SLIDES: Never Let a Crisis Go to Waste

Lester Snow

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Never Let a Crisis Go to Waste

Martz Conference June 12, 2015
Discussion Outline

- Historical Water Development
- Current Challenges & Opportunities
- Groundwater and Beyond
Historical Context

- Swamp and Overflow Act
- Central Valley Flood System
- Water System Development
90% of annual runoff occurs in 40% of the state.
Los Angeles Aqueduct (1908)
California Water Systems

Hetch Hetchy Aqueduct (1913)
Colorado River Aqueduct (1933)

California Water Systems
- Fueled California economy
- All had unintended consequences
- All are less reliable today
Water System Challenges

- Increasing Population
- Aging infrastructure
- Groundwater Overdraft
- Degraded ecosystems
- Increasing conflict
- Uncertainty due to climate change
Addressing the Challenge

- Achieving sustainable water management through:
  - Integrated Water Management
  - Groundwater Management
  - Urban Water Use Efficiency
  - Stormwater Capture
  - Recycled Water
  - Reservoir Reoperation
  - Flood Management
Integrated Water Management

WATER SYSTEM INTERCONNECTIVITY
June 2, 2015
(Released Thursday, Jun. 4, 2015)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

<table>
<thead>
<tr>
<th></th>
<th>D0</th>
<th>D1-D2</th>
<th>D3-D4</th>
<th>D4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>26.23</td>
<td>74.77</td>
<td>50.98</td>
<td>55.92</td>
</tr>
<tr>
<td>Last Week</td>
<td>25.37</td>
<td>74.03</td>
<td>57.03</td>
<td>55.92</td>
</tr>
<tr>
<td>3 Months Age</td>
<td>29.35</td>
<td>70.05</td>
<td>59.79</td>
<td>29.49</td>
</tr>
<tr>
<td>Start of Year</td>
<td>34.36</td>
<td>68.24</td>
<td>54.40</td>
<td>33.50</td>
</tr>
<tr>
<td>Start of Water Year</td>
<td>31.48</td>
<td>69.52</td>
<td>55.57</td>
<td>35.85</td>
</tr>
<tr>
<td>One Year Age</td>
<td>31.84</td>
<td>69.18</td>
<td>90.32</td>
<td>47.21</td>
</tr>
</tbody>
</table>

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
David Miskus
NOAA/NWS/NCEP/CPC

http://droughtmonitor.unl.edu/
Drought Forecast

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period

Valid for April 16 - July 31, 2015
Released April 16, 2015

Author:
Rich Tinker
NOAA/NWS/NCEP/Climate Prediction Center

Descriptive legend:
- Drought persists/intensifies
- Drought remains but improves
- Drought removal likely
- Drought development likely

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

http://go.usa.gov/hHTe
Half Dome March 19, 2011
Half Dome March 19, 2013
Half Dome March 19, 2015
Groundwater in Context

- 40% of supply in an average year; 60% in dry
- Critical part of integrated management
- Flexible source for storage and use
Groundwater in Context

- Several decades of increasing use
  - Reduction in surface supplies
  - Hardening of demand
- Increasing landowner conflicts
Problems With Overdraft

- Subsidence threatens infrastructure
- Reduced water for species
- Reduced surface supplies
- Increased drilling/pumping costs
- Increased costs for taxpayers, business, farmers
CWF Groundwater Efforts

- Develop and Protect Leadership
- Reframe the Debate/Compelling Information
- New Coalitions
- Policy Reform
EVERYONE’S TALKING ABOUT WATER.
FOR ONCE, THEY’RE SAYING THE SAME THING
Compelling Information
Coalitions & Support

[Logos of various organizations]
Media Statistics: Editorials and Op-eds

- **18 positive editorials statewide**
  - 4 supporting groundwater reform
  - 12 supporting specific legislation
  - 2 urging Governor to sign bills
  - 4 million print impressions, 31 million online

- **13 positive opinion pieces published**
  - 5 by Groundwater Voices
  - 4 by Lester Snow
  - 4 by other supportive orgs, individuals
  - 750k print impressions, 1 million online
Media Statistics:
News Articles

- More than 70 articles mentioned California Water Foundation efforts to reform groundwater policy

- More than 130 positive articles posted to Groundwater Voices website

- More than 200 million print and online impressions garnered from earned media efforts
Groundwater Policy

- 1961 Legislative Report
- 1978 Commission Report
- ACWA 2011 Report
- ACWA 2014 Recommendations
- CWF Steering Committee Outreach
- CWF Recommendations
Several decades of increasing use
  - Reduction in surface supplies
  - Hardening of demand

Increasing landowner conflicts
Definitions

Local Empowerment
- Jurisdiction and Basin Priority (exempts adjudicated basins)
- Plan Requirements
- Authorities

State Role
- Assistance
- Plan Review
- Back-Stop
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<tr>
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Taking these actions shields local managers from state intervention
**Time Frame for Success**

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Example of Current Groundwater Management Jurisdictional Challenges

Legend:
- Subbasin
- County
- Neighboring Subbasins
- Foothills Area
SGMA Implementation

- Early Adopters
- “Clean Up” Legislation
- State Regulations
- Bond Funding
- Drought Pressure and Conflict
Integrated Water Management

WATER SYSTEM INTERCONNECTIVITY

- Wetlands Habitat
- Irrigated Agriculture
- Agricultural Use Groundwater Supply Wells
- Groundwater Recharge Basin
- Groundwater Injection Well
- Groundwater Basin Monitoring Well
- Municipal Groundwater Supply Well
- Wastewater Treatment Plant
- Freshwater Treatment Plant
- Reservoir

GROUNDWATER BASIN