CITY OF
TAFT
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January 26, 2010

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

RE: Water Efficient Landscape Ordinance

Dear Mr. Eching:

Enclosed is the Water Efficient Landscape Ordinance approved by the Taft City Council on January 19, 2010. As the ordinance and accompanying materials show, the City has adopted the DWR model, identifying the City of Taft and West Kern Water District by name and retaining a points system from the City's previous ordinance to assist applicants to achieving the goal of water conservation.

Please call me if you have any questions.

Sincerely,

Paul M. Gorte

Paul M. Gorte, AICP
Redevelopment Manager/Acting Community Development Director
City of Taft
209 E Kern St
Taft, California 93268
661/763-1222 ext 24
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ORDINANCE NO. 778-10

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF TAFT APPROVING ZONE CHANGE NO. 09-02 AMENDING TITLE VI, CHAPTER 10, SECTION 390 OF THE TAFT MUNCIPAL CODE TO AMEND THE WATER EFFICIENT LANDSCAPE REQUIREMENTS INCORPORATED HEREIN BY REFERENCE, AND APPROVING A SUMMARY THEREOF

WHEREAS, the City Council at a public hearing held on January 5, 2010, studied and considered Zone Change No. 09-02 to amend the Water Efficient Landscape Requirements applicable throughout the City of Taft; and

WHEREAS, the State of California through the Department of Water Resources has mandated minimum requirements for water efficient landscape ordinances pursuant to AB 1881 (2006) to enhance the quality of life and to protect the health, safety and welfare of its citizens by regulating the use of water for landscaping purposes; and

WHEREAS, a timely and properly noticed public hearing upon Zone Change No. 09-02 (Resolution No.2009-12), was held by the Planning Commission on December 8, 2009, at which hearing evidence, both oral and documentary, was admitted on behalf of said zone change.

WHEREAS, the City Council has determined that it is in the best interest of the City of Taft to enact Zone Change No. 09-02 to enhance the quality of life and to protect the health, safety and welfare of its citizens by regulating the use of water for landscaping purposes pursuant to the State mandate; and

WHEREAS, the Planning Commission approved Resolution No. 2009-12 on December 8, 2009, recommending to the City Council approval of Zone Change No. 09-02; and

WHEREAS, the City Council has determined that enactment of Zone Change No. 09-02 is classified as a ministerial project and is, therefore, exempt as set forth in Section 15300.1 of the State Guidelines Implementing the California Environmental Quality Act; and

WHEREAS, a timely and properly noticed public hearing upon Zone Change No. 09-02, was held by the City Council on January 5, 2010, at which hearing evidence, both oral and documentary was admitted on behalf of said zone change.

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

SECTION 1. That Title VI, Chapter 10, of the Taft Municipal Code (Zoning Ordinance be amended by deleting Section 390 in its entirety and replacing with the language set forth in Exhibit A and incorporated herein by reference.

SECTION 2. Severability. If any section, subsection, subdivision, sentence, phrase or portion of this Ordinance or the application to any person or place is held to be unconstitutional or invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council declares that it would have adopted this

City of Taft
Title VI. City of Taft Zoning Ordinance
Chapter 10. General Development Standards
Section 390. Water Efficient Landscape Requirements

1. Purpose.

a. The California State Legislature has found:
   1) that the waters of the state are of limited supply and are subject to ever increasing demands;
   2) that the continuation of California's economic prosperity is dependent on the availability of adequate supplies of water for future uses;
   3) that it is the policy of the State to promote the conservation and efficient use of water and to prevent the waste of this valuable resource;
   4) that landscapes are essential to the quality of life in California by providing areas for active and passive recreation and as an enhancement to the environment by cleaning air and water, preventing erosion, offering fire protection, and replacing ecosystems lost to development; and
   5) that landscape design, installation, maintenance and management can and should be water efficient; and
   6) that Section 2 of Article X of the California Constitution specifies that the right to use water is limited to the amount reasonably required for the beneficial use to be served and the right does not and shall not extend to waste or unreasonable method of use.

b. Consistent with these legislative findings, the purpose of this ordinance is to:
   1) promote the values and benefits of landscapes while recognizing the need to invest water and other resources as efficiently as possible;
   2) establish a structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects;
   3) establish provisions for water management practices and water waste prevention for existing landscapes;
   4) use water efficiently without waste by setting a Maximum Applied Water Allowance as an upper limit for water use and reduce water use to the lowest practical amount;
   5) promote the benefits of consistent landscape ordinances with neighboring local and regional agencies;
   6) encourage the use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure; and
   7) encourage cooperation between the City of Taft and local agencies to implement and enforce of this ordinance.

Note: Authority cited: Section 65593, Government Code. Reference: Sections 65591, 65593, 65596, Government Code.

irrigation auditor certification program and Irrigation Association's Certified Landscape Irrigation Auditor program.

g. "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.
h. "common interest developments" means community apartment projects, condominium projects, planned developments, and stock cooperatives per Civil Code Section 1351.
i. "conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year
j. "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.
k. "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
l. "effective precipitation" or "usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.
m. "emitter" means a drip irrigation emission device that delivers water slowly from the system to the soil.
n. "established landscape" means the point at which plants in the landscape have developed significant root growth into the soil. Typically, most plants are established after one or two years of growth.
o. "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.
p. "Estimated Total Water Use" (ETWU) means the total water used for the landscape as described in Section 8.
q. "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.
r. "evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.
s. "flow rate" means the rate at which water flows through pipes, valves and emission devices, measured in gallons per minute, gallons per hour, or cubic feet per second.
t. "hardscapes" means any durable material (pervious and non-pervious).
u. "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.
v. "hydrozone" means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.

ll. "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section 8. It is based upon the area's reference evapotranspiration, the ET Adjustment Factor, and the size of the landscape 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.

mm. "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.

nn. "mined-land reclamation projects" means any surface mining operation with a reclamation plan approved in accordance with the Surface Mining and Reclamation Act of 1975.

oo. "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.

pp. "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.

qq. "operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.

rr. "overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).

ss. "overspray" means the irrigation water which is delivered beyond the target area.

tt. "permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.

uu. "pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.

vv. "plant factor" or "plant water use factor" is a factor , 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".

ww. "precipitation rate" means the rate of application of water measured in inches per hour.

xx. "project applicant" means the individual or entity submitting a Landscape Documentation Package required under Section 7, to request a permit, plan check, or design review from the City. A project applicant may be the property owner or his or her designee.

yy. "rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.

zz. "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.

aaa. "recreational area" means areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.

stormwater retention are not water features and, therefore, are not subject to the water budget calculation.

qqq. "watering window" means the time of day irrigation is allowed.

rrr. "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.

Note: Authority Cited: Section 65595, Government Code. Reference: Sections 65592, 65596, Government Code.

4. Provisions for New Construction or Rehabilitated Landscapes.

a. The City may designate another agency, such as the West Kern Water District, to implement some or all of the requirements contained in this ordinance. The City may collaborate with water purveyors to define each entity's specific responsibilities relating to this ordinance.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

5. Compliance with Landscape Documentation Package.

a. Prior to construction, the City shall:
   1) provide the project applicant with the ordinance and procedures for permits, plan checks, or design reviews;
   2) review the Landscape Documentation Package submitted by the project applicant;
   3) approve or deny the Landscape Documentation Package;
   4) issue a permit or approve the plan check or design review for the project applicant; and
   5) upon approval of the Landscape Documentation Package, submit a copy of the Water Efficient Landscape Worksheet to the West Kern Water District.

b. Prior to construction, the project applicant shall:
   1) submit a Landscape Documentation Package to the City.

c. Upon approval of the Landscape Documentation Package by the City, the project applicant shall:
   1) receive a permit or approval of the plan check or design review and record the date of the permit in the Certificate of Completion;
   2) submit a copy of the approved Landscape Documentation Package along with the record drawings, and any other information to the property owner or his/her designee; and
   3) submit a copy of the Water Efficient Landscape Worksheet to the West Kern Water District.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

Evapotranspiration Table in Appendix A. For geographic areas not covered in Appendix A, use data from other cities located nearby in the same reference evapotranspiration zone, as found in the CIMIS Reference Evapotranspiration Zones Map, Department of Water Resources, 1999.

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 x LA) + (0.3 x SLA)]

d. Estimated Total Water Use.
   The Estimated Total Water Use shall be calculated using the equation below. The sum of the Estimated Total Water Use calculated for all hydrozones shall not exceed MAWA.

$$ETWU = (ETo)(0.62)\left(\frac{PF \times HA}{IE} + SLA\right)$$

Where:

ETWU = Estimated Total Water Use per year (gallons)
ETo = Reference Evapotranspiration (inches)
PF = Plant Factor from WUCOLS (see Section 491)
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)

9. Soil Management Report.

a. 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:
         i. soil texture;
         ii. infiltration rate determined by laboratory test or soil texture infiltration rate table;
         iii. pH;
         iv. total soluble salts;

iii. consider the solar orientation for plant placement to maximize summer shade and winter solar gain.

d) Turf is not allowed on slopes greater than 25% where the toe of the slope is adjacent to an impermeable hardscape and where 25% 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 (see Section 9).

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

1) delineate and label each hydrozone by number, letter, or other method;

2) 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;

3) identify recreational areas;

4) identify areas permanently and solely dedicated to edible plants;

5) identify areas irrigated with recycled water;

6) identify type of mulch and application depth;

7) identify soil amendments, type, and quantity;

8) identify type and surface area of water features;

9) identify hardscapes (pervious and non-pervious);

10) 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:

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 City 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 8 regarding the Maximum Applied Water Allowance.

l) It is highly recommended that the project applicant or City inquire with the West Kern Water District 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 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:

7) 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 Agricultural Code.)

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

12. Grading Design Plan.

a. 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 for other City 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; and
      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.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

13. Certificate of Completion.

a. The Certificate of Completion (see Appendix C for a sample certificate) shall include the following six (6) elements:
   1) project information sheet that contains:
      a) date;
      b) project name;
      c) project applicant name, telephone, and mailing address;
      d) project address and location; and
      e) property owner name, telephone, and mailing address;

c) temporarily irrigated areas.

5) Each irrigation schedule shall consider for each station all of the following that apply:
   a) irrigation interval (days between irrigation);
   b) irrigation run times (hours or minutes per irrigation event to avoid runoff);
   c) number of cycle starts required for each irrigation event to avoid runoff;
   d) amount of applied water scheduled to be applied on a monthly basis;
   e) application rate setting;
   f) root depth setting;
   g) plant type setting;
   h) soil type;
   i) slope factor setting;
   j) shade factor setting; and
   k) irrigation uniformity or efficiency setting.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

15. Landscape and Irrigation Maintenance Schedule.

a. Landscapes shall be maintained to ensure water use efficiency. A regular maintenance schedule shall be submitted with the Certificate of Completion.
b. 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.
c. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.
d. A project applicant is encouraged to implement sustainable or environmentally-friendly practices for overall landscape maintenance.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

16. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

a. All landscape irrigation audits shall be conducted by a certified landscape irrigation auditor.
b. For new construction and rehabilitated landscape projects installed after January 1, 2010, as described in Section 2:
   1) the project applicant shall submit an irrigation audit report with the Certificate of Completion to the City 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;

20. Public Education.

a. Publications. Education is a critical component to promote the efficient use of water in landscapes. The use of appropriate principles of design, installation, management and maintenance that save water is encouraged in the community.
   1) The City or West Kern Water District shall provide information to owners of new, single-family residential homes regarding the design, installation, management, and maintenance of water efficient landscapes.

b. Model Homes. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water efficient landscapes described in this ordinance.
   1) Signs shall be used to identify the model as an example of a water efficient landscape featuring elements such as hydrozones, irrigation equipment, and others that contribute to the overall water efficient theme.
   2) Information shall be provided about designing, installing, managing, and maintaining water efficient landscapes.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

21. Environmental Review.

a. The City must comply with the California Environmental Quality Act (CEQA), as appropriate.

Note: Authority cited: Section 21082, Public Resources Code. Reference: Sections 21080, 21082, Public Resources Code.

22. Provisions for Existing Landscapes.

a. The City may designate the West Kern Water District to implement some or all of the requirements contained in this ordinance. The City may collaborate with the West Kern Water District to define each entity's specific responsibilities relating to this ordinance.

Note: Authority Cited: Section 65595, Government Code. Reference: Section 65596, Government Code.

23. Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis.

a. This section shall apply to all existing landscapes that were installed before January 1, 2010 and are over one acre in size.
   1) For all landscapes in Section 23.a that have a water meter, the City shall administer programs that may include, but not be limited to, irrigation water use analyses, irrigation surveys, and irrigation audits to evaluate water use and provide recommendations as necessary to reduce landscape water use to a level that does not exceed the Maximum Applied Water Allowance for existing landscapes. The

POINT VALUES FOR LANDSCAPING & PLANTING

Landscaping Planting: 120 Points Possible (40%)	Maximum Points
Water Conserving Plants Used:	
25 - 100% of total plant material count*	25 pts
25% or less of total count of water conserving plants used	0 pts
Plant groups by water needs	10 pts
Spacing of plants based on mature growth	10 pts
Low water turf type	15 pts
Soil amendment (healthy soil, use less water)	10 pts
Deep root water sleeve for trees	10 pts
Turf 30 - 75% of total landscape area**	20 pts
(Turf 100% of total landscape area)	0 pts
Hardscape of 20% of total	5 pts
Mulch 25 - 100% of total shrub area*	15 pts
Mulch 25% or less of total shrub area	0 pts
Landscape planting minimum requirements	80 pts

* Points allocated on a percentage basis

** Points allocated on a reverse percentage basis

Irrigation System: 180 Points Possible (60%)	Maximum Points
	40 pts
Low gallonage spray	
Drip/micro spray/bubbler	35 pts
Automatic controller	10 pts
Scheduling based on C.I.M.I.S. (California Irrigation Management Information System)	15 pts
Soil moisture sensors	15 pts
Rain sensors	15 pts
Sensitivity to slope factors (Head spacing and valving)	15 pts
Sensitivity to climatic factors	5 pts
Sensitivity to aspect (orientation N-S-E-W)	10 pts
Check valves	20 pts
Irrigation minimum requirements	120 pts

Appendix B – Sample Water Efficient Landscape Worksheet.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Please complete all sections (A and B) of the worksheet.

SECTION A. HYDROZONE INFORMATION TABLE

Please complete the hydrozone table(s) for each hydrozone. Use as many tables as necessary to provide the square footage of landscape area per hydrozone.

Hydrozone*	Zone or Valve	Irrigation Method**	Area (Sq. Ft.)	% of Landscape Area
	Total			**100%**

** Hydrozone*
HW = High Water Use Plants
MW = Moderate Water Use Plants
LW = Low Water Use Plants

Show calculations.

Section B2. Estimated Total Water Use (ETWU)

The project's Estimated Total Water Use is calculated using the following formula:

$$ETWU = (ETo)(0.62)\left(\frac{PF\,x\,HA}{IE} + SLA\right)$$

where:
ETWU = Estimated total water use per year (gallons per year)
ETo = Reference Evapotranspiration (inches per year)
PF = Plant Factor from WUCOLS (see Definitions)
HA = Hydrozone Area [high, medium, and low water use areas] (square feet)
SLA = Special Landscape Area (square feet)
0.62 = Conversion Factor (to gallons per square foot).
IE = Irrigation Efficiency (minimum 0.71)

Hydrozone Table for Calculating ETWU

Please complete the hydrozone table(s). Use as many tables as necessary.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)	Area (HA) (square feet)	PF x HA (square feet)
			Sum	
	SLA			

Estimated Total Water Use = _____**gallons**

Appendix C – Sample Certificate of Completion.

CERTIFICATE OF COMPLETION

This certificate is 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)
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."

PART 4. SCHEDULE OF LANDSCAPE AND IRRIGATION MAINTENANCE
Attach schedule of Landscape and Irrigation Maintenance per ordinance Section 15.

PART 5. LANDSCAPE IRRIGATION AUDIT REPORT
Attach Landscape Irrigation Audit Report per ordinance Section 16.

PART 6. SOIL MANAGEMENT REPORT
Attach soil analysis report, if not previously submitted with the Landscape Documentation Package per ordinance Section 9.
Attach documentation verifying implementation of recommendations from soil analysis report per ordinance Section 9.

Appendix E. Estimated Total Water Use (Reference Section 8.d).

1) Example ETWU calculation: landscape area is 50,000 square feet; plant water use type, plant factor, and hydrozone area are shown in the table below. The ETo value is 51.1 inches per year. There are no Special Landscape Areas (recreational area, area permanently and solely dedicated to edible plants, and area irrigated with recycled water) in this example.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	10,000	7,000
3	Medium	0.5	16,000	8,000
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	24,700

*Plant Factor from WUCOLS

$$ETWU = (51.1)(0.62)\left(\frac{24{,}700}{0.71} + 0\right)$$

= 1,102,116 gallons per year
Compare ETWU with MAWA: For this example MAWA = (51.1) (0.62) [(0.7 x 50,000) + (0.3 x 0)] = 1,108,870 gallons per year. The ETWU (1,102,116 gallons per year) is less than MAWA (1,108,870 gallons per year). In this example, the water budget complies with the MAWA.

2) Example ETWU calculation: total landscape area is 50,000 square feet, 2,000 square feet of which is planted with edible plants. The edible plant area is considered a Special Landscape Area (SLA). The reference evapotranspiration value is 51.1 inches per year. The plant type, plant factor, and hydrozone area are shown in the table below.

Hydrozone	Plant Water Use Type(s)	Plant Factor (PF)*	Hydrozone Area (HA) (square feet)	PF x HA (square feet)
1	High	0.8	7,000	5,600
2	High	0.7	9,000	6,300
3	Medium	0.5	15,000	7,500
4	Low	0.3	7,000	2,100
5	Low	0.2	10,000	2,000
			Sum	23,500