

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 E Regional Water Plan

ACTION REQUESTED

Approve the 2016 Regional Water Plan for the Far West Texas (Region E) 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 E 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 E Regional Water Planning Area are included as Attachment 1. The water management strategy projects recommended in the 2016 Region E Regional Water Plan are included as Attachment 2.

KEY ISSUES

The recommended strategies in the 2016 Region E Regional Water Plan meet all identified needs in the plan except for approximately 144,000 acre-feet per year associated primarily with irrigation but also mining uses in 2020 decreasing to approximately 104,000 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 E Regional Water Plan is \$1.9 billion.

The EA has verified that the plan was formally adopted on November 5, 2015.

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

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

RECOMMENDATION

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

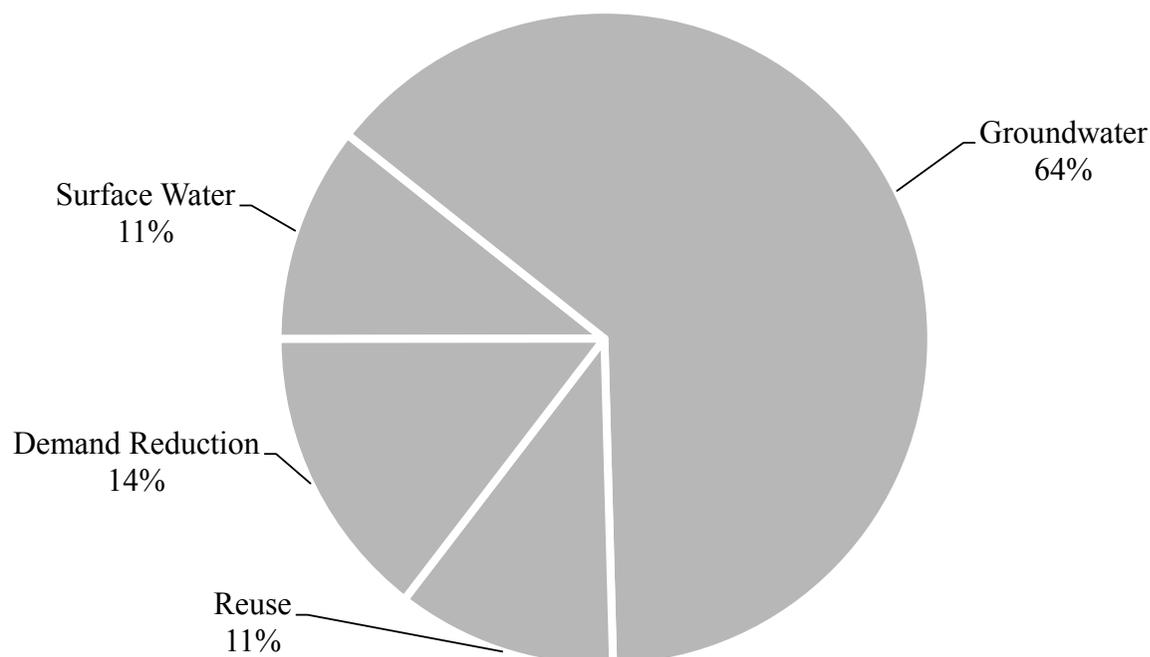
Attachment 1 – Summary of the Water User Groups in the 2016 Region E Regional Water Plan

Attachment 2 – Recommended water management strategy projects

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

Year	2020	2030	2040	2050	2060	2070
Population Projections	954,000	1,086,000	1,208,000	1,329,000	1,444,000	1,551,000
Existing Water Supply	495,000	497,000	499,000	501,000	502,000	502,000
Municipal	134,000	148,000	162,000	176,000	191,000	205,000
County-Other	8,000	9,000	9,000	10,000	10,000	11,000
Manufacturing	16,000	17,000	18,000	19,000	21,000	22,000
Mining	6,000	7,000	8,000	8,000	9,000	9,000
Irrigation	471,000	465,000	452,000	443,000	435,000	427,000
Steam Electric Power	7,000	8,000	10,000	11,000	13,000	16,000
Livestock	3,000	3,000	3,000	3,000	3,000	3,000
Total Water Demands	645,000	657,000	662,000	670,000	682,000	693,000
Municipal	5,000	10,000	14,000	27,000	41,000	55,000
County-Other	400	800	1,000	2,000	2,000	3,000
Manufacturing	9,000	10,000	11,000	12,000	13,000	15,000
Mining	700	2,000	2,000	2,000	2,000	2,000
Irrigation	170,000	162,000	148,000	139,000	131,000	124,000
Steam Electric Power	4,000	5,000	6,000	8,000	10,000	13,000
Livestock	0	0	0	0	0	0
Total Water Needs	189,100	189,800	182,000	190,000	199,000	212,000
Municipal	95,000	107,000	133,000	155,000	179,000	201,000
County-Other	2,000	2,000	2,000	3,000	3,000	4,000
Manufacturing	9,000	10,000	11,000	12,000	13,000	15,000
Mining	1,000	1,000	1,000	1,000	2,000	3,000
Irrigation	33,000	33,000	33,000	33,000	33,000	33,000
Steam Electric Power	4,000	5,000	6,000	8,000	10,000	13,000
Total Strategy Supplies	144,000	158,000	186,000	212,000	240,000	269,000

Recommended water management strategies by water resource (2070)



Sponsor Region	Sponsor	Recommended Water Management Strategy Project	Capital Cost	Online Decade
E	ANTHONY	TOWN OF ANTHONY - ADDITIONAL GROUNDWATER WELL	\$1,244,471	2020
E	ANTHONY	TOWN OF ANTHONY - ARSENIC TREATMENT FACILITY	\$9,952,000	2020
E	ANTHONY	TOWN OF ANTHONY - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$759,000	2020
E	COUNTY-OTHER, BREWSTER	BREWSTER COUNTY OTHER (MARATHON WSSSERVICE) - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$426,000	2020
E	COUNTY-OTHER, BREWSTER	BREWSTER COUNTY OTHER (PANTHER JUNCTION BBNP PLT) - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$759,000	2020
E	COUNTY-OTHER, BREWSTER	BREWSTER COUNTY OTHER (RIO GRANDE VILLAGE BBNP) - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$607,000	2020
E	COUNTY-OTHER, HUDSPETH	HUDSPETH COUNTY OTHER (CITY OF SIERRA BLANCA - HUDSPETH CO. WCID #1) - ADDITIONAL TRANSMISSION LINE	\$1,429,000	2020
E	COUNTY-OTHER, HUDSPETH	HUDSPETH COUNTY OTHER (DELL CITY) - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$1,614,000	2020
E	COUNTY-OTHER, HUDSPETH	HUDSPETH COUNTY OTHER (FORT HANCOCK WCID) - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$292,000	2020
E	COUNTY-OTHER, HUDSPETH	HUDSPETH COUNTY OTHER (DELL CITY) - BRACKISH GROUNDWATER DESALINATION FACILITY	\$1,299,000	2020
E	COUNTY-OTHER, HUDSPETH	HUDSPETH COUNTY OTHER (FORT HANCOCK WCID #1) - ADDITIONAL WELL AND RO TREATMENT FACILITY	\$6,109,000	2020
E	COUNTY-OTHER, JEFF DAVIS	JEFF DAVIS COUNTY OTHER (TOWN OF VALENTINE) - ADDITIONAL GROUNDWATER WELL	\$402,808	2020
E	EL PASO	EPWU - RIVERSIDE REGULATING RESERVOIR	\$93,526,200	2020
E	EL PASO	EPWU - RECHARGE OF HUECO AQUIFER GROUNDWATER WITH TREATED SURFACE WATER	\$1,806,000	2020
E	EL PASO	EPWU - BRACKISH GROUNDWATER AT THE JONATHAN ROGERS WWTP	\$65,865,000	2040
E	EL PASO	EPWU - EXPANSION OF THE KAY BAILEY HUTCHINSON DESAL PLANT	\$37,200,000	2020
E	EL PASO	EPWU - ADVANCED PURIFIED WATER AT THE HASKELL AND NW WWTPS	\$291,800,000	2040
E	EL PASO	EPWU - ADVANCED PURIFIED WATER AT THE BUSTAMANTE WWTP	\$94,096,000	2020
E	EL PASO	EPWU - EXPANSION OF LOCAL WELL FIELDS	\$32,712,000	2020
E	EL PASO	EPWU - GROUNDWATER FROM HUECO RANCH	\$155,858,000	2040
E	EL PASO	EPWU - GROUNDWATER FROM DIABLO FARMS	\$273,507,000	2050
E	EL PASO	EPWU - GROUNDWATER FROM SOUTHERN HUDSPETH COUNTY	\$98,980,000	2020
E	EL PASO	EPWU - GROUNDWATER FROM THE DELL CITY AREA	\$257,901,000	2060
E	EL PASO	EPWU - TREATMENT AND REUSE OF AGRICULTURAL DRAIN WATER	\$41,679,000	2030
E	EL PASO	EPWU - EXPANSION OF THE JONATHAN ROGERS WWTP	\$95,186,653	2020
E	EL PASO COUNTY TORNILLO WID	EL PASO CO. TORNILLO WID - ADDITIONAL GROUNDWATER WELL AND TRANSMISSION LINE	\$1,726,000	2020
E	EL PASO COUNTY TORNILLO WID	EL PASO CO. TORNILLO WID - ARSENIC TREATMENT FACILITY	\$3,114,000	2020
E	FORT DAVIS	FORT DAVIS WSC - ADDITIONAL TRANSMISSION LINE	\$1,068,000	2020
E	FORT DAVIS	FORT DAVIS WSC - ADDITIONAL GROUNDWATER WELL	\$507,000	2020
E	HORIZON REGIONAL MUD	HORIZON REGIONAL MUD - ADDITIONAL WELLS AND EXPANSION OF DESAL PLANT	\$56,443,000	2020
E	IRRIGATION, EL PASO	EL PASO COUNTY - EPCWID #1 - IMPROVEMENTS TO WATER DISTRICT DELIVERY SYSTEM	\$157,777,783	2020
E	IRRIGATION, HUDSPETH	HUDSPETH IRRIGATION - HCCRD #1 - ADDITIONAL GROUNDWATER WELLS	\$173,000	2020
E	LOWER VALLEY WD	LVWD - GROUNDWATER FROM PROPOSED WELL FIELD - HUECO BOLSON AQUIFER	\$41,070,000	2020
E	LOWER VALLEY WD	LVWD - GROUNDWATER FROM PROPOSED WELL FIELD - RIO GRANDE ALLUVIUM AQUIFER	\$37,490,000	2020
E	LOWER VALLEY WD	LVWD - WASTEWATER TREATMENT AND ASR FACILITY	\$18,108,000	2020
E	LOWER VALLEY WD	LVWD - SURFACE WATER TREATMENT PLANT AND TRANSMISSION LINES	\$34,080,000	2020
E	MARFA	CITY OF MARFA - ADDITIONAL GROUNDWATER WELL	\$1,143,000	2020
E	MINING, CULBERSON	CULBERSON COUNTY - ADDITIONAL GROUNDWATER WELLS - RUSTLER AQUIFER	\$608,000	2020
E	MINING, CULBERSON	CULBERSON COUNTY - ADDITIONAL GROUNDWATER WELL - WEST TEXAS BOLSONS AQUIFER	\$675,000	2020
E	MINING, EL PASO	EL PASO COUNTY - MINING - ADDITIONAL GROUNDWATER WELLS	\$969,000	2020
E	MINING, HUDSPETH	HUDSPETH MINING - ADDITIONAL GROUNDWATER WELL	\$449,000	2020
E	PRESIDIO	CITY OF PRESIDIO - ADDITIONAL GROUNDWATER WELL	\$1,861,000	2020
E	PRESIDIO	CITY OF PRESIDIO - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$2,172,000	2020
E	VAN HORN	CITY OF VAN HORN - WATER LOSS AUDIT AND MAIN-LINE REPAIR	\$1,197,000	2020
E	VINTON	CITY OF VINTON - HIGH CAPACITY WATER LINES	\$4,192,000	2020
Total			\$1,929,832,915	