



CITY OF EL PASO DE ROBLES

"The Pass of the Oaks"

December 21, 2009

Mr. Simon Eching
California Department of Water Resource
Water Use and Efficiency Branch
P.O. Box 942836
Sacramento, CA 94236-0001

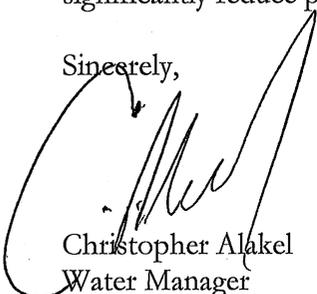
Re: Submittal of City of Paso Robles Water Efficient Landscape Ordinance

Dear Mr. Eching:

The City of Paso Robles is pleased to submit to the California Department of Water Resources the enclosed Water Efficient Landscape Ordinance. The Paso Robles City Council adopted the ordinance on December 15, 2009, in response to the requirements of AB 1881.

The Paso Robles ordinance is based on the state's model landscape ordinance and is customized to fit local circumstances, conditions and staffing capabilities. The ordinance will be at least as effective as the state's model ordinance. The Paso Robles ordinance goes beyond the state's model ordinance by limiting the amount of turf landscaping in new residential and commercial development as a key means of reducing landscape water use. The ordinance's turf limitations, combined with improvements in irrigation efficiency, will significantly reduce per capita water use in new development.

Sincerely,



Christopher Alakel
Water Manager

Enclosure

ORDINANCE NO. 964 N.S.

AN ORDINANCE OF THE CITY OF EL PASO DE ROBLES
ADDING SECTION 21.22.B,
WATER EFFICIENT LANDSCAPE ORDINANCE

WHEREAS, The Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881) requires cities to adopt landscape water conservation ordinances by January 1, 2010; and

WHEREAS, in accordance with this law, the California Department of Water Resources prepared a Model Water Efficient Landscape Ordinance (MWELO); and

WHEREAS, all cities and counties have until January 1, 2010, to either adopt the state's MWELO or their own local water efficient landscape ordinance; and

WHEREAS, a draft local ordinance has been prepared and provides requirements that:

- Are as effective at achieving water savings as the MWELO; and
- Reduces the costs for new homes compared to the State's requirements; and.
- Reduces the City's administrative costs compared to the State's MWELO approach.

and

WHEREAS, this Zoning Ordinance Amendment would include a new Section 21.22B, Water Efficient Landscape Regulations; and

WHEREAS, at its meeting on November 10, 2009, the Planning Commission took the following actions regarding this ordinance:

- a. Considered the facts and analysis, as presented in the staff report prepared for this project;
- b. Conducted a public hearing to obtain public testimony on the proposed ordinance;
- c. Recommended that the City Council approve the proposed ordinance; and

WHEREAS, based on consideration of information received at its meeting of December 1, 2009, the City Council took the following actions regarding this ordinance:

- a. Considered the facts and analysis, as presented in the staff report prepared for this project;
- b. Conducted a public hearing to obtain public testimony on the proposed ordinance;
- c. Considered the recommendation from the Planning Commission meeting on November 10, 2009;
- d. Introduced said ordinance for the first reading; and

WHEREAS, on December 15, 2010, the City Council held a second reading of said ordinance.

NOW, THEREFORE, the City Council of the City of El Paso de Robles does hereby ordain as follows:

SECTION 1. Council Findings.

The Council finds that:

- a. It is necessary to amend the Zoning Ordinance in order to comply with the Water Conservation in Landscaping Act of 2006 (Assembly Bill 1881);

- b. The proposed code amendment would meet the City's policy to promote the conservation and efficient use of water and to prevent waste of this valuable resource;
- c. Consistent with California Law, the purpose of this ordinance is to promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
- d. Consistent with California Law, the purpose of this ordinance is to establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects.

- e. The proposed ordinance will achieve an overall water use reduction of approximately 19 percent compared to development without the landscape restrictions.

- f. The 19 percent reduction is estimated to be at least as effective as the States Model Water Efficient Landscape and Irrigation Ordinance as a result of the turf limitations and limitations on overhead spray irrigation for all projects including single family residential.

SECTION 2: A new Chapter 21.22B, Water Efficient Landscape Ordinance will be added to Title 21, Zoning Code, as shown in Exhibit A.

SECTION 3: A revision to Chapter 21.16, E.340. Landscape Requirements for Front Yards (R-1 Zone), see **bold language** below:

- A. Within one year of issuance of a certificate of occupancy, the holder of a building permit for a single-family dwelling shall have installed front yard landscaping in all nonpaved portions of the area between the front of the home and the street upon which the home faces. The landscaping may consist of lawn, ground cover, flowers, gravel, bark or other equivalent decorative materials. Bare ground and/or weeds are not acceptable landscaping treatments. **Please refer to Chapter 21.22B, Water Efficient Landscape Ordinance for rules and regulations regarding landscape and irrigation, including limitations on the percentage of turf/lawn that can be placed in the front yard.**

- B. In order to ensure enforcement of this provision, if required landscaping is not completed prior to issuance of a certificate of occupancy, a security deposit, in a form and an amount to be established by city council resolution, shall be submitted prior to issuance of the certificate of occupancy. The costs of inspecting the landscaping, as required by this section, shall be charged against the security deposit. The remaining deposit shall be refunded upon compliance with the requirements of this section.

- C. Upon completion of landscaping installation, the holder of the building permit shall request a building inspection; upon approval of the installed landscaping, the permit holder is released from further responsibility regarding the landscaping. Following approval of landscaping installation, it shall thereafter be the responsibility of the property owner to ensure that the installed landscaping is adequately maintained. Inadequately maintained landscaping may be grounds for public nuisance abatement. Judgment of the adequacy of installed and/or maintained landscaping shall be the responsibility of the city planner, who shall use reasonable discretion. Exceptions from the requirements to landscape front yard areas may be granted by the development review committee upon demonstration that such landscaping would not be reasonable or appropriate based on property size or location.

SECTION 4: A revision to Chapter 21.16.I.290.C Landscape Requirements (Multi-family Residential Zones):

- A. Landscaping. Landscape plans shall be approved by the Development Review Committee to meet the standards listed below.

- 1. Protection and Use of Existing Vegetation. Development on hillside lots shall, to the maximum extent possible, protect and use existing vegetation. Existing groundcover and shrubs should not be removed from lands with steep slopes (thirty percent or greater) unless necessary for weed abatement to remove fire hazards. Existing groundcover

should not be removed from lesser slopes unless replaced with other vegetation. Existing groundcover shall be protected from damage during construction.

2. New Landscaping. All development on hillside lots shall provide new landscaping as follows:
 - a. Erosion Control. All graded or cleared slopes shall be landscaped with groundcover designed to hold the slope and to mitigate the visual impacts associated with the bare ground. Groundcover on slopes with vertical heights greater than eight feet shall be irrigated.
 - b. Architectural Enhancement. Trees and shrubs shall be planted to provide screening under decks, along walls, and where required as a condition of site plan or development plan review to assist in providing visual relief.
 - c. Street Trees. Street trees shall be planted as required by Title 10 of this code.
 - d. Irrigation. All landscaping required for erosion control, street trees and architectural enhancement shall be irrigated except where the development review committee explicitly approves otherwise.
 - e. Plant Species. New landscaping shall incorporate plant species which meets the following criteria:
 - i. New vegetation should be compatible with natural vegetation and that on surrounding properties.
 - ii. All planting within thirty feet of buildings should be fire-retardant.
 - iii. For water conservation purposes, drought-tolerant species are encouraged.
 - f. Completion of Landscaping. All landscaping and irrigation required for erosion control, street trees and architectural enhancement shall either be completed prior to issuance of a certificate of occupancy or security such as a performance bond be posted.
 - g. **Please refer to Chapter 21.22B, Water Efficient Landscape Ordinance for rules and regulations regarding landscape and irrigation, including limitations on the percentage of turf/lawn that can be placed in the landscape areas.**

SECTION 5. Publication. The City Clerk shall cause this ordinance to be published once within fifteen (15) days after its passage in a newspaper of general circulation, printed, published and circulated in the City in accordance with Section 36933 of the Government Code.

SECTION 6. Severability. If any section, subsection, sentence, clause, or phrase of the Ordinance is, for any reason, found to be invalid or unconstitutional, such finding shall not affect the remaining portions of this Ordinance.

The City Council hereby declares that it would have passed this Ordinance by section, subsection, sentence, clause, or phrase irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases are declared unconstitutional.

SECTION 7. Inconsistency. To the extent that the terms or provisions of this Ordinance may be inconsistent or in conflict with the terms or conditions of any prior City ordinance(s), motion, resolution, rule, or regulation governing the same subject matter thereof, such inconsistent and conflicting provisions of prior ordinances, motions, resolutions, rules, and regulations are hereby repealed.

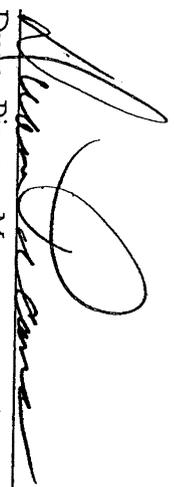
Introduced at a regular meeting of the City Council held on December 1, 2009, and passed and adopted by the City Council of the City of El Paso de Robles on the 15th day of December, 2009 by the following vote:

AYES: Gilman, Hamon, Steinbeck, Strong, and Picanco

NOES:

ABSTAIN:

ABSENT:



Duane Picanco, Mayor

ATTEST:



Lonnie Dolan, Deputy City Clerk

Exhibit A

Chapter 21.22B

LANDSCAPE and IRRIGATION ORDINANCE

Sections:

| | |
|------------|--|
| 21.22B.010 | Purpose |
| 21.22B.020 | Definitions |
| 21.22B.030 | Applicability |
| 21.22B.040 | Turf Limitations for New Construction and Rehabilitated Landscapes |
| 21.22B.050 | Landscape and Irrigation System Design Requirements |
| 21.22B.010 | Purpose |

Consistent with California State Law, it is the purpose of this ordinance to: (a) promote the values and benefits of landscapes while recognizing the need to use water resources as efficiently as possible; (b) establish a structure for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects.

21.22B.020 Definitions (Definitions related to the technical information of the Landscape Documentation Package are provided as Attachment 5, of the Landscape and Irrigation Design Guide.);

“Certificate of Completion” means the document required under Section 21.22B.050.B.4.

“Landscape Architect” means a person who holds a license to practice landscape architecture in the State of California as described in the Business and Professions Code, §5615.

“Landscaped area” means all 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 pervious or non-pervious hardscapes, and other nonirrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

“Landscape contractor” means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

“Landscape Documentation Package (LDP)” means the documents required under Section 21.22B.050.B.3.

“Landscape project” means total area of landscape in a project as defined in “landscape area” for the purposes of this ordinance.

“Multi-family Residential” means two or more attached residential units. Landscape areas for multiple detached units on one parcel will be considered single family units for the purposes of this Ordinance.

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

“Permit” means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

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

“Project applicant” means the individual or entity submitting a Landscape Documentation Package required under Section 21.22B.050.B.3, to request a permit, plan check or design review from the local agency. A project applicant may be the property owner or his or her designee.

“Rehabilitated landscape” means any re-landscaping project that requires a permit, plan check, or design review.

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

“Single Family Residential” one home on one lot, or multiple detached units on one lot (not attached).

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

“Turf” means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

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

“Water conserving plant species” means a plant species identified as having a low plant factor.

21.22B.030 Applicability

The requirements within this Chapter apply to new construction and rehabilitated landscapes for commercial, industrial and residential projects that are subject to the development review process and/or a building permit.

A. Development Review Process

In conjunction with the submittal of a project for development review (tentative parcel map, tentative tract, development plan or conditional use permit), conceptual landscape plans shall be provided that demonstrate that the design of the landscaping complies with the standards within this Ordinance. These plans shall be reviewed by City Staff during the development review process.

B. Building Permit

In conjunction with the submittal of a project for building plan check, final landscape and irrigation plans, in compliance with this Ordinance, shall be submitted with the project. After a plan check review by the Planning and/or Public Works Departments for compliance with this Ordinance, a Building Permit may be issued. Fees consistent with the fees established for building plan check will be applied for staff review of the landscape and irrigation plan.

C. Certificate of Completion

Once the landscape and irrigation plans and necessary documentation has been provided in substantial compliance with the LDP, a Certificate of Completion may be issued. A Certificate of Completion shall be issued prior to the project receiving a Certificate of Occupancy by the Building Division.

D. Landscape and Irrigation Installation

For both projects less than or greater than 1 acre, the landscape and irrigation shall be installed per the approved plans prior to the issuance of a Certificate of Occupancy or “final” of the building/project.

E. Landscape Bond

For projects that have a landscape area of 1-acre or greater and require a LDP, a bond may be posted which would allow a building to be finalized and a Certificate of Occupancy to be issued prior to the site landscape and irrigation being completed. The bond shall be based on an estimate for labor and materials to complete the landscape and irrigation project per the approved plans, plus an additional 25-percent. The applicant shall fill out the Landscape Bond Security Bond Agreement along with the necessary bonding information, to the Public Works Department for review and approval to determine the specific bond amount.

For projects that have a landscape area of less than 1-acre which does not require the LDP, the Community Development Director or his or her designee may approve a bond to be posted which would allow a building to be finalized and a Certificate of Occupancy to be issued prior to the site landscape and irrigation being completed.

21.22B.040 Turf Limitations for New Construction and Rehabilitated Landscapes.

A. All new construction projects (residential, commercial, industrial) shall comply with the following limitations:

1. Turf areas less than 8 ft. in width in any direction are prohibited, unless subsurface irrigation is used and maximum turf areas do not exceed the percentages outlined in this ordinance.
2. Turf shall be prohibited within the public right-of-way, including parkways.
3. Developments shall be graded to maximize the on-site distribution of runoff to planted areas.
4. For non-turf areas, drip irrigation methods and low water use plants are recommended.
5. Covenants, Conditions and Restrictions (CCRs) shall not require turf landscaping nor have the effect of prohibiting low-water use landscaping and shall include by reference and/or attachment a copy of Chapter 21.22B, City of Paso Robles Landscape Ordinance.

B. Commercial and Industrial projects:

1. The area planted in turf grass and irrigated with spray irrigation shall be limited to 10 percent of the development's landscaped area.
2. Exceptions: This section does not apply to Cemeteries, plant collections as part of botanical gardens and arboreums open to the public, City parks, and school sports fields.

C. Single Family Residences

1. Turf grass installed with spray irrigation in residential front yards shall be limited to 25 percent of the landscapable area.
2. The common areas in residential subdivisions planted in turf (including landscape and lighting district areas) shall be limited to 10 percent of the landscaped area. (Excluding active play areas such as ball fields, playgrounds, and picnic areas).

D. Model Homes

1. Turf grass shall be prohibited in the front yards of model homes, and shall be limited to 50 percent of the landscaped area in back and side yards.
2. Model homes shall be used to educate future home owners about water efficient landscape and irrigation techniques. Education features for Model homes shall include:
 - (a) The installation of interpretive landscape information signs that describe the principles of water efficient landscapes including features such as hydrozones, appropriate irrigation equipment and others techniques that contribute to the overall water efficient irrigation theme.
 - (b) Information shall be provided to new home owners that include techniques on designing, installing, managing, and maintaining water efficient landscapes.

E. Multi-family Residential Projects

1. Turf grass shall be limited to 20 percent of the landscaped area. The 20 percent limitation shall be exclusive of areas designed as active play surfaces (e.g. ballfields, playgrounds, picnic areas).

F. Rehabilitated Landscapes

1. Rehabilitated landscapes shall comply with the turf limitations outlined in Sections A-E above, as appropriate to the property type.

21.22B.050 Landscape and Irrigation System Design and Information Requirements

A. All project landscaping and irrigation plans/designs shall comply with the following standards:

1. Utilize rain sensors, either integral or auxiliary, that suspend irrigation during and after rainfall events, shall be required on all irrigation control systems.
2. Prohibit turf on slopes greater than 20% where the toe of the slope is adjacent to an impermeable hardscape. (where 20% means 1 foot of vertical elevation change for every 5 feet of horizontal length rise divided by run X 100 = slope percent).
3. Water features shall use recirculating water systems.
4. Prohibit overhead spray irrigation within 24 inches of a non-permeable surfaces such as but not limited to concrete sidewalks and driveways. Subsurface irrigation may be used as long as other requirements of this ordinance are met. Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low-flow non-spray type of systems. The setback area may be planted or non-planted. The surfacing of the setback may be mulch, gravel, cobbles, or other porous material. These restrictions may be modified if the landscape area is adjacent to permeable surfacing, and no runoff occurs or the adjacent non permeable surface drains entirely to landscaped areas.
5. Irrigation systems shall be designed and constructed to achieve a minimum efficiency of 71 percent.
6. Apply a minimum two inch (2") layer of mulch on all exposed soil surface of planting areas.
7. The architectural guidelines and Covenants, Conditions, and Restrictions of common interest developments shall not have the effect of prohibiting the use of low-water use plants or requiring turf grass in landscaped areas.

B. Projects that have a landscape area equal to or greater than 1 acre need to submit the flowing information:

Please note that the landscape area for new residential subdivisions will be calculated on an individual lot basis as each lot develops, not a total of landscape areas prior to subdivision. Therefore, generally a residential subdivision will not require an LDP for individual lot landscaping, however if there are common areas, or areas within a Landscape and Lighting District that have landscape areas 1 acre or greater, there will be a requirement for an LDP for those areas to be completed prior to the recordation of the final map.

1. All of the items identified in Section A above.
2. Weather-based irrigation controllers, soil moisture-based controllers, or other self-adjusting irrigation controllers shall be required for irrigation scheduling.
3. The following documents and plans need to be submitted prior to the issuance of a Building Permit for the associated project (Please refer to the Landscape & Irrigation Design Guide for specific forms and criteria):

Compliance with Landscape Documentation Package which includes completion of the following items:

- Project Information
- Water Efficient Landscape Worksheet
- Soil Management Report
- Landscape Design Plan
- Irrigation Design Plan
- Grading Design Plan

4. The following documents and plans need to be completed and the landscape and irrigation project shall be installed prior to the issuance of a Certificate of Occupancy for the

associated project (Please refer to the Landscape & Irrigation Design Guide for specific forms and criteria):

Certificate of Completion which includes documentation of the following items:

- Irrigation Scheduling
- Landscape and Irrigation Maintenance Schedule
- Irrigation Audit, Irrigation Survey and Irrigation Water Use Analysis
- Irrigation Efficiency
- Stormwater Management

ORDINANCE OF THE COUNCIL
OF THE CITY OF PASO ROBLES, STATE OF CALIFORNIA

IN THE MATTER OF:

NO. 964 N.S.

Amending the Zoning Code to establish a Landscape
And Irrigation Ordinance to be in Compliance with the
Water Conservation in Landscaping Act of 2006
(AB1881)

I, Lonnie Dolan, Deputy City Clerk of the City of Paso Robles, certify that foregoing is a full, true and correct copy of Ordinance No. 964 N.S., proposed by Councilmember Strong, seconded by Councilmember Gilman, was duly introduced at the regular meeting on 12/01/2009 and adopted by the City Council of the City of El Paso de Robles, at its regular meeting on 12/15/2009 by the following vote:

AYES: Gilman, Harmon, Steinbeck, Strong and Picanco

NOES:

ABSTAIN:

ABSENT:



Lonnie Dolan, Deputy City Clerk and
Ex-Officio Clerk of the City Council



COMMUNITY DEVELOPMENT DEPARTMENT

PLANNING DIVISION

LANDSCAPE AND IRRIGATION

DESIGN GUIDE

1000 Spring Street
Paso Robles, CA. 93446
Phone: (805) 237-3970
Fax: (805) 237-3904
planning@prcity.com

Chapter 21.22B of the Zoning Code requires the following:

- The Landscape Documentation Package be submitted in conjunction with or prior to the submittal of construction drawings for building plan check.
- A Certificate of Completion needs to be issued by the City prior to issuance of a Certificate of Occupancy of the associated project/building.

LANDSCAPE DOCUMENT PACKAGE

The Landscape Documentation Package shall include the following six (6) elements:

- 1. **COMPLETED APPLICATION FORM:** Fill out Standard Development Application Form from Community Development Department. (Attachment 1)
- 2. **WATER EFFICIENT LANDSCAPE WORK SHEET:**
A project applicant shall complete the Water Efficient Landscape Worksheet which contains two sections (see sample worksheet Attachment 3):
 - 1. A hydrozone information table (Attachment 3, Section A) for the landscape project; and
 - 2. A water budget calculation (Attachment 3, Section B) for the landscape project. For the calculation of the Maximum Applied Water Allowance and Estimated Total Water Use (Attachment 3, Section C), a project applicant shall use the ETo values from the Reference Evapotranspiration Table (Attachment 2, Section A).

B. Water budget calculations shall adhere to the following requirements:

 - 1. The plant factor used shall be from WUCOLS. The plant factor ranges from 0 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants and from 0.7 to 1.0 for high water use plants.
 - 2. All water features shall be included in the high water use hydrozone and temporarily irrigated areas shall be included in the low water use hydrozone.
 - 3. All Special Landscape Areas shall be identified and their water use calculated as described below.
 - 4. ETAF for Special Landscape Areas shall not exceed 1.0.

C. Maximum Applied Water Allowance

The Maximum Applied Water Allowance shall be calculated using the equation;
 $MAWA = (ETo) (0.62) [(0.7 \times LA) + (0.3 \times SLA)]$

See Example Calculations, Attachment 2

- 3. **SOIL MANAGEMENT REPORT:**

In order to reduce runoff and encourage healthy plant growth, a soil management report shall be completed by the project applicant, or his/her designee, as follows:

- 1. Submit soil samples to a laboratory for analysis and recommendations.
 - a. Soil sampling shall be conducted in accordance with laboratory protocol, including protocols regarding adequate sampling depth for the intended plants.

- b. The soil analysis may include:
1. soil texture;
 2. infiltration rate determined by laboratory test or soil texture infiltration rate table;
 3. pH;
 4. total soluble salts;
 5. sodium;
 6. percent organic matter; and
 7. recommendations.

2. The project applicant, or his/her designee, shall comply with one of the following:
- a. If significant mass grading is not planned, the soil analysis report shall be submitted to the local agency as part of the Landscape Documentation Package; or
 - b. If significant mass grading is planned, the soil analysis report shall be submitted to the local agency as part of the Certificate of Completion.

3. The soil analysis report shall be made available, in a timely manner, to the professionals preparing the landscape design plans and irrigation design plans to make any necessary adjustments to the design plans.

4. The project applicant, or his/her designee, shall submit documentation verifying implementation of soil analysis report recommendations to the local agency with Certificate of Completion.

4. **LANDSCAPE DESIGN PLAN:**

For the efficient use of water, a landscape shall be carefully designed and planned for the intended function of the project. A landscape design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

1. **Plant Material**

- a. Any plant may be selected for the landscape, providing the Estimated Total Water Use in the landscape area does not exceed the Maximum Applied Water Allowance. To encourage the efficient use of water, the following is highly recommended:
 - b. protection and preservation of native species and natural vegetation;
 - c. selection of water-conserving plant and turf species;
 - d. selection of plants based on disease and pest resistance;
 - e. selection of trees based on applicable local tree ordinances or tree shading guidelines; and
 - f. selection of plants from local and regional landscape program plant lists.
- b. Each hydrozone shall have plant materials with similar water use.
- c. Plants shall be selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site. To encourage the efficient use of water, the following is highly recommended:
 1. Use the Sunset Western Climate Zone System which takes into account temperature, humidity, elevation, terrain, latitude, and varying degrees of continental and marine influence on local climate;
 2. Recognize the horticultural attributes of plants (i.e., mature plant size, invasive surface roots) to minimize damage to property or infrastructure [e.g., buildings, sidewalks, power lines]; and
 3. Consider the solar orientation for plant placement to maximize summer shade and winter solar gain.
- d. Turf is not allowed on slopes greater than 20% where the toe of the slope is adjacent to an impermeable hardscape and where 20% means 1 foot of vertical elevation change for every 4 feet of horizontal length (rise divided by run x 100 = slope percent).

- e. A landscape design plan for projects in fire-prone areas shall address fire safety and prevention. A defensible space or zone around a building or structure is required per Public Resources Code Section 4291(a) and (b). Avoid fire-prone plant materials and highly flammable mulches.
- f. The use of invasive and/or noxious plant species is strongly discouraged.
- g. 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.

2. Water Features

- a. Recirculating water systems shall be used for water features.
- b. Where available, recycled water shall be used as a source for decorative water features.
- c. Surface area of a water feature shall be included in the high water use hydrozone area of the water budget calculation.
- d. Pool and spa covers are highly recommended.

3. Mulch and Amendments

- a. 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 groundcovers or direct seeding applications where mulch is contraindicated.
- b. Stabilizing mulching products shall be used on slopes.
- c. The mulching portion of the seed/mulch slurry in hydro-seeded applications shall meet the mulching requirement.
- d. Soil amendments shall be incorporated according to recommendations of the soil report and what is appropriate for the plants selected.

4. The landscape design plan, at a minimum, shall:

- a. delineate and label each hydrozone by number, letter, or other method;
- b. identify each hydrozone as low, moderate, high water or mixed water use. Temporarily irrigated areas of the landscape shall be included in the low water use hydrozone for the water budget calculation.;
- c. identify recreational areas;
- d. identify areas permanently and solely dedicated to edible plants;
- e. identify areas irrigated with recycled water;
- f. identify type of mulch and application depth;
- g. identify soil amendments, type, and quantity;
- h. identify type and surface area of water features;
- i. identify hardscapes (pervious and non-pervious);
- j. identify location and installation details of any applicable stormwater best management practices that encourage on-site retention and infiltration of stormwater. Stormwater best management practices are encouraged in the landscape design plan and examples include, but are not limited to:
 1. infiltration beds, swales and basins that allow water to collect and soak into the ground;
 2. constructed wetlands and retention ponds that retain water, handle excess flow and filter pollutants; and
 3. pervious surfaces (e.g., permeable pavers or blocks, pervious or porous concrete, etc.) that minimize runoff.
- k. identify any applicable rain harvesting or catchment technologies (e.g., rain gardens, cisterns, etc.);
- l. contain the following statement: "I have complied with the criteria of the ordinance and applied them for the efficient use of water in the landscape design plan;" and

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

5. **IRRIGATION DESIGN PLAN:**

For the efficient use of water, an irrigation system shall meet all the requirements listed in this section and the manufacturers' recommendations. The irrigation system and its related components shall be planned and designed to allow for proper installation, management, and maintenance. An irrigation design plan meeting the following design criteria shall be submitted as part of the Landscape Documentation Package.

1. Irrigation System

A. Dedicated landscape water meters are highly recommended on landscape areas smaller than 5,000 square feet to facilitate water management.

B. Automatic irrigation controllers utilizing either weather base or soil moisture sensor data shall be required for irrigation scheduling in all irrigation systems.

C. The irrigation system shall be designed to ensure that the dynamic pressure at each emission device is within the manufacturer's recommended pressure range for optimal performance.

1. If the static pressure is above or below the required dynamic pressure of the irrigation system, pressure-regulating devices such as inline pressure regulators, booster pumps or other devices shall be installed to meet the required dynamic pressure of the irrigation system.

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

D. Sensors (rain, freeze, wind, etc.), either integral or auxiliary, that suspend or alter irrigation operation during unfavorable weather conditions shall be required on all irrigation systems, as appropriate for local climatic conditions. Irrigation should be avoided during windy or freezing weather or during rain.

E. Manual shut-off valves (such as a gate valve, ball valve, or butterfly valve) shall be required, as close as possible to the point of connection of the water supply, to minimize water loss in case of an emergency (such as a main line break) or routine repair.

F. Backflow prevention devices shall be required to protect the water supply from contamination by the irrigation system. A project applicant shall refer to the applicable local agency code (i.e., public health) for additional backflow prevention requirements.

G. High flow sensors that detect and report high flow conditions created by system damage or malfunction are recommended.

H. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions where irrigation water flows onto non-targeted areas, such as adjacent property, non-irrigated areas, hardscapes, roadways or structures.

I. Relevant information from the soil management plan, such as soil type and infiltration rate, shall be utilized when designing irrigation systems.

- J. The design of the irrigation system shall conform to the hydrozones of the landscape design plan.
- K. The irrigation system must be designed and installed to meet, at a minimum, the irrigation efficiency criteria as described in Section 492.4 regarding the Maximum Applied Water Allowance.
- L. It is highly recommended that the project applicant or local agency inquire with the local water purveyor about peak water operating demands (on the water supply system) or water restrictions that may impact the effectiveness of the irrigation system.
- M. In mulched planting areas, the use of low volume irrigation is required to maximize water infiltration into the root zone.
- N. Sprinkler heads and other emission devices shall have matched precipitation rates, unless otherwise directed by the manufacturer's recommendations.
- O. Head to head coverage is recommended. However, sprinkler spacing shall be designed to achieve the highest possible distribution uniformity using the manufacturer's recommendations.
- P. Swing joints or other riser-protection components are required on all risers subject to damage that are adjacent to high traffic areas.
- Q. Check valves or anti-drain valves are required for all irrigation systems.
- R. Narrow or irregularly shaped areas, including turf, less than eight (8) feet in width in any direction shall be irrigated with subsurface irrigation or low volume irrigation system.
- S. Overhead spray irrigation shall not be permitted within 24 inches of any non-permeable surface.
 Allowable irrigation within the setback from non-permeable surfaces may include drip, drip line, or other low flow non-spray technology. The setback area may be planted or unplanted. The surfacing of the setback may be mulch, gravel, or other porous material. These restrictions may be modified if:
 1. the landscape area is adjacent to permeable surfacing and no runoff occurs; or
 2. the adjacent non-permeable surfaces are designed and constructed to drain entirely to landscaping; or
 3. the irrigation designer specifies an alternative design or technology, as part of the Landscape Documentation Package and clearly demonstrates strict adherence to irrigation system design criteria in Section IV.F (1) (H). Prevention of overspray and runoff must be confirmed during the irrigation audit.
- T. Slopes greater than 20% shall not be irrigated with an irrigation system with a precipitation rate exceeding 0.75 inches per hour. This restriction may be modified if the landscape designer specifies an alternative design or technology, as part of the Landscape Documentation Package, and clearly demonstrates no runoff or erosion will occur. Prevention of runoff and erosion must be confirmed during the irrigation audit.

2. Hydrozone
- A. Each valve shall irrigate a hydrozone with similar sun exposure, and plant materials with similar water needs. Certain exemptions may apply to this requirement as determined by the Water Conservation Manager.
 - B. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.
 - C. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers and turf.
 - D. Individual hydrozones that mix plants of moderate and low water use or moderate and high water use, may be allowed if:
 1. plant factor calculation is based on the proportions of the respective plant water uses and their plant factor; or
 2. the plant factor of the higher water using plant is used for calculations.
 - E. Individual hydrozones that mix high and low water use plants shall not be permitted.
 - F. On the landscape design plan and irrigation design plan, hydrozone areas shall be designated by number, letter or other designation. On the irrigation design plan, designate the areas irrigated by each valve, and assign a number to each valve. Use this valve number in the Hydrozone Information Table (see Attachment 3, Section A). This table can also assist with the irrigation audit and programming the controller.
3. The irrigation design plan, at a minimum shall contain:
- A. location and size if separate water meters are utilized for the landscape project;
 - B. location, type and size of all components of the irrigation system, including controllers, main and lateral lines, valves, sprinkler heads, moisture sensing devices, rain switches, quick couplers, pressure regulators and backflow prevention devices;
 - C. static water pressure at the point of connection to the public water supply;
 - D. flow rate (gallons per minute), application rate (inches per hour) and design operating pressure (pressure per square inch) for each station;
 - E. recycled water irrigation systems (if applicable);
 - F. the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the irrigation design plan," and
 - G. the signature of a licensed landscape architect, certified irrigation designer, licensed landscape contractor or any other person authorized to design an irrigation system. (See Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agriculture Code.)

6. GRADING DESIGN PLAN:

For the efficient use of water, grading of a project site shall be designed to minimize soil erosion, runoff and water waste. A grading plan shall be submitted as part of the Landscape Documentation Package. A comprehensive grading plan prepared by a civil engineer, licensed architect, or landscape architect for other local agency permits satisfies this requirement.

1. The project applicant shall submit a landscape grading plan that indicates finished configurations and elevations of the landscape area including:
- A. Height of graded slopes;
 - B. Drainage patterns;
 - C. Pad elevations;

 - D. Finish grade;
 - E. Stormwater retention improvements, if applicable.
2. To prevent excessive erosion and runoff, it is highly recommended that project applicants:
- A. Grade so that all irrigation and normal rainfall remains within property lines and does not drain on to non-permeable hardscapes;
 - B. Avoid disruption of natural drainage patterns and undisturbed soil; and
 - C. Avoid soil compaction in landscape areas.
3. The grading design plan shall contain the following statement: "I have complied with the criteria of the ordinance and applied them accordingly for the efficient use of water in the grading design plan" and shall bear the signature of a licensed professional as authorized by law.

CERTIFICATE OF COMPLETION

1. The project applicant shall:
- 1. Submit the signed Certificate of Completion to the City for review;
 - 2. Ensure that copies of the approved Certificate of Completion are submitted to the property owner or his or her designee.

The City will:

- 1. Receive the signed Certificate of Completion from the project applicant;
- 2. Approve or deny the Certificate of Completion. If the Certificate of Completion is denied, the local agency shall provide information to the project applicant regarding reapplication, appeal or other assistance.

The Certificate of Completion (see Attachment 4 for certificate form) shall include the following six (6) elements:

- 1. Project information sheet that contains:
 - Standard Development Application Form from the Community Development Department;
- 2. Certification by either the signer of the landscape design plan, the signer of the irrigation design plan, or the licensed landscape contractor that the landscape project has been installed per the approved Landscape Documentation Package;
 - Where there have been significant changes made in the field during construction, these "as-built" or record drawings shall be included with the certification;
- 3. Irrigation scheduling parameters used to set the controller;
- 4. Landscape and irrigation maintenance schedule;
- 5. Irrigation audit report; and
- 6. Soil analysis report, if not submitted with Landscape Documentation Package, and documentation verifying implementation of soil report recommendations.

2. **IRRIGATION SCHEDULING:**

For the efficient use of water, all irrigation schedules shall be developed, managed, and evaluated to utilize the minimum amount of water required to maintain plant health. Irrigation schedules shall meet the following criteria:

- 1. Irrigation scheduling shall be regulated by automatic irrigation controllers.
- 2. Overhead irrigation shall be scheduled between 7:00 p.m. and 9:00 a.m. unless weather conditions prevent it. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance, only when audit and maintenance staff are present.
- 3. For implementation of the irrigation schedule, particular attention must be paid to irrigation run times, emission device, flow rate, and current reference evapotranspiration, so that applied water meets the Estimated Total Water Use. Total annual applied water shall be less than or equal to Maximum Applied Water Allowance (MAWA). Actual irrigation schedules shall be regulated by automatic irrigation controllers using current reference evapotranspiration data (e.g., CIMIS) or soil moisture sensor data.
- 4. Parameters used to set the automatic controller shall be developed and submitted for each of the following:
 - The plant establishment period;
 - The established landscape; and
 - Temporarily irrigated areas.
- 5. Each irrigation schedule shall consider for each station all of the following that apply:
 - Irrigation interval (days between irrigation);
 - Irrigation run times (hours or minutes per irrigation event to avoid runoff);
 - Number of cycle starts required for each irrigation event to avoid runoff;
 - Amount of applied water scheduled to be applied on a monthly basis;
 - Application rate setting;
 - Root depth setting;
 - Plant type setting;
 - Soil type;
 - Slope factor setting;
 - Shade factor setting; and
 - Irrigation uniformity or efficiency setting.

3. **LANDSCAPE AND IRRIGATION MAINTENANCE SCHEDULE:**

- 1. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.
- 2. A regular maintenance schedule shall include, but not be limited to, routine inspection; adjustment and repair of the irrigation system and its components; aerating and dethatching turf areas; replenishing mulch; fertilizing; pruning; weeding in all landscape areas and removing and obstruction to emission devices. Operation of the irrigation system outside the normal watering window is allowed for auditing and system maintenance.
- 3. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.
- 4. A project applicant is encouraged to implement sustainable or environmentally-friendly practices for overall landscape maintenance.

4. **IRRIGATION AUDIT, IRRIGATION SURVEY AND IRRIGATION WATER USE ANALYSIS:**

1. All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.

2. For new construction and rehabilitated landscape projects installed after January 1, 2010: the project applicant shall submit an irrigation audit report with the Certificate of Completion to the local agency that may include, but is not limited to, inspection, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule.

5. **IRRIGATION EFFICIENCY:**

For the purpose of determining Maximum Applied Water Allowance, average irrigation efficiency is assumed to be 0.71. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 0.71.

6. **STORMWATER MANAGEMENT:**

1. Stormwater management practices minimize runoff and increase infiltration, increasing groundwater recharge and improving water quality. Implementing stormwater best management practices into the landscape and grading design plans to minimize runoff and to increase on-site retention and infiltration are encouraged.

2. Project applicants shall refer to Municipal Code Section _____ for information on applicable stormwater ordinances and stormwater management plans.

3. Rain gardens, cisterns, and other landscapes features and practices that increase rainwater capture and create opportunities for infiltration and/or onsite storage are recommended.



Attachment 1
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING DIVISION
DEVELOPMENT APPLICATION FORM

1000 Spring Street
 Paso Robles, CA. 93446
 Phone: (805) 237-3970
 Fax: (805) 237-3904
 planning@prcity.com

GENERAL INFORMATION REQUIRED

Applicant: _____ Phone: _____ Fax # _____
 Mailing/Billing Address: _____ Email: _____
 Representative: _____ Phone: _____ Fax _____
 Mailing Address: _____ Email: _____

 Property Owner: _____ Phone: _____ Fax # _____
 Owner's Address: _____ Email: _____

PROJECT DESCRIPTION

Assessor's Parcel Number(s) _____
 Project Location: _____
 Project Description: _____

OWNER / APPLICANT AUTHORIZATION

APPLICANT / REPRESENTATIVE: I have reviewed this completed application and the attached material. The information included with this application is true and correct to the best of my knowledge. I am submitting the project description, site plan, and elevations for this project on a 3.5 inch disk or IBM compatible CD with all graphics/illustrations in PDF or JPEG format. I understand the city might not approve what I am applying for, or might set conditions of approval.

PROPERTY OWNER / AUTHORIZED AGENT: I certify that I am presently the legal owner of the above described property. Further, I acknowledge the filing of this application and certify that all of the above information is true and accurate. I understand that I am responsible for ensuring compliance with conditions of approval. (If the undersigned is different from the legal property owner, a letter of authorization must accompany this form). I hereby authorize the City of Paso Robles and/or its designated agent(s) to enter onto the subject property to confirm the location of existing conditions and proposed improvements, including compliance with applicable City code requirements.

By signing this application I certify that I have reviewed this completed application and the attached material and consent to its filing. I agree to allow the Community Development Department to duplicate and distribute plans to interested persons as it determines is necessary for the processing of the application.

 Signed Date

 Signed Date

BELOW AREA FOR OFFICE USE ONLY

Notes to File / Staff Notes:

Action / Body / Date:

THIS AREA FOR OFFICE USE ONLY

DEPOSIT APPLICATIONS

- General Plan Amend.
- Rezone
- Conditional Use Permit
- Development Plan
- Tentative Tract Map
- Tentative Parcel Map
- Lot Line Adjustment
- _____

APPLICATION NO.

FEE APPLICATIONS

- Site Plan Review (\$50)
- Plot Plan Review (\$20)
- Sign Review (\$20)
- _____
- _____

APPLICATION NO.

Total Deposit Paid
(G.L. # 406-000-2304-209)

\$ _____

Total Fees Paid
(G.L. # 100-000-4704)

\$ _____

Application Received By: _____

Date: _____

AGREEMENT TO PAY ALL DEVELOPMENT APPLICATION FEES

In accordance with City Council Resolution 96-75, the City collects fees based on the actual cost of providing service. The application deposit for this project (as indicated below) may not cover the total cost of processing this application. I am aware that if greater than 75 percent of the application deposit amount is depleted prior to completion of the project, staff will notify the undersigned, in writing, of the amount of additional deposit required to complete processing of the application, based on staff's reasonable estimate of the hours remaining to complete this application process.

Further, I understand that if I do not submit the required additional deposit to the City within 15 days from the date of the letter, staff may stop processing of the application and/or not schedule the project for action by the Planning Commission or City Council. Any remaining deposit will be refunded to me at the time of closeout after I have submitted the approved project plans and forms electronically, or upon my written request to formally withdraw the application.

As the applicant, I understand that I am responsible for the cost of processing this application and I agree that the actual time spent processing this application will be paid to the City of El Paso de Robles.

Deposit Paid: \$ _____

Applicant's Signature _____

Date: _____

Applicant's Name _____
(Please Print)

ATTACHMENT 2

Reference Evapotranspiration (ETo) Table

| From CIMAS Reference Evapotranspiration Zone Map, Department of Water Resources, 1999 (All values in inches) | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual ETo |
| Paso Robles | 1.6 | 2.0 | 3.2 | 4.3 | 5.5 | 6.3 | 7.3 | 6.7 | 5.1 | 3.7 | 2.1 | 1.4 | 49.0 |

SECTION B. WATER BUDGET CALCULATIONS

Section B1. Maximum Applied Water Allowance (MAWA)

The project's Maximum Applied Water Allowance shall be calculated using this equation:

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

where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ET_o = Reference Evapotranspiration from Appendix A (inches per year)

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 (square feet)

0.3 = the additional ET Adjustment Factor for Special Landscape Area (1.0 - 0.7 = 0.3)

Maximum Applied Water Allowance = _____ gallons per year

Show calculations.

Effective Precipitation (Eppt)

If considering Effective Precipitation, use 25% of annual precipitation. Use the following equation to calculate

Maximum Applied Water Allowance:

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

Maximum Applied Water Allowance = _____ gallons per year

Show calculations.

ATTACHMENT 4

CERTIFICATE OF COMPLETION

To be filled out by the project applicant upon completion of the landscape project.

PART 1. PROJECT INFORMATION SHEET

| | | |
|---------------------------|----------------|----------|
| Date | | |
| Project Name | | |
| Name of Project Applicant | Telephone No. | |
| | Fax No. | |
| Title | Email Address | |
| Company | Street Address | |
| City | State | Zip Code |

Project Address and Location:

| | | |
|----------------|--|--|
| Street Address | Parcel, tract or lot number, if available. | |
| City | Latitude/Longitude (optional GIS applications) | |
| State | Zip Code | |

Property Owner or his/her designee:

| | | |
|---------|----------------|----------|
| Name | Telephone No. | |
| | Fax No. | |
| Title | Email Address | |
| Company | Street Address | |
| City | State | Zip Code |

Property Owner

"I/we certify that I/we have received copies of all the documents within the Landscape Documentation Package and the Certificate of Completion and that it is our responsibility to see that the project is maintained in accordance with the Landscape and Irrigation Maintenance Schedule."

Property Owner Signature Date

Please answer the questions below:

1. Date the Landscape Documentation Package was submitted to the local agency _____
2. Date the Landscape Documentation Package was approved by the local agency _____
3. Date that a copy of the Water Efficient Landscape Worksheet (including the Water Budget Calculation) was submitted to the local water purveyor _____

PART 2. CERTIFICATION OF INSTALLATION ACCORDING TO THE LANDSCAPE DOCUMENTATION PACKAGE

“I/we certify that based upon periodic site observations, the work has been substantially completed in accordance with the ordinance and that the landscape planting and irrigation installation conform with the criteria and specifications of the approved Landscape Documentation Package.”

| | | |
|----------------------------------|----------------|----------|
| Signature* | Date | |
| Name (print) | Telephone No. | |
| Title | Fax No. | |
| | Email Address | |
| License No. or Certification No. | | |
| Company | Street Address | |
| City | State | Zip Code |

*Signer of the landscape design plan, signer of the irrigation plan or a licensed landscape contractor.

PART 3. IRRIGATION SCHEDULING

Attach parameters for setting the irrigation schedule on controller per ordinance Section ____

PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE

Attach schedule of Landscape and Irrigation Maintenance per ordinance Section ____.

PART 5. LANDSCAPE IRRIGATION AUDIT REPORT

Attach Landscape Irrigation Audit Report per ordinance Section ____.

PART 6. SOIL MANAGEMENT REPORT

Attach soil analysis report, if not previously submitted with the Landscape Documentation Package per ordinance Section ____.

Attach documentation verifying implementation of recommendations from soil analysis report per ordinance

Section ____.

ATTACHMENT 5

DEFINITIONS

The terms used in this ordinance have the meanings set forth below:

- (1) **“applied water”** means the portion of water supplied by the irrigation system to the landscape.
- (2) **“backflow prevention device”** means a safety device used to prevent pollution or contamination of the water supply due to the reverse flow of water from the irrigation system.
- (3) **“Certificate of Completion”** means the document required under Section 21.22B.050.B.4.
- (4) **“certified irrigation designer”** means a person certified to design irrigation systems by an accredited academic institution a professional trade organization or other program such as the US Environmental Protection Agency’s WaterSense irrigation designer certification program and Irrigation Association’s Certified Irrigation Designer program.
- (5) **“certified landscape irrigation auditor”** means a person certified to perform landscape irrigation audits by an accredited academic institution, a professional trade organization or other program such as the US Environmental Protection Agency’s WaterSense irrigation auditor certification program and Irrigation Association’s Certified Landscape Irrigation Auditor program.
- (6) **“check valve” or “anti-drain valve”** means a valve located under a sprinkler head, or other location in the irrigation system, to hold water in the system to prevent drainage from sprinkler heads when the sprinkler is off.
- (7) **“common interest developments”** means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.
- (8) **“conversion factor (0.62)”** means a the number that converts the maximum applied water allowance from acre-inches per acre per year to gallons per square foot per year.
- (9) **“drip irrigation”** means any non-spray low volume irrigation system utilizing emission devices with a flow rate measured in gallons per hour. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.
- (10) **“effective precipitation” or “usable rainfall” (Eppt)** means the portion of total precipitation which becomes available for plant growth.
- (11) **“emitter”** means a drip irrigation emission device that delivers water slowly from the system to the soil.
- (12) **“established landscape”** means the point at which plants in the landscape have developed significant roots growth into the soil. Typically, most plants are established after one or two years of growth.
- (13) **“establishment period of the plants”** means the first year after installing the plant in the landscape or the first two years if irrigation will be terminated after establishment. Typically, most plants are established after one or two years of growth.

- (14) **“Estimated Total Water Use”** (ETWU) means the total water used for the landscape as described in Section 492.4.
- (15) **“ET adjustment factor”** (ETAF) means a factor of 0.7, that, when applied to reference evapotranspiration, adjusts for plant factors and irrigation efficiency, two major influences upon the amount of water that needs to be applied to the landscape. A combined plant mix with a site-wide average of 0.5 is the basis of the plant factor portion of this calculation. For purposes of the ETAF, the average irrigation efficiency is 0.71. Therefore, the ET Adjustment Factor is $(0.7) = (0.5/0.71)$. ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing non-rehabilitated landscapes is 0.8.
- (16) **“evapotranspiration rate”** means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.
- (17) **“flow rate”** means the rate at which water flows through pipes, and valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.
- (18) **“hardscapes”** means any durable material (pervious and non-pervious).
- (19) **“homeowner-provided landscaping”** means any landscaping either installed by a private individual for a single family residence or installed by a licensed contractor hired by a homeowner. A homeowner, for purposes of this ordinance, is a person who occupies the dwelling he or she owns. This excludes speculative homes, which are not owner-occupied dwellings.
- (20) **“hydrozone”** means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.
- (21) **“infiltration rate”** means the rate of water entry into the soil expressed as a depth of water per unit of time (e.g., inches per hour).
- (22) **“invasive plant species”** means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. Invasive species may be regulated by county agricultural agencies as noxious species. “Noxious weeds” means any weed designated by the Weed Control Regulations in the Weed Control Act and identified on a Regional District noxious weed control list. Lists of invasive plants are maintained at the California Invasive Plant Inventory and USDA invasive and noxious weeds database.
- (23) **“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.
- (24) **“irrigation efficiency”** (IE) means the measurement of the amount of water beneficially used divided by the amount of water applied. Irrigation efficiency is derived from measurements and estimates of irrigation system characteristics and management practices. The minimum average irrigation efficiency for purposes of this ordinance is 0.71. Greater irrigation efficiency can be expected from well designed and maintained systems.
- (25) **“irrigation survey”** means an evaluation of an irrigation system that is less detailed than an irrigation audit. An irrigation survey includes, but is not limited to: inspection, system test and written recommendations to improve performance of the irrigation system.

(26) **“irrigation water use analysis”** means an analysis of water use data based on meter readings and billing data.

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

(28) **“landscaped area”** means all 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 pervious or non-pervious hardscapes, and other nonirrigated areas designated for non-development (e.g., open spaces and existing native vegetation).

(29) **“landscape contractor”** means a person licensed by the state of California to construct, maintain, repair, install, or subcontract the development of landscape systems.

(30) **“Landscape Documentation Package”** means the documents required under Section 21.22B.050.B.3.

(31) **“landscape project”** means total area of landscape in a project as defined in “landscape area” for the purposes of this ordinance.

(32) **“lateral line”** means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.

(33) **“local agency”** means a city or county, including a charter city or charter county, that is responsible for adopting and implementing the ordinance. The local agency is also responsible for the enforcement of this ordinance, including but not limited to, approval of a permit and plan check or design review of a project.

(34) **“local water purveyor”** means any entity, including a public agency, city, county or private water company that provides retail water service.

(35) **“low volume irrigation”** means the application of irrigation water at low pressure through a system of tubing or lateral lines and low-volume emitters such as drip, drip lines and bubblers. Low volume irrigation systems are specifically designed to apply small volumes of water slowly at or near the root zone of plants.

(36) **“main line”** means the pressurized pipeline that delivers water from the water source to the valve or outlet.

(37) **“Maximum Applied Water Allowance”** (MAWA) means, the upper limit of annual applied water for the established landscaped area as specified in Section IV.4.C. It is based upon the area’s reference evapotranspiration, the ET Adjustment Factor, and the size of the landscaped area. The Estimated Total Water Use shall not exceed the Maximum Applied Water Allowance. Special Landscape Areas, including recreation areas, areas permanently and solely dedicated to edible plants such as orchards and vegetable gardens, and areas irrigated with recycled water are subject to the MAWA with an ETAF not to exceed 1.0.

(38) **“microclimate”** means the climate of a small, specific area that may contrast with the climate of the overall landscape area due to factors such as wind, sun exposure, plant density or proximity to reflective surfaces.

(39) **“mulch”** means any organic material such as leaves, bark, straw, compost or inorganic mineral materials such as rocks, gravel, and decomposed granite left loose and applied to the soil surface for the beneficial purposes of reducing evaporation, suppressing weeds, moderating soil temperature and preventing soil erosion.

(40) **“new construction”** means, for the purposes of this ordinance, a new building with a landscape or other new landscape, such as a park, playground or greenbelt without an associated building.

(41) **“operating pressure”** means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

(42) **“overhead sprinkler irrigation systems”** means systems that deliver water through the air (e.g., spray heads and rotors).

(43) **“overspray”** means the irrigation water which is delivered beyond the target area.,

(44) **“permit”** means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

(45) **“pervious”** means any surface or material that allows the passage of water through the material and into the underlying soil.

(46) **“plant factor”** or **“plant water use factor”** is a factor that, when multiplied by ETo, estimates the amount of water needed by plants. For purposes of this ordinance, the plant factor range for low water use plants is 0 to 0.3, the plant factor range for moderate water use plants is 0.4 to 0.6, and the plant factor range for high water use plants is 0.7 to 1.0. Plant factors cited in this ordinance are derived from the Department of Water Resources 2000 publication “Water Use Classification of Landscape Species.”

(47) **“precipitation rate”** means the rate of application of water measured in inches per hour.

(48) **“project applicant”** means the individual or entity submitting a Landscape Documentation Package required under Section IV.4.A., to request a permit, plan check or design review from the local agency. A project applicant may be the property owner or his or her designee.

(49) **“rain sensor”** or **“rain sensing shutoff device”** means a component which automatically suspends an irrigation event when it rains.

(50) **“record drawing”** or **“as-builts”** means a set of reproducible drawings which show significant changes in the work made during construction and which are usually based on drawings marked up in the field and other data furnished by the contractor.

(51) **“recreational area”** means areas dedicated to active play or such as parks, sports fields and golf courses where turf provides a playing surface.

(52) **“recycled water,” “reclaimed water,”** or **“treated sewage effluent water”** means treated or recycled waste water of a quality suitable for non-potable uses such as landscape irrigation and water features. This water is ; not intended for human consumption.

(53) **“reference evapotranspiration”** or **“ETo”** means a standard measurement of environmental parameters which affect the water use of plants. ETo is given expressed in inches per day, month, or year as represented in Section V, and is an estimate of the evapotranspiration of a large field of four to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of determining the Maximum Applied Water Allowances so that regional differences in climate can be accommodated.

(54) **“rehabilitated landscape”** means any re-landscaping project that requires a permit, plan check, or design review.

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

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

(57) **“soil texture”** means the classification of soil based on its percentage of sand, silt, and clay.

(58) **“Special Landscape Area” (SLA)** means an area of the landscape dedicated solely to edible plants, areas irrigated with recycled water, water features using recycled water and areas dedicated to active play such as parks, sports fields, golf courses, and where turf provides a playing surface.

(59) **“sprinkler head”** means a device which delivers water through a nozzle.

(60) **“static water pressure”** means the pipeline or municipal water supply pressure when water is not flowing.

(61) **“station”** means an area served by one valve or by a set of valves that operate simultaneously.

(62) **“swing joint”** means an irrigation component that provides a flexible, leak-free connection between the emission device and lateral pipeline to allow movement in any direction and to prevent equipment damage.

(63) **“turf”** means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermudagrass, Kikuyugrass, Seashore Paspalum, St. Augustinegrass, Zoysiagrass, and Buffalo grass are warm-season grasses.

(64) **“valve”** means a device used to control the flow of water in the irrigation system.

(65) **“water conserving plant species”** means a plant species identified as having a low plant factor.

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

(67) **“watering window”** means the time of day irrigation is allowed.

(68) **“WUCOLS”** means the Water Use Classification of Landscape Species published by the University of California Cooperative Extension, the Department of Water Resources and the Bureau of Reclamation, 2000.

