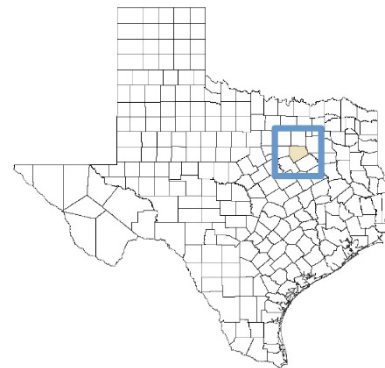


Ellis County

Water Supply Planning

Information & Resources



This document summarizes key water supply planning information for Ellis County and highlights planning and drought resources available from the Texas Water Development Board (TWDB). This document was developed to support regional water planning group outreach efforts aimed at improving engagement with small and rural entities.

All water utilities in the state are strongly encouraged to participate in the regional water planning process and utilize TWDB resources to ensure sufficient water supplies are available for all Texans in times of drought.

Definitions of common [regional water planning terms and acronyms are available at this link](#).

Future Water Supply Plans

Region C Regional Water Planning

Ellis County is located in the Region C Regional Water Planning Area, which encompasses all or parts of 16 counties in north Texas (Figure 1). The Region C Regional Water Planning Group is responsible for developing a regional water plan every five years based on conditions that the region would face under a recurrence of a historical drought of record. The results of the regional water plan are included in the state water plan and inform state financial assistance and surface water right permitting decisions. The 2026 plan is currently under development and due to the TWDB in October 2025.

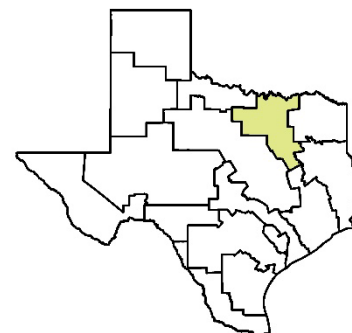


Figure 1 – Region C Regional Water Planning Area

Public involvement is a key component to regional water planning. To ensure your water needs are accurately reflected in the 2026 plan, get involved in Region C water planning by visiting <https://regioncwater.org/> or contact the Trinity River Authority at longas@trinityra.org, 817-467-4343.

2021 Region C Regional Water Plan

The 2021 Region C Regional Water Plan is available at <http://www.twdb.texas.gov/waterplanning/rwp/plans/2021/index.asp>.

The following highlights from the plan are included in Attachment I

- Table A1 summarizes current water supply sources, 2020 and 2070 water supply needs, and recommended water management strategies for water user groups in Ellis County.
- Table A2 provides additional context on the severity of the identified water supply needs by expressing the needs as a percentage of each water user group's total demand. The larger the percent of an entity's total demand, the more severe a potential shortage may be.
- Table A3 presents unmet needs that remain even if all the recommended strategies in the plan were implemented.

Water Providers in Ellis County

Municipal Water User Groups

Public water systems provide potable water for public use and have at least 15 service connections or serve at least 25 individuals at least 60 days out of the year. Public water systems that provide more than 100 acre-feet of water per year for municipal use are considered municipal water user groups and are individually planned for in the regional water planning process. Note that some municipal water user groups include more than one public water system. Table 1 lists the Ellis County municipal water user groups for the 2026 regional water plan and associated public water systems that are located in the county.

Table 1. Ellis County municipal water user groups and associated public water systems

Water User Group	Associated Public Water Systems(s)
Avalon Water Supply & Sewer Service	AVALON WSC (TX0700019) ^R
Buena Vista-Bethel SUD	BUENA VISTA BETHEL SUD (TX0700037)
East Garrett WSC	EAST GARRETT WSC (TX0700024) ^R
Ennis	CITY OF ENNIS (TX0700001)
Ferris	CITY OF FERRIS (TX0700002) ^R
Files Valley WSC*	FILES VALLEY WSC (TX1090035) ^R
Glenn Heights*	CITY OF GLENN HEIGHTS (TX0570085)
Hilco United Services*	CHAMBERS MEADOW ESTATE WATER (TX0700071); LAKEVIEW WATER SYSTEM (TX0700059)
Italy	CITY OF ITALY (TX0700028) ^R
Mansfield*	CITY OF MANSFIELD (TX2200018)
Midlothian	CITY OF MIDLOTHIAN (TX0700005)
Mountain Peak SUD*	MOUNTAIN PEAK SUD (TX0700042) ^R
Nash Forreton WSC	NASH FORRESTON WSC (TX0700025)
Ovilla*	CITY OF OVILLA (TX0700067) ^R
Palmer	CITY OF PALMER (TX0700007) ^R
Red Oak	CITY OF RED OAK (TX0700031)
Rice Water Supply and Sewer Service*	RICE WSC (TX1750019) ^R
Rockett SUD*	ROCKETT SUD (TX0700033)
Sardis Lone Elm WSC	SARDIS LONE ELM WSC (TX0700034)
South Ellis County WSC*	SOUTH ELLIS COUNTY WATER SUPPLY (TX0700043) ^R
Waxahachie	CITY OF WAXAHACHIE (TX0700008)

^R Public water system meets the definition of a rural political subdivision as defined in [Texas Water Code 15.001\(14\)](#).

* Water user group is split by more than one county. Public water systems associated with the water user group and located in Ellis County are shown.

County-Other Water Systems

County-other water systems are a subset of public water systems that provide on average less than 100 acre-feet of water per year for municipal use. For TWDB planning purposes, the following systems will be grouped

together and planned for under the County-Other, Ellis water user group category in the 2026 regional water plan:

- BUFFALO HILLS WATER SYSTEM (TX0700070)**
- CITY OF BARDWELL (TX0700020)^R
- CITY OF MAYPEARL (TX0700004)^R
- CITY OF MILFORD (TX0700006)^{R**}
- COMING OF CHRIST FULL GOSPEL CHURCH (TX0700080)
- ELLIS COUNTY FWSD I (TX0700081)
- EMERALD FOREST (TX0700058)
- GARRETT COMMUNITY WATER COMPANY (TX0700026)
- GRANDE CASA (TX0700063)
- HOWARD WATER COOP (TX0700054)
- LAKEVIEW RANCHETTES (TX0700057)
- RED OAK COMMUNITY WATER SERVICE (TX0700056)
- RURAL BARDWELL WSC (TX0700023)^R
- SPANISH GRANT SUBDIVISION (TX0700064)

^R Public water system meets the definition of a rural political subdivision as defined in [Texas Water Code 15.001\(14\)](#).

** Current records show that the public water system did not submit a water use survey response in 2023.

Status of Water Systems and Supply

This section highlights potentially vulnerable water systems in Ellis County that serve a population of 7,500 or less and rely on a single water source and systems that have recently reported having 180 days or less of available supply.

Entities that are identified as 7,500 / sole source

The following entities were identified in the 2021 Region C Regional Water Plan as having a 2010 population less than 7,500 and relying on a sole source for their water supply regardless of whether that water is provided by a wholesale water provider. These entities are highlighted since they may be more vulnerable in times of drought or in the event of a loss of water supply.

- Avalon Water Supply & Sewer Service
- Files Valley WSC*
- South Ellis County WSC*

* Water user group is split by more than one county.

The 2021 Region C Regional Water Plan presents potential emergency response options for entities with populations less than 7,500 that rely on a sole source and county-other water user groups in the region. Emergency response options could potentially include addition of a local groundwater well, trucking in water, importing supply from a nearby entity, or utilizing existing emergency interconnects. For the temporary emergency response options identified for entities in Ellis County, see [Chapter 7](#) of the 2021 Region C Regional Water Plan.

180-day Priority List occurrences

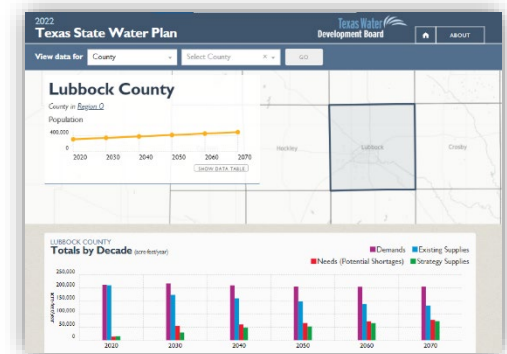
Retail public utilities are required by the Texas Commission on Environmental Quality (TCEQ) to report when the utility is reasonably certain that its water supply will be available for less than 180 days. Between January 2016 and November 2023, no public water systems in Ellis County reported having approximately 180 days or less of water supply remaining.

Key TWDB Resources for Water Planning & Drought

Interactive State Water Plan

The online [Interactive State Water Plan](https://texasstatewaterplan.org/) provides access to detailed planning data presented at varying geographic levels, through maps, tables, and additional graphics. Users can customize what they see, for example, by selecting data associated with a specific water use category or from a specific planning decade. The displayed data is also downloadable in a spreadsheet format.

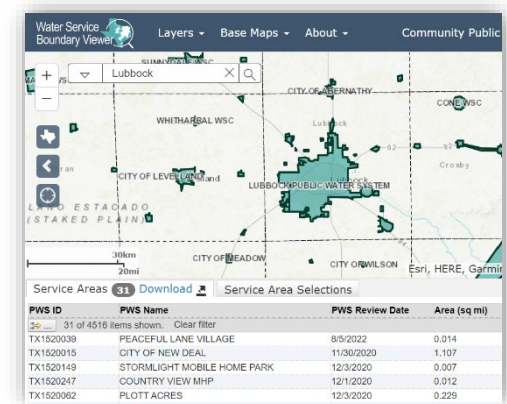
To explore detailed planning data for Ellis County in the Interactive State Water Plan, visit <https://texasstatewaterplan.org/>.



Texas Water Service Boundary Viewer

The Texas Water Service Boundary Viewer (TWSBV) is a public water system service area mapping application that strives to provide the most up-to-date and best data available on the service areas for all community public water systems within Texas. The TWSBV also provides links to supplemental public water system information, including system specific data from the Drinking Water Watch (maintained by the TCEQ) as well as water use survey information.

The application is used to collect accurate retail water service boundaries to better estimate and project utility population and rural population not served by a system for the regional and state water plans.



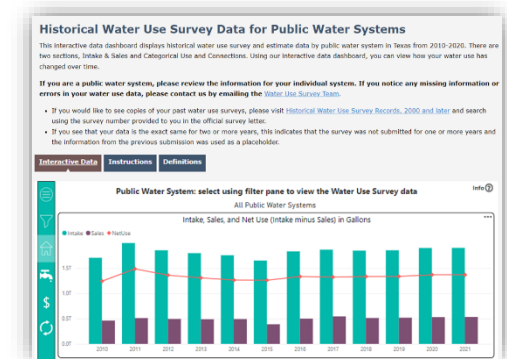
Water systems are encouraged to use the application to verify that their service area boundaries on file are accurate and update them if changes have occurred. Information for editors (utilities) is available at: <http://bit.ly/ServiceBoundaryEditor>.

The public can view water system areas on file at <https://www2.twdb.texas.gov/apps/WaterServiceBoundaries>.

Water Use Survey

The TWDB is legislatively directed to provide planning and financial assistance for the development and management of water resources in Texas. This activity is dependent upon the accuracy and completeness of the information that water users provide in the annual Water Use Survey.

The TWDB annually collects and maintains information concerning current state water use in various reports accessible here: <https://www.twdb.texas.gov/waterplanning/waterusesurvey/estimates>



TWDB Water Loss Resources

Reducing water loss offers utilities the ability to increase their water use efficiency, improve their financial status, and assist with long-term water sustainability. Currently, all retail public water systems with more than 3,300 connections or a financial obligation to TWDB are required to annually complete and submit a [Water Loss Audit](#). All other retail public water suppliers are required to submit a water loss audit to the TWDB every five years. Water loss audits are required to be submitted by an individual [trained](#) in water loss auditing.

Water loss audits help determine the appropriate actions for water loss control but, only if the water loss audit data is validated. Starting in 2025, a Water Loss Audit is required to be validated if the utility has an existing financial obligation to TWDB or is applying financial assistance from TWDB. Visit the TWDB [Water Loss Audit Validation](#) webpage for more information.

TWDB staff are available to provide water loss audit assistance and work with utility staff to better understand how water loss audits can benefit their utility. For more information on leak detection, how to collect and report accurate data, and data validation, visit <https://www.twdb.texas.gov/conservation/municipal/waterloss/>.

TWDB Drought Resources

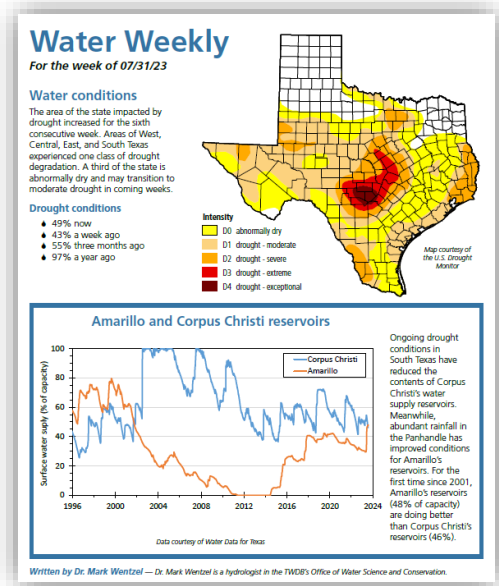
The TWDB offers a variety of resources to assist Texans with drought response and preparedness on the [TWDB Drought Resources webpage](#), including

[Water Data for Texas](#): Water Data for Texas provides information on reservoir storage levels, lake evaporation and precipitation, and water levels at the automated groundwater level wells among other types of information.

[Drought Dashboard](#): The TWDB's drought dashboard provides information on conditions across the state, including rainfall, temperature, streamflow, and soil moisture as well as various drought indices and U.S. Drought Monitor status.

[Water Weekly](#): Water weekly provides a weekly summary of drought conditions across the state.

[Texas Water Conditions Report](#): Report provides a monthly summary of the state's drought and water conditions.



TWDB Financial Assistance Programs

The TWDB offers a variety of cost-effective loan and grant programs that provide for the planning, acquisition, design, and construction of water related infrastructure and other water quality improvements. [Urgent need funding is available through the Drinking Water State Revolving Fund](#) to assist communities with addressing unforeseen situations that require immediate attention to protect public health and safety.

For more information about TWDB financial assistance programs, visit <http://www.twdb.texas.gov/financial/>, or contact TWDB at 512-463-0991, Financial_Assistance@twdb.texas.gov.

Texas Division of Emergency Management (TDEM)

The TDEM coordinates the state emergency management program, which is intended to ensure the state and its local governments respond to and recover from emergencies and disasters and implement plans and programs to help prevent or lessen the impact of emergencies and disasters. The chief of TDEM is the state drought manager and is responsible for managing and coordinating the drought response component of the state water plan. For more information, visit <https://www.tdem.texas.gov/> or contact 512-424-2208.

Texas Commission on Environmental Quality (TCEQ)

The TCEQ provides hands-on assistance to communities responding to drought, consults with public water systems about implementing drought contingency plans, tracks public drinking water systems under water-use restrictions, actively manages water in Watermaster Programs, answers the public drought-information hot line: 800-447-2827, and offers drought information on its website: <https://www.tceq.texas.gov/response/drought>.

In the event of a drinking water emergency, contact your [TCEQ regional office](#). For after-hours emergencies, call 1-888-777-3186.

Attachment I – 2021 Region C Regional Water Plan Summary Tables

Table A1. Ellis County planning summary

Water User Group	Current Water Supply Sources	2020 Water Need (acre-feet/year)	2070 Water Need (acre-feet/year)	Recommended Water Management Strategies
Avalon Water Supply & Sewer Service	Trinity Aquifer	0	389	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Brandon Irene WSC*	Brazos River Authority Aquilla Lake/Reservoir System; Trinity Aquifer	0	0	Municipal conservation
Buena Vista-Bethel SUD	Bardwell Lake/Reservoir; Indirect Reuse; Trinity Aquifer; TRWD Lake/Reservoir System; Waxahachie Lake/Reservoir	0	1,836	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Cedar Hill*	Fork Lake/Reservoir; Indirect Reuse; Ray Hubbard Lake/Reservoir; Ray Roberts-Lewisville-Grapevine Lake/Reservoir System; Tawakoni Lake/Reservoir; Trinity Aquifer	427	4,904	Indirect reuse; Municipal conservation; New major reservoir; Other surface water
County-Other, Ellis	Bardwell Lake/Reservoir; Brazos River Authority Aquilla Lake/Reservoir System; Indirect Reuse; Joe Pool Lake/Reservoir; Trinity Aquifer; TRWD Lake/Reservoir System; Waxahachie Lake/Reservoir	0	4,818	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
East Garrett WSC	Bardwell Lake/Reservoir; TRWD Lake/Reservoir System	0	1,001	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Ennis	Bardwell Lake/Reservoir; TRWD Lake/Reservoir System	0	14,012	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water

Water User Group	Current Water Supply Sources	2020 Water Need (acre-feet/year)	2070 Water Need (acre-feet/year)	Recommended Water Management Strategies
Ferris*	Joe Pool Lake/Reservoir; TRWD Lake/Reservoir System	0	965	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Files Valley WSC*	Brazos River Authority Aquilla Lake/Reservoir System	0	0	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Glenn Heights*	Fork Lake/Reservoir; Indirect Reuse; Ray Hubbard Lake/Reservoir; Ray Roberts-Lewisville-Grapevine Lake/Reservoir System; Tawakoni Lake/Reservoir; Trinity Aquifer; Woodbine Aquifer	73	1,872	Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Grand Prairie*	Fork Lake/Reservoir; Indirect Reuse; Ray Hubbard Lake/Reservoir; Ray Roberts-Lewisville-Grapevine Lake/Reservoir System; Tawakoni Lake/Reservoir; Trinity Aquifer; TRWD Lake/Reservoir System	1,380	15,358	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Hilco United Services*	Brazos River Authority Aquilla Lake/Reservoir System; Trinity Aquifer; Woodbine Aquifer	0	0	None
Irrigation, Ellis	Trinity Aquifer; Trinity Run-of-River; Woodbine Aquifer	748	748	Agricultural conservation
Italy	Trinity Aquifer; Woodbine Aquifer	0	788	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Livestock, Ellis	Trinity Livestock Local Supply; Woodbine Aquifer	0	0	None

Water User Group	Current Water Supply Sources	2020 Water Need (acre-feet/year)	2070 Water Need (acre-feet/year)	Recommended Water Management Strategies
Mansfield*	TRWD Lake/Reservoir System	1,308	26,747	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Manufacturing, Ellis	Bardwell Lake/Reservoir; Indirect Reuse; Trinity Aquifer; TRWD Lake/Reservoir System; Waxahachie Lake/Reservoir; Woodbine Aquifer	22	3,010	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Industrial conservation; New major reservoir; Other surface water
Midlothian	Joe Pool Lake/Reservoir; TRWD Lake/Reservoir System	403	3,783	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Mining, Ellis	Trinity Aquifer	0	0	None
Mountain Peak SUD*	Joe Pool Lake/Reservoir; Trinity Aquifer	705	7,505	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Ovilla*	Fork Lake/Reservoir; Indirect Reuse; Ray Hubbard Lake/Reservoir; Ray Roberts-Lewisville-Grapevine Lake/Reservoir System; Tawakoni Lake/Reservoir	43	1,414	Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Palmer	Joe Pool Lake/Reservoir; TRWD Lake/Reservoir System	0	786	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Red Oak	Fork Lake/Reservoir; Indirect Reuse; Ray Hubbard Lake/Reservoir; Ray Roberts-Lewisville-Grapevine Lake/Reservoir System; Tawakoni Lake/Reservoir; Woodbine Aquifer	25	1,380	Indirect reuse; Municipal conservation; New major reservoir; Other surface water

Water User Group	Current Water Supply Sources	2020 Water Need (acre-feet/year)	2070 Water Need (acre-feet/year)	Recommended Water Management Strategies
Rice Water Supply and Sewer Service*	Bardwell Lake/Reservoir; Navarro Mills Lake/Reservoir; Richland Chambers Lake/Reservoir Non-System Portion; TRWD Lake/Reservoir System	0	813	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Rockett SUD*	Joe Pool Lake/Reservoir; TRWD Lake/Reservoir System	0	9,323	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Sardis Lone Elm WSC	Joe Pool Lake/Reservoir; Trinity Aquifer; TRWD Lake/Reservoir System; Woodbine Aquifer	1,401	5,572	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
South Ellis County WSC*	Trinity Aquifer	0	922	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Steam-Electric Power, Ellis	Direct Reuse; TRWD Lake/Reservoir System	48	170	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; New major reservoir; Other surface water
Venus*	TRWD Lake/Reservoir System; Woodbine Aquifer	92	654	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water
Waxahachie	Bardwell Lake/Reservoir; Indirect Reuse; TRWD Lake/Reservoir System; Waxahachie Lake/Reservoir	0	7,146	Aquifer storage and recovery; Groundwater wells and other; Indirect reuse; Municipal conservation; New major reservoir; Other surface water

* Water user group is split by more than one county. Table presents the water user group's total summary data for all related counties.

Table A2. Ellis County projected needs of every water user group, as a share of total demand (percent)

Water User Group	2020	2030	2040	2050	2060	2070
Avalon Water Supply & Sewer Service	-	15	29	48	61	72
Brandon Irene WSC*	-	-	-	-	-	-
Buena Vista-Bethel SUD	-	-	9	18	26	42
Cedar Hill*	4	9	17	23	27	30
County-Other, Ellis	-	-	-	33	29	50
East Garrett WSC	-	1	6	23	51	71
Ennis	-	1	5	23	51	71
Ferris*	-	9	16	32	49	65
Files Valley WSC*	-	-	-	-	-	-
Glenn Heights*	4	8	17	23	27	30
Grand Prairie*	4	15	23	29	32	35
Hilco United Services*	-	-	-	-	-	-
Irrigation, Ellis	55	55	55	55	55	55
Italy	-	45	55	65	72	79
Livestock, Ellis	-	-	-	-	-	-
Mansfield*	7	29	39	48	53	57
Manufacturing, Ellis	-	20	27	31	38	46
Midlothian	8	33	40	33	36	41
Mining, Ellis	-	-	-	-	-	-
Mountain Peak SUD*	17	33	39	70	74	77
Ovilla*	4	9	17	24	27	30
Palmer	-	9	16	32	49	64
Red Oak	2	9	17	24	27	30
Rice Water Supply and Sewer Service*	-	-	1	10	19	29
Rockett SUD*	-	9	16	32	49	65
Sardis Lone Elm WSC	26	50	55	58	62	65
South Ellis County WSC*	-	-	-	26	45	61
Steam-Electric Power, Ellis	5	15	18	17	18	19
Venus*	14	42	50	50	52	55
Waxahachie	-	-	9	18	27	43

* Water user group is split by more than one county. Table presents the water user group's total data for all related counties.

 Color graded scale of needs as a share of demand from 0 (green) to 100 percent (red). **Bold** indicates needs are 100 percent met by implementation of the plan.

Table A3. Ellis County unmet needs (acre-feet per year)

Water User Group	2020	2030	2040	2050	2060	2070
Irrigation, Ellis	747	729	711	701	692	684



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