Toro Irrigation Position Statement
RE: Proposed Changes to CA MWELO

Introduction

Toro is a leading worldwide provider of innovative solutions for the outdoor environment. Through constant innovation and caring relationships, Toro has built a legacy of excellence by helping customers irrigate and care for golf courses, landscapes, sports fields, public green spaces, commercial and residential properties and agricultural fields.

Toro appreciates the opportunity to provide input to the MWELO update process and commends the intent of those responsible for developing the proposed changes and for their solicitation of feedback from stakeholders.

I. Progress To Date In Reducing R-GPCD

A. Toro Irrigation recognizes the severity of the current drought and is working to support the current emergency regulations that are designed to reduce California's urban per capita consumption of water by 25%.

B. Statewide, the R-GPCD in April declined 13.5% vs. the same month in 2013. Given what we see in a multitude of communities throughout the state, we fully expect the May reduction to be even greater

C. Water agency implementation of water conservation rate structures that communicate to end users the real value of water and penalize water waste are having their intended effects. Additional charges authorized by the state of California, and imposed by retail water agencies under emergency drought regulations, will accelerate the communication process as well as the intended effects.

D. California's water utilities have already succeeded in achieving the statewide 20 x 2020 reduction target set back in February of 2010: 154 GPCD. While insufficient during the 4th year of the drought, this reduction from 192 GPCD in 2005 is noteworthy and indicative that ongoing water conservation efforts are successfully reducing the average Californian's water footprint.

E. While California reservoir levels are now, in the aggregate, approaching the all-time low levels of 1977, it is remarkable to note that the population in California has increased from 22 million to over 38 million during that same period. Overall urban water consumption has not increased in the aggregate since 1980. These facts support the contention that ongoing, statewide water conservation efforts are succeeding. And that this is a very good reason to commend the SWRCB and California Water Agencies for their conservation efforts and a good reason to continue the progress in reducing R-GPCD without permanent, drastic changes to the Model Water Efficient Landscape Ordinance.

Summary: Taken together, the above facts suggest that many Californians understand the drought's severity, the need to reduce water use immediately and that there are financial impacts associated with non-compliance. Progress toward the statewide, drought emergency reduction goal is being made. Although it is clearly recognized that more progress needs to be made, some of the proposed MWELO changes are so drastic that we are concerned there will be significant economic losses that in many cases will be severe and permanent - when in fact they are really not necessary given the progress and trends we are seeing in the reduction of R-GPCD in the state, in each of the California hydrologic regions and with almost all water agencies.

II. Proposed ET Adjustment Factors, Plant Factors & Irrigation Efficiencies Are Too Extreme

A. The proposed ET Factor changes require the following:
   i. 28.6% Reduction in MAWA for residential landscapes: 0.7 to 0.55 to 0.5
   ii. 42.9% Reduction in MAWA for commercial landscapes: 0.7 to 0.55 to 0.4.

B. The proposed Plant Factor changes require the following:
   i. 15% Reduction in Plant Factor for residential landscapes: 0.5 to .425
   ii. 47% Reduction in Plant Factor for commercial landscapes: 0.7 to 0.37

C. The proposed Irrigation Efficiencies require the following:
   i. 19.7% Increase in irrigation efficiency for residential landscapes: 0.71 to .85
   ii. 29.6% Increase in irrigation efficiency for commercial landscapes: 0.71 to 0.92

Summary: The current emergency reduction of the ET Factor for both commercial and residential landscapes to 0.55, which was most recently adopted by the California Building Standards Commission, is consistent with the position expressed by the California Landscape Contractors Association and would avoid the complication of MWELO that the CLCA warns against. An ET Factor of 0.55 still reduces the MWELO MAWA standard by 21% and more importantly, has the support of the irrigation and building industries. Willing compliance and support of stakeholders should be considered in the overall effort to reduce outdoor irrigation water use. This also enables the landscape architects and irrigation designers to make tradeoffs between irrigation technologies and plant selection – empowering those who can make a difference in the water footprint of a landscape.

III. Section 492.11 of MWELO is titled: Landscape and Irrigation Maintenance Schedule. Item (a) states: Landscapes shall be maintained to ensure water use efficiency.

A. An effective way to "ensure water use efficiency" is to create a regulatory environment that incentivizes large area irrigation systems to be managed to the MWELO MAWA standard through implementation of a water budget program managed by a certified water manager – such as the CLCA Water Management Certification Program.

B. The water budget approach compares actual monthly water use, as measured through a dedicated landscape water meter or sub-meter, to the MAWA budget.
   i. This is in fact a standard operating procedure for the Irvine Ranch Water District who has used this approach since 1992 through strict enforcement of their water budgets via their monthly water bills.

C. Combining the possibility of an audit with a requirement to maintain records showing compliance to the water budget, creates the desired incentive to "ensure water use efficiency. The result would be a focus - by the landscape maintenance company and/or the property manager - on maintaining outdoor landscape water use consistent with the MWELO MAWA standard; which will result in increased water use efficiency well past the initial irrigation system installation and contractor warranty period.

Summary: Both CLCA (California Landscape Contractors Association) and ASIC (American Society of Irrigation Consultants) support the use of the water budget, with its explicit emphasis on ongoing maintenance and irrigation management, as an effective way to reduce outdoor water waste and believe that this approach will have more results on overall outdoor water use than the proposed changes to MWELO.

IV. The ongoing water savings of an irrigation system is determined by the weakest link in the integrated and interdependent processes of design, installation, maintenance and management.

A. The proposed changes to MWELO focus almost exclusively on the design and installation processes to the exclusion of the maintenance and management of an irrigation system - where the bulk of the potential water savings reside.

B. This means that the same economic forces that cause more conventional landscapes and irrigation systems to waste water, i.e. insufficient system maintenance and poor water management, will continue to affect the newest, most efficient landscapes and irrigation systems – even if they meet the more demanding criteria of the proposed MWELO when they are first installed.

C. The end goal of the MWELO proposed changes will therefore not be met – which is to reduce the amount of potable water used in California to irrigate outdoor landscapes.

Summary: Recognizing that the efficiency of the irrigation system is determined by the "weakest link" in the interdependent processes noted above, the suggestion is that some type of requirement for reporting landscape water use post-installation and on an ongoing basis using a water budget approach should be seriously considered before drastic changes to ET Factors, Plant Factors and Irrigation Efficiencies are mandated.

V. Precipitation Rate Limitations – Applications Which Should Be Excluded From This Limitation

A. Rotors used on golf courses, commercial sites, parks, cemeteries and sports fields should be excluded from the 1" per hour precipitation rate limitation.

i. In golf applications, matched precipitation rates are achieved by central control run time adjustments that include using the arc setting of the sprinkler. In new golf applications, the use of "valve-in-head" rotors makes this run time control independent for each golf rotor.

B. To not exclude rotors for the above mentioned applications means the vast majority of existing rotors currently used for these applications would be prohibited. Does this mean the intention is to replace all longer distance rotors with double or triple the quantity of shorter throw rotors on the above referenced applications?

i. When the radius range is 50 feet and above, the physics of the distribution of water requires the pressure and flow rate to be sufficiently high to reach the intended distances and this often results in precipitation rates that are above 1" per hour.

ii. Rotors that utilize rotating streams to deliver the water pattern - and which are considered highly efficient for use on slopes - would also be excluded from use; which is hopefully not the intention.

C. Drip and dripline applications should also be excluded from this 1"/hour precipitation rate limitation as many dripline grids routinely apply water in excess of the 1"/hour limitation.

i. This is true when using dripline tubing with 1 GPH emitters spaced 12" apart and installed with the dripline rows spaced 12" or 18" apart; or when using 0.5 GPH emitters spaced 12" apart and installed with the dripline rows spaced 12" apart.

VI. A Note On Significantly Changing the Plant Factor

A. The following excerpt is from the 2006 Journal of Agricultural and Resource Economics 31(2):173-192 article titled, "Water Conservation and Residential Landscapes: Household Preferences, Household Choices" by Brian Hurd. The excerpt below addresses the unchallenged assumptions that commercial landscape with no turf and nothing but native and drought tolerant plant material will by definition save significant amounts of water over a landscape design that does include some type of turf – even though it might be warm season turf grass that requires 25% - 30% less water than the most popular California cool season turf grasses.

"… water savings will depend on factors beyond simply exchanging one type of vegetation for another. Arguably more important that vegetation type is the system of irrigation used and the capability of the homeowner to effectively manage the system for water efficiency. Researchers at the University of California, Riverside, Turfgrass Research Facility, for example, have estimated that two-thirds of the water savings from municipal turf rebate programs is the result of upgraded and more efficient irrigation systems, while the remaining one-third is attributable to the switch from turfgrass to Xeriscape™.

B. The following excerpt is from "Turf Removal & Replacement: Lessons Learned" published March, 2015 by CUWCC. It provides another perspective on the issue of plant factor changes.

"… some rebate customers see no water savings despite replacing their turf. Anecdotally, water agency employees observe negligible initial water savings on many turf conversions. They note that while climate appropriate and native landscapes require different irrigation techniques, they still use roughly the same quantity of water as efficiently-watered turf grasses upon installation."

Concluding Statement

It is the hope of many in the irrigation industry that the final 2015 MWELO changes maintain the regulatory spirit of the 2010 MWELO regulation in that a "performance" based approach be taken rather than a "prescriptive" approach. Moreover, the use of good research and science to set new parameters for MWELO water budgets makes good sense and can be supported; selecting targets based on unreasonable assumptions and/or non-stated agendas may result in unintended consequences that create undue economic harm without real progress being made towards the desired goal. We trust that these issues will be given due consideration by those making the final decisions.

Thank you for providing stakeholders the opportunity to provide feedback.