

PROPOSAL PAPER

Independent Technical Panel on Demand Management Measures Final Report on California Landscape Water Use 1-17-16 Draft

Section: 6

Section Title: New Landscapes

Recommendation: #2 State Facility Leadership

Authoring Team: Penny Falcon, Lisa Maddaus, William Granger

Background:

There a number of opportunities for the state to take leadership in improving water efficiency in state facilities. In recognition of these opportunities, state requirements including a 2012 Governor's Executive Order are now in place for state buildings to become more water efficient, with some pertaining to improvements in sustainable landscaping and on-site water management. The policy and procedures that include these requirements are:

- Executive Order B-18-12: Calls for state agencies to reduce water use, monitor and report that use consistent with goals of the 20x2020 Water Conservation Plan.
- Senate Bill 1812: Presiding water use guideline document for state agencies to meet the 20x2020 water use requirements.
- Green Building Action Plan: A detailed implementation guide to achieve goals of B-18-12.
- Water Use Reduction Guidelines: Guidelines written by Department of Water Resources (DWR) Water Use Efficiency (WUE) staff to provide additional guidance to state agencies.
- Management Memo (MM) 14-02: 2014 MM14-02 from the State Administrative Manual describing exactly what agencies must do to reduce water use and track progress, where DWR WUE Office had lead authorship in writing the memorandum.
- Management Memo (MM) 15-06: 2015 MM15-05 from the State Administrative Manual describing building and grounds maintenance, which instructs state agency landscape managers to manage to a water budget. DWR had minimum input into this document.

Comment [L1]: ASK JULIE: Email mentions MM 15-05 but title is same as 15-06 and no copy attached.

Based on information provided by the DWR along with a review of the documents listed above, the ITP recommends strengthening both the requirements, budget priorities, and implementation for designing, installing and maintaining sustainable landscaping at state facilities. There are mutual benefits to improving water use efficiency above the state code requirements at all new and majorly renovated state facilities, especially those with high visibility due to customer service functions or other drivers for visitation. It is an important catalyst in changing social norms for leadership to be shown by the state, even if benefits cannot be quantified (i.e., where some renovated facilities are not metered).

Currently, new and majorly renovated state buildings are subject to compliance with the *Green Building Action Plan – For Implementation of Executive Order B-18-12*. For water conservation, the standard in Section 7 of the Plan is to:

Section 7. New and major renovated State buildings and build-to-suit leases larger than 10,000 square feet shall obtain LEED “Silver” certification or higher, using the applicable version of LEED.

7.1. Certification to an equivalent or higher standard is acceptable when approved by the Sustainable Building Task Force.

7.2. Buildings smaller than 10,000 square feet authorized to begin design after January 1, 2013, shall meet applicable California Green Building Standard’s Tier 1 measures.

The water efficiency standards for LEED are minimal and mainly focused only indoor water use, where landscape benefits are generally through implementation of a storm water related point rated system. As a result, the ITP is recommending a sustainable landscape design and maintenance policy on the same level commitment as Energy Section 2.0 of the Green Building Action Plan (see Appendix XX).

Comment [L2]: Or provide a web link

Recommended Action:

This proposal focuses on new and renovated state facilities only. Recommendation 5.3 focuses on retrofitting existing state customer service buildings for educational purposes, which includes a mandated watershed approach, and demonstration type gardens that would include detailed signage explaining the landscaping and identifying various features in the garden (versus other facilities with small signs). These signs are primarily for new customer service facilities that are highly frequented. The State’s “lead by example” design of new and majorly renovated buildings outlined below will further help to educate the public, and provide ideas about how to beautifully apply California-friendly landscaping.

Proposal:

1. DWR shall establish an online training curriculum with requirements to review and certify landscape design and maintenance professionals working on existing and new state facilities, with a focus on landscape managers maintaining existing irrigated area to water budgets in line with MM 15-06. This program is envisioned to be similar to the State Water Resources Control Board’s training and certification for State Water Board’s Storm Water Monitoring and Report Tracking System (SMARTS) online database, such that the program includes all landscape designers and practitioners to participate in a program similar to the requirements for Qualified SWPPP Developers (QSDs) and Qualified SWPPP Practitioners (QSPs)¹.

Currently, one example is online training required for storm water best management practices by identified CalTRANS maintenance employees as part of compliance with the CalTrans’ NPDES permit². It is assumed that given CalTRANS has the most irrigated area in the state and numerous other facilities have stormwater requirements, that there would be significant

¹ http://www.waterboards.ca.gov/water_issues/programs/stormwater/training.shtml

² http://www.dot.ca.gov/hq/construc/stormwater/swppp_training.html

overlap and therefore mutual benefit with DWR, SWRCB and CalTRANS collaborating on the implementation of this directive.

2. The state architect should be required by January 1, 2017 to prepare landscape designs that are accessible to new building developers for all new state facilities. Supporting benefits of sustainable landscaping should also be calculated and included in the Net Zero Energy Design Criteria (e.g. carbon storage, ecosystem services, air quality, etc.). This follows the same approach used by City of Los Angeles and elsewhere for their municipally owned facilities.
3. The state shall identify at least three buildings by January 1, 2017, to pursue Sustainable Water Landscaping Demonstration Sites as pilot projects. These shall include at least one new building to be designed and constructed, one major renovation, and one existing building to undergo a completely retrofitted irrigated area. The total landscaped area affected should be at least 5 acres in landscaped area (additional sites beyond 3 acres may be added to meet this target of 5 acres) where areas of plant material with no supplemental potable irrigation is credited towards the 5 acre target. Reclaimed water should be used wherever possible as directed in MM15-06.
4. The State's Green Building Action Plan Section 7 shall be updated, where new and major renovated State buildings and build-to-suit leases shall be required to be designed and constructed with incorporation of the watershed approach into landscaping designs. These facilities should include demonstration gardens with accompanying, appropriate educational signage. The landscape design requirements shall exceed the applicable version of MWEL0, by 15% or more, and include EPA WaterSense labeled appliances and fixtures, including building commissioning, for buildings authorized to begin design after July 1, 2017.
5. In aligning with the state's Net Zero Energy policy in the Green Building Action Plan outlined in Section 2.0 for all new state buildings and major renovations, beginning landscape designs after January 1, 2025 shall be constructed as maximum practicable water efficient facilities with 50% reduction from the MWEL0 (from the baseline of the Ordinance adopted on January 1, 2016) through implementation of the watershed approach, use of non-potable water sources, more sustainable landscaping and on-site reuse. As an interim target, 50% of new facilities beginning design after 2018 should be targeted to achieve this higher reduction goal stretching beyond MWEL0 requirements.
6. A further update to the State's Green Building Action Plan, where as directed by Department of General Services with oversight by DWR and State Water Resources Control Board, state agencies shall also take measures toward achieving retrofitting up to 50% of the square footage of existing State-owned irrigated area by 2025. The state may exclude areas from retrofit that do not meet eligibility criteria set by DWR for general public access or otherwise warranted investment in sustainable landscape upgrades (i.e., maintenance corporation yards, warehouse facilities, high-security facilities where less than 1,000 persons visit annually).