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June 17, 2015

California Department of Water Resources (DWR)

RE: Hunter Comments on Proposed Model Water Efficiency Landscape Ordinance (MWEL) Updates

Dear DWR Decision Makers;

Hunter Industries is a California-based corporation, focused on manufacturing and innovations within the landscape irrigation equipment industry. As such, we offer our help to the efforts put forth by the ITP to enhance the MWEL. We respectfully ask that you consider the following comments/positions from our perspective as a professional solutions provider of Proven Water Saver products in landscapes.

Precipitation Rate Limit:

- Hunter Industries is in support of the precipitation rate limitation mandate.
- A precipitation rate of 1"/hr or less more closely matches soil infiltration rates and therefore lowers the probability of runoff and promotes deep-root development of plant material. This saves water and develops a landscape that is better equipped to handle the drought conditions we face.
- This prescriptive measure is fair and does not exclude any of the major irrigation equipment manufacturers.
- The precipitation rate limitation approach comes with wind drift concerns that can cause gross irrigation inefficiencies. At precipitation rates at or below 1"/hr any device that uses a spray nozzle approach of any kind typically results in water drops that either evaporate before landing in the irrigated area or drift outside the irrigated area due to wind. Devices that utilize streams (either multi-stream, multi-trajectory rotor type nozzles or single-stream rotors) are much more efficient at delivering water to the irrigated area. The answer is not allowing higher precipitation rate spray devices but the selection of stream delivery type sprinklers to achieve both low precipitation rate advantages and avoidance of wind-related inefficiencies.
- Lower precipitation rate sprinklers (like multi-stream, multi-trajectory rotor type nozzles or single-stream rotors) do not require longer irrigation cycle times (water windows) when compared to higher precipitation rate sprinklers. The difference in design of a new system is simply the lower precipitation rate sprinkler system can support more heads per zone than a higher rate system. In the retrofit situation, depending on system design and controller capability, the system may even be able to complete an entire cycle in less time due to the relative increase in distribution uniformity of lower precipitation rate devices compared to higher rate devices. Hunter believes irrigation cycle time is not an issue to be considered when limiting the precipitation of the irrigation system.

Irrigation Efficiency (IE):

- Hunter Industries strongly opposes the overall 85% and 92% irrigation efficiency rate changes proposed.

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- In order to reach an 85% irrigation efficiency the irrigation system would need to attain a distribution uniformity level that is not reasonable based on current technology.
- An irrigation efficiency value of 75% is challenging yet attainable in our opinion. Coupled with a 1"/hr precipitation rate limitation, the results will be an increase to the beneficial utilization of potable water for landscape irrigation intended by the MWELo.
- Hunter recommends an update to the IE from 71% to 75% for both Commercial and Residential.

Evapotranspiration Rate Adjustment Factor (ETAF):

- Due to the IE discussion above and the dependence of the ETAF on IE, Hunter recommends changes to the ETAF that keeps the Plant Factors as defined in the proposed MWELo. The resulting ETAF values are then 0.49 for Commercial and 0.57 for Residential.

We understand the severity of the water shortage situation we all face here in our home state of California. Hunter Industries is grateful to the ITP and the DWR for their work in making the proposed changes to the current MWELo and the opportunity to voice our position on these changes. We continue to offer our professional staff as unbiased advisors to the ITP and the DWR as solutions are being finalized to solve the state water issue.

Thank you and kindest regards,

GENE SMITH, CLIA, CID, PE
Vice President, Marketing

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