

**CALIFORNIA BUILDING STANDARDS COMMISSION
GREEN BUILDING
WORKSHOP**

February 5, 2015 - Agenda Item 5c

**DRAFT EXPRESS TERMS for the 2016
CALIFORNIA GREEN BUILDING STANDARDS CODE,
(CALGreen), PART 11,
CALIFORNIA BUILDING STANDARDS CODE,
TITLE 24, CALIFORNIA CODE OF REGULATIONS**

- **Statement of specific purpose, problem, rationale and benefits:**

A California stakeholder (Energy Solutions in support of Statewide Electric Utility Codes and Standards Team) is proposing the following:

1. Amend existing mandatory indoor plumbing fixture flow rates to make them more water efficient. (Item 5d)
2. Propose new mandatory requirements for outdoor water use. (Items 5e,5f,and 5g)
3. Propose new mandatory and voluntary requirements for commercial kitchen equipment. (Items 5g and 5h)

History: Water is essential for supporting and sustaining California's environmental, economic, and public health needs. Improving water efficiency is a well-established statewide policy goal. Legislation enacted in 2009 (SB X7 7) established the goal of achieving a 20 percent reduction in urban per capita water use in California by 2020. In addition, California's Global Warming Action Plan calls for establishing indoor and outdoor water efficiency standards and water recycling to help achieve California's greenhouse gas reduction goals. Twenty percent of the electricity used in California is attributed to water supply, conveyance, treatment, and distribution. The California Public Utilities Commission has directed the Investor Owned Utilities (electricity utilities) to pursue water efficiency activities to help achieve energy savings goals.

A 2014 study of the economic impacts of the current drought concluded that the 2014 drought will result in a total statewide economic cost of \$2.2 billion, with a total loss of 17,100 seasonal and part-time jobs.¹

Despite well-established policy goals, water supplies are rapidly diminishing due to ongoing extreme drought, shifts in regional climate patterns, and population growth. On January 17, 2014 Governor Brown proclaimed a State of Emergency and directed state agencies to take emergency actions to prepare for and respond to drought conditions. California urgently needs to address its water shortage by deploying all possible solutions, including establishing more stringent water efficiency standards.

CALGreen provides an opportunity to achieve additional water savings in response to these policies by strengthening existing mandatory and/or voluntary requirements for both indoor and outdoor water use. For nonresidential buildings, the proposed changes will impact indoor water use, including water use from commercial kitchen equipment, and also outdoor water use for landscaping. A number of government and non-government entities have

¹ University of California Davis Center for Watershed Sciences. (2014). *Economic Analysis of the 2014 Drought for California Agriculture*. Available online at: https://watershed.ucdavis.edu/files/biblio/DroughtReport_23July2014_0.pdf.

already made substantial progress establishing water efficiency standards, which can serve as a model for updates to the CALGreen water efficiency standards. The standards listed below have been established through public vetting processes:

- California's Model Water Efficiency Landscape Ordinance (MWELo)
 - Developed by the California Department of Water Resources through a public rulemaking process. More information available at: <http://www.water.ca.gov/wateruseefficiency/landscapeordinance/>
- WaterSense® Specifications
 - Developed by the United States Environmental Protection Agency, WaterSense Program through a public vetting process. More information available at: <http://www.epa.gov/watersense/index.html>.
- ENERGY STAR® Specifications
 - Developed by the United States Department of Energy, Energy Star Program through a public vetting process. More information available at: <http://www.energystar.gov/>.
- 2012 Green Plumbing and Mechanical Code Supplement: For Use with all Codes (IAPMO GPMCS)
 - Developed by the International Association of Plumbing and Mechanical Officials through a public vetting process. More information available at: http://www.iapmo.org/pages/iapmo_green.aspx.
- ASHRAE Standard 189.1 Standard for the Design of High-Performance, Green Buildings: Except Low-Rise Residential Buildings
 - Developed by ASHRAE through a public vetting process. More information available at: <https://www.ashrae.org/resources--publications/bookstore/standard-189-1>.
- Leadership in Energy and Environmental Design (LEED) Building Design and Construction Rating System, Version 4
 - Developed by the United States Green Building Council through a public vetting process. More information available at: <http://www.usgbc.org/leed#overview>.
- International Green Construction Code
 - Developed by the International Code Council through a public vetting process. More information available at: <http://www.iccsafe.org/CS/IGCC/Pages/default.aspx>

Proposed measures: see attachments 5d through 5h for specific proposed measures, history, and rationale for

- 5d Indoor Plumbing Fixture Flow Rates;
- 5e Outdoor Potable Water Use;
- 5f Outdoor Stormwater and Sediment Management;
- 5g Commercial Kitchens – Mandatory;
- 5h Commercial Kitchens – Voluntary.