



To: Mayor and City Council
From: City Manager
Meeting Date: February 9, 2010
Subject: WATER EFFICIENT LANDSCAPE ORDINANCE (2nd Reading)

Recommendation:

Adopt on Second Reading, a proposed Ordinance adding Chapter 13.90, of the Pico Rivera Municipal Code relative to the Water Efficient Landscape Ordinance.

Background:

AB 1881 amended the Landscape Act (the "Act") and mandated that all public water agencies update their local Landscape Ordinances by January 1, 2010 to be minimally compliant with the California Department of Water Resource's ("DWR") Model Ordinance. The proposed Municipal Code amendment in Chapter 13.90 applies to all new construction and rehabilitated landscapes that are public agency or developer installed projects with a total landscape area of greater than 2,500 square feet; new homeowner-installed residential projects with a landscape area of greater than 5,000 square feet; and includes certain existing and special landscaped areas.

For properties and projects that are subject to this Chapter, a licensed landscape architect must submit a "Landscape Documentation Package." The applicant shall submit to the City a Certificate of Completion prior to the City issuing a Certificate of Occupancy stating the landscaping has been completed pursuant to the approved Landscaped Documentation Package.

Landscape Documentation Package

This mandated process includes the following:

- Landscape Concept Plan (design statement, irrigation notes).
- Conceptual Plant Palette identifying proposed hydrozones.
- Irrigation Plan
- Planting and Soils Plan
- Water Management Plan

Landscape Design and Plan Requirements

The Ordinance recommends the use of certain native plants and trees that are selected be appropriate for the climatic, environmental, and soil conditions of the property, while also encouraging the minimal use of turf in landscaping. Where turf is called out, its use will be taken into account when determining the total amount of water to be used, AKA "Maximum Allowed Water Allowance". The Maximum Applied Water Allowance is based upon the total amount of water that will be used for landscaping and takes into account both the natural evapotranspiration rate and land area.

In addition, the proposed Ordinance requires that decorative water systems (i.e., fountains) must be recirculating and that if available, recycled-reclaimed water be used for water fixtures (excluding pools and spas).

Proposed Ordinance is at Least as Effective as the Model Ordinance

This proposed Ordinance meets the AB 1881 mandate that it be as effective as the Model Ordinance in requiring water efficient landscaping for all new projects. The proposed Ordinance was developed using ordinances from several local jurisdictions that have already adopted their own ordinances in compliance with AB 1881, which include agencies in the Chino Valley Basin and Orange County. It is projected that other agencies in the Central Basin Municipal Water District will also follow this process in adopting their ordinances.

The proposed Ordinance contains all of the provisions that are required in AB 1881 and it requires the same reports (i.e. a Soils Management Report, Irrigation Plan, and Water Management Plan, referred to as the Landscape Documentation Package) as recommended in the Model Ordinance.



Charles P. Fuentes

CPF:ARC:AD:lg

Enc.

- 1) Water Efficient Landscape Ordinance
- 2) Landscape Documentation Package worksheet

ORDINANCE NO. 1061

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY
OF PICO RIVERA, CALIFORNIA, ADOPTING CHAPTER
90 OF TITLE 13 OF THE PICO RIVERA MUNICIPAL
CODE ENTITLED "WATER EFFICIENT LANDSCAPE
ORDINANCE"**

WHEREAS, Article X, Section 2 of the California Constitution declares that waters of the State are to be put to beneficial use, that waste, unreasonable use, or unreasonable method of use of water be prevented and that waste be conserved for the public welfare;

WHEREAS, the waters of the State and those from which the City of Pico Rivera (the "City") receives its water supply are of limited supply and are subject to ever increasing demands;

WHEREAS, the continuation of the City's economic prosperity is dependent on the availability of adequate supplies of water for future uses;

WHEREAS, it is the policy of the City to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;

WHEREAS, landscapes are essential to the quality of life in California and the City by providing areas for active and passive recreation and as an enhancement to the environment by claiming air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development;

WHEREAS, landscape design, installation, maintenance and management can and should be water efficient;

WHEREAS, pursuant to Government Code § 65594(c), the City is required to adopt a water efficient landscape ordinance that is at least as effective in conserving water as the State's Model Ordinance;

WHEREAS, the Ordinance includes provisions for water conservation and the appropriate use and groupings of plants that are well adapted to particular sites and to particular climatic, soil, and topographic conditions;

WHEREAS, the Ordinance will promote alternative landscape and irrigation methods and strategies for water conservation by encouraging use of native landscaping and responsible water management practices;

WHEREAS, the Ordinance provides for onsite soil assessment and soil management plans that include drainage and grading to promote healthy plant growth and to prevent excessive erosion and runoff, and the use of mulches in shrub areas, garden beds, and landscaped areas where appropriate;

WHEREAS, the Ordinance provides for landscape maintenance practices that foster long-term landscape water conservation;

WHEREAS, the Ordinance includes provisions to establish a maximum amount of water to be applied through the irrigation system;

WHEREAS, the Ordinance encourages the capture and retention of stormwater to improve water use efficiency or water quality;

WHEREAS, the Ordinance includes provisions for the use of automatic irrigation systems and irrigation schedules based upon climatic conditions, specific terrains and soil types, and other environmental conditions;

WHEREAS, the Ordinance promotes the use of recycled water;

WHEREAS, this Ordinance is at least as effective in conserving water as the model ordinance adopted pursuant to Government Code § 65595;

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF PICO RIVERA DOES HEREBY ORDAIN AS FOLLOWS:

SECTION 1. Chapter 13.90 is hereby established to the Pico Rivera Municipal Code to read as follows:

13.90.010. Purpose and Intent.

The purpose of this Water Efficient Landscape Ordinance is:

- a. That this Ordinance be at least as effective in conserving water as the model ordinance adopted pursuant to Government Code § 65595;
- b. To assure beneficial, efficient, and responsible use of water resources for all users within the City of Pico Rivera;
- c. To retain the land's natural hydrological role and promote the infiltration of surface water into the groundwater;
- d. To acknowledge that landscape water use accounts for more than 60% of all domestic water use in the City;
- e. To recognize that landscapes enhance the aesthetic appearance of developments and communities;
- f. To encourage the appropriate design, installation, maintenance, and management of landscapes so that water demand can be decreased, runoff can be retained, and flooding can be reduced without a decline in the quality or quantity of landscapes;
- g. To preserve existing natural vegetation and the incorporation of native plants, plant communities, and ecosystems into landscape design, where possible;
- h. To promote and encourage the use of low water use plants;
- i. To minimize the use of cool season turf;
- j. To promote the conservation of potable water by maximizing the use of recycled water and other water conserving technology for appropriate applications;

- k. To promote public education about water conservation and efficient water management;
- l. To reduce or eliminate water waste.

13.90.020. Definitions.

- a. "Administrator" means the Department or person at the City who has the authority to approve a permit, plan check, and design review for a project.
- b. "Amendments" means any material added to a soil to improve its physical properties, such as water retention, permeability, water infiltration, and drainage.
- c. "Anti-drain check valve" means a valve located under a sprinkler head to hold water in the system to prevent drainage from the lower elevation sprinkler heads when the system is off.
- d. "Applicant" means the individual or entity submitting a Landscape Documentation Package required under this Chapter or State law, to request a permit, plan check, or design review from the City. A project applicant may be the property owner or his/her designee.
- e. "Application rate" means the depth of water applied to a given area, measured in inches per minute, or inches per hour, or gallons per hour.
- f. "Applied water" means the portion of water supplied by the irrigation system to the landscape.
- g. "Automatic rain shut-off feature" means a system of which a component automatically suspends the irrigation system event when it rains.
- h. "Backflow prevention device" means a safety device used to prevent pollution or contamination of the potable water supply due to the reverse flow of water from the irrigation system.
- i. "Botanical gardens and arboretums" means a garden in which a variety of plants is grown for scientific and educational purposes.
- j. "Certified landscape irrigation auditor" means a person certified to perform landscape irrigation audits by an accredited educational institution or professional trade organization.
- k. "Control valve" means a device used to control the flow of water in the irrigation system. It may also mean all of the sprinklers or emitters in a line controlled by the valve.
- l. "Controller" means an automatic timing device used to remotely control valves or heads to set an irrigation schedule. A weather-based controller is a controller that uses evapotranspiration or weather data. A self-adjusting irrigation controller is a controller that uses sensor data (i.e., soil moisture sensor).
- m. "Developer" means a landowner or owner's agent responsible for the development of land. It does not include homeowners or landlords of single-family homes.
- n. "Discretionary permit" means any permit requiring a decision making body to exercise judgment prior to its approval, conditional approval, or disapproval.
- o. "Ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, and/or historic ecosystem.
- p. "Estimated Applied Water Use ("EAWU")" means the portion of the Estimated Total Water Use that is derived from applied water. The Landscape Documentation Package shall contain the formula and calculation. The Estimated Water Use shall not exceed the Maximum Applied Water Allowance.

- q. “Estimated total water use” (“ETWU”) means the total water used for the landscape.
- r. “ET Adjustment Factor” or “ETAF” is equal to the plant factor divided by the irrigation efficiency factor for a landscape project. The ETAF is calculated in the context of local reference evapotranspiration, using site-specific plant factors and irrigation efficiency factors that influence the amount of water that needs to be applied to the specific landscaped area. A combined plant mix with a site-wide average plant factor of 0.5 (indicating a moderate water need) and average irrigation efficiency of 0.71 produces an ET adjustment factor of $(0.7) = (0.5/0.71)$, which is the standard of water use efficiency generally required by this Chapter except that the ETAF for a special landscape area shall not exceed 1.0.
- s. “Hardscape” means any durable material or feature installed in or around a landscaped area, such as pavements or walls. Pools and other water features are considered part of the landscaped area and not considered hardscapes for purposes of this Chapter.
- t. “High water use plants” means turfs, annuals, container plantings, and other plants recognized in the Water Classification of Landscape Species document as available from the State of California as it currently exists or may be amended in the future.
- u. “Hydrozone” means a section or zone of the landscaped area having plants with similar water needs that are served by a valve or set of valves with the same schedule. A hydrozone may be irrigated or non-irrigated.
- v. “Infiltration rate” means the rate of water entry into the soil expressed as a depth of water per unit of time (i.e., inches per hour).
- w. “Invasive species” means non-indigenous species that adversely affect the habitats they invade economically, environmentally, or ecologically.
- x. “Irrigation audit” means an in-depth evaluation of the performance of an irrigation system conducted by a Certified Landscape Irrigation Auditor. An irrigation audit includes, but is not limited to: inspection, system tune-up, system test with distribution uniformity or emission uniformity, reporting overspray or runoff that causes overland flow, and preparation of an irrigation schedule.
- y. “Irrigation efficiency” means the measurement of the amount of water beneficially used divided by the amount of amount applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum irrigation efficiency for purposes of this Chapter is 0.71.
- z. “Irrigation system” means the network of piping, valves, and irrigation heads.
- aa. “Landscape architect” means a person licensed to practice landscape architecture in this State pursuant to Chapter 3.5 (commencing with Section 5615) of Division 3 of the Business and Professions Code.
- bb. “Landscape concept plan” means the portion of a landscape documentation package that includes a design statement, irrigation notes, planting notes, the plant palette, and conforms with the requirements of this Chapter.
- cc. “Landscape construction drawings” means the portion of a landscape documentation package that includes the irrigation plan, plant and soils plan, water management plan, and conforms with the requirements of this Chapter.
- dd. “Landscape documentation package” or “documentation package” means the complete packet of documents required under this Chapter to be submitted to the City. Documentation packages include the landscape concept plan and landscape construction drawings.

- ee. “Local water purveyor” means any entity, including a public agency, city, county or private water company that provides retail water service.
- ff. “Low head drainage” means drainage from a sprinkler that is caused by water flowing down an irrigation system from a higher level of elevation.
- gg. “Low water use plants” means Mediterranean region and native trees, shrubs and groundcovers and other plants recognized as low-water-use by the Water Classification of Landscape Species document as available from the State of California as it currently exists or may be amended in the future.
- hh. “Maximum Applied Water Allowance” or “MAWA” means the upper limit of annual applied water for the established landscaped area. It is based upon the area’s reference evapotranspiration, the ET Adjustment Factor, and the size of the landscaped area. The Estimated Applied Water Use shall not exceed the Maximum Applied Water Allowance.
- ii. “Moderate water use plants” means ornamental trees, shrubs ground covers, perennials, and other plants recognized as moderate-water-use by the Water Classification of Landscape Species document as available from the State of California as it currently exists or may be amended in the future.
- jj. “Mulch” means any organic material such leaves, bark, or inorganic material such as pebbles, stones, gravel, decorative sand or decomposed granite left loose and applied to the soil surface to reduce evaporation.
- kk. “Operating pressure” means the pressure at which an irrigation system of sprinklers is designed by the manufacturer to operate, usually indicated at the base of a sprinkler.
- ll. “Overspray” means the water that is delivered beyond the landscaped areas by the irrigation system onto pavements, walks, structures, or other non-landscaped areas.
- mm. “Planting plan” means a plan submitted with the construction drawings indicating a list and quantity of plants.
- nn. “Potable water” means water meant for human consumption that is treated to legal standards for human consumption.
- oo. “Pressure regulator” means a device used in sprinkler systems for radius and high-pressure control.
- pp. “Project net landscape area,” “landscaped area,” or “landscape project area” means all of the planting areas, turf areas, and water features in a landscape design plan subject to the Maximum Applied Water Allowance calculation. The landscape area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other previous or non-pervious hardscapes, and other non-irrigated areas designated for non-development.
- qq. “Rain sensor” means a system component that detects rainfall and automatically overrides the irrigation system during rain events.
- rr. “Recycled water” means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource. Recycled water shall not be intended for human consumption.
- ss. “Rehabilitated landscapes” means any re-landscaping project that requires a permit, plan check, or design review and meets the requirements of this Chapter.
- tt. “Runoff” means water that is not absorbed by the soil or landscape to which it is applied and flows from the area.

- uu. “SMART irrigation controller” means weather-based or soil moisture-based irrigation controller that monitors and uses information about the environmental conditions at a specific location and landscape to automatically adjust watering schedules.
- vv. “Soil Management Plan” means a plan submitted with the construction drawings indicating results from soil tests and recommended soil amendments.
- ww. “Soil test” means a test done by a soil test lab that indicates at minimum soil texture, water holding capacity, pH, and clay.
- xx. “Soil type” means the classification of soil based on the percentage of its composition of sand, silt, and clay.
- yy. “Special landscape area” means an area of the landscape dedicated to edible plants, areas irrigated with recycled water, and areas dedicated to active play such as parks, sports fields, golf courses, where turf provides a playing surface.
- zz. “Sprinkler head” means a device that delivers water through a nozzle.
- aaa. “Static water pressure” means the pipeline or municipal water supply pressure when water is not flowing.
- bbb. “Submeter” means a separate meter that is located on the private side of the water system and is plumbed to measure all water that flows only through the irrigation system intended for landscaping. The meter is to be used to monitor irrigation water use for landscaping.
- ccc. “Turf” means a surface layer of earth containing mowed grass or grass-like sedge with its roots, a groundcover surface of moved grass or grass-like sedge. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tail fescue are common cool-season turf. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, Carex pansa, and Buffalo grass are common warm-season turf.
- ddd. “Water Efficient Landscape Worksheet” means a worksheet that calculates a site’s water budget.
- eee. “Water feature” means any water applied to the landscape for non-irrigation, decorative purposes. Fountains, streams, ponds, lakes, and swimming pools are considered water features.
- fff. “Water Management Plan” means a plan submitted with the construction drawings as part of the Landscape Documentation Package.
- ggg. “Water schedules” means a schedule of irrigation times throughout a given year.
- hhh. “Water-conserving Landscape Design” means a landscape design developed to conserve water.

13.90.030. Applicability

- a. All planting, irrigation, and landscape-related improvements required by this Chapter shall apply to the following landscape projects:
 - 1. New construction and rehabilitated landscapes for public agency projects and private development projects with a total project net landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review. A landscape area includes pools and other water features but excludes hardscape areas.

2. New construction and rehabilitated landscapes which are developer-installed residential projects with a total project net landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review. A landscape area includes pools and other water features but excludes hardscape areas.
 3. New construction which are homeowner-installed residential projects with a total project net landscape area equal to or greater than 5,000 square feet requiring a building or landscape permit, plan check, or design review. A landscape area includes pools and other water features but excludes hardscape areas.
 4. Existing landscapes that are one acre or more are limited to preparing a water efficient landscape worksheet pursuant to the specifications for existing landscapes in the Landscape Documentation Package.
 5. Recognizing the special landscape management needs of cemeteries, new and rehabilitated cemeteries shall prepare a water efficient landscape worksheet, landscape and irrigation maintenance schedule, and irrigation audit, survey and water use analysis. Existing cemeteries are limited to preparing a water efficient landscape worksheet according to the specifications for existing landscapes in the Landscape Documentation Package.
 6. Special Landscaped Areas, such areas dedicated to edible plants, irrigated with recycled water, or dedicated to active play, shall prepare a water efficient landscape worksheet and Landscape Documentation Package according to the specifications for Special Landscaped Areas.
- b. This Chapter does not apply to:
1. Registered local, state or federal historical sites;
 2. Ecological restoration projects that do not require a permanent irrigation system;
 3. Mined-land reclamation projects that do not require a permanent irrigation system; or
 4. Botanical gardens and arboretums open to the public.

13.90.040. Landscape Design Criteria.

A Landscape Documentation Package prepared by a licensed landscape architect shall include the following landscape design criteria:

- a. Plant Selection and Grouping.

1. Any plant may be used in the landscape, providing the EAWU does not exceed the MAWA and that the plants must meet the specifications set forth in this subsection.
2. Plants which have similar water needs shall be grouped together in distinct hydrozones.
 - i. Low and moderate water use plants can be mixed but the entire hydrozone will be classified as moderate water use for MAWA calculations.
 - ii. High water use plants shall not be mixed with low or moderate water use plants.
3. Plants shall be selected appropriately based upon their adaptability to the climate, geologic, and topographical conditions of the site. Protection and preservation of existing native species and natural areas is encouraged. The planting of appropriate trees is encouraged.
4. The minimal use of turf.
 - i. Turf areas shall be used wisely in response to functional needs and shall not exceed the MAWA.
 - ii. Where turf is installed, the use of warm season turf is strongly encouraged.
 - iii. Turf is not allowed on slopes greater than twenty-five percent where the toe of the slope is adjacent to an impermeable hardscape and where twenty-five percent means one foot of vertical elevation change for every four feet of horizontal length.
5. Fire prevention needs shall be addressed in areas that are fire prone. Design should be consistent with regulations from the Fire Department.
6. Invasive species of plants as listed by the California Invasive Plant Council should be avoided especially near parks, buffers, greenbelts, water bodies, and open spaces because of their potential to cause harm to sensitive areas.
7. Encourage the appropriate use of mulch within developed landscapes to retain moisture.
 - i. Stabilizing mulching products shall be used on slopes greater than 3:1.
 - ii. A minimum layer of two inches (2") of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping groundcovers or areas where mulch is not advisable. The plans shall identify the type of mulch and application depth.

b. Water Features.

1. Recirculating water systems shall be used for decorative water features.
2. Where available, recycled water shall be used as the source for water fixtures (excluding swimming pools and spas).
3. The surface area of a water feature will be included in the MAWA calculation with the evaporation rate.

13.90.050. Irrigation Requirements.

- a. All irrigation systems shall be designed to prevent runoff, over-spray, low head drainage and other similar conditions. Soil types and infiltration rates shall be considered when

designing irrigation systems. Irrigation systems shall be designed, constructed, managed, and maintained to achieve as high an overall efficiency as possible.

- b. Dedicated and separate landscape water meters shall be installed for all projects greater than 5,000 square feet, except for single-family residences. Dedicated landscape water meters are highly recommended on landscape areas less than 5,000 square feet to facilitate water management.
- c. All irrigation systems shall include:
 - 1. A SMART irrigation controller, or other equivalent technology which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions, shall be required. The planting areas shall be grouped and irrigated in relation to hydrozones based on similarity of water requirements.
 - 2. Anti-drain check valves shall be installed to prevent low-head drainage in sprinkler heads.
 - 3. A pressure regulator when the static pressure exceeds the maximum recommended operating pressure of the irrigation system.
 - 4. A rain sensor with an automatic rain shut-off feature shall be required.
 - 5. A backflow prevention device.
 - 6. Connection to reclaimed water system if subject property is located within 150 feet of a public reclaimed water distribution system, and subject to appropriate health standards.
 - 7. Installation that conforms to the current Uniform Plumbing Code.
 - 8. Irrigation shall comply with the City's water conservation regulations in Chapter 13.70 of this Code.

13.90.060. Soil and Grading Requirements.

- a. Soil testing shall be performed after mass grading if applicable, prior to landscape installation to ensure the selection of appropriate plant material that is suitable for the site, and reported in a soil management plan. The soil management plan shall include:
 - 1. Determination of soil texture, indicating the available water holding capacity.
 - 2. An approximate soil infiltration rate measure or derived from soil texture/infiltration rate tables. A range of infiltration rates shall be noted where appropriate.
 - 3. Measure of pH and total soluble salts.
 - 4. Recommended amendments.
- b. Grading on-site shall be designed to minimize unnecessary soil compaction, erosion and water waste. Grading plans must satisfy all other applicable laws related to grading and be submitted as part of the landscape documentation package.
- c. Where slopes exceed ten percent, a grading plan drawn at the same scale as the planting plan that accurately and clearly identifies finished grades, drainage patterns, pad elevations, spot elevations, and stormwater retention improvements.

Section 13.90.070. Submittal Requirements.

Applicants subject to the requirements of this Chapter shall submit a complete Landscape Documentation Package to the Administrator. The Package may be submitted in two parts: A Landscape Concept Plan, which is submitted with an application for a zoning approval or similar approval and Landscape Construction Drawings, submitted with the plan check or building permit application. All applications and plans shall conform to the design criteria, irrigation, soils and grading requirements, recycled water requirements and water budget requirements set forth in this Chapter.

- a. The Landscape Concept Plan shall include:
 1. Design statement, irrigation notes, planting notes, and a conceptual plant palette identification of proposed hydrozones.
 2. MAWA circulation for the landscape project area (including water features).
 3. ETWU calculation for the landscape project area.
 4. Hydrozone information.
- b. The Landscape Construction Drawings shall include:
 1. Compliance with the design standards and specifications contained in this Chapter.
 2. Compliance with the Landscape Concept Plan. If the construction drawings differ from the Landscape Concept Plan, the Applicant may be required to submit a revised Landscape Concept Plan.
 3. An Irrigation Plan. The Irrigation Plan shall be a separate document from the planting plan. The Irrigation Plan shall be prepared pursuant to the requirements in this Chapter and include pressure calculations and the location, installation details, and specifications of control valves, irrigation heads, piping, irrigation controllers, and power supply.
 4. A Planting Plan & Soils Plan which shall include, but not be limited to:
 - i. A description of any existing plant material to be retained or removed.
 - ii. A plan showing the planting areas and hydrozones, plant spacing, plant location, and size, natural features, water features and all paved areas.
 - iii. A legend listing the common and botanical plant names and total quantities by container size and species.
 - iv. A description of the seed mixes with application rates and relevant germination specifications.
 - v. Soil management plan, including the soil test results and recommendations.
 - vi. The grading plan shall be submitted for reference.
 5. A Water Management Plan which shall include, but not be limited to:
 - i. An introduction and statement of site conditions as described in this Section or in the Landscape Concept Plan.
 - ii. An introduction and statement of site conditions as described in this Section or a Landscape Concept Plan.
 - iii. Identification of the party or parties responsible for implementation of the Water Management Plan.

- iv. The anticipated water requirements in inches per year, and water budget for the various hydrozones identified in the Landscape Concept Plan to include calculations demonstrating an overall water budget that requires no more irrigation than the 0.7 of the ET adjustment factor.
 - v. A description of the water delivery systems, including the type of irrigation system to be used; water conservation methods to be applied; and precipitation rates for each hydrozone.
 - vi. Season irrigation water schedules or procedures for programming of proposed SMART controllers.
 - vii. A maintenance plan for the ongoing operation and maintenance of the irrigation system.
 - viii. All applications for model homes shall include the nature of public information documents and signage that will be placed at model homes describing water conservation principles used in the landscaping for the model home.
- c. An applicant submitting a Landscape Documentation Project shall include with the documentation package any fees established by the City to cover the City's cost to review an submitted documents.

Section 13.90.080. Compliance and Enforcement.

The Community and Economic Development Department shall have the duty and authority to administer the provisions of this Chapter until such time the Certificate of Completion is completed. The Public Works Department shall work with the Community and Economic Development Department to ensure compliance with other provisions in this Code and with State law regarding the conservation of water. The Public Works Department shall also have the duty and authority to administer the provisions of this Chapter for any property that has had its Certificate of Completion certified.

- a. A project must proceed with the following review and approval process:
- 1. Prior to the issuance of a building permit, a complete Landscape Documentation Package prepared by an independent licensed landscape architect shall be submitted to the Administrator for review and approval. The licensed landscape architect shall ensure that all components of the package adhere to the requirements of this Chapter. Any documentation packages submitted without the signature of a licensed landscape architect shall not be accepted for review.
 - 2. Prior to issuance of a Certificate of Occupancy or final inspection for a project subject to this Chapter, a Certificate of Completion shall be submitted to the Administrator certifying that the landscaping has been completed in accordance with the approved Planting and Irrigation Plans for the project. The Certificate of Completion shall be signed by a licensed landscape architect and shall indicate the following:
 - i. The landscaping has been installed in conformance with the approved Planting and Irrigation Plans;

- ii. The SMART irrigation controller has been set according to the irrigation schedule;
 - iii. The irrigation system has been adjusted to maximize irrigation efficiency and eliminate over-spray and run-off; and
 - iv. A copy of the irrigation schedule has been given to the property owner.
- 3. Upon receipt of a Certificate of Completion, the City shall either approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the City shall not be obligated to issue an occupancy permit and will provide information to the project applicant regarding necessary corrections, appeal, or other assistance.
- 4. Upon notice of the Applicant, the Administrator shall have the right to enter the project site to conduct inspections for the purpose of enforcing this Chapter, before, during, and immediately after installation of the landscaping.
- 5. A copy of the completed Landscape Documentation Package shall be given to the Planning Division and Public Works Department. If the property is found to be in excess of their established MAWA, the property shall be subject to an irrigation audit.
- b. Irrigation of all landscaped areas shall be conducted in a manner conforming to the rules and requirements, and shall be subject to penalties and incentives for water conservation and water waste prevention as determined and implemented by the local water purveyor or as mutually agreed by local water purveyor and the City. The City Public Works Department may require mandatory irrigation audits at the property owners' expense to demonstrate that the landscaping conforms to the MAWA.
- c. An irrigation audit shall proceed as follows:
 - 1. The applicant shall submit an irrigation audit to the City upon the Public Works Department's request pursuant to this Chapter.
 - 2. In the event that the applicant does not submit an irrigation audit to the City within sixty days after the Public Works Department has requested an irrigation audit be submitted, the Public Works Department may conduct an irrigation audit and charge the property owner any and all fees associated with the irrigation audit.
- d. In addition to any other remedies provided for in the Code, any violation of this Chapter and failure to comply with the terms of the Landscape Documentation Package and Certificate of Completion submitted to the City pursuant to this Code may be enforced by a civil action brought by the City.
 - 1. In any such action, the City may seek, and the Court may grant, as appropriate, any or all of the following remedies:
 - i. A temporary and/or permanent injunction;

- ii. An assessment of the violator for the costs of any investigation which led to the establishment of the violation and for the reasonable costs of preparing and bringing legal action under this Chapter;
 - iii. Any other costs incurred in enforcing the provisions of this Chapter;
 - iv. Any other action the City deems appropriate to protect the general welfare and the City's water supplies, and to reduce water consumption in accordance with this Chapter and with the declares policies and law of the State.
2. Assessments under this Section shall be paid to the City to be used exclusively for costs associated with implementing or enforcing this Chapter.
- e. In addition to any other remedies provided for in this Chapter, any violation of this Chapter shall constitute a misdemeanor and be punishable by a fine of not more than five hundred dollars or a term in County jail not to exceed six months. A violation may also be an infraction punishable by a fine not to exceed two hundred fifty dollars. Any person shall be deemed guilty of a separate offense for each and every day during any portion of which any violation of this Chapter is committed, continued, or permitted by such person.

Section 13.90.090. Landscape and Irrigation Maintenance.

Landscape and irrigation improvements required by this ordinance shall be continually maintained in optimal conditions at all times. Maintenance shall include but not be limited to:

1. Fertilizing;
2. Irrigation head adjustments, repairs and replacements, per original approval;
3. Maintaining adequate water pressure;
4. Pruning and weeding all landscaping within the property;
5. Removing all dead plant material;
6. Replacing all dead plant material, per original approval;
7. Replenishing mulch;
8. Resetting, repairing or replacing the SMART automatic controller, per original approval;
9. Valve adjustments , repairs and replacements, per original approval.

Section 13.90.100. Recycled Water.

- a. The installation of recycled water irrigation systems (i.e. dual distribution systems) shall be required to allow for the current and future use of recycled water, unless a written exemption by the City's Public Works Department has been granted stating that recycled water will not be available in the foreseeable future.
- b. Irrigation systems shall make use of recycled water unless a written exemption has been granted by the Public Works Department stating that recycled water meeting all public health codes and standards is not available and will not be available in the foreseeable future or where the physical constraints or functional difficulties would make the use of recycled water irrigation systems impracticable.

- c. The Public Works Department may grant an exemption from the use of recycled water if the use of recycled water would not meet all relevant public health codes and standards, if the use of recycled water would not be available in the foreseeable future through the local water purveyor, or where the physical constraints or functional difficulties would make the use of recycled water systems impracticable.
- d. The recycled water irrigation systems shall be designed in accordance with all local agency and State Codes.

Section 13.90.110. Stormwater Management.

- a. Stormwater management combines practices to minimize runoff and water waste to recharge groundwater, and to improve water quality. Implementing stormwater best management practices into the landscape, irrigation, and grading design plans to minimize runoff, and increase retention and infiltration are highly recommended onsite.
- b. Project applicants shall refer to the City or Regional Water Quality Control Board for information addressing stormwater ordinances and stormwater management plans.

Section 13.90.120. Existing Landscapes.

- a. Irrigation of all landscaped areas shall be conducted in a manner conforming to the rules and requirements and shall be subject to penalties and incentives for water conservation and water waste prevention, as determined and implemented by the local water purveyor and as may be mutually agreed by the City.

The City and/or the regional or local water purveyor may administer programs such as irrigation water use analyses, irrigation surveys and/or irrigation audits, tiered water rate structures, water budgeting by parcel, or other approaches to achieve landscape water use efficiency community-wide to a level equivalent to or less than would be achieved by applying a MAWA calculated with an ETAF of 0.8 to all landscaped areas in the City over one acre in size.

- b. The architectural guidelines of a common interest development, including apartments, 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.

Section 13.90.130. Recovery of Costs.

- a. The City Manager or his or her designee shall serve an invoice for costs upon the person or responsible person who is subject to a notice of a violation, a cease and desist order, or an administrative compliance order. An invoice for costs shall be immediately due and payable to the City. If any person or responsible person fails to either pay the invoice for costs or appeal successfully the invoice for costs in accordance to the provisions in this Chapter, then the City may institute collection proceedings. The invoice for costs may include reasonable attorneys' fees.

The City shall impose any other penalties or regulatory fees, as fixed from time to time by resolution of the City Council, for a violation or enforcement of this Chapter.

- b. In addition to the costs which may be recovered pursuant to the Code, and in order to recover the costs of the water efficient landscape regulatory program set forth in this Chapter, the City Council may from time to time, fix and impose by resolution fees and charges. The fees and charges may include, but are not limited to, fees and charges for:
 1. Any visits of any enforcement officer, or any other City staff or authorized representative of the City for time incurred for inspections of the property;
 2. Any monitoring, inspection, and surveillance procedures pertaining to enforcement of this Chapter;
 3. Any audits conducted by the City pursuant to this Chapter;
 4. Enforcing compliance with any term or provision of this Chapter;
 5. Any other necessary and appropriate fees and charges to recover the cost of providing the City's water efficient landscape regulatory program.

Section 13.90.140. Appeals.

- a. The applicant or any affected person may appeal the final decision of staff regarding any approvals required under this Chapter by filing a written notice of appeal to the City Council within ten business days after the date of the final decision in writing.
- b. An appeal, established by the City, shall be required for each appeal under this Section. No appeal shall be placed on the agenda of any meeting of the City Council until such fee has been paid.

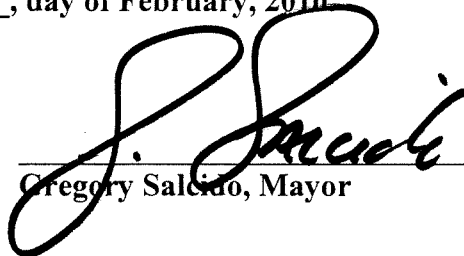
SECTION 2. The City Council hereby declares that it would have passed this ordinance sentence by sentence, paragraph by paragraph, and section by section, and does hereby declare that the provisions of this ordinance are severable and, if for any reason any sentence, paragraph, or section of this ordinance shall be held invalid, such decision will not affect the validity of the remaining parts of this ordinance.

SECTION 3. The City Council hereby determines that this Ordinance is exempt from review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.), because pursuant to State CEQA Regulation 15307 (14 Cal. Code Regs., § 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for protection of the environment. The adoption of this Ordinance will result in the enhancement and protection of water resources in the City, and will not result in cumulative adverse environment impacts. It is therefore exempt from the provisions of CEQA. The City Council hereby directs the City Manager or designee to prepare and file a Notice of Exemption as soon as possible following adoption of this Ordinance.

SECTION 4. The City Clerk shall certify to the adoption of this Ordinance. The City Council hereby finds and determines that there are no newspapers of general circulation both published and circulated within the City and, in compliance with Section 36933 of the

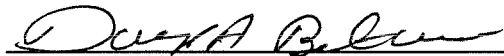
Government Code directs the City Clerk to cause said Ordinance, within fifteen (15) days after its passage, to be posted in at least five (5) public places within the City. This Ordinance shall take effect thirty (30) days after its adoption.

ADOPTED AND APPROVED this 9th, day of February, 2010.




Gregory Salcido, Mayor

ATTEST:



Daryl A. Betancur, City Clerk

APPROVED AS TO FORM:



Arnold M. Alvarez-Glasman, City Attorney

AYES:	Archuleta, Armenta, Camacho, Salcido
NOES:	None
ABSENT:	None
ABSTAIN:	None

WATER EFFICIENT LANDSCAPE WORKSHEET

Please complete the entire worksheet as it is part of the Landscape Documentation Package that is required to be submitted pursuant to Chapter 13.90 of the Pico Rivera Municipal Code.

SECTION A. PROJECT INFORMATION

Date: _____

Project Name: _____

Project Applicant: _____

Project Address and Location:

Street Address	Parcel Number
City	Tract or Lot Number(s)
State	Zip Code

Please use the checklist below to indicate the completion of the Landscape Documentation Package.

SECTION B. PROJECT INFORMATION AND CHECKLIST

Landscape Documentation Package

- ☐ Water Efficient Landscape Worksheet
- ☐ Soil Management Plan
- ☐ Landscape Design Plan
- ☐ Irrigation Design Plan
- ☐ Planting and Soils Plan
- ☐ Grading Design Plan

Please fill in the information to describe the landscape project, where applicable:

Total Project Area: _____

Total Irrigated Landscape Area: _____

Turf Area: _____

Non-Turf Area: _____

Recreational Areas: _____

Areas permanently and solely dedicated to edible plants: _____

Total Non-Irrigated Landscape Area: _____

Total Special Landscape Area: _____

Water Supply Type:

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Potable Water | <input type="checkbox"/> Mixed Use |
| <input type="checkbox"/> Recycled Water | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Graywater | |
| <input type="checkbox"/> Groundwater or Well Water | |

Project Type: Please check only one

- | | |
|---|---|
| <input type="checkbox"/> Public or community facility | <input type="checkbox"/> Single Family Residence |
| <input type="checkbox"/> Commercial | <input type="checkbox"/> Multi-Family Residential |
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Mixed Use |
| <input type="checkbox"/> Institutional (i.e., school) | |
| <input type="checkbox"/> Other _____ | |

Project Contacts – The project applicant and other individuals may receive inquiries or notifications of all proceedings regarding the Water Efficient Landscape Worksheet from the City. Please provide the name, address, email address, and telephone, etc. of each person to receive such inquiries and notifications.

1. Project Applicant

Name	Telephone and Fax Number	
Title	Email address	
Company	Street Address	
City	State	Zip Code

2. Property Owner

Name	Telephone and Fax Number	
Title	Email address	
Company	Street Address	
City	State	Zip Code

3. Licensed Landscape Architect

Name	Telephone and Fax Number	
Title	Email address	
Company	Street Address	
City	State	Zip Code

4. Certified Irrigation Designer

Name	Telephone and Fax Number	
Title	Email address	
License #	Business License #	
Company	Street Address	
City	State	Zip Code

5. Landscape Installation Contractor

Name	Telephone and Fax Number	
Title	Email address	
State License #	Business License #	
Company	Street Address	
City	State	Zip Code

6. Landscape Maintenance Contractor

Name	Telephone and Fax Number	
Title	Email address	
State License #	Business License #	
Company	Street Address	
City	State	Zip Code

7. Local retail water purveyor

Name of contact at water purveyor	Telephone No.	
Title	Fax No.	
Name of Company or Water Purveyor	Street Address	
City	State	Zip Code

SECTION C. WATER USE EFFICIENCY STATEMENT

Provide a narrative summary of the water use efficiency practices applied to the landscape project and answer all of the following questions (attach additional sheets if necessary):

Narrative Statement: _____



- (1) Did you review Chapter 13.90 of the Pico Rivera Municipal Code to learn about the criteria and specifications for landscape design plans? _____
- (2) Did you coordinate with the City or local water purveyor on the landscape plan? _____

- (3) Which criteria and specifications did you apply to the landscape design plan? _____

- (4) Did you review Chapter 13.90 to learn about the criteria and specifications for the irrigation design plan? _____
- (5) Did you coordinate with the City or local water purveyor on the irrigation design plan? ____

- (6) Which criteria and specifications did you apply to your irrigation design plan? _____

- (7) Did you ask for assistance from the City or local water purveyor to calculate a project water budget? _____



(8) Did you receive any water efficient landscape publications from the City or local water purveyor, and if so, which ones? _____

(9) How did you assure the overall quality of the irrigation system? _____

(10) How will you manage the irrigation system for optimum operation and performance? _____

(11) How will you manage the irrigation system to respond to the changing requirements for water in the landscape? _____

(12) Did you apply any stormwater best management practices to the design, and if so, which ones? _____

- (13) If recycled water was available, did you design and install a dual distribution system? _____

SECTION D. MAXIMUM APPLIED WATER ALLOWANCE

(1) $MAWA = (ET_o)(0.62)[0.7 \times LA] + (0.3 \times SLA)$

Where:

MAWA = Maximum Applied Water Allowance (gallons per year)
ET_o = Reference Evapotranspiration
0.7 = ET Adjustment Factor (ETAF)
LA = Landscaped Area includes Special Landscape Area (square feet)
0.62 = Conversion factor (to gallons per square foot)
SLA = Portion of the landscape area identified as Special Landscape Area
0.3 = Additional ET Adjustment Factor for Special Landscape Area

- (2) Example MAWA calculation: A hypothetical landscape project in Pico Rivera, CA with an irrigated area of 50,000 square feet without any Special Landscape Area (SLA = 0, no edible plants or recreational areas or use of recycled water). To calculate MAWA, the annual (ET_o) value for Pico Rivera is 39.7.

To convert from gallons per year to hundred-cubic-feet per year: 100 cubic feet = 748 gallons.

- (3) Show calculations:

MAWA for Total Landscape Area: _____ gallons

SECTION E. ESTIMATED WATER USE FOR HYDROZONES AND ESTIMATED TOTAL WATER USE

Estimated Total Water Use

Estimated Total Water Use shall be calculated using the equation below. Estimate Total Water Use shall not exceed MAWA.

$$ETWU = (ET_o)(0.62)((PF \times HA)/(IE) + SA)$$

ETWU =	Estimated total water use per year (gallons)
ET _o =	Reference Evapotranspiration (inches)
PF =	Plant Factor ¹
HA =	Hydrozone Area (high, medium, and low water use areas) (square feet)
SLA =	Special Landscape Area (square feet)
0.62 =	Conversion Factor
IE =	Irrigation Efficiency (minimum 0.71)

Attach calculations for each hydrozone.

Estimated Total Water Use: _____

SECTION F. HYDROZONE INFORMATION

Section F(i). Hydrozone Map

- (1) Attach a hydrozone map to the Water Efficient Landscape Worksheet. Hydrozones shall be designed by number, letter or other designation. Designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Table. This map can also assist with inspections of the irrigation system and programming the controller.

¹ The plant factor shall be from the Water Use Classification of Landscape Species (WUCOLS) published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation 2000, which are as follows:

- i. Low water use plants = 0 to 0.3
- ii. Moderate water use plants = 0.4 to 0.6
- iii. High water use plants = 0.7 to 1.0

Section F(ii). Hydrozone Table

(2) Hydrozone Table

Controller #	Valve Circuit	Plant Types ²	Irrigation Method** ³	Area (square feet)	% Landscape Area

² Plant type may include: cool season turf, warm season turf, high water use plants, moderate water use plants, or low water use plants.

³ Irrigation method may include spray, rotor, bubbler, or drip.

Section F(iii). Hydrozone Calculation Summary.

Hydrozone	Total Square Feet	% of Total Landscape Area

SIGNATURES

I further acknowledge and agree under penalty of perjury under the laws of the State of California that the information contained in this Water Efficient Landscape Worksheet is true and correct.

Project Applicant (Owner or Authorized Agent)

Date

Licensed Landscape Architect

Date