

**TO:** Board Members

**THROUGH:** Kevin Patteson, Executive Administrator  
Les Trobman, General Counsel  
Jeff Walker, Deputy Executive Administrator, Water Supply & Infrastructure

**FROM:** Thomas Barnett, Planner, Regional Water Planning

**DATE:** December 4, 2015

**SUBJECT:** Approval of the 2016 Region B Regional Water Plan

**ACTION REQUESTED**

Approve the 2016 Regional Water Plan for the Region B Regional Water Planning Area.

**BACKGROUND**

In accordance with §16.051 of the Texas Water Code (TWC), the Texas Water Development Board (TWDB) is required to develop and adopt a comprehensive state water plan every five years that incorporates the regional water plans developed and approved in accordance with TWC §16.053. Pursuant to 31 TAC §357.50, regional water planning groups are required to submit their adopted regional water plans to the Board for approval every five years.

In accordance with 31 TAC §357.50, the Board is required to consider approval of submitted regional water plans and may approve a regional water plan (RWP) only after it has determined that the RWP complies with statute and rules including TWC §16.053, 31 TAC Chapters 355, 357, and 358.

In accordance with TWC §16.053, the Board may approve a regional water plan only after it has determined that:

- all interregional conflicts involving the regional water planning area, if any, have been resolved;
- the plan includes water conservation practices and drought management measures; and
- the plan is consistent with long-term protection of the state's water resources, agricultural resources, and natural resources.

**Our Mission : Board Members**

|   |   |   |
|---|---|---|
| To provide leadership, information, education, and support for planning, financial assistance, and outreach for the conservation and responsible development of water for Texas | : | Bech Bruun, Chairman   Kathleen Jackson, Member |
|   | : |   |
|   | : | Kevin Patteson, Executive Administrator         |

The Executive Administrator (EA) has conducted a review of the final adopted Region B Regional Water Plan related to all applicable legal and contractual requirements including related to the following key issues:

1. Determinations of whether the plans were developed according to the general provisions for planning included in statute, rule, and guidance.
2. Determination that there are no interregional conflicts associated with the plan.
3. Determination that environmental planning criteria, including consideration of environmental flow standards adopted by the Texas Commission on Environmental Quality, related to instream and bay and estuary inflows were followed appropriately in evaluations of water management strategies utilizing surface water.
4. Determination that existing and recommended water supplies would be available under a repeat of the historic drought of record.
5. Determination that impacts to agricultural resources were quantified.
6. Determination that cost estimates developed in the plan were prepared in general accordance with the provisions of the contract.
7. Determination that water conservation and drought management was considered as a means to meet all identified water needs.
8. Determination that all comments received by the regional water planning groups on the initially prepared plans from the TWDB have been satisfactorily addressed.
9. Determination that, in aggregate, the plan was found to meet the requirements related to:
  - consideration of a balance of economic, social, and ecological viability as well as consideration of the interests of the state and entities providing water.
  - providing for the orderly development, management, and conservation of water resources and preparation for and response to drought conditions in order that sufficient water will be available at a reasonable cost to ensure public health, safety, and welfare, and further economic development.
10. Determination that the plan is consistent with long-term protection of:
  - state and regional water resources
  - state and regional agricultural resources
  - state and regional natural resources

Summary data of the projected population, existing supplies, demands, needs, and strategy supplies for the water user groups in the Region B Regional Water Planning Area are included as Attachment 1. The water management strategy projects recommended in the 2016 Region B Regional Water Plan are included as Attachment 2.

### **KEY ISSUES**

The recommended strategies in the 2016 Region B Regional Water Plan meet all identified needs in the plan except for approximately 3,000 acre-feet per year associated with irrigation, mining, and livestock uses in 2020 increasing to approximately 10,000 acre-feet per year in 2070. These needs were left unmet by the planning group due to limited, feasible water supply options. An unmet need in a regional plan does not prevent an associated entity from pursuing development of additional water supplies. In some instances, the underlying future increase in demand associated with an unmet need may actually shift to a less water-scarce location.

The total cost of the recommended projects in the 2016 Region B Regional Water Plan is \$629.6 million.

The EA has verified that the plan was formally adopted on October 21, 2015.

The EA has reviewed the adopted 2016 Region B Regional Water Plan and determined that the plan complies with statute and rules.

The EA has reviewed the Region B Regional Water Plan for interregional conflicts and has found none.

**RECOMMENDATION**

The Executive Administrator recommends approval of the 2016 Region B Regional Water Plan.

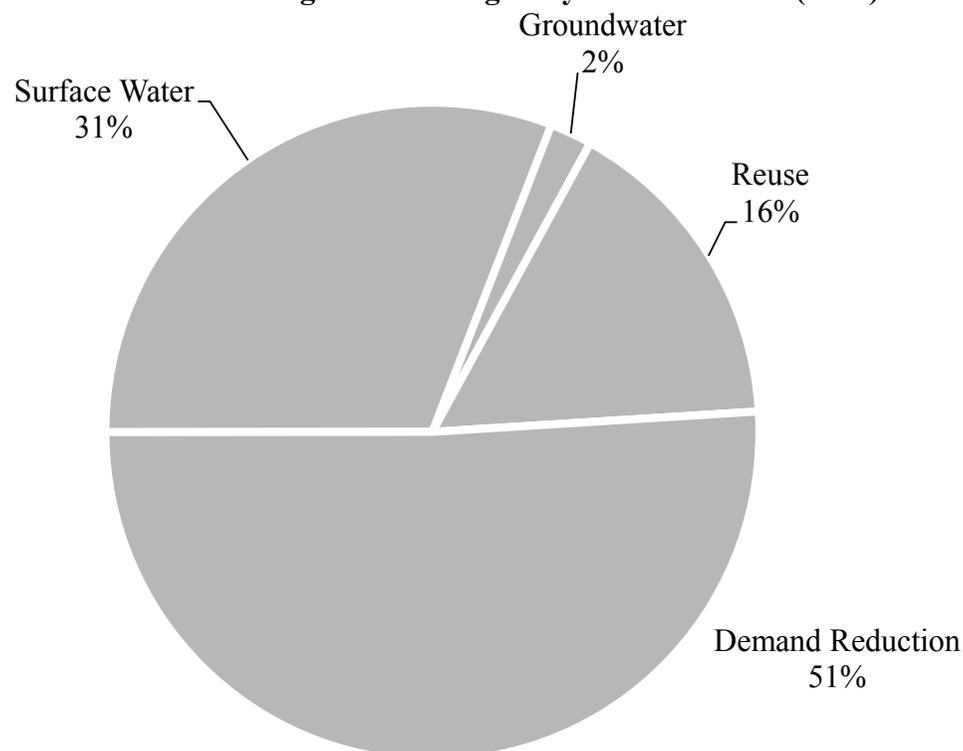
Attachment 1 – Summary of the Water User Groups in the 2016 Region B Regional Water Plan

Attachment 2 – Recommended water management strategy projects

**Summary of Water User Groups in the 2016 Region B Regional Water Plan**

| Year                           | 2020           | 2030           | 2040           | 2050           | 2060           | 2070           |
|--------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>Population Projections</b>  | <b>206,000</b> | <b>214,000</b> | <b>219,000</b> | <b>223,000</b> | <b>226,000</b> | <b>229,000</b> |
| <b>Existing Water Supply</b>   | <b>133,000</b> | <b>129,000</b> | <b>123,000</b> | <b>118,000</b> | <b>113,000</b> | <b>109,000</b> |
| Municipal                      | 29,000         | 30,000         | 30,000         | 30,000         | 30,000         | 31,000         |
| County-Other                   | 3,000          | 3,000          | 3,000          | 3,000          | 3,000          | 3,000          |
| Manufacturing                  | 4,000          | 4,000          | 5,000          | 5,000          | 5,000          | 5,000          |
| Mining                         | 5,000          | 4,000          | 3,000          | 2,000          | 2,000          | 2,000          |
| Irrigation                     | 100,000        | 97,000         | 95,000         | 93,000         | 93,000         | 93,000         |
| Steam Electric Power           | 10,000         | 10,000         | 10,000         | 10,000         | 10,000         | 10,000         |
| Livestock                      | 11,000         | 11,000         | 11,000         | 11,000         | 11,000         | 11,000         |
| <b>Total Water Demands</b>     | <b>162,000</b> | <b>159,000</b> | <b>157,000</b> | <b>154,000</b> | <b>154,000</b> | <b>155,000</b> |
| Municipal                      | 8,000          | 9,000          | 9,000          | 10,000         | 10,000         | 11,000         |
| County-Other                   | 100            | 100            | 100            | 100            | 100            | 100            |
| Manufacturing                  | 1,000          | 1,000          | 2,000          | 2,000          | 2,000          | 2,000          |
| Mining                         | 2,000          | 600            | 500            | 100            | 100            | 100            |
| Irrigation                     | 23,000         | 23,000         | 24,000         | 26,000         | 28,000         | 31,000         |
| Steam Electric Power           | 1,000          | 2,000          | 3,000          | 4,000          | 5,000          | 6,000          |
| Livestock                      | 100            | 100            | 100            | 100            | 100            | 100            |
| <b>Total Water Needs</b>       | <b>35,200</b>  | <b>35,800</b>  | <b>38,700</b>  | <b>42,300</b>  | <b>45,300</b>  | <b>50,300</b>  |
| Municipal                      | 20,000         | 20,000         | 37,000         | 37,000         | 37,000         | 37,000         |
| County-Other                   | 400            | 400            | 800            | 900            | 1,000          | 1,000          |
| Manufacturing                  | 2,000          | 2,000          | 3,000          | 3,000          | 3,000          | 3,000          |
| Mining                         | 1,000          | 1,000          | 700            | 500            | 400            | 400            |
| Irrigation                     | 28,000         | 28,000         | 27,000         | 26,000         | 26,000         | 25,000         |
| Steam Electric Power           | 1,000          | 2,000          | 3,000          | 4,000          | 5,000          | 6,000          |
| <b>Total Strategy Supplies</b> | <b>52,400</b>  | <b>53,400</b>  | <b>71,500</b>  | <b>71,400</b>  | <b>72,400</b>  | <b>72,400</b>  |

**Recommended water management strategies by water resource (2070)**



| Sponsor<br>Region | Sponsor                         | Recommended Water Management Strategy Project                          | Capital Cost         | Online<br>Decade |
|-------------------|---------------------------------|--|----------------------|------------------|
| B                 | COUNTY-OTHER, BAYLOR            | CHLORIDE CONTROL PROJECT   | \$59,371,000         | 2020             |
| B                 | MINING, ARCHER                  | MINING CONSERVATION - ARCHER   | \$1,004,000          | 2020             |
| B                 | MINING, BAYLOR                  | MINING CONSERVATION - BAYLOR   | \$33,000             | 2020             |
| B                 | MINING, CLAY                    | MINING CONSERVATION - CLAY   | \$1,635,000          | 2020             |
| B                 | MINING, COTTLE                  | MINING CONSERVATION - COTTLE   | \$83,000             | 2020             |
| B                 | MINING, FOARD                   | MINING CONSERVATION - FOARD  | \$25,000             | 2020             |
| B                 | MINING, HARDEMAN                | MINING CONSERVATION - HARDEMAN   | \$42,000             | 2020             |
| B                 | MINING, KING                    | MINING CONSERVATION - KING   | \$789,000            | 2020             |
| B                 | MINING, MONTAGUE                | MINING CONSERVATION - MONTAGUE   | \$7,553,000          | 2020             |
| B                 | MINING, WICHITA                 | MINING CONSERVATION - WICHITA  | \$133,000            | 2020             |
| B                 | MINING, WILBARGER               | MINING CONSERVATION - WILBARGER  | \$42,000             | 2020             |
| B                 | STEAM ELECTRIC POWER, WILBARGER | ALTERNATIVE COOLING TECHNOLOGY - STEAM ELECTRIC POWER WILBARGER COUNTY | \$89,740,000         | 2020             |
| B                 | VERNON                          | ADDITIONAL SEYMOUR AQUIFER - VERNON                                    | \$9,810,000          | 2020             |
| B                 | VERNON                          | DIRECT REUSE - VERNON  | \$8,500,000          | 2040             |
| B                 | VERNON                          | WATER CONSERVATION (REPLACE TRANSMISSION PIPELINE) - VERNON            | \$7,807,000          | 2020             |
| B                 | WICHITA FALLS                   | INDIRECT REUSE TO LAKE ARROWHEAD                                       | \$36,400,000         | 2020             |
| B                 | WICHITA FALLS                   | WICHITA RIVER DIVERSION  | \$11,230,000         | 2020             |
| B                 | WICHITA FALLS                   | LOCAL SEYMOUR AQUIFER  | \$19,674,000         | 2020             |
| B                 | WICHITA FALLS                   | LAKE RINGGOLD  | \$330,510,000        | 2040             |
| B                 | WICHITA FALLS                   | WATER CONSERVATION - WICHITA FALLS                                     | \$36,656,000         | 2020             |
| B                 | WICHITA WCID #2                 | WCWID NO. 2 CANAL CONVERSION TO PIPELINE                               | \$8,538,000          | 2020             |
| <b>Total</b>      |                                 |  | <b>\$629,575,000</b> |                  |