the administrative authority may exempt any person from the requirements of sections 9-4-105 and 9-4-106 of this article if the director determines that compliance with the requirements of those sections will cause existing wastewater systems to malfunction or will cause a danger to any person's health or safety. (Ord. 09-O-2561, eff. 2-6-2009)

9-4-109: PENALTIES; ENFORCEMENT:

A. It is unlawful for any person, firm, partnership, association or corporation to violate, cause the violation of, or maintain a violation of any section of this article.

- B. It is unlawful for any person, firm, partnership, association or corporation to remove or cause the removal of water conserving plumbing fixtures contrary to the provisions of this article.
- C. In addition to any other remedy provided by this code, any provision of this article may be enforced by an injunction issued by the superior court upon a suit brought by the city of Beverly Hills.
- D. Any provision of this article may be enforced pursuant to the administrative penalty process set forth in title 1, chapter 3 of this code.
- E. No liability shall arise, nor shall any action be brought or maintained against, any agent of any party to a transfer of title, including any person or entity acting in the capacity of an escrow officer, for any error, inaccuracy, or omission relating to compliance with this article. Except as otherwise provided in this article, this section shall not be deemed to create or imply a duty upon a licensee, as defined in section 10011 of the state Business and Professions Code, or upon any agent of any party to a transfer of title, including any person or entity acting in the capacity of an escrow officer, to monitor or ensure compliance with this article, or to notify any person of requirements to comply with this article.
- F. Every person, firm, partnership, association or corporation that violates, causes the violation of, or maintains a violation of any provision in this article is guilty of a misdemeanor and is subject to the penalties imposed by this code.
- G. The administrative authority is authorized and empowered to enforce the provisions of this article. (Ord. 09-O-2561, eff. 2-6-2009)

Article 4. Water Efficient Landscaping

9-4-401: PURPOSE:

Water is a precious commodity of limited supply. In accordance with the water conservation in landscaping act ("act"), the purpose and intent of this article is to:

- A. Promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
- B. Establish a structure for planning, designing, installing, and maintaining and managing water efficient landscapes in new residential or commercial development projects and when landscaped areas are altered by more than fifty percent (50%) in total area;
- C. Promote water management practices and water waste prevention for existing landscapes; and
- D. Use water efficiently without waste by setting a maximum applied water allowance as an upper limit for water use and reduce water use to the lowest practical amount.

Accordingly, this article is intended to be as effective in conserving water as is the department of water resources state model landscaping ordinance set forth in Government Code section 65595 and shall be known as the *WATER EFFICIENT LANDSCAPING ORDINANCE*. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-402: APPLICABILITY:

Except as set forth in section 9-4-404 of this article, this article shall apply to all landscaped areas of new residential or commercial development projects, including city projects and facilities, all new installations of landscaped area irrigation systems, and all altered landscaped areas, whether proposed as part of projects subject to plan reviews by any design or other reviewing body, or as part of projects not subject to review. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-403: DEFINITIONS:

Unless the context otherwise requires, the following definitions shall govern the construction of this article:

ALTERED LANDSCAPED AREA: A landscaped area, including landscaped areas of public property or facilities, that has been altered by more than fifty percent (50%) in total area.

CERTIFICATE OF COMPLETION: The document required under section 9-4-411 of this article.

CERTIFIED LANDSCAPE IRRIGATION AUDITOR: A person certified to perform landscape irrigation audits by a recognized professional trade organization or other educational organization.

DEPARTMENT: The department of community development.

DIRECTOR: The director of the department of community development or his/her designee.

ESTIMATED TOTAL WATER USE ("ETWU"): The total water used for the landscape subject to this article determined pursuant to the formula set forth in the landscape regulations. The ETWU is based upon such factors as the local evapotranspiration rate, the size of the landscaped area, the types of plants and the efficiency of the irrigation system.

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

LANDSCAPE DOCUMENTATION PACKAGE: The documents required under section 9-4-405 of this article required to be submitted to the department of community development for review and approval.

LANDSCAPE REGULATIONS: Rules and regulations adopted by the director of community development for the implementation and enforcement of provisions of this article, and when duly promulgated, such rules and regulations shall be in full force and effect.

LANDSCAPED AREA: The entire lot, including, water features such as pools, spas, ponds, and fountains. "Landscaped area" shall not include the building footprint, driveways, nonirrigated portions of parking lots, hardscapes such as decks and patios, and other nonporous areas.

MAXIMUM APPLIED WATER ALLOWANCE ("MAWA"): The upper limit of annual applied water for the established landscaped area or altered landscaped area determined pursuant to the formula set forth in the landscape regulations. The MAWA is based upon the local reference evapotranspiration rate, the ETo adjustment factor and the size of the landscaped area or altered landscaped area.

PROJECT APPLICANT: The person or entity submitting a landscape documentation package. A project applicant may include the property owner and/or an agent of the owner.

SMART IRRIGATION CONTROLLER: A weather based device that automatically controls an outdoor irrigation system by using weather, site or soil moisture data as a basis for determining an appropriate watering schedule or utilizing prevailing weather conditions, current and historic evapotranspiration, soil moisture levels, and other relevant factors to adapt water applications to meet the actual needs of the plants.

WATER EFFICIENT LANDSCAPE WORKSHEET: The document described in section 9-4-410 of this article. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-404: EXCEPTIONS:

This article shall not apply to:

- A. Projects which involve alterations or additions to, or retrofits of, existing residential, commercial or public structures or facilities, unless the landscaped area is altered as defined in section 9-4-403 of this article.
- B. Projects with a landscaped area of less than two thousand five hundred (2,500) square feet.
- C. Landscaping that is part of a property listed on any applicable local, state or national register of historic places.
- D. Plant collections as part of gardens and arboretums open to the public. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-405: REVIEW AND APPROVAL REQUIREMENTS:

- A. Prior to issuance of a building permit for any project that involves landscaped areas or altered landscaped areas subject to this article, the project applicant must submit a landscape documentation package for review and approval by the community development department ("department"). The landscape documentation package shall include the following:
 - 1. Project information as required by the landscape regulations;

2. Landscape design plan as described in section 9-4-406 of this article;
3. Irrigation design plan as described in section 9-4-407 of this article;
4. Water efficient landscape worksheet as described in section 9-4-410 of this article;
5. A soils management report as described in section 9-4-409 of this article;
6. Grading design plan as described in section 9-4-408 of this article; and
7. Payment of the fee as prescribed by city council upon submittal of the landscape documentation package.

If the landscaped area or altered landscaped area subject to this article is a stand alone project or does not otherwise require a building permit or formal planning or other commission approval or review, the landscape documentation package shall be submitted to the department for review and approval prior to the commencement of landscape improvements.

- B. The documents listed in subsection A of this section shall be prepared and signed by a landscape architect, landscape designer, or irrigation designer, as appropriate, except that the soils report shall be prepared by a qualified soil and plant laboratory. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-406: LANDSCAPE DESIGN PLAN:

- A. Landscaped areas or altered landscaped areas subject to this article shall be carefully designed and planned to ensure the efficient use of water. The project applicant shall submit to the department a landscape design plan that meets the criteria set forth in this section and the criteria set forth in the landscape regulations.
- B. The landscape design plan shall comply with or include the following:
1. A description of the plant material. Any plant may be selected for the landscape provided that the estimated applied water use in the landscaped area or altered landscaped area does not exceed the maximum applied water allowance.
 2. Landscape design plans for projects in the city's very high fire hazard severity zones areas shall address fire safety and prevention. The project applicant shall ensure that the defensible space required by this code is maintained and shall avoid fire prone plant materials and mulches.
 3. Invasive species of plants shall be prohibited near parks, buffers, greenbelts and open

spaces and are generally discouraged for landscape use.

4. The architectural guidelines of a common interest development, which include community apartment projects, condominiums, planned developments, and stock cooperatives, shall not prohibit or include conditions that have the effect of prohibiting the use of low water use plants as a group.
5. Turf 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 percent).
6. Recirculating water systems shall be used as a source for water features.
7. The surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.
8. Pool and spa covers are highly recommended.
9. A minimum two inch (2") layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting ground covers or direct seeding applications where mulch is contraindicated.
10. Stabilizing mulching products shall be used on slopes.
11. The mulching portion of the seed/mulch slurry in hydroseeded applications shall meet the mulching requirement.
12. Soil amendments shall be incorporated according to recommendations of the soil report, if any, and what is appropriate for the plants selected. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-407: IRRIGATION DESIGN PLAN:

- A. An irrigation system and its related components for landscaped areas and altered landscaped areas subject to this article shall be carefully designed and planned to allow for proper installation, management, and maintenance. The project applicant shall submit to the department an irrigation design plan that meets the criteria set forth in this section and the criteria set forth in the landscape regulations.
- B. An irrigation design plan shall comply with or include the following:
 1. Smart irrigation controllers or other self-adjusting irrigation controllers shall be required for all irrigation systems. The controller must be able to accommodate all aspects of the landscape and irrigation design plans.

2. All irrigation systems shall be designed to avoid excessive pressure. Water pressure regulators are required. Static water pressure, dynamic or operating pressure and flow reading of the water supply shall be measured at the time of day the system will operate. These pressure and flow measurements shall be conducted at the design stage, if available, or prior to installation, if not available at the design phase.
3. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure regulators, or booster pumps, or other devices shall be installed to meet the required dynamic pressure of the irrigation system.
4. Sensor (rain, freeze, wind, etc.), either integral or auxiliary, that suspends irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions.
5. High flow check valves, or other technology to interrupt operations in high flow conditions created by irrigation system damage or malfunction, shall be required.
6. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto nontargeted areas, such as adjacent property, nonirrigated areas, hardscapes, roadways, or structures.
7. Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.
8. The design of the irrigation system shall conform to the hydrozones of the landscape design plan. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-408: GRADING DESIGN PLAN:

- A. Grading of a project site that contains a landscaped area or altered landscaped area subject to this article, shall be designed to minimize soil erosion, runoff and water waste. The project applicant shall submit to the department a grading design plan that meets the criteria set forth in this section and the criteria set forth in the landscape regulations.
- B. The landscape grading plan shall indicate finished configurations and elevations of the landscaped area including: 1) height of graded slopes; 2) drainage patterns; 3) pad elevations; 4) finish grade; and 5) stormwater retention improvements, if applicable.
- C. To prevent excessive erosion and runoff, grading shall avoid disturbing natural drainage patterns and avoid soil compaction in landscaped areas or altered landscaped areas subject to this article. All irrigation and normal rainfall should remain within the property lines so as not to drain onto nonpermeable hardscapes.

- D. A comprehensive grading plan prepared by a civil engineer for a project which includes landscaped areas or altered landscaped areas subject to this article, can satisfy this requirement. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-409: SOIL MANAGEMENT REPORT:

The project applicant shall submit to the department a soil management plan that meets the criteria set forth in the landscape regulations. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-410: WATER EFFICIENT LANDSCAPE WORKSHEET:

- A. The project applicant shall complete and submit to the department a water efficient landscape worksheet that meets the criteria set forth in this section and the criteria set forth in the landscape regulations.
- B. The water efficient landscape worksheet shall contain two (2) sections: 1) a hydrozone information table and 2) a water budget calculation for the landscaped areas or altered landscaped areas subject to this article. The water budget calculation shall include the maximum applied water allowance and the estimated total water use. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-411: CERTIFICATION OF COMPLETION:

- A. Upon completion of the installation of the landscaped areas or altered landscaped areas subject to this article, the project applicant shall submit a certificate of completion, in the form provided by the city, for review and approval by the director. The certificate of completion shall be executed by either the licensed landscape architect, licensed landscape contractor or the certified irrigation designer that signed any of the documents submitted as part of the landscape documentation package.
- B. The certificate of completion shall certify and/or include the following:

1. The landscaped areas or altered landscaped areas subject to this article have been installed in conformance with the landscape documentation package, the water efficient landscaping ordinance and the landscape regulations;
 2. The automatic controller has been set according to the irrigation schedule described in section 9-4-412 of this article;
 3. Documentation that the soil management report recommendations, if any, have been implemented;
 4. The irrigation audit report; and
 5. The landscape and irrigation maintenance schedule.
- C. The director shall approve the certificate of completion if it is determined the project conforms to the provisions of this section. If the director determines that the certificate of completion is incomplete or does not conform to the provisions of this section, the director shall:
1. Notify the project applicant in writing that the certificate of completion has been denied and include a statement of reasons; or
 2. Notify the project applicant in writing that the certificate of completion is incomplete with an indication of additional information necessary. The project applicant may resubmit the certificate of completion for review by the director.
- D. The project applicant shall provide a copy of the approved certificate of completion to the property owner within seven (7) days of its approval. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-412: IRRIGATION SCHEDULE:

The project applicant shall prepare an irrigation schedule in accordance with the landscape regulations that evaluates and manages the amount of water required to maintain plant health. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-413: LANDSCAPE AND IRRIGATION MAINTENANCE:

The project applicant shall prepare a landscape and irrigation maintenance plan in accordance with the landscape regulations to ensure the efficiency of water use. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-414: IRRIGATION AUDIT:

- A. For landscaped areas or altered landscaped areas subject to this article, the project applicant shall prepare an irrigation audit report as set forth in the landscape regulations.
- B. For all existing landscaped areas installed prior to January 1, 2010, irrigation audits shall be prepared as set forth in the landscape regulations. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-415: IRRIGATION EFFICIENCY:

- A. New irrigation systems installed, whether or not part of a landscaped area or altered landscaped area subject to this article, shall be designed, maintained and managed to meet or exceed the average irrigation efficiency set forth in the landscape regulations.
- B. New irrigation systems installed as stand alone projects shall comply with sections 9-4-407, 9-4-410, 9-4-411, 9-4-412, 9-4-413 and 9-4-414 of this article. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-416: ALTERNATIVE WATER EFFICIENT USE:

Alternative methods of using water efficiently such as the use of potable water, rainwater or other alternative water systems are encouraged. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-417: STORMWATER MANAGEMENT:

- A. Landscape and grading design plans shall be developed in accordance with the applicable provisions of the stormwater and urban runoff control provisions set forth in article 5 of this chapter.
- B. Rain gardens, cisterns, and other landscape features and practices that increase rainwater

capture and create opportunities for infiltration and/or on site storage are encouraged. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-418: WATER WASTE PREVENTION:

Water waste resulting from inefficient landscape irrigation, such as runoff, low head drainage, overspray or other similar conditions where water flows onto adjacent property, nonirrigated areas, walks, roadways, parking lots or structures is prohibited. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-419: AUTHORITY TO PROMULGATE RULES AND REGULATIONS:

The director of community development shall have the power and authority to promulgate rules and regulations for the implementation and enforcement of provisions of this article, and when duly promulgated, such rules and regulations shall be in full force and effect. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-420: ADMINISTRATION AND APPEAL PROCESS:

The director shall have the duty and authority to administer and enforce this article. The project applicant or property owner may appeal any other decision made by the director pursuant to this article by filing with the director within fifteen (15) days of the date of written notification of the action at issue. The appeal shall be held pursuant to the applicable provisions of the uniform administrative code set forth in section 9-1-103 of this title. (Ord. 09-O-2574, eff. 1-1-2010)

9-4-421: PENALTIES:

Violation of any provision of this article shall be punishable as provided for in title 1, chapter 3 of this code. In addition, the city building official may deny any project subject to this article its certificate of occupancy or equivalent until the certificate of completion has been submitted, reviewed and approved by the city. (Ord. 09-O-2574, eff. 1-1-2010)