NOTICE OF MODIFICATIONS TO THE PROPOSED REGULATION
(MODEL WATER EFFICIENT LANDSCAPE ORDINANCE)
TO
CALIFORNIA CODE OF REGULATIONS, TITLE 23 SECTION 490-495

The State of California Department of Water Resources (DWR) is providing notice of the changes for incorporation into the Model Water Efficient Landscape Ordinance (Model Ordinance) (California Code of Regulations, Title 23 Section 490) per Chapter 559 Statutes of 2006 (Government Code, Section 65591), which were the subject of a written comment period and public hearings held on March 25 and 27, 2008. These changes are in response to comments received during the initial 45-day public comment period that began on February 8, 2008 and ended on March 27, 2008. In addition, DWR has prepared summaries and responses for key public comments to assist reviewers with understanding the reasons behind changes to the proposed regulation.

If you have comments on the Modified Text of Proposed Regulation, DWR will accept written comments between November 26, 2008 and December 30, 2008. Please limit comments to changes to the Modified Text of Proposed Regulation, where added text is displayed in *italicized double underline* and deleted text is displayed in ~~double strikeout~~. All written comments must be submitted to DWR no later than 5:00 p.m. on December 30, 2008, and addressed to:

DEPARTMENT OF WATER RESOURCES
OFFICE OF WATER USE EFFICIENCY AND TRANSFERS
ATTN: SIMON ECHING
POST OFFICE BOX 942836
SACRAMENTO CA 94236-0001

Written comments may also be emailed to mweo@water.ca.gov no later than 5:00 p.m. on December 30, 2008. Note that instead of having a 15-day comment period as required by law, this public comment period is 34 days.

All written comments received by December 30, 2008, which pertain to the indicated changes, will be reviewed and responded to by DWR staff as part of the compilation of the rulemaking record.

Per the Administrative Procedures Act (APA) (Government Code Section 11346.8 (a) and 11340.8 (a)), the rulemaking agency (DWR) must consider all relevant material it receives during a noticed opportunity to comment before adopting or amending any regulation including comments received by fax and email. The APA permits the rulemaking agency to summarize and respond to comments; include late comments but they need not be summarized or responded to; aggregate or group duplicate comments; and there is no need to personally respond to a commenter but the Final Statement of Reasons will contain a summary and response for all comments.

Summary of Key Public Comments and DWR Responses

NOTE: This document summarizes both key public comments received during the 45-day comment period and DWR responses. DWR will provide all the detailed comments and responses in the Final Statement of Reasons. All of the public comments, written and oral, are posted on DWR's website at http://www.owue.water.ca.gov/landscape/ord/ord.cfm

Roles of Local Agency and Water Purveyor

Summary: Commenters requested clarification on the roles of local agencies and water purveyors. Each entity believes that the other should be responsible or not be responsible for the implementation and enforcement of the Model Ordinance. Generally, Commenters either stated that local agencies would have great difficulty administratively implementing the Model Ordinance because of limited staff, technical, and financial resources or that the water purveyors should implement the Model Ordinance because they track customer water use and collect data.

DWR Response: Reject. The role of local agencies and water purveyors is beyond the scope of the DWR authority mandated by Water Conservation in Landscape Act, and cannot be addressed in the Notice of Proposed Rulemaking. DWR has modified the proposed regulation to clarify the roles of local agencies and water purveyors including provisions for local agencies who are not water suppliers. DWR encourages local agencies to collaborate with water purveyors to determine the appropriate responsibilities for each entity.

Applicability and 2,500 square feet threshold

Summary: Commenters disagreed with applicability of the Model Ordinance to homeowner provided or installed residential landscape projects. Commenters disagreed with the 2,500 square feet (sf) threshold for projects, especially for residential projects and suggested increasing the square footage to 5,000 or 10,000 sf. Commenters also requested exemptions for local historical sites and botanical gardens.

DWR Response: Accept in part and reject in part. Urban landscapes account for significant amounts (30 to 50 percent) of outdoor water use in California and DWR included provisions to target this sector. However, DWR increased the 2,500 sf threshold to 5,000 sf for homeowner-installed or provided landscapes only. For new construction and rehabilitated landscapes which are developer-installed in single-family and multi-family residential project, the threshold remains at 2,500 sf. The 2,500 sf of landscape area threshold is part of a provision of the existing regulation under Section 492 Title 23 of the California Code of Regulations and thus, there are no additional modifications to the proposed regulation. Also, DWR made modifications to the proposed regulation to exempt local historical sites and botanical gardens.

Landscape Area definition

Summary: Commenters disagreed with the definition of "landscape area" and requested further clarification.

DWR Response: Accept. DWR made modifications to the landscape area definition.

Landscape Documentation Package

Summary: Commenters disagreed on the numerous requirements and submittals of the Landscape Documentation Package including the Water Efficient Landscape Worksheet.

DWR Response: Accept in part and reject in part. The elements (requirements) of the Landscape Documentation Package are a provision in the existing regulation under Section 492 Title 23 of the California Code of Regulations. However, DWR made modifications to the Landscape Documentation Package and the Water Efficient Landscape Worksheet, and reduced the specifications for landscape design plans, irrigation design plans, and grading plans to reduced documentation work load.

Costs to Local Agencies

Summary: Commenters stated that the regulation increases costs for local agencies becoming an unfunded State mandate. Commenters requested that these costs be addressed in the Final Statement of Reasons for the proposed regulation.

DWR Response: Reject. Comments on increased costs to local agencies are general objections directed at the proposed regulation. The Model Water Efficient Landscape Ordinance is an existing regulation under Sections 490-495 Title 23 of the California Code of Regulations. The Initial Statement of Reasons and an initial Economic Impact Statement recently prepared by DWR for the Department of Finance addressed the issues related to costs. The Final Statement of Reasons, to be released at a later date, will further address costs to local agencies.

24" setback

Summary: The provision for a 24" setback of overhead irrigation (spray and rotor) from non-permeable hardscapes has prompted numerous comments both in support and against its inclusion. Commenters who opposed the setback cite design issues where they believe pedestrian access, aesthetics, and equipment issues will make implementing this provision difficult. Some felt it will impede their ability to design landscapes with turf next to pavement. Some also believed it will be more costly or conflict with established procedures in some cities. Commenters that supported an overhead irrigation setback cite that setbacks are already successfully implemented at several locations throughout the State and they believed it will reduce non-point pollution entering storm systems and watersheds, and reduce the amount of wasted water.

DWR Response: Reject. It is difficult to irrigate with overhead technology without overspray or runoff onto adjacent surfaces. Frequently, irrigation heads spray beyond

the 180 degree arc that is needed on a straight edge. This is caused by various reasons including equipment design, influence of wind, nozzle clogging, and riser misalignment. By moving the irrigation heads away from non-permeable hardscape edges, overspray and runoff can be minimized. If a design requires turf to be placed adjacent to hardscapes for pedestrian access or freedom of play, permeable hardscapes (e.g. pervious concrete, pavers, mulch, gravel, etc.) with adjacently placed overhead technology is allowed. Otherwise, the irrigation technology allowed in the irrigation setback is limited to drip, dripper line or other low flow non-spray technology. The irrigation setback may also be non-irrigated. The overhead technology placed beyond the setback must be appropriate to the design and should not spray onto hardscape. For example, a sprinkler head placed on the edge (beyond the setback) must be a half-circle, *not* a full circle that will spray into the setback and onto hardscape.

By carefully evaluating the intended landscape functions, plant, equipment and surfacing choices, landscape architects and designers can incorporate irrigation setbacks in designs that will reduce non-point pollution and water waste. The setback serves to address the statute and the recommendation (no. 17) of the AB 2717 Landscape Task Force of minimizing overspray and runoff.

Lowering the ETAF to 0.7

Summary: DWR received a wide range of public comments related to lowering the Model Ordinance's Evapotranspiration Adjustment Factor (ETAF) from 0.8 to 0.7. Many wrote in protest stating that there was not enough scientific evidence to justify this change. Other commenters stated that DWR's use of a 90 percent irrigation management efficiency factor was arbitrary and too high. Others felt that DWR should have waited for the ETAF study recommended by the Task Force to be conducted and completed and not rely on what was described as anecdotal evidence. DWR also received comments supporting the change, most emphasizing improvements in irrigation efficiency to justify the change.

DWR Response: Reject. After carefully reviewing public comments and considering that the weight of currently available evidence supports an ETAF of 0.7, DWR has determined that ETAF of 0.7 is reasonable and appropriate and has updated the ETAF White Paper to further explain the reasoning behind this change. The ETAF White Paper will be available at DWR website at http://www.owue.water.ca.gov/landscape/index.cfm

DWR considered various alternatives in coming to a decision and they are as follows:

Alternative 1-Maintain the plant factor value of 0.5 and irrigation efficiency of 0.625 and adopt the updated model ordinance with an ETAF of 0.8. This alternative was rejected because DWR was required by AB 1881 to update the water budget component and the Landscape Task Force Report recommended ETAF value of less than 0.8 after studies or review of existing data have been conducted.

Alternative 2- Maintain the plant factor of 0.5 and irrigation efficiency of 0.625, and ETAF of 0.8 and adopt the ordinance, but conduct a long-term field study to update the ETAF value by modifying the plant factor and irrigation efficiency. Alternative 2 was rejected because there is sufficient technical evidence that a landscape irrigation efficiency higher than 0.625 is achievable.

Alternative 3- Lower the ETAF based on a plant factor of less than 0.5 and an irrigation efficiency higher than 0.625. Some local agencies have adopted a plant factor that is lower than 0.5. Although there is sufficient information to demonstrate that irrigation efficiency higher than 0.625 is achievable, Alternative 3 was rejected because DWR wanted to maintain consumer choices and retain a broad plant palette by maintaining the current plant factor of 0.5. DWR is commissioning a long-term study to determine if further efficiency improvements are achievable and if reduction in plant factor can be made while retaining consumer accepted plant palette.

Alternative 4- Lower the ETAF based on an irrigation efficiency higher than 0.625 and maintain the plant factor at 0.5. DWR recommends Alternative 4. DWR has conducted literature and other data review and, using this published information, calculated the distribution uniformity and irrigation efficiency and recommends an irrigation efficiency of 0.71

Recycled Water

Summary: Several commenters requested an increased water allowance for landscapes using recycled water, in order to encourage the use of recycled water, as well as to allow for leaching of additional salts that may be expected. Other commenters addressed issues that were unchanged from the existing regulation: requirement to install recycled water irrigation systems, where recycled water is available; and applicability of the Model Ordinance to landscapes using recycled water. Some commenters requested that landscapes using recycled water be exempt from the Model Ordinance and stated that recycled water is already sufficiently regulated by other organizations and codes.

DWR Response: Accept in part and reject in part. The requirements for installation and use of recycled water are already in the existing Model Ordinance and have been slightly modified. The Model Ordinance released in February of 2008 stated a specific salinity threshold that would allow extra water for a leaching fraction. This provision has been removed. DWR has allowed additional water for landscapes that use recycled water. Referring to the Water Budget Calculations, the standard ET Adjustment Factor is 0.7. But for landscapes using recycled water, the ET Adjustment Factor may be up to 1.0. This extra water allowance is intended to encourage the use of recycled water as well as address water needs for leaching as a consequence of increased salts.

Furthermore, requirements of the Model Ordinance do not place any additional burden upon agencies subject to existing code (Water Code Section 13551).

Reference Evapotranspiration Tables

Summary: Commenters questioned the data in the updated Evapotranspiration (ETo) Tables. Some commenters noted the difference between the data in the ETo Tables and California Irrigation Management Information System data and requested clarification on the sources used for the tables. They further requested that the Model Ordinance clearly state that the ETo Tables be used for design purposes and CIMIS data be used for real-time irrigation scheduling. One commenter stated that ETo values are applicable to crops and turf and are not appropriate for complex landscapes. Several commenters requested that the CIMIS system provide data for more locations throughout the state. Another commenter questioned how the table will respond to updates in weather information as it becomes available.

DWR Response: Accept in part and reject in part. The data in the updated ETo Tables is explained and footnoted on the table. The updated ETo tables represent the best available data for the greatest number of cities, providing ETo data for more cities than the table from the existing regulation (AB 325). These tables are to be used for planning purposes only, while current ETo data is to be used for irrigation scheduling.

ETo data is routinely used for scheduling landscape irrigation. The ETo data represents a reference crop, such as irrigated grass. A crop coefficient is applied to the reference number which adjusts the value for varied plant species, including landscapes.

DWR recognizes that there are gaps in geographical areas represented in the ETo table and CIMIS data. At present, ETo data is not available for all communities throughout the State. In the future, CIMIS data will expand to cover all areas of the State. For areas not specifically covered in the tables or by CIMIS, those seeking relevant data may refer to data from other cities located nearby in the same Evapotranspiration Zone, as provided on the DWR Evapotranspiration Zone Map. DWR will assess the need to update these tables as new information becomes available.

Irrigation Audits

Summary: Majority of the comments received were opposed to irrigation audits for both new and rehabilitated landscapes and existing landscapes. Commenters stated that local agencies lacked resources (financial, technical, and staff) to implement and enforce irrigation audit programs; that costs to implement, follow-up, and enforce audits were cost prohibitive and not evaluated by DWR; that there were unresolved property access issues and water data privacy issues; that the industry lacked trained professionals to conduct audits; that audits are not reliable; that audits are not appropriate for areas irrigated with drip or micro-sprinklers; that audits do not save water; that tiered water rate programs are more effective than audits; that audits and surveys were responsibility of the water purveyors, not the local agencies and vice versa; that audit requirements duplicated existing requirements of National Pollutant Discharge Elimination System permits, Urban Water Management Plans demand management measures (DMM), or best management practices (BMP) of the California Urban Water Conservation Council.

DWR Response: Comments on irrigation audits are general objections directed at the proposed regulation. Irrigation audits are required in the existing regulation under California Code of Regulations Title 23, Section 492 and Section 493. However, major modifications were made to the irrigation audit sections. Local agencies will be responsible for determining what type of audit program is suitable for their service area.