Ain’t I drunk you before?

Re-Use During Drought in Texas

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Texas Water Development Board

presented at

Direct Potable Reuse, Newport Beach

November 8, 2013
U.S. Drought Monitor

Texas

October 29, 2013
(Released Thursday, Oct. 31, 2013)
Valid 7 a.m. EDT

Drought Conditions (Percent Area)

<table>
<thead>
<tr>
<th></th>
<th>None</th>
<th>D0-D4</th>
<th>D1-D4</th>
<th>D2-D4</th>
<th>D3-D4</th>
<th>D4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>14.17</td>
<td>65.83</td>
<td>15.81</td>
<td>12.40</td>
<td>4.26</td>
<td>0.23</td>
</tr>
<tr>
<td>Last Week</td>
<td>13.16</td>
<td>66.94</td>
<td>17.03</td>
<td>22.76</td>
<td>4.19</td>
<td>0.23</td>
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<tr>
<td>3 Months Ago</td>
<td>2.83</td>
<td>67.17</td>
<td>17.69</td>
<td>25.36</td>
<td>25.97</td>
<td>5.66</td>
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<tr>
<td>Start of Calendar Year</td>
<td>3.04</td>
<td>96.96</td>
<td>97.00</td>
<td>55.38</td>
<td>35.03</td>
<td>11.96</td>
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<tr>
<td>Start of Water Year</td>
<td>6.62</td>
<td>93.38</td>
<td>70.95</td>
<td>25.08</td>
<td>4.01</td>
<td>0.12</td>
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<tr>
<td>One Year Ago</td>
<td>15.36</td>
<td>64.64</td>
<td>57.66</td>
<td>31.61</td>
<td>16.23</td>
<td>3.67</td>
</tr>
</tbody>
</table>

Intensity:
- Yellow: 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:
Brian Fuchs
National Drought Mitigation Center

http://droughtmonitor.unl.edu/
Actual Water Usage

18,000,000 acre-feet
Total Water Use

1.7% Total Reuse
~316,000 acre-feet

Data from 2011 Water Survey
Actual Water Usage

5.5% is Reused
~268,000 acre-feet

4,866,000 acre-feet
Municipal Water Use

Data from 2011 Water Survey
Current (and future) Re-Use

- Projected Existing water supplies in 2010
  - ~280,000 acre-feet of direct re-use
  - ~202,000 acre-feet of indirect re-use

Data from the 2012 State Water Plan
Existing **Direct Reuse** Supplies through 2060 by Region (acre-feet per year)

Data from the 2012 State Water Plan
What will Texas do for more water?

Water Management Strategies for 2060

- Other surface water: 34%
- New major reservoirs: 17%
- Irrigation conservation: 17%
- Reuse: 10%
- Other conservation: 0.3%
- Desalination: 3.4%
- Groundwater: 9%
- Drought management: <0.1%
- Brush control: 0.2%
- Weather modification: 0.2%
- Aquifer storage & recovery: 0.9%
- Conjunctive use: 1.5%

New water supplies in 2060:
- ~916,000 acre-feet

New water supplies in 2010:
- ~100,000 acre-feet

Data from the 2012 State Water Plan
Upcoming Research Studies

- Testing Water Quality at the Raw Water Production Facility in Big Spring, Texas
  - Quarterly sampling for Chemicals of Emerging Concern and microbial pathogens
  - Develop correlations for surrogates compounds
  - Develop Monitoring Guidance for Direct Potable Reuse
  - Goal to demonstrate water reuse is safe
    - Treatment is effective, consistent, and accurate
Proposition 6

• November 5 Election - Voters Approved
• Creates two new funds
  - State Water Implementation Fund for Texas (SWIFT)
  - State Water Implementation Revenue Fund for Texas (SWIRFT)
• $2 Billion from the Rainy Day Fund to the SWIFT
• 20 % of SWIFT financial assistance is for water conservation and reuse projects.
  - To implement reuse projects more infrastructure is required
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Innovative Water Technologies
www.twdb.texas.gov/innovativewater/reuse

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