



FRI-B08

Lessons from the Frontlines of Drought and Climate Change: Radical Water Conservation

Friday, October 20, 2017 at 10:30 AM - 12:00 PM

Overview

California landscape architects are becoming experts in designing for drought conditions. As climate change increases the odds of drought in many regions of the U.S. and the world, lessons from California can be applied nationwide. This session presents state-of-the-art approaches from regulatory, scientific and design perspectives.

Learning Objectives

- Understand what regulatory tools are available to advance water conservation in landscape design. Understand the limits of regulation, the process of developing regulation, stakeholder input and issues and compromises.
- Understand potential horticultural responses to limiting water use including: anticipating salinity from reclaimed water, anticipating a new climate regime, designing soils for water conservation, and establishing non-irrigated landscapes.
- Understand the potential to integrate systems for water-conservation, including gray water & black water from MEP systems and advanced irrigation technologies.
- Learn lessons related to design and client expectations: the potential pitfalls of low-water and non-irrigated landscapes; the aesthetic implications; maintenance considerations.

References

Water Use Classification of Landscape Species (WUCOLS IV):

<http://ucanr.edu/sites/WUCOLS/>

Includes link to Plant Search Database for California.

A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California

<http://www.water.ca.gov/wateruseefficiency/docs/wucols00.pdf>

Describes the Landscape Coefficient Method in detail (co-authored by Nelda Matheny).

California Irrigation Management Information System:

<http://www.cimis.water.ca.gov/>

Model Water Efficient Landscape Ordinance (MWELO):

<http://www.water.ca.gov/wateruseefficiency/landscapeordinance/>

Includes links to downloadable Water Budget Calculator spreadsheets as well as the MWELO itself and background information.



References, cont'd

Guide to the 2016 California Green Building Standards Code, Nonresidential:

<https://www.documents.dgs.ca.gov/bsc/CALGreen/CALGreen-Guide-2016-FINAL.pdf>

Guide to the 2016 California Green Building Standards Code, Residential:

<https://codes.iccsafe.org/public/chapter/content/2504/>

CA Department of Water Resources Climate Change Web Page:

<http://www.water.ca.gov/climatechange/>

Includes links to:

- Managing an Uncertain Future, Climate Change Adaptation Strategies for California's Water
- California Climate Science and Data for Water Resources Management
- Climate Change Handbook for Regional Water Planning
- DWR Climate Action Plan

Speakers

Jacob S. Tobias, ASLA, LEED AP

Senior Associate, Landscape Architect, WRT, Inc.

Jacob Tobias is a landscape architect and urban designer in WRT's San Francisco office. With over 17 years of experience, his work includes design at the full range of scales from master planning to detail design, with emphasis on design, construction documentation and implementation of built projects. His focus is incorporating green infrastructure, ecological design principles and community participation in the design process. He is WRT's expert on implementation of California's Model Water Efficient Landscape Ordinance (MWELO), and he is currently participating on the Landscape Stakeholder Advisory Group, which is providing input on the 2018 MWELO code update.

Julie Saare-Edmonds

Senior Environmental Scientist, CA Department of Water Resources

Julie Saare-Edmonds is a Senior Environmental Scientist with the CA Department of Water Resources specializing in landscape water use efficiency and green building for 16 years. She has been involved in two updates of the Model Water Efficient Landscape Ordinance, written publications, and helped design an award winning landscape exhibit for the California State Fair. She was a member of the ASABE/ICC 802-2014 Landscape Irrigation Sprinkler and Emitter Standard and is a member of the Cal Fire Urban Forestry Advisory Committee. She has degrees in Biological Conservation and Horticulture. Julie is also an UCCE Master Gardener.

Nelda Matheny

President, HortScience, Inc.

Nelda Matheny is president of HortScience, Inc. in Pleasanton CA, a horticultural consulting firm that she started in 1983. Nelda received B.S. and M.S. degrees in horticulture at the UC Davis. She is author of numerous books and peer-reviewed papers including, "The Landscape Coefficient Method" published by the California Dept. of Water Resources in "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California," which was the basis for California's water-efficient landscape regulation. Nelda has been involved in site evaluation, plant selection and landscape management using recycled water in California since the early 1980's.