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Felicia Marcus, Chair
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

July 14, 2014

Re: Emergency Water Conservation Regulations

I am writing to respond to the State Board's proposed emergency urban water conservation regulations. I want to applaud the action the Board is taking to address the historic drought in a clear and decisive way, including the tracking and reporting of water use per person monthly. I'd also like to offer some comments on specific additions and revisions the Board may consider to increase the efficacy of the proposed regulations for generating an immediate and real impact on water conservation. These suggestions are based on years of experience WaterSmart Software has developed in partnership with water utilities across California to engage residential customers on their water use and drive behavior change with proven, measurable results.

First, the Board should make a priority of engaging all Californians in water conservation activities. This is no easy feat, even with the heavy media coverage and clear economic and environmental impacts from the drought. In fact, a poll conducted by the LA Times in May found that only 16% of Californians said that the drought has had a "major impact on their daily lives."¹ Water suppliers' expertise is in providing clean, reliable water and maintaining their financial integrity. As a result, additional guidance from the State Board may be required to make water conservation a top priority state-wide. The state should continue to invest in outreach until the state has made far more significant progress in advancing water use efficiency.

Second, the Board should provide specific recommendations to water suppliers on techniques that have proven effective to reduce water use. Watering restrictions may be one such solution, but studies indicate the effectiveness of this approach may vary widely.² Many water suppliers may also be opposed on

¹ <http://www.latimes.com/local/lanow/la-me-ln-drought-worsens-across-california-20140619-story.html>

² See research from water restriction impact evaluations in Florida
http://b2bcontentsolutions.com/documents/B2B_SJRWMDIrrigationRestrictionRep

principal to such limits and restrictions. Other options, including providing social norm comparisons that engage consumers, offer additional tools to water suppliers.

In light of the needs discussed above, I recommend that the board amend its resolution to direct retail water agencies to adopt behavioral water efficiency (social norm-based) programs designed to increase customer awareness of their water use. We suggest the Board include the following in the Mandatory Actions by Water Suppliers:

- To promote water conservation, urban water suppliers should implement behavioral water efficiency measures (see my letter dated 6.26.14 for more information).
- To promote water conservation, each urban water supplier should target outreach to high residential water users, which other cities have found to use 10-20 times the average household.³
- To promote water conservation, each urban water supplier should communicate recommendations for indoor and outdoor water conservation to each residential customer on at least a quarterly basis.

Thank you for considering these comments, and let me know if I can provide any additional information.

Sincerely,



Peter Yolles
CEO & Founder
WaterSmart Software

[ort2006.pdf](#), and Colorado
http://www.researchgate.net/publication/227543578_Residential_Water_Demand_Management_Lessons_from_Aurora_Colorado1/file/e0b4952695f0489c8b.pdf

³ <http://www.expressnews.com/news/environment/article/Biggest-water-users-consume-10-to-20-times-more-5341194.php#/0>

June 26, 2014

Felicia Marcus, Chair
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Re: **Proposal for Urban Water Conservation Emergency Regulations**

I am writing in response to the Board's request for suggestions regarding potential emergency water conservation regulations. WaterSmart Software is a leader in developing new, behavioral water efficiency-based tools for urban water agencies to provide cost-effective water conservation savings.

The need for creative new water conservation solutions has been highlighted by pressures caused by the drought as well as by the limited progress in accelerating water conservation efforts reported at the last Board meeting. I recommend that the Board consider an emergency regulation that would direct all urban water agencies to adopt a behavioral water efficiency program that would use "social norming" comparisons to encourage customers to increase their water conservation efforts.

This new technology has been demonstrated to be highly effective in an evaluation of a carefully designed EBMUD project. (An independent evaluation, funded by the California Water Foundation, is available here - [http://californiawaterfoundation.org/uploads/1389391749-Watersmart_evaluation_report_FINAL_12-12-13\(00238356\).pdf](http://californiawaterfoundation.org/uploads/1389391749-Watersmart_evaluation_report_FINAL_12-12-13(00238356).pdf)) This analysis found that WaterSmart Software reduced water use by 5% within a year. These savings were achieved at a cost of \$380-\$400 per acre-foot. WaterSmart Software currently has more than 20 water utility customers in four states. Other water agencies are implementing in-house behavioral water efficiency programs.

In particular, the Board should consider adopting a regulation directing urban water agencies with more than 10,000 connections to implement behavioral water efficiency programs within three months, in order to help residential customers understand their water use in comparison with that of average and efficient neighbors. Behavioral science has shown that this approach is highly effective in changing behavior in areas as diverse as smoking reduction, corporate wellness, energy efficiency and water conservation.

Behavioral water efficiency has several advantages that make it an ideal response to the drought and the need to accelerate water conservation efforts:

First, behavioral water efficiency programs can be implemented very rapidly. They require no hardware installation or software integration either by the water user or by the water utility. Instead, these programs, which rely on behavioral science and information technology, can be implemented and begin delivering results in as little as 30 days.

Second, behavioral water efficiency has been proven to be highly cost-effective. The EBMUD evaluation confirmed that this tool is among the most cost-effective sources of new water available to urban water agencies. In considering emergency regulations, the board should focus on encouraging the widespread adoption of cost-effective conservation tools.

Third, behavioral water efficiency programs increase customer engagement in water conservation efforts and increase customer satisfaction. In fact, most new water conservation gains are now coming from behavior change, as opposed to traditional retrofit programs. The Board's emergency regulations should encourage programs that foster positive customer engagement. As California faces not only the drought, but also the likelihood of a warmer future and more constrained water supplies, increasing customer engagement will only become more important over time.

Fourth, this new technology is consistent with the Governor's Water Action Plan, which included the following specific recommendation: "promote the innovation of new systems for increased water conservation."

Thank you for considering this proposal. Please let me know if additional information would be helpful.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Yolles". The signature is fluid and cursive, with the first name "Peter" being more prominent than the last name "Yolles".

Peter Yolles
CEO and Founder