254 counties

16 water planning areas

23 river basins

30 aquifers
WORST STATEWIDE TEXAS DROUGHTS

Palmer Drought Severity Index

Months

0 10 20 30 40 50 60 70 80

2010-2014

1950-1957
Region K: +87%
PROJECTED GROWTH RATE IN TEXAS COUNTIES

Population growth rate
2020 to 2070
(percent change)

- > 200% increase
- 100 - 200% increase
- 10 -100% increase
- < 10% increase
- < 10% increase

Interstate Highways
PROJECTED WATER NEED

Statewide Projected Demand
+17%

Region K Projected Demand
+24%

(demand met by existing supply)
PROJECTED ANNUAL WATER NEEDS IN TEXAS

Year | Non-municipal | Municipal |
-----|---------------|-----------|
2020 | 4.8           |           |
2030 | 5.6           |           |
2040 | 6.4           |           |
2050 | 7.1           |           |
2060 | 7.8           |           |
2070 | 8.9           |           |

Legend:
- Non-municipal
- Municipal
STATE-WIDE WATER NEEDS BY WATER USE CATEGORY

- Irrigation
- Municipal
- Manufacturing
- Steam-electric
- Mining
- Livestock

Graph showing trends from 2020 to 2070.
STRATEGIES BY WATER RESOURCE IN 2070

- Surface water: 44.5%
- Demand management: 30.3%
- Reuse: 14.2%
- Groundwater: 9.6%
- Seawater: 1.4%
Strategies by Type in 2070

- Other surface water: 30.5%
- Irrigation conservation: 15.7%
- New major reservoir: 13.0%
- Municipal conservation: 9.6%
- Indirect reuse: 7.6%
- Groundwater wells & other: 7.4%
- Other direct reuse: 4.4%
- Drought management: 2.7%
- Aquifer storage & recovery: 1.8%
- Seawater desalination: 1.4%
- Groundwater desalination: 1.3%
- Direct potable reuse: 1.0%
- Conjunctive use: 0.8%
- Other strategies: 0.6%
- Other conservation: 2.4%

Demand management vs. Water supply

- Demand management
- Water supply
## TOP THREE STRATEGIES

<table>
<thead>
<tr>
<th>Statewide</th>
<th>2020</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Other Surface Water</td>
<td>Other Surface Water</td>
</tr>
<tr>
<td></td>
<td>Irrigation Conservation</td>
<td>Irrigation Conservation</td>
</tr>
<tr>
<td></td>
<td>Groundwater Wells &amp; Other</td>
<td>New Major Reservoir</td>
</tr>
<tr>
<td>Region K</td>
<td>Drought Management</td>
<td>Drought Management</td>
</tr>
<tr>
<td></td>
<td>Other Surface Water</td>
<td>Irrigation Conservation</td>
</tr>
<tr>
<td></td>
<td>Indirect Reuse</td>
<td>New Major Reservoir</td>
</tr>
</tbody>
</table>

11
• Conservation makes up over one quarter of strategy supplies in 2070

• Most frequently recommended strategy in the 2017 Plan

• More than $4 billion in capital costs

• Demand management (long-term conservation and temporary drought management restrictions) and reuse combined make up 45% of total strategy volumes.
Conservation

Over 25% of all strategies

Aquifer Storage and Recovery

350% Increase

Direct Potable Reuse

Recommended 7x as much!
5,500 strategies

2,400 projects

Capital cost of $63 billion
- $900 million in financial assistance in 2015 (approximately)

- $3.9 billion in financial assistance over the next decade (approximately)

- 20 project sponsors

- 30 projects

- $106 million in projected savings

- AAA rating
2015 SWIRFT Financial Assistance

Total Funding Commitments* (Loans and Grants)
Post-SWIRFT 1957 – December 2015

Multi-Year Financial Assistance Request*

Funding and Commitments by Program

<table>
<thead>
<tr>
<th>Program</th>
<th>Funded</th>
<th>Commitments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CWSRF</td>
<td>$8,894,941,712</td>
<td>1,973</td>
</tr>
<tr>
<td>DWSRF</td>
<td>1,550,594,803</td>
<td>426</td>
</tr>
<tr>
<td>EDAP</td>
<td>783,023,965</td>
<td>464</td>
</tr>
<tr>
<td>STATE</td>
<td>4,261,916,281</td>
<td>1,087</td>
</tr>
<tr>
<td>SWIFT</td>
<td>3,753,370,000</td>
<td>112</td>
</tr>
<tr>
<td>Total</td>
<td>$19,184,746,851</td>
<td>4,652</td>
</tr>
</tbody>
</table>

Note: The Funded amount consists of actual closed commitment amounts plus unclosed commitment amounts. The number of commitments represents the total of commitments made since the Agency's inception.

* Preliminary, subject to change
** Multi-year commitments include the 2015 financial assistance requests
### REGION K

**Totals by Decade** (acre-feet/year)

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
<th>2060</th>
<th>2070</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demands</td>
<td>1,183,325</td>
<td>1,245,335</td>
<td>1,301,963</td>
<td>1,352,231</td>
<td>1,401,321</td>
<td>1,461,807</td>
</tr>
<tr>
<td>Existing</td>
<td>998,867</td>
<td>1,000,960</td>
<td>1,003,758</td>
<td>1,001,689</td>
<td>996,571</td>
<td>991,929</td>
</tr>
<tr>
<td>Needs</td>
<td>373,563</td>
<td>383,821</td>
<td>387,321</td>
<td>400,009</td>
<td>449,699</td>
<td>512,304</td>
</tr>
<tr>
<td>Strategy</td>
<td>436,403</td>
<td>498,144</td>
<td>547,398</td>
<td>619,471</td>
<td>678,032</td>
<td>745,284</td>
</tr>
</tbody>
</table>

[http://texasstatewaterplan.org](http://texasstatewaterplan.org)
### Recommended Projects

Total capital cost of recommended projects: $3,772,705,672.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Decade Online</th>
<th>Sponsor</th>
<th>Capital Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTERNATE CANAL DELIVERY - STPNOC</td>
<td>2020</td>
<td>STEAM ELECTRIC POWER (MATAGORDA)</td>
<td>$7,669,000</td>
</tr>
<tr>
<td>BRUSH CONTROL</td>
<td>2020</td>
<td>COUNTY-OTHER (BLANCO); COUNTY-OTHER (BURNET); COUNTY-OTHER (GILLESPIE); COUNTY-OTHER (HAYS); COUNTY-OTHER (LLANO); COUNTY-OTHER (MILLS); COUNTY-OTHER (SAN SABA); COUNTY-OTHER (TRAVIS)</td>
<td>$17,096,000</td>
</tr>
<tr>
<td>BS/EACD EDWARDS / MIDDLE TRINITY ASR</td>
<td>2030</td>
<td>BUDA; COUNTY-OTHER (HAYS); MINING (HAYS); MOUNTAIN CITY; SUNSET VALLEY</td>
<td>$13,000,000</td>
</tr>
<tr>
<td>BS/EACD SALINE EDWARDS ASR</td>
<td>2030</td>
<td>BUDA; COUNTY-OTHER (HAYS); CREEDMOOR-MAHA WSC</td>
<td>$15,000,000</td>
</tr>
<tr>
<td>BUENA VISTA REGIONAL PROJECT</td>
<td>2020</td>
<td>BERTRAM; BURNET; COUNTY-OTHER (BURNET)</td>
<td>$24,990,000</td>
</tr>
<tr>
<td>CITY OF AUSTIN - AQUIFER STORAGE AND RECOVERY</td>
<td>2020</td>
<td>AUSTIN</td>
<td>$312,316,000</td>
</tr>
<tr>
<td>CITY OF AUSTIN - CAPTURE LOCAL INFLOWS TO LADY BIRD LAKE</td>
<td>2020</td>
<td>AUSTIN</td>
<td>$2,949,000</td>
</tr>
<tr>
<td>CITY OF AUSTIN - DIRECT REUSE</td>
<td>2020</td>
<td>AUSTIN</td>
<td>$536,176,000</td>
</tr>
<tr>
<td>CITY OF AUSTIN - INDIRECT POTABLE REUSE THROUGH LADY BIRD LAKE</td>
<td>2020</td>
<td>AUSTIN</td>
<td>$41,970,000</td>
</tr>
</tbody>
</table>
SAVE THE DATE!

WATER for TEXAS 2017 conference

January 23-25, 2017
AT&T Conference Center, Austin, Texas
Hosted by the TWDB

WaterForTexas.twdb.texas.gov
Kathleen Jackson, P.E.
@twdb_kathleen
512.463.7847
Kathleen.Jackson@twdb.texas.gov

www.twdb.texas.gov