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Opening Comments of
Tracy Quinn
Natural Resources Defense Council
CEC Staff Workshop on Appliance Efficiency Regulations for Spray Sprinkler Bodies
Docket No. 17-AAER-08
March 14, 2018

1. NRDC supports the adoption of state efficiency standards for spray sprinkler bodies (SSBs).

- State policy calls for making water conservation "a California way of life," with water efficiency a priority consideration regardless of water availability in any given year.
- The estimated water savings at full stock turnover (10 years) in the staff analysis of 83,526 million gallons per year, or 256,000 acre-feet per year, is more than one and a half times greater than the entire annual water use of San Diego, the state's second largest city.

2. The staff analysis is fundamentally conservative in its estimation of water savings and financial benefits of the proposed standard.

- No benefits are credited for SSBs used in any commercial or multifamily residential landscape. While these additional savings do not need to be calculated to justify adopting a standard, we expect that they are substantial.

- Water savings were calculated based on a supply pressure of 65 psi at the curb, although California water suppliers recently reported water pressure with a population-weighted average of 81 psi at the curb.[1] Based on this data, the Title 20 standards will correct an irrigation overpressure problem that is pervasive throughout California and achieve greater than estimated water savings.

- Financial benefits for consumers are estimated based on the assumption of no further increases in the real cost of water, even though charges for water and sewer service have been increasing at more than twice the CPI for over ten years, and such increases are expected to continue further in the future.

- Financial benefits were further understated by basing the cost of compliance with the standard upon the incremental cost of a 6" pop-up stem rather than the widely used 4" pop-up stem, whose incremental cost is nearly 30% less.

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[1] In a previous submission to this docket on June 15, 2017, NRDC provided an estimate of the population-weighted service water pressure for 2015 of 77.5 psi, based on reports by California retail urban water suppliers to the Department of Water Resources as part of their 2015 urban water management plans. As a result of SB 555, retail urban water suppliers now file water audit reports (including average service pressure) on an annual basis, and such audits must be validated by expert review before submission. The newer dataset is thus a somewhat more accurate depiction of conditions than contained in the unvalidated reports of the prior year. See Attachment A.

3. We continue to support the inclusion of check valves in the SSB standard. However, we do not recommend delaying the adoption of a final standard in order to address check valves. While the volume of water savings is small relative to the savings attributable to pressure regulation, it is nevertheless a meaningful saving of water, and the standard overall would remain cost-effective with requirements for both pressure regulation and check valves included. Additionally, check valves are required by the Department of Water Resources' Title 23 regulations (MWELO) on any new or rehabilitated landscape where low head drainage could be a problem. However, enforcement of this provision could be greatly simplified by including the requirement for check valves in Title 20 regulations.

4. Initial suggested clarifications to the draft staff report and draft standard:

Page 29, first paragraph, third line: The current text suggests that an initial calibration flow rate of 0.75 gpm would be in lieu of the initial calibration flow rate 1.5gpm. While the proposed text of the regulation on pages 40-41 states that test runs at *each* of these two flow rates are to be performed, the narrative on page 29 does not. The intent could be clarified by striking all wording after "2017" and inserting "to be supplemented with an additional test run with a calibration flow rate of 0.75 +/-0.1 gpm."

Page 40, definition of spray sprinkler: The definition of spray sprinkler could be clarified to ensure that both fixed spray and multi-stream, multi-trajectory spray sprinklers are covered. This could be accomplished by adding at the end: "and may be either fixed spray type or multi-stream, multi-trajectory type."

Pages 40 and 42, Test Methods and State Standards (respectively). Proposed section 1604(y)(1) and 1605.3 (y)(1) each include the phrase "a spray sprinkler body and a spray sprinkler body within a spray sprinkler" to describe the product being regulated. The second phrase appears to be stated in the inverse, and would clearer if described as "a spray sprinkler body and a spray sprinkler within a spray sprinkler body."

Our review is ongoing, and we may provide additional suggestions for clarifications to the definitions and the staff report in written comments.

5. Suggested corrections to the staff report.

Page 10, second paragraph, third line: "325 million" should be "325 <u>billion</u>."

Page A-6, Smart Irrigation Controller Calculation Method, fifth line: "15,037 cubic feet x 7.48 gallons" should be "<u>16,664</u> cubic feet x 7.48 gallons."

Attachment A

2016 System Water Pressure for California Utilities

California Utilities	**Number of Utility Audits**	**Population of Utility Service Areas (2015)**	**Average of All System Operating Pressure Values (psi)**	**Population - Weighted Average of All System Operating Pressure Values (psi)**
Utilities serving populations under 50,000	194	4,675,547	74.7	74.0
Utilities serving populations over 50,000	173	30,013,285	77.2	82.1
All Reporting Utilities	367	34,688,832	75.8	81.0

Minimum Reported Average Operating Pressure (psi)	45.0
Maximum Reported Average Operating Pressure (psi)	158.0
Average Operating Pressure (psi) for 10th Percentile of Population	59.2
Average Operating Pressure (psi) for 90th Percentile of Population	111.2

Notes:
Population estimate (2015) for California: 38.99 million (US Census)
Estimated population (2010) served by public water systems: 34.8 million (USGS)

Source:
California Department of Water Resources, Water Use Efficiency Data (WUEdata), 2016 Water Audit Report Data - System water pressure data compiled using AWWA Water Audit Software compiler 5.0.

by Susan Lee, NRDC. 3/12/2018