California Water and the Drought Update

Energy, Water & Environmental Sustainability Council

Los Angeles Area Chamber of Commerce

August 19, 2016

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Water Management Branch Chief
Department of Water Resources
Southern Region
Mission of the Department of Water Resources

Mission Statement
To manage the water resources of California, in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environments.

Key Responsibilities
- State Water Project
- Dam Safety
- Flood Management
- Environmental Services
- Planning & Local Assistance
California’s Drought

Governor Declared Drought Emergency

2016 - 5th consecutive dry water year
2012-2015 - Driest 4 years on record
January 2015 – Driest January on record
2015 - Record low snowpack

Statewide water storage improved in 2016

Groundwater basins continue to be depleted

Local conditions are degrading

High level of local, State and federal coordination
Statewide Drought Conditions

Local Emergencies Declared
- 25 Counties
- 10 Cities
- 10 Tribal Reservations
- 12 Special Districts

County & Tribal Drought Task Force
- 9 Counties
- 6 Tribes

United States Drought Monitor
August 9, 2016

Official State of Emergency
January 17, 2014
April 1, 2015 Executive Order
May 9, 2015 Executive Order
May 9, 2016 Executive Order
Precipitation – Northern California (No. Sierra Nevada) 2012-2016 (Select Stations)
Precipitation – Central Sierra Nevada Mountains 2012-2016 (Select Stations)
Precipitation – Southern Sierra Nevada Mountains 2016 (Select Stations)
Under normal condition, the snowpack can provide up to 33% of surface water supplies and helps meet demands later in the year.

For 2015 – The snowpack was only 25% of the record low recorded on April 1st.

For 2016, much of the snowpack was depleted by early July.
Even though the winter of 2012-2013 was a dry year, the snowpack in January 2013 was significantly higher than January 2014. A few spring storms improved the snowpack somewhat. Lake Tahoe is circled for reference.
Comparison of Snowpack 2015 and 2016
April 1, 2015 - Snow Survey-No Snow
Lake Oroville – Spring 2016
## Comparison of SWP Water Storage

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Capacity (acre-feet)</th>
<th>2015 Storage As of Aug 1</th>
<th>% of Cap.</th>
<th>2016 Storage As of Aug 1</th>
<th>% of Cap.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frenchman</td>
<td>55,475</td>
<td>15,854</td>
<td>29%</td>
<td>20,473</td>
<td>37%</td>
</tr>
<tr>
<td>Lake Davis</td>
<td>84,371</td>
<td>41,908</td>
<td>50%</td>
<td>51,337</td>
<td>61%</td>
</tr>
<tr>
<td>Antelope</td>
<td>22,564</td>
<td>19,998</td>
<td>89%</td>
<td>20,242</td>
<td>90%</td>
</tr>
<tr>
<td>Oroville</td>
<td>3,553,405</td>
<td>1,155,247</td>
<td>33%</td>
<td>2,312,798</td>
<td>65%</td>
</tr>
<tr>
<td>TOTAL North</td>
<td>3,715,815</td>
<td>1,233,007</td>
<td>33%</td>
<td>2,404,850</td>
<td>65%</td>
</tr>
<tr>
<td>Del Valle</td>
<td>39,914</td>
<td>37,732</td>
<td>95%</td>
<td>38,040</td>
<td>95%</td>
</tr>
<tr>
<td>San Luis (DWR)</td>
<td>1,062,180</td>
<td>455,660</td>
<td>43%</td>
<td>158,128</td>
<td>15%</td>
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<tr>
<td>Pyramid</td>
<td>169,901</td>
<td>167,025</td>
<td>98%</td>
<td>168,819</td>
<td>99%</td>
</tr>
<tr>
<td>Castaic</td>
<td>319,247</td>
<td>126,238</td>
<td>40%</td>
<td>246,565</td>
<td>77%</td>
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<tr>
<td>Silverwood</td>
<td>74,970</td>
<td>71,121</td>
<td>95%</td>
<td>72,178</td>
<td>96%</td>
</tr>
<tr>
<td>Perris</td>
<td>126,841</td>
<td>47,004</td>
<td>37%</td>
<td>47,803</td>
<td>38%</td>
</tr>
<tr>
<td>TOTAL South</td>
<td>1,793,053</td>
<td>904,780</td>
<td>50%</td>
<td>731,533</td>
<td>41%</td>
</tr>
<tr>
<td>TOTAL SWP</td>
<td>5,508,868</td>
<td>2,137,787</td>
<td>39%</td>
<td>3,136,383</td>
<td>57%</td>
</tr>
</tbody>
</table>

State Water Project Projected Deliveries:
As of April 21, 2016, the Table-A allocations for 2016 is 60%
Department of Water Resources
Drought Actions

• Coordinating all drought activities with the Interagency Drought Task Force

• Coordinating the Central Valley Project and State Water Project operations

• Conducting water quality testing and environmental monitoring of protected fish and the ecosystem in the Delta

• Providing technical assistance to local water agencies to help them resolve water management issues related to the drought
  
  • Water Supply Shortage Contingency Planning
  • Assisting local agencies with the monitoring of groundwater levels
Department of Water Resources
Drought Actions

• Assisting local water agencies in the development of short-term water supply transfer agreements

• Updated the Model Water Use Efficiency Landscape Ordinance

• Conducting landscape water use efficiency workshops for landscaping professionals

• Operating the network of weather stations of the California Irrigation Management Information System to assist farmers and landscape professionals with their irrigation management operations

• Managing Grant Programs to assist local agencies with projects design to resolve drought or other water management issues

• Responding to questions about the drought and requests for water use efficiency and other information
Weather Forecast for the Winter

NOAA reports that the El Nino conditions are gone and projects that there is a 55 to 60% probably of La Nina conditions this winter.

More dry weather ahead?
What Is Next?

• Advance planning is underway in the event that this winter is dry
• Continuation of environmental monitoring and water quality and water level modeling for the Delta
• Continuation of Real-time Data Management
• Continuation of Local Assistance
Turf Replacement and Toilet Rebate Programs
Turf and Toilet Rebate Programs

- **Turf Replacement Program**
  - $2 rebate to replace one square foot of turf,
  - Rebate limit - $2,000 per household,
  - Seeking to replace 10 million square feet of turf Statewide
  - $12 million to disadvantaged communities impacted by drought

- **Toilet Rebate Program**
  - $100 rebate to replace one old toilet per household
  - $6 million to replace 60,000 toilets

- Visit [www.SaveOurWaterRebates.com](http://www.SaveOurWaterRebates.com) to learn more about the programs and apply for the rebates
Thank You!

Please Visit the Department of Water Resources on the Internet at www.water.ca.gov