

# Texas Water Development Board

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**TO:** Board Members

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

**FROM:** Temple McKinnon, Manager, Regional Water Planning

**DATE:** December 17, 2015

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

## **ACTION REQUESTED**

Approve the 2016 Regional Water Plan for the Plateau (Region J) 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 J 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 water user groups in the Region J Regional Water Planning Area are included as Attachment 1. The water management strategy projects recommended in the 2016 Region J Regional Water Plan are included as Attachment 2.

### **KEY ISSUES**

The recommended strategies in the 2016 Region J Regional Water Plan meet all identified needs in the plan except for approximately 400 acre-feet per year associated with irrigation and mining uses in 2020 and approximately 300 acre-feet per year associated with irrigation, mining, and manufacturing uses 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 J Regional Water Plan is \$144.4 million.

The EA has verified that the plan was formally adopted on October 29, 2015.

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

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

**RECOMMENDATION**

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

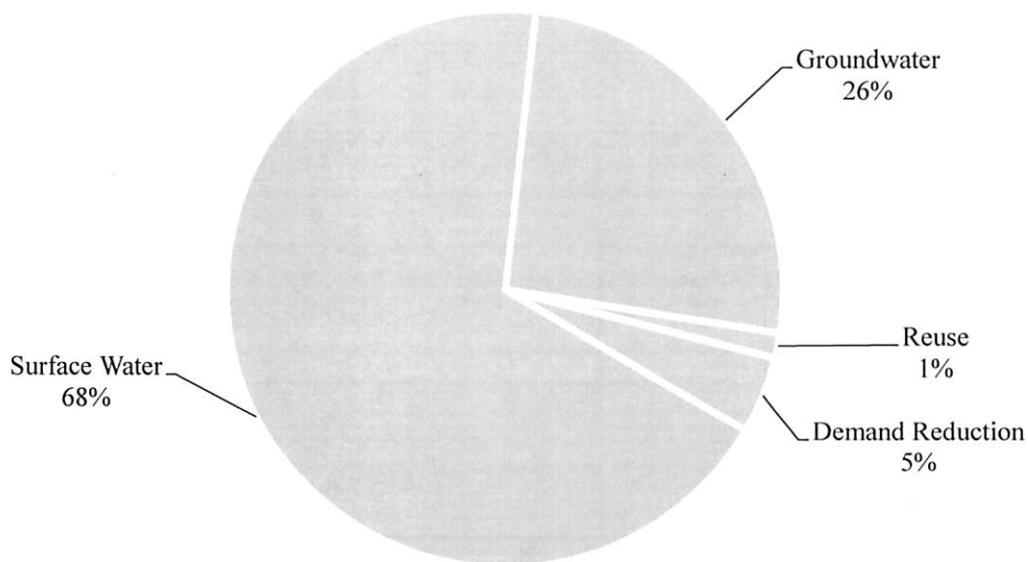
Attachment 1 – Summary of the Water User Groups in the 2016 Region J Regional Water Plan

Attachment 2 – Recommended water management strategy projects

Summary of Water User Groups in the 2016 Region J Regional Water Plan

Year	2020	2030	2040	2050	2060	2070
<b>Population Projections</b>	<b>141,000</b>	<b>154,000</b>	<b>163,000</b>	<b>171,000</b>	<b>178,000</b>	<b>185,000</b>
<b>Existing Water Supply</b>	<b>68,000</b>	<b>68,000</b>	<b>68,000</b>	<b>68,000</b>	<b>68,000</b>	<b>68,000</b>
Municipal	19,000	19,000	20,000	21,000	21,000	22,000
County-Other	7,000	8,000	8,000	8,000	9,000	9,000
Manufacturing	0	0	0	0	0	0
Mining	400	400	400	400	400	400
Irrigation	11,000	11,000	11,000	11,000	10,000	10,000
Livestock	3,000	3,000	3,000	3,000	3,000	3,000
<b>Total Water Demands</b>	<b>40,400</b>	<b>41,400</b>	<b>42,400</b>	<b>43,400</b>	<b>43,400</b>	<b>44,400</b>
Municipal	3,000	4,000	4,000	4,000	4,000	4,000
County-Other	0	200	400	400	500	500
Manufacturing	0	0	0	0	0	0
Mining	0	100	100	100	0	0
Irrigation	100	100	100	100	100	100
Livestock	200	200	200	200	200	200
<b>Total Water Needs</b>	<b>3,300</b>	<b>4,600</b>	<b>4,800</b>	<b>4,800</b>	<b>4,800</b>	<b>4,800</b>
Municipal	15,000	15,000	15,000	15,000	15,000	15,000
County-Other	6,000	6,000	6,000	6,000	6,000	6,000
Mining	100	100	100	100	100	100
Irrigation	200	200	200	200	200	200
Livestock	300	300	300	300	300	300
<b>Total Strategy Supplies</b>	<b>21,600</b>	<b>21,600</b>	<b>21,600</b>	<b>21,600</b>	<b>21,600</b>	<b>21,600</b>

Recommended water management strategies by water resource (2070)



Sponsor Region	Sponsor	Recommended Water Management Strategy Project	Capital Cost	Online Decade
J	BANDERA	CITY OF BANDERA - REUSE TREATED WASTEWATER EFFLUENT FOR IRRIGATION USE	\$450,000	2020
J	BANDERA	CITY OF BANDERA - SURFACE WATER ACQUISITION, TREATMENT AND ASR	\$29,450,000	2040
J	BANDERA	CITY OF BANDERA - ADDITIONAL MIDDLE TRINITY WELLS WITHIN CITY	\$779,000	2020
J	BANDERA	CITY OF BANDERA - ADDITIONAL GROUNDWATER WELLS AND NECESSARY PIPELINE	\$2,284,000	2020
J	BANDERA	CITY OF BANDERA - PROMOTE, DESIGN AND INSTALL RAINWATER HARVESTING SYSTEMS	\$56,625	2020
J	BRACKETTVILLE	CITY OF BRACKETTVILLE - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$1,116	2020
J	BRACKETTVILLE	CITY OF BRACKETTVILLE - INCREASE SUPPLY TO SPOFFORD WITH NEW WATER LINE	\$751,000	2020
J	BRACKETTVILLE	CITY OF BRACKETTVILLE - INCREASE STORAGE FACILITY	\$288,000	2020
J	CAMP WOOD	CITY OF CAMP WOOD - ADDITIONAL GROUNDWATER WELLS	\$1,887,000	2020
J	COUNTY-OTHER, BANDERA	BANDERA COUNTY FWSD #1 - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$163,000	2020
J	COUNTY-OTHER, BANDERA	BANDERA RIVER RANCH #1 - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$463,000	2020
J	COUNTY-OTHER, BANDERA	MEDINA WSC - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$447,000	2020
J	COUNTY-OTHER, BANDERA	BCRAGD - ADDITIONAL WELLS TO HELP MEDINA LAKE AREA	\$1,377,000	2020
J	COUNTY-OTHER, BANDERA	BCRAGD - ADDITIONAL WELLS TO PROVIDE EMERGENCY SUPPLY TO VFD	\$2,824,000	2020
J	COUNTY-OTHER, BANDERA	BANDERA CO. FWSD #1 - ADDITIONAL WELL FOR PEBBLE BEACH SUBDIVISION	\$3,717,000	2020
J	COUNTY-OTHER, EDWARDS	BARKSDALE WSC - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$203,000	2020
J	COUNTY-OTHER, EDWARDS	BARKSDALE WSC - ADDITIONAL GROUNDWATER WELL	\$114,000	2020
J	COUNTY-OTHER, KERR	CENTER POINT WWW - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$33,000	2020
J	COUNTY-OTHER, KERR	HILLS AND DALES WWW - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$138,000	2020
J	COUNTY-OTHER, KERR	RUSTIC HILLS WATER - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$99,000	2020
J	COUNTY-OTHER, KERR	VERDE PARK ESTATES WWW - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$102,000	2020
J	COUNTY-OTHER, KERR	CCP/UGRA - OFF-CHANNEL SURFACE WATER STORAGE	\$7,534,303	2020
J	COUNTY-OTHER, KERR	CCP / UGRA - DESALINATION PLANT	\$14,539,000	2020
J	COUNTY-OTHER, KERR	CCP/UGRA - ASR FACILITY	\$1,258,000	2020
J	COUNTY-OTHER, KERR	CCP/UGRA - WELL FIELD FOR DENSE, RURAL AREAS	\$4,357,000	2020
J	COUNTY-OTHER, KERR	CCP/UGRA - SURFACE WATER TREATMENT AND DISTRIBUTION LINES	\$25,581,000	2020
J	COUNTY-OTHER, KERR	CCP/UGRA - ELLENBURGER AQUIFER WATER SUPPLY WELL	\$567,000	2020
J	COUNTY-OTHER, REAL	CITY OF LEAKEY - INTERCONNECTIONS BETWEEN WELLS	\$200,000	2020
J	COUNTY-OTHER, REAL	CITY OF LEAKEY - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$52,000	2020
J	COUNTY-OTHER, REAL	REAL WSC - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$199,000	2020
J	COUNTY-OTHER, REAL	CITY OF LEAKEY - ADDITIONAL GROUNDWATER WELL	\$156,000	2020
J	COUNTY-OTHER, REAL	OAKMONT SADDLE WSC - ADDITIONAL GROUNDWATER WELL	\$420,000	2020
J	DEL RIO	CITY OF DEL RIO - DEVELOP A WASTEWATER REUSE PROGRAM	\$1,700,000	2020
J	DEL RIO	CITY OF DEL RIO - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$8,673,000	2020
J	DEL RIO	CITY OF DEL RIO - RENOVATE, DRILL & EQUIP NEW WELL, CONNECT TO DISTRIBUTION SYSTEM	\$2,937,000	2020
J	DEL RIO	CITY OF DEL RIO - WATER TREATMENT PLANT EXPANSION	\$1,841,000	2020
J	FORT CLARK SPRINGS MUD	FORT CLARK SPRINGS MUD - INCREASE STORAGE FACILITY	\$1,033,000	2020
J	IRRIGATION, BANDERA	BANDERA COUNTY IRRIGATION - ADDITIONAL GROUNDWATER WELLS	\$244,000	2020
J	IRRIGATION, KERR	KERR COUNTY IRRIGATION - ADDITIONAL GROUNDWATER WELL	\$78,000	2020
J	KERRVILLE	CITY OF KERRVILLE - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$9,339,000	2020
J	KERRVILLE	CITY OF KERRVILLE - INCREASE WASTEWATER REUSE	\$3,248,282	2020
J	KERRVILLE	CITY OF KERRVILLE - INCREASED WATER TREATMENT AND ASR CAPACITY	\$11,543,000	2020
J	LIVESTOCK, BANDERA	BANDERA COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELL	\$103,000	2020
J	LIVESTOCK, EDWARDS	EDWARDS COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELLS	\$105,000	2020
J	LIVESTOCK, KERR	KERR COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELLS	\$667,000	2020
J	LIVESTOCK, KERR	KERR COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELLS - GUADALUPE RIVER BASIN	\$190,000	2020
J	LIVESTOCK, KERR	KERR COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELL	\$65,000	2020
J	LIVESTOCK, KINNEY	KINNEY COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELLS	\$55,000	2020
J	LIVESTOCK, REAL	REAL COUNTY LIVESTOCK - ADDITIONAL GROUNDWATER WELLS	\$74,000	2020
J	LOMA VISTA WATER SYSTEM	LOMA VISTA WSC - ADDITIONAL GROUNDWATER WELL	\$728,000	2020
J	MINING, EDWARDS	EDWARDS COUNTY MINING - ADDITIONAL GROUNDWATER WELLS	\$109,000	2020
J	MINING, KERR	KERR COUNTY MINING - ADDITIONAL GROUNDWATER WELL	\$132,000	2020
J	MINING, VAL VERDE	VAL VERDE MINING - ADDITIONAL GROUNDWATER WELL	\$235,000	2020
J	ROCKSPRINGS	CITY OF ROCKSPRINGS - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$129,000	2020
J	ROCKSPRINGS	CITY OF ROCKSPRINGS - ADDITIONAL GROUNDWATER WELL	\$650,000	2020
<b>Total</b>			<b>\$144,368,326</b>	