



AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

CALIFORNIA COUNCIL
AMERICAN SOCIETY OF
LANDSCAPE ARCHITECTS

June 26, 2015

Julie Saare-Edmonds
Water Use and Efficiency Program
California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

RE: June 12, 2015 Public Draft, Model Water Efficient Landscape Ordinance (MWEL0)

Dear Julie:

On behalf of the California Council, American Society of Landscape Architects (CCASLA), please accept the following comments and recommendations regarding the proposed MWEL0 update. CCASLA represents the interests of landscape architects who rely on water efficient landscape ordinances to help direct their landscape design projects on a daily basis. We take seriously the effort to update the MWEL0 to address changing environmental conditions while helping to ensure that California benefits from a realistic, achievable approach to water conservation.

As such, CCASLA wishes to address the following MWEL0 subject areas:

Regenerative Landscape Systems (Section 490 (c)) – CCASLA strongly supports the ordinance's contention that regenerative landscape systems play a critical role in improving and maintaining California's environment conditions. As such, we feel that direct and continued support of environmental efforts such as expanding urban forestry programs throughout California are critical to meeting the State's sustainability goals. Trees play a critical role in helping address a number of issues in the urban environment including climate moderation, storm water management, wildlife habitat, and aesthetics. Protection of legacy trees and shrubs at the expense of turf is an area CCASLA supports. It is also critical when advocating for the removal of existing landscapes and replacing them with drought tolerant ones that it be fully understood that timing is a very important consideration. Water requirements are directly affected by time of year and type of vegetation being established and/or maintained. The necessity of continuing the proper irrigation of all landscape assets should be specifically addressed in the MWEL0 update in order to continue moving forward in achieving the State's sustainability goals. CCASLA recommends the following:

- The planting and maintenance of appropriate trees for California's varied urban climates should be highly encouraged and follow strict guidelines set at the local level to address microclimates, soils, water availability, and other site conditions. The goal should be long-term survival.
- Require that trees be irrigated separately from other landscape planting and receive Special Landscape Area (SLA) status in the MAWA calculations.
- Ensure that new and existing irrigation systems are properly designed and operated to provide the necessary water for long-term tree survival.

Applicability (Section 490.1) and Provisions for Existing Landscapes (Section 493) – The Ordinance recognizes that significant water savings could occur with the appropriate retrofitting, operation, and maintenance of existing irrigation systems. As such, greater emphasis should be placed on Section 493 and addressing existing irrigation systems efficiency. To achieve this goal, CCASLA recommends the following:

- Existing large turf areas with older overhead irrigation systems typically have the highest amount of water waste. Provide incentive for these existing landscapes greater than 2,500SF to receive an irrigation audit and system retrofit with the explicit goal of achieving an irrigation efficiency (IE) rate of 0.71, the current MWEL0 IE figure.
- Projects that have successfully complied with current MWEL0 requirements should be exempt from further water restrictions resulting from local municipal and/or water agency implementation of the MWEL0 update.
- Keep MWEL0 applicability to the current 2,500 SF of landscape area; do not reduce to 500 SF as this provision is overly restrictive, and will be difficult to enforce.

Water Efficient Landscape Worksheet (Section 492.4) and Effective Precipitation (Section 494) – Proposed adjustments to the MAWA calculation formula should reflect scientifically-verifiable studies conducted in such a manner as to simulate a variety of climatic and field conditions using a variety of vegetation types. This will help ensure that water conservation goals can be realistically achieved given the diverse nature of California's landscape and specific site conditions. To achieve this goal, CCASLA recommends the following:

- Recognize that several other factors such as slope, type and density of plant material being established, soil conditions, and type of irrigation equipment, amongst others, will directly affect achievable effective precipitation rates.
- The MWEL0 update should allow for local flexibility in determining appropriate landscape and irrigation design treatments to factor specific project site conditions.
- The use of currently available irrigation technologies, including overhead spray and rotors should continue to be allowed if precisely matched to irrigation needs based on site conditions, vegetation type, and irrigation efficiency goals. This will help ensure that irrigation efficiency is matched to local soil conditions.

Soil Management Report (Section 492.5) and Soil Preparation (Section 492.6 (G) (3)) – Soils play a key role in determining effective precipitation. This is especially true in urban areas where trees are to be planted. Soil preparation and the appropriate use of mulch and amendments are not only critical in the establishment of plant materials, but their long term maintenance and survival. To help ensure these factors continue receiving appropriate attention, CCASLA recommends:

- Greater emphasis should be placed on effectively addressing urban soil conditions at each stage of local plan review.
- Continued monitoring of soil conditions and verification of the appropriate use of mulch and amendments should be noted as a part of each irrigation audit as applicable.
- Adequate soil volumes should be provided to ensure healthy plant growth and the deep rooting of tree species in particular.

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- Require that the installing contractor provide material evidence (invoices) documenting that all soil amendments were installed, and that all required irrigation system components are attributable to the project with material invoices from the vendor showing the job name on it.
- Literature and other informational materials of the International Society of Arboriculture (ISA), the Nursery Growers Association of California (NGA), and others should be incorporated as a reference in the proper cultivation, installation, and maintenance of plant materials.

Landscape Design Plan (Section 492.6) – Proper plant material selection including the limited use of turf plays a critical role in achieving water conservation goals. However, this should not come at the expense of achieving the State’s other sustainability goals. CCASLA recognizes the role turfgrass use plays in this equation and so, recommends:

- Turfgrass should be used in limited applications including municipal facilities (parks), schools, and in multi-family environments. Public parks in particular are the highest and best use of our urban water resources since their use can be demonstrated to help alleviate a number of public health and welfare issues.
- Where practicable, larger areas of turfgrass should utilize alternative water supply sources such as recycled or raw water options.
- All other planting areas should be generally based on regenerative landscape system principles in order to provide desired water- and energy-saving, wildlife habitat, and aesthetic benefits.
- Paving and other hardscape areas should be permeable where practicable, especially where the water is accessible to plant root zones.
- Protection of native and cultivated landscapes including appropriate maintenance procedures should continue to be emphasized when addressing landscape design in fire-prone areas. Removal of vegetation for the sole purpose of water conservation should be highly discouraged.
- Living, regenerative landscape systems should be encouraged over the use of artificial- or synthetic-landscape materials. The appropriate mixture of organic and inorganic materials should be encouraged to provide water savings while also providing other environmental benefits.

Irrigation Design Plan (Section 492.7) – CCASLA remains concerned that the 1"/hr. maximum precipitation rate will severely limit the ability to use a large number of appropriate irrigation options. Landscape Architects support the performance goal of limiting or eliminating runoff, but need flexibility to apply a range of solutions to achieve that goal while meeting site-specific needs. In order to help meet water conservation goals while providing for a choice of design solutions, CCASLA recommends the following:

- That irrigation system design, operation, and maintenance strive to meet maximum irrigation efficiency standards as based on scientifically defensible studies.
- That precipitation rates be based on specific site conditions, plant water requirements, and the system’s components ability to deliver water in as efficient manner as is practicable. This includes applicability to the irrigation of slope areas.
- That the protection of trees be given a high priority when designing the irrigation system.
- That watering times and duration be based on specific site requirements rather than set time periods.
- That local water purveyors invest in and make available for public use alternative water sources such as recycled and raw water for irrigation purposes.

Landscape and Irrigation Maintenance Schedule (Section 492.11) – Only through proper maintenance of landscape and irrigation systems will long-term water savings be achievable. Properly trained and dedicated maintenance personnel are necessary to meet this goal. CCASLA strongly recommends the following:

- That all landscape maintenance contractors for commercial projects are licensed and certified (Certified Landscape Technicians per California Landscape Contractors Association guidelines) so that they are qualified to properly maintain MWEL0 designed and installed landscapes. Training should include at a minimum: the understanding of basic MAWA factors and calculations, irrigation design principles, plant identification, basic plant material watering requirements (WUCOLS criteria), and hydrozone criteria.
- That all commercial and municipal maintenance contracts require pre-qualification based on establishing minimum competency to ensure that low-bid, non-skilled maintenance contractors are disqualified. It does little good to design and install a sophisticated irrigation system and landscape if it will not be properly maintained for optimal performance.
- That all irrigation systems are proactively observed during normal operational times (usually during off-hours) to quickly identify any system malfunctions and to expedite necessary repairs helping minimize water waste.
- That Errors and Omissions (E&O) insurance coverage of installing contractors be required for construction defects specific to MWEL0 requirements.

Irrigation Audit, Irrigation Survey, and Irrigation Water Use Analysis (Section 492.12) – Irrigation audits are critical in establishing the efficiency of existing irrigation systems. Auditing does have limitations depending on the type of landscape being audited. Therefore, CCASLA recommends the following in regards to the audit provisions of the MWEL0 update:

- Shrub & groundcover areas should be exempt from the Catch Can portion of an Irrigation Audit as the plant material blocks the water droplets and makes it nearly impossible to achieve the target Distribution Uniformity (DU). Additionally, sub-surface and drip irrigation systems, by their very design, are very difficult to gauge water distribution so they too should be exempt from the Catch Can portion of an audit.
- Due to the potential interference of plant materials with conducting an accurate water audit, the initial water audit in new landscape areas should be performed after the irrigation system is installed, site grading is complete, and before planting begins. This will help avoid having to change the irrigation system after planting.
- Require that as a part of the irrigation audit, that sub-surface and drip irrigation zones (assumed to be at 0.90 efficiency, therefore not requiring an audit per the proposed update) are audited per Certified Landscape Irrigation Auditor (CLIA) guidelines. This should include a visual inspection for proper operation at a minimum.
- Require that a ‘Landscape Permit’ be required from the local permitting agency that will require documentation and certification for compliance with MWEL0. That includes acknowledgement from the local water purveyor that they have received and accepted the irrigation audit results. REQUIRING this prior to the developer being issued certificates of occupancy ENSURES compliance with MWEL0.
- Describe what steps are to be taken should an irrigation audit report show a new system to have less than the target Distribution Uniformity.
- Local municipalities and water agencies should dedicate the necessary resources to re-educate and train their irrigation auditors/municipal water program personnel/plan checkers, etc. on the goals

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and objectives of the MWEL0 update and the importance of flexible applicability based on local, site-specific factors and other conditions.

Irrigation Efficiency (Section 492.13) – We continue to strongly believe that encouraging and/or offering incentives to retrofit older irrigation systems to current high efficiency equipment accompanied with proper, ongoing maintenance in conjunction with the use of climate-appropriate and native plantings will offer substantial water savings. CCASLA therefore offers the following recommendations:

- Dedicated funding should continue to be encouraged at the local level to support the retrofitting of existing irrigation systems.
- Irrigation efficiency figures should be based on solid, scientifically-vetted studies that are achievable with existing irrigation technologies.

Public Education (Section 492.16) – CCASLA strongly believes that the primary effort to achieve intended water conservation goals must lie with educating the public on appropriate planting and irrigation design, operation and maintenance. This coupled with appropriate financial incentives will likely result in the greatest success. Emphasis should be placed on the value of our public landscapes while encouraging individual responsibility in addressing local conditions. To encourage public acceptance of the need to rethink how we design and maintain our landscape assets, CCASLA makes the following recommendations:

- Continue to support and encourage local education programs focused on regenerative landscape system principles.
- Encourage municipalities and other government entities to take a leading role in water conservation efforts through the retrofitting of their existing landscapes and sharing related information.
- Encourage the use of landscape industry professionals to assist in the design, installation, and maintenance of climate-appropriate, water-conserving landscapes.

CCASLA's comments and recommendations are based on a logical, achievable approach to improving water conservation savings in the landscape. Landscape architects take this goal very seriously. We recognize the need for a "standardized" approach in addressing this issue. We cannot emphasize enough however, the importance of the proper maintenance of existing irrigation systems coupled with appropriate plant selection. Another point of emphasis is that the Ordinance must be enforced on a consistent basis if it is to be fair and equitable. This will help build public trust and understanding. We also recommend that over time, and as conditions change, that the MWEL0 be revisited in order to determine if further revision is necessary or justified.

CCASLA will continue to remain actively involved in the examination of all aspects and factors affecting the design, implementation, and maintenance of California landscapes. We look forward to all future opportunities to comment on the MWEL0. Please feel free to contact me should you have any questions or desire further discussion.

Sincerely,



Jon Wreschinsky, President
California Council of ASLA