



**California Water Research**

**Comments on Proposed Drought-Related Emergency Regulations  
for Urban Water Conservation**

**by**

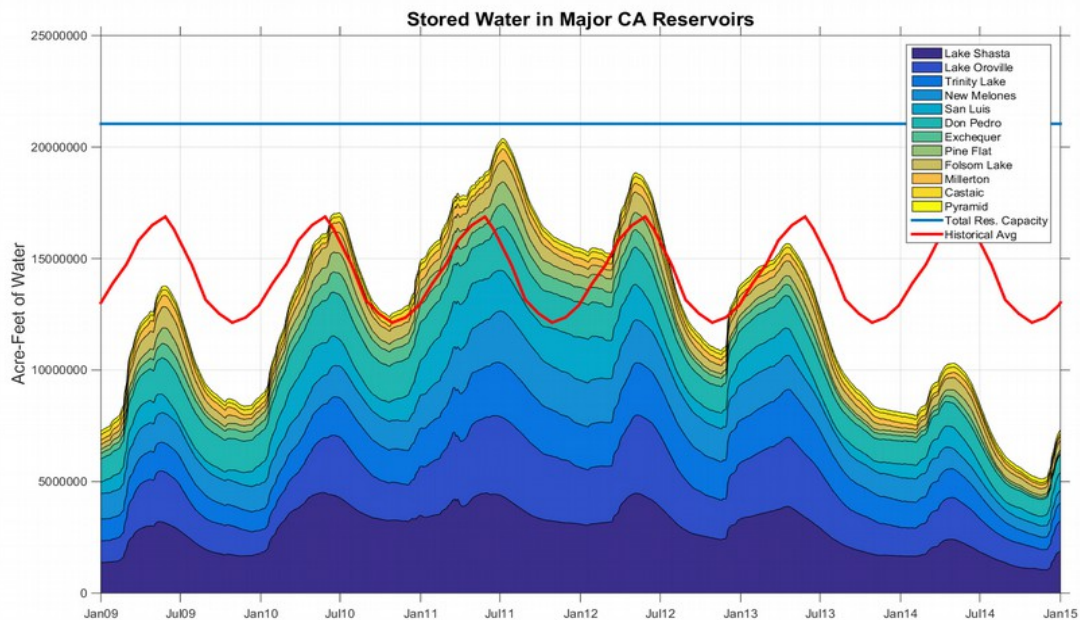
**Deirdre Des Jardins**

## Comments on Proposed Drought-Related Emergency Regulations for Urban Water Conservation

The efforts of the Board last year to enact mandatory restrictions on outdoor water use were very important, and the efforts this year to continue the restrictions are also essential. However, given the severity of the drought, and the fact that recent droughts in Australia and Texas continued for many years, stronger restrictions are necessary. California has had two six year droughts in the period of record, and it should be assumed that this drought could continue for at least another two years.

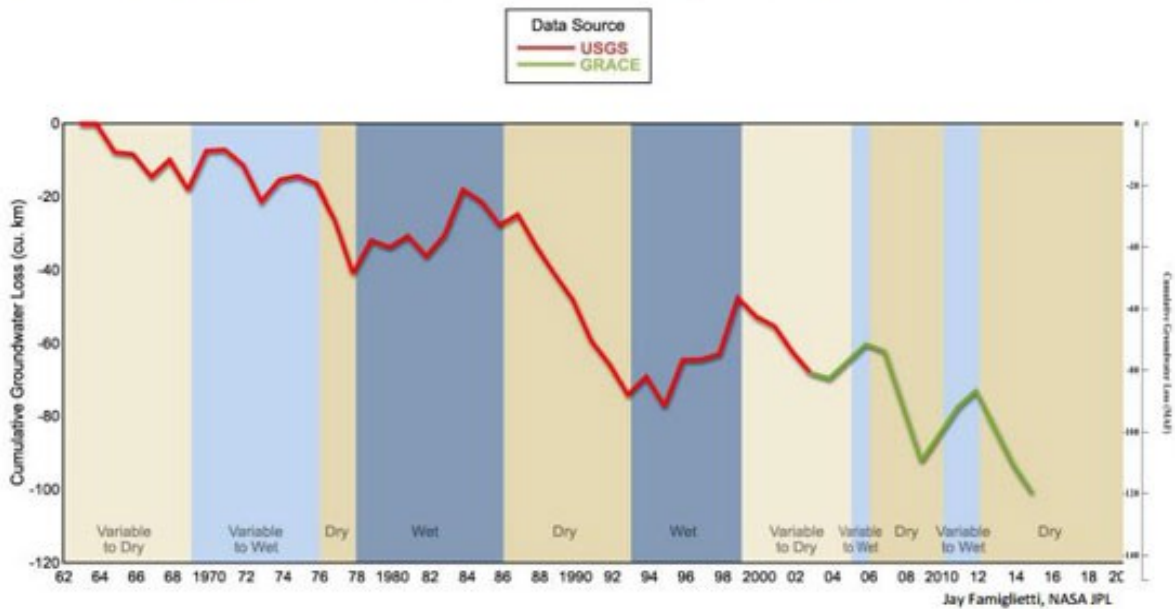
To protect the public trust, the Board should require enforcement of these restrictions as a condition of approval of any future Temporary Urgency Change Petitions by urban water agencies for health and safety reasons. This should include approvals of future TUCPs by the California Department of Water Resources and the Bureau of Reclamation on behalf of municipal and industrial water agencies served by the SWP and CVP.

Neither urban nor agricultural users in the state have reduced water use as needed to respond to the drought. As a result, both groundwater and storage in major reservoirs has been rapidly depleted. The graph below, created by Perry Tsao from CDEC reservoir data, shows the massive depletions in storage in major reservoirs through January of this year.



Storage in Major Reservoirs. Source: Perry Tsao<sup>1</sup>

## Cumulative groundwater depletion in California's Central Valley from USGS and GRACE



Groundwater Depletion in the Central Valley. Source: Jay Famiglietti, NASA JPL<sup>2</sup>

The graph above, created by Jay Famiglietti's lab at JPL from Grace satellite imaging, shows groundwater depletion in the Central Valley. It is clear that the state has been living beyond its water means for some time.

To give an idea of how urban water agencies are responding to the drought, let us look at Metropolitan Water District, which supplies 26 urban water agencies which serve 19 million people in Southern California. Last year, Metropolitan implemented only voluntary demand reductions, in spite of serious concerns expressed by San Diego Water Authority, which stated in a letter to the MWD Board on May 12, 2014:

“While MWD may have sufficient water in storage to meet full demands this year, the use of more than 1 million acre-feet – or, almost one half -- of MWD's reserves in one year as currently planned poses a great risk to MWD's water supply reliability next year and in future years, should the drought continue.”<sup>3</sup>

From January 1, 2014 to January 1, 2015, MWD sold 1.88 MAF of water, 107% of the average demand projections of 1.75 MAF, in spite of having only a 5% allocation from the State Water Project. As a result, MWD drew storage reserves down from 2.3 MAF to 1.2 MAF. If demand had instead been reduced by 20%, as recommended by the governor, storage would only have been reduced by 0.6 MAF, leaving 1.7 MAF in dry year reserves.

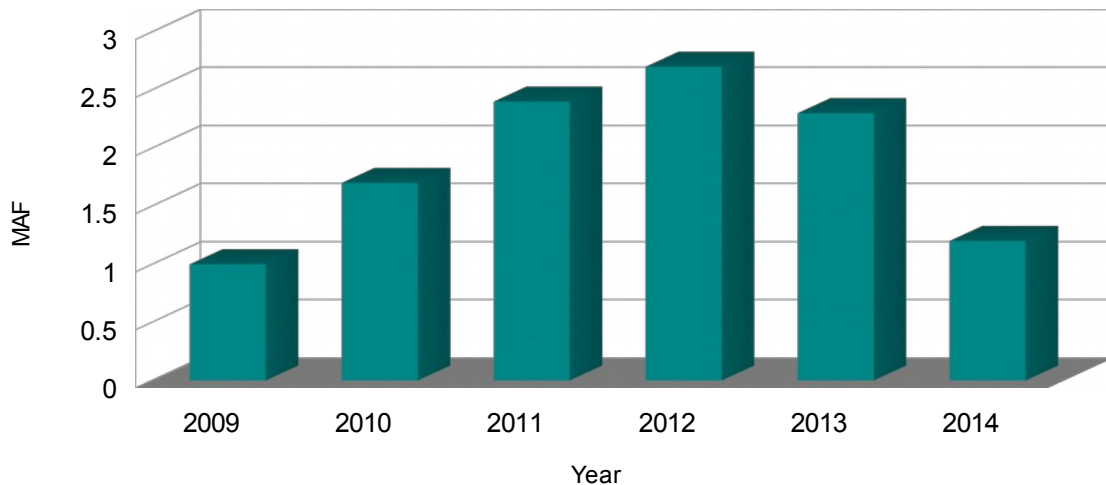
Metropolitan had a financial incentive last year to not implement mandatory reductions. The district was planning to issue \$50 million in refunding bonds. Mandatory reductions would have reduced operating margins, potentially reducing the district's credit rating. Purchasing large amounts of transfer water would also have impacted operating margins. Moody's report on MWD's bond issue stated:

Despite the current level of water sufficiency, negative credit pressure will mount as the severity and duration of the California drought deepens. Negative pressure would most likely take the form of increased operating costs and weaker operating margins if the district is exposed to buying significant amounts of water on the open market. In such a scenario, we would also expect weakened liquidity, which is currently a credit strength and is an important part of the district's credit profile given its debt profile and substantial short-term obligations.<sup>4</sup>

In 2015, MWD is expecting to get 925 TAF from the Colorado River, and 382 TAF from the SWP,<sup>5</sup> leaving MWD with a deficit of 443 TAF. Mandatory reductions of 10% are being considered, but this will leave the district with a deficit of 268 TAF, which could further cut into reserves. MWD is looking to purchase transfer water, but only 295 TAF of transfer water was available last year from Sacramento Valley agricultural users for the entire San Joaquin Valley and Southern California.

### Metropolitan Water District

EOP Storage 2012-2014



End of Period Storage for Metropolitan Water District, not including 650 TAF emergency reserves for earthquake preparedness. Data from MWD.

Given this context, the State Water Board should mandate stronger restrictions on outdoor watering . Restricting outdoor landscape watering with potable, non-recycled water to once every other week would protect deep rooted, established trees and shrubs and drought-tolerant plants and produce water conservation savings necessary to survive an extended drought.

The Board should also tie any future approvals of Temporary Urgency Change Petitions to requirements for enforcement of the Board's mandatory watering restrictions. It is a violation of the Public Trust for urban water agencies to allow customers to use water needed to protect critically endangered fish in the Delta to water lawns and golf courses.

- 1 Perry Tsao, "How Much Water Does California Have?" Available at <http://perrytsao.users.sonic.net/water/how-much-water-does-california-have/>. Accessed on March 16, 2015.
- 2 <http://www.yaleclimateconnections.org/2014/12/california-11-trillion-gallons-of-drought/><http://www.yaleclimateconnections.org/2014/12/california-11-trillion-gallons-of-drought/>
- 3 San Diego County Water Authority, May 2, 2014 letter RE: Board Memo 8-2: Authorize execution and distribution of the Official Statement in connection with the issuance of the Special Variable Rate Water Revenue Refunding Bonds, 2014 Series D, and authorize payment of costs of issuance from bond proceeds - OPPOSE . Available at [http://www.mwdh2o.com/mwdh2o/pages/finance/PDFs/SD/SDCWA-letters/2014-0512\\_SD-MWD\\_8-2\\_Official-Statement.pdf](http://www.mwdh2o.com/mwdh2o/pages/finance/PDFs/SD/SDCWA-letters/2014-0512_SD-MWD_8-2_Official-Statement.pdf). Accessed on March 16, 2015.
- 4 Moody's assigns Aaa to Metropolitan Water District of Southern California GO Bonds. Available at [http://www.mwdh2o.com/mwdh2o/pages/finance/PDFs/Moody%27s\\_Report.pdf](http://www.mwdh2o.com/mwdh2o/pages/finance/PDFs/Moody%27s_Report.pdf). Accessed on March 16, 2015.
- 5 Metropolitan Water District, Water Resource Management Group, Water Supply, March 8, 2015. Available at [http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/res\\_storage/res\\_storage.pdf](http://www.mwdh2o.com/mwdh2o/pages/yourwater/supply/res_storage/res_storage.pdf). Accessed on March 16, 2015.