



# Association of California Water Agencies

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(5/5-6/15) Board Meeting- Item 6  
Emergency Conservation Regulation  
Deadline: 5/4/15 by 10:00 am



May 4, 2015

Delivered by e-mail to: [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

The Honorable Felicia Marcus, Chair  
and Members of the State Water Resources Control Board  
c/o Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24th Floor  
Sacramento, CA 95814

Subject: "Comment Letter – Emergency Conservation Regulation"

Dear Chair Marcus and Members of the Board:

The Association of California Water Agencies (ACWA) appreciates this opportunity to comment on the State Water Resources Control Board (Water Board) proposal to amend and readopt Emergency Regulations for Urban Water Conservation (Emergency Regulations), which the Water Board released for public comment on April 29, 2015.

ACWA represents over 430 public water agencies which are responsible for delivery of over 90% of the water that serves residential, commercial and agricultural needs throughout California. ACWA supports the Governor's April 1 Executive Order and its key provision to reduce potable urban water usage by 25 percent statewide through February 2016. It is clear that Californians need to continue to reduce their water use significantly as the drought continues into its fourth year, and California's water suppliers are on the front line to help make this happen. Water suppliers need to rely on clear, fair, and flexible regulations from the Water Board as they implement the programs and outreach needed to ensure success.

We continue to appreciate the effort Water Board devoted to meeting with and soliciting input from ACWA and other stakeholders on concerns with previous draft proposals and to considering ways to resolve some of these concerns. Although staff has incorporated some of the recommendations from ACWA and water agencies, this staff proposal does not provide satisfactory resolution of several significant issues.

We ask the Water Board to consider these issues include further amendments into the Emergency Regulations, as follows.

## **Remaining Concerns Associated with the Proposed Emergency Regulations**

### **1. Climate Adjustment**

We appreciate that the Water Board staff considered ACWA's proposed adjustment for climate as presented in detail in our April 22 letter. But, we are disappointed that the proposed Emergency Regulation still does not address this issue, either as we have proposed or by another method. We believe it is important for the integrity of this process that this issue be addressed. Minor adjustments can be made even under the present rushed circumstances to incorporate this important element.

#### **Why Climate Adjustment is Necessary**

ACWA agrees with the Water Board that outdoor irrigation in all climate zones should be the primary focus for water use reductions. ACWA agrees that water suppliers with relatively higher residential gallons per capita per day (R-GPCD) numbers should do proportionally more. But, a residential lot of exactly the same size with exactly the same landscape and efficient irrigation technology will require more water for even minimal irrigation in a hot, interior climate zone as compared to in a cooler coastal location. The conservation standard target setting approach should include an objective climate adjustment factor that reduces somewhat the water use reduction required from water suppliers in hotter climate zones that have relatively lower R-GPCDs, while increasing somewhat the water use reduction required from water suppliers in cooler climate zones that have relatively higher R-GPCDs.

#### **A Proposed Method**

ACWA's April 22 comment letter presented an objective, science-based method using published information. It is described in Attachment 1. In summary, water supplier service areas are identified by climate zone with reference to a published Evapotranspiration (ET<sub>o</sub>) map, which indicates relative reference ET<sub>o</sub> for irrigating turf. Relative average outdoor irrigation water use is normalized to develop a climate adjustment factor for each ET zone. Water supplier R-GPCD is adjusted reflect the percentage that each ET zone was greater than the "normal" climate (assumed to be Zone 3). Water suppliers are then re-ranked by the adjusted R-GPCD. This new ranking list would be used by Water Board staff by applying the proposed 9 tiers (or 18 tiers with 2% intervals as proposed by staff) and assigning conservation standards to meet the overall statewide 25% reduction goal.

## **Outcomes**

Climate adjustment moves water suppliers relative to each other as a function of their climate zone location. Water suppliers in higher ET zones but with relatively lower R-GPCD receive slightly lower targets, while those in lower ET zones with relatively higher R-GPCD receive slightly higher targets. Water suppliers in higher ET zones and high R-GPCD continue to receive the highest targets, while those in lower ET zones continue to receive lower targets.

We continue to stand ready to assist the Water Board to incorporate climate adjustment into the proposed Emergency Regulation at this time, or to collaborate with the Water Board and water agencies to develop climate adjusted conservation targets that could be included in further revisions of the Emergency Regulation, should that be necessary after February 2016.

## **Recommendation**

Incorporate a climate adjustment factor into the “Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction” table and amend the Proposed Text of the Emergency Regulation Sec. 865 (c)(3) through (10) to reflect the results.

### **2. Double the Number of Tiers and Use 2% Increments**

The Fact Sheet solicits input on whether the Water Board should double the number of tiers and use 2% increments to reduce the disparity between tier “breakpoints” and smooth the transitions between assigned conservation standard. ACWA supports this proposal.

## **Recommendation**

Revise the “Urban Water Suppliers and Regulatory Framework Tiers to Achieve 25% Use Reduction” table to double the number of tiers and use 2% increments to assign conservation standards, and amend the Proposed Text of the Emergency Regulation Sec. 865 (c)(3) through (10) to reflect the results.

### **3. Reserve Water Supply Exception – Include Groundwater Supply**

ACWA supports the provision in the proposed Emergency Regulation to allow water suppliers that have a reserve supply of surface water, upon demonstration that they meet the eligibility criteria, to be placed in the lower conservation tier. We appreciate that the proposal was amended to replace the precipitation criterion with the 4-year supply criterion. The Fact Sheet solicits input on whether the Water Board should allow water suppliers whose supplies include

groundwater to apply for inclusion in the lower conservation tier if they can demonstrate that they have 4 years of supply, do not rely on imported water, and their groundwater supplies recharge naturally. ACWA supports this proposal

### **Recommendation**

Amend the proposed Emergency Regulation to include groundwater as a reserve water supply upon showing that a water supplier meets the proposed eligibility criteria, including the 4-year supply criterion, as proposed in the “Fact Sheet.”

## **4. Waste and Unreasonable Use of Water**

ACWA recognizes and supports Water Board authority to conduct proceedings “to prevent the waste and unreasonable use of water” under Article X Section 2 of the State Constitution. However we continue to be concerned that the clause “prevent the waste and unreasonable use of water” throughout the proposed Emergency Regulation sets up a presupposition that any failure to achieve the conservation standards, including even procedural failures on the part of water suppliers, becomes a de-facto waste and unreasonable use of water and could provide the basis for proceeding against the water rights of those agencies. ACWA supports deleting this language or clarifying in the record the Water Board’s intent.

### **Recommendation**

Delete “to prevent the waste and unreasonable use of water” throughout the proposed Emergency Regulation, or add language in the record clarifying the Water Board’s intent.

## **5. Exception Process**

ACWA continues to believe that the Water Board should include in the Proposed Emergency Regulation an “Exception Process” to allow water suppliers to present to the Water Board specific information and evidence supporting needed adjustments to address extenuating circumstances or unreasonable local impacts. Merely committing the Water Board to using its “prosecutorial discretion” judiciously does not provide the transparency and due process that would be afforded by a formal exception process.

An example of “extenuating circumstances” might be where a relatively small water supplier has a relatively large state agency water customer (such as a prison, highway or office complex) that consumes a substantial proportion of the water suppliers’ production but which has not reduced its water use despite local demands and state policy direction. Another example may

be a situation in which local health and safety conditions are triggered. The “exception process” could require water suppliers to disclose proposed actions that would partially mitigate effects on overall water use reductions.

### **Recommendation**

Add language to the Proposed Text of the Emergency Regulation to provide for an administrative process where the Executive Director or his designee may issue exceptions to address specific hardship situations on a case-by-case basis, based on evidence submitted by water suppliers.

### **6. Credit for New Local Supplies**

ACWA continues to believe that the proposed Emergency Regulation should including an incentive for bringing new local potable reuse or desalination supplies on-line during its effective period. A credit for additions to total potable water production to proportionally reduce the conservation standard will help demonstrate to local rate-payers the wisdom of developing a diverse water supply portfolio.

### **Recommendation**

Add the following language to the Proposed Text of the Emergency Regulation:

“Each urban supplier that adds a new drought-proof supply, such as potable reuse, seawater desalination, or other drought-proof potable water supplies may deduct the amount of water produced by the drought-proof supply from its total potable water production to meet the economic demands of the commercial, industrial, institutional sectors and agricultural use that is not excluded under section 865(e).”

### **7. Collective Conservation Standard**

ACWA recognizes the administrative challenges presented by including an option for groups of water suppliers to form coalitions to collectively achieve the assigned conservation standard, as proposed in the April 17 Water Board Fact Sheet. We continue to believe this approach could yield valuable results for regional groups and encourage the Water Board to solicit proposals in coming months and consider developing a collective conservation standard option that could be included in further revisions of the Emergency Regulation, should that be necessary after February 2016.

## **8. Standardize Methods**

ACWA appreciates that Water Board staff is continuing to accept and evaluate revisions to water supplier's total production and service area population information. We recognize that further changes may affect water supplier R-GPCD, but they may not be able to affect the assigned conservation standard. However, for future compliance evaluation purposes we continue to advocate further staff guidance to help standardize the methods used to calculate these factors and provide a method to account for bimonthly billing cycles and different numbers of days in each billing cycle.

### **Recommendation**

Establish a process to amend and standardize calculation methods and provide a method to account for bimonthly billing cycles and different numbers of days in each billing cycle. Continually accept and review water supplier data on an on-going basis, subject to adequate supporting documentation.

Thank you for your consideration of these comments. ACWA will continue to work with the Water Board and its staff to assist urban water suppliers and water users to implement the provisions of the Emergency Regulations to help further reduce statewide water use in 2015. If you have any questions, please contact me at [daveb@acwa.com](mailto:daveb@acwa.com) or (916) 441-4545.

Sincerely,

David Bolland  
Special Projects Manager

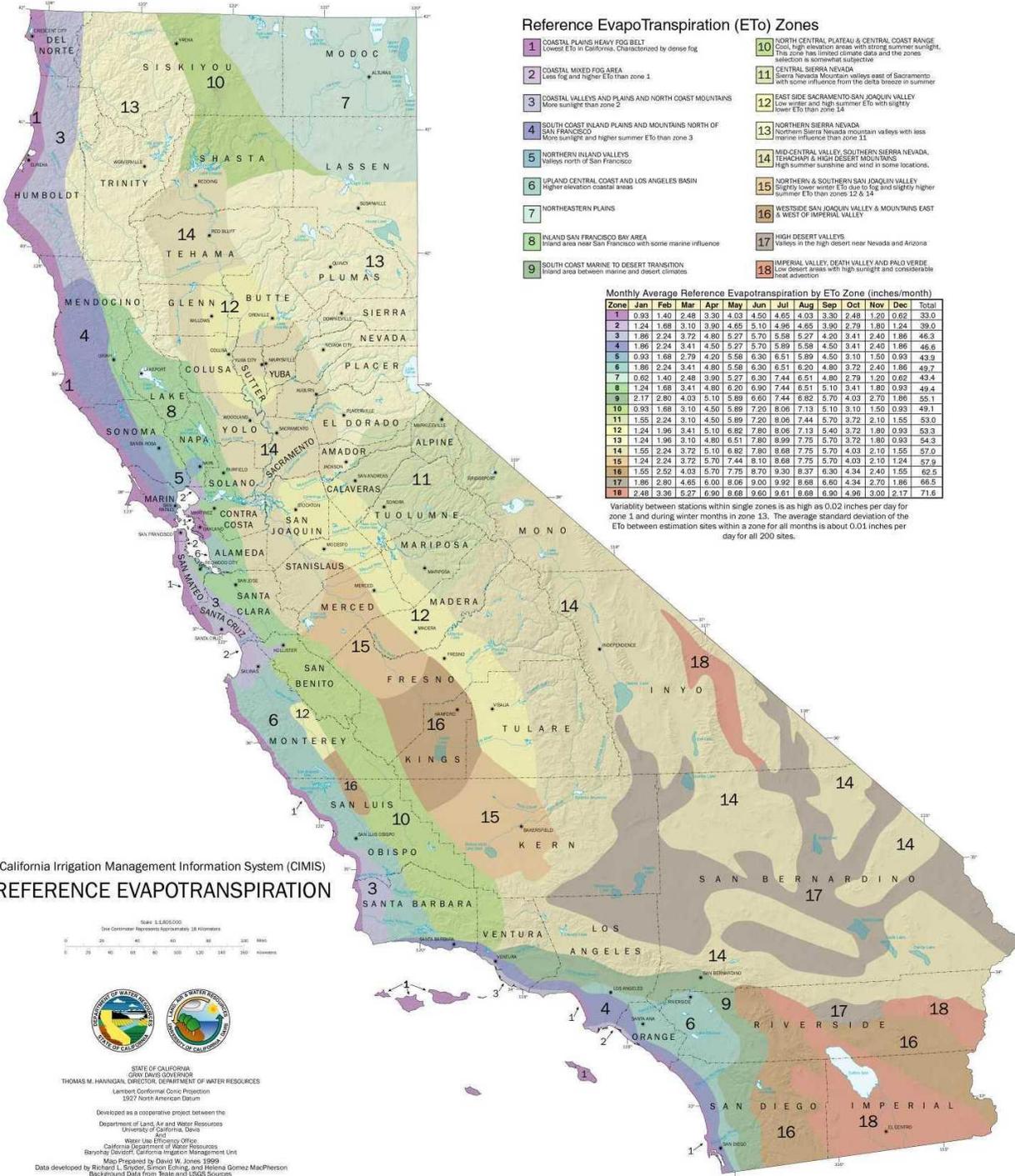
cc: Mr. Tom Howard, Executive Director  
Ms. Caren Trgovcich, Chief Deputy Director  
Mr. Eric Oppenheimer, Director of the State Water Board's Office of Research, Planning and Performance

## Attachment 1

### Approach to evaluating effects of climate on per capita water use

As has been broadly discussed during the process for developing conservation targets to achieve 25% Statewide water conservation during the current drought conditions, outdoor water use is a key component to achieving such savings. Available data was used to evaluate the potential influence of climate and make recommendations for adjustments to conservation standards. The process is briefly described here.

1. A geographical information systems (GIS)-based coverage of reference EvapoTranspiration (ET<sub>o</sub>) for California was obtained from the California Department of Water Resources (DWR) (see enclosed figure). ET<sub>o</sub> is a reference used to represent relative climate, because it accounts for local climate parameters independent of soil conditions.
2. Monthly average reference ET<sub>o</sub> was also obtained from DWR for each of the 18 defined zones in California. To be consistent with the current Water Board methodology, reference ET<sub>o</sub> values for July through September were used for each zone and a weighted average (based on the area of each of the ET<sub>o</sub> zones) was determined for the three month period for the entire State (see attached table). The weighted average was calculated as 21.36-inches.
3. To account for climate variability, it was necessary to attempt to define what could be considered “normal” conditions. Conveniently, DWR’s Model Water Efficient Landscape Ordinance uses 70% as an adjustment factor for irrigation efficiency. In reviewing the ET<sub>o</sub> zone table, Zone 3 is at 70% of the statewide average weighted ET<sub>o</sub>. As a result, the ET<sub>o</sub> for Zone 3 of 15.05 was used to define the “normal” climate. Value below normal (Zones 1 and 2) occupy an extremely small area of the State, so no attempt was made to adjust them relative to the “normal” value. The remaining zones were then expressed as percent of the Zone 3 value. The hottest zones, 17 and 18, were 167% of the Zone 3 value indicating the significantly higher demand associated with outdoor landscapes in those areas.
4. Next, a coverage of water purveyor boundaries was obtained from DWR. While not complete, this served as a good initial tool to associate water suppliers with ET<sub>o</sub> zones. For agencies not readily available in the GIS coverage, an internet search was used to locate them and assign them to a ET<sub>o</sub> zone using the DWR map.
5. Each water purveyor was assigned to an ET<sub>o</sub> zone. From the current R-GPCD from the Water Board, R-GPCDs were adjusted to account for climate zones the had higher reference ET<sub>o</sub> values. No adjustments were made for zones 1 through 3. Beginning with Zone 4, each R-GPCD was adjusted by first subtracting 55 GPCD (indoor use) from the value. The remaining value was adjusted downward to reflect the percentage that each zone was greater than the “normal” climate. After this calculation, the 55 GPCD was added back to the result for a relative R-GPCD with an ET correction value.
6. Water suppliers are ranked by the R-GPCD- ET corrected value. Tiers and intervals are applied to achieve the 25% statewide water use reduction for total water production and conservation standards are assigned by the Water Board.



### Reference Evapotranspiration (ET<sub>0</sub>) Zones

- 1** COASTAL PLAINS HEAVY FOG BELT  
Lowest ET<sub>0</sub> in California. Characterized by dense fog
- 2** COASTAL MIXED FOG AREA  
Less fog and higher ET<sub>0</sub> than zone 1.
- 3** COASTAL VALLEYS AND PLAINS AND NORTH COAST MOUNTAINS  
More sunlight than zone 2
- 4** SOUTH COAST INLAND PLAINS AND MOUNTAINS NORTH OF SAN FRANCISCO  
More sunlight and higher summer ET<sub>0</sub> than zone 3
- 5** NORTHERN INLAND VALLEYS  
Valleys north of San Francisco
- 6** UPLAND CENTRAL COAST AND LOS ANGELES BASIN  
Higher elevation coastal areas
- 7** NORTHEASTERN PLAINS
- 8** INLAND SAN FRANCISCO BAY AREA  
Inland area near San Francisco with some marine influence
- 9** SOUTH COAST MARINE TO DESERT TRANSITION  
Inland area between marine and desert climates
- 10** NORTH CENTRAL PLATEAU & CENTRAL COAST RANGE  
Cool, high elevation areas with strong summer sunlight. This zone has limited climate data and the zones selection is somewhat subjective
- 11** CENTRAL SIERRA NEVADA  
Sierra Nevada Mountain valleys east of Sacramento with some influence from the delta breeze in summer
- 12** EAST SIDE SACRAMENTO SAN JOAQUIN VALLEY  
Low winter and high summer ET<sub>0</sub> with slightly lower ET<sub>0</sub> than zone 14
- 13** NORTHERN SIERRA NEVADA  
Northern Sierra Nevada mountain valleys with less marine influence than zone 13
- 14** MID-CENTRAL VALLEY, SOUTHERN SIERRA NEVADA, TEHACHA & HIGH DESERT MOUNTAINS  
High summer sunshine and wind in some locations.
- 15** NORTHERN & SOUTHERN SAN JOAQUIN VALLEY  
Slightly lower winter ET<sub>0</sub> due to fog and slightly higher summer ET<sub>0</sub> than zones 12 & 14
- 16** WESTSIDE SAN JOAQUIN VALLEY & MOUNTAINS EAST & WEST OF IMPERIAL VALLEY
- 17** HIGH DESERT VALLEYS  
Valleys in the high desert near Nevada and Arizona
- 18** IMPERIAL VALLEY, DEATH VALLEY AND PALM VERDE  
Low desert areas with high sunlight and considerable heat advection

Monthly Average Reference Evapotranspiration by ET<sub>0</sub> Zone (inches/month)

Zone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	0.93	1.40	2.46	3.30	4.03	4.50	4.65	4.03	3.30	2.46	1.40	0.93	33.0
2	1.24	1.68	3.10	3.90	4.65	5.10	4.96	4.65	3.90	2.79	1.68	1.24	39.0
3	1.86	2.24	3.72	4.80	5.27	5.70	5.58	5.27	4.20	3.41	2.40	1.86	46.8
4	1.86	2.24	3.41	4.50	5.27	5.70	5.89	5.58	4.50	3.41	2.40	1.86	46.8
5	0.93	1.68	2.79	4.20	5.58	6.30	6.51	5.89	4.50	3.10	1.50	0.93	43.9
6	1.86	2.24	3.41	4.80	5.58	6.30	6.51	6.20	4.80	3.72	2.40	1.86	49.7
7	0.62	1.40	2.48	3.90	5.27	6.30	7.44	6.51	4.80	2.79	1.20	0.62	43.4
8	1.24	1.68	3.41	4.80	6.20	6.90	7.44	6.51	5.10	3.41	1.80	0.93	49.4
9	2.17	2.80	4.03	5.10	5.89	6.60	7.44	6.82	5.70	4.03	2.70	1.86	55.1
10	0.93	1.68	3.10	4.50	5.89	7.20	8.06	7.13	5.10	3.10	1.50	0.93	49.1
11	1.55	2.24	3.10	4.50	5.89	7.20	8.06	7.44	5.70	3.72	2.10	1.55	53.0
12	1.24	1.96	3.41	5.10	6.82	7.80	8.06	7.13	5.40	3.72	1.80	0.93	53.3
13	1.24	1.96	3.10	4.80	6.51	7.80	8.99	7.75	5.70	3.72	1.80	0.93	54.3
14	1.55	2.24	3.72	5.10	6.82	7.80	8.68	7.75	5.70	4.03	2.10	1.55	57.0
15	1.24	2.24	3.72	5.70	7.44	8.10	8.68	7.75	5.70	4.03	2.10	1.24	57.9
16	1.55	2.52	4.03	5.70	7.75	8.70	9.30	8.37	6.30	4.34	2.40	1.55	62.6
17	1.86	2.80	4.65	6.00	8.06	9.00	9.92	8.68	6.60	4.34	2.70	1.86	66.5
18	2.48	3.36	5.27	6.90	8.68	9.60	9.61	8.68	6.90	4.96	3.00	2.17	71.6

Variability between stations within single zones is as high as 0.02 inches per day for zone 1 and during winter months in zone 13. The average standard deviation of the ET<sub>0</sub> between estimation sites within a zone for all months is about 0.01 inches per day for all 200 sites.

### California Irrigation Management Information System (CIMIS) REFERENCE EVAPOTRANSPIRATION



STATE OF CALIFORNIA  
GRAY DAVIS GOVERNORS  
THOMAS M. HANAGAN, DIRECTOR, DEPARTMENT OF WATER RESOURCES

Lambert Conformal Conic Projection  
1927 North American Datum

Developed as a cooperative project between the  
Department of Land and Water Resources  
University of California, Davis

Water Use Efficiency Office  
California Department of Water Resources  
Bayshore Divisort, California Irrigation Management Unit

Map Prepared by David W. Jones, 1989

Data developed by Richard L. Snyder, Simon Eching, and Helena Gomez MacPherson  
Background Data from State and USGS Sources