EAST BAY
MUNICIPAL UTILITY DISTRICT

April 8, 2009

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DATE	April 08 2009
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California Energy Commission
Dockets Office, MS-4
Re: Docket No. 09-AAER-1A
1516 Ninth Street
Sacramento, CA 95814-5512

Dear Commissioners:

RE: 2009 Irrigation Equipment Performance Standards and Labeling Requirements Proceeding Scope

The East Bay Municipal Utility District (EBMUD) thanks you for the opportunity to provide comment on the Commission's scope proceeding.

EBMUD supports equipment performance standards and labeling. Having these standards and labeling assist state water purveyors, end-users, and manufacturers in their program development, purchasing decisions and product development. Over the years, EBMUD has been actively involved in improving irrigation efficiency through customer incentive programs, supporting third party independent testing, assembly bills, and research studies. For example, EBMUD is the lead agency for Northern California in a Proposition 13 funded Evaluation of California Weather-Based "SMART" Irrigation Controller Programs. When this report is complete, we will provide a copy of the study to the CEC.

The April 1, 2009 CEC Efficiency Committee Workshop was provided with a broad overview of irrigation issues from various perspectives. It is apparent that efficient urban landscape irrigation is a complex process and equipment will benefit from efficiency standards and labeling while other facets of irrigation are not equipment related. For example local water efficient landscape regulations vary from community to community and training, education, certification and human behavior all affect the design, installation, maintenance and management of irrigation systems and ultimately irrigation efficiency. With that being said, what the CEC chooses to develop performance standard for and labeling should take into account current efforts to development standards already going on in this sector of water efficiency.

AB 1881 directs the CEC to adopt standards and labeling requirements for controllers and moisture sensors by January 1, 2010. Much effort in developing testing protocols and setting performance standards has already been accomplished and EBMUD encourages the CEC to support and complement the efforts of the US EPA WaterSense Product Rating and Labeling Program and the Irrigation Association Smart Water Application Technology (SWAT) initiatives that were presented at the April 1, 2009 workshop. Many stakeholders including public agencies, water purveyors, environmental groups, manufacturers and green industry professionals have contributed to this process and the process is gaining wide-spread national acceptance. In addition, other organizations such as International Association of Plumbing and

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Mechanical Officials (IAPMO) already have standards for lawn sprinkler valves and backflow preventers and American Society of Testing and Materials ASTM are already involved in design and installation of systems with regards to the pressure capacity of the components.

Please consider the following recommendations for the CEC's standards and labeling process.

1. Adopt US EPA performance standards for irrigation products as they become certified and labeled 'WaterSense'. To be labeled *WaterSense*, US EPA requires a third party lab to test irrigation products using the appropriate SWAT protocol for water efficiency and also requires additional consumer protection testing. EPA will determine minimum performance standards based on the data generated by the SWAT protocols. Product testing is a consensus process that takes time. US EPA has already established a process of establishing protocols for irrigation equipment in order of highest priority based on the potential water savings of the equipment. Currently, only the protocol for climate based self-adjusting controllers has been approved by the SWAT committee. An additional protocol for soil moisture based self-adjusting controllers is also underdevelopment and nearing approval.

2. Adopt performance standards that are as inclusive as practical. Entrepreneurs have responded to the call for water efficiency from many different angles and before State standards and labeling. Some products may not fit perfectly into a category but may provide significant water savings. Some examples are:
   - **Large central irrigation controllers**. The existing SWAT protocols are specific to light commercial and residential controllers. We recommend large central irrigation controllers at a minimum be required to meet the same *scheduling* protocol as light commercial and residential models. Other large central irrigation features such as *flow management* may reduce energy consumption but from a cost effective standpoint it may not be practical to establish a unique protocol for central irrigation controllers.
   - **Add-on devices**. Add-on devices convert any conventional controller into a smart controller. SWAT and EPA are probably best qualified to determine how to include other products in the performance standard but CEC should encourage the widest practical inclusiveness rather than exclusiveness. At one point EPA was going to require a separate test of an add-on device with each conventional controller to qualify. In response to strong stakeholder opposition the EPA is now considering modifying the requirement to allow the add-on device to be tested with only two or three devices. If the performance is similar for the three devices the manufacturer would be required to publish a list of acceptable controllers that can be used in conjunction with the add-on device but not be required to perform individual tests on all possible combinations.

Although it may be outside the scope of the CEC and may be a responsibility of the manufacturer, the fine-tuning of the smart controllers is an issue that must be dealt with. This is an essential follow-up after the initial set-up in order to achieve the highest percentage of potential water savings for the controller. We suspect that the reason some self-adjusting controllers use more water than their conventional counterparts is that either the wrong default

settings were programmed into the controller or the default settings were more generous than the settings used for the conventional controller. In our experience it is both homeowners and landscape professionals who need more assistance. Smart controllers can and should be adjusted to use no more water than the conventional controller it replaced. Manufactures could do more to communicate the need for fine-tuning in the training of professionals and in the manuals that accompany the product. This fine-tuning process is essential to calibrate the default setting to the actual field conditions. This will help capture a higher percentage of the potential water savings achieved by installing a self-adjusting controller. Though the CEC can set standards for pieces of equipment, there are human behavior factors that can have greater effects on water usage than the device itself and this needs to be considered with setting a performance standard.

As a final note EBMUD does not support using the results of a single study or report based on actual field conditions as a basis for controller and other irrigation equipment performance standards. While these studies are useful to the industry, water districts, and consumers, they can be biased on 'real-world' conditions that are highly variable.

Thank you, again, for the opportunity to comment on the scope of efficient irrigation product standards and for your consideration of these suggestions. If you have any questions, please contact me at (510) 287-1675.

Sincerely,

Charles M. Bohilg
Supervisor of Water Conservation