

**COLLATERAL MATERIALS TO SUPPORT THE ADOPTION AND IMPLEMENTATION
OF A
WATER CONSERVATION IN LANDSCAPING ORDINANCE**

December 2009

The following information has been provided to assist the BAWSCA member agencies in the adoption and implementation of a Water Conservation in Landscaping Ordinance.

- BAWSCA Template Water Conservation in Landscaping Ordinance
- Outdoor Water Use Efficiency Checklist
- Water Budget Calculation Worksheets
- Template Staff Report – Water Conservation in Landscaping Ordinance
- Outdoor Ordinance Frequently Asked Questions (FAQs)
- Form Letter to DWR #1 – Status Update
- Form Letter to DWR #2 – Transmittal of Adopted Ordinance

Reference Websites:

- General information on water-efficient landscapes:
http://www.water.ca.gov/wateruseefficiency/docs/water_efficient_landscapes.pdf
- Guide for estimating the water needs of plants:
<http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf>
- Residential landscapes:
 - <http://www.water.ca.gov/wateruseefficiency/docs/ResidentialLandscapes-2005.pdf>
 - <http://www.water.ca.gov/wateruseefficiency/docs/toolkit.pdf>
- Parks and Commercial landscapes:
<http://www.water.ca.gov/wateruseefficiency/docs/parkscomm.pdf>
- Plant recommendations:
http://www.ebmud.com/conserving_&_recycling/plant_book/default.htm
- California invasive plant material list and recommendations www.cal-ipc.org
- Reference evapotranspiration information:
<http://www.cimis.water.ca.gov/cimis/welcome.jsp>
- Irrigation controller information:
http://www.water.ca.gov/wateruseefficiency/docs/irrigation_controllers_0903.pdf
- BayFriendly gardening practices: www.StopWaste.org
- BAWSCA's Water Wise Gardening information: www.bawasca.org
- Guides to pest control and more: www.ourwaterourworld.org

ORDINANCE NO. _____

**AN ORDINANCE OF [insert name of GOVERNING BODY OF JURISDICTIONAL ENTITY]
ESTABLISHING WATER CONSERVATION IN LANDSCAPING REGULATIONS**

THIS ORDINANCE is adopted in light of the following facts and circumstances, which are hereby found and declared by the [Council/Board of Directors/Board of Supervisors]:

WHEREAS, a reliable minimum supply of potable water is essential to the public health, safety and welfare of the people and economy of [insert City or County name, California].

WHEREAS, the California Water Conservation in Landscaping Act, also known as the State Landscape Model Ordinance ("Model Ordinance"), has been implemented by a Statewide Landscape Task Force which was overseen by the California Urban Water Conservation Council. The California Water Conservation in Landscaping Act was amended pursuant to AB 2717 (Chapter 682, Stats. 2004) and AB 1881 (Chapter 559, Stats. 2006).

WHEREAS, AB 1881 requires cities and counties, no later than January 1, 2010, to adopt the updated Model Ordinance or an equivalent document which is "at least as effective as" the Model Ordinance in conserving water. In the event cities and counties do not take such action, the State's Model Ordinance will be deemed to be automatically adopted by statute.

WHEREAS, the [Entity's name] has developed this local Water Conservation In Landscaping Ordinance to meet the requirements and guidelines of the Model Ordinance and to address the unique physical characteristics, including average landscaped areas, within [Entity]'s jurisdiction in order to ensure that this Ordinance will be "at least as effective as" the Model Ordinance in conserving water.

WHEREAS, although this Water Conservation in Landscaping Ordinance is more streamlined and simplified than the Model Ordinance, the [Council/Board of Directors/Board of Supervisors] finds that it is "at least as effective as" the Model Ordinance for the following reasons: (1) this Ordinance applies to more accounts than the Model Ordinance does because it lowers the size threshold for applicable landscapes from 2,500 square feet (or, in the case of single-family residences, from 5,000 square feet) to 1,000 square feet, to better reflect the typical landscaped areas located within this [City/County/District]'s boundaries; (2) this Ordinance includes a default turf restriction of 25% of the irrigated area and requires that at least 80% of the plants in non-turf landscape areas be native plants, low-water using plants, or no-water using plants (unless the applicant elects to perform a water budget); and (3) this Ordinance expands the requirement for dedicated irrigation meters to all accounts with landscaping greater than 5,000 square feet. The Model Ordinance does not contain any such default turf restrictions or specified plant requirements and only requires dedicated irrigation meters on non-residential accounts with landscaping greater than 5,000 square feet.

WHEREAS, although this Water Conservation in Landscaping Ordinance is more streamlined and simplified than the Model Ordinance, the [Council/Board of Directors/Board of Supervisors] further finds that it is "at least as effective as" the Model Ordinance because this Ordinance includes water budget parameters and values and landscape parameters that are consistent with the Model Ordinance. By using the same water budget parameters as the Model Ordinance (e.g., plant factors, irrigation efficiency), this Ordinance will be as effective as the

Model Ordinance in developing landscape water budgets. By using the same landscape parameters as the Model Ordinance for, among other things, slope restrictions and width restrictions for turf, irrigation times, and minimum mulch requirements, this Ordinance will be at least as effective as the Model Ordinance in achieving water savings.

WHEREAS, Article X, Section 2 of the California Constitution and Section 100 of the California Water Code declare that the general welfare requires water resources be put to beneficial use, waste or unreasonable use or unreasonable method of use of water be prevented, and conservation of water be fully exercised with a view to the reasonable and beneficial use thereof.

WHEREAS, the San Francisco Public Utilities Commission has imposed an interim water supply limitation on its wholesale customers, including local water suppliers, until at least 2018.

WHEREAS, current supply and demand projections for the Bay Area Water Supply and Conservation Agency ("BAWSCA") member agencies indicate that, in the absence of increased water conservation, water demands will exceed available water supplies in 2015 and implementation of water conserving ordinances is one mechanism by which agencies can reduce future water demands and remain within existing supplies.

WHEREAS, The [City Council/Board of Directors/Board of Supervisors] finds and determines that this Ordinance is consistent with the provisions requiring reductions in outdoor water use for landscaping in the California Green Building Standards Code, as such provisions will be implemented in the coming years. Such requirements include the development of a water budget for landscape irrigation in accordance with methodology outlined in either the Model Ordinance or pursuant to a locally adopted ordinance.

WHEREAS, the State Legislature has identified the provision of a more reliable water supply and the protection, restoration and enhancement of the Delta ecosystem as a high priority for the state. Pursuant to this, in November 2009, the State Legislature passed Senate Bill 7 (7th Extraordinary Session) requiring certain urban water suppliers to reduce per capita urban water use by 20% by the year 2020. Accordingly, the [City Council/Board of Directors/Board of Supervisors] finds that implementation of this Ordinance is consistent with the policies and goals established by the State Legislature in enacting SB 7 (7th Extraordinary Session).

WHEREAS, [For Cities and Counties only.] Article XI, Section 7 of the California Constitution declares that a city or county may make and enforce within its limits all local, policy, sanitary, and other ordinances and regulations not in conflict with general laws.

WHEREAS, [For City/Counties who are not water purveyors] pursuant to AB 1881, enforcement of the landscape conservation ordinance adopted by [Insert name of City/County] will require supportive measures by [_____ Water District], the local water provider within these jurisdictions, so as to ensure the successful implementation and enforcement of this Ordinance.

WHEREAS, [For Water Districts] the District has the power to perform all acts necessary to carry out fully the provisions of the County Water District Law (Water Code Section 31001), may establish rules and regulations for the distribution and use of water supplies (Water Code Section 31024), may adopt and enforce a comprehensive water conservation program to reduce

potable water consumption and conserve supplies (Water Code Section 375), and may require as a condition of new service, that reasonable water-saving devices and water reclamation devices be installed to reduce water use (Water Code Section 31035).

WHEREAS, [For Water Districts] the Board of Directors of [_____ Water District] has a long-standing policy of engaging in and encouraging efficient water management measures and practices and desires to adopt this Ordinance in order to provide supportive measures to facilitate the enforcement of landscape conservation ordinances by [the applicable City and/or County.]

WHEREAS, [For Water Districts] the District has followed the procedures for notice, public participation and adoption set forth in Section 375 of the California Water Code.

WHEREAS, [for agencies with recycled water] the adoption of this Ordinance is separate and distinct from [insert Entity's name] adoption of a local ordinance relating to the use of recycled water in outdoor landscapes, as required pursuant to the Recycled Water in Landscaping Act, SB 2095 (Chapter 510, Stats. 2000).

WHEREAS, the [City Council/Board of Directors/Board of Supervisors] finds and determines that this Ordinance is not subject to the California Environmental Quality Act (Public Resources Code Section 2100 et seq.) ("CEQA") pursuant to Section 15307 (the activity assures the maintenance, restoration, enhancement, or protection of a natural resource) and Section 15378(b)(2) (the activity is not a project as it involves general policy and procedure making) of the State CEQA Guidelines, California Code of Regulations, Title 14, Chapter 3, since it makes and implements policies and procedures to ensure that water resources are conserved by reducing water consumption through the establishment of a structure for planning, designing, installing, maintaining and managing water-efficient landscapes.

WHEREAS, the adoption and enforcement of this Ordinance is necessary to manage the [Entity]'s potable water supply in the short and long-term and to avoid or minimize the effects of drought and shortage within the [Entity]. This Ordinance is essential to ensure a reliable and sustainable minimum supply of water for the public health, safety and welfare.

NOW, THEREFORE, THE [COUNCIL/BOARD OF DIRECTORS/SUPERVISORS CITY/COUNTY OR DISTRICT] DOES ORDAIN AS FOLLOWS:

I. Title

THIS ORDINANCE shall be known as the [insert name of Entity] Water Conservation in Landscaping Ordinance.

II. Applicability

A. The provisions of this Ordinance shall apply to all of the following landscape projects:

- i. Tier 1 Landscapes: All new construction and rehabilitated landscapes with irrigated landscape areas between 1,000 square feet and 2,500

square feet requiring a building or landscape permit, plan check or design review, or requiring new or expanded water service.

- ii. Tier 2 Landscapes: All new construction and rehabilitated landscapes with irrigated landscape areas equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check or design review or requiring new or expanded water service.
- iii. Existing landscapes, including existing cemeteries, shall only be subject to the provisions for existing landscapes provided for in Section XIII "Provisions for Existing Landscapes Over One Acre in Size;" and
- iv. New and rehabilitated cemeteries shall only be subject to the provisions of Section VIII "Water Budget Calculations", Section X "Landscape Audit Report", and Section XI "Landscape and Irrigation Maintenance Schedule."

B. The provisions of this Ordinance shall not apply to:

- i. New construction and rehabilitated landscapes with irrigated landscape areas less than 1,000 square feet or that do not require a building or landscape permit, plan check or design review, or new or expanded water service;
- ii. Landscapes, or portions of landscapes, that are only irrigated for an establishment period;
- iii. Registered local, state or federal historical sites where landscaping establishes a historical landscape style, as determined by a public board or commission responsible for architectural review or historic preservation;
- iv. Ecological restoration or mined-land reclamation projects that do not require a permanent irrigation system; or
- v. Community gardens or plant collections, as part of botanical gardens and arboretums open to the public, agricultural uses, commercial nurseries and sod farms.

III. Definitions

- A. "applied water" means the portion of water supplied by the irrigation system to the landscape.
- B. "automatic irrigation controller" means an automatic timing device used to remotely control valves that operate an irrigation system. Automatic irrigation controllers schedule irrigation events using either evapotranspiration (weather-based) or soil moisture data.

- C. "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.
- D. "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.
- E. "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.
- F. "certified professional" or "authorized professional" means a certified irrigation designer, a certified landscape irrigation auditor, a licensed landscape architect, a licensed landscape contractor, a licensed professional engineer, or any other person authorized by the state to design a landscape, an irrigation system, or authorized to complete a water budget.
- G. "conversion factor (0.62)" means the number that converts acre-inches per acre per year to gallons per square foot per year
- H. "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.
- I. "ecological restoration project" means a project where the site is intentionally altered to establish a defined, indigenous, historic ecosystem.
- J. "effective precipitation" or "usable rainfall" (Eppt) means the portion of total precipitation which becomes available for plant growth.
- K. "establishment period" 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.
- L. "Estimated Total Water Use" (ETWU) means the total water used for the landscape as described in Section VIII "Water Budget Calculations."
- M. "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. ETAF for a Special Landscape Area shall not exceed 1.0. ETAF for existing non-rehabilitated landscapes shall not exceed 0.8.
- N. "evapotranspiration rate" means the quantity of water evaporated from adjacent soil and other surfaces and transpired by plants during a specified time.

- O. "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.
- P. "hardscapes" means any durable material (pervious and non-pervious).
- Q. "hydrozone" means a portion of the landscaped area having plants with similar water needs. A hydrozone may be irrigated or non-irrigated.
- R. "invasive plant species" means species of plants not historically found in California that spread outside cultivated areas and can damage environmental or economic resources. "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.
- S. "irrigation audit" means an in-depth evaluation of the performance of an irrigation system. 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.
- T. "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 70%. Greater irrigation efficiency can be expected from well-designed and maintained systems.
- U. "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.
- V. "irrigation water use analysis" means an analysis of water use data based on meter readings and billing data.
- W. "landscape architect" means a person who holds a license to practice landscape architecture in California as further defined by the California Business and Professions Code, Section 5615.
- X. "landscape 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, other non-irrigated areas designated for non-development (e.g., open spaces and existing native vegetation), agricultural uses, commercial nurseries and sod farms.

- Y. "landscape contractor" means a person licensed by the State of California to construct, maintain, repair, install, or subcontract the development of landscape systems.
- Z. "landscape project" means the total area comprising the landscape area, as defined in this Ordinance.
- AA. "lateral line" means the water delivery pipeline that supplies water to the emitters or sprinklers from the valve.
- BB. "local agency" means a city or county, including a charter city or charter county, or water district that is responsible for adopting and implementing this Ordinance. The local agency is also responsible for the enforcement of this Ordinance, including but not limited to, in the case of a city or county, approval of a permit and plan check or design review of a project; and in the case of a district, approval of a new or expanded water service application.
- CC. "local water purveyor" means any entity, including a public agency, city, county, district or private water company that provides retail water service.
- DD. "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.
- EE. "low water use plant" means a plant species whose water needs are compatible with local climate and soil conditions. Species classified as "very low water use" and "low water use" by WUCOLS, having a regionally adjusted *plant factor* of 0.0 through 0.3, shall be considered low water use plants.
- FF. "Maximum Applied Water Allowance" (MAWA) means the upper limit of annual applied water for the established landscaped area as specified in Section VIII "Water Budget Calculations."
- GG. "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.
- HH. "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.
- II. "native plant" means a plant indigenous to a specific area of consideration. For the purposes of these guidelines, the term shall refer to plants indigenous to the coastal ranges of Central and Northern California, and more specifically to such plants that are suited to the ecology of the present or historic natural community(ies) of the project's vicinity.

- JJ. "new construction" means the construction of a new building or structure containing a landscape or other new land improvement, such as a park, playground, or greenbelt without an associated building.
- KK. "no-water using plant" means a plant species with water needs that are compatible with local climate and soil conditions such that regular supplemental irrigation is not required to sustain the plant after it has become established.
- LL. "operating pressure" means the pressure at which the parts of an irrigation system are designed by the manufacturer to operate.
- MM. "overhead sprinkler irrigation systems" means systems that deliver water through the air (e.g., spray heads and rotors).
- NN. "overspray" means the irrigation water which is delivered beyond the target area.
- OO. "permit" means an authorizing document issued by local agencies for new construction or rehabilitated landscapes.
- PP. "pervious" means any surface or material that allows the passage of water through the material and into the underlying soil.
- QQ. "plant factor" or "plant water use factor" is a factor, when multiplied by ETo, estimates the amount of water needed by plants.
- RR. "precipitation rate" means the rate of application of water measured in inches per hour.
- SS. "project applicant" means the individual or entity submitting a Project Landscape Application required under Section VI, to request a permit, plan check, or design review from the local agency or requesting new or expanded water service from the water district. A project applicant may be the property owner or his or her designee.
- TT. "rain sensor" or "rain sensing shutoff device" means a component which automatically suspends an irrigation event when it rains.
- UU. "recreational area" means areas dedicated to active play such as parks, sports fields, and golf courses where turf provides a playing surface.
- VV. "reference evapotranspiration" or "ETo" means a standard measurement of environmental parameters which affect the water use of plants.
- WW. "rehabilitated landscape" means any re-landscaping project that requires a permit, plan check, design review, or requires a new or expanded water service application.
- XX. "runoff" means water which is not absorbed by the soil or landscape to which it is applied and flows from the landscape area.

- YY. "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.
- ZZ. "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.
- AAA. "sprinkler head" means a device which delivers water through a nozzle.
- BBB. "station" means an area served by one valve or by a set of valves that operate simultaneously.
- CCC. "turf" means a ground cover surface of mowed grass. Annual bluegrass, Kentucky bluegrass, Perennial ryegrass, Red fescue, and Tall fescue are cool-season grasses. Bermuda grass, Kikuyu grass, Seashore Paspalum, St. Augustine grass, Zoysia grass, and Buffalo grass are warm-season grasses.
- DDD. "valve" means a device used to control the flow of water in the irrigation system.
- EEE. "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).
- FFF. "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.

IV. Water Conservation in Landscaping Ordinance Requirements

- A. All owners of new construction and rehabilitated landscapes of applicable sizes shall: (1) complete the Landscape Project Application (Section VI) and (2) comply with the Landscape and Irrigation Maintenance Schedule (Section XI) requirements of this Ordinance.
- B. All owners of existing landscapes over one acre in size, even if installed before enactment of this Ordinance, shall: (1) comply with local agency programs that may be instituted relating to irrigation audits, surveys and water use analysis, and (2) shall maintain landscape irrigation facilities to prevent water waste and runoff.

V. Compliance with Ordinance.

- A. The local agency shall:
- i. Provide the project applicant with the Ordinance and Landscape Project Application requirements and the procedures for permits, plan checks, design reviews, or new or expanded water service;

- ii. Review the Landscape Project Application submitted by the project applicant;
 - iii. Approve or deny the project applicant's Landscape Project Application submittal;
 - iv. Issue or approve a permit, plan check or design review that complies with the approved Landscape Project Application or approve a new or expanded water service application that complies with the approved Landscape Project Application;
 - v. Submit a copy of the complete Landscape Project Application to the local water purveyor or land use authority, as the case may be.
- B. The project applicant shall:
- i. Prior to construction, submit all portions of the Landscape Project Application, except the Landscape Audit Report, to the local agency; and
 - ii. After construction, submit the Landscape Audit Report portion of the Landscape Project Application to the local agency.

VI. Landscape Project Application

- A. The elements of a landscape must be designed to achieve water efficiency and will comply with the criteria described in this Ordinance. In completing the Landscape Project Application, project applicants may choose one of two options to demonstrate that the landscape meets the Ordinance's water efficiency goals. Regardless of which option is selected, the applicant must complete and comply with all other elements of the Ordinance. The options include:
- i. Planting restrictions:
 - a. The turf area may not be more than 25% of the landscape area [or *no more than _____ square feet*]; and
 - b. At least 80% of the plants in non-turf landscape areas shall be native plants, low-water using plants, or no-water using plants; or the
 - ii. Water Budget Calculation option (Section VIII).
- B. The Landscape Project Application shall include the following elements:
- i. Project Information;
 - ii. Outdoor Water Use Efficiency Checklist (Section VII);
 - iii. Water Budget Calculations, if applicant selects to use a water budget approach rather than comply with the turf area limitations or specified plant type restrictions (Section VIII);

- iv. Landscape and Irrigation System Design Plans (Section IX); and
- v. Landscape Audit Report (Section X).

VII. Outdoor Water Use Efficiency Checklist

[*Entity's name*] [has developed/will develop] an Outdoor Water Use Efficiency Checklist (Checklist), based on the criteria described below. For Tier 1 projects, either the project applicant or a certified or authorized professional shall complete the Checklist and submit it to [*Entity's name*] along with the Landscape and Irrigation Design Plan. For Tier 2 projects, the Checklist shall be completed by a certified or authorized professional and submitted to [*Entity's name*] along with the Landscape and Irrigation Design Plan.

A. Plant Material

- i. Each hydrozone shall have plant materials with similar water use that are selected and planted appropriately based upon their adaptability to the climatic, geologic, and topographical conditions of the project site.
- ii. The turf area shall not be more than 25% of the landscape area [*or no more than _____ square feet*], unless the project applicant develops a site-specific water budget and the ETWU of the landscape area does not exceed the MAWA.
- iii. Turf shall not be planted on slopes greater than 25% or in areas that are less than eight feet wide, unless irrigated with subsurface irrigation or a low volume irrigation system.
- iv. At least 80% of the plants in non-turf landscape areas shall be native plants, low-water using plants, or no-water using plants, unless the project applicant develops a site-specific water budget and the ETWU of the landscaped area does not exceed the MAWA.
- v. Fire-prone plant materials and highly flammable mulches should be avoided.
- vi. The use of invasive and/or noxious plant species is strongly discouraged.
- vii. The architectural guidelines of a common interest development shall not prohibit or include conditions that have the effect of prohibiting the use of low-water use plants as a group.

B. Mulch

A minimum two-inch layer of mulch shall be applied on all exposed soil surfaces of planting areas, although a three-inch layer is recommended.

C. Irrigation System

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.

- i. Dedicated landscape water meters shall be required for landscape areas greater than 5,000 square feet and are highly recommended for landscape areas greater than 2,500 square feet.
- ii. Tier 2 Landscapes are required to have automatic irrigation controllers that utilize either evapotranspiration or soil moisture sensor data for irrigation scheduling.
- iii. 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.
- iv. The irrigation system shall be designed to prevent runoff, low head drainage, overspray, or other similar conditions.
- v. Low volume irrigation required in mulched areas, in areas with slope greater than 25%, and within 24-inches of a non-permeable surface, or in narrow or irregularly shaped areas that are less than eight feet in width in any direction.
- vi. Average irrigation efficiency is assumed to be 70%. Irrigation systems shall be designed, maintained, and managed to meet or exceed an average landscape irrigation efficiency of 70%.
- vii. Irrigation shall be scheduled between 8:00 p.m. and 10:00 a.m., unless unfavorable weather prevents it or otherwise renders irrigation unnecessary.

D. Hydrozone

- i. Each valve shall irrigate a hydrozone with similar site, slope, sun exposure, soil conditions, and plant materials with similar water use.
- ii. Sprinkler heads and other emission devices shall be selected based on what is appropriate for the plant type within that hydrozone.
- iii. Where feasible, trees shall be placed on separate valves from shrubs, groundcovers, and turf.
- iv. Individual hydrozones that mix plants with different water uses may be allowed if a water budget is performed, and the plant factor calculation is based on the proportion of the respective plant water uses or the plant factor of the higher water using plant is used.

E. Water Features

- i. Recirculating water systems will be used for water features.

- ii. The surface area of a water feature will not exceed 10% of the landscape area and will be counted as a high-water using plant for purposes of a water budget calculation.
- iii. Pool and spa covers are highly recommended.

F. Soil Amendments

Soil amendments, such as compost, shall be incorporated according to the soil conditions at the project site and based on what is appropriate for the selected plants.

VIII. Water Budget Calculations

Project applicant may elect to complete a water budget calculation for the landscape project. A Tier 1 water budget may be developed and completed by the project applicant. A Tier 2 water budget calculation must be completed by a certified or authorized professional. Water budget calculations, if prepared, shall adhere to the following requirements:

- A. The plant factor used shall be from WUCOLS. The plant factor ranges from 0.0 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.
- B. All water features shall be included in the high water use hydrozone.
- C. All Special Landscape Areas (SLA) shall be identified and their water use included in the water budget calculations.
- D. The reference evapotranspiration adjustment factor (ETAF) for SLA shall not exceed 1.0. The ETAF for all other landscaped areas shall not exceed 0.7.
- E. Irrigation system efficiency shall be greater than or equal to 70%.
- F. Maximum Applied Water Allowance (MAWA) shall be calculated using the equation below:

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

Where:

- MAWA = Maximum Applied Water Allowance (gallons per year)
- ET_o = Reference Evapotranspiration (inches per year)
- 0.62 = Conversion Factor (to gallons)
- 0.7 = Reference Evapotranspiration Adjustment Factor (ETAF)
- LA = Landscape Area including SLA (square feet)
- 0.3 = Additional Water Allowance for SLA
- SLA = Special Landscape Area (square feet)

- G. A local agency or project applicant may consider Effective Precipitation (25% of annual precipitation) in tracking water use and may use the following equation to calculate the MAWA:

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

- H. Estimated Total Water Use (ETWU) will be calculated using the equation below. The sum of the ETWU calculated for all hydrozones will not exceed the MAWA.

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

Where:

ETWU = Estimated Total Water Use per year (gallons)

ET_o = 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 0.70)

IX. Landscape and Irrigation Design Plans

- A. Tier 1 Landscapes: The Landscape and Irrigation Design Plan may be prepared by, and bear the signature of, the project applicant, or that of a certified or authorized professional.
- B. Tier 2 Landscapes: The components of the Landscape and Irrigation Design Plan shall be prepared as follows:
- i. The landscape design portion shall be prepared by, and bear the signature of, a licensed landscape architect, licensed landscape contractor, or that of a certified or authorized professional; and
 - ii. The irrigation design portion shall be prepared by, and bear the signature of, a licensed landscape architect, certified irrigation designer, licensed landscape contractor, or that of a certified or authorized professional.
- C. The landscape design portion of the Landscape and Irrigation Design Plan, at a minimum, shall:
- i. Delineate and label each hydrozone;
 - ii. Identify each hydrozone as low, moderate, high water, or mixed water use;

- iii. Identify Special Landscape Areas (i.e., recreational areas; areas permanently and solely dedicated to edible plants; areas irrigated with recycled water);
 - iv. Identify type of mulch and application depth;
 - v. Identify type and surface area of water features;
 - vi. Identify hardscapes (pervious and non-pervious); and
 - vii. Contain the following statement: "I have complied with the criteria of the Water Conservation in Landscaping Ordinance and applied them for the efficient use of water in the Landscape and Irrigation Design Plan."
- D. The irrigation design portion of the Landscape and Irrigation Design Plan, at a minimum, shall contain:
- i. Location and size of separate water meters for landscape;
 - ii. 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;
 - iii. Static water pressure at the point of connection to the public water supply;
 - iv. Flow rate (gallons per minute), application rate (inches per hour), and design operating pressure (pressure per square inch) for each station;
 - v. Irrigation schedule;
 - vi. The following statement: "I have complied with the criteria of the Water Conservation in Landscaping Ordinance and applied them accordingly for the efficient use of water in the Landscape and Irrigation Design Plan."
- E. Grading

If the Landscape Project will be graded, then the grading shall be designed to minimize soil erosion, runoff, and water waste. All grading should be conducted to:

- i. Maintain all irrigation and normal rainfall within property lines and avoid drainage on to non-permeable hardscapes;
- ii. Avoid disruption of natural drainage patterns and undisturbed soil;
- iii. Avoid soil compaction in landscape areas; and
- iv. Be consistent with city and county grading requirements.

X. Landscape Audit Report

- A. Tier 1 Landscapes: Landscape irrigation audits for new or rehabilitated landscapes installed after [Ordinance adoption date] shall be conducted after the landscaping and irrigation systems have been installed. The audit may be conducted by the project applicant or by a certified landscape irrigation auditor.
- B. Tier 2 Landscapes: Landscape irrigation audits for new or rehabilitated landscapes installed after [Ordinance adoption date] shall be conducted by a certified landscape irrigation auditor after the landscaping and irrigation system have been installed.
- C. The Landscape Audit Report shall include, but is not limited to: inspection to confirm that the landscaping and irrigation system were installed as specified in the Landscape and Irrigation Design Plan, system tune-up, system test with distribution uniformity, reporting overspray or run off that causes overland flow, and preparation of an irrigation schedule.
- D. The Landscape Audit Report shall include the following statement: "The landscape and irrigation system has been installed as specified in the Landscape and Irrigation Design Plan and complies with the criteria of the Ordinance and the permit".
- E. Local agency shall administer on-going programs that may include, but not be limited to, post-installation landscape inspection, irrigation water use analysis, irrigation audits, irrigation surveys and water budget calculations to evaluate compliance with the MAWA.

XI. Landscape and Irrigation Maintenance Schedule

Landscapes shall be maintained to ensure water use efficiency.

- A. 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 obstructions to emission devices.
- B. Repair of all irrigation equipment shall be done with the originally installed components or their equivalents.
- C. A Project applicant is encouraged to implement sustainable or environmentally-friendly practices for overall landscape maintenance.

XII. Stormwater Management

Stormwater best management practices should be implemented into the landscape and grading design plans to minimize runoff and to increase on-site retention and infiltration and should be consistent with city and county stormwater management requirements.

XIII. Provisions for Existing Landscapes Over One Acre in Size

This section shall apply to all existing landscapes that were installed before [Ordinance adoption date] and are over one acre in size.

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

- i. For landscapes that have a water meter, the local agency 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 MAWA for existing landscapes. The MAWA for existing landscapes shall be calculated as:

$$\text{MAWA} = (0.8) (\text{ET}_o)(\text{LA})(0.62).$$

- ii. For landscapes that do not have a meter, the local agency shall administer programs that may include, but not be limited to, irrigation surveys and irrigation audits to evaluate water use and provide recommendations as necessary in order to prevent water waste.
- iii. All landscape irrigation audits for existing landscapes that are greater than one acre in size shall be conducted by a certified landscape irrigation auditor.

B. Water Waste Prevention.

Local agencies shall prevent water waste resulting from inefficient landscape irrigation by prohibiting runoff from leaving the target landscape due to low head drainage, overspray, or other similar conditions where water flows onto adjacent property, non-irrigated areas, walks, roadways, parking lots, or structures.

XIV. Penalties

A local agency may establish and administer penalties to the project applicant for non-compliance with this Ordinance to the extent permitted by law.

[Note: The precise provisions of this section should be tailored to the specific policies and goals of your organization.]

A. Violation and Notice of Correction.

It is unlawful for any person, firm, partnership, association, or corporation subject to the requirements of this Ordinance to fail to comply with the outdoor water use efficiency requirements of this Ordinance. [Insert appropriate City/County/Water District official] has the authority to conduct such inquiries, audits or surveys to ensure compliance with the requirements of this Ordinance. Whenever the [insert appropriate City/County/Water District official] determines that a violation of this Ordinance has occurred, the [insert appropriate City/County/Water District official] may serve a notice of correction on the owner(s) of the property on which

the violation is situated. The owner(s) of record shall have ninety (90) days to take corrective action.

B. **[For Cities and Counties]** Administrative Enforcement.

In addition to any other remedy provided by the *[insert entity's name]*'s Municipal Code, any provision of this Ordinance may be enforced by an administrative order issued pursuant to any one of the administrative processes set forth in Section ____ of the *[insert entity's name]*'s Municipal Code. The *[insert commission/governing body]* shall serve as the administrative enforcement hearing officer for the purposes of considering any appeals.

C. **[For Water Districts]** Enforcement.

If an applicant for new or expanded water service fails to comply with the provisions of this Ordinance, the District may require the applicant to resubmit its water service application and revised Landscape Project Application for approval and may withhold approval of the application until the applicant complies with the terms of this Ordinance. In addition to any other remedy provided herein, the District may also refer enforcement of violations under this Ordinance to the City Attorney of the municipality *[or District Attorney/County Counsel/County]* where the violation occurred.

XV. Public Education

- A. The local agency shall provide information to all applicants regarding the design, installation, management, and maintenance of water-efficient landscapes and irrigation systems.
- B. All model homes that are landscaped shall use signs and written information to demonstrate the principles of water-efficient landscapes that are described in this Ordinance.

XVI. Severability

If any section, subsection, provision or part of this Ordinance, or its application to any person or circumstance, is held to be unconstitutional or otherwise invalid, the remainder of this Ordinance, and the application of such provision to other person or circumstances, shall not be affected thereby and shall remain in full force and effect and, to that end, the provisions of this Ordinance are severable.

XVII. Effective Date

This Ordinance shall become effective on _____, 2009/2010. *[For Cities/Counties, 30 days after enactment]*

INTRODUCED at a regular meeting of the *[City Council/Board of Directors/Board of Supervisors]* held on _____, 2009/2010.

PASSED AND ADOPTED at a regular meeting of the [City Council/Board of Directors/Board of Supervisors] of the [City of _____/District/County of _____] held on _____, 2009/2010, by the following vote:

AYES:

NOES:

ABSENT:

[MAYOR/PRESIDENT OF THE BOARD]

ATTEST:

[CITY CLERK/BOARD SECRETARY]

OUTDOOR WATER USE EFFICIENCY CHECKLIST

To Be Completed by Applicant

I certify that the subject project meets the specified requirements of the Water Conservation in Landscaping Ordinance.

Signature _____ Date _____

Project Information

Single Family Multi-Family Commercial Institutional Irrigation only Industrial Other:

Applicant Name (print): _____ Contact Phone #: _____

Project Site Address: _____ Agency Review

Project Area (sq.ft. or acre): _____ # of Units: _____ # of Meters: _____ (Pass) (Fail)

For a single-family project, or a single-family development project, enter this information on an average, per unit basis. For all other projects, input an aggregate value for the entire project.	Total Landscape Area (sq.ft.):	<input type="checkbox"/> Tier 1 (1,000 - 2,500 sq.ft.) <input type="checkbox"/> Tier 2 (> 2,500 sq.ft.)	<input type="checkbox"/>	<input type="checkbox"/>
	Turf Irrigated Area (sq.ft.):		<input type="checkbox"/>	<input type="checkbox"/>
	Non-Turf Irrigated Area (sq.ft.):		<input type="checkbox"/>	<input type="checkbox"/>
	Special Landscape Area (SLA) (sq.ft.):		<input type="checkbox"/>	<input type="checkbox"/>
	Water Feature Surface Area (sq.ft.):			

Landscape Parameter	Requirements	Project Compliance	(Pass)	(Fail)
Turf	Less than 25% of the landscape area is turf	<input type="checkbox"/> Yes <input type="checkbox"/> No, See Water Budget	<input type="checkbox"/>	<input type="checkbox"/>
	All turf areas are > 8 feet wide	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	All turf is planted on slopes < 25%	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Non-Turf	At least 80% of non-turf area is native or low water use plants	<input type="checkbox"/> Yes <input type="checkbox"/> No, See Water Budget	<input type="checkbox"/>	<input type="checkbox"/>
Hydrozones	Plants are grouped by Hydrozones	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Mulch	At least 2-inches of mulch on exposed soil surfaces	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Irrigation System Efficiency	70% ETo (100% ETo for SLAs)	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	No overspray or runoff	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Irrigation System Design	System efficiency > 70%	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Automatic, self-adjusting irrigation controllers	<input type="checkbox"/> No, not required for Tier 1 <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Moisture sensor/rain sensor shutoffs	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	No sprayheads in < 8-ft wide area	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Irrigation Time	System only operates between 8 PM and 10 AM	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Metering	Separate irrigation meter	<input type="checkbox"/> No, not required because < 5,000 sq.ft. <input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Swimming Pools / Spas	Cover highly recommended	<input type="checkbox"/> Yes <input type="checkbox"/> No, not required	<input type="checkbox"/>	<input type="checkbox"/>
Water Features	Recirculating	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Less than 10% of landscape area	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
Documentation	Checklist	<input type="checkbox"/> Yes	<input type="checkbox"/>	<input type="checkbox"/>
	Landscape and Irrigation Design Plan	<input type="checkbox"/> Prepared by applicant <input type="checkbox"/> Prepared by professional	<input type="checkbox"/>	<input type="checkbox"/>
	Water Budget (optional)	<input type="checkbox"/> Prepared by applicant <input type="checkbox"/> Prepared by professional	<input type="checkbox"/>	<input type="checkbox"/>
Audit	Post-installation audit completed	<input type="checkbox"/> Completed by applicant <input type="checkbox"/> Completed by professional	<input type="checkbox"/>	<input type="checkbox"/>

OUTDOOR WATER USE EFFICIENCY CHECKLIST

To Be Completed by Agency		Page 2 of 2											
<p>Auditor:</p> <p>Materials Received and Reviewed:</p> <p><input type="checkbox"/> Outdoor Water Use Efficiency Checklist</p> <p><input type="checkbox"/> Water Budget</p> <p><input type="checkbox"/> Landscape Plan</p> <p><input type="checkbox"/> Post-Installation Audit</p> <p>Date Reviewed:</p> <p><input type="checkbox"/> Follow up required (explain):</p> <p>Date Resubmitted:</p> <p>Date Approved:</p> <p>Dedicated Irrigation Meter Required:</p> <p>Meter sizing:</p>	<div style="background-color: #ccc; padding: 2px; text-align: center; font-weight: bold; margin-bottom: 5px;">Material Distributed to Applicant</div> <p><input type="checkbox"/> Water Conservation in Landscaping Ordinance</p> <p><input type="checkbox"/> Outdoor Water Use Efficiency Checklist</p> <p><input type="checkbox"/> Water Budget Calculation Worksheets</p> <p><input type="checkbox"/> Plant List</p> <p><input type="checkbox"/> Other:</p> <div style="background-color: #ccc; padding: 2px; text-align: center; font-weight: bold; margin-top: 10px;">Measures Recommended to Applicant</div> <p><input type="checkbox"/> Drip irrigation</p> <p><input type="checkbox"/> Self-adjusting Irrigation Controller</p> <p><input type="checkbox"/> Plant palate</p> <p><input type="checkbox"/> Three (3) inches of mulch</p> <p><input type="checkbox"/> Soil amendment (e.g., compost)</p> <p><input type="checkbox"/> Grading</p> <p><input type="checkbox"/> Pool and/or spa cover</p> <p><input type="checkbox"/> Dedicated irrigation meter</p> <p><input type="checkbox"/> Other:</p>												
<p>Comments:</p> 													
<p>Selected Definitions:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%; vertical-align: top; padding: 2px;">Tier 1</td> <td style="padding: 2px;">New construction and rehabilitated landscapes with irrigated landscape areas between 1,000 and 2,500 square feet requiring a building or landscape permit, plan check or design review, or new or expanded water service.</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Tier 2</td> <td style="padding: 2px;">New construction and rehabilitated landscapes with irrigated landscape areas greater than 2,500 square feet requiring a building or landscape permit, plan check or design review.</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">ETo</td> <td style="padding: 2px;">Reference evapotranspiration means the quantity of water evaporated from a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of estimating water budgets so that regional differences in climate can be accommodated.</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">SLA</td> <td style="padding: 2px;">Special Landscaped Area. Includes edible plants, areas irrigated with recycled water, surface 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.</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Professional</td> <td style="padding: 2px;">Professional is a "certified professional" or "authorized professional" that is a certified irrigation designer, a certified landscape irrigation auditor, a licensed landscape architect, a licensed landscape contractor, a licensed professional engineer, or any other person authorized by the state to design a landscape, an irrigation system, or authorized to complete a water budget, irrigation survey or irrigation audit.</td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Water Feature</td> <td style="padding: 2px;">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).</td> </tr> </table>		Tier 1	New construction and rehabilitated landscapes with irrigated landscape areas between 1,000 and 2,500 square feet requiring a building or landscape permit, plan check or design review, or new or expanded water service.	Tier 2	New construction and rehabilitated landscapes with irrigated landscape areas greater than 2,500 square feet requiring a building or landscape permit, plan check or design review.	ETo	Reference evapotranspiration means the quantity of water evaporated from a large field of four- to seven-inch tall, cool-season grass that is well watered. Reference evapotranspiration is used as the basis of estimating water budgets so that regional differences in climate can be accommodated.	SLA	Special Landscaped Area. Includes edible plants, areas irrigated with recycled water, surface 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.	Professional	Professional is a "certified professional" or "authorized professional" that is a certified irrigation designer, a certified landscape irrigation auditor, a licensed landscape architect, a licensed landscape contractor, a licensed professional engineer, or any other person authorized by the state to design a landscape, an irrigation system, or authorized to complete a water budget, irrigation survey or irrigation audit.	Water Feature	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).
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WATER BUDGET CALCULATION WORKSHEETS

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:

$$\text{MAWA} = (\text{ET}_o) (0.62) [(0.7 \times \text{LA}) + (0.3 \times \text{SLA})]$$

where:

MAWA = Maximum Applied Water Allowance (gallons per year)

ET_o = Reference Evapotranspiration (inches per year)

0.62 = Conversion factor (to gallons per square foot)

0.7 = ET Adjustment Factor (ETAF)

LA = Landscaped Area includes Special Landscape Area (square feet)

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

SLA = Portion of the landscape area identified as Special Landscape Area (square feet)

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:

$$\text{MAWA} = (\text{ET}_o - \text{Eppt}) (0.62) [(0.7 \times \text{LA}) + (0.3 \times \text{SLA})]$$

Maximum Applied Water Allowance = _____ gallons per year

Show calculations.

WATER BUDGET CALCULATION WORKSHEETS

SECTION B. WATER BUDGET CALCULATIONS

Section B2. Estimated Total Water Use (ETWU)

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

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

where:

- ETWU = Estimated total water use per year (gallons per year)
- ET_o = Reference Evapotranspiration (inches per year)
- PF = Plant Factor from WUCOLS
- 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 0.70)

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)

Estimated Total Water Use = _____ gallons

Show calculations.

TEMPLATE STAFF REPORT

BAWSCA WATER CONSERVATION IN LANDSCAPING ORDINANCE

RECOMMENDATION:

That the [City Council or Water District Board] adopt the proposed Water Conservation in Landscaping Ordinance (Ordinance).

SUMMARY:

On October 31, 2008 the San Francisco Public Utilities Commission (SFPUC) made a unilateral decision to limit the water supply available from the San Francisco Regional Water System to the City of San Francisco and to the Bay Area Water Supply and Conservation (BAWSCA) member agencies until at least 2018. As a result, in absence of increased water conservation, water demands within the BAWSCA service area are projected to exceed available supplies by 2015. In addition to needing to save water to live within current supplies, the BAWSCA agencies are also being required by new state regulations to conserve additional water and to enforce new outdoor water efficiency standards.

Adoption and implementation of the Ordinance was identified as one mechanism by which [agency] could augment current water conservation efforts to comply with the new state regulations, reduce future water demands, and live within current supplies. The Ordinance was developed by a working group that consisted of BAWSCA, representatives from BAWSCA's member agencies, and representatives from the associated land use jurisdictions in Alameda, Santa Clara, and San Mateo Counties.

The Ordinance requires the installation of water efficient landscaping in all new development and select remodels. The Ordinance is designed to achieve a 25% savings on outdoor water use at applicable projects and is consistent with, or exceeds, the standards set forth in new state regulations. Furthermore, the Ordinance provides [agency] with a tool that can be used to comply with the new state regulations (e.g., requirements to adopt a water-efficient landscape ordinance by January 2010 and to reduce urban per capita consumption 20% by 2020) and will aid [agency] in achieving the necessary water savings.

DESCRIPTION OF THE ORDINANCE:

The Ordinance has been designed to achieve a 25% water savings on outdoor water use at applicable new development projects and landscape rehabilitations.

The Ordinance was developed through extensive research and as part of a multi-agency, multi-county stakeholder process that was facilitated by BAWSCA. The Ordinance was designed to be at least as effective as the Model Water-Efficient Landscape Ordinance that was developed by the Department of Water Resources (DWR Model Ordinance) in terms of achieving water savings. The Ordinance was also designed to be as simple as possible (i.e., facilitating a checklist format) to make the process more straightforward for the project applicant and to make it easier for [agency] staff to review a project for compliance.

The landscape parameters that are addressed in the Ordinance and the proposed efficiency standards are summarized below in Table 1.

TABLE 1
Proposed Landscape Efficiency Standards

Parameter	Tier 1	Tier 2
Applicability	<ul style="list-style-type: none"> • New construction with landscaped area between 1,000 and 2,500 sq. ft., if permit or new or expanded water service required • Rehabilitated landscaped area between 1,000 and 2,500 sq. ft., if permit or new or expanded water service required 	<ul style="list-style-type: none"> • New construction with landscaped area greater than 2,500 sq. ft., if permit or new or expanded water service required • Rehabilitated landscaped area greater than 2,500 sq. ft., if permit or new or expanded water service required
Turf Area	<ul style="list-style-type: none"> • Less than 25% of landscaped area or no more than [X] sq. ft. • Water Budget (optional) • Turf areas must be greater than 8 feet wide • No turf on slopes greater than 25% 	<ul style="list-style-type: none"> • Less than 25% of landscaped area or no more than [X] sq. ft. • Water Budget (optional) • Turf areas must be greater than 8 feet wide • No turf on slopes greater than 25%
Non-Turf Landscaped Area	<ul style="list-style-type: none"> • 80% of non-turf area must be native or low water use • Water Budget (optional) 	<ul style="list-style-type: none"> • 80% of non-turf area must be native or low water use • Water Budget (optional)
Hydrozones	<ul style="list-style-type: none"> • Plants must be grouped in hydrozones 	<ul style="list-style-type: none"> • Plants must be grouped in hydrozones
Mulch	<ul style="list-style-type: none"> • At least 2 inches of mulch required on all exposed soil surfaces 	<ul style="list-style-type: none"> • At least 2 inches of mulch required on all exposed soil surfaces
Overall Irrigation Efficiency	<ul style="list-style-type: none"> • No overspray or runoff • 70% Eto • SLAs allowed 100% Eto 	<ul style="list-style-type: none"> • No overspray or runoff • 70% Eto • SLAs allowed 100% Eto

TABLE 1
Proposed Landscape Efficiency Standards

Parameter	Tier 1	Tier 2
Irrigation Systems	<ul style="list-style-type: none"> • Irrigation system efficiency $\geq 70\%$ • Moisture sensor and/or rain sensor shutoffs • Sprayheads not allowed in areas less than 8 ft wide • — 	<ul style="list-style-type: none"> • Irrigation system efficiency $\geq 70\%$ • Moisture sensor and/or rain sensor shutoffs • Sprayheads not allowed in areas less than 8 ft wide • Automatic, self-adjusting irrigation controllers
Irrigation Times	<ul style="list-style-type: none"> • 8 PM to 10 AM 	<ul style="list-style-type: none"> • 8 PM to 10 AM
Metering	<ul style="list-style-type: none"> • — 	<ul style="list-style-type: none"> • Separate meter recommended for landscaped areas greater than 2,500 sq. ft. • Separate meter required for landscaped areas greater than 5,000 sq. ft.
Swimming Pools and Spas	<ul style="list-style-type: none"> • Covers recommended 	<ul style="list-style-type: none"> • Covers recommended
Water Features	<ul style="list-style-type: none"> • Recirculating • Surface area considered high water use plant • Less than 10% of landscaped area 	<ul style="list-style-type: none"> • Recirculating • Surface area considered high water use plant • Less than 10% of landscaped area
Documentation	<ul style="list-style-type: none"> • Checklist • Landscape and Irrigation Design Plan • Water Budget (optional) 	<ul style="list-style-type: none"> • Checklist • Landscape and Irrigation Design Plan prepared by Certified or Authorized Professional • Water Budget (optional) prepared by Certified or Authorized Professional
Audits	<ul style="list-style-type: none"> • Post-installation audit 	<ul style="list-style-type: none"> • Post-installation audit conducted by Certified or Authorized Professional

The water budget parameters that are addressed in the Ordinance and the proposed values are summarized below in Table 2.

TABLE 2
Proposed Water Budget Parameters and Values

<u>Parameter</u>	<u>Proposed Value</u>
Landscape Coefficient	
High Water Use Plants	0.7 - 1.0
Medium Water Use Plants	0.4 - 0.6
Low Water Use Plants	0.0 - 0.3
Irrigation System Efficiency	≥ 70%
Effective Precipitation	25% of annual precipitation
Evapotranspiration Adjustment	0.7
Factor	1.0 for SLAs

The landscape requirements included in the Ordinance address common landscape parameters and the efficiency standards are consistent with the DWR Model Ordinance requirements. Staff will supply project applicants with information and resources to help them install water efficient landscaping and irrigation systems in compliance with the Ordinance.

For the following reasons, it has been determined that the Ordinance is at least as effective as the DWR Model Ordinance.

(1) The Ordinance applies to more accounts than the DWR Model Ordinance would. The Ordinance applies to all new development and rehabilitated landscapes that are greater than 1,000 square feet (sq.ft.) and that require a landscape permit, plan check or design review, or new or expanded water service. The thresholds specified in the Ordinance are lower than the DWR Model Ordinance thresholds of 2,500 sq. ft. for non-residential accounts and developer-installed single family projects, and 5,000 sq.ft. for homeowner-installed projects. The impact of lowering the landscape size thresholds is that more landscapes will be subject to the Ordinance and therefore, will be designed to be more water efficient than they may otherwise have been pursuant to the DWR Model Ordinance, with the result of increased water savings.

(2) The Ordinance limits the allowable turf area to 25% of the irrigated area, unless the project applicant chooses to develop a water budget. Turf area restrictions result in lower water use landscape designs than a water budget based approach (i.e., the DWR Model Ordinance approach). By having a turf restriction as the default option, the Ordinance has been designed to minimize the use of turf in landscaping and result in increased water savings.

(3) The Ordinance requires that at least 80% of the plants in non-turf landscape areas shall be native plants, low-water using plants, or no-water using plants, unless the project applicant chooses to develop a water budget. The DWR Model Ordinance does not specify plant requirements as it is based on a water budget approach. By having low water use plantings as a

default requirement, the Ordinance has been designed to minimize the use of high-water using plants in landscaping and result in increased water savings.

(4) The Ordinance requires dedicated irrigation meters at all accounts with landscaping that exceeds 5,000 sq.ft. The DWR Model Ordinance only requires separate meters for non-residential accounts that have irrigated landscaping in excess of 5,000 sq. ft. By requiring meters on all landscapes that are greater than 5,000 sq.ft., the Ordinance allows for better accounting of water use at large landscaped areas and provides data that the water purveyor, the local agency, and the property owner can cooperatively use to minimize high landscape water use at a given account.

(5) The Ordinance includes water budget parameters and values that are consistent with the DWR Model Ordinance. By using the same parameters as the DWR Model Ordinance for purposes of developing the water budgets (e.g., plant factors, irrigation efficiency, etc), the Ordinance will necessarily be at least effective as the DWR Model Ordinance in terms of developing landscape water budgets and achieving water savings.

(6) The Ordinance includes landscape parameters that are consistent with the DWR Model Ordinance. The Ordinance includes the same values as the DWR Model Ordinance for, among other things, establishing slope restrictions and width restrictions for turf, limiting irrigation times, and establishing minimum mulch requirements. By adopting the same requirements as the DWR Model Ordinance, the Ordinance will necessarily be at least as effective as the DWR Model Ordinance in terms of achieving water savings.

(7) The Ordinance has been simplified relative to the DWR ordinance. The Ordinance is more simple and streamlined than the DWR Model Ordinance. As such, it will be easier for applicants to comply with the Ordinance and easier for the agency or water purveyor to implement and enforce the Ordinance. The Ordinance will therefore be at least as effective as the DWR Model Ordinance in terms of achieving water savings.

BACKGROUND:

There are two main reasons why the Ordinance was developed.

(1) Without Additional Conservation, the Water Demand of the BAWSCA Agencies is Projected to Exceed Supplies by 2015

The SFPUC provides water to all of the BAWSCA member agencies. On October 31, 2008 the SFPUC made the unilateral decision to limit the water supply available from the San Francisco Regional Water System to the BAWSCA member agencies to 184 MGD until at least 2018. As a

result, based on current projections, and in absence of increased water conservation, water demands within the BAWSCA service area will exceed available supplies by 2015.

Furthermore, the SFPUC has determined that, in addition to limiting BAWSCA's aggregate deliveries to 184 MGD, it will impose an interim supply limitation on each BAWSCA member agency. The sum of the individual BAWSCA agency interim supply limitations will be equal to the 184 MGD. In the event that the supply limitation established by SFPUC is exceeded in a given year on an overall, system-wide basis, agencies that exceed their individual interim supply limitations will be subject to environmental surcharge fees, which will also be set forth by SFPUC.

Lastly, it is uncertain what, if any, additional supplies will be available from SFPUC after 2018. Demand projections through 2035 indicate that, in absence of additional supplies developed by the SFPUC, BAWSCA, or the individual member agencies, there may be a significant gap between demand and available supply. Thus, it is prudent to take steps at this time to reduce demand in conjunction with exploration of alternative supplies. To this end, BAWSCA, in coordination with the member agencies, prepared a Water Conservation Implementation Plan (WCIP) in 2009 to identify additional water conservation measures that the member agencies could potentially implement to achieve the water savings necessary to maintain water demands within available supplies until at least 2018. Based on the WCIP development and analysis process, BAWSCA and the member agencies identified the adoption of an Outdoor Water Efficiency Ordinance as one of five new water conservation measures, which, if fully implemented throughout the BAWSCA service area, could help the member agencies reduce water demands and live within current supply limitations.

(2) The Ordinance Provides a Tool for Compliance With New State Legislation that Mandates Changes to Outdoor Water Use Efficiency

There are efforts at the State level to reduce water consumption throughout California. The Governor has called for a 20% reduction in per capita water use by 2020, and, as described below, recent legislation adopted by the California State Legislature targets outdoor water use efficiency to meet these goals.

The Ordinance is consistent with, or in some cases exceeds, the standards set forth by these new regulations and provides [agency] with a tool that they can use to comply with the new regulations. Moreover, adoption and implementation of the Ordinance will assist [agency] to reduce per capita consumption and to keep purchases from SFPUC below the interim supply limitation through 2018.

California Green Building Standards Code: The Green Building Standards Code came into effect in August 2009, with the requirements for water savings becoming mandatory in 2011. The

California Green Building Standards Code requires that, at a minimum, a water budget be developed for landscape irrigation at new development in accordance with methodology outlined in either the DWR Model Ordinance or pursuant to a locally adopted Ordinance. The Ordinance is consistent with this requirement of the Green Building Standards Code.

AB 1881 (State Model Water Efficient Landscape Ordinance): AB 1881 requires cities and counties, no later than January 1, 2010, to adopt the updated DWR Model Ordinance or an equivalent ordinance which is “at least as effective” as the DWR Model Ordinance in conserving water. In the event cities and counties do not take such action, the DWR Model Ordinance will be deemed to be automatically adopted by statute. By adopting this Ordinance, [agency] will more specifically address the needs of the local community, while being at least as effective as the DWR Model Ordinance in conserving water.

Senate Bill 7 (Steinberg; 7th Extraordinary Session): Pursuant to SB 7, the state will have to reduce urban per capita water use by 20 percent no later than December 31, 2020, and by at least 10 percent no later than December 31, 2015. These water use reductions will be compared against a 10- to 15-year baseline period that ends between 2004 and 2010.

SB 7 does not require individual urban water suppliers to reduce per capita water usage by more than 20 percent. However, each supplier will have to reduce per capita daily water use by at least 5 percent, unless their baseline water use is less than 100 gallons per capita per day (gpcd). Urban water suppliers will have to meet their own, specified water use targets, which they can establish on an individual or regional basis, using one of four methods: (1) a 20% reduction in baseline per capita water use, (2) compliance with established performance standards (e.g., 55 gpcd for residential indoor water use), (3) a 5% reduction from the applicable state hydrologic region target set in the state’s draft 20x2020 Water Conservation Plan¹, or (4) a method that will be developed by DWR by December 31, 2010.

By requiring new development to have water efficient landscaping, the Ordinance will assist [agency] to comply with the water savings requirements of SB 7.

ECONOMIC IMPACT

There would be no additional requirements for new developments with less than 1,000 sq. ft. feet of irrigated landscape areas compared to existing requirements. Other exceptions would be considered and approved at the discretion of the [agency]. For projects that would be affected by the Ordinance, the main economic impact would be the added costs for the development of the Landscape Project Application, the participation from consultants (if required), and potentially from the installation of the landscaping and irrigation systems.

¹ 20X2020 Water Conservation Plan, Draft, April 30, 2009.

Whether the actual cost savings to customers from the reduced water use through implementation of the Ordinance would equal to or greater than the additional incurred cost is not yet quantified.

FISCAL IMPACT

Additional staff time may be required to educate applicants on the new requirements and to review the Landscape Project Applications to ensure that requirements have been met. However, in order to meet its water reduction targets and comply with state regulations, [agency] has taken a leadership role to invest in and foster water conservation. Staff will continue to look for opportunities to partner with other entities both regionally and at the State level to make water conservation as cost effective as possible.

BAWSCA Template Water Conservation in Landscaping Ordinance Frequently Asked Questions (FAQs)

Why are the BAWSCA Member Agencies developing their own Water Conservation in Landscaping Ordinance (the Ordinance) instead of adopting the State Model Water Efficient Landscape Ordinance prepared by DWR (DWR Model Ordinance)?

The Ordinance differs from the State Model Water Efficient Landscape Ordinance prepared by DWR (DWR Model Ordinance) in two main ways: (1) Size Threshold, and (2) Documentation Requirements.

Size Threshold: The DWR Model Ordinance only applies to developer-installed single family accounts and non-residential accounts that have new or rehabilitated landscaping (that require a permit) of greater than 2,500 square feet and new home-owner installed accounts with landscaping greater than 5,000 square feet. Because of the nature of development within much of the BAWSCA service area (i.e., predominately higher-density and infill development) the majority of the new accounts will not have landscaping that will be large enough to trigger application of the DWR Model Ordinance. By lowering the size threshold for applicability (i.e., to 1,000 square feet for all new or rehabilitated landscapes that require a permit or new or expanded water service), the Ordinance is designed to achieve water savings at the majority of new development that is planned within the BAWSCA service area. Other regional entities that have similar growth patterns and needs to save water (e.g., San Diego County Water Authority) have also lowered the landscape size threshold to 1,000 square feet.

Documentation Requirements: Because the applicability threshold has been lowered in an effort to capture more accounts, the Ordinance reduces the documentation requirements in order to avoid placing undue burden on the applicant and the entity that is reviewing the project applications. By simplifying the documentation requirements and the application process, the goal is to achieve greater implementation rates, and thus, greater water savings.

Is the Ordinance at least as effective as the DWR Model Ordinance in terms of saving water?

For the following reasons, the Ordinance is at least as effective as the DWR Model Ordinance in terms of saving water:

- The Ordinance applies to more accounts in the BAWSCA service area than the DWR Model Ordinance would, and therefore, will result in increased water savings.
- The Ordinance limits the allowable turf area to 25% of the irrigated area, unless the project applicant chooses to develop a water budget. The DWR Model Ordinance contains no such turf restriction and is solely water budget based. Turf restrictions have been demonstrated to have lower estimated water use than a water budget approach; therefore the Ordinance has been designed to achieve increased water savings.
- The Ordinance requires that at least 80% of the plants in non-turf landscape areas be native plants, low-water using plants, or no-water using plants, unless the project applicant chooses to develop a water budget. The DWR Model Ordinance contains no such plant restriction and is solely water budget based. By limiting the portion of a landscape that consists of high-water use plants, the Ordinance has been designed to achieve increased water savings.

BAWSCA Template Water Conservation in Landscaping Ordinance Frequently Asked Questions (FAQs)

- The Ordinance requires dedicated irrigation meters at all accounts with landscaping that exceeds 5,000 square feet. The DWR Model Ordinance only requires dedicated irrigation meters at non-residential accounts with landscaping greater than 5,000 square feet.
- The Ordinance includes water budget parameters and values that are consistent with the DWR Model Ordinance (e.g., plant factors, irrigation efficiency).
- The Ordinance includes landscape parameters that are consistent with the DWR Model Ordinance (e.g., slope restrictions, minimum mulch requirements).
- The Ordinance has been simplified relative to the DWR Model Ordinance, which will make it easier to implement, and therefore, increase the water savings.

What will happen if an agency has not adopted its own ordinance by January 1, 2010, when the DWR Model Ordinance has been deemed effective?

By law, the DWR Model Ordinance becomes effective by statute on January 1, 2010 unless an agency has adopted its own ordinance. However, at this time it is not clear how this law will be enforced by the state. BAWSCA has developed a form letter that each agency can send to DWR in January 2010 that explains that they are in the process of developing their own ordinance in lieu of adopting the DWR Model Ordinance and that they will be providing copies of the DWR Model Ordinance and other materials to project applicants until such time that their local ordinance comes into effect.

How much water will the Ordinance save?

The Ordinance has been designed to achieve a 25% savings on outdoor water use at applicable projects. Actual water savings will likely vary based on among others things, final landscape design and the long-term maintenance of the landscaping and irrigation systems.

Does the Ordinance apply to landscape rehabilitations?

The Ordinance applies to rehabilitated landscapes if that landscape is greater than 1,000 square feet, and if a landscape permit, plan check or design review or expanded water service is required.

How do is a water budget calculated?

There are two components of the water budget calculation: (1) The Maximum Applied Water Allowance (MAWA), and (2) the Estimated Total Water Use. The Water Budget Worksheets provided by BAWSCA are based on the DWR worksheets and present the process, data needs, and equations for estimating both the MAWA and the ETWU for a given landscape. Additional information on how to calculate the water budgets and where to get evapotranspiration values, plant factors and other inputs is available on the DWR website and from the local agency.

Can a landscape project have more than 25% turf?

If a project applicant chooses to prepare a water budget in lieu of complying with the turf restriction, and can demonstrate that the ETWU of the proposed landscape is less than the MAWA, then that turf area would be allowable pursuant to the Ordinance. However, the turf area may still be restricted if a local agency has established a maximum turf area as part of the Ordinance. If the turf area is irrigated with recycled water, then it will be considered a Special Landscape Area and different standards may apply.

BAWSCA Template Water Conservation in Landscaping Ordinance Frequently Asked Questions (FAQs)

How does the Ordinance impact edible plants, golf courses, recreational fields, parks, areas irrigated with recycled water or gray water, or water features using recycled water?

Pursuant to the Ordinance, and consistent with the DWR Model Ordinance, all of the above are considered "Special Landscape Areas" or SLA's. For purposes of water budget calculations they are treated differently in that the Evaporation Adjustment Factor (ETAF) for SLAs is 100% of the reference evapotranspiration (ET_o). For non-SLA portions of the landscape, the ETAF is 70% of the ET_o. The ETAF, when applied to the ET_o, adjusts for plant factors and irrigation efficiency. Therefore, the SLAs are allowed 30% more water than other, non-SLA plantings.

Some plants require water to get established, but then do not require much water on a long-term basis. How is this accounted for in the Ordinance?

The checklists and water budgets that summarize the areas of low and high water use plants are based on the long-term average water needs of the plants. The water used for the establishment period (assumed to be one to two years) is not included in the water budget or the calculation of the irrigated landscape area.

How will the water savings associated with the Ordinance be measured and tracked?

Because there are many factors that impact water use on a year-to-year basis (e.g., the weather) specific water savings associated with adoption of the Ordinance will be difficult to track on a near-term basis. What will be possible to track in the near-term, however, is the number of permits and approved water service applications that are issued by a given agency that were deemed by that agency to comply with the Ordinance requirements. On a longer-term basis, and depending on the sophistication of the metering and billing system and the level of coordination between the agency and the water purveyor, it may be possible for BAWSCA to work with the local agency to quantitatively measure the water savings associated with the implementation and enforcement of the Ordinance. BAWSCA will continue to work with the member agencies on this issue.

Is an agency allowed to modify the BAWSCA Template Ordinance?

Each agency has full latitude to modify the BAWSCA Template Ordinance to suit the particulars of its local jurisdiction. However, the Ordinance that an agency adopts must, by state law, be at least as effective as the DWR Model Ordinance in terms of conserving water.

How will the Ordinance that my agency adopts be enforced?

Each agency will decide what level of resources will be assigned to enforcement its Ordinance. The first, and most critical, enforcement step will be when an agency either grants or denies a permit or an application for new or expanded water service based on whether or not the applicant has complied with the terms of the Ordinance.

[Date]

Mr. Simon Eching
California Department of Water Resources
Office of Water Use Efficiency
901 P Street, Third Floor
P. O. Box 942836
Sacramento, CA 94236-0001

Subject: Notification of [insert agency name] Plans to Implement a Local Water Conservation in Landscaping Ordinance

Dear Mr. Eching,

Pursuant to AB 1881, Section 65597, on or before January 31, 2010 each City and County within California is obligated to notify the California Department of Water Resources (DWR) as to whether that City or County is subject to the DWR updated model water-efficient landscape ordinance (DWR Model Ordinance), or whether that City or County has adopted its own water-efficient landscape ordinance.

The [insert agency name] is writing to inform you that we are in the process of developing our own Water Conservation in Landscaping Ordinance (Ordinance). At this time we anticipate that our Ordinance will be adopted by [insert date] and that it will at least as effective as the DWR Model Ordinance in terms of conserving water. Once our Ordinance has been adopted, we will send DWR a copy for your records.

Our community has a strong commitment to conserving water and we are actively working on the development of our own Ordinance. We are also providing copies of the DWR Model Ordinance to project applicants for informational purposes until such time as our Ordinance comes into effect.

Please do not hesitate to contact me with any questions at [insert phone number].

Sincerely,

[Agency Representative]

[Title]

[Agency Name]

cc. BAWSCA
[any ccs]

[Date]

Mr. Simon Eching
California Department of Water Resources
Office of Water Use Efficiency
901 P Street, Third Floor
P. O. Box 942836
Sacramento, CA 94236-0001

Subject: Notification of [insert agency name] Adoption of a Water Conservation in Landscaping Ordinance

Dear Mr. Eching,

Pursuant to AB 1881, Section 65597, on or before January 31, 2010 each City and County within California is obligated to notify the California Department of Water Resources (DWR) as to whether that City or County is subject to the DWR updated model water-efficient landscape ordinance (DWR Model Ordinance), or whether that City or County has adopted its own water-efficient landscape ordinance.

*[Use the following sentence if this letter is dated after January 31, 2010, and if you sent an earlier letter to DWR, in advance of January 31, 2010, that described your intent to develop and adopt a local ordinance]*As described in our letter dated [insert date], [insert agency name], has been in the process of developing our own Water Conservation in Landscaping Ordinance. The [insert agency name] is writing to inform you that, on [insert date], we adopted our own Water Conservation in Landscaping (Ordinance). A copy of our Ordinance, and the resolution adopting the Ordinance, is attached.

Based on the following findings, we have concluded that our Ordinance addresses the needs of our local community and is at least as effective as the DWR Model Ordinance in conserving water:

[If you have modified the components of the BAWSCA template ordinance described below then you may have to edit or remove the points related to those components]

- (1) The Ordinance applies to more accounts in our service area than the DWR Model Ordinance would.** The Ordinance applies to all new development and rehabilitated landscapes that are greater than 1,000 square feet (sq.ft.) and that require a landscape permit, plan check or design review, or new or expanded water service. The thresholds specified in the Ordinance are lower than the DWR Model Ordinance thresholds of 2,500 sq. ft. for non-residential accounts and developer-installed single family projects, and 5,000 sq.ft. for homeowner-installed projects. The impact of lowering the landscape size thresholds is that more landscapes will be subject to the Ordinance and therefore, will be designed to be more water efficient than they may otherwise have been pursuant to the DWR Model Ordinance, with the result of increased water savings.

- (2) **The Ordinance limits the allowable turf area to 25% of the irrigated area, unless the project applicant chooses to develop a water budget.** Turf area restrictions result in lower water use landscape designs than a water budget based approach (i.e., the DWR Model Ordinance approach). By having a turf restriction as the default option, the Ordinance has been designed to minimize the use of turf in landscaping and result in increased water savings.
- (3) **The Ordinance requires that at least 80% of the plants in non-turf landscape areas shall be native plants, low-water using plants, or no-water using plants, unless the project applicant chooses to develop a water budget.** The DWR Model Ordinance does not specify plant requirements as it is based on a water budget approach. By having low water use plantings as a default requirement, the Ordinance has been designed to minimize the use of high-water using plants in landscaping and result in increased water savings.
- (4) **The Ordinance requires dedicated irrigation meters at all accounts with landscaping that exceeds 5,000 sq.ft.** The DWR Model Ordinance only requires separate meters for non-residential accounts that have irrigated landscaping in excess of 5,000 sq. ft. By requiring meters on all landscapes that are greater than 5,000 sq.ft., the Ordinance allows for better accounting of water use at large landscaped areas and provides data that the water purveyor, the local agency, and the property owner can cooperatively use to minimize high landscape water use at a given account.
- (5) **The Ordinance includes water budget parameters and values that are consistent with the DWR Model Ordinance.** By using the same parameters as the DWR Model Ordinance for purposes of developing the water budgets (e.g., plant factors, irrigation efficiency, etc), the Ordinance will necessarily be at least effective as the DWR Model Ordinance in terms of developing landscape water budgets and achieving water savings.
- (6) **The Ordinance includes landscape parameters that are consistent with the DWR Model Ordinance.** The Ordinance includes the same values as the DWR Model Ordinance for, among other things, establishing slope restrictions and width restrictions for turf, limiting irrigation times, and establishing minimum mulch requirements. By adopting the same requirements as the DWR Model Ordinance, the Ordinance will necessarily be at least as effective as the DWR Model Ordinance in terms of achieving water savings.
- (7) **The Ordinance has been simplified relative to the DWR ordinance.** The Ordinance is more simple and streamlined than the DWR Model Ordinance. As such, it will be easier for applicants to comply with the Ordinance and easier for the agency or water purveyor to implement and enforce the Ordinance. The Ordinance will therefore be at least as effective as the DWR Model Ordinance in terms of achieving water savings.

Our community has a strong commitment to conserving water. The Ordinance will apply to the majority of the new and rehabilitated landscapes within our jurisdiction that require a landscape permit, plan check or design review, or new or expanded water service. We will be working with the Project

applicants to ensure that they install and maintain beautiful and water-efficient landscaping that also coincides with our stormwater best management practices and other goals. Please do not hesitate to contact me with any questions at *[insert phone number]*.

Sincerely,

[Agency Representative]

[Title]

[Agency Name]

cc. BAWSCA
[any ccs]

Attachments:

Ordinance, as adopted by *[insert agency name]* on *[insert date]*