

AGENDA ITEM MEMO

BOARD MEETING DATE: January 19, 2021

TO: Board Members

THROUGH: Jeff Walker, Executive Administrator
Ashley Harden, General Counsel
Jessica Zuba, Deputy Executive Administrator, Water Supply & Infrastructure

FROM: Ron Ellis, Planner, Regional Water Planning
Sarah Backhouse, Manager, Regional Water Planning

SUBJECT: Approval of the 2021 Region D Regional Water Plan

ACTION REQUESTED

Consider approval of the 2021 Regional Water Plan (RWP) for the North East Texas (Region D) Regional Water Planning Group (RWPG).

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 RWPs developed and approved in accordance with TWC §16.053. RWPGs are required to submit their adopted RWPs to the TWDB for approval every five years pursuant to 31 Texas Administrative Code (TAC) §357.50.

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

In accordance with TWC §16.053, the TWDB may approve a RWP 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.

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Jeff Walker, Executive Administrator

The Executive Administrator (EA) has conducted a review of the final adopted Region D 2021 RWP related to all applicable legal and contractual requirements, including 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 could reasonably be expected to be available under a repeat of the historic drought of record.
5. Determination that impacts to agricultural resources and environmental factors 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:
 - a. consideration of a balance of economic, social, and ecological viability as well as consideration of the interests of the state and entities providing water.
 - b. 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 the state and regional water resources, agricultural resources, and natural resources.

Summary data of the projected population, existing supplies, demands, needs, and strategy supplies, as well as a summary of recommended water management strategies and projects are included as an attachment.

KEY ISSUES

1. The total recommended water management strategy volume is approximately 83,000 acre-feet per year in 2020 and 221,000 acre-feet per year in 2070.
2. The recommended water management strategies in the 2021 Region D RWP meets all identified needs in the plan except for approximately 800 acre-feet per year associated with irrigation, manufacturing, and municipal uses in 2020 increasing to

approximately 2,000 acre-feet per year associated with irrigation and municipal uses in 2070. These needs were left unmet by the planning group due to lack of economically feasible surface water supply options and limitations in modeled available groundwater. To address the unmet municipal needs, the plan states that the needs will be met by the legal development of new groundwater supplies, therefore public health, safety, and welfare is anticipated to be protected. There are no groundwater conservation districts within Region D.

3. The total capital cost of the 103 recommended projects in the 2021 Region D RWP is approximately \$731 million.
4. Conservation accounts for 4.7 percent of 2070 strategy volumes.
5. Region D's Riverbend Strategy includes a water right amendment, new intake, new pipeline, and new water treatment plant to develop additional supplies from Lake Wright Patman. The Riverbend Strategy is projected to serve 13 water user groups serving 104,000 people in 2070. The supply generated by the strategy provides over half of the total strategy supplies for the region in 2070.
6. The Region D RWPG formally adopted their final 2021 RWP on September 30, 2020.
7. The EA has reviewed the adopted 2021 Region D RWP and determined that the plan complies with statute and rules.
8. The EA has reviewed the 2021 Region D RWP for interregional conflicts and has found none.

RECOMMENDATION

The EA recommends approval of the 2021 Region D RWP.

Attachment: Data Summary of the 2021 Region D RWP

Region D 2021 Regional Water Plan Data Summary

Table 1 - Population, existing water supplies, demands, needs, and strategies 2020–2070 (acre-feet per year)*

	Decade	2020	2030	2040	2050	2060	2070
	Population	831,000	908,000	989,000	1,089,000	1,212,000	1,370,000
Existing supplies	Surface water	507,000	521,000	520,000	519,000	519,000	522,000
	Groundwater	91,000	93,000	94,000	95,000	96,000	97,000
	Reuse	79,000	74,000	69,000	71,000	80,000	74,000
	Total water supplies	678,000	688,000	683,000	685,000	695,000	693,000
Demands	Municipal Utility	119,000	126,000	136,000	149,000	165,000	185,000
	Municipal County-other	11,000	11,000	11,000	12,000	14,000	18,000
	Manufacturing	100,000	105,000	105,000	105,000	105,000	105,000
	Mining	7,000	8,000	8,000	7,000	7,000	7,000
	Irrigation	35,000	35,000	35,000	35,000	35,000	35,000
	Steam-electric	94,000	94,000	94,000	94,000	94,000	94,000
	Livestock	36,000	36,000	36,000	35,000	35,000	35,000
	Total water demand	401,000	415,000	425,000	438,000	456,000	479,000
Needs	Municipal Utility	17,000	20,000	24,000	29,000	36,000	45,000
	Municipal County-other	1,000	1,000	1,000	1,000	2,000	4,000
	Manufacturing	3,000	6,000	5,000	5,000	6,000	6,000
	Mining	2,000	2,000	2,000	2,000	1,000	1,000
	Irrigation	13,000	13,000	13,000	13,000	13,000	13,000
	Steam-electric	30,000	31,000	32,000	33,000	33,000	33,000
	Livestock	15,000	15,000	15,000	14,000	14,000	14,000
	Total water needs	81,000	87,000	91,000	98,000	106,000	117,000
Strategy supplies	Municipal Utility	19,000	22,000	26,000	31,000	38,000	47,000
	Municipal County-other	1,000	1,000	1,000	2,000	3,000	5,000
	Manufacturing	3,000	64,000	70,000	78,000	87,000	105,000
	Mining	3,000	3,000	3,000	3,000	3,000	3,000
	Irrigation	13,000	13,000	13,000	13,000	13,000	13,000
	Steam-electric	30,000	31,000	32,000	33,000	33,000	33,000
	Livestock	15,000	15,000	15,000	15,000	15,000	15,000
	Total strategy supplies	83,000	149,000	161,000	175,000	192,000	221,000

* Total values in this table are presented as rounded actual total values rather than the sum of rounded values to provide consistent referencing of total values.

Table 2 - Ten recommended water management strategies with largest supply volume

Recommended water management strategy name	2070 projected population served by strategy	Number of water user groups served	Strategy volume in acre-feet per year in 2070
Riverbend Strategy	104,000	13	116,000
Increase Existing Contract (Steam Electric Power, Titus)	na	1	33,000
Greenville Conservation and WTP	143,000	3	17,000
New WTP Greenville	78,000	1	5,000
Drill New Wells (Irrigation, Bowie, Carrizo-Wilcox, Sulphur)	na	1	4,000
Drill New Wells (Livestock, Camp, Queen City, Cypress)	na	1	4,000
Drill New Wells (Irrigation, Hopkins, Carrizo-Wilcox, Sulphur)	na	1	4,000
Drill New Wells (Irrigation, Red River)	na	1	2,000
Drill New Wells (Livestock, Titus)	na	1	2,000
Drill New Wells (Manufacturing, Wood, Queen City, Sabine)	na	1	2,000
<i>Other recommended strategies</i>	<i>na</i>	<i>151</i>	<i>32,000</i>

Table 3 - Ten recommended water management strategy projects with largest capital cost

Recommended water management strategy project	Online decade	Sponsor(s)	Capital Cost
Riverbend WMS New WTP 25 MGD 2030	2030	Riverbend Water Resources District	\$127,811,000
New WTP Greenville	2070	Greenville	\$81,786,000
Riverbend WMS New Raw Water Pipeline 32 MGD 2050	2050	Riverbend Water Resources District	\$61,647,000
Riverbend WMS Raw Water Pump Station 66 MGD 2030	2030	Riverbend Water Resources District	\$45,041,000
WTP Expansion 2030 (Greenville, Sabine)	2030	Greenville	\$43,955,000
Riverbend WMS Raw Water Pipeline 72 MGD 2030	2030	Riverbend Water Resources District	\$36,061,000
Riverbend WMS WTP Expansion 10 MGD 2050	2050	Riverbend Water Resources District	\$33,348,000
Riverbend Strategy Cass New WTP and Transmission Line	2030	Riverbend Water Resources District	\$22,807,000
Riverbend WMS Pump Station Expansion 30 MGD 2060	2060	Riverbend Water Resources District	\$22,130,000
Riverbend WMS Interim to Ultimate Storage Conversion	2020	Riverbend Water Resources District	\$20,550,000
<i>Other recommended projects</i>	<i>various</i>	<i>93 various</i>	<i>\$235,589,428</i>
Total capital cost			\$730,725,428

Table 4 - Unmet water needs by water user group type 2020-2070 (acre-feet per year)

Water User Group Category	2020	2030	2040	2050	2060	2070
Irrigation	97	97	97	97	97	97
Livestock	0	0	0	0	0	0
Manufacturing	629	0	0	0	0	0
Mining	0	0	0	0	0	0
Municipal County-Other	0	0	0	0	0	0
Municipal Utility	85	250	485	820	1,303	2,010
Steam Electric Power	0	0	0	0	0	0
Total unmet needs	811	347	582	917	1,400	2,107