

DOCKETED

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Document Title:	Edward Norum/Fresno State Comments - Pressure regulated vs non-pressure regulated sprinkler efficiency
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Pressure regulated vs non-pressure regulated sprinkler efficiency

These tests were conducted to compare the sprinkler's performance before the proposed design change to after the proposed change. In this way, the effect of the change is scientifically evaluated. The table shows that the proposed change is actually somewhat less efficient. This is a pilot study, the results of which need to be confirmed by additional testing. In light of this, the CEC rule should not be established until additional testing has been completed. E. Norum

Additional submitted attachment is included below.

Research on Pressure Regulating Sprinklers

Test #	Pressure Regulation	Pressure <i>psi</i>	Flow Rate <i>gpm</i>	Effective Application Rate <i>in./hr</i>	Overspray %	Pattern Loss %	Application Efficiency %	Distribution Uniformity %
1	No	55	17.0	1.95	7.2	24.2	70.3	62.0
2	Yes	55	16.8	1.92	2.7	28.7	69.4	58.3
3	No	40	13.5	1.60	2.8	25.1	72.8	63.9
4	Yes	40	14.6	1.71	2.8	25.6	72.3	61.5

Notes: Nine-sprinkler SWAT layout, sprinklers 15 ft c/c
Gross area, 30 ft x 30 ft, CIT indoor test
All sprinklers are manufacturer-supplied, 6-in. pop-ups
Testing conducted in April, 2018, Norum