Credit for Drought-Resilient Water Supplies

Sustainable and Balanced Approach to Managing Droughts

Proposed Modification to Emergency Regulation Presented by:

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SWRCB Public Workshop, December 7, 2015
## Urban Water Suppliers are Implementing Governor Brown’s Water Action Plan

<table>
<thead>
<tr>
<th>Key Actions</th>
<th>Water Agencies Implementing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make conservation a way of life</td>
<td>✓</td>
</tr>
<tr>
<td>Increase regional self-reliance and integrated water management</td>
<td>✓</td>
</tr>
<tr>
<td>Manage and prepare for dry periods</td>
<td>✓</td>
</tr>
<tr>
<td>Expand water storage capacity and improve groundwater management</td>
<td>✓</td>
</tr>
</tbody>
</table>

“All Californians have a stake in our water future. These actions set us on a path toward reliability, restoration, and resilience in California water.”
Urban Water Suppliers are Implementing State Law Requiring Reduced Reliance on the Bay-Delta

2009 Delta Reform Act (Water Code §85021):
- “reduce reliance on the Delta”
- “invest in improved regional supplies”
- “improve regional self-reliance”
- “invest in conservation, and water use efficiency”
- “invest in advanced water technologies”
Implementing Gov. Brown’s Water Action Plan
Making Conservation a Way of Life
San Diego County Reduction in Per Capita Water Use

40% Reduction in GPCD Since 1990

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Potable GPCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>235</td>
</tr>
<tr>
<td>2000</td>
<td>216</td>
</tr>
<tr>
<td>2005</td>
<td>190</td>
</tr>
<tr>
<td>2010</td>
<td>152</td>
</tr>
<tr>
<td>2015</td>
<td>143</td>
</tr>
<tr>
<td>2020</td>
<td>167</td>
</tr>
</tbody>
</table>

State-Mandated 2020 Target
Implementing Gov. Brown’s Water Action Plan
Increasing San Diego County’s Regional Self-Reliance

1991
- 28 TAF (5%)
- 550 TAF (95%)
Total = 578 TAF

1991 - Metropolitan Water District
1991 - Imperial Irrigation District Transfer
1991 - All American & Coachella Canal Lining
1991 - Local Surface Water
1991 - Recycled Water
1991 - Seawater Desalination
1991 - Groundwater
1991 - Potable Reuse (Includes conceptual and planned projects)

Estimated 2020
- 80 TAF (14%)
- 190 TAF (32%)
- 150 TAF (26%)
- 48 TAF (8%)
- 27 TAF (5%)
- 48 TAF (8%)
Total = 587 TAF

2020 - Metropolitan Water District
2020 - Imperial Irrigation District Transfer
2020 - All American & Coachella Canal Lining
2020 - Local Surface Water
2020 - Recycled Water
2020 - Seawater Desalination
2020 - Groundwater
2020 - Potable Reuse (Includes conceptual and planned projects)

2020 - Estimated Water Sources
2020 - Projected Water Sources

Projected 2035
- 80 TAF (12%)
- 50 TAF (7%)
- 50 TAF (7%)
- 30 TAF (4%)
- 50 TAF (7%)
- 100 TAF (15%)
Total = 680 TAF

2035 - Metropolitan Water District
2035 - Imperial Irrigation District Transfer
2035 - All American & Coachella Canal Lining
2035 - Local Surface Water
2035 - Recycled Water
2035 - Seawater Desalination
2035 - Groundwater
2035 - Potable Reuse (Includes conceptual and planned projects)

2035 - Projected Water Sources

TAF=Thousand Acre-Feet
Groundwater Replenishment System
Indirect Potable Reuse

- Operational since January 2008
- Creates 100 million gallons per day (103,000 acre-feet per year) of new water supply for Southern California
- Treating sewer water and purifies it to near-distilled quality for groundwater recharge
- Reduces imported water need for Southern California
- Provides a new source of water—enough for nearly 850,000 people
- $623 million capital cost
Regulations Must Account for Potable Reuse Projects

- Identical benefit to “Purple Pipe” non-potable reuse projects – should also receive credit in Regulation
- Potable reuse projects are more efficient as they avoid dual plumbing issues
- Reduces TDS concentration of local water supplies
- Not including potable reuse projects disincentives development of new projects
- More sustainable local supplies reduces imported water need and the frequency of drought events
  - Actions consistent with Governor Brown’s Water Action Plan
Drought-Resilient Supply Credit
Basis and Rationale

1. Provides a sustainable approach to managing California’s Drought
   - Combination of conservation and drought-resilient supplies

2. Protects California’s economy
   - Approach doesn’t just rely on reduction mandates, which can stymie economic growth
3. Allows agencies to realize the benefits from drought-resilient supplies
   • Consistent with Governor’s Action Plan to increase self-reliance and reduce demands on Bay-Delta
   • Provide incentive for agencies to develop sustainable supplies
Drought-Resilient Supply Credit

**Alternative Path to Compliance**

- Simple and straightforward approach
- Urban water supplier conservation standard remains the same – no impact to other suppliers
- Reduction target is met through combination of conservation and drought sustainable supplies
- Include conservation savings floor of 8% to ensure balanced approach to managing droughts
  - Consistent with range included in current emergency regulations
Drought-Resilient Supply Credit
Alternative Path to Compliance (cont.)

- Applies to potable reuse, desalination, long-term transfers of conserved water or other potable drought-resilient supplies

- Urban agency must provide written proof that identifies long-term availability of supply
  - Written agreements, contracts or other guarantee

- Wholesaler has the ability to assign its sustainable supplies to agencies it serves
### Proposed Alternative Path to Compliance

**Illustrative Example (Figures in AF)**

<table>
<thead>
<tr>
<th></th>
<th>Agency A</th>
<th>Agency B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2013 Base Period Month</td>
<td>3,000</td>
</tr>
<tr>
<td>B</td>
<td>Conservation Standard</td>
<td>20%</td>
</tr>
<tr>
<td>C=A*B</td>
<td><strong>Total Reduction Target</strong></td>
<td>600</td>
</tr>
</tbody>
</table>

Reduction target may be met through conservation and sustainable supplies

<table>
<thead>
<tr>
<th></th>
<th>Agency A</th>
<th>Agency B</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Drought-resilient supplies available</td>
<td>200</td>
</tr>
<tr>
<td>E=C-D</td>
<td>Conservation savings</td>
<td>400</td>
</tr>
<tr>
<td>F=E/A</td>
<td>Does savings drop below 8%?</td>
<td>13% (no)</td>
</tr>
</tbody>
</table>

Determine sustainable supplies and conservation applied to reduction target, assuming 8% conservation floor

<table>
<thead>
<tr>
<th></th>
<th>Agency A</th>
<th>Agency B</th>
</tr>
</thead>
<tbody>
<tr>
<td>G=A*.08</td>
<td>Conservation required with 8% floor</td>
<td>400</td>
</tr>
<tr>
<td>H=C-G</td>
<td>Adjusted drought-resilient supplies applied to reduction target</td>
<td>200</td>
</tr>
</tbody>
</table>
Conclusion

Drought-Resilient Supply Credit

1. Provides a sustainable, balanced approach to managing California’s Drought
2. Protects California’s economy
3. Allows agencies to realize the benefits from investments in drought-resilient supplies
   - Consistent with Governor’s Action Plan to increase self-reliance and reduce demands on Bay-Delta

Desalination  Water-Use Efficiency  Potable Reuse