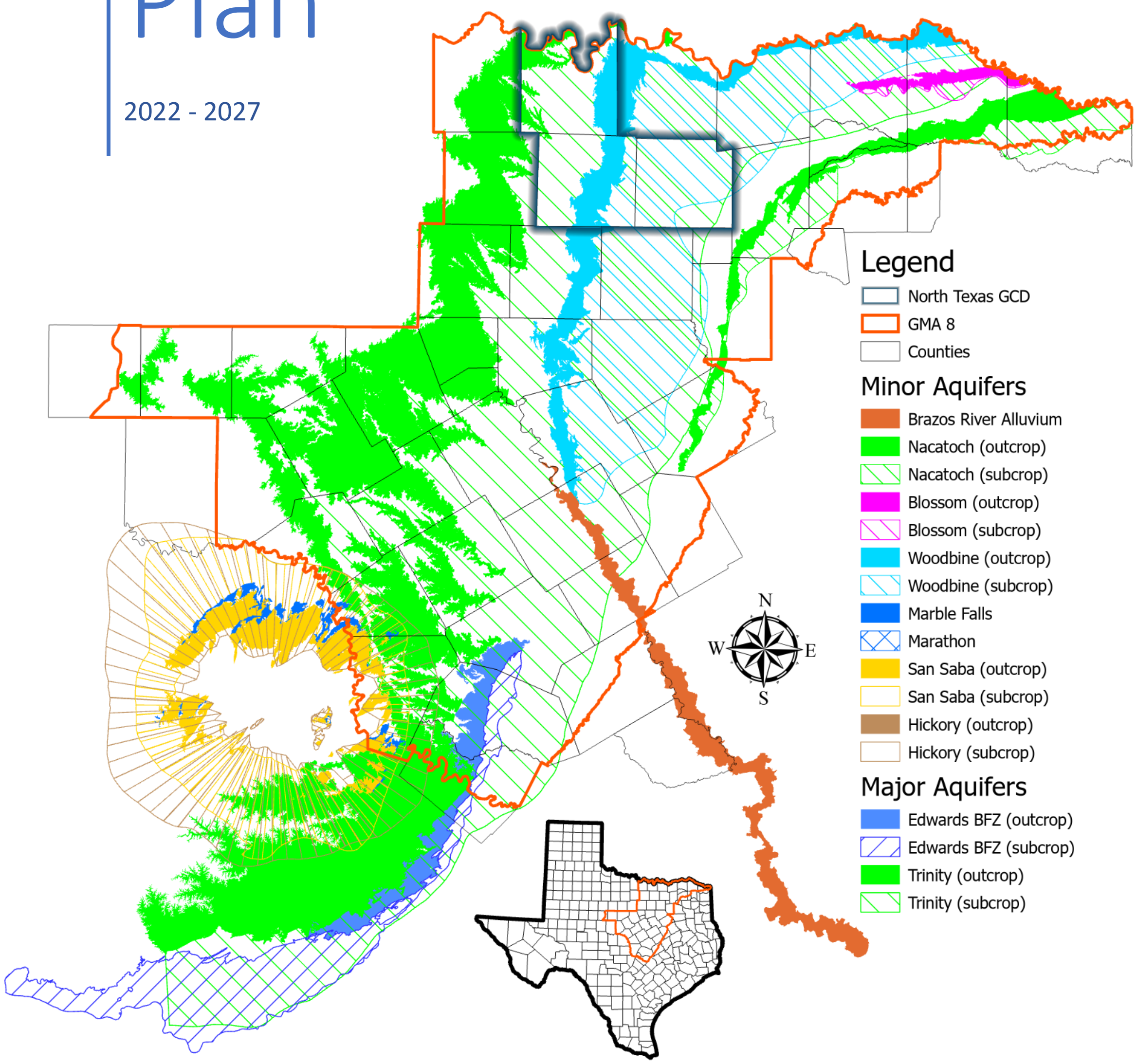
NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT

# 2022 Management Plan

2022 - 2027




Adopted: August 9, 2022

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT

*P.O. Box 508*
*Gainesville, TX 76241*
*(855) 426-4433*
*ntgcd@northtexasgcd.org*
*www.northtexasgcd.org*

# TABLE OF CONTENTS

## INTRODUCTION

The North Texas Groundwater Conservation District (the District), after notice and hearing, adopts this Management Plan according to the requirements of Texas Water Code §36.1071. The North Texas Groundwater Conservation District Management Plan represents the management goals of the District for the next five years, including the desired future conditions of the aquifers within the jurisdictional boundaries of the District. These desired future conditions were adopted through the joint planning process in Groundwater Management Area 8 as prescribed in Chapter 36, Texas Water Code.

### DISTRICT MISSION

The mission of the District is to develop and adopt a management plan and develop and enforce rules to provide protection to protect existing wells and the rights of landowners, prevent waste, promote conservation, provide a framework that will allow availability and accessibility of groundwater for future generations, protect the quality of the groundwater in the recharge zone of the aquifers, ensure that the residents of Collin, Cooke, and Denton counties maintain local control over their groundwater, and operate the District in a fair and equitable manner for all residents.

### STATEMENT OF GUIDING PRINCIPLES

The District is committed to manage and protect the groundwater resources within its jurisdiction and to work with others to ensure a sustainable, adequate, high quality and cost-effective supply of water, now and in the future. The District will strive to develop, promote, and implement water conservation, augmentation, and management strategies to protect water resources for the benefit of the citizens, economy, and environment of the District. The preservation of this most valuable resource can be managed in a prudent and cost-effective manner through conservation, education, and management. Any action taken by the District shall only be after full consideration and respect has been afforded to the individual property rights of all citizens of the District.

## HISTORY AND PURPOSE OF THE MANAGEMENT PLAN

The purpose of the management plan is to identify the goals of the District and to document the management objectives and performance standards that will be used to accomplish those goals.

The 75th Texas Legislature in 1997 enacted Senate Bill 1 (SB 1) to establish a comprehensive statewide water planning process. In particular, SB 1 contained provisions that require each groundwater conservation district (GCD) to prepare a management plan to identify the water supply resources and water demands that will shape the decisions of the GCD. SB 1 designed the management plans to include management goals for each GCD to manage and conserve the groundwater resources within their boundaries. In 2001, the Texas Legislature enacted Senate Bill 2 (SB 2) to build on the planning requirements of SB 1 and to further clarify the actions necessary for GCDs to manage and conserve the groundwater resources of the state of Texas.

The Texas Legislature enacted significant changes to the management of groundwater resources in Texas with the passage of House Bill 1763 (HB 1763) in 2005. HB 1763 created a long-term planning process in which GCDs in each Groundwater Management Area (GMA) were required to meet and determine the Desired Future Conditions (DFCs) for the groundwater resources within their boundaries by September 1, 2010. In 2011, Senate Bills 660 and 737 further modified these groundwater laws and GCD management requirements in Texas.

Texas groundwater law is clear in establishing the sequence that a GCD is to follow in accomplishing statutory responsibilities related to the conservation and management of groundwater resources. The three primary steps, each of which must occur at least once every five years, are the following: (1) to adopt desired future conditions (Texas Water Code Section 36.108(c)), (2) to develop and adopt a management plan that includes goals designed to achieve the desired future conditions (Texas Water Code Section 36.1071(a)(8)), (3) to amend and adopt rules necessary to achieve goals included in the management plan (Texas Water Code Section 36.101(a)(5)).

Senate Bill 660 required that GMA representatives must participate within each applicable regional water planning group (RWPG). It also required the Regional Water Plans (RWP) be consistent with the DFCs in place when the regional plans are initially developed. TWDB technical guidelines indicate that the MAG volume (within each county and basin) is the maximum amount of groundwater that can be used for existing uses and new strategies in the Regional Water Plans. In other words, the MAG volumes are a cap on groundwater production for TWDB planning purposes.

"Managed available groundwater" was redefined as "modeled available groundwater" in Senate Bill 737 by the 82$^{nd}$ Legislature. Modeled available groundwater is "the amount of water that can be produced on an average annual basis" to achieve a desired future condition.

## Criteria for Plan Approval

### Planning Horizon

This management plan becomes effective upon adoption by the District Board of Directors and subsequent approval by the Executive Administrator of the Texas Water Development Board (TWDB). This management plan incorporates a planning period of five years in accordance with 31 Texas Administrative Code (TAC) §356.5(a).

### Plan Adoption

Public notices documenting that the plan was adopted following appropriate public meetings and hearings are located in Appendix A: and Appendix B: Evidence that the Management Plan was Adopted.

### Coordination with Surface Management Entities

A template letter transmitting copies of this plan to the surface water management entities in the District along with a list of the surface water management entities to which the plan was sent are located in Appendix C: Evidence that the District Coordinated Development of the Management Plan with the Surface Water Management Entities.

# DISTRICT INFORMATION

## CREATION

The District was created by the 81st Texas Legislature under the authority of Section 59, Article XVI, of the Texas Constitution, and in accordance with Chapter 36 of the Texas Water Code by the Act of May 27, 2009, 81st Leg., R.S., Chapter 248, 2009 Tex. Gen. Laws 686, codified at Texas Special District Local Laws Code Ann. Chapter 8856 (the District Act).

The District is a governmental agency and a body politic and corporate. The District was created to serve a public use and benefit and is essential to accomplish the objectives set forth in Section 59, Article XVI, of the Texas Constitution. The District's boundaries are coextensive with the boundaries of Collin, Denton, and Cooke counties, Texas (Figure 1) and all lands and other property within these boundaries will benefit from the works and projects that will be accomplished by the District.

The creation of the District was confirmed by the Commissioners Court of Collin County on August 10, 2009; the Commissioners Court of Denton County on August 11, 2009; and the Commissioners Court of Cooke County on August 10, 2009.

## LOCATION AND EXTENT

The District's boundaries are coextensive with the boundaries of Cooke, Collin and Denton Counties, Texas. The District covers an area of approximately 2,740 square miles. Figure 1 is a map of the District's jurisdiction.

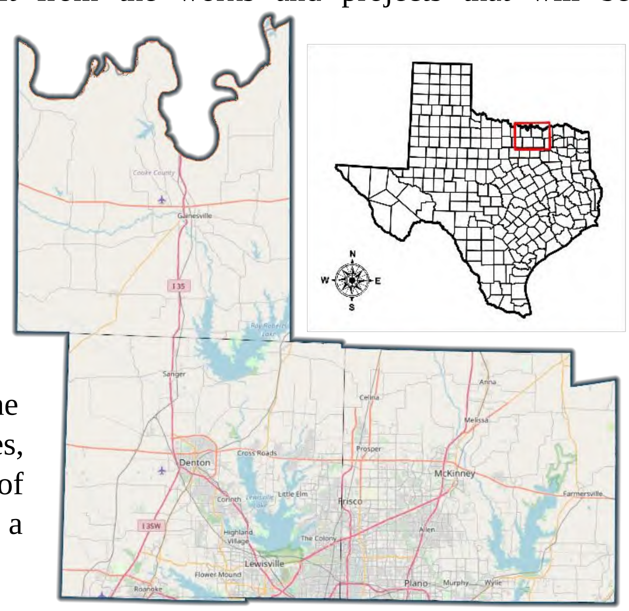



*Figure 1: Map of the District's Jurisdiction.*

## DIRECTORS

The District is governed by a Board of Directors, which is comprised of nine appointed Directors, three from each of the three county commissioners courts comprising the District. Each county commissioners courts appoint a member to represent the largest municipal groundwater producer, other groundwater producers, and county representative.

## AUTHORITY AND FRAMEWORK

The District has the rights and responsibilities provided for in Chapter 36 of the Texas Water Code and Chapter 356, Title 31 of the Texas Administrative Code. The District is charged with conducting hydrogeological studies, adopting a management plan, providing for the permitting of certain water wells and implementing programs to achieve statutory mandates. The District has rulemaking authority to implement the policies and procedures needed to manage the groundwater resources of Cooke, Collin and Denton counties.

## POPULATION

Primary activities involved in the development of a water resources management plan include the analysis and development of projections of population, historical and current water use, and water demands in the future (for a defined period of time). In order to develop projections for how much water supply we will need in the future, three questions must be answered: (1) how many people are there now and how much water has been used in the recent past, (2) how many people will there be in the future (population projections), and (3) how much water will be required to meet the needs of the projected population and other water use sectors in the future. These analyses to develop water demand projections are primarily conducted in Texas as part of the regional water supply planning process (created by the 75th Texas Legislature through the passage of Senate Bill 1 in 1997). Water demand projections are developed for the following water user categories; municipal, rural (county-other), irrigation, livestock, manufacturing, mining, and steam-electric power generation.

Based on the 2021 Region C Water Plan, the population projection for the District for 2020 was 1,982,742 increasing 231% to 4,581,579 in 2070 (Figure 2).

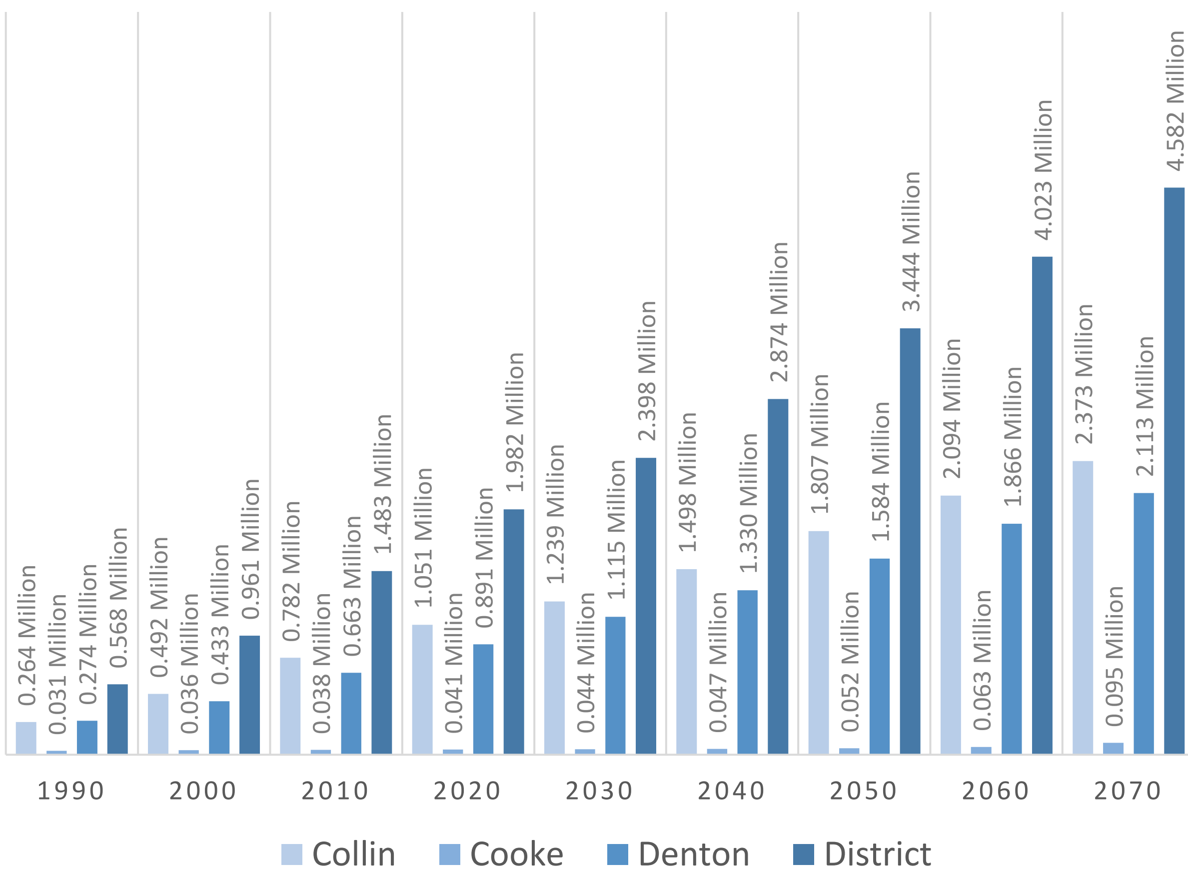



*Figure 2: Population Trends*

## DISTRICT RULES AND MANAGEMENT OF GROUNDWATER

With substantial input and feedback from stakeholders, the District's Board of Directors established the District's Rules in accordance with state law to successfully implement the management plan. The Rules are strictly and fairly enforced. The District may amend the Rules as necessary to comply with changes to Texas law and to ensure the best management of the groundwater within the District. The Rules govern the management strategies of the District, including, but not limited to, well registration, permitting, well spacing, production limitations, water production reporting and fees, waste of groundwater, and achieving DFCs. The District executes its responsibilities with transparency and places stakeholder involvement as a priority. All District documents are made available to the public pursuant to the Texas Public Information Act. In addition to the District's management plan, the District's Rules can be obtained online from the District's website: www.northtexasgcd.org and from the District's office.

## GENERAL GEOLOGY AND HYDROLOGY

A summary review of the hydrogeology and water resources of the North Texas region that includes the District is presented here to understand better the current "state of groundwater science" and to provide information necessary to develop a strategic plan for future technical efforts by the District. An understanding of currently available groundwater science in the District is important for a number of reasons including:

- Understanding the quantity and quality of groundwater resources available to meet current and future water supply needs of the different water use sectors present,
- Understanding the effects of changing conditions, such as population growth, shifting industrial demands, and climate variability on the availability of and demand for groundwater resources,
- Determining the temporal and spatial variability of aquifer dynamics so that adequate monitoring programs may be designed and implemented, and
- Determining areas of groundwater science for which current information is inadequate to make informed policy decisions, so that additional scientific investigations may be pursued to address targeted scientific deficiencies.

Recent scientific efforts have included significant literature reviews of the hydrogeology and water resources for the Northern Trinity and Woodbine aquifers. For example, Bene and others (2004) discuss the research results of over 46 different studies that were utilized in developing the most recent groundwater availability model for the Northern Trinity and Woodbine aquifers. With respect to the District, the most notable conclusion that can be drawn from Bene and others (2004) is that while the area within the District has been included in a number of regional groundwater water resources investigations, the area has never been the primary or sole focus of such a hydrogeology/water resource study. As the District works in the future to evaluate and adopt desired future conditions during future joint-planning efforts, it is clear that certain site-specific studies will be necessary in order to ensure that these critical policy decisions are based on adequate sound science.

## PREVIOUS STUDIES, OVERVIEW, AND CURRENT UNDERSTANDING OF THE HYDROGEOLOGY OF THE NORTHERN TRINITY AND WOODBINE AQUIFERS IN THE DISTRICT

The vast majority of historical groundwater studies in the District may be divided into four categories; (1) water resources evaluations in support of regional water supply assessments conducted to support the need for large water supply projects and state water planning prior to 1985, (2) studies related to the Critical Area process required with the passage of House Bill 2 in 1985 and the Priority Groundwater Management Area process required with the passage of Senate Bill 1 in 1997, (3) regional water planning efforts required by the passage of Senate Bill 1 in 1997, and (4) groundwater availability modeling efforts for the Northern Trinity and Woodbine aquifers required by the passage of Senate Bill 2 in 2001 and in support of the Groundwater Management Areas/Joint Planning process resulting from the passage of House Bill 1763 in 2005.

For more than a century, there have been a number of regional studies related to the occurrence and availability of groundwater from the Northern Trinity and Woodbine aquifers. The following studies, which only represent a small fraction of the available literature, were reviewed in order to identify availability of information from those regional studies that would benefit the District and to identify any technical gaps that may exist.

In the earliest phase of groundwater development in North Texas (1880s to early 1900s), the science of groundwater hydrology was still poorly understood. The Trinity Aquifer was so charged with groundwater that many early wells flowed at the land surface (Hill, 1901; Mace and others, 1994) (Figure 3). This condition of flowing wells results when groundwater pressure (also known as artesian pressure) builds up under a confining layer. Groundwater pressure also increases with depth because of the weight of the water column confined between rock layers and in some cases, from the weight of the overlying geologic formations. The flowing well penetrates the overlying layers and provides a conduit for flow to the surface and pressure release. Decreasing fluid pressure in the aquifer causes water-level declines (drawdown) in wells. Hundreds of flowing wells were drilled in North Texas in the late 1800s and allowed to flow freely at the surface. At the time this was a novelty ("geysers"), and much of the groundwater was wasted. These wells experienced rapid pressure declines, and most had stopped flowing by 1914 (Leggatt, 1957). Groundwater use declined after 1914 as surface water (impounded lakes) began to be developed (Bene and others, 2004).

By the mid-1900s the population of North Texas was growing, and groundwater use was again increasing. By the 1930s groundwater science had progressed greatly. Methods were developed for calculating productivity (yield) and water-level declines from data collected in water wells. The Texas Board of Water Engineers (predecessor agency to the TWDB) began compiling groundwater data from many Texas counties with the notable exception of the counties in the District. Texas Board of Water Engineers reports emphasized dramatic drawdowns that had already occurred in the North Texas region and documented the relationship between pumping and water level decline. Hundreds of feet of drawdown were common in the Dallas-Ft. Worth area at rates up to 20 feet per year (Bene and others, 2004). In spite of the efforts of the Texas Board of Water Engineers, few water-level measurements were recorded in wells in the District prior to 1960 (Figure 4).

Also, by the mid-1900s, the geology of North Texas aquifers was becoming increasingly well understood (see summaries in Nordstrom [1982] and Bene and others [2004]). Aquifer geology describes the rock units making up the container that holds the groundwater. Groundwater is present in pores and cracks within the rocks and flows through an interconnected system. The ability of rock layers to store and transmit groundwater varies – aquifers readily store and transmit water, whereas aquitards lack well-interconnected pore systems and therefore inhibit groundwater flow. Geologic studies revealed that the Trinity and Woodbine rock formations are the primary aquifers in North Texas and that they are enclosed in aquitard formations. Thus, the Northern Trinity and Woodbine aquifers are confined by aquitards (confining layers) (Figure 5 and Figure 6). Near land surface, where the upper part of the aquifer is exposed (outcrops), a water table develops that separates saturated (below) from unsaturated (above) parts of the aquifer. The level of the water table corresponds to the volume of groundwater in the aquifer outcrop. Deeper underground, however, the entire aquifer is usually saturated, and fluid pressure corresponds to groundwater volume. Groundwater pumping results in the lowering of water levels in wells, which corresponds directly to lower fluid pressure in the aquifer. The science of hydrogeology encompasses both groundwater (the liquid resource) and aquifer properties (the container). The main data types used to characterize groundwater resources are measured in wells: water levels to quantify volume and pumping tests to quantify yield (flow rate into wells) and aquifer properties such as hydraulic conductivity and storativity. During the 1960s and 1970s, numerous scientific and economic groundwater studies by state agencies and universities included systematic data collection from Texas aquifers and increased the number of water levels measured in the District (Figure 7). Groundwater-use data were also beginning to be collected systematically by the TWDB and other government agencies. Groundwater data and conditions during this period were documented by Nordstrom (1982). By the 1960s and 1970s, North Texas was becoming a major population center and a key focus of water planning efforts by the state through the efforts of the TWDB.

Nordstrom (1982) is one of the classic regional hydrogeologic/water resources investigations available, containing information on 22 counties in the North-Central Texas region including the entire District. Nordstrom (1982) also provides early estimates of historical groundwater use and future availability. Even more notable is the inclusion of pumping tests in this report from throughout the region. Specific to the District, results from 5, 8, and 10 pumping tests in Collin, Cooke, and Denton counties respectively, are included in the report (Figure 8). Analyses for yield, transmissivity, specific capacity, and hydraulic conductivity are provided for most of these tests. In the District, no additional pumping test analyses became available between the time of Nordstrom's study (1982) and the development of the Northern Trinity and Woodbine groundwater availability model (GAM) (Bene and others, 2004). Aquifer properties input to the GAM are based mainly on Nordstrom's (1982) data. Future technical studies by the District will need to take advantage of and add to Nordstrom's (1982) valuable data set of aquifer tests.

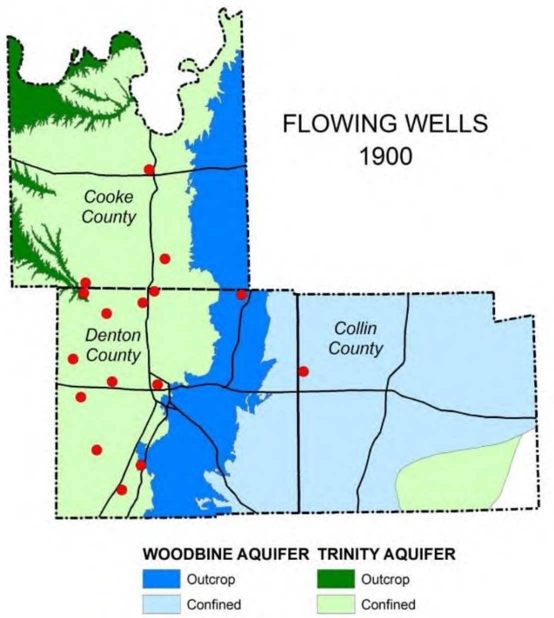



*Figure 3: Location of wells flowing at the land surface in 1900 (Hill, 1901).*

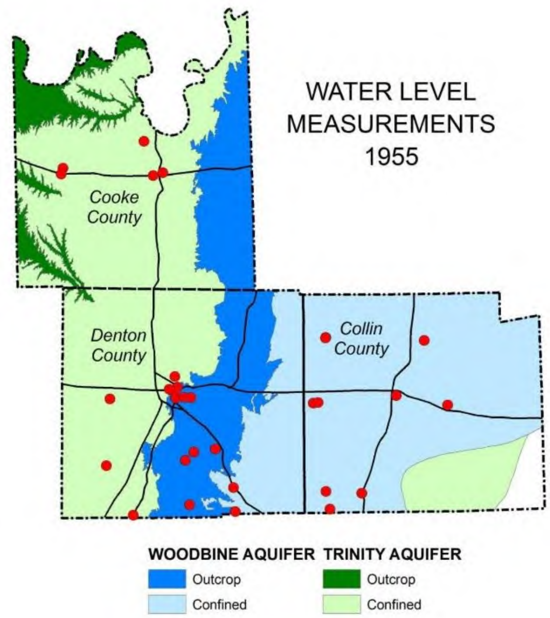



*Figure 4: Location of wells having water-level measurements taken in 1955 (Nordstrom, 1982).*

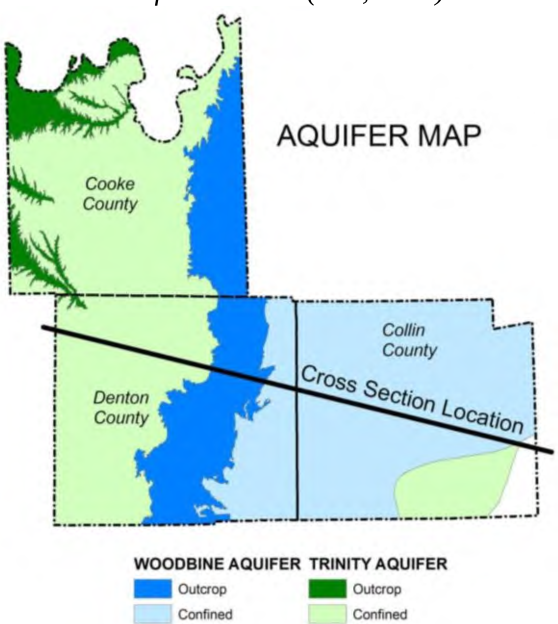



*Figure 5: Aquifer Map*

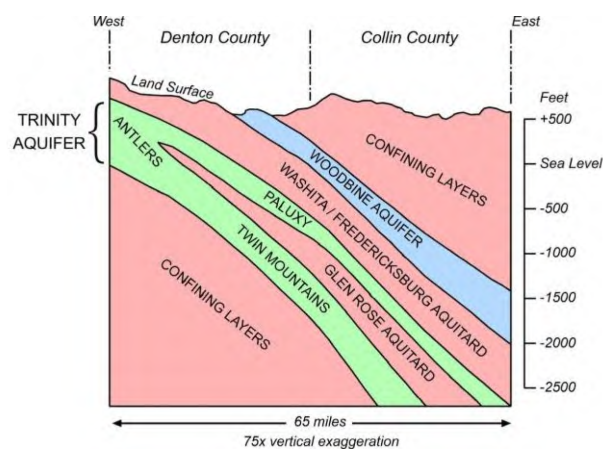



*Figure 6: Cross section of the Trinity and Woodbine aquifers in the North Texas GCD.*

Groundwater data (primarily water levels and water quality) have been collected by the TWDB and its predecessor and partner agencies from water wells throughout Texas since the early 1900s (Rein and Hopkins, 2008). Groundwater data collected before 1988 primarily represent one-time visits to wells and springs, but since then, monitoring programs have been established to record data annually in the same observation wells. Systematically revisiting the same wells is critical for establishing historical trends in groundwater conditions. Historical trend data track changes through time and can be used to make future projections. Historical trends in groundwater conditions are necessary input data for groundwater availability modeling. Many agencies and stakeholders cooperate with the TWDB to collect the measurements that go into the TWDB groundwater database: Texas Commission on Environmental Quality, U.S. Geological Survey, GCDs, water-supply corporations, municipalities, individual landowners, and other entities. GCDs actually provide the majority of water-level measurements in the TWDB groundwater database. In 2010, the counties of the District contained 555 wells having water levels in the TWDB database, but only 39 of these were observation wells (Figure 9). In 2015, there were 24 TWDB wells in the District for which 2015 water level data were available (Figure 10). These water level data are useful for the evaluation of "state of the aquifer" conditions relative to the DFCs.

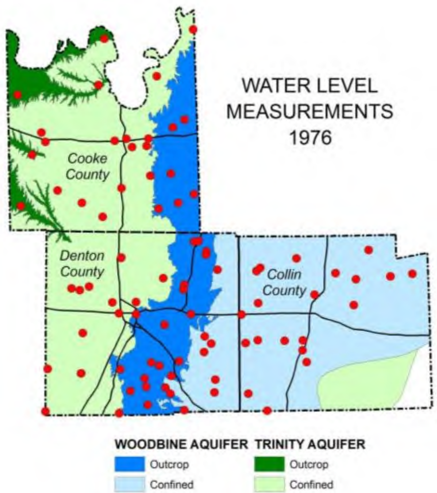



*Figure 7: Location of wells having water-level measurements taken in 1976 (Nordstrom, 1982).*

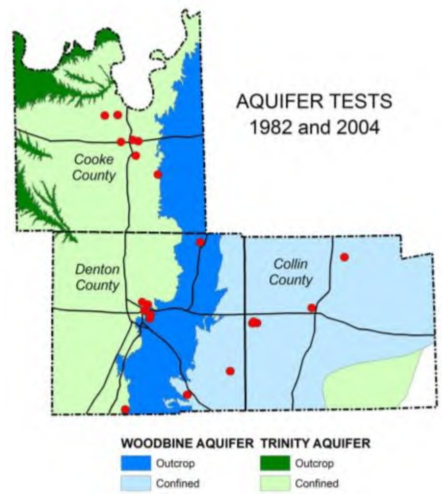



*Figure 8: Location of wells having pumping test data reported by Nordstrom (1982) and used by Bene and others (2004) in the Northern Trinity/Woodbine GAM.*

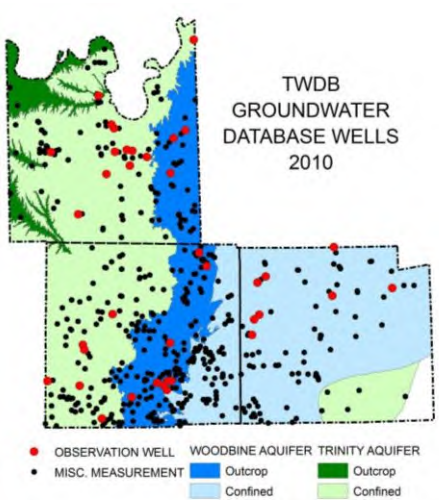



*Figure 9: Location of wells having water-level measurements in the TWDB groundwater database. Observation wells that are monitored annually are shown in red.*

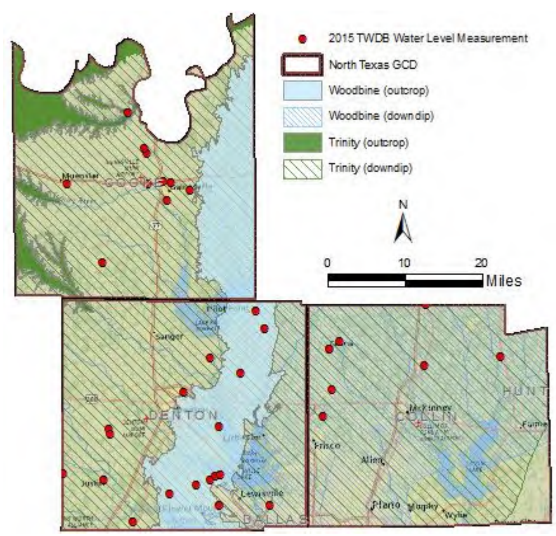



*Figure 10: Location of wells having water-level measurements in the TWDB database in year 2015.*

Since the passage of House Bill 2 in 1985, the reliability and vulnerability of groundwater resources in North-Central Texas have been a priority issue for the Texas Commission on Environmental Quality and its predecessor agencies. Specifically, the issue of focus has been areas of the state that are experiencing or are expected to experience critical groundwater problems in the next 20-25 years. As required by statute, the region, as a result of recognized critical groundwater problems, has been the subject of multiple studies and reviews to evaluate the status of groundwater resources in this area. Baker and others (1990) conducted the first study as a result of the critical area process. This report highlights the declines in water-level elevations between 1976 and 1989 in the Antlers and Twin Mountain aquifers from 100 to 250 feet with declines in the Paluxy and Woodbine aquifers being up to 150 feet. Baker and others (1990) also noted concerns regarding water quality in the region, some of which were naturally occurring, while others were suggested to be the result of poor well completion techniques, leaking underground petroleum storage tanks, brine contamination resulting from oil and gas activities, and industrial activities in the outcrop/recharge areas. It is interesting to note that in this study, the conclusion is drawn that if additional surface water supplies are not developed by 2010, some rural areas in the region could face water supply shortages. No groundwater availability estimates specific to the area covered by the District were included in the report. However, one significant finding was that even in 1985 (the period during which data for this report was primarily collected) it was estimated that groundwater demands for the study area were 110,000 acre-feet per year, which was estimated to be 44 percent greater than the annual recharge for the study area, which was estimated to be 76,000 acre-feet per year.

Baker and others (1990) emphasize groundwater sources (recharge), occurrence (location and movement of groundwater), and discharge (natural and pumpage). Much of the science presented by Baker and others (1990) summarizes and updates Nordstrom (1982). New material presented by Baker and others (1990) concerns groundwater use, availability, and related problems. The primary source of groundwater in North Texas is recharge from precipitation on the outcrop. In the District, average annual precipitation ranges from 35 to 40 inches per year. Most precipitation runs off the surface, evaporates, or is used by plants (transpiration), aquifer recharge being only a small fraction of precipitation. Surface-water seepage from lakes and streams on the aquifer outcrop provides a secondary source of recharge.

Water recharged to an aquifer is held in storage. Pumping tests measure aquifer storage: specific yield in outcrop and storativity in the confined part. In the aquifer outcrop water levels remain relatively constant. Lowering of the water table in outcrop requires complete dewatering of the upper part of the aquifer, effectively emptying the porous volume of the rock. Specific yield is a measure of aquifer porosity, which is 15 to 25 percent (of total rock volume) in the Trinity Aquifer and closer to 15 percent in the Woodbine Aquifer (Nordstrom, 1982). In the confined part of the aquifer, groundwater is under pressure, and storativity relates water volume to pressure decline. Much less water is available by pressured decline than by dewatering, but pressure declines have a dramatic effect on water levels in wells. Pumping-induced pressure declines, causing drawdowns of hundreds of feet, have been a major groundwater resource problem in North Texas (Baker and others, 1990).

The movement of groundwater through an aquifer is controlled by pressure gradient (from high to low pressure) and by the ease with which water flows through the aquifer pore system.

Pumping tests measure hydraulic conductivity (rate of flow) and transmissivity (volume of flow). Along with storage, hydraulic conductivity and transmissivity control how much water a well will produce for a given amount of drawdown (specific capacity or well yield). Because hydraulic conductivity and transmissivity are highly variable in the Trinity and Woodbine aquifers (Nordstrom, 1982), additional pumping test data will be needed to adequately characterize groundwater flow throughout the District.

The main groundwater resource problems identified by Baker and others (1990) are water-level declines and localized water-quality issues. Local water-level declines occur when pumpage exceeds flow rates in the aquifer, causing large drawdowns around wells (cones of depression). Cones of depression have been common around pumping centers in North Texas since the early 1900s (Mace and others, 1994). Cones of depression increase the cost of groundwater, because pumps must be lowered, well yields decrease, and it takes more energy to lift the water to the surface. Regional water-level declines occur when discharge (primarily from pumpage) exceeds recharge over large areas. Regional declines effectively mine the aquifer and are not sustainable over the long term.

In response to Senate Bill 1 passed by the Texas Legislature in 1997, Langley (1999) updated the analysis of Baker and others (1990) and addressed the potential for critical water resource problems in North-Central Texas in the following 25 years. Water levels remained relatively stable in the District during the 1990s. Southern Denton County experienced rising water levels in the Twin Mountains Aquifer due to decreased pumping in the Dallas - Ft. Worth area, but water levels in the Paluxy and Woodbine aquifers declined slightly in parts of Denton and Collin counties. Although water-level declines were less during 1989–1997 than during 1966–1989, groundwater use still exceeded availability in Cooke and Denton counties (Langley, 1999). Langley (1999) projections suggest that adequate supplies of groundwater plus surface water exist to meet demands through 2030 and that groundwater use will decline through conservation and conversion to surface water. In the District, however, these projections are based on a small number of wells and therefore subject to significant uncertainty.

Ashworth and Hopkins (1995) provide a general overview of the major and minor aquifers of Texas. In their report, regional characteristics and locations of the Trinity and Woodbine aquifers are presented. This report has served as a standard reference for subsequent hydrogeologic publications and planning documents such as the state water plan with respect to the recognized locations of the aquifers in Texas. The informative "atlas" nature of this report will be a good model for the District as it works to develop more locally- detailed information to educate the general public. This 'atlas' was updated in 2011 (George, and others, 2011).

The area covered by the District has now been the subject of four regional water plans, the 2001, 2006, 2011, and 2016 Region C Water Plans. Region C Water Plans summarize groundwater conditions in the Trinity and Woodbine aquifers within the region. The 2001 and 2006 Region C Water Plans include essentially identical aquifer information, much of which was derived from Nordstrom’s comprehensive study (Nordstrom, 1982). The 2001 and 2006 Region C Water Plans emphasize Nordstrom’s finding that annual pumpage is greater than aquifer recharge. Overdevelopment of aquifers and resulting water-level declines pose the greatest threat to small water suppliers and rural households. The 2001 and 2006 Region C Water Plans describe water quality as generally acceptable in the Trinity and Woodbine aquifers, although poor water quality occurs locally, and the deeper parts of both aquifers have higher concentrations of dissolved solids.

The 2006 and 2011 Region C Water Plans relied in part on the Northern Trinity/Woodbine GAM and accompanying report (Bene and others, 2004) for aquifer conditions. As reported in the 2006 Region C Water Plan, GAM simulations in 2004 (Bene and others, 2004) showed that groundwater availability in Cooke County is less than estimated in the 2001 Region C Water Plan and that over drafting is occurring in that county. GAM simulations in 2004 also showed that groundwater use in Denton County exceeds the estimated reliable long-term supply (Bene and others, 2004).

The 2011 Region C Water Plan documents that groundwater use in 2006 exceeded the managed (now referred to as modeled) available groundwater estimates in certain Region C counties, including Collin County (Mullican, 2011). Cooke County groundwater use in 2006 was close to but did not exceed managed available groundwater. The 2011 Region C Water Plan states that temporary groundwater over drafting may be necessary while other water supplies are developed. However, it is important to note that while the concept of temporary over drafting has been a common strategy utilized by regional water planning groups to meet certain water supply needs in the 2001, 2006, and 2011, in the 2016 round of regional water planning, planned over drafting (the volume of groundwater utilized in a regional water plan is greater than the modeled available groundwater estimate) was not allowed. Under rules that have been developed to implement House Bill 1763, enacted by the Texas Legislature in 2005, the use of more groundwater in regional and state water planning than is determined to be available through the joint-planning process as expressed by the estimate of modeled available groundwater will result in a conflict, and prevent the approval of regional water plans by the TWDB. Therefore, either in the 2016 Region C Water Plan or in the desired future conditions adopted for GMA 8 by 2016, the volume of groundwater available to meet future water supply needs was revised so that conflicts did not exist.

Development of brackish groundwater is considered in the Region C Water Plan. Although GAMs to determine brackish groundwater availability have not yet been developed, preliminary analysis by the TWDB indicates approximately 85 million acre-feet of brackish groundwater supply may be present in Region C. Further study, perhaps through coordinated efforts of the GCDs, is needed to identify brackish groundwater resources and to deal with water-quality issues.

In general, all Region C Water Plans (2001, 2006, 2011, 2016, and 2021) describe the ***current*** state of fresh groundwater use to be close to long-term sustainable availability. Most water management strategies in the Region C Water Plans emphasize increasing surface water supplies while conserving groundwater supplies. The 2021 Plan indicates that currently available supplies are almost constant over time at 1.7 million acre-feet per year, as sedimentation in reservoirs is offset by increases in reuse supplies due to increased return flows. With the projected 2070 demand of 2.9 million acre-feet per year, the region has a shortage of 1.2 million acre-feet per year by 2070. Meeting the projected shortage and leaving a reasonable reserve of planned supplies beyond projected needs will require the development of significant new water supplies for Region C over the next 50 years.

## GROUNDWATER AVAILABILITY MODELING EFFORTS FOR THE NORTHERN TRINITY AND WOODBINE AQUIFERS

One of the initial developments to result from the initiation of regional water planning in Texas was the realization that the science and quantification of Texas' surface water and groundwater resources was not sufficiently accurate to meet the requirements of the planning process. As a result, new surface water availability models, referred to as WAMs, were developed by the Texas Commission on Environmental Quality and groundwater availability models, referred to as GAMs, were developed by the Texas Water Development Board. The GAM Program has resulted in significant advancement of our understanding of groundwater resources throughout Texas. GAMs are numerical computer models that produce three-dimensional simulations of groundwater systems that track the "water budget" (inflow, storage, outflow) and spatially distribute aquifer properties (flow rates, volumes, and directions). Once the GAM is calibrated using historical water use and aquifer property data (such as water levels through time), it can then be used to test and evaluate future water use scenarios.

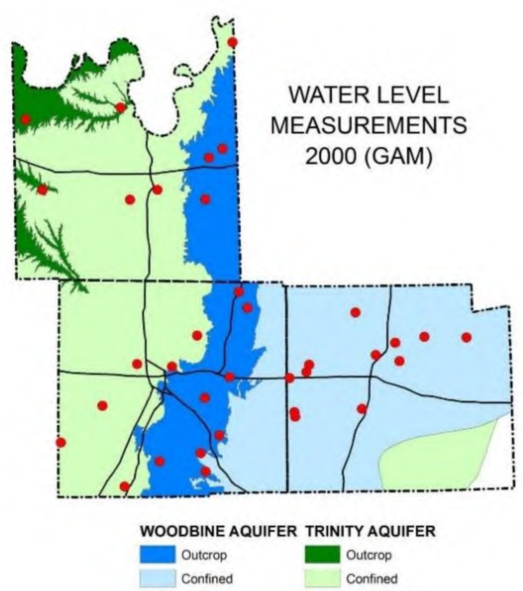



*Figure 11: Location of wells having water-level measurements taken in 2000 that were used in the Northern Trinity/Woodbine GAM (Bene and others, 2004).*

Bene and others (2004) constructed the first regionally comprehensive GAM for the Northern Trinity and Woodbine aquifers in Texas. It is important to note that "Bene and others (2004)" is not the GAM itself but is the technical report that describes the GAM and summarizes, from a regional perspective, relevant data and analyses that were used to build a conceptual model of the Northern Trinity and Woodbine aquifer system. The conceptual model utilized in the development of the model ideally includes everything affecting groundwater conditions: physiography, climate, geology, water quality, water levels, aquifer properties, recharge, surface-water/groundwater interaction, and discharge (evapotranspiration and pumpage). The design of the GAM is based as closely as possible on the conceptual model. The computer model divides the real world (i.e., the conceptual model) into cells that, in the case of the Northern Trinity and Woodbine aquifer GAM, are one square mile in area and several hundred feet thick. The thickness of the cells is controlled by aquifer layering. The Northern Trinity and Woodbine GAMs contain seven layers of cells representing all of the aquifers and aquitards in the area (see Figure 16, Figure 17, and Table 1). By making the model cells this large (1 square mile), the GAM often times does not do a good job of modeling or predicting local groundwater conditions, rather the GAM is specifically designed to better understand regional trends. Smaller model cells for an area as large as the area covered by the Northern Trinity and Woodbine GAM, however, would require massive amounts of computing power to run the GAM. Furthermore, the regional nature of the available data (widely spaced measurements) would not support a higher resolution model. One solution to the inherent resolution problem of the GAM would be to build a geographically smaller, more focused GAM based on more closely spaced well data for the area covered by the District.

As was the case with previous regional groundwater studies in North Texas, the GAM-related data are especially sparse in the counties of the District. Water-level data for the year 2000, for example, actually include fewer measurements than Nordstrom (1982) used for 1976 (compare Figure 7 and Figure 11) and the GAM used the same aquifer pumping tests reported by Nordstrom (1982).

## Updated Groundwater Availability Model of the Northern Trinity and Woodbine Aquifers

The purpose of the latest model update was "to make improvements to the original 2004 GAM by Bené and others (2004), including incorporation of data collected after the 2004 GAM was developed and results from recent studies in the region, and implementation of the model at a scale that better bridges the gap between regional models and a model that can be used at the scale of a typical GCD for pursuit of their groundwater management objectives. This study provides a model that has been calibrated across the entire period of record through 2012, which is a benefit to GCDs, Groundwater Management Area (GMA) 8, and stakeholders. This study provides significant advancement in the hydrogeological framework and understanding of these aquifers."

The updated GAM and the information collected and interpreted to support the study provide GCDs with the best available science to inform final rule making, groundwater management within GCD boundaries, and joint planning. The data collected and made public from this study provides a wealth of knowledge to support GCDs in local-scale hydraulic calculations with analytic tool to address such issues as well spacing.

The latest GAM update (Kelley and others, 2014) introduced hydrostratigraphic regions for the Trinity Group formations encompassed by the Northern Trinity GAM (Figure 12). The regions are delineated based on stratigraphic and lithologic similarities (Figure 13).

According to the GAM, Region 1 includes the western and northwestern portions of the model's study area in Texas, Oklahoma and Arkansas, and consists of undifferentiated sandstones and shales referred to as the Antlers Formation, which is locally referred to as the Antlers Aquifer.

Region 2 lies south and east of Region 1. In this region, limestones of the Glen Rose Formation separate the sandstones in the upper portion of the northern Trinity Group from the undifferentiated sandstones and shales in the lower portion of the northern Trinity Group (Figure 14). The boundary between Regions 1 and 2 is defined by a lithological transition between thinly interbedded sandstone and shale in the northwest and thick limestones of the Glen Rose Limestone that exist elsewhere else in the model study area.

In Region 2, the upper sandstones (above the Glen Rose Limestone) are referred to as the Paluxy Formation. The undifferentiated lower sandstones and shales (below the Glen Rose Limestone) are referred to as the Twin Mountains Formation.

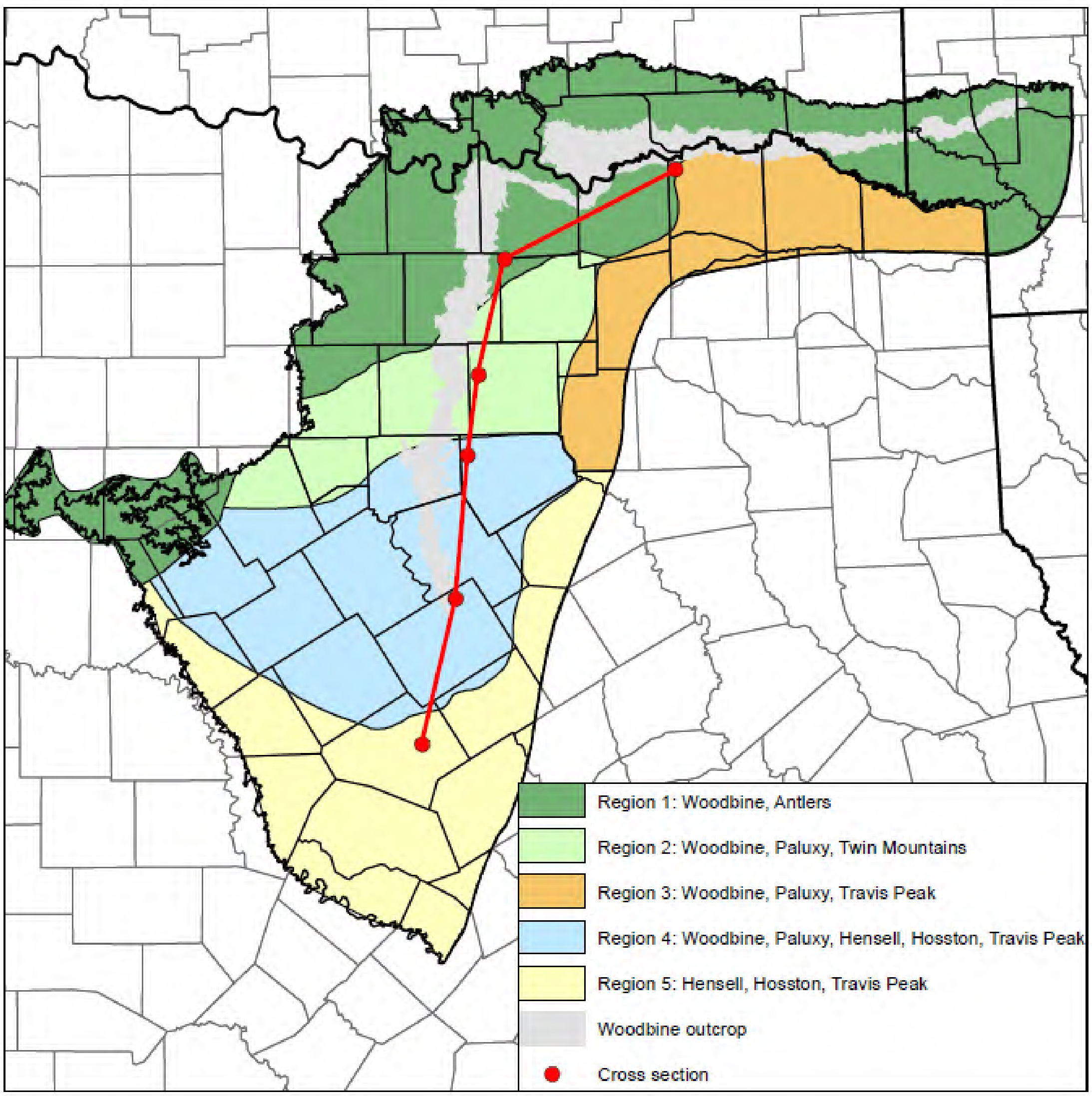
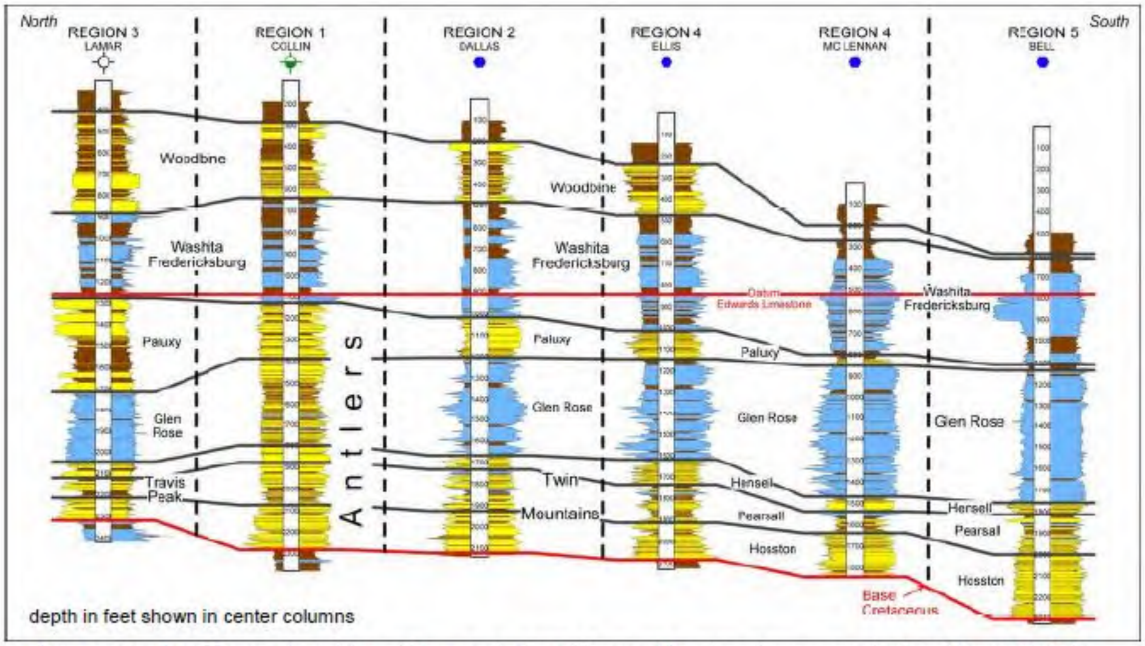



*Figure 12: Northern Trinity GAM Regions (from Kelley and others, 2014).*




yellow = greater than 50 percent sandstone, blue = greater than 50 percent limestone, brown = greater than 50 percent shale

*Figure 13: Cross section through Region 1 through 5 (from Kelley and others, 2014).*

| Model Terminology | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 |
|---|---|---|---|---|---|
| Woodbine Aquifer | Woodbine | Woodbine | Woodbine | Woodbine | Woodbine (no sand) |
| Washita/ Fredericksburg Groups | Washita/ Fredericksburg | Washita/ Fredericksburg | Washita/ Fredericksburg | Washita/ Fredericksburg | Washita/ Fredericksburg |
| Paluxy Aquifer | Antlers | Paluxy | Paluxy | Paluxy | Paluxy (no sand) |
| Glen Rose Formation | Antlers | Glen Rose | Glen Rose | Glen Rose | Glen Rose |
| Hensell Aquifer | Antlers | Twin Mountains | Travis Peak | Hensell/ Travis Peak | Hensell/ Travis Peak |
| Pearsall Formation | Antlers | Twin Mountains | Travis Peak | Pearsall/ Sligo | Pearsall/ Sligo |
| Hosston Aquifer | Antlers | Twin Mountains | Travis Peak | Hosston/ Travis Peak | Hosston/ Travis Peak |

yellow = sandstone aquifers

*Figure 14. North Trinity GAM terminology for Region 1 through 5 (from Kelley and others, 2014).*

In order to better understand groundwater resources within a groundwater conservation district, Texas Water Code §36.1071 requires that estimates of recharge, discharge, and various other aspects of groundwater flow, such as cross-formational flow and flow into and out of the district, be included in the management plan if a groundwater availability model is available for use. The TWDB, in its role of providing technical assistance to the District, conducted groundwater availability modeling runs for the Northern Trinity and Woodbine aquifers and provided all required estimates for inclusion in the management plan.

## MODELED AVAILABLE GROUNDWATER BASED ON THE DESIRED FUTURE CONDITIONS

The term "desired future conditions" was added by the Texas Legislature in 2005 to the list of goals that districts must address when adopting or readopting management plans required by Texas Water Code §36.1071. Desired future conditions are defined in Texas Water Code §36.001(30) as follows, "Desired future condition" means a quantitative description, adopted in accordance with Section 36.108, of the desired condition of the groundwater resources in a management area at one or more specified future times".

Even before creation of the District by the Texas Legislature in 2009, other districts in Groundwater Management Area 8 adopted, through the joint planning process required by Texas Water Code §36.108, desired future conditions for the Woodbine Aquifer on December 17, 2007, and for the Trinity Aquifer on September 17, 2008. Subsequently, and with participation by the District, designated representatives in Groundwater Management Area 8 voted on April 27, 2011, to readopt the previously adopted desired future conditions without amendment for the Woodbine and Trinity aquifers. Because the District was not in existence during the initial adoption of desired future conditions in 2008 and was still in the organizational stages of development during re-adoption of those desired future conditions in 2011, the District did not have an opportunity to participate in the development of those desired future conditions.

Upon approval of this management plan by the Texas Water Development Board, the District intends to continue collecting as much data and information on the groundwater resources within its boundaries as practically feasible in order to enable it to develop and establish meaningful and reasonable desired future conditions for the aquifers within its jurisdiction in the next round of joint planning. Once those desired future conditions have been established and adopted, the District intends to develop permanent rules that require the permitting of certain wells and that establish a management system that will be designed to achieve the desired future conditions.

To determine the DFCs, a series of simulations using the TWDB's Groundwater Availability Model ("GAM") for the Northern Trinity and Woodbine aquifers were completed. Each GAM simulation was done by iteratively applying various amounts of simulated groundwater pumping from the aquifer over a predictive period that included a simulated repeat of the drought of record. Pumping was increased until the amount of pumping that could be sustained by the aquifer without impairing the aquifer conditions selected for consideration as the indicator of the aquifer desired future condition was identified.

In the North Texas District, the geologic units comprising the Trinity are: the Antlers (which includes all of the Trinity Group Formations), the Paluxy Sand, the Glen Rose Limestone, and the

Twin Mountains (which includes the Hensell and the Hosston Formations that are differentiated further to the south). Trinity Formations for which DFCs and MAGs are developed need to be modified in terms of the Antlers, Paluxy and Twin Mountains.

During the second round of joint planning, GMA-8 passed and adopted a resolution proposing DFCs for all relevant aquifers by letter dated April 1, 2016. In February 2017, GMA-8 submitted to the TWDB a Resolution package containing GMA-8's approved and adopted DFC's.

The Modeled Available Groundwater (MAG) estimates in GMA-8 for the Woodbine and Trinity aquifers are documented in Table 1 and are based on GAM Run 17-029 MAG. The GAM Run is included as Appendix D. At the time of the adoption of this management plan, GMA 8 is in the process of adopting new DFCs. The new MAG will replace the GAM Run 17-029 MAG and the new MAG is expected to be available later in 2022. The new MAG will be posted on the District's website with this management plan.

*Table 1: Estimates of Modeled Available Groundwater for pumping within the District (GAM Run 17-029 MAG).*

| *County* | *Aquifer* | *2020* | *2030* | *2040* | *2050* | *2060* | *2070* |
|---|---|---|---|---|---|---|---|
| *Collin* | Trinity (Antlers) | 1,966 | 1,961 | 1,966 | 1,961 | 1,966 | 1,961 |
| | Trinity (Twin Mountains) | 2,207 | 2,201 | 2,207 | 2,201 | 2,207 | 2,201 |
| | Trinity (Paluxy) | 1,551 | 1,547 | 1,551 | 1,547 | 1,551 | 1,547 |
| | Trinity (Glen Rose) | 83 | 83 | 83 | 83 | 83 | 83 |
| | Woodbine | 4,263 | 4,251 | 4,263 | 4,251 | 4,263 | 4,251 |
| | Total | 10,070 | 10,043 | 10,070 | 10,043 | 10,070 | 10,043 |
| *Cooke* | Trinity (Antlers) | 10,544 | 10,514 | 10,544 | 10,514 | 10,544 | 10,514 |
| | Woodbine | 802 | 800 | 802 | 800 | 802 | 800 |
| | Total | 11,346 | 11,314 | 11,346 | 11,314 | 11,346 | 11,314 |
| *Denton* | Trinity (Antlers) | 16,591 | 16,545 | 16,591 | 16,545 | 16,591 | 16,545 |
| | Trinity (Twin Mountains) | 8,389 | 8,366 | 8,389 | 8,366 | 8,389 | 8,366 |
| | Trinity (Paluxy) | 4,832 | 4,819 | 4,832 | 4,819 | 4,832 | 4,819 |
| | Trinity (Glen Rose) | 339 | 338 | 339 | 338 | 339 | 338 |
| | Woodbine | 3,616 | 3,607 | 3,616 | 3,607 | 3,616 | 3,607 |
| | Total | 33,767 | 33,675 | 33,767 | 33,675 | 33,767 | 33,675 |
| *District* | Trinity (Antlers) | 29,101 | 29,020 | 29,101 | 29,020 | 29,101 | 29,020 |
| | Trinity (Twin Mountains) | 10596 | 10567 | 10596 | 10567 | 10596 | 10567 |
| | Trinity (Paluxy) | 6,383 | 6,366 | 6,383 | 6,366 | 6,383 | 6,366 |
| | Trinity (Glen Rose) | 422 | 421 | 422 | 421 | 422 | 421 |
| | Woodbine | 8,681 | 8,658 | 8,681 | 8,658 | 8,681 | 8,658 |
| | Total | 55,183 | 55,032 | 55,183 | 55,032 | 55,183 | 55,032 |

*Note: Production is in acre-feet.*

## AMOUNT OF GROUNDWATER BEING USED WITHIN THE DISTRICT

Estimates of historical water use, especially estimates from recent times, are very important during the process of developing water demand projections during the planning process. This is because changes in the volumes and types of water use, especially on a regional basis, will typically occur relatively slowly. Therefore, if one has a good understanding of recent water use statistics, then the projections of future water demands will be much more reliable.

Texas Water Code §36.1071(e)(3)(B) requires that a management plan must include recent estimates of groundwater use. The primary source of this information is the TWDB Water Use Survey. Groundwater use estimates for the District for years 2004 through 2019 for the six primary water use sectors from the TWDB Water Use Survey are presented in Appendix E and Table 2.

Estimated historical groundwater use in the District by category was 87 percent for municipal use, nine percent for irrigation use, two percent for livestock use, one percent for manufacturing and mining use, and zero percent for steam-electric power use. In the TWDB Water Use Survey, the municipal use category includes small water providers and rural domestic pumping in addition to municipalities.

*Table 2: TWDB's Estimated Historical Water Use by Water Source*

| *County* | *Source* | *Municipal* | *Manufacturing* | *Mining* | *Steam Electric* | *Irrigation* | *Livestock* | *Total* |
|---|---|---|---|---|---|---|---|---|
| *Collin* | Groundwater | 5,025 | 208 | 0 | 0 | 725 | 45 | 6,002 |
| | Surface Water | 168,912 | 1,928 | 26 | 160 | 1,236 | 809 | 173,071 |
| | Total | 173.937 | 2,136 | 26 | 160 | 1,961 | 854 | 179,073 |
| *Cooke* | Groundwater | 8,457 | 85 | 77 | 3 | 429 | 233 | 9,283 |
| | Surface Water | 423 | 5 | 205 | 0 | 171 | 1,226 | 2,029 |
| | Total | 8,880 | 90 | 282 | 3 | 599 | 1,458 | 11,312 |
| *Denton* | Groundwater | 11,779 | 22 | 351 | 0 | 1,440 | 280 | 13,871 |
| | Surface Water | 107,218 | 362 | 821 | 136 | 1,084 | 612 | 110,233 |
| | Total | 118,997 | 383 | 1,172 | 136 | 2,524 | 892 | 124,104 |
| *District* | Groundwater | 25,261 | 315 | 428 | 3 | 2,593 | 558 | 29,157 |
| | Surface Water | 276,553 | 2,294 | 1,053 | 295 | 2,491 | 2,647 | 285,333 |
| | Total | 301,814 | 2,609 | 1,480 | 298 | 5,083 | 3,204 | 314,489 |

*Note: The data was averaged from 2004 through 2019. For more information on this data, see Appendix E. Production is in acre-feet.*

## Annual Amount of Recharge of Precipitation

Recharge from precipitation falling on the outcrop of the aquifer (where the aquifer is exposed to the surface) within the North Texas GCD was estimated by the TWDB in the GAM Run 21-001 dated January 13, 2022. Water budget values of recharge extracted for the transient model period indicate that precipitation accounts for 13,916 acre-feet per year of recharge to the Trinity aquifer and 53,946 acre-feet per year of recharge to the Woodbine aquifer within the boundaries of the North Texas GCD (Appendix D).

## Annual Volume of Discharge from the Aquifer to Springs and Surface Water Bodies

The total water discharged from the aquifer to surface water features such as streams, reservoirs, and springs is defined as the surface water outflow. Water budget values of surface water outflow within the North Texas GCD were estimated by the TWDB in the GAM Run 21-001 (Appendix

D). Values from the transient model period are 28,692 acre-feet per year of discharge from the Trinity aquifer and 35,100 acre-feet per year of discharge from the Woodbine aquifer to surface water bodies that are located within the North Texas GCD.

### Annual Volume of Flow into and out of the District and between Aquifers in the District

Flow into and out of the District is defined as the lateral flow within an aquifer between the District and adjacent counties. Flow between aquifers is defined as the vertical flow between aquifers or confining units that occurs within the boundaries of the District. The flow is controlled by hydrologic properties as well as relative water levels in the aquifers and confining units. Water budget values of flow for the North Texas GCD were estimated by the TWDB in the GAM Run 21-001 (Appendix D). Values extracted from the transient model period represent the model's calibration and verification time period (years 1980 through 2012).

For the Woodbine Aquifer, estimated annual flow into and out of the District is 1,115 and 2,912 acre-feet per year, respectively. These volumes indicate that the District gains only half as much water from neighboring portions of the Woodbine Aquifer than it loses. For the Northern Trinity Aquifer, estimated annual flow into and out of the District is 19,118 and 10,881 acre-feet per year, respectively. These volumes indicate that the District gains almost twice as much water from neighboring portions of the Northern Trinity Aquifer than it loses.

The estimated amount of annual flow between aquifers in the District based on GAM Run 21-001 provided by the TWDB are given in Appendix E. The GAM run estimates flow of 898 acre-feet per year from the Woodbine Aquifer to younger units and flow of 9,560 acre-feet per year from the Woodbine Aquifer to the Washita and Fredericksburg confining units. The run also estimated that 20,504 acre-feet per year flows from overlying units to the Trinity Aquifer.

## Projected Water Supply Needs

### Projected Surface Water Supply in the District

Although the primary focus of this management plan is on groundwater resources, the reality is that in areas like the District, decision makers must also consider surface water resources available to meet water supply needs when planning for the sustainable utilization of the resource. Texas Water Code §36.1071 recognizes this need for a more comprehensive evaluation, and as such requires groundwater conservation districts to consider surface water resources available in the District and also water management strategies that are included in the most recently adopted state water plan, regardless of whether the original source is surface water or groundwater. Appendix E summarizes the projected surface water supplies in the District based on the 2022 State Water Plan, as provided by TWDB (2022). This table is organized by county and water user groups and provides projected values for every decade from 2020 to 2070.

Total projected surface water supplies by county are illustrated in Figure 15. The estimated projections range from a maximum of 156,936 acre-feet per year in 2020 to a minimum of 131,709 acre-feet per year in 2070 for Collin County, from a maximum of 3,429 acre-feet per year in 2070 to a minimum of 2,970 acre-feet per year in 2030 for Cooke County, and from a maximum of 144,135 acre-feet per year in 2020 to a minimum of 133,910 acre-feet per year in 2070 for Denton County. These values indicate very little projected surface water supplies in Cooke County. They also indicate that projected surface water supplies for the District, which are on the order of 270,000 acre-feet per year, are significantly greater than historical groundwater use in the District, which is on the order of 20,000 to 35,000 acre-feet per year for 2004 through 2019.

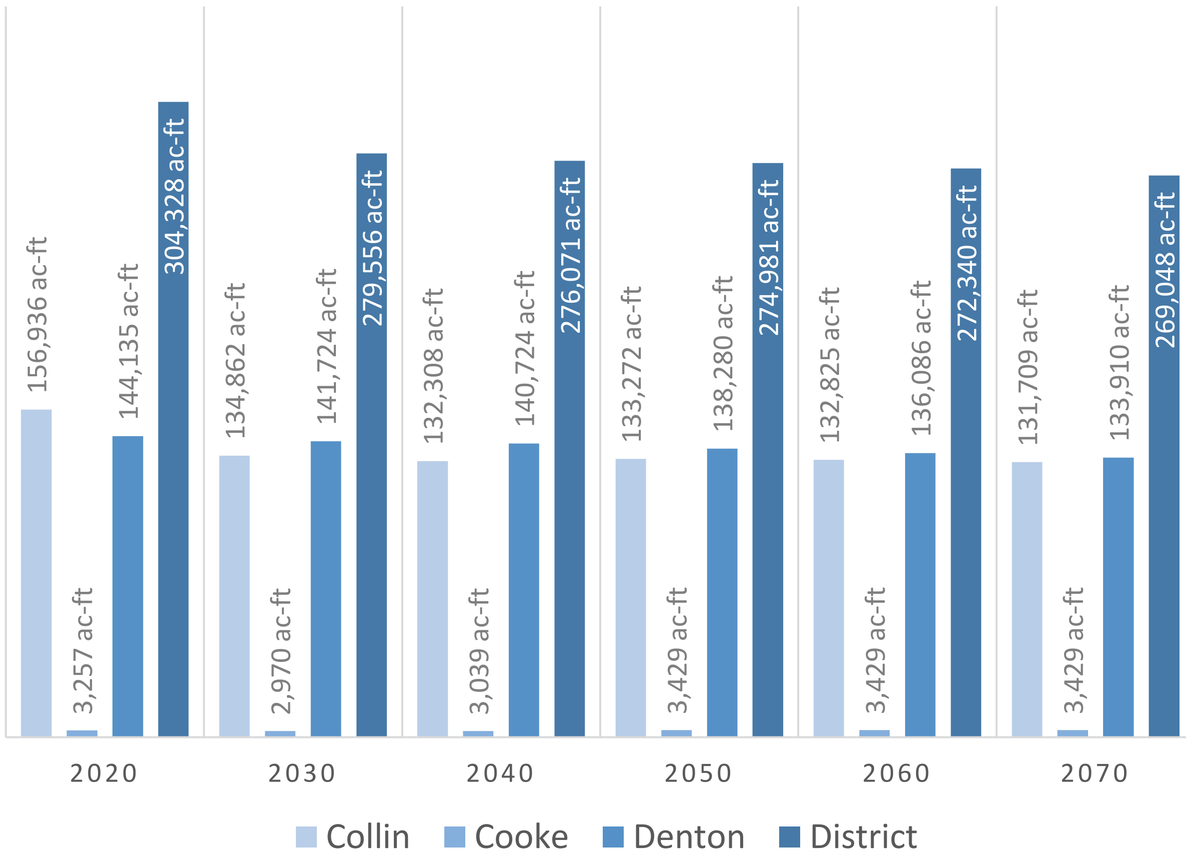



*Figure 15: Projected surface water supply within the District by county*

## PROJECTED TOTAL DEMAND FOR WATER IN THE DISTRICT

The analyses to develop water demand projections are primarily conducted in Texas as part of the regional water supply planning process (created by the 75th Texas Legislature through the passage of Senate Bill 1 in 1997). Water demand projections are developed for the following water user categories; municipal, rural (county-other), irrigation, livestock, manufacturing, mining, and steam-electric power generation.

Texas Water Code §36.1071(e)(3)(G) requires that a management plan include projections of the total demand for water (surface water and groundwater) from the most recently adopted state water plan. Water demand projections from the 2022 State Water Plan are presented in Appendix E. The projected total demand for the District increases significantly from 436,486 acre-feet per year in 2020 to 878,513 acre-feet per year in 2070. Projected demands are significantly higher in Collin and Denton counties than in Cooke County (Figure 16).

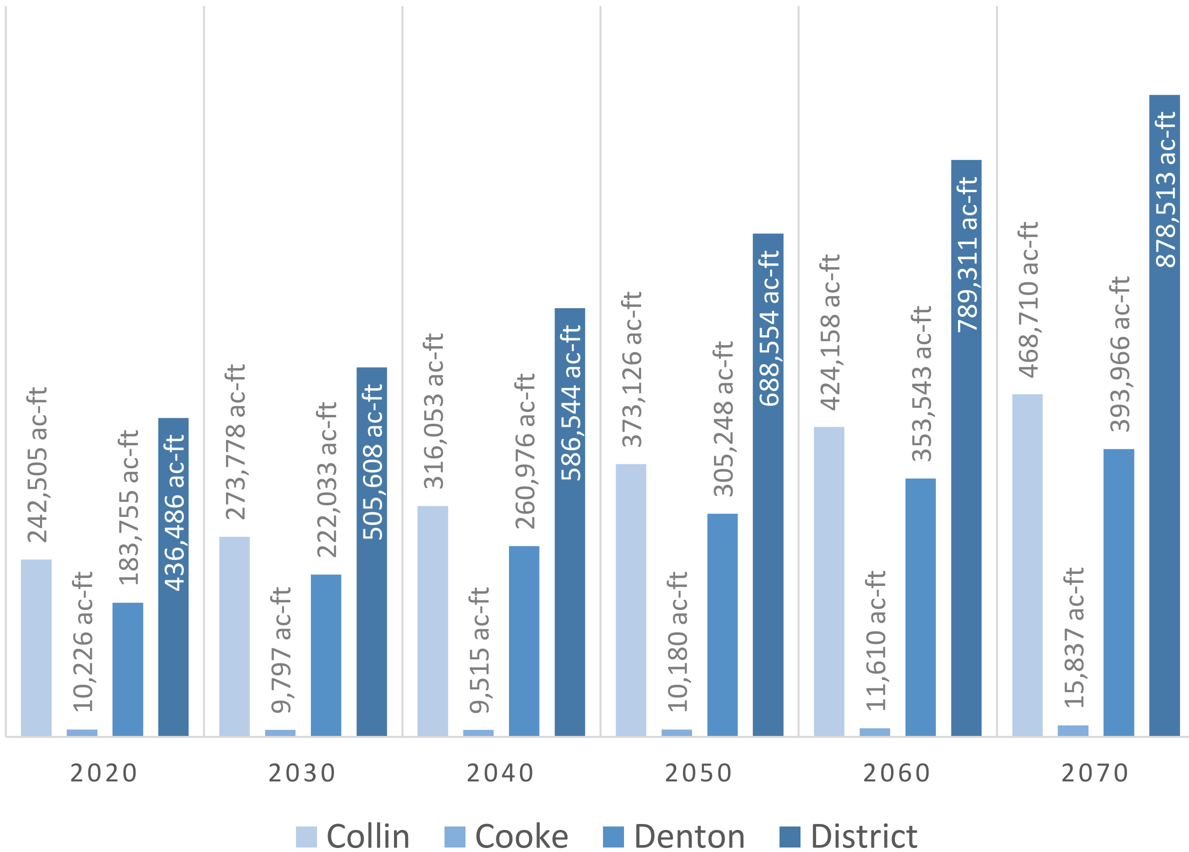



*Figure 16: Water demand projections within the District by county*

## Projected Water Supply Needs

Projected water needs for the counties in the District have been developed for inclusion in the 2022 State Water Plan. The projected water needs reflect the volume of water needed in the event of a drought of record based on projected water supplies and projected water demands. A need occurs when the projected water demand is greater than the projected water supply. Projected water needs were estimated for all water user groups for every decade from 2020 through 2070 on a county-basin level. Appendix E summarizes the projected water needs for the District based on the database for the 2022 State Water Plan received from TWDB (2022). Data in this table are organized by county, water user group, and basin. The projected total water needs by county are illustrated in Figure 17.

Data for the 2022 State Water Plan projects future water needs for all three of the counties in the District. There are 54 water user groups in Collin County. A water needs at some point between 2020 and 2070 is projected for all but seven of those water users groups. The projected need in Collin County increases significantly from 2,557 acre-feet per year in 2020 to 237,749 acre-feet per year in 2070. Of the 22 water user groups in Cooke County, a need at some point between

2020 and 2070 is projected for 15. The projected need in Cooke County increases from 588 acre-feet per year in 2020 to 5,922 acre-feet per year in 2070. Forty-six water user groups are listed for Denton County. Of those, a need at some point between 2020 and 2070 is projected for all but three of those water users groups. The need in Denton County significantly increases from 3,954 acre-feet per year in 2020 to 210,453 acre-feet per year in 2070. For the District as a whole, the total projected water needs increases from 7,099 acre-feet per year in 2020 to 454,124 acre-feet per year in 2070.

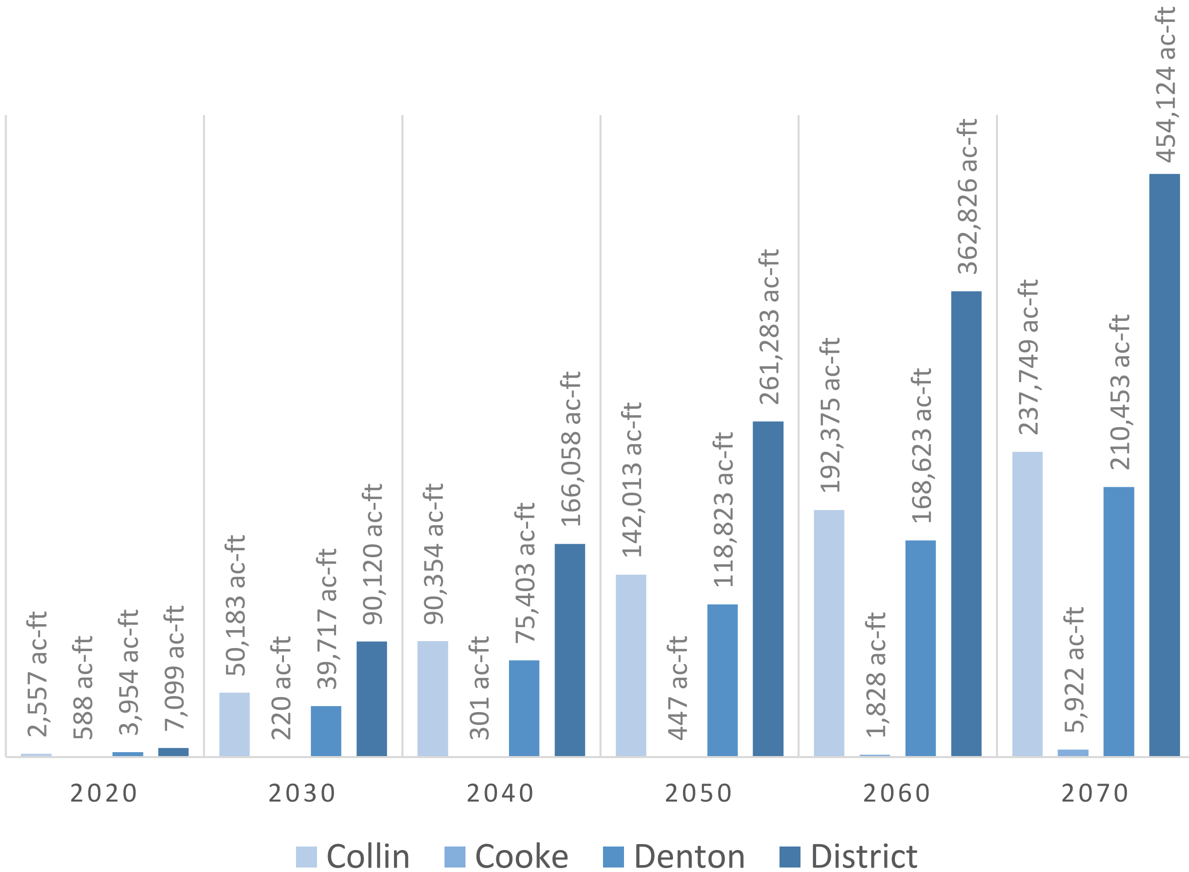



*Figure 17: Total projected water supply needs within the District by county*

## PROJECTED WATER MANAGEMENT STRATEGIES

The database for the 2022 State Water Plan also includes recommended water management strategies to meet the identified water needs in the District for every decade from 2020 through 2070. Potential strategies identified include conservation, water reuse, expansion, and improvement of existing water supplies, development of additional groundwater and surface water supplies, expansion of existing water treatment plants and construction of new water treatment plants, facility improvements, and purchase of water from water providers. The projected water management strategies for the counties in the District from the 2022 State Water Plan are shown in Appendix E by water user group ("WUG"). Table 3 includes all the water management strategies involving the groundwater resources within the District. The water management strategies involving groundwater resources consist of new wells for public water systems, manufacturing, and county-other or unallocated groundwater supply utilization for public water systems. These strategies where consider during the joint groundwater planning process.

*Table 3: Groundwater Management Strategies for the District.*

| *Water Management Strategy* | *Source Name [Origin]* | *2020* | *2030* | *2040* | *2050* | *2060* | *2070* |
|---|---|---|---|---|---|---|---|
| *Anna - New Well(s) in Woodbine Aquifer* | Woodbine Aquifer [Collin] | 200 | 200 | 200 | 200 | 200 | 200 |
| *Argyle WSC - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 250 | 250 | 250 | 250 | 250 | 250 |
| *Black Rock WSC - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 0 | 0 | 0 | 8 | 82 | 154 |
| *Bolivar WSC - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 232 | 232 | 233 | 234 | 234 | 235 |
| *County-Other, Denton - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 504 | 504 | 504 | 504 | 504 | 504 |
| *County-Other, Denton - New Well(s) in Woodbine Aquifer* | Woodbine Aquifer [Denton] | 817 | 817 | 817 | 817 | 817 | 817 |
| *Cross Timbers WSC - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 250 | 250 | 250 | 250 | 250 | 250 |
| *Gainesville - Unallocated Groundwater Supply Utilization* | Trinity Aquifer [Cooke] | 484 | 83 | 77 | 72 | 84 | 56 |
| *Justin - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 244 | 244 | 244 | 244 | 244 | 244 |
| *Krum - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 202 | 202 | 202 | 202 | 202 | 202 |
| *Manufacturing, Collin - New Well(s) in Woodbine Aquifer* | Woodbine Aquifer [Collin] | 0 | 78 | 78 | 78 | 78 | 78 |
| *Pilot Point - New Well(s) in Trinity Aquifer* | Trinity Aquifer [Denton] | 313 | 313 | 313 | 313 | 313 | 313 |
| *Verona SUD - New Well(s) in Woodbine Aquifer* | Woodbine Aquifer [Collin] | 0 | 31 | 90 | 176 | 235 | 286 |
| *Total (ac-ft)* | | *3,496* | *3,204* | *3,258* | *3,348* | *3,493* | *3,589* |

## Actions, Procedures, Performance, and Avoidance for Plan Implementation, and Management of Groundwater Supplies

In order to effectuate the District's management plan, the District continually works to develop, maintain, review, and update the District rules and procedures for the various activities contained in the management plan. In order to monitor performance, (a) the Board of Directors routinely meets to track progress on the various objectives and standards adopted in this management plan and (b) the General Manager prepares and submits an annual report documenting progress made towards implementation of the management plan to the Board of Directors for its review and approval. Also, as needed, and at least annually, the Board of Directors reviews District rules to ensure that all provisions necessary to implement the plan are contained in the rules. The Board of Directors will revise the rules as needed to manage and conserve groundwater resources within the

District more effectively and to ensure that the duties prescribed in Texas Water Code and other applicable laws are carried out.

The District is currently operating pursuant to a set of rules that became effective January 1, 2019 A copy of the District's rules may also be found on the District's website located at www.northtexasgcd.org/.

The District will work diligently to ensure that all citizens within the District's jurisdictional boundaries are treated as equitably as possible. The District, as needed, will seek the cooperation of federal, state, regional, and local water management entities in the implementation of this management plan and management of groundwater supplies.

The District will continue to enforce its rules to conserve, preserve, protect, and prevent the waste of groundwater resources within its jurisdiction. Texas Water Code Chapter 36.1071(a)(1-8) requires that all management plans contain the following management goals, as applicable:

- providing the most efficient use of groundwater;
- controlling and preventing waste of groundwater;
- controlling and preventing subsidence;
- addressing conjunctive surface water management issues;
- addressing natural resource issues;
- addressing drought conditions;
- addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost-effective; and
- addressing desired future conditions of the groundwater resources in a quantitative manner.

The following management goals, management objectives, and performance standards have been developed and adopted to ensure the management and conservation of groundwater resources within the District's jurisdiction.

## Methodology for Tracking District Progress in Achieving Management Goals

The District's General Manager and staff will prepare an annual report ("Annual Report") and will submit the Annual Report to members of the Board of the District. The Annual Report covers the activities of the District including information on the District's performance in regard to achieving the District's management goals and objectives. The Annual Report will be delivered to the Board following the completion of the District's fiscal year. A copy of the Annual Report will be kept on file and available for public inspection at the District's offices upon approval by the Board.

## Goals, Management Objectives and Performance Standards

The following goals, management objectives, and performance standards have been developed and adopted to ensure the management and conservation of groundwater resources within the District's jurisdiction.

For purposes of this management plan, an exempt well means wells that meet any one of the following, unless the context clearly provides otherwise: (1) any well that was applied for or existed prior to January 1, 2019 that is used solely for domestic use, livestock use, or poultry use; (2) any well that was applied for or existed prior to January 1, 2019 that does not have the capacity, as equipped, to produce more than 25 gallons per minute and is used in whole or in part for commercial, industrial, municipal, manufacturing, or public water supply use, use for oil or gas or other hydrocarbon exploration or production, or any other purpose of use other than solely for domestic, livestock, or poultry use, except that if the total sum of the capacities of wells that operate as part of a well system is greater than 25 gallons per minute, the well system and individual wells that are part of it are not considered to be exempt; (3) any new well applied for after January 1, 2019 that does not have the capacity, as equipped, to produce more than 17.36 gallons per minute; or (4) leachate wells, monitoring wells, and piezometers. All wells that do not meet one of these criteria are considered to be non-exempt for purposes of this management plan. The characterization of exempt and non-exempt wells is intended to apply only to wells described in this management plan and shall not be interpreted to mean that the wells will be considered exempt or not exempt from permitting under any rules adopted by the District in the future.

## GOAL 1: PROVIDING FOR THE MOST EFFICIENT USE OF GROUNDWATER

The District, through strategies and programs adopted in this management plan and rules, strives to ensure the most efficient use of groundwater in order to sustain available resources for the future while maintaining the vibrant economic growth of the District.

### 1. *WELL REGISTRATIONS*

*Management Objective:*

a. The District will require that all wells be registered in accordance with its current rules.
b. It is the goal of the District that all non-exempt wells and exempt wells be registered. In order to ensure that all wells required by District rules to be registered have been accurately registered the District's Field Technician manages a Field Inspections Program, with the objective of conducting field inspections of at least 60 wells per year. These inspections will confirm that a well has been registered, accuracy of well location, meet the District's spacing requirements, flow test the well to ensure the well meet the flowrate listed on the registration, accuracy of certain other required well registration information and ensure the well comply with the District's Rules.

*Performance Standard:*

a. The Board of Directors will receive quarterly briefings by the General Manager regarding the District's well registration program. These quarterly reports will be included in the Annual Report to the Board of Directors. In addition, a handout will be made available to local realtor associations detailing the benefits of new property owners registering their existing well in full complains of the District's Rules.
b. Quarterly briefings by the General Manager will be provided to the Board of Directors regarding the number of well sites inspected each month to confirm well registration requirements have been met. This information will also be included in the Annual Report to the Board of Directors.

## 2. *PERMITTING*

*Management Objective:*

a. Each year, the District will require permits for all non-exempt wells in the District in accordance with the District's Rules.
b. The District will continue developing methods for determining or evaluating permit requested annual amounts.
c. Any permit that exceeds their maximum amount authorized by the permit or rule will be subjected to penalties as outlined in Rule 9.8 of the District Rules.

*Performance Standard:*

a. The District will provide information on the approved permits in the Annual Report to the Board of Directors.
b. The District will work with industry experts to develop and evaluate the District's methods for determining or evaluating permit requested annual amounts. The District staff will report the progress in evaluating and developing the methods as needed to the Board of Directors.
c. The General Manager will report to the Board of Directors any violations of the permitted maximum amount as needed and the District will report on any violations in the Annual Report.

## 3. *GROUNDWATER MONITORING*

*Management Objective:*

a. In order to evaluate continually the effectiveness of the District's rules in meeting the goal of ensuring the efficient use of groundwater, the District will operate a groundwater monitoring program to collect information on the quantity and quality of groundwater resources throughout the District. This monitoring program is based on the establishment of a network of monitoring wells. In addition, one additional well will be added in each county, for a total of three new wells to the system in accordance with the District's well monitoring plan. For the purpose of water quality sampling, samples collected for water quality taken by Texas Commission on Environmental Quality staff every five years will be used for monitoring purposes initially and may be supplemented in the future as determined by the Board. All information collected in the monitoring program will be entered into the District's geodatabase. The results of the monitoring program will be included in the Annual Report presented by the General Manager.
b. In order to ensure the efficient use of groundwater, adequate data must be collected to facilitate groundwater availability modeling activities necessary to understand current groundwater resources and the projected availability of those resources in the future. Monitoring wells will be established by the District on a schedule determined by the Board of Directors as funds are available.

*Performance Standard:*

a. Track the number of wells in Collin, Cooke, and Denton counties for which water levels were measured per year as reported in the Annual Report presented by the General Manager to the Board of Directors.
b. Track the number of wells in Collin, Cooke, and Denton Counties for which water samples were collected for the testing of water quality: The Texas Commission on Environmental

Quality provides a Consumer Confidence Report that provides consumers with information about the quality of drinking water.

c. The wells for which water level data is available will be accessible online to the well owner.

This data may be reviewed at: www.tceq.texas.gov/drinkingwater/ccr/ for water systems.

## 4. METER REQUIREMENTS

*Management Objective:*

a. A critical component of the District's goal of ensuring the efficient use of groundwater is the collection of accurate water use information. The District's Rules require that all non-exempt wells be equipped with meters to measure the use of groundwater. The well owner/operator is responsible for maintaining a meter log with at least monthly records of water use. Cumulative water use is to be reported to the District by the well owner/operator quarterly. All water use information will be entered and maintained in the District's geodatabase. It is the objective of the District that 95 percent of all registered non-exempt wells will report water use by the reporting deadlines established in the District's rules.

b. In order to ensure that registered non-exempt wells have been equipped with District-approved meters and that water use is being accurately reported, the District Field Technician facilitates a meter inspection program to ensure that all registered non-exempt wells will be inspected on at least a five-year cycle by District personnel. These inspections will, at a minimum, verify proper installation and operational status of meters and record the meter reading at the time of inspection. This meter reading will be compared to the most recent water use report for the inspected well. Any potential violations of District rules regarding meter installation and reporting requirements will be reported to the Board of Directors at the next practicable meeting for consideration of possible enforcement actions. Annual water use will be included in the Annual Report presented by the General Manager to the Board of Directors.

*Performance Standard:*

a. Percent of registered non-exempt wells meeting reporting requirements of water use will be provided in the Annual Report to the Board of Directors.

b. Percentage of registered non-exempt wells inspected by District personnel annually is provided in the Annual Report presented by the General Manager.

## 5. ESTIMATING EXEMPT PRODUCTION

*Management Objective:* The District will quantify current and projected annual groundwater production from exempt wells.

*Performance Standard:* The District will provide the TWDB with its methodology and estimates of current and projected annual groundwater production from exempt wells. The District will also utilize the information in the future in developing and achieving desired future conditions and in developing and implementing its production allocation and permitting system and rules. Information related to implementation of this objective will be included in the Annual Report to the Board of Directors.

## Goal 2: Controlling and Preventing Waste of Groundwater

Another important goal of the District is to implement strategies that will control and prevent the waste of groundwater.

### 1. Outreach

*Management Objective:* The District will annually provide information to the public on eliminating and reducing wasteful practices in the use of groundwater by publishing information on groundwater waste reduction on the District's website.

*Performance Standard:* Information on groundwater waste reduction will be provided on the District's website and the information published on the website will be included in the District's Annual Report to be provided to the Board of Directors.

### 2. Water Use Fees

*Management Objective:* The District will encourage the elimination and reduction of groundwater waste through a collection of water-use fees for non-exempt production wells within the District.

*Performance Standard:* Annual reporting of the total fees paid, and total groundwater used by non-exempt wells will be included in the Annual Report provided to the Board of Directors.

### 3. Rule Enforcement

*Management Objective:*

a. The District will identify well owners that are not in compliance with District well registration, reporting, and fee payment requirements and bring them into compliance.
b. The District will investigate instances of potential waste of groundwater.

*Performance Standard:*

a. The District will compare existing state records and field staff observations with well registration database to identify noncompliant well owners.
b. District staff will report to Board of Directors as needed regarding potential waste of groundwater and include number of investigations in Annual Report.

## Goal 3: Controlling and Preventing Subsidence

The District has reviewed the TWDB report on Identification of the Vulnerability of the Major and Minor Aquifers of Texas to Subsidence with Regard to Groundwater Pumping (Furnans, et al., 2017) and used the provided Subsidence Prediction Tool located at http://www.twdb.texas.gov/groundwater/models/research/subsidence/subsidence.asp to evaluate the risk of subsidence within the District. The Woodbine Aquifer has a subsidence risk score of 4.5. For the Trinity Aquifer, three wells were used to evaluate the subsidence risk of the aquifer, and the evaluation determine a subsidence risk score between 7.03 and 7.81. The results of the evaluation can be found in Table 4. Based on the subsidence risk score, the District has a medium subsidence risk.

*Table 4: Subsidence Prediction Tool Results for Trinity Aquifer Wells in North Texas GCD.*

| *Well Owner* | *State Well ID* | *Aquifer Thickness (feet)* | *Clay Thickness (feet)* | *Subsidence Risk Score* | *Minimum Subsidence (feet)* | *Maximum Subsidence (feet)* |
|---|---|---|---|---|---|---|
| *Kiowa SUD* | 19-32-302 | 1,250 | 547 | 7.03 | 0.56 | 1.02 |
| *City of Celina* | 18-24-604 | 1,150 | 354 | 7.81 | 0.53 | 0.94 |
| *Camp Sweeney* | 19-24-603 | 800 | 267 | 7.19 | 1.01 | 1.95 |

According to Water-Level Declines in the Woodbine, Paluxy, and Trinity Aquifers of North-Central Texas (Mace, Dutton, & Nance, 1994), historical data collected south of the Dallas-Fort Worth area in Ellis County indicates that there has been no detectable land subsidence greater than measurement error between 1957 and 1991. Due to the medium subsidence risk and no detectable land subsidence in areas of large water decline in the Woodbine and Trinity aquifers, problems resulting from water level declines and any resulting subsidence are considered insignificant and as such, a goal addressing subsidence is not applicable. Any reported cases of subsidence will be investigated by the District and reported to the Board of Directors.

## GOAL 4: ADDRESSING CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES

Surface water resources represent a vital component in meeting current and future water demands in all water use sectors within the District. The District coordinates with surface water management entities within the region by designating a board member or the general manager to attend and coordinate on water supply and management issues with the Region C Water Planning Group.

### 1. REGION C WATER PLANNING GROUP

*Management Objective:* Each year, a representative of the District will participate in the regional water planning process by attending at least one of the Region C Water Planning Group meetings to encourage the development of surface water supplies to meet the needs of water user groups within the District.

*Performance Standard:* The attendance of the District representative at the Region C Water Planning Group meetings will be noted in the Annual Report provided to the Board of Directors.

### 2. OUTREACH

*Management Objective:* The General Manager of the District will monitor and participate in relevant stakeholder meetings concerning water resources relevant to the District such as Groundwater Management Area 8, Texas Water Development Board, and Texas Commission of Environment Quality stakeholder meetings.

*Performance Standard:* The General Manager of the District will monitor and participate in relevant stakeholder meetings that concern water resources relevant to the District. The meetings that are attended will be presented in the District’s Annual Report.

## Goal 5: Addressing Natural Resource Issues that Impact the Use and Availability of Groundwater and Which are Impacted by the Use of Groundwater

The District understands the important nexus between water resources and natural resources. The exploration and production of natural resources such as oil and gas along with mining efforts for road aggregate materials such as sand and gravel clearly represent potential management issues for the District. For example, improperly plugged oil and gas wells may provide a conduit for various hydrocarbon and drilling fluids to potentially migrate and contaminate groundwater resources in the District.

### 1. *Injection Well Monitoring*

*Management Objective:* The District has engaged a firm to monitor all injection well applications within the District and notify the General Manager of any potential impacts.

*Performance Standard:* General Manager will report to the Board of Directors any information provided by the consultant engaged to monitor injection well applications within the District to the Board of Directors and document the information in the Annual Report to the Board of Directors.

### 2. *Oil and Gas Wells*

*Management Objective:* The District will monitor compliance by oil and gas companies including water well registration, metering, production reporting, and fee payment requirements of the District's rules.

*Performance Standard:* As with other types of wells, instances of non-compliance by owners and operators of water wells for oil and gas activities will be reported to the Board of Directors as appropriate for enforcement action. A summary of such enforcement activities will be included in the Annual Report to the Board of Directors.

## Goal 6: Addressing Drought Conditions

### 1. *Outreach*

*Management Objective:* The District will make available through the District's website easily accessible drought information.

*Performance Standard:* Current drought conditions information from multiple resources including the Palmer Drought Severity Index (PDSI) map for the region is available to the public through the District's website at http://www.northtexasgcd.org/drought-management.html.

### 2. *Drought Contingency Plan*

*Management Objective:* The District will update as necessary the Drought Contingency Plan for the purpose to conserve, preserve, protect, and recharge the groundwater resources of Cooke, Collin and Denton Counties, and to prevent waste and degradation of quality of those groundwater resources. The plan will include initiation and determination of drought stages and water reduction goals for each stage.

*Performance Standard:* The District Staff will update the Board on the current drought stage and the Board will acted as necessary to initiate or terminate the various drought stages. A summary of such initiated and terminated drought stages will be included in the Annual Report to the Board of Directors.

## Goal 7: Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, and Brush Control

Texas Water Code §36.1071(a)(7) requires that a management plan include a goal that addresses conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control, where appropriate and cost-effective. The District has determined that a goal addressing recharge enhancement and precipitation enhancement is not appropriate or cost-effective, and therefore is not applicable to the District.

### 1. Conservation

*Management Objective:*

a. The primary goal, perhaps viewed as the "umbrella goal" of the District is to provide for and facilitate the conservation of groundwater resources within the District. The District will include a link on the District's website to the electronic library of water conservation resources supported by the Water Conservation Advisory Council. For example, one important resource available through this internet-based resource library is the Water Conservation Best Management Practices Guide developed by the Texas Water Conservation implementation Task Force. This Guide contains over 60 Best Management Practices for municipalities, industry, and agriculture that will be beneficial to water users in the District.
b. The District will provide educational curriculum regarding water conservation offered by the Texas Water Development Board (Major Rivers) to at least one elementary school in each county of the District.

*Performance Standard:*

a. Link to the electronic library of water conservation resources supported by the Water Conservation Advisory Council is available on the District's website at http://www.northtexasgcd.org/conservation-information.html.
b. Each year the District will seek to provide water conservation curriculum to at least one elementary school in each county within the District. The elementary schools for which the curriculum is provided will be listed in the Annual Report to the Board of Directors.

### 2. Rainwater Harvesting

*Management Objective:* Rainwater harvesting is assuming a viable role either as a supplemental water supply or as the primary water supply in both urban and rural areas of Texas. As a result, Texas has become internationally recognized for the widespread use and innovative technologies that have been developed, primarily through efforts at the TWDB. To ensure these educational materials are readily available to citizens in the District, a link to rainwater harvesting materials including system design specifications and water quality requirements will be maintained on the District's website at northtexasgcd.org/conservation-information.html.

*Performance Standard:* Link to rainwater harvesting resources at the TWDB is available on the District's website at northtexasgcd.org/conservation-information.html.

### 3. Brush Control

*Management Objective:* Educate public on importance of brush control as it relates to water table consumption.

*Performance Standard:* Link to information concerning brush control is available on the District's website at northtexasgcd.org/conservation-information.html.

## Goal 8: Addressing the Desired Future Conditions

The desired future conditions of the aquifers in Groundwater Management Area 8 represent average water levels in the various aquifers at the end of 50-years based on meeting current and projected groundwater supply needs. The Board of Directors has adopted a strategic approach that includes the adoption of this management plan and rules necessary to achieve the desired future conditions. This management plan and the companion rules have been designed as an integrated program that will systematically collect and review water data on water quantity, water quality, and water use, while at the same time, implementing public awareness and public education activities that will result in a better-informed constituency.

*Management Objective:* Statute requires GCDs to review, amend as necessary, and readopt management plans at least every five years. The General Manager will annually present a summary report on the status of achieving the adopted desired future conditions. Prior to the adoption date of the next management plan, the General Manager will work with the Board of Directors to conduct a focused review to determine if any elements of this management plan or rules need to be amended in order to achieve the adopted desired future conditions, or if the adopted desired future conditions need to be revised to better reflect the needs of the District.

*Performance Standard:*

a. The General Manager will include a summary report on the status of achieving the adopted desired future conditions in the Annual Report. This summary report will primarily be based on data collected from the District's groundwater monitoring program.
b. Comparison of annual water use versus estimates of modeled available groundwater established as a result of the adopted Desired Future Conditions shall be included in the Annual Report presented by the General Manager.

## REFERENCES


TWDB, 2022. Estimated Historical Water Use And 2022 State Water Plan Datasets: North Texas Groundwater Conservation District; dated January 20, 2022.

Ashworth, J. B., and Hopkins, J., 1995, Aquifers of Texas: Texas Water Development Board, Report 345, 69 p.

Baker, B., Duffin, G., Flores, R., and Lynch, T., 1990, Evaluation of water resources in part of north-central Texas: Texas Water Development Board, Report 318, 67 p.

Beach, J., 2019. Discussion of DFCs and MAGs numbers for submission to GMA 8 Presentation, North Texas Groundwater Conservation District October 8, 2019 Board of Directors Meeting.

Bene, J., Harden, B., O'Rourke, D., Donnelly, A., and Yelderman, J., 2004, Northern Trinity/Woodbine Groundwater Availability Model: contract report to the Texas Water Development Board by R.W. Warden and Associates, 391 p.

Boghici, R., 2016. GAM Run 21-001: North Texas Groundwater Conservation District Management Plan, Texas Water Development Board, 12 p.

George, P.G., Ph.D., Mace, R.E., Ph.D., and Petrossian, 2011. Aquifers of Texas, Texas Water Development Board Report 380, 172 p.

Hill, R. T., 1901, Geography and geology of the Black and Grand Prairies, Texas: U.S. Geological Survey 21st Annual Report, part 7, 666 p.

Kelley, V. A. and others, 2014. Updated Groundwater Availability Model of the Northern Trinity and Woodbine Aquifers. Austin (Texas): INTERA Incorporated.

Langley, L., 1999, Updated evaluation of water resources in part of north-central Texas: Texas Water Development Board, Report 349, 69 p.

Leggat, E. R., 1957, Geology and ground-water resources of Tarrant County, Texas: Texas Board of Water Engineers, Bulletin 5709, 187 p.

Mace, R. E., Dutton, A. R., and Nance, H. S., 1994, Water-level declines in the Woodbine, Paluxy, and Trinity aquifers of North-Central Texas: Gulf Coast Association of Geological Societies Transactions, vol. 44, p. 413-420.

Mullican, W.F., III, 2011, Technical Memorandum and Recommendations on Estimates of Managed Available Groundwater for Aquifers within the North Texas Groundwater Conservation District, 9 p.

Nordstrom, P. L., 1982 Occurrence, availability, and chemical quality of ground water in the Cretaceous aquifers of North-Central Texas, Volume 1: Report 269, Texas Department of Water Resources, 66 p.

Rein, H., and Hopkins, J., 2008, Explanation of the groundwater database and data entry: Texas Water Development Board, User Manual 50, 130 p.

Furnans, J., Keester, M., Colvin, D., Bauer, J., Gin, G., Danielson, V., . . . Snyder, G. (2017). Final Report: Identification of the Vulnerability of the Major and Minor Aquifers of Texas to Subsidence with Regard to Groundwater Pumping. Texas Water Development Board, 4-71 thru 4-79 & 4-222 thru 4-228.

Mace, R. E., Dutton, A. R., & Nance, H. S. (1994). Water-Level Declines in the Woodbine, Paluxy, and Trinity Aquifers of North-Central Texas. Transactions Of The Gulf Coast Association of Geological Societies, v. 44, 413-420.

# APPENDIX A: HEARING NOTICE

Proof of Publication

# APPENDIX B: EVIDENCE THAT THE MANAGEMENT PLAN WAS ADOPTED

# Meeting Agenda

Meeting Minutes

# APPENDIX C: EVIDENCE THAT THE DISTRICT COORDINATED DEVELOPMENT OF THE MANAGEMENT PLAN WITH THE SURFACE WATER MANAGEMENT ENTITIES

# Surface Water Management Entities Letter

Proof Letter Email/Mail

# APPENDIX D: GAM RUNS

# GAM Run 17-029 MAG: Modeled Available Groundwater for the Trinity, Woodbine, Edwards (Balcones Fault Zone), Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Groundwater Management Area 8

Jerry Shi, Ph.D., P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Department
(512) 463-5076
January 19, 2018

STATE OF TEXAS
JIANYOU SHI
GEOLOGY
11113
LICENSED
PROFESSIONAL GEOSCIENTIST

1/19/2018

*This page is intentionally left blank.*

# GAM RUN 17-029 MAG: MODELED AVAILABLE GROUNDWATER FOR THE TRINITY, WOODBINE, EDWARDS (BALCONES FAULT ZONE), MARBLE FALLS, ELLENBURGER-SAN SABA, AND HICKORY AQUIFERS IN GROUNDWATER MANAGEMENT AREA 8

Jerry Shi, Ph.D., P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Department
(512) 463-5076
January 19, 2018

## *EXECUTIVE SUMMARY:*

The Texas Water Development Board (TWDB) has calculated the modeled available groundwater estimates for the Trinity, Woodbine, Edwards (Balcones Fault Zone), Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Groundwater Management Area 8. The modeled available groundwater estimates are based on the desired future conditions for these aquifers adopted by groundwater conservation district representatives in Groundwater Management Area 8 on January 31, 2017. The district representatives declared the Nacatoch, Blossom, and Brazos River Alluvium aquifers to be non-relevant for purposes of joint planning. The TWDB determined that the explanatory report and other materials submitted by the district representatives were administratively complete on November 2, 2017.

The modeled available groundwater values for the following relevant aquifers in Groundwater Management Area 8 are summarized below:

- Trinity Aquifer (Paluxy) – The modeled available groundwater ranges from approximately 24,500 to 24,600 acre-feet per year between 2010 and 2070, and is

summarized by groundwater conservation districts and counties in Table 1, and by river basins, regional planning areas, and counties in Table 13.

- Trinity Aquifer (Glen Rose) – The modeled available groundwater is approximately 12,700 acre-feet per year between 2010 and 2070, and is summarized by groundwater conservation districts and counties in Table 2, and by river basins, regional planning areas, and counties in Table 14.
- Trinity Aquifer (Twin Mountains) – The modeled available groundwater ranges from approximately 40,800 to 40,900 acre-feet per year between 2010 and 2070, and is summarized by groundwater conservation districts and counties in Table 3, and by river basins, regional planning areas, and counties in Table 15.
- Trinity Aquifer (Travis Peak) – The modeled available groundwater ranges from approximately 93,800 to 94,000 acre-feet per year between 2010 and 2070, and is summarized by groundwater conservation districts and counties in in Table 4, and by river basins, regional planning areas, and counties in Table 16.
- Trinity Aquifer (Hensell) – The modeled available groundwater is approximately 27,300 acre-feet per year from 2010 to 2070, and is summarized by groundwater conservation districts and counties in Table 5, and by river basins, regional planning areas, and counties in Table 17.
- Trinity Aquifer (Hosston) – The modeled available groundwater ranges from approximately 64,900 to 65,100 acre-feet per year from 2010 to 2070, and is summarized by groundwater conservation districts and counties in Table 6, and by river basins, regional planning areas, and counties in Table 18.
- Trinity Aquifer (Antlers) – The modeled available groundwater ranges from approximately 74,500 to 74,700 acre-feet per year between 2010 and 2070, and is summarized by groundwater conservation districts and counties in Table 7, and by river basins, regional planning areas, and counties in Table 19.
- Woodbine Aquifer – The modeled available groundwater is approximately 30,600 acre-feet per year from 2010 to 2070, and is summarized by groundwater conservation districts and counties in Table 8, and by river basins, regional planning areas, and counties in Table 20.
- Edwards (Balcones Fault Zone) Aquifer – The modeled available groundwater is 15,168 acre-feet per year from 2010 to 2060, and is summarized by groundwater conservation districts and counties in Table 9, and by river basins, regional planning areas, and counties in Table 21.

- Marble Falls Aquifer – The modeled available groundwater is approximately 5,600 acre-feet per year from 2010 to 2070, and is summarized by groundwater conservation districts and counties in Table 10, and by river basins, regional planning areas, and counties in Table 22.
- Ellenburger-San Saba Aquifer – The modeled available groundwater is approximately 14,100 acre-feet per year between 2010 and 2070, and is summarized by groundwater conservation districts and counties in Table 11, and by river basins, regional planning areas, and counties in Table 23.
- Hickory Aquifer – The modeled available groundwater is approximately 3,600 acre-feet per year from 2010 to 2070, and is summarized by groundwater conservation districts and counties in Table 12, and by river basins, regional planning areas, and counties in Table 24.

The modeled available groundwater values for the Trinity Aquifer (Paluxy, Glen Rose, Twin Mountains, Travis Peak, Hensell, Hosston, and Antlers subunits), Woodbine Aquifer, and Edwards (Balcones Fault Zone) Aquifer are based on the official aquifer boundaries defined by the TWDB. The modeled available groundwater values for the Marble Falls, Ellenburger-San Saba, and Hickory aquifers are based on the modeled extent, as clarified by Groundwater Management Area 8 on October 9, 2017.

The modeled available groundwater values estimated for counties may be slightly different from those estimated for groundwater conservation districts because of the process for rounding the values. The modeled available groundwater values for the longer leap years (2020, 2040, and 2060) are slightly higher than shorter non-leap years (2010, 2030, 2050, and 2070).

## *REQUESTOR:*

Mr. Drew Satterwhite, General Manager of North Texas Groundwater Conservation District and Groundwater Management Area 8 Coordinator.

## *DESCRIPTION OF REQUEST:*

In a letter dated February 17, 2017, Mr. Drew Satterwhite provided the TWDB with the desired future conditions of the Trinity (Paluxy), Trinity (Glen Rose), Trinity (Twin Mountains), Trinity (Travis Peak), Trinity (Hensell), Trinity (Hosston), Trinity (Antlers), Woodbine, Edwards (Balcones Fault Zone), Marble Falls, Ellenburger-San Saba, and Hickory aquifers. The desired future conditions were adopted as Resolution No. 2017-01 on January 31, 2017 by the groundwater conservation district representatives in

Groundwater Management Area 8. The following sections present the adopted desired future conditions for these aquifers:

### Trinity and Woodbine Aquifers

The desired future conditions for the Trinity and Woodbine aquifers are expressed as water level decline or drawdown in feet over the planning period 2010 to 2070 relative to the baseline year 2009, based on a predictive simulation by Beach and others (2016).

The county-based desired future conditions for the Trinity Aquifer subunits, excluding counties in the Upper Trinity Groundwater Conservation District, are listed below (dashes indicate areas where the subunits do not exist and therefore no desired future condition was proposed):

| County | Adopted Desired Future Condition (feet of drawdown below 2009 levels) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
| Bell | — | 19 | 83 | — | 300 | 137 | 330 | — |
| Bosque | — | 6 | 49 | — | 167 | 129 | 201 | — |
| Brown | — | — | 2 | — | 1 | 1 | 1 | 2 |
| Burnet | — | — | 2 | — | 16 | 7 | 20 | — |
| Callahan | — | — | — | — | — | — | — | 1 |
| Collin | 459 | 705 | 339 | 526 | — | — | — | 570 |
| Comanche | — | — | 1 | — | 2 | 2 | 3 | 9 |
| Cooke | 2 | | — | — | — | | — | 176 |
| Coryell | — | 7 | 14 | — | 99 | 66 | 130 | — |
| Dallas | 123 | 324 | 263 | 463 | 348 | 332 | 351 | — |
| Delta | — | 264 | 181 | — | 186 | — | — | — |
| Denton | 22 | 552 | 349 | 716 | — | — | — | 395 |
| Eastland | — | — | — | — | — | — | — | 3 |
| Ellis | 61 | 107 | 194 | 333 | 301 | 263 | 310 | — |
| Erath | — | 1 | 5 | 6 | 19 | 11 | 31 | 12 |
| Falls | — | 144 | 215 | — | 462 | 271 | 465 | — |
| Fannin | 247 | 688 | 280 | 372 | 269 | — | — | 251 |
| Grayson | 160 | 922 | 337 | 417 | — | — | — | 348 |
| Hamilton | — | 2 | 4 | — | 24 | 13 | 35 | — |
| Hill | 20 | 38 | 133 | — | 298 | 186 | 337 | — |
| Hunt | 598 | 586 | 299 | 370 | 324 | — | — | — |

| County | Adopted Desired Future Condition (feet of drawdown below 2009 levels) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
| Johnson | 2 | -61 | 58 | 156 | 179 | 126 | 235 | — |
| Kaufman | 208 | 276 | 269 | 381 | 323 | 309 | 295 | — |
| Lamar | 38 | 93 | 97 | — | 114 | — | — | 122 |
| Lampasas | — | — | 1 | — | 6 | 1 | 11 | — |
| Limestone | — | 178 | 271 | — | 392 | 183 | 404 | — |
| McLennan | 6 | 35 | 133 | — | 471 | 220 | 542 | — |
| Milam | — | — | 212 | — | 345 | 229 | 345 | — |
| Mills | — | 1 | 1 | — | 7 | 2 | 13 | — |
| Navarro | 92 | 119 | 232 | — | 290 | 254 | 291 | — |
| Red River | 2 | 21 | 36 | — | 51 | — | — | 13 |
| Rockwall | 243 | 401 | 311 | 426 | — | — | — | — |
| Somervell | — | 1 | 4 | 31 | 51 | 26 | 83 | — |
| Tarrant | 7 | 101 | 148 | 315 | — | — | — | 148 |
| Taylor | — | — | — | — | — | — | — | 0 |
| Travis | — | — | 85 | — | 141 | 50 | 146 | — |
| Williamson | — | — | 77 | — | 173 | 74 | 177 | — |

The desired future conditions for the counties in the Upper Trinity Groundwater Conservation District are further divided into outcrop and downdip areas, and are listed below (dashes indicate areas where the subunits do not exist):

| Upper Trinity GCD County (crop) | Adopted Desired Future Conditions (feet of drawdown below 2009 levels) | | | |
|---|---|---|---|---|
| | Antlers | Paluxy | Glen Rose | Twin Mountains |
| Hood (outcrop) | — | 5 | 7 | 4 |
| Hood (downdip) | — | — | 28 | 46 |
| Montague (outcrop) | 18 | — | — | — |
| Montague (downdip) | — | — | — | — |
| Parker (outcrop) | 11 | 5 | 10 | 1 |
| Parker (downdip) | — | 1 | 28 | 46 |
| Wise (outcrop) | 34 | — | — | — |
| Wise (downdip) | 142 | — | — | — |

## Edwards (Balcones Fault Zone) Aquifer

The desired future conditions adopted by Groundwater Management Area 8 for the Edwards (Balcones Fault Zone) Aquifer are intended to maintain minimum stream and spring flows under the drought of record in Bell, Travis, and Williamson counties over the planning period 2010 to 2070. The desired future conditions are listed below:

| County | Adopted Desired Future Condition |
|---|---|
| Bell | Maintain at least 100 acre-feet per month of stream/spring flow in Salado Creek during a repeat of the drought of record |
| Travis | Maintain at least 42 acre-feet per month of aggregated stream/spring flow during a repeat of the drought of record |
| Williamson | Maintain at least 60 acre-feet per month of aggregated stream/spring flow during a repeat of the drought of record |

## Marble Falls, Ellenburger-San Saba, and Hickory Aquifers

The desired future conditions for the Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Brown, Burnet, Lampasas, and Mills counties are intended to maintain 90 percent of the aquifer saturated thickness over the planning period 2010 to 2070 relative to the baseline year 2009.

## Supplemental Information from Groundwater Management Area 8

After review of the explanatory report and model files, the TWDB emailed a request for clarifications to Mr. Drew Satterwhite on August 7, 2017. On September 8, 2017, Mr. Satterwhite provided the TWDB with a technical memorandum from James Beach, Jeff Davis, and Brant Konetchy of LBG-Guyton Associates. On October 9, 2017, Mr. Satterwhite sent the TWDB two emails with additional information and clarifications. The information and clarifications are summarized below:

a. For the Trinity and Woodbine aquifers, an additional error tolerance defined as five feet of drawdown between the adopted desired future condition and the simulated drawdown is included with the original error tolerance of five percent. Thus, if the drawdown from the predictive simulation is within five feet or five percent from the desired future condition, then the predictive simulation is considered to meet the desired future condition.

   Groundwater Management Area 8 provided a new MODFLOW-NWT well package, simulated head file, and simulated budget file on October 9, 2017. The TWDB determined that the distribution of pumping in the new model files was consistent with the explanatory report.

The TWDB evaluates if the simulated drawdown from the predictive simulation meets the desired future condition by county. However, Groundwater Management Area 8 also provided desired future conditions based on groundwater conservation district and the whole groundwater management area.

b. For the Edwards (Balcones Fault Zone) Aquifer in Bell, Travis, and Williamson counties, the coordinator for Groundwater Management Area 8 clarified that TWDB uses GAM Run 08-010 MAG by Anaya (2008) from the last cycle of desired future conditions with all associated assumptions including a baseline year of 2000.

c. For the Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Brown, Burnet, Lampasas, and Mills counties, Groundwater Management Area 8 adjusted the desired future condition from "maintain 90 percent of the saturated thickness" to "maintain *at least* 90 percent of the saturated thickness". Groundwater Management Area 8 also provided estimated pumping to use for the predictive simulation by TWDB.

d. The Trinity, Woodbine, and Edwards (Balcones Fault Zone) aquifers are based on the official aquifer boundary while the Marble Falls, Ellenburger-San Saba, and Hickory aquifers include the portions both inside and outside the official aquifer boundaries (modeled extent).

e. The sliver of the Edwards-Trinity (Plateau) Aquifer was declared to be non-relevant by Groundwater Management Area 8.

## *METHODS:*

The desired future conditions for Groundwater Management Area 8 are based on multiple criteria. For the Trinity and Woodbine aquifers, the desired future conditions are defined as water-level declines or drawdowns over the course of the planning period 2010 through 2070 relative to the baseline year 2009. The desired future conditions for the Edwards (Balcones Fault Zone) Aquifer are based on stream and spring flows under the drought of record over the planning period 2010 to 2070. For the Marble Falls, Ellenburger-San Saba, and Hickory aquifers, the desired future conditions are to maintain aquifer saturated thickness between 2010 and 2070 relative to the baseline year 2009. The methods to calculate the desired future conditions are discussed below.

### Trinity and Woodbine Aquifers

The desired future conditions for the Trinity and Woodbine aquifers in Groundwater Management Area 8 are based on a predictive simulation by Beach and others (2016), which used the groundwater availability model for the northern portion of the Trinity and Woodbine aquifers (Kelley and others, 2014). The predictive simulation contained 61 annual stress periods corresponding to 2010 through 2070, with an initial head equal to 2009 of the calibrated groundwater availability model. The desired future conditions are the drawdowns between 2009 and 2070.

Because the baseline year 2009 for the desired future conditions falls within the calibration period 1890 to 2012 of the groundwater availability model, the water levels for the baseline year have been calibrated to observed data and, thus, they were directly used as the initial water level (head) condition of the predictive simulation.

The drawdowns between 2009 and 2070 are calculated from composite heads. Appendix A presents additional details on methods used to calculate composite head and associated average drawdown values for the Trinity and Woodbine aquifers.

### Edwards (Balcones Fault Zone) Aquifer

Per Groundwater Management Area 8 (clarification dated September 1, 2017), the results from GAM Run 08-010 MAG by Anaya (2008) are used for the current round of joint planning. The following summarizes the approach used:

- Ran the model for 141 years, starting with a 100-year initial stress period (pre-1980) followed by 21 years of historical monthly stress periods (1980 to 2000), then 10 years of predictive annual stress periods (2001 to 2010), and ending with 10 years of predictive monthly stress periods (2011 to 2020) to represent a simulated repeat of the 1950s' drought of record.

- Used pumpage and recharge distributions provided to TWDB by the Groundwater Management Area 8 consultant.

- Adjusted pumpage in Williamson County to meet the desired future conditions.

- Extracted projected discharge for drain cells representing Salado Creek in Bell County and drain cells representing aggregated springs and streams in Williamson and Travis counties, respectively, for each of the stress periods from 2011 through 2020 to verify that the desired future conditions were met.

- Determined which stress period reflected the worst case monthly scenario for Salado Springs during a repeat of the 1950s' drought of record.

- Generated modeled available groundwater for all three desired future conditions based on the lowest monthly springflow volume for Salado Springs during a simulated repeat of the 1950s' drought of record.

### Marble Falls, Ellenburger-San Saba, and Hickory Aquifers

The TWDB constructed a predictive simulation to analyze the desired future conditions for the Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Brown, Burnet, Lampasas, and Mills counties within Groundwater Management Area 8. This simulation used the groundwater availability model for the minor aquifers in the Llano Uplift region by Shi and others (2016). The predictive simulation contains 61 annual stress periods corresponding to the planning period 2010 through 2070 with an initial head condition from 2009.

Because the baseline year 2009 for the desired future conditions falls within the model calibration period 1980 to 2010, and the water levels for the baseline year have been calibrated to observed data, the simulated head from 2009 of the calibrated groundwater availability model was directly used as the initial water level (head) condition of the predictive simulation.

Additional details on the predictive simulation and methods to estimate the drawdowns between 2009 and 2070 are described in Appendix B.

### Modeled Available Groundwater

Once the predictive simulations met the desired future conditions, the modeled available groundwater values were extracted from the MODFLOW cell-by-cell budget files. Annual pumping rates were then divided by county, river basin, regional water planning area, and groundwater conservation district within Groundwater Management Area 8 (Figures 1 through 13 and Tables 1 through 24).

### Modeled Available Groundwater and Permitting

As defined in Chapter 36 of the Texas Water Code, "modeled available groundwater" is the estimated average amount of water that may be produced annually to achieve a desired future condition. Groundwater conservation districts are required to consider modeled available groundwater, along with several other factors, when issuing permits in order to manage groundwater production to achieve the desired future condition(s). The other factors districts must consider include annual precipitation and production patterns, the estimated amount of pumping exempt from permitting, existing permits, and a reasonable estimate of actual groundwater production under existing permits.

## *PARAMETERS AND ASSUMPTIONS:*

The parameters and assumptions for the groundwater availability simulations are described below:

### Trinity and Woodbine Aquifers

- Version 2.01 of the updated groundwater availability model for the northern Trinity and Woodbine aquifers by Kelley and others (2014) was used to construct the predictive model simulation for this analysis (Beach and others, 2016).
- The predictive model was run with MODFLOW-NWT (Niswonger and others, 2011).
- The model has eight layers that represent units younger than the Woodbine Aquifer and the shallow outcrop of all aquifers (Layer 1), the Woodbine Aquifer (Layer 2), the Fredericksburg and Washita units (Layer 3), and various combinations of the subunits that comprise the Trinity Aquifer (Layers 4 to 8).
- Multiple model layers could represent an aquifer where it outcrops. For example, the Woodbine Aquifer could span Layers 1 to 2 and the Trinity Aquifer (Hosston) could contain Layers 1 through 8. The aquifer designation in model layers was defined in the model grid files produced by TWDB.
- The predictive model simulation contains 61 transient annual stress periods with an initial head equal to 2009 of the calibrated groundwater availability model.
- The predictive simulation had the same hydrogeological properties and hydraulic boundary conditions as the calibrated groundwater availability model except groundwater recharge and pumping.
- The groundwater recharge for the predictive model simulation was the same as stress period 1 of the calibrated groundwater availability model (steady state period) except stress periods representing 2058 through 2060, which contained lower recharge representing severe drought conditions.
- In the predictive simulation, additional pumping was added to certain counties and some pumping in Layer 1 was moved to lower layer(s) to avoid the automatic pumping reduction enacted by the MODFLOW-NWT code (Beach and others, 2016).

- During the predictive simulation model run, some model cells went dry (Appendix C). Dry cells occur during a model run when the simulated water level in a cell falls below the bottom of the cell.
- Estimates of modeled drawdown and available groundwater from the model simulation were rounded to whole numbers.

### Edwards (Balcones Fault Zone) Aquifer

- Version 1.01 of the groundwater availability model for the northern segment of the Edwards (Balcones Fault Zone) Aquifer (Jones, 2003) was used to construct the predictive model simulation for the analysis by Anaya (2008).
- The model has one layer that represents the Edwards (Balcones Fault Zone) Aquifer.
- The model was run with MODFLOW-96 (Harbaugh and McDonald, 1996).
- The predictive model simulation contains the calibrated groundwater availability model (253 monthly stress periods), stabilization (10 annual stress periods), and drought conditions (120 monthly stress periods).
- The boundary conditions for the stabilization and drought periods (except recharge and pumping) were the same in the predictive simulation as the last stress period (stress period 253) of the calibrated groundwater availability model.
- The groundwater recharge for the stabilization and drought periods and pumping information were from Groundwater Management Area 8 consultant.
- The groundwater pumping in Williamson County was adjusted as needed during the predictive model run simulation to match the desired future conditions.
- Estimates of modeled spring and stream flows from the model simulation were rounded to whole numbers.

### Marble Falls, Ellenburger-San Saba, and Hickory Aquifers

- Version 1.01 of the groundwater availability model for the minor aquifers in Llano Uplift region by Shi and others (2016) was used to develop the predictive model simulation used for this analysis.
- The model has eight layers: Layer 1 (the Trinity Aquifer, Edwards-Trinity (Plateau) Aquifer, and younger alluvium deposits), Layer 2 (confining units), Layer 3 (the Marble Falls Aquifer and equivalent unit), Layer 4 (confining units), Layer 5 (Ellenburger-San Saba Aquifer and equivalent unit), Layer 6 (confining units), Layer 7 (the Hickory Aquifer and equivalent unit), and Layer 8 (Precambrian units).

- The model was run with MODFLOW-USG beta (development) version (Panday and others, 2013).
- The predictive model simulation contains 61 annual stress periods (2010 to 2070) with the initial head equal to 2009 of the calibrated groundwater availability model.
- The boundary conditions for the predictive model except recharge and pumping were the same in the predictive simulation of the last stress period of the calibrated groundwater availability model.
- The groundwater recharge for the predictive model simulation was set equal to the average of all stress periods (1982 to 2010) of the calibrated model except the first stress period.
- The groundwater pumping was initially set to the last stress period of the calibrated groundwater availability model. Additional pumping per county was then added to the model cells of the three aquifers based on the modeled extent to match the total pumping data for each aquifer provided by Groundwater Management area 8.
- During the predictive model run, some active model cells went dry (Appendix D). Dry cells occur during a model run when the simulated water level in a cell falls below the bottom of the cell.
- Estimates of modeled saturated aquifer thickness values were rounded to one decimal point.

## *RESULTS:*

The modeled available groundwater for the Trinity Aquifer (Paluxy) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 24,499 acre-feet per year for the non-leap (shorter) years (2010, 2030, 2050, and 2070) to 24,565 acre-feet per year for the leap (longer) years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 1. Table 13 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Trinity Aquifer (Glen Rose) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 12,701 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 12,736 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 2. Table 14 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Trinity Aquifer (Twin Mountains) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 40,827 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 40,939 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 3. Table 15 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Trinity Aquifer (Travis Peak) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 93,757 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 94,016 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 4. Table 16 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Trinity Aquifer (Hensell) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 27,257 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 27,331 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 5. Table 17 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Trinity Aquifer (Hosston) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 64,922 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 65,098 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 6. Table 18 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Trinity Aquifer (Antlers) that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 74,471 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 74,677 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 7. Table 19 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Woodbine Aquifer that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 30,554 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 30,636 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 8. Table 20 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Edwards (Balcones Fault Zone) Aquifer that achieves the desired future condition adopted by Groundwater Management Area 8 remains at 15,168 acre-feet per year from 2010 to 2060. The modeled available groundwater is summarized by groundwater conservation district and county in Table 9. Table 21 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Marble Falls Aquifer that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 5,623 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 5,639 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 10. Table 22 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Ellenburger-San Saba Aquifer that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 14,050 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 14,089 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 11. Table 23 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

The modeled available groundwater for the Hickory Aquifer that achieves the desired future condition adopted by Groundwater Management Area 8 ranges from 3,574 acre-feet per year for the non-leap years (2010, 2030, 2050, and 2070) to 3,585 acre-feet per year for the leap years (2020, 2040, and 2060). The modeled available groundwater is summarized by groundwater conservation district and county in Table 12. Table 24 summarizes the modeled available groundwater by county, river basin, and regional water planning area for use in the regional water planning process.

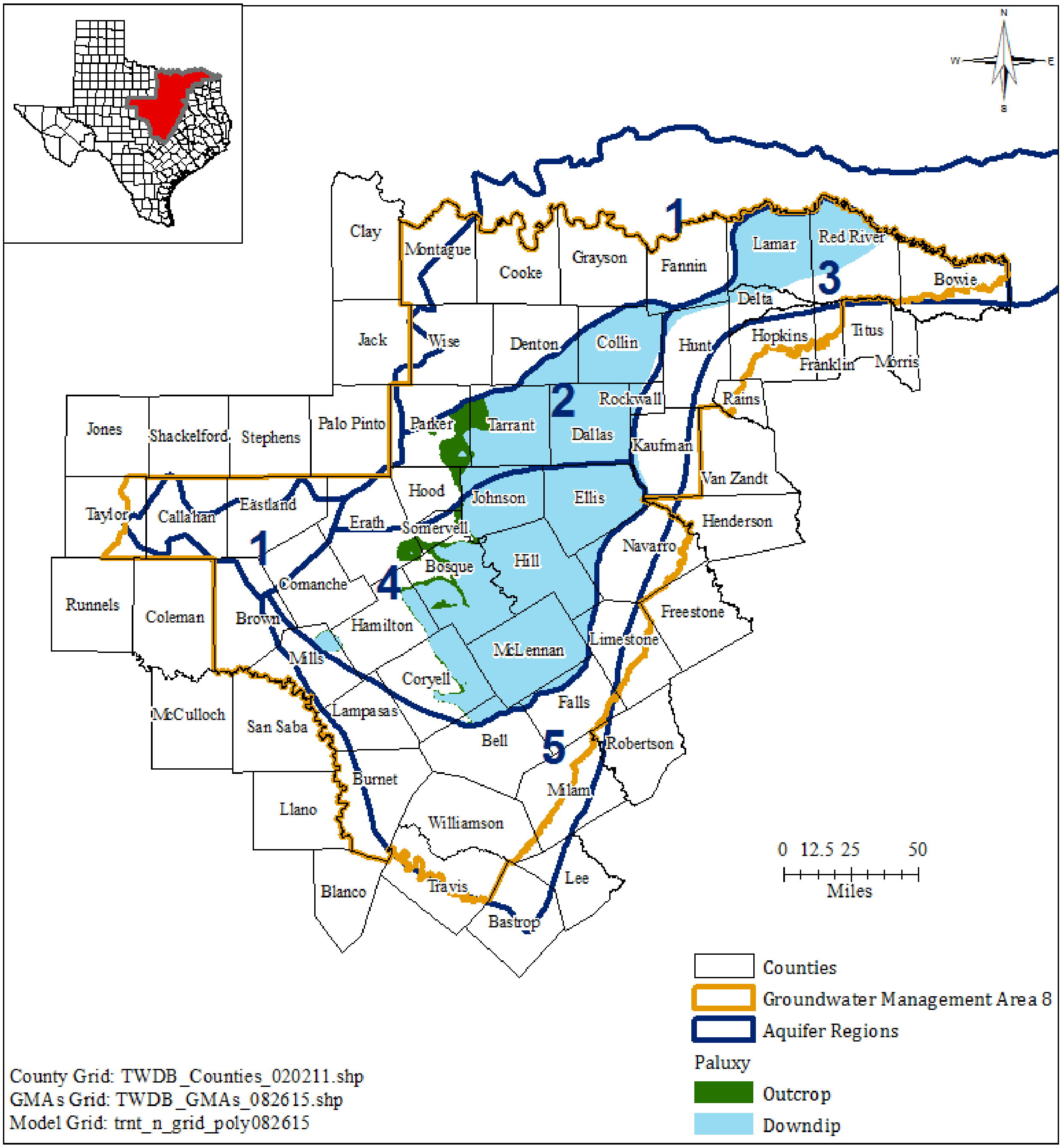



**FIGURE 1. MAP SHOWING THE TRINITY AQUIFER (PALUXY) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

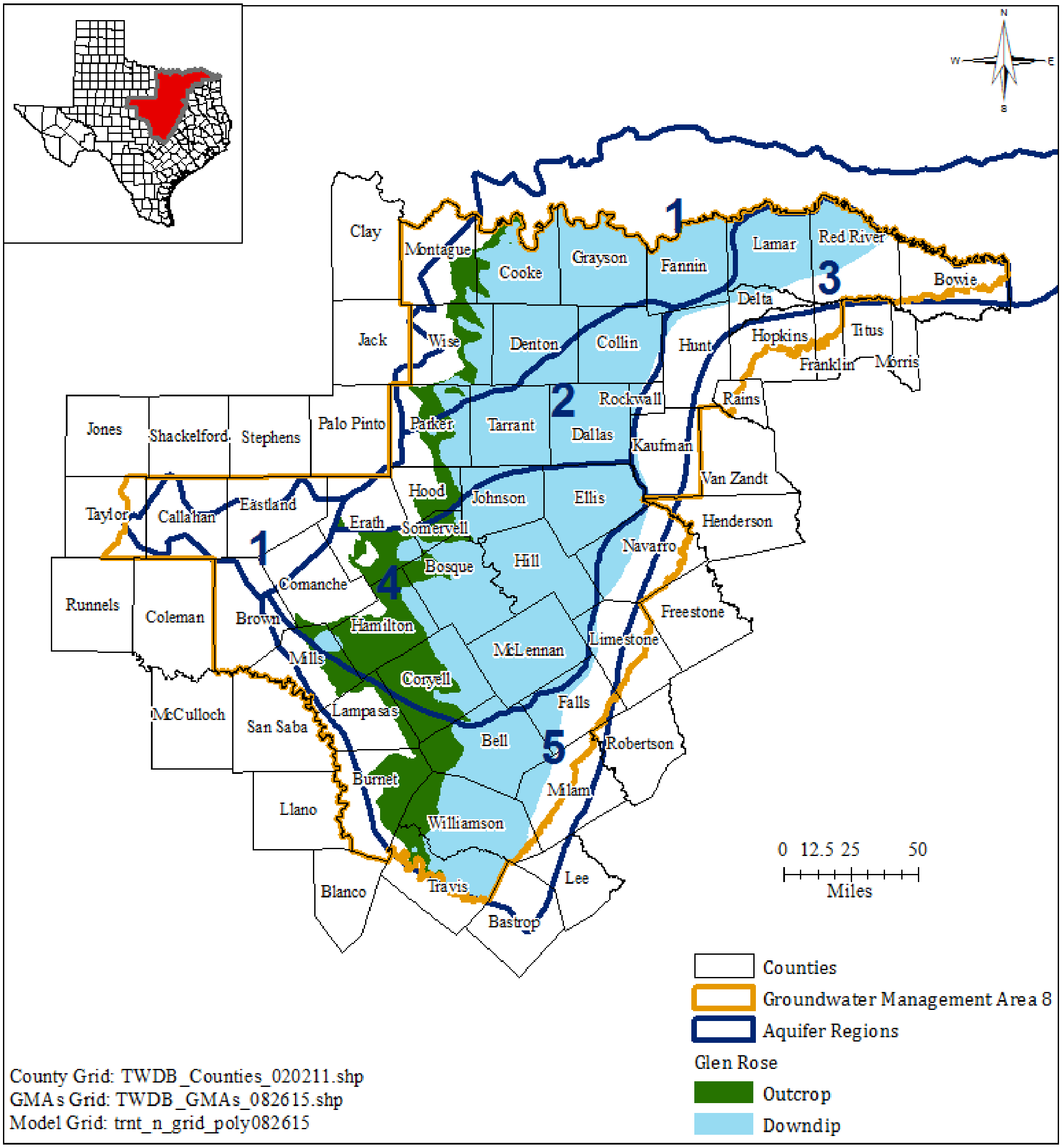



**FIGURE 2. MAP SHOWING THE TRINITY AQUIFER (GLEN ROSE) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

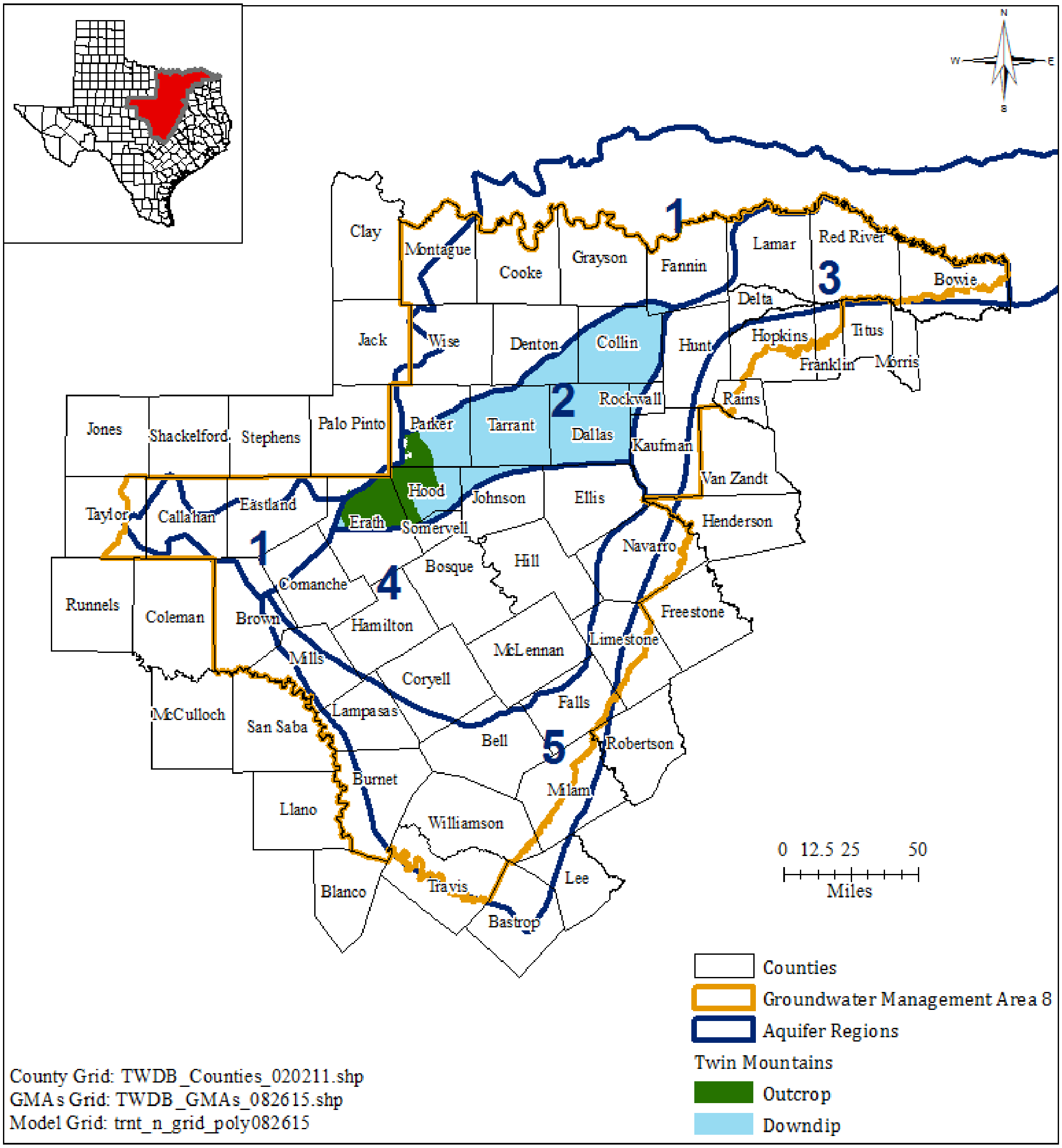



**FIGURE 3. MAP SHOWING THE TRINITY AQUIFER (TWIN MOUNTAINS) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

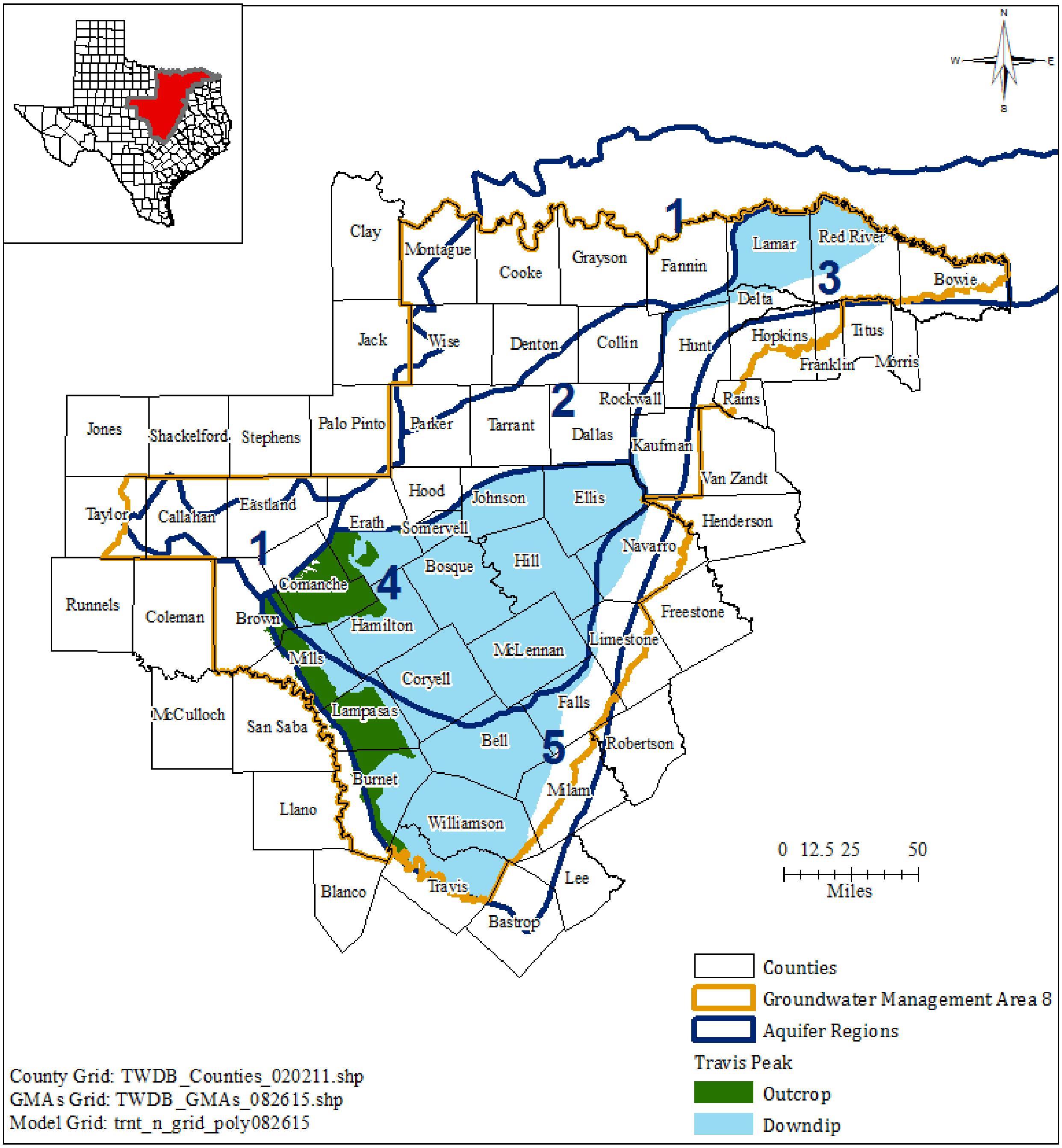



**FIGURE 4.** MAP SHOWING THE TRINITY AQUIFER (TRAVIS PEAK) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.

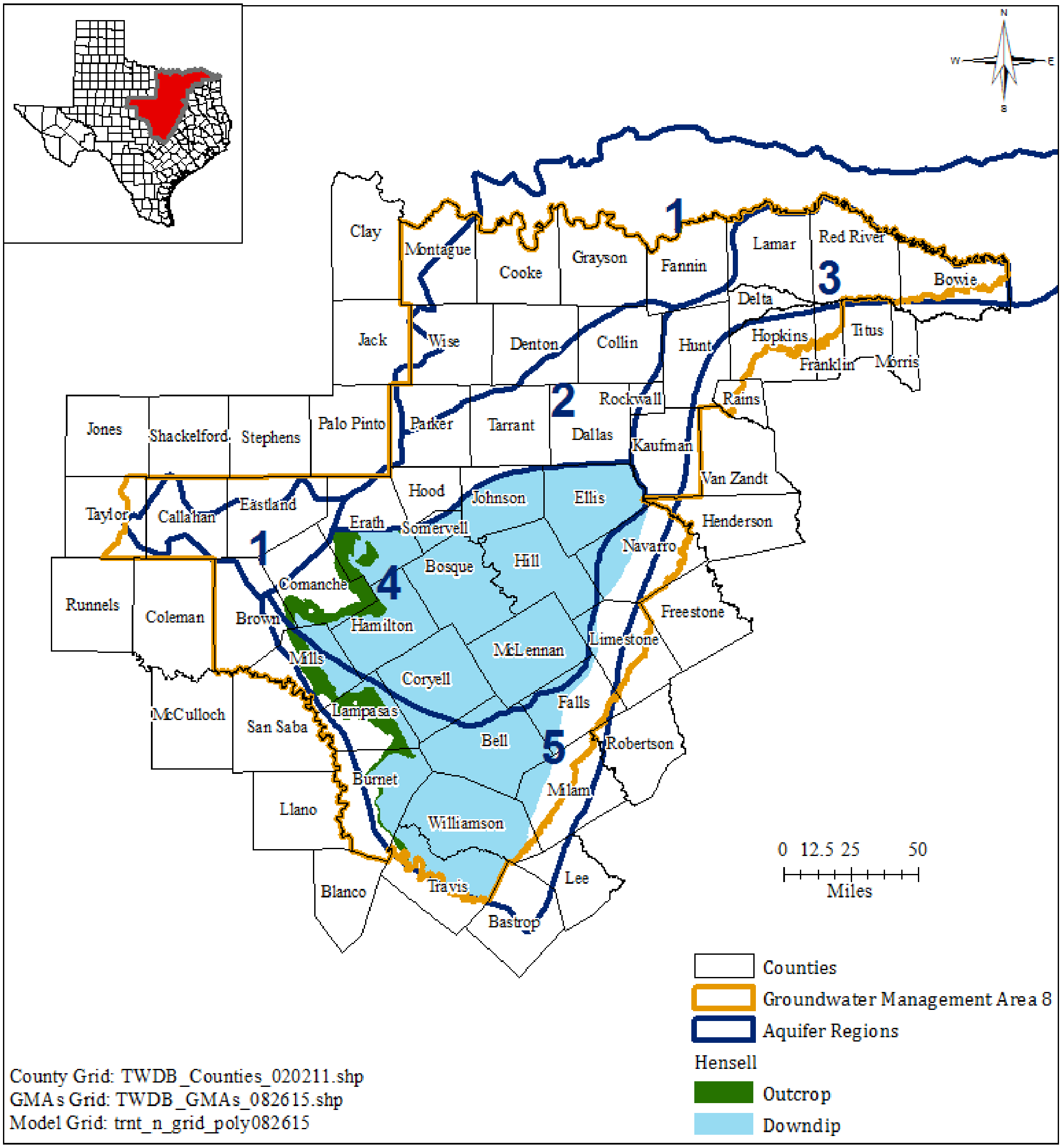



**FIGURE 5. MAP SHOWING THE TRINITY AQUIFER (HENSELL) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

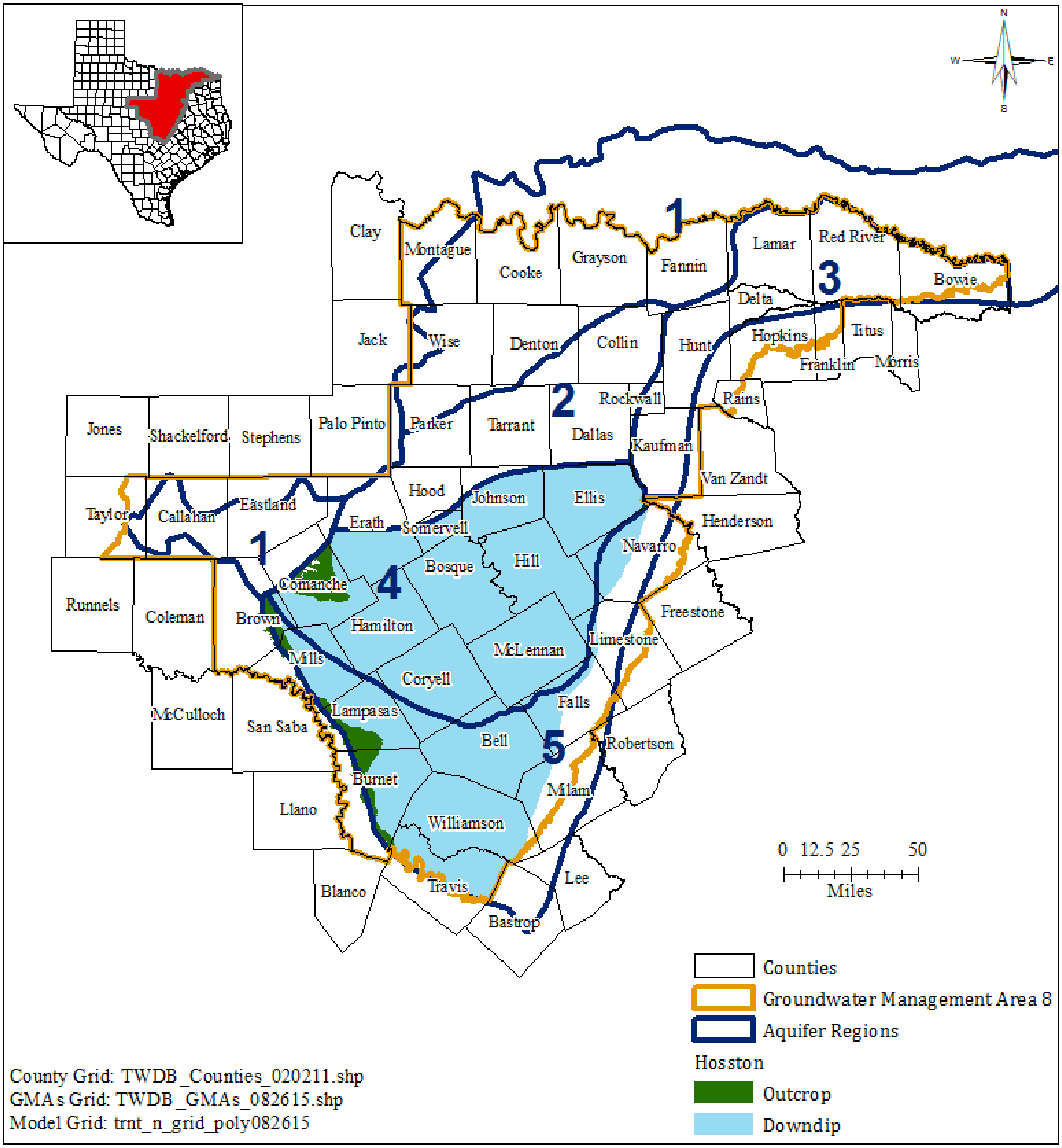



**FIGURE 6. MAP SHOWING THE TRINITY AQUIFER (HOSSTON) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

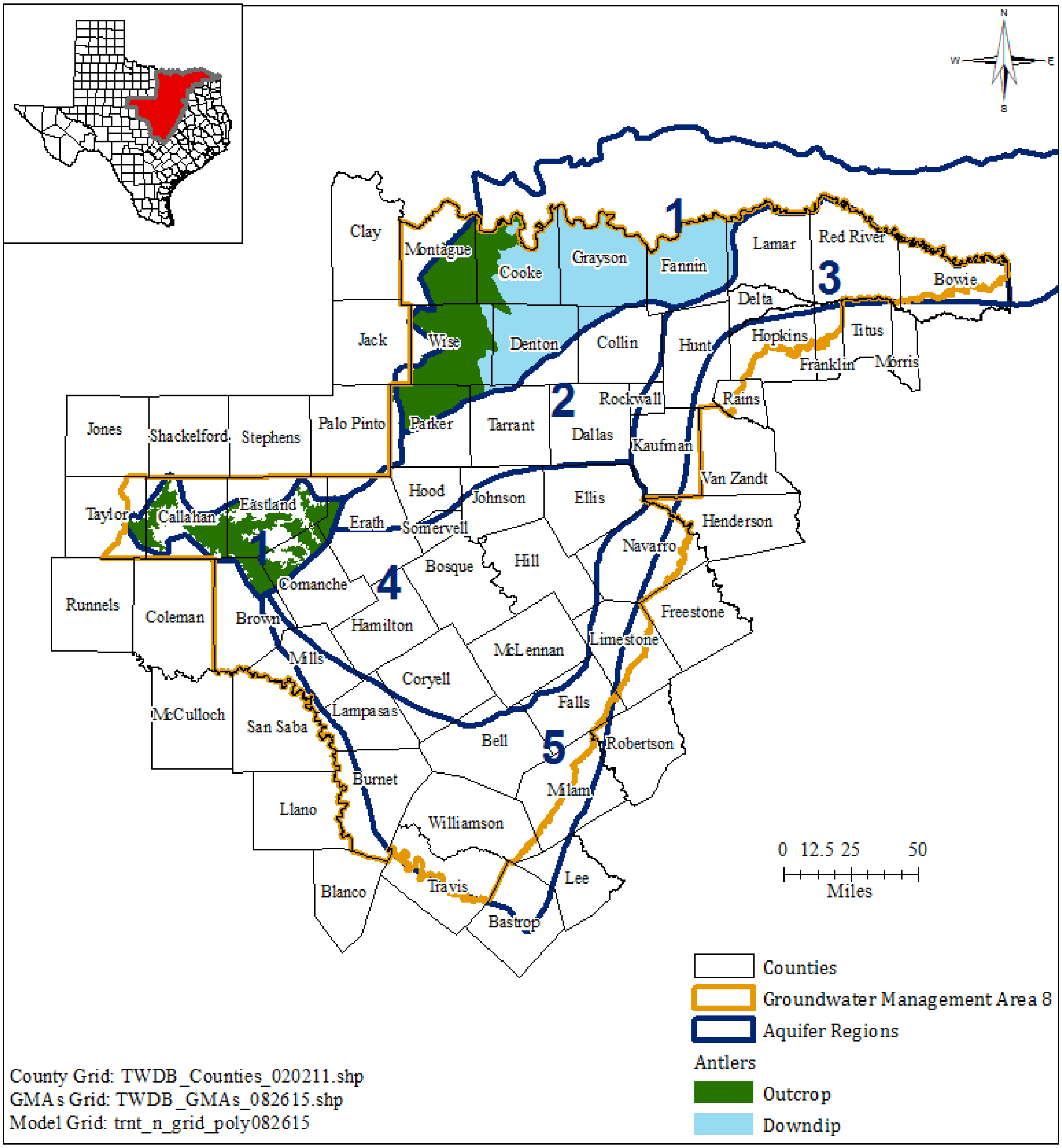



**FIGURE 7. MAP SHOWING THE TRINITY AQUIFER (ANTLERS) WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

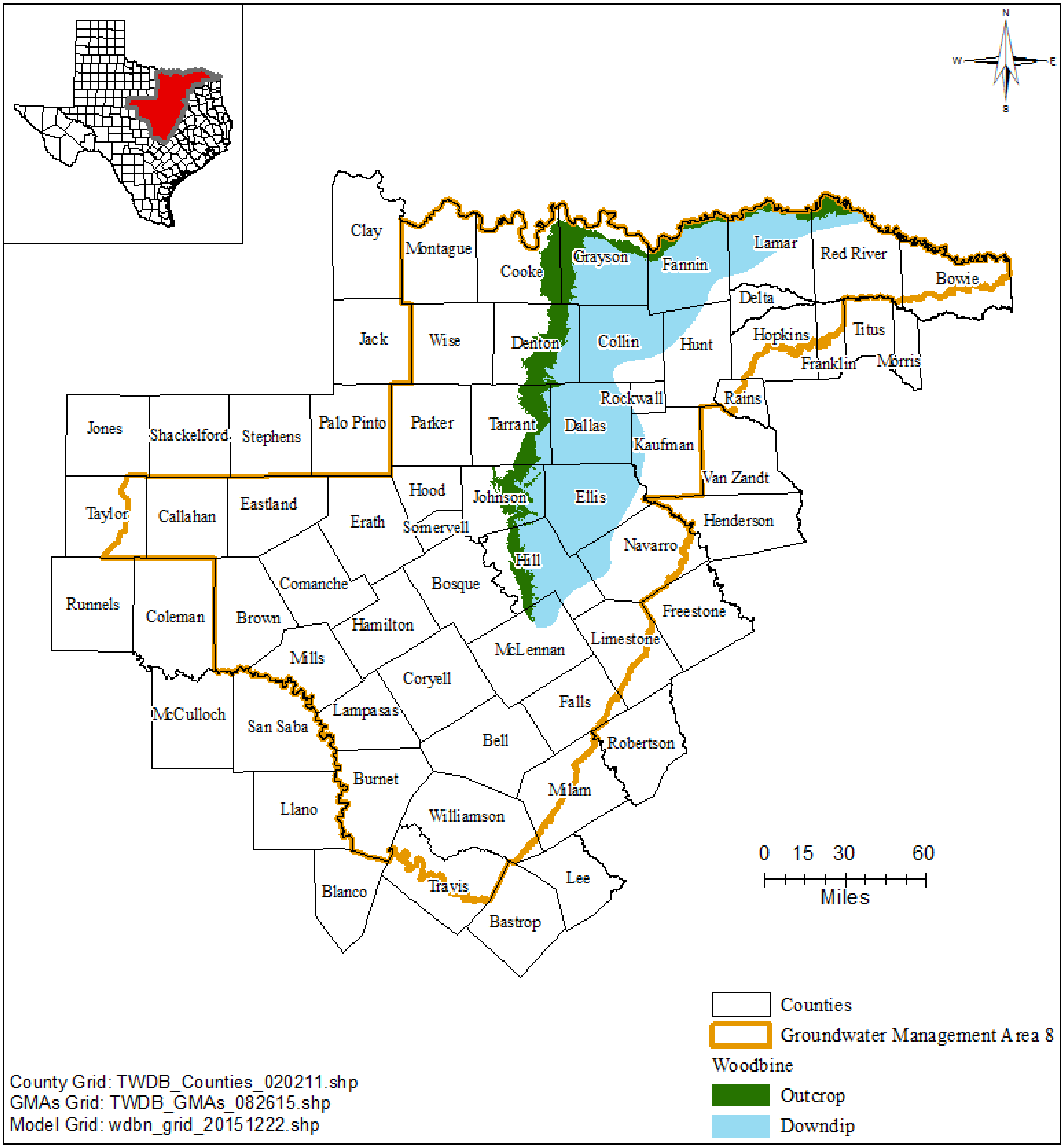



**FIGURE 8.** **MAP SHOWING THE WOODBINE AQUIFER WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AND WOODBINE AQUIFERS.**

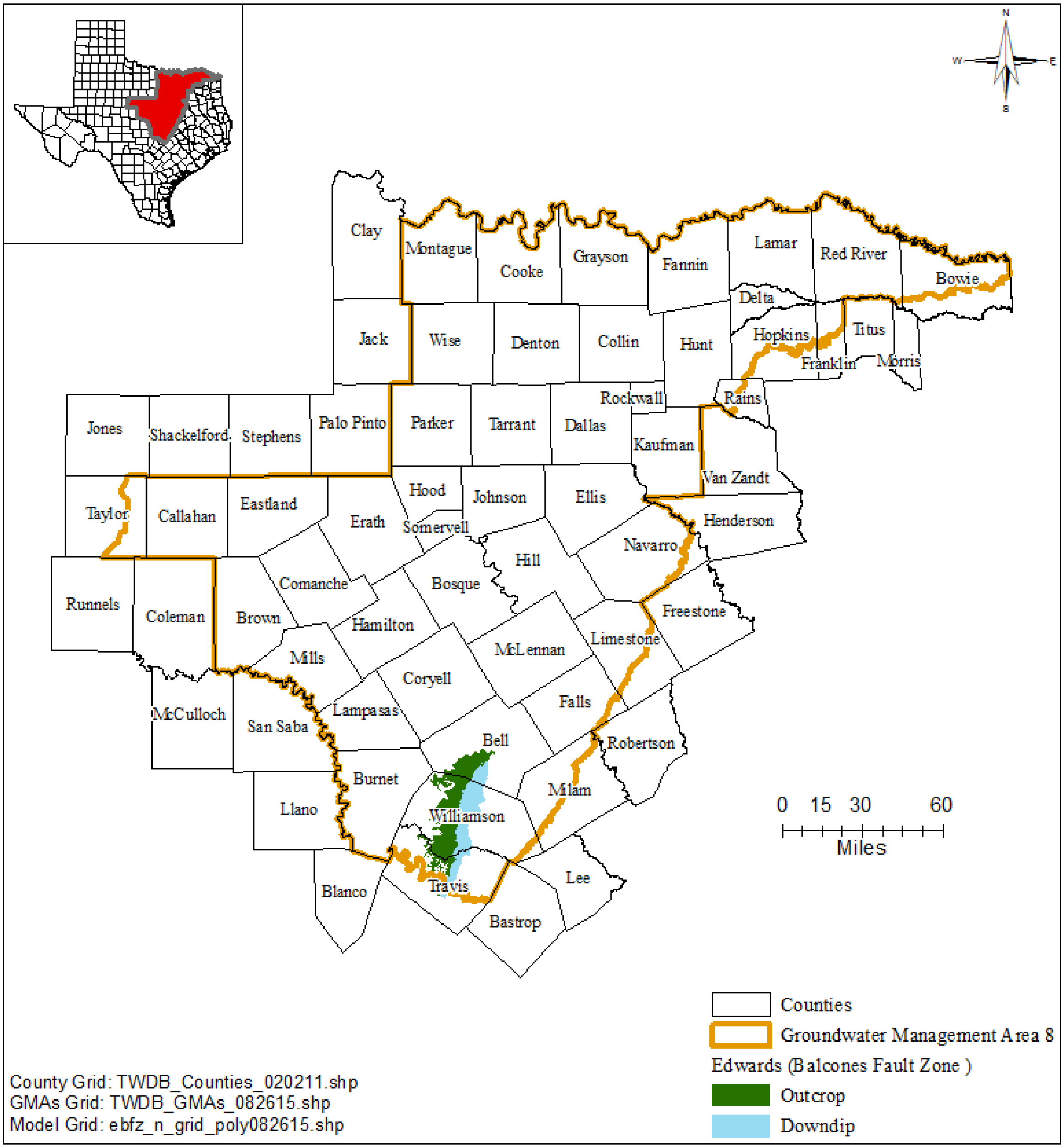



**FIGURE 9.** **MAP SHOWING THE EDWARDS (BALCONES FAULT ZONE) AQUIFER WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN SEGMENT OF THE EDWARDS (BALCONES FAULT ZONE) AQUIFER.**

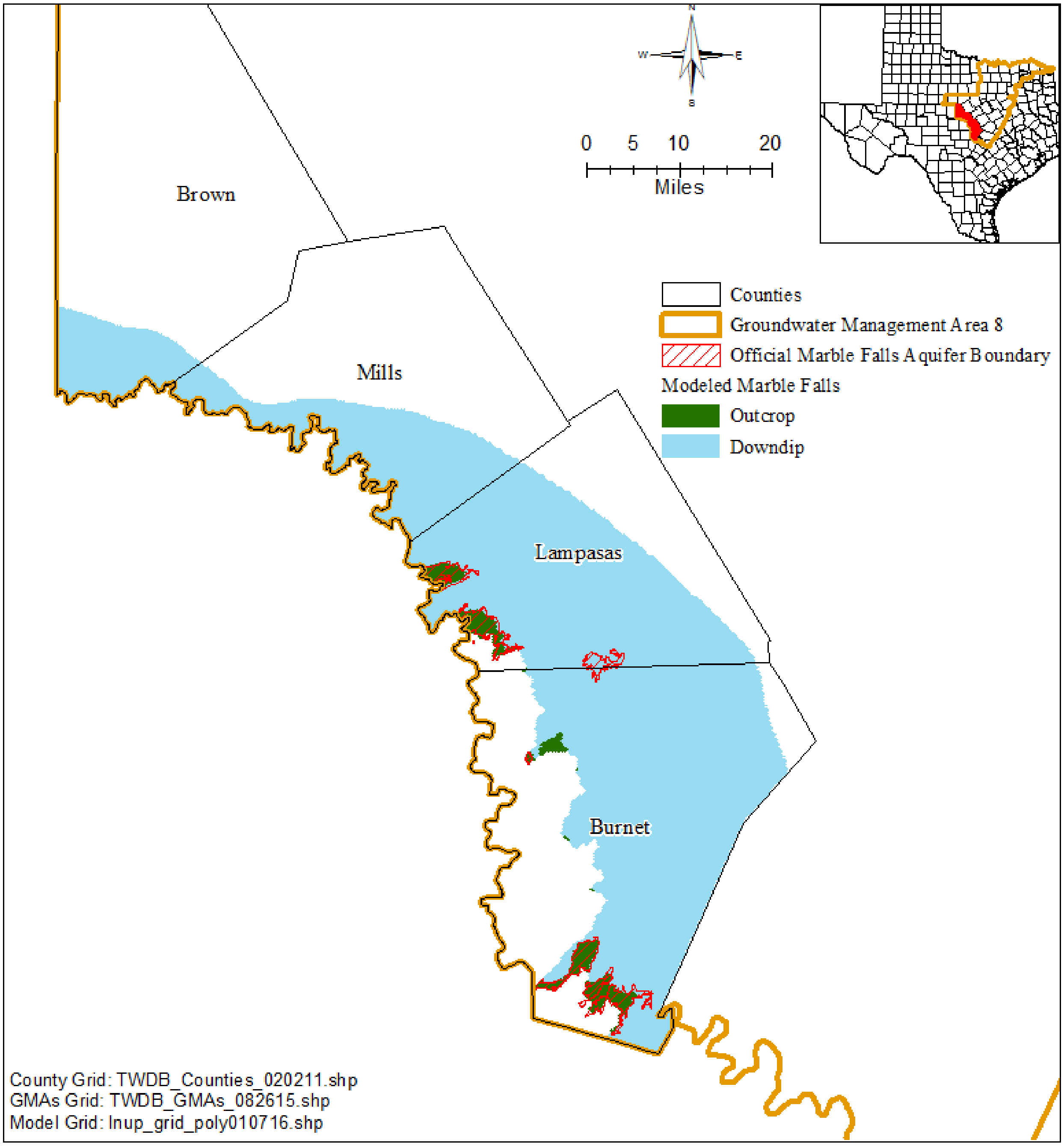



**FIGURE 10. MAP SHOWING THE MARBLE FALLS AQUIFER WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE MINOR AQUIFERS IN LLANO UPLIFT REGION.**

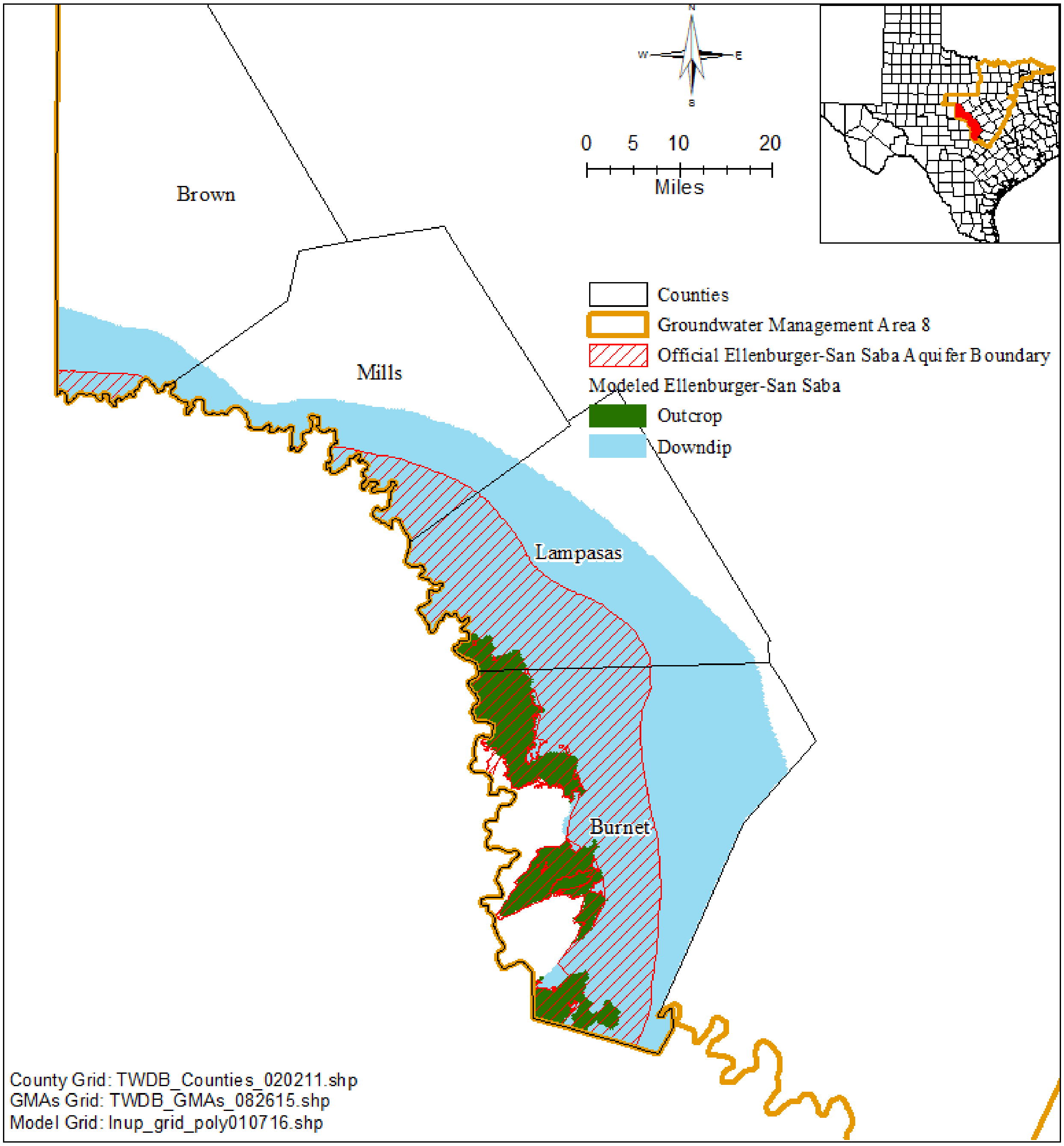



**FIGURE 11. MAP SHOWING THE ELLENBURGER-SAN SABA AQUIFER WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE MINOR AQUIFERS IN LLANO UPLIFT REGION.**

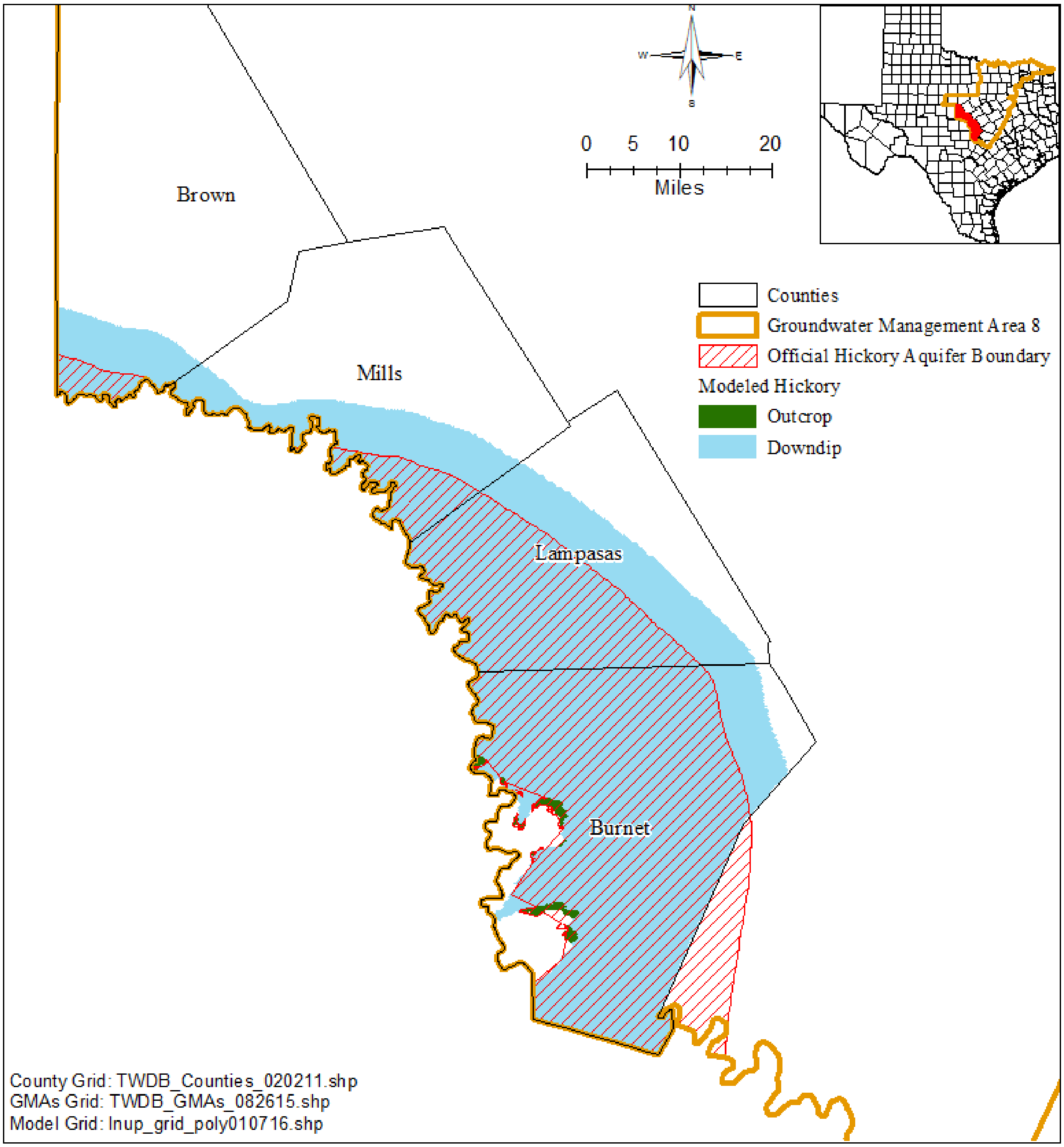



**FIGURE 12. MAP SHOWING THE HICKORY AQUIFER WITHIN GROUNDWATER MANAGEMENT AREA 8 FROM THE GROUNDWATER AVAILABILITY MODEL FOR THE MINOR AQUIFERS IN LLANO UPLIFT REGION.**

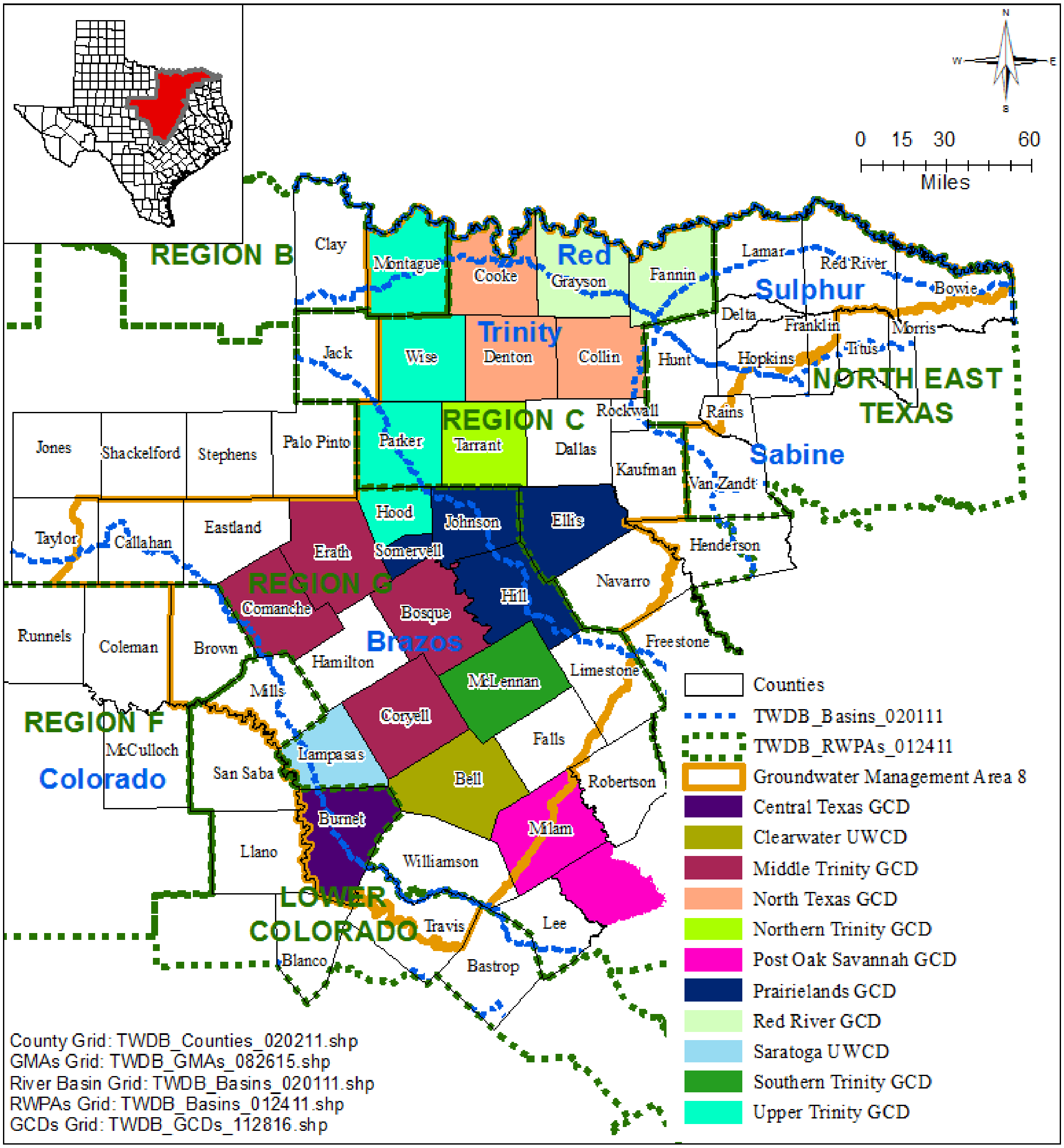



**FIGURE 13. MAP SHOWING REGIONAL WATER PLANNING AREAS (RWPAS), GROUNDWATER CONSERVATION DISTRICTS (GCDS), AND RIVER BASINS ASSOCIATED WITH GROUNDWATER MANAGEMENT AREA 8.**

**TABLE 1. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (PALUXY) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Clearwater UWCD** | Bell | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Middle Trinity GCD | Bosque | 204 | 356 | 358 | 356 | 358 | 356 | 358 | 356 |
| Middle Trinity GCD | Coryell | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Middle Trinity GCD | Erath | 38 | 61 | 61 | 61 | 61 | 61 | 61 | 61 |
| **Middle Trinity GCD Total** | | **242** | **417** | **419** | **417** | **419** | **417** | **419** | **417** |
| North Texas GCD | Collin | 616 | 1,547 | 1,551 | 1,547 | 1,551 | 1,547 | 1,551 | 1,547 |
| North Texas GCD | Denton | 1,532 | 4,819 | 4,832 | 4,819 | 4,832 | 4,819 | 4,832 | 4,819 |
| **North Texas GCD Total** | | **2,148** | **6,366** | **6,383** | **6,366** | **6,383** | **6,366** | **6,383** | **6,366** |
| **Northern Trinity GCD** | Tarrant | **11,285** | **8,957** | **8,982** | **8,957** | **8,982** | **8,957** | **8,982** | **8,957** |
| Prairielands GCD | Ellis | 510 | 442 | 443 | 442 | 443 | 442 | 443 | 442 |
| Prairielands GCD | Hill | 400 | 352 | 353 | 352 | 353 | 352 | 353 | 352 |
| Prairielands GCD | Johnson | 4,851 | 2,440 | 2,447 | 2,440 | 2,447 | 2,440 | 2,447 | 2,440 |
| Prairielands GCD | Somervell | 3 | 14 | 14 | 14 | 14 | 14 | 14 | 14 |
| **Prairielands GCD Total** | | **5,764** | **3,248** | **3,257** | **3,248** | **3,257** | **3,248** | **3,257** | **3,248** |
| Red River GCD | Fannin | 389 | 2,087 | 2,092 | 2,087 | 2,092 | 2,087 | 2,092 | 2,087 |
| Red River GCD | Grayson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Red River GCD Total** | | **389** | **2,087** | **2,092** | **2,087** | **2,092** | **2,087** | **2,092** | **2,087** |
| **Southern Trinity GCD** | McLennan | **319** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Upper Trinity GCD | Hood (outcrop) | 106 | 159 | 159 | 159 | 159 | 159 | 159 | 159 |
| Upper Trinity GCD | Parker (outcrop) | 2,100 | 2,607 | 2,614 | 2,607 | 2,614 | 2,607 | 2,614 | 2,607 |
| Upper Trinity GCD | Parker (downdip) | 221 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| **Upper Trinity GCD Total** | | **2,427** | **2,816** | **2,823** | **2,816** | **2,823** | **2,816** | **2,823** | **2,816** |
| No District | Dallas | 231 | 358 | 359 | 358 | 359 | 358 | 359 | 358 |
| No District | Delta | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |
| No District | Falls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Hamilton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Hunt | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Lamar | 16 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| No District | Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Mills | 3 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| No District | Navarro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Red River | 190 | 177 | 177 | 177 | 177 | 177 | 177 | 177 |
| No District | Rockwall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **No District Total** | | **499** | **608** | **609** | **608** | **609** | **608** | **609** | **608** |
| **Groundwater Management Area 8** | | **23,073** | **24,499** | **24,565** | **24,499** | **24,565** | **24,499** | **24,565** | **24,499** |

UWCD: Underground Water Conservation District.

**TABLE 2. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (GLEN ROSE) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **35** | **423** | **425** | **423** | **425** | **423** | **425** | **423** |
| **Clearwater UWCD** | Bell | **775** | **971** | **974** | **971** | **974** | **971** | **974** | **971** |
| Middle Trinity GCD | Bosque | 576 | 728 | 731 | 728 | 731 | 728 | 731 | 728 |
| Middle Trinity GCD | Comanche | 3 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |
| Middle Trinity GCD | Coryell | 0 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Middle Trinity GCD | Erath | 263 | 1,078 | 1,081 | 1,078 | 1,081 | 1,078 | 1,081 | 1,078 |
| **Middle Trinity GCD Total** | | **842** | **1,967** | **1,973** | **1,967** | **1,973** | **1,967** | **1,973** | **1,967** |
| North Texas GCD | Collin | 84 | 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| North Texas GCD | Denton | 121 | 338 | 339 | 338 | 339 | 338 | 339 | 338 |
| **North Texas GCD Total** | | **205** | **421** | **422** | **421** | **422** | **421** | **422** | **421** |
| **Northern Trinity GCD** | Tarrant | **1,070** | **793** | **795** | **793** | **795** | **793** | **795** | **793** |
| **Post Oak Savannah GCD** | Milam | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Prairielands GCD | Ellis | 58 | 50 | 50 | 50 | 50 | 50 | 50 | 50 |
| Prairielands GCD | Hill | 116 | 115 | 115 | 115 | 115 | 115 | 115 | 115 |
| Prairielands GCD | Johnson | 1,780 | 1,632 | 1,636 | 1,632 | 1,636 | 1,632 | 1,636 | 1,632 |
| Prairielands GCD | Somervell | 81 | 146 | 146 | 146 | 146 | 146 | 146 | 146 |
| **Prairielands GCD Total** | | **2,035** | **1,943** | **1,947** | **1,943** | **1,947** | **1,943** | **1,947** | **1,943** |
| Red River GCD | Fannin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River GCD | Grayson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Red River GCD Total** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Saratoga UWCD** | Lampasas | **65** | **68** | **68** | **68** | **68** | **68** | **68** | **68** |
| **Southern Trinity GCD** | McLennan | **845** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Upper Trinity GCD | Hood (outcrop) | 483 | 653 | 655 | 653 | 655 | 653 | 655 | 653 |
| Upper Trinity GCD | Hood (downdip) | 81 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| Upper Trinity GCD | Parker (outcrop) | 2,593 | 2,289 | 2,295 | 2,289 | 2,295 | 2,289 | 2,295 | 2,289 |
| Upper Trinity GCD | Parker (downdip) | 1,063 | 873 | 876 | 873 | 876 | 873 | 876 | 873 |
| **Upper Trinity GCD Total** | | **4,220** | **3,918** | **3,929** | **3,918** | **3,929** | **3,918** | **3,929** | **3,918** |

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| No District | Brown | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Dallas | 135 | 131 | 132 | 131 | 132 | 131 | 132 | 131 |
| No District | Delta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Falls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Hamilton | 168 | 218 | 218 | 218 | 218 | 218 | 218 | 218 |
| No District | Hunt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Lamar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Mills | 12 | 189 | 189 | 189 | 189 | 189 | 189 | 189 |
| No District | Navarro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Red River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Rockwall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Travis | 898 | 971 | 974 | 971 | 974 | 971 | 974 | 971 |
| No District | Williamson | 695 | 688 | 690 | 688 | 690 | 688 | 690 | 688 |
| **No District Total** | | **1,908** | **2,197** | **2,203** | **2,197** | **2,203** | **2,197** | **2,203** | **2,197** |
| **Groundwater Management Area 8** | | **12,000** | **12,701** | **12,736** | **12,701** | **12,736** | **12,701** | **12,736** | **12,701** |

UWCD: Underground Water Conservation District.

**TABLE 3. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (TWIN MOUNTAINS) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Middle Trinity GCD** | Erath | **3,443** | **5,017** | **5,031** | **5,017** | **5,031** | **5,017** | **5,031** | **5,017** |
| North Texas GCD | Collin | 163 | 2,201 | 2,207 | 2,201 | 2,207 | 2,201 | 2,207 | 2,201 |
| North Texas GCD | Denton | 997 | 8,366 | 8,389 | 8,366 | 8,389 | 8,366 | 8,389 | 8,366 |
| **North Texas GCD Total** | | **1,160** | **10,567** | **10,596** | **10,567** | **10,596** | **10,567** | **10,596** | **10,567** |
| **Northern Trinity GCD** | Tarrant | **7,329** | **6,917** | **6,936** | **6,917** | **6,936** | **6,917** | **6,936** | **6,917** |
| Prairielands GCD | Ellis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prairielands GCD | Johnson | 539 | 384 | 385 | 384 | 385 | 384 | 385 | 384 |
| Prairielands GCD | Somervell | 150 | 174 | 174 | 174 | 174 | 174 | 174 | 174 |
| **Prairielands GCD Total** | | **689** | **558** | **559** | **558** | **559** | **558** | **559** | **558** |
| Red River GCD | Fannin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River GCD | Grayson | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Red River GCD Total** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Upper Trinity GCD | Hood (outcrop) | 3,379 | 3,662 | 3,672 | 3,662 | 3,672 | 3,662 | 3,672 | 3,662 |
| Upper Trinity GCD | Hood (downdip) | 7,143 | 7,759 | 7,780 | 7,759 | 7,780 | 7,759 | 7,780 | 7,759 |
| Upper Trinity GCD | Parker (outcrop) | 1,600 | 1,066 | 1,069 | 1,066 | 1,069 | 1,066 | 1,069 | 1,066 |
| Upper Trinity GCD | Parker (downdip) | 3,459 | 2,082 | 2,088 | 2,082 | 2,088 | 2,082 | 2,088 | 2,082 |
| **Upper Trinity GCD Total** | | **15,581** | **14,569** | **14,609** | **14,569** | **14,609** | **14,569** | **14,609** | **14,569** |
| No District | Dallas | 2,282 | 3,199 | 3,208 | 3,199 | 3,208 | 3,199 | 3,208 | 3,199 |
| No District | Hunt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Rockwall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **No District Total** | | **2,282** | **3,199** | **3,208** | **3,199** | **3,208** | **3,199** | **3,208** | **3,199** |
| **Groundwater Management Area 8** | | **30,484** | **40,827** | **40,939** | **40,827** | **40,939** | **40,827** | **40,939** | **40,827** |

**TABLE 4. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (TRAVIS PEAK) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **1,906** | **3,464** | **3,474** | **3,464** | **3,474** | **3,464** | **3,474** | **3,464** |
| **Clearwater UWCD** | Bell | **1,957** | **8,270** | **8,293** | **8,270** | **8,293** | **8,270** | **8,293** | **8,270** |
| Middle Trinity GCD | Bosque | 5,255 | 7,678 | 7,699 | 7,678 | 7,699 | 7,678 | 7,699 | 7,678 |
| Middle Trinity GCD | Comanche | 9,793 | 6,160 | 6,177 | 6,160 | 6,177 | 6,160 | 6,177 | 6,160 |
| Middle Trinity GCD | Coryell | 3,350 | 4,371 | 4,383 | 4,371 | 4,383 | 4,371 | 4,383 | 4,371 |
| Middle Trinity GCD | Erath | 8,263 | 11,815 | 11,849 | 11,815 | 11,849 | 11,815 | 11,849 | 11,815 |
| **Middle Trinity GCD Total** | | **26,661** | **30,024** | **30,108** | **30,024** | **30,108** | **30,024** | **30,108** | **30,024** |
| **Post Oak Savannah GCD** | Milam | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Prairielands GCD | Ellis | 5,583 | 5,032 | 5,046 | 5,032 | 5,046 | 5,032 | 5,046 | 5,032 |
| Prairielands GCD | Hill | 3,700 | 3,550 | 3,559 | 3,550 | 3,559 | 3,550 | 3,559 | 3,550 |
| Prairielands GCD | Johnson | 5,602 | 4,941 | 4,955 | 4,941 | 4,955 | 4,941 | 4,955 | 4,941 |
| Prairielands GCD | Somervell | 2,560 | 2,847 | 2,854 | 2,847 | 2,854 | 2,847 | 2,854 | 2,847 |
| **Prairielands GCD Total** | | **17,445** | **16,370** | **16,414** | **16,370** | **16,414** | **16,370** | **16,414** | **16,370** |
| **Red River GCD** | Fannin | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Saratoga UWCD** | Lampasas | **1,669** | **1,599** | **1,603** | **1,599** | **1,603** | **1,599** | **1,603** | **1,599** |
| **Southern Trinity GCD** | McLennan | **13,252** | **20,635** | **20,691** | **20,635** | **20,691** | **20,635** | **20,691** | **20,635** |
| **Upper Trinity GCD** | Hood (downdip) | **70** | **89** | **89** | **89** | **89** | **89** | **89** | **89** |
| No District | Brown | 680 | 394 | 395 | 394 | 395 | 394 | 395 | 394 |
| No District | Dallas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Delta | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Falls | 1,158 | 1,434 | 1,438 | 1,434 | 1,438 | 1,434 | 1,438 | 1,434 |
| No District | Hamilton | 1,685 | 2,207 | 2,213 | 2,207 | 2,213 | 2,207 | 2,213 | 2,207 |
| No District | Hunt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Lamar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Mills | 1,011 | 2,275 | 2,282 | 2,275 | 2,282 | 2,275 | 2,282 | 2,275 |
| No District | Navarro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Red River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Travis | 3,442 | 4,113 | 4,125 | 4,113 | 4,125 | 4,113 | 4,125 | 4,113 |
| No District | Williamson | 3,026 | 2,883 | 2,891 | 2,883 | 2,891 | 2,883 | 2,891 | 2,883 |

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **No District Total** | | **11,002** | **13,306** | **13,344** | **13,306** | **13,344** | **13,306** | **13,344** | **13,306** |
| **Groundwater Management Area 8** | | **73,962** | **93,757** | **94,016** | **93,757** | **94,016** | **93,757** | **94,016** | **93,757** |

UWCD: Underground Water Conservation District.

**TABLE 5. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (HENSELL) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **51** | **1,888** | **1,894** | **1,888** | **1,894** | **1,888** | **1,894** | **1,888** |
| **Clearwater UWCD** | Bell | **355** | **1,096** | **1,099** | **1,096** | **1,099** | **1,096** | **1,099** | **1,096** |
| Middle Trinity GCD | Bosque | 2,909 | 3,835 | 3,845 | 3,835 | 3,845 | 3,835 | 3,845 | 3,835 |
| Middle Trinity GCD | Comanche | 188 | 204 | 204 | 204 | 204 | 204 | 204 | 204 |
| Middle Trinity GCD | Coryell | 1,679 | 2,196 | 2,202 | 2,196 | 2,202 | 2,196 | 2,202 | 2,196 |
| Middle Trinity GCD | Erath | 3,446 | 5,137 | 5,151 | 5,137 | 5,151 | 5,137 | 5,151 | 5,137 |
| **Middle Trinity GCD Total** | | **8,222** | **11,372** | **11,402** | **11,372** | **11,402** | **11,372** | **11,402** | **11,372** |
| **Post Oak Savannah GCD** | Milam | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Prairielands GCD | Ellis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Prairielands GCD | Hill | 237 | 225 | 226 | 225 | 226 | 225 | 226 | 225 |
| Prairielands GCD | Johnson | 1,530 | 1,083 | 1,086 | 1,083 | 1,086 | 1,083 | 1,086 | 1,083 |
| Prairielands GCD | Somervell | 1,822 | 1,973 | 1,978 | 1,973 | 1,978 | 1,973 | 1,978 | 1,973 |
| **Prairielands GCD Total** | | **3,589** | **3,281** | **3,290** | **3,281** | **3,290** | **3,281** | **3,290** | **3,281** |
| **Saratoga UWCD** | Lampasas | **730** | **712** | **715** | **712** | **715** | **712** | **715** | **712** |
| **Southern Trinity GCD** | McLennan | **3,018** | **4,698** | **4,711** | **4,698** | **4,711** | **4,698** | **4,711** | **4,698** |
| **Upper Trinity GCD** | Hood (downdip) | **45** | **36** | **36** | **36** | **36** | **36** | **36** | **36** |
| No District | Brown | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| No District | Dallas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Falls | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Hamilton | 1,221 | 1,671 | 1,675 | 1,671 | 1,675 | 1,671 | 1,675 | 1,671 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Mills | 224 | 607 | 608 | 607 | 608 | 607 | 608 | 607 |
| No District | Navarro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Travis | 919 | 1,141 | 1,144 | 1,141 | 1,144 | 1,141 | 1,144 | 1,141 |
| No District | Williamson | 772 | 751 | 753 | 751 | 753 | 751 | 753 | 751 |
| **No District Total** | | **3,142** | **4,174** | **4,184** | **4,174** | **4,184** | **4,174** | **4,184** | **4,174** |
| **Groundwater Management Area 8** | | **19,152** | **27,257** | **27,331** | **27,257** | **27,331** | **27,257** | **27,331** | **27,257** |

UWCD: Underground Water Conservation District.

**TABLE 6. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (HOSSTON) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **1,799** | **1,379** | **1,382** | **1,379** | **1,382** | **1,379** | **1,382** | **1,379** |
| **Clearwater UWCD** | Bell | **1,375** | **7,174** | **7,193** | **7,174** | **7,193** | **7,174** | **7,193** | **7,174** |
| Middle Trinity GCD | Bosque | 2,289 | 3,762 | 3,772 | 3,762 | 3,772 | 3,762 | 3,772 | 3,762 |
| Middle Trinity GCD | Comanche | 9,504 | 5,864 | 5,881 | 5,864 | 5,881 | 5,864 | 5,881 | 5,864 |
| Middle Trinity GCD | Coryell | 1,661 | 2,161 | 2,167 | 2,161 | 2,167 | 2,161 | 2,167 | 2,161 |
| Middle Trinity GCD | Erath | 4,637 | 6,383 | 6,400 | 6,383 | 6,400 | 6,383 | 6,400 | 6,383 |
| **Middle Trinity GCD Total** | | **18,091** | **18,170** | **18,220** | **18,170** | **18,220** | **18,170** | **18,220** | **18,170** |
| **Post Oak Savannah GCD** | Milam | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| Prairielands GCD | Ellis | 5,575 | 5,026 | 5,040 | 5,026 | 5,040 | 5,026 | 5,040 | 5,026 |
| Prairielands GCD | Hill | 3,413 | 3,272 | 3,281 | 3,272 | 3,281 | 3,272 | 3,281 | 3,272 |
| Prairielands GCD | Johnson | 4,061 | 3,853 | 3,863 | 3,853 | 3,863 | 3,853 | 3,863 | 3,853 |
| Prairielands GCD | Somervell | 736 | 843 | 845 | 843 | 845 | 843 | 845 | 843 |
| **Prairielands GCD Total** | | **13,785** | **12,994** | **13,029** | **12,994** | **13,029** | **12,994** | **13,029** | **12,994** |
| **Saratoga UWCD** | Lampasas | **907** | **857** | **859** | **857** | **859** | **857** | **859** | **857** |
| **Southern Trinity GCD** | McLennan | **10,212** | **15,937** | **15,980** | **15,937** | **15,980** | **15,937** | **15,980** | **15,937** |
| **Upper Trinity GCD** | Hood (downdip) | **25** | **53** | **53** | **53** | **53** | **53** | **53** | **53** |
| No District | Brown | 624 | 356 | 358 | 356 | 358 | 356 | 358 | 356 |
| No District | Dallas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Falls | 1,157 | 1,434 | 1,438 | 1,434 | 1,438 | 1,434 | 1,438 | 1,434 |
| No District | Hamilton | 325 | 385 | 386 | 385 | 386 | 385 | 386 | 385 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Limestone | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Mills | 650 | 1,467 | 1,471 | 1,467 | 1,471 | 1,467 | 1,471 | 1,467 |
| No District | Navarro | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Travis | 2,357 | 2,783 | 2,791 | 2,783 | 2,791 | 2,783 | 2,791 | 2,783 |
| No District | Williamson | 2,050 | 1,933 | 1,938 | 1,933 | 1,938 | 1,933 | 1,938 | 1,933 |
| **No District Total** | | **7,163** | **8,358** | **8,382** | **8,358** | **8,382** | **8,358** | **8,382** | **8,358** |
| **Groundwater Management Area 8** | | **53,357** | **64,922** | **65,098** | **64,922** | **65,098** | **64,922** | **65,098** | **64,922** |

UWCD: Underground Water Conservation District.

**TABLE 7. MODELED AVAILABLE GROUNDWATER FOR THE TRINITY AQUIFER (ANTLERS) IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| Middle Trinity GCD | Comanche | 9,320 | 5,839 | 5,855 | 5,839 | 5,855 | 5,839 | 5,855 | 5,839 |
| Middle Trinity GCD | Erath | 1,663 | 2,628 | 2,636 | 2,628 | 2,636 | 2,628 | 2,636 | 2,628 |
| **Middle Trinity GCD Total** | | **10,983** | **8,467** | **8,491** | **8,467** | **8,491** | **8,467** | **8,491** | **8,467** |
| North Texas GCD | Collin | 629 | 1,961 | 1,966 | 1,961 | 1,966 | 1,961 | 1,966 | 1,961 |
| North Texas GCD | Cooke | 4,117 | 10,514 | 10,544 | 10,514 | 10,544 | 10,514 | 10,544 | 10,514 |
| North Texas GCD | Denton | 11,427 | 16,545 | 16,591 | 16,545 | 16,591 | 16,545 | 16,591 | 16,545 |
| **North Texas GCD Total** | | **16,173** | **29,020** | **29,101** | **29,020** | **29,101** | **29,020** | **29,101** | **29,020** |
| **Northern Trinity GCD** | Tarrant | **1,908** | **1,248** | **1,251** | **1,248** | **1,251** | **1,248** | **1,251** | **1,248** |
| Red River GCD | Fannin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River GCD | Grayson | 6,872 | 10,708 | 10,738 | 10,708 | 10,738 | 10,708 | 10,738 | 10,708 |
| **Red River GCD Total** | | **6,872** | **10,708** | **10,738** | **10,708** | **10,738** | **10,708** | **10,738** | **10,708** |
| Upper Trinity GCD | Montague (outcrop) | 1,421 | 3,875 | 3,886 | 3,875 | 3,886 | 3,875 | 3,886 | 3,875 |
| Upper Trinity GCD | Parker (outcrop) | 3,321 | 2,897 | 2,905 | 2,897 | 2,905 | 2,897 | 2,905 | 2,897 |
| Upper Trinity GCD | Wise (outcrop) | 9,080 | 7,677 | 7,698 | 7,677 | 7,698 | 7,677 | 7,698 | 7,677 |
| Upper Trinity GCD | Wise (downdip) | 3,699 | 2,057 | 2,062 | 2,057 | 2,062 | 2,057 | 2,062 | 2,057 |
| **Upper Trinity GCD Total** | | **17,521** | **16,506** | **16,551** | **16,506** | **16,551** | **16,506** | **16,551** | **16,506** |
| No District | Brown | 1,743 | 1,052 | 1,055 | 1,052 | 1,055 | 1,052 | 1,055 | 1,052 |
| No District | Callahan | 1,804 | 1,725 | 1,730 | 1,725 | 1,730 | 1,725 | 1,730 | 1,725 |
| No District | Eastland | 5,613 | 5,732 | 5,747 | 5,732 | 5,747 | 5,732 | 5,747 | 5,732 |
| No District | Lamar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Red River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Taylor | 17 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| **No District Total** | | **9,177** | **8,522** | **8,545** | **8,522** | **8,545** | **8,522** | **8,545** | **8,522** |
| **Groundwater Management Area 8** | | **62,634** | **74,471** | **74,677** | **74,471** | **74,677** | **74,471** | **74,677** | **74,471** |

**TABLE 8. MODELED AVAILABLE GROUNDWATER FOR THE WOODBINE AQUIFER IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| North Texas GCD | Collin | 2,427 | 4,251 | 4,263 | 4,251 | 4,263 | 4,251 | 4,263 | 4,251 |
| North Texas GCD | Cooke | 1,646 | 800 | 802 | 800 | 802 | 800 | 802 | 800 |
| North Texas GCD | Denton | 3,797 | 3,607 | 3,616 | 3,607 | 3,616 | 3,607 | 3,616 | 3,607 |
| **North Texas GCD Total** | | **7,870** | **8,658** | **8,681** | **8,658** | **8,681** | **8,658** | **8,681** | **8,658** |
| **Northern Trinity GCD** | Tarrant | **2,646** | **1,138** | **1,141** | **1,138** | **1,141** | **1,138** | **1,141** | **1,138** |
| Prairielands GCD | Ellis | 2,471 | 2,073 | 2,078 | 2,073 | 2,078 | 2,073 | 2,078 | 2,073 |
| Prairielands GCD | Hill | 752 | 586 | 588 | 586 | 588 | 586 | 588 | 586 |
| Prairielands GCD | Johnson | 3,880 | 1,980 | 1,985 | 1,980 | 1,985 | 1,980 | 1,985 | 1,980 |
| **Prairielands GCD Total** | | **7,103** | **4,639** | **4,651** | **4,639** | **4,651** | **4,639** | **4,651** | **4,639** |
| Red River GCD | Fannin | 5,495 | 4,920 | 4,934 | 4,920 | 4,934 | 4,920 | 4,934 | 4,920 |
| Red River GCD | Grayson | 5,056 | 7,521 | 7,541 | 7,521 | 7,541 | 7,521 | 7,541 | 7,521 |
| **Red River GCD Total** | | **10,551** | **12,441** | **12,475** | **12,441** | **12,475** | **12,441** | **12,475** | **12,441** |
| **Southern Trinity GCD** | McLennan | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| No District | Dallas | 1,957 | 2,796 | 2,804 | 2,796 | 2,804 | 2,796 | 2,804 | 2,796 |
| No District | Hunt | 463 | 763 | 765 | 763 | 765 | 763 | 765 | 763 |
| No District | Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No District | Lamar | 61 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| No District | Navarro | 65 | 68 | 68 | 68 | 68 | 68 | 68 | 68 |
| No District | Red River | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| No District | Rockwall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **No District Total** | | **2,549** | **3,678** | **3,688** | **3,678** | **3,688** | **3,678** | **3,688** | **3,678** |
| **Groundwater Management Area 8** | | **30,719** | **30,554** | **30,636** | **30,554** | **30,636** | **30,554** | **30,636** | **30,554** |

**TABLE 9. MODELED AVAILABLE GROUNDWATER FOR THE EDWARDS (BALCONES FAULT ZONE) AQUIFER IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Clearwater UWCD** | Bell | **949** | **6,469** | **6,469** | **6,469** | **6,469** | **6,469** | **6,469** | **6,469** |
| No District | Travis | 1,201 | 5,237 | 5,237 | 5,237 | 5,237 | 5,237 | 5,237 | 5,237 |
| No District | Williamson | 13,813 | 3,462 | 3,462 | 3,462 | 3,462 | 3,462 | 3,462 | 3,462 |
| **Groundwater Management Area 8** | | **15,981** | **15,168** | **15,168** | **15,168** | **15,168** | **15,168** | **15,168** | **15,168** |

UWCD: Underground Water Conservation District.

**TABLE 10. MODELED AVAILABLE GROUNDWATER FOR THE MARBLE FALLS AQUIFER IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **2,220** | **2,736** | **2,744** | **2,736** | **2,744** | **2,736** | **2,744** | **2,736** |
| **Saratoga UWCD** | Lampasas | **363** | **2,837** | **2,845** | **2,837** | **2,845** | **2,837** | **2,845** | **2,837** |
| No District | Brown | 0 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| No District | Mills | 20 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| **No District Total** | | **20** | **50** | **50** | **50** | **50** | **50** | **50** | **50** |
| **Groundwater Management Area 8** | | **2,603** | **5,623** | **5,639** | **5,623** | **5,639** | **5,623** | **5,639** | **5,623** |

UWCD: Underground Water Conservation District.

**TABLE 11. MODELED AVAILABLE GROUNDWATER FOR THE ELLENBURGER-SAN SABA AQUIFER IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **5,256** | **10,827** | **10,857** | **10,827** | **10,857** | **10,827** | **10,857** | **10,827** |
| **Saratoga UWCD** | Lampasas | **351** | **2,593** | **2,601** | **2,593** | **2,601** | **2,593** | **2,601** | **2,593** |
| No District | Brown | 1 | 131 | 131 | 131 | 131 | 131 | 131 | 131 |
| No District | Mills | 0 | 499 | 500 | 499 | 500 | 499 | 500 | 499 |
| **No District Total** | | **1** | **630** | **631** | **630** | **631** | **630** | **631** | **630** |
| **Groundwater Management Area 8** | | **5,608** | **14,050** | **14,089** | **14,050** | **14,089** | **14,050** | **14,089** | **14,050** |

UWCD: Underground Water Conservation District.

**TABLE 12. MODELED AVAILABLE GROUNDWATER FOR THE HICKORY AQUIFER IN GROUNDWATER MANAGEMENT AREA 8 SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) AND COUNTY FOR EACH DECADE BETWEEN 2010 AND 2070 WITH BASELINE YEAR 2009. VALUES ARE IN ACRE-FEET PER YEAR.**

| GCD | County | 2009 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| **Central Texas GCD** | Burnet | **1,088** | **3,413** | **3,423** | **3,413** | **3,423** | **3,413** | **3,423** | **3,413** |
| **Saratoga UWCD** | Lampasas | **0** | **113** | **114** | **113** | **114** | **113** | **114** | **113** |
| No District | Brown | 0 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| No District | Mills | 0 | 36 | 36 | 36 | 36 | 36 | 36 | 36 |
| **No District Total** | | **0** | **48** | **48** | **48** | **48** | **48** | **48** | **48** |
| **Groundwater Management Area 8** | | **1,088** | **3,574** | **3,585** | **3,574** | **3,585** | **3,574** | **3,585** | **3,574** |

UWCD: Underground Water Conservation District.

**TABLE 13. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (PALUXY) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Bell | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Bosque | Region G | Brazos | 358 | 356 | 358 | 356 | 358 | 356 |
| Collin | Region C | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Collin | Region C | Trinity | 1,551 | 1,547 | 1,551 | 1,547 | 1,551 | 1,547 |
| Coryell | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Dallas | Region C | Trinity | 359 | 358 | 359 | 358 | 359 | 358 |
| Delta | Northeast Texas | Sulphur | 56 | 56 | 56 | 56 | 56 | 56 |
| Denton | Region C | Trinity | 4,832 | 4,819 | 4,832 | 4,819 | 4,832 | 4,819 |
| Ellis | Region C | Trinity | 443 | 442 | 443 | 442 | 443 | 442 |
| Erath | Region G | Brazos | 61 | 61 | 61 | 61 | 61 | 61 |
| Falls | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Sulphur | 2,092 | 2,087 | 2,092 | 2,087 | 2,092 | 2,087 |
| Fannin | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Grayson | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamilton | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Hill | Region G | Brazos | 348 | 347 | 348 | 347 | 348 | 347 |
| Hill | Region G | Trinity | 5 | 5 | 5 | 5 | 5 | 5 |
| Hunt | Northeast Texas | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Sulphur | 3 | 3 | 3 | 3 | 3 | 3 |
| Hunt | Northeast Texas | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Johnson | Region G | Brazos | 880 | 878 | 880 | 878 | 880 | 878 |
| Johnson | Region G | Trinity | 1,567 | 1,562 | 1,567 | 1,562 | 1,567 | 1,562 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Sulphur | 8 | 8 | 8 | 8 | 8 | 8 |
| Limestone | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Limestone | Region G | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| McLennan | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Mills | Lower Colorado | Brazos | 6 | 6 | 6 | 6 | 6 | 6 |
| Mills | Lower Colorado | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| Navarro | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River | Northeast Texas | Red | 52 | 52 | 52 | 52 | 52 | 52 |
| Red River | Northeast Texas | Sulphur | 125 | 125 | 125 | 125 | 125 | 125 |

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Rockwall | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Somervell | Region G | Brazos | 14 | 14 | 14 | 14 | 14 | 14 |
| Tarrant | Region C | Trinity | 8,982 | 8,957 | 8,982 | 8,957 | 8,982 | 8,957 |
| **Subtotal** | | | **21,742** | **21,683** | **21,742** | **21,683** | **21,742** | **21,683** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Hood (outcrop) | Region G | Brazos | 159 | 158 | 159 | 158 | 159 | 158 |
| Hood (outcrop) | Region G | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Parker (outcrop) | Region C | Brazos | 34 | 34 | 34 | 34 | 34 | 34 |
| Parker (outcrop) | Region C | Trinity | 2,580 | 2,573 | 2,580 | 2,573 | 2,580 | 2,573 |
| Parker (downdip) | Region C | Trinity | 50 | 50 | 50 | 50 | 50 | 50 |
| **Subtotal** | | | **2,823** | **2,815** | **2,823** | **2,815** | **2,823** | **2,815** |
| **Groundwater Management Area 8** | | | **24,565** | **24,498** | **24,565** | **24,498** | **24,565** | **24,498** |

**TABLE 14. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (GLEN ROSE) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Bell | Region G | Brazos | 974 | 971 | 974 | 971 | 974 | 971 |
| Bosque | Region G | Brazos | 731 | 728 | 731 | 728 | 731 | 728 |
| Brown | Region F | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| Burnet | Lower Colorado | Brazos | 188 | 188 | 188 | 188 | 188 | 188 |
| Burnet | Lower Colorado | Colorado | 236 | 235 | 236 | 235 | 236 | 235 |
| Collin | Region C | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Collin | Region C | Trinity | 83 | 83 | 83 | 83 | 83 | 83 |
| Comanche | Region G | Brazos | 22 | 22 | 22 | 22 | 22 | 22 |
| Comanche | Region G | Colorado | 18 | 18 | 18 | 18 | 18 | 18 |
| Coryell | Region G | Brazos | 120 | 120 | 120 | 120 | 120 | 120 |
| Dallas | Region C | Trinity | 132 | 131 | 132 | 131 | 132 | 131 |
| Delta | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Denton | Region C | Trinity | 339 | 338 | 339 | 338 | 339 | 338 |
| Ellis | Region C | Trinity | 50 | 50 | 50 | 50 | 50 | 50 |
| Erath | Region G | Brazos | 1,081 | 1,078 | 1,081 | 1,078 | 1,081 | 1,078 |
| Falls | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Grayson | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamilton | Region G | Brazos | 218 | 218 | 218 | 218 | 218 | 218 |
| Hill | Region G | Brazos | 115 | 114 | 115 | 114 | 115 | 114 |
| Hill | Region G | Trinity | 1 | 1 | 1 | 1 | 1 | 1 |
| Hunt | Northeast Texas | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Johnson | Region G | Brazos | 953 | 950 | 953 | 950 | 953 | 950 |
| Johnson | Region G | Trinity | 683 | 681 | 683 | 681 | 683 | 681 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Lampasas | Region G | Brazos | 68 | 68 | 68 | 68 | 68 | 68 |
| Limestone | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Limestone | Region G | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| McLennan | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Milam | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Mills | Lower Colorado | Brazos | 96 | 96 | 96 | 96 | 96 | 96 |
| Mills | Lower Colorado | Colorado | 93 | 93 | 93 | 93 | 93 | 93 |
| Navarro | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Rockwall | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Somervell | Region G | Brazos | 146 | 146 | 146 | 146 | 146 | 146 |
| Tarrant | Region C | Trinity | 795 | 793 | 795 | 793 | 795 | 793 |
| Travis | Lower Colorado | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Travis | Lower Colorado | Colorado | 974 | 971 | 974 | 971 | 974 | 971 |
| Williamson | Region G | Brazos | 623 | 621 | 623 | 621 | 623 | 621 |
| Williamson | Region G | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| Williamson | Lower Colorado | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Williamson | Lower Colorado | Colorado | 67 | 67 | 67 | 67 | 67 | 67 |
| **Subtotal** | | | **8,806** | **8,781** | **8,806** | **8,781** | **8,806** | **8,781** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Hood (outcrop) | Region G | Brazos | 655 | 653 | 655 | 653 | 655 | 653 |
| Hood (downdip) | Region G | Brazos | 83 | 83 | 83 | 83 | 83 | 83 |
| Hood (downdip) | Region G | Trinity | 20 | 20 | 20 | 20 | 20 | 20 |
| Parker (outcrop) | Region C | Brazos | 87 | 87 | 87 | 87 | 87 | 87 |
| Parker (downdip) | Region C | Brazos | 7 | 7 | 7 | 7 | 7 | 7 |
| Parker (outcrop) | Region C | Trinity | 2,208 | 2,202 | 2,208 | 2,202 | 2,208 | 2,202 |
| Parker (downdip) | Region C | Trinity | 869 | 866 | 869 | 866 | 869 | 866 |
| **Subtotal** | | | **3,929** | **3,918** | **3,929** | **3,918** | **3,929** | **3,918** |
| **Groundwater Management Area 8** | | | **12,735** | **12,699** | **12,735** | **12,699** | **12,735** | **12,699** |

**TABLE 15. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (TWIN MOUNTAINS) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Collin | Region C | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Collin | Region C | Trinity | 2,207 | 2,201 | 2,207 | 2,201 | 2,207 | 2,201 |
| Dallas | Region C | Trinity | 3,208 | 3,199 | 3,208 | 3,199 | 3,208 | 3,199 |
| Denton | Region C | Trinity | 8,389 | 8,366 | 8,389 | 8,366 | 8,389 | 8,366 |
| Ellis | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Erath | Region G | Brazos | 5,031 | 5,017 | 5,031 | 5,017 | 5,031 | 5,017 |
| Fannin | Region C | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Grayson | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Johnson | Region G | Brazos | 133 | 133 | 133 | 133 | 133 | 133 |
| Johnson | Region G | Trinity | 252 | 251 | 252 | 251 | 252 | 251 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Rockwall | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Somervell | Region G | Brazos | 174 | 174 | 174 | 174 | 174 | 174 |
| Tarrant | Region C | Trinity | 6,936 | 6,917 | 6,936 | 6,917 | 6,936 | 6,917 |
| **Subtotal** | | | **26,330** | **26,258** | **26,330** | **26,258** | **26,330** | **26,258** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Hood (outcrop) | Region G | Brazos | 3,672 | 3,662 | 3,672 | 3,662 | 3,672 | 3,662 |
| Hood (downdip) | Region G | Brazos | 7,761 | 7,740 | 7,761 | 7,740 | 7,761 | 7,740 |
| Hood (downdip) | Region G | Trinity | 19 | 19 | 19 | 19 | 19 | 19 |
| Parker (outcrop) | Region C | Brazos | 1,069 | 1,066 | 1,069 | 1,066 | 1,069 | 1,066 |
| Parker (downdip) | Region C | Brazos | 778 | 776 | 778 | 776 | 778 | 776 |
| Parker (downdip) | Region C | Trinity | 1,310 | 1,306 | 1,310 | 1,306 | 1,310 | 1,306 |
| **Subtotal** | | | **14,609** | **14,569** | **14,609** | **14,569** | **14,609** | **14,569** |
| **Groundwater Management Area 8** | | | **40,939** | **40,827** | **40,939** | **40,827** | **40,939** | **40,827** |

**TABLE 16. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (TRAVIS PEAK) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Bell | Region G | Brazos | 8,293 | 8,270 | 8,293 | 8,270 | 8,293 | 8,270 |
| Bosque | Region G | Brazos | 7,699 | 7,678 | 7,699 | 7,678 | 7,699 | 7,678 |
| Brown | Region F | Brazos | 3 | 3 | 3 | 3 | 3 | 3 |
| Brown | Region F | Colorado | 392 | 391 | 392 | 391 | 392 | 391 |
| Burnet | Lower Colorado | Brazos | 2,950 | 2,943 | 2,950 | 2,943 | 2,950 | 2,943 |
| Burnet | Lower Colorado | Colorado | 523 | 521 | 523 | 521 | 523 | 521 |
| Comanche | Region G | Brazos | 6,128 | 6,111 | 6,128 | 6,111 | 6,128 | 6,111 |
| Comanche | Region G | Colorado | 49 | 49 | 49 | 49 | 49 | 49 |
| Coryell | Region G | Brazos | 4,383 | 4,371 | 4,383 | 4,371 | 4,383 | 4,371 |
| Dallas | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Delta | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Ellis | Region C | Trinity | 5,046 | 5,032 | 5,046 | 5,032 | 5,046 | 5,032 |
| Erath | Region G | Brazos | 11,849 | 11,815 | 11,849 | 11,815 | 11,849 | 11,815 |
| Falls | Region G | Brazos | 1,438 | 1,434 | 1,438 | 1,434 | 1,438 | 1,434 |
| Fannin | Region C | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamilton | Region G | Brazos | 2,213 | 2,207 | 2,213 | 2,207 | 2,213 | 2,207 |
| Hill | Region G | Brazos | 3,304 | 3,295 | 3,304 | 3,295 | 3,304 | 3,295 |
| Hill | Region G | Trinity | 256 | 255 | 256 | 255 | 256 | 255 |
| Hunt | Northeast Texas | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Hunt | Northeast Texas | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Johnson | Region G | Brazos | 1,932 | 1,927 | 1,932 | 1,927 | 1,932 | 1,927 |
| Johnson | Region G | Trinity | 3,022 | 3,014 | 3,022 | 3,014 | 3,022 | 3,014 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Lampasas | Region G | Brazos | 1,528 | 1,523 | 1,528 | 1,523 | 1,528 | 1,523 |
| Lampasas | Region G | Colorado | 76 | 75 | 76 | 75 | 76 | 75 |
| Limestone | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Limestone | Region G | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| McLennan | Region G | Brazos | 20,691 | 20,635 | 20,691 | 20,635 | 20,691 | 20,635 |
| Milam | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Mills | Lower Colorado | Brazos | 706 | 703 | 706 | 703 | 706 | 703 |
| Mills | Lower Colorado | Colorado | 1,576 | 1,572 | 1,576 | 1,572 | 1,576 | 1,572 |
| Navarro | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Somervell | Region G | Brazos | 2,854 | 2,847 | 2,854 | 2,847 | 2,854 | 2,847 |
| Travis | Lower Colorado | Brazos | 1 | 1 | 1 | 1 | 1 | 1 |
| Travis | Lower Colorado | Colorado | 4,124 | 4,112 | 4,124 | 4,112 | 4,124 | 4,112 |
| Williamson | Region G | Brazos | 2,885 | 2,877 | 2,885 | 2,877 | 2,885 | 2,877 |
| Williamson | Region G | Colorado | 5 | 5 | 5 | 5 | 5 | 5 |
| Williamson | Lower Colorado | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Williamson | Lower Colorado | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal** | | | **93,926** | **93,666** | **93,926** | **93,666** | **93,926** | **93,666** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Hood (downdip) | Region G | Brazos | 89 | 89 | 89 | 89 | 89 | 89 |
| **Subtotal** | | | **89** | **89** | **89** | **89** | **89** | **89** |
| **Groundwater Management Area 8** | | | **94,015** | **93,755** | **94,015** | **93,755** | **94,015** | **93,755** |

**TABLE 17. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (HENSELL) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Bell | Region G | Brazos | 1,099 | 1,096 | 1,099 | 1,096 | 1,099 | 1,096 |
| Bosque | Region G | Brazos | 3,845 | 3,835 | 3,845 | 3,835 | 3,845 | 3,835 |
| Brown | Region F | Colorado | 4 | 4 | 4 | 4 | 4 | 4 |
| Burnet | Lower Colorado | Brazos | 1,761 | 1,757 | 1,761 | 1,757 | 1,761 | 1,757 |
| Burnet | Lower Colorado | Colorado | 133 | 132 | 133 | 132 | 133 | 132 |
| Comanche | Region G | Brazos | 181 | 180 | 181 | 180 | 181 | 180 |
| Comanche | Region G | Colorado | 24 | 24 | 24 | 24 | 24 | 24 |
| Coryell | Region G | Brazos | 2,202 | 2,196 | 2,202 | 2,196 | 2,202 | 2,196 |
| Dallas | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Ellis | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Erath | Region G | Brazos | 5,151 | 5,137 | 5,151 | 5,137 | 5,151 | 5,137 |
| Falls | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Hamilton | Region G | Brazos | 1,675 | 1,671 | 1,675 | 1,671 | 1,675 | 1,671 |
| Hill | Region G | Brazos | 225 | 224 | 225 | 224 | 225 | 224 |
| Hill | Region G | Trinity | 1 | 1 | 1 | 1 | 1 | 1 |
| Johnson | Region G | Brazos | 618 | 616 | 618 | 616 | 618 | 616 |
| Johnson | Region G | Trinity | 468 | 467 | 468 | 467 | 468 | 467 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Lampasas | Region G | Brazos | 713 | 711 | 713 | 711 | 713 | 711 |
| Lampasas | Region G | Colorado | 1 | 1 | 1 | 1 | 1 | 1 |
| Limestone | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Limestone | Region G | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| McLennan | Region G | Brazos | 4,711 | 4,698 | 4,711 | 4,698 | 4,711 | 4,698 |
| Milam | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Mills | Lower Colorado | Brazos | 172 | 172 | 172 | 172 | 172 | 172 |
| Mills | Lower Colorado | Colorado | 436 | 435 | 436 | 435 | 436 | 435 |
| Navarro | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Somervell | Region G | Brazos | 1,978 | 1,973 | 1,978 | 1,973 | 1,978 | 1,973 |
| Travis | Lower Colorado | Brazos | 1 | 1 | 1 | 1 | 1 | 1 |
| Travis | Lower Colorado | Colorado | 1,144 | 1,141 | 1,144 | 1,141 | 1,144 | 1,141 |
| Williamson | Region G | Brazos | 753 | 751 | 753 | 751 | 753 | 751 |
| Williamson | Region G | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| Williamson | Lower Colorado | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Williamson | Lower Colorado | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal** | | | **27,296** | **27,223** | **27,296** | **27,223** | **27,296** | **27,223** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Hood (downdip) | Region G | Brazos | 36 | 36 | 36 | 36 | 36 | 36 |
| **Subtotal** | | | **36** | **36** | **36** | **36** | **36** | **36** |
| **Groundwater Management Area 8** | | | **27,332** | **27,259** | **27,332** | **27,259** | **27,332** | **27,259** |

**TABLE 18. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (HOSSTON) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Bell | Region G | Brazos | 7,193 | 7,174 | 7,193 | 7,174 | 7,193 | 7,174 |
| Bosque | Region G | Brazos | 3,772 | 3,762 | 3,772 | 3,762 | 3,772 | 3,762 |
| Brown | Region F | Brazos | 3 | 3 | 3 | 3 | 3 | 3 |
| Brown | Region F | Colorado | 355 | 353 | 355 | 353 | 355 | 353 |
| Burnet | Lower Colorado | Brazos | 1,027 | 1,025 | 1,027 | 1,025 | 1,027 | 1,025 |
| Burnet | Lower Colorado | Colorado | 355 | 354 | 355 | 354 | 355 | 354 |
| Comanche | Region G | Brazos | 5,875 | 5,858 | 5,875 | 5,858 | 5,875 | 5,858 |
| Comanche | Region G | Colorado | 6 | 6 | 6 | 6 | 6 | 6 |
| Coryell | Region G | Brazos | 2,167 | 2,161 | 2,167 | 2,161 | 2,167 | 2,161 |
| Dallas | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Ellis | Region C | Trinity | 5,040 | 5,026 | 5,040 | 5,026 | 5,040 | 5,026 |
| Erath | Region G | Brazos | 6,400 | 6,383 | 6,400 | 6,383 | 6,400 | 6,383 |
| Falls | Region G | Brazos | 1,438 | 1,434 | 1,438 | 1,434 | 1,438 | 1,434 |
| Hamilton | Region G | Brazos | 386 | 385 | 386 | 385 | 386 | 385 |
| Hill | Region G | Brazos | 3,026 | 3,018 | 3,026 | 3,018 | 3,026 | 3,018 |
| Hill | Region G | Trinity | 255 | 254 | 255 | 254 | 255 | 254 |
| Johnson | Region G | Brazos | 1,311 | 1,307 | 1,311 | 1,307 | 1,311 | 1,307 |
| Johnson | Region G | Trinity | 2,553 | 2,546 | 2,553 | 2,546 | 2,553 | 2,546 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Lampasas | Region G | Brazos | 786 | 783 | 786 | 783 | 786 | 783 |
| Lampasas | Region G | Colorado | 72 | 72 | 72 | 72 | 72 | 72 |
| Limestone | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Limestone | Region G | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| McLennan | Region G | Brazos | 15,980 | 15,937 | 15,980 | 15,937 | 15,980 | 15,937 |
| Milam | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Mills | Lower Colorado | Brazos | 376 | 375 | 376 | 375 | 376 | 375 |
| Mills | Lower Colorado | Colorado | 1,096 | 1,093 | 1,096 | 1,093 | 1,096 | 1,093 |
| Navarro | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Somervell | Region G | Brazos | 845 | 843 | 845 | 843 | 845 | 843 |
| Travis | Lower Colorado | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Travis | Lower Colorado | Colorado | 2,791 | 2,783 | 2,791 | 2,783 | 2,791 | 2,783 |
| Williamson | Region G | Brazos | 1,933 | 1,928 | 1,933 | 1,928 | 1,933 | 1,928 |
| Williamson | Region G | Colorado | 5 | 5 | 5 | 5 | 5 | 5 |

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Williamson | Lower Colorado | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Williamson | Lower Colorado | Colorado | 0 | 0 | 0 | 0 | 0 | 0 |
| **Subtotal** | | | **65,046** | **64,868** | **65,046** | **64,868** | **65,046** | **64,868** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Hood (downdip) | Region G | Brazos | 53 | 53 | 53 | 53 | 53 | 53 |
| **Subtotal** | | | **53** | **53** | **53** | **53** | **53** | **53** |
| **Groundwater Management Area 8** | | | **65,099** | **64,921** | **65,099** | **64,921** | **65,099** | **64,921** |

**TABLE 19. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE TRINITY AQUIFER (ANTLERS) IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| **Counties Not in Upper Trinity GCD** | | | | | | | | |
| Brown | Region F | Brazos | 48 | 48 | 48 | 48 | 48 | 48 |
| Brown | Region F | Colorado | 1,007 | 1,004 | 1,007 | 1,004 | 1,007 | 1,004 |
| Callahan | Region G | Brazos | 444 | 443 | 444 | 443 | 444 | 443 |
| Callahan | Region G | Colorado | 1,285 | 1,282 | 1,285 | 1,282 | 1,285 | 1,282 |
| Collin | Region C | Trinity | 1,966 | 1,961 | 1,966 | 1,961 | 1,966 | 1,961 |
| Comanche | Region G | Brazos | 5,855 | 5,839 | 5,855 | 5,839 | 5,855 | 5,839 |
| Cooke | Region C | Red | 2,191 | 2,184 | 2,191 | 2,184 | 2,191 | 2,184 |
| Cooke | Region C | Trinity | 8,353 | 8,330 | 8,353 | 8,330 | 8,353 | 8,330 |
| Denton | Region C | Trinity | 16,591 | 16,545 | 16,591 | 16,545 | 16,591 | 16,545 |
| Eastland | Region G | Brazos | 5,194 | 5,180 | 5,194 | 5,180 | 5,194 | 5,180 |
| Eastland | Region G | Colorado | 553 | 552 | 553 | 552 | 553 | 552 |
| Erath | Region G | Brazos | 2,636 | 2,628 | 2,636 | 2,628 | 2,636 | 2,628 |
| Fannin | Region C | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Fannin | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Grayson | Region C | Red | 6,678 | 6,660 | 6,678 | 6,660 | 6,678 | 6,660 |
| Grayson | Region C | Trinity | 4,059 | 4,048 | 4,059 | 4,048 | 4,059 | 4,048 |
| Lamar | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Sulphur | 0 | 0 | 0 | 0 | 0 | 0 |
| Red River | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Tarrant | Region C | Trinity | 1,251 | 1,248 | 1,251 | 1,248 | 1,251 | 1,248 |
| Taylor | Region G | Brazos | 5 | 5 | 5 | 5 | 5 | 5 |
| Taylor | Region G | Colorado | 9 | 9 | 9 | 9 | 9 | 9 |
| **Subtotal** | | | **58,125** | **57,966** | **58,125** | **57,966** | **58,125** | **57,966** |
| **Counties in Upper Trinity GCD** | | | | | | | | |
| Montague (outcrop) | Region B | Red | 154 | 154 | 154 | 154 | 154 | 154 |
| Montague (outcrop) | Region B | Trinity | 3,732 | 3,721 | 3,732 | 3,721 | 3,732 | 3,721 |
| Parker (outcrop) | Region C | Brazos | 257 | 256 | 257 | 256 | 257 | 256 |
| Parker (outcrop) | Region C | Trinity | 2,648 | 2,640 | 2,648 | 2,640 | 2,648 | 2,640 |
| Wise (outcrop) | Region C | Trinity | 7,698 | 7,677 | 7,698 | 7,677 | 7,698 | 7,677 |

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Wise (downdip) | Region C | Trinity | 2,062 | 2,057 | 2,062 | 2,057 | 2,062 | 2,057 |
| **Subtotal** | | | **16,551** | **16,505** | **16,551** | **16,505** | **16,551** | **16,505** |
| **Groundwater Management Area 8** | | | **74,676** | **74,471** | **74,676** | **74,471** | **74,676** | **74,471** |

**TABLE 20. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE WOODBINE AQUIFER IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Collin | Region C | Sabine | 0 | 0 | 0 | 0 | 0 | 0 |
| Collin | Region C | Trinity | 4,263 | 4,251 | 4,263 | 4,251 | 4,263 | 4,251 |
| Cooke | Region C | Red | 262 | 261 | 262 | 261 | 262 | 261 |
| Cooke | Region C | Trinity | 540 | 538 | 540 | 538 | 540 | 538 |
| Dallas | Region C | Trinity | 2,804 | 2,796 | 2,804 | 2,796 | 2,804 | 2,796 |
| Denton | Region C | Trinity | 3,616 | 3,607 | 3,616 | 3,607 | 3,616 | 3,607 |
| Ellis | Region C | Trinity | 2,078 | 2,073 | 2,078 | 2,073 | 2,078 | 2,073 |
| Fannin | Region C | Red | 3,553 | 3,544 | 3,553 | 3,544 | 3,553 | 3,544 |
| Fannin | Region C | Sulphur | 551 | 550 | 551 | 550 | 551 | 550 |
| Fannin | Region C | Trinity | 829 | 827 | 829 | 827 | 829 | 827 |
| Grayson | Region C | Red | 5,615 | 5,599 | 5,615 | 5,599 | 5,615 | 5,599 |
| Grayson | Region C | Trinity | 1,926 | 1,922 | 1,926 | 1,922 | 1,926 | 1,922 |
| Hill | Region G | Brazos | 285 | 284 | 285 | 284 | 285 | 284 |
| Hill | Region G | Trinity | 303 | 302 | 303 | 302 | 303 | 302 |
| Hunt | Northeast Texas | Sabine | 269 | 268 | 269 | 268 | 269 | 268 |
| Hunt | Northeast Texas | Sulphur | 165 | 165 | 165 | 165 | 165 | 165 |
| Hunt | Northeast Texas | Trinity | 330 | 329 | 330 | 329 | 330 | 329 |
| Johnson | Region G | Brazos | 24 | 24 | 24 | 24 | 24 | 24 |
| Johnson | Region G | Trinity | 1,961 | 1,956 | 1,961 | 1,956 | 1,961 | 1,956 |
| Kaufman | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Red | 0 | 0 | 0 | 0 | 0 | 0 |
| Lamar | Northeast Texas | Sulphur | 49 | 49 | 49 | 49 | 49 | 49 |
| McLennan | Region G | Brazos | 0 | 0 | 0 | 0 | 0 | 0 |
| Navarro | Region C | Trinity | 68 | 68 | 68 | 68 | 68 | 68 |
| Red River | Northeast Texas | Red | 2 | 2 | 2 | 2 | 2 | 2 |
| Rockwall | Region C | Trinity | 0 | 0 | 0 | 0 | 0 | 0 |
| Tarrant | Region C | Trinity | 1,141 | 1,138 | 1,141 | 1,138 | 1,141 | 1,138 |
| **Groundwater Management Area 8** | | | **30,634** | **30,553** | **30,634** | **30,553** | **30,634** | **30,553** |

**TABLE 21. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE EDWARDS (BALCONES FAULT ZONE) AQUIFER IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN. MODELED AVAILABLE GROUNDWATER VALUES ARE FROM GAM RUN 08-010MAG BY ANAYA (2008).**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Bell | Region G | Brazos | 6,469 | 6,469 | 6,469 | 6,469 | 6,469 | 6,469 |
| Travis | Lower Colorado | Brazos | 275 | 275 | 275 | 275 | 275 | 275 |
| Travis | Lower Colorado | Colorado | 4,962 | 4,962 | 4,962 | 4,962 | 4,962 | 4,962 |
| Williamson | Region G | Brazos | 3,351 | 3,351 | 3,351 | 3,351 | 3,351 | 3,351 |
| Williamson | Region G | Colorado | 101 | 101 | 101 | 101 | 101 | 101 |
| Williamson | Lower Colorado | Brazos | 6 | 6 | 6 | 6 | 6 | 6 |
| Williamson | Lower Colorado | Colorado | 4 | 4 | 4 | 4 | 4 | 4 |
| **Groundwater Management Area 8** | | | **15,168** | **15,168** | **15,168** | **15,168** | **15,168** | **15,168** |

**TABLE 22. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE MARBLE FALLS AQUIFER IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Brown | Region F | Colorado | 25 | 25 | 25 | 25 | 25 | 25 |
| Burnet | Lower Colorado | Brazos | 1,387 | 1,383 | 1,387 | 1,383 | 1,387 | 1,383 |
| Burnet | Lower Colorado | Colorado | 1,357 | 1,353 | 1,357 | 1,353 | 1,357 | 1,353 |
| Lampasas | Region G | Brazos | 1,958 | 1,952 | 1,958 | 1,952 | 1,958 | 1,952 |
| Lampasas | Region G | Colorado | 887 | 885 | 887 | 885 | 887 | 885 |
| Mills | Lower Colorado | Brazos | 1 | 1 | 1 | 1 | 1 | 1 |
| Mills | Lower Colorado | Colorado | 24 | 24 | 24 | 24 | 24 | 24 |
| **Groundwater Management Area 8** | | | **5,639** | **5,623** | **5,639** | **5,623** | **5,639** | **5,623** |

**TABLE 23. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE ELLENBURGER-SAN SABA AQUIFER IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Brown | Region F | Colorado | 131 | 131 | 131 | 131 | 131 | 131 |
| Burnet | Lower Colorado | Brazos | 3,833 | 3,822 | 3,833 | 3,822 | 3,833 | 3,822 |
| Burnet | Lower Colorado | Colorado | 7,024 | 7,005 | 7,024 | 7,005 | 7,024 | 7,005 |
| Lampasas | Region G | Brazos | 1,685 | 1,680 | 1,685 | 1,680 | 1,685 | 1,680 |
| Lampasas | Region G | Colorado | 916 | 913 | 916 | 913 | 916 | 913 |
| Mills | Lower Colorado | Brazos | 93 | 93 | 93 | 93 | 93 | 93 |
| Mills | Lower Colorado | Colorado | 407 | 406 | 407 | 406 | 407 | 406 |
| **Groundwater Management Area 8** | | | **14,089** | **14,050** | **14,089** | **14,050** | **14,089** | **14,050** |

**TABLE 24. MODELED AVAILABLE GROUNDWATER BY DECADE FOR THE HICKORY AQUIFER IN GROUNDWATER MANAGEMENT AREA 8. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE SUMMARIZED BY COUNTY, REGIONAL WATER PLANNING AREA (RWPA), AND RIVER BASIN.**

| County | RWPA | River Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| Brown | Region F | Colorado | 12 | 12 | 12 | 12 | 12 | 12 |
| Burnet | Lower Colorado | Brazos | 1,240 | 1,236 | 1,240 | 1,236 | 1,240 | 1,236 |
| Burnet | Lower Colorado | Colorado | 2,183 | 2,177 | 2,183 | 2,177 | 2,183 | 2,177 |
| Lampasas | Region G | Brazos | 80 | 79 | 80 | 79 | 80 | 79 |
| Lampasas | Region G | Colorado | 34 | 34 | 34 | 34 | 34 | 34 |
| Mills | Lower Colorado | Brazos | 7 | 7 | 7 | 7 | 7 | 7 |
| Mills | Lower Colorado | Colorado | 29 | 29 | 29 | 29 | 29 | 29 |
| **Groundwater Management Area 8** | | | **3,585** | **3,574** | **3,585** | **3,574** | **3,585** | **3,574** |

## *LIMITATIONS:*

The groundwater model used in completing this analysis is the best available scientific tool that can be used to meet the stated objectives. To the extent that this analysis will be used for planning purposes and/or regulatory purposes related to pumping in the past and into the future, it is important to recognize the assumptions and limitations associated with the use of the results. In reviewing the use of models in environmental regulatory decision making, the National Research Council (2007) noted:

> *"Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."*

A key aspect of using the groundwater model to evaluate historic groundwater flow conditions includes the assumptions about the location in the aquifer where historic pumping was placed. Understanding the amount and location of historic pumping is as important as evaluating the volume of groundwater flow into and out of the district, between aquifers within the district (as applicable), interactions with surface water (as applicable), recharge to the aquifer system (as applicable), and other metrics that describe the impacts of that pumping. In addition, assumptions regarding precipitation, recharge, and streamflow are specific to a particular historic time period.

Because the application of the groundwater model was designed to address regional scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations relating to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor groundwater pumping and groundwater levels in the aquifer. Because of the limitations of the groundwater model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine this analysis in the future given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future. Historic precipitation patterns also need to be placed in context as future climatic conditions, such as dry and wet year precipitation patterns, may differ and affect groundwater flow conditions.

## *REFERENCES:*

Anaya, R., 2008, Gam Run 08-010mag: Managed available groundwater for the Edwards (Balcones Fault Zone) Aquifer in Bell, Travis, and Williamson counties, 7 p., http://www.twdb.texas.gov/groundwater/docs/GAMruns/GR08-10mag_final.pdf?d=16598.495

Beach, J., Keester, M., and Konetchy, B, 2016, LBG-Guyton Associates Technical Memorandum: Results of Predictive Simulation in Support of GMA 8 Joint Planning – NTGCD GMA 8 Run 10 (January 14, 2016).

Harbaugh, A. W., and McDonald, M. G., 1996, User's documentation for MODFLOW-96, an update to the U.S. Geological Survey modular finite-difference ground-water flow model: U.S. Geological Survey Open-File Report 96-485, 56 p.

Jones, I., 2003, Groundwater Availability Modeling: Northern Segment of the Edwards Aquifer, Texas (December 2003), 75 p., http://www.twdb.texas.gov/publications/reports/numbered_reports/doc/R358/Report%20358%20Northern%20Edwards.pdf?d=1503601352574.

Kelley, V.A., Ewing, J., Jones, T.L., Young, S.C., Deeds, N., and Hamlin, S., 2014, Updated Groundwater Availability Model of the Northern Trinity and Woodbine Aquifers – Draft Final Model Report (August 2014), 990 p., http://www.twdb.texas.gov/groundwater/models/gam/trnt_n/Final_NTGAM_Vol%20I%20Aug%202014_Report.pdf?d=1503601407956.

National Research Council, 2007, Models in Environmental Regulatory Decision Making Committee on Models in the Regulatory Decision Process, National Academies Press, Washington D.C., 287 p., http://www.nap.edu/catalog.php?record_id=11972.

Niswonger, R.G., Panday, S., and Ibaraki, M., 2011, MODFLOW-NWT, a Newton formulation for MODFLOW-2005: United States Geological Survey, Techniques and Methods 6-A37, 44 p.

Panday, S., Langevin, C.D., Niswonger, R.G., Ibaraki, M., and Hughes, J.D., 2013, MODFLOW–USG version 1: An unstructured grid version of MODFLOW for simulating groundwater flow and tightly coupled processes using a control volume finite-difference formulation: U.S. Geological Survey Techniques and Methods, book 6, chap. A45, 66 p.

Shi, J., Boghici, R., Kohlrenken, W., and Hutchison, W.R., 2016, Numerical Model Report: Minor Aquifers of the Llano Uplift Region of Texas (Marble Falls, Ellenburger-San Saba, and Hickory). Texas Water Development Board, November 2016, 435p.

http://www.twdb.texas.gov/groundwater/models/gam/llano/Llano_Uplift_Numerical_Model_Report_Final.pdf?d=1503601525245.

Texas Water Code, 2011, http://www.statutes.legis.state.tx.us/docs/WA/pdf/WA.36.pdf.

# *Appendix A*

## Comparison between Desired Future Conditions and Simulated Drawdowns for the Trinity and Woodbine Aquifers

Drawdown values for the Trinity and Woodbine aquifers between 2009 and 2070 were based on the simulated head values at individual model cells extracted from predictive simulation head file submitted by Groundwater Management Area 8.

The Paluxy, Glen Rose, Twin Mountains, Travis Peak, Hensell, Hosston, and Antlers are subunits of the Trinity Aquifer. These subunits and Woodbine Aquifer exist in both outcrop and downdip areas (Figures 1 through 8). Kelley and others (2014) further divided these aquifers into five (5) regions, each with unique aquifer combinations and properties (table below and Figures 1 through 8).

<table>
<tr><th>Model Layer</th><th>Region 1</th><th>Region 2</th><th>Region 3</th><th colspan="2">Region 4</th><th colspan="2">Region 5</th></tr>
<tr><td>2</td><td colspan="4">Woodbine</td><td colspan="3">Woodbine (no sand)</td></tr>
<tr><td>3</td><td colspan="7">Washita/Fredericksburg</td></tr>
<tr><td>4</td><td rowspan="5">Antlers</td><td colspan="4">Paluxy</td><td colspan="2">Paluxy (no sand)</td></tr>
<tr><td>5</td><td colspan="6">Glen Rose</td></tr>
<tr><td>6</td><td rowspan="3">Twin Mountains</td><td colspan="2" rowspan="3">Travis Peak</td><td>Hensell</td><td rowspan="3">Travis Peak</td><td>Hensell</td></tr>
<tr><td>7</td><td>Pearsall/Sligo</td><td>Pearsall/Sligo</td></tr>
<tr><td>8</td><td>Hosston</td><td>Hosston</td></tr>
</table>

Vertically, the Trinity and Woodbine aquifers could contain multiple model layers and some of the model cells are pass-through cells with a thickness of one foot. To account for variable model cells from multiple model layers for the same aquifer, Beach and others (2016) adopted a method presented by Van Kelley of INTERA, Inc., which calculated a single composite head from multiple model cells with each adjusted by transmissivity. This composite head took both the head and hydraulic transmissivity at each cell into calculation, as shown in the following equation:

$$Hc = \frac{\sum_{i=UL}^{LL} T_i H_i}{\sum_{i=UL}^{LL} T_i}$$

Where:

$Hc$ = Composite Head (feet above mean sea level)

$T_i$ = Transmissivity of model layer $i$ (square feet per day)

$H_i$ = Head of model layer $i$ (feet above mean sea level)

*LL* = Lowest model layer representing the regional aquifer

*UL* = Uppermost model layer representing the regional aquifer.

The average head for the same aquifer in a county (*Hc_County*) was then calculated using the following equation:

$$Hc\_County = \frac{\sum_{i=1}^{n} Hc_i}{n}$$

Where:

$Hc\_County$ = Average composite head for a county (feet above mean sea level)

$Hc_i$ = Composite Head at a lateral location as defined in last step (feet above mean sea level)

$n$ = Total lateral (row, column) locations of an aquifer in a county.

Drawdown of the aquifer in a county (*DD_County*) was calculated using the following equation:

$$DD\_County = Hc\_County_{2009} - Hc\_County_{2070}$$

Where:

$Hc\_County_{2009}$ = Average head of an aquifer in a county in 2009 as defined above (feet above mean sea level)

$Hc\_County_{2070}$ = Average head of an aquifer in a county in 2070 as defined above (feet above mean sea level).

Model cells with head values below the cell bottom in 2009 were excluded from the calculation. Also, head was set at the cell bottom if it fell below the cell bottom at 2070.

In comparison with a simple average calculation based on total model cell count, use of composite head gives less weight to cells with lower transmissivity values (such as pass-through cells, cells with low saturation in outcrop area, or cells with lower hydraulic conductivity) in head and drawdown calculation.

Per Groundwater Management Area 8, a desired future condition was met if the simulated drawdown from the desired future condition was within five percent or five feet. Using the head output file submitted by Groundwater Management Area 8 and the method described above, the TWDB calculated the drawdowns (Tables A1 and A2) and performed the comparison against the corresponding desired future conditions by county (Tables A3, A4, A5, and A6). The review by the TWDB indicates that the predictive simulation meets the desired future conditions (Tables A7 and A8).

**TABLE A1. SIMULATED DRAWDOWN VALUES OF THE TRINITY AND WOODBINE AQUIFERS FOR COUNTIES NOT IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. DRAWDOWNS ARE IN FEET.**

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Bell | — | 19 | 83 | — | 294 | 137 | 330 | — |
| Bosque | — | 6 | 49 | — | 167 | 129 | 201 | — |
| Brown | — | — | 2 | — | 1 | 1 | 1 | 2 |
| Burnet | — | — | 2 | — | 16 | 7 | 20 | — |
| Callahan | — | — | — | — | — | — | — | 1 |
| Collin | 459 | 705 | 339 | 526 | — | — | — | 570 |
| Comanche | — | — | 1 | — | 2 | 2 | 3 | 9 |
| Cooke | 2 | — | — | — | — | — | — | 179 |
| Coryell | — | 7 | 14 | — | 100 | 66 | 130 | — |
| Dallas | 123 | 324 | 263 | 463 | 350 | 332 | 351 | — |
| Delta | — | 264 | 181 | — | 186 | — | — | — |
| Denton | 19 | 552 | 349 | 716 | — | — | — | 398 |
| Eastland | — | — | — | — | — | — | — | 3 |
| Ellis | 61 | 107 | 194 | 333 | 305 | 263 | 310 | — |
| Erath | — | 1 | 5 | 6 | 19 | 11 | 31 | 11 |
| Falls | — | 144 | 215 | — | 460 | 271 | 465 | — |
| Fannin | 247 | 688 | 280 | 372 | 269 | — | — | 251 |
| Grayson | 157 | 922 | 337 | 417 | — | — | — | 348 |
| Hamilton | — | 2 | 4 | — | 24 | 13 | 35 | — |
| Hill | 16 | 38 | 133 | — | 299 | 186 | 337 | — |
| Hunt | 598 | 586 | 299 | 370 | 324 | — | — | — |
| Johnson | 3 | -61 | 58 | 156 | 184 | 126 | 235 | — |
| Kaufman | 208 | 276 | 269 | 381 | 323 | 309 | 295 | — |
| Lamar | 38 | 93 | 97 | — | 114 | — | — | 122 |
| Lampasas | — | — | 1 | — | 6 | 1 | 11 | — |
| Limestone | — | 178 | 271 | — | 393 | 183 | 404 | — |
| McLennan | 6 | 35 | 133 | — | 468 | 220 | 542 | — |
| Milam | — | — | 212 | — | 344 | 229 | 345 | — |
| Mills | — | 1 | 1 | — | 7 | 2 | 13 | — |
| Navarro | 92 | 119 | 232 | — | 291 | 254 | 291 | — |
| Red River | 2 | 21 | 36 | — | 51 | — | — | 13 |
| Rockwall | 243 | 401 | 311 | 426 | — | — | — | — |
| Somervell | — | 1 | 4 | 31 | 52 | 26 | 83 | — |
| Tarrant | 6 | 101 | 148 | 315 | — | — | — | 149 |

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Taylor | — | — | — | — | — | — | — | 0 |
| Travis | — | — | 85 | — | 142 | 51 | 148 | — |
| Williamson | — | — | 76 | — | 172 | 73 | 176 | — |

—: Not available.

**TABLE A2. SIMULATED DRAWDOWN VALUES OF THE TRINITY AQUIFER FOR COUNTIES IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. DRAWDOWNS ARE IN FEET.**

| County | Paluxy | Glen Rose | Twin Mountains | Antlers |
|---|---|---|---|---|
| Hood (outcrop) | 5 | 7 | 4 | — |
| Hood (downdip) | — | 27 | 46 | — |
| Montague (outcrop) | — | — | — | 18 |
| Montague (downdip) | — | — | — | — |
| Parker (outcrop) | 5 | 10 | 1 | 11 |
| Parker (downdip) | 1 | 28 | 46 | — |
| Wise (outcrop) | — | — | — | 35 |
| Wise (downdip) | — | — | — | 142 |

—: Not available.

**TABLE A3. RELATIVE DIFFERENCE BETWEEN SIMULATED DRAWDOWNS AND DESIRED FUTURE CONDITIONS OF THE TRINITY AND WOODBINE AQUIFERS FOR COUNTIES NOT IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. VALUES GREATER THAN THE ERROR TOLERANCE OF FIVE PERCENT ARE HIGHLIGHTED.**

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Bell | — | 0% | 0% | — | -2% | 0% | 0% | — |
| Bosque | — | 0% | 0% | — | 0% | 0% | 0% | — |
| Brown | — | — | 0% | — | 0% | 0% | 0% | 0% |
| Burnet | — | — | 0% | — | 0% | 0% | 0% | — |
| Callahan | — | — | — | — | — | — | — | 0% |
| Collin | 0% | 0% | 0% | 0% | — | — | — | 0% |
| Comanche | — | — | 0% | — | 0% | 0% | 0% | 0% |
| Cooke | 0% | — | — | — | — | — | — | 2% |
| Coryell | — | 0% | 0% | — | 1% | 0% | 0% | — |
| Dallas | 0% | 0% | 0% | 0% | 1% | 0% | 0% | — |
| Delta | — | 0% | 0% | — | 0% | — | — | — |
| Denton | -16% | 0% | 0% | 0% | — | — | — | 1% |
| Eastland | — | — | — | — | — | — | — | 0% |
| Ellis | 0% | 0% | 0% | 0% | 1% | 0% | 0% | — |
| Erath | — | 0% | 0% | 0% | 0% | 0% | 0% | -9% |
| Falls | — | 0% | 0% | — | 0% | 0% | 0% | — |
| Fannin | 0% | 0% | 0% | 0% | 0% | — | — | 0% |
| Grayson | -2% | 0% | 0% | 0% | — | — | — | 0% |
| Hamilton | — | 0% | 0% | — | 0% | 0% | 0% | — |
| Hill | -25% | 0% | 0% | — | 0% | 0% | 0% | — |
| Hunt | 0% | 0% | 0% | 0% | 0% | — | — | — |
| Johnson | 33% | 0% | 0% | 0% | 3% | 0% | 0% | — |
| Kaufman | 0% | 0% | 0% | 0% | 0% | 0% | 0% | — |
| Lamar | 0% | 0% | 0% | — | 0% | — | — | 0% |
| Lampasas | — | — | 0% | — | 0% | 0% | 0% | — |
| Limestone | — | 0% | 0% | — | 0% | 0% | 0% | — |
| McLen—n | 0% | 0% | 0% | — | -1% | 0% | 0% | — |
| Milam | — | — | 0% | — | 0% | 0% | 0% | — |
| Mills | — | 0% | 0% | — | 0% | 0% | 0% | — |
| —varro | 0% | 0% | 0% | — | 0% | 0% | 0% | — |
| Red River | 0% | 0% | 0% | — | 0% | — | — | 0% |
| Rockwall | 0% | 0% | 0% | 0% | — | — | — | — |

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Somervell | — | 0% | 0% | 0% | 2% | 0% | 0% | — |
| Tarrant | -17% | 0% | 0% | 0% | — | — | — | 1% |
| Taylor | — | — | — | — | — | — | — | 0% |
| Travis | — | — | 0% | — | 1% | 2% | 1% | — |
| Williamson | — | — | -1% | — | -1% | -1% | -1% | — |

—: Not available.

**TABLE A4. RELATIVE DIFFERENCE BETWEEN SIMULATED DRAWDOWNS AND DESIRED FUTURE CONDITIONS OF THE TRINITY AQUIFER FOR COUNTIES IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. VALUES GREATER THAN THE ERROR TOLERANCE OF FIVE PERCENT ARE HIGHLIGHTED.**

| County | Paluxy | Glen Rose | Twin Mountains | Antlers |
|---|---|---|---|---|
| Hood (outcrop) | 0% | 0% | 0% | — |
| Hood (downdip) | — | -4% | 0% | — |
| Montague (outcrop) | — | — | — | 0% |
| Montague (downdip) | — | — | — | — |
| Parker (outcrop) | 0% | 0% | 0% | 0% |
| Parker (downdip) | 0% | 0% | 0% | — |
| Wise (outcrop) | — | — | — | 3% |
| Wise (downdip) | — | — | — | 0% |

—: Not available.

**TABLE A5. DIFFERENCE BETWEEN SIMULATED DRAWDOWNS AND DESIRED FUTURE CONDITIONS OF THE TRINITY AND WOODBINE AQUIFERS FOR COUNTIES NOT IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. VALUES GREATER THAN THE ERROR TOLERANCE OF FIVE FEET ARE HIGHLIGHTED.**

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Bell | — | 0 | 0 | — | -6 | 0 | 0 | — |
| Bosque | — | 0 | 0 | — | 0 | 0 | 0 | — |
| Brown | — | — | 0 | — | 0 | 0 | 0 | 0 |
| Burnet | — | — | 0 | — | 0 | 0 | 0 | — |
| Callahan | — | — | — | — | — | — | — | 0 |
| Collin | 0 | 0 | 0 | 0 | — | — | — | 0 |
| Comanche | — | — | 0 | — | 0 | 0 | 0 | 0 |
| Cooke | 0 | — | — | — | — | — | — | 3 |
| Coryell | — | 0 | 0 | — | 1 | 0 | 0 | — |
| Dallas | 0 | 0 | 0 | 0 | 2 | 0 | 0 | — |
| Delta | — | 0 | 0 | — | 0 | — | — | — |
| Denton | -3 | 0 | 0 | 0 | — | — | — | 3 |
| Eastland | — | — | — | — | — | — | — | 0 |
| Ellis | 0 | 0 | 0 | 0 | 4 | 0 | 0 | — |
| Erath | — | 0 | 0 | 0 | 0 | 0 | 0 | -1 |
| Falls | — | 0 | 0 | — | -2 | 0 | 0 | — |
| Fannin | 0 | 0 | 0 | 0 | 0 | — | — | 0 |
| Grayson | -3 | 0 | 0 | 0 | — | — | — | 0 |
| Hamilton | — | 0 | 0 | — | 0 | 0 | 0 | — |
| Hill | -4 | 0 | 0 | — | 1 | 0 | 0 | — |
| Hunt | 0 | 0 | 0 | 0 | 0 | — | — | — |
| Johnson | 1 | 0 | 0 | 0 | 5 | 0 | 0 | — |
| Kaufman | 0 | 0 | 0 | 0 | 0 | 0 | 0 | — |
| Lamar | 0 | 0 | 0 | — | 0 | — | — | 0 |
| Lampasas | — | — | 0 | — | 0 | 0 | 0 | — |
| Limestone | — | 0 | 0 | — | 1 | 0 | 0 | — |
| McLennan | 0 | 0 | 0 | — | -3 | 0 | 0 | — |
| Milam | — | — | 0 | — | -1 | 0 | 0 | — |
| Mills | — | 0 | 0 | — | 0 | 0 | 0 | — |
| Navarro | 0 | 0 | 0 | — | 1 | 0 | 0 | — |
| Red River | 0 | 0 | 0 | — | 0 | — | — | 0 |
| Rockwall | 0 | 0 | 0 | 0 | — | — | — | — |

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Somervell | — | 0 | 0 | 0 | 1 | 0 | 0 | — |
| Tarrant | -1 | 0 | 0 | 0 | — | — | — | 1 |
| Taylor | — | — | — | — | — | — | — | 0 |
| Travis | — | — | 0 | — | 1 | 1 | 2 | — |
| Williamson | — | — | -1 | — | -1 | -1 | -1 | — |

—: Not available.

**TABLE A6. DIFFERENCE BETWEEN SIMULATED DRAWDOWNS AND DESIRED FUTURE CONDITIONS OF THE TRINITY AQUIFER FOR COUNTIES IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. NO VALUES ARE GREATER THAN THE ERROR TOLERANCE OF FIVE FEET.**

| County | Paluxy | Glen Rose | Twin Mountains | Antlers |
|---|---|---|---|---|
| Hood (outcrop) | 0 | 0 | 0 | — |
| Hood (downdip) | — | -1 | 0 | — |
| Montague (outcrop) | — | — | — | 0 |
| Montague (downdip) | — | — | — | — |
| Parker (outcrop) | 0 | 0 | 0 | 0 |
| Parker (downdip) | 0 | 0 | 0 | — |
| Wise (outcrop) | — | — | — | 1 |
| Wise (downdip) | — | — | — | 0 |

—: Not available.

**TABLE A7. COMPARISON OF SIMULATED DRAWDOWNS WITH THE DESIRED FUTURE CONDITIONS OF THE TRINITY AND WOODBINE AQUIFERS FOR COUNTIES NOT IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. NO VALUES ARE GREATER THAN BOTH ERROR TOLERRANCES OF FIVE PERCENT AND FIVE FEET AT THE SAME TIME. THUS, PREDICTIVE SIMULATION MEETS ALL DESIRED FUTURE CONDITIONS.**

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Bell | — | MEET | MEET | — | MEET | MEET | MEET | — |
| Bosque | — | MEET | MEET | — | MEET | MEET | MEET | — |
| Brown | — | — | MEET | — | MEET | MEET | MEET | MEET |
| Burnet | — | — | MEET | — | MEET | MEET | MEET | — |
| Callahan | — | — | — | — | — | — | — | MEET |
| Collin | MEET | MEET | MEET | MEET | — | — | — | MEET |
| Comanche | — | — | MEET | — | MEET | MEET | MEET | MEET |
| Cooke | MEET | — | — | — | — | — | — | MEET |
| Coryell | — | MEET | MEET | — | MEET | MEET | MEET | — |
| Dallas | MEET | MEET | MEET | MEET | MEET | MEET | MEET | — |
| Delta | — | MEET | MEET | — | MEET | — | — | — |
| Denton | MEET | MEET | MEET | MEET | — | — | — | MEET |
| Eastland | — | — | — | — | — | — | — | MEET |
| Ellis | MEET | MEET | MEET | MEET | MEET | MEET | MEET | — |
| Erath | — | MEET | MEET | MEET | MEET | MEET | MEET | MEET |
| Falls | — | MEET | MEET | — | MEET | MEET | MEET | — |
| Fannin | MEET | MEET | MEET | MEET | MEET | — | — | MEET |
| Grayson | MEET | MEET | MEET | MEET | — | — | — | MEET |
| Hamilton | — | MEET | MEET | — | MEET | MEET | MEET | — |
| Hill | MEET | MEET | MEET | — | MEET | MEET | MEET | — |
| Hunt | MEET | MEET | MEET | MEET | MEET | — | — | — |
| Johnson | MEET | MEET | MEET | MEET | MEET | MEET | MEET | — |
| Kaufman | MEET | MEET | MEET | MEET | MEET | MEET | MEET | — |
| Lamar | MEET | MEET | MEET | — | MEET | — | — | MEET |
| Lampasas | — | — | MEET | — | MEET | MEET | MEET | — |
| Limestone | — | MEET | MEET | — | MEET | MEET | MEET | — |
| McLennan | MEET | MEET | MEET | — | MEET | MEET | MEET | — |
| Milam | — | — | MEET | — | MEET | MEET | MEET | — |
| Mills | — | MEET | MEET | — | MEET | MEET | MEET | — |
| Navarro | MEET | MEET | MEET | — | MEET | MEET | MEET | — |

| County | Woodbine | Paluxy | Glen Rose | Twin Mountains | Travis Peak | Hensell | Hosston | Antlers |
|---|---|---|---|---|---|---|---|---|
| Red River | MEET | MEET | MEET | — | MEET | — | — | MEET |
| Rockwall | MEET | MEET | MEET | MEET | — | — | — | — |
| Somervell | — | MEET | MEET | MEET | MEET | MEET | MEET | — |
| Tarrant | MEET | MEET | MEET | MEET | — | — | — | MEET |
| Taylor | — | — | — | — | — | — | — | MEET |
| Travis | — | — | MEET | — | MEET | MEET | MEET | — |
| Williamson | — | — | MEET | — | MEET | MEET | MEET | — |

—: Not available.

**TABLE A8. COMPARISON OF SIMULATED DRAWDOWNS WITH THE DESIRED FUTURE CONDITIONS OF THE TRINITY AQUIFER FOR COUNTIES IN THE UPPER TRINITY GROUNDWATER CONSERVATION DISTRICT. NO VALUES ARE GREATER THAN BOTH ERROR TOLERRANCES OF FIVE PERCENT AND FIVE FEET AT THE SAME TIME. THUS, PREDICTIVE SIMULATION MEETS ALL DESIRED FUTURE CONDITIONS.**

| County | Paluxy | Glen Rose | Twin Mountains | Antlers |
|---|---|---|---|---|
| Hood (outcrop) | MEET | MEET | MEET | — |
| Hood (downdip) | — | MEET | MEET | — |
| Montague (outcrop) | — | — | — | MEET |
| Montague (downdip) | — | — | — | — |
| Parker (outcrop) | MEET | MEET | MEET | MEET |
| Parker (downdip) | MEET | MEET | MEET | — |
| Wise (outcrop) | — | — | — | MEET |
| Wise (downdip) | — | — | — | MEET |

—: Not available.

# *Appendix B*

## Comparison between Desired Future Conditions and Simulated Saturated Thickness for the Marble Falls, Ellenburger-San Saba, and Hickory Aquifers in Brown, Burnet, Lampasas, and Mills Counties

The predictive simulation used to evaluate the desired future conditions and the modeled available groundwater values for the Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Brown, Burnet, Lampasas, and Mills counties within Groundwater Management Area 8 involves rewriting all relevant MODFLOW-USG packages to reflect the predictive simulation. The initial pumping for the predictive simulation was based on the last stress period of the groundwater availability model. In its clarification, Groundwater Management Area 8 also provided estimated pumping to use for the predictive simulation by TWDB (Table B1).

These pumping values from Groundwater Management Area 8 are more than the pumpage from the last stress period of the groundwater availability model. This surplus pumping for each aquifer was redistributed uniformly in each county according to its modeled extent.

The head file from the model output was used to calculate the remaining saturated thickness (*ST*) within the modeled extent for each aquifer between 2009 and 2070 using the following equation:

$$ST = \frac{\sum_{i=1}^{n}\left(h2070_i - e_i\right)}{\sum_{i=1}^{n}\left(h2009_i - e_i\right)}$$

Where:

$n$ = Total model cells in a county

$h2009_i$ = Head of 2009 at model cell $i$ (feet)

$h2070_i$ = Head of 2070 at model cell $i$ (feet)

$e_i$ = Bottom elevation of model cell $i$ (feet).

Model cells with head values below the cell bottom in 2009 were excluded from the calculation. Also, head was set at the cell bottom if it fell below the cell bottom at 2070.

The comparison between the simulated remaining saturated thickness and the desired future conditions is presented in Table B2. Table B2 indicates that the predictive simulation meets the desired future conditions of the Marble Falls, Ellenburger-San Saba, and Hickory aquifers in Brown, Burnet, Lampasas, and Mills counties.

**TABLE B1. GROUNDWATER PUMPING RATES FOR THE MARBLE FALLS, ELLENBURGER-SAN SABA, AND HICKORY AQUIFERS IN BROWN, BURNET, LAMPASAS, AND MILLS COUNTIES PROVIDED BY GROUNDWATER MNAAGMENT AREA 8.**

| County | Aquifer | 2010 to 2070 (acre-feet per year) |
|---|---|---|
| Burnet | Marble Falls | 2,736 |
| Lampasas | Marble Falls | 2,837 |
| Brown | Marble Falls | 25 |
| Mills | Marble Falls | 25 |
| Burnet | Ellenburger-San Saba | 10,827 |
| Lampasas | Ellenburger-San Saba | 2,593 |
| Brown | Ellenburger-San Saba | 131 |
| Mills | Ellenburger-San Saba | 499 |
| Burnet | Hickory | 3,413 |
| Lampasas | Hickory | 113 |
| Brown | Hickory | 12 |
| Mills | Hickory | 36 |

**TABLE B2. COMPARISON BETWEEN SIMULATED REMAINING AQUIFER SATURATED THICKESS AND DESIRED FUTURE CONDITIONS OF MARBLE FALLS, ELLENBURGER-SAN SABA, AND HICKORY AQUIFERS IN BROWN, BURNET, LAMPASAS, AND MILLS COUNTIES.**

| County | Aquifer | Remaining Aquifer Saturated Thickness Defined by Desired Future Condition | Simulated Remaining Aquifer Saturated Thickness | Is Desired Future Condition Met? |
|---|---|---|---|---|
| Brown | Marble Falls | at least 90% | 99.8% | Yes |
| Brown | Ellenburger-San Saba | at least 90% | 99.9% | Yes |
| Brown | Hickory | at least 90% | 99.9% | Yes |
| Burnet | Marble Falls | at least 90% | 98.8% | Yes |
| Burnet | Ellenburger-San Saba | at least 90% | 99.3% | Yes |
| Burnet | Hickory | at least 90% | 99.5% | Yes |
| Lampasas | Marble Falls | at least 90% | 98.2% | Yes |
| Lampasas | Ellenburger-San Saba | at least 90% | 99.0% | Yes |
| Lampasas | Hickory | at least 90% | 99.5% | Yes |
| Mills | Marble Falls | at least 90% | 99.5% | Yes |
| Mills | Ellenburger-San Saba | at least 90% | 99.7% | Yes |
| Mills | Hickory | at least 90% | 99.8% | Yes |

# *Appendix C*

## Summary of Dry Model Cell Count for the Trinity and Woodbine Aquifers

**TABLE C1. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (PALUXY) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Collin | Dallas | Denton | Johnson | Tarrant |
|---|---|---|---|---|---|
| Total Active Official Aquifer Model Cells | 12,062 | 14,532 | 3,520 | 11,627 | 15,389 |
| 2009 (baseline) | 0 | 0 | 0 | 17 | 3 |
| 2010 | 0 | 0 | 9 | 0 | 3 |
| 2011 | 1 | 0 | 49 | 0 | 3 |
| 2012 | 4 | 0 | 83 | 0 | 17 |
| 2013 | 8 | 0 | 140 | 0 | 47 |
| 2014 | 35 | 0 | 196 | 0 | 91 |
| 2015 | 49 | 0 | 264 | 0 | 146 |
| 2016 | 64 | 0 | 306 | 0 | 209 |
| 2017 | 72 | 0 | 349 | 0 | 291 |
| 2018 | 83 | 0 | 385 | 0 | 373 |
| 2019 | 93 | 0 | 428 | 0 | 460 |
| 2020 | 99 | 0 | 482 | 0 | 555 |
| 2021 | 109 | 0 | 550 | 0 | 620 |
| 2022 | 115 | 0 | 622 | 0 | 684 |
| 2023 | 125 | 0 | 695 | 0 | 746 |
| 2024 | 129 | 0 | 780 | 0 | 802 |
| 2025 | 138 | 0 | 879 | 0 | 862 |
| 2026 | 147 | 0 | 957 | 0 | 919 |
| 2027 | 151 | 0 | 1,018 | 0 | 964 |
| 2028 | 159 | 0 | 1,087 | 0 | 995 |
| 2029 | 166 | 0 | 1,171 | 0 | 1,038 |
| 2030 | 173 | 0 | 1,262 | 0 | 1,072 |
| 2031 | 176 | 0 | 1,326 | 0 | 1,101 |
| 2032 | 180 | 0 | 1,379 | 0 | 1,137 |
| 2033 | 187 | 0 | 1,420 | 0 | 1,156 |
| 2034 | 193 | 0 | 1,461 | 0 | 1,194 |
| 2035 | 201 | 0 | 1,492 | 0 | 1,224 |
| 2036 | 204 | 0 | 1,520 | 0 | 1,240 |
| 2037 | 209 | 0 | 1,554 | 0 | 1,274 |
| 2038 | 212 | 0 | 1,584 | 0 | 1,292 |
| 2039 | 215 | 0 | 1,607 | 0 | 1,317 |
| 2040 | 217 | 0 | 1,627 | 0 | 1,347 |
| 2041 | 224 | 0 | 1,659 | 0 | 1,362 |
| 2042 | 228 | 0 | 1,682 | 0 | 1,377 |

| Year | Collin | Dallas | Denton | Johnson | Tarrant |
|---|---|---|---|---|---|
| 2043 | 235 | 0 | 1,710 | 0 | 1,409 |
| 2044 | 239 | 0 | 1,735 | 0 | 1,425 |
| 2045 | 242 | 0 | 1,755 | 0 | 1,438 |
| 2046 | 247 | 0 | 1,777 | 0 | 1,455 |
| 2047 | 250 | 0 | 1,790 | 0 | 1,477 |
| 2048 | 251 | 0 | 1,807 | 0 | 1,497 |
| 2049 | 253 | 0 | 1,823 | 0 | 1,517 |
| 2050 | 254 | 0 | 1,834 | 0 | 1,530 |
| 2051 | 258 | 2 | 1,847 | 0 | 1,539 |
| 2052 | 264 | 2 | 1,860 | 0 | 1,562 |
| 2053 | 266 | 2 | 1,874 | 0 | 1,585 |
| 2054 | 270 | 3 | 1,883 | 0 | 1,594 |
| 2055 | 272 | 3 | 1,893 | 0 | 1,606 |
| 2056 | 275 | 3 | 1,902 | 0 | 1,621 |
| 2057 | 276 | 3 | 1,923 | 0 | 1,634 |
| 2058 | 280 | 4 | 1,929 | 0 | 1,650 |
| 2059 | 282 | 4 | 1,934 | 0 | 1,666 |
| 2060 | 286 | 4 | 1,943 | 0 | 1,679 |
| 2061 | 288 | 4 | 1,947 | 0 | 1,693 |
| 2062 | 288 | 4 | 1,961 | 0 | 1,701 |
| 2063 | 290 | 5 | 1,973 | 0 | 1,712 |
| 2064 | 291 | 5 | 1,977 | 0 | 1,726 |
| 2065 | 292 | 5 | 1,988 | 0 | 1,739 |
| 2066 | 295 | 5 | 1,996 | 0 | 1,752 |
| 2067 | 297 | 6 | 2,002 | 0 | 1,760 |
| 2068 | 300 | 7 | 2,009 | 0 | 1,769 |
| 2069 | 304 | 7 | 2,017 | 0 | 1,778 |
| 2070 | 305 | 7 | 2,024 | 0 | 1,784 |

**TABLE C2. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (GLEN ROSE) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Bell | Burnet | Coryell | Erath | Hamilton | Hood | Johnson | Mills | Parker | Travis |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Active Official Aquifer Model Cells | 23,737 | 22,534 | 41,647 | 20,905 | 36,944 | 14,461 | 12,342 | 10,615 | 11,389 | 14,552 |
| 2009 (baseline) | 0 | 0 | 11 | 0 | 0 | 0 | 15 | 0 | 8 | 25 |
| 2010 | 0 | 0 | 11 | 0 | 0 | 0 | 15 | 0 | 9 | 29 |
| 2011 | 0 | 0 | 11 | 0 | 0 | 0 | 15 | 0 | 12 | 29 |
| 2012 | 0 | 0 | 11 | 0 | 0 | 0 | 15 | 0 | 15 | 29 |
| 2013 | 0 | 0 | 11 | 1 | 0 | 0 | 15 | 1 | 19 | 29 |
| 2014 | 0 | 1 | 11 | 1 | 0 | 1 | 15 | 1 | 22 | 31 |
| 2015 | 0 | 1 | 11 | 1 | 0 | 1 | 15 | 1 | 23 | 32 |
| 2016 | 0 | 1 | 12 | 1 | 0 | 1 | 15 | 1 | 30 | 33 |
| 2017 | 0 | 1 | 12 | 2 | 0 | 2 | 15 | 1 | 37 | 34 |
| 2018 | 0 | 1 | 12 | 3 | 0 | 2 | 15 | 1 | 38 | 34 |
| 2019 | 0 | 1 | 14 | 3 | 0 | 2 | 16 | 1 | 44 | 34 |
| 2020 | 0 | 1 | 14 | 3 | 0 | 2 | 16 | 1 | 46 | 34 |
| 2021 | 0 | 1 | 14 | 3 | 0 | 3 | 16 | 1 | 48 | 35 |
| 2022 | 0 | 1 | 14 | 3 | 0 | 3 | 16 | 1 | 49 | 38 |
| 2023 | 0 | 1 | 14 | 3 | 0 | 3 | 17 | 1 | 54 | 41 |
| 2024 | 0 | 1 | 15 | 3 | 0 | 3 | 17 | 1 | 58 | 45 |
| 2025 | 0 | 1 | 15 | 3 | 0 | 3 | 17 | 1 | 65 | 47 |
| 2026 | 0 | 1 | 15 | 3 | 0 | 5 | 19 | 1 | 72 | 48 |
| 2027 | 0 | 1 | 15 | 4 | 0 | 5 | 21 | 1 | 78 | 50 |
| 2028 | 0 | 1 | 15 | 4 | 0 | 5 | 21 | 1 | 82 | 51 |
| 2029 | 0 | 1 | 15 | 4 | 0 | 6 | 22 | 1 | 84 | 51 |
| 2030 | 0 | 1 | 15 | 4 | 0 | 6 | 22 | 1 | 90 | 54 |
| 2031 | 0 | 1 | 15 | 8 | 0 | 6 | 22 | 1 | 99 | 54 |
| 2032 | 0 | 1 | 15 | 8 | 0 | 8 | 23 | 1 | 103 | 55 |
| 2033 | 0 | 1 | 15 | 8 | 0 | 8 | 23 | 1 | 105 | 56 |
| 2034 | 0 | 1 | 15 | 9 | 0 | 9 | 23 | 1 | 108 | 56 |
| 2035 | 0 | 1 | 15 | 9 | 0 | 10 | 23 | 1 | 109 | 57 |
| 2036 | 0 | 1 | 15 | 9 | 0 | 12 | 23 | 1 | 110 | 58 |
| 2037 | 0 | 1 | 15 | 9 | 0 | 13 | 23 | 1 | 110 | 58 |
| 2038 | 0 | 1 | 15 | 9 | 0 | 14 | 23 | 1 | 113 | 59 |

| Year | Bell | Burnet | Coryell | Erath | Hamilton | Hood | Johnson | Mills | Parker | Travis |
|---|---|---|---|---|---|---|---|---|---|---|
| 2039 | 0 | 2 | 15 | 9 | 0 | 14 | 23 | 1 | 113 | 59 |
| 2040 | 0 | 2 | 15 | 9 | 0 | 14 | 23 | 1 | 116 | 60 |
| 2041 | 0 | 2 | 15 | 9 | 0 | 16 | 23 | 1 | 119 | 60 |
| 2042 | 0 | 2 | 15 | 10 | 1 | 16 | 23 | 1 | 122 | 61 |
| 2043 | 0 | 2 | 15 | 10 | 2 | 16 | 23 | 1 | 124 | 61 |
| 2044 | 0 | 2 | 15 | 10 | 2 | 18 | 24 | 1 | 125 | 62 |
| 2045 | 0 | 2 | 15 | 10 | 2 | 18 | 25 | 1 | 131 | 63 |
| 2046 | 0 | 2 | 15 | 10 | 2 | 18 | 25 | 1 | 131 | 63 |
| 2047 | 0 | 2 | 16 | 10 | 3 | 18 | 25 | 1 | 134 | 64 |
| 2048 | 0 | 2 | 16 | 10 | 4 | 18 | 26 | 1 | 137 | 64 |
| 2049 | 0 | 2 | 16 | 11 | 4 | 20 | 26 | 1 | 139 | 65 |
| 2050 | 0 | 2 | 16 | 11 | 4 | 22 | 26 | 1 | 143 | 65 |
| 2051 | 0 | 2 | 16 | 12 | 5 | 22 | 29 | 1 | 144 | 66 |
| 2052 | 1 | 2 | 16 | 12 | 5 | 22 | 31 | 1 | 147 | 66 |
| 2053 | 3 | 2 | 16 | 12 | 7 | 24 | 32 | 1 | 149 | 67 |
| 2054 | 4 | 2 | 17 | 12 | 7 | 27 | 32 | 1 | 151 | 67 |
| 2055 | 4 | 2 | 17 | 12 | 7 | 27 | 34 | 1 | 152 | 67 |
| 2056 | 4 | 2 | 17 | 12 | 7 | 30 | 34 | 1 | 152 | 68 |
| 2057 | 6 | 2 | 17 | 13 | 7 | 31 | 34 | 1 | 156 | 69 |
| 2058 | 7 | 2 | 17 | 13 | 7 | 31 | 34 | 1 | 159 | 69 |
| 2059 | 7 | 2 | 17 | 13 | 7 | 31 | 34 | 1 | 164 | 69 |
| 2060 | 7 | 2 | 17 | 13 | 8 | 34 | 34 | 1 | 166 | 69 |
| 2061 | 7 | 2 | 17 | 13 | 8 | 34 | 34 | 1 | 165 | 69 |
| 2062 | 7 | 2 | 17 | 13 | 9 | 35 | 34 | 1 | 168 | 69 |
| 2063 | 7 | 2 | 17 | 14 | 9 | 36 | 34 | 1 | 168 | 69 |
| 2064 | 7 | 2 | 17 | 16 | 9 | 36 | 34 | 1 | 172 | 69 |
| 2065 | 8 | 2 | 17 | 16 | 9 | 36 | 34 | 2 | 176 | 69 |
| 2066 | 8 | 2 | 17 | 16 | 10 | 36 | 34 | 2 | 180 | 69 |
| 2067 | 8 | 3 | 17 | 19 | 10 | 36 | 34 | 2 | 184 | 69 |
| 2068 | 8 | 3 | 17 | 19 | 11 | 38 | 34 | 2 | 188 | 69 |
| 2069 | 8 | 3 | 17 | 20 | 11 | 38 | 34 | 2 | 191 | 69 |
| 2070 | 8 | 4 | 17 | 20 | 11 | 41 | 34 | 2 | 194 | 69 |

**TABLE C3. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (TWIN MOUNTAINS) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Denton | Erath | Hood | Johnson | Parker | Tarrant |
|---|---|---|---|---|---|---|
| Total Active Official Aquifer Model Cells | 10,560 | 46,642 | 37,444 | 6,816 | 30,830 | 40,713 |
| 2009 (baseline) | 0 | 20 | 0 | 0 | 0 | 0 |
| 2010 | 0 | 27 | 0 | 0 | 0 | 0 |
| 2011 | 0 | 33 | 0 | 0 | 0 | 0 |
| 2012 | 0 | 40 | 0 | 0 | 0 | 0 |
| 2013 | 0 | 44 | 0 | 0 | 0 | 0 |
| 2014 | 0 | 48 | 0 | 0 | 0 | 0 |
| 2015 | 0 | 53 | 0 | 0 | 0 | 0 |
| 2016 | 0 | 56 | 0 | 0 | 0 | 0 |
| 2017 | 0 | 61 | 0 | 0 | 0 | 0 |
| 2018 | 0 | 65 | 0 | 0 | 0 | 0 |
| 2019 | 0 | 68 | 1 | 0 | 0 | 0 |
| 2020 | 0 | 71 | 1 | 0 | 0 | 0 |
| 2021 | 0 | 76 | 1 | 0 | 1 | 0 |
| 2022 | 0 | 80 | 1 | 0 | 4 | 0 |
| 2023 | 0 | 81 | 1 | 0 | 8 | 2 |
| 2024 | 0 | 85 | 4 | 0 | 13 | 6 |
| 2025 | 0 | 88 | 7 | 0 | 16 | 10 |
| 2026 | 0 | 91 | 15 | 0 | 17 | 16 |
| 2027 | 0 | 94 | 18 | 0 | 18 | 25 |
| 2028 | 0 | 97 | 23 | 0 | 18 | 32 |
| 2029 | 0 | 101 | 28 | 0 | 23 | 36 |
| 2030 | 0 | 107 | 33 | 0 | 24 | 41 |
| 2031 | 1 | 108 | 41 | 0 | 25 | 48 |
| 2032 | 1 | 111 | 46 | 0 | 25 | 53 |
| 2033 | 1 | 119 | 56 | 0 | 26 | 56 |
| 2034 | 1 | 122 | 64 | 0 | 27 | 66 |
| 2035 | 1 | 123 | 68 | 0 | 27 | 74 |
| 2036 | 2 | 126 | 75 | 0 | 29 | 93 |
| 2037 | 2 | 131 | 82 | 0 | 29 | 127 |
| 2038 | 2 | 134 | 95 | 0 | 30 | 170 |
| 2039 | 2 | 136 | 100 | 0 | 31 | 231 |
| 2040 | 2 | 137 | 114 | 0 | 32 | 289 |
| 2041 | 2 | 143 | 129 | 0 | 32 | 354 |

| Year | Denton | Erath | Hood | Johnson | Parker | Tarrant |
|---|---|---|---|---|---|---|
| 2042 | 2 | 146 | 137 | 0 | 32 | 426 |
| 2043 | 2 | 150 | 150 | 0 | 32 | 500 |
| 2044 | 2 | 154 | 165 | 0 | 32 | 587 |
| 2045 | 3 | 157 | 178 | 0 | 34 | 648 |
| 2046 | 4 | 161 | 194 | 0 | 35 | 711 |
| 2047 | 4 | 167 | 212 | 0 | 36 | 767 |
| 2048 | 4 | 171 | 228 | 0 | 38 | 832 |
| 2049 | 5 | 174 | 242 | 0 | 38 | 889 |
| 2050 | 7 | 176 | 251 | 0 | 38 | 930 |
| 2051 | 8 | 178 | 262 | 0 | 38 | 996 |
| 2052 | 8 | 181 | 272 | 2 | 38 | 1,057 |
| 2053 | 9 | 184 | 282 | 7 | 38 | 1,114 |
| 2054 | 9 | 186 | 297 | 13 | 39 | 1,169 |
| 2055 | 9 | 189 | 313 | 19 | 40 | 1,234 |
| 2056 | 10 | 194 | 320 | 26 | 40 | 1,303 |
| 2057 | 11 | 196 | 330 | 33 | 41 | 1,366 |
| 2058 | 14 | 207 | 336 | 41 | 42 | 1,435 |
| 2059 | 14 | 211 | 341 | 49 | 42 | 1,508 |
| 2060 | 15 | 221 | 351 | 57 | 42 | 1,595 |
| 2061 | 16 | 221 | 363 | 67 | 43 | 1,681 |
| 2062 | 17 | 223 | 368 | 75 | 43 | 1,783 |
| 2063 | 18 | 224 | 375 | 83 | 43 | 1,899 |
| 2064 | 20 | 228 | 385 | 94 | 45 | 1,988 |
| 2065 | 22 | 229 | 393 | 105 | 46 | 2,104 |
| 2066 | 23 | 231 | 401 | 115 | 47 | 2,188 |
| 2067 | 24 | 233 | 408 | 130 | 47 | 2,285 |
| 2068 | 27 | 236 | 416 | 139 | 47 | 2,364 |
| 2069 | 31 | 240 | 424 | 155 | 47 | 2,468 |
| 2070 | 35 | 242 | 429 | 168 | 47 | 2,553 |

**TABLE C4. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (TRAVIS PEAK) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Burnet | Comanche | Erath | Johnson | Lampasas | McLennan | Travis |
|---|---|---|---|---|---|---|---|
| Total Active Official Aquifer Model Cells | 46,474 | 78,137 | 39,220 | 28,386 | 63,905 | 50,973 | 30,318 |
| 2009 (baseline) | 217 | 0 | 0 | 0 | 1 | 0 | 57 |
| 2010 | 176 | 0 | 1 | 0 | 1 | 0 | 59 |
| 2011 | 186 | 0 | 1 | 0 | 1 | 0 | 60 |
| 2012 | 218 | 0 | 1 | 0 | 1 | 0 | 63 |
| 2013 | 249 | 0 | 1 | 0 | 1 | 0 | 65 |
| 2014 | 271 | 0 | 1 | 0 | 1 | 0 | 68 |
| 2015 | 291 | 0 | 1 | 0 | 1 | 0 | 68 |
| 2016 | 314 | 0 | 3 | 0 | 1 | 0 | 70 |
| 2017 | 331 | 0 | 4 | 0 | 1 | 0 | 70 |
| 2018 | 345 | 0 | 5 | 0 | 1 | 0 | 71 |
| 2019 | 363 | 0 | 6 | 0 | 1 | 0 | 72 |
| 2020 | 378 | 0 | 11 | 0 | 1 | 0 | 72 |
| 2021 | 394 | 0 | 17 | 0 | 1 | 0 | 74 |
| 2022 | 400 | 0 | 29 | 0 | 1 | 0 | 74 |
| 2023 | 414 | 0 | 59 | 0 | 1 | 0 | 76 |
| 2024 | 424 | 0 | 93 | 0 | 1 | 0 | 77 |
| 2025 | 438 | 1 | 114 | 0 | 1 | 0 | 77 |
| 2026 | 450 | 9 | 130 | 0 | 1 | 0 | 79 |
| 2027 | 463 | 14 | 160 | 0 | 1 | 0 | 80 |
| 2028 | 474 | 14 | 183 | 0 | 1 | 0 | 80 |
| 2029 | 483 | 18 | 205 | 0 | 1 | 0 | 82 |
| 2030 | 494 | 30 | 238 | 0 | 1 | 0 | 82 |
| 2031 | 505 | 34 | 266 | 0 | 1 | 0 | 83 |
| 2032 | 512 | 35 | 299 | 0 | 1 | 0 | 83 |
| 2033 | 520 | 41 | 328 | 0 | 1 | 0 | 84 |
| 2034 | 527 | 54 | 343 | 0 | 1 | 0 | 85 |
| 2035 | 533 | 67 | 351 | 0 | 1 | 0 | 85 |
| 2036 | 543 | 72 | 370 | 0 | 1 | 0 | 87 |
| 2037 | 545 | 77 | 398 | 0 | 1 | 0 | 88 |
| 2038 | 554 | 85 | 414 | 0 | 1 | 0 | 88 |
| 2039 | 564 | 94 | 421 | 0 | 1 | 0 | 90 |
| 2040 | 571 | 103 | 435 | 0 | 1 | 1 | 90 |
| 2041 | 579 | 111 | 453 | 0 | 1 | 1 | 91 |
| 2042 | 588 | 116 | 481 | 0 | 1 | 1 | 92 |

| Year | Burnet | Comanche | Erath | Johnson | Lampasas | McLennan | Travis |
|---|---|---|---|---|---|---|---|
| 2043 | 599 | 116 | 497 | 0 | 1 | 1 | 93 |
| 2044 | 604 | 121 | 507 | 0 | 1 | 1 | 93 |
| 2045 | 609 | 128 | 520 | 0 | 1 | 1 | 94 |
| 2046 | 618 | 138 | 538 | 0 | 1 | 1 | 95 |
| 2047 | 623 | 146 | 557 | 0 | 1 | 2 | 97 |
| 2048 | 629 | 152 | 590 | 0 | 1 | 2 | 97 |
| 2049 | 634 | 160 | 606 | 0 | 1 | 2 | 98 |
| 2050 | 640 | 166 | 620 | 0 | 1 | 2 | 99 |
| 2051 | 644 | 172 | 638 | 1 | 1 | 2 | 100 |
| 2052 | 648 | 180 | 651 | 1 | 1 | 2 | 100 |
| 2053 | 654 | 186 | 665 | 1 | 1 | 2 | 101 |
| 2054 | 658 | 190 | 678 | 1 | 1 | 2 | 102 |
| 2055 | 670 | 194 | 690 | 1 | 1 | 2 | 103 |
| 2056 | 675 | 196 | 699 | 1 | 1 | 2 | 103 |
| 2057 | 678 | 199 | 711 | 1 | 1 | 2 | 104 |
| 2058 | 692 | 206 | 723 | 1 | 1 | 2 | 105 |
| 2059 | 702 | 216 | 746 | 1 | 1 | 2 | 106 |
| 2060 | 717 | 222 | 774 | 1 | 1 | 2 | 106 |
| 2061 | 714 | 225 | 776 | 1 | 1 | 2 | 106 |
| 2062 | 719 | 227 | 790 | 1 | 1 | 2 | 107 |
| 2063 | 723 | 231 | 799 | 1 | 1 | 3 | 107 |
| 2064 | 728 | 235 | 813 | 2 | 1 | 3 | 109 |
| 2065 | 730 | 238 | 822 | 3 | 1 | 3 | 109 |
| 2066 | 730 | 245 | 832 | 3 | 1 | 3 | 109 |
| 2067 | 734 | 252 | 841 | 3 | 1 | 3 | 110 |
| 2068 | 741 | 258 | 850 | 3 | 1 | 3 | 110 |
| 2069 | 745 | 264 | 861 | 6 | 1 | 3 | 111 |
| 2070 | 748 | 269 | 871 | 7 | 1 | 3 | 112 |

**TABLE C5. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (HENSELL) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Erath | Lampasas |
|---|---|---|
| Total Active Official Aquifer Model Cells | 21,880 | 25,364 |
| 2009 (baseline) | 0 | 1 |
| 2010 | 0 | 1 |
| 2011 | 0 | 1 |
| 2012 | 0 | 1 |
| 2013 | 0 | 1 |
| 2014 | 0 | 1 |
| 2015 | 0 | 1 |
| 2016 | 0 | 1 |
| 2017 | 0 | 1 |
| 2018 | 0 | 1 |
| 2019 | 0 | 1 |
| 2020 | 0 | 1 |
| 2021 | 0 | 1 |
| 2022 | 0 | 1 |
| 2023 | 0 | 1 |
| 2024 | 0 | 1 |
| 2025 | 0 | 1 |
| 2026 | 0 | 1 |
| 2027 | 0 | 1 |
| 2028 | 0 | 1 |
| 2029 | 0 | 1 |
| 2030 | 0 | 1 |
| 2031 | 0 | 1 |
| 2032 | 0 | 1 |
| 2033 | 0 | 1 |
| 2034 | 0 | 1 |
| 2035 | 0 | 1 |
| 2036 | 0 | 1 |
| 2037 | 0 | 1 |
| 2038 | 0 | 1 |
| 2039 | 0 | 1 |
| 2040 | 1 | 1 |
| 2041 | 1 | 1 |
| 2042 | 3 | 1 |
| 2043 | 3 | 1 |

| Year | Erath | Lampasas |
|---|---|---|
| 2044 | 3 | 1 |
| 2045 | 6 | 1 |
| 2046 | 7 | 1 |
| 2047 | 7 | 1 |
| 2048 | 12 | 1 |
| 2049 | 14 | 1 |
| 2050 | 14 | 1 |
| 2051 | 18 | 1 |
| 2052 | 20 | 1 |
| 2053 | 22 | 1 |
| 2054 | 24 | 1 |
| 2055 | 25 | 1 |
| 2056 | 25 | 1 |
| 2057 | 30 | 1 |
| 2058 | 31 | 1 |
| 2059 | 35 | 1 |
| 2060 | 37 | 1 |
| 2061 | 37 | 1 |
| 2062 | 40 | 1 |
| 2063 | 42 | 1 |
| 2064 | 42 | 1 |
| 2065 | 44 | 1 |
| 2066 | 46 | 1 |
| 2067 | 46 | 1 |
| 2068 | 48 | 1 |
| 2069 | 50 | 1 |
| 2070 | 52 | 1 |

**TABLE C6. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (HOSSTON) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Burnet | Comanche | Erath | Johnson | McLennan | Travis |
|---|---|---|---|---|---|---|
| Total Active Official Aquifer Model Cells | 24,354 | 41,062 | 8,464 | 9,462 | 16,991 | 9,480 |
| 2009 (baseline) | 217 | 0 | 0 | 0 | 0 | 57 |
| 2010 | 176 | 0 | 1 | 0 | 0 | 59 |
| 2011 | 186 | 0 | 1 | 0 | 0 | 60 |
| 2012 | 218 | 0 | 1 | 0 | 0 | 63 |
| 2013 | 247 | 0 | 1 | 0 | 0 | 65 |
| 2014 | 269 | 0 | 1 | 0 | 0 | 68 |
| 2015 | 288 | 0 | 1 | 0 | 0 | 68 |
| 2016 | 310 | 0 | 1 | 0 | 0 | 70 |
| 2017 | 325 | 0 | 1 | 0 | 0 | 70 |
| 2018 | 338 | 0 | 1 | 0 | 0 | 71 |
| 2019 | 353 | 0 | 1 | 0 | 0 | 72 |
| 2020 | 368 | 0 | 1 | 0 | 0 | 72 |
| 2021 | 382 | 0 | 2 | 0 | 0 | 74 |
| 2022 | 387 | 0 | 9 | 0 | 0 | 74 |
| 2023 | 400 | 0 | 25 | 0 | 0 | 76 |
| 2024 | 409 | 0 | 51 | 0 | 0 | 77 |
| 2025 | 423 | 1 | 66 | 0 | 0 | 77 |
| 2026 | 433 | 9 | 75 | 0 | 0 | 79 |
| 2027 | 444 | 14 | 93 | 0 | 0 | 80 |
| 2028 | 455 | 14 | 99 | 0 | 0 | 80 |
| 2029 | 463 | 18 | 105 | 0 | 0 | 82 |
| 2030 | 473 | 30 | 111 | 0 | 0 | 82 |
| 2031 | 484 | 34 | 118 | 0 | 0 | 83 |
| 2032 | 491 | 35 | 127 | 0 | 0 | 83 |
| 2033 | 498 | 41 | 132 | 0 | 0 | 84 |
| 2034 | 505 | 54 | 138 | 0 | 0 | 85 |
| 2035 | 511 | 67 | 143 | 0 | 0 | 85 |
| 2036 | 520 | 72 | 151 | 0 | 0 | 87 |
| 2037 | 522 | 77 | 158 | 0 | 0 | 88 |
| 2038 | 531 | 85 | 162 | 0 | 0 | 88 |
| 2039 | 541 | 94 | 162 | 0 | 0 | 90 |
| 2040 | 547 | 103 | 166 | 0 | 1 | 90 |
| 2041 | 555 | 111 | 174 | 0 | 1 | 91 |
| 2042 | 563 | 116 | 183 | 0 | 1 | 92 |
| 2043 | 570 | 116 | 187 | 0 | 1 | 93 |

| Year | Burnet | Comanche | Erath | Johnson | McLennan | Travis |
|---|---|---|---|---|---|---|
| 2044 | 575 | 121 | 192 | 0 | 1 | 93 |
| 2045 | 579 | 128 | 198 | 0 | 1 | 94 |
| 2046 | 588 | 138 | 206 | 0 | 1 | 95 |
| 2047 | 591 | 146 | 211 | 0 | 2 | 97 |
| 2048 | 597 | 152 | 219 | 0 | 2 | 97 |
| 2049 | 602 | 160 | 222 | 0 | 2 | 98 |
| 2050 | 607 | 166 | 227 | 0 | 2 | 99 |
| 2051 | 609 | 172 | 229 | 1 | 2 | 100 |
| 2052 | 613 | 180 | 232 | 1 | 2 | 100 |
| 2053 | 619 | 186 | 239 | 1 | 2 | 101 |
| 2054 | 623 | 190 | 246 | 1 | 2 | 102 |
| 2055 | 633 | 194 | 253 | 1 | 2 | 103 |
| 2056 | 637 | 196 | 259 | 1 | 2 | 103 |
| 2057 | 640 | 199 | 263 | 1 | 2 | 104 |
| 2058 | 651 | 206 | 269 | 1 | 2 | 105 |
| 2059 | 659 | 216 | 283 | 1 | 2 | 106 |
| 2060 | 673 | 222 | 294 | 1 | 2 | 106 |
| 2061 | 671 | 225 | 295 | 1 | 2 | 106 |
| 2062 | 675 | 227 | 297 | 1 | 2 | 107 |
| 2063 | 679 | 231 | 299 | 1 | 3 | 107 |
| 2064 | 684 | 235 | 305 | 2 | 3 | 109 |
| 2065 | 686 | 238 | 307 | 3 | 3 | 109 |
| 2066 | 686 | 245 | 310 | 3 | 3 | 109 |
| 2067 | 689 | 252 | 315 | 3 | 3 | 110 |
| 2068 | 696 | 258 | 317 | 3 | 3 | 110 |
| 2069 | 700 | 264 | 320 | 6 | 3 | 111 |
| 2070 | 703 | 269 | 323 | 7 | 3 | 112 |

**TABLE C7. SUMMARY OF DRY MODEL CELLS FOR THE TRINITY AQUIFER (ANTLERS) FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Collin | Comanche | Cooke | Denton | Eastland | Erath | Grayson | Montague | Parker | Tarrant | Wise |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Active Official Aquifer Model Cells | 7,055 | 23,711 | 77,143 | 59,107 | 44,009 | 9,287 | 77,954 | 56,141 | 42,539 | 5,009 | 92,333 |
| 2009 (baseline) | 0 | 123 | 0 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2010 | 1 | 80 | 0 | 0 | 91 | 6 | 0 | 0 | 0 | 0 | 1 |
| 2011 | 3 | 85 | 0 | 5 | 94 | 13 | 0 | 0 | 0 | 0 | 5 |
| 2012 | 7 | 92 | 0 | 29 | 99 | 29 | 0 | 0 | 0 | 0 | 6 |
| 2013 | 11 | 99 | 0 | 95 | 108 | 34 | 0 | 0 | 0 | 1 | 6 |
| 2014 | 16 | 103 | 1 | 201 | 110 | 36 | 0 | 0 | 0 | 6 | 6 |
| 2015 | 22 | 111 | 2 | 341 | 111 | 36 | 0 | 0 | 0 | 15 | 8 |
| 2016 | 30 | 120 | 3 | 500 | 113 | 36 | 0 | 0 | 0 | 28 | 67 |
| 2017 | 37 | 130 | 4 | 616 | 115 | 36 | 2 | 0 | 0 | 40 | 221 |
| 2018 | 44 | 141 | 7 | 721 | 117 | 39 | 6 | 0 | 1 | 58 | 372 |
| 2019 | 47 | 156 | 10 | 806 | 120 | 44 | 10 | 0 | 1 | 78 | 484 |
| 2020 | 53 | 167 | 17 | 901 | 125 | 48 | 22 | 0 | 2 | 94 | 574 |
| 2021 | 57 | 176 | 27 | 1,017 | 127 | 51 | 29 | 0 | 2 | 111 | 654 |
| 2022 | 62 | 186 | 37 | 1,199 | 130 | 52 | 36 | 0 | 2 | 124 | 741 |
| 2023 | 67 | 202 | 49 | 1,375 | 130 | 60 | 48 | 0 | 6 | 140 | 810 |
| 2024 | 71 | 230 | 64 | 1,543 | 133 | 74 | 57 | 0 | 9 | 151 | 879 |
| 2025 | 77 | 270 | 76 | 1,692 | 137 | 81 | 72 | 0 | 19 | 158 | 947 |
| 2026 | 79 | 294 | 95 | 1,803 | 139 | 90 | 90 | 0 | 54 | 162 | 995 |
| 2027 | 83 | 327 | 111 | 1,903 | 149 | 102 | 101 | 0 | 84 | 167 | 1,053 |
| 2028 | 86 | 373 | 123 | 1,983 | 156 | 110 | 106 | 0 | 112 | 171 | 1,109 |
| 2029 | 90 | 422 | 140 | 2,056 | 162 | 128 | 117 | 0 | 141 | 179 | 1,180 |
| 2030 | 94 | 448 | 152 | 2,121 | 179 | 171 | 122 | 0 | 166 | 183 | 1,236 |

| Year | Collin | Comanche | Cooke | Denton | Eastland | Erath | Grayson | Montague | Parker | Tarrant | Wise |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2031 | 96 | 478 | 164 | 2,180 | 204 | 185 | 134 | 0 | 184 | 190 | 1,294 |
| 2032 | 100 | 517 | 175 | 2,244 | 221 | 197 | 140 | 0 | 206 | 195 | 1,368 |
| 2033 | 103 | 554 | 185 | 2,299 | 233 | 208 | 148 | 0 | 218 | 202 | 1,479 |
| 2034 | 105 | 617 | 199 | 2,364 | 236 | 222 | 152 | 0 | 234 | 208 | 1,551 |
| 2035 | 110 | 669 | 216 | 2,436 | 242 | 225 | 161 | 0 | 244 | 215 | 1,628 |
| 2036 | 111 | 710 | 222 | 2,517 | 249 | 232 | 168 | 0 | 254 | 222 | 1,713 |
| 2037 | 113 | 771 | 234 | 2,623 | 259 | 246 | 175 | 0 | 262 | 229 | 1,809 |
| 2038 | 116 | 836 | 245 | 2,708 | 282 | 262 | 184 | 0 | 270 | 236 | 1,879 |
| 2039 | 121 | 865 | 256 | 2,788 | 304 | 283 | 191 | 0 | 278 | 244 | 1,952 |
| 2040 | 122 | 913 | 264 | 2,879 | 321 | 303 | 195 | 0 | 285 | 256 | 2,029 |
| 2041 | 123 | 957 | 276 | 2,951 | 331 | 313 | 201 | 0 | 292 | 291 | 2,085 |
| 2042 | 126 | 998 | 292 | 3,038 | 344 | 326 | 205 | 0 | 295 | 349 | 2,130 |
| 2043 | 128 | 1,032 | 300 | 3,119 | 363 | 334 | 210 | 0 | 303 | 383 | 2,174 |
| 2044 | 130 | 1,074 | 307 | 3,189 | 380 | 351 | 215 | 0 | 305 | 414 | 2,214 |
| 2045 | 131 | 1,129 | 314 | 3,251 | 397 | 359 | 221 | 0 | 309 | 446 | 2,253 |
| 2046 | 131 | 1,171 | 323 | 3,336 | 412 | 372 | 230 | 0 | 312 | 472 | 2,291 |
| 2047 | 136 | 1,221 | 333 | 3,405 | 442 | 390 | 233 | 0 | 318 | 501 | 2,349 |
| 2048 | 137 | 1,266 | 340 | 3,465 | 453 | 415 | 239 | 0 | 319 | 533 | 2,382 |
| 2049 | 139 | 1,320 | 353 | 3,524 | 474 | 440 | 240 | 0 | 325 | 558 | 2,413 |
| 2050 | 141 | 1,351 | 361 | 3,589 | 502 | 455 | 244 | 0 | 326 | 583 | 2,442 |
| 2051 | 141 | 1,389 | 367 | 3,633 | 525 | 468 | 247 | 0 | 327 | 608 | 2,458 |
| 2052 | 143 | 1,435 | 376 | 3,688 | 548 | 482 | 254 | 0 | 331 | 632 | 2,480 |
| 2053 | 146 | 1,469 | 379 | 3,745 | 590 | 493 | 257 | 0 | 332 | 652 | 2,496 |
| 2054 | 147 | 1,510 | 384 | 3,788 | 619 | 506 | 258 | 0 | 334 | 671 | 2,518 |
| 2055 | 148 | 1,548 | 392 | 3,849 | 645 | 526 | 264 | 0 | 335 | 697 | 2,533 |
| 2056 | 149 | 1,585 | 399 | 3,897 | 668 | 548 | 267 | 0 | 337 | 719 | 2,545 |

| Year | Collin | Comanche | Cooke | Denton | Eastland | Erath | Grayson | Montague | Parker | Tarrant | Wise |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2057 | 150 | 1,626 | 402 | 3,948 | 681 | 564 | 270 | 0 | 340 | 754 | 2,558 |
| 2058 | 150 | 1,703 | 407 | 3,981 | 715 | 578 | 274 | 0 | 340 | 788 | 2,574 |
| 2059 | 152 | 1,750 | 411 | 4,028 | 733 | 606 | 280 | 1 | 346 | 817 | 2,586 |
| 2060 | 154 | 1,813 | 416 | 4,067 | 751 | 627 | 283 | 1 | 346 | 845 | 2,594 |
| 2061 | 155 | 1,846 | 424 | 4,115 | 756 | 637 | 283 | 1 | 350 | 872 | 2,607 |
| 2062 | 156 | 1,909 | 428 | 4,152 | 777 | 646 | 287 | 1 | 350 | 898 | 2,616 |
| 2063 | 158 | 1,944 | 434 | 4,193 | 793 | 673 | 288 | 1 | 350 | 930 | 2,629 |
| 2064 | 158 | 1,968 | 441 | 4,232 | 807 | 711 | 292 | 1 | 350 | 953 | 2,635 |
| 2065 | 158 | 2,001 | 448 | 4,260 | 821 | 744 | 294 | 1 | 350 | 966 | 2,642 |
| 2066 | 158 | 2,065 | 450 | 4,295 | 842 | 770 | 298 | 1 | 352 | 984 | 2,653 |
| 2067 | 160 | 2,117 | 454 | 4,335 | 854 | 792 | 301 | 1 | 354 | 1,005 | 2,665 |
| 2068 | 162 | 2,154 | 455 | 4,360 | 863 | 802 | 303 | 1 | 355 | 1,016 | 2,676 |
| 2069 | 162 | 2,198 | 459 | 4,395 | 876 | 825 | 303 | 1 | 359 | 1,017 | 2,684 |
| 2070 | 164 | 2,268 | 462 | 4,438 | 881 | 846 | 307 | 1 | 360 | 1,019 | 2,691 |

**TABLE C8. SUMMARY OF DRY MODEL CELLS FOR THE WOODBINE AQUIFER FROM THE REVISED PREDICTIVE SIMULATION.**

| Year | Collin | Cooke | Denton | Fannin | Grayson | Johnson | Tarrant |
|---|---|---|---|---|---|---|---|
| Total Active Model Cells in Official Aquifer Boundary | 11,762 | 5,700 | 11,991 | 15,443 | 17,911 | 8,407 | 8,901 |
| 2009 (baseline) | 0 | 0 | 3 | 3 | 2 | 14 | 2 |
| 2010 | 0 | 4 | 3 | 3 | 3 | 16 | 2 |
| 2011 | 0 | 4 | 3 | 4 | 3 | 16 | 2 |
| 2012 | 0 | 4 | 3 | 4 | 5 | 16 | 2 |
| 2013 | 0 | 4 | 3 | 4 | 5 | 19 | 2 |
| 2014 | 0 | 4 | 3 | 5 | 6 | 23 | 2 |
| 2015 | 0 | 4 | 3 | 6 | 7 | 23 | 2 |
| 2016 | 0 | 5 | 3 | 6 | 8 | 23 | 2 |
| 2017 | 0 | 5 | 3 | 8 | 9 | 24 | 2 |
| 2018 | 0 | 5 | 3 | 9 | 10 | 26 | 2 |
| 2019 | 0 | 5 | 3 | 10 | 11 | 26 | 2 |
| 2020 | 0 | 5 | 3 | 11 | 11 | 26 | 2 |
| 2021 | 0 | 5 | 3 | 12 | 13 | 27 | 2 |
| 2022 | 0 | 5 | 3 | 12 | 14 | 28 | 2 |
| 2023 | 0 | 5 | 3 | 12 | 14 | 28 | 2 |
| 2024 | 0 | 5 | 4 | 13 | 14 | 29 | 2 |
| 2025 | 0 | 5 | 5 | 14 | 15 | 29 | 2 |
| 2026 | 0 | 5 | 5 | 15 | 15 | 30 | 2 |
| 2027 | 0 | 5 | 5 | 15 | 15 | 31 | 2 |
| 2028 | 0 | 6 | 5 | 15 | 15 | 33 | 2 |
| 2029 | 0 | 6 | 5 | 15 | 15 | 34 | 2 |
| 2030 | 0 | 6 | 5 | 15 | 15 | 36 | 2 |
| 2031 | 0 | 6 | 5 | 16 | 15 | 37 | 2 |
| 2032 | 0 | 6 | 5 | 17 | 16 | 37 | 2 |
| 2033 | 0 | 6 | 5 | 18 | 17 | 38 | 2 |
| 2034 | 0 | 6 | 5 | 20 | 18 | 40 | 2 |
| 2035 | 0 | 6 | 5 | 21 | 19 | 40 | 2 |
| 2036 | 0 | 6 | 5 | 22 | 19 | 41 | 2 |
| 2037 | 0 | 6 | 5 | 24 | 19 | 41 | 2 |
| 2038 | 0 | 6 | 5 | 25 | 23 | 42 | 2 |
| 2039 | 0 | 6 | 5 | 26 | 25 | 42 | 2 |
| 2040 | 0 | 6 | 5 | 27 | 25 | 42 | 2 |
| 2041 | 0 | 6 | 5 | 27 | 25 | 42 | 2 |

| Year | Collin | Cooke | Denton | Fannin | Grayson | Johnson | Tarrant |
|---|---|---|---|---|---|---|---|
| 2042 | 0 | 6 | 5 | 27 | 27 | 42 | 2 |
| 2043 | 0 | 6 | 5 | 27 | 27 | 42 | 2 |
| 2044 | 0 | 6 | 5 | 28 | 30 | 42 | 2 |
| 2045 | 0 | 6 | 5 | 29 | 31 | 43 | 2 |
| 2046 | 0 | 6 | 6 | 30 | 31 | 43 | 2 |
| 2047 | 0 | 6 | 6 | 30 | 31 | 43 | 2 |
| 2048 | 0 | 6 | 7 | 32 | 34 | 43 | 2 |
| 2049 | 0 | 6 | 8 | 35 | 34 | 43 | 2 |
| 2050 | 0 | 7 | 8 | 35 | 35 | 43 | 2 |
| 2051 | 0 | 8 | 8 | 35 | 35 | 43 | 2 |
| 2052 | 0 | 8 | 8 | 37 | 35 | 43 | 2 |
| 2053 | 0 | 8 | 8 | 38 | 35 | 44 | 2 |
| 2054 | 0 | 8 | 8 | 38 | 37 | 45 | 2 |
| 2055 | 0 | 9 | 8 | 38 | 38 | 45 | 2 |
| 2056 | 0 | 10 | 8 | 38 | 38 | 46 | 2 |
| 2057 | 0 | 10 | 9 | 39 | 38 | 46 | 2 |
| 2058 | 0 | 10 | 9 | 42 | 39 | 50 | 3 |
| 2059 | 0 | 10 | 9 | 44 | 40 | 52 | 3 |
| 2060 | 0 | 13 | 9 | 47 | 41 | 54 | 3 |
| 2061 | 0 | 14 | 9 | 47 | 41 | 53 | 3 |
| 2062 | 0 | 14 | 9 | 47 | 41 | 53 | 3 |
| 2063 | 0 | 17 | 9 | 47 | 42 | 55 | 3 |
| 2064 | 0 | 20 | 9 | 47 | 42 | 55 | 3 |
| 2065 | 0 | 21 | 9 | 47 | 42 | 56 | 3 |
| 2066 | 1 | 23 | 9 | 47 | 42 | 57 | 3 |
| 2067 | 1 | 23 | 9 | 48 | 45 | 58 | 3 |
| 2068 | 2 | 24 | 9 | 49 | 45 | 59 | 3 |
| 2069 | 2 | 24 | 9 | 50 | 45 | 59 | 3 |
| 2070 | 2 | 24 | 9 | 50 | 45 | 60 | 3 |

# *Appendix D*

## Summary of Dry Model Cell Count for the Marble Falls, Ellenburger-San Saba, and Hickory Aquifers in Brown, Burnet, Lampasas, and Mills Counties

**TABLE D1. SUMMARY OF DRY MODEL CELLS FOR THE MARBLE FALLS, ELLENBURGER-SAN SABA, AND HICKORY AQUIFERS IN BROWN, BURNET, LAMPASAS, AND MILLS COUNTIES FROM THE PREDICTIVE SIMULATION.**

| Year | Burnet | Lampasas | Burnet | Burnet |
|---|---|---|---|---|
| | Marble Falls | | Ellenburger-San Saba | Hickory |
| Total Active Cells in modeled extent | 10,810 | 7,614 | 13,618 | 14,334 |
| 2009 (baseline) | 2298 | 611 | 709 | 111 |
| 2010 | 2353 | 631 | 724 | 112 |
| 2011 | 2363 | 638 | 735 | 112 |
| 2012 | 2376 | 641 | 744 | 113 |
| 2013 | 2386 | 642 | 758 | 113 |
| 2014 | 2391 | 646 | 769 | 113 |
| 2015 | 2395 | 650 | 776 | 113 |
| 2016 | 2397 | 653 | 781 | 115 |
| 2017 | 2405 | 654 | 787 | 117 |
| 2018 | 2406 | 657 | 795 | 117 |
| 2019 | 2409 | 659 | 801 | 118 |
| 2020 | 2413 | 661 | 804 | 118 |
| 2021 | 2419 | 661 | 809 | 118 |
| 2022 | 2419 | 661 | 810 | 118 |
| 2023 | 2421 | 661 | 811 | 118 |
| 2024 | 2422 | 662 | 813 | 119 |
| 2025 | 2423 | 662 | 817 | 120 |
| 2026 | 2425 | 664 | 821 | 120 |
| 2027 | 2426 | 665 | 821 | 120 |
| 2028 | 2428 | 666 | 823 | 120 |
| 2029 | 2433 | 667 | 824 | 122 |
| 2030 | 2433 | 669 | 824 | 123 |
| 2031 | 2435 | 670 | 825 | 123 |
| 2032 | 2436 | 671 | 828 | 123 |
| 2033 | 2438 | 671 | 830 | 123 |
| 2034 | 2440 | 672 | 832 | 124 |
| 2035 | 2441 | 673 | 832 | 124 |
| 2036 | 2441 | 675 | 833 | 124 |
| 2037 | 2442 | 676 | 833 | 124 |
| 2038 | 2442 | 677 | 834 | 125 |
| 2039 | 2443 | 678 | 837 | 126 |
| 2040 | 2443 | 678 | 837 | 126 |

| Year | Burnet | Lampasas | Burnet | Burnet |
|---|---|---|---|---|
| | Marble Falls | | Ellenburger-San Saba | Hickory |
| 2041 | 2443 | 680 | 839 | 126 |
| 2042 | 2443 | 680 | 840 | 126 |
| 2043 | 2443 | 680 | 842 | 127 |
| 2044 | 2444 | 680 | 842 | 127 |
| 2045 | 2445 | 680 | 842 | 128 |
| 2046 | 2446 | 680 | 843 | 128 |
| 2047 | 2446 | 680 | 843 | 128 |
| 2048 | 2446 | 680 | 843 | 128 |
| 2049 | 2446 | 680 | 844 | 128 |
| 2050 | 2446 | 680 | 845 | 128 |
| 2051 | 2446 | 681 | 846 | 128 |
| 2052 | 2446 | 681 | 846 | 128 |
| 2053 | 2446 | 681 | 846 | 130 |
| 2054 | 2446 | 681 | 846 | 130 |
| 2055 | 2447 | 681 | 846 | 130 |
| 2056 | 2447 | 681 | 847 | 130 |
| 2057 | 2447 | 681 | 848 | 130 |
| 2058 | 2447 | 682 | 848 | 130 |
| 2059 | 2448 | 682 | 849 | 130 |
| 2060 | 2448 | 682 | 849 | 130 |
| 2061 | 2448 | 682 | 849 | 130 |
| 2062 | 2448 | 682 | 849 | 130 |
| 2063 | 2448 | 682 | 849 | 130 |
| 2064 | 2449 | 682 | 849 | 130 |
| 2065 | 2449 | 683 | 849 | 130 |
| 2066 | 2449 | 683 | 849 | 130 |
| 2067 | 2449 | 683 | 850 | 130 |
| 2068 | 2449 | 683 | 850 | 130 |
| 2069 | 2450 | 683 | 850 | 130 |
| 2070 | 2450 | 683 | 850 | 130 |

# GAM RUN 21-001: NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT GROUNDWATER MANAGEMENT PLAN

Grayson Dowlearn and Radu Boghici, P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Department
512-463-5808
January 13, 2022

STATE OF TEXAS
Radu Boghici
Geology
No. 482
LICENSED
PROFESSIONAL GEOSCIENTIST

1/11/2022

*This page is intentionally blank.*

# GAM RUN 21-001: NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT GROUNDWATER MANAGEMENT PLAN

Grayson Dowlearn and Radu Boghici, P.G.
Texas Water Development Board
Groundwater Division
Groundwater Modeling Department
512-463-5808
January 13, 2022

## *EXECUTIVE SUMMARY:*

Texas State Water Code, Section 36.1071, Subsection (h) (Texas Water Code, 2015), states that, in developing its groundwater management plan, a groundwater conservation district shall use groundwater availability modeling information provided by the Executive Administrator of the Texas Water Development Board (TWDB) in conjunction with any available site-specific information provided by the district for review and comment to the Executive Administrator.

The TWDB provides data and information to the North Texas Groundwater Conservation District in two parts. Part 1 is the Estimated Historical Water Use/State Water Plan dataset report, which will be provided to you separately by the TWDB Groundwater Technical Assistance Department. Please direct questions about the water data report to Mr. Stephen Allen at 512-463-7317 or stephen.allen@twdb.texas.gov. Part 2 is the required groundwater availability modeling information and this information includes:

1. the annual amount of recharge from precipitation, if any, to the groundwater resources within the district;

2. for each aquifer within the district, the annual volume of water that discharges from the aquifer to springs and any surface-water bodies, including lakes, streams, and rivers; and

3. the annual volume of flow into and out of the district within each aquifer and between aquifers in the district

The groundwater management plan for the North Texas Groundwater Conservation District should be adopted by the district on or before February 11, 2022 and submitted to the Executive Administrator of the TWDB on or before March 13, 2022. The current management plan for the North Texas Groundwater Conservation District expires on May 12, 2022.

We used the groundwater availability model for the northern portion of the Trinity Aquifer and Woodbine Aquifers (Kelley and others, 2014) to estimate the management plan information for the Trinity and Woodbine aquifers within the North Texas Groundwater Conservation District.

This report replaces the results of GAM Run 16-004 (Boghici, 2016), as the approach used for analyzing model results has been since refined to more accurately delineate groundwater flows. Additionally, we routinely update the spatial grid file used to define county, groundwater conservation district, and aquifer boundaries, which can also impact the water budget. Tables 1 and 2 summarize the groundwater availability model data required by statute. Figures 1 and 3 show the area of the models from which the values in the tables were extracted. Figures 2 and 4 provide generalized diagrams of the groundwater flow components provided in Tables 1 and 2. If, after review of the figures, the North Texas Groundwater Conservation District determines that the district boundaries used in the assessment do not reflect current conditions, please notify the TWDB at your earliest convenience.

## *METHODS:*

In accordance with the provisions of the Texas State Water Code, Section 36.1071, Subsection (h), the groundwater availability model for the northern portion of the Trinity Aquifer and Woodbine Aquifers was used to estimate information for the North Texas Groundwater Conservation District management plan. Water budgets were extracted for the historical model period for the Trinity and Woodbine aquifers (1980-2012). We used ZONEBUDGET Version 3.01 (Harbaugh, 2009) to extract water budgets from the model results. The average annual water budget values for recharge, surface-water outflow, inflow to the district, outflow from the district, and the flow between aquifers within the district are summarized in this report.

## *PARAMETERS AND ASSUMPTIONS:*

### *Trinity and Woodbine Aquifers*

- We used version 2.01 of the groundwater availability model for the northern portion of the Trinity Aquifer and Woodbine Aquifer. See Kelley and others (2014) for assumptions and limitations of the model.
- The groundwater availability model for the northern portion of the Trinity Aquifer and Woodbine Aquifer contains eight layers that generally represent the following: Layer 1 (the surficial outcrop area of the units in layers 2 through 8 and units younger than the Woodbine Aquifer), Layer 2 (Woodbine Aquifer), Layer 3 (Washita and Fredericksburg Groups, and the Edwards [Balcones Fault Zone] Aquifer), and Layers 4 through 8 (Trinity Aquifer). Layers 2 through 7 also include pass-through cells.
- Perennial rivers and reservoirs were simulated using the MODFLOW River package. Ephemeral streams, flowing wells, springs, and evapotranspiration in riparian zones along perennial rivers were simulated using the MODFLOW Drain package.
- The model was run using MODFLOW-NWT (Niswonger and others, 2011).

## *RESULTS:*

A groundwater budget summarizes the amount of water entering and leaving the aquifers according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the groundwater availability model results for the Trinity and Woodbine aquifers located within the North Texas Groundwater Conservation District and averaged over the historical calibration period, as shown in Tables 1 and 2.

1. Precipitation recharge—the areally distributed recharge sourced from precipitation falling on the outcrop areas of the aquifers (where the aquifer is exposed at land surface) within the district.
2. Surface-water outflow—the total water discharging from the aquifer (outflow) to surface-water features such as streams, reservoirs, and springs.
3. Flow into and out of district—the lateral flow within the aquifer between the district and adjacent counties.

4. Flow between aquifers—the net vertical flow between the aquifer and adjacent aquifers or confining units. This flow is controlled by the relative water levels in each aquifer and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs.

The information needed for the district's management plan is summarized in Tables 1 and 2. It is important to note that sub-regional water budgets are not exact. This is due to the size of the model cells and the approach used to extract data from the model. To avoid double accounting, a model cell that straddles a political boundary, such as a district or county boundary, is assigned to one side of the boundary based on the location of the centroid of the model cell. For example, if a cell contains two counties, the cell is assigned to the county where the centroid of the cell is located.

**TABLE 1: SUMMARIZED INFORMATION FOR THE TRINITY AQUIFER FOR NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.**

<table>
<tr><th>Management Plan requirement</th><th>Aquifer or confining unit</th><th>Results</th></tr>
<tr><td>Estimated annual amount of recharge from precipitation to the district</td><td>Trinity Aquifer</td><td>13,916</td></tr>
<tr><td>Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers</td><td>Trinity Aquifer</td><td>28,692</td></tr>
<tr><td>Estimated annual volume of flow into the district within each aquifer in the district</td><td>Trinity Aquifer</td><td>19,118</td></tr>
<tr><td>Estimated annual volume of flow out of the district within each aquifer in the district</td><td>Trinity Aquifer</td><td>10,881</td></tr>
<tr><td rowspan="3">Estimated net annual volume of flow between each aquifer in the district</td><td>To the Trinity Aquifer from the overlying Fredericksburg and Washita groups</td><td>20,504</td></tr>
<tr><td>From the Trinity Aquifer to equivalent hydrogeologic units in Oklahoma</td><td>1,954</td></tr>
<tr><td>To the Trinity Aquifer from equivalent units outside of the official Trinity Aquifer extent</td><td>376</td></tr>
</table>

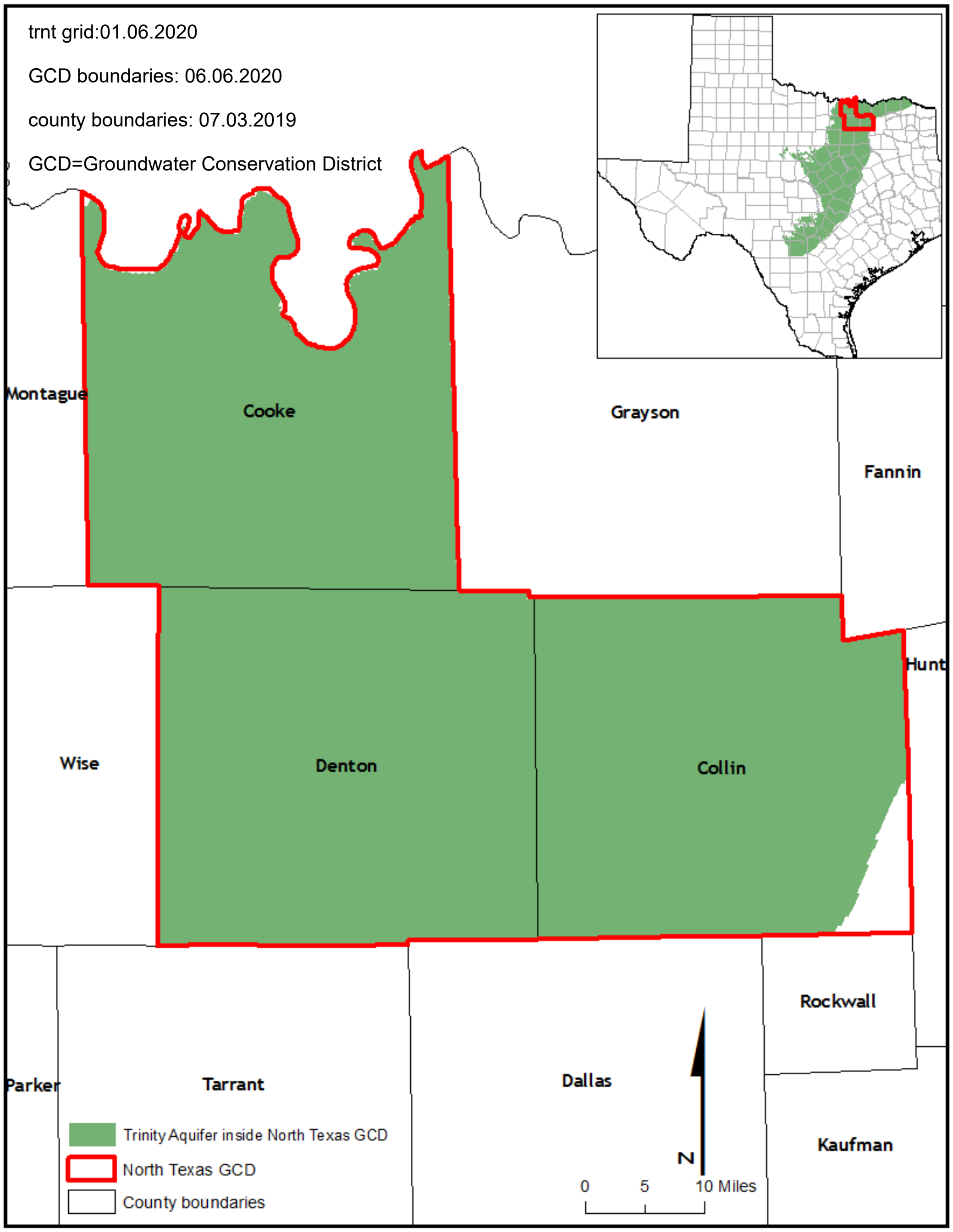
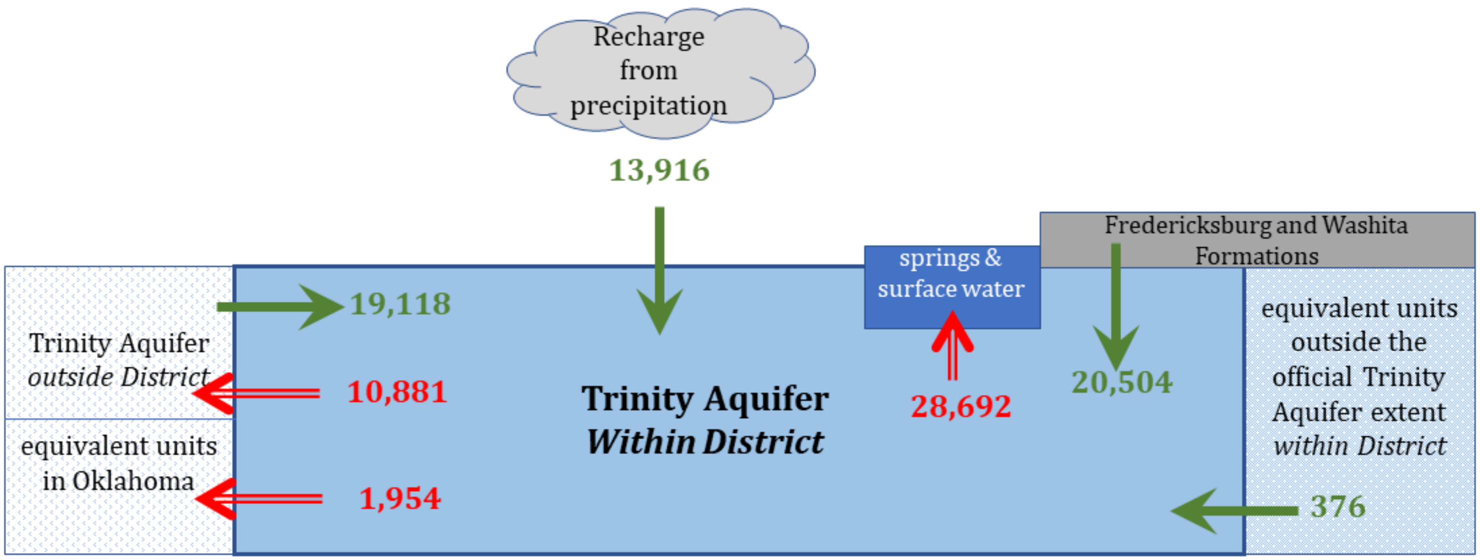



**FIGURE 1: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AQUIFER AND WOODBINE AQUIFER FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED (THE TRINITY AQUIFER EXTENT WITHIN THE DISTRICT BOUNDARY).**




*Note: This diagram only includes the water budget items provided in Table 1. If the District requires values for additional water budget items, please contact TWDB.*

**FIGURE 2: GENERALIZED DIAGRAM OF THE SUMMARIZED BUDGET INFORMATION FROM TABLE 1, REPRESENTING DIRECTIONS OF FLOW FOR THE TRINITY AQUIFER WITHIN NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT. FLOW VALUES EXPRESSED IN ACRE-FEET PER YEAR.**

**TABLE 2: SUMMARIZED INFORMATION FOR THE WOODBINE AQUIFER FOR NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.**

| Management Plan requirement | Aquifer or confining unit | Results |
|---|---|---|
| Estimated annual amount of recharge from precipitation to the district | Woodbine Aquifer | 53,946 |
| Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers | Woodbine Aquifer | 35,100 |
| Estimated annual volume of flow into the district within each aquifer in the district | Woodbine Aquifer | 1,115 |
| Estimated annual volume of flow out of the district within each aquifer in the district | Woodbine Aquifer | 2,912 |
| Estimated net annual volume of flow between each aquifer in the district | To the Woodbine Aquifer from younger overlying units | 898 |
| | From the Woodbine Aquifer to underlying Fredericksburg and Washita groups | 9,560 |
| | To the Woodbine Aquifer from equivalent units outside the official Woodbine Aquifer extent | 11 |

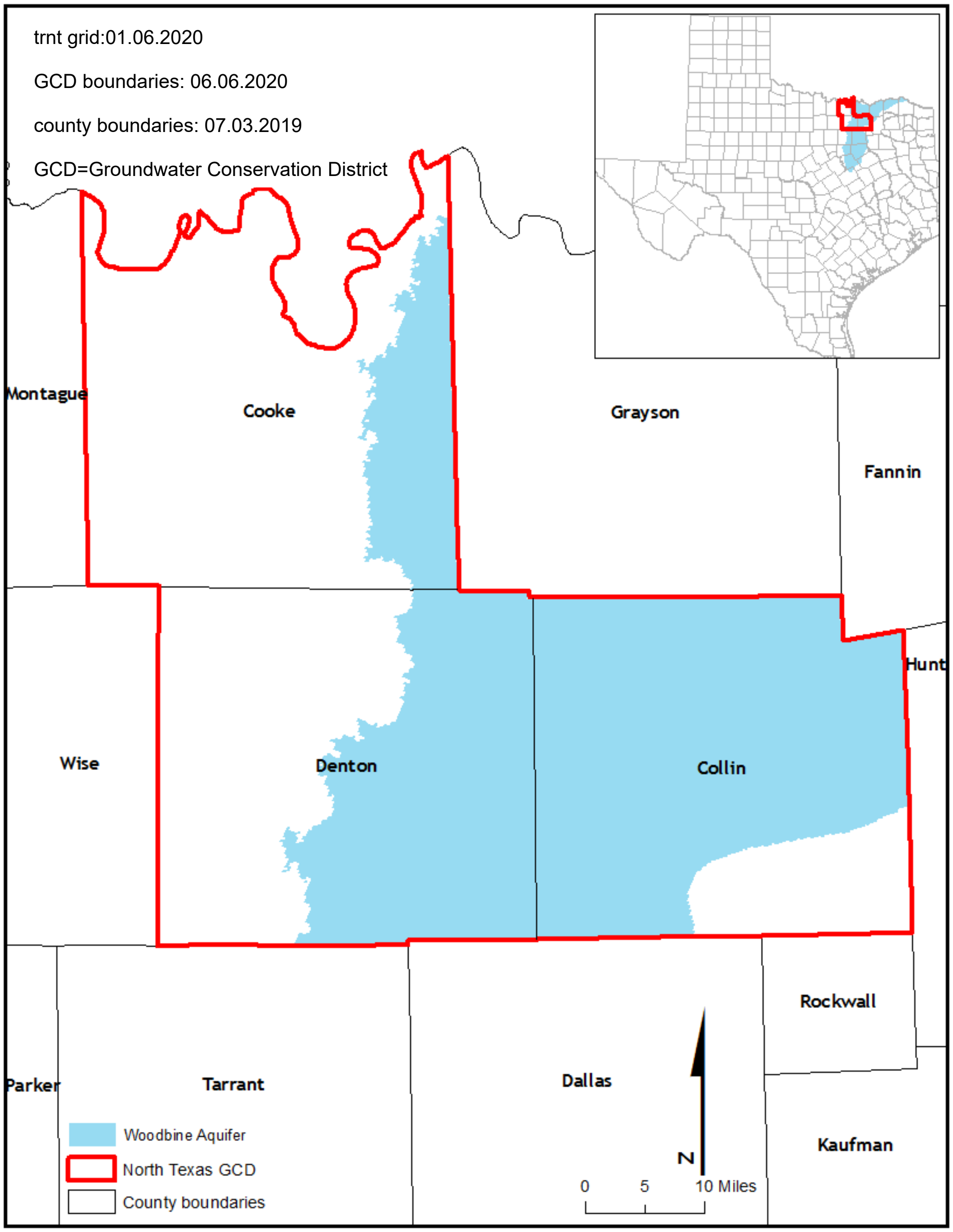
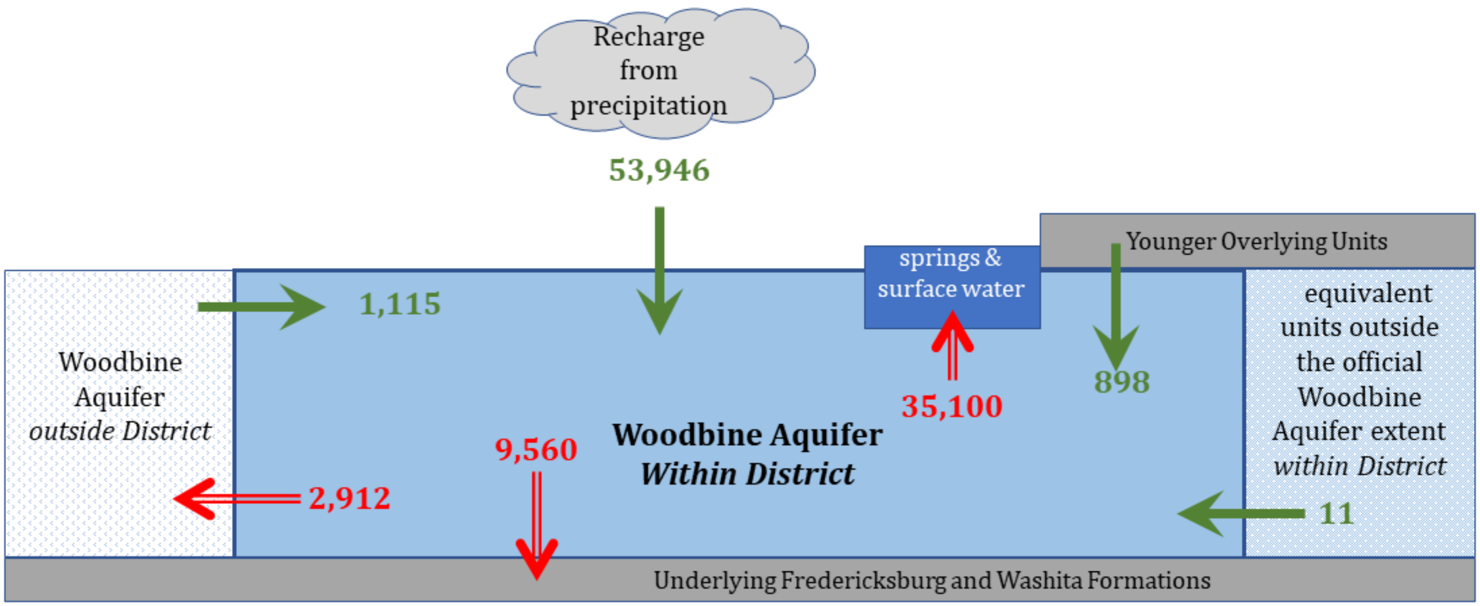



**FIGURE 3: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE NORTHERN PORTION OF THE TRINITY AQUIFER AND WOODBINE AQUIFER FROM WHICH THE INFORMATION IN TABLE 2 WAS EXTRACTED (THE WOODBINE AQUIFER EXTENT WITHIN THE DISTRICT BOUNDARY).**




*Note: This diagram only includes the water budget items provided in Table 2. If the District requires values for additional water budget items, please contact TWDB.*

**FIGURE 4: GENERALIZED DIAGRAM OF THE SUMMARIZED BUDGET INFORMATION FROM TABLE 2, REPRESENTING DIRECTIONS OF FLOW FOR THE WOODBINE AQUIFER WITHIN NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT. FLOW VALUES EXPRESSED IN ACRE-FEET PER YEAR.**

## *LIMITATIONS:*

The groundwater model used in completing this analysis are the best available scientific tools that can be used to meet the stated objectives. To the extent that this analysis will be used for planning purposes and/or regulatory purposes related to pumping in the past and into the future, it is important to recognize the assumptions and limitations associated with the use of the results. In reviewing the use of models in environmental regulatory decision making, the National Research Council (2007) noted:

> *"Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."*

A key aspect of using the groundwater model to evaluate historical groundwater flow conditions includes the assumptions about the location in the aquifer where historical pumping was placed. Understanding the amount and location of historical pumping is as important as evaluating the volume of groundwater flow into and out of the district, between aquifers within the district (as applicable), interactions with surface water (as applicable), recharge to the aquifer system (as applicable), and other metrics that describe the impacts of that pumping. In addition, assumptions regarding precipitation, recharge, and interaction with streams are specific to particular historical time periods.

Because the application of the groundwater models was designed to address regional-scale questions, the results are most effective on a regional scale. The TWDB makes no warranties or representations related to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor groundwater pumping and overall conditions of the aquifer. Because of the limitations of the groundwater model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine this analysis in the future given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future. Historical precipitation patterns also need to be placed in context as future climatic conditions, such as dry and wet year precipitation patterns, may differ and affect groundwater flow conditions.

## *REFERENCES:*

Boghici, R., 2016, GAM Run 16-004, North Texas Groundwater Conservation District Management Plan, 12 p., http://www.twdb.texas.gov/groundwater/docs/GAMruns/GR16-004.pdf.

Harbaugh, A. W., 2009, Zonebudget Version 3.01, A computer program for computing subregional water budgets for MODFLOW ground-water flow models: U.S. Geological Survey Groundwater Software.

Kelley, V.A., Ewing, J., Jones, T.L., Young, S.C., Deeds, N., and Hamlin, S., 2014, Updated Groundwater Availability Model of the Northern Trinity and Woodbine Aquifers – Final Model Report, 984 p., http://www.twdb.texas.gov/groundwater/models/gam/trnt_n/Final_NTGAM_Vol%20I%20Aug%202014_Report.pdf.

National Research Council, 2007, Models in Environmental Regulatory Decision Making Committee on Models in the Regulatory Decision Process, National Academies Press, Washington D.C., 287 p., http://www.nap.edu/catalog.php?record_id=11972.

Niswonger, R.G., Panday, S., and Ibaraki, M., 2011, MODFLOW-NWT, a Newton formulation for MODFLOW-2005: USGS, Techniques and Methods 6-A37, 44 p.

Texas Water Code, 2015, http://www.statutes.legis.state.tx.us/docs/WA/pdf/WA.36.pdf.

# APPENDIX E: ESTIMATED HISTORICAL WATER USE AND 2022 STATE WATER PLAN DATASETS

# Estimated Historical Groundwater Use And 2022 State Water Plan Datasets:

## North Texas Groundwater Conservation District

Texas Water Development Board
Groundwater Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
January 20, 2022

### *GROUNDWATER MANAGEMENT PLAN DATA:*

This package of water data reports (part 1 of a 2-part package of information) is being provided to groundwater conservation districts to help them meet the requirements for approval of their five-year groundwater management plan. Each report in the package addresses a specific numbered requirement in the Texas Water Development Board's groundwater management plan checklist. The checklist can be viewed and downloaded from this web address:

*http://www.twdb.texas.gov/groundwater/docs/GCD/GMPChecklist0113.pdf*

The five reports included in this part are:

1. Estimated Historical Groundwater Use (checklist item 2)

   *from the TWDB Historical Water Use Survey (WUS)*

2. Projected Surface Water Supplies (checklist item 6)
3. Projected Water Demands (checklist item 7)
4. Projected Water Supply Needs (checklist item 8)
5. Projected Water Management Strategies (checklist item 9)

   *from the 2022 Texas State Water Plan (SWP)*

Part 2 of the 2-part package is the groundwater availability model (GAM) report for the District (checklist items 3 through 5). The District should have received, or will receive, this report from the Groundwater Availability Modeling Section. Questions about the GAM can be directed to Dr. Shirley Wade, shirley.wade@twdb.texas.gov, (512) 936-0883.

## ***DISCLAIMER:***

The data presented in this report represents the most up-to-date WUS and 2022 SWP data available as of 1/20/2022. Although it does not happen frequently, either of these datasets are subject to change pending the availability of more accurate WUS data or an amendment to the 2022 SWP. District personnel must review these datasets and correct any discrepancies to ensure approval of their groundwater management plan.

The WUS dataset can be verified at this web address:

*http://www.twdb.texas.gov/waterplanning/waterusesurvey/estimates/*

The 2022 SWP dataset can be verified by contacting Sabrina Anderson (sabrina.anderson@twdb.texas.gov or 512-936-0886).

For additional questions regarding this data, please contact Stephen Allen (stephen.allen@twdb.texas.gov or 512-463-7317).

# Estimated Historical Water Use
# TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2020. TWDB staff anticipates the calculation and posting of these estimates at a later date.

## COLLIN COUNTY

All values are in acre-feet

| Year | Source | Municipal | Manufacturing | Mining | Steam Electric | Irrigation | Livestock | Total |
|---|---|---|---|---|---|---|---|---|
| 2019 | GW | 3,981 | 142 | 0 | 0 | 1,456 | 41 | 5,620 |
| | SW | 182,621 | 4,258 | 0 | 20 | 874 | 776 | 188,549 |
| 2018 | GW | 4,577 | 134 | 0 | 0 | 973 | 41 | 5,725 |
| | SW | 184,382 | 4,311 | 0 | 18 | 2,456 | 775 | 191,942 |
| 2017 | GW | 4,310 | 118 | 0 | 0 | 818 | 40 | 5,286 |
| | SW | 195,988 | 3,189 | 0 | 15 | 718 | 750 | 200,660 |
| 2016 | GW | 4,908 | 101 | 0 | 0 | 644 | 40 | 5,693 |
| | SW | 188,273 | 2,997 | 0 | 19 | 916 | 756 | 192,961 |
| 2015 | GW | 6,366 | 99 | 0 | 0 | 680 | 39 | 7,184 |
| | SW | 146,094 | 2,137 | 0 | 19 | 2,689 | 746 | 151,685 |
| 2014 | GW | 3,963 | 204 | 0 | 0 | 1,807 | 39 | 6,013 |
| | SW | 164,701 | 1,889 | 0 | 37 | 1,364 | 732 | 168,723 |
| 2013 | GW | 6,477 | 198 | 0 | 0 | 210 | 37 | 6,922 |
| | SW | 181,939 | 1,947 | 0 | 13 | 3,282 | 695 | 187,876 |
| 2012 | GW | 6,591 | 190 | 0 | 0 | 849 | 30 | 7,660 |
| | SW | 208,737 | 2,028 | 0 | 40 | 3,200 | 570 | 214,575 |
| 2011 | GW | 7,525 | 197 | 0 | 0 | 1,068 | 62 | 8,852 |
| | SW | 214,192 | 1,826 | 0 | 40 | 1,550 | 1,174 | 218,782 |
| 2010 | GW | 4,767 | 181 | 0 | 0 | 112 | 61 | 5,121 |
| | SW | 163,914 | 653 | 0 | 28 | 612 | 1,158 | 166,365 |
| 2009 | GW | 4,145 | 197 | 0 | 0 | 220 | 33 | 4,595 |
| | SW | 143,738 | 578 | 0 | 32 | 430 | 625 | 145,403 |
| 2008 | GW | 4,298 | 361 | 0 | 0 | 0 | 36 | 4,695 |
| | SW | 153,953 | 611 | 59 | 150 | 552 | 688 | 156,013 |
| 2007 | GW | 4,280 | 376 | 0 | 0 | 245 | 52 | 4,953 |
| | SW | 140,650 | 714 | 59 | 332 | 455 | 987 | 143,197 |
| 2006 | GW | 5,320 | 326 | 0 | 0 | 938 | 45 | 6,629 |
| | SW | 155,399 | 1,674 | 99 | 525 | 0 | 863 | 158,560 |
| 2005 | GW | 4,928 | 256 | 0 | 0 | 750 | 49 | 5,983 |
| | SW | 151,813 | 896 | 99 | 528 | 0 | 923 | 154,259 |
| 2004 | GW | 3,964 | 244 | 0 | 0 | 824 | 75 | 5,107 |
| | SW | 126,203 | 1,141 | 99 | 736 | 676 | 730 | 129,585 |

## COOKE COUNTY

All values are in acre-feet

| Year | Source | Municipal | Manufacturing | Mining | Steam Electric | Irrigation | Livestock | Total |
|---|---|---|---|---|---|---|---|---|
| 2019 | GW | 4,430 | 27 | 10 | 4 | 448 | 237 | 5,156 |
| | SW | 385 | 10 | 41 | 0 | 128 | 1,339 | 1,903 |
| 2018 | GW | 4,492 | 31 | 0 | 4 | 453 | 237 | 5,217 |
| | SW | 482 | 15 | 0 | 0 | 144 | 1,339 | 1,980 |
| 2017 | GW | 4,300 | 68 | 0 | 6 | 761 | 228 | 5,363 |
| | SW | 237 | 5 | 0 | 0 | 136 | 1,292 | 1,670 |
| 2016 | GW | 4,541 | 49 | 0 | 5 | 335 | 217 | 5,147 |
| | SW | 83 | 2 | 0 | 0 | 127 | 1,230 | 1,442 |
| 2015 | GW | 4,288 | 49 | 8 | 4 | 641 | 213 | 5,203 |
| | SW | 463 | 34 | 31 | 0 | 1 | 1,208 | 1,737 |
| 2014 | GW | 4,781 | 116 | 25 | 4 | 967 | 212 | 6,105 |
| | SW | 0 | 0 | 98 | 0 | 151 | 1,202 | 1,451 |
| 2013 | GW | 4,509 | 103 | 100 | 5 | 1,023 | 188 | 5,928 |
| | SW | 459 | 6 | 399 | 0 | 177 | 1,067 | 2,108 |
| 2012 | GW | 4,803 | 92 | 501 | 5 | 1,141 | 179 | 6,721 |
| | SW | 656 | 0 | 2,003 | 0 | 205 | 1,009 | 3,873 |
| 2011 | GW | 5,294 | 100 | 27 | 4 | 609 | 211 | 6,245 |
| | SW | 591 | 0 | 107 | 0 | 585 | 1,198 | 2,481 |
| 2010 | GW | 4,535 | 73 | 153 | 2 | 123 | 207 | 5,093 |
| | SW | 703 | 0 | 168 | 0 | 207 | 1,175 | 2,253 |
| 2009 | GW | 4,492 | 91 | 184 | 0 | 56 | 220 | 5,043 |
| | SW | 600 | 0 | 203 | 0 | 59 | 1,244 | 2,106 |
| 2008 | GW | 4,643 | 94 | 216 | 0 | 0 | 229 | 5,182 |
| | SW | 615 | 0 | 237 | 0 | 183 | 1,296 | 2,331 |
| 2007 | GW | 4,340 | 106 | 0 | 0 | 37 | 235 | 4,718 |
| | SW | 571 | 0 | 0 | 0 | 123 | 1,329 | 2,023 |
| 2006 | GW | 5,738 | 125 | 0 | 0 | 82 | 205 | 6,150 |
| | SW | 425 | 0 | 0 | 0 | 218 | 1,161 | 1,804 |
| 2005 | GW | 5,432 | 112 | 0 | 0 | 98 | 232 | 5,874 |
| | SW | 294 | 0 | 0 | 0 | 169 | 1,318 | 1,781 |
| 2004 | GW | 4,699 | 130 | 0 | 0 | 82 | 475 | 5,386 |
| | SW | 196 | 0 | 0 | 0 | 118 | 1,202 | 1,516 |

## DENTON COUNTY

All values are in acre-feet

| Year | Source | Municipal | Manufacturing | Mining | Steam Electric | Irrigation | Livestock | Total |
|---|---|---|---|---|---|---|---|---|
| 2019 | GW | 11,585 | 23 | 44 | 0 | 3,506 | 265 | 15,423 |
| | SW | 128,178 | 378 | 184 | 13 | 521 | 618 | 129,892 |
| 2018 | GW | 13,214 | 16 | 26 | 0 | 972 | 265 | 14,493 |
| | SW | 126,784 | 414 | 104 | 6 | 943 | 617 | 128,868 |
| 2017 | GW | 12,520 | 16 | 23 | 0 | 955 | 257 | 13,771 |
| | SW | 115,023 | 321 | 91 | 6 | 751 | 601 | 116,793 |
| 2016 | GW | 11,712 | 17 | 44 | 0 | 952 | 238 | 12,963 |
| | SW | 111,953 | 338 | 176 | 7 | 2,126 | 555 | 115,155 |
| 2015 | GW | 13,810 | 22 | 191 | 0 | 655 | 236 | 14,914 |
| | SW | 93,428 | 330 | 764 | 5 | 1,586 | 550 | 96,663 |
| 2014 | GW | 11,864 | 16 | 238 | 0 | 1,816 | 243 | 14,177 |
| | SW | 106,235 | 323 | 953 | 5 | 1,162 | 568 | 109,246 |
| 2013 | GW | 12,897 | 13 | 292 | 0 | 2,167 | 225 | 15,594 |
| | SW | 109,813 | 321 | 1,169 | 55 | 782 | 524 | 112,664 |
| 2012 | GW | 15,070 | 14 | 517 | 0 | 2,817 | 206 | 18,624 |
| | SW | 119,747 | 314 | 2,099 | 86 | 611 | 479 | 123,336 |
| 2011 | GW | 17,278 | 12 | 145 | 0 | 2,534 | 239 | 20,208 |
| | SW | 124,316 | 326 | 580 | 23 | 750 | 559 | 126,554 |
| 2010 | GW | 12,327 | 1 | 1,209 | 0 | 967 | 240 | 14,744 |
| | SW | 100,984 | 397 | 2,070 | 80 | 1,124 | 560 | 105,215 |
| 2009 | GW | 10,478 | 1 | 1,366 | 0 | 1,445 | 275 | 13,565 |
| | SW | 96,094 | 403 | 2,340 | 129 | 1,055 | 643 | 100,664 |
| 2008 | GW | 10,288 | 13 | 1,523 | 0 | 0 | 265 | 12,089 |
| | SW | 99,989 | 442 | 2,609 | 122 | 1,475 | 618 | 105,255 |
| 2007 | GW | 7,537 | 13 | 0 | 0 | 696 | 357 | 8,603 |
| | SW | 87,322 | 365 | 0 | 200 | 762 | 833 | 89,482 |
| 2006 | GW | 9,512 | 30 | 0 | 0 | 1,337 | 348 | 11,227 |
| | SW | 104,655 | 410 | 0 | 639 | 1,413 | 812 | 107,929 |
| 2005 | GW | 9,923 | 59 | 0 | 0 | 1,136 | 322 | 11,440 |
| | SW | 103,027 | 355 | 0 | 384 | 1,364 | 751 | 105,881 |
| 2004 | GW | 8,442 | 78 | 0 | 0 | 1,080 | 500 | 10,100 |
| | SW | 87,944 | 352 | 0 | 415 | 920 | 500 | 90,131 |

# Projected Surface Water Supplies
# TWDB 2022 State Water Plan Data

## COLLIN COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | Source Name | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| C | ALLEN | TRINITY | FORK LAKE/RESERVOIR | 1,642 | 0 | 0 | 0 | 0 | 0 |
| C | ALLEN | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 11,126 | 10,904 | 9,948 | 9,054 | 8,272 | 7,703 |
| C | ALLEN | TRINITY | TAWAKONI LAKE/RESERVOIR | 1,136 | 558 | 500 | 452 | 411 | 381 |
| C | ANNA | TRINITY | FORK LAKE/RESERVOIR | 92 | 0 | 0 | 0 | 0 | 0 |
| C | ANNA | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 627 | 915 | 893 | 886 | 884 | 881 |
| C | ANNA | TRINITY | TAWAKONI LAKE/RESERVOIR | 64 | 47 | 45 | 44 | 44 | 44 |
| C | B H P WSC | SABINE | FORK LAKE/RESERVOIR | 3 | 0 | 0 | 0 | 0 | 0 |
| C | B H P WSC | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 19 | 26 | 29 | 26 | 24 | 21 |
| C | B H P WSC | SABINE | TAWAKONI LAKE/RESERVOIR | 2 | 1 | 1 | 1 | 1 | 1 |
| C | BEAR CREEK SUD | TRINITY | FORK LAKE/RESERVOIR | 46 | 0 | 0 | 0 | 0 | 0 |
| C | BEAR CREEK SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 310 | 440 | 561 | 701 | 790 | 911 |
| C | BEAR CREEK SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 32 | 23 | 29 | 34 | 39 | 45 |
| C | CADDO BASIN SUD | SABINE | FORK LAKE/RESERVOIR | 11 | 0 | 0 | 0 | 0 | 0 |
| C | CADDO BASIN SUD | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 79 | 87 | 104 | 124 | 143 | 163 |
| C | CADDO BASIN SUD | SABINE | TAWAKONI LAKE/RESERVOIR | 8 | 4 | 6 | 7 | 7 | 8 |
| C | CADDO BASIN SUD | TRINITY | FORK LAKE/RESERVOIR | 8 | 0 | 0 | 0 | 0 | 0 |
| C | CADDO BASIN SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 52 | 58 | 69 | 82 | 95 | 108 |
| C | CADDO BASIN SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 6 | 3 | 3 | 4 | 5 | 6 |
| C | CARROLLTON | TRINITY | FORK LAKE/RESERVOIR | 0 | 1 | 0 | 0 | 0 | 1 |
| C | CARROLLTON | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 1 |
| C | CARROLLTON | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE | 0 | 0 | 0 | 0 | 1 | 1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | LAKE/RESERVOIR SYSTEM | | | | | | |
| C | CARROLLTON | TRINITY | TAWAKONI LAKE/RESERVOIR | 1 | 1 | 0 | 1 | 1 | 1 |
| C | CELINA | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 915 | 1,413 | 1,448 | 1,364 | 1,475 | 1,556 |
| C | CELINA | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 3,197 | 5,403 | 5,326 | 4,725 | 4,955 | 5,119 |
| C | COPEVILLE SUD | TRINITY | FORK LAKE/RESERVOIR | 25 | 0 | 0 | 0 | 0 | 0 |
| C | COPEVILLE SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 166 | 179 | 195 | 240 | 378 | 594 |
| C | COPEVILLE SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 17 | 9 | 9 | 12 | 19 | 29 |
| C | COUNTY-OTHER, COLLIN | SABINE | FORK LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| C | COUNTY-OTHER, COLLIN | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 0 | 0 | 0 | 0 | 0 | 0 |
| C | COUNTY-OTHER, COLLIN | SABINE | TAWAKONI LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| C | COUNTY-OTHER, COLLIN | TRINITY | FORK LAKE/RESERVOIR | 10 | 0 | 0 | 0 | 0 | 0 |
| C | COUNTY-OTHER, COLLIN | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 64 | 53 | 44 | 36 | 231 | 413 |
| C | COUNTY-OTHER, COLLIN | TRINITY | TAWAKONI LAKE/RESERVOIR | 7 | 3 | 2 | 2 | 11 | 20 |
| C | CULLEOKA WSC | TRINITY | FORK LAKE/RESERVOIR | 45 | 0 | 0 | 0 | 0 | 0 |
| C | CULLEOKA WSC | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 303 | 276 | 376 | 410 | 418 | 477 |
| C | CULLEOKA WSC | TRINITY | TAWAKONI LAKE/RESERVOIR | 31 | 14 | 19 | 21 | 21 | 24 |
| C | DALLAS | TRINITY | FORK LAKE/RESERVOIR | 1,753 | 1,872 | 1,852 | 1,836 | 1,857 | 1,906 |
| C | DALLAS | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 1,807 | 1,733 | 1,555 | 1,406 | 1,302 | 1,228 |
| C | DALLAS | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 4,004 | 3,485 | 3,011 | 2,626 | 2,307 | 2,046 |
| C | DALLAS | TRINITY | TAWAKONI LAKE/RESERVOIR | 6,087 | 5,749 | 5,064 | 4,496 | 4,093 | 3,798 |
| C | EAST FORK SUD | TRINITY | FORK LAKE/RESERVOIR | 99 | 0 | 0 | 0 | 0 | 0 |
| C | EAST FORK SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 664 | 652 | 661 | 593 | 553 | 524 |
| C | EAST FORK SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 68 | 34 | 33 | 30 | 28 | 26 |
| C | FAIRVIEW | TRINITY | FORK LAKE/RESERVOIR | 338 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C | FAIRVIEW | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 2,287 | 2,392 | 2,872 | 2,682 | 2,439 | 2,233 |
| C | FAIRVIEW | TRINITY | TAWAKONI LAKE/RESERVOIR | 233 | 122 | 144 | 134 | 121 | 111 |
| C | FARMERSVILLE | SABINE | FORK LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| C | FARMERSVILLE | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 1 | 1 | 3 | 4 | 5 | 7 |
| C | FARMERSVILLE | SABINE | TAWAKONI LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| C | FARMERSVILLE | TRINITY | FORK LAKE/RESERVOIR | 78 | 0 | 0 | 0 | 0 | 0 |
| C | FARMERSVILLE | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 525 | 1,159 | 2,364 | 3,239 | 4,140 | 5,481 |
| C | FARMERSVILLE | TRINITY | TAWAKONI LAKE/RESERVOIR | 54 | 59 | 119 | 162 | 206 | 272 |
| C | FRISCO | TRINITY | FORK LAKE/RESERVOIR | 1,976 | 0 | 0 | 0 | 0 | 0 |
| C | FRISCO | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 13,389 | 12,538 | 13,335 | 17,424 | 18,382 | 18,080 |
| C | FRISCO | TRINITY | TAWAKONI LAKE/RESERVOIR | 1,367 | 642 | 671 | 870 | 914 | 894 |
| C | GARLAND | TRINITY | FORK LAKE/RESERVOIR | 4 | 0 | 0 | 0 | 0 | 0 |
| C | GARLAND | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 26 | 29 | 32 | 36 | 39 | 43 |
| C | GARLAND | TRINITY | TAWAKONI LAKE/RESERVOIR | 3 | 1 | 2 | 2 | 2 | 2 |
| C | IRRIGATION, COLLIN | SABINE | RAY HUBBARD LAKE/RESERVOIR | 77 | 73 | 66 | 61 | 58 | 56 |
| C | IRRIGATION, COLLIN | SABINE | TRINITY RUN-OF-RIVER | 12 | 12 | 12 | 12 | 12 | 12 |
| C | IRRIGATION, COLLIN | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 2,653 | 2,525 | 2,288 | 2,110 | 2,009 | 1,932 |
| C | IRRIGATION, COLLIN | TRINITY | TRINITY RUN-OF-RIVER | 396 | 396 | 396 | 396 | 396 | 396 |
| C | JOSEPHINE | SABINE | FORK LAKE/RESERVOIR | 23 | 0 | 0 | 0 | 0 | 0 |
| C | JOSEPHINE | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 156 | 225 | 283 | 328 | 308 | 281 |
| C | JOSEPHINE | SABINE | TAWAKONI LAKE/RESERVOIR | 16 | 11 | 14 | 16 | 15 | 14 |
| C | LIVESTOCK, COLLIN | SABINE | SABINE LIVESTOCK LOCAL SUPPLY | 3 | 3 | 3 | 3 | 3 | 3 |
| C | LIVESTOCK, COLLIN | SABINE | TRINITY LIVESTOCK LOCAL SUPPLY | 97 | 97 | 97 | 97 | 97 | 97 |
| C | LIVESTOCK, COLLIN | TRINITY | SABINE LIVESTOCK LOCAL SUPPLY | 28 | 28 | 28 | 28 | 28 | 28 |
| C | LIVESTOCK, COLLIN | TRINITY | TRINITY LIVESTOCK LOCAL SUPPLY | 874 | 874 | 874 | 874 | 874 | 874 |
| C | LUCAS | TRINITY | FORK LAKE/RESERVOIR | 174 | 0 | 0 | 0 | 0 | 0 |
| C | LUCAS | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR | 1,177 | 1,211 | 1,436 | 1,497 | 1,504 | 1,378 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | SYSTEM | | | | | | |
| C | LUCAS | TRINITY | TAWAKONI LAKE/RESERVOIR | 120 | 62 | 72 | 75 | 75 | 68 |
| C | MANUFACTURING, COLLIN | TRINITY | FORK LAKE/RESERVOIR | 161 | 0 | 0 | 0 | 0 | 0 |
| C | MANUFACTURING, COLLIN | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 1,083 | 1,144 | 1,030 | 928 | 839 | 766 |
| C | MANUFACTURING, COLLIN | TRINITY | TAWAKONI LAKE/RESERVOIR | 110 | 59 | 53 | 45 | 39 | 37 |
| C | MARILEE SUD | TRINITY | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION | 116 | 124 | 137 | 134 | 109 | 66 |
| C | MCKINNEY | TRINITY | FORK LAKE/RESERVOIR | 3,066 | 0 | 0 | 0 | 0 | 0 |
| C | MCKINNEY | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 20,769 | 20,583 | 20,466 | 22,226 | 23,932 | 23,758 |
| C | MCKINNEY | TRINITY | TAWAKONI LAKE/RESERVOIR | 2,120 | 1,054 | 1,030 | 1,109 | 1,191 | 1,175 |
| C | MELISSA | TRINITY | FORK LAKE/RESERVOIR | 257 | 0 | 0 | 0 | 0 | 0 |
| C | MELISSA | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 1,742 | 1,825 | 1,759 | 1,724 | 1,701 | 1,681 |
| C | MELISSA | TRINITY | TAWAKONI LAKE/RESERVOIR | 178 | 93 | 89 | 86 | 84 | 84 |
| C | MILLIGAN WSC | TRINITY | FORK LAKE/RESERVOIR | 34 | 0 | 0 | 0 | 0 | 0 |
| C | MILLIGAN WSC | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 229 | 236 | 256 | 288 | 293 | 297 |
| C | MILLIGAN WSC | TRINITY | TAWAKONI LAKE/RESERVOIR | 23 | 12 | 13 | 14 | 15 | 15 |
| C | MURPHY | TRINITY | FORK LAKE/RESERVOIR | 333 | 0 | 0 | 0 | 0 | 0 |
| C | MURPHY | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 2,259 | 2,045 | 1,839 | 1,649 | 1,481 | 1,357 |
| C | MURPHY | TRINITY | TAWAKONI LAKE/RESERVOIR | 230 | 105 | 93 | 82 | 74 | 67 |
| C | NEVADA SUD | SABINE | FORK LAKE/RESERVOIR | 6 | 0 | 0 | 0 | 0 | 0 |
| C | NEVADA SUD | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 41 | 45 | 47 | 136 | 288 | 474 |
| C | NEVADA SUD | SABINE | TAWAKONI LAKE/RESERVOIR | 4 | 2 | 2 | 7 | 14 | 24 |
| C | NEVADA SUD | TRINITY | FORK LAKE/RESERVOIR | 12 | 0 | 0 | 0 | 0 | 0 |
| C | NEVADA SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 82 | 89 | 93 | 268 | 569 | 937 |
| C | NEVADA SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 8 | 5 | 5 | 13 | 28 | 47 |
| C | NORTH COLLIN SUD | TRINITY | FORK LAKE/RESERVOIR | 61 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C | NORTH COLLIN SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 417 | 427 | 441 | 470 | 494 | 521 |
| C | NORTH COLLIN SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 42 | 22 | 22 | 24 | 25 | 26 |
| C | NORTH FARMERSVILLE WSC | TRINITY | FORK LAKE/RESERVOIR | 7 | 0 | 0 | 0 | 0 | 0 |
| C | NORTH FARMERSVILLE WSC | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 46 | 48 | 53 | 59 | 61 | 61 |
| C | NORTH FARMERSVILLE WSC | TRINITY | TAWAKONI LAKE/RESERVOIR | 5 | 2 | 3 | 3 | 3 | 3 |
| C | PARKER | TRINITY | FORK LAKE/RESERVOIR | 211 | 0 | 0 | 0 | 0 | 0 |
| C | PARKER | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 1,433 | 1,404 | 1,330 | 1,378 | 1,357 | 1,410 |
| C | PARKER | TRINITY | TAWAKONI LAKE/RESERVOIR | 146 | 72 | 67 | 69 | 68 | 70 |
| C | PLANO | TRINITY | FORK LAKE/RESERVOIR | 5,394 | 0 | 0 | 0 | 0 | 0 |
| C | PLANO | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 36,544 | 33,349 | 30,215 | 27,073 | 24,365 | 22,551 |
| C | PLANO | TRINITY | TAWAKONI LAKE/RESERVOIR | 3,731 | 1,707 | 1,520 | 1,352 | 1,212 | 1,116 |
| C | PRINCETON | TRINITY | FORK LAKE/RESERVOIR | 89 | 0 | 0 | 0 | 0 | 0 |
| C | PRINCETON | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 602 | 1,837 | 3,322 | 3,497 | 3,141 | 2,876 |
| C | PRINCETON | TRINITY | TAWAKONI LAKE/RESERVOIR | 61 | 94 | 167 | 175 | 156 | 142 |
| C | PROSPER | TRINITY | FORK LAKE/RESERVOIR | 365 | 0 | 0 | 0 | 0 | 0 |
| C | PROSPER | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 2,471 | 2,450 | 2,139 | 1,936 | 2,041 | 2,038 |
| C | PROSPER | TRINITY | TAWAKONI LAKE/RESERVOIR | 253 | 125 | 108 | 97 | 102 | 101 |
| C | RICHARDSON | TRINITY | FORK LAKE/RESERVOIR | 672 | 0 | 0 | 0 | 0 | 0 |
| C | RICHARDSON | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 4,550 | 4,078 | 3,628 | 3,312 | 3,111 | 3,110 |
| C | RICHARDSON | TRINITY | TAWAKONI LAKE/RESERVOIR | 465 | 209 | 183 | 165 | 155 | 154 |
| C | ROYSE CITY | SABINE | FORK LAKE/RESERVOIR | 20 | 0 | 0 | 0 | 0 | 0 |
| C | ROYSE CITY | SABINE | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 131 | 554 | 893 | 1,249 | 1,498 | 1,806 |
| C | ROYSE CITY | SABINE | TAWAKONI LAKE/RESERVOIR | 14 | 29 | 45 | 62 | 74 | 90 |
| C | SACHSE | TRINITY | FORK LAKE/RESERVOIR | 110 | 0 | 0 | 0 | 0 | 0 |
| C | SACHSE | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 748 | 670 | 602 | 564 | 512 | 469 |
| C | SACHSE | TRINITY | TAWAKONI LAKE/RESERVOIR | 76 | 34 | 30 | 28 | 25 | 23 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C | SEIS LAGOS UD | TRINITY | FORK LAKE/RESERVOIR | 43 | 0 | 0 | 0 | 0 | 0 |
| C | SEIS LAGOS UD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 293 | 265 | 238 | 222 | 201 | 185 |
| C | SEIS LAGOS UD | TRINITY | TAWAKONI LAKE/RESERVOIR | 30 | 14 | 12 | 11 | 10 | 9 |
| C | STEAM ELECTRIC POWER, COLLIN | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 40 | 40 | 40 | 40 | 40 | 40 |
| C | WYLIE | TRINITY | FORK LAKE/RESERVOIR | 468 | 0 | 0 | 0 | 0 | 0 |
| C | WYLIE | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 3,170 | 3,064 | 2,894 | 2,785 | 2,603 | 2,626 |
| C | WYLIE | TRINITY | TAWAKONI LAKE/RESERVOIR | 324 | 157 | 145 | 139 | 129 | 130 |
| C | WYLIE NORTHEAST SUD | TRINITY | FORK LAKE/RESERVOIR | 51 | 0 | 0 | 0 | 0 | 0 |
| C | WYLIE NORTHEAST SUD | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 342 | 368 | 386 | 562 | 755 | 1,019 |
| C | WYLIE NORTHEAST SUD | TRINITY | TAWAKONI LAKE/RESERVOIR | 35 | 19 | 19 | 28 | 38 | 50 |
| | **Sum of Projected Surface Water Supplies (acre-feet)** | | | **156,936** | **134,862** | **132,308** | **133,272** | **132,825** | **131,709** |

## COOKE COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | Source Name | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|
| C | COUNTY-OTHER, COOKE | RED | HUBERT H MOSS LAKE/RESERVOIR | 11 | 11 | 11 | 84 | 107 | 200 |
| C | COUNTY-OTHER, COOKE | TRINITY | HUBERT H MOSS LAKE/RESERVOIR | 39 | 39 | 39 | 306 | 393 | 732 |
| C | GAINESVILLE | RED | HUBERT H MOSS LAKE/RESERVOIR | 2 | 1 | 1 | 1 | 1 | 2 |
| C | GAINESVILLE | TRINITY | HUBERT H MOSS LAKE/RESERVOIR | 1,034 | 736 | 805 | 855 | 1,033 | 970 |
| C | IRRIGATION, COOKE | RED | HUBERT H MOSS LAKE/RESERVOIR | 263 | 263 | 263 | 263 | 187 | 89 |
| C | IRRIGATION, COOKE | TRINITY | HUBERT H MOSS LAKE/RESERVOIR | 609 | 609 | 609 | 609 | 433 | 207 |
| C | LIVESTOCK, COOKE | RED | RED LIVESTOCK LOCAL SUPPLY | 180 | 180 | 180 | 180 | 180 | 180 |
| C | LIVESTOCK, COOKE | RED | TRINITY LIVESTOCK LOCAL SUPPLY | 382 | 382 | 382 | 382 | 382 | 382 |
| C | LIVESTOCK, COOKE | TRINITY | RED LIVESTOCK LOCAL SUPPLY | 200 | 200 | 200 | 200 | 200 | 200 |
| C | LIVESTOCK, COOKE | TRINITY | TRINITY LIVESTOCK LOCAL SUPPLY | 425 | 425 | 425 | 425 | 425 | 425 |
| C | MANUFACTURING, COOKE | TRINITY | HUBERT H MOSS LAKE/RESERVOIR | 112 | 124 | 124 | 124 | 88 | 42 |
| | **Sum of Projected Surface Water Supplies (acre-feet)** | | | **3,257** | **2,970** | **3,039** | **3,429** | **3,429** | **3,429** |

## DENTON COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | Source Name | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C | ARGYLE WSC | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 409 | 370 | 427 | 393 | 358 | 318 |
| C | ARGYLE WSC | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,429 | 1,415 | 1,571 | 1,360 | 1,202 | 1,046 |
| C | CARROLLTON | TRINITY | FORK LAKE/RESERVOIR | 1,633 | 1,751 | 1,710 | 1,692 | 1,711 | 1,756 |
| C | CARROLLTON | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 1,684 | 1,621 | 1,436 | 1,296 | 1,200 | 1,131 |
| C | CARROLLTON | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 3,729 | 3,261 | 2,779 | 2,422 | 2,125 | 1,885 |
| C | CARROLLTON | TRINITY | TAWAKONI LAKE/RESERVOIR | 5,670 | 5,378 | 4,675 | 4,144 | 3,771 | 3,499 |
| C | CELINA | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 32 | 145 | 327 | 481 | 411 | 358 |
| C | CELINA | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 111 | 556 | 1,200 | 1,668 | 1,381 | 1,178 |
| C | COPPELL | TRINITY | FORK LAKE/RESERVOIR | 33 | 35 | 34 | 34 | 35 | 36 |
| C | COPPELL | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 34 | 32 | 29 | 26 | 24 | 23 |
| C | COPPELL | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 76 | 65 | 56 | 49 | 43 | 38 |
| C | COPPELL | TRINITY | TAWAKONI LAKE/RESERVOIR | 116 | 108 | 94 | 84 | 76 | 71 |
| C | CORINTH | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 884 | 671 | 561 | 505 | 451 | 402 |
| C | CORINTH | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 3,087 | 2,565 | 2,064 | 1,749 | 1,518 | 1,322 |
| C | COUNTY-OTHER, DENTON | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 186 | 155 | 180 | 357 | 563 | 991 |
| C | COUNTY-OTHER, DENTON | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 650 | 594 | 664 | 1,236 | 1,892 | 3,260 |
| C | CROSS TIMBERS WSC | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 206 | 198 | 173 | 167 | 159 | 145 |
| C | CROSS TIMBERS WSC | TRINITY | RAY ROBERTS-LEWISVILLE- | 718 | 759 | 635 | 577 | 535 | 476 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | GRAPEVINE LAKE/RESERVOIR SYSTEM | | | | | | |
| C | DALLAS | TRINITY | FORK LAKE/RESERVOIR | 729 | 824 | 914 | 1,010 | 1,101 | 1,170 |
| C | DALLAS | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 752 | 762 | 768 | 774 | 772 | 754 |
| C | DALLAS | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,666 | 1,533 | 1,486 | 1,444 | 1,368 | 1,256 |
| C | DALLAS | TRINITY | TAWAKONI LAKE/RESERVOIR | 2,534 | 2,529 | 2,499 | 2,473 | 2,428 | 2,332 |
| C | DENTON | TRINITY | LEWISVILLE LAKE/RESERVOIR NON-SYSTEM PORTION | 6,412 | 6,132 | 5,870 | 5,386 | 5,311 | 5,275 |
| C | DENTON | TRINITY | RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION | 15,506 | 14,789 | 14,024 | 12,746 | 12,644 | 12,681 |
| C | DENTON COUNTY FWSD 1-A | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 508 | 586 | 590 | 532 | 477 | 424 |
| C | DENTON COUNTY FWSD 1-A | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 2,931 | 4,114 | 4,147 | 3,609 | 3,199 | 2,992 |
| C | DENTON COUNTY FWSD 10 | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 307 | 421 | 418 | 377 | 338 | 301 |
| C | DENTON COUNTY FWSD 10 | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,074 | 1,609 | 1,536 | 1,306 | 1,134 | 988 |
| C | DENTON COUNTY FWSD 7 | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 708 | 458 | 385 | 348 | 311 | 277 |
| C | DENTON COUNTY FWSD 7 | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 2,472 | 1,752 | 1,416 | 1,203 | 1,045 | 910 |
| C | FLOWER MOUND | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 2,547 | 1,918 | 1,651 | 1,533 | 1,417 | 1,315 |
| C | FLOWER MOUND | TRINITY | FORK LAKE/RESERVOIR | 682 | 724 | 718 | 716 | 724 | 745 |
| C | FLOWER MOUND | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 703 | 669 | 602 | 548 | 507 | 480 |
| C | FLOWER MOUND | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 10,452 | 8,678 | 7,235 | 6,339 | 5,661 | 5,128 |
| C | FLOWER MOUND | TRINITY | TAWAKONI LAKE/RESERVOIR | 2,367 | 2,221 | 1,961 | 1,754 | 1,597 | 1,485 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C | FORT WORTH | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 5,590 | 6,674 | 7,824 | 9,545 | 10,880 | 11,712 |
| C | FRISCO | TRINITY | FORK LAKE/RESERVOIR | 1,325 | 0 | 0 | 0 | 0 | 0 |
| C | FRISCO | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 8,977 | 10,224 | 11,614 | 10,594 | 9,646 | 8,885 |
| C | FRISCO | TRINITY | TAWAKONI LAKE/RESERVOIR | 917 | 524 | 584 | 529 | 480 | 440 |
| C | HACKBERRY | TRINITY | FORK LAKE/RESERVOIR | 34 | 0 | 0 | 0 | 0 | 0 |
| C | HACKBERRY | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 230 | 268 | 306 | 338 | 372 | 412 |
| C | HACKBERRY | TRINITY | TAWAKONI LAKE/RESERVOIR | 23 | 14 | 15 | 17 | 19 | 20 |
| C | HIGHLAND VILLAGE | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 502 | 364 | 313 | 298 | 280 | 249 |
| C | HIGHLAND VILLAGE | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,753 | 1,389 | 1,149 | 1,033 | 938 | 817 |
| C | IRRIGATION, DENTON | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,516 | 1,443 | 1,307 | 1,205 | 1,148 | 1,103 |
| C | JUSTIN | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 47 | 108 | 157 | 146 | 136 | 120 |
| C | JUSTIN | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 163 | 414 | 576 | 507 | 454 | 397 |
| C | KRUM | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 100 | 108 | 127 | 145 | 167 | 182 |
| C | KRUM | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 351 | 414 | 469 | 505 | 562 | 598 |
| C | LAKE CITIES MUNICIPAL UTILITY AUTHORITY | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 446 | 327 | 312 | 302 | 271 | 241 |
| C | LAKE CITIES MUNICIPAL UTILITY AUTHORITY | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,557 | 1,253 | 1,148 | 1,048 | 909 | 792 |
| C | LEWISVILLE | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 19,181 | 19,511 | 19,425 | 19,652 | 19,830 | 19,830 |
| C | LITTLE ELM | TRINITY | FORK | 305 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | LAKE/RESERVOIR | | | | | | |
| C | LITTLE ELM | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 2,069 | 2,088 | 1,874 | 1,690 | 1,530 | 1,400 |
| C | LITTLE ELM | TRINITY | TAWAKONI LAKE/RESERVOIR | 211 | 107 | 94 | 84 | 76 | 69 |
| C | LIVESTOCK, DENTON | TRINITY | TRINITY LIVESTOCK LOCAL SUPPLY | 622 | 622 | 622 | 622 | 622 | 622 |
| C | MANUFACTURING, DENTON | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 4 | 5 | 6 | 5 | 4 | 4 |
| C | MANUFACTURING, DENTON | TRINITY | FORK LAKE/RESERVOIR | 5 | 3 | 3 | 3 | 3 | 3 |
| C | MANUFACTURING, DENTON | TRINITY | LEWISVILLE LAKE/RESERVOIR NON-SYSTEM PORTION | 67 | 61 | 45 | 30 | 21 | 17 |
| C | MANUFACTURING, DENTON | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 14 | 12 | 10 | 10 | 10 | 8 |
| C | MANUFACTURING, DENTON | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 3 | 3 | 2 | 2 | 2 | 2 |
| C | MANUFACTURING, DENTON | TRINITY | RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION | 161 | 146 | 107 | 71 | 49 | 40 |
| C | MANUFACTURING, DENTON | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 20 | 23 | 25 | 23 | 20 | 17 |
| C | MANUFACTURING, DENTON | TRINITY | TAWAKONI LAKE/RESERVOIR | 11 | 11 | 9 | 7 | 7 | 6 |
| C | MANUFACTURING, DENTON | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 26 | 23 | 20 | 18 | 17 | 15 |
| C | MINING, DENTON | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 287 | 31 | 129 | 244 | 328 | 393 |
| C | MINING, DENTON | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,004 | 119 | 475 | 848 | 1,103 | 1,292 |
| C | MINING, DENTON | TRINITY | TRINITY OTHER LOCAL SUPPLY | 1,366 | 1,366 | 1,366 | 1,366 | 1,366 | 1,366 |
| C | MUSTANG SUD | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 598 | 924 | 1,229 | 1,520 | 1,730 | 1,855 |
| C | MUSTANG SUD | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 2,089 | 3,530 | 4,520 | 5,268 | 5,812 | 6,098 |
| C | NORTHLAKE | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 252 | 386 | 460 | 578 | 664 | 591 |
| C | NORTHLAKE | TRINITY | RAY ROBERTS-LEWISVILLE- | 882 | 1,477 | 1,693 | 2,005 | 2,233 | 1,946 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | GRAPEVINE LAKE/RESERVOIR SYSTEM | | | | | | |
| C | NORTHLAKE | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 609 | 1,265 | 1,590 | 1,997 | 2,357 | 2,181 |
| C | PALOMA CREEK NORTH | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 353 | 310 | 260 | 235 | 211 | 187 |
| C | PALOMA CREEK NORTH | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,229 | 1,185 | 958 | 814 | 707 | 616 |
| C | PALOMA CREEK SOUTH | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 176 | 157 | 131 | 119 | 107 | 95 |
| C | PALOMA CREEK SOUTH | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 618 | 599 | 485 | 412 | 358 | 312 |
| C | PLANO | TRINITY | FORK LAKE/RESERVOIR | 144 | 0 | 0 | 0 | 0 | 0 |
| C | PLANO | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 975 | 912 | 834 | 745 | 670 | 614 |
| C | PLANO | TRINITY | TAWAKONI LAKE/RESERVOIR | 100 | 47 | 42 | 37 | 33 | 30 |
| C | PROSPER | TRINITY | FORK LAKE/RESERVOIR | 22 | 0 | 0 | 0 | 0 | 0 |
| C | PROSPER | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 151 | 625 | 860 | 1,039 | 928 | 927 |
| C | PROSPER | TRINITY | TAWAKONI LAKE/RESERVOIR | 15 | 32 | 43 | 52 | 46 | 46 |
| C | PROVIDENCE VILLAGE WCID | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 195 | 125 | 106 | 95 | 84 | 75 |
| C | PROVIDENCE VILLAGE WCID | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 678 | 478 | 386 | 328 | 285 | 248 |
| C | ROANOKE | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 2,255 | 2,424 | 2,539 | 2,354 | 2,167 | 2,004 |
| C | SANGER | TRINITY | CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 65 | 85 | 109 | 130 | 154 | 169 |
| C | SANGER | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 228 | 326 | 401 | 452 | 518 | 558 |
| C | SOUTHLAKE | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 419 | 474 | 531 | 592 | 667 | 746 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| C | THE COLONY | TRINITY | FORK LAKE/RESERVOIR | 739 | 661 | 688 | 775 | 783 | 805 |
| C | THE COLONY | TRINITY | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 610 | 927 | 920 | 827 | 742 | 680 |
| C | THE COLONY | TRINITY | RAY HUBBARD LAKE/RESERVOIR | 670 | 612 | 578 | 594 | 549 | 518 |
| C | THE COLONY | TRINITY | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM | 1,483 | 1,232 | 1,120 | 1,109 | 974 | 864 |
| C | THE COLONY | TRINITY | TAWAKONI LAKE/RESERVOIR | 2,318 | 2,078 | 1,928 | 1,939 | 1,764 | 1,637 |
| C | TROPHY CLUB MUD 1 | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 4,308 | 3,766 | 3,326 | 2,995 | 2,754 | 2,549 |
| C | WESTLAKE | TRINITY | TRWD LAKE/RESERVOIR SYSTEM | 30 | 34 | 39 | 44 | 50 | 59 |
| | | | **Sum of Projected Surface Water Supplies (acre-feet)** | **144,135** | **141,724** | **140,724** | **138,280** | **136,086** | **133,910** |

# Projected Water Demands
# TWDB 2022 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

## COLLIN COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| C | ALLEN | TRINITY | 21,887 | 23,536 | 23,806 | 24,125 | 24,496 | 24,902 |
| C | ANNA | TRINITY | 2,389 | 4,047 | 6,429 | 8,336 | 10,816 | 14,053 |
| C | B H P WSC | SABINE | 38 | 55 | 68 | 68 | 69 | 69 |
| C | BEAR CREEK SUD | TRINITY | 610 | 948 | 1,342 | 1,866 | 2,336 | 2,947 |
| C | BLUE RIDGE | TRINITY | 413 | 687 | 6,403 | 14,735 | 21,025 | 29,142 |
| C | CADDO BASIN SUD | SABINE | 155 | 188 | 251 | 331 | 425 | 527 |
| C | CADDO BASIN SUD | TRINITY | 103 | 124 | 166 | 220 | 282 | 349 |
| C | CARROLLTON | TRINITY | 1 | 1 | 2 | 2 | 3 | 3 |
| C | CELINA | TRINITY | 4,420 | 10,515 | 15,980 | 21,784 | 27,596 | 33,405 |
| C | COPEVILLE SUD | TRINITY | 327 | 387 | 465 | 638 | 1,123 | 1,921 |
| C | COUNTY-OTHER, COLLIN | SABINE | 0 | 0 | 0 | 0 | 1 | 1 |
| C | COUNTY-OTHER, COLLIN | TRINITY | 627 | 615 | 606 | 596 | 1,180 | 1,834 |
| C | CULLEOKA WSC | TRINITY | 597 | 596 | 901 | 1,094 | 1,237 | 1,546 |
| C | DALLAS | TRINITY | 15,807 | 15,886 | 15,830 | 15,706 | 15,681 | 15,679 |
| C | DESERT WSC | TRINITY | 51 | 56 | 64 | 81 | 110 | 144 |
| C | EAST FORK SUD | TRINITY | 1,308 | 1,407 | 1,580 | 1,581 | 1,638 | 1,693 |
| C | FAIRVIEW | TRINITY | 4,498 | 5,162 | 6,871 | 7,146 | 7,223 | 7,222 |
| C | FARMERSVILLE | SABINE | 1 | 3 | 7 | 11 | 16 | 23 |
| C | FARMERSVILLE | TRINITY | 1,035 | 2,501 | 5,658 | 8,629 | 12,260 | 17,721 |
| C | FRISCO | TRINITY | 27,373 | 28,159 | 33,122 | 47,994 | 56,265 | 60,316 |
| C | FROGNOT WSC | TRINITY | 171 | 193 | 232 | 289 | 329 | 366 |
| C | GARLAND | TRINITY | 51 | 62 | 76 | 94 | 115 | 137 |
| C | HICKORY CREEK SUD | TRINITY | 10 | 14 | 20 | 28 | 40 | 57 |
| C | IRRIGATION, COLLIN | SABINE | 94 | 94 | 94 | 94 | 94 | 94 |
| C | IRRIGATION, COLLIN | TRINITY | 3,246 | 3,246 | 3,246 | 3,246 | 3,246 | 3,246 |
| C | JOSEPHINE | SABINE | 307 | 485 | 676 | 874 | 910 | 910 |
| C | LIVESTOCK, COLLIN | SABINE | 91 | 91 | 91 | 91 | 91 | 91 |
| C | LIVESTOCK, COLLIN | TRINITY | 821 | 821 | 821 | 821 | 821 | 821 |
| C | LUCAS | TRINITY | 2,316 | 2,613 | 3,438 | 3,990 | 4,455 | 4,454 |
| C | MANUFACTURING, COLLIN | TRINITY | 2,246 | 2,602 | 2,602 | 2,602 | 2,602 | 2,602 |
| C | MARILEE SUD | TRINITY | 675 | 665 | 669 | 666 | 665 | 665 |
| C | MCKINNEY | TRINITY | 40,856 | 44,424 | 48,984 | 59,223 | 70,879 | 76,807 |
| C | MELISSA | TRINITY | 3,946 | 12,418 | 17,365 | 21,642 | 24,886 | 25,745 |
| C | MILLIGAN WSC | TRINITY | 450 | 511 | 614 | 766 | 870 | 963 |
| C | MURPHY | TRINITY | 4,441 | 4,414 | 4,402 | 4,393 | 4,388 | 4,387 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | NEVADA SUD | SABINE | 81 | 97 | 112 | 361 | 852 | 1,532 |
| C | NEVADA SUD | TRINITY | 161 | 192 | 222 | 713 | 1,685 | 3,031 |
| C | NORTH COLLIN SUD | TRINITY | 818 | 921 | 1,055 | 1,254 | 1,463 | 1,685 |
| C | NORTH FARMERSVILLE WSC | TRINITY | 91 | 104 | 126 | 158 | 180 | 199 |
| C | PARKER | TRINITY | 3,123 | 3,096 | 3,302 | 3,852 | 4,239 | 4,843 |
| C | PLANO | TRINITY | 71,890 | 71,978 | 72,314 | 72,139 | 72,158 | 72,907 |
| C | PRINCETON | TRINITY | 1,184 | 3,964 | 7,951 | 9,320 | 9,303 | 9,298 |
| C | PROSPER | TRINITY | 4,872 | 5,600 | 6,353 | 7,109 | 8,896 | 8,895 |
| C | RICHARDSON | TRINITY | 8,951 | 8,801 | 8,683 | 8,824 | 9,215 | 10,055 |
| C | ROYSE CITY | SABINE | 258 | 1,197 | 2,137 | 3,328 | 4,437 | 5,838 |
| C | SACHSE | TRINITY | 1,473 | 1,457 | 1,448 | 1,502 | 1,516 | 1,516 |
| C | SEIS LAGOS UD | TRINITY | 577 | 573 | 571 | 592 | 598 | 598 |
| C | SOUTH GRAYSON SUD | TRINITY | 151 | 184 | 242 | 293 | 341 | 388 |
| C | STEAM ELECTRIC POWER, COLLIN | TRINITY | 40 | 40 | 40 | 40 | 40 | 40 |
| C | VERONA SUD | TRINITY | 266 | 301 | 360 | 448 | 509 | 563 |
| C | WEST LEONARD WSC | TRINITY | 42 | 47 | 56 | 75 | 107 | 142 |
| C | WESTMINSTER WSC | TRINITY | 256 | 291 | 350 | 437 | 498 | 552 |
| C | WYLIE | TRINITY | 6,236 | 6,614 | 6,926 | 7,421 | 7,710 | 8,491 |
| C | WYLIE NORTHEAST SUD | TRINITY | 674 | 795 | 924 | 1,498 | 2,238 | 3,295 |
| | | **Sum of Projected Water Demands (acre-feet)** | **242,505** | **273,778** | **316,053** | **373,126** | **424,158** | **468,710** |

## COOKE COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| C | BOLIVAR WSC | TRINITY | 104 | 107 | 109 | 113 | 117 | 121 |
| C | CALLISBURG WSC | RED | 54 | 53 | 52 | 52 | 52 | 53 |
| C | CALLISBURG WSC | TRINITY | 96 | 93 | 92 | 91 | 92 | 92 |
| C | COUNTY-OTHER, COOKE | RED | 160 | 167 | 179 | 259 | 326 | 766 |
| C | COUNTY-OTHER, COOKE | TRINITY | 583 | 607 | 655 | 945 | 1,191 | 2,795 |
| C | GAINESVILLE | RED | 4 | 4 | 4 | 4 | 5 | 8 |
| C | GAINESVILLE | TRINITY | 2,652 | 2,754 | 2,829 | 2,931 | 3,552 | 4,961 |
| C | IRRIGATION, COOKE | RED | 332 | 332 | 332 | 332 | 332 | 332 |
| C | IRRIGATION, COOKE | TRINITY | 768 | 768 | 768 | 768 | 768 | 768 |
| C | LAKE KIOWA SUD | TRINITY | 891 | 921 | 938 | 957 | 964 | 976 |
| C | LINDSAY | RED | 1 | 1 | 2 | 2 | 2 | 3 |
| C | LINDSAY | TRINITY | 172 | 179 | 186 | 204 | 243 | 365 |
| C | LIVESTOCK, COOKE | RED | 630 | 630 | 630 | 630 | 630 | 630 |
| C | LIVESTOCK, COOKE | TRINITY | 700 | 700 | 700 | 700 | 700 | 700 |
| C | MANUFACTURING, COOKE | TRINITY | 116 | 128 | 128 | 128 | 128 | 128 |
| C | MINING, COOKE | TRINITY | 1,583 | 900 | 378 | 446 | 511 | 586 |
| C | MOUNTAIN SPRINGS WSC | TRINITY | 445 | 468 | 486 | 506 | 801 | 1,279 |
| C | MUENSTER | TRINITY | 268 | 261 | 263 | 260 | 267 | 267 |
| C | STEAM ELECTRIC POWER, COOKE | TRINITY | 5 | 5 | 5 | 5 | 5 | 5 |
| C | TWO WAY SUD | RED | 11 | 12 | 12 | 12 | 13 | 13 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | WOODBINE WSC | RED | 51 | 56 | 61 | 66 | 72 | 78 |
| C | WOODBINE WSC | TRINITY | 600 | 651 | 706 | 769 | 839 | 911 |
| | | **Sum of Projected Water Demands (acre-feet)** | **10,226** | **9,797** | **9,515** | **10,180** | **11,610** | **15,837** |

## DENTON COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| C | ARGYLE WSC | TRINITY | 2,659 | 3,365 | 4,322 | 4,319 | 4,317 | 4,314 |
| C | AUBREY | TRINITY | 547 | 711 | 823 | 972 | 1,164 | 1,412 |
| C | BLACK ROCK WSC | TRINITY | 296 | 368 | 433 | 505 | 590 | 668 |
| C | BOLIVAR WSC | TRINITY | 885 | 1,028 | 1,212 | 1,429 | 1,697 | 2,007 |
| C | CARROLLTON | TRINITY | 14,723 | 14,861 | 14,613 | 14,476 | 14,448 | 14,446 |
| C | CELINA | TRINITY | 154 | 1,081 | 3,602 | 7,692 | 7,691 | 7,690 |
| C | COPPELL | TRINITY | 301 | 297 | 294 | 293 | 292 | 292 |
| C | CORINTH | TRINITY | 4,269 | 4,986 | 4,959 | 4,942 | 4,935 | 4,934 |
| C | COUNTY-OTHER, DENTON | TRINITY | 1,199 | 1,537 | 1,878 | 4,108 | 7,241 | 13,671 |
| C | CROSS TIMBERS WSC | TRINITY | 1,642 | 2,060 | 2,073 | 2,096 | 2,128 | 2,166 |
| C | DALLAS | TRINITY | 6,578 | 6,987 | 7,811 | 8,638 | 9,301 | 9,625 |
| C | DENTON | TRINITY | 26,174 | 33,012 | 40,885 | 56,228 | 80,557 | 99,143 |
| C | DENTON COUNTY FWSD 1-A | TRINITY | 3,659 | 6,493 | 7,776 | 7,773 | 7,771 | 7,769 |
| C | DENTON COUNTY FWSD 10 | TRINITY | 1,485 | 3,128 | 3,690 | 3,689 | 3,687 | 3,686 |
| C | DENTON COUNTY FWSD 7 | TRINITY | 3,418 | 3,405 | 3,403 | 3,401 | 3,399 | 3,397 |
| C | FLOWER MOUND | TRINITY | 18,988 | 20,956 | 21,288 | 21,714 | 22,184 | 22,855 |
| C | FORT WORTH | TRINITY | 7,190 | 10,843 | 15,557 | 21,833 | 27,949 | 34,079 |
| C | FRISCO | TRINITY | 18,353 | 22,963 | 28,846 | 29,181 | 29,523 | 29,639 |
| C | HACKBERRY | TRINITY | 452 | 578 | 730 | 902 | 1,103 | 1,332 |
| C | HIGHLAND VILLAGE | TRINITY | 3,835 | 3,972 | 3,927 | 3,902 | 3,897 | 3,897 |
| C | IRRIGATION, DENTON | TRINITY | 3,003 | 3,003 | 3,003 | 3,003 | 3,003 | 3,003 |
| C | JUSTIN | TRINITY | 712 | 1,242 | 1,775 | 1,771 | 1,770 | 1,770 |
| C | KRUM | TRINITY | 1,135 | 1,391 | 1,703 | 2,055 | 2,471 | 2,947 |
| C | LAKE CITIES MUNICIPAL UTILITY AUTHORITY | TRINITY | 2,153 | 2,435 | 2,758 | 2,962 | 2,956 | 2,955 |
| C | LEWISVILLE | TRINITY | 19,984 | 22,285 | 25,176 | 28,536 | 31,821 | 31,817 |
| C | LITTLE ELM | TRINITY | 4,075 | 4,564 | 4,550 | 4,538 | 4,528 | 4,528 |
| C | LIVESTOCK, DENTON | TRINITY | 769 | 769 | 769 | 769 | 769 | 769 |
| C | MANUFACTURING, DENTON | TRINITY | 374 | 440 | 440 | 440 | 440 | 440 |
| C | MINING, DENTON | TRINITY | 4,326 | 2,729 | 3,345 | 4,306 | 5,204 | 6,291 |
| C | MOUNTAIN SPRINGS WSC | TRINITY | 9 | 10 | 11 | 12 | 13 | 15 |
| C | MUSTANG SUD | TRINITY | 4,548 | 8,361 | 12,201 | 16,049 | 19,904 | 23,762 |
| C | NORTHLAKE | TRINITY | 1,923 | 4,402 | 6,197 | 8,591 | 10,986 | 10,985 |
| C | PALOMA CREEK NORTH | TRINITY | 1,700 | 2,303 | 2,302 | 2,301 | 2,299 | 2,298 |
| C | PALOMA CREEK SOUTH | TRINITY | 854 | 1,165 | 1,165 | 1,165 | 1,165 | 1,165 |
| C | PILOT POINT | TRINITY | 891 | 1,069 | 1,449 | 1,964 | 2,614 | 3,527 |
| C | PLANO | TRINITY | 1,918 | 1,968 | 1,997 | 1,986 | 1,984 | 1,984 |
| C | PONDER | TRINITY | 388 | 524 | 690 | 878 | 1,099 | 1,352 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | PROSPER | TRINITY | 297 | 1,428 | 2,556 | 3,816 | 4,046 | 4,046 |
| C | PROVIDENCE VILLAGE WCID | TRINITY | 938 | 930 | 929 | 927 | 925 | 925 |
| C | ROANOKE | TRINITY | 2,255 | 2,797 | 3,345 | 3,339 | 3,337 | 3,336 |
| C | SANGER | TRINITY | 1,140 | 1,377 | 1,672 | 2,010 | 2,414 | 2,878 |
| C | SOUTHLAKE | TRINITY | 419 | 538 | 680 | 840 | 1,027 | 1,242 |
| C | STEAM ELECTRIC POWER, DENTON | TRINITY | 173 | 173 | 173 | 173 | 173 | 173 |
| C | THE COLONY | TRINITY | 8,071 | 8,631 | 9,105 | 9,857 | 9,844 | 9,841 |
| C | TROPHY CLUB MUD 1 | TRINITY | 4,863 | 4,829 | 4,811 | 4,802 | 4,798 | 4,797 |
| C | WESTLAKE | TRINITY | 30 | 39 | 52 | 65 | 79 | 98 |
| | | **Sum of Projected Water Demands (acre-feet)** | **183,755** | **222,033** | **260,976** | **305,248** | **353,543** | **393,966** |

# Projected Water Supply Needs
# TWDB 2022 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

## COLLIN COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| C | ALLEN | TRINITY | -118 | -3,655 | -5,212 | -7,068 | -8,886 | -10,339 |
| C | ANNA | TRINITY | -9 | -1,225 | -3,607 | -5,514 | -7,994 | -11,231 |
| C | B H P WSC | SABINE | 0 | -8 | -15 | -19 | -25 | -30 |
| C | BEAR CREEK SUD | TRINITY | -3 | -146 | -293 | -548 | -848 | -1,224 |
| C | BLUE RIDGE | TRINITY | -13 | -287 | -6,003 | -14,335 | -20,625 | -28,742 |
| C | CADDO BASIN SUD | SABINE | -1 | -30 | -54 | -97 | -155 | -219 |
| C | CADDO BASIN SUD | TRINITY | -1 | -18 | -38 | -65 | -102 | -144 |
| C | CARROLLTON | TRINITY | 1 | 2 | -1 | -1 | -1 | 2 |
| C | CELINA | TRINITY | 0 | -3,196 | -8,662 | -15,155 | -20,583 | -26,115 |
| C | COPEVILLE SUD | TRINITY | -1 | -60 | -102 | -187 | -408 | -798 |
| C | COUNTY-OTHER, COLLIN | SABINE | 0 | 0 | 0 | 0 | -1 | -1 |
| C | COUNTY-OTHER, COLLIN | TRINITY | -1 | -18 | -24 | -29 | -246 | -553 |
| C | CULLEOKA WSC | TRINITY | -4 | -93 | -197 | -320 | -448 | -643 |
| C | DALLAS | TRINITY | -636 | -1,375 | -2,728 | -3,718 | -4,283 | -4,724 |
| C | DESERT WSC | TRINITY | 42 | 38 | 36 | 27 | 2 | -34 |
| C | EAST FORK SUD | TRINITY | -6 | -219 | -346 | -463 | -594 | -702 |
| C | FAIRVIEW | TRINITY | -24 | -802 | -1,504 | -2,094 | -2,620 | -2,999 |
| C | FARMERSVILLE | SABINE | 0 | -1 | -2 | -4 | -6 | -11 |
| C | FARMERSVILLE | TRINITY | -5 | -388 | -1,238 | -2,527 | -4,446 | -7,356 |
| C | FRISCO | TRINITY | -253 | -4,452 | -7,370 | -14,211 | -20,561 | -25,100 |
| C | FROGNOT WSC | TRINITY | 195 | 173 | 134 | 77 | 37 | 0 |
| C | GARLAND | TRINITY | 0 | -10 | -15 | -27 | -41 | -56 |
| C | HICKORY CREEK SUD | TRINITY | -4 | -9 | -14 | -22 | -34 | -52 |
| C | IRRIGATION, COLLIN | SABINE | 68 | 64 | 57 | 52 | 49 | 47 |
| C | IRRIGATION, COLLIN | TRINITY | 2,328 | 2,200 | 1,963 | 1,785 | 1,684 | 1,607 |
| C | JOSEPHINE | SABINE | -2 | -75 | -148 | -256 | -329 | -378 |
| C | LIVESTOCK, COLLIN | SABINE | 9 | 9 | 9 | 9 | 9 | 9 |
| C | LIVESTOCK, COLLIN | TRINITY | 81 | 81 | 81 | 81 | 81 | 81 |
| C | LUCAS | TRINITY | -12 | -405 | -753 | -1,169 | -1,616 | -1,849 |
| C | MANUFACTURING, COLLIN | TRINITY | 6 | -385 | -542 | -727 | -895 | -1,026 |
| C | MARILEE SUD | TRINITY | 1 | -1 | 0 | -1 | -25 | -68 |
| C | MCKINNEY | TRINITY | -220 | -6,898 | -10,726 | -17,353 | -25,710 | -31,888 |
| C | MELISSA | TRINITY | -361 | -8,917 | -13,900 | -18,219 | -21,501 | -22,390 |
| C | MILLIGAN WSC | TRINITY | -3 | -80 | -134 | -224 | -316 | -400 |
| C | MURPHY | TRINITY | -24 | -685 | -964 | -1,288 | -1,592 | -1,822 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | NEVADA SUD | SABINE | -1 | -15 | -24 | -105 | -309 | -636 |
| C | NEVADA SUD | TRINITY | -1 | -29 | -48 | -209 | -612 | -1,258 |
| C | NORTH COLLIN SUD | TRINITY | -4 | -143 | -231 | -367 | -530 | -699 |
| C | NORTH FARMERSVILLE WSC | TRINITY | 0 | -16 | -28 | -46 | -65 | -83 |
| C | PARKER | TRINITY | -320 | -537 | -816 | -1,256 | -1,678 | -2,176 |
| C | PLANO | TRINITY | -388 | -11,177 | -15,833 | -21,136 | -26,174 | -30,269 |
| C | PRINCETON | TRINITY | -6 | -615 | -1,741 | -2,731 | -3,375 | -3,861 |
| C | PROSPER | TRINITY | -37 | -1,134 | -2,356 | -3,462 | -5,043 | -5,042 |
| C | RICHARDSON | TRINITY | -48 | -1,366 | -1,901 | -2,586 | -3,343 | -4,175 |
| C | ROYSE CITY | SABINE | 1 | -186 | -467 | -976 | -1,610 | -2,423 |
| C | SACHSE | TRINITY | -11 | -236 | -323 | -440 | -550 | -629 |
| C | SEIS LAGOS UD | TRINITY | -4 | -89 | -125 | -174 | -217 | -248 |
| C | SOUTH GRAYSON SUD | TRINITY | 0 | -17 | -57 | -89 | -125 | -160 |
| C | STEAM ELECTRIC POWER, COLLIN | TRINITY | 0 | 0 | 0 | 0 | 0 | 0 |
| C | VERONA SUD | TRINITY | 0 | -35 | -94 | -182 | -243 | -297 |
| C | WEST LEONARD WSC | TRINITY | 39 | 37 | 45 | 44 | 29 | 0 |
| C | WESTMINSTER WSC | TRINITY | 290 | 255 | 196 | 109 | 48 | -6 |
| C | WYLIE | TRINITY | -33 | -1,027 | -1,516 | -2,174 | -2,798 | -3,525 |
| C | WYLIE NORTHEAST SUD | TRINITY | -3 | -123 | -202 | -439 | -812 | -1,368 |
| | **Sum of Projected Water Supply Needs (acre-feet)** | | **-2,557** | **-50,183** | **-90,354** | **-142,013** | **-192,375** | **-237,749** |

## COOKE COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| C | BOLIVAR WSC | TRINITY | 20 | 4 | -13 | -26 | -40 | -53 |
| C | CALLISBURG WSC | RED | 0 | 2 | 2 | 3 | 2 | 2 |
| C | CALLISBURG WSC | TRINITY | 0 | 2 | 4 | 4 | 4 | 3 |
| C | COUNTY-OTHER, COOKE | RED | 27 | 20 | 7 | 1 | -44 | -390 |
| C | COUNTY-OTHER, COOKE | TRINITY | 94 | 70 | 23 | -1 | -159 | -1,425 |
| C | GAINESVILLE | RED | 0 | 0 | 0 | 0 | -1 | -3 |
| C | GAINESVILLE | TRINITY | 0 | 0 | 0 | -47 | -502 | -1,946 |
| C | IRRIGATION, COOKE | RED | 0 | 0 | 0 | 0 | -76 | -174 |
| C | IRRIGATION, COOKE | TRINITY | 0 | 0 | 0 | 0 | -176 | -402 |
| C | LAKE KIOWA SUD | TRINITY | 94 | 64 | 47 | 28 | 21 | 9 |
| C | LINDSAY | RED | 0 | 0 | 0 | 0 | -1 | -2 |
| C | LINDSAY | TRINITY | 0 | -7 | -15 | -33 | -71 | -193 |
| C | LIVESTOCK, COOKE | RED | 45 | 45 | 45 | 45 | 45 | 45 |
| C | LIVESTOCK, COOKE | TRINITY | 52 | 52 | 52 | 52 | 52 | 52 |
| C | MANUFACTURING, COOKE | TRINITY | 0 | 0 | 0 | 0 | -36 | -82 |
| C | MINING, COOKE | TRINITY | -583 | -150 | -148 | -146 | -161 | -136 |
| C | MOUNTAIN SPRINGS WSC | TRINITY | 65 | 41 | 22 | 2 | -289 | -765 |
| C | MUENSTER | TRINITY | 0 | 7 | 5 | 8 | 1 | 1 |
| C | STEAM ELECTRIC POWER, COOKE | TRINITY | 0 | 0 | 0 | 0 | 0 | 0 |
| C | TWO WAY SUD | RED | 0 | -2 | -4 | -5 | -7 | -8 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | WOODBINE WSC | RED | 0 | -5 | -9 | -15 | -21 | -27 |
| C | WOODBINE WSC | TRINITY | -5 | -56 | -112 | -174 | -244 | -316 |
| | **Sum of Projected Water Supply Needs (acre-feet)** | | **-588** | **-220** | **-301** | **-447** | **-1,828** | **-5,922** |

## DENTON COUNTY

All values are in acre-feet

| RWPG | WUG | WUG Basin | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|---|
| C | ARGYLE WSC | TRINITY | 0 | -765 | -1,480 | -1,728 | -1,933 | -2,141 |
| C | AUBREY | TRINITY | 12 | -152 | -264 | -413 | -605 | -853 |
| C | BLACK ROCK WSC | TRINITY | 172 | 100 | 35 | -37 | -122 | -200 |
| C | BOLIVAR WSC | TRINITY | 162 | 35 | -130 | -334 | -588 | -886 |
| C | CARROLLTON | TRINITY | -577 | -1,272 | -2,502 | -3,409 | -3,931 | -4,339 |
| C | CELINA | TRINITY | 0 | -328 | -1,952 | -5,353 | -5,736 | -6,012 |
| C | COPPELL | TRINITY | -13 | -26 | -51 | -70 | -80 | -87 |
| C | CORINTH | TRINITY | 0 | -1,511 | -2,123 | -2,488 | -2,787 | -3,051 |
| C | COUNTY-OTHER, DENTON | TRINITY | 1,204 | 771 | 538 | -870 | -3,059 | -7,524 |
| C | CROSS TIMBERS WSC | TRINITY | 0 | -448 | -680 | -834 | -982 | -1,099 |
| C | DALLAS | TRINITY | -265 | -604 | -1,344 | -2,043 | -2,541 | -2,899 |
| C | DENTON | TRINITY | 453 | -6,371 | -14,185 | -29,472 | -53,757 | -72,323 |
| C | DENTON COUNTY FWSD 1-A | TRINITY | -49 | -1,585 | -2,818 | -3,422 | -3,907 | -4,185 |
| C | DENTON COUNTY FWSD 10 | TRINITY | 0 | -948 | -1,579 | -1,857 | -2,082 | -2,279 |
| C | DENTON COUNTY FWSD 7 | TRINITY | 0 | -1,032 | -1,457 | -1,713 | -1,920 | -2,101 |
| C | FLOWER MOUND | TRINITY | -789 | -5,417 | -7,873 | -9,584 | -11,000 | -12,409 |
| C | FORT WORTH | TRINITY | -234 | -2,310 | -5,317 | -8,916 | -12,710 | -16,913 |
| C | FRISCO | TRINITY | -170 | -3,630 | -6,420 | -8,640 | -10,788 | -12,332 |
| C | HACKBERRY | TRINITY | -3 | -89 | -159 | -264 | -400 | -553 |
| C | HIGHLAND VILLAGE | TRINITY | 0 | -679 | -937 | -1,042 | -1,158 | -1,322 |
| C | IRRIGATION, DENTON | TRINITY | 1,875 | 1,802 | 1,666 | 1,564 | 1,507 | 1,462 |
| C | JUSTIN | TRINITY | -244 | -439 | -741 | -818 | -885 | -963 |
| C | KRUM | TRINITY | -202 | -382 | -611 | -899 | -1,228 | -1,647 |
| C | LAKE CITIES MUNICIPAL UTILITY AUTHORITY | TRINITY | 0 | -738 | -1,181 | -1,492 | -1,669 | -1,827 |
| C | LEWISVILLE | TRINITY | -803 | -2,774 | -5,751 | -8,884 | -11,991 | -11,987 |
| C | LITTLE ELM | TRINITY | -28 | -756 | -1,048 | -1,355 | -1,642 | -1,880 |
| C | LIVESTOCK, DENTON | TRINITY | 583 | 583 | 583 | 583 | 583 | 583 |
| C | MANUFACTURING, DENTON | TRINITY | -1 | -83 | -147 | -211 | -261 | -289 |
| C | MINING, DENTON | TRINITY | 0 | 370 | 246 | -179 | -705 | -1,513 |
| C | MOUNTAIN SPRINGS WSC | TRINITY | 1 | 1 | 1 | 0 | -5 | -9 |
| C | MUSTANG SUD | TRINITY | 0 | -1,911 | -4,320 | -6,988 | -10,006 | -13,404 |
| C | NORTHLAKE | TRINITY | 0 | -1,041 | -2,186 | -3,687 | -5,374 | -5,938 |
| C | PALOMA CREEK NORTH | TRINITY | 0 | -698 | -986 | -1,159 | -1,298 | -1,421 |
| C | PALOMA CREEK SOUTH | TRINITY | 0 | -353 | -499 | -587 | -658 | -720 |
| C | PILOT POINT | TRINITY | -320 | -498 | -878 | -1,393 | -2,043 | -2,956 |
| C | PLANO | TRINITY | -10 | -305 | -438 | -583 | -720 | -824 |
| C | PONDER | TRINITY | -3 | -139 | -305 | -493 | -714 | -967 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| C | PROSPER | TRINITY | -2 | -289 | -948 | -1,858 | -2,294 | -2,294 |
| C | PROVIDENCE VILLAGE WCID | TRINITY | 0 | -282 | -398 | -467 | -522 | -572 |
| C | ROANOKE | TRINITY | 0 | -373 | -806 | -985 | -1,170 | -1,332 |
| C | SANGER | TRINITY | 0 | -111 | -296 | -551 | -856 | -1,259 |
| C | SOUTHLAKE | TRINITY | 0 | -64 | -149 | -248 | -360 | -496 |
| C | STEAM ELECTRIC POWER, DENTON | TRINITY | 0 | 0 | 0 | 0 | 0 | 0 |
| C | THE COLONY | TRINITY | -241 | -801 | -1,501 | -2,224 | -2,618 | -2,915 |
| C | TROPHY CLUB MUD 1 | TRINITY | 0 | -508 | -930 | -1,252 | -1,489 | -1,693 |
| C | WESTLAKE | TRINITY | 0 | -5 | -13 | -21 | -29 | -39 |
| | **Sum of Projected Water Supply Needs (acre-feet)** | | **-3,954** | **-39,717** | **-75,403** | **-118,823** | **-168,623** | **-210,453** |

# Projected Water Management Strategies
# TWDB 2022 State Water Plan Data

## COLLIN COUNTY

**WUG, Basin (RWPG)**

All values are in acre-feet

| Water Management Strategy | Source Name [Origin] | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|
| **ALLEN, TRINITY (C)** | | | | | | | |
| CONSERVATION - ALLEN | DEMAND REDUCTION [COLLIN] | 670 | 768 | 769 | 850 | 955 | 1,066 |
| CONSERVATION, IRRIGATION RESTRICTIONS – ALLEN | DEMAND REDUCTION [COLLIN] | 657 | 706 | 714 | 724 | 735 | 747 |
| CONSERVATION, WATER LOSS CONTROL - ALLEN | DEMAND REDUCTION [COLLIN] | 109 | 118 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 2,140 | 2,684 | 2,415 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 151 | 419 | 559 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 193 | 243 | 146 | 168 | 137 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 1,737 | 2,354 | 1,522 | 1,898 | 1,695 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 125 | 208 | 179 | 253 | 243 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 8 | 149 | 135 | 247 | 297 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 721 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 775 | 1,221 | 1,527 | 1,642 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 817 |
| | | **1,436** | **3,655** | **5,212** | **7,068** | **8,886** | **10,339** |
| **ANNA, TRINITY (C)** | | | | | | | |
| ANNA - NEW WELL(S) IN WOODBINE AQUIFER | WOODBINE AQUIFER [COLLIN] | 200 | 200 | 200 | 200 | 200 | 200 |
| CONSERVATION - ANNA | DEMAND REDUCTION [COLLIN] | 47 | 118 | 80 | 132 | 207 | 316 |
| CONSERVATION – WASTE PROHIBITION, ANNA | DEMAND REDUCTION [COLLIN] | 10 | 19 | 0 | 0 | 0 | 0 |
| CONSERVATION, IRRIGATION RESTRICTIONS – ANNA | DEMAND REDUCTION [COLLIN] | 65 | 121 | 0 | 0 | 0 | 0 |
| CONSERVATION, WATER LOSS CONTROL - ANNA | DEMAND REDUCTION [COLLIN] | 116 | 547 | 0 | 0 | 0 | 0 |
| GTUA - CONNECTION FROM SHERMAN TO CGMA | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION | 0 | 625 | 494 | 761 | 1,112 | 1,207 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | [RESERVOIR] | | | | | | |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 2,096 | 2,905 | 3,091 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 148 | 453 | 716 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 39 | 230 | 143 | 182 | 175 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 354 | 2,226 | 1,492 | 2,053 | 2,170 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 25 | 197 | 175 | 274 | 311 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 2 | 141 | 132 | 268 | 381 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 923 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 733 | 1,196 | 1,652 | 2,102 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 610 | 381 | 292 | 0 | 0 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1,046 |
| | | **438** | **2,660** | **4,682** | **6,767** | **9,306** | **12,638** |

**B H P WSC, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - B H P WSC | DEMAND REDUCTION [COLLIN] | 0 | 1 | 1 | 1 | 1 | 2 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 8 | 9 | 8 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 1 | 1 | 2 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 7 | 9 | 4 | 7 | 6 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 1 | 1 | 1 | 1 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 1 | 0 | 1 | 1 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 2 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 3 | 4 | 5 | 5 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 3 |
| | | **0** | **8** | **15** | **19** | **25** | **30** |

**BEAR CREEK SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - BEAR CREEK SUD | DEMAND REDUCTION [COLLIN] | 2 | 3 | 15 | 29 | 46 | 67 |
| CONSERVATION, IRRIGATION | DEMAND REDUCTION | 19 | 29 | 40 | 56 | 70 | 89 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| RESTRICTIONS – BEAR CREEK SUD | [COLLIN] | | | | | | |
| CONSERVATION, WATER LOSS CONTROL - BEAR CREEK SUD | DEMAND REDUCTION [COLLIN] | 3 | 5 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 180 | 273 | 303 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 12 | 43 | 70 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 10 | 15 | 11 | 18 | 17 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 92 | 150 | 129 | 193 | 213 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 7 | 13 | 14 | 25 | 30 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 10 | 11 | 25 | 37 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 91 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 50 | 106 | 155 | 205 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 102 |
| | | **24** | **146** | **293** | **548** | **848** | **1,224** |

**BLUE RIDGE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - BLUE RIDGE | DEMAND REDUCTION [COLLIN] | 7 | 19 | 200 | 528 | 824 | 1,239 |
| CONSERVATION – WASTE PROHIBITION, BLUE RIDGE | DEMAND REDUCTION [COLLIN] | 1 | 2 | 23 | 52 | 75 | 104 |
| CONSERVATION, IRRIGATION RESTRICTIONS – BLUE RIDGE | DEMAND REDUCTION [COLLIN] | 11 | 22 | 198 | 457 | 652 | 903 |
| CONSERVATION, WATER LOSS CONTROL - BLUE RIDGE | DEMAND REDUCTION [COLLIN] | 2 | 3 | 2 | 5 | 7 | 9 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 567 | 5,930 | 13,663 | 19,437 | 26,857 |
| | | **21** | **613** | **6,353** | **14,705** | **20,995** | **29,112** |

**CADDO BASIN SUD, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - CADDO BASIN SUD | DEMAND REDUCTION [COLLIN] | 1 | 1 | 2 | 4 | 7 | 11 |
| CONSERVATION, WATER LOSS CONTROL - CADDO BASIN SUD | DEMAND REDUCTION [COLLIN] | 1 | 1 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 37 | 57 | 61 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 3 | 9 | 14 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 3 | 4 | 3 | 4 | 4 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 24 | 33 | 27 | 41 | 43 |
| NTMWD - EXPANDED WETLAND | INDIRECT REUSE | 0 | 2 | 3 | 3 | 5 | 6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REUSE | [COLLIN] | | | | | | |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 2 | 2 | 5 | 8 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 18 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 11 | 21 | 32 | 42 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 21 |
| | | **2** | **31** | **55** | **100** | **160** | **228** |
| **CADDO BASIN SUD, TRINITY (C)** | | | | | | | |
| CONSERVATION - CADDO BASIN SUD | DEMAND REDUCTION [COLLIN] | 0 | 1 | 2 | 3 | 5 | 7 |
| CONSERVATION, WATER LOSS CONTROL - CADDO BASIN SUD | DEMAND REDUCTION [COLLIN] | 0 | 1 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 25 | 38 | 41 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 2 | 6 | 9 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 2 | 2 | 2 | 2 | 2 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 1 | 14 | 26 | 17 | 27 | 28 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 1 | 2 | 2 | 4 | 4 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 1 | 2 | 3 | 5 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 12 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 7 | 14 | 21 | 28 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 14 |
| | | **1** | **19** | **40** | **67** | **106** | **150** |
| **CARROLLTON, TRINITY (C)** | | | | | | | |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| CONSERVATION - CARROLLTON | DEMAND REDUCTION [COLLIN] | 0 | 0 | 1 | 1 | 1 | 0 |
| CONSERVATION, IRRIGATION RESTRICTIONS – CARROLLTON | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| CONSERVATION, WATER LOSS CONTROL - CARROLLTON | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - INDIRECT REUSE | INDIRECT REUSE | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| IMPLEMENTATION | [DENTON] | | | | | | |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1 |
| | | **0** | **0** | **1** | **1** | **1** | **1** |

**CELINA, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 762 |
| CONSERVATION - CELINA | DEMAND REDUCTION [COLLIN] | 87 | 306 | 520 | 781 | 1,081 | 1,420 |
| CONSERVATION, IRRIGATION RESTRICTIONS – CELINA | DEMAND REDUCTION [COLLIN] | 119 | 316 | 479 | 653 | 828 | 1,002 |
| CONSERVATION, WATER LOSS CONTROL - CELINA | DEMAND REDUCTION [COLLIN] | 22 | 53 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 7 | 22 | 27 | 39 | 40 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 40 | 259 | 380 | 585 | 622 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 5 | 48 | 109 | 221 | 230 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 756 | 1,228 | 1,304 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 133 | 761 | 999 | 1,406 | 1,382 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 2,573 | 2,573 | 2,994 | 4,383 | 4,556 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 4,730 | 5,646 | 5,895 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 101 | 228 | 267 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 127 | 159 | 98 | 91 | 65 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 1,145 | 1,546 | 1,025 | 1,031 | 808 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 83 | 137 | 120 | 138 | 116 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 5 | 98 | 91 | 135 | 141 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 344 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 508 | 821 | 830 | 783 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 2,509 | 2,001 | 1,148 | 0 | 0 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER | 0 | 0 | 0 | 0 | 646 | 643 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | [ANDERSON] | | | | | | |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 1,301 | 1,656 | 2,510 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 612 | 1,794 | 1,941 | 2,464 | 2,792 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 1,723 | 4,779 | 4,916 | 6,241 | 7,058 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1,994 |
| | | **228** | **9,637** | **15,684** | **22,991** | **28,877** | **34,734** |

**COPEVILLE SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - COPEVILLE SUD | DEMAND REDUCTION [COLLIN] | 7 | 9 | 14 | 21 | 41 | 80 |
| CONSERVATION, WATER LOSS CONTROL - COPEVILLE SUD | DEMAND REDUCTION [COLLIN] | 2 | 2 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 65 | 137 | 204 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 5 | 21 | 47 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 5 | 6 | 5 | 8 | 12 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 41 | 55 | 45 | 97 | 144 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 3 | 5 | 6 | 13 | 20 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 4 | 4 | 13 | 25 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 61 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 18 | 36 | 78 | 137 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 68 |
| | | **9** | **60** | **102** | **187** | **408** | **798** |

**COUNTY-OTHER, COLLIN, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - COLLIN COUNTY OTHER | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| CONSERVATION, WATER LOSS CONTROL - COLLIN COUNTY OTHER | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 1 | 1 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | [RESERVOIR] | | | | | | |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **0** | **0** | **0** | **0** | **1** | **1** |

**COUNTY-OTHER, COLLIN, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - COLLIN COUNTY OTHER | DEMAND REDUCTION [COLLIN] | 2 | 4 | 6 | 8 | 20 | 37 |
| CONSERVATION, WATER LOSS CONTROL - COLLIN COUNTY OTHER | DEMAND REDUCTION [COLLIN] | 3 | 3 | 0 | 0 | 0 | 0 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 279 | 618 | 794 | 1,098 | 1,098 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 8 | 85 | 146 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 1 | 13 | 34 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 1 | 1 | 1 | 5 | 8 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 9 | 11 | 4 | 60 | 102 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 1 | 1 | 1 | 8 | 15 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 1 | 1 | 8 | 18 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 44 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 4 | 5 | 48 | 100 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 271 | 481 | 305 | 0 | 0 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 50 |
| | | **5** | **568** | **1,123** | **1,128** | **1,345** | **1,652** |

**CULLEOKA WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - CULLEOKA WSC | DEMAND REDUCTION [COLLIN] | 2 | 4 | 9 | 16 | 24 | 35 |
| CONSERVATION, WATER LOSS CONTROL - CULLEOKA WSC | DEMAND REDUCTION [COLLIN] | 3 | 3 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 118 | 158 | 172 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 8 | 25 | 40 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 8 | 12 | 8 | 10 | 10 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 73 | 118 | 86 | 111 | 123 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 5 | 11 | 10 | 15 | 17 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 8 | 7 | 15 | 21 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 51 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 39 | 67 | 90 | 116 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 58 |
| | | **5** | **93** | **197** | **320** | **448** | **643** |

**DALLAS, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 437 |
| CONSERVATION - DALLAS | DEMAND REDUCTION [COLLIN] | 382 | 703 | 1,338 | 1,428 | 1,397 | 1,395 |
| CONSERVATION, IRRIGATION RESTRICTIONS – DALLAS | DEMAND REDUCTION [COLLIN] | 474 | 477 | 475 | 471 | 470 | 470 |
| CONSERVATION, WATER LOSS CONTROL - DALLAS | DEMAND REDUCTION [COLLIN] | 158 | 159 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 18 | 22 | 23 | 23 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 8 | 217 | 305 | 343 | 357 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 40 | 88 | 130 | 132 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 605 | 718 | 748 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 26 | 640 | 799 | 823 | 793 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 379 | 369 |
| | | **1,014** | **1,375** | **2,728** | **3,718** | **4,283** | **4,724** |

**DESERT WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - DESERT WSC | DEMAND REDUCTION [COLLIN] | 0 | 0 | 1 | 1 | 2 | 3 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION, WATER LOSS CONTROL - DESERT WSC | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| DESERT WSC - NEW WELL(S) IN WOODBINE AQUIFER | WOODBINE AQUIFER [FANNIN] | 0 | 0 | 0 | 0 | 0 | 31 |
| | | **0** | **0** | **1** | **1** | **2** | **34** |

**EAST FORK SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - EAST FORK SUD | DEMAND REDUCTION [COLLIN] | 13 | 23 | 34 | 38 | 49 | 55 |
| CONSERVATION, IRRIGATION RESTRICTIONS – EAST FORK SUD | DEMAND REDUCTION [COLLIN] | 39 | 42 | 47 | 47 | 49 | 51 |
| CONSERVATION, WATER LOSS CONTROL - EAST FORK SUD | DEMAND REDUCTION [COLLIN] | 7 | 7 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 147 | 185 | 169 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 11 | 29 | 39 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 14 | 17 | 10 | 11 | 9 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 123 | 168 | 105 | 131 | 118 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 9 | 15 | 12 | 18 | 17 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 10 | 9 | 17 | 21 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 51 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 55 | 84 | 105 | 115 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 57 |
| | | **59** | **219** | **346** | **463** | **594** | **702** |

**FAIRVIEW, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - FAIRVIEW | DEMAND REDUCTION [COLLIN] | 43 | 78 | 125 | 154 | 179 | 203 |
| CONSERVATION, IRRIGATION RESTRICTIONS – FAIRVIEW | DEMAND REDUCTION [COLLIN] | 121 | 155 | 206 | 214 | 217 | 217 |
| CONSERVATION, WATER LOSS CONTROL - FAIRVIEW | DEMAND REDUCTION [COLLIN] | 22 | 26 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 672 | 830 | 730 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 47 | 129 | 169 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 51 | 76 | 46 | 52 | 41 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 457 | 740 | 480 | 587 | 514 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 33 | 66 | 56 | 78 | 74 |
| NTMWD - EXPANDED WETLAND | INDIRECT REUSE | 0 | 2 | 47 | 42 | 76 | 90 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REUSE | [KAUFMAN] | | | | | | |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 218 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 244 | 383 | 472 | 496 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 247 |
| | | **186** | **802** | **1,504** | **2,094** | **2,620** | **2,999** |

**FARMERSVILLE, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - FARMERSVILLE | DEMAND REDUCTION [COLLIN] | 0 | 1 | 1 | 1 | 2 | 1 |
| CONSERVATION, WATER LOSS CONTROL - FARMERSVILLE | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1 | 2 | 3 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 1 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 1 | 1 | 2 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 1 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 1 | 1 | 2 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1 |
| | | **0** | **1** | **2** | **4** | **6** | **11** |

**FARMERSVILLE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - FARMERSVILLE | DEMAND REDUCTION [COLLIN] | 3 | 19 | 70 | 136 | 234 | 398 |
| CONSERVATION, WATER LOSS CONTROL - FARMERSVILLE | DEMAND REDUCTION [COLLIN] | 5 | 13 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 931 | 1,571 | 1,970 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 66 | 245 | 456 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 33 | 76 | 64 | 98 | 112 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 301 | 737 | 662 | 1,111 | 1,382 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 21 | 65 | 78 | 148 | 199 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 47 | 59 | 145 | 243 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 588 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 243 | 531 | 894 | 1,341 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 667 |
| | | **8** | **388** | **1,238** | **2,527** | **4,446** | **7,356** |

**FRISCO, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - FRISCO | DEMAND REDUCTION [COLLIN] | 498 | 740 | 983 | 1,507 | 1,919 | 2,243 |
| CONSERVATION, IRRIGATION RESTRICTIONS – FRISCO | DEMAND REDUCTION [COLLIN] | 821 | 845 | 994 | 1,440 | 1,688 | 1,810 |
| CONSERVATION, WATER LOSS CONTROL - FRISCO | DEMAND REDUCTION [COLLIN] | 137 | 141 | 0 | 0 | 0 | 0 |
| FRISCO - ADDITIONAL DIRECT REUSE | DIRECT REUSE [COLLIN] | 195 | 327 | 458 | 695 | 904 | 925 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 4,150 | 6,021 | 5,725 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 293 | 939 | 1,326 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 232 | 326 | 284 | 376 | 325 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 2,085 | 3,164 | 2,953 | 4,256 | 4,019 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 149 | 280 | 346 | 568 | 577 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 9 | 200 | 262 | 555 | 705 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 1,708 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 1,041 | 2,368 | 3,426 | 3,894 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1,937 |
| | | **1,651** | **4,528** | **7,446** | **14,298** | **20,652** | **25,194** |

**FROGNOT WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - FROGNOT | DEMAND REDUCTION [COLLIN] | 1 | 1 | 2 | 4 | 5 | 7 |
| CONSERVATION, WATER LOSS CONTROL - FROGNOT WSC | DEMAND REDUCTION [COLLIN] | 1 | 1 | 0 | 0 | 0 | 0 |
| | | **2** | **2** | **2** | **4** | **5** | **7** |

**GARLAND, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - GARLAND | DEMAND REDUCTION [COLLIN] | 2 | 2 | 0 | 1 | 4 | 5 |
| CONSERVATION, IRRIGATION RESTRICTIONS – GARLAND | DEMAND REDUCTION [COLLIN] | 2 | 2 | 2 | 3 | 3 | 4 |
| CONSERVATION, WATER LOSS CONTROL - GARLAND | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 8 | 13 | 13 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 1 | 2 | 3 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 1 | 1 | 1 | 1 | 1 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 5 | 8 | 6 | 9 | 9 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 1 | 1 | 1 | 1 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 0 | 1 | 1 | 2 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 4 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 3 | 5 | 7 | 9 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 5 |
| | | **4** | **10** | **15** | **27** | **41** | **56** |

**IRRIGATION, COLLIN, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 4 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 1 | 0 | 0 | 0 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 3 | 1 | 3 | 3 | 3 | 3 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 1 | 1 | 1 | 1 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 6 | 7 | 6 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 5 | 10 | 8 | 7 | 7 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 3 | 3 |
| | | **4** | **6** | **14** | **18** | **21** | **24** |

**IRRIGATION, COLLIN, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 127 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 8 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 33 | 11 | 9 | 7 | 7 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 74 | 51 | 114 | 110 | 107 | 103 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 3 | 7 | 21 | 32 | 41 | 39 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 218 | 224 | 218 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 171 | 332 | 288 | 258 | 230 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 119 | 107 |
| | | **110** | **240** | **476** | **655** | **756** | **832** |

**JOSEPHINE, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - JOSEPHINE | DEMAND REDUCTION [COLLIN] | 3 | 4 | 8 | 13 | 17 | 20 |
| CONSERVATION, IRRIGATION RESTRICTIONS – JOSEPHINE | DEMAND REDUCTION [COLLIN] | 7 | 13 | 17 | 22 | 23 | 23 |
| CONSERVATION, WATER LOSS CONTROL - JOSEPHINE | DEMAND REDUCTION [COLLIN] | 2 | 2 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 86 | 108 | 95 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 6 | 17 | 22 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 52 | 85 | 67 | 82 | 73 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 4 | 7 | 8 | 10 | 9 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 5 | 5 | 10 | 12 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 28 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 26 | 49 | 62 | 64 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 32 |
| | | **12** | **75** | **148** | **256** | **329** | **378** |

**LUCAS, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - LUCAS | DEMAND REDUCTION [COLLIN] | 20 | 30 | 55 | 83 | 107 | 122 |
| CONSERVATION – WASTE PROHIBITION, LUCAS | DEMAND REDUCTION [COLLIN] | 18 | 23 | 32 | 38 | 43 | 43 |
| CONSERVATION, IRRIGATION RESTRICTIONS – LUCAS | DEMAND REDUCTION [COLLIN] | 68 | 84 | 112 | 131 | 146 | 146 |
| CONSERVATION, WATER LOSS CONTROL - LUCAS | DEMAND REDUCTION [COLLIN] | 55 | 159 | 191 | 222 | 248 | 248 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 271 | 400 | 365 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 19 | 62 | 85 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 10 | 24 | 18 | 25 | 21 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 92 | 229 | 193 | 283 | 256 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 7 | 20 | 23 | 38 | 37 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 15 | 17 | 37 | 45 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 109 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 75 | 154 | 227 | 248 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 124 |
| | | **161** | **405** | **753** | **1,169** | **1,616** | **1,849** |

**MANUFACTURING, COLLIN, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MANUFACTURING, COLLIN - NEW WELL(S) IN WOODBINE AQUIFER | WOODBINE AQUIFER [COLLIN] | 0 | 78 | 78 | 78 | 78 | 78 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 283 | 332 | 291 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 20 | 53 | 67 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 35 | 35 | 20 | 21 | 18 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 327 | 344 | 199 | 240 | 207 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 22 | 29 | 25 | 30 | 29 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 21 | 19 | 30 | 35 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 87 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 113 | 161 | 189 | 195 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 97 |
| | | **0** | **463** | **620** | **805** | **973** | **1,104** |

**MARILEE SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - MARILEE SUD | DEMAND REDUCTION [COLLIN] | 2 | 5 | 7 | 9 | 11 | 13 |
| CONSERVATION, WATER LOSS CONTROL - MARILEE SUD | DEMAND REDUCTION [COLLIN] | 4 | 3 | 0 | 0 | 0 | 0 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 401 | 493 | 631 | 847 | 802 |
| SHERMAN - TREATMENT OF LAKE TEXOMA | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 24 | 67 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON- | 0 | 391 | 383 | 242 | 0 | 0 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | SYSTEM PORTION [RESERVOIR] | | | | | | |
| **MCKINNEY, TRINITY (C)** | | | **6** | **800** | **883** | **882** | **882** | **882** |
| | CONSERVATION - MCKINNEY | DEMAND REDUCTION [COLLIN] | 946 | 1,289 | 1,804 | 2,463 | 2,941 | 3,341 |
| | CONSERVATION, IRRIGATION RESTRICTIONS – MCKINNEY | DEMAND REDUCTION [COLLIN] | 1,226 | 1,333 | 1,470 | 1,777 | 2,126 | 2,304 |
| | CONSERVATION, WATER LOSS CONTROL - MCKINNEY | DEMAND REDUCTION [COLLIN] | 337 | 657 | 479 | 579 | 693 | 751 |
| | MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 4,882 | 7,442 | 7,219 |
| | NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 345 | 1,161 | 1,671 |
| | NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 339 | 454 | 333 | 465 | 410 |
| | NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 3,048 | 4,401 | 3,474 | 5,260 | 5,070 |
| | NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 218 | 390 | 407 | 702 | 727 |
| | NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 14 | 279 | 308 | 686 | 889 |
| | NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 2,155 |
| | NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 1,449 | 2,785 | 4,234 | 4,909 |
| | WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 2,442 |
| **MELISSA, TRINITY (C)** | | | **2,509** | **6,898** | **10,726** | **17,353** | **25,710** | **31,888** |
| | CONSERVATION - MELISSA | DEMAND REDUCTION [COLLIN] | 38 | 176 | 304 | 451 | 601 | 708 |
| | CONSERVATION, IRRIGATION RESTRICTIONS – MELISSA | DEMAND REDUCTION [COLLIN] | 118 | 373 | 521 | 649 | 747 | 772 |
| | CONSERVATION, WATER LOSS CONTROL - MELISSA | DEMAND REDUCTION [COLLIN] | 20 | 62 | 0 | 0 | 0 | 0 |
| | GTUA - CONNECTION FROM SHERMAN TO CGMA | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 1,606 | 1,967 | 2,382 | 3,112 | 2,974 |
| | MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 6,668 | 7,517 | 5,922 |
| | NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 471 | 1,173 | 1,371 |
| | NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 778 | 851 | 456 | 470 | 336 |
| | NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 208 | 6,994 | 8,253 | 4,742 | 5,315 | 4,159 |
| | NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 502 | 731 | 556 | 709 | 597 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 32 | 523 | 421 | 693 | 729 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 1,767 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 2,717 | 3,805 | 4,276 | 4,026 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 1,566 | 1,530 | 914 | 0 | 0 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 2,003 |
| | | **384** | **12,089** | **17,397** | **21,515** | **24,613** | **25,364** |

**MILLIGAN WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - MILLIGAN WSC | DEMAND REDUCTION [COLLIN] | 2 | 3 | 6 | 10 | 15 | 19 |
| CONSERVATION, WATER LOSS CONTROL - MILLIGAN WSC | DEMAND REDUCTION [COLLIN] | 2 | 3 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 83 | 112 | 108 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 6 | 18 | 25 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 7 | 8 | 6 | 7 | 6 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 63 | 81 | 59 | 80 | 76 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 4 | 7 | 7 | 11 | 11 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 5 | 5 | 10 | 13 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 32 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 27 | 48 | 63 | 73 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 37 |
| | | **4** | **80** | **134** | **224** | **316** | **400** |

**MURPHY, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - MURPHY | DEMAND REDUCTION [COLLIN] | 43 | 62 | 77 | 92 | 106 | 121 |
| CONSERVATION – WASTE PROHIBITION, MURPHY | DEMAND REDUCTION [COLLIN] | 29 | 32 | 32 | 32 | 32 | 32 |
| CONSERVATION, IRRIGATION RESTRICTIONS – MURPHY | DEMAND REDUCTION [COLLIN] | 120 | 132 | 132 | 132 | 132 | 132 |
| CONSERVATION, WATER LOSS CONTROL - MURPHY | DEMAND REDUCTION [COLLIN] | 22 | 22 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 402 | 493 | 435 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 28 | 77 | 101 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 41 | 47 | 27 | 31 | 25 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 368 | 457 | 287 | 349 | 305 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 26 | 40 | 34 | 47 | 44 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 2 | 29 | 25 | 45 | 54 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 130 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 150 | 229 | 280 | 296 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 147 |
| | | **214** | **685** | **964** | **1,288** | **1,592** | **1,822** |

**NEVADA SUD, SABINE (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - NEVADA SUD | DEMAND REDUCTION [COLLIN] | 0 | 1 | 0 | 3 | 16 | 33 |
| CONSERVATION, IRRIGATION RESTRICTIONS – NEVADA SUD | DEMAND REDUCTION [COLLIN] | 3 | 3 | 3 | 11 | 25 | 46 |
| CONSERVATION, WATER LOSS CONTROL - NEVADA SUD | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 35 | 100 | 158 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 3 | 15 | 37 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 1 | 1 | 3 | 6 | 9 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 9 | 13 | 24 | 70 | 110 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 1 | 1 | 3 | 10 | 16 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 1 | 3 | 10 | 20 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 47 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 5 | 20 | 57 | 107 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 53 |
| | | **3** | **15** | **24** | **105** | **309** | **636** |

**NEVADA SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - NEVADA SUD | DEMAND REDUCTION [COLLIN] | 1 | 0 | 0 | 11 | 33 | 69 |
| CONSERVATION, IRRIGATION RESTRICTIONS – NEVADA SUD | DEMAND REDUCTION [COLLIN] | 5 | 6 | 7 | 21 | 51 | 91 |
| CONSERVATION, WATER LOSS CONTROL - NEVADA SUD | DEMAND REDUCTION [COLLIN] | 1 | 1 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 69 | 197 | 311 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 5 | 31 | 72 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 2 | 3 | 4 | 12 | 18 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 19 | 25 | 49 | 140 | 218 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 1 | 3 | 6 | 18 | 31 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 2 | 4 | 18 | 38 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 93 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 8 | 40 | 112 | 212 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 105 |
| | | **7** | **29** | **48** | **209** | **612** | **1,258** |

**NORTH COLLIN SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - NORTH COLLIN WSC | DEMAND REDUCTION [COLLIN] | 3 | 6 | 11 | 17 | 26 | 38 |
| CONSERVATION, WATER LOSS CONTROL - NORTH COLLIN WSC | DEMAND REDUCTION [COLLIN] | 4 | 5 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 136 | 188 | 187 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 10 | 29 | 43 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 12 | 14 | 9 | 12 | 11 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 111 | 139 | 98 | 133 | 132 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 8 | 12 | 11 | 18 | 19 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 9 | 9 | 17 | 23 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 56 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 46 | 77 | 107 | 127 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 63 |
| | | **7** | **143** | **231** | **367** | **530** | **699** |

**NORTH FARMERSVILLE WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - NORTH FARMERSVILLE WSC | DEMAND REDUCTION [COLLIN] | 1 | 3 | 4 | 5 | 7 | 8 |
| CONSERVATION, IRRIGATION RESTRICTIONS – NORTH | DEMAND REDUCTION [COLLIN] | 2 | 3 | 4 | 5 | 5 | 6 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FARMERSVILLE WSC | | | | | | | |
| CONSERVATION, WATER LOSS CONTROL - NORTH FARMERSVILLE | DEMAND REDUCTION [COLLIN] | 0 | 1 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 14 | 20 | 20 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 1 | 3 | 5 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 1 | 1 | 1 | 1 | 1 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 7 | 13 | 10 | 13 | 12 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 1 | 1 | 1 | 2 | 2 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 1 | 1 | 2 | 2 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 6 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 4 | 8 | 12 | 14 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 7 |
| | | **3** | **16** | **28** | **46** | **65** | **83** |

**PARKER, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - PARKER | DEMAND REDUCTION [COLLIN] | 26 | 36 | 50 | 70 | 97 | 133 |
| CONSERVATION – WASTE PROHIBITION, PARKER | DEMAND REDUCTION [COLLIN] | 41 | 45 | 48 | 57 | 63 | 73 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PARKER | DEMAND REDUCTION [COLLIN] | 95 | 106 | 113 | 132 | 145 | 166 |
| CONSERVATION, WATER LOSS CONTROL - PARKER | DEMAND REDUCTION [COLLIN] | 16 | 15 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 388 | 512 | 511 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 27 | 80 | 118 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 31 | 39 | 27 | 32 | 29 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 142 | 283 | 382 | 277 | 362 | 359 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 20 | 34 | 32 | 48 | 51 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 24 | 25 | 47 | 63 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 152 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 126 | 221 | 292 | 348 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 173 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | [RESERVOIR] | | | | | | |
| **PLANO, TRINITY (C)** | | **320** | **537** | **816** | **1,256** | **1,678** | **2,176** |
| CONSERVATION - PLANO | DEMAND REDUCTION [COLLIN] | 1,050 | 1,467 | 2,096 | 1,877 | 2,120 | 2,379 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PLANO | DEMAND REDUCTION [COLLIN] | 2,156 | 2,159 | 2,169 | 2,164 | 2,164 | 2,187 |
| CONSERVATION, WATER LOSS CONTROL - PLANO | DEMAND REDUCTION [COLLIN] | 359 | 360 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 6,659 | 8,166 | 7,279 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 470 | 1,274 | 1,685 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 673 | 753 | 454 | 511 | 413 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 6,057 | 7,302 | 4,737 | 5,770 | 5,110 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 434 | 647 | 556 | 771 | 733 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 27 | 462 | 420 | 752 | 897 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 2,173 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 2,404 | 3,799 | 4,646 | 4,950 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 2,463 |
| **PRINCETON, TRINITY (C)** | | **3,565** | **11,177** | **15,833** | **21,136** | **26,174** | **30,269** |
| CONSERVATION - PRINCETON | DEMAND REDUCTION [COLLIN] | 5 | 36 | 100 | 147 | 178 | 209 |
| CONSERVATION, WATER LOSS CONTROL - PRINCETON | DEMAND REDUCTION [COLLIN] | 6 | 20 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1,006 | 1,193 | 1,034 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 71 | 186 | 239 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 52 | 107 | 69 | 75 | 59 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 471 | 1,035 | 716 | 841 | 726 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 34 | 92 | 84 | 113 | 104 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 2 | 66 | 64 | 110 | 127 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 309 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 0 | 0 | 341 | 574 | 679 | 704 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | [RESERVOIR] | | | | | | |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 350 |
| | | **11** | **615** | **1,741** | **2,731** | **3,375** | **3,861** |
| **PROSPER, TRINITY (C)** | | | | | | | |
| CONSERVATION - PROSPER | DEMAND REDUCTION [COLLIN] | 46 | 80 | 112 | 149 | 214 | 245 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PROSPER | DEMAND REDUCTION [COLLIN] | 146 | 168 | 190 | 213 | 267 | 267 |
| CONSERVATION, WATER LOSS CONTROL - PROSPER | DEMAND REDUCTION [COLLIN] | 25 | 28 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1,208 | 1,701 | 1,283 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 85 | 265 | 297 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 80 | 134 | 83 | 107 | 73 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 723 | 1,296 | 859 | 1,203 | 900 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 52 | 115 | 101 | 161 | 129 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 3 | 82 | 76 | 157 | 158 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 383 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 427 | 688 | 968 | 873 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 434 |
| | | **217** | **1,134** | **2,356** | **3,462** | **5,043** | **5,042** |
| **RICHARDSON, TRINITY (C)** | | | | | | | |
| CONSERVATION - RICHARDSON | DEMAND REDUCTION [COLLIN] | 119 | 158 | 184 | 217 | 257 | 314 |
| CONSERVATION, IRRIGATION RESTRICTIONS – RICHARDSON | DEMAND REDUCTION [COLLIN] | 269 | 264 | 260 | 265 | 277 | 302 |
| CONSERVATION, WATER LOSS CONTROL - RICHARDSON | DEMAND REDUCTION [COLLIN] | 45 | 44 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 819 | 1,048 | 1,008 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 58 | 163 | 234 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 84 | 95 | 56 | 66 | 57 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 759 | 919 | 583 | 740 | 708 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 54 | 82 | 68 | 99 | 101 |
| NTMWD - EXPANDED WETLAND | INDIRECT REUSE | 0 | 3 | 58 | 52 | 97 | 124 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REUSE | [KAUFMAN] | | | | | | |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 301 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 303 | 468 | 596 | 685 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 341 |
| | | **433** | **1,366** | **1,901** | **2,586** | **3,343** | **4,175** |
| **ROYSE CITY, SABINE (C)** | | | | | | | |
| CONSERVATION - ROYSE CITY | DEMAND REDUCTION [COLLIN] | 1 | 9 | 26 | 54 | 83 | 131 |
| CONSERVATION, WATER LOSS CONTROL - ROYSE CITY | DEMAND REDUCTION [COLLIN] | 1 | 6 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 360 | 569 | 649 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 25 | 89 | 150 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 159 | 309 | 280 | 438 | 493 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 11 | 24 | 30 | 54 | 65 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 17 | 22 | 53 | 80 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 194 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 91 | 205 | 324 | 442 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 219 |
| | | **2** | **186** | **467** | **976** | **1,610** | **2,423** |
| **SACHSE, TRINITY (C)** | | | | | | | |
| CONSERVATION - SACHSE | DEMAND REDUCTION [COLLIN] | 58 | 65 | 69 | 77 | 81 | 86 |
| CONSERVATION, IRRIGATION RESTRICTIONS – SACHSE | DEMAND REDUCTION [COLLIN] | 44 | 44 | 43 | 45 | 45 | 45 |
| CONSERVATION, WATER LOSS CONTROL - SACHSE | DEMAND REDUCTION [COLLIN] | 7 | 7 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 124 | 158 | 141 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 9 | 25 | 33 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 11 | 14 | 8 | 10 | 8 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 101 | 133 | 88 | 111 | 99 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 7 | 12 | 10 | 15 | 14 |
| NTMWD - EXPANDED WETLAND | INDIRECT REUSE | 0 | 1 | 8 | 8 | 15 | 17 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REUSE | [KAUFMAN] | | | | | | |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 42 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 44 | 71 | 90 | 96 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 48 |
| | | **109** | **236** | **323** | **440** | **550** | **629** |

**SEIS LAGOS UD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - SEIS LAGOS UD | DEMAND REDUCTION [COLLIN] | 5 | 7 | 9 | 11 | 13 | 15 |
| CONSERVATION, IRRIGATION RESTRICTIONS – SEIS LAGOS UD | DEMAND REDUCTION [COLLIN] | 16 | 17 | 17 | 18 | 18 | 18 |
| CONSERVATION, WATER LOSS CONTROL - SEIS LAGOS UD | DEMAND REDUCTION [COLLIN] | 3 | 3 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 56 | 69 | 61 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 4 | 11 | 14 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 6 | 6 | 4 | 4 | 3 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 52 | 62 | 40 | 50 | 44 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 4 | 6 | 5 | 7 | 6 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 4 | 4 | 6 | 7 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 18 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 21 | 32 | 39 | 41 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 21 |
| | | **24** | **89** | **125** | **174** | **217** | **248** |

**SOUTH GRAYSON SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - SOUTH GRAYSON WSC | DEMAND REDUCTION [COLLIN] | 1 | 2 | 2 | 3 | 6 | 8 |
| CONSERVATION, WATER LOSS CONTROL - SOUTH GRAYSON SUD | DEMAND REDUCTION [COLLIN] | 1 | 1 | 0 | 0 | 0 | 0 |
| SHERMAN - TREATMENT OF LAKE TEXOMA | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 7 | 31 | 62 | 119 | 152 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 7 | 24 | 24 | 0 | 0 |
| | | **2** | **17** | **57** | **89** | **125** | **160** |

**STEAM ELECTRIC POWER, COLLIN, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **0** | **0** | **0** | **0** | **0** | **0** |
| **VERONA SUD, TRINITY (C)** | | | | | | | |
| CONSERVATION - VERONA SUD | DEMAND REDUCTION [COLLIN] | 1 | 2 | 4 | 6 | 8 | 11 |
| CONSERVATION, WATER LOSS CONTROL - VERONA SUD | DEMAND REDUCTION [COLLIN] | 1 | 2 | 0 | 0 | 0 | 0 |
| VERONA SUD - NEW WELL(S) IN WOODBINE AQUIFER | WOODBINE AQUIFER [COLLIN] | 0 | 31 | 90 | 176 | 235 | 286 |
| | | **2** | **35** | **94** | **182** | **243** | **297** |
| **WEST LEONARD WSC, TRINITY (C)** | | | | | | | |
| CONSERVATION - WEST LEONARD WSC | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 1 | 2 | 3 |
| CONSERVATION, WATER LOSS CONTROL - WEST LEONARD WSC | DEMAND REDUCTION [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **0** | **0** | **0** | **1** | **2** | **3** |
| **WESTMINSTER WSC, TRINITY (C)** | | | | | | | |
| CONSERVATION - WESTMINSTER WSC | DEMAND REDUCTION [COLLIN] | 1 | 2 | 4 | 6 | 8 | 11 |
| CONSERVATION, WATER LOSS CONTROL - WESTMINSTER WSC | DEMAND REDUCTION [COLLIN] | 1 | 1 | 0 | 0 | 0 | 0 |
| | | **2** | **3** | **4** | **6** | **8** | **11** |
| **WYLIE, TRINITY (C)** | | | | | | | |
| CONSERVATION - WYLIE | DEMAND REDUCTION [COLLIN] | 113 | 153 | 184 | 219 | 256 | 301 |
| CONSERVATION, IRRIGATION RESTRICTIONS – WYLIE | DEMAND REDUCTION [COLLIN] | 187 | 198 | 208 | 223 | 232 | 255 |
| CONSERVATION, WATER LOSS CONTROL - WYLIE | DEMAND REDUCTION [COLLIN] | 31 | 32 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 673 | 862 | 841 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 48 | 134 | 195 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 60 | 73 | 47 | 54 | 48 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 542 | 709 | 480 | 609 | 590 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 39 | 63 | 56 | 81 | 85 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 3 | 45 | 43 | 79 | 104 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 250 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 234 | 385 | 491 | 571 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 285 |
| | | **331** | **1,027** | **1,516** | **2,174** | **2,798** | **3,525** |

**WYLIE NORTHEAST SUD, TRINITY (C)**

| Water Management Strategy | Source Name [Origin] | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|
| CONSERVATION - WYLIE NORTHEAST SUD | DEMAND REDUCTION [COLLIN] | 2 | 5 | 9 | 22 | 43 | 74 |
| CONSERVATION, WATER LOSS CONTROL - WYLIE NORTHEAST SUD | DEMAND REDUCTION [COLLIN] | 3 | 4 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 162 | 287 | 366 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 11 | 45 | 85 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 11 | 13 | 11 | 18 | 21 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 96 | 121 | 116 | 202 | 258 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 7 | 11 | 14 | 27 | 37 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 8 | 10 | 26 | 45 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 109 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 40 | 93 | 164 | 249 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 124 |
| | | **5** | **123** | **202** | **439** | **812** | **1,368** |
| **Sum of Projected Water Management Strategies (acre-feet)** | | **13,540** | **63,304** | **104,920** | **157,581** | **208,357** | **254,039** |

## COOKE COUNTY

**WUG, Basin (RWPG)**

All values are in acre-feet

| Water Management Strategy | Source Name [Origin] | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|
| **BOLIVAR WSC, TRINITY (C)** | | | | | | | |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 3 |
| BOLIVAR WSC - NEW WELL(S) IN THE TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 24 | 22 | 19 | 17 | 15 | 13 |
| CONSERVATION - BOLIVAR WSC | DEMAND REDUCTION [COOKE] | 0 | 1 | 1 | 2 | 2 | 3 |
| CONSERVATION, WATER LOSS CONTROL - BOLIVAR WSC | DEMAND REDUCTION [COOKE] | 0 | 1 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 2 | 3 | 3 | 3 | 2 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 1 | 0 | 1 | 1 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 4 | 6 | 5 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 4 | 8 | 6 | 7 | 5 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 1 | 4 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 4 | 6 | 7 | 6 | 4 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 21 | 20 | 18 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 3 | 2 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 8 | 8 | 9 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 21 | 20 | 12 | 12 | 11 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 59 | 54 | 31 | 30 | 27 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 6 |
| | | **24** | **114** | **112** | **111** | **114** | **113** |

**CALLISBURG WSC, RED (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - CALLISBURG WSC | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 1 | 1 | 1 |
| CONSERVATION, WATER LOSS CONTROL - CALLISBURG WSC | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **0** | **0** | **0** | **1** | **1** | **1** |

**CALLISBURG WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - CALLISBURG WSC | DEMAND REDUCTION [COOKE] | 1 | 1 | 1 | 1 | 1 | 2 |
| CONSERVATION, WATER LOSS CONTROL - CALLISBURG WSC | DEMAND REDUCTION [COOKE] | 1 | 1 | 0 | 0 | 0 | 0 |
| | | **2** | **2** | **1** | **1** | **1** | **2** |

**COUNTY-OTHER, COOKE, RED (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - COOKE COUNTY OTHER | DEMAND REDUCTION [COOKE] | 0 | 1 | 2 | 3 | 5 | 15 |
| CONSERVATION, WATER LOSS CONTROL - COOKE COUNTY OTHER | DEMAND REDUCTION [COOKE] | 1 | 1 | 0 | 0 | 0 | 0 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 8 | 179 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 31 | 196 |
| | | **1** | **2** | **2** | **3** | **44** | **390** |

**COUNTY-OTHER, COOKE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - COOKE COUNTY OTHER | DEMAND REDUCTION [COOKE] | 2 | 4 | 6 | 13 | 20 | 56 |
| CONSERVATION, WATER LOSS CONTROL - COOKE COUNTY OTHER | DEMAND REDUCTION [COOKE] | 3 | 3 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 24 | 655 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 115 | 714 |
| | | **5** | **7** | **6** | **13** | **159** | **1,425** |
| **GAINESVILLE, RED (C)** | | | | | | | |
| CONSERVATION - GAINESVILLE | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| CONSERVATION, WATER LOSS CONTROL - GAINESVILLE | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 2 | 6 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 2 | 8 | 7 | 7 | 6 |
| | | **0** | **2** | **8** | **7** | **9** | **12** |
| **GAINESVILLE, TRINITY (C)** | | | | | | | |
| CONSERVATION - GAINESVILLE | DEMAND REDUCTION [COOKE] | 12 | 25 | 35 | 46 | 68 | 111 |
| CONSERVATION, WATER LOSS CONTROL - GAINESVILLE | DEMAND REDUCTION [COOKE] | 13 | 14 | 0 | 0 | 0 | 0 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 34 | 1,094 | 3,554 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 1,576 | 5,510 | 5,471 | 4,937 | 3,877 |
| | | **25** | **1,615** | **5,545** | **5,551** | **6,099** | **7,542** |
| **IRRIGATION, COOKE, RED (C)** | | | | | | | |
| GAINESVILLE - EXPAND DIRECT REUSE FOR IRRIGATION | DIRECT REUSE [COOKE] | 21 | 21 | 21 | 21 | 21 | 21 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 9 | 66 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 39 | 72 |
| NON-MUNICIPAL CONSERVATION, IRRIGATION, COOKE | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 7 | 15 |
| | | **21** | **21** | **21** | **21** | **76** | **174** |
| **IRRIGATION, COOKE, TRINITY (C)** | | | | | | | |
| GAINESVILLE - EXPAND DIRECT REUSE FOR IRRIGATION | DIRECT REUSE [COOKE] | 49 | 49 | 49 | 49 | 49 | 49 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 20 | 154 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 90 | 167 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NON-MUNICIPAL CONSERVATION, IRRIGATION, COOKE | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 1 | 17 | 32 |
| | | **49** | **49** | **49** | **50** | **176** | **402** |
| **LAKE KIOWA SUD, TRINITY (C)** | | | | | | | |
| CONSERVATION - LAKE KIOWA SUD | DEMAND REDUCTION [COOKE] | 3 | 6 | 9 | 13 | 16 | 20 |
| CONSERVATION, WATER LOSS CONTROL - LAKE KIOWA SUD | DEMAND REDUCTION [COOKE] | 4 | 5 | 0 | 0 | 0 | 0 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 443 | 493 | 631 | 870 | 866 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 432 | 384 | 242 | 0 | 0 |
| | | **7** | **886** | **886** | **886** | **886** | **886** |
| **LINDSAY, RED (C)** | | | | | | | |
| CONSERVATION - LINDSAY | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 1 | 0 |
| CONSERVATION, WATER LOSS CONTROL - LINDSAY | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1 |
| | | **0** | **0** | **0** | **0** | **1** | **2** |
| **LINDSAY, TRINITY (C)** | | | | | | | |
| CONSERVATION - LINDSAY | DEMAND REDUCTION [COOKE] | 1 | 1 | 2 | 3 | 3 | 7 |
| CONSERVATION, WATER LOSS CONTROL - LINDSAY | DEMAND REDUCTION [COOKE] | 1 | 1 | 0 | 0 | 0 | 0 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 12 | 89 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 5 | 13 | 30 | 56 | 97 |
| | | **2** | **7** | **15** | **33** | **71** | **193** |
| **MANUFACTURING, COOKE, TRINITY (C)** | | | | | | | |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 7 | 39 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 29 | 43 |
| | | **0** | **0** | **0** | **0** | **36** | **82** |
| **MINING, COOKE, TRINITY (C)** | | | | | | | |
| GAINESVILLE - EXPAND DIRECT REUSE FOR MINING | DIRECT REUSE [COOKE] | 99 | 67 | 71 | 74 | 77 | 80 |
| GAINESVILLE - UNALLOCATED | TRINITY AQUIFER | 484 | 83 | 77 | 72 | 84 | 56 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | GROUNDWATER SUPPLY UTILIZATION | [COOKE] | | | | | |
| | | | **583** | **150** | **148** | **146** | **161** | **136** |
| **MOUNTAIN SPRINGS WSC, TRINITY (C)** | | | | | | | | |
| | CONSERVATION - MOUNTAIN SPRING WSC | DEMAND REDUCTION [COOKE] | 2 | 3 | 5 | 7 | 25 | 51 |
| | CONSERVATION, IRRIGATION RESTRICTIONS – MOUNTAIN SPRINGS WSC | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 22 | 39 |
| | CONSERVATION, WATER LOSS CONTROL - MOUNTAIN SPRING WSC | DEMAND REDUCTION [COOKE] | 2 | 2 | 0 | 0 | 0 | 0 |
| | GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 44 | 323 |
| | GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 198 | 352 |
| | | | **4** | **5** | **5** | **7** | **289** | **765** |
| **MUENSTER, TRINITY (C)** | | | | | | | | |
| | CONSERVATION - MUENSTER | DEMAND REDUCTION [COOKE] | 1 | 2 | 3 | 3 | 4 | 5 |
| | CONSERVATION, WATER LOSS CONTROL - MUENSTER | DEMAND REDUCTION [COOKE] | 1 | 1 | 0 | 0 | 0 | 0 |
| | MUENSTER - DEVELOP MUENSTER LAKE SUPPLY | MUENSTER LAKE/RESERVOIR [RESERVOIR] | 280 | 280 | 280 | 280 | 280 | 280 |
| | | | **282** | **283** | **283** | **283** | **284** | **285** |
| **TWO WAY SUD, RED (C)** | | | | | | | | |
| | CONSERVATION - TWO WAY SUD | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| | CONSERVATION, WATER LOSS CONTROL - TWO WAY SUD | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| | GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 6 | 7 | 9 | 13 | 10 |
| | MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| | NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 0 | 0 | 0 | 0 |
| | NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 0 |
| | NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 6 | 5 | 3 | 0 | 0 |
| | WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | **0** | **12** | **12** | **12** | **13** | **10** |

**WOODBINE WSC, RED (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - WOODBINE WSC | DEMAND REDUCTION [COOKE] | 0 | 0 | 1 | 1 | 1 | 2 |
| CONSERVATION, WATER LOSS CONTROL - WOODBINE WSC | DEMAND REDUCTION [COOKE] | 0 | 0 | 0 | 0 | 0 | 0 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 28 | 42 | 53 | 73 | 73 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 28 | 33 | 20 | 0 | 0 |
| | | **0** | **56** | **76** | **74** | **74** | **75** |

**WOODBINE WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - WOODBINE WSC | DEMAND REDUCTION [COOKE] | 2 | 5 | 7 | 10 | 14 | 19 |
| CONSERVATION, WATER LOSS CONTROL - WOODBINE WSC | DEMAND REDUCTION [COOKE] | 3 | 4 | 0 | 0 | 0 | 0 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 329 | 481 | 620 | 857 | 857 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 322 | 374 | 238 | 0 | 0 |
| | | **5** | **660** | **862** | **868** | **871** | **876** |
| **Sum of Projected Water Management Strategies (acre-feet)** | | **1,010** | **3,871** | **8,031** | **8,067** | **9,365** | **13,371** |

## DENTON COUNTY

**WUG, Basin (RWPG)**

All values are in acre-feet

| Water Management Strategy | Source Name [Origin] | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|---|---|---|---|---|---|---|---|
| **ARGYLE WSC, TRINITY (C)** | | | | | | | |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 62 |
| ARGYLE WSC - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 250 | 250 | 250 | 250 | 250 | 250 |
| CONSERVATION - ARGYLE WSC | DEMAND REDUCTION [DENTON] | 12 | 80 | 140 | 155 | 169 | 183 |
| CONSERVATION – WASTE PROHIBITION, ARGYLE WSC | DEMAND REDUCTION [DENTON] | 0 | 36 | 51 | 51 | 51 | 51 |
| CONSERVATION, IRRIGATION RESTRICTIONS – ARGYLE WSC | DEMAND REDUCTION [DENTON] | 0 | 101 | 144 | 144 | 144 | 143 |
| CONSERVATION, WATER LOSS CONTROL - ARGYLE WSC | DEMAND REDUCTION [DENTON] | 13 | 43 | 101 | 101 | 101 | 101 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 3 | 3 | 4 | 3 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 9 | 40 | 42 | 54 | 51 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 7 | 12 | 21 | 19 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 82 | 115 | 107 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 30 | 117 | 108 | 131 | 113 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 356 | 391 | 388 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 60 | 53 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 141 | 154 | 205 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 139 | 276 | 210 | 230 | 228 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 392 | 737 | 530 | 582 | 577 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 131 |
| | | **275** | **1,083** | **1,866** | **2,185** | **2,457** | **2,665** |

**AUBREY, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 37 |
| CONSERVATION - AUBREY | DEMAND REDUCTION [DENTON] | 2 | 5 | 8 | 13 | 20 | 32 |
| CONSERVATION, WATER LOSS CONTROL - AUBREY | DEMAND REDUCTION [DENTON] | 3 | 4 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 1 | 1 | 2 | 2 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 4 | 16 | 19 | 29 | 30 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 3 | 5 | 11 | 11 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 37 | 60 | 63 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 14 | 45 | 49 | 69 | 67 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 161 | 205 | 230 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 32 | 31 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 64 | 81 | 122 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 62 | 107 | 95 | 121 | 136 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 173 | 285 | 242 | 305 | 344 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 78 |
| | | **5** | **264** | **465** | **686** | **935** | **1,183** |

**BLACK ROCK WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| BLACK ROCK WSC - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 0 | 0 | 0 | 8 | 82 | 154 |
| CONSERVATION - BLACK ROCK WSC | DEMAND REDUCTION [DENTON] | 1 | 2 | 4 | 15 | 22 | 26 |
| CONSERVATION, IRRIGATION RESTRICTIONS – BLACK ROCK WSC | DEMAND REDUCTION [DENTON] | 0 | 0 | 0 | 14 | 18 | 20 |
| CONSERVATION, WATER LOSS CONTROL - BLACK ROCK WSC | DEMAND REDUCTION [DENTON] | 1 | 2 | 0 | 0 | 0 | 0 |
| | | **2** | **4** | **4** | **37** | **122** | **200** |

**BOLIVAR WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 49 |
| BOLIVAR WSC - NEW WELL(S) IN THE TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 208 | 210 | 214 | 217 | 219 | 222 |
| CONSERVATION - BOLIVAR WSC | DEMAND REDUCTION [DENTON] | 5 | 9 | 16 | 22 | 33 | 45 |
| CONSERVATION, WATER LOSS CONTROL - BOLIVAR WSC | DEMAND REDUCTION [DENTON] | 5 | 5 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 3 | 3 | 3 | 3 | 3 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 12 | 31 | 31 | 40 | 40 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 2 | 6 | 9 | 16 | 15 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 62 | 85 | 83 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 44 | 95 | 81 | 97 | 88 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1 | 20 | 62 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 42 | 63 | 84 | 88 | 67 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 266 | 291 | 303 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 45 | 41 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 106 | 115 | 161 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 199 | 224 | 157 | 171 | 178 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 561 | 599 | 398 | 435 | 450 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 102 |
| | | **218** | **1,087** | **1,251** | **1,437** | **1,658** | **1,909** |

**CARROLLTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 522 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - CARROLLTON | DEMAND REDUCTION [DENTON] | 254 | 325 | 368 | 414 | 462 | 511 |
| CONSERVATION, IRRIGATION RESTRICTIONS – CARROLLTON | DEMAND REDUCTION [DENTON] | 398 | 446 | 439 | 434 | 434 | 434 |
| CONSERVATION, WATER LOSS CONTROL - CARROLLTON | DEMAND REDUCTION [DENTON] | 73 | 74 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 18 | 34 | 31 | 29 | 28 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 94 | 406 | 430 | 432 | 425 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 13 | 75 | 125 | 164 | 157 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 857 | 908 | 892 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 316 | 1,194 | 1,133 | 1,040 | 945 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 478 | 440 |
| | | **725** | **1,286** | **2,516** | **3,424** | **3,947** | **4,354** |

**CELINA, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 176 |
| CONSERVATION - CELINA | DEMAND REDUCTION [DENTON] | 3 | 32 | 117 | 276 | 301 | 327 |
| CONSERVATION, IRRIGATION RESTRICTIONS – CELINA | DEMAND REDUCTION [DENTON] | 4 | 32 | 108 | 231 | 231 | 231 |
| CONSERVATION, WATER LOSS CONTROL - CELINA | DEMAND REDUCTION [DENTON] | 1 | 5 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 5 | 10 | 11 | 9 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 4 | 58 | 134 | 163 | 143 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 11 | 39 | 62 | 53 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 267 | 342 | 300 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 14 | 172 | 353 | 392 | 318 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 265 | 580 | 1,057 | 1,222 | 1,049 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1,670 | 1,573 | 1,357 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 36 | 63 | 61 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 13 | 36 | 35 | 26 | 15 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 118 | 348 | 362 | 287 | 186 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 8 | 31 | 42 | 38 | 27 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 22 | 32 | 37 | 33 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 79 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 115 | 290 | 231 | 180 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 258 | 451 | 406 | 0 | 0 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 180 | 148 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 460 | 461 | 578 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 63 | 404 | 686 | 687 | 643 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 177 | 1,077 | 1,736 | 1,740 | 1,625 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 460 |
| | | **8** | **992** | **3,535** | **8,122** | **8,047** | **7,998** |

**COPPELL, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 10 |
| CONSERVATION - COPPELL | DEMAND REDUCTION [DENTON] | 11 | 14 | 13 | 15 | 14 | 15 |
| CONSERVATION, IRRIGATION RESTRICTIONS – COPPELL | DEMAND REDUCTION [DENTON] | 8 | 9 | 9 | 9 | 9 | 9 |
| CONSERVATION, WATER LOSS CONTROL - COPPELL | DEMAND REDUCTION [DENTON] | 2 | 1 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 1 | 1 | 1 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 0 | 7 | 8 | 8 | 8 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 1 | 2 | 3 | 3 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 15 | 17 | 16 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 20 | 20 | 19 | 17 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 9 | 8 |
| | | **21** | **26** | **51** | **70** | **80** | **87** |

**CORINTH, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 85 |
| CONSERVATION - CORINTH | DEMAND REDUCTION [DENTON] | 20 | 120 | 161 | 177 | 193 | 210 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION – WASTE PROHIBITION, CORINTH | DEMAND REDUCTION [DENTON] | 0 | 39 | 43 | 43 | 43 | 43 |
| CONSERVATION, IRRIGATION RESTRICTIONS – CORINTH | DEMAND REDUCTION [DENTON] | 0 | 146 | 161 | 160 | 160 | 160 |
| CONSERVATION, WATER LOSS CONTROL - CORINTH | DEMAND REDUCTION [DENTON] | 21 | 25 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 4 | 5 | 4 | 5 | 4 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 19 | 60 | 59 | 75 | 70 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 3 | 11 | 17 | 28 | 26 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 116 | 157 | 145 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 63 | 175 | 153 | 180 | 154 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 506 | 536 | 528 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 83 | 72 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 200 | 212 | 280 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 287 | 411 | 298 | 316 | 311 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 805 | 1,096 | 755 | 799 | 784 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 179 |
| | | **41** | **1,511** | **2,123** | **2,488** | **2,787** | **3,051** |

**COUNTY-OTHER, DENTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 233 |
| CONSERVATION - DENTON COUNTY | DEMAND REDUCTION [DENTON] | 4 | 10 | 19 | 55 | 121 | 273 |
| CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY | DEMAND REDUCTION [DENTON] | 6 | 8 | 0 | 0 | 0 | 0 |
| COUNTY-OTHER, DENTON - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 504 | 504 | 504 | 504 | 504 | 504 |
| COUNTY-OTHER, DENTON - NEW WELL(S) IN WOODBINE AQUIFER | WOODBINE AQUIFER [DENTON] | 817 | 817 | 817 | 817 | 817 | 817 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 2 | 3 | 7 | 12 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 5 | 23 | 47 | 105 | 190 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 4 | 14 | 40 | 70 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 94 | 221 | 399 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 18 | 66 | 124 | 253 | 423 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 408 | 753 | 1,452 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 116 | 197 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 161 | 298 | 768 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 80 | 156 | 241 | 443 | 855 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 226 | 414 | 611 | 1,120 | 2,161 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 491 |
| | | **1,331** | **1,670** | **2,005** | **3,079** | **4,798** | **8,845** |

**CROSS TIMBERS WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 30 |
| CONSERVATION - CROSS TIMBERS WSC | DEMAND REDUCTION [DENTON] | 5 | 45 | 62 | 70 | 81 | 91 |
| CONSERVATION, IRRIGATION RESTRICTIONS – CROSS TIMBERS WSC | DEMAND REDUCTION [DENTON] | 0 | 56 | 62 | 63 | 64 | 65 |
| CONSERVATION, WATER LOSS CONTROL - CROSS TIMBERS WSC | DEMAND REDUCTION [DENTON] | 8 | 10 | 0 | 0 | 0 | 0 |
| CROSS TIMBERS WSC - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 250 | 250 | 250 | 250 | 250 | 250 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 2 | 1 | 2 | 2 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 5 | 19 | 20 | 27 | 25 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 3 | 6 | 10 | 9 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 39 | 55 | 52 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 18 | 55 | 51 | 63 | 55 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 168 | 188 | 189 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 29 | 26 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 66 | 74 | 100 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 82 | 130 | 99 | 110 | 111 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 230 | 347 | 251 | 279 | 280 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 64 |
| | | **263** | **698** | **930** | **1,084** | **1,232** | **1,349** |

**DALLAS, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 268 |
| CONSERVATION - DALLAS | DEMAND REDUCTION [DENTON] | 159 | 309 | 658 | 784 | 830 | 856 |
| CONSERVATION, IRRIGATION RESTRICTIONS – DALLAS | DEMAND REDUCTION [DENTON] | 197 | 210 | 234 | 259 | 279 | 289 |
| CONSERVATION, WATER LOSS CONTROL - DALLAS | DEMAND REDUCTION [DENTON] | 66 | 70 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 9 | 12 | 14 | 14 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 3 | 107 | 167 | 203 | 219 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 20 | 48 | 77 | 81 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 333 | 426 | 459 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 11 | 316 | 440 | 488 | 487 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 224 | 226 |
| | | **422** | **604** | **1,344** | **2,043** | **2,541** | **2,899** |

**DENTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 6,966 |
| CONSERVATION - DENTON | DEMAND REDUCTION [DENTON] | 710 | 1,203 | 1,572 | 2,314 | 3,563 | 4,711 |
| CONSERVATION, IRRIGATION RESTRICTIONS – DENTON | DEMAND REDUCTION [DENTON] | 707 | 990 | 1,227 | 1,687 | 2,417 | 2,974 |
| CONSERVATION, WATER LOSS CONTROL - DENTON | DEMAND REDUCTION [DENTON] | 131 | 165 | 0 | 0 | 0 | 0 |
| DENTON - UNALLOCATED SUPPLY UTILIZATION | INDIRECT REUSE [DENTON] | 0 | 1,501 | 2,184 | 3,819 | 3,922 | 3,779 |
| DENTON - UNALLOCATED SUPPLY UTILIZATION | LEWISVILLE LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 1,338 | 1,609 | 1,884 | 2,386 | 2,356 | 2,250 |
| DENTON - UNALLOCATED SUPPLY UTILIZATION | RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 3,235 | 3,884 | 4,502 | 5,647 | 5,607 | 5,408 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 116 | 285 | 365 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 0 | 2,783 | 5,589 | 10,196 | 13,337 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 2 | 466 | 1,608 | 2,103 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 3,207 | 8,909 | 11,921 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 30 | 4,241 | 10,204 | 12,632 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 4,690 | 5,877 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **DENTON COUNTY FWSD 1-A, TRINITY (C)** | | **6,121** | **9,352** | **14,185** | **29,472** | **53,757** | **72,323** |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 210 |
| CONSERVATION - DENTON COUNTY FWSD #1A | DEMAND REDUCTION [DENTON] | 72 | 189 | 253 | 278 | 304 | 329 |
| CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD 1-A | DEMAND REDUCTION [DENTON] | 110 | 195 | 233 | 233 | 233 | 233 |
| CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #1A | DEMAND REDUCTION [DENTON] | 18 | 32 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 12 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 8 | 13 | 13 | 13 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 45 | 165 | 168 | 192 | 172 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 6 | 31 | 48 | 73 | 64 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 336 | 405 | 360 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 148 | 487 | 443 | 463 | 383 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 547 | 579 | 569 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 213 | 178 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 216 | 229 | 301 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 252 | 446 | 323 | 341 | 335 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 710 | 1,190 | 817 | 862 | 846 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 193 |
| **DENTON COUNTY FWSD 10, TRINITY (C)** | | **200** | **1,585** | **2,818** | **3,422** | **3,907** | **4,185** |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 63 |
| CONSERVATION - DENTON COUNTY FWSD #10 | DEMAND REDUCTION [DENTON] | 5 | 72 | 120 | 132 | 144 | 157 |
| CONSERVATION – WASTE PROHIBITION, DENTON COUNTY FWSD 10 | DEMAND REDUCTION [DENTON] | 0 | 28 | 37 | 37 | 37 | 37 |
| CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD #10 | DEMAND REDUCTION [DENTON] | 0 | 92 | 121 | 121 | 121 | 121 |
| CONSERVATION, WATER LOSS | DEMAND REDUCTION | 7 | 16 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONTROL - DENTON COUNTY FWSD #10 | [DENTON] | | | | | | |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 4 | 3 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 3 | 4 | 3 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 11 | 44 | 43 | 56 | 51 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 8 | 13 | 21 | 19 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 86 | 117 | 108 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 39 | 129 | 114 | 134 | 114 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 376 | 399 | 393 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 61 | 53 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 149 | 158 | 208 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 179 | 304 | 222 | 235 | 232 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 507 | 812 | 561 | 595 | 587 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 133 |
| | | **12** | **948** | **1,579** | **1,857** | **2,082** | **2,279** |

**DENTON COUNTY FWSD 7, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 58 |
| CONSERVATION - DENTON COUNTY FWSD #7 | DEMAND REDUCTION [DENTON] | 15 | 83 | 111 | 122 | 133 | 144 |
| CONSERVATION – WASTE PROHIBITION, DENTON COUNTY FWSD 7 | DEMAND REDUCTION [DENTON] | 0 | 33 | 37 | 37 | 37 | 37 |
| CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD #7 | DEMAND REDUCTION [DENTON] | 0 | 101 | 112 | 112 | 112 | 112 |
| CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #7 | DEMAND REDUCTION [DENTON] | 17 | 17 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 3 | 3 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 3 | 3 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 12 | 40 | 40 | 51 | 48 |
| DWU - INDIRECT REUSE | INDIRECT REUSE | 0 | 2 | 7 | 12 | 19 | 18 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| IMPLEMENTATION | [DENTON] | | | | | | |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 79 | 108 | 100 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 42 | 119 | 105 | 123 | 105 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 346 | 367 | 362 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 57 | 49 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 137 | 145 | 192 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 194 | 280 | 204 | 216 | 213 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 546 | 748 | 516 | 549 | 538 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 122 |
| | | **32** | **1,032** | **1,457** | **1,713** | **1,920** | **2,101** |

**FLOWER MOUND, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ALLIANCE DIRECT REUSE | DIRECT REUSE [TARRANT] | 0 | 554 | 554 | 554 | 554 | 554 |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 521 |
| CONSERVATION - FLOWER MOUND | DEMAND REDUCTION [DENTON] | 182 | 295 | 372 | 450 | 536 | 628 |
| CONSERVATION, IRRIGATION RESTRICTIONS – FLOWER MOUND | DEMAND REDUCTION [DENTON] | 512 | 629 | 639 | 651 | 666 | 686 |
| CONSERVATION, WATER LOSS CONTROL - FLOWER MOUND | DEMAND REDUCTION [DENTON] | 95 | 105 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 16 | 16 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 20 | 31 | 28 | 12 | 9 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 107 | 370 | 381 | 440 | 426 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 15 | 69 | 110 | 166 | 158 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 756 | 923 | 891 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 355 | 1,090 | 999 | 1,057 | 945 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1,625 | 1,768 | 1,810 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 487 | 440 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 643 | 699 | 957 |
| UTRWD - RALPH HALL RESERVOIR | INDIRECT REUSE | 0 | 875 | 1,296 | 959 | 1,040 | 1,065 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| AND REUSE | [FANNIN] | | | | | | |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 2,462 | 3,452 | 2,428 | 2,636 | 2,691 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 612 |
| | | **789** | **5,417** | **7,873** | **9,584** | **11,000** | **12,409** |

**FORT WORTH, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ALLIANCE DIRECT REUSE | DIRECT REUSE [TARRANT] | 0 | 62 | 201 | 254 | 299 | 337 |
| CONSERVATION - FORT WORTH | DEMAND REDUCTION [DENTON] | 120 | 215 | 301 | 448 | 664 | 927 |
| CONSERVATION, IRRIGATION RESTRICTIONS – FORT WORTH | DEMAND REDUCTION [DENTON] | 216 | 325 | 467 | 653 | 835 | 1,017 |
| CONSERVATION, WATER LOSS CONTROL - FORT WORTH | DEMAND REDUCTION [DENTON] | 683 | 925 | 467 | 435 | 278 | 0 |
| FORT WORTH - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 737 | 1,371 | 1,836 | 1,906 | 1,716 |
| FORT WORTH - VILLAGE AND MARY CREEK WRF FUTURE DIRECT REUSE | DIRECT REUSE [TARRANT] | 0 | 309 | 363 | 459 | 541 | 610 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 2,048 | 3,308 | 4,256 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 0 | 580 | 628 | 920 | 1,034 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 0 | 52 | 61 | 99 | 127 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 195 | 231 | 372 | 479 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 27 | 33 | 52 | 67 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 109 | 129 | 208 | 267 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 0 | 577 | 865 | 1,656 | 2,237 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 0 | 310 | 489 | 987 | 1,523 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 218 | 258 | 415 | 536 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 79 | 89 | 170 | 340 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1,440 |
| | | **1,019** | **2,573** | **5,317** | **8,916** | **12,710** | **16,913** |

**FRISCO, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - FRISCO | DEMAND REDUCTION [DENTON] | 334 | 604 | 856 | 917 | 1,007 | 1,102 |
| CONSERVATION, IRRIGATION RESTRICTIONS – FRISCO | DEMAND REDUCTION [DENTON] | 551 | 689 | 865 | 875 | 886 | 889 |
| CONSERVATION, WATER LOSS CONTROL - FRISCO | DEMAND REDUCTION [DENTON] | 92 | 115 | 0 | 0 | 0 | 0 |
| FRISCO - ADDITIONAL DIRECT REUSE | DIRECT REUSE [COLLIN] | 130 | 267 | 398 | 423 | 475 | 454 |
| MARVIN NICHOLS (328) STRATEGY | MARVIN NICHOLS | 0 | 0 | 0 | 2,523 | 3,159 | 2,813 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FOR NTMWD, TRWD, AND UTRWD | LAKE/RESERVOIR [RESERVOIR] | | | | | | |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 178 | 493 | 651 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 189 | 284 | 172 | 198 | 160 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 1,700 | 2,755 | 1,795 | 2,233 | 1,975 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 122 | 244 | 211 | 298 | 283 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 8 | 175 | 160 | 291 | 346 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 840 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 907 | 1,439 | 1,797 | 1,913 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 952 |
| | | **1,107** | **3,694** | **6,484** | **8,693** | **10,837** | **12,378** |

**HACKBERRY, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - HACKBERRY | DEMAND REDUCTION [DENTON] | 9 | 16 | 22 | 30 | 40 | 54 |
| CONSERVATION – WASTE PROHIBITION, HACKBERRY | DEMAND REDUCTION [DENTON] | 3 | 5 | 7 | 8 | 10 | 13 |
| CONSERVATION, IRRIGATION RESTRICTIONS – HACKBERRY | DEMAND REDUCTION [DENTON] | 13 | 18 | 24 | 29 | 36 | 44 |
| CONSERVATION, WATER LOSS CONTROL - HACKBERRY | DEMAND REDUCTION [DENTON] | 2 | 3 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 77 | 117 | 125 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 5 | 18 | 29 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 4 | 7 | 5 | 7 | 7 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 40 | 67 | 55 | 83 | 89 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 3 | 6 | 6 | 11 | 13 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 4 | 5 | 11 | 15 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 37 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 22 | 44 | 67 | 85 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 42 |
| | | **27** | **89** | **159** | **264** | **400** | **553** |

**HIGHLAND VILLAGE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 44 |
| CONSERVATION - HIGHLAND VILLAGE | DEMAND REDUCTION [DENTON] | 241 | 323 | 354 | 365 | 378 | 391 |
| CONSERVATION, IRRIGATION RESTRICTIONS – HIGHLAND VILLAGE | DEMAND REDUCTION [DENTON] | 0 | 107 | 118 | 117 | 117 | 117 |
| CONSERVATION, WATER LOSS CONTROL - HIGHLAND VILLAGE | DEMAND REDUCTION [DENTON] | 19 | 20 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 3 | 2 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 2 | 2 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 6 | 26 | 28 | 38 | 36 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 5 | 8 | 15 | 13 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 54 | 81 | 76 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 20 | 74 | 72 | 93 | 80 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 237 | 276 | 276 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 43 | 37 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 94 | 109 | 146 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 90 | 175 | 140 | 162 | 163 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 252 | 464 | 353 | 409 | 414 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 93 |
| | | **260** | **820** | **1,218** | **1,470** | **1,724** | **1,888** |

**IRRIGATION, DENTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 73 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 4 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 19 | 6 | 6 | 6 | 4 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 42 | 29 | 64 | 62 | 61 | 59 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 2 | 4 | 12 | 18 | 23 | 22 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 124 | 128 | 125 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 97 | 190 | 164 | 147 | 132 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 68 | 61 |
| UTRWD - ADDITIONAL DIRECT REUSE | DIRECT REUSE [DENTON] | 0 | 560 | 1,121 | 2,240 | 2,240 | 2,240 |
| | | **63** | **696** | **1,393** | **2,614** | **2,671** | **2,716** |

**JUSTIN, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 28 |
| CONSERVATION - JUSTIN | DEMAND REDUCTION [DENTON] | 2 | 8 | 20 | 28 | 34 | 39 |
| CONSERVATION, WATER LOSS CONTROL - JUSTIN | DEMAND REDUCTION [DENTON] | 8 | 12 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 2 | 1 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 2 | 1 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 4 | 20 | 19 | 25 | 22 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 4 | 6 | 10 | 8 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 38 | 53 | 48 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 12 | 57 | 51 | 60 | 51 |
| JUSTIN - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 244 | 244 | 244 | 244 | 244 | 244 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 166 | 180 | 175 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 28 | 24 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 66 | 71 | 93 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 54 | 134 | 98 | 106 | 103 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 153 | 357 | 249 | 267 | 263 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 59 |
| | | **254** | **488** | **838** | **966** | **1,080** | **1,158** |

**KRUM, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 48 |
| CONSERVATION - KRUM | DEMAND REDUCTION [DENTON] | 21 | 37 | 51 | 68 | 93 | 125 |
| CONSERVATION, IRRIGATION RESTRICTIONS – KRUM | DEMAND REDUCTION [DENTON] | 31 | 42 | 51 | 62 | 74 | 88 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION, WATER LOSS CONTROL - KRUM | DEMAND REDUCTION [DENTON] | 6 | 7 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 2 | 3 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 2 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 3 | 14 | 21 | 35 | 39 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 3 | 6 | 13 | 14 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 42 | 74 | 82 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 8 | 43 | 56 | 84 | 87 |
| KRUM - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 202 | 202 | 202 | 202 | 202 | 202 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 183 | 251 | 299 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 39 | 40 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 72 | 99 | 158 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 39 | 102 | 108 | 148 | 176 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 109 | 273 | 274 | 374 | 445 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 101 |
| | | **260** | **447** | **740** | **1,096** | **1,488** | **1,907** |

**LAKE CITIES MUNICIPAL UTILITY AUTHORITY, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 57 |
| CONSERVATION - LAKE CITIES MUA | DEMAND REDUCTION [DENTON] | 10 | 22 | 35 | 46 | 56 | 66 |
| CONSERVATION, WATER LOSS CONTROL - LAKE CITIES MUA | DEMAND REDUCTION [DENTON] | 11 | 12 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 3 | 3 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 3 | 3 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 11 | 39 | 40 | 51 | 46 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 2 | 7 | 12 | 19 | 17 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 80 | 106 | 97 |
| DWU - LAKE PALESTINE | PALESTINE | 0 | 37 | 114 | 105 | 121 | 103 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | LAKE/RESERVOIR [RESERVOIR] | | | | | | |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 347 | 362 | 353 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 56 | 48 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 137 | 143 | 187 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 171 | 268 | 205 | 213 | 208 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 481 | 715 | 517 | 539 | 523 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 119 |
| | | **21** | **738** | **1,181** | **1,492** | **1,669** | **1,827** |

**LEWISVILLE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 1,547 |
| CONSERVATION - LEWISVILLE | DEMAND REDUCTION [DENTON] | 191 | 316 | 441 | 594 | 771 | 874 |
| CONSERVATION, IRRIGATION RESTRICTIONS – LEWISVILLE | DEMAND REDUCTION [DENTON] | 560 | 695 | 789 | 897 | 1,002 | 1,002 |
| CONSERVATION, WATER LOSS CONTROL - LEWISVILLE | DEMAND REDUCTION [DENTON] | 100 | 111 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 98 | 81 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 68 | 89 | 90 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 352 | 1,074 | 1,237 | 1,448 | 1,260 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 49 | 199 | 357 | 548 | 467 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 2,459 | 3,040 | 2,646 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 1,183 | 3,159 | 3,250 | 3,483 | 2,805 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 1,601 | 1,305 |
| | | **851** | **2,774** | **5,751** | **8,884** | **11,991** | **11,987** |

**LITTLE ELM, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - LITTLE ELM | DEMAND REDUCTION [DENTON] | 59 | 78 | 94 | 109 | 123 | 139 |
| CONSERVATION, IRRIGATION RESTRICTIONS – LITTLE ELM | DEMAND REDUCTION [DENTON] | 122 | 137 | 137 | 136 | 136 | 136 |
| CONSERVATION, WATER LOSS CONTROL - LITTLE ELM | DEMAND REDUCTION [DENTON] | 20 | 23 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 432 | 516 | 455 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 31 | 80 | 105 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 48 | 53 | 30 | 32 | 26 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 437 | 515 | 307 | 364 | 318 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 31 | 46 | 36 | 49 | 46 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 2 | 33 | 27 | 48 | 56 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 136 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 170 | 247 | 294 | 309 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 154 |
| | | **201** | **756** | **1,048** | **1,355** | **1,642** | **1,880** |

**MANUFACTURING, DENTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 27 |
| DENTON - UNALLOCATED SUPPLY UTILIZATION | INDIRECT REUSE [DENTON] | 0 | 14 | 21 | 25 | 17 | 13 |
| DENTON - UNALLOCATED SUPPLY UTILIZATION | LEWISVILLE LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 15 | 18 | 15 | 10 | 8 |
| DENTON - UNALLOCATED SUPPLY UTILIZATION | RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 34 | 43 | 36 | 24 | 19 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 2 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 1 | 1 | 1 | 1 | 1 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 0 | 28 | 37 | 47 | 49 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 3 | 7 | 7 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 24 | 43 | 46 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 5 | 32 | 49 | 49 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 12 | 13 | 13 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 1 | 1 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 4 | 5 | 3 | 3 | 3 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 0 | 0 | 0 | 0 | 0 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 1 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 1 | 2 | 2 | 2 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 2 | 1 | 2 | 1 | 2 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 1 | 1 | 1 | 1 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 1 | 2 | 1 | 2 | 2 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 0 | 1 | 1 | 1 | 1 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 0 | 0 | 0 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 23 | 23 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 2 | 2 | 3 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 3 | 5 | 4 | 4 | 4 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 7 | 14 | 10 | 10 | 9 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 4 |
| | | **1** | **83** | **147** | **211** | **261** | **289** |

**MINING, DENTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 96 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 4 | 5 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 2 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 1 | 17 | 34 | 63 | 78 |
| DWU - INDIRECT REUSE | INDIRECT REUSE | 0 | 0 | 3 | 10 | 24 | 29 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| IMPLEMENTATION | [DENTON] | | | | | | |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 66 | 133 | 164 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 4 | 49 | 88 | 153 | 174 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 289 | 455 | 597 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 70 | 81 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 114 | 180 | 316 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 17 | 114 | 171 | 267 | 351 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 49 | 305 | 433 | 678 | 889 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 202 |
| | | **0** | **71** | **489** | **1,207** | **2,027** | **2,982** |

**MOUNTAIN SPRINGS WSC, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - MOUNTAIN SPRING WSC | DEMAND REDUCTION [DENTON] | 0 | 0 | 0 | 0 | 1 | 1 |
| CONSERVATION, IRRIGATION RESTRICTIONS – MOUNTAIN SPRINGS WSC | DEMAND REDUCTION [DENTON] | 0 | 0 | 0 | 0 | 0 | 0 |
| CONSERVATION, WATER LOSS CONTROL - MOUNTAIN SPRING WSC | DEMAND REDUCTION [DENTON] | 0 | 0 | 0 | 0 | 0 | 0 |
| GAINESVILLE - UNALLOCATED SURFACE WATER SUPPLY UTILIZATION | HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 1 | 4 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 0 | 0 | 0 | 3 | 4 |
| | | **0** | **0** | **0** | **0** | **5** | **9** |

**MUSTANG SUD, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 435 |
| CONSERVATION - MUSTANG SUD | DEMAND REDUCTION [DENTON] | 21 | 75 | 152 | 254 | 381 | 535 |
| CONSERVATION, WATER LOSS CONTROL - MUSTANG SUD | DEMAND REDUCTION [DENTON] | 23 | 42 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 21 | 23 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 6 | 13 | 14 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 32 | 153 | 201 | 323 | 355 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 4 | 28 | 58 | 122 | 132 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 399 | 677 | 745 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 104 | 447 | 527 | 775 | 790 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 1,737 | 2,308 | 2,711 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 356 | 367 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 686 | 913 | 1,435 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 476 | 1,054 | 1,024 | 1,358 | 1,595 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 1,339 | 2,806 | 2,595 | 3,442 | 4,034 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 917 |
| | | **44** | **2,078** | **4,653** | **7,495** | **10,676** | **14,074** |

**NORTHLAKE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 131 |
| CONSERVATION - NORTHLAKE | DEMAND REDUCTION [DENTON] | 6 | 57 | 108 | 179 | 265 | 302 |
| CONSERVATION, IRRIGATION RESTRICTIONS – NORTHLAKE | DEMAND REDUCTION [DENTON] | 0 | 119 | 186 | 258 | 330 | 330 |
| CONSERVATION, WATER LOSS CONTROL - NORTHLAKE | DEMAND REDUCTION [DENTON] | 10 | 22 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 8 | 7 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 4 | 5 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 11 | 53 | 71 | 116 | 106 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 2 | 10 | 20 | 44 | 39 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 141 | 243 | 224 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 39 | 154 | 186 | 279 | 237 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 909 | 1,269 | 1,247 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 51 | 95 | 90 | 121 | 105 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 2 | 9 | 9 | 13 | 13 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 32 | 32 | 50 | 49 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 5 | 5 | 7 | 7 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 18 | 19 | 27 | 27 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 32 | 95 | 125 | 219 | 227 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 17 | 51 | 70 | 131 | 155 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 36 | 37 | 55 | 54 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 3 | 5 | 7 | 14 | 23 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 128 | 110 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 243 | 328 | 431 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 179 | 362 | 362 | 489 | 479 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 505 | 963 | 919 | 1,238 | 1,213 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 422 |
| | | **16** | **1,041** | **2,186** | **3,687** | **5,374** | **5,938** |

**PALOMA CREEK NORTH, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 39 |
| CONSERVATION - PALOMA CREEK NORTH | DEMAND REDUCTION [DENTON] | 6 | 53 | 75 | 83 | 90 | 98 |
| CONSERVATION – WASTE PROHIBITION, PALOMA CREEK NORTH | DEMAND REDUCTION [DENTON] | 0 | 21 | 23 | 23 | 23 | 23 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PALOMA CREEK NORTH | DEMAND REDUCTION [DENTON] | 0 | 68 | 75 | 75 | 75 | 75 |
| CONSERVATION, WATER LOSS CONTROL - PALOMA CREEK NORTH | DEMAND REDUCTION [DENTON] | 9 | 12 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 2 | 2 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 2 | 2 | 2 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 8 | 27 | 27 | 35 | 32 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 5 | 8 | 13 | 12 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 54 | 73 | 67 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 29 | 81 | 71 | 84 | 71 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 235 | 249 | 245 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 38 | 33 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 93 | 98 | 130 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 132 | 190 | 138 | 146 | 144 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 372 | 508 | 350 | 372 | 367 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 83 |
| | | **15** | **698** | **986** | **1,159** | **1,298** | **1,421** |

**PALOMA CREEK SOUTH, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 20 |
| CONSERVATION - PALOMA CREEK SOUTH | DEMAND REDUCTION [DENTON] | 3 | 25 | 35 | 39 | 42 | 46 |
| CONSERVATION – WASTE PROHIBITION, PALOMA CREEK SOUTH | DEMAND REDUCTION [DENTON] | 0 | 12 | 13 | 13 | 13 | 13 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PALOMA CREEK SOUTH | DEMAND REDUCTION [DENTON] | 0 | 34 | 39 | 39 | 39 | 39 |
| CONSERVATION, WATER LOSS CONTROL - PALOMA CREEK SOUTH | DEMAND REDUCTION [DENTON] | 4 | 6 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 1 | 1 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 1 | 1 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 4 | 14 | 14 | 18 | 16 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 3 | 4 | 7 | 6 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 27 | 37 | 34 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 15 | 41 | 36 | 42 | 36 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 119 | 126 | 125 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 20 | 17 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 47 | 50 | 66 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 67 | 96 | 70 | 74 | 73 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 188 | 257 | 178 | 189 | 186 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 42 |
| | | **7** | **353** | **499** | **587** | **658** | **720** |

**PILOT POINT, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 95 |
| CONSERVATION - PILOT POINT | DEMAND REDUCTION [DENTON] | 3 | 7 | 16 | 31 | 51 | 80 |
| CONSERVATION, WATER LOSS CONTROL - PILOT POINT | DEMAND REDUCTION [DENTON] | 4 | 5 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 4 | 5 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 2 | 3 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 4 | 26 | 37 | 65 | 78 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 5 | 11 | 24 | 29 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 74 | 135 | 162 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 16 | 75 | 98 | 155 | 172 |
| GTUA - REGIONAL WATER SYSTEM | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 494 | 707 | 908 | 1,256 | 1,256 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 323 | 462 | 589 |
| PILOT POINT - NEW WELL(S) IN TRINITY AQUIFER | TRINITY AQUIFER [DENTON] | 313 | 313 | 313 | 313 | 313 | 313 |
| SHERMAN - UNALLOCATED SUPPLY UTILIZATION | TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR] | 0 | 481 | 549 | 348 | 0 | 0 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 71 | 80 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 128 | 183 | 312 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 73 | 178 | 191 | 272 | 347 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 206 | 474 | 482 | 688 | 875 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 199 |
| | | **320** | **1,601** | **2,345** | **2,947** | **3,679** | **4,592** |

**PLANO, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - PLANO | DEMAND REDUCTION [DENTON] | 28 | 39 | 58 | 52 | 57 | 65 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PLANO | DEMAND REDUCTION [DENTON] | 58 | 59 | 60 | 60 | 60 | 60 |
| CONSERVATION, WATER LOSS CONTROL - PLANO | DEMAND REDUCTION [DENTON] | 10 | 10 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 183 | 225 | 198 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 13 | 35 | 46 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 18 | 21 | 13 | 14 | 11 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 166 | 202 | 130 | 159 | 139 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 12 | 18 | 15 | 21 | 20 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 13 | 12 | 21 | 24 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 59 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 66 | 105 | 128 | 135 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 67 |
| | | **96** | **305** | **438** | **583** | **720** | **824** |

**PONDER, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 35 |
| CONSERVATION - PONDER | DEMAND REDUCTION [DENTON] | 1 | 3 | 7 | 12 | 18 | 29 |
| CONSERVATION, WATER LOSS CONTROL - PONDER | DEMAND REDUCTION [DENTON] | 2 | 3 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 2 | 2 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 1 | 1 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 3 | 13 | 17 | 27 | 29 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 2 | 5 | 10 | 11 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 33 | 56 | 60 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 9 | 37 | 43 | 64 | 64 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 143 | 191 | 219 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 29 | 30 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 57 | 75 | 116 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 42 | 88 | 84 | 112 | 129 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 116 | 233 | 214 | 284 | 323 |
| WRIGHT PATMAN REALLOCATION FOR | WRIGHT PATMAN | 0 | 0 | 0 | 0 | 0 | 74 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD, TRWD, AND UTRWD | LAKE/RESERVOIR [RESERVOIR] | | | | | | |
| **PROSPER, TRINITY (C)** | | **3** | **177** | **381** | **609** | **868** | **1,121** |
| CONSERVATION - PROSPER | DEMAND REDUCTION [DENTON] | 3 | 20 | 44 | 79 | 99 | 111 |
| CONSERVATION, IRRIGATION RESTRICTIONS – PROSPER | DEMAND REDUCTION [DENTON] | 9 | 43 | 77 | 115 | 121 | 121 |
| CONSERVATION, WATER LOSS CONTROL - PROSPER | DEMAND REDUCTION [DENTON] | 1 | 7 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 648 | 774 | 584 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 46 | 121 | 135 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 21 | 54 | 44 | 48 | 33 |
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 184 | 522 | 461 | 547 | 410 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 13 | 46 | 54 | 73 | 59 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 33 | 41 | 71 | 72 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 174 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 172 | 370 | 440 | 397 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 198 |
| **PROVIDENCE VILLAGE WCID, TRINITY (C)** | | **13** | **289** | **948** | **1,858** | **2,294** | **2,294** |
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 18 |
| CONSERVATION - PROVIDENCE VILLAGE WCID | DEMAND REDUCTION [DENTON] | 3 | 6 | 9 | 12 | 15 | 19 |
| CONSERVATION, WATER LOSS CONTROL - PROVIDENCE VILLAGE WCID | DEMAND REDUCTION [DENTON] | 5 | 5 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 1 | 1 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 1 | 1 | 1 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 4 | 13 | 12 | 16 | 14 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 1 | 2 | 4 | 6 | 5 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 25 | 33 | 30 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR | 0 | 14 | 39 | 33 | 38 | 32 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | [RESERVOIR] | | | | | | |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 109 | 114 | 111 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 18 | 15 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 43 | 45 | 59 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 66 | 91 | 64 | 67 | 65 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 185 | 243 | 164 | 169 | 166 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 37 |
| | | **8** | **282** | **398** | **467** | **522** | **572** |

**ROANOKE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ALLIANCE DIRECT REUSE | DIRECT REUSE [TARRANT] | 0 | 224 | 448 | 448 | 448 | 448 |
| CONSERVATION - ROANOKE | DEMAND REDUCTION [DENTON] | 8 | 36 | 58 | 70 | 81 | 92 |
| CONSERVATION – WASTE PROHIBITION, ROANOKE | DEMAND REDUCTION [DENTON] | 0 | 19 | 27 | 27 | 27 | 27 |
| CONSERVATION, IRRIGATION RESTRICTIONS – ROANOKE | DEMAND REDUCTION [DENTON] | 0 | 81 | 107 | 107 | 107 | 107 |
| CONSERVATION, WATER LOSS CONTROL - ROANOKE | DEMAND REDUCTION [DENTON] | 11 | 14 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 140 | 204 | 227 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 0 | 44 | 43 | 57 | 55 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 0 | 4 | 4 | 6 | 7 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 15 | 16 | 23 | 25 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 2 | 2 | 3 | 4 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 8 | 9 | 13 | 14 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 0 | 44 | 59 | 102 | 119 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 0 | 23 | 34 | 61 | 81 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 16 | 18 | 26 | 29 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 5 | 10 | 8 | 12 | 20 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 77 |
| | | **19** | **379** | **806** | **985** | **1,170** | **1,332** |

**SANGER, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA | 0 | 0 | 0 | 0 | 0 | 46 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | LAKE/RESERVOIR [RESERVOIR] | | | | | | |
| CONSERVATION - SANGER | DEMAND REDUCTION [DENTON] | 4 | 11 | 21 | 32 | 46 | 65 |
| CONSERVATION, IRRIGATION RESTRICTIONS – SANGER | DEMAND REDUCTION [DENTON] | 34 | 41 | 50 | 60 | 72 | 86 |
| CONSERVATION, WATER LOSS CONTROL - SANGER | DEMAND REDUCTION [DENTON] | 6 | 7 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 2 | 2 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 1 | 1 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 3 | 13 | 20 | 33 | 38 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 2 | 6 | 13 | 14 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 39 | 70 | 79 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 7 | 39 | 52 | 80 | 84 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 170 | 239 | 288 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 37 | 39 |
| UTRWD - ADDITIONAL INDIRECT REUSE | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 67 | 95 | 152 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | INDIRECT REUSE [FANNIN] | 0 | 33 | 91 | 100 | 141 | 169 |
| UTRWD - RALPH HALL RESERVOIR AND REUSE | RALPH HALL LAKE/RESERVOIR [RESERVOIR] | 0 | 91 | 243 | 254 | 358 | 430 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 97 |
| | | **44** | **193** | **460** | **801** | **1,186** | **1,589** |

**SOUTHLAKE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - SOUTHLAKE | DEMAND REDUCTION [DENTON] | 4 | 11 | 15 | 24 | 30 | 45 |
| CONSERVATION, IRRIGATION RESTRICTIONS – SOUTHLAKE | DEMAND REDUCTION [DENTON] | 13 | 16 | 20 | 25 | 31 | 37 |
| CONSERVATION, WATER LOSS CONTROL - SOUTHLAKE | DEMAND REDUCTION [DENTON] | 2 | 3 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 85 | 121 | 145 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 17 | 31 | 26 | 34 | 35 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 1 | 3 | 3 | 4 | 4 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 11 | 10 | 14 | 16 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 1 | 1 | 2 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 6 | 5 | 8 | 9 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 10 | 31 | 36 | 61 | 76 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 5 | 17 | 20 | 36 | 52 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 12 | 11 | 15 | 18 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 1 | 2 | 2 | 4 | 8 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 49 |
| | | **19** | **64** | **149** | **248** | **360** | **496** |

**STEAM ELECTRIC POWER, DENTON, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 0 | 0 | 0 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **0** | **0** | **0** | **0** | **0** | **0** |

**THE COLONY, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ANRA-COL - LAKE COLUMBIA | COLUMBIA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 274 |
| CONSERVATION - THE COLONY | DEMAND REDUCTION [DENTON] | 84 | 132 | 169 | 214 | 247 | 280 |
| CONSERVATION, WATER LOSS CONTROL - THE COLONY | DEMAND REDUCTION [DENTON] | 40 | 43 | 0 | 0 | 0 | 0 |
| DWU - CONSERVATION SURPLUS REALLOCATION | RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 13 |
| DWU - CONSERVATION SURPLUS REALLOCATION | TAWAKONI LAKE/RESERVOIR [RESERVOIR] | 39 | 14 | 18 | 17 | 15 | 0 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [COLLIN] | 89 | 77 | 213 | 237 | 232 | 224 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [DENTON] | 4 | 11 | 39 | 69 | 88 | 83 |
| DWU - INDIRECT REUSE IMPLEMENTATION | INDIRECT REUSE [ELLIS] | 0 | 0 | 0 | 472 | 487 | 469 |
| DWU - LAKE PALESTINE | PALESTINE LAKE/RESERVOIR [RESERVOIR] | 0 | 259 | 626 | 624 | 557 | 497 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 230 | 275 | 239 |
| NTMWD - ADDITIONAL LAVON WATERSHED REUSE | INDIRECT REUSE [COLLIN] | 0 | 0 | 0 | 16 | 43 | 55 |
| NTMWD - ADDITIONAL MEASURES TO ACCESS FULL LAVON YIELD | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 25 | 28 | 16 | 17 | 14 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| NTMWD - BOIS D'ARC LAKE | BOIS D ARC LAKE/RESERVOIR [RESERVOIR] | 0 | 223 | 276 | 163 | 193 | 168 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [COLLIN] | 0 | 16 | 24 | 19 | 26 | 24 |
| NTMWD - EXPANDED WETLAND REUSE | INDIRECT REUSE [KAUFMAN] | 0 | 1 | 17 | 15 | 25 | 29 |
| NTMWD - OKLAHOMA | OKLAHOMA RUN-OF-RIVER [OKLAHOMA] | 0 | 0 | 0 | 0 | 0 | 71 |
| NTMWD - TEXOMA BLENDING | NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 91 | 132 | 157 | 163 |
| UNM-ROR-NECHES RUN OF RIVER | NECHES RUN-OF-RIVER [ANDERSON] | 0 | 0 | 0 | 0 | 256 | 231 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 81 |
| | | **256** | **801** | **1,501** | **2,224** | **2,618** | **2,915** |

**TROPHY CLUB MUD 1, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION - TROPHY CLUB MUD 1 | DEMAND REDUCTION [DENTON] | 71 | 117 | 133 | 149 | 165 | 181 |
| CONSERVATION, IRRIGATION RESTRICTIONS – TROPHY CLUB MUD 1 | DEMAND REDUCTION [DENTON] | 146 | 145 | 144 | 144 | 144 | 144 |
| CONSERVATION, WATER LOSS CONTROL - TROPHY CLUB MUD 1 | DEMAND REDUCTION [DENTON] | 24 | 24 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 410 | 481 | 478 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 109 | 181 | 126 | 134 | 116 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 4 | 16 | 12 | 14 | 14 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 61 | 45 | 54 | 54 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 9 | 6 | 8 | 8 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 33 | 27 | 30 | 29 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 68 | 179 | 173 | 241 | 251 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 36 | 96 | 98 | 143 | 171 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 68 | 52 | 60 | 60 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 5 | 10 | 10 | 15 | 25 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 162 |
| | | **241** | **508** | **930** | **1,252** | **1,489** | **1,693** |

**WESTLAKE, TRINITY (C)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ALLIANCE DIRECT REUSE | DIRECT REUSE [TARRANT] | 0 | 5 | 13 | 21 | 27 | 33 |
| CONSERVATION - WESTLAKE | DEMAND REDUCTION [DENTON] | 0 | 0 | 1 | 1 | 2 | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CONSERVATION – WASTE PROHIBITION, WESTLAKE | DEMAND REDUCTION [DENTON] | 0 | 0 | 1 | 1 | 1 | 1 |
| CONSERVATION, IRRIGATION RESTRICTIONS – WESTLAKE | DEMAND REDUCTION [DENTON] | 0 | 1 | 2 | 2 | 2 | 3 |
| CONSERVATION, WATER LOSS CONTROL - WESTLAKE | DEMAND REDUCTION [DENTON] | 0 | 0 | 0 | 0 | 0 | 0 |
| MARVIN NICHOLS (328) STRATEGY FOR NTMWD, TRWD, AND UTRWD | MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS | INDIRECT REUSE [NAVARRO] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - AQUIFER STORAGE AND RECOVERY PILOT | TRINITY AQUIFER ASR [TARRANT] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [ANDERSON] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | CARRIZO-WILCOX AQUIFER [FREESTONE] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CARRIZO-WILCOX GROUNDWATER | QUEEN CITY AQUIFER [ANDERSON] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - CEDAR CREEK WETLANDS | INDIRECT REUSE [HENDERSON] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - REUSE FROM TRA CENTRAL WWTP | INDIRECT REUSE [DALLAS] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - TEHUACANA | TEHUACANA LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| TRWD - UNALLOCATED SUPPLY UTILIZATION | TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| WRIGHT PATMAN REALLOCATION FOR NTMWD, TRWD, AND UTRWD | WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR] | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **0** | **6** | **17** | **25** | **32** | **39** |
| **Sum of Projected Water Management Strategies (acre-feet)** | | **15,630** | **49,563** | **85,464** | **132,798** | **182,719** | **223,944** |