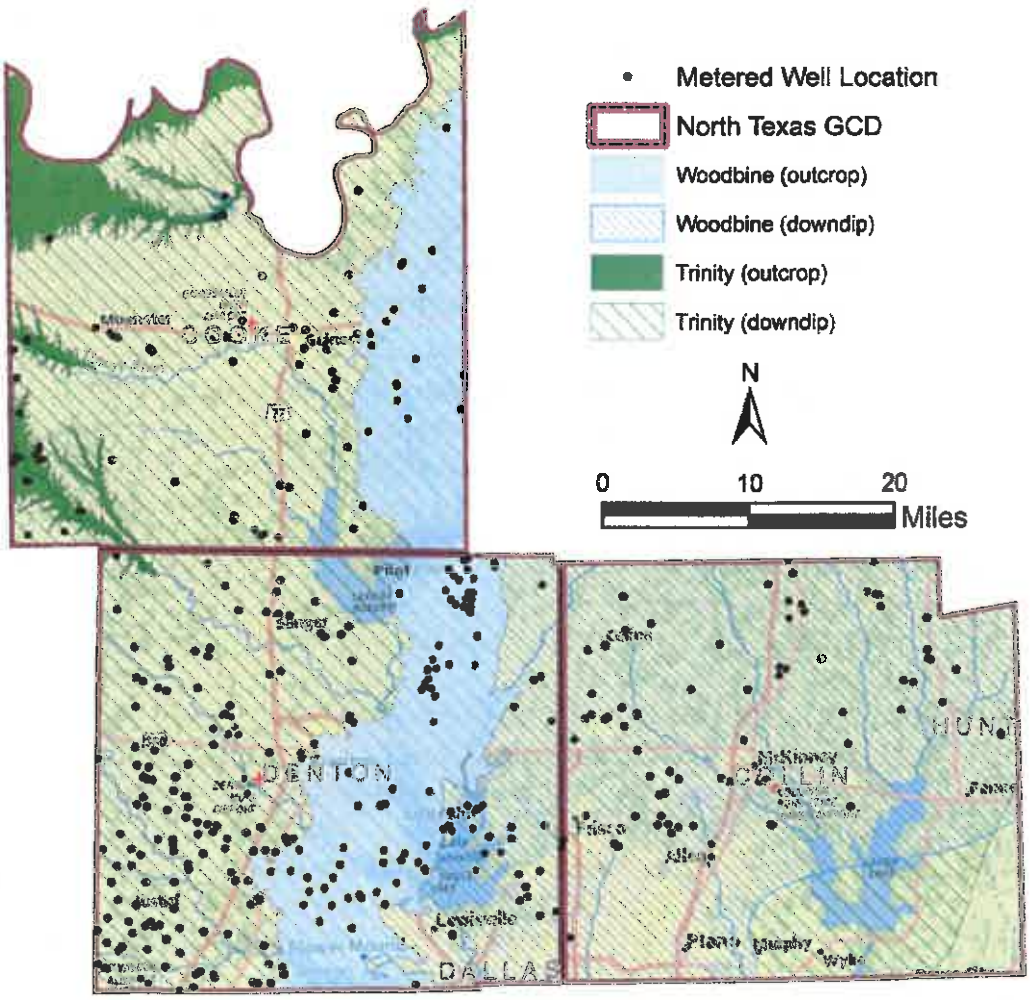
NORTH TEXAS
GROUNDWATER CONSERVATION DISTRICT
MANAGEMENT PLAN



As Adopted on March 14, 2017

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North Texas GCD 2017 Management Plan Revisions

Feb. 1, 2017

Statute requires groundwater conservation districts (GCDs) to review, amend as necessary, and readopt management plans at least every five years. The North Texas GCD Management Plan developed in April 2012 has been updated to meet statute requirements and is in accordance with the Texas Water Development Board (TWDB) GCD management plan criteria checklist.

Below is a summarized list of revisions that have been made to the 2012 Plan in the development of the 2017 North Texas GCD Management Plan.

- Section 2 – History and Purpose of the Management Plan was enhanced to include text regarding new legislation (Senate Bill 660 and 737) which impacts the development of DFCs and the water planning process.

- Revisions to Goal 1 – Providing the Most Efficient Use of Groundwater.

Discussion was added to update the Plan regarding the current registration process of all non-exempt and exempts wells. In addition, the Plan includes mention of a groundwater monitoring program, meter inspection program, and updates to the District's geodatabase.

- Enhanced Goal 5 – Addressing natural resource issues within the District.

The District has recently engaged a firm to monitor all injection well applications who will notify the General Manager of any potential impacts. In addition, the District will monitor compliance by oil and gas companies of well registration, metering, production reporting, and fee payment requirements of the District's rules.

- Enhancement of Section 8 – Estimates of Technical Information.

Update summary table of newly adopted DFCs and incorporate new GAM runs as an appendix.

Update the general overview discussion to include District specific hydrogeology to include new figures, maps, and cross-sections. In addition, a section was developed to discuss District specific outcrop and downdip groundwater management issues.

- Update to all text, tables, appendices and the addition of new figures using the most recent data provided by the Texas Water Development Board (TWDB). The Board reports were relocated as separate appendices for clarity.

- Update supplemental content in Section 10 – Groundwater Resources. This information is helpful for stakeholders in understanding relevant groundwater issues within the District.

NORTH TEXAS
GROUNDWATER CONSERVATION DISTRICT
MANAGEMENT PLAN

1. 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.

2. 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 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 2016 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 82nd Legislature. Modeled available groundwater is "the amount of water that can be produced on an average annual basis" to achieve a desired future condition.

3. DISTRICT INFORMATION

3.1 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 19, 2009, 81st Leg., R.S., Chapter 248, 2009 Tex. Gen. Laws 686, codified at TEX. SPEC. DIST. LOC. 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.

3.2 DIRECTORS

The District is governed by a Board of Directors, which is comprised of nine appointed Directors, three from each of the three counties' commissioners' courts comprising the District.

3.3 AUTHORITY

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.

3.4 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. A map is included as Figure 1.

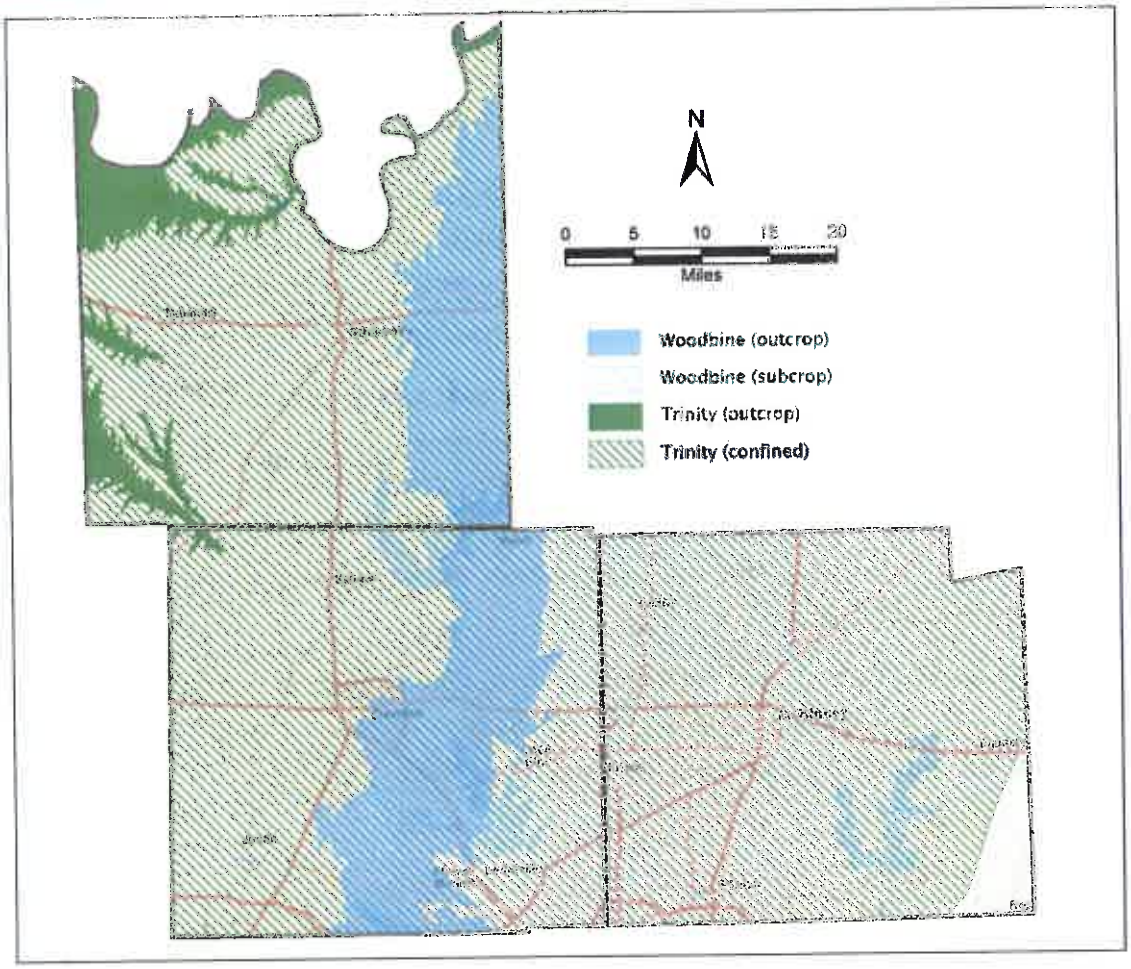


Figure 1. District aquifer map

4. CRITERIA FOR PLAN APPROVAL

4.1 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 ten years in accordance with 31 Texas Administrative Code (TAC) §356.5(a).

4.2 BOARD RESOLUTION

A certified copy of the North Texas Groundwater Conservation District resolution adopting the plan is located in Appendix A – District Resolution.

4.3 PLAN ADOPTION

Public notices documenting that the plan was adopted following appropriate public meetings and hearings are located in Appendix B – Notice of Meetings.

4.4 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 – Letters to Surface Water Management Entities.

5. 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 temporary rules adopted on October 19, 2010 and amended January 21, 2013, November 12, 2013, August 12, 2014, and on March 1, 2017. (Appendix D). The District anticipates operating under permanent rules in the Spring of 2018 and will amend the Plan accordingly at that time. 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.

6. 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 regards to achieving the District's management goals and objectives. The Annual Report will be delivered to the Board by July 1 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.

7. 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 new or existing well of any size or capacity used solely for domestic use, livestock use, or poultry use; (2) any new or existing well

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; or (3) 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 permanent rules adopted by the District in the future.

GOAL 1 - PROVIDING 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.

Management Objective 1.1

The District will require that all wells be registered in accordance with its current rules.

Performance standard 1.1

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. The District is currently in the beginning phase of making improvements to the online geodatabase that will make additional statistics available for this report such as the aquifer in which wells are being completed. In addition, a handout will be provided annually to local realtor associations detailing the requirement of new property owners to register their existing wells within 90 days of transfer of ownership.

Management Objective 1.2

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 5 wells per month. These inspections will confirm that a well has been registered, accuracy of well location, and accuracy of certain other required well

registration information.

Performance Standard 1.2

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.

Management Objective 1.3

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. The District staff has assumed the responsibility of monitoring all available TWDB wells at least annually. 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 after the current geodatabase improvements project is complete. The results of the monitoring program will be included in the Annual Report presented by the General Manager.

Performance Standard 1.3 (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.

Performance Standard 1.3 (a)

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.

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

Management Objective 1.3 (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 1.3 (b)

The number of wells for which water level data is available will be accessible online after the current geodatabase improvements project is complete.

Management Objective 1.4

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 has established by temporary rule a requirement 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.

Performance Standard 1.4

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

Management Objective 1.5

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 insure 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 1.5 (a)

Percentage of registered non-exempt wells inspected by District personnel annually is provided

in the Annual Report presented by the General Manager.

Performance Standard 1.5 (a)

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 no later than 2019, after the current geodatabase improvements project is completed.

Management Objective 1.6

A critical component to accomplishing the District's mission is to ensure that proper data is being collected and that the data is being utilized to the fullest extent and efficiently. Shortly after the District's creation, the District hired a consultant to build an online geodatabase that would make workflows, data entry and data utilization easier and more efficient for well owners, well drillers, general public, District staff and the Board of Directors. After several years of utilizing the geodatabase the District had built, the District has identified areas in which the existing system can be upgraded

Performance Standard 1.6

The District will make substantial upgrades and improvements to the online geodatabase by 2019, in order to make workflows, data entry and data utilization easier and more efficient.

Management Objective 1.7

The District will develop a methodology to quantify current and projected annual groundwater production from exempt wells.

Performance Standard 1.7

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 by 2019.

GOAL 2 - CONTROLLING AND PREVENTING THE WASTE OF GROUNDWATER

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

Management Objective 2.1

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 at least once a year.

Performance Standard 2.1

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.

Management Objective 2.2

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 2.2

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.

Management Objective 2.3

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.

Performance Standard 2.3

The District will compare existing state records and field staff observations with well registration database to identify noncompliant well owners.

Management Objective 2.4

The District will investigate instances of potential waste of groundwater.

Performance Standard 2.4

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

Due to the geology of the Northern Trinity/Woodbine Aquifers in the District, problems resulting from water level declines causing subsidence are not technically feasible and as such, a goal addressing subsidence is not applicable.

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.

Management Objective 4.1

Coordination with surface water management agencies - the designated board member or General Manager will attend, at a minimum 75 percent of the meetings and events of the Region C Water Planning Group. Participation in the regional water planning process will ensure coordination with surface water management agencies that are participating in the regional water planning process.

Performance Standard 4.1

The designated board member or General Manager will report on actions of the Region C Water Planning Group as appropriate to the board, and the General Manager will document meetings attended in the Annual Report.

Management Objective 4.2

The General Manager of the District will monitor and participate in relevant stakeholder meetings concerning water resources relevant to the District.

Performance Standard 4.2

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

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.

Management Objective 5.1

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 5.1

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.

Management Objective 5.2

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

Performance Standard 5.2

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

Management Objective 6.1

The District will make available through the District's website easily accessible drought information with an emphasis on developing droughts and on any current drought conditions. Examples of links that will be provided include routine updates to the Palmer Drought Severity Index (PDSI) map for the region, the Drought Preparedness Council Situation Report (routinely posted on the Texas Water Information Network, and the TWDB Drought Page at https://waterdatafortexas.org/drought.

Performance Standard 6.1

Current drought conditions information from multiple resources including the Palmer Drought Severity Index (PDSI) map for the region and the Drought Preparedness Council Situation Report is available to the public through the District's website

GOAL 7 - ADDRESS 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.

Management Objective 7.1

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.

Performance Standard 7.1

Link to the electronic library of water conservation resources supported by the Water Conservation Advisory Council is available on the District's website.

Management Objective 7.2

The District will submit at least one article regarding water conservation for publication each year to at least one newspaper of general circulation in the District's Counties.

Performance Standard 7.2

A copy of the article submitted by the District for publication to a newspaper of general circulation in one of the District's Counties regarding water conservation will be included in the Annual Report to the Board of Directors.

Management Objective 7.3

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 7.3

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.

Management Objective 7.4

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.

Performance Standard 7.4

Link to rainwater harvesting resources at the TWDB is available on the District's website.

Management Objective 7.5

Educate public on importance of brush control as it relates to water table consumption.

Performance Standard 7.5

Link to information concerning brush control is available on the District's website.

GOAL 8 - ACHIEVING DESIRED FUTURE CONDITIONS OF GROUNDWATER RESOURCES

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 8.1

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 8.1

The General Manager will include a summary report on the status of achieving the adopted desired future conditions in the Annual Report beginning by 2019, after the geodatabase improvements project is complete. This summary report will primarily be based on data collected from the District's groundwater monitoring program.

Four years after the adoption of this management plan, and based on the annual review conducted by the General Manager and the Board of Directors, the Board of Directors will determine which of the following are needed for the District; (1) the current management plan and rules are working effectively to meet the adopted desired future conditions, (2) specific amendments need to be made to this management plan and/or rules in order to achieve the adopted desired future conditions, (3) amendments are needed to the adopted desired future conditions in order to better meet the needs of the District, or (4) a combination of (2) and (3). This determination will be made at a regularly scheduled meeting of the Board of Directors.

8. ESTIMATES OF TECHNICAL INFORMATION

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.

8.1 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 is 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 adopted DFCs for the Trinity and Woodbine aquifers are documented in Table 1. The DFCs are based on average drawdown in feet after 50 years for the Woodbine aquifer and for each Trinity aquifer units.

The Modeled Available Groundwater (MAG) estimates in GMA-8 for the Woodbine and Trinity aquifers are documented in Table 2 and are based on the following GAM runs: GAM Run 10-063 MAG (Trinity aquifer) and GAM Run 10-064 MAG (Woodbine aquifer). The GAM Runs are included as Appendix E. These estimates will be updated when the TWDB completes the development of the new GAM Runs based on the newly adopted DFCs mentioned above. When the updated MAG estimates are made available to the District, the District will follow the required process to amend the Plan.

Table 1. Current desired future conditions for the Trinity and Woodbine aquifers based on total average feet of drawdown

GMA-8 Adopted DFCs					
County	**Woodbine**	**Paluxy**	**Glen Rose**	**Twin Mountain**	**Antlers**
Collin	459	705	339	526	570
Cooke	2	-	-	-	176
Denton	22	552	349	716	395

Table 2. Estimates of Modeled Available Groundwater for pumping in the Trinity and Woodbine aquifers (GAM Run 10-063 and GAM Run 10-064)

County	Desired Future Condition (feet of drawdown after 50 years)	Modeled Available Groundwater (acre-feet per year)
Collin	Paluxy - 298	1,762
Collin	Glen Rose - 247	0
Collin	Hensell - 224	103
Collin	Hosston - 236	239
Collin	Woodbine - 154	2,509
Collin	County Total	4,613
Cooke	Paluxy - 26	3,528
Cooke	Glen Rose - 42	0
Cooke	Hensell - 60	1,611
Cooke	Hosston - 78	1,711
Cooke	Woodbine - 0	154
Cooke	County Total	7,004
Denton	Paluxy - 98	9,822
Denton	Glen Rose - 134	0
Denton	Hensell - 180	3,112
Denton	Hosston - 214	6,399
Denton	Woodbine - 16	4,126
Denton	County Total	23,459
District Total		**35,076**

8.2 AMOUNT OF GROUNDWATER BEING USED WITHIN THE DISTRICT

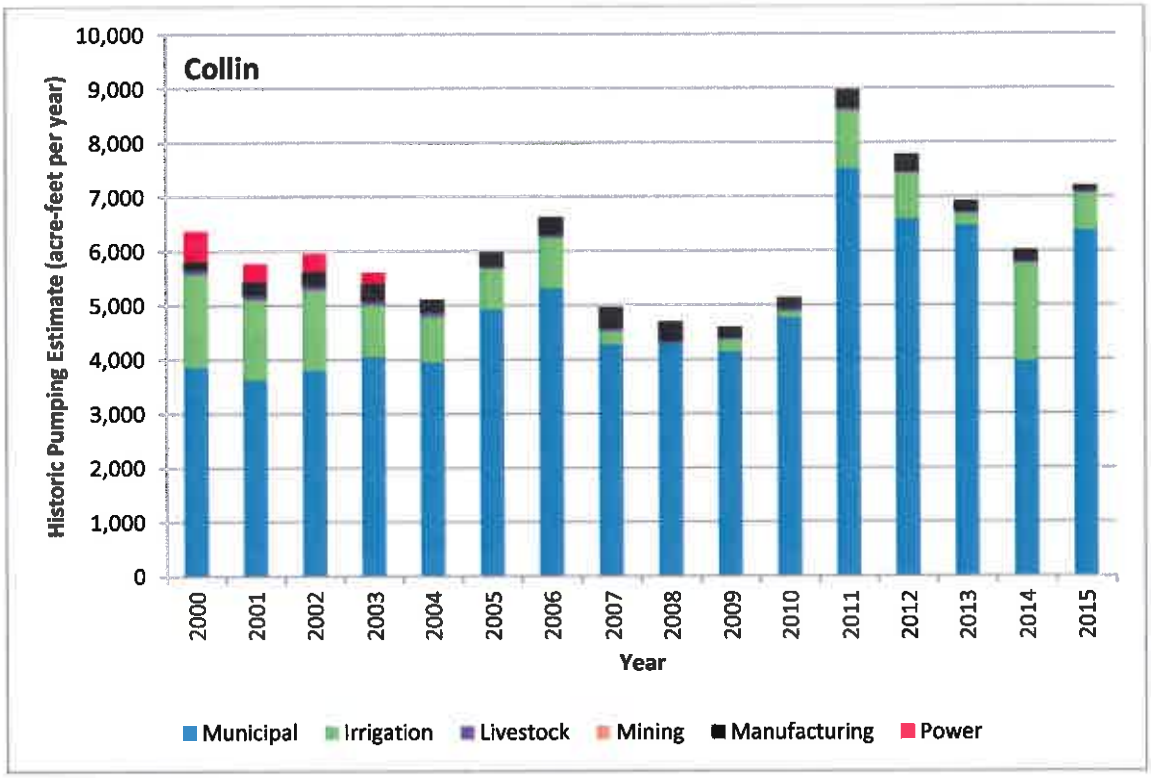
Estimates of historical water use, especially estimates from recent times, are very important during the process of developing water demand projections during the planning process. This is because changes in the volumes and types of water use, especially on a regional basis, will typically occur relatively 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 2000 through 2015 for the six primary water use sectors from the TWDB Water Use Survey are presented in Appendix F and Figure 2.

Estimated historical groundwater use in the District by category in 2015 was 90 percent for

municipal use, seven percent for irrigation use, two percent for livestock use, less than 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.

Total use was about 26,530 acre-feet in 2000, around 20,000 acre-feet per year from 2000 through 2006, generally increased between 2008 and 2012 to a maximum of about 37,525 acre-feet in 2011, generally decreased from 2011 through 2015. Total groundwater use reached a total volume in 2015 of 27,313 acre-feet. Usage for irrigation purposes was greatest from 2000 through 2006 and decreased to zero in 2008. Water use for mining purposes increased significantly in 2008 through 2011. Livestock use remained on average, 1,000 acre-feet per year from 2000 through 2004 and then decreased by about half to around 589 acre-feet per year from 2008 through 2011. Water use for steam-electric power generation varied from over 500 acre-feet per year in 2000 to approximately 336 acre-feet per year in 2001 and 337 acre-feet in 2002. No usage for power occurred in 2004 through 2015. Generally, municipal use has been greater than about 15,000 acre-feet per year throughout the historical record with maximum usage in 2011 (29,919 acre-feet), 2012 (26,424 acre-feet, and 2015 (24,479 acre-feet).



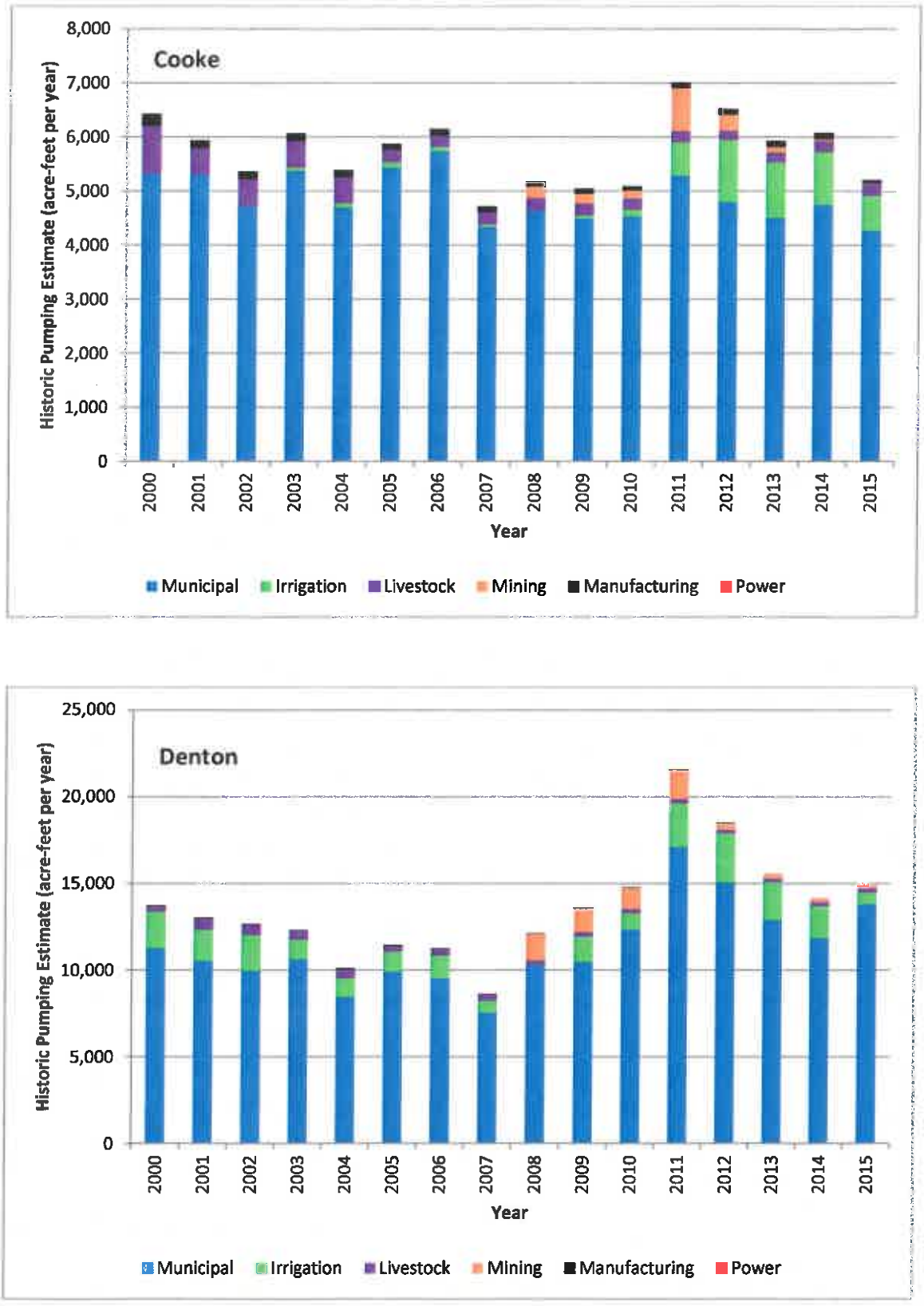


Figure 2. Historical groundwater use estimates by county, 2000-2015

8.3 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 16-004 dated May 16, 2016. Water budget values of recharge extracted for the transient model period indicate that precipitation accounts for 13,851 acre-feet per year of recharge to the Trinity aquifer and 55,555 acre-feet per year of recharge to the Woodbine aquifer within the boundaries of the North Texas GCD (Appendix E).

8.4 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 16-004 (Appendix E). Values from the transient model period are 27,471 acre-feet per year of discharge from the Trinity aquifer and 35,588 acre-feet per year of discharge from the Woodbine aquifer to surface water bodies that are located within the North Texas GCD.

8.5 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 16-004 (Appendix E). 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 7,668 and 16,202 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 41,751 and 18,411 acre-feet per year, respectively. These volumes indicate that the District gains over 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 16-004 provided by the TWDB are given in Appendix E. The GAM run estimates flow of 3,280 acre-feet per year from the Woodbine Aquifer to younger units and flow of 6,595 acre-feet per year from the Woodbine Aquifer to the Washita and Fredericksburg confining units. The run also estimated that 16,473 acre-feet per year flows from overlying units to the Trinity Aquifer.

8.6 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 F summarizes the projected surface water supplies in the District based on the 2017 Texas State Water Plan, as provided by Allen (2017). This table is organized by county and water user groups and provides projected values for every decade from2020 to 2070.

Total projected surface water supplies by county are illustrated in Figure 3. The estimated projections range from a maximum of 150,370 acre-feet per year in 2020 to a minimum of 112,754 acre-feet per year in 2070 for Collin County, from a maximum of 3,344 acre-feet per year in 2070 to a minimum of 1,929 acre-feet per year in 2020 for Cooke County, and from a maximum of 143,405 acre-feet per year in 2030 to a minimum of 130,146 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 264,000 acre-feet per year, are significantly greater than historical groundwater use in the District, which is on the order of 20,000 to 30,000 acre-feet per year for 1980 through 2008.

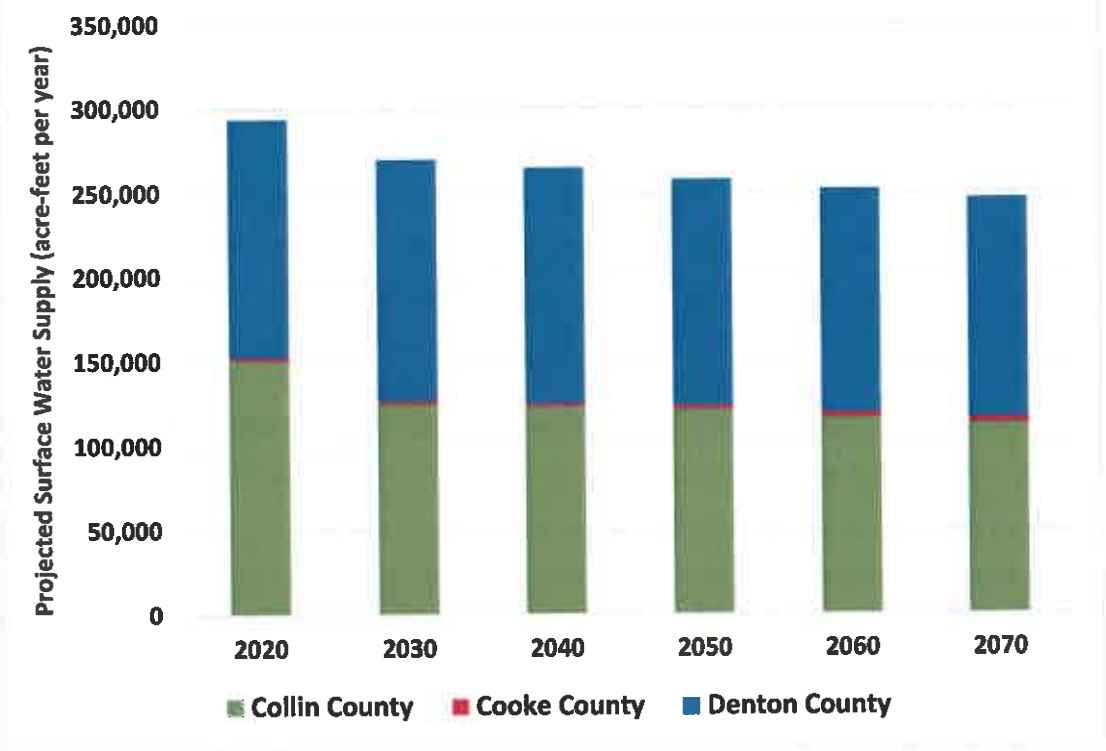


Figure 3. Projected surface water supply within the District by county

8.7 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 2017 Texas State Water Plan are presented in Appendix F. The projected total demand for the District increases significantly from 419,457 acre-feet per year in 2020 to 820,443 acre-feet per year in 2070. Projected demands are significantly higher in Collin and Denton counties than in Cooke County (Figure 4).

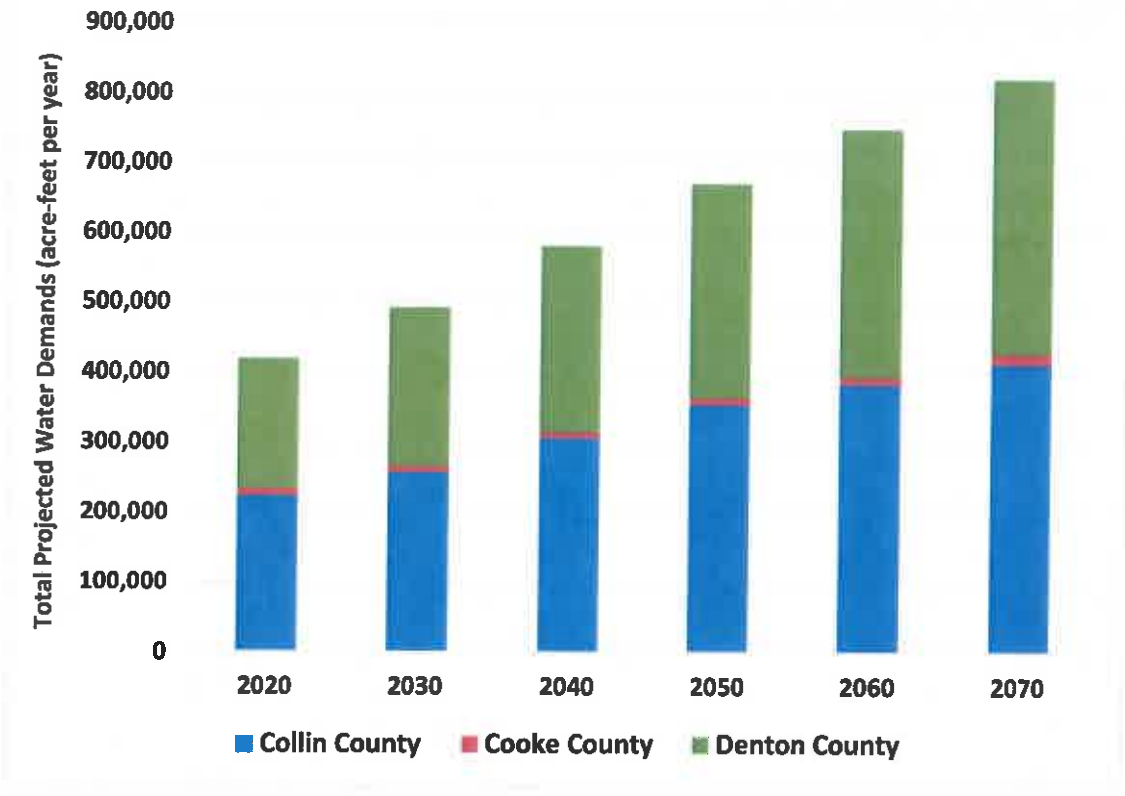


Figure 4. Water demand projections within the District by county

8.8 PROJECTED WATER SUPPLY NEEDS

This section replaces part of the former Section 6.0 Water Supply Plans.

Projected water needs for the counties in the District have been developed for inclusion in the 2017 Texas 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 F summarizes the projected water needs for the District based on the database for the 2017 Texas State Water Plan received from Allen (2017). Data in this table are organized by county, water user group, and basin. The projected total water needs by county are illustrated in Figure 5.

Data for the 2017 State Water Plan projects future water needs for all three of the counties in the District. There are 51 water user groups in Collin County. A water need at some point between 2020 and 2070 is projected for all but five of those water user groups. The projected need in Collin County increases significantly from 18,865 acre-feet per year in 2020 to 207,655 acre-feet per year in 2070. Of the 19 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 849 acre-

feet per year in 2020 to 5,017 acre-feet per year in 2070. Fifty-three water user groups are listed for Denton County. Of those, a need at some point between 2020 and 2070 is projected for all but four of those water user groups. The need in Denton County significantly increases from 12,241 acre-feet per year in 2020 to 216,283 acre-feet per year in 2070. For the District as a whole, the total projected water need increases from 31,955 acre-feet per year in 2020 to 428,955 acre-feet per year in 2070.

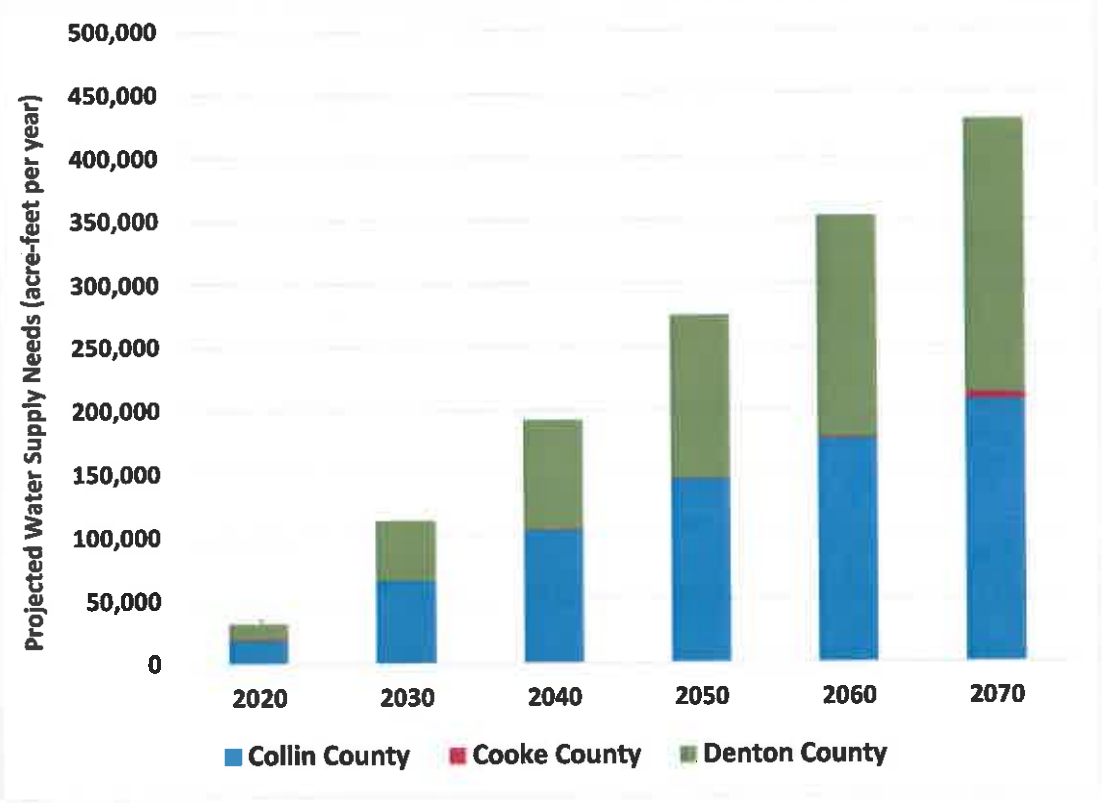


Figure 5. Total projected water supply needs within the District by county

8.9 WATER MANAGEMENT STRATEGIES

The database for the 2017 Texas 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 2017 State Water Plan are shown in Appendix F by water user group ("WUG").

9. POPULATION

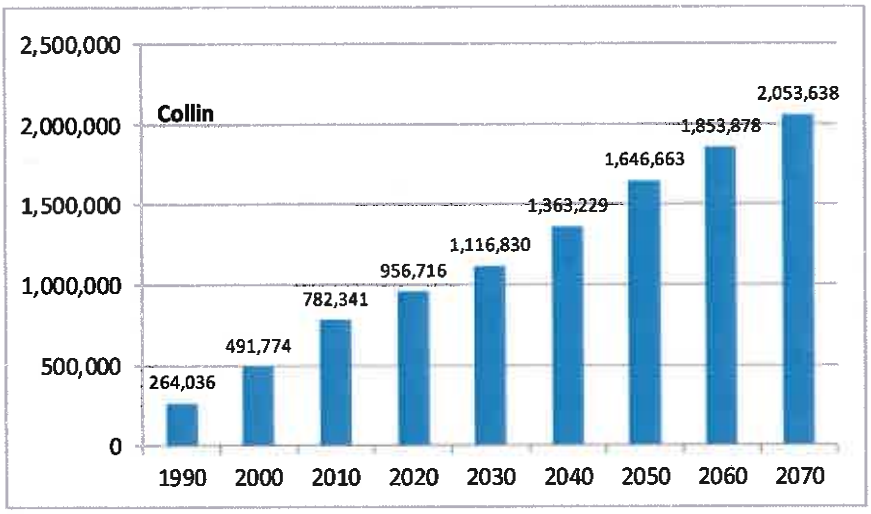
Water Use and Water Demands are now addressed in Sections 10.B and 10.G.

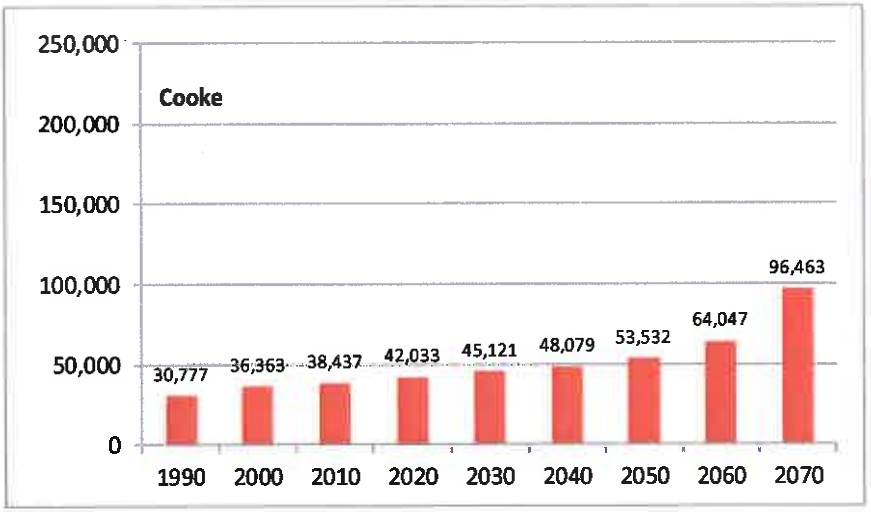
Primary activities involved in the development of a water resources management plan include the analysis and development of projections of population, historical and current water use, and water demands in the future (for a defined period of time). In order to develop projections for how much water supply 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 2016 Region C Water Plan, the population projection for the District for 2020 was 1,900,348 increasing 223 percent to 4,240,586 in 2070 (Table 3). Population trends for each county of the District are shown in Figure 6.

Table 3. Population projections 2016 Region C Water Plan

	Historical			Projected					
County	1990	2000	2010	2020	2030	2040	2050	2060	2070
Collin	264,036	491,774	782,341	956,716	1,116,830	1,363,229	1,646,663	1,853,878	2,053,638
Cooke	30,777	36,363	38,437	42,033	45,121	48,079	53,532	64,047	96,463
Denton	273,525	432,976	662,614	901,645	1,135,397	1,348,271	1,576,424	1,846,314	2,090,485
Total	568,338	961,113	1,483,392	1,900,394	2,297,348	2,759,579	3,276,619	3,764,239	4,240,586





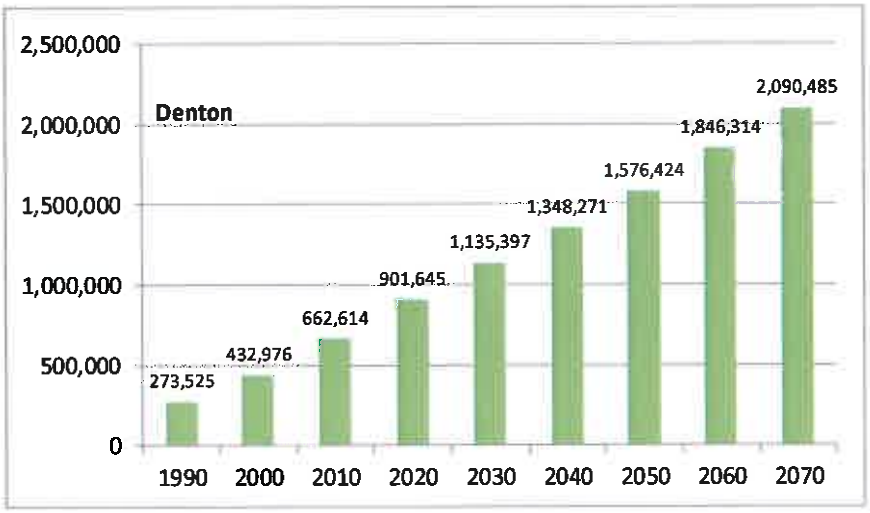


Figure 6. Population trends, by county

10. GROUNDWATER RESOURCES

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 7). 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 8).

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) (Figures 9 and 10). 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 11). 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 12). 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.

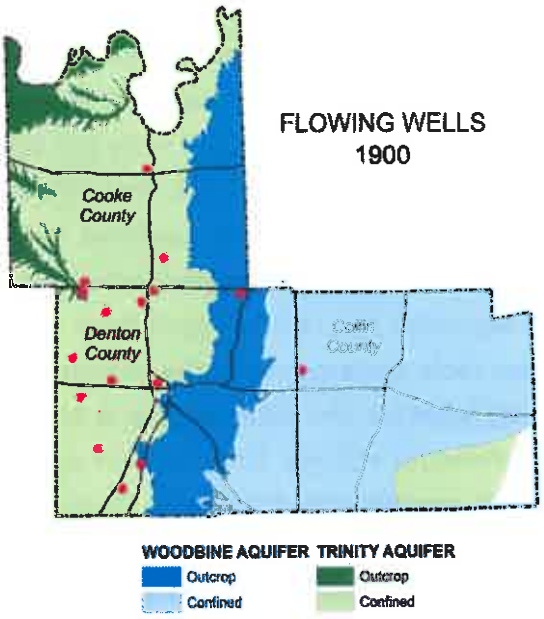


Figure 7. Location of wells flowing at the land surface in 1900 (Hill, 1901).

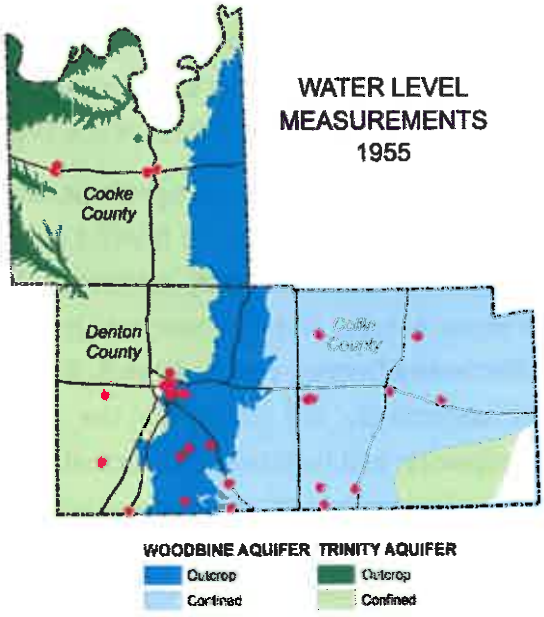


Figure 8. Location of wells having water-level measurements taken in 1955 (Nordstrom, 1982).

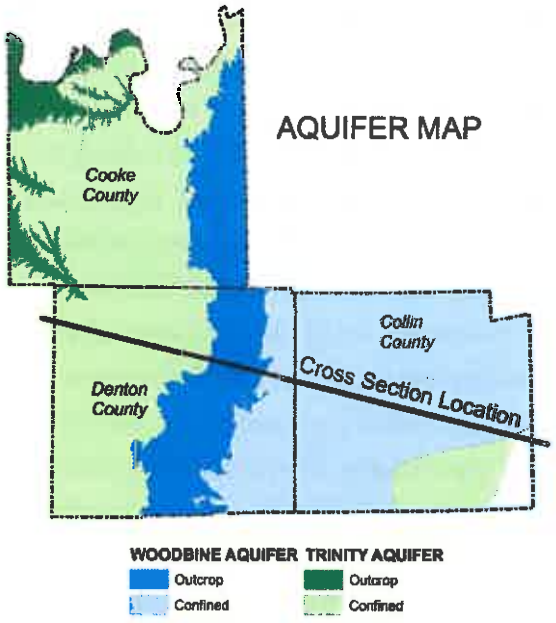


Figure 9. Aquifer Map

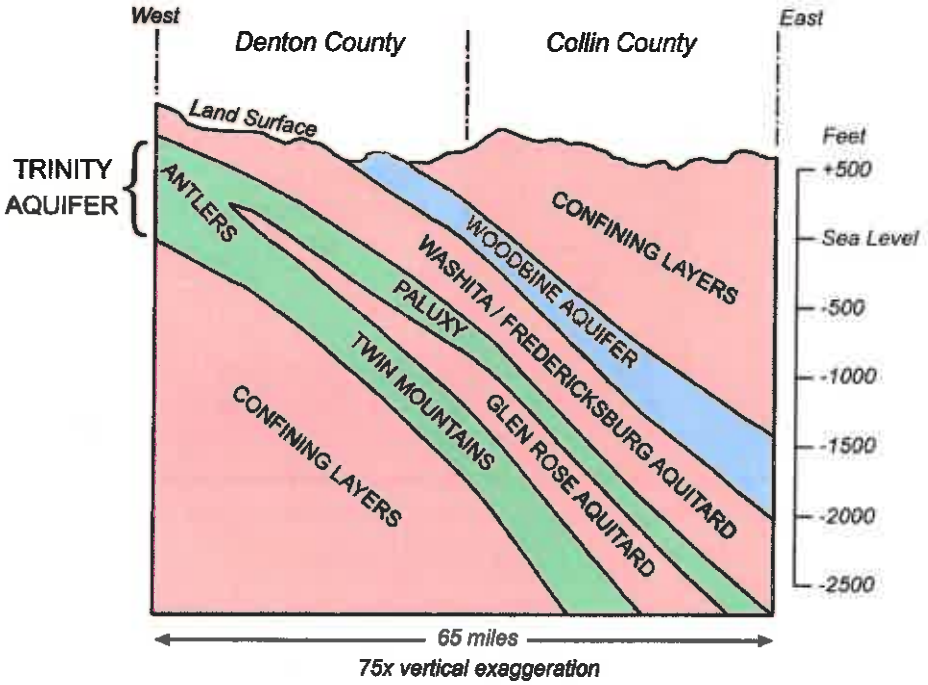


Figure 10. Cross section of the Trinity and Woodbine aquifers in the North Texas GCD.

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 13). In 2015, there were 24 TWDB wells in the District for which 2015 water level data were available (Figure 14). These water level data are useful for the evaluation of "state of the aquifer" conditions relative to the DFCs.

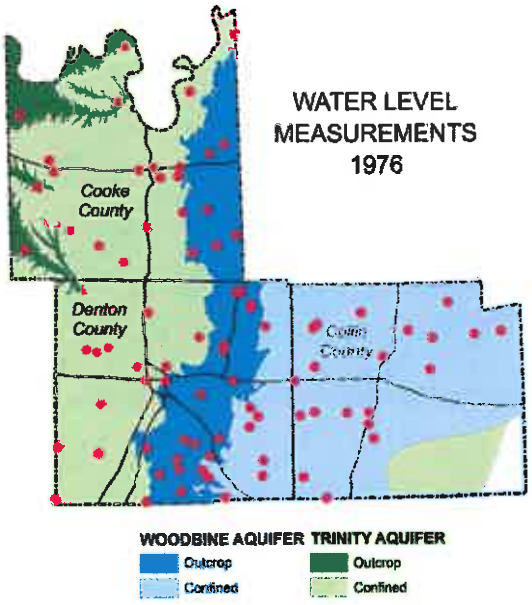


Figure 11. Location of wells having water-level measurements taken in 1976 (Nordstrom, 1982).

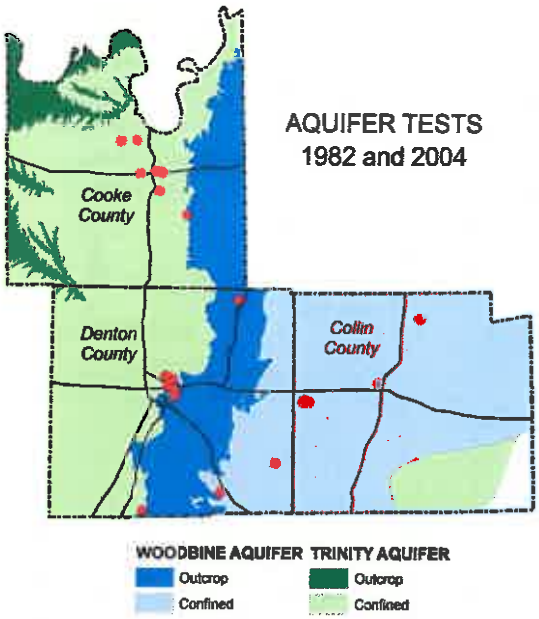


Figure 12. Location of wells having pumping test data reported by Nordstrom (1982) and used by Bene and others (2004) in the Northern Trinity/Woodbine GAM.

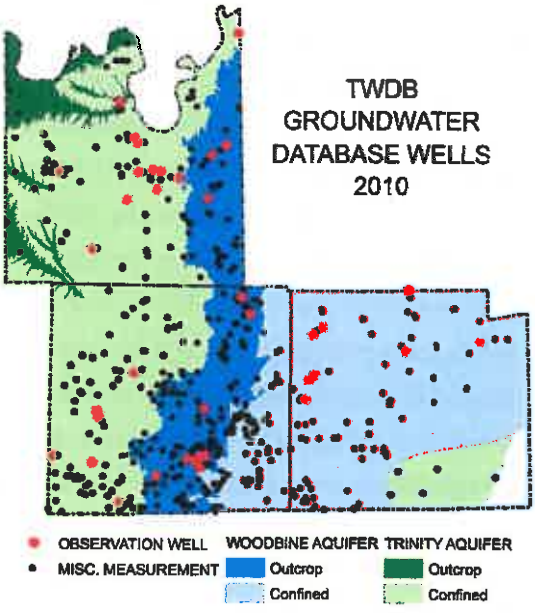


Figure 13. Location of wells having water-level measurements in the TWDB groundwater database. Observation wells that are monitored annually are shown in red.

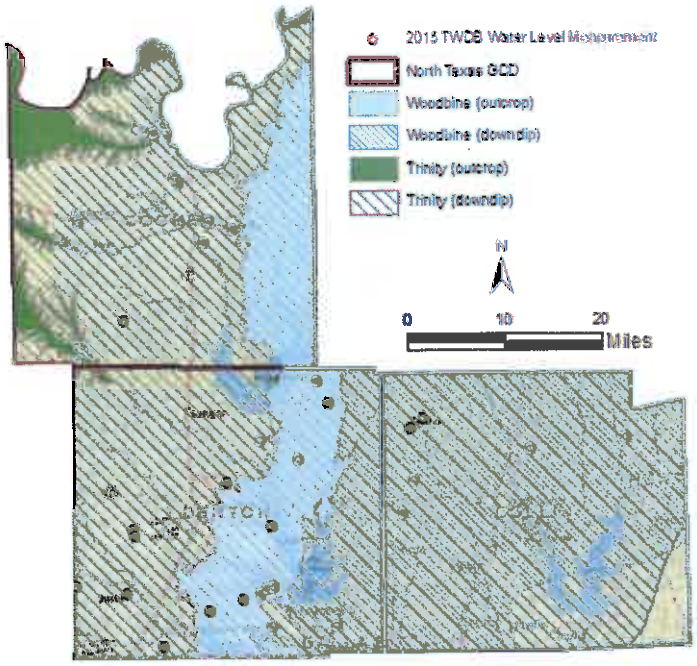


Figure 14. Location of wells having water-level measurements in the TWDB database in year 2015.

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 overdrafting 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 overdrafting may be necessary while other water supplies are developed. However, it is important to note that while the concept of temporary overdrafting 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 overdrafting (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 2011 and 2016 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, and 2016) 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 2016 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.

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 Figures 4 and 5 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 Figures 6 and 9), and the GAM used the same aquifer pumping tests reported by Nordstrom (1982).

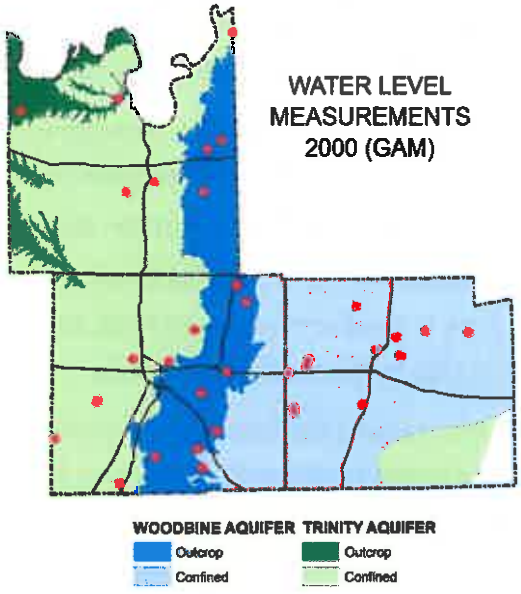


Figure 14. Location of wells having water-level measurements taken in 2000 that were used in the Northern Trinity/Woodbine GAM (Bene and others, 2004).

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 15). The regions are delineated based on stratigraphic and lithologic similarities (Figure 16).

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 17). 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.

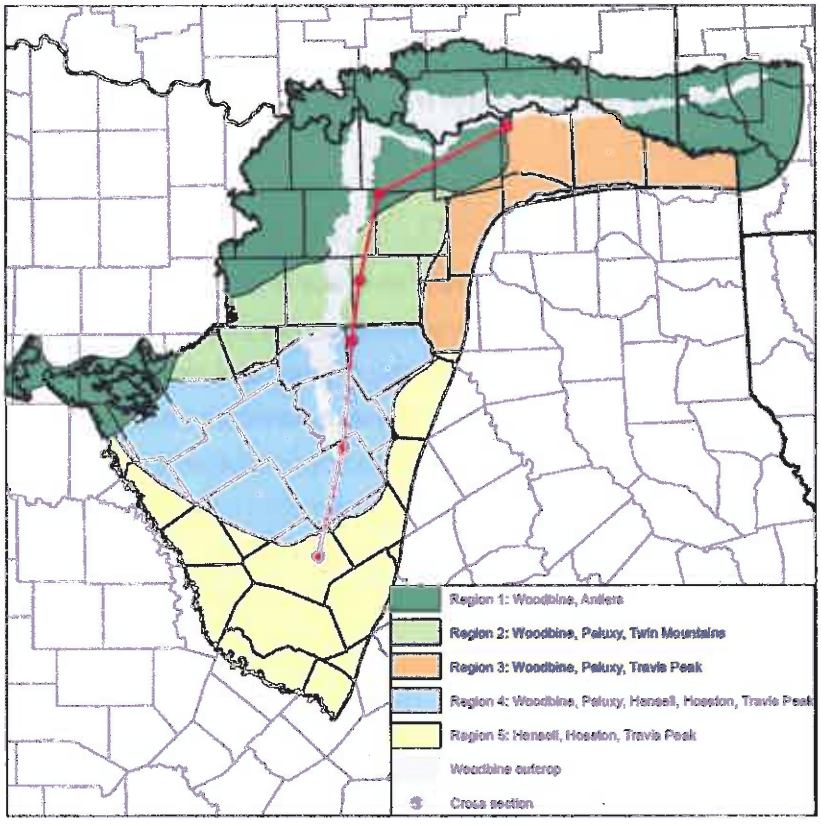


Figure 15. Northern Trinity GAM Regions (from Kelley and others, 2014).

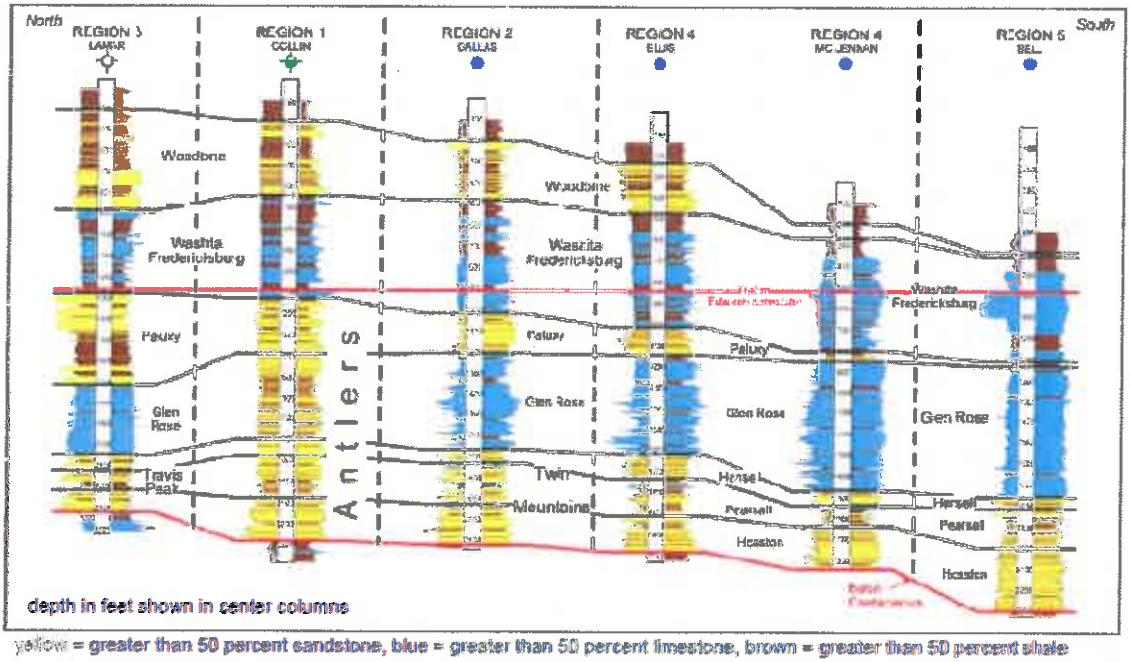


Figure 16. Cross section through Regions 1 through 5 (from Kelley and others, 2014).

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 17. North Trinity GAM terminology for Regions 1 through 5 (from Kelley and others, 2014).

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APPENDIX A

Resolution Adopting District Management Plan

RESOLUTION ADOPTING DISTRICT MANAGEMENT PLAN

RESOLUTION 2017-03-14-2

THE STATE OF TEXAS	§
	§
NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT	§

WHEREAS, North Texas Groundwater Conservation District (the "District") was created as a groundwater conservation district 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 19, 2009, 81st Leg., R.S., ch. 248, 2009 Tex. Gen. Laws 686, codified at TEX. SPEC. DIST. LOC. LAWS CODE ANN. ch. 8856 ("the District Act");

WHEREAS, under the direction of the Board of Directors of the District (the "Board"), and in accordance with Sections 36.1071, 36.1072, and 36.108 of the Texas Water Code, and 31 Texas Administrative Code Chapter 356, the District has undertaken the readoption of its Management Plan;

WHEREAS, Section 36.1085 of the Texas Water Code requires the District to ensure that its Management Plan contains the goals and objectives consistent with achieving the Desired Future Conditions ("DFCs") adopted through the joint planning process set forth in Chapter 36 of the Texas Water Code;

WHEREAS, Section 36.1071(e) requires the District, after notice and hearing, to readopt its Management Plan at least once every five years;

WHEREAS, the District initially adopted its Management Plan on April 19, 2012;

WHEREAS, as part of the process of readopting its Management Plan with revisions, the District requested and received the assistance of the Texas Water Development Board (the "TWDB") and worked closely with the TWDB staff to obtain its input and comments on the draft Management Plan, and its technical and legal sufficiency;

WHEREAS, the Board, District staff, and the District's geoscientist have reviewed and analyzed the District's best available data, groundwater availability modeling information, and other information and data required by the TWDB to readopt the Management Plan with revisions;

WHEREAS, the District issued the notice in the manner required by state law and held a public hearing on March 14, 2017, at 10:00 a.m. at the District's meeting place located at 7985 FM 2931, Aubrey, Texas 76227, to receive public and written comments on the revised Management Plan;

WHEREAS, the District coordinated its planning efforts on a regional basis with the appropriate surface water management entities during the preparation of the Management Plan;

WHEREAS, the Board finds that the Management Plan meets all of the requirements of Chapter 36, Water Code, and 31 Texas Administrative Code Chapter 356; and

WHEREAS, after the public hearing, the Board of Directors met in a regular board meeting on March 14, 2017, properly noticed in accordance with state law, and considered adoption of the attached Management Plan and approval of this resolution after due consideration of all comments received.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT AS FOLLOWS:

1. The above recitals are true and correct;

2. The Board of Directors of the District hereby adopts the attached Management Plan as the Management Plan for the District, subject to those amendments necessary based on comments received from the public at the public hearing or Board meeting, recommendations from the District Board, staff, or legal counsel, or to incorporate technical information received from the Texas Water Development Board and/or District geoscientist;

3. The Board President and the General Manager of the District are further authorized to take all steps necessary to implement this resolution and submit the Management Plan to the TWDB for its approval; and

4. The Board President and General Manager of the District are further authorized to take any and all action necessary to coordinate with the TWDB as may be required in furtherance of TWDB's approval pursuant to the provisions of Section 36.1072 of the Texas Water Code.

AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 14th day of March, 2017.

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT

By: _____
Vice President

_____
Secretary

APPENDIX B

Evidence that the Management Plan was Adopted

MINUTES OF THE BOARD OF DIRECTORS' PUBLIC HEARING
NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT

TUESDAY, MARCH 14, 2017

MUSTANG SUD ADMINISTRATIVE OFFICES
7985 FM 2931
AUBREY, TEXAS

Members Present:	Evan Groeschel, Joseph Helmberger, Philip Sanders, Ron Sellman, Thomas Smith, and Ronny Young
Members Absent:	Eddy Daniel, Chris Boyd
Staff:	Drew Satterwhite, P.E., Allen Burks, Velma Starks, Carolyn Bennett
Visitors:	Lou Fleischhauer, Collier Consulting/SR Hydrogeologist Neal Welch, City of Sanger

Public Hearing

1. Call to order, establish quorum; declare public hearing open to the public

   Vice President Young called the public hearing to order at 10:02 a.m., established a quorum was present, and declared the hearing open to the public and the Board of Directors introduced themselves.

2. Presentation and Review of Management Plan

   Vice President Young stated purpose of the public hearing was to receive public comments on the District's Management Plan. General Manager Drew Satterwhite informed the Board the revised Management Plan was posted on the District website for at least 20 days, and notice was published in the required newspapers.

   General Manager Satterwhite reviewed the revisions to the Management Plan with the Board of Directors.

3. Public Comment on Management Plan (verbal comments limited to three (3) minutes each; written comments may also be submitted for the Board's consideration)

   Vice President Young asked if there were any public comments on the management Plan. There were no citizens present requesting to comment publicly on the revised Management Plan.

4. Adjourn or continue public hearing on the Management Plan

Ron Sellman motioned to adjourn the public hearing at 10:15 a.m. Thomas Smith seconded the motion and the motion passed unanimously.

##########

Carolyn Bennett
Recording Secretary

Assist. Secretary-Treasurer

MINUTES OF THE BOARD OF DIRECTORS' BOARD MEETING
NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT

TUESDAY, MARCH 14, 2017

MUSTANG SUD ADMINISTRATIVE OFFICES
7985 FM 2931
AUBREY, TEXAS

Members Present:	Evan Groeschel, Joseph Helmberger, Philip Sanders, Ron Sellman, Thomas Smith, and Ronny Young
Members Absent:	Eddy Daniel and Chris Boyd
Staff:	Drew Satterwhite, P.E., Allen Burks, Velma Starks, Carolyn Bennett
Visitors:	Lou Fleischhauer, Collier Consulting/SR Hydrogeologist Neal Welch, City of Sanger

---

1. Pledge of Allegiance and Invocation

   Vice President Ronny Young led the group in the Pledge of Allegiance and provided the invocation.

2. Call to order, establish quorum; declare meeting open to the public

   Vice President Ronny Young called the meeting to order at 10:16 am, established a quorum was present, and declared the meeting open to the public.

3. Public Comment

   There were no citizens present requesting to appear before the Board of Directors for public comment.

4. Consider and act upon approval of Minutes from the February 14, 2017 board meeting and public hearing

   After review and discussion, motion was made by Thomas Smith and seconded by Evan Groeschel to approve the Minutes from the February 14, 2017 board meeting and public hearing. Motion passed unanimously.

5. Consider and act upon approval of invoices and reimbursements.

   After a review, Joseph Helmberger made a motion to approve Resolution 2017-03-14-17-01. Thomas Smith seconded the motion. Motion passed unanimously.

6. Receive reports from the following Committees*:

a. Budget and Finance Committee

1) Receive Monthly Financial Information
General Manager Drew Satterwhite reviewed the financial information with the Board.

b. Investment Committee

No report.

c. Rules and Bylaws Committee

No report.

d. Groundwater Monitoring and Database Committee

General Manager Satterwhite provided the Board with an update on the database. He and Field Technician Allen Burks met with Intera last week and worked through the scope for the database. The scope and costs should be available at the next Board meeting.

e. Policy and Personnel Committee

No report.

f. Conservation and Public Awareness Committee

No report.

g. Management Plan Committee

1) Consider and act upon Management Plan
Vice President Young stated the revisions to the Management Plan were discussed during the public hearing held prior to this meeting. Thomas Smith made a motion to adopt the Management Plan as revised , subject to those amendments necessary based on comments received from the public at the public hearing or Board meeting, recommendations from the District Board, staff, or legal counsel, or to incorporate technical information received from the Texas Water Development Board and/or District geoscientist, and review of the final Management Plan Committee. Evan Groeschel seconded motion. Motion passed unanimously.

h. Desired Future Condition Committee

General Manager Satterwhite informed the Board the Desired Future Conditions adopted by the GMA 8 are under review the Texas Water Development Board.

7. Proclamation for Kenneth "Kenny" Klement

Vice President Young informed the board he had asked General Manager Satterwhite to draft a

proclamation for Kenny Klement. A presentation will be made at Commissioner's Court on March 27th, when Vice President presents a plaque to Kenny Klement's family. Vice President Young read proclamation for Kenny Klement to the Board of Directors.

8. Consider and act upon District's Fund Balance Allocations and Policy

General Manager Satterwhite reviewed the District's Fund Balance Allocations and Policy with the Board of Directors. Philip Sanders made a motion to approve the fund balance policy, with 33% entered as the percent for unassigned fund balance. The motion was seconded by Ron Sellman and passed unanimously.

9. Update and possible action regarding the process for the development of Desired Future Conditions (DFCs)

Joseph Helmberger made a motion to table the update and possible action regarding the process for the development of the Desired Future Conditions. The motion was seconded by Thomas Smith and passed unanimously.

10. Consider and act upon compliance and enforcement activities for violations of District

General Manager Satterwhite updated the Board regarding the enforcement activities relating to Strittmatter Irrigation and Supply.

11. General Manager's Report: The General Manager will update the Board on operational, educational and other activities of the District

General Manager Satterwhite reviewed well registration summary with the Board. Mr. Satterwhite also updated the Board regarding a private water well located in Denton County. The property owner had reached out to the District concerning possible gas being emitted from a water well located on his property. Mr. Satterwhite informed the Board that he personally visited the site and had reached out to the TCEQ Air Quality Division and the Railroad Commission regarding the well. The Railroad Commission has informed him that a contractor has been hired to conduct testing on water in the private well. The Board instructed the General Manager to notify the water section of the Texas Commission on Environmental Quality about the well, and to file a written request with the Railroad Commission regarding the data and results of tests being conducted by the contractor on behalf of the Commission to determine if the water in the well is contaminated.

12. Open Forum / discussion of new business for future meeting agendas

The Board asked for an update on well with gas issues in Denton County at the next meeting. Board Member Helmberger discussed with the Board the possibility of conducting meetings in the evening. General Manager Satterwhite informed the Board the April 11th meeting will be a Visioning Workshop regarding the District Rules, and lunch will be provided for the Board. Thomas Smith asked if LBG Guyton could provide the Board with a certificate for continuing education from LBG Guyton for attending meeting.

13. Adjourn public meeting

Vice President Ronny Young declared the meeting adjourned 10:56 a.m.

##########

Carolyn Bennett
Recording Secretary

Assist. Secretary-Treasurer

NOTICE OF PUBLIC MEETING

OF THE
BOARD OF DIRECTORS of the

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
at the

Mustang SUD Administrative Offices
7985 FM 2931
Aubrey, Texas
Tuesday, March 14, 2017

Public Hearing

The Public Hearing will begin at 10:00 a.m.

Notice is hereby given that the Board of Directors of the North Texas Groundwater Conservation District ("District") will hold a public hearing, accept public comment, and may discuss and consider the District's Management Plan.

Agenda

1. Call to Order; establish quorum; declare hearing open to the public; introduction of Board.
2. Presentation and review of Management Plan.
3. Public Comment on Management Plan (verbal comments limited to three (3) minutes each; written comments may also be submitted for the Board's consideration).
4. Adjourn or continue public hearing on the Management Plan.

At the conclusion of the hearing or any time or date thereafter, the proposed Management Plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, attorneys, consultants, or members of the Board of Directors without any additional notice.

Board Meeting

The regular Board Meeting will begin at 10:15 a.m. or upon adjournment of the above-noticed Public Hearing, whichever is later.

Notice is hereby given that the Board of Directors of the North Texas Groundwater Conservation District ("District") may discuss, consider, and take all necessary action, including expenditure of funds, regarding each of the agenda items below:

Agenda:

1. Pledge of Allegiance and Invocation

2. Call to order, establish quorum; declare meeting open to the public

3. Public comment

4. Consider and act upon approval of the minutes from the February 14, 2017 board meeting

5. Consider and act upon approval of invoices and reimbursements

6. Receive reports from the following Committees*:
   a. Budget and Finance Committee
      1) Receive Monthly Financial Information
   b. Investment Committee
   c. Rules and Bylaws Committee
   d. Groundwater Monitoring and Database Committee
   e. Policy and Personnel Committee
   f. Conservation and Public Awareness Committee
   g. Management Plan Committee
      1) Consider and act upon Management Plan
   h. Desired Future Condition Committee

7. Proclamation for Kenneth "Kenny" Klement

8. Consider and act upon District's Fund Balance Allocations and Policy

9. Update and possible action regarding the process for the development of Desired Future Conditions (DFCs)

10. Consider and act upon compliance and enforcement activities for violations of District

11. General Manager's Report: The General Manager will update the board on operational, educational and other activities of the District

12. Open forum / discussion of new business for future meeting agendas

13. Adjourn public meeting

* Reports from District standing committees will include a briefing by each committee for the Board on the activities of the committee, if any, since the last regular Board meeting.

The above agenda schedules represent an estimate of the order for the indicated items and is subject to change at any time.

These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (855) 426-4433 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

For questions regarding this notice, please contact Velma Starks at (855) 426-4433, at ntgcd@northtexasgcd.org, or at 5100 Airport Drive, Denison, TX 75020.

At any time during the meeting or work session and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the North Texas Groundwater Conservation District Board may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§551.071); deliberation regarding real property (§551.072); deliberation regarding prospective gifts (§551.073); personnel matters (§551.074); and deliberation regarding security devices (§551.076). Any subject discussed in executive session may be subject to action during an open meeting.

This is to certify that I, Velma Starks, posted this agenda on the west side of the Administrative Offices of the District at 5100 Airport Drive, Denison, Texas 75020, and on our website, at or before 5:00 p.m. on March 10, 2017.

Velma Starks

Velma Starks

Sworn and subscribed to before me this 10 day of March 2017.

Carolyn Bennett

Notary Public

(SEAL)

CAROLYN BENNETT
Notary ID # 7072231
My Commission Expires
October 22, 2020

314 E. Hickory
P.O. Box 369
Denton, TX 76202
940-387-3811

Publication(s): Denton Record-Chronicle

PROOF OF PUBLICATION

Being duly sworn (s)he is the Publisher/authorized designee of **Denton Record-Chronicle**, in City of Denton/surrounding areas in Denton County; Newspaper of general circulation which has been continuously and regularly published for a period of not less than one year preceding the date of the attached notice, and that the said notice was published in said newspaper **Denton Record-Chronicle** on the following dates below:

02/22/2017

(signature of Authorized Designee)

Subscribed and sworn to before me this 22 day of Feb by 2017

Bill Patterson

(printed name of Designee)

Witness my hand and official seal:

(signature of notary public)

Notary Public, Denton County, Texas

JULIE K. HAMMOND
Notary Public
State of Texas
ID # 683555-2
My Comm. Expires 01-05-2020

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
PO BOX 508
GAINESVILLE, TX 76241

Ad Number: 0001592161-01 Price: $57.00

Ad Copy:

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT NOTICE OF HEARING ON DISTRICT MANAGEMENT PLAN MARCH 14, 2017

NOTICE IS HEREBY GIVEN to all interested persons in Collin, Cooke, and Denton Counties, Texas:

That the Board of Directors of the North Texas Groundwater Conservation District ("District") will hold a public hearing to discuss, consider, receive public comments, and potentially act upon adoption of the District Management Plan.

The hearing will be held on Tuesday, March 14, 2017, at 10:00 a.m. at the Mustang Special Utility District office, located at 7985 FM 2931, Aubrey, Texas 76227. Comments on the proposed Management Plan may be presented in written or verbal form at the hearing, and persons interested in submitting written comments on the proposed Management Plan in advance may do so by sending comments to the District at P.O. Box 508, Gainesville, Texas 76241. Any person who desires to appear at the hearing and present comments may do so in person, by legal representative, or both. The hearing posted in this notice may be recessed from day to day or continued where appropriate. At the conclusion of the hearing or any time or date thereafter, the proposed Management Plan may be adopted in the form presented or as amended based upon comments received from the public, the Texas Water Development Board, District staff, consultants, or members of the Board without any additional notice.

A copy of the proposed Management Plan will be available 20 days before the date of the hearing by requesting a copy by email at ntgcd@northtexasgcd.org, by accessing the District's website at www.northtexasgcd.org, or by reviewing or copying the proposed Management Plan in person at 5100 Airport Drive, Denison, TX 75020. The District is committed to compliance with the Americans with Disabilities Act (ADA). Any person who needs special accommodations should contact District staff at (855) 426-4433 at least 24 hours in advance if accommodation is needed. Any person who wishes to receive more detailed information on this notice should contact District staff at (855) 426-4433.

drc 2/22/2017

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drc 2/22/2017

FEB 27 2017

STATE OF TEXAS

COUNTY OF COOKE

Before me, the undersigned, on this day personally appeared Lisa Chappell, the Publisher, of the Gainesville Daily Register, a newspaper having general circulation in Cooke County, Texas, who being by me duly sworn, deposes and says that the foregoing attached notice was published in said newspaper on the following date(s), to wit: 02/21.

Lisa Chappell, Publisher

Subscribed and sworn to before me this 21st day of February, 2017

LAURA GARCIA
Notary Public, State of Texas
My Commission Expires 7-27-2019

Notary Public in and for the State of Texas

Legals

Legal Notice

Application has been made with the Texas Alcoholic Beverage Commission for a Mixed Beverage, Mixed Beverage Late Hours and Beverage Cartage Permit by Synergy Restaurant Management LLC d/b/a Applebee's Neighborhood Grill & Bar, located at 4317 Hwy 35 North, Gainesville, Cooke County, Texas 76240. Officers of said company are Sunil D. Dhaliwal as Manager and President and Cheryl F. Green as Vice President.

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
NOTICE OF HEARING ON DISTRICT MANAGEMENT PLAN
MARCH 14, 2017

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Legals

NOTICE TO ADVERTISERS

All advertising published in the Gainesville Daily Register is subject to the following items and conditions:

1) Newspaper reserves the right to refuse to publish any advertisement. All advertisements are accepted for publication subject to review and rejection by the Publisher. Newspaper's acceptance of any advertisement shall not relieve the advertiser of liability for the content.

2) Advertiser assumes full responsibility and liability for advertisements published on its behalf. Advertiser warrants that it has the full legal right to use all legal materials submitted for publication. Advertiser further agrees to indemnify and hold Newspaper harmless from any and all claims and damages, including all costs incurred by Newspaper, resulting from publication of any materials submitted by the advertiser.

3) Advertiser shall not authorize the reproduction of any advertisement, or any part of an advertisement, created by the Newspaper, without the Newspaper's prior consent.

4) Newspaper shall have no responsibility or liability for errors appearing in original or advertiser approved copy. Advertiser agrees to check the advertisement's first publication and notify Newspaper of any errors or the omission of an advertisement, which is Newspaper's fault. Newspaper's sole responsibility or liability shall be to correctly publish the advertisement. Newspaper shall not be liable in any other manner whatsoever to advertiser.

5) Credit & Rate Policy. All Classified categories may require prepayment. If in doubt, please call the Classified Department. All classified display ads require prepayment in the absence of established credit terms. Commercial rates apply to commercial business and applicable classifications, i.e. Help Wanted, Rentals, Real Estate for Sale, etc. Classified line rates are discounted by consecutive insertions. Canceled Classified ads are non-refundable.

6) Adjustment of Errors. It is the responsibility of the advertiser to check each insertion of an advertisement. On consecutive run advertisements, no adjustments will be made by the publishers for errors not corrected after the first day. The Publisher accepts no liability for responsibility for failure to insert an advertisement. The publisher accepts no liability for any error in an advertisement, regardless of cause, except for the cost of the space actually occupied by the error. The publisher reserves the right to revise or reject, at its' opinion, any advertisement deemed objectionable by the Publisher in subject matter, phraseology or composition, or to classify any advertisements. All ads subject to credit approval.

LETTER POLICY

The Gainesville Daily Register encourages readers to express their views. Viewpoints expressed in letters to the editor are those of the writer and not the viewpoints of the Gainesville Daily Register. Letters are limited to 400 words, about one page typed or two pages hand written. Longer letters will be condensed. Frequent writers should limit submissions to one letter per month. The Gainesville Daily Register reserves the right to accept or reject letters based

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Gainesville Daily Register

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Gainesville, TX 76241

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☐ Enclosed is a check for my first month's payment, along with a blank check/deposit slip marked "VOID" across the front

Important: Please include a voided check/deposit slip

Savings/Deposit Slip

McKinney Courier Gazette, Internet

AFFIDAVIT OF LEGAL NOTICE

I, Nick Souders, Inside Sales Manager of the McKinney Courier Gazette, Internet a newspaper printed in the English language in Collin County, State of Texas, do hereby certify that this notice was Published in the McKinney Courier Gazette, Internet on the following dates, to-wit

McKinney Courier Gazette	02/19/17	02/19/17	1
Internet	02/19/17	02/19/17	1

LEGAL: DISTRICT MANAGEMENT 3/14/17 — $159.58

(Description) — (Cost)

Inside Sales Manager of the McKinney Courier Gazette, Internet

Subscribed and sworn on this

21 day of February, 2017

Joni Craghead

Notary Public, State of Texas

JONI CRAGHEAD
Notary Public, State of Texas
Comm Expires 03-14-2020
Notary ID 124850232

NOTICES NOTICES NOTICES NOTICES NOTICES NOTICES NOTICES

LEGAL NOTICE

BID INVITATION

The McKinney Independent School District is now accepting proposals for **Property Casualty Insurance.** Proposals will be received at McKinney Independent School District, #1 Duvall Street, McKinney, Texas 75069 until 3:30 p.m. on Wednesday, March 29, 2017, at which time they will be publicly opened. Proposals must be mailed or delivered in an envelope clearly marked **"RFP2017-543 - Property Casualty Insurance, Attention: B.B. Biering, Purchasing Department."** Copies of specifications may be obtained by calling the Purchasing Department at 469-302-4009, picked up at the above address or accessed from our website at

www.mckinneyisd.net/departments/purchasing

The McKinney Independent School District reserves the right to reject any or all Proposals and to accept the Proposal/Proposal's in the best interest of the McKinney Independent School District.

NOTICES NOTICES NOTICES

LEGAL NOTICE

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
NOTICE OF HEARING ON DISTRICT MANAGEMENT PLAN
MARCH 14, 2017

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NOTICES NOTICES NOTICES

Legal Notice

City of McKinney, Texas
Advertisement for Bids for
The Construction of Craig Ranch Parkway Hike and Bike Trail
Bid # 17-26CC

The City of McKinney is accepting sealed bids for the **Craig Ranch Parkway Hike and Bike Trail** project. **Project No.: PK4413.** Propos-

LEGAL NOTICE

NOTICE TO CREDITORS

Notice is hereby given that original ***Letters Testamentary*** for the **Estate of Elise Louise Benenate, Deceased,** were issued on January 23, 2017, under Docket No. **PB1-1986-2016,** pending in the Probate Court No. 1 of Collin County, Texas, to: *Marguerite Esther Kell.*

Claims may be presented in care of the attorney for the Estate addressed as follows:

Mark W. Sutherland
MARK W. SUTHERLAND, P.C.
14465 Webb Chapel Rd., Suite 206
Farmers Branch, TX 75234

All persons having claims against this Estate which is currently being administered are required to present them within the time and in the manner prescribed by law.

Dated this 27th day of January, 2017.

MARK W. SUTHERLAND, P.C.
By: */s/ Mark W. Sutherland*
Mark W. Sutherland
Attorney for Applicant
E-mail: mark@marksutherlandpc.com

LEGAL NOTICE

NOTICE OF REQUIREMENT TO COMPLY WITH THE SUBDIVISION SERVICE EXTENSION POLICY OF MILLIGAN WATER SUPPLY CORPORATION

Pursuant to Texas Water Code, §13.2502, Milligan Water Supply Corporation hereby gives notice that any person who subdivides land by dividing any lot, tract, or parcel of land, within the service area of Milligan Water Supply Corporation, Certificate of Convenience and Necessity No. 11188, in Collin County, into two or more lots or sites for the purpose of sale or development, whether immediate or future, including re-subdivision of land for which a plat has been filed and recorded or requests more than two water or sewer service connections on a single contiguous tract of land must comply with the Subdivision Service Extension policy stated in the tariff. ("Subdivision Policy") contained in Milligan Water Supply Corporation's tariff.

Milligan Water Supply Corporation is not required to extend retail water to a service applicant in a subdivision where the developer of the subdivision has failed to comply with the Subdivision Policy.

Applicable elements of the Subdivision Policy include:

Evaluation by Milligan Water Supply Corporation of the impact a proposed subdivision service extension will make on Milligan Water Supply Corporation's water supply system and payment of the costs for this evaluation;

Payment of reasonable costs or fees by the developer for providing water supply capacity;

Payment of fees for reserving water supply capacity;

Forfeiture of reserved water supply capacity for failure to pay applicable fees;

Payment of costs of any improvements to Milligan Water Supply Corporation's system that are necessary to provide the water service;

Construction according to design approved by Milligan Water Supply Corporation and dedication by the developer of water facilities within the subdivision following inspection.

Milligan Water Supply Corporation's tariff and a map showing Milligan Water Supply Corporation's service area may be reviewed at Milligan Water Supply Corporation's offices, at 1400 S. Bridgefarmer Rd. Mckinney TX 75069; the tariff and service area map also are filed of record at the Public Utility Commission of Texas.

LEGAL NOTICE

City of McKinney, Texas
Advertisement for Bids for

Notice is here
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Bernard F. Turner
Claims may be
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All persons ha
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Dated this 31

NOTICES

The City of McKinn
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or via an alternate
address. ***Respond***
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date and time. La

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RFQ NUMBER:

DUE DATE/TIME:

MAIL OR DELIVER

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adacompliance@m
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The City reserves

APPENDIX C

Evidence that the District Coordinated Development of the Management Plan with the Surface Water Entities

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT

COLLIN COUNTY - COOKE COUNTY - DENTON COUNTY

MEMO

TO: Surface Water Management Entities OKS

FROM: Drew Satterwhite, P.E., General Manager

DATE: April 20, 2017

SUBJECT: North Texas Groundwater Conservation District Management Plan

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The North Texas Groundwater Conservation District's Management Plan, adopted at the District's Public Hearing held March 14, 2017, is available on the District website, www.northtexasgcd.com. This copy is being made available for your review and files. The North Texas Groundwater Conservation District is required to make this document available to "Political subdivisions as defined by Texas Water Code, Chapter 15, and identified from Texas Commission on Environmental Quality records which are granted authority to store, take, divert, or supply surface water either directly or by contract under Texas Water Code, Chapter 11, for use within the boundaries of a district."

DS:cb

APPENDIX C
Evidence District Coordinated With Surface Water Entities

Entity	Address	Phone No.	County	Email Address
*CITY OF HASLET	105 MAIN ST; HASLET, TEXAS 76052-0000	(817) 307-0263	Denton	drogers@haslet.org, jtucker@haslet.org
*DENTON COUNTY FWSD 1-B	9406 BISCAYNE BLVD; SHUPE VENTURA LINDELOW & OLSON PLLC; DALLAS, TEXAS 75218-2705	(214) 328-1101	Denton	misty.ventura@svlandlaw.com
*DENTON COUNTY RECLAMATION & ROAD DISTRICT	PO BOX 7081; PAUL W PHY ATTORNEY; DALLAS, TEXAS 75209-0081	(214) 691-9448	Denton	no Email
*DENTON COUNTY ROAD UTILITY DISTRICT	200 CRESCENT CT FL 11; DALLAS, TEXAS 75201-1875	(214) 871-8200	Denton	no Email
*FOUR SEASONS RANCH MUD 1	NO OFFICIAL ADDRESS	no phone	Denton	no Email
*JONES ACRES WATER COMPANY	PO Box 1577; Roanoke, Texas 76262	(817) 491-2999	Denton	no Email
*P&M SERVICE COMPANY	PO BOX 7831; THE WOODLANDS, TEXAS 77387-7831	(832) 257-7660	Denton	no Email
*STONEBRIDGE WSC	PO BOX 246; ARGYLE, TEXAS 76226-0246	(940) 241-1386	Denton	tjbonfield@verizon.net
*SUETRAK USA CO INC	PO BOX 577; HUMBLE, TEXAS 77347-0577	(972) 436-9337	Denton	no Email
*TOWN OF WESTLAKE	VILLAGE CIRCLE SUITE 207; ROANOKE, TEXAS 76262-0000	(817) 430-8616	Denton	no Email
*WATER ASSOCIATION OF NORTH LAKE, INC.	25 DOVE CREEK CIRCLE; AUBREY,TEXAS, 76227-7613	no phone	Denton	no Email
AIR PARK HOMEOWNERS ASSOCIATION INC	6355 STINSON ST; PLANO, TEXAS 75093-0000	(972) 931-7186	Collin	charibier@aol.com
ALPHA RANCH WCID	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
ARGYLE WSC	PO BOX 249; ARGYLE, TEXAS 76226-0000	(940) 464-7713	Denton	gab@argylewater.com
BARTONVILLE WSC	1911 E JETER RD; BARTONVILLE, TEXAS 76226-9401	(817) 430-3541	Denton	Lloyd@bartonvillewater.com
BELMONT FWSD 1 OF DENTON COUNTY	19 BRIAR HOLLOW LN STE 245; HOUSTON, TEXAS 77027-2858	(713) 621-3707	Denton	ccrawford@crawlaw.net; kdabbs@crawlaw.net
BELMONT FWSD 2 OF DENTON COUNTY	19 BRIAR HOLLOW LN STE 245; HOUSTON, TEXAS 77027-2858	(713) 621-3707	Denton	ccrawford@crawlaw.net; kdabbs@crawlaw.net
CADDO BASIN SUD	156 CR 1118 GREENVILLE, TEXAS 75401-7514	(903) 527-3504	Collin	caddobasin@yahoo.com
CIRCLE T MUD 1	3 GREENWAY PLZ STE 2000; HOUSTON, TEXAS 77046-0307	(713) 651-0111	Denton	tgreen@coatsrose.com
CIRCLE T MUD 2	3 GREENWAY PLZ STE 2000; HOUSTON, TEXAS 77046-0307	(713) 651-0111	Denton	tgreen@coatsrose.com
CITY OF THE COLONY	5151 S COLONY BLVD; LEWISVILLE, TEXAS 75056-0000	(972) 625-1756	Denton	llavender@thecolonytx.gov
CITY OF ALLEN	1 BUTLER CIR, ALLEN, TEXAS 75013-0000	(972) 727-0100	Collin	sgeorge@cityofallen.org
CITY OF ANNA	PO BOX 776, ANNA, TEXAS 75409-0000	(972) 924-3325	Collin	jparkman@annatexas.gov
City of Aubrey	107 S MAIN ST; AUBREY, TEXAS 76227-0000	(940) 440-9343	Denton	nmdownes@aubreytx.gov
CITY OF CARROLLTON	PO BOX 110535; CARROLLTON, TEXAS 75011-0000	(972) 466 3000	Denton	Brian.Little@cityofcarrollton.com
CITY OF CELINA	302 W WALNUT ST, CELINA, TEXAS 75009-0000	(972) 382-2682	Collin	jjohnson@celina-tx.gov, vfaulkner@celina-tx.gov
CITY OF COPPELL	PO BOX 478; COPPELL, TEXAS 75019-0000	(972) 462-0022	Denton	utility@coppelltx.gov
CITY OF DENTON	901-A TEXAS STREET; DENTON, TEXAS 76209-0000	(940) 349-8230	Denton	Tim.fisher@cityofdenton.com
CITY OF FAIRVIEW	PO BOX 551, MCKINNEY, TEXAS 75069-0000	(972)-562-0522	Collin	jgodwin@fairviewtexas.org , aholmgren@fairviewtexas.org
CITY OF FARMERSVILLE	205 S MAIN ST, FARMERSVILLE, TEXAS 75442-0000	(972) 782-6151	Collin	p.jackson@cofarmersville.tx.us
CITY OF FORT WORTH	1000 THROCKMORTON ST; FORT WORTH, TEXAS 76102-6312	(817) 392-6118	Denton	betsy.price@fortworthtexas.gov
CITY OF FRISCO	6891 MAIN STREET, FRISCO, TEXAS 75035-0000	(972) 335-5551	Collin	staylor@friscotexas.gov
CITY OF GAINESVILLE	200 SOUTH RUSK STREET, GAINESVILLE, TEXAS 76240-0000	(940) 668-4500	Cooke	bsullivan@cogtx.org

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
SURFACE WATER CONTACTS

Entity	Address	Phone No.	County	Email Address
CITY OF HACKBERRY	119 MAXWELL ROAD; FRISCO, TEXAS 75034-0000	(972) 292-3223	Denton	hackberry@prodigy.net
CITY OF HIGHLAND VILLAGE	1000 HIGHLAND VILLAGE RD; LEWISVILLE, TEXAS 75077-0000	(972) 317-0237	Denton	mkite@highlandvillage.org, skriston@highlandvillage.org
CITY OF JOSEPHINE	PO BOX 99, JOSEPHINE, TEXAS 75164-0099	(972) 843-8282	Collin	cityofjosephine@yahoo.com
CITY OF JUSTIN	PO BOX 578; JUSTIN, TEXAS 76247-0000	(940) 648-2541	Denton	bking@cityofjustin.com
CITY OF KRUGERVILLE	5097 US HIGHWAY 377 S; KRUGERVILLE, TEXAS 76227-0000	(940) 365-5833	Denton	susan@krugerville.org
CITY OF KRUM	PO BOX 217; KRUM, TEXAS 76249-0000	(940) 482-3491	Denton	Pattpreserve@aol.com, twilson@ci.krum.tx.us, mbruce@ci.krum.tx.us
CITY OF LEWISVILLE	151 CHURCH ST; LEWISVILLE, TEXAS 75057-0000	(972) 219-3400	Denton	kemadiazar@cityoflewisville.com
CITY OF LUCAS	151 COUNTRY CLUB RD, LUCAS, TEXAS 75002-7663	(972) 727-8999	Collin	dmoody@lucastexas.us
CITY OF MCKINNEY	PO BOX 517, MCKINNEY, TEXAS 75070-0517	(972) 547-7500	Collin	jgray@mckinneytexas.org, knish@mckinneytexas.org
CITY OF MELISSA	PO BOX 409MELISSA, TEXAS 75454-0409	(972) 837-2460	Collin	jcartwright@cityofmelissa.com
CITY OF MURPHY	205 NORTH MURPHY ROAD, PLANO, TEXAS 75074-0000	(972) 424-6021	Collin	customerservice@murphytx.org
CITY OF OAK POINT	100 NAYLOR RD; OAK POINT, TEXAS 75068-2201	(972) 294-2312	Denton	dmousel@oakpointtexas.com
CITY OF PARKER	5700 E PARKER RD, PARKER, TEXAS 75002-0000	(972) 442-6811	Collin	jflanigan@parkertexas.us
CITY OF PLANO	PO BOX 860358, PLANO, TEXAS 75086-0000	(972)-941-7307	Collin	margies@plano.gov
CITY OF PLANO	PO BOX 860358; PLANO, TEXAS 75086-0000	(972) 769-4160	Denton	gentrys@plano.gov
CITY OF PLANO	PO BOX 860358; PLANO, TEXAS 75086-0000	(972)-769-4160	Denton	gentrys@plano.gov
CITY OF PRINCETON	306 N FRONT ST, PRINCETON, TEXAS 75407-0000	(972)-736-2711	Collin	lthornhill@princetontx.us
CITY OF RICHARDSON	411 W Arapaho, Richardson,Texas 75080	(972)-744-4220	Collin	jerry.ortega@cor.gov, richard.boston@cor.gov
CITY OF ROANOKE	108 S OAK ST; ROANOKE, TEXAS 76262-2610	(817) 491-2411	Denton	jstathatos@roanoketexas.com
CITY OF ROYSE CITY	305 ARCH STROYSE CITY, TEXAS 75189-0000	(972) 636-2250	Collin	Brenda.craft@roysecity.com
CITY OF SACHSE	5560 HWY 78, GARLAND, TEXAS 75048-0000	(972)-495-7600	Collin	spoe@cityofsachse.com
CITY OF SANGER	PO BOX 1729; SANGER, TEXAS 76266-0000	(949) 458-7930	Denton	mbrice@sangertexas.org, rwoods@sangertexas.org
CITY OF SOUTHLAKE	1400 MAIN ST STE 320; SOUTHLAKE, TEXAS 76092-7604	(817) 481-5581	Denton	bprice@ci.southlake.tx.us, cmcmurray@ci.southlake.tx.us, erice@ci.southlake.tx.us
CITY OF VAN ALSTYNE	PO BOX 247, VAN ALSTYNE, TEXAS 75495-0247	(903) 482-5426	Collin	tbrown@ci.van-alstyne.tx.com
CITY OF WYLIE	PO BOX 428, WYLIE, TEXAS 75098-0000	(972) 516-6000	Collin	mike.sferra@wylietexas.gov
CLEAR CREEK WATERSHED AUTHORITY	201 S DIXON ST STE 208GAINESVILLE, TEXAS 76240	(940) 668-2404	Cooke/Denton	ccwa-tx@att.net
COLLIN COUNTY MUD 1	19 BRIAR HOLLOW LN STE 245,HOUSTON, TEXAS 77027-2858	(713) 621-3707	Collin	kdabbs@crawlaw.net, ccrawford@crlaw.net
COMMUNITY WATER SERVICE INC	PO BOX 850155; MESQUITE, TEXAS 75185-0000	(972) 286-8051	Denton	Bonnie1015@aol.com
COPEVILLE SUD	PO BOX 135, COPEVILLE, TEXAS 75121-0135	(972) 853-4630	Collin	dhurth@copevillewater.com
COPEVILLE WSC	PO BOX 135, COPEVILLE, TEXAS 75121-0000	(972) 853-4630	Collin	dhurt@copeville.com
CREEKSIDE AT NORTHLAKE	8299 SMALL BLOCK RD; ROANOKE, TEXAS 76262-3328	(817) 854-0011	Denton	creeksideatnorthlake@lincolnapts.com
CREEKSIDE WATER	8299 SMALL BLOCK RD; ROANOKE, TEXAS 76262-3328	(817) 854-0011	Denton	drobinson@amcreit.com
CULLEOKA WSC	PO BOX 909PRINCETON, TEXAS 75407-0000	(972) 736-2592	Collin	culleoka@culleoka.org

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
SURFACE WATER CONTACTS

Entity	Address	Phone No.	County	Email Address
DENTON COUNTY DEVELOPMENT DISTRICT 4	19 BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC;HOUSTON, TEXAS 77027-2801	(713) 968-9855	Denton	tcrawford@crawlaw.net, kdabbs@crawlaw.net
DENTON COUNTY FWSD 10	19 BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	ccrawford@crawlaw.net; mgordon@crawlaw.net
DENTON COUNTY FWSD 11-A	19 BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
DENTON COUNTY FWSD 11-B	19 BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
DENTON COUNTY FWSD 11-C	19 BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
DENTON COUNTY FWSD 1-A	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2500	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 1-C	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2500	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 1-D	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2501	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 1-E	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2502	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 1-F	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2503	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 1-G	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2504	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 1-H	201MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2505	Denton	ross.martin@kellyhart.com;.rebecca.daniels@kellyhart.com
DENTON COUNTY FWSD 4-A	3100 MCKINNON ST STE 950; DALLAS, TEXAS 75201	(214) 981-9090	Denton	glutzel@crawlaw.net
DENTON COUNTY FWSD 6	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	ccrawford@crawlaw.net; kdabbs@crawlaw.net
DENTON COUNTY FWSD 7	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	ccrawford@crawlaw.net; kdabbs@crawlaw.net
DENTON COUNTY FWSD 8-A	19 BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
DENTON COUNTY FWSD 8-B	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
DENTON COUNTY FWSD 8-C	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(713) 621-3707	Denton	judy.mcangus@kellyhart.com; www.kellyhart.com
DENTON COUNTY MUD 4	1980 POST OAK BLVD STE 1380; HOUSTON, TEXAS 77056-3970	(713) 850-9000	Denton	kugle@skdaw.us
DENTON COUNTY MUD 5	1980 POST OAK BLVD STE 1380; HOUSTON, TEXAS 77056-3970	(713) 850-9000	Denton	kugle@skdaw.us
DENTON COUNTY MUD 6	5420 LBJ FWY STE 1300; COATS ROSE YALE RYMAN AND LEE PC; DALLAS, TEXAS 75240-6299	(972) 982-8450	Denton	astepherson@coatsrose.com
EAST FORK FWSD 1	201 MAIN ST STE 2500, FORT WORTH, TEXAS 76102-3129	(817) 332-2500	Collin	Ross.martin@kellyhart.com
EAST FORK SUD	1355 TROY RD, WYLIE, TEXAS 75098-6615	(972) 442-7572	Collin	dana@eastforksud.com
GREATER TEXOMA UTILITY AUTHORITY	5100 AIRPORT DRDENISON, TEXAS 75020-8498	(903) 786-4433	Cooke	Carmen@gtua.org
KIOWA HOMEOWNERS WSC	133 KIOWA DR SLAKE KIOWA, TEXAS 76240-9539	(940) 668-8391	Cooke	gm@kiowawsc.com
LAKE CITIES MUNICIPAL UTILITY AUTHORITY	PO BOX 2017; LAKE DALLAS, TEXAS 75065-2017	(940) 497-2999	Denton	bvickers@lcmua.com
LAVON WSC	PO BOX 188, LAVON, TEXAS 75166-0000	(972) 843-2101	Collin	lwsc@lavonwater.com
MARILEE SUD	PO BOX 1017, CELINA, TEXAS 75009-1017	(972)-382-3222	Collin	donna.marileesud@suddenlinkmail.com; Vicki.msud@suddenlink.com
MEADOW ROAD IMPROVEMENT DISTRICT	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2500	Denton	ross.martin@kellyhart.com; rebecca.daniels@kellyhart.com
MIDWAY WATER UTILITIES INC	12535 REED RD; SUGAR LAND, TEXAS 77478-2837	(281) 207-5800	Denton	gfleitag@swwc.com
MILLIGAN WSC	1400 S BRIDGEFARMER RD, MCKINNEY, TEXAS 75069-0000	(972) 542-1143	Collin	candi@milliganwater.com
MULTI COUNTY WSC	PO BOX 1006GATESVILLE, TEXAS 76528-0000	(254) 865-2269	Cooke	mcwscgv@centurylink.net
MUSTANG SUD	7985 FM 2931; AUBREY, TEXAS 76227-3940	(940) 440-9561	Denton	swright@mustangwater.com

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
SURFACE WATER CONTACTS

Entity	Address	Phone No.	County	Email Address
NEVADA WSC	PO BOX 442, NEVADA, TEXAS 75173-0422	(972) 843-2608	Collin	Nevada@nevadawater.co
NORTH COLLIN WSC	PO BOX 343, MELISSA, TEXAS 75454-0343	(972) 837-2331	Collin	aknight@northcollinwsc.com
NORTH FARMERSVILLE WSC	PO BOX 212, FARMERSVILLE, TEXAS 75442-0212	(972) 782-6257	Collin	No Email
NORTH FORT WORTH WCID 1	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	abenefield@crawlaw.net; cjordan@crawlaw.net
NORTH TEXAS MWD	PO BOX 2408, WYLIE, TEXAS 75098-2408	(972) 442-5405	Collin/Dent	jparks@ntmwd.com, mrickman@ntmwd.com , dhickey@ntmwd.com
NORTHWEST GRAYSON COUNTY WCID 1	PO BOX 715; GORDONVILLE, TEXAS 76245-0715	(903) 523-5886	Cooke	nwwater@verizon.net
OAK POINT WCID 1	3100 MCKINNON ST STE 950; DALLAS, TEXAS 75201-7011	(214) 981-9090	Denton	glutzel@crawlaw.net
OAK POINT WCID 2	3100 MCKINNON ST STE 950; DALLAS, TEXAS 75201-7011	(214) 981-9090	Denton	glutzel@crawlaw.net
OAK POINT WCID 3	3100 MCKINNON ST STE 950; DALLAS, TEXAS 75201-7011	(214) 981-9090	Denton	glutzel@crawlaw.net
OAK POINT WCID 4	5420 LBJ FWY STE 1300; DALLAS, TEXAS 75240-6299	(972) 982-8450	Denton	astepherson@coatsrose.com
PROVIDENCE VILLAGE WCID OF DENTON COUNTY	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	mgordon@crawlaw.net; ccrawford@crawlaw.net
RED RIVER AUTHORITY OF TEXAS	900 8TH ST STE 520, HAMILTON BLDG, WICHITA FALLS, TEXAS 76301	(940)-723-8697	Cooke	ccampbell@rra.dst.tx.us
RED ROCK WSC	PO BOX 270103; FLOWER MOUND, TEXAS 75027-0103	no phone	Denton	no Email
SABINE RIVER AUTHORIT	PO BOX 579, ORANGE, TEXAS 77631-0579	(409) 746-2192	Collin	jtatum@sratx.org
SEIS LAGOS UTILITY DISTRICT	220 SEIS LAGOS TRLWYLIE, TEXAS 75098-8222	(972) 442-6875	Collin	district@slud.us
SMILEY ROAD WCID	201 MAIN ST STE 2500; KELLY HART & HALLMAN LLPFORT WORTH, TEXAS 76102-3129	(817) 332-2500	Denton	ross.martin@kellyhart.com; rebecca.daniels@kellyhart.com
SOUTH DENTON COUNTY WCID 1	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
SOUTH WEST WATER COMPANY	9511 Ranch Rd. 620 North; Austin Tx 78726-2908	(512) 219-2272	Denton	gfleitag@swwc.com
SOUTHLAKE PARK SERVICE INC	3340 SOUTHLAKE PARK RD; SOUTHLAKE, TEXAS 76092-2506	(817) 874-3589	Denton	rc.ohara5@gmail.com
TALLEY RANCH WCID 1 OF DENTON COUNTY	5420 LBJ FWY STE 1300; DALLAS, TEXAS 75240-6299	(972) 982-8450	Denton	astepherson@coatsrose.com
THE LAKES FWSD OF DENTON COUNTY	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; mgordon@crawlaw.net
TOWN OF FLOWER MOUND	2121 CROSS TIMBERS ROAD; LEWISVILLE, TEXAS 75028-0000	(972) 874-6000	Denton	Barbara.leal@flower-mound.com
TOWN OF LINDSAY	PO BOX 153, LINDSAY, TEXAS 76250-0153	(940) 665-4455	Cooke	cityoflindsey@ntin.net
TOWN OF LITTLE ELM	PO BOX 129; LITTLE ELM, TEXAS 75068-0000	972) 975-0404	Denton	kphillips@littleelm.org
TOWN OF NORTHLAKE	1400 FM 407Northlake, TEXAS 76247-	(940) 648-3290	Denton	etamayo@town.northlake.tx.us
TOWN OF PROSPER	PO BOX 307PROSPER, TEXAS 75078-0000	(972) 347-2304	Collin	Frank_Jarmon@prospertx.gov
TRADITION MUD 1 OF DENTON COUNTY	5420 LBJ FWY STE 1300; DALLAS, TEXAS 75240-6299	(972) 982-8450	Denton	astepherson@coatsrose.com
TROPHY CLUB MUD 1	100 MUNICIPAL DR, TROPHY CLUB, TEXAS 76262-5420	(682) 831-4685	Denton	jmcknight@trophyclub.org; lslaght@trophyclub.org
UPPER TRINITY REGIONAL WATER DISTRICT	PO BOX 305; LEWISVILLE, TEXAS 75067-0305	(972) 219-1228	Denton	jpierce@utrwd.com
VALENCIA ON THE LAKE WCID	19BRIAR HOLLOW LN STE 245; LAW OFFICES OF CLAY E CRAWFORD PC; HOUSTON, TEXAS 77027-2801	(713) 621-3707	Denton	cjordan@crawlaw.net; abenefield@crawlaw.net
WOODBINE WSC	PO BOX 1257, GAINESVILLE, TEXAS 76241-1257	(940) 668-8337	Cooke	Rdkemp55@yahoo.com
WYLIE NORTHEAST SUD	PO BOX 1029, WYLIE, TEXAS 75098-1029	(972) 442-2075	Collin	chester@wylienortheastwater.com
WYLIE NORTHEAST SUD	PO BOX 1029, WYLIE, TEXAS 75098-1029	(972) 442-2075	Collin	chester@wylienortheastwater.com

APPENDIX D

North Texas GCD Temporary Rules

North Texas Groundwater Conservation District

Temporary Rules for Water Wells in Collin, Cooke, and Denton Counties, Texas

As Amended on March 1, 2017

Procedural History of Rules Adoption

These temporary rules of the North Texas Groundwater Conservation District were initially adopted by the Board of Directors on October 19, 2010, at a duly posted public meeting in compliance with the Texas Open Meetings Act and following notice and hearing in accordance with Chapter 36 of the Texas Water Code. The temporary rules were subsequently amended, in accordance with all legal requirements, on January 21, 2013, November 12, 2013, August 12, 2014, and on March 1, 2017.

NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT
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North Texas
Groundwater Conservation District

District Rules

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PREAMBLE

The North Texas Groundwater Conservation District ("District") was created in 2009 by the 81st Texas Legislature with a directive to conserve, protect and enhance the groundwater resources of Collin, Cooke, and Denton Counties, Texas. The District's boundaries are coextensive with the boundaries of Collin, Cooke, and Denton Counties, and all lands and other property within these boundaries will benefit from the works and projects that will be accomplished by the District.

The Mission of the North Texas Groundwater Conservation District is to develop rules to provide protection to existing wells, 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 aquifer, insure 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 of the district.

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.

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SECTION 1.
DEFINITION, CONCEPTS, AND GENERAL PROVISIONS

Rule 1.1 Definition of Terms.

In the administration of its duties, the District follows the definitions of terms set forth in Chapter 36, Texas Water Code, and other definitions as follows:

(1) "Agriculture" (or "agricultural") means any of the following activities:

1. cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;

2. the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, by a nursery grower;

3. raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;

4. planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure;

5. wildlife management; and

6. raising or keeping equine animals.

(2) "Animal Feeding Operation" (AFO) means: (1) a lot or facility (other than an aquatic animal production facility) where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and where the animal confinement areas do not sustain crops, vegetation, forage growth, or postharvest residues in the normal growing season over any portion of the lot or facility; or (2) any other facility regulated as an AFO or as a Concentrated Animal Feeding Operation by the TCEQ.

(3) "Aquifer" means a water bearing geologic formation in the District.

(4) "As equipped" for purposes of determining the capacity of a well means visible pipes, plumbing, and equipment attached to the wellhead or adjacent plumbing that controls the maximum rate of flow of groundwater and that is permanently affixed to the well or adjacent plumbing by welding, glue or cement, bolts or related hardware, or other reasonably permanent means.

(5) "Beneficial use" or "beneficial purpose" means use of groundwater for:

1. agricultural, gardening, domestic, stock raising, municipal, mining, manufacturing, industrial, commercial, or recreational purposes;

2. exploring for, producing, handling, or treating oil, gas, sulfur, lignite, or other minerals; or

3. any other purpose that is useful and beneficial to the user that does not constitute waste.

(6) "Board" means the Board of Directors of the District.

(7) "Capped well" means a well that is closed or capped with a covering capable of preventing surface pollutants from entering the well and sustaining weight of at least 400 pounds and constructed in such a way that the covering cannot be easily removed by hand.

(8) "Closed loop geothermal well" means a well used for domestic use purposes that re- circulates water or other fluids inside a sealed system for heating and/or cooling purposes, and where no water is produced from the well or used for any other purpose of use.

(9) "Contiguous" means property within a continuous boundary situated within the District. The term also refers to properties that are divided by a publicly owned road or highway or other easements if the properties would otherwise share a common border.

(10) "District" means the North Texas Groundwater Conservation District created in accordance with Section 59, Article XVI, Texas Constitution, Chapter 36, Texas Water Code, and the District Act.

(11) "District Act" means the Act of May 19, 2009, 81st Leg., R.S., ch. 248, 2009 Tex. Gen. Laws 686, codified at TEX. SPEC. DIST. LOC. LAWS CODE ANN. ch. 8856 ("the District Act"), as may be amended from time to time.

(12) "Domestic use" means the use of groundwater by an individual or a household to support domestic activity. Such use may include water for drinking, washing, or culinary purposes; and may be used for irrigation of lawns, or of a family garden and/or family orchard; for watering of domestic animals. Domestic use does not include water used to support activities for which consideration is given or received or for which the product of the activity is sold. Domestic use does not include use by or for a public water system. Domestic use does not include irrigation of crops in fields or pastures. Domestic use does not include water used for open-loop residential geothermal heating and cooling systems, but does include water used for closed-loop residential geothermal systems. Domestic use does not include pumping groundwater into a pond or other surface water impoundment unless the impoundment is fully lined with an impervious artificial liner and has a surface area equal to or smaller than one-third of a surface acre (14,520 square feet).

(13) "Effective date" means October 19, 2010, which was the original date of adoption of these Temporary Rules.

(14) "Emergency purposes" means the use of groundwater:

(a) to fight fires, manage chemical spills, and otherwise address emergency public safety or welfare concerns; or

(b) for training exercises conducted in preparation for responding to fires, chemical spills, and other emergency public safety or welfare concerns.

(15) "Exempt well" means a new or an existing well that is exempt under Rule 2.1 from certain regulatory requirements in these rules.

(16) "Existing well" means a well that was in existence or for which drilling commenced prior to April 1, 2011.

(17) "General Manager" as used herein is the chief administrative officer of the District, as set forth in the District's bylaws, or the District staff or other Board designee acting at the direction of the General Manager or Board to perform the duties of the General Manager.

(18) "Groundwater" means water percolating below the surface of the earth.

(19) "Groundwater reservoir" means a specific subsurface water-bearing stratum.

(20) "Landowner" means the person who holds possessory rights to the land surface or to the withdrawal of groundwater from wells located on the land surface.

(21) "Leachate well" means a well used to remove contamination from soil or groundwater.

(22) "Livestock" means, in the singular or plural, grass- or plant-eating, single- or cloven- hoofed mammals raised in an agricultural setting for subsistence, profit or for its labor, or to make produce such as food or fiber, including cattle, horses, mules, asses, sheep, goats, llamas, alpacas, and hogs, as well as species known as ungulates that are not indigenous to this state from the swine, horse, tapir, rhinoceros, elephant, deer, and antelope families, but does not mean a mammal defined as a game animal in section 63.001, Parks and Wildlife Code, or as a fur-bearing animal in section 71.001, Parks and Wildlife Code, or any other indigenous mammal regulated by the Texas Department of Parks and Wildlife as an endangered or threatened species. The term does not include any animal that is stabled, confined, or fed at a facility that is defined herein as an Animal Feeding Operation.

(23) "Maintenance Purposes" means the use of water used to flush mains, fire hydrants, or tanks as required by TCEQ.

(24) "Meter" or "measurement device" means a water flow measuring device that can measure

within +/- 5% of accuracy the instantaneous rate of flow and record the amount of groundwater produced or transported from a well or well system during a measure of time, as specifically set forth under Section 8.

(25) "Modify" or "Modified" means performing work on the physical or mechanical components of the well head assembly or downhole portion of a well.

(26) "Monitoring well" means a well installed to measure some property of the groundwater or the aquifer that it penetrates, and does not produce more than 5,000 gallons per year.

(27) "New well" means a water well for which drilling commenced on or after April 1, 2011 or conversion of another type of well or artificial excavation to a water well, including but not limited to a well originally drilled for hydrocarbon production activities that is to be converted to a water well.

(28) "Nursery grower" means a person who grows more than 50 percent of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, "grow" means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

(29) "Penalty" means a reasonable civil penalty set by rule under the express authority delegated to the District through Section 36.102(b) of the Texas Water Code.

(30) "Person" means an individual, corporation, limited liability company, organization, government, governmental subdivision, agency, business trust, estate, trust, partnership, association, or other legal entity.

(31) "Poultry" means chickens, turkeys, non-migratory game birds, and other domestic non-migratory fowl, but does not include any other bird regulated by the Parks and Wildlife as an endangered or threatened species. The term does not include any animal that is stabled, confined, or fed at a facility that is defined by TCEQ rules as an Animal Feeding Operation or a Concentrated Animal Feeding Operation.

(32) "Production" or "producing" means the act of extracting groundwater from an aquifer by a pump or other method.

(33) "Public Water System" means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, which includes all uses described under the definition for "drinking water" in 30 Texas Administrative Code, Section 290.38. Such a system must have at least 15 service connections or serve at least 25 individuals at least 60 days out of the year. This term includes any collection, treatment, storage, and distribution facilities under the control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used

primarily in connection with such system. Two or more systems with each having a potential to serve less than 15 connections or less than 25 individuals but owned by the same person, firm, or corporation and located on adjacent land will be considered a public water system when the total potential service connections in the combined systems are 15 or greater or if the total number of individuals served by the combined systems total 25 or greater at least 60 days out of the year. Without excluding other meanings of the terms "individual" or "served," an individual shall be deemed to be served by a water system if he lives in, uses as his place of employment, or works in a place to which drinking water is supplied from the system.

(34) "Pump" means any facility, device, equipment, materials, or method used to obtain water from a well.

(35) "Registrant" means a person required to submit a registration.

(36) "Registration" means a well owner providing certain information about a well to the District, as more particularly described under Section 3.

(37) "Replacement well" means a new well drilled to replace an existing registered well that meets the requirements set forth in Rule 4.3.

(38) "Rule" or "Rules" or "Temporary Rules" means these Temporary Rules of the District regulating water wells, which shall continue to be effective until amended or repealed.

(39) "Substantially alter" with respect to the size or capacity of a well means to increase the inside diameter of the pump discharge column pipe size of the well in any way, change the depth or diameter of a well bore, increase the size of the pump or pump motor on the well, or performing work on the well in a way that involves reaming, setting casing, or grouting.

(40) "TCEQ" means the Texas Commission on Environmental Quality, or its predecessor or successor agency.

(41) "Tract" means a contiguous parcel of land under the ownership of a single entity, such as a corporation, partnership or trust, or an individual or individuals holding as joint owners or tenants in common.

(42) "Transfer" means a change in a registration as follows, except that the term "transfer" shall have its ordinary meaning as read in context when used in other contexts:

(a) ownership; or

(b) the person authorized to exercise the right to make withdrawals and place the groundwater to beneficial use.

(43) "Waste" means one or more of the following:

(a) withdrawal of groundwater from the aquifer at a rate and in an amount that causes or threatens to cause an intrusion into the aquifer unsuitable for agriculture, gardening, domestic, stock raising, or other beneficial purposes;

(b) the flowing or producing of water from the aquifer by artificial means if the water produced is not used for a beneficial purpose;

(c) the escape of groundwater from the aquifer to any other underground reservoir or geologic stratum that does not contain groundwater;

(d) pollution or harmful alteration of groundwater in the aquifer by saltwater or by other deleterious matter admitted from another stratum or from the surface of the ground;

(e) willfully or negligently causing, suffering, or allowing groundwater to escape into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or other order issued by the TCEQ under Chapters 11 or 26 of the Texas Water Code;

(f) groundwater pumped for irrigation that escapes as irrigation tail water onto land other than that of the owner of the well unless permission has been granted by the occupant of the land receiving the discharge;

(g) for water produced from an artesian well, "waste" has the meaning assigned by Section 11.205, Texas Water Code;

(h) operating a deteriorated well; or

(i) producing groundwater in violation of any District rule governing the withdrawal of groundwater through production limits on wells, managed depletion, or both.

(44) "Well" means any artificial excavation located within the boundaries of the District dug or drilled for the purpose of exploring for or withdrawing groundwater from the aquifer.

(45) "Well owner" means the person who owns a possessors interest in: (1) the land upon which a well or well system is located or to be located; (2) the well or well system; or (3) the groundwater withdrawn from a well or well system.

(46) "Well system" means a well or group of wells connected by piping, storage, or that share or are tied to the same distribution system. Examples of a well system include, but are not limited to, a well or group of wells connected to the same ground storage tank, pond or swimming pool.

(47) "Withdraw" means the act of extracting or producing groundwater by pumping or other method.

(48) "Year" means a calendar year (January 1 through December 31), except where the usage of the term clearly suggests otherwise.

Rule 1.2 Authority of District.

The North Texas Groundwater Conservation District is a political subdivision of the State of Texas organized and existing under Section 59, Article XVI, Texas Constitution, Chapter 36, Texas Water Code, and 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.

Rule 1.3 Purpose of Rules.

These Temporary Rules are adopted under the authority of Sections 36.101 and 36.1071(f), Texas Water Code, and the District Act for the purpose of conserving, preserving, protecting, and recharging groundwater in the District in order to prevent subsidence, prevent degradation of water quality, prevent waste of groundwater, and to carry out the powers and duties of Chapter 36, Texas Water Code, and the District Act.

Rule 1.4 Use and Effect of Rules.

These rules are used by the District in the exercise of the powers conferred on the District by law and in the accomplishment of the purposes of the law creating the District. These rules may be used as guides in the exercise of discretion, where discretion is vested. However, under no circumstances and in no particular case will they or any part therein, be construed as a limitation or restriction upon the District to exercise powers, duties and jurisdiction conferred by law. These rules create no rights or privileges in any person or water well, and shall not be construed to bind the Board in any manner in its promulgation of the District Management Plan, amendments to these Temporary Rules, or promulgation of permanent rules.

Rule 1.5 Purpose of District.

The purpose of the District is to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, consistent with the objectives of Section 59, Article XVI, Texas Constitution.

Rule 1.6 Construction.

A reference to a title or chapter without further identification is a reference to a title or chapter of the Texas Water Code. A reference to a section or rule without further identification is a reference to a section or rule in these rules. Construction of words and phrases is governed by the Code Construction Act, Subchapter B, Chapter 311, Texas Government Code. The singular includes the plural, and the plural includes the singular. The masculine includes the feminine, and the feminine includes the masculine.

Rule 1.7 Methods of Service Under the Rules.

Except as provided in these rules, any notice or document required by these rules to be served or delivered may be delivered to the recipient or the recipient's authorized representative in person, by agent, by courier receipted delivery, by certified or registered mail sent to the recipient's last known address, or by fax to the recipient's current fax number and shall be accomplished by 5:00 o'clock p.m. on the date which it is due. Service by mail is complete upon deposit in a post office depository box or other official depository of the United States Postal Service. Service by fax is complete upon transfer, except that any transfer commencing after 5:00 o'clock p.m. shall be deemed complete the following business day. If service or delivery is by mail and the recipient has the right or is required to do some act within a prescribed period of time after service, three days will be added to the prescribed period. If service by other methods has proved unsuccessful, service will be deemed complete upon publication of the notice or document in a newspaper of general circulation in the District.

Rule 1.8 Severability.

If a provision contained in these Temporary Rules is for any reason held to be invalid, illegal, or unenforceable in any respect, the invalidity, illegality, or unenforceability does not affect any other rules or provisions of these Temporary Rules, and these Temporary Rules shall be construed as if the invalid, illegal, or unenforceable provision had never been contained in these rules.

Rule 1.9 Regulatory Compliance; Other Governmental Entities.

All registrants of the District shall comply with all applicable rules and regulations of the District and of all other governmental entities. If the District Rules and regulations are more stringent than those of other governmental entities, the District Rules and regulations control.

Rule 1.10 Computing Time.

In computing any period of time prescribed or allowed by these rules, order of the Board, or any applicable statute, the day of the act, event, or default from which the designated period of time begins to run is not included, but the last day of the period so computed is included, unless it is a Saturday, Sunday, or legal holiday, in which event the period runs until the end of the next day which is neither a Saturday, Sunday, or legal holiday.

Rule 1.11 Time Limits.

Applications, requests, or other papers or documents required or allowed to be filed under these rules or by law must be received for filing by the District within the time limit for filing, if any. The date of receipt, not the date of posting, is determinative of the time of filing. Time periods set forth in these rules shall be measured by calendar days, unless otherwise specified.

Rule 1.12 Amending of Rules.

The Board may, following notice and hearing, amend or repeal these rules or adopt new rules from time to time.

SECTION 2.
APPLICABILITY OF REGULATORY REQUIREMENTS; EXEMPTIONS

Rule 2.1 Wells Exempt from Fee Payment, Metering, and Reporting Requirements of These Temporary Rules.

(a) The requirements of these Temporary Rules relating to the payment of fees under Section 7, the requirement to install and maintain a meter under Section 8, and the requirement to report to the District the amount of water produced from a well under Section 3 do not apply to the following types of wells:

1. All wells, existing or new, of any size or capacity used solely for domestic use, livestock use, or poultry use;

2. An existing well or new well 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 as provided by Subsection (b) of this rule; or

3. Leachate wells, monitoring wells, and piezometers.

(b) For purposes of determining whether the exemption set forth under Subsection (a)(2) applies, the capacity of a well that is part of a well system shall be determined by taking the sum of the capacities of each of the individual wells, as equipped, in the system. If the total sum of the capacities is greater than 25 gallons per minute, the well system and the individual wells that are part of it are not exempt from the fee payment, metering, and reporting requirements of these rules.

(c) A well exempted under Subsection (a) will lose its exempt status if the well is subsequently used for a purpose or in a manner that is not exempt under Subsection (a).

(d) A well exempted under Subsection (a)(2) will lose its exempt status if, while the well was registered as an exempt well, the District determines that the well had the capacity, as equipped, to produce more than 25 gallons per minute. Such wells are subject to the fee payment, metering, reporting, and other requirements of these Temporary Rules, and may be subject to enforcement under Section 9.

(e) The owner of a new well that is exempt under this rule shall nonetheless register the well with the District, as required under Section 3.

Rule 2.2 Wells Subject to Fee Payment, Metering, and Reporting Requirements of These Temporary Rules

All wells not described as exempt under Rule 2.1(a) are subject to the fee payment, metering, reporting, registration, and other requirements of these Temporary Rules. Such wells include wells with a capacity, as equipped, to produce more than 25 gallons per minute and that are used in whole or in part for any purpose of use other than solely for domestic use, livestock use, or poultry use.

Rule 2.3 Exemption from Production Fees for Groundwater Used for Certain Emergency Purposes

(a) Groundwater produced within the boundaries of the District is exempt from the assessment of applicable Water Use Fees and Groundwater Transport Fees otherwise required by Section 7 if the groundwater is used by a fire department or an emergency services district solely for emergency purposes and the use is qualified under Subsection

(b) To qualify for the exemption provided for in Subsection (a), a fire department or emergency services district that uses groundwater produced from within the District, or a person that supplies groundwater produced from within the District to a fire department or emergency services district, shall submit to the District a Water Production Report that complies with Rule 3.10.

Rule 2.4 Exemption from Production Fees for Groundwater Used for Maintenance Purposes

Groundwater used for the purposes of flushing lines, tanks, or fire hydrants as required by TCEQ are exempt from fees if an approved metering device or an alternative measuring method approved by the District is used. These amounts shall be noted on the water production report and subtracted from the total amount pumped.

Rule 2.5 Exemption from Production Fees, Metering, and Reporting Requirements for Groundwater Used for Well Development

Groundwater produced from a well during its development or rehabilitation, including groundwater used in pump tests, is exempt from the requirements relating to the payment of fees under Section 7, the requirement to install and maintain a meter under Section 8, and the requirement to report to the District the amount of water produced from a well under Section 3. However, use of the well must comply with those requirements before being placed into operation unless otherwise exempt under these rules.

SECTION 3.
REGISTRATIONS, RECORDS, REPORTS, AND LOGS; PERMIT NOT REQUIRED

Rule 3.1 Purpose and Policy

The accurate and timely reporting to the District of activities governed by these Rules is a critical component to the District's ability to effectively and prudently manage the groundwater resources that it has been charged by law with regulating. The purpose of Section 3 is to require the submission, by the appropriate person or persons, of complete, accurate, and timely registrations, records, reports, and logs as required throughout the District Rules. Because of the important role that accurate and timely reporting plays in the District's understanding of past, current and anticipated groundwater conditions within the District, the failure to comply with these rules may result in the assessment of additional fees, civil penalties, or any combination of the same, as specifically set forth under Section 9.

Rule 3.2 Permit Not Required Under Temporary Rules.

No permit of any kind is required under these Temporary Rules. Notwithstanding Chapter 36, Water Code, a permit is not required under these Temporary Rules to drill, equip, operate, or complete a well, produce water from a well, or to substantially alter the size or capacity of a well. Permitting requirements will be developed and adopted by the District in the future after it has had a sufficient opportunity to develop a management plan and carefully consider various regulatory approaches and how such approaches may impact landowners and other water users in the District while achieving proper management of the groundwater resources. Permitting rules will be adopted only after ample opportunity has been afforded the public to participate in the development of such rules.

Rule 3.3 Well Registration.

(a) The following wells must be registered with the District:

1. all new wells drilled on or after April 1, 2011, including new wells exempt under Rule 2.1(a);

2. all existing wells that are not exempt under Rule 2.1(a).

(b) Test holes must be registered with the District in accordance with the terms of this rule. Test holes are not subject to registration fees charged by the District. A plugging report shall be submitted to the District within 30 days of the date the test hole is plugged in accordance with Rule 3.7(c).

(c) A person seeking to register a well shall provide the District with the following information in the registration application on a form provided by the District:

1. the name and mailing address of the registrant and the owner of the property, if different from the registrant, on which the well is or will be located;

2. if the registrant is other than the owner of the property, documentation establishing the applicable authority to file the application for well registration, serve as the registrant in lieu of the property owner, and construct and operate a well for the proposed use;

3. a statement of the nature and purpose of the existing or proposed use of water from the well;

4. the location or proposed location of the well, identified as a specific point measured by latitudinal, longitudinal, and elevation coordinates;

5. the location or proposed location of the use of water from the well, if used or proposed to be used at a location other than the location of the well;

6. the production capacity or proposed production capacity of the well, as equipped, in gallons per minute, and the horsepower rating of the pump, as assigned by the pump manufacturer;

7. a water well closure plan or a declaration that the applicant will comply with well plugging guidelines and report closure to the District;

8. a statement that the water withdrawn from the well will be put to beneficial use at all times; and

9. any other information deemed necessary by the Board.

(d) The timely filing of an application for registration shall provide the owner of a well described under Subsection (a)(2) with evidence that a well existed before April 1, 2011, for purposes of establishing the well as an existing well, grandfathering the well from the requirement to comply with any well location or spacing requirements of the District, and any other entitlements that existing wells may receive under these Temporary Rules or under permanent rules adopted by the District. A well that is required to be registered under this rule and that is not exempt under Rule 2.1(a) shall not be operated on or after July 1, 2011, without first complying with the metering provisions set forth under Section 8.

(e) Once a registration is complete, which for new wells also includes receipt by the District of the well report required by Rule 3.7, the registration shall be perpetual in nature, subject to being amended or transferred and to enforcement for violations of these rules.

Rule 3.4 Registration of Existing Non-Exempt Wells Required Between April 1 and June 30, 2011.

(a) The owner of an existing well described under Rule 3.3(a)(2) must register the well with the District between April 1 and June 30, 2011, and must install a meter on the well as set forth under Section 8 of these rules before July 1, 2011. Failure of the owner of such a well

to timely register the well under this Rule shall subject the well owner to enforcement under these rules.

(b) Although not required under these Temporary Rules, the owner of an existing well exempt under Rule 2.1(a) may elect to register the well with the District to provide the owner with evidence that the well existed before April 1, 2011, for purposes of establishing the well as an existing well, grandfathering the well from the requirement to comply with any well location or spacing requirements of the District, and any other entitlements that existing wells may receive under these Temporary Rules or under permanent rules adopted by the District.

Rule 3.5 Registration of New Wells or Alterations to Existing Wells Required Prior to Drilling or Alteration.

(a) An owner or well driller, or any other person legally authorized to act on their behalf, must submit and obtain approval of a registration application and submit a well report deposit with the District before any new well, except leachate wells or monitoring wells, may be drilled, equipped, or completed, or before an existing well may be substantially altered, beginning on and after April 1, 2011.

(b) A registrant for a new well has 240 days from the date of approval of its application for well registration to drill and complete the new well, and must file the well report within 60 days of completion. However, a registrant may apply for one extension of an additional 240 days or may resubmit an identical well registration without the need to pay any additional administrative fee associated with the submittal of well registrations for new wells. A registrant for a new well has 180 days from the date of approval of its application for well registration to commence drilling the well. If drilling has not commenced within 180 days from the date of approval of its application, the well registration becomes expired. If the well report is timely submitted to the District, the District shall return the well report deposit to the owner or well driller. In the event that the well report required under this rule and Rule 3.7 are not filed within the deadlines set forth under Subsection (b) of this rule, the driller or owner shall forfeit the well report deposit and shall be subject to enforcement by the District for violation of this rule.

(c) No well that is classified as non-exempt under Rule 2.1(a) may be modified or operated unless the well is first registered with the District or the well registration on file for the well is amended pursuant to Rule 3.9.

(d) Notwithstanding any other rule to the contrary, the owner, driller, pump installer, or well service company that is authorized by the owner to complete or operate a new well, substantially alter an existing well, or modify or operate an existing non-exempt well are jointly responsible for ensuring that a well registration required by this section, or well registration amendment required by Rule 3.9, is timely filed with the District and contains only information that is true and accurate. Each will be subject to enforcement action if a registration or registration amendment required by this section is not timely filed by either, or by any other person legally authorized to act on his or her behalf.

Rule 3.6 General Provisions Applicable to Registrations.

(a) Registration applications may be submitted to the District in person, by mail, by fax, or by internet when available by the District, using the registration form provided by the District.

(b) A determination of administrative completeness of a registration application shall be made by the General Manager within 30 business days after the date of receipt of an application for registration. If an application is not administratively complete, the District shall request the applicant to complete the application. The application will expire if the applicant does not complete the application within 120 days of the date of the District's request. An application will be considered administratively complete and may be approved by the General Manager without notice or hearing if:

1. it substantially complies with the requirements set forth under Rule 3.3(c), including providing all information required to be included in the application that may be obtained through reasonable diligence; and

2. if it is a registration for a new well:

(A) includes the well log deposit; and

(B) proposes a well that complies with the spacing, location, and well completion requirements of Section 4.

A person may appeal the General Manager's ruling by filing a written request for a hearing before the Board. The Board will hear the applicant's appeal at the next regular Board meeting. The General Manager may set the application for consideration by the Board at the next available Board meeting or hearing in lieu of approving or denying an application.

(c) Upon approval or denial of an application, the General Manager shall inform the registrant in writing by regular mail of the approval or denial, as well as whether the well meets the exemptions provided in Rule 2.1 or whether it is subject to the metering, fee payment, and reporting requirements of these rules.

(d) An application pursuant to which a registration has been issued is incorporated in the registration, and the registration is valid contingent upon the accuracy of the information supplied in the registration application. A finding that false information has been supplied in the application may be grounds to refuse to approve the registration or to revoke or suspend the registration.

(e) Submission of a registration application constitutes an acknowledgment by the registrant of receipt of the rules and regulations of the District and agreement that the registrant will comply with all rules and regulations of the District.

(f) The District may amend any registration, in accordance with these rules, to accomplish the purposes of the District Rules, management plan, the District Act, or Chapter 36, Texas Water Code.

(g) If multiple wells have been aggregated under one registration and one or more wells under the registration will be transferred, the District will require separate registration applications from each new owner for the wells retained or obtained by that person.

(h) No person shall operate or otherwise produce groundwater from a well required under this Section to be registered with the District before:

1. timely submitting an accurate application for registration, or accurate application to amend an existing registration as applicable, of the well to the District; and

2. obtaining approval from the District of the application for registration or amendment application, if such approval is required under these rules.

Rule 3.7 Records of Drilling, Pump Installation and Alteration Activity, Plugging and Capping.

(a) Each person who drills, deepens, completes or otherwise alters a well shall make, at the time of drilling, deepening, completing or otherwise altering the well, a legible, complete, and accurate well report recorded on the Texas Department of Licensing and Regulation "Well Report" form.

(b) The person who drilled, deepened, completed or otherwise altered a well pursuant to this rule shall, within 60 days after the date the well is completed, file the well report described in Subsection (a) with the District.

(c) Not later than the 30th day after the date a well is plugged, a driller, licensed pump installer, or well owner who plugs the well shall submit a plugging report to the District, which shall be substantially similar form to the Texas Department of Licensing and Regulation Form a004WWD (Plugging Report) and shall include all information required therein.

(d) The District requires wells to be capped under certain conditions to prevent waste, prevent pollution, or prevent further deterioration of well casing. The well must remain capped until such a time as the condition that led to the capping requirement is eliminated or repaired. A well must be capped in accordance with this rule if the well pump equipment is removed from a well with the intention of re-equipping the well at a later date for future use; provided, however that the casing is not in a deteriorated condition that could result in the commingling of water strata and degradation of water quality, in which case the well must be plugged or repaired in accordance with this rule. The cap must be capable of sustaining a weight of at least 400 pounds when installed on the well and must be constructed in such a way that the covering cannot be easily removed by hand. The driller, licensed pump installer, or well owner who caps a well shall submit to the District a well capping notice on a form provided by the District.

Rule 3.8 Transfer of Well Ownership.

(a) Within 90 days after the date of a change in ownership of a well exempt under Rule 2.1, the new well owner (transferee) shall notify the District in writing of the effective date of the change in ownership, the name, daytime telephone number, and mailing address of the new well owner, along with any other contact or well-related information reasonably requested by the General Manager. The new well owner may, in addition, be required to submit an application for registration of an existing well if a registration does not yet exist for the well.

(b) Within 90 days after the date of a change in ownership of a well that is not exempt under District Rule 2.1 from the fee payment, metering, and reporting requirements of these rules, the new well owner (transferee) shall submit to the District, on a form provided by the District staff, a signed and sworn-to application for transfer of ownership.

(c) If a registrant conveys by any lawful and legally enforceable means to another person the real property interests in one or more wells or a well system that is recognized in the registration so that the transferring party (the transferor) is no longer the "well owner" as defined herein, and if an application for change of ownership under Subsection (b) has been approved by the District, the District shall recognize the person to whom such interests were conveyed (the transferee) as the legal holder of the registration, subject to the conditions and limitations of these District Rules.

(d) The burden of proof in any proceeding related to a question of well ownership or status as the legal holder of a registration issued by the District and the rights there under shall be on the person claiming such ownership or status.

(e) Notwithstanding any provision of this rule to the contrary, no application made pursuant to Subsection (b) of this rule shall be granted by the District unless all outstanding fees, penalties, and compliance matters have first been fully and finally paid or otherwise resolved by the transferring party (transferor) for all wells included in the application or existing registration, and each well and registration made the subject of the application is otherwise in good standing with the District.

(f) The new owner of a well that is the subject of a transfer described in this rule (transferee) may not operate or otherwise produce groundwater from the well after 90 days from the date of the change in ownership until the new owner has:

1. submitted written notice to the District of the change in ownership, for wells described in Subsection (a); or

2. submitted to the District a completed application for transfer of ownership, for wells described in Subsection (b).

A new well owner that intends to alter or use the well in a manner that would constitute a substantial change from the information in the existing registration or that would trigger the requirement to register the well under these rules must also submit and obtain District

approval of a registration application or registration amendment application, as applicable, prior to altering or operating the well in the new manner.

Rule 3.9 Amendment of Registration.

A registrant shall file an application to amend an existing registration and obtain approval by the District of the application prior to engaging in any activity that would constitute a substantial change from the information in the existing registration. For purposes of this rule, a substantial change includes a change that would substantially alter the pump or well, a change in the type of use of the water produced, the addition of a new well to be included in an already registered aggregate system, a change in location of a well or proposed well, a change of the location of use of the groundwater, or a change in ownership of a well. A registration amendment is not required for maintenance or repair of a well if the maintenance or repair does not increase the designed production capabilities of the pump.

Rule 3.10 Water Production Reports.

(a) The owner of any non-exempt well within the District must submit, through regular mail, facsimile, electronic mail, hand delivery, or the District's online reporting system, a quarterly report on a form provided or approved by the District, or an annual report for the system loss report required under Subsection (a)(7) only, containing the following:

1. the name of the registrant;

2. the well numbers of each registered well within the District owned or operated by the registrant;

3. the total amount of groundwater produced by each well or well system during the immediately preceding reporting period;

4. the total amount of groundwater produced by each well or well system during each month of the immediately preceding reporting period;

5. the purposes for which the water was used;

6. for water used at a location other than the property on which the well is located, and that is not used by a fire department or emergency services district for emergency purposes or by a public water system:

   (A) the location of the use and purpose of use of the water; and

   (B) if the water was sold on a retail or wholesale basis, the name of the person to whom it was sold and the quantity sold to each person;

7. for water used by a public water system, a description of identified system losses, including:

(A) an estimate of the total quantity, reported in gallons or in percentages of total annual production, of water lost to system loss, if known;

(B) the sources of system losses reported under Subsection (A); and

(C) the methods, if any, employed to address the system losses reported under this subsection;

8. the amount of groundwater produced for which a fee exemption is sought, if any, under Rule 2.4 for flushing lines, tanks, or fire hydrants, and the metering method(s) employed to determine the amount; and

9. additionally, for fire departments, emergency services districts, and any person that provides groundwater produced from within the District to a fire department or emergency services district and that seeks a fee payment exemption under Rule 2.3:

(A) the total amount of groundwater produced or used, as applicable, solely for emergency purposes during each month of the reporting period provided for under this rule; and

(B) the total amount of groundwater produced or used, as applicable, for any purpose other than for emergency purposes during each month of the reporting period provided for under this rule.

(b) There shall be four quarterly reporting periods each year: January 1 to March 31, April 1 to June 30, July 1 to September 30, and October 1 to December 31. The report for each quarter shall be due no later than 30 days after the last day of the applicable quarterly reporting period. To comply with this rule, the registrant of a well shall read each water meter associated with a well within 15 days before or after March 31, within 15 days before or after June 30, within 15 days before or after September 30, and within 15 days before or after December 31 each year and report the readings to the District on the form described in Subsection (a). Additionally, to comply with this rule, all applicable information required under Subsection (a) must be contained in the water production report filed with the District.

(c) The report required by Subsection (a) must also include a true and correct copy of the monthly meter log required by District Rule 8.5. All such reports and logs may be submitted via internet on the District's well registration website.

SECTION 4.
SPACING AND LOCATION OF WELLS; WELL COMPLETION

Rule 4.1 Spacing and Location of Existing Wells.

Wells drilled prior to October 19, 2010, shall be drilled in accordance with state law in effect, if any, on the date such drilling commenced and are exempt from the spacing and location requirements of these rules to the extent that they were drilled lawfully.

Rule 4.2 Standards of Completion for All Wells.

(a) All wells must be completed in accordance with the well completion standards set forth under the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Part 4, Chapter 76, Texas Administrative Code, and under these Rules.

(b) In addition to the requirements under Subsection (a), all new wells, re-completed wells, and wells that are re-worked in a manner that involves removal of the pump from the well for any reason shall be equipped in such a manner as to allow the measurement of the water level in the aquifer supplying water to the well. The driller or well owner is responsible for ensuring that the completed well complies with this subsection.

(c) Water well drillers shall indicate the method of completion performed on the well report.

(d) To prevent the commingling of water between the aquifers which can result in a loss of artesian (or static) head pressure or the degradation of water quality, each well penetrating more than one aquifer or subdivision thereof must be completed in a manner so as to prevent the commingling of groundwater between aquifers or between subdivisions of an aquifer if required by the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Part 4, Chapter 76, Texas Administrative Code. The driller shall indicate the method of completion used to prevent the commingling of water on the well report. The well driller may use any lawful method of completion calculated to prevent the commingling of groundwater.

(e) All wells drilled on or after April 1, 2017 must be equipped with either one of the following water quality control devices for the purpose of preventing the siphoning of external water and contaminants into the well:

1. a backflow prevention device installed downstream of well head so that it is readily accessible for maintenance or replacement; or

2. an air gap installed at the well discharge location.

A device installed under this subsection is subject to inspection and testing by the District.

(f) Except as otherwise provided in Subsection (g) of this rule, new wells registered and drilled on or after April 1, 2017 shall meet at least one of the following completion

standards:

1. the well shall be completed in a manner that exposes fourteen (14) inches or six (6) pipe diameters, whichever is greater, of straight and unobstructed discharge pipe above ground so that the District's flow metering measurement device can measure the flow rate;

2. provide a tee above ground with valves arranged in a manner to divert 100% of the discharge to one side of the tee temporarily so that the District's flow metering device can measure the flow rate; or

3. equip the well with a meter that is easily accessible and measures instantaneous flow rate.

(g) The requirements of Subsection (f) of this rule do not apply if the well is exempt and used solely for domestic use, livestock use, or poultry use pursuant to Rule 2.1(a)(1).

(h) In order to protect water quality, the integrity of the well, or loss of groundwater from the well, the District may impose additional well completion requirements on any well as determined necessary or appropriate by the Board.

Rule 4.3 Replacement Wells.

(a) No person may replace an existing well without first having obtained authorization from the District. Authorization for the construction of a replacement well may only be granted following the submission to the District of an application for registration of a replacement well on a form provided by the District. The application for registration of a replacement well shall include a diagram of the property that depicts both the proposed replacement well and the well being replaced, and any other structures on the property.

(b) Applications for registration of replacement wells submitted under this rule may be granted by the General Manager without notice or hearing. An applicant may appeal the General Manager's ruling by filing a written request before the Board. The Board will hear such an appeal at the next available regular Board meeting or hearing called for that purpose.

(c) A replacement well must be actually drilled and completed on the same tract of land as the well being replaced. The replacement well and pump must not be larger in designed production capacity than the well and pump being replaced, unless the well is exempt under Rule 2.1.

(d) The well owner must cease all production from the well being replaced immediately upon commencing production from the replacement well, and must plug the well being replaced within 90 days from the date that the replacement well is completed.

SECTION 5.
REGULATION OF PRODUCTION; WASTE PROHIBITED

Rule 5.1 Temporary Production Limitations.

The maximum quantity of water that a person may withdraw from a well that is not exempt under Rule 2.1(a) is the amount of water the person produces and timely:

1. submits payment to the District for in accordance with the fee rate adopted by the District under Section 7; and

2. reports pumpage volumes to the District under Rule 3.10.

Rule 5.2 Regular Production Limitations.

In order to accomplish the purposes of Chapter 36, Texas Water Code, and the District Act, and to achieve the goals of the District Management Plan, the District may, after notice and hearing, establish groundwater production limitations for all wells when it adopts permanent rules for the District.

Rule 5.3 Waste Prohibited.

No person shall engage in any conduct subject to the District's regulatory jurisdiction that constitutes waste, as that term is defined herein.

SECTION 6.
TRANSPORTATION OF GROUNDWATER OUT OF THE DISTRICT

Rule 6.1 General Provisions.

(a) A person who produces or wishes to produce water from a well not exempt under Rule 2.1(a) that is located or is to be located within the District and transport such water for use outside of the District must register the well and submit timely payment of the Groundwater Transport Fee to the District under Rule 7.2 for any water transported out of the District. The District may require the person to install any meters necessary to report the total amount of groundwater transported outside of the District for reporting purposes and for purposes of calculating the Groundwater Transport Fee.

(b) The District may not, in a manner inconsistent with rules and fees applied to production and use occurring wholly within the boundaries of the District, regulate production of groundwater or assess fees against the transport of water produced in an area of a retail public utility that is located inside the district boundaries and transported for use to an area that is within the same retail public utility but that is located outside the district boundaries if the majority of the geographic area of the retail public utility's boundaries or defined service area is within the boundaries of the District and the majority of the groundwater produced is used within the boundaries of the District. If conditions change over time such

that the majority of such geographic area or use is not within the boundaries of the District, the groundwater transported for use outside of the District shall be assessed the Groundwater Transport Fee.

Rule 6.2 Reporting.

A person transporting groundwater for use outside of the District and subject to the requirement to pay the Groundwater Transport Fee shall file periodic reports with the District describing the amount of water transported and used outside the District. The report shall be filed with the District in the same manner, for the same reporting periods, and by the same deadlines set forth for Water Production Reports under Rule 3.10. The report for groundwater transported shall be on the appropriate form provided by the District and shall state the following: (1) the name of the person;
(2) the well registration numbers of each well from which the person has produced groundwater transported for use outside the District; (3) the total amount of groundwater produced from each well or well system during the immediately preceding reporting period; (4) the total amount of groundwater transported outside of the district from each well, well system, or surface impoundment containing produced groundwater during each month of the immediately preceding reporting period; (5) the purposes for which the water was transported; and (6) any other information requested by the District.

SECTION 7.
FEES AND PAYMENT OF FEES

Rule 7.1 Water Use Fees.

(a) A water use fee rate schedule shall be established by Board resolution annually at least 60 days before the end of the calendar year. The Board may adopt a different water use fee rate for water used for agricultural purposes than for water used for non-agricultural purposes. The rate shall be applied to the groundwater pumpage in the ensuing calendar year for each well not exempt under Rule 2.1. The District will review the account of any person changing the use of a well from non-exempt to exempt or vice versa to determine if additional water use fees are due or if a refund of water use fees is warranted. Wells exempt under Rule 2.1 shall be exempt from payment of Water Use Fees. However, if exempt well status is withdrawn, the District may assess fees and penalties in accordance with the District Rules.

(b) No later than 30 days prior to the end of the calendar year, beginning with calendar year 2011, the District shall send by regular mail or email to the owner or operator of each registered well that is required to pay the Water Use Fee a reminder statement setting forth the water use fee rate applicable to the water produced in the ensuing year, setting forth deadlines for submission of fee payments and production reports of meter readings, and other information deemed appropriate by the District.

Rule 7.2 Groundwater Transport Fees.

The District shall impose a Groundwater Transport Fee of 1.5 times the District's Water Use Fee rate for in-District use for groundwater produced in the District that is transported for use outside of the District. The procedures, requirements, and penalties related to payment of the Water Use Fee shall also apply to payment of the Groundwater Transport Fee. Groundwater Transport Fees shall not be imposed on a water supplier that withdraws groundwater from a well located in the District and that distributes the water to any part of the territory within the water supplier's certificate of convenience and necessity (CCN) issued by the Texas Commission on Environmental Quality, or its predecessor or successor agency, that is outside the boundaries of the District. Groundwater Transport Fees shall also not be imposed on a person that produces groundwater from a well located in the District, but who uses the water outside the boundaries of the District, only if the property where the well is located and the water is used is contiguous and owned by the same person.

Rule 7.3 Payments of Water Use and Groundwater Transport Fees.

(a) All fees for groundwater production or transport in a calendar year must be paid to the District based on quarterly production. All water production reports, monthly logs, and groundwater transport reports will be due no later than 30 days from the end of the applicable quarterly reporting period in accordance with Rule 3.10(b). The District will generate and mail all invoices for fee payment not later than the 45th day after the end of the quarterly reporting period. All payments that are due to the District must be paid no later than 75 days from the end of the applicable quarterly reporting period.

(b) Any well that is subject to fee payment under this rule and that provides water for both agricultural and non-agricultural purposes shall pay the water use fee rate applicable to non-agricultural purposes for all water produced from the well, unless the applicant can demonstrate through convincing evidence to the satisfaction of the District that a system is or will be in place so as to assure an accurate accounting of water for each purpose of use.

(c) Notwithstanding anything to the contrary in these rules, the initial Water Use Fees and Groundwater Transport Fees to be submitted under Rules 7.1 and 7.2 shall be for groundwater produced or transported during the period of July 1 to December 31, 2012, which shall be due to the District no later than January 31, 2013. This subsection shall expire without need for further action by the Board on December 31, 2013.

Rule 7.4 Failure to Make Fee Payments.

(a) Payments not received within 30 days following the date that Water Use Fees or Groundwater Transport Fees are due and owing to the District pursuant to Rule 7.3(a) will be subject to a late payment fee of fifteen percent (15%) of the total amount of water use fees due and owing to the District.

(b) Persons failing to remit all Water Use Fees or Groundwater Transport Fees due and owing

to the District within 60 days of the date such fees are due pursuant to Rule 7.3(a) shall be subject to a civil penalty not to exceed three times the amount of the outstanding fees due and owing, in addition to the late fee penalty prescribed in Subsection (a) of this rule, and may be subject to additional enforcement measures provided for by these rules or by order of the Board.

Rule 7.5 Failure to Submit Water Production Reports.

(a) Water Production Reports not received within 30 days after the last day of the applicable quarterly reporting period pursuant to Rule 3.10(b) will be subject to a late fee of fifty dollars ($50) per billing account.

(b) Persons failing to submit Water Production Reports within 60 days after the last day of the applicable quarterly reporting period pursuant to Rule 3.10(b) shall be subject to a civil penalty as set forth in the District's Enforcement Policy and Civil Penalty Schedule in Appendix A.

Rule 7.6 Returned Check Fee.

The Board, by resolution, may establish a fee for checks returned to the District for insufficient funds, account closed, signature missing, or any other reason causing a check to be returned by the District's depository.

Rule 7.7 Well Report Deposit.

The Board, by resolution, may establish a well report deposit to be held by the District as part of the well registration procedures. The District shall return the deposit to the depositor if all relevant well logs are timely submitted to the District in accordance with these rules. In the event the District does not timely receive all relevant well logs, or if rights granted within the registration are not timely used, the deposit shall become the property of the District.

Rule 7.8 Enforcement.

After a well is determined to be in violation of these rules for failure to make payment of water use fees or groundwater transport fees on or before the 60th day following the date such fees are due pursuant to Rule 7.3, all enforcement mechanisms provided by law and these rules shall be available to prevent unauthorized use of the well and may be initiated by the General Manager without further authorization from the Board.

Rule 7.9 Well Registration Fee.

The Board, by resolution, shall establish a non-refundable well registration fee. The owner of any new well shall submit the non-refundable well registration fee payment to the District per well, which is due by the same deadline established under these rules for registration of the well. The well registration fee must be received by the District in order for the District to find a registration application administratively complete. The purpose of the well registration fee is to cover the administrative costs to the District associated with registering the well and administering the rules

of the District related to the well.

Rule 7.10 Meter Sealing Fee.

The Board, by resolution, may establish a fee to recover all or part of its costs for removing and reapplying a District seal and verifying relevant well and meter information in situations where a well owner or operator submits a request to move a meter from one well to another.

SECTION 8. METERING

Rule 8.1 Water Meter Required.

(a) Except as provided in Rule 8.2, the owner of a well located in the District and not exempt under Rule 2.1 shall equip the well with a flow measurement device meeting the specifications of these rules and shall operate the meter on the well to measure the flow rate and cumulative amount of groundwater withdrawn from the well. Except as provided in Rule 8.2, the owner of an existing well not exempt under Rule 2.1 that is located in the District shall install a meter on the well in compliance with the requirements herein prior to producing groundwater from the well after July 1, 2011.

(b) All meters must be sealed in place by the District with a District seal. Except as provided by Rule 8.4, the meter must remain with the well except in cases where the well is modified or the meter no longer meets the accuracy standards set forth under this rule and Rule 8.3. In the event a well owner wants to move a meter from one well to another, the well owner must submit a request to the District to remove its meter seal and must pay to the District the meter sealing fee established under Rule 7.10. The District shall remove the seal within five business days of receiving a request from the well owner. The District may seal the well from which the meter was removed to prevent its operation without a meter, in addition to sealing the meter on the new well. The readings on the meter must be recorded immediately prior to removal and at the time of reinstallation.

(c) A mechanically driven, magnetic, or ultrasonic totalizing water meter must be installed on a well registered with the District unless an approval for another type of meter or measuring method is granted by the District The totalizer must not be resettable by the registrant and must be capable of a maximum reading greater than the maximum expected annual pumpage. Battery operated registers must have a minimum five-year life expectancy and must be permanently hermetically sealed. Battery operated registers must visibly display the expiration date of the battery. All meters must meet the requirements for registration accuracy set forth in the American Water Works Association standards for cold-water meters as those standards existed on the date of adoption of these rules. Meters must be able to measure instantaneous flow rate of the groundwater produced from the well, except as follows: a meter that was installed on an existing well before April 1, 2011, that is not capable of measuring the instantaneous flow rate will not have to be replaced, provided that the meter has the ability to measure the cumulative amount of groundwater withdrawn from the well and meets all other requirements herein.

(d) The water meter must be installed according to the manufacturer's published specifications in effect at the time of the meter installation, or the meter's accuracy must be verified by the registrant in accordance with Rule 8.3. If no specifications are published, there must be a minimum length of five pipe diameters of straight pipe upstream of the water meter and one pipe diameter of straight pipe downstream of the water meter. These lengths of straight pipe must contain no check valves, tees, gate valves, back flow preventers, blow-off valves, or any other fixture other than those flanges or welds necessary to connect the straight pipe to the meter. In addition, the pipe must be completely full of water throughout the region. All installed meters must measure only groundwater.

(e) Each meter shall be installed, operated, maintained, and repaired in accordance with the manufacturer's standards, instructions, or recommendations, and shall be calibrated to ensure an accuracy reading range of 95% to 105% of actual flow.

(f) The owner of a well is responsible for the purchase, installation, operation, maintenance, and repair of the meter associated with the well.

(g) Bypasses are prohibited unless they are also metered. This subsection shall not apply to any unmetered bypasses in existence on October 19, 2010, but shall apply to bypasses installed after that date. A person commits a major violation of these rules by using a bypass to avoid recording groundwater production on a well meter, which may also be subject to criminal prosecution by a local prosecuting authority.

Rule 8.2 Water Meter Exemption.

Wells exempt under Rule 2.1(a) shall be exempt from the requirement to obtain a water meter under Rule 8.1.

Rule 8.3 Accuracy Verification.

(a) **Meter Accuracy to be Tested:** The General Manager may require the registrant, at the registrant's expense, to test the accuracy of a water meter and submit a certificate of the test results. The certificate shall be on a form provided by the District. The General Manager may further require that such test be performed by a third party qualified to perform such tests. The third party must be approved by the General Manager prior to the test. Except as otherwise provided herein, certification tests will be required no more than once every three years for the same meter. If the test results indicate that the water meter is registering an accuracy reading outside the range of 95% to 105% of the actual flow, then appropriate steps shall be taken by the registrant to repair or replace the water meter within 90 calendar days from the date of the test. The District, at its own expense, may undertake random tests and other investigations at any time for the purpose of verifying water meter readings. If the District's tests or investigations reveal that a water meter is not registering within the accuracy range of 95% to 105% of the actual flow, or is not properly recording the total flow of groundwater withdrawn from the well or wells, the registrant shall reimburse the District for the cost of those tests and investigations within 90 calendar days from the date of the tests or investigations, and the registrant shall take appropriate steps to bring the

meter or meters into compliance with these rules within 90 calendar days from the date of the tests or investigations. If a water meter or related piping or equipment is tampered with or damaged so that the measurement of accuracy is impaired, the District may require the registrant, at the registrant's expense, to take appropriate steps to remedy the problem and to retest the water meter within 90 calendar days from the date the problem is discovered and reported to the registrant.

(b) **Meter Testing and Calibration Equipment:** Only equipment capable of accuracy results of plus or minus two percent of actual flow may be used to calibrate or test meters.

(c) **Calibration of Testing Equipment:** All approved testing equipment must be calibrated every two years by an independent testing laboratory or company capable of accuracy verification. A copy of the accuracy verification must be presented to the District before any further tests may be performed using that equipment.

Rule 8.4 Removal of Meter for Repairs.

A water meter may be removed for repairs and the well remains operational. A water meter may also be removed if necessary to modify the well. A water meter may be removed provided the District is notified prior to the removal, and if the well is to remain operational, the repairs much be completed in a timely manner. If the meter on the well has already been sealed by the District, the District shall remove the seal within five business days of receiving a request from the well owner. The readings on the meter must be recorded immediately prior to removal and at the time of reinstallation. The record of pumpage must include an estimate of the amount of groundwater withdrawn during the period the meter was not installed and operating.

Rule 8.5 Water Meter Readings.

The registrant of a well not exempt under Rule 2.1 must read each water meter associated with the well and record the meter readings and the actual amount of pumpage in a log at least monthly. The logs containing the recordings shall be available for inspection by the District at reasonable business hours. Copies of the logs must be included with the Water Production Report required by District Rule 3.10, along with fee payments as set forth under Section 7. A registrant with multiple purposes of use from the same well must pay the highest applicable fee payment rate for all production from the well. The registrant of a well shall read each water meter associated with a well within 15 days before or after March 31, within 15 days before or after June 30, within 15 days before or after September 30, and within 15 days before or after December 31 each year, as applicable to the respective immediately preceding quarterly reporting period, and report the readings to the District on a form provided by the District along with copies of the monthly logs and payment of all Water Use Fees and Groundwater Transport Fees by the deadlines set forth for fee payment under Rule 7.3.

Rule 8.6 Installation of Meters.

Except as otherwise provided by these rules, a meter required to be installed under these rules shall be installed before producing water from the well on or after July 1, 2011.

Rule 8.7 Enforcement.

It is a major violation of these rules to fail to meter a well and report meter readings in accordance with this Section. After a well is determined to be in violation of these rules for failure to meter or maintain and report meter readings, all enforcement mechanisms provided by law and these rules shall be available to prevent unauthorized use of the well and may be initiated by the General Manager without further authorization from the Board.

SECTION 9.
INSPECTION AND ENFORCEMENT OF RULES

Rule 9.1 Purpose and Policy.

The District's ability to effectively and efficiently manage the limited groundwater resources within its boundaries depends entirely upon the adherence to the rules promulgated by the Board to carry out the District's purposes. Those purposes include providing for the conservation, preservation, protection and recharge of the groundwater resources within the District, to protect against subsidence, degradation of water quality, and to prevent waste of those resources. Without the ability to enforce these rules in a fair, effective manner, it would not be possible to accomplish the District's express groundwater management purposes. The enforcement rules and procedures that follow are consistent with the responsibilities delegated to it by the Texas Legislature through the District Act, and through Chapter 36 of the Texas Water Code.

Rule 9.2 Rules Enforcement.

(a) If it appears that a person or entity has violated, is violating, or is threatening to violate any provision of the District Rules, the Board may institute and conduct a suit in a court of competent jurisdiction in the name of the District for injunctive relief, recovery of a civil penalty in an amount set by District rule per violation, both injunctive relief and a civil penalty, or any other appropriate remedy. Each day of a continuing violation constitutes a separate violation.

(b) Unless otherwise provided in these rules, the penalty for a violation of any District rule shall be either:

1. $10,000.00 per violation; or

2. a lesser amount, based on the severity of the violation, as set forth in the Enforcement Policy and Civil Penalty Schedule, which is attached to these rules as Appendix A and adopted as a rule of the District for all purposes.

(c) A penalty under this section is in addition to any other penalty provided by law and may be enforced by filing a complaint in a court of competent jurisdiction in the county in which the District's principal office or meeting place is located.

(d) If the District prevails in a suit to enforce its rules, the District may seek, in the same action,

recovery of attorney's fees, costs for expert witnesses, and other costs incurred by the District before the court. The amount of attorney's fees awarded by a court under this rule shall be fixed by the court.

Rule 9.3 Failure to Report Pumpage and/or Transported Volumes.

(a) The accurate reporting and timely submission of pumpage and/or transported volumes is necessary for the proper management of water resources in the District.

(b) Failure of a well owner required by these Temporary Rules to submit complete, accurate, and timely pumpage and transportation reports may result in:

1. the assessment of any fees or penalties adopted under Rule 9.2 for meter reading and inspection as a result of District inspections to obtain current and accurate pumpage and/or transported volumes; and

2. additional enforcement measures provided by these rules or by order of the Board.

Rule 9.4 District Inspections.

No person shall unreasonably interfere with the District's efforts to conduct inspections or otherwise comply with the requirements, obligations, and authority provided in Section 36.123 of the Texas Water Code.

Rule 9.5 Notices of Violation.

Whenever the District determines that any person has violated or is violating any provision of the District's Rules, including the terms of any rule or order issued by the District, it may use any of the following means of notifying the person or persons of the violation:

(a) Informal Notice: The officers, staff or agents of the District acting on behalf of the District or the Board may inform the person of the violation by telephone by speaking or attempting to speak to the appropriate person to explain the violation and the steps necessary to satisfactorily remedy the violation. The information received by the District through this informal notice concerning the violation will be documented, along with the date and time of the call, and will be kept on file with the District. Nothing in this subsection shall limit the authority of the District to take action, including emergency actions or any other enforcement action, without first providing notice under this subsection.

(b) Notice of Violation: The District may inform the person of the violation through a written notice of violation issued pursuant to this rule. Each notice of violation issued hereunder shall explain the basis of the violation, identify the rule or order that has been violated or is being violated, and list specific required actions that must be satisfactorily completed—which may include the payment of applicable civil penalties—to address each violation raised in the notice. Notices of violation issued hereunder shall be tendered by a delivery method that complies with District Rule 1.7. Nothing in this subsection shall limit the

authority of the District to take action, including emergency actions or any other enforcement action, without first issuing a notice of violation.

(c) Compliance Meeting: The District may hold a meeting with any person whom the District believes to have violated or to be violating, a District Rule or District order to discuss each such violation and the steps necessary to satisfactorily remedy each such violation. The information received in any meeting conducted pursuant to this subsection concerning the violation will be documented, along with the date and time of the meeting, and will be kept on file with the District. Nothing in this subsection shall limit the authority of the District to take action, including emergency actions or any other enforcement action, without first conducting a meeting under this subsection.

Rule 9.6 Show Cause Hearing.

(a) Upon recommendation of the General Manager to the Board or upon the Board's own motion, the Board may order any person that it believes has violated or is violating any provision of the District's Rules a District order to appear before the Board at a public meeting called for such purpose and show cause why an enforcement action, including the initiation of a suit in a court of competent jurisdiction, should not be pursued by the District against the person or persons made the subject of the show cause hearing.

(b) No show cause hearing under Subsection (a) of this rule may be held unless the District first certified mails each person to be made the subject of the hearing, written notice not less than 20 days prior to the date of the hearing. Such notice shall include the following:

1. the time and place for the hearing;

2. the basis of each asserted violation;

3. the rule or order that the District believes has been violated or is being violated; and

4. a request that the person cited duly appear and show cause why enforcement action should not be pursued.

(c) The District may pursue immediate enforcement action against the person cited to appear in any show cause order issued by the District where the person so cited fails to appear and show cause why an enforcement action should not be pursued.

(d) Nothing in this rule shall limit the authority of the District to take action, including emergency actions or any other enforcement action, against a person at any time regardless of whether the District holds a hearing under this rule.

SECTION 10.
EFFECTIVE DATE

Rule 10.1. Effective Date.

These rules took effect on October 19, 2010, which was the date of their original adoption. An amendment to these rules takes effect on the date of its original adoption. It is the District's intention that the rules and amendments thereto be applied retroactively to activities involving the production and use of groundwater resources located in the District, as specifically set forth in these rules.

APPENDIX A. Enforcement Policy and Civil Penalty Schedule.

North Texas Groundwater Conservation District
ENFORCEMENT POLICY AND CIVIL PENALTY SCHEDULE

General Guidelines

When the General Manager discovers a violation of the District Rules that either (1) constitutes a Major Violation, or (2) constitutes a Minor Violation that the General Manager is unable to resolve within 60 days of discovering the Minor Violation, the General Manager shall bring the Major Violation or the unresolved Minor Violation and the pertinent facts surrounding it to the attention of the Board. Violations related to water well construction and completion requirements shall also be brought to the attention of the Board.

The General Manager shall recommend to the Board of Directors an appropriate settlement offer to settle the violation in lieu of litigation based upon the Civil Penalty Schedule set forth below. The Board may instruct the General Manager to tender an offer to settle the violation or to institute a civil suit in the appropriate court to seek civil penalties, injunctive relief, and costs of court and expert witnesses, damages, and attorneys' fees.

I. Minor Violations

The following acts each constitute a minor violation:

1. Failure to timely file a registration on a new well that qualifies for an exemption under Rule 2.1.
2. Failure to conduct a meter reading within the required period.
3. Failure to timely notify District regarding change of ownership.
4. Failure to timely file Well Report.
5. Failure to timely submit required documentation reflecting alterations or increased production.
6. Operating a meter that is not accurately calibrated.
7. Drilling an exempt or non-exempt well with an expired well registration.

CIVIL PENALTY SCHEDULE FOR MINOR VIOLATIONS

First Violation:	**$100.00**
Second Violation:	**$200.00**
Third Violation:	**Major Violation**

A second violation shall be any minor violation within 3 years of the first minor violation. A third violation shall be any minor violation following the second minor violation within 5 years of the first minor violation. Each day of a continuing violation constitutes a separate violation.

II. Major Violations

The following acts each constitute a major violation:

1. Failure to register a well or amend the registration of a well where mandated by rules, including drilling, equipping, completing, altering, or operating a well without a compliant and approved registration.

2. Failure to timely meter a well when required.

3. Failure to submit accurate Water Production report within 60 days of the date the report is due.

4. Failure to submit accurate Groundwater Transport report within the required period.

5. Drilling a well at a different location than authorized or in violation of spacing requirements.*

6. Failure to close or cap an open or uncovered well.

7. Failure to submit Water Use Fees within 60 days of the date the fees are due.**

8. Failure to timely submit Groundwater Transport Fees within 60 days of the date the fees are due.**

9. Committing waste.

10. Tampering with or disabling a required meter or tampering with a District seal.

CIVIL PENALTY SCHEDULE FOR MAJOR VIOLATIONS

First Violation:	**$500.00**
Second Violation:	**$1000.00**
Third Violation:	**Civil Suit for injunction and damages**

A second violation shall be any major violation within 3 years of the first major violation. A third violation shall be any major violation following the second major violation within 5 years of the first major violation. Each day of a continuing violation constitutes a separate violation.

* In addition to the applicable penalty provided for in the Civil Penalty Schedule for Major Violations, persons who drill a well in violation of applicable spacing requirements may be required to plug the well.

** In addition to the applicable penalty provided for in the Civil Penalty Schedule for Major Violations, persons who do not submit all Water Use Fees and Groundwater Transport Fees due and owing within 60 days of the date the fees are due pursuant to Rule 7.3(a) will be assessed a civil penalty equal to three times the total amount of outstanding Water Use Fees, Groundwater Transport Fees, or both, that are due and owing.

III. Water Well Construction and Completion Requirements

Failure to use approved construction materials:	**$250 + total costs of remediation**
Failure to properly cement annular space:	**$500 + total costs of remediation**

In addition to the civil penalties provided for in this schedule, persons who drill a well in violation of applicable spacing or completion requirements may be required to re-complete or reconstruct the well in accordance with the District's rules, or may be ordered to plug the well.

IV. Other Violations of District Rules Not Specifically Listed Herein

Any violation of a District Rule not specifically set forth herein shall be presented to the Board of Directors for a determination of whether the violation is Minor or Major, based upon the severity of the violation and the particular facts and issues involved, whereupon the procedures and the appropriate civil penalty amount set forth herein for Minor and Major Violations shall apply to the violation.

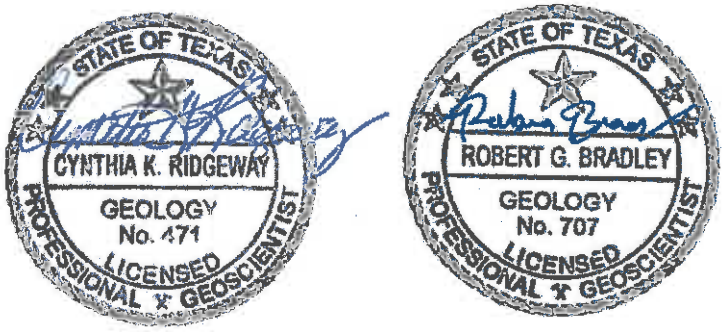
APPENDIX E

GAM Runs

GAM Run 10-063 MAG

by Mr. Wade Oliver and Mr. Robert G. Bradley, P.G.

Texas Water Development Board
Groundwater Availability Modeling Section
(512) 463-3132
December 14, 2011



Cynthia K. Ridgeway, the Manager of the Groundwater Availability Modeling Section and Interim Director of the Groundwater Resources Division, is responsible for oversight of work performed by employees under her direct supervision. The seal appearing on this document was authorized by Cynthia K. Ridgeway, P.G. 471 on December 14, 2011.

Robert G. Bradley, P.G. is responsible for the water budget approach for Comanche and Erath counties within Middle Trinity Groundwater Conservation District. The seal appearing on this document was authorized by Robert G. Bradley, P.G. 707 on December 14, 2011.

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EXECUTIVE SUMMARY:

In response to receiving the adopted desired future conditions for the Trinity Aquifer in Groundwater Management Area 8, the Texas Water Development Board completed Groundwater Availability Model (GAM) Run 08-84mag, which reported the "managed available groundwater" that achieves the adopted desired future conditions. Subsequent to the release of GAM Run 08-84mag, the Middle Trinity Groundwater Conservation District requested that the Texas Water Development Board reevaluate the "managed available groundwater" for Comanche and Erath counties. This resulted in the completion of Aquifer Assessment 09-07, which addressed these counties. In April 2011, the groundwater conservation districts in Groundwater Management Area 8 readopted the desired future conditions for the Trinity Aquifer previously adopted in September 2008.

This report, an update to GAM Run 08-84mag and Aquifer Assessment 09-07, incorporates the changes above and addresses the readopted desired future conditions. In addition, the pumping estimates previously reported as "managed available groundwater" in the above reports are reported here as "modeled available groundwater" to reflect changes in statute effective September 1, 2011. The modeled available groundwater for the Trinity Aquifer as a result of the desired future conditions adopted by the members of Groundwater Management Area 8 is approximately 261,000 acre-feet per year.

REQUESTOR:

Mr. Eddy Daniel of North Texas Groundwater Conservation District on behalf of Groundwater Management Area 8

DESCRIPTION OF REQUEST:

In a letter dated August 31, 2011, Mr. Eddy Daniel provided the Texas Water Development Board (TWDB) with the desired future conditions of the Trinity Aquifer adopted in a resolution, dated April 27, 2011, by the members of Groundwater Management Area 8. This resolution referenced the desired future conditions previously adopted for the aquifer on September 17, 2008 by the groundwater conservation districts within Groundwater Management Area 8. These are summarized in Table 1.

In response to receiving the initially adopted desired future conditions from September 2008, the Texas Water Development Board completed Groundwater Availability Model (GAM) Run 08-84mag, which reported the "managed available groundwater" that achieves the above desired future conditions (Wade, 2009). On June 12, 2009, the general manager and consultants for the Middle Trinity Groundwater Conservation District met with Texas Water Development Board staff to discuss issues they had concerning GAM Run 08-84mag. After discussion, staff reevaluated pumping estimates using a water-budget approach based on the desired future conditions for Comanche and Erath counties and released this analysis as Aquifer Assessment 09-07 on November 22, 2010 (Bradley, 2010). This report, an update to GAM Run 08-84mag and Aquifer Assessment 09-07, incorporates the two changes above. In addition, the pumping estimates previously reported as "managed available groundwater" in the above reports are

reported here as "modeled available groundwater" to reflect changes in statute effective September 1, 2011.

METHODS:

Groundwater Management Area 8 contains the Trinity Aquifer, a major aquifer in Texas as defined in the 2007 State Water Plan (TWDB, 2007). The location of Groundwater Management Area 8, the Trinity Aquifer, and the groundwater availability model cells that represent the aquifer are shown in Figure 1.

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. This is distinct from "managed available groundwater," shown in the draft version of this report dated December 20, 2010, which was a permitting value and accounted for the estimated use of the aquifer exempt from permitting. This change was made to reflect changes in statute by the 82nd Texas Legislature, effective September 1, 2011.

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. The estimated amount of pumping exempt from permitting, which the Texas Water Development Board is now required to develop after soliciting input from applicable groundwater conservation districts, will be provided in a separate report.

PARAMETERS AND ASSUMPTIONS:

The groundwater availability model for the northern portion of the Trinity Aquifer was used for the results presented in this report outside of Comanche and Erath counties. In those counties, a water budget approach was used. The parameters and assumptions for developing the modeled available groundwater are described below:

Groundwater Availability Model for the Northern Portion of the Trinity Aquifer

- The results for modeled available groundwater presented here are based on the results reported as "managed available groundwater" in GAM Run 08-84mag (Wade, 2009) for all areas except Comanche and Erath counties. See GAM Run 08-84mag for a full description of the methods and assumptions associated with the model simulation. Because GAM Run 08-84mag presented constant pumping from 2000 to 2050, it was assumed for the purposes of this analysis that pumping from 2051 to 2060 was also constant at the same level. As summarized in Table 1, desired future conditions were defined by the groundwater conservation districts in Groundwater Management Area 8 for 2050. It is expected that pumping from 2051 to 2060 would cause additional

drawdown, but this analysis does not estimate drawdown in 2060. Pumping estimates for 2060 were important to include for purposes of regional water planning.

- Version 1.01 of the groundwater availability model for the northern portion of the Trinity Aquifer was used for this analysis. See Bené and others (2004) for assumptions and limitations of the model.

- The model includes seven layers which generally correspond to the Woodbine Aquifer (Layer 1), the Washita and Fredericksburg Groups (Layer 2), the Paluxy Formation (Layer 3), the Glen Rose Formation (Layer 4), the Hensell Formation (Layer 5), the Pearsall/Cow Creek/Hammett/Sligo Members (Layer 6), and the Hosston Formation (Layer 7).

- The mean absolute error (a measure of the difference between simulated and measured water levels during model calibration) for the four main aquifers in the model (Woodbine, Paluxy, Hensell, and Hosston) for the calibration and verification time periods (1980 to 2000) ranged from approximately 38 to 75 feet. The root mean squared error was less than ten percent of the maximum change in water levels across the model (Bené and others, 2004).

- Average annual recharge conditions based on climate data from 1980 to 1999 were assumed for the first 47 years of the simulation. The last three years of the simulation drought-of-record recharge conditions were assumed, which were defined as the years 1954 to 1956.

- Groundwater conservation district boundaries were updated since the release of GAM Run 08-84mag. The results presented here correspond to the official district boundaries as of the date of this report.

Water Budget Approach for Comanche and Erath Counties

- The modeled available groundwater presented for Comanche and Erath counties is based on Aquifer Assessment 09-07 (Bradley, 2010). See Aquifer Assessment 09-07 for a full description of the methods and assumptions associated with the water budget calculations.

- The Hensell and Hosston members were grouped as the Twin Mountains Formation in Aquifer Assessment 09-07. To be consistent with the desired future conditions, however, it was necessary to split the pumping in Aquifer Assessment 09-07 into the Hensell and Hosston members. In Comanche County, 10 percent of the pumping in the Twin Mountains Formation was assigned to the Hensell member while 90 percent was assigned to the Hosston. In Erath County, 35 percent of the pumping in Aquifer Assessment 09-07 was assigned to the Hensell with the remaining 65 percent assigned to the Hosston. These percentages were developed after a preliminary review of available pumping information and discussion with Joe Cooper of Middle Trinity Groundwater Conservation District.

RESULTS:

The modeled available groundwater for the Trinity Aquifer in Groundwater Management Area 8 as a result of the desired future conditions is approximately 261,000 acre-feet per year between 2010 and 2060. This pumping has been divided by county, regional water planning area, and river basin for each decade between 2010 and 2060 for use in the regional water planning process (Table 2). These areas are shown in Figure 2.

Since the desired future conditions are specified for individual units of the Trinity Aquifer (Paluxy, Glen Rose, Hensell, and Hosston) based on the layering used in the model, the modeled available groundwater is shown for each unit in the subsequent tables. Tables 3, 4, 5, and 6 show the modeled available groundwater summarized by county in the Paluxy, Glen Rose, Hensell, and Hosston units of the Trinity Aquifer, respectively. Tables 7, 8, 9, and 10 show the modeled available groundwater summarized by regional water planning area for the same units, respectively. Tables 11, 12, 13, and 14 show the modeled available groundwater summarized by river basin for each of the above units, respectively. The modeled available groundwater summarized by groundwater conservation district is shown for the Paluxy, Glen Rose, Hensell, and Hosston units in tables 15, 16, 17, and 18, respectively. Notice that the pumping is totaled both excluding and including areas outside of a groundwater conservation district.

LIMITATIONS:

The groundwater model used in developing estimates of modeled available groundwater is the best available scientific tool that can be used to estimate the pumping that will achieve the desired future conditions. Although the groundwater model used in this analysis is the best available scientific tool for this purpose, it, like all models, has limitations. 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 develop estimates of modeled available groundwater is the need to make assumptions about the location in the aquifer where future pumping will occur. As actual pumping changes in the future, it will be necessary to evaluate the amount of that pumping as well as its location in the context of the assumptions associated with this analysis. Evaluating the amount and location of future pumping is as important as evaluating the changes in groundwater levels, spring flows, and other metrics that describe the condition of the groundwater resources in the area that relate to the adopted desired future condition(s).

Given these limitations, users of this information are cautioned that the modeled available groundwater numbers should not be considered a definitive, permanent description of the amount

of groundwater that can be pumped to meet the adopted desired future condition. 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 future groundwater pumping as well as whether or not they are achieving their desired future conditions. Because of the limitations of the model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine the modeled available groundwater numbers given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future.

REFERENCES:

Bené, 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. Harden and Associates, 391 p.

Bradley, R.G., 2010, GTA Aquifer Assessment 09-07: Texas Water Development Board, GTA Aquifer Assessment 09-07 Report, 19 p.

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.

Texas Water Development Board, 2007, Water for Texas – 2007—Volumes I-III; Texas Water Development Board Document No. GP-8-1, 392 p.

Wade, S., 2009, GAM Run 08-84mag, Texas Water Development Board GAM Run 08-84mag Report, 37 p.

Table 1. Desired future conditions (in feet of drawdown) for each unit of the Trinity Aquifer adopted by members of Groundwater Management Area 8.

County	Average water level decrease (feet)			
	Paluxy	Glen Rose	Hensell	Hosston
Bell	134	155	286	319
Bosque	26	33	201	220
Brown	0	0	1	1
Burnet	1	1	11	29
Callahan	n/a	n/a	0	2
Collin	298	247	224	236
Comanche	0	0	2	11
Cooke	26	42	60	78
Coryell	15	15	156	179
Dallas	240	224	263	290
Delta	175	162	162	159
Denton	98	134	180	214
Eastland	0	0	0	0
Ellis	265	283	336	362
Erath	1	1	11	27
Falls	279	354	459	480
Fannin	212	196	182	181
Grayson	175	161	160	165
Hamilton	0	2	39	51
Hill	209	253	381	406
Hood	1	2	16	56
Hunt	286	245	215	223
Johnson	37	83	208	234
Kaufman	303	286	295	312
Lamar	132	130	136	134
Lampasas	0	1	12	23
Limestone	328	392	475	492
McLennan	251	291	489	527
Milam	252	294	337	344
Mills	0	0	3	12
Montague	0	1	3	12
Navarro	344	353	399	413
Parker	5	6	16	40
Red River	82	77	78	78
Rockwall	346	272	248	265
Somervell	1	4	53	113
Tarrant	33	75	160	173
Taylor	n/a	n/a	n/a	3
Travis	124	61	98	116
Williamson	108	88	142	166
Wise	4	14	23	53

Table 2. Modeled available groundwater in acre-feet for the Trinity Aquifer in Groundwater Management Area 8 by county, regional water planning area, and river basin.

County	Regional Water Planning Area	Basin	Year					
			2010	2020	2030	2040	2050	2060
Bell	G	Brazos	7,068	7,068	7,068	7,068	7,068	7,068
Bosque	G	Brazos	5,849	5,849	5,849	5,849	5,849	5,849
Brown	F	Brazos	28	28	28	28	28	28
		Colorado	2,017	2,017	2,017	2,017	2,017	2,017
Burnet	K	Brazos	2,723	2,723	2,723	2,723	2,723	2,723
		Colorado	823	823	823	823	823	823
Callahan	G	Brazos	1,792	1,792	1,792	1,792	1,792	1,792
		Colorado	1,985	1,985	1,985	1,985	1,985	1,985
Collin	C	Sabine	0	0	0	0	0	0
		Trinity	2,104	2,104	2,104	2,104	2,104	2,104
Comanche	G	Brazos	32,115	32,115	32,115	32,115	32,115	32,115
		Colorado	120	120	120	120	120	120
Cooke	C	Red	1,284	1,284	1,284	1,284	1,284	1,284
		Trinity	5,566	5,566	5,566	5,566	5,566	5,566
Coryell	G	Brazos	3,716	3,716	3,716	3,716	3,716	3,716
Dallas	C	Trinity	5,458	5,458	5,458	5,458	5,458	5,458
Delta	D	Sulphur	362	362	362	362	362	362
Denton	C	Trinity	19,333	19,333	19,333	19,333	19,333	19,333
Eastland	G	Brazos	4,489	4,489	4,489	4,489	4,489	4,489
		Colorado	231	231	231	231	231	231
Ellis	C	Trinity	3,959	3,959	3,959	3,959	3,959	3,959
Erath	G	Brazos	32,926	32,926	32,926	32,926	32,926	32,926
Falls	G	Brazos	169	169	169	169	169	169
Fannin	C	Red	617	617	617	617	617	617
		Sulphur	0	0	0	0	0	0
		Trinity	83	83	83	83	83	83
Franklin	D	Sulphur	0	0	0	0	0	0
Grayson	C	Red	7,722	7,722	7,722	7,722	7,722	7,722
		Trinity	1,678	1,678	1,678	1,678	1,678	1,678
Hamilton	G	Brazos	2,144	2,144	2,144	2,144	2,144	2,144
Hill	G	Brazos	3,086	3,086	3,086	3,086	3,086	3,086
		Trinity	61	61	61	61	61	61
Hood	G	Brazos	11,081	11,081	11,081	11,081	11,081	11,081
		Trinity	64	64	64	64	64	64
Hunt	D	Sabine	0	0	0	0	0	0
		Sulphur	0	0	0	0	0	0
		Trinity	551	551	551	551	551	551
Johnson	G	Brazos	4,940	4,940	4,940	4,940	4,940	4,940
		Trinity	7,931	7,931	7,931	7,931	7,931	7,931
Kaufman	C	Sabine	45	45	45	45	45	45
		Trinity	1,136	1,136	1,136	1,136	1,136	1,136

Table 2. Continued.

County	Regional Water Planning Area	Basin	Year					
			2010	2020	2030	2040	2050	2060
Lamar	D	Red	1,320	1,320	1,320	1,320	1,320	1,320
		Sulphur	2	2	2	2	2	2
Lampasas	G	Brazos	2,925	2,925	2,925	2,925	2,925	2,925
		Colorado	192	192	192	192	192	192
Limestone	G	Brazos	69	69	69	69	69	69
		Trinity	0	0	0	0	0	0
McLennan	G	Brazos	20,690	20,690	20,690	20,690	20,690	20,690
Milam	G	Brazos	288	288	288	288	288	288
Mills	K	Brazos	1,273	1,273	1,273	1,273	1,273	1,273
		Colorado	1,128	1,128	1,128	1,128	1,128	1,128
Montague	B	Brazos	0	0	0	0	0	0
		Red	129	129	129	129	129	129
		Trinity	2,545	2,545	2,545	2,545	2,545	2,545
Navarro	C	Trinity	1,873	1,873	1,873	1,873	1,873	1,873
Parker	C	Brazos	2,799	2,799	2,799	2,799	2,799	2,799
		Trinity	12,449	12,449	12,449	12,449	12,449	12,449
Red River	D	Red	263	263	263	263	263	263
		Sulphur	267	267	267	267	267	267
Rockwall	C	Sabine	0	0	0	0	0	0
		Trinity	958	958	958	958	958	958
Somervell	G	Brazos	2,485	2,485	2,485	2,485	2,485	2,485
Tarrant	C	Trinity	18,747	18,747	18,747	18,747	18,747	18,747
Taylor	G	Brazos	153	153	153	153	153	153
		Colorado	278	278	278	278	278	278
Travis	K	Brazos	8	8	8	8	8	8
		Colorado	3,882	3,882	3,882	3,882	3,882	3,882
Williamson	G	Brazos	1,514	1,514	1,514	1,514	1,514	1,514
		Colorado	68	68	68	68	68	68
	K	Brazos	157	157	157	157	157	157
		Colorado	61	61	61	61	61	61
Wise	C	Trinity	9,282	9,282	9,282	9,282	9,282	9,282
Total			**261,061**	**261,061**	**261,061**	**261,061**	**261,061**	**261,061**

Table 3. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	96	96	96	96	96	96
Bosque	1,013	1,013	1,013	1,013	1,013	1,013
Brown	18	18	18	18	18	18
Burnet	182	182	182	182	182	182
Collin	1,762	1,762	1,762	1,762	1,762	1,762
Comanche	2,292	2,292	2,292	2,292	2,292	2,292
Cooke	3,528	3,528	3,528	3,528	3,528	3,528
Coryell	254	254	254	254	254	254
Dallas	433	433	433	433	433	433
Delta	0	0	0	0	0	0
Denton	9,822	9,822	9,822	9,822	9,822	9,822
Eastland	4	4	4	4	4	4
Ellis	400	400	400	400	400	400
Erath	13,614	13,614	13,614	13,614	13,614	13,614
Falls	0	0	0	0	0	0
Fannin	288	288	288	288	288	288
Grayson	4,708	4,708	4,708	4,708	4,708	4,708
Hamilton	291	291	291	291	291	291
Hill	1,254	1,254	1,254	1,254	1,254	1,254
Hood	942	942	942	942	942	942
Hunt	551	551	551	551	551	551
Johnson	9,493	9,493	9,493	9,493	9,493	9,493
Kaufman	102	102	102	102	102	102
Lamar	0	0	0	0	0	0
Lampasas	13	13	13	13	13	13
Limestone	0	0	0	0	0	0
McLennan	231	231	231	231	231	231
Milam	0	0	0	0	0	0
Mills	5	5	5	5	5	5
Montague	505	505	505	505	505	505
Navarro	413	413	413	413	413	413
Parker	9,800	9,800	9,800	9,800	9,800	9,800
Red River	473	473	473	473	473	473
Rockwall	958	958	958	958	958	958
Somervell	120	120	120	120	120	120
Tarrant	10,544	10,544	10,544	10,544	10,544	10,544
Travis	3	3	3	3	3	3
Williamson	11	11	11	11	11	11
Wise	2,559	2,559	2,559	2,559	2,559	2,559
Total	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**

Table 4. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	880	880	880	880	880	880
Bosque	258	258	258	258	258	258
Brown	0	0	0	0	0	0
Burnet	205	205	205	205	205	205
Collin	0	0	0	0	0	0
Comanche	0	0	0	0	0	0
Cooke	0	0	0	0	0	0
Coryell	784	784	784	784	784	784
Dallas	0	0	0	0	0	0
Delta	0	0	0	0	0	0
Denton	0	0	0	0	0	0
Eastland	0	0	0	0	0	0
Ellis	0	0	0	0	0	0
Erath	41	41	41	41	41	41
Falls	2	2	2	2	2	2
Fannin	0	0	0	0	0	0
Franklin	0	0	0	0	0	0
Grayson	0	0	0	0	0	0
Hamilton	46	46	46	46	46	46
Hill	10	10	10	10	10	10
Hood	4	4	4	4	4	4
Hunt	0	0	0	0	0	0
Johnson	24	24	24	24	24	24
Kaufman	0	0	0	0	0	0
Lamar	0	0	0	0	0	0
Lampasas	773	773	773	773	773	773
Limestone	4	4	4	4	4	4
McLennan	265	265	265	265	265	265
Milam	149	149	149	149	149	149
Mills	66	66	66	66	66	66
Montague	0	0	0	0	0	0
Navarro	0	0	0	0	0	0
Parker	192	192	192	192	192	192
Red River	0	0	0	0	0	0
Rockwall	0	0	0	0	0	0
Somervell	134	134	134	134	134	134
Tarrant	112	112	112	112	112	112
Travis	2,612	2,612	2,612	2,612	2,612	2,612
Williamson	760	760	760	760	760	760
Wise	5	5	5	5	5	5
Total	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**

Table 5. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	1,099	1,099	1,099	1,099	1,099	1,099
Bosque	1,749	1,749	1,749	1,749	1,749	1,749
Brown	79	79	79	79	79	79
Burnet	690	690	690	690	690	690
Callahan	123	123	123	123	123	123
Collin	103	103	103	103	103	103
Comanche	2,995	2,995	2,995	2,995	2,995	2,995
Cooke	1,611	1,611	1,611	1,611	1,611	1,611
Coryell	1,765	1,765	1,765	1,765	1,765	1,765
Dallas	1,121	1,121	1,121	1,121	1,121	1,121
Delta	181	181	181	181	181	181
Denton	3,112	3,112	3,112	3,112	3,112	3,112
Eastland	79	79	79	79	79	79
Ellis	1,142	1,142	1,142	1,142	1,142	1,142
Erath	6,745	6,745	6,745	6,745	6,745	6,745
Falls	22	22	22	22	22	22
Fannin	203	203	203	203	203	203
Grayson	2,345	2,345	2,345	2,345	2,345	2,345
Hamilton	1,109	1,109	1,109	1,109	1,109	1,109
Hill	933	933	933	933	933	933
Hood	3,595	3,595	3,595	3,595	3,595	3,595
Hunt	0	0	0	0	0	0
Johnson	1,065	1,065	1,065	1,065	1,065	1,065
Kaufman	240	240	240	240	240	240
Lamar	661	661	661	661	661	661
Lampasas	885	885	885	885	885	885
Limestone	15	15	15	15	15	15
McLennan	4,190	4,190	4,190	4,190	4,190	4,190
Milam	36	36	36	36	36	36
Mills	946	946	946	946	946	946
Montague	362	362	362	362	362	362
Navarro	256	256	256	256	256	256
Parker	1,441	1,441	1,441	1,441	1,441	1,441
Red River	19	19	19	19	19	19
Rockwall	0	0	0	0	0	0
Somervell	741	741	741	741	741	741
Tarrant	2,535	2,535	2,535	2,535	2,535	2,535
Travis	156	156	156	156	156	156
Williamson	415	415	415	415	415	415
Wise	1,480	1,480	1,480	1,480	1,480	1,480
Total	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**

Table 6. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by county in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

County	Year					
	2010	2020	2030	2040	2050	2060
Bell	4,993	4,993	4,993	4,993	4,993	4,993
Bosque	2,829	2,829	2,829	2,829	2,829	2,829
Brown	1,948	1,948	1,948	1,948	1,948	1,948
Burnet	2,469	2,469	2,469	2,469	2,469	2,469
Callahan	3,654	3,654	3,654	3,654	3,654	3,654
Collin	239	239	239	239	239	239
Comanche	26,948	26,948	26,948	26,948	26,948	26,948
Cooke	1,711	1,711	1,711	1,711	1,711	1,711
Coryell	913	913	913	913	913	913
Dallas	3,904	3,904	3,904	3,904	3,904	3,904
Delta	181	181	181	181	181	181
Denton	6,399	6,399	6,399	6,399	6,399	6,399
Eastland	4,637	4,637	4,637	4,637	4,637	4,637
Ellis	2,417	2,417	2,417	2,417	2,417	2,417
Erath	12,526	12,526	12,526	12,526	12,526	12,526
Falls	145	145	145	145	145	145
Fannin	209	209	209	209	209	209
Franklin	0	0	0	0	0	0
Grayson	2,347	2,347	2,347	2,347	2,347	2,347
Hamilton	698	698	698	698	698	698
Hill	950	950	950	950	950	950
Hood	6,604	6,604	6,604	6,604	6,604	6,604
Hunt	0	0	0	0	0	0
Johnson	2,289	2,289	2,289	2,289	2,289	2,289
Kaufman	839	839	839	839	839	839
Lamar	661	661	661	661	661	661
Lampasas	1,446	1,446	1,446	1,446	1,446	1,446
Limestone	50	50	50	50	50	50
McLennan	16,004	16,004	16,004	16,004	16,004	16,004
Milam	103	103	103	103	103	103
Mills	1,384	1,384	1,384	1,384	1,384	1,384
Montague	1,807	1,807	1,807	1,807	1,807	1,807
Navarro	1,204	1,204	1,204	1,204	1,204	1,204
Parker	3,815	3,815	3,815	3,815	3,815	3,815
Red River	38	38	38	38	38	38
Rockwall	0	0	0	0	0	0
Somervell	1,490	1,490	1,490	1,490	1,490	1,490
Tarrant	5,556	5,556	5,556	5,556	5,556	5,556
Taylor	431	431	431	431	431	431
Travis	1,119	1,119	1,119	1,119	1,119	1,119
Williamson	614	614	614	614	614	614
Wise	5,238	5,238	5,238	5,238	5,238	5,238
Total	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**

Table 7. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	505	505	505	505	505	505
C	45,317	45,317	45,317	45,317	45,317	45,317
D	1,024	1,024	1,024	1,024	1,024	1,024
F	18	18	18	18	18	18
G	29,628	29,628	29,628	29,628	29,628	29,628
K	190	190	190	190	190	190
Total	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**

Table 8. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	0	0	0	0	0	0
C	309	309	309	309	309	309
D	0	0	0	0	0	0
F	0	0	0	0	0	0
G	4,016	4,016	4,016	4,016	4,016	4,016
K	3,001	3,001	3,001	3,001	3,001	3,001
Total	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**

Table 9. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 12 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	362	362	362	362	362	362
C	15,589	15,589	15,589	15,589	15,589	15,589
D	861	861	861	861	861	861
F	79	79	79	79	79	79
G	27,514	27,514	27,514	27,514	27,514	27,514
K	1,839	1,839	1,839	1,839	1,839	1,839
Total	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**

Table 10. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by regional water planning area in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
B	1,807	1,807	1,807	1,807	1,807	1,807
C	33,878	33,878	33,878	33,878	33,878	33,878
D	880	880	880	880	880	880
F	1,948	1,948	1,948	1,948	1,948	1,948
G	87,271	87,271	87,271	87,271	87,271	87,271
K	5,025	5,025	5,025	5,025	5,025	5,025
Total	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**

Table 11. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	23,223	23,223	23,223	23,223	23,223	23,223
Colorado	193	193	193	193	193	193
Red	4,943	4,943	4,943	4,943	4,943	4,943
Sabine	4	4	4	4	4	4
Sulphur	267	267	267	267	267	267
Trinity	48,052	48,052	48,052	48,052	48,052	48,052
Total	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**

Table 12. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	4,263	4,263	4,263	4,263	4,263	4,263
Colorado	2,753	2,753	2,753	2,753	2,753	2,753
Red	0	0	0	0	0	0
Sabine	0	0	0	0	0	0
Sulphur	0	0	0	0	0	0
Trinity	310	310	310	310	310	310
Total	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**

Table 13. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	29,030	29,030	29,030	29,030	29,030	29,030
Colorado	585	585	585	585	585	585
Red	3,129	3,129	3,129	3,129	3,129	3,129
Sabine	9	9	9	9	9	9
Sulphur	182	182	182	182	182	182
Trinity	13,309	13,309	13,309	13,309	13,309	13,309
Total	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**

Table 14. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by river basin in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Brazos	87,971	87,971	87,971	87,971	87,971	87,971
Colorado	7,254	7,254	7,254	7,254	7,254	7,254
Red	3,263	3,263	3,263	3,263	3,263	3,263
Sabine	32	32	32	32	32	32
Sulphur	182	182	182	182	182	182
Trinity	32,107	32,107	32,107	32,107	32,107	32,107
Total	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**

Table 15. Modeled available groundwater for the Paluxy unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	182	182	182	182	182	182
Clearwater UWCD	96	96	96	96	96	96
Fox Crossing WD	5	5	5	5	5	5
Middle Trinity GCD	17,173	17,173	17,173	17,173	17,173	17,173
North Texas GCD	15,112	15,112	15,112	15,112	15,112	15,112
Northern Trinity GCD	10,544	10,544	10,544	10,544	10,544	10,544
Post Oak Savannah GCD	0	0	0	0	0	0
Prairielands GCD	11,267	11,267	11,267	11,267	11,267	11,267
Red River GCD	4,996	4,996	4,996	4,996	4,996	4,996
Saratoga UWCD	13	13	13	13	13	13
Southern Trinity GCD	231	231	231	231	231	231
Upper Trinity GCD	13,806	13,806	13,806	13,806	13,806	13,806
Total (excluding non-district areas)	**73,425**	**73,425**	**73,425**	**73,425**	**73,425**	**73,425**
No District	3,257	3,257	3,257	3,257	3,257	3,257
Total (including non-district areas)	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**	**76,682**

Table 16. Modeled available groundwater for the Glen Rose unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	205	205	205	205	205	205
Clearwater UWCD	880	880	880	880	880	880
Fox Crossing WD	66	66	66	66	66	66
Middle Trinity GCD	1,083	1,083	1,083	1,083	1,083	1,083
North Texas GCD	0	0	0	0	0	0
Northern Trinity GCD	112	112	112	112	112	112
Post Oak Savannah GCD	149	149	149	149	149	149
Prairielands GCD	168	168	168	168	168	168
Red River GCD	0	0	0	0	0	0
Saratoga UWCD	773	773	773	773	773	773
Southern Trinity GCD	265	265	265	265	265	265
Upper Trinity GCD	201	201	201	201	201	201
Total (excluding non-district areas)	**3,902**	**3,902**	**3,902**	**3,902**	**3,902**	**3,902**
No District	3,424	3,424	3,424	3,424	3,424	3,424
Total (including non-district areas)	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**	**7,326**

Table 17. Modeled available groundwater for the Hensell unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	690	690	690	690	690	690
Clearwater UWCD	1,099	1,099	1,099	1,099	1,099	1,099
Fox Crossing WD	946	946	946	946	946	946
Middle Trinity GCD	13,254	13,254	13,254	13,254	13,254	13,254
North Texas GCD	4,826	4,826	4,826	4,826	4,826	4,826
Northern Trinity GCD	2,535	2,535	2,535	2,535	2,535	2,535
Post Oak Savannah GCD	36	36	36	36	36	36
Prairielands GCD	3,881	3,881	3,881	3,881	3,881	3,881
Red River GCD	2,548	2,548	2,548	2,548	2,548	2,548
Saratoga UWCD	885	885	885	885	885	885
Southern Trinity GCD	4,190	4,190	4,190	4,190	4,190	4,190
Upper Trinity GCD	6,878	6,878	6,878	6,878	6,878	6,878
Total (excluding non-district areas)	**41,768**	**41,768**	**41,768**	**41,768**	**41,768**	**41,768**
No District	4,476	4,476	4,476	4,476	4,476	4,476
Total (including non-district areas)	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**	**46,244**

Table 18. Modeled available groundwater for the Hosston unit of the Trinity Aquifer summarized by groundwater conservation district (GCD) in Groundwater Management Area 8 for each decade between 2010 and 2060. Results are in acre-feet per year. UWCD refers to Underground Water Conservation District. WD refers to Water District.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Central Texas GCD	2,469	2,469	2,469	2,469	2,469	2,469
Clearwater UWCD	4,993	4,993	4,993	4,993	4,993	4,993
Fox Crossing WD	1,384	1,384	1,384	1,384	1,384	1,384
Middle Trinity GCD	43,216	43,216	43,216	43,216	43,216	43,216
North Texas GCD	8,349	8,349	8,349	8,349	8,349	8,349
Northern Trinity GCD	5,556	5,556	5,556	5,556	5,556	5,556
Post Oak Savannah GCD	103	103	103	103	103	103
Prairielands GCD	7,146	7,146	7,146	7,146	7,146	7,146
Red River GCD	2,556	2,556	2,556	2,556	2,556	2,556
Saratoga UWCD	1,446	1,446	1,446	1,446	1,446	1,446
Southern Trinity GCD	16,004	16,004	16,004	16,004	16,004	16,004
Upper Trinity GCD	17,464	17,464	17,464	17,464	17,464	17,464
Total (excluding non-district areas)	**110,686**	**110,686**	**110,686**	**110,686**	**110,686**	**110,686**
No District	20,123	20,123	20,123	20,123	20,123	20,123
Total (including non-district areas)	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**	**130,809**

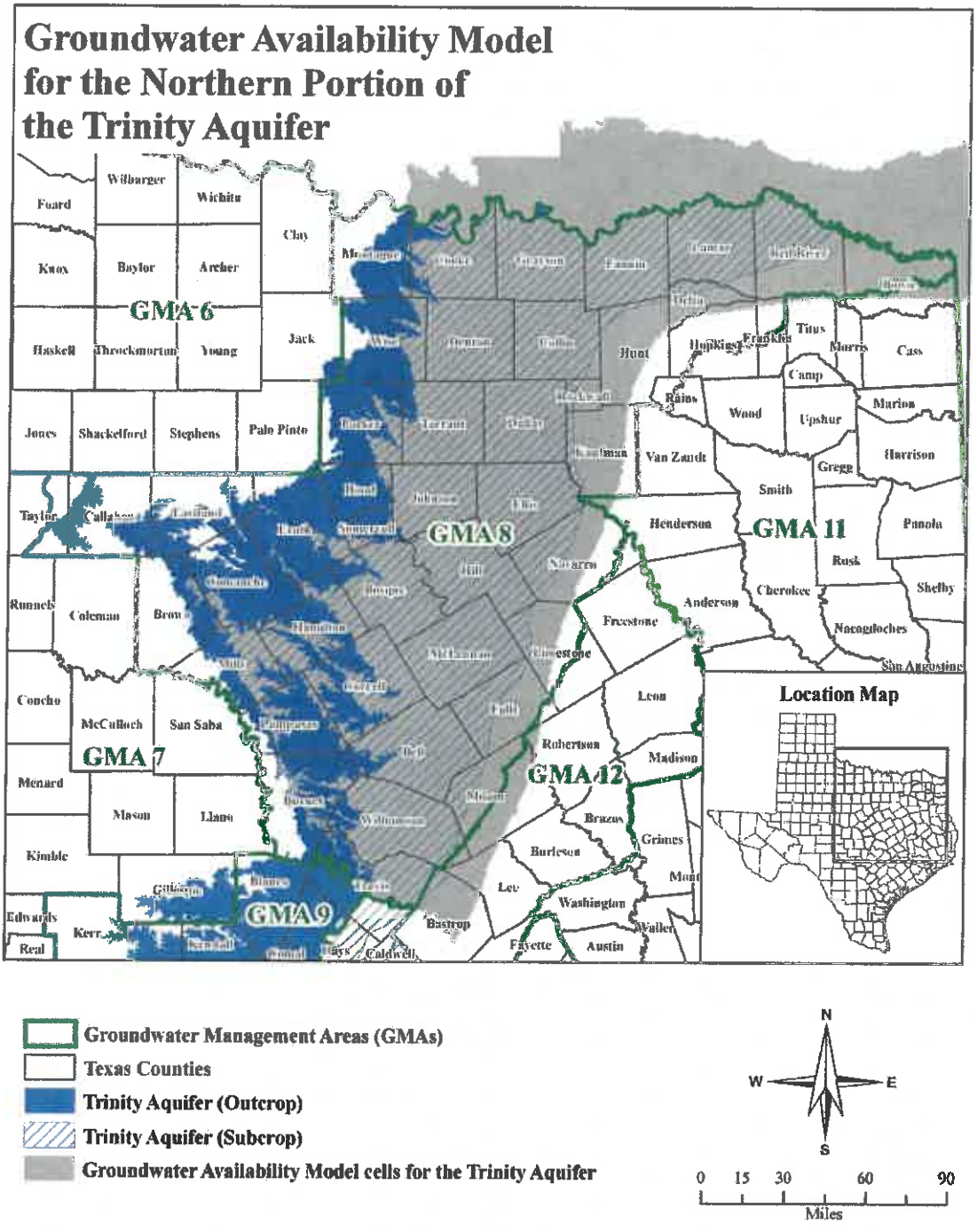

Figure 1. Map showing the areas of the groundwater availability model representing the northern portion of the Trinity Aquifer and the boundary of Groundwater Management Area 8.

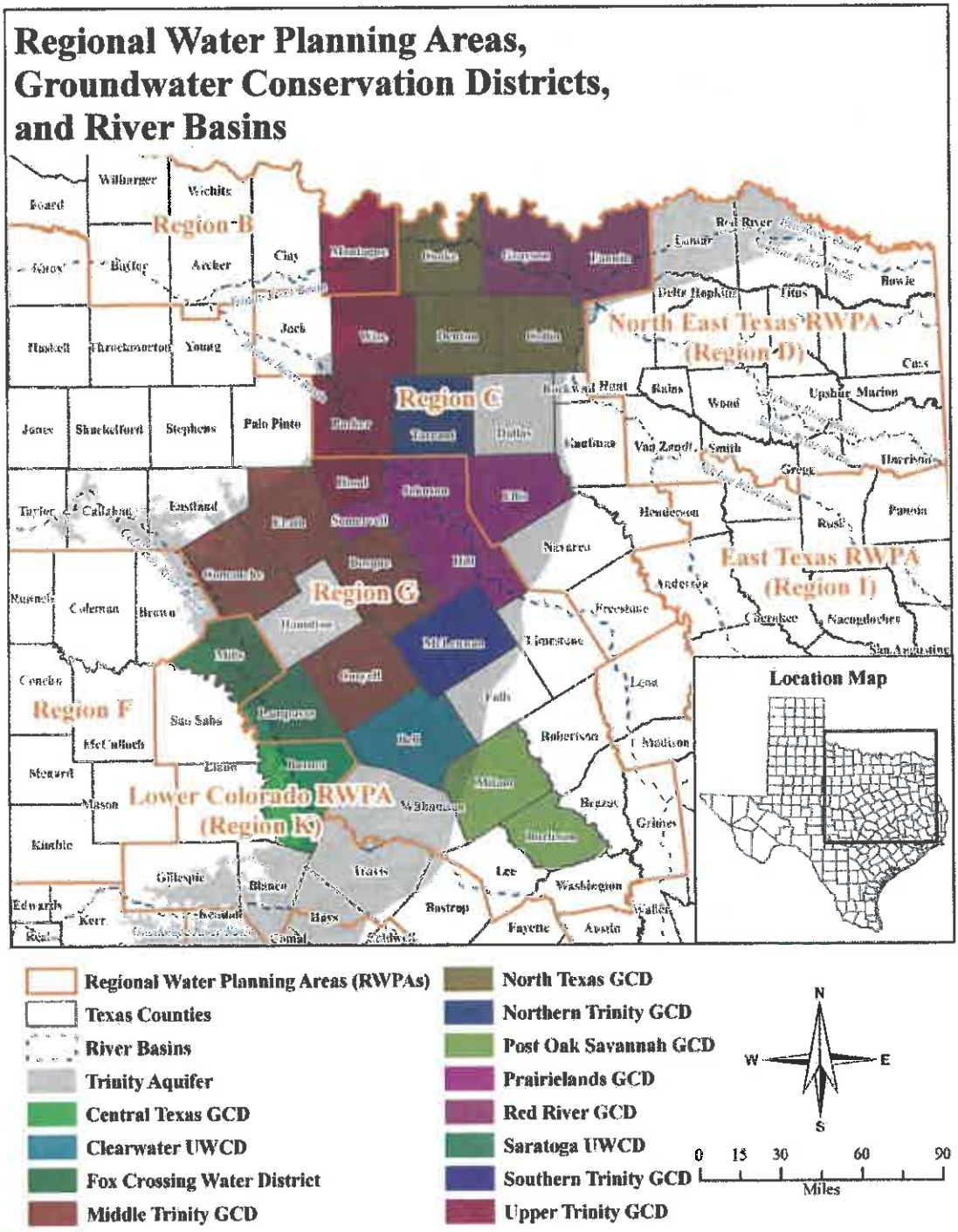

Figure 2. Map showing regional water planning areas (RWPAs), groundwater conservation districts (GCDs), counties, and river basins in and neighboring Groundwater Management Area 8.

GAM Run 16-004: North Texas Groundwater Conservation District Management Plan

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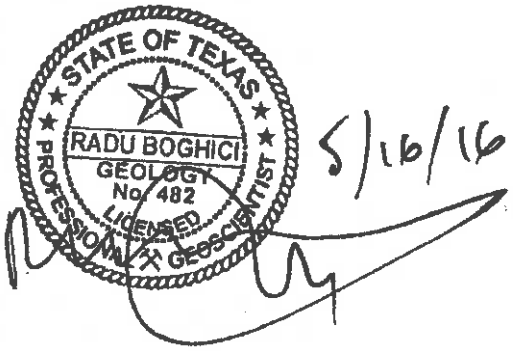
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Section
(512)463-5808
May 16, 2016



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GAM RUN 16-004: NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT MANAGEMENT PLAN

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Groundwater Division
Groundwater Availability Modeling Section
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May 16, 2016

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. Information derived from groundwater availability models that shall be included in the groundwater management plan includes:

- The annual amount of recharge from precipitation, if any, to the groundwater resources within the district;
- 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
- The annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

This report—Part 2 of a two-part package of information from the TWDB to the North Texas Groundwater Conservation District—fulfills the requirements noted above. Part 1 of the two-part package is the Estimated Historical Water Use/State Water Plan data report. The district will receive this data report from the TWDB Groundwater Technical Assistance Section. Questions about the data report can be directed to Mr. Stephen Allen, stephen.allen@twdb.texas.gov, (512)463-7317.

The groundwater management plan for the North Texas Groundwater Conservation District should be adopted by the district on or before March 21, 2017, and submitted to the Executive Administrator of the TWDB on or before April 20, 2017. The current management plan for the North Texas Groundwater Conservation District expires on June 19, 2017.

This report discusses the methods, assumptions, and results from a model run using version 2.01 of the groundwater availability model for the northern portion of the Trinity and Woodbine aquifers (Kelley and others, 2014). This model run replaces the results of GAM Run 10-034 (Hassan, 2010). GAM Run 10-034 was completed using version 1.01 of the groundwater availability model for the northern portion of the Trinity and Woodbine aquifers (Bené and others, 2004). Table 1 and Table 2 summarize the groundwater availability model data required by statute. Figure 1 and Figure 2 show the area of the model from which the values in the table were extracted. If after review of the figure 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 and Woodbine aquifers was used for this analysis. The water budget for the North Texas Groundwater Conservation District was extracted for selected years of the historical model period (1980 to 2012) using ZONEBUDGET Version 3.01 (Harbaugh, 2009). The average annual water budget values for recharge, surface-water outflow, inflow to the district, and outflow from the district for the Trinity Aquifer and Woodbine Aquifer within the district are summarized in this report.

PARAMETERS AND ASSUMPTIONS:

Trinity Aquifer and Woodbine Aquifer

- We used version 2.01 of the updated groundwater availability model for the northern portion of the Trinity and Woodbine aquifers. See Kelley and others (2014) for assumptions and limitations of the model.
- The groundwater availability model for the northern portion of the Trinity and Woodbine aquifers contains eight layers: Layer 1 (the surficial outcrop area of the units in layers 2 through 8 and units younger than Woodbine Aquifer), Layer 2 (Woodbine Aquifer and pass-through cells), Layer 3

(Washita and Fredericksburg, Edwards (Balcones Fault Zone), and pass-through cells), and Layers 4 through 8 (Trinity Aquifer).

- Perennial rivers and reservoirs were simulated using MODFLOW-NWT river package. Ephemeral streams, flowing wells, springs, and evapotranspiration in riparian zones along perennial rivers were simulated using MODFLOW-NWT drain package. For this management plan, groundwater discharge to surface water includes groundwater leakage to all of the river and drain boundaries except for the groundwater loss along the riparian zone.
- The model was run with MODFLOW-NWT (Niswonger and others, 2011).

RESULTS:

A groundwater budget summarizes the amount of water entering and leaving the aquifer according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the model results for the Trinity and Woodbine aquifers located within the district and averaged over the duration of the calibration and verification portion of the model run in the district, as shown in Table 1 and Table 2.

- 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.
- Surface-water outflow—the total water discharging from the aquifer (outflow) to surface-water features such as streams, reservoirs, and drains (springs).
- Flow into and out of district—the lateral flow within the aquifer between the district and adjacent counties.
- Flow between aquifers—the net vertical flow between aquifers or confining units. This flow is controlled by the relative water levels in each aquifer or confining unit and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs. Please note that the model assumes no cross-formational flow at the base of the Trinity Aquifer. Therefore, no cross-formational flow between the Trinity Aquifer and underlying hydrogeologic units was calculated by the model.

The information needed for the district's management plan is summarized in Table 1 and Table 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 THAT IS NEEDED 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	Trinity Aquifer	13,851
Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers	Trinity Aquifer	27,471
Estimated annual volume of flow into the district within each aquifer in the district	Trinity Aquifer	41,751[1]
Estimated annual volume of flow out of the district within each aquifer in the district	Trinity Aquifer	18,411[2]
Estimated net annual volume of flow between each aquifer in the district	From overlying younger units to Trinity Aquifer	16,473

[1] The estimated volume of flow from the brackish portion of the Trinity Group to the Trinity Aquifer in southeast Collin County is 463 acre-feet per year and was not included in the management plan requirement results.

[2] The estimated volume of flow from the Trinity Aquifer to the brackish portion of the Trinity Group in southeast Collin County is 87 acre-feet per year and was not included in the management plan requirement results.

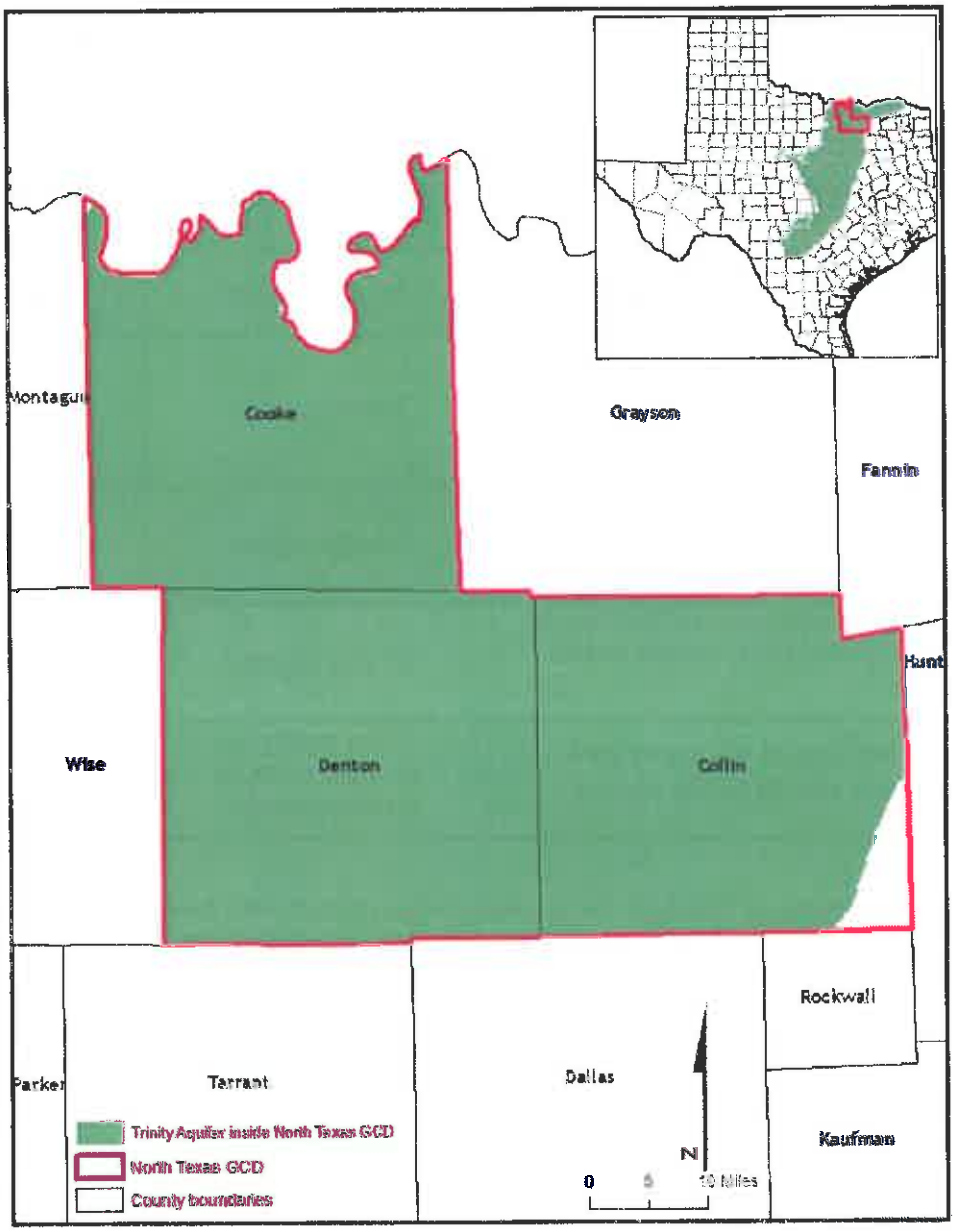

FIGURE 1: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE TRINITY AQUIFER FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED FOR THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT (GCD).

TABLE 2: SUMMARIZED INFORMATION FOR THE WOODBINE AQUIFER THAT IS NEEDED 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	55,555
Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers	Woodbine Aquifer	35,588
Estimated annual volume of flow into the district within each aquifer in the district	Woodbine Aquifer	7,668[1]
Estimated annual volume of flow out of the district within each aquifer in the district	Woodbine Aquifer	16,202[2]
Estimated net annual volume of flow between each aquifer in the district	From Woodbine Aquifer to younger units	3,280
	From Woodbine Aquifer to Washita and Fredericksburg confining units	6,595

1 The estimated volume of flow from the brackish portion of the Woodbine Formation to the Woodbine Aquifer in southeast Collin County is 54 acre-feet per year and was not included in the management plan requirement results.

2 The estimated volume of flow from the Woodbine Aquifer to the brackish portion of the Woodbine Formation in southeast Collin County is 43 acre-feet per year and was not included in the management plan requirement results

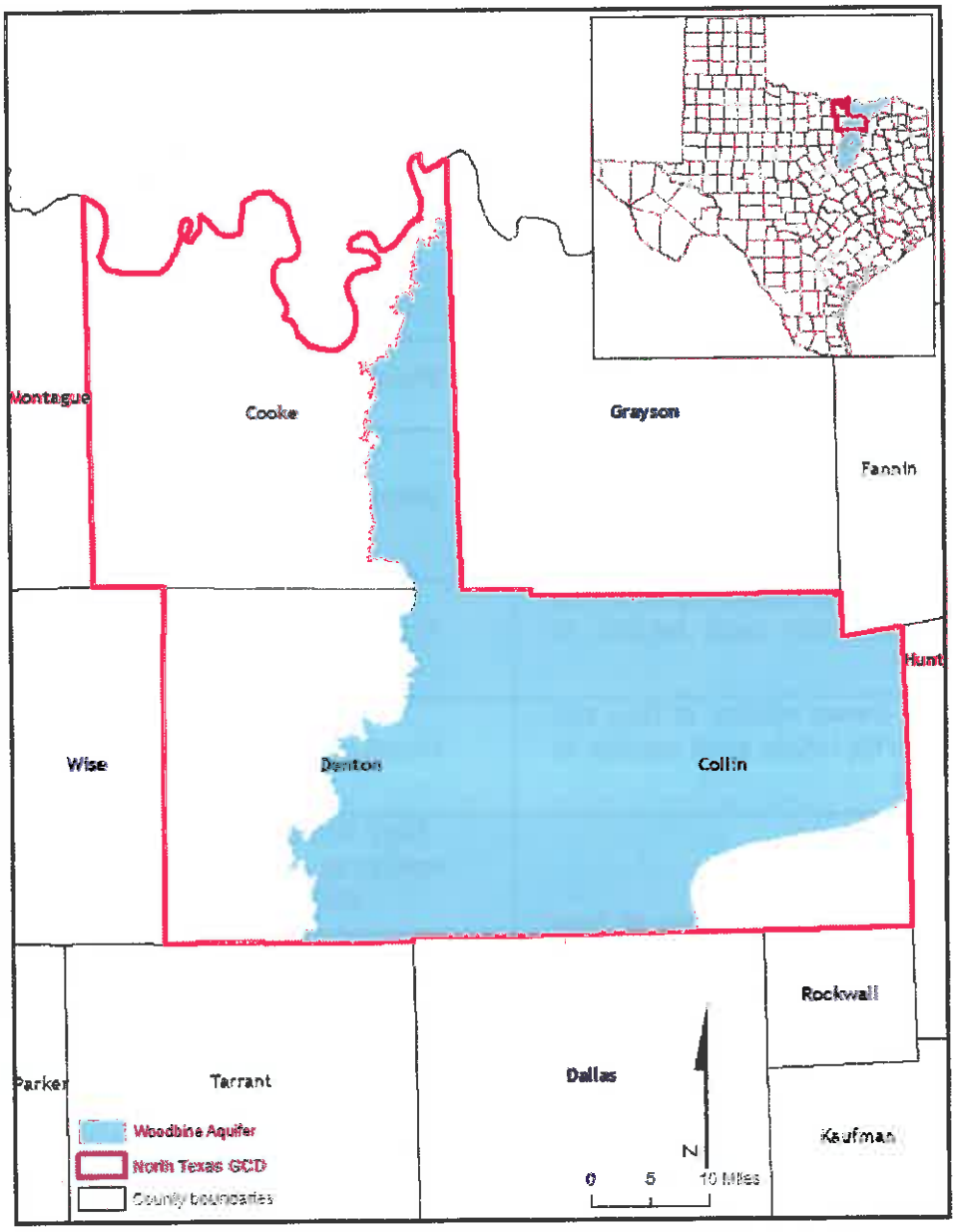

FIGURE 2: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE WOODBINE AQUIFER FROM WHICH THE INFORMATION IN TABLE 2 WAS EXTRACTED FOR THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT (GCD).

LIMITATIONS:

The groundwater models 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 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 interaction with streams are specific to particular historic 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. 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:

Bené, 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. Harden and Associates, 391 p., http://www.twdb.texas.gov/groundwater/models/gam/trnt_n/TRNT_N_Model_Report.pdf.

Hassan M. M., 2010, GAM Run 10-034: Texas Water Development Board GAM Run 10-004 Report, 6 p., http://www.twdb.texas.gov/groundwater/docs/GAMruns/GR10-34.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 - Draft Final Model Report (May 2014), 984 p.

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 F

Estimated Historical Water Use and 2017 State Water Plan Data Sets

Estimated Historical Water Use And 2017 State Water Plan Datasets:

North Texas Groundwater Conservation District

by Stephen Allen
Texas Water Development Board
Groundwater Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
January 19, 2017

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 Water 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 2017 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 2017 SWP data available as of 1/19/2017. 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 2017 SWP. District personnel must review these datasets and correct any discrepancies in order 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 2017 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) or Rima Petrossian (rima.petrossian@twdb.texas.gov or 512-936-2420).

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

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2015. 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
2014	GW	3,963	205	0	0	1,807	39	6,014
	SW	163,730	1,860	0	37	1,364	732	167,723
2013	GW	6,477	199	0	0	210	35	6,921
	SW	181,120	1,896	0	13	3,282	694	187,005
2012	GW	6,591	315	0	0	849	30	7,785
	SW	207,698	609	0	40	3,200	570	212,117
2011	GW	7,525	322	0	0	1,068	62	8,977
	SW	213,995	624	0	40	1,550	1,173	217,382
2010	GW	4,767	199	0	0	112	61	5,139
	SW	161,918	556	0	28	612	1,158	164,272
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	1,093	99	736	676	730	129,537
2003	GW	4,059	325	0	210	950	71	5,615
	SW	125,801	937	99	713	1,050	690	129,290
2002	GW	3,801	270	0	337	1,481	76	5,965
	SW	125,096	1,045	99	858	1,117	743	128,958
2001	GW	3,631	244	0	336	1,481	79	5,771
	SW	126,640	1,249	113	942	1,117	774	130,835
2000	GW	3,870	138	0	570	1,718	88	6,384
	SW	113,739	1,266	234	1,245	1,277	796	118,557

COOKE COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2014	GW	4,753	120	25	0	967	212	6,077
	SW	0	0	98	0	151	1,202	1,451
2013	GW	4,509	108	99	0	1,023	187	5,926
	SW	459	6	399	0	177	1,066	2,107
2012	GW	4,803	96	296	0	1,141	178	6,514
	SW	656	0	899	0	205	1,010	2,770
2011	GW	5,294	104	793	0	609	211	7,011
	SW	591	0	871	0	585	1,198	3,245
2010	GW	4,535	75	153	0	123	206	5,092
	SW	703	0	168	0	207	1,176	2,254
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
2003	GW	5,376	141	0	0	60	489	6,066
	SW	199	0	0	0	40	1,239	1,478
2002	GW	4,723	138	0	0	0	499	5,360
	SW	0	0	0	0	0	1,263	1,263
2001	GW	5,306	141	0	0	0	487	5,934
	SW	0	0	0	0	0	1,233	1,233
2000	GW	5,323	224	0	0	0	881	6,428
	SW	0	0	0	0	0	881	881

DENTON COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2014	GW	11,864	0	238	0	1,816	243	14,161
	SW	104,624	289	953	5	1,162	568	107,601
2013	GW	12,897	0	292	0	2,167	224	15,580
	SW	108,277	294	1,168	55	782	524	111,100
2012	GW	15,070	1	372	0	2,817	205	18,465
	SW	118,073	291	1,096	86	611	479	120,636
2011	GW	17,100	1	1,663	0	2,534	239	21,537
	SW	124,060	302	2,847	23	750	559	128,541
2010	GW	12,327	7	1,209	0	967	240	14,750
	SW	100,694	358	2,070	80	1,124	559	104,885
2009	GW	10,476	8	1,366	0	1,445	275	13,572
	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
2003	GW	10,646	53	0	0	1,096	499	12,294
	SW	97,967	388	0	346	704	499	99,904
2002	GW	9,980	55	0	0	2,042	570	12,647
	SW	80,217	486	0	158	0	570	81,431
2001	GW	10,531	44	0	0	1,792	635	13,002
	SW	102,552	510	0	0	0	635	103,697
2000	GW	11,252	43	0	0	2,108	315	13,718
	SW	81,653	754	0	19	0	315	82,741

Projected Surface Water Supplies
TWDB 2017 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	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2,249	1,947	1,677	1,486	1,349	1,228
C	ALLEN	TRINITY	FORK LAKE/RESERVOIR	1,139	0	0	0	0	0
C	ALLEN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	4,725	4,080	3,507	3,099	2,806	2,549
C	ALLEN	TRINITY	TAWAKONI LAKE/RESERVOIR	1,749	530	461	411	375	343
C	ALLEN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3,857	3,355	2,904	2,585	2,357	2,156
C	ANNA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	107	121	196	185	179	176
C	ANNA	TRINITY	FORK LAKE/RESERVOIR	54	0	0	0	0	0
C	ANNA	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	225	255	410	386	374	367
C	ANNA	TRINITY	TAWAKONI LAKE/RESERVOIR	83	33	54	51	50	49
C	ANNA	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	183	209	339	322	313	310
C	CADDO BASIN SUD	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	20	21	23	26	28	29
C	CADDO BASIN SUD	SABINE	FORK LAKE/RESERVOIR	11	0	0	0	0	0
C	CADDO BASIN SUD	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	43	43	48	54	58	62
C	CADDO BASIN SUD	SABINE	TAWAKONI LAKE/RESERVOIR	16	6	6	7	8	8

Projected Surface Water Supplies
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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	CADDO BASIN SUD	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	36	40	43	48	52
C	CADDO BASIN SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	10	11	13	14	14
C	CADDO BASIN SUD	TRINITY	FORK LAKE/RESERVOIR	5	0	0	0	0	0
C	CADDO BASIN SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	21	22	24	26	29	30
C	CADDO BASIN SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	8	3	3	4	4	4
C	CADDO BASIN SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	16	17	20	22	24	25
C	CARROLLTON	TRINITY	FORK LAKE/RESERVOIR	0	0	0	0	0	0
C	CARROLLTON	TRINITY	RAY HUBBARD LAKE/RESERVOIR	0	0	0	0	0	0
C	CARROLLTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	0	0	0	0	0	0
C	CARROLLTON	TRINITY	TAWAKONI LAKE/RESERVOIR	0	1	1	1	1	1
C	CELINA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	680	591	559	533	552	112
C	CELINA	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,012	1,914	1,706	1,521	1,486	1,457
C	COPEVILLE SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	35	36	38	44	70	108
C	COPEVILLE SUD	TRINITY	FORK LAKE/RESERVOIR	18	0	0	0	0	0
C	COPEVILLE SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	73	76	78	91	144	225
C	COPEVILLE SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	27	10	10	12	19	30

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	COPEVILLE SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	62	65	77	122	190
C	COUNTY-OTHER, COLLIN	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	5	3	2	2	2	1
C	COUNTY-OTHER, COLLIN	SABINE	FORK LAKE/RESERVOIR	2	0	0	0	0	0
C	COUNTY-OTHER, COLLIN	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	7	5	5	4	3
C	COUNTY-OTHER, COLLIN	SABINE	TAWAKONI LAKE/RESERVOIR	4	1	1	1	1	0
C	COUNTY-OTHER, COLLIN	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	8	6	4	4	3	2
C	COUNTY-OTHER, COLLIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	117	101	87	346	463	694
C	COUNTY-OTHER, COLLIN	TRINITY	FORK LAKE/RESERVOIR	60	0	0	0	0	0
C	COUNTY-OTHER, COLLIN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	246	210	179	722	965	1,442
C	COUNTY-OTHER, COLLIN	TRINITY	TAWAKONI LAKE/RESERVOIR	91	27	23	95	129	194
C	COUNTY-OTHER, COLLIN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	202	173	149	601	810	1,219
C	CULLEOKA WSC	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	35	50	55	54	62
C	CULLEOKA WSC	TRINITY	FORK LAKE/RESERVOIR	18	0	0	0	0	0
C	CULLEOKA WSC	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	75	75	105	113	112	128
C	CULLEOKA WSC	TRINITY	TAWAKONI LAKE/RESERVOIR	28	10	14	15	15	17
C	CULLEOKA WSC	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	62	61	87	95	95	108

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	DALLAS	TRINITY	FORK LAKE/RESERVOIR	1,778	1,814	1,771	1,719	1,680	1,685
C	DALLAS	TRINITY	RAY HUBBARD LAKE/RESERVOIR	1,751	1,603	1,416	1,246	1,108	1,013
C	DALLAS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	4,215	3,529	3,020	2,587	2,224	1,951
C	DALLAS	TRINITY	TAWAKONI LAKE/RESERVOIR	6,174	5,571	4,842	4,209	3,705	3,357
C	EAST FORK SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	31	32	34	36	39	42
C	EAST FORK SUD	TRINITY	FORK LAKE/RESERVOIR	16	0	0	0	0	0
C	EAST FORK SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	64	68	70	74	80	88
C	EAST FORK SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	24	9	9	10	11	12
C	EAST FORK SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	52	55	59	62	69	75
C	FAIRVIEW	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	508	510	589	523	475	433
C	FAIRVIEW	TRINITY	FORK LAKE/RESERVOIR	258	0	0	0	0	0
C	FAIRVIEW	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,069	1,070	1,230	1,091	990	897
C	FAIRVIEW	TRINITY	TAWAKONI LAKE/RESERVOIR	396	139	162	145	132	121
C	FAIRVIEW	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	872	879	1,019	909	830	760
C	FARMERSVILLE	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	0	0	0	0	0	0
C	FARMERSVILLE	SABINE	FORK LAKE/RESERVOIR	0	0	0	0	0	0

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	FARMERSVILLE	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	0	1	1	1	1	1
C	FARMERSVILLE	SABINE	TAWAKONI LAKE/RESERVOIR	0	0	0	0	0	0
C	FARMERSVILLE	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	0	1	1	1	0	0
C	FARMERSVILLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	105	221	191	169	154	140
C	FARMERSVILLE	TRINITY	FORK LAKE/RESERVOIR	53	0	0	0	0	0
C	FARMERSVILLE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	220	463	399	352	319	289
C	FARMERSVILLE	TRINITY	TAWAKONI LAKE/RESERVOIR	82	60	52	47	43	39
C	FARMERSVILLE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	180	380	329	293	268	246
C	FRISCO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2,588	2,930	3,069	2,726	2,475	2,253
C	FRISCO	TRINITY	FORK LAKE/RESERVOIR	1,305	0	0	0	0	0
C	FRISCO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	5,437	6,142	6,417	5,687	5,150	4,677
C	FRISCO	TRINITY	TAWAKONI LAKE/RESERVOIR	2,002	797	841	752	699	640
C	FRISCO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	4,439	5,050	5,313	4,742	4,325	3,956
C	GARLAND	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	6	6	7	7	8	8
C	GARLAND	TRINITY	FORK LAKE/RESERVOIR	3	0	0	0	0	0
C	GARLAND	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	12	13	14	15	16	17

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	GARLAND	TRINITY	TAWAKONI LAKE/RESERVOIR	5	2	2	2	2	2
C	GARLAND	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	11	11	12	13	15
C	IRRIGATION, COLLIN	SABINE	RAY HUBBARD LAKE/RESERVOIR	39	36	32	29	27	26
C	IRRIGATION, COLLIN	SABINE	TRINITY RUN-OF-RIVER	9	9	9	9	9	9
C	IRRIGATION, COLLIN	TRINITY	RAY HUBBARD LAKE/RESERVOIR	1,680	1,528	1,364	1,258	1,177	1,121
C	IRRIGATION, COLLIN	TRINITY	TRINITY RUN-OF-RIVER	399	399	399	399	399	399
C	JOSEPHINE	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	28	38	43	47	43	39
C	JOSEPHINE	SABINE	FORK LAKE/RESERVOIR	14	0	0	0	0	0
C	JOSEPHINE	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	78	91	99	90	82
C	JOSEPHINE	SABINE	TAWAKONI LAKE/RESERVOIR	22	10	12	13	12	11
C	JOSEPHINE	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	48	64	74	83	75	68
C	LAVON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	61	68	90	103	210	429
C	LAVON	TRINITY	FORK LAKE/RESERVOIR	31	0	0	0	0	0
C	LAVON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	129	142	187	214	436	891
C	LAVON	TRINITY	TAWAKONI LAKE/RESERVOIR	48	19	25	28	58	120
C	LAVON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	105	117	155	179	366	753
C	LAVON SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	39	35	36	35	75	170

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	LAVON SUD	TRINITY	FORK LAKE/RESERVOIR	20	0	0	0	0	0
C	LAVON SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	82	73	75	74	156	353
C	LAVON SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	30	10	10	10	20	47
C	LAVON SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	67	61	62	62	131	299
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	LOWRY CROSSING	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	24	25	26	23	20	19
C	LOWRY CROSSING	TRINITY	FORK LAKE/RESERVOIR	12	0	0	0	0	0
C	LOWRY CROSSING	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	52	51	54	47	43	38
C	LOWRY CROSSING	TRINITY	TAWAKONI LAKE/RESERVOIR	19	7	7	6	6	5
C	LOWRY CROSSING	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	42	42	44	39	36	33
C	LUCAS	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	233	230	263	260	261	238
C	LUCAS	TRINITY	FORK LAKE/RESERVOIR	118	0	0	0	0	0
C	LUCAS	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	491	483	548	543	544	494
C	LUCAS	TRINITY	TAWAKONI LAKE/RESERVOIR	182	63	72	72	73	66

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	LUCAS	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	400	397	455	453	457	418
C	MANUFACTURING, COLLIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	359	355	341	329	324	322
C	MANUFACTURING, COLLIN	TRINITY	FORK LAKE/RESERVOIR	183	0	0	0	0	0
C	MANUFACTURING, COLLIN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	756	740	711	687	679	669
C	MANUFACTURING, COLLIN	TRINITY	TAWAKONI LAKE/RESERVOIR	280	96	94	90	90	90
C	MANUFACTURING, COLLIN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	616	609	589	575	569	565
C	MARILEE SUD	TRINITY	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION	141	133	120	103	81	56
C	MCKINNEY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3,764	3,914	4,905	5,672	5,152	4,691
C	MCKINNEY	TRINITY	FORK LAKE/RESERVOIR	1,907	0	0	0	0	0
C	MCKINNEY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	7,906	8,201	10,255	11,831	10,722	9,738
C	MCKINNEY	TRINITY	TAWAKONI LAKE/RESERVOIR	2,928	1,065	1,347	1,570	1,435	1,309
C	MCKINNEY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	6,456	6,744	8,491	9,865	9,004	8,237
C	MELISSA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	146	185	221	464	712	978
C	MELISSA	TRINITY	FORK LAKE/RESERVOIR	74	0	0	0	0	0
C	MELISSA	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	307	390	462	967	1,481	2,031
C	MELISSA	TRINITY	TAWAKONI LAKE/RESERVOIR	114	50	61	128	198	273

Projected Surface Water Supplies
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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	MELISSA	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	250	319	383	808	1,244	1,717
C	MURPHY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	579	503	435	386	350	319
C	MURPHY	TRINITY	FORK LAKE/RESERVOIR	293	0	0	0	0	0
C	MURPHY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,216	1,053	908	804	730	661
C	MURPHY	TRINITY	TAWAKONI LAKE/RESERVOIR	450	137	119	107	97	89
C	MURPHY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	993	867	752	671	612	560
C	NEVADA	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1	1	1	4	10	16
C	NEVADA	SABINE	FORK LAKE/RESERVOIR	1	0	0	0	0	0
C	NEVADA	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3	3	3	9	21	34
C	NEVADA	SABINE	TAWAKONI LAKE/RESERVOIR	1	0	0	1	3	4
C	NEVADA	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2	2	2	8	17	29
C	NEVADA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	10	10	35	78	129
C	NEVADA	TRINITY	FORK LAKE/RESERVOIR	4	0	0	0	0	0
C	NEVADA	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	19	20	21	72	163	266
C	NEVADA	TRINITY	TAWAKONI LAKE/RESERVOIR	7	3	3	10	22	36
C	NEVADA	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	16	16	17	60	137	225

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	NEW HOPE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	13	14	14	15	17	18
C	NEW HOPE	TRINITY	FORK LAKE/RESERVOIR	7	0	0	0	0	0
C	NEW HOPE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	28	28	30	33	35	38
C	NEW HOPE	TRINITY	TAWAKONI LAKE/RESERVOIR	10	4	4	4	5	5
C	NEW HOPE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	22	24	25	27	29	32
C	NORTH COLLIN WSC	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	86	83	82	82	86	89
C	NORTH COLLIN WSC	TRINITY	FORK LAKE/RESERVOIR	43	0	0	0	0	0
C	NORTH COLLIN WSC	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	179	174	171	173	178	185
C	NORTH COLLIN WSC	TRINITY	TAWAKONI LAKE/RESERVOIR	67	23	22	23	24	25
C	NORTH COLLIN WSC	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	147	144	142	143	150	157
C	PARKER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	281	350	329	311	301	296
C	PARKER	TRINITY	FORK LAKE/RESERVOIR	142	0	0	0	0	0
C	PARKER	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	589	734	689	648	627	616
C	PARKER	TRINITY	TAWAKONI LAKE/RESERVOIR	218	95	90	86	84	83
C	PARKER	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	481	604	570	540	527	520
C	PLANO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	7,350	6,570	5,895	5,250	4,764	4,338

Projected Surface Water Supplies
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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	PLANO	TRINITY	FORK LAKE/RESERVOIR	3,714	0	0	0	0	0
C	PLANO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	15,444	13,771	12,326	10,951	9,915	9,005
C	PLANO	TRINITY	TAWAKONI LAKE/RESERVOIR	5,701	1,786	1,615	1,448	1,342	1,228
C	PLANO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	12,609	11,323	10,206	9,132	8,326	7,617
C	PRINCETON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	107	118	130	271	389	484
C	PRINCETON	TRINITY	FORK LAKE/RESERVOIR	54	0	0	0	0	0
C	PRINCETON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	224	248	272	566	809	1,004
C	PRINCETON	TRINITY	TAWAKONI LAKE/RESERVOIR	83	32	36	75	108	135
C	PRINCETON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	183	204	225	472	680	849
C	PROSPER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	562	598	479	369	306	301
C	PROSPER	TRINITY	FORK LAKE/RESERVOIR	284	0	0	0	0	0
C	PROSPER	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,181	1,253	1,001	770	637	625
C	PROSPER	TRINITY	TAWAKONI LAKE/RESERVOIR	437	163	132	102	85	84
C	PROSPER	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	964	1,031	829	643	535	529
C	RICHARDSON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	866	749	665	606	550	501
C	RICHARDSON	TRINITY	FORK LAKE/RESERVOIR	439	0	0	0	0	0

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	RICHARDSON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,819	1,569	1,392	1,264	1,145	1,040
C	RICHARDSON	TRINITY	TAWAKONI LAKE/RESERVOIR	673	204	183	168	153	140
C	RICHARDSON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,485	1,290	1,152	1,054	961	879
C	ROYSE CITY	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	21	59	111	164	282	276
C	ROYSE CITY	SABINE	FORK LAKE/RESERVOIR	11	0	0	0	0	0
C	ROYSE CITY	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	44	125	232	341	586	573
C	ROYSE CITY	SABINE	TAWAKONI LAKE/RESERVOIR	16	16	31	45	78	77
C	ROYSE CITY	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	102	192	284	492	485
C	SACHSE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	157	136	117	104	94	86
C	SACHSE	TRINITY	FORK LAKE/RESERVOIR	80	0	0	0	0	0
C	SACHSE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	331	285	245	217	196	178
C	SACHSE	TRINITY	TAWAKONI LAKE/RESERVOIR	122	37	32	29	26	24
C	SACHSE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	270	234	203	180	164	150
C	SEIS LAGOS UD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	66	57	49	44	40	36
C	SEIS LAGOS UD	TRINITY	FORK LAKE/RESERVOIR	33	0	0	0	0	0
C	SEIS LAGOS UD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	139	119	104	91	83	75

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	SEIS LAGOS UD	TRINITY	TAWAKONI LAKE/RESERVOIR	51	16	14	12	11	10
C	SEIS LAGOS UD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	114	99	86	76	70	64
C	ST. PAUL	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	29	28	27	25	23	21
C	ST. PAUL	TRINITY	FORK LAKE/RESERVOIR	15	0	0	0	0	0
C	ST. PAUL	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	60	56	50	48	44
C	ST. PAUL	TRINITY	TAWAKONI LAKE/RESERVOIR	23	8	7	7	6	6
C	ST. PAUL	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	50	49	46	43	41	37
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	92	60	63	45	54	46
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	195	124	133	94	112	94
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	159	103	110	79	95	80
C	WYLIE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	695	678	628	586	549	515
C	WYLIE	TRINITY	FORK LAKE/RESERVOIR	353	0	0	0	0	0
C	WYLIE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,461	1,420	1,310	1,225	1,144	1,069
C	WYLIE	TRINITY	TAWAKONI LAKE/RESERVOIR	541	185	172	163	152	144
C	WYLIE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,193	1,168	1,086	1,019	960	904

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	WYLIE NORTHEAST SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	28	31	33	58	88	127
C	WYLIE NORTHEAST SUD	TRINITY	FORK LAKE/RESERVOIR	14	0	0	0	0	0
C	WYLIE NORTHEAST SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	63	69	120	181	264
C	WYLIE NORTHEAST SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	22	8	9	16	24	36
C	WYLIE NORTHEAST SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	48	53	57	101	153	224
	Sum of Projected Surface Water Supplies (acre-feet)			**150,370**	**124,355**	**123,068**	**121,257**	**116,056**	**112,754**

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	35	30	0	23	69	141
C	COUNTY-OTHER, COOKE	TRINITY	HUBERT H MOSS LAKE/RESERVOIR	127	108	0	106	300	810
C	GAINESVILLE	RED	HUBERT H MOSS LAKE/RESERVOIR	1	1	1	1	2	2
C	GAINESVILLE	TRINITY	HUBERT H MOSS LAKE/RESERVOIR	387	484	554	650	1,232	1,080
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	192	213	234	252	276	124
	Sum of Projected Surface Water Supplies (acre-feet)			**1,929**	**2,023**	**1,976**	**2,219**	**3,066**	**3,344**

DENTON COUNTY

All values are in acre-feet

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	ARGYLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	191	247	323	276	261	235
C	ARGYLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	634	811	984	785	703	606
C	ARGYLE WSC	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	137	118	108	92	87	78
C	ARGYLE WSC	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	335	369	329	263	235	202
C	AUBREY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	128	121	114	112	124	134
C	AUBREY	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	379	392	348	318	332	347
C	BARTONVILLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	148	125	104	87	82	74
C	BARTONVILLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	442	406	316	249	222	190
C	CARROLLTON	TRINITY	FORK LAKE/RESERVOIR	1,609	1,649	1,589	1,539	1,505	1,508
C	CARROLLTON	TRINITY	RAY HUBBARD LAKE/RESERVOIR	1,585	1,457	1,270	1,116	992	907
C	CARROLLTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	3,814	3,209	2,709	2,316	1,992	1,748
C	CARROLLTON	TRINITY	TAWAKONI LAKE/RESERVOIR	5,588	5,063	4,342	3,769	3,315	3,004
C	CELINA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	21	66	123	178	184	38

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	CELINA	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	62	213	375	507	495	486
C	COPPELL	TRINITY	FORK LAKE/RESERVOIR	34	34	33	32	31	31
C	COPPELL	TRINITY	RAY HUBBARD LAKE/RESERVOIR	33	30	26	23	21	19
C	COPPELL	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	81	66	56	48	42	36
C	COPPELL	TRINITY	TAWAKONI LAKE/RESERVOIR	118	105	90	79	69	63
C	COPPER CANYON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	21	19	22	22	24	24
C	COPPER CANYON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	63	66	63	62	66	64
C	CORINTH	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	714	547	441	364	335	301
C	CORINTH	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,116	1,770	1,346	1,038	902	776
C	COUNTY-OTHER, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	313	344	15	16	18	20
C	COUNTY-OTHER, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	233	178	154	137	124	113
C	COUNTY-OTHER, DENTON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	488	375	323	286	260	235
C	COUNTY-OTHER, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	929	1,113	1,656	2,084	3,682	6,858

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	COUNTY-OTHER, DENTON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	399	307	267	238	217	199
C	CROSS ROADS	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	103	103	101	84	78	70
C	CROSS ROADS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	307	332	310	241	209	180
C	DALLAS	TRINITY	FORK LAKE/RESERVOIR	740	798	874	945	997	1,034
C	DALLAS	TRINITY	RAY HUBBARD LAKE/RESERVOIR	729	705	699	685	657	622
C	DALLAS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,754	1,552	1,490	1,422	1,319	1,197
C	DALLAS	TRINITY	TAWAKONI LAKE/RESERVOIR	2,570	2,450	2,389	2,315	2,197	2,061
C	DENTON	TRINITY	LEWISVILLE LAKE/RESERVOIR NON-SYSTEM PORTION	7,817	7,715	7,613	7,512	7,410	7,308
C	DENTON	TRINITY	RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION	17,830	17,787	17,716	17,657	17,637	17,531
C	DENTON COUNTY FWSD #10	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	338	536	430	353	326	290
C	DENTON COUNTY FWSD #10	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	999	1,677	1,285	996	868	746
C	DENTON COUNTY FWSD #1A	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	557	729	708	585	538	150
C	DENTON COUNTY FWSD #1A	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,800	4,220	4,118	3,416	3,031	2,828

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	DENTON COUNTY FWSD #7	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	777	565	459	380	351	315
C	DENTON COUNTY FWSD #7	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,299	1,826	1,399	1,084	943	812
C	DOUBLE OAK	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	54	42	36	35	36	31
C	DOUBLE OAK	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	156	135	115	97	93	81
C	FLOWER MOUND	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	2,373	2,373	1,919	1,586	1,460	1,312
C	FLOWER MOUND	TRINITY	FORK LAKE/RESERVOIR	725	810	888	942	931	933
C	FLOWER MOUND	TRINITY	RAY HUBBARD LAKE/RESERVOIR	714	715	710	683	614	561
C	FLOWER MOUND	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	8,744	9,248	7,364	5,938	5,165	4,468
C	FLOWER MOUND	TRINITY	TAWAKONI LAKE/RESERVOIR	2,518	2,487	2,429	2,308	2,052	1,859
C	FORT WORTH	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	4,491	5,781	6,874	8,449	9,621	10,434
C	FRISCO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,726	1,954	2,046	1,818	1,650	1,502
C	FRISCO	TRINITY	FORK LAKE/RESERVOIR	870	0	0	0	0	0
C	FRISCO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3,625	4,095	4,278	3,792	3,434	3,118
C	FRISCO	TRINITY	TAWAKONI LAKE/RESERVOIR	1,335	531	560	501	466	426
C	FRISCO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2,960	3,367	3,542	3,161	2,884	2,637

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	HACKBERRY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	40	39	43	47	52	57
C	HACKBERRY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	84	82	89	97	108	119
C	HACKBERRY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	69	67	74	81	91	100
C	HICKORY CREEK	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	110	103	105	110	103	91
C	HICKORY CREEK	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	327	330	319	314	277	238
C	HIGHLAND VILLAGE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	564	457	384	331	318	285
C	HIGHLAND VILLAGE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,672	1,478	1,169	943	857	737
C	IRRIGATION, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	429	390	348	321	301	286
C	JUSTIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	47	129	181	156	148	133
C	JUSTIN	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	141	416	553	443	399	343
C	KRUGERVILLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	59	53	49	49	46	40
C	KRUGERVILLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	177	169	151	139	120	103

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	KRUM	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	160	168	185	199	232	253
C	KRUM	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	476	543	564	566	623	652
C	LAKE DALLAS	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	207	168	161	137	127	115
C	LAKE DALLAS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	615	549	491	387	342	294
C	LEWISVILLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	19,056	19,308	19,223	19,447	19,624	19,624
C	LITTLE ELM	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	531	456	393	348	315	287
C	LITTLE ELM	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,117	955	822	726	658	596
C	LITTLE ELM	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	911	786	681	606	551	504
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	17	27	24	23	24	22
C	MANUFACTURING, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	9	8	8	8	8	8
C	MANUFACTURING, DENTON	TRINITY	FORK LAKE/RESERVOIR	11	13	14	15	17	18
C	MANUFACTURING, DENTON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	19	17	16	16	16	16
C	MANUFACTURING, DENTON	TRINITY	RAY HUBBARD LAKE/RESERVOIR	11	12	12	11	11	11

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	MANUFACTURING, DENTON	TRINITY	RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION	1,072	946	848	738	589	526
C	MANUFACTURING, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	75	113	100	88	84	78
C	MANUFACTURING, DENTON	TRINITY	TAWAKONI LAKE/RESERVOIR	40	41	40	38	36	35
C	MANUFACTURING, DENTON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	16	14	14	13	13	13
C	MANUFACTURING, DENTON	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	13	13	13	13	13	12
C	MINING, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	537	127	187	262	334	44
C	MINING, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,590	411	568	746	900	1,597
C	MUSTANG SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	162	391	265	581	494	153
C	MUSTANG SUD	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	472	1,325	2,046	2,014	2,479	2,267
C	NORTHLAKE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	131	418	304	734	869	50
C	NORTHLAKE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	389	1,352	2,264	2,093	2,342	3,147
C	NORTHLAKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	160	573	905	1,140	1,340	1,233
C	OAK POINT	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	178	221	254	273	309	277

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	OAK POINT	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	531	715	775	777	832	715
C	PALOMA CREEK	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	582	576	468	388	358	321
C	PALOMA CREEK	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,723	1,862	1,426	1,105	962	828
C	PLANO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	212	190	167	148	134	122
C	PLANO	TRINITY	FORK LAKE/RESERVOIR	107	0	0	0	0	0
C	PLANO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	445	398	349	308	279	253
C	PLANO	TRINITY	TAWAKONI LAKE/RESERVOIR	164	52	46	41	38	35
C	PLANO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	363	327	289	257	234	214
C	PROSPER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	21	102	179	252	297	292
C	PROSPER	TRINITY	FORK LAKE/RESERVOIR	11	0	0	0	0	0
C	PROSPER	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	44	215	376	525	616	606
C	PROSPER	TRINITY	TAWAKONI LAKE/RESERVOIR	16	28	49	70	83	81
C	PROSPER	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	176	311	438	518	512
C	PROVIDENCE VILLAGE WCID	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	213	154	125	103	95	87

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	PROVIDENCE VILLAGE WCID	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	631	499	382	295	257	221
C	ROANOKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	2,219	2,264	2,294	2,062	1,886	1,734
C	SANGER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	18	73	117	149	193	218
C	SANGER	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	52	236	354	426	519	564
C	SHADY SHORES	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	88	75	62	52	48	43
C	SHADY SHORES	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	258	240	188	148	130	112
C	SOUTHLAKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	411	436	467	520	581	646
C	THE COLONY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	155	198	189	183	180	176
C	THE COLONY	TRINITY	FORK LAKE/RESERVOIR	589	606	624	671	634	614
C	THE COLONY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	326	415	394	381	374	366
C	THE COLONY	TRINITY	RAY HUBBARD LAKE/RESERVOIR	580	535	499	486	418	369
C	THE COLONY	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,398	1,177	1,064	1,009	839	712
C	THE COLONY	TRINITY	TAWAKONI LAKE/RESERVOIR	2,044	1,862	1,707	1,643	1,399	1,223
C	THE COLONY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	266	342	327	318	314	309

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	TROPHY CLUB	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	4,951	4,598	3,884	3,492	3,194	2,936
C	WESTLAKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	28	31	34	39	44	49
	Sum of Projected Surface Water Supplies (acre-feet)			**141,324**	**143,405**	**139,513**	**134,182**	**132,535**	**130,146**

Projected Water Demands
TWDB 2017 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	20,533	20,336	20,215	20,139	20,108	20,106
C	ANNA	TRINITY	1,898	2,190	3,588	4,826	9,167	13,820
C	BLUE RIDGE	TRINITY	92	185	362	1,412	3,221	5,461
C	CADDO BASIN SUD	SABINE	187	215	280	346	414	483
C	CADDO BASIN SUD	TRINITY	92	106	138	170	204	237
C	CARROLLTON	TRINITY	1	2	2	3	3	4
C	CELINA	TRINITY	4,574	8,900	15,008	23,121	23,119	23,117
C	COPEVILLE SUD	TRINITY	319	376	452	596	1,037	1,773
C	COUNTY-OTHER, COLLIN	SABINE	63	53	40	34	30	22
C	COUNTY-OTHER, COLLIN	TRINITY	1,550	1,529	1,520	5,179	7,404	11,863
C	CULLEOKA WSC	TRINITY	328	370	605	740	807	1,009
C	DALLAS	TRINITY	15,807	15,886	15,831	15,707	15,682	15,679
C	EAST FORK SUD	TRINITY	279	335	407	487	586	698
C	FAIRVIEW	TRINITY	4,644	5,329	7,094	7,087	7,084	7,083
C	FARMERSVILLE	SABINE	2	4	4	4	4	4
C	FARMERSVILLE	TRINITY	956	2,306	2,295	2,289	2,287	2,287
C	FRISCO	TRINITY	24,957	32,625	40,372	40,334	40,308	40,300
C	GARLAND	TRINITY	54	66	80	96	115	137
C	HICKORY CREEK SUD	TRINITY	7	7	8	8	9	10
C	IRRIGATION, COLLIN	SABINE	68	68	68	68	68	68
C	IRRIGATION, COLLIN	TRINITY	2,927	2,927	2,927	2,927	2,927	2,927
C	JOSEPHINE	SABINE	258	390	519	641	641	641
C	LAVON	TRINITY	559	711	1,081	1,392	3,125	7,025
C	LAVON SUD	TRINITY	354	367	430	481	1,115	2,783
C	LIVESTOCK, COLLIN	SABINE	86	86	86	86	86	86
C	LIVESTOCK, COLLIN	TRINITY	774	774	774	774	774	774
C	LOWRY CROSSING	TRINITY	222	257	308	306	305	305
C	LUCAS	TRINITY	2,132	2,406	3,165	3,528	3,896	3,896
C	MANUFACTURING, COLLIN	TRINITY	3,456	3,888	4,319	4,706	5,109	5,547
C	MARILEE SUD	TRINITY	541	532	517	515	506	506
C	MCKINNEY	TRINITY	34,365	40,877	59,112	76,866	76,818	76,814
C	MELISSA	TRINITY	1,535	2,133	2,869	6,493	10,814	16,216

Projected Water Demands
TWDB 2017 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.

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	MURPHY	TRINITY	5,285	5,253	5,238	5,228	5,222	5,220
C	NEVADA	SABINE	11	13	15	60	148	266
C	NEVADA	TRINITY	85	99	118	468	1,168	2,102
C	NEW HOPE	TRINITY	119	143	174	209	251	299
C	NORTH COLLIN WSC	TRINITY	782	871	987	1,117	1,279	1,464
C	PARKER	TRINITY	2,561	6,772	8,454	8,450	8,449	8,449
C	PLANO	TRINITY	67,088	68,626	71,043	71,153	71,061	71,061
C	PRINCETON	TRINITY	974	1,236	1,566	3,679	5,798	7,919
C	PROSPER	TRINITY	5,129	7,134	8,294	8,594	8,897	8,896
C	RICHARDSON	TRINITY	7,904	7,819	8,021	8,212	8,201	8,201
C	ROYSE CITY	SABINE	190	621	1,338	2,215	4,199	4,519
C	SACHSE	TRINITY	1,436	1,420	1,411	1,406	1,404	1,403
C	SEIS LAGOS UD	TRINITY	603	598	596	594	594	594
C	SOUTH GRAYSON WSC	TRINITY	143	175	230	267	307	349
C	ST. PAUL	TRINITY	265	298	322	334	348	347
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	715	602	740	594	782	724
C	WESTON	TRINITY	506	1,060	4,814	11,768	18,723	18,721
C	WYLIE	TRINITY	6,349	7,080	7,562	7,943	8,196	8,434
C	WYLIE NORTHEAST SUD	TRINITY	257	319	396	785	1,305	2,086
	Sum of Projected Water Demands (acre-feet)		**224,022**	**256,375**	**305,795**	**354,437**	**384,105**	**412,735**

COOKE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	BOLIVAR WSC	TRINITY	146	150	153	159	164	169
C	COUNTY-OTHER, COOKE	RED	241	247	253	278	343	559
C	COUNTY-OTHER, COOKE	TRINITY	882	902	956	1,312	1,487	3,208
C	GAINESVILLE	RED	4	4	4	5	5	7
C	GAINESVILLE	TRINITY	2,488	2,585	2,655	2,750	3,333	4,656
C	IRRIGATION, COOKE	RED	90	90	90	90	90	90
C	IRRIGATION, COOKE	TRINITY	210	210	210	210	210	210
C	LAKE KIOWA SUD	TRINITY	786	790	800	813	826	826
C	LINDSAY	TRINITY	144	150	154	160	304	605
C	LIVESTOCK, COOKE	RED	708	708	708	708	708	708

Projected Water Demands
TWDB 2017 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.

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	LIVESTOCK, COOKE	TRINITY	786	786	786	786	786	786
C	MANUFACTURING, COOKE	TRINITY	226	247	268	286	310	336
C	MINING, COOKE	TRINITY	1,583	900	378	446	511	586
C	MOUNTAIN SPRING WSC	TRINITY	446	469	487	507	802	1,280
C	MUENSTER	TRINITY	266	259	261	258	265	265
C	TWO WAY SUD	RED	12	12	12	13	13	14
C	VALLEY VIEW	TRINITY	56	60	63	66	68	71
C	WOODBINE WSC	RED	52	56	61	67	73	79
C	WOODBINE WSC	TRINITY	599	651	706	769	839	911
	Sum of Projected Water Demands (acre-feet)		**9,725**	**9,276**	**9,005**	**9,683**	**11,137**	**15,366**

DENTON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	ARGYLE	TRINITY	1,395	2,064	2,966	2,961	2,960	2,959
C	ARGYLE WSC	TRINITY	996	991	990	990	989	989
C	AUBREY	TRINITY	563	731	847	999	1,197	1,452
C	BARTONVILLE	TRINITY	825	907	903	900	900	899
C	BOLIVAR WSC	TRINITY	848	985	1,160	1,369	1,625	1,921
C	CARROLLTON	TRINITY	14,303	14,437	14,196	14,062	14,036	14,034
C	CELINA	TRINITY	142	989	3,295	7,707	7,707	7,706
C	COPPELL	TRINITY	302	298	295	294	293	293
C	COPPER CANYON	TRINITY	260	272	289	310	338	369
C	CORINTH	TRINITY	4,266	4,983	4,956	4,939	4,932	4,931
C	COUNTY-OTHER, DENTON	TRINITY	3,785	4,155	4,574	6,487	10,458	19,480
C	CROSS ROADS	TRINITY	457	619	756	755	754	754
C	DALLAS	TRINITY	6,579	6,987	7,812	8,638	9,301	9,625
C	DENTON	TRINITY	28,908	37,431	47,013	59,444	81,374	99,143
C	DENTON COUNTY FWSD #10	TRINITY	1,486	3,128	3,127	3,126	3,124	3,124
C	DENTON COUNTY FWSD #1A	TRINITY	3,659	6,494	7,777	7,774	7,771	7,769
C	DENTON COUNTY FWSD #7	TRINITY	3,418	3,405	3,403	3,401	3,399	3,397
C	DOUBLE OAK	TRINITY	558	547	539	534	533	533
C	FLOWER MOUND	TRINITY	18,988	23,080	22,955	22,881	22,857	22,855

Projected Water Demands
TWDB 2017 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.

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	FORT WORTH	TRINITY	7,139	10,766	15,447	21,678	27,750	33,837
C	FRISCO	TRINITY	16,638	21,750	26,915	26,890	26,872	26,867
C	HACKBERRY	TRINITY	309	394	498	615	752	908
C	HICKORY CREEK	TRINITY	583	709	865	1,078	1,076	1,076
C	HIGHLAND VILLAGE	TRINITY	3,832	3,968	3,924	3,899	3,893	3,893
C	IRRIGATION, DENTON	TRINITY	2,137	2,137	2,137	2,137	2,137	2,137
C	JUSTIN	TRINITY	695	1,212	1,733	1,729	1,728	1,727
C	KRUGERVILLE	TRINITY	263	315	368	435	434	434
C	KRUM	TRINITY	1,154	1,414	1,731	2,089	2,512	2,997
C	LAKE DALLAS	TRINITY	1,096	1,181	1,339	1,329	1,326	1,326
C	LAKEWOOD VILLAGE	TRINITY	83	102	125	151	182	218
C	LEWISVILLE	TRINITY	19,985	22,286	25,177	28,537	31,822	31,818
C	LITTLE ELM	TRINITY	4,108	4,600	4,586	4,574	4,564	4,564
C	LIVESTOCK, DENTON	TRINITY	1,045	1,045	1,045	1,045	1,045	1,045
C	MANUFACTURING, DENTON	TRINITY	1,446	1,643	1,843	2,020	2,194	2,383
C	MINING, DENTON	TRINITY	4,326	2,729	3,345	4,306	5,204	6,291
C	MOUNTAIN SPRING WSC	TRINITY	10	11	12	13	14	16
C	MUSTANG SUD	TRINITY	1,875	3,527	5,190	6,856	8,526	10,196
C	NORTHLAKE	TRINITY	911	3,402	6,198	8,591	10,986	10,986
C	OAK POINT	TRINITY	1,053	1,572	2,097	2,624	3,153	3,152
C	PALOMA CREEK	TRINITY	2,562	3,472	3,470	3,468	3,465	3,464
C	PILOT POINT	TRINITY	891	1,070	1,449	1,965	2,615	3,527
C	PLANO	TRINITY	1,932	1,982	2,011	2,000	1,998	1,998
C	PONDER	TRINITY	254	343	451	574	718	883
C	PROSPER	TRINITY	193	1,221	3,111	5,863	8,614	8,613
C	PROVIDENCE VILLAGE WCID	TRINITY	938	931	929	927	926	925
C	ROANOKE	TRINITY	2,263	2,807	3,356	3,350	3,348	3,348
C	SANGER	TRINITY	1,202	1,452	1,763	2,119	2,545	3,034
C	SHADY SHORES	TRINITY	461	516	511	508	507	506
C	SOUTHLAKE	TRINITY	421	541	683	844	1,032	1,247
C	STEAM ELECTRIC POWER, DENTON	TRINITY	646	733	819	906	993	1,088
C	THE COLONY	TRINITY	7,762	8,632	9,106	9,857	9,844	9,841
C	TROPHY CLUB	TRINITY	5,730	5,701	5,683	5,673	5,670	5,669
C	WESTLAKE	TRINITY	29	39	50	63	78	95

Projected Water Demands
TWDB 2017 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.

Sum of Projected Water Demands (acre-feet)	**185,710**	**226,706**	**265,820**	**306,284**	**353,071**	**392,342**

Projected Water Supply Needs
TWDB 2017 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	-1,613	-4,753	-5,938	-6,732	-7,563	-8,495
C	ANNA	TRINITY	-77	-296	-998	-2,236	-6,577	-11,230
C	BLUE RIDGE	TRINITY	0	-93	-270	-1,320	-3,129	-5,369
C	CADDO BASIN SUD	SABINE	-15	-48	-83	-116	-155	-203
C	CADDO BASIN SUD	TRINITY	-8	-24	-40	-56	-75	-101
C	CARROLLTON	TRINITY	-1	-1	-1	-2	-2	-2
C	CELINA	TRINITY	-1,395	-5,951	-12,322	-20,663	-20,662	-21,114
C	COPEVILLE SUD	TRINITY	-25	-88	-133	-199	-390	-749
C	COUNTY-OTHER, COLLIN	SABINE	-2	-10	-8	-9	-10	-11
C	COUNTY-OTHER, COLLIN	TRINITY	-86	-244	-304	-1,567	-2,599	-4,800
C	CULLEOKA WSC	TRINITY	-26	-86	-178	-247	-304	-426
C	DALLAS	TRINITY	-735	-2,110	-3,571	-4,492	-5,209	-5,705
C	EAST FORK SUD	TRINITY	-21	-78	-119	-164	-223	-296
C	FAIRVIEW	TRINITY	-365	-1,245	-2,084	-2,369	-2,664	-2,992
C	FARMERSVILLE	SABINE	-2	0	0	0	-2	-2
C	FARMERSVILLE	TRINITY	-73	-540	-675	-767	-860	-966
C	FRISCO	TRINITY	-3,200	-9,170	-14,253	-15,740	-17,276	-18,983
C	GARLAND	TRINITY	-4	-15	-24	-32	-43	-59
C	HICKORY CREEK SUD	TRINITY	5	1	-2	-4	-5	-7
C	IRRIGATION, COLLIN	SABINE	57	54	50	47	45	44
C	IRRIGATION, COLLIN	TRINITY	2,486	2,334	2,170	2,064	1,983	1,927
C	JOSEPHINE	SABINE	-22	-91	-152	-214	-241	-271
C	LAVON	TRINITY	-44	-166	-318	-465	-1,175	-2,968
C	LAVON SUD	TRINITY	-26	-85	-125	-160	-419	-1,175
C	LIVESTOCK, COLLIN	SABINE	14	14	14	14	14	14
C	LIVESTOCK, COLLIN	TRINITY	128	128	128	128	128	128
C	LOWRY CROSSING	TRINITY	-17	-60	-90	-102	-115	-129
C	LUCAS	TRINITY	-168	-562	-930	-1,179	-1,465	-1,646
C	MANUFACTURING, COLLIN	TRINITY	-233	-855	-1,221	-1,532	-1,884	-2,302
C	MARILEE SUD	TRINITY	141	142	144	129	115	91
C	MCKINNEY	TRINITY	-2,700	-9,554	-17,363	-25,694	-28,891	-32,454
C	MELISSA	TRINITY	-105	-450	-785	-2,105	-3,992	-6,766

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

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

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	MURPHY	TRINITY	-415	-1,228	-1,539	-1,748	-1,964	-2,205
C	NEVADA	SABINE	-1	-3	-5	-20	-55	-112
C	NEVADA	TRINITY	-7	-23	-34	-156	-440	-888
C	NEW HOPE	TRINITY	-9	-33	-51	-70	-94	-126
C	NORTH COLLIN WSC	TRINITY	-61	-204	-290	-373	-481	-619
C	PARKER	TRINITY	-201	-3,969	-5,651	-5,647	-5,646	-5,646
C	PLANO	TRINITY	-5,271	-16,040	-20,869	-23,787	-26,726	-30,022
C	PRINCETON	TRINITY	-76	-289	-460	-1,230	-2,180	-3,346
C	PROSPER	TRINITY	-402	-2,348	-4,218	-5,262	-6,049	-6,049
C	RICHARDSON	TRINITY	-620	-1,827	-2,356	-2,744	-3,085	-3,465
C	ROYSE CITY	SABINE	-14	-146	-392	-739	-1,580	-1,909
C	SACHSE	TRINITY	-112	-332	-414	-469	-529	-593
C	SEIS LAGOS UD	TRINITY	-47	-140	-175	-199	-223	-251
C	SOUTH GRAYSON WSC	TRINITY	71	66	38	22	3	-19
C	ST. PAUL	TRINITY	-21	-70	-95	-112	-131	-147
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	-56	-141	-217	-199	-294	-306
C	WESTON	TRINITY	-71	-625	-4,379	-11,333	-18,288	-18,286
C	WYLIE	TRINITY	-498	-1,654	-2,222	-2,652	-3,084	-3,564
C	WYLIE NORTHEAST SUD	TRINITY	-20	-75	-116	-262	-491	-881
	Sum of Projected Water Supply Needs (acre-feet)		**-18,865**	**-65,722**	**-105,470**	**-145,168**	**-177,270**	**-207,655**

COOKE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	BOLIVAR WSC	TRINITY	3	-17	-36	-53	-71	-86
C	COUNTY-OTHER, COOKE	RED	0	0	52	0	0	-201
C	COUNTY-OTHER, COOKE	TRINITY	0	0	200	0	0	-1,154
C	GAINESVILLE	RED	0	0	0	0	0	-2
C	GAINESVILLE	TRINITY	0	0	0	0	0	-1,475
C	IRRIGATION, COOKE	RED	-20	-20	-20	-20	-20	-20
C	IRRIGATION, COOKE	TRINITY	-46	-46	-46	-46	-46	-46
C	LAKE KIOWA SUD	TRINITY	43	39	29	16	3	3
C	LINDSAY	TRINITY	14	8	4	-2	-146	-447
C	LIVESTOCK, COOKE	RED	29	29	29	29	29	29
C	LIVESTOCK, COOKE	TRINITY	31	31	31	31	31	31

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

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

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	MANUFACTURING, COOKE	TRINITY	0	0	0	0	0	-178
C	MINING, COOKE	TRINITY	-783	-150	-78	-146	-211	-286
C	MOUNTAIN SPRING WSC	TRINITY	63	39	20	0	-291	-766
C	MUENSTER	TRINITY	17	24	22	25	18	18
C	TWO WAY SUD	RED	0	-2	-4	-6	-7	-9
C	VALLEY VIEW	TRINITY	0	-4	-7	-10	-12	-15
C	WOODBINE WSC	RED	1	-4	-9	-14	-20	-26
C	WOODBINE WSC	TRINITY	6	-45	-100	-164	-234	-306
	Sum of Projected Water Supply Needs (acre-feet)		**-849**	**-288**	**-300**	**-461**	**-1,058**	**-5,017**

DENTON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	ARGYLE	TRINITY	-36	-444	-1,058	-1,317	-1,416	-1,547
C	ARGYLE WSC	TRINITY	36	50	-2	-90	-123	-169
C	AUBREY	TRINITY	0	-163	-331	-515	-680	-902
C	BARTONVILLE	TRINITY	-1	-151	-266	-354	-387	-429
C	BOLIVAR WSC	TRINITY	6	-112	-267	-460	-700	-981
C	CARROLLTON	TRINITY	-642	-1,895	-3,180	-4,000	-4,640	-5,086
C	CELINA	TRINITY	-44	-661	-2,704	-6,888	-6,887	-7,036
C	COPPELL	TRINITY	-14	-39	-67	-85	-97	-107
C	COPPER CANYON	TRINITY	0	-11	-27	-49	-69	-101
C	CORINTH	TRINITY	-847	-2,143	-2,688	-3,087	-3,254	-3,426
C	COUNTY-OTHER, DENTON	TRINITY	1,059	642	217	-1,120	-3,638	-9,747
C	CROSS ROADS	TRINITY	-1	-137	-297	-389	-428	-468
C	DALLAS	TRINITY	-306	-928	-1,763	-2,471	-3,090	-3,503
C	DENTON	TRINITY	-3,076	-11,473	-20,957	-33,278	-55,059	-72,765
C	DENTON COUNTY FWSD #10	TRINITY	0	-680	-1,214	-1,608	-1,770	-1,939
C	DENTON COUNTY FWSD #1A	TRINITY	-57	-1,213	-2,619	-3,490	-3,934	-4,543
C	DENTON COUNTY FWSD #7	TRINITY	0	-758	-1,330	-1,753	-1,931	-2,109
C	DOUBLE OAK	TRINITY	0	-26	-46	-60	-62	-80
C	FLOWER MOUND	TRINITY	-2,399	-5,807	-8,139	-9,859	-10,935	-11,959
C	FORT WORTH	TRINITY	-265	-1,905	-4,758	-8,130	-11,810	-15,918
C	FRISCO	TRINITY	-2,132	-6,113	-9,502	-10,493	-11,516	-12,658

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

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

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	HACKBERRY	TRINITY	-24	-92	-146	-206	-283	-384
C	HICKORY CREEK	TRINITY	0	-133	-295	-504	-548	-603
C	HIGHLAND VILLAGE	TRINITY	0	-478	-844	-1,118	-1,213	-1,377
C	IRRIGATION, DENTON	TRINITY	995	956	914	887	867	852
C	JUSTIN	TRINITY	-244	-367	-672	-813	-865	-941
C	KRUGERVILLE	TRINITY	-1	-69	-145	-223	-246	-270
C	KRUM	TRINITY	0	-180	-448	-781	-1,095	-1,515
C	LAKE DALLAS	TRINITY	-1	-205	-429	-557	-612	-676
C	LAKEWOOD VILLAGE	TRINITY	135	116	93	67	36	0
C	LEWISVILLE	TRINITY	-929	-2,978	-5,954	-9,090	-12,198	-12,194
C	LITTLE ELM	TRINITY	-322	-1,075	-1,347	-1,529	-1,717	-1,929
C	LIVESTOCK, DENTON	TRINITY	307	307	307	307	307	307
C	MANUFACTURING, DENTON	TRINITY	-116	-383	-694	-992	-1,311	-1,569
C	MINING, DENTON	TRINITY	0	-170	-540	-1,208	-1,841	-2,687
C	MOUNTAIN SPRING WSC	TRINITY	1	1	1	0	-5	-10
C	MUSTANG SUD	TRINITY	4	-449	-1,436	-2,760	-3,977	-6,601
C	NORTHLAKE	TRINITY	-3	-699	-2,258	-4,099	-5,832	-6,386
C	OAK POINT	TRINITY	-1	-272	-685	-1,178	-1,594	-1,754
C	PALOMA CREEK	TRINITY	-1	-773	-1,357	-1,788	-1,967	-2,282
C	PILOT POINT	TRINITY	211	32	-347	-863	-1,513	-2,425
C	PLANO	TRINITY	-151	-462	-590	-668	-751	-844
C	PONDER	TRINITY	222	133	25	-98	-242	-407
C	PROSPER	TRINITY	-16	-402	-1,582	-3,590	-5,857	-5,855
C	PROVIDENCE VILLAGE WCID	TRINITY	0	-208	-363	-479	-526	-573
C	ROANOKE	TRINITY	-44	-543	-1,062	-1,288	-1,462	-1,614
C	SANGER	TRINITY	-3	11	-117	-351	-616	-1,019
C	SHADY SHORES	TRINITY	0	-91	-156	-207	-229	-253
C	SOUTHLAKE	TRINITY	-10	-105	-216	-324	-451	-601
C	STEAM ELECTRIC POWER, DENTON	TRINITY	0	0	0	0	0	0
C	THE COLONY	TRINITY	-336	-1,171	-1,904	-2,555	-2,943	-3,262
C	TROPHY CLUB	TRINITY	-218	-1,103	-1,799	-2,181	-2,476	-2,733
C	WESTLAKE	TRINITY	-1	-8	-16	-24	-34	-46
	Sum of Projected Water Supply Needs (acre-feet)		**-12,241**	**-47,075**	**-86,617**	**-128,970**	**-174,830**	**-216,283**

Projected Water Management Strategies
TWDB 2017 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]	660	851	1,002	1,048	1,113	1,180
CONSERVATION, WATER LOSS CONTROL - ALLEN	DEMAND REDUCTION [COLLIN]	103	103	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	200	442	475	558	390	276
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	149	2,499	2,844	3,484	2,553	1,899
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	472	788	599	384	15	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	836
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	936	1,161	1,493	1,120
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,439	1,671
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	32	73	82	98	72	52
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,091
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	488	370
		1,616	**4,756**	**5,938**	**6,733**	**7,563**	**8,495**
ANNA, TRINITY (C)							
CONSERVATION - ANNA	DEMAND REDUCTION [COLLIN]	25	48	36	64	153	276
CONSERVATION, WATER LOSS CONTROL - ANNA	DEMAND REDUCTION [COLLIN]	54	163	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	10	81	152	239	258
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	56	482	952	1,563	1,773

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	18	102	105	9	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	780
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	151	268	772	927
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	744	1,385
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	0	32	174	609	953
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	0	38	211	828	276
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	20	98	343	533
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	43	206	711	1,106
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	35	171	598	938
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	1	13	27	44	48
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,992
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	252	306
		79	**296**	**1,033**	**2,428**	**6,865**	**11,551**

BLUE RIDGE, TRINITY (C)

CONSERVATION - BLUE RIDGE	DEMAND REDUCTION [COLLIN]	0	1	4	19	54	109
CONSERVATION, WATER LOSS CONTROL - BLUE RIDGE	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	13	30	134	190	201

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	72	177	835	1,242	1,381
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	23	37	92	7	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	608
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	58	278	726	814
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	700	1,216
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	1	6	24	35	39
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	794
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	237	269
		0	**110**	**312**	**1,382**	**3,191**	**5,431**

CADDO BASIN SUD, SABINE (C)

CHAPMAN RAW WATER PIPELINE AND NEW WTP(GREENVILLE)	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	13	62	128
CONSERVATION - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	1	1	2	2
CONSERVATION, WATER LOSS CONTROL - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	8	11	9	8
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	33	47	70	61	53
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	8	10	10	7	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	23

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	15	24	35	31
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	40	46
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	1	2	2	1
WTP EXPANSION (GREENVILLE)	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	15	48	82	102	92	75
		29	**98**	**164**	**230**	**303**	**367**
CADDO BASIN SUD, TRINITY (C)							
CHAPMAN RAW WATER PIPELINE AND NEW WTP(GREENVILLE)	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	6	30	63
CONSERVATION - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	0	1	1	1
CONSERVATION, WATER LOSS CONTROL - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	3	4	6	5	4
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	16	23	35	30	25
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	4	5	5	4	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	11
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	8	11	18	15
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	20	23
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	1	1	1
WTP EXPANSION (GREENVILLE)	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	8	24	40	50	46	37

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
		16	48	81	114	151	180
CARROLLTON, TRINITY (C)							
CONSERVATION - 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 - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	1	1	1	2	2	2
		1	1	1	2	2	2
CELINA, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	673
CONSERVATION - CELINA	DEMAND REDUCTION [COLLIN]	61	193	450	771	847	925
CONSERVATION, WATER LOSS CONTROL - CELINA	DEMAND REDUCTION [COLLIN]	23	22	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	41	176	1,498	1,697	1,789
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	129	554	1,368	1,332	1,275
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	153	230	355	219	136
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	866	1,374	2,221	1,429	934
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	273	289	244	8	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	411
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	453	740	836	550
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	806	823
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	26	62	133	116	127
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	25	39	63	40	25

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	4,386
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	852	1,486
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	586	567
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	94	213	196	452
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	186	406	364	817
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	265	990	2,229	2,052	2,366
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	930	2,251	4,948	6,158	5,014
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	163	346	0	24	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	234	473	0	0	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	998	2,209	5,248	5,480	3,180	0
		1,479	**5,951**	**12,396**	**20,693**	**20,718**	**22,756**

COPEVILLE SUD, TRINITY (C)

CONSERVATION - COPEVILLE SUD	DEMAND REDUCTION [COLLIN]	1	3	5	8	17	35
CONSERVATION, WATER LOSS CONTROL - COPEVILLE SUD	DEMAND REDUCTION [COLLIN]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	10	13	19	23	27
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	4	55	74	117	148	185
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	12	17	16	13	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	82

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	24	39	86	110
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	83	163
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	1	3	4	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	107
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	28	36
		25	**89**	**133**	**199**	**390**	**749**
COUNTY-OTHER, COLLIN, SABINE (C)							
CONSERVATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	0	0	0	1	0
CONSERVATION, WATER LOSS CONTROL - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	1	1	1	0
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	8	5	6	4	6
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	1	1	1	1	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	1
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	2	2	1
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1	0
		3	**10**	**8**	**10**	**12**	**11**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, COLLIN, TRINITY (C)							
CONSERVATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	5	11	16	70	123	238
CONSERVATION, WATER LOSS CONTROL - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	8	8	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	17	27	28	147	149	173
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	13	149	168	920	982	1,183
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	42	49	35	101	5	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	523
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	56	307	575	700
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	554	1,045
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	5	5	26	28	33
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	683
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	187	232
		88	**249**	**308**	**1,571**	**2,603**	**4,810**
CULLEOKA WSC, TRINITY (C)							
CONSERVATION - CULLEOKA WSC	DEMAND REDUCTION [COLLIN]	1	2	6	10	13	20
CONSERVATION, WATER LOSS CONTROL - CULLEOKA WSC	DEMAND REDUCTION [COLLIN]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	9	16	24	18	15
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	4	54	99	145	115	105
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	13	17	21	16	1	0

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	46
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	33	48	67	62
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,075	93
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	3	4	3	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	716
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	22	21
		26	**86**	**178**	**247**	**1,314**	**1,082**
DALLAS, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	633
CONSERVATION - DALLAS	DEMAND REDUCTION [COLLIN]	542	1,343	1,814	1,820	1,717	1,636
CONSERVATION, WATER LOSS CONTROL - DALLAS	DEMAND REDUCTION [COLLIN]	79	75	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	108	164	423	1,381	1,614	1,684
DWU UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	0	0	0	5	11	5
DWU UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	0	0	6	11	4
DWU UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	0	0	4	7	2
DWU UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	6	5	3	14	23	8
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	523	1,331	1,262	1,268	1,200
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	558	534
		735	**2,110**	**3,571**	**4,492**	**5,209**	**5,706**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
EAST FORK SUD, TRINITY (C)							
CONSERVATION - EAST FORK SUD	DEMAND REDUCTION [COLLIN]	1	2	4	6	10	14
CONSERVATION, WATER LOSS CONTROL - EAST FORK SUD	DEMAND REDUCTION [COLLIN]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	4	9	11	15	13	10
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	48	65	99	86	75
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	11	16	15	10	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	32
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	22	32	48	43
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	47	64
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	2	2	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	42
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	16	14
		21	**79**	**119**	**164**	**223**	**296**
FAIRVIEW, TRINITY (C)							
CONSERVATION - FAIRVIEW	DEMAND REDUCTION [COLLIN]	68	122	219	243	266	290
CONSERVATION, WATER LOSS CONTROL - FAIRVIEW	DEMAND REDUCTION [COLLIN]	23	23	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	64	128	179	208	145	102
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	48	723	1,075	1,303	950	701
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	152	228	226	144	6	0

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	309
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	354	434	555	414
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	535	617
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	10	21	31	37	26	19
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	403
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	181	137
		365	**1,245**	**2,084**	**2,369**	**2,664**	**2,992**
FARMERSVILLE, SABINE (C)							
CONSERVATION - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
CONSERVATION, WATER LOSS CONTROL - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	0	0	0	2	2
		2	**0**	**0**	**0**	**2**	**2**
FARMERSVILLE, TRINITY (C)							
CONSERVATION - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	3	15	23	31	38	46
CONSERVATION, WATER LOSS CONTROL - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	5	5	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	16	60	63	72	50	34
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	342	376	451	324	237
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	37	108	79	50	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	105

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	124	150	191	141
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	184	211
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	10	10	13	9	8
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	138
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	62	47
		73	**540**	**675**	**767**	**860**	**967**

FRISCO, TRINITY (C)

CONSERVATION - FRISCO	DEMAND REDUCTION [COLLIN]	913	1,463	2,143	2,276	2,410	2,543
CONSERVATION, WATER LOSS CONTROL - FRISCO	DEMAND REDUCTION [COLLIN]	125	125	0	0	0	0
FRISCO DIRECT REUSE	DIRECT REUSE [COLLIN]	1,344	2,016	3,390	3,390	3,390	3,390
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	191	647	838	988	694	493
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	143	3,660	5,026	6,174	4,543	3,388
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	454	1,154	1,059	680	26	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	1,491
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1,654	2,058	2,657	1,998
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	2,561	2,982
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	31	107	143	174	127	94

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,947
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	868	659
		3,201	**9,172**	**14,253**	**15,740**	**17,276**	**18,985**
GARLAND, TRINITY (C)							
CONSERVATION - GARLAND	DEMAND REDUCTION [COLLIN]	1	1	1	1	2	3
CONSERVATION, WATER LOSS CONTROL - GARLAND	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	2	3	2	2
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	9	14	19	17	16
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	2	3	3	2	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	6
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	4	6	10	8
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	13
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	0	1	0	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	8
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	3	3
		4	**15**	**24**	**32**	**43**	**59**
HICKORY CREEK SUD, TRINITY (C)							
CONSERVATION - HICKORY CREEK SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
CONSERVATION, WATER LOSS CONTROL - HICKORY CREEK SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DRILL NEW WELLS (HICKORY CREEK SUD, WOODBINE, SABINE)	WOODBINE AQUIFER [HUNT]	0	0	2	4	5	7
		0	**0**	**2**	**4**	**5**	**7**
IRRIGATION, COLLIN, SABINE (C)							
CONSERVATION, IRRIGATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	2	4	5	5	6
		0	**2**	**4**	**5**	**5**	**6**
IRRIGATION, COLLIN, TRINITY (C)							
CONSERVATION, IRRIGATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	5	81	155	194	232	269
		5	**81**	**155**	**194**	**232**	**269**
JOSEPHINE, SABINE (C)							
CONSERVATION - JOSEPHINE	DEMAND REDUCTION [COLLIN]	1	3	5	8	10	12
CONSERVATION, WATER LOSS CONTROL - JOSEPHINE	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	10	14	20	14	10
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	4	58	85	126	91	67
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	18	18	14	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	29
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	28	42	53	39
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	51	59
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	2	4	3	3
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	39
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	18	13
		22	**91**	**152**	**214**	**241**	**271**

Projected Water Management Strategies
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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
LAVON, TRINITY (C)							
CONSERVATION - LAVON	DEMAND REDUCTION [COLLIN]	8	16	33	19	52	141
CONSERVATION, WATER LOSS CONTROL - LAVON	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	8	17	27	43	68	106
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	6	97	165	274	445	734
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	19	31	35	30	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	323
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	54	91	260	433
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	251	646
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	3	5	8	11	20
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	422
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	85	143
		45	**167**	**319**	**465**	**1,175**	**2,968**
LAVON SUD, TRINITY (C)							
CONSERVATION - LAVON SUD	DEMAND REDUCTION [COLLIN]	2	3	5	6	18	55
CONSERVATION, WATER LOSS CONTROL - LAVON SUD	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	9	10	15	24	44
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	5	54	71	95	159	291
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	14	17	15	10	2	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	127
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	22	32	92	171
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	90	256
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	1	3	2	4	8
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	167
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	30	56
		27	**85**	**126**	**160**	**419**	**1,175**

LOWRY CROSSING, TRINITY (C)

CONSERVATION - LOWRY CROSSING	DEMAND REDUCTION [COLLIN]	1	2	3	4	5	6
CONSERVATION, WATER LOSS CONTROL - LOWRY CROSSING	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	8	10	7	5
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	38	50	60	44	33
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	9	12	11	7	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	14
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	17	20	25	19
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	24	28
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	1	1	2	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	18
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	8	6
		18	**60**	**90**	**102**	**115**	**129**
LUCAS, TRINITY (C)							
CONSERVATION - LUCAS	DEMAND REDUCTION [COLLIN]	28	52	95	118	143	156
CONSERVATION, IRRIGATION RESTRICTIONS – LUCAS	DEMAND REDUCTION [COLLIN]	3	7	10	11	13	13
CONSERVATION, WATER LOSS CONTROL - LUCAS	DEMAND REDUCTION [COLLIN]	50	145	176	196	217	217
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	20	41	62	83	66	47
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	16	236	374	524	432	327
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	47	74	79	58	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	144
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	123	175	253	193
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	244	288
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	4	7	11	14	12	9
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	188
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	83	54
		168	**562**	**930**	**1,179**	**1,466**	**1,646**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MANUFACTURING, COLLIN, TRINITY (C)							
COLLIN COUNTY MANUFACTURING ADDITIONAL GROUNDWATER (NEW WELLS)	WOODBINE AQUIFER [COLLIN]	0	78	78	78	78	78
CONSERVATION, MANUFACTURING - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	8	90	133	145	157
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	60	99	108	134	102	78
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	45	564	645	839	668	539
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	143	178	136	92	4	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	237
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	212	280	391	318
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	377	475
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	10	17	18	24	19	16
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	310
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	128	105
		258	**944**	**1,287**	**1,580**	**1,912**	**2,313**
MARILEE SUD, TRINITY (C)							
CONSERVATION - MARILEE SUD	DEMAND REDUCTION [COLLIN]	2	3	5	7	9	10
CONSERVATION, WATER LOSS CONTROL - MARILEE SUD	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
GTUA - GRAYSON COUNTY WSP	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	18	33	54	77
		5	**9**	**23**	**40**	**63**	**87**

Projected Water Management Strategies
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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MCKINNEY, TRINITY (C)							
CONSERVATION - MCKINNEY	DEMAND REDUCTION [COLLIN]	472	899	1,786	2,575	2,829	3,085
CONSERVATION, WATER LOSS CONTROL - MCKINNEY	DEMAND REDUCTION [COLLIN]	284	572	578	752	751	751
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	456	939	1,443	2,193	1,531	1,080
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	341	5,315	8,644	13,708	10,021	7,430
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	1,079	1,676	1,822	1,511	58	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	3,269
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	2,846	4,569	5,861	4,381
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5,648	6,538
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	73	156	245	387	279	205
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	4,269
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,913	1,446
		2,705	**9,557**	**17,364**	**25,695**	**28,891**	**32,454**
MELISSA, TRINITY (C)							
CONSERVATION - MELISSA	DEMAND REDUCTION [COLLIN]	39	73	122	299	532	852
CONSERVATION, WATER LOSS CONTROL - MELISSA	DEMAND REDUCTION [COLLIN]	8	8	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	14	43	63	177	210	223
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	244	381	1,106	1,369	1,535
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	32	77	81	123	8	0

Projected Water Management Strategies
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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	676
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	126	369	801	906
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	772	1,351
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	7	12	31	38	42
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	882
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	262	299
		105	**452**	**785**	**2,105**	**3,992**	**6,766**

MURPHY, TRINITY (C)

CONSERVATION - MURPHY	DEMAND REDUCTION [COLLIN]	71	114	157	175	191	208
CONSERVATION – WASTE PROHIBITION, MURPHY	DEMAND REDUCTION [COLLIN]	27	53	53	53	53	53
CONSERVATION, WATER LOSS CONTROL - MURPHY	DEMAND REDUCTION [COLLIN]	26	26	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	68	120	128	149	104	73
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	51	680	766	932	681	505
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	161	214	161	103	4	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	222
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	252	311	398	297
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	384	444

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	11	21	22	26	19	15
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	290
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	130	98
		415	**1,228**	**1,539**	**1,749**	**1,964**	**2,205**
NEVADA, SABINE (C)							
CONSERVATION - NEVADA	DEMAND REDUCTION [COLLIN]	0	0	0	1	2	5
CONSERVATION, WATER LOSS CONTROL - NEVADA	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	0	2	3	4
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	2	3	12	21	29
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	1	1	1	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	12
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	4	12	16
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	12	24
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	0	0	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	16
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	4	5
		1	**3**	**5**	**20**	**55**	**112**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NEVADA, TRINITY (C)							
CONSERVATION - NEVADA	DEMAND REDUCTION [COLLIN]	0	1	1	6	20	42
CONSERVATION, WATER LOSS CONTROL - NEVADA	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	3	3	14	26	32
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	15	19	92	166	218
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	4	4	4	10	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	97
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	6	31	97	129
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	94	194
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	3	5	7
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	126
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	32	43
		7	**23**	**34**	**156**	**441**	**888**
NEW HOPE, TRINITY (C)							
CONSERVATION - NEW HOPE	DEMAND REDUCTION [COLLIN]	0	1	2	3	4	6
CONSERVATION, WATER LOSS CONTROL - NEW HOPE	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	3	5	6	5	5
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	21	28	41	36	31
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	5	7	6	5	0	0

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	14
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	9	14	21	18
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	20	27
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	1	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	18
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	7	6
		9	**33**	**51**	**70**	**94**	**126**
NORTH COLLIN WSC, TRINITY (C)							
CONSERVATION - NORTH COLLIN WSC	DEMAND REDUCTION [COLLIN]	3	6	10	15	21	29
CONSERVATION, WATER LOSS CONTROL - NORTH COLLIN WSC	DEMAND REDUCTION [COLLIN]	4	4	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	13	22	27	35	28	23
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	127	161	220	182	153
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	31	40	34	24	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	67
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	53	73	107	90
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	103	135
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	5	5	6	5	4

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	88
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	35	30
		63	**204**	**290**	**373**	**482**	**619**
PARKER, TRINITY (C)							
CONSERVATION - PARKER	DEMAND REDUCTION [COLLIN]	35	147	254	282	310	338
CONSERVATION, WATER LOSS CONTROL - PARKER	DEMAND REDUCTION [COLLIN]	13	13	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	36	356	342	342	216	145
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	27	2,013	2,046	2,138	1,415	993
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	86	635	431	236	8	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	437
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	552	563	727	543
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	700	811
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	176	472	527	433	342
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	197	560	640	588	490
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	129	300	298	244	192
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	276	630	626	508	397
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	222	523	518	425	337

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	6	58	58	59	41	28
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	530
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	237	179
		203	**4,222**	**6,168**	**6,229**	**5,852**	**5,762**
PLANO, TRINITY (C)							
CONSERVATION - PLANO	DEMAND REDUCTION [COLLIN]	1,084	1,740	2,567	2,390	2,624	2,861
CONSERVATION, WATER LOSS CONTROL - PLANO	DEMAND REDUCTION [COLLIN]	335	335	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	901	1,622	1,759	2,098	1,459	1,025
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	677	9,181	10,547	13,115	9,541	7,051
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	2,136	2,893	2,223	1,444	55	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	3,103
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	3,472	4,370	5,581	4,158
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5,379	6,206
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	146	269	301	370	266	195
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	4,051
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,822	1,372
		5,279	**16,040**	**20,869**	**23,787**	**26,727**	**30,022**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
PRINCETON, TRINITY (C)							
CONSERVATION - PRINCETON	DEMAND REDUCTION [COLLIN]	3	8	16	49	97	158
CONSERVATION, WATER LOSS CONTROL - PRINCETON	DEMAND REDUCTION [COLLIN]	5	5	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	16	32	43	115	126	121
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	12	181	256	724	825	828
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	38	57	54	80	5	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	364
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	84	241	483	488
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	465	728
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	7	21	22	23
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	475
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	158	161
		77	**289**	**460**	**1,230**	**2,181**	**3,346**
PROSPER, TRINITY (C)							
CONSERVATION - PROSPER	DEMAND REDUCTION [COLLIN]	165	289	405	448	494	523
CONSERVATION, WATER LOSS CONTROL - PROSPER	DEMAND REDUCTION [COLLIN]	26	23	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	49	212	267	316	219	147
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	36	1,199	1,598	1,976	1,437	1,010
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	118	377	337	218	8	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	445
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	458	532	730	549
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	704	820
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	50	265	446	474	378
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	56	315	542	644	81
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	37	169	252	267	211
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	79	356	530	554	437
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	63	294	439	465	371
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	9	35	45	56	41	27
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	995
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	238	181
		403	**2,420**	**4,509**	**5,755**	**6,275**	**6,175**
RICHARDSON, TRINITY (C)							
CONSERVATION - RICHARDSON	DEMAND REDUCTION [COLLIN]	142	205	276	309	336	363
CONSERVATION, WATER LOSS CONTROL - RICHARDSON	DEMAND REDUCTION [COLLIN]	40	39	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	103	184	200	239	166	117
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	77	1,041	1,198	1,492	1,090	805

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	244	328	253	164	6	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	354
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	395	498	636	475
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	613	709
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	17	30	34	42	30	22
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	463
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	208	157
		623	**1,827**	**2,356**	**2,744**	**3,085**	**3,465**

ROYSE CITY, SABINE (C)

CONSERVATION - ROYSE CITY	DEMAND REDUCTION [COLLIN]	1	4	13	29	69	89
CONSERVATION, WATER LOSS CONTROL - ROYSE CITY	DEMAND REDUCTION [COLLIN]	1	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	17	36	70	92	69
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	92	217	434	599	472
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	7	29	47	48	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	208
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	73	146	350	279
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	337	416

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	6	12	16	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	271
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	114	92
		14	**146**	**392**	**739**	**1,580**	**1,909**
SACHSE, TRINITY (C)							
CONSERVATION - SACHSE	DEMAND REDUCTION [COLLIN]	19	31	42	47	51	56
CONSERVATION, WATER LOSS CONTROL - SACHSE	DEMAND REDUCTION [COLLIN]	7	7	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	20	34	36	42	29	20
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	15	193	214	257	190	140
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	48	61	45	29	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	61
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	71	87	110	82
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	106	123
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	6	7	6	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	80
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	36	27
		112	**332**	**414**	**469**	**529**	**593**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SEIS LAGOS UD, TRINITY (C)							
CONSERVATION - SEIS LAGOS UD	DEMAND REDUCTION [COLLIN]	31	36	41	43	45	47
CONSERVATION, WATER LOSS CONTROL - SEIS LAGOS UD	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	11	13	16	11	8
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	66	77	96	71	53
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	7	21	16	11	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	23
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	25	32	42	32
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	40	47
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	3	3	2	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	31
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	14	10
		47	**140**	**175**	**200**	**224**	**252**
SOUTH GRAYSON WSC, TRINITY (C)							
CONSERVATION - SOUTH GRAYSON WSC	DEMAND REDUCTION [COLLIN]	1	1	2	4	5	7
CONSERVATION, WATER LOSS CONTROL - SOUTH GRAYSON WSC	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
GTUA - GRAYSON COUNTY WSP	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	25	27	30	32	32	33
		27	**29**	**32**	**36**	**37**	**40**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
ST. PAUL, TRINITY (C)							
CONSERVATION - ST PAUL	DEMAND REDUCTION [COLLIN]	1	2	3	4	6	7
CONSERVATION, WATER LOSS CONTROL - ST. PAUL	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	8	9	11	8	5
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	44	53	66	49	36
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	14	11	7	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	16
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	17	22	28	21
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	28	32
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	2	2	3	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	21
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	7
		21	**70**	**95**	**112**	**131**	**147**
STEAM ELECTRIC POWER, COLLIN, TRINITY (C)							
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	13	16	21	19	18	11
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	92	125	133	145	99
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	31	29	26	3	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	35

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	41	41	39	26
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	66	70
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	4	4	3	3	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	46
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	22	15
		56	**141**	**217**	**199**	**294**	**306**
WESTON, TRINITY (C)							
CONSERVATION - WESTON	DEMAND REDUCTION [COLLIN]	2	7	48	157	312	374
CONSERVATION, WATER LOSS CONTROL - WESTON	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	829	4,600	11,501	18,301	18,237
WESTON - NEW WELLS IN WOODBINE AQUIFER	WOODBINE AQUIFER [COLLIN]	71	71	71	71	71	71
		76	**910**	**4,719**	**11,729**	**18,684**	**18,682**
WYLIE, TRINITY (C)							
CONSERVATION - WYLIE	DEMAND REDUCTION [COLLIN]	21	47	76	106	137	168
CONSERVATION, WATER LOSS CONTROL - WYLIE	DEMAND REDUCTION [COLLIN]	32	32	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	105	183	206	249	178	128
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	77	1,036	1,237	1,561	1,167	882
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	248	326	261	172	7	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	388

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	407	520	682	520
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	657	775
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	17	30	35	46	33	24
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	507
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	223	172
		500	**1,654**	**2,222**	**2,654**	**3,084**	**3,564**
WYLIE NORTHEAST SUD, TRINITY (C)							
CONSERVATION - WYLIE NORTHEAST SUD	DEMAND REDUCTION [COLLIN]	1	2	4	10	22	42
CONSERVATION, WATER LOSS CONTROL - WYLIE NORTHEAST SUD	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	8	11	24	29	31
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	47	65	155	186	219
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	15	14	17	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	96
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	21	52	109	129
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	105	192
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	2	1	4	4	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	125

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	35	42
		20	**75**	**116**	**262**	**491**	**881**
Sum of Projected Water Management Strategies (acre-feet)		**19,074**	**66,651**	**107,178**	**147,429**	**180,115**	**211,626**

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	2
CONSERVATION - BOLIVAR WSC	DEMAND REDUCTION [COOKE]	1	1	1	2	3	3
CONSERVATION, WATER LOSS CONTROL - BOLIVAR WSC	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	1	5	7	6
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	6	8	9	10	11
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	2	5	5	4
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	0	1	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	14
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	2	5
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	2	2
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	0	1	1	2
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	1	1	3

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	1	4	8	8	8
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	3	10	17	25	17
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	0	2	3	4	5	5
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	7	8	10	10
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	13	21	24	27	26
		2	**31**	**58**	**84**	**107**	**118**
COUNTY-OTHER, COOKE, RED (C)							
CONSERVATION - COOKE COUNTY	DEMAND REDUCTION [COOKE]	1	2	3	4	6	11
CONSERVATION, WATER LOSS CONTROL - COOKE COUNTY	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	190
		2	**3**	**3**	**4**	**6**	**201**
COUNTY-OTHER, COOKE, TRINITY (C)							
CONSERVATION - COOKE COUNTY	DEMAND REDUCTION [COOKE]	3	6	9	17	25	64
CONSERVATION, WATER LOSS CONTROL - COOKE COUNTY	DEMAND REDUCTION [COOKE]	5	5	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,090
		8	**11**	**9**	**17**	**25**	**1,154**
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 SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	2
		0	**0**	**0**	**0**	**0**	**2**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
GAINESVILLE, TRINITY (C)							
CONSERVATION - GAINESVILLE	DEMAND REDUCTION [COOKE]	8	17	27	37	56	93
CONSERVATION, WATER LOSS CONTROL - GAINESVILLE	DEMAND REDUCTION [COOKE]	12	12	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,382
		20	**29**	**27**	**37**	**56**	**1,475**
IRRIGATION, COOKE, RED (C)							
GAINESVILLE ADDITIONAL DIRECT REUSE	DIRECT REUSE [COOKE]	21	21	21	21	21	21
		21	**21**	**21**	**21**	**21**	**21**
IRRIGATION, COOKE, TRINITY (C)							
GAINESVILLE ADDITIONAL DIRECT REUSE	DIRECT REUSE [COOKE]	49	49	49	49	49	49
		49	**49**	**49**	**49**	**49**	**49**
LAKE KIOWA SUD, TRINITY (C)							
CONSERVATION - LAKE KIOWA SUD	DEMAND REDUCTION [COOKE]	3	5	8	11	14	17
CONSERVATION, WATER LOSS CONTROL - LAKE KIOWA SUD	DEMAND REDUCTION [COOKE]	4	4	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	91	92	89	86	83
		7	**100**	**100**	**100**	**100**	**100**
LINDSAY, TRINITY (C)							
CONSERVATION - LINDSAY	DEMAND REDUCTION [COOKE]	0	1	2	2	5	12
CONSERVATION, WATER LOSS CONTROL - LINDSAY	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	141	435
		1	**2**	**2**	**2**	**146**	**447**
MANUFACTURING, COOKE, TRINITY (C)							
CONSERVATION, MANUFACTURING - COOKE COUNTY	DEMAND REDUCTION [COOKE]	0	0	5	8	8	9
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	169
		0	**0**	**5**	**8**	**8**	**178**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MINING, COOKE, TRINITY (C)							
COOKE COUNTY MINING DIRECT REUSE	DIRECT REUSE [COOKE]	99	67	71	74	77	80
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	684	83	7	72	134	206
		783	**150**	**78**	**146**	**211**	**286**
MOUNTAIN SPRING WSC, TRINITY (C)							
CONSERVATION - MOUNTAIN SPRING WSC	DEMAND REDUCTION [COOKE]	2	3	5	7	14	26
CONSERVATION, WATER LOSS CONTROL - MOUNTAIN SPRING WSC	DEMAND REDUCTION [COOKE]	2	2	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	277	740
		4	**5**	**5**	**7**	**291**	**766**
MUENSTER, TRINITY (C)							
CONSERVATION - MUENSTER	DEMAND REDUCTION [COOKE]	1	2	6	7	9	10
CONSERVATION, WATER LOSS CONTROL - MUENSTER	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
DEVELOP LAKE MUENSTER SUPPLY	MUENSTER LAKE/RESERVOIR [RESERVOIR]	280	280	280	280	280	280
		282	**283**	**286**	**287**	**289**	**290**
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 - GRAYSON COUNTY WSP	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	4	6	7	9
		0	**2**	**4**	**6**	**7**	**9**
VALLEY VIEW, TRINITY (C)							
CONSERVATION - VALLEY VIEW	DEMAND REDUCTION [COOKE]	0	0	1	1	1	1
CONSERVATION, WATER LOSS CONTROL - VALLEY VIEW	DEMAND REDUCTION [COOKE]	0	0	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	4	6	9	11	14

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
							All values are in acre-feet
		0	**4**	**7**	**10**	**12**	**15**
WOODBINE WSC, RED (C)							
CONSERVATION - WOODBINE WSC	DEMAND REDUCTION [COOKE]	0	1	1	1	1	1
CONSERVATION, WATER LOSS CONTROL - WOODBINE WSC	DEMAND REDUCTION [COOKE]	0	0	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	3	8	13	19	25
		0	**4**	**9**	**14**	**20**	**26**
WOODBINE WSC, TRINITY (C)							
CONSERVATION - WOODBINE WSC	DEMAND REDUCTION [COOKE]	2	4	6	9	13	18
CONSERVATION, WATER LOSS CONTROL - WOODBINE WSC	DEMAND REDUCTION [COOKE]	3	3	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	38	94	155	221	288
		5	**45**	**100**	**164**	**234**	**306**
Sum of Projected Water Management Strategies (acre-feet)		**1,184**	**739**	**763**	**956**	**1,582**	**5,443**

DENTON COUNTY

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
							All values are in acre-feet
ARGYLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	57
CONSERVATION - ARGYLE	DEMAND REDUCTION [DENTON]	19	45	89	99	109	118
CONSERVATION, WATER LOSS CONTROL - ARGYLE	DEMAND REDUCTION [DENTON]	18	55	69	69	69	69
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	11	40	178	184	151
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	36	127	163	145	108
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	7	14	16	13	11

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	325
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	63	110
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	64	48
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	22	25	21	38
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	43	48	39	69
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	74	227	265	223	200
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	260	517	589	666	424
		37	488	1,148	1,452	1,596	1,728
ARGYLE WSC, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	12
CONSERVATION - ARGYLE WSC	DEMAND REDUCTION [DENTON]	24	38	42	45	48	51
CONSERVATION – WASTE PROHIBITION, ARGYLE WSC	DEMAND REDUCTION [DENTON]	6	12	12	12	12	12
CONSERVATION, WATER LOSS CONTROL - ARGYLE WSC	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	2	27	36	31
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	8	25	28	22
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	2	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	67
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	12	23

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	12	10
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	1	4	4	8
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	3	7	8	14
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	14	40	43	41
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	31	90	129	87
		35	**55**	**114**	**252**	**334**	**380**
AUBREY, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	32
CONSERVATION - AUBREY	DEMAND REDUCTION [DENTON]	2	5	8	13	20	29
CONSERVATION, WATER LOSS CONTROL - AUBREY	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	13	69	86	86
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	14	42	63	67	61
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	5	6	6	6
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	185
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	30	63
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	30	27
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	10	10	22
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	14	19	18	39

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	30	74	103	104	113
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	103	168	232	309	241
		5	**163**	**331**	**515**	**680**	**904**
BARTONVILLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	17
CONSERVATION - BARTONVILLE	DEMAND REDUCTION [DENTON]	11	20	27	30	33	36
CONSERVATION, WATER LOSS CONTROL - BARTONVILLE	DEMAND REDUCTION [DENTON]	4	4	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	11	52	55	46
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	13	35	48	43	32
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	4	5	4	3
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	97
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	19	33
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	19	14
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	12	14	12	21
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	28	63	77	66	60
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	96	142	172	197	126
		15	**168**	**294**	**398**	**448**	**485**
BOLIVAR WSC, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	27
CONSERVATION - BOLIVAR WSC	DEMAND REDUCTION [DENTON]	3	6	12	18	27	39

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CONSERVATION, WATER LOSS CONTROL - BOLIVAR WSC	DEMAND REDUCTION [DENTON]	4	4	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	1	5	44	68	72
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	39	60	82	104	127
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	3	18	40	54	51
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	3	5	4	6
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	153
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	24	52
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	24	23
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	4	6	7	17
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	6	13	15	33
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	4	32	65	83	95
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	16	72	145	244	199
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	0	12	24	35	50	58
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	26	52	73	100	114
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	86	159	208	268	294
		7	**198**	**447**	**734**	**1,072**	**1,360**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CARROLLTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	711
CONSERVATION - CARROLLTON	DEMAND REDUCTION [DENTON]	191	313	426	469	515	562
CONSERVATION, WATER LOSS CONTROL - CARROLLTON	DEMAND REDUCTION [DENTON]	72	72	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	402	366	669	1,858	1,946	1,889
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	1,166	2,108	1,696	1,528	1,347
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	673	599
		665	**1,917**	**3,203**	**4,023**	**4,662**	**5,108**
CELINA, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	224
CONSERVATION - CELINA	DEMAND REDUCTION [DENTON]	2	21	99	257	283	308
CONSERVATION, WATER LOSS CONTROL - CELINA	DEMAND REDUCTION [DENTON]	1	2	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	39	499	566	596
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	14	122	456	444	425
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	17	50	119	73	45
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	96	302	740	477	312
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	30	64	82	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	137
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	99	247	279	184
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	269	274

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	14	45	39	43
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	3	9	21	13	9
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,462
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	284	496
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	196	189
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	21	71	65	151
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	41	136	121	272
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	30	217	743	684	789
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	103	494	1,650	2,054	1,671
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	5	39	0	8	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	7	53	0	0	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	31	246	1,152	1,827	1,060	0
		46	**661**	**2,723**	**6,901**	**6,910**	**7,587**
COPPELL, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	15
CONSERVATION - COPPELL	DEMAND REDUCTION [DENTON]	4	6	9	10	11	12
CONSERVATION, WATER LOSS CONTROL - COPPELL	DEMAND REDUCTION [DENTON]	2	1	0	0	0	0

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	9	8	14	39	41	39
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	24	44	36	32	28
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	14	13
		15	**39**	**67**	**85**	**98**	**107**
COPPER CANYON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	6
CONSERVATION - COPPER CANYON	DEMAND REDUCTION [DENTON]	4	6	9	10	13	14
CONSERVATION, WATER LOSS CONTROL - COPPER CANYON	DEMAND REDUCTION [DENTON]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	1	2	13	16	14
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	2	7	11	13	11
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	1	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	32
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5	11
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	6	5
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	2	3	3	7
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	4	12	18	19	20
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	14	26	41	58	41
		5	**28**	**59**	**97**	**134**	**162**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CORINTH, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	67
CONSERVATION - CORINTH	DEMAND REDUCTION [DENTON]	57	108	149	165	181	198
CONSERVATION, IRRIGATION RESTRICTIONS – CORINTH	DEMAND REDUCTION [DENTON]	5	13	13	13	13	13
CONSERVATION, WATER LOSS CONTROL - CORINTH	DEMAND REDUCTION [DENTON]	21	21	0	0	0	0
CORINTH NEW WELLS IN TRINITY AQUIFER-2020	TRINITY AQUIFER [DENTON]	561	561	561	561	561	561
CORINTH NEW WELLS IN TRINITY AQUIFER-2030	TRINITY AQUIFER [DENTON]	0	561	561	561	561	561
CORINTH UPSIZE EXISTING WELL	TRINITY AQUIFER [DENTON]	286	286	286	286	286	286
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	17	46	208	214	177
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	55	144	190	168	126
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	11	16	19	15	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	382
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	76	129
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	74	56
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	24	30	25	45
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	48	57	46	81
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	113	256	310	259	235
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	397	584	687	775	497
		930	**2,143**	**2,688**	**3,087**	**3,254**	**3,427**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	407
CONSERVATION - DENTON COUNTY	DEMAND REDUCTION [DENTON]	13	28	46	86	174	390
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY	DEMAND REDUCTION [DENTON]	19	19	0	0	0	0
DENTON COUNTY OTHER NEW WELLS IN TRINITY AQUIFER	TRINITY AQUIFER [DENTON]	504	504	504	504	504	504
DENTON COUNTY OTHER NEW WELLS IN WOODBINE AQUIFER	WOODBINE AQUIFER [DENTON]	1,000	1,000	1,000	1,000	1,000	1,000
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	13	43	349	656	1,081
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	42	136	319	515	771
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	31	47	51	58	40	28
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	23	271	301	364	264	195
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	74	85	63	40	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	86
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	99	121	155	115
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	149	171
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	8	16	31	45	77
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	6	9	8	11	7	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	2,524
		1,670	**2,298**	**2,931**	**4,554**	**7,307**	**13,704**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	321	855
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	227	343
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	24	51	77	276
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	44	92	138	488
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	87	243	520	794	1,430
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	185	353	1,008	2,239	2,958
		1,670	**2,298**	**2,931**	**4,554**	**7,307**	**13,704**

CROSS ROADS, TRINITY (C)

ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	16
CONSERVATION - CROSS ROADS	DEMAND REDUCTION [DENTON]	7	13	23	25	28	30
CONSERVATION, WATER LOSS CONTROL - CROSS ROADS	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	11	51	52	43
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	11	35	46	41	31
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	4	4	4	3
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	92
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	18	31
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	18	14
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	6	7	6	11

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	12	14	11	20
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	24	63	75	63	58
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	81	143	167	187	119
		9	**137**	**297**	**389**	**428**	**468**
DALLAS, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	389
CONSERVATION - DALLAS	DEMAND REDUCTION [DENTON]	226	591	895	1,001	1,018	1,004
CONSERVATION, WATER LOSS CONTROL - DALLAS	DEMAND REDUCTION [DENTON]	33	33	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	45	72	209	760	958	1,034
DWU UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	0	0	0	3	7	3
DWU UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	0	0	3	6	2
DWU UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	0	0	2	4	1
DWU UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	2	2	2	8	14	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	230	657	694	752	737
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	331	328
		306	**928**	**1,763**	**2,471**	**3,090**	**3,503**
DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	3,291
CONSERVATION - DENTON	DEMAND REDUCTION [DENTON]	385	811	1,410	1,982	2,983	3,966
CONSERVATION, WATER LOSS CONTROL - DENTON	DEMAND REDUCTION [DENTON]	145	145	0	0	0	0
DENTON UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	6,275	8,160	10,606	13,445	15,857	18,184

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DENTON UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	291	1,082	2,151	4,369	6,217
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	258	864	1,560	2,881	3,738
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	567	1,845	3,237	5,782	7,198
DENTON UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	0	896	2,957	5,268	9,630	12,388
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	87	539	2,953	6,375	8,778
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	258	1,654	2,684	4,989	6,237
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	2,196	2,774
		6,805	**11,473**	**20,957**	**33,280**	**55,062**	**72,771**
DENTON COUNTY FWSD #10, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	67
CONSERVATION - DENTON COUNTY FWSD #10	DEMAND REDUCTION [DENTON]	20	68	94	105	114	124
CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD #10	DEMAND REDUCTION [DENTON]	1	7	7	7	7	7
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #10	DEMAND REDUCTION [DENTON]	7	7	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	18	45	208	214	177
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	55	143	189	168	126
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	11	16	19	14	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	382
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	73	129

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	74	56
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	24	29	24	45
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	48	56	46	81
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	114	256	309	259	235
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	400	581	686	777	497
		28	**680**	**1,214**	**1,608**	**1,770**	**1,939**
DENTON COUNTY FWSD #1A, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	262
CONSERVATION - DENTON COUNTY FWSD #1A	DEMAND REDUCTION [DENTON]	49	140	234	259	285	310
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #1A	DEMAND REDUCTION [DENTON]	18	18	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	34	80	196	711	756	697
DWU UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	1	29	33	40	19
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	253	620	651	594	496
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	16	27	31	25	24
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	729
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	122	247
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	262	220

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	41	49	41	86
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	80	94	77	155
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	157	426	516	433	448
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	549	969	1,146	1,300	948
		101	**1,214**	**2,622**	**3,490**	**3,935**	**4,641**
DENTON COUNTY FWSD #7, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	73
CONSERVATION - DENTON COUNTY FWSD #7	DEMAND REDUCTION [DENTON]	45	74	102	113	125	136
CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD #7	DEMAND REDUCTION [DENTON]	4	8	8	8	8	8
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #7	DEMAND REDUCTION [DENTON]	17	17	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	19	50	226	233	193
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	61	157	207	183	137
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	13	18	20	16	14
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	415
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	80	141
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	81	61
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	27	32	27	49

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	53	61	51	88
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	126	280	337	282	255
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	440	635	749	845	540
		66	**758**	**1,330**	**1,753**	**1,931**	**2,110**
DOUBLE OAK, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	7
CONSERVATION - DOUBLE OAK	DEMAND REDUCTION [DENTON]	8	12	16	18	20	22
CONSERVATION, WATER LOSS CONTROL - DOUBLE OAK	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	1	4	20	23	18
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	4	12	18	18	13
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	1	2	2	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	40
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5	11
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	8	6
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	4	5	5	8
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	8	22	29	27	25
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	29	49	63	78	53
		11	**58**	**108**	**155**	**186**	**204**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
FLOWER MOUND, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	744
CONSERVATION - FLOWER MOUND	DEMAND REDUCTION [DENTON]	252	500	688	763	838	913
CONSERVATION, WATER LOSS CONTROL - FLOWER MOUND	DEMAND REDUCTION [DENTON]	95	95	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	242	306	620	2,098	2,181	1,977
DWU UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	152	130	78	10	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	234	189	117	12	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	230	165	94	9	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	556	345	0	0	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	828	629	318	29	0	0
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	975	1,955	1,914	1,713	1,409
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	54	75	85	67	58
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,738
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	333	589
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	754	627
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	113	135	113	204
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	221	257	209	369
		2,589	**5,807**	**8,139**	**9,859**	**10,935**	**11,959**

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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	538	1,180	1,411	1,183	1,070
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	1,881	2,680	3,136	3,544	2,261
		2,589	**5,807**	**8,139**	**9,859**	**10,935**	**11,959**
FORT WORTH, TRINITY (C)							
CONSERVATION - FORT WORTH	DEMAND REDUCTION [DENTON]	207	406	676	993	1,362	1,771
CONSERVATION, WATER LOSS CONTROL - FORT WORTH	DEMAND REDUCTION [DENTON]	714	951	463	434	277	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	0	0	321	0
FORT WORTH ALLIANCE DIRECT REUSE	DIRECT REUSE [TARRANT]	0	129	425	539	634	716
FORT WORTH DIRECT REUSE	DIRECT REUSE [TARRANT]	34	41	49	62	73	82
FORT WORTH FUTURE DIRECT REUSE	DIRECT REUSE [TARRANT]	0	320	443	561	661	745
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	391	905	936	688	263
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	5,888
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	2,116	3,263	2,163
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	48	26	414	445	287	162
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	31	6	106	135	249	523
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	65	828	1,331	2,381	2,626
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	911	629	1,541	1,179
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	73	0
		1,034	**2,335**	**5,220**	**8,181**	**11,810**	**16,118**
FRISCO, TRINITY (C)							
CONSERVATION - FRISCO	DEMAND REDUCTION [DENTON]	609	975	1,429	1,517	1,606	1,695
CONSERVATION, WATER LOSS CONTROL - FRISCO	DEMAND REDUCTION [DENTON]	83	83	0	0	0	0
FRISCO DIRECT REUSE	DIRECT REUSE [COLLIN]	896	1,344	2,260	2,260	2,260	2,260

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	128	431	559	658	463	328
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	96	2,440	3,349	4,116	3,028	2,261
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	303	769	706	454	18	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	994
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1,103	1,372	1,772	1,332
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,707	1,988
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	21	72	96	116	85	62
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,298
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	578	440
		2,136	**6,114**	**9,502**	**10,493**	**11,517**	**12,658**
HACKBERRY, TRINITY (C)							
CONSERVATION - HACKBERRY	DEMAND REDUCTION [DENTON]	4	9	15	20	28	36
CONSERVATION, WATER LOSS CONTROL - HACKBERRY	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	9	13	18	16	13
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	54	76	114	101	90
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	17	16	12	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	40
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	25	38	59	53

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	57	79
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	2	1	4	2	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	52
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	19	18
		24	**93**	**146**	**206**	**283**	**385**
HICKORY CREEK, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	23
CONSERVATION - HICKORY CREEK	DEMAND REDUCTION [DENTON]	5	8	9	14	18	22
CONSERVATION, WATER LOSS CONTROL - HICKORY CREEK	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	12	72	74	60
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	13	39	66	58	43
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	4	6	5	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	131
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	25	44
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	26	19
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	10	9	15
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	13	20	16	28

Projected Water Management Strategies
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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	26	70	107	89	80
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	89	161	239	266	172
		8	**146**	**315**	**534**	**586**	**641**
HIGHLAND VILLAGE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	65
CONSERVATION - HIGHLAND VILLAGE	DEMAND REDUCTION [DENTON]	51	86	117	130	143	156
CONSERVATION, WATER LOSS CONTROL - HIGHLAND VILLAGE	DEMAND REDUCTION [DENTON]	19	19	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	15	40	194	209	172
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	47	128	177	164	123
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	10	14	17	14	12
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	371
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	71	126
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	72	55
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	22	28	24	44
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	43	53	45	79
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	97	228	288	252	228
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	339	518	639	756	484
		70	**613**	**1,110**	**1,526**	**1,750**	**1,915**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
IRRIGATION, DENTON, TRINITY (C)							
CONSERVATION, IRRIGATION - DENTON COUNTY	DEMAND REDUCTION [DENTON]	2	37	72	90	107	124
UTRWD - ADDITIONAL DIRECT REUSE	DIRECT REUSE [DENTON]	0	560	1,121	2,240	2,240	2,240
		2	**597**	**1,193**	**2,330**	**2,347**	**2,364**
JUSTIN, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	32
CONSERVATION - JUSTIN	DEMAND REDUCTION [DENTON]	2	8	17	23	29	35
CONSERVATION, WATER LOSS CONTROL - JUSTIN	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	21	96	102	84
JUSTIN NEW WELLS IN TRINITY AQUIFER	TRINITY AQUIFER [DENTON]	244	244	244	244	244	244
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	15	65	88	80	60
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	7	9	7	6
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	181
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	35	61
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	35	27
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	11	14	12	21
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	22	26	22	38
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	31	117	143	123	111
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	106	266	318	370	236
		249	**415**	**770**	**961**	**1,059**	**1,136**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
KRUGERVILLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	10
CONSERVATION - KRUGERVILLE	DEMAND REDUCTION [DENTON]	1	2	4	6	7	9
CONSERVATION, WATER LOSS CONTROL - KRUGERVILLE	DEMAND REDUCTION [DENTON]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	2	6	30	31	26
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	6	18	27	24	18
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	2	3	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	55
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	11	19
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	11	8
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	3	4	4	6
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	6	8	7	12
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	13	32	45	37	34
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	44	74	100	112	71
		2	**69**	**145**	**223**	**246**	**270**
KRUM, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	58
CONSERVATION - KRUM	DEMAND REDUCTION [DENTON]	16	30	52	70	92	120
CONSERVATION, WATER LOSS CONTROL - KRUM	DEMAND REDUCTION [DENTON]	6	6	0	0	0	0

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	20	117	153	155
KRUM NEW WELLS IN TRINITY AQUIFER	TRINITY AQUIFER [DENTON]	577	707	866	1,025	1,025	1,025
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	17	62	107	120	110
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	7	10	11	11
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	223
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	52	113
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	53	49
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	11	17	18	39
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	21	32	33	71
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	34	110	173	185	204
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	119	249	385	556	432
		599	**922**	**1,398**	**1,936**	**2,298**	**2,720**
LAKE DALLAS, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	27
CONSERVATION - LAKE DALLAS	DEMAND REDUCTION [DENTON]	4	8	13	18	22	27
CONSERVATION, WATER LOSS CONTROL - LAKE DALLAS	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	6	18	62	86	71
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	19	58	75	68	51

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	7	7	6	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	153
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	29	52
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	30	23
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	10	12	10	18
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	19	22	18	32
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	40	103	123	104	94
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	138	234	274	310	198
		9	**220**	**462**	**613**	**683**	**751**
LAKEWOOD VILLAGE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	2
CONSERVATION - LAKEWOOD VILLAGE	DEMAND REDUCTION [DENTON]	0	1	1	2	3	4
CONSERVATION, WATER LOSS CONTROL - LAKEWOOD VILLAGE	DEMAND REDUCTION [DENTON]	0	0	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	0	0	4	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	3	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	11
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1	4
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	1	2

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	0	0	0	1
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	0	1	2
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	0	0	4	7
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	12	14
		0	**1**	**1**	**2**	**29**	**56**
LEWISVILLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,661
CONSERVATION - LEWISVILLE	DEMAND REDUCTION [DENTON]	266	484	755	952	1,166	1,272
CONSERVATION, IRRIGATION RESTRICTIONS – LEWISVILLE	DEMAND REDUCTION [DENTON]	13	32	39	47	55	55
CONSERVATION, WATER LOSS CONTROL - LEWISVILLE	DEMAND REDUCTION [DENTON]	100	100	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	550	560	1,177	4,041	4,918	4,420
DWU UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	19	274	361	499	236
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	1,784	3,709	3,689	3,861	3,150
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	1,699	1,400
		929	**2,979**	**5,954**	**9,090**	**12,198**	**12,194**
LITTLE ELM, TRINITY (C)							
CONSERVATION - LITTLE ELM	DEMAND REDUCTION [DENTON]	14	31	46	61	76	91
CONSERVATION, WATER LOSS CONTROL - LITTLE ELM	DEMAND REDUCTION [DENTON]	21	21	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	68	119	125	144	100	70
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	51	673	750	900	649	478

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	160	212	158	99	4	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	210
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	247	300	379	281
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	366	420
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	10	20	21	25	19	12
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	274
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	124	93
		324	**1,076**	**1,347**	**1,529**	**1,717**	**1,929**
MANUFACTURING, DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	81
CONSERVATION, MANUFACTURING - DENTON COUNTY	DEMAND REDUCTION [DENTON]	0	3	38	57	62	68
DENTON COUNTY MANUFACTURING ADDITIONAL GROUNDWATER	WOODBINE AQUIFER [DENTON]	184	184	184	184	184	184
DENTON UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	315	323	353	383	360	369
DENTON UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	12	36	61	99	126
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	10	29	44	65	76
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	22	61	92	131	146
DENTON UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	0	35	98	150	219	252
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	7	9	27	120	185	215

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	25	83	106	142	153
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	3	3	2	2
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	13	14	19	15	12
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	3	4	3	2	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	5
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	5	6	9	7
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	11
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	1	1	1	1
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	0	0	1	0	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	41
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	1	9	13
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	0	1	0	0	0
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	1	1	0
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	1	2	2	1	2
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	1	2	1	1
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	63	67
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	1	2	2	3
		512	**676**	**993**	**1,306**	**1,638**	**1,900**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	3	4	3	6
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	7	15	20	19	18
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	25	35	45	56	40
		512	**676**	**993**	**1,306**	**1,638**	**1,900**
MINING, DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	99
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	22	168	239	263
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	16	70	153	187	188
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	8	15	16	19
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	567
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	81	192
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	83	84
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	12	24	28	67
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	23	46	51	120
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	32	124	249	290	349
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	114	282	553	866	739
		0	**170**	**541**	**1,208**	**1,841**	**2,687**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MOUNTAIN SPRING WSC, TRINITY (C)							
CONSERVATION - MOUNTAIN SPRING 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 SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5	10
		0	**0**	**0**	**0**	**5**	**10**
MUSTANG SUD, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	253
CONSERVATION - MUSTANG SUD	DEMAND REDUCTION [DENTON]	6	24	52	91	142	204
CONSERVATION, WATER LOSS CONTROL - MUSTANG SUD	DEMAND REDUCTION [DENTON]	9	9	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	15	66	420	558	674
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	48	207	383	438	480
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	10	23	37	38	48
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,450
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	190	491
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	193	214
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	35	60	64	170
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	69	114	120	308
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	99	369	623	675	891
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	345	840	1,383	2,018	1,887

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
		15	**550**	**1,661**	**3,111**	**4,436**	**7,070**
NORTHLAKE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	181
CONSERVATION - NORTHLAKE	DEMAND REDUCTION [DENTON]	12	74	186	287	403	440
CONSERVATION, WATER LOSS CONTROL - NORTHLAKE	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	15	69	439	581	480
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	76	163	178	170	115
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	46	218	401	734	342
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	10	25	39	40	34
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,469
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	56	323	497
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	12	40	42	58	39
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	3	10	12	24	53
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	32	114	236	225	181
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	54	131	73	86
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	201	152
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	37	62	67	121
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	73	119	125	219
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	95	388	653	711	636

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	334	882	1,450	2,101	1,348
		17	**702**	**2,259**	**4,105**	**5,836**	**6,393**
OAK POINT, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	66
CONSERVATION - OAK POINT	DEMAND REDUCTION [DENTON]	4	10	21	35	53	63
CONSERVATION, WATER LOSS CONTROL - OAK POINT	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	8	29	170	213	176
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	26	92	155	168	126
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	5	10	15	15	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	379
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	73	129
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	74	56
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	16	24	25	45
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	31	46	46	80
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	54	164	252	258	233
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	189	374	561	774	494
		9	**297**	**737**	**1,258**	**1,699**	**1,860**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
PALOMA CREEK, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	79
CONSERVATION - PALOMA CREEK	DEMAND REDUCTION [DENTON]	35	75	104	115	127	138
CONSERVATION, WATER LOSS CONTROL - PALOMA CREEK	DEMAND REDUCTION [DENTON]	13	13	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	20	51	232	239	210
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	63	161	212	187	150
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	13	18	21	16	15
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	452
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	81	153
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	82	67
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	27	33	28	53
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	54	63	51	96
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	131	287	346	290	280
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	458	655	766	866	589
		48	**773**	**1,357**	**1,788**	**1,967**	**2,282**
PILOT POINT, TRINITY (C)							
CONSERVATION - PILOT POINT	DEMAND REDUCTION [DENTON]	3	4	14	26	44	71
CONSERVATION, WATER LOSS CONTROL - PILOT POINT	DEMAND REDUCTION [DENTON]	4	4	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	14	137	227	258

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
PILOT POINT ADDITIONAL GROUNDWATER	TRINITY AQUIFER [DENTON]	269	269	269	269	269	269
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	5	12	16	18
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	556
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	77	188
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	78	82
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	19	26	65
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	15	37	49	118
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	77	203	275	342
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	176	451	827	726
		276	**277**	**577**	**1,154**	**1,888**	**2,693**
PLANO, TRINITY (C)							
CONSERVATION - PLANO	DEMAND REDUCTION [DENTON]	31	50	73	67	74	80
CONSERVATION, WATER LOSS CONTROL - PLANO	DEMAND REDUCTION [DENTON]	10	10	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	26	47	50	59	41	29
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	19	265	297	369	268	199
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	62	84	63	41	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	87
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	98	123	157	117

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	151	174
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	4	8	9	10	7	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	114
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	51	39
		152	**464**	**590**	**669**	**751**	**844**
PONDER, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	13
CONSERVATION - PONDER	DEMAND REDUCTION [DENTON]	1	2	5	8	12	18
CONSERVATION, WATER LOSS CONTROL - PONDER	DEMAND REDUCTION [DENTON]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	1	16	31	35
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	3	15	24	25
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	1	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	75
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	10	25
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	10	11
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	1	2	3	9
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	4	6	16

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	48	142	225	273
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	12	55	110	97
		2	**3**	**71**	**243**	**433**	**599**
PROSPER, TRINITY (C)							
CONSERVATION - PROSPER	DEMAND REDUCTION [DENTON]	6	49	152	306	478	507
CONSERVATION, WATER LOSS CONTROL - PROSPER	DEMAND REDUCTION [DENTON]	1	4	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	36	100	216	213	142
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	205	600	1,348	1,391	978
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	4	65	126	148	8	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	430
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	172	363	707	532
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	681	793
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	9	100	304	458	365
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	10	118	370	623	78
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	6	63	172	258	205
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	14	134	361	536	423
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	11	110	299	450	360
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	6	17	39	39	27

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	963
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	231	176
		16	**415**	**1,692**	**3,926**	**6,073**	**5,979**
PROVIDENCE VILLAGE WCID, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	20
CONSERVATION - PROVIDNECE 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 - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	6	14	65	66	55
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	18	46	59	52	39
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	5	6	5	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	117
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	25	40
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	23	17
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	8	9	8	14
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	15	18	14	25
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	38	81	96	80	72
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	131	185	214	238	151
		8	**208**	**363**	**479**	**526**	**573**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
ROANOKE, TRINITY (C)							
CONSERVATION - ROANOKE	DEMAND REDUCTION [DENTON]	31	61	101	112	123	134
CONSERVATION, IRRIGATION RESTRICTIONS – ROANOKE	DEMAND REDUCTION [DENTON]	3	6	7	7	7	7
CONSERVATION, WATER LOSS CONTROL - ROANOKE	DEMAND REDUCTION [DENTON]	11	11	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	291	406	319	237	161
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	389	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	604
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	99	174	205
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	46	100	75	83	55
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	11	26	23	32	74
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	117	287	423	315	254
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	135	234	102	120
		44	**543**	**1,062**	**1,292**	**1,462**	**1,614**
SANGER, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	52
CONSERVATION - SANGER	DEMAND REDUCTION [DENTON]	4	10	18	28	42	63
CONSERVATION, WATER LOSS CONTROL - SANGER	DEMAND REDUCTION [DENTON]	6	6	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	2	13	92	133	138
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	8	40	84	104	98
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	5	8	9	10

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	296
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	45	100
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	46	44
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	13	15	35
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	14	25	28	63
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	16	73	136	160	182
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	55	167	302	481	385
		10	**99**	**337**	**688**	**1,063**	**1,464**
SHADY SHORES, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	10
CONSERVATION - SHADY SHORES	DEMAND REDUCTION [DENTON]	2	3	5	7	8	10
CONSERVATION, WATER LOSS CONTROL - SHADY SHORES	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	3	7	31	32	27
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	8	21	28	25	19
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	2	3	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	58
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	11	20
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	11	8

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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	4	4	4	7
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	7	8	7	12
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	18	38	46	39	35
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	60	87	103	119	76
		4	**96**	**171**	**230**	**258**	**284**
SOUTHLAKE, TRINITY (C)							
CONSERVATION - SOUTHLAKE	DEMAND REDUCTION [DENTON]	8	14	24	32	42	55
CONSERVATION, WATER LOSS CONTROL - SOUTHLAKE	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	56	83	80	73	60
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	119	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	224
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	99	53	76
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	9	20	19	25	20
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	2	5	6	10	27
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	22	58	61	96	94
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	26	28	33	45
		10	**105**	**216**	**325**	**451**	**601**
THE COLONY, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	304
CONSERVATION - THE COLONY	DEMAND REDUCTION [DENTON]	26	58	91	131	164	197

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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CONSERVATION, WATER LOSS CONTROL - THE COLONY	DEMAND REDUCTION [DENTON]	39	39	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	190	152	288	867	869	809
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	485	906	792	683	577
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	19	52	60	75	56	42
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	14	292	357	469	367	290
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	46	92	75	52	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	128
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	118	156	214	171
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	207	255
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	8	10	13	12	9
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	167
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	70	56
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	301	257
		337	**1,178**	**1,905**	**2,555**	**2,945**	**3,262**

TROPHY CLUB, TRINITY (C)

CONSERVATION - TROPHY CLUB	DEMAND REDUCTION [DENTON]	189	236	283	301	320	339
CONSERVATION, WATER LOSS CONTROL - TROPHY CLUB	DEMAND REDUCTION [DENTON]	29	29	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	590	688	540	401	272
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	623	0

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WUG, Basin (RWPG) All values are in acre-feet

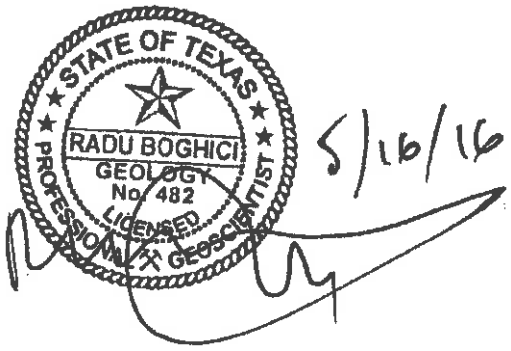
Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	977
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	155	279	331
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	65	152	119	132	90
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	16	39	36	51	119
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	167	433	667	506	412
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	205	367	164	193
		218	**1,103**	**1,800**	**2,185**	**2,476**	**2,733**
WESTLAKE, TRINITY (C)							
CONSERVATION - WESTLAKE	DEMAND REDUCTION [DENTON]	1	1	1	2	3	4
CONSERVATION, WATER LOSS CONTROL - WESTLAKE	DEMAND REDUCTION [DENTON]	0	0	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	4	6	6	5	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	17
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	2	5	6
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	1	2	1	1	2
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	1	2
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	2	4	9	7	7
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	3	4	3	3
		1	**8**	**16**	**24**	**34**	**46**
Sum of Projected Water Management Strategies (acre-feet)		**20,410**	**52,460**	**94,346**	**139,273**	**186,137**	**228,578**

APPENDIX G

GAM Run 16-004

GAM Run 16-004: North Texas Groundwater Conservation District Management Plan

Radu Boghici, P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Section
(512)463-5808
May 16, 2016



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GAM RUN 16-004: NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT MANAGEMENT PLAN

Radu Boghici, P.G.
Texas Water Development Board
Groundwater Division
Groundwater Availability Modeling Section
(512)463-5808
May 16, 2016

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. Information derived from groundwater availability models that shall be included in the groundwater management plan includes:

- The annual amount of recharge from precipitation, if any, to the groundwater resources within the district;
- 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
- The annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

This report—Part 2 of a two-part package of information from the TWDB to the North Texas Groundwater Conservation District—fulfills the requirements noted above. Part 1 of the two-part package is the Estimated Historical Water Use/State Water Plan data report. The district will receive this data report from the TWDB Groundwater Technical Assistance Section. Questions about the data report can be directed to Mr. Stephen Allen, stephen.allen@twdb.texas.gov, (512)463-7317.

The groundwater management plan for the North Texas Groundwater Conservation District should be adopted by the district on or before March 21, 2017, and submitted to the Executive Administrator of the TWDB on or before April 20, 2017. The current management plan for the North Texas Groundwater Conservation District expires on June 19, 2017.

This report discusses the methods, assumptions, and results from a model run using version 2.01 of the groundwater availability model for the northern portion of the Trinity and Woodbine aquifers (Kelley and others, 2014). This model run replaces the results of GAM Run 10-034 (Hassan, 2010). GAM Run 10-034 was completed using version 1.01 of the groundwater availability model for the northern portion of the Trinity and Woodbine aquifers (Bené and others, 2004). Table 1 and Table 2 summarize the groundwater availability model data required by statute. Figure 1 and Figure 2 show the area of the model from which the values in the table were extracted. If after review of the figure 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 and Woodbine aquifers was used for this analysis. The water budget for the North Texas Groundwater Conservation District was extracted for selected years of the historical model period (1980 to 2012) using ZONEBUDGET Version 3.01 (Harbaugh, 2009). The average annual water budget values for recharge, surface-water outflow, inflow to the district, and outflow from the district for the Trinity Aquifer and Woodbine Aquifer within the district are summarized in this report.

PARAMETERS AND ASSUMPTIONS:

Trinity Aquifer and Woodbine Aquifer

- We used version 2.01 of the updated groundwater availability model for the northern portion of the Trinity and Woodbine aquifers. See Kelley and others (2014) for assumptions and limitations of the model.
- The groundwater availability model for the northern portion of the Trinity and Woodbine aquifers contains eight layers: Layer 1 (the surficial outcrop area of the units in layers 2 through 8 and units younger than Woodbine Aquifer), Layer 2 (Woodbine Aquifer and pass-through cells), Layer 3

(Washita and Fredericksburg, Edwards (Balcones Fault Zone), and pass-through cells), and Layers 4 through 8 (Trinity Aquifer).

- Perennial rivers and reservoirs were simulated using MODFLOW-NWT river package. Ephemeral streams, flowing wells, springs, and evapotranspiration in riparian zones along perennial rivers were simulated using MODFLOW-NWT drain package. For this management plan, groundwater discharge to surface water includes groundwater leakage to all of the river and drain boundaries except for the groundwater loss along the riparian zone.
- The model was run with MODFLOW-NWT (Niswonger and others, 2011).

RESULTS:

A groundwater budget summarizes the amount of water entering and leaving the aquifer according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the model results for the Trinity and Woodbine aquifers located within the district and averaged over the duration of the calibration and verification portion of the model run in the district, as shown in Table 1 and Table 2.

- 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.
- Surface-water outflow—the total water discharging from the aquifer (outflow) to surface-water features such as streams, reservoirs, and drains (springs).
- Flow into and out of district—the lateral flow within the aquifer between the district and adjacent counties.
- Flow between aquifers—the net vertical flow between aquifers or confining units. This flow is controlled by the relative water levels in each aquifer or confining unit and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs. Please note that the model assumes no cross-formational flow at the base of the Trinity Aquifer. Therefore, no cross-formational flow between the Trinity Aquifer and underlying hydrogeologic units was calculated by the model.

The information needed for the district's management plan is summarized in Table 1 and Table 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 THAT IS NEEDED 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	Trinity Aquifer	13,851
Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers	Trinity Aquifer	27,471
Estimated annual volume of flow into the district within each aquifer in the district	Trinity Aquifer	41,751[1]
Estimated annual volume of flow out of the district within each aquifer in the district	Trinity Aquifer	18,411[2]
Estimated net annual volume of flow between each aquifer in the district	From overlying younger units to Trinity Aquifer	16,473

[1] The estimated volume of flow from the brackish portion of the Trinity Group to the Trinity Aquifer in southeast Collin County is 463 acre-feet per year and was not included in the management plan requirement results.

[2] The estimated volume of flow from the Trinity Aquifer to the brackish portion of the Trinity Group in southeast Collin County is 87 acre-feet per year and was not included in the management plan requirement results.

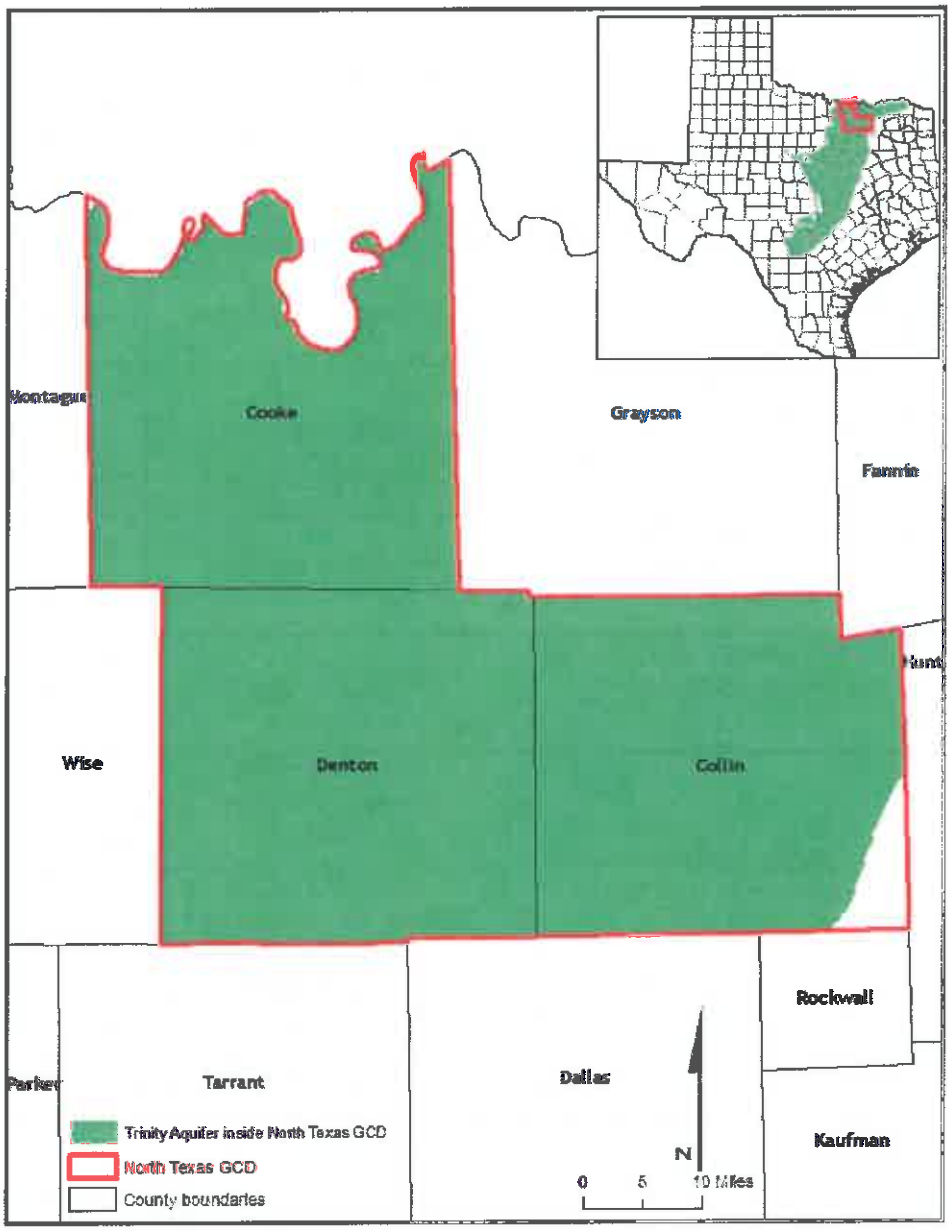

FIGURE 1: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE TRINITY AQUIFER FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED FOR THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT (GCD).

TABLE 2: SUMMARIZED INFORMATION FOR THE WOODBINE AQUIFER THAT IS NEEDED 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	55,555
Estimated annual volume of water that discharges from the aquifer to springs and any surface-water body including lakes, streams, and rivers	Woodbine Aquifer	35,588
Estimated annual volume of flow into the district within each aquifer in the district	Woodbine Aquifer	7,668[1]
Estimated annual volume of flow out of the district within each aquifer in the district	Woodbine Aquifer	16,202[2]
Estimated net annual volume of flow between each aquifer in the district	From Woodbine Aquifer to younger units	3,280
	From Woodbine Aquifer to Washita and Fredericksburg confining units	6,595

1 The estimated volume of flow from the brackish portion of the Woodbine Formation to the Woodbine Aquifer in southeast Collin County is 54 acre-feet per year and was not included in the management plan requirement results.

2 The estimated volume of flow from the Woodbine Aquifer to the brackish portion of the Woodbine Formation in southeast Collin County is 43 acre-feet per year and was not included in the management plan requirement results

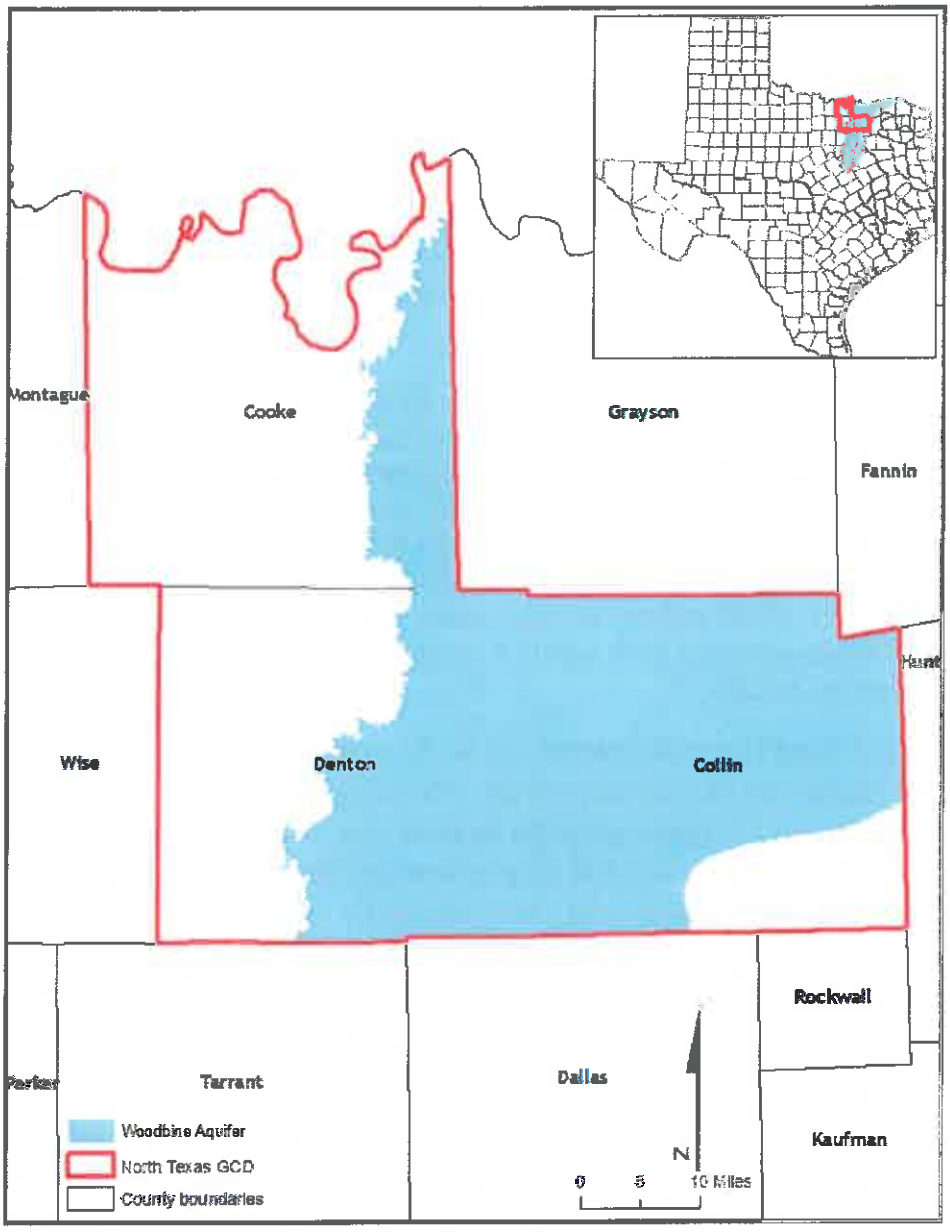

FIGURE 2: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE WOODBINE AQUIFER FROM WHICH THE INFORMATION IN TABLE 2 WAS EXTRACTED FOR THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT (GCD).

LIMITATIONS:

The groundwater models 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 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 interaction with streams are specific to particular historic 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. 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:

Bené, 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. Harden and Associates, 391 p., http://www.twdb.texas.gov/groundwater/models/gam/trnt_n/TRNT_N_Model_Report.pdf.

Hassan M. M., 2010, GAM Run 10-034: Texas Water Development Board GAM Run 10-004 Report, 6 p., http://www.twdb.texas.gov/groundwater/docs/GAMruns/GR10-34.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 - Draft Final Model Report (May 2014), 984 p.

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 F

Estimated Historical Water Use and 2017 State Water Plan Data Sets

Estimated Historical Water Use And 2017 State Water Plan Datasets:

North Texas Groundwater Conservation District

by Stephen Allen
Texas Water Development Board
Groundwater Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
April 12, 2017

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 Water 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 2017 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 2017 SWP data available as of 4/12/2017. 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 2017 SWP. District personnel must review these datasets and correct any discrepancies in order 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 2017 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) or Rima Petrossian (rima.petrossian@twdb.texas.gov or 512-936-2420).

Estimated Historical Water Use

TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar year 2016. 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
2015	GW	6,382	100	0	0	680	39	7,201
	SW	177,982	2,109	0	19	2,689	740	183,539
2014	GW	3,963	205	0	0	1,807	39	6,014
	SW	163,730	1,860	0	37	1,364	732	167,723
2013	GW	6,477	199	0	0	210	35	6,921
	SW	181,120	1,896	0	13	3,282	694	187,005
2012	GW	6,591	315	0	0	849	30	7,785
	SW	207,698	1,931	0	40	3,200	570	213,439
2011	GW	7,525	322	0	0	1,068	62	8,977
	SW	213,995	1,726	0	40	1,550	1,173	218,484
2010	GW	4,767	199	0	0	112	61	5,139
	SW	161,918	556	0	28	612	1,158	164,272
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	1,093	99	736	676	730	129,537
2003	GW	4,059	325	0	210	950	71	5,615
	SW	125,801	937	99	713	1,050	690	129,290
2002	GW	3,801	270	0	337	1,481	76	5,965
	SW	125,096	1,045	99	858	1,117	743	128,958
2001	GW	3,631	244	0	336	1,481	79	5,771
	SW	126,640	1,249	113	942	1,117	774	130,835
2000	GW	3,870	138	0	570	1,718	88	6,384
	SW	113,739	1,266	234	1,245	1,277	796	118,557

COOKE COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2015	GW	4,276	58	8	4	641	223	5,210
	SW	458	5	31	0	1	1,260	1,755
2014	GW	4,753	116	25	4	967	212	6,077
	SW	0	0	98	0	151	1,202	1,451
2013	GW	4,509	103	99	5	1,023	187	5,926
	SW	459	6	399	0	177	1,066	2,107
2012	GW	4,803	92	296	5	1,141	178	6,515
	SW	656	0	899	0	205	1,010	2,770
2011	GW	5,294	100	793	4	609	211	7,011
	SW	591	0	871	0	585	1,198	3,245
2010	GW	4,535	73	153	2	123	206	5,092
	SW	703	0	168	0	207	1,176	2,254
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
2003	GW	5,376	141	0	0	60	489	6,066
	SW	199	0	0	0	40	1,239	1,478
2002	GW	4,723	138	0	0	0	499	5,360
	SW	0	0	0	0	0	1,263	1,263
2001	GW	5,306	141	0	0	0	487	5,934
	SW	0	0	0	0	0	1,233	1,233
2000	GW	5,323	224	0	0	0	881	6,428
	SW	0	0	0	0	0	881	881

DENTON COUNTY

All values are in acre-feet

Year	Source	Municipal	Manufacturing	Mining	Steam Electric	Irrigation	Livestock	Total
2015	GW	13,821	0	191	0	655	235	14,902
	SW	106,042	300	764	5	1,586	547	109,244
2014	GW	11,864	0	238	0	1,816	243	14,161
	SW	104,627	289	953	5	1,162	568	107,604
2013	GW	12,897	0	292	0	2,167	224	15,580
	SW	108,277	294	1,168	55	782	524	111,100
2012	GW	15,070	1	372	0	2,817	205	18,465
	SW	118,073	291	1,096	86	611	479	120,636
2011	GW	17,100	1	1,663	0	2,534	239	21,537
	SW	124,060	302	2,847	23	750	559	128,541
2010	GW	12,327	7	1,209	0	967	240	14,750
	SW	100,694	358	2,070	80	1,124	559	104,885
2009	GW	10,478	8	1,366	0	1,445	275	13,572
	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
2003	GW	10,646	53	0	0	1,096	499	12,294
	SW	97,967	388	0	346	704	499	99,904
2002	GW	9,980	55	0	0	2,042	570	12,647
	SW	80,217	486	0	158	0	570	81,431
2001	GW	10,531	44	0	0	1,792	635	13,002
	SW	102,552	510	0	0	0	635	103,697
2000	GW	11,252	43	0	0	2,108	315	13,718
	SW	81,653	754	0	19	0	315	82,741

Projected Surface Water Supplies
TWDB 2017 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	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2,249	1,947	1,677	1,486	1,349	1,228
C	ALLEN	TRINITY	FORK LAKE/RESERVOIR	1,139	0	0	0	0	0
C	ALLEN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	4,725	4,080	3,507	3,099	2,806	2,549
C	ALLEN	TRINITY	TAWAKONI LAKE/RESERVOIR	1,749	530	461	411	375	343
C	ALLEN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3,857	3,355	2,904	2,585	2,357	2,156
C	ANNA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	107	121	196	185	179	176
C	ANNA	TRINITY	FORK LAKE/RESERVOIR	54	0	0	0	0	0
C	ANNA	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	225	255	410	386	374	367
C	ANNA	TRINITY	TAWAKONI LAKE/RESERVOIR	83	33	54	51	50	49
C	ANNA	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	183	209	339	322	313	310
C	CADDO BASIN SUD	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	20	21	23	26	28	29
C	CADDO BASIN SUD	SABINE	FORK LAKE/RESERVOIR	11	0	0	0	0	0
C	CADDO BASIN SUD	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	43	43	48	54	58	62
C	CADDO BASIN SUD	SABINE	TAWAKONI LAKE/RESERVOIR	16	6	6	7	8	8

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	CADDO BASIN SUD	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	36	40	43	48	52
C	CADDO BASIN SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	10	11	13	14	14
C	CADDO BASIN SUD	TRINITY	FORK LAKE/RESERVOIR	5	0	0	0	0	0
C	CADDO BASIN SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	21	22	24	26	29	30
C	CADDO BASIN SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	8	3	3	4	4	4
C	CADDO BASIN SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	16	17	20	22	24	25
C	CARROLLTON	TRINITY	FORK LAKE/RESERVOIR	0	0	0	0	0	0
C	CARROLLTON	TRINITY	RAY HUBBARD LAKE/RESERVOIR	0	0	0	0	0	0
C	CARROLLTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	0	0	0	0	0	0
C	CARROLLTON	TRINITY	TAWAKONI LAKE/RESERVOIR	0	1	1	1	1	1
C	CELINA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	680	591	559	533	552	112
C	CELINA	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,012	1,914	1,706	1,521	1,486	1,457
C	COPEVILLE SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	35	36	38	44	70	108
C	COPEVILLE SUD	TRINITY	FORK LAKE/RESERVOIR	18	0	0	0	0	0
C	COPEVILLE SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	73	76	78	91	144	225
C	COPEVILLE SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	27	10	10	12	19	30

Projected Surface Water Supplies
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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	COPEVILLE SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	62	65	77	122	190
C	COUNTY-OTHER, COLLIN	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	5	3	2	2	2	1
C	COUNTY-OTHER, COLLIN	SABINE	FORK LAKE/RESERVOIR	2	0	0	0	0	0
C	COUNTY-OTHER, COLLIN	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	7	5	5	4	3
C	COUNTY-OTHER, COLLIN	SABINE	TAWAKONI LAKE/RESERVOIR	4	1	1	1	1	0
C	COUNTY-OTHER, COLLIN	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	8	6	4	4	3	2
C	COUNTY-OTHER, COLLIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	117	101	87	346	463	694
C	COUNTY-OTHER, COLLIN	TRINITY	FORK LAKE/RESERVOIR	60	0	0	0	0	0
C	COUNTY-OTHER, COLLIN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	246	210	179	722	965	1,442
C	COUNTY-OTHER, COLLIN	TRINITY	TAWAKONI LAKE/RESERVOIR	91	27	23	95	129	194
C	COUNTY-OTHER, COLLIN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	202	173	149	601	810	1,219
C	CULLEOKA WSC	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	35	50	55	54	62
C	CULLEOKA WSC	TRINITY	FORK LAKE/RESERVOIR	18	0	0	0	0	0
C	CULLEOKA WSC	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	75	75	105	113	112	128
C	CULLEOKA WSC	TRINITY	TAWAKONI LAKE/RESERVOIR	28	10	14	15	15	17
C	CULLEOKA WSC	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	62	61	87	95	95	108

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	DALLAS	TRINITY	FORK LAKE/RESERVOIR	1,778	1,814	1,771	1,719	1,680	1,685
C	DALLAS	TRINITY	RAY HUBBARD LAKE/RESERVOIR	1,751	1,603	1,416	1,246	1,108	1,013
C	DALLAS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	4,215	3,529	3,020	2,587	2,224	1,951
C	DALLAS	TRINITY	TAWAKONI LAKE/RESERVOIR	6,174	5,571	4,842	4,209	3,705	3,357
C	EAST FORK SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	31	32	34	36	39	42
C	EAST FORK SUD	TRINITY	FORK LAKE/RESERVOIR	16	0	0	0	0	0
C	EAST FORK SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	64	68	70	74	80	88
C	EAST FORK SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	24	9	9	10	11	12
C	EAST FORK SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	52	55	59	62	69	75
C	FAIRVIEW	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	508	510	589	523	475	433
C	FAIRVIEW	TRINITY	FORK LAKE/RESERVOIR	258	0	0	0	0	0
C	FAIRVIEW	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,069	1,070	1,230	1,091	990	897
C	FAIRVIEW	TRINITY	TAWAKONI LAKE/RESERVOIR	396	139	162	145	132	121
C	FAIRVIEW	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	872	879	1,019	909	830	760
C	FARMERSVILLE	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	0	0	0	0	0	0
C	FARMERSVILLE	SABINE	FORK LAKE/RESERVOIR	0	0	0	0	0	0

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	FARMERSVILLE	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	0	1	1	1	1	1
C	FARMERSVILLE	SABINE	TAWAKONI LAKE/RESERVOIR	0	0	0	0	0	0
C	FARMERSVILLE	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	0	1	1	1	0	0
C	FARMERSVILLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	105	221	191	169	154	140
C	FARMERSVILLE	TRINITY	FORK LAKE/RESERVOIR	53	0	0	0	0	0
C	FARMERSVILLE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	220	463	399	352	319	289
C	FARMERSVILLE	TRINITY	TAWAKONI LAKE/RESERVOIR	82	60	52	47	43	39
C	FARMERSVILLE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	180	380	329	293	268	246
C	FRISCO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2,588	2,930	3,069	2,726	2,475	2,253
C	FRISCO	TRINITY	FORK LAKE/RESERVOIR	1,305	0	0	0	0	0
C	FRISCO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	5,437	6,142	6,417	5,687	5,150	4,677
C	FRISCO	TRINITY	TAWAKONI LAKE/RESERVOIR	2,002	797	841	752	699	640
C	FRISCO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	4,439	5,050	5,313	4,742	4,325	3,956
C	GARLAND	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	6	6	7	7	8	8
C	GARLAND	TRINITY	FORK LAKE/RESERVOIR	3	0	0	0	0	0
C	GARLAND	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	12	13	14	15	16	17

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	GARLAND	TRINITY	TAWAKONI LAKE/RESERVOIR	5	2	2	2	2	2
C	GARLAND	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	11	11	12	13	15
C	IRRIGATION, COLLIN	SABINE	RAY HUBBARD LAKE/RESERVOIR	39	36	32	29	27	26
C	IRRIGATION, COLLIN	SABINE	TRINITY RUN-OF-RIVER	9	9	9	9	9	9
C	IRRIGATION, COLLIN	TRINITY	RAY HUBBARD LAKE/RESERVOIR	1,680	1,528	1,364	1,258	1,177	1,121
C	IRRIGATION, COLLIN	TRINITY	TRINITY RUN-OF-RIVER	399	399	399	399	399	399
C	JOSEPHINE	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	28	38	43	47	43	39
C	JOSEPHINE	SABINE	FORK LAKE/RESERVOIR	14	0	0	0	0	0
C	JOSEPHINE	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	78	91	99	90	82
C	JOSEPHINE	SABINE	TAWAKONI LAKE/RESERVOIR	22	10	12	13	12	11
C	JOSEPHINE	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	48	64	74	83	75	68
C	LAVON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	61	68	90	103	210	429
C	LAVON	TRINITY	FORK LAKE/RESERVOIR	31	0	0	0	0	0
C	LAVON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	129	142	187	214	436	891
C	LAVON	TRINITY	TAWAKONI LAKE/RESERVOIR	48	19	25	28	58	120
C	LAVON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	105	117	155	179	366	753
C	LAVON SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	39	35	36	35	75	170

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	LAVON SUD	TRINITY	FORK LAKE/RESERVOIR	20	0	0	0	0	0
C	LAVON SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	82	73	75	74	156	353
C	LAVON SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	30	10	10	10	20	47
C	LAVON SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	67	61	62	62	131	299
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	LOWRY CROSSING	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	24	25	26	23	20	19
C	LOWRY CROSSING	TRINITY	FORK LAKE/RESERVOIR	12	0	0	0	0	0
C	LOWRY CROSSING	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	52	51	54	47	43	38
C	LOWRY CROSSING	TRINITY	TAWAKONI LAKE/RESERVOIR	19	7	7	6	6	5
C	LOWRY CROSSING	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	42	42	44	39	36	33
C	LUCAS	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	233	230	263	260	261	238
C	LUCAS	TRINITY	FORK LAKE/RESERVOIR	118	0	0	0	0	0
C	LUCAS	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	491	483	548	543	544	494
C	LUCAS	TRINITY	TAWAKONI LAKE/RESERVOIR	182	63	72	72	73	66

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	LUCAS	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	400	397	455	453	457	418
C	MANUFACTURING, COLLIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	359	355	341	329	324	322
C	MANUFACTURING, COLLIN	TRINITY	FORK LAKE/RESERVOIR	183	0	0	0	0	0
C	MANUFACTURING, COLLIN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	756	740	711	687	679	669
C	MANUFACTURING, COLLIN	TRINITY	TAWAKONI LAKE/RESERVOIR	280	96	94	90	90	90
C	MANUFACTURING, COLLIN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	616	609	589	575	569	565
C	MARILEE SUD	TRINITY	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION	141	133	120	103	81	56
C	MCKINNEY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3,764	3,914	4,905	5,672	5,152	4,691
C	MCKINNEY	TRINITY	FORK LAKE/RESERVOIR	1,907	0	0	0	0	0
C	MCKINNEY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	7,906	8,201	10,255	11,831	10,722	9,738
C	MCKINNEY	TRINITY	TAWAKONI LAKE/RESERVOIR	2,928	1,065	1,347	1,570	1,435	1,309
C	MCKINNEY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	6,456	6,744	8,491	9,865	9,004	8,237
C	MELISSA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	146	185	221	464	712	978
C	MELISSA	TRINITY	FORK LAKE/RESERVOIR	74	0	0	0	0	0
C	MELISSA	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	307	390	462	967	1,481	2,031
C	MELISSA	TRINITY	TAWAKONI LAKE/RESERVOIR	114	50	61	128	198	273

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	MELISSA	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	250	319	383	808	1,244	1,717
C	MURPHY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	579	503	435	386	350	319
C	MURPHY	TRINITY	FORK LAKE/RESERVOIR	293	0	0	0	0	0
C	MURPHY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,216	1,053	908	804	730	661
C	MURPHY	TRINITY	TAWAKONI LAKE/RESERVOIR	450	137	119	107	97	89
C	MURPHY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	993	867	752	671	612	560
C	NEVADA	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1	1	1	4	10	16
C	NEVADA	SABINE	FORK LAKE/RESERVOIR	1	0	0	0	0	0
C	NEVADA	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3	3	3	9	21	34
C	NEVADA	SABINE	TAWAKONI LAKE/RESERVOIR	1	0	0	1	3	4
C	NEVADA	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2	2	2	8	17	29
C	NEVADA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	10	10	10	35	78	129
C	NEVADA	TRINITY	FORK LAKE/RESERVOIR	4	0	0	0	0	0
C	NEVADA	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	19	20	21	72	163	266
C	NEVADA	TRINITY	TAWAKONI LAKE/RESERVOIR	7	3	3	10	22	36
C	NEVADA	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	16	16	17	60	137	225

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	NEW HOPE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	13	14	14	15	17	18
C	NEW HOPE	TRINITY	FORK LAKE/RESERVOIR	7	0	0	0	0	0
C	NEW HOPE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	28	28	30	33	35	38
C	NEW HOPE	TRINITY	TAWAKONI LAKE/RESERVOIR	10	4	4	4	5	5
C	NEW HOPE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	22	24	25	27	29	32
C	NORTH COLLIN WSC	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	86	83	82	82	86	89
C	NORTH COLLIN WSC	TRINITY	FORK LAKE/RESERVOIR	43	0	0	0	0	0
C	NORTH COLLIN WSC	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	179	174	171	173	178	185
C	NORTH COLLIN WSC	TRINITY	TAWAKONI LAKE/RESERVOIR	67	23	22	23	24	25
C	NORTH COLLIN WSC	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	147	144	142	143	150	157
C	PARKER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	281	350	329	311	301	296
C	PARKER	TRINITY	FORK LAKE/RESERVOIR	142	0	0	0	0	0
C	PARKER	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	589	734	689	648	627	616
C	PARKER	TRINITY	TAWAKONI LAKE/RESERVOIR	218	95	90	86	84	83
C	PARKER	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	481	604	570	540	527	520
C	PLANO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	7,350	6,570	5,895	5,250	4,764	4,338

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	PLANO	TRINITY	FORK LAKE/RESERVOIR	3,714	0	0	0	0	0
C	PLANO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	15,444	13,771	12,326	10,951	9,915	9,005
C	PLANO	TRINITY	TAWAKONI LAKE/RESERVOIR	5,701	1,786	1,615	1,448	1,342	1,228
C	PLANO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	12,609	11,323	10,206	9,132	8,326	7,617
C	PRINCETON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	107	118	130	271	389	484
C	PRINCETON	TRINITY	FORK LAKE/RESERVOIR	54	0	0	0	0	0
C	PRINCETON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	224	248	272	566	809	1,004
C	PRINCETON	TRINITY	TAWAKONI LAKE/RESERVOIR	83	32	36	75	108	135
C	PRINCETON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	183	204	225	472	680	849
C	PROSPER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	562	598	479	369	306	301
C	PROSPER	TRINITY	FORK LAKE/RESERVOIR	284	0	0	0	0	0
C	PROSPER	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,181	1,253	1,001	770	637	625
C	PROSPER	TRINITY	TAWAKONI LAKE/RESERVOIR	437	163	132	102	85	84
C	PROSPER	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	964	1,031	829	643	535	529
C	RICHARDSON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	866	749	665	606	550	501
C	RICHARDSON	TRINITY	FORK LAKE/RESERVOIR	439	0	0	0	0	0

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	RICHARDSON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,819	1,569	1,392	1,264	1,145	1,040
C	RICHARDSON	TRINITY	TAWAKONI LAKE/RESERVOIR	673	204	183	168	153	140
C	RICHARDSON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,485	1,290	1,152	1,054	961	879
C	ROYSE CITY	SABINE	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	21	59	111	164	282	276
C	ROYSE CITY	SABINE	FORK LAKE/RESERVOIR	11	0	0	0	0	0
C	ROYSE CITY	SABINE	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	44	125	232	341	586	573
C	ROYSE CITY	SABINE	TAWAKONI LAKE/RESERVOIR	16	16	31	45	78	77
C	ROYSE CITY	SABINE	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	102	192	284	492	485
C	SACHSE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	157	136	117	104	94	86
C	SACHSE	TRINITY	FORK LAKE/RESERVOIR	80	0	0	0	0	0
C	SACHSE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	331	285	245	217	196	178
C	SACHSE	TRINITY	TAWAKONI LAKE/RESERVOIR	122	37	32	29	26	24
C	SACHSE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	270	234	203	180	164	150
C	SEIS LAGOS UD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	66	57	49	44	40	36
C	SEIS LAGOS UD	TRINITY	FORK LAKE/RESERVOIR	33	0	0	0	0	0
C	SEIS LAGOS UD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	139	119	104	91	83	75

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RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	SEIS LAGOS UD	TRINITY	TAWAKONI LAKE/RESERVOIR	51	16	14	12	11	10
C	SEIS LAGOS UD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	114	99	86	76	70	64
C	ST. PAUL	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	29	28	27	25	23	21
C	ST. PAUL	TRINITY	FORK LAKE/RESERVOIR	15	0	0	0	0	0
C	ST. PAUL	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	60	56	50	48	44
C	ST. PAUL	TRINITY	TAWAKONI LAKE/RESERVOIR	23	8	7	7	6	6
C	ST. PAUL	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	50	49	46	43	41	37
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	92	60	63	45	54	46
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	195	124	133	94	112	94
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	159	103	110	79	95	80
C	WYLIE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	695	678	628	586	549	515
C	WYLIE	TRINITY	FORK LAKE/RESERVOIR	353	0	0	0	0	0
C	WYLIE	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,461	1,420	1,310	1,225	1,144	1,069
C	WYLIE	TRINITY	TAWAKONI LAKE/RESERVOIR	541	185	172	163	152	144
C	WYLIE	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,193	1,168	1,086	1,019	960	904

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	WYLIE NORTHEAST SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	28	31	33	58	88	127
C	WYLIE NORTHEAST SUD	TRINITY	FORK LAKE/RESERVOIR	14	0	0	0	0	0
C	WYLIE NORTHEAST SUD	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	60	63	69	120	181	264
C	WYLIE NORTHEAST SUD	TRINITY	TAWAKONI LAKE/RESERVOIR	22	8	9	16	24	36
C	WYLIE NORTHEAST SUD	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	48	53	57	101	153	224
	Sum of Projected Surface Water Supplies (acre-feet)			**150,370**	**124,355**	**123,068**	**121,257**	**116,056**	**112,754**

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	35	30	0	23	69	141
C	COUNTY-OTHER, COOKE	TRINITY	HUBERT H MOSS LAKE/RESERVOIR	127	108	0	106	300	810
C	GAINESVILLE	RED	HUBERT H MOSS LAKE/RESERVOIR	1	1	1	1	2	2
C	GAINESVILLE	TRINITY	HUBERT H MOSS LAKE/RESERVOIR	387	484	554	650	1,232	1,080
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	192	213	234	252	276	124
	Sum of Projected Surface Water Supplies (acre-feet)			**1,929**	**2,023**	**1,976**	**2,219**	**3,066**	**3,344**

DENTON COUNTY

All values are in acre-feet

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	ARGYLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	191	247	323	276	261	235
C	ARGYLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	634	811	984	785	703	606
C	ARGYLE WSC	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	137	118	108	92	87	78
C	ARGYLE WSC	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	335	369	329	263	235	202
C	AUBREY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	128	121	114	112	124	134
C	AUBREY	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	379	392	348	318	332	347
C	BARTONVILLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	148	125	104	87	82	74
C	BARTONVILLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	442	406	316	249	222	190
C	CARROLLTON	TRINITY	FORK LAKE/RESERVOIR	1,609	1,649	1,589	1,539	1,505	1,508
C	CARROLLTON	TRINITY	RAY HUBBARD LAKE/RESERVOIR	1,585	1,457	1,270	1,116	992	907
C	CARROLLTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	3,814	3,209	2,709	2,316	1,992	1,748
C	CARROLLTON	TRINITY	TAWAKONI LAKE/RESERVOIR	5,588	5,063	4,342	3,769	3,315	3,004
C	CELINA	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	21	66	123	178	184	38

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	CELINA	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	62	213	375	507	495	486
C	COPPELL	TRINITY	FORK LAKE/RESERVOIR	34	34	33	32	31	31
C	COPPELL	TRINITY	RAY HUBBARD LAKE/RESERVOIR	33	30	26	23	21	19
C	COPPELL	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	81	66	56	48	42	36
C	COPPELL	TRINITY	TAWAKONI LAKE/RESERVOIR	118	105	90	79	69	63
C	COPPER CANYON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	21	19	22	22	24	24
C	COPPER CANYON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	63	66	63	62	66	64
C	CORINTH	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	714	547	441	364	335	301
C	CORINTH	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,116	1,770	1,346	1,038	902	776
C	COUNTY-OTHER, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	313	344	15	16	18	20
C	COUNTY-OTHER, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	233	178	154	137	124	113
C	COUNTY-OTHER, DENTON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	488	375	323	286	260	235
C	COUNTY-OTHER, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	929	1,113	1,656	2,084	3,682	6,858

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	COUNTY-OTHER, DENTON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	399	307	267	238	217	199
C	CROSS ROADS	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	103	103	101	84	78	70
C	CROSS ROADS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	307	332	310	241	209	180
C	DALLAS	TRINITY	FORK LAKE/RESERVOIR	740	798	874	945	997	1,034
C	DALLAS	TRINITY	RAY HUBBARD LAKE/RESERVOIR	729	705	699	685	657	622
C	DALLAS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,754	1,552	1,490	1,422	1,319	1,197
C	DALLAS	TRINITY	TAWAKONI LAKE/RESERVOIR	2,570	2,450	2,389	2,315	2,197	2,061
C	DENTON	TRINITY	LEWISVILLE LAKE/RESERVOIR NON-SYSTEM PORTION	7,817	7,715	7,613	7,512	7,410	7,308
C	DENTON	TRINITY	RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION	17,830	17,787	17,716	17,657	17,637	17,531
C	DENTON COUNTY FWSD #10	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	338	536	430	353	326	290
C	DENTON COUNTY FWSD #10	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	999	1,677	1,285	996	868	746
C	DENTON COUNTY FWSD #1A	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	557	729	708	585	538	150
C	DENTON COUNTY FWSD #1A	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,800	4,220	4,118	3,416	3,031	2,828

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	DENTON COUNTY FWSD #7	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	777	565	459	380	351	315
C	DENTON COUNTY FWSD #7	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	2,299	1,826	1,399	1,084	943	812
C	DOUBLE OAK	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	54	42	36	35	36	31
C	DOUBLE OAK	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	156	135	115	97	93	81
C	FLOWER MOUND	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	2,373	2,373	1,919	1,586	1,460	1,312
C	FLOWER MOUND	TRINITY	FORK LAKE/RESERVOIR	725	810	888	942	931	933
C	FLOWER MOUND	TRINITY	RAY HUBBARD LAKE/RESERVOIR	714	715	710	683	614	561
C	FLOWER MOUND	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	8,744	9,248	7,364	5,938	5,165	4,468
C	FLOWER MOUND	TRINITY	TAWAKONI LAKE/RESERVOIR	2,518	2,487	2,429	2,308	2,052	1,859
C	FORT WORTH	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	4,491	5,781	6,874	8,449	9,621	10,434
C	FRISCO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,726	1,954	2,046	1,818	1,650	1,502
C	FRISCO	TRINITY	FORK LAKE/RESERVOIR	870	0	0	0	0	0
C	FRISCO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	3,625	4,095	4,278	3,792	3,434	3,118
C	FRISCO	TRINITY	TAWAKONI LAKE/RESERVOIR	1,335	531	560	501	466	426
C	FRISCO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	2,960	3,367	3,542	3,161	2,884	2,637

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	HACKBERRY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	40	39	43	47	52	57
C	HACKBERRY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	84	82	89	97	108	119
C	HACKBERRY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	69	67	74	81	91	100
C	HICKORY CREEK	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	110	103	105	110	103	91
C	HICKORY CREEK	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	327	330	319	314	277	238
C	HIGHLAND VILLAGE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	564	457	384	331	318	285
C	HIGHLAND VILLAGE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,672	1,478	1,169	943	857	737
C	IRRIGATION, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	429	390	348	321	301	286
C	JUSTIN	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	47	129	181	156	148	133
C	JUSTIN	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	141	416	553	443	399	343
C	KRUGERVILLE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	59	53	49	49	46	40
C	KRUGERVILLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	177	169	151	139	120	103

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	KRUM	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	160	168	185	199	232	253
C	KRUM	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	476	543	564	566	623	652
C	LAKE DALLAS	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	207	168	161	137	127	115
C	LAKE DALLAS	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	615	549	491	387	342	294
C	LEWISVILLE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	19,056	19,308	19,223	19,447	19,624	19,624
C	LITTLE ELM	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	531	456	393	348	315	287
C	LITTLE ELM	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	1,117	955	822	726	658	596
C	LITTLE ELM	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	911	786	681	606	551	504
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	17	27	24	23	24	22
C	MANUFACTURING, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	9	8	8	8	8	8
C	MANUFACTURING, DENTON	TRINITY	FORK LAKE/RESERVOIR	11	13	14	15	17	18
C	MANUFACTURING, DENTON	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	19	17	16	16	16	16
C	MANUFACTURING, DENTON	TRINITY	RAY HUBBARD LAKE/RESERVOIR	11	12	12	11	11	11

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	MANUFACTURING, DENTON	TRINITY	RAY ROBERTS LAKE/RESERVOIR NON-SYSTEM PORTION	1,072	946	848	738	589	526
C	MANUFACTURING, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	75	113	100	88	84	78
C	MANUFACTURING, DENTON	TRINITY	TAWAKONI LAKE/RESERVOIR	40	41	40	38	36	35
C	MANUFACTURING, DENTON	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	16	14	14	13	13	13
C	MANUFACTURING, DENTON	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	13	13	13	13	13	12
C	MINING, DENTON	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	537	127	187	262	334	44
C	MINING, DENTON	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,590	411	568	746	900	1,597
C	MUSTANG SUD	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	162	391	265	581	494	153
C	MUSTANG SUD	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	472	1,325	2,046	2,014	2,479	2,267
C	NORTHLAKE	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	131	418	304	734	869	50
C	NORTHLAKE	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	389	1,352	2,264	2,093	2,342	3,147
C	NORTHLAKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	160	573	905	1,140	1,340	1,233
C	OAK POINT	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	178	221	254	273	309	277

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	OAK POINT	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	531	715	775	777	832	715
C	PALOMA CREEK	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	582	576	468	388	358	321
C	PALOMA CREEK	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,723	1,862	1,426	1,105	962	828
C	PLANO	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	212	190	167	148	134	122
C	PLANO	TRINITY	FORK LAKE/RESERVOIR	107	0	0	0	0	0
C	PLANO	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	445	398	349	308	279	253
C	PLANO	TRINITY	TAWAKONI LAKE/RESERVOIR	164	52	46	41	38	35
C	PLANO	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	363	327	289	257	234	214
C	PROSPER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	21	102	179	252	297	292
C	PROSPER	TRINITY	FORK LAKE/RESERVOIR	11	0	0	0	0	0
C	PROSPER	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	44	215	376	525	616	606
C	PROSPER	TRINITY	TAWAKONI LAKE/RESERVOIR	16	28	49	70	83	81
C	PROSPER	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	36	176	311	438	518	512
C	PROVIDENCE VILLAGE WCID	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	213	154	125	103	95	87

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	PROVIDENCE VILLAGE WCID	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	631	499	382	295	257	221
C	ROANOKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	2,219	2,264	2,294	2,062	1,886	1,734
C	SANGER	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	18	73	117	149	193	218
C	SANGER	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	52	236	354	426	519	564
C	SHADY SHORES	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION	88	75	62	52	48	43
C	SHADY SHORES	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	258	240	188	148	130	112
C	SOUTHLAKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	411	436	467	520	581	646
C	THE COLONY	TRINITY	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	155	198	189	183	180	176
C	THE COLONY	TRINITY	FORK LAKE/RESERVOIR	589	606	624	671	634	614
C	THE COLONY	TRINITY	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	326	415	394	381	374	366
C	THE COLONY	TRINITY	RAY HUBBARD LAKE/RESERVOIR	580	535	499	486	418	369
C	THE COLONY	TRINITY	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM	1,398	1,177	1,064	1,009	839	712
C	THE COLONY	TRINITY	TAWAKONI LAKE/RESERVOIR	2,044	1,862	1,707	1,643	1,399	1,223
C	THE COLONY	TRINITY	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM	266	342	327	318	314	309

Projected Surface Water Supplies
TWDB 2017 State Water Plan Data

RWPG	WUG	WUG Basin	Source Name	2020	2030	2040	2050	2060	2070
C	TROPHY CLUB	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	4,951	4,598	3,884	3,492	3,194	2,936
C	WESTLAKE	TRINITY	TRWD LAKE/RESERVOIR SYSTEM	28	31	34	39	44	49
	Sum of Projected Surface Water Supplies (acre-feet)			**141,324**	**143,405**	**139,513**	**134,182**	**132,535**	**130,146**

Projected Water Demands
TWDB 2017 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	20,533	20,336	20,215	20,139	20,108	20,106
C	ANNA	TRINITY	1,898	2,190	3,588	4,826	9,167	13,820
C	BLUE RIDGE	TRINITY	92	185	362	1,412	3,221	5,461
C	CADDO BASIN SUD	SABINE	187	215	280	346	414	483
C	CADDO BASIN SUD	TRINITY	92	106	138	170	204	237
C	CARROLLTON	TRINITY	1	2	2	3	3	4
C	CELINA	TRINITY	4,574	8,900	15,008	23,121	23,119	23,117
C	COPEVILLE SUD	TRINITY	319	376	452	596	1,037	1,773
C	COUNTY-OTHER, COLLIN	SABINE	63	53	40	34	30	22
C	COUNTY-OTHER, COLLIN	TRINITY	1,550	1,529	1,520	5,179	7,404	11,863
C	CULLEOKA WSC	TRINITY	328	370	605	740	807	1,009
C	DALLAS	TRINITY	15,807	15,886	15,831	15,707	15,682	15,679
C	EAST FORK SUD	TRINITY	279	335	407	487	586	698
C	FAIRVIEW	TRINITY	4,644	5,329	7,094	7,087	7,084	7,083
C	FARMERSVILLE	SABINE	2	4	4	4	4	4
C	FARMERSVILLE	TRINITY	956	2,306	2,295	2,289	2,287	2,287
C	FRISCO	TRINITY	24,957	32,625	40,372	40,334	40,308	40,300
C	GARLAND	TRINITY	54	66	80	96	115	137
C	HICKORY CREEK SUD	TRINITY	7	7	8	8	9	10
C	IRRIGATION, COLLIN	SABINE	68	68	68	68	68	68
C	IRRIGATION, COLLIN	TRINITY	2,927	2,927	2,927	2,927	2,927	2,927
C	JOSEPHINE	SABINE	258	390	519	641	641	641
C	LAVON	TRINITY	559	711	1,081	1,392	3,125	7,025
C	LAVON SUD	TRINITY	354	367	430	481	1,115	2,783
C	LIVESTOCK, COLLIN	SABINE	86	86	86	86	86	86
C	LIVESTOCK, COLLIN	TRINITY	774	774	774	774	774	774
C	LOWRY CROSSING	TRINITY	222	257	308	306	305	305
C	LUCAS	TRINITY	2,132	2,406	3,165	3,528	3,896	3,896
C	MANUFACTURING, COLLIN	TRINITY	3,456	3,888	4,319	4,706	5,109	5,547
C	MARILEE SUD	TRINITY	541	532	517	515	506	506
C	MCKINNEY	TRINITY	34,365	40,877	59,112	76,866	76,818	76,814
C	MELISSA	TRINITY	1,535	2,133	2,869	6,493	10,814	16,216

Projected Water Demands
TWDB 2017 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.

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	MURPHY	TRINITY	5,285	5,253	5,238	5,228	5,222	5,220
C	NEVADA	SABINE	11	13	15	60	148	266
C	NEVADA	TRINITY	85	99	118	468	1,168	2,102
C	NEW HOPE	TRINITY	119	143	174	209	251	299
C	NORTH COLLIN WSC	TRINITY	782	871	987	1,117	1,279	1,464
C	PARKER	TRINITY	2,561	6,772	8,454	8,450	8,449	8,449
C	PLANO	TRINITY	67,088	68,626	71,043	71,153	71,061	71,061
C	PRINCETON	TRINITY	974	1,236	1,566	3,679	5,798	7,919
C	PROSPER	TRINITY	5,129	7,134	8,294	8,594	8,897	8,896
C	RICHARDSON	TRINITY	7,904	7,819	8,021	8,212	8,201	8,201
C	ROYSE CITY	SABINE	190	621	1,338	2,215	4,199	4,519
C	SACHSE	TRINITY	1,436	1,420	1,411	1,406	1,404	1,403
C	SEIS LAGOS UD	TRINITY	603	598	596	594	594	594
C	SOUTH GRAYSON WSC	TRINITY	143	175	230	267	307	349
C	ST. PAUL	TRINITY	265	298	322	334	348	347
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	715	602	740	594	782	724
C	WESTON	TRINITY	506	1,060	4,814	11,768	18,723	18,721
C	WYLIE	TRINITY	6,349	7,080	7,562	7,943	8,196	8,434
C	WYLIE NORTHEAST SUD	TRINITY	257	319	396	785	1,305	2,086
	Sum of Projected Water Demands (acre-feet)		**224,022**	**256,375**	**305,795**	**354,437**	**384,105**	**412,735**

COOKE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	BOLIVAR WSC	TRINITY	146	150	153	159	164	169
C	COUNTY-OTHER, COOKE	RED	241	247	253	278	343	559
C	COUNTY-OTHER, COOKE	TRINITY	882	902	956	1,312	1,487	3,208
C	GAINESVILLE	RED	4	4	4	5	5	7
C	GAINESVILLE	TRINITY	2,488	2,585	2,655	2,750	3,333	4,656
C	IRRIGATION, COOKE	RED	90	90	90	90	90	90
C	IRRIGATION, COOKE	TRINITY	210	210	210	210	210	210
C	LAKE KIOWA SUD	TRINITY	786	790	800	813	826	826
C	LINDSAY	TRINITY	144	150	154	160	304	605
C	LIVESTOCK, COOKE	RED	708	708	708	708	708	708

Projected Water Demands
TWDB 2017 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.

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	LIVESTOCK, COOKE	TRINITY	786	786	786	786	786	786
C	MANUFACTURING, COOKE	TRINITY	226	247	268	286	310	336
C	MINING, COOKE	TRINITY	1,583	900	378	446	511	586
C	MOUNTAIN SPRING WSC	TRINITY	446	469	487	507	802	1,280
C	MUENSTER	TRINITY	266	259	261	258	265	265
C	TWO WAY SUD	RED	12	12	12	13	13	14
C	VALLEY VIEW	TRINITY	56	60	63	66	68	71
C	WOODBINE WSC	RED	52	56	61	67	73	79
C	WOODBINE WSC	TRINITY	599	651	706	769	839	911
	Sum of Projected Water Demands (acre-feet)		**9,725**	**9,276**	**9,005**	**9,683**	**11,137**	**15,366**

DENTON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	ARGYLE	TRINITY	1,395	2,064	2,966	2,961	2,960	2,959
C	ARGYLE WSC	TRINITY	996	991	990	990	989	989
C	AUBREY	TRINITY	563	731	847	999	1,197	1,452
C	BARTONVILLE	TRINITY	825	907	903	900	900	899
C	BOLIVAR WSC	TRINITY	848	985	1,160	1,369	1,625	1,921
C	CARROLLTON	TRINITY	14,303	14,437	14,196	14,062	14,036	14,034
C	CELINA	TRINITY	142	989	3,295	7,707	7,707	7,706
C	COPPELL	TRINITY	302	298	295	294	293	293
C	COPPER CANYON	TRINITY	260	272	289	310	338	369
C	CORINTH	TRINITY	4,266	4,983	4,956	4,939	4,932	4,931
C	COUNTY-OTHER, DENTON	TRINITY	3,785	4,155	4,574	6,487	10,458	19,480
C	CROSS ROADS	TRINITY	457	619	756	755	754	754
C	DALLAS	TRINITY	6,579	6,987	7,812	8,638	9,301	9,625
C	DENTON	TRINITY	28,908	37,431	47,013	59,444	81,374	99,143
C	DENTON COUNTY FWSD #10	TRINITY	1,486	3,128	3,127	3,126	3,124	3,124
C	DENTON COUNTY FWSD #1A	TRINITY	3,659	6,494	7,777	7,774	7,771	7,769
C	DENTON COUNTY FWSD #7	TRINITY	3,418	3,405	3,403	3,401	3,399	3,397
C	DOUBLE OAK	TRINITY	558	547	539	534	533	533
C	FLOWER MOUND	TRINITY	18,988	23,080	22,955	22,881	22,857	22,855

Projected Water Demands
TWDB 2017 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.

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	FORT WORTH	TRINITY	7,139	10,766	15,447	21,678	27,750	33,837
C	FRISCO	TRINITY	16,638	21,750	26,915	26,890	26,872	26,867
C	HACKBERRY	TRINITY	309	394	498	615	752	908
C	HICKORY CREEK	TRINITY	583	709	865	1,078	1,076	1,076
C	HIGHLAND VILLAGE	TRINITY	3,832	3,968	3,924	3,899	3,893	3,893
C	IRRIGATION, DENTON	TRINITY	2,137	2,137	2,137	2,137	2,137	2,137
C	JUSTIN	TRINITY	695	1,212	1,733	1,729	1,728	1,727
C	KRUGERVILLE	TRINITY	263	315	368	435	434	434
C	KRUM	TRINITY	1,154	1,414	1,731	2,089	2,512	2,997
C	LAKE DALLAS	TRINITY	1,096	1,181	1,339	1,329	1,326	1,326
C	LAKEWOOD VILLAGE	TRINITY	83	102	125	151	182	218
C	LEWISVILLE	TRINITY	19,985	22,286	25,177	28,537	31,822	31,818
C	LITTLE ELM	TRINITY	4,108	4,600	4,586	4,574	4,564	4,564
C	LIVESTOCK, DENTON	TRINITY	1,045	1,045	1,045	1,045	1,045	1,045
C	MANUFACTURING, DENTON	TRINITY	1,446	1,643	1,843	2,020	2,194	2,383
C	MINING, DENTON	TRINITY	4,326	2,729	3,345	4,306	5,204	6,291
C	MOUNTAIN SPRING WSC	TRINITY	10	11	12	13	14	16
C	MUSTANG SUD	TRINITY	1,875	3,527	5,190	6,856	8,526	10,196
C	NORTHLAKE	TRINITY	911	3,402	6,198	8,591	10,986	10,986
C	OAK POINT	TRINITY	1,053	1,572	2,097	2,624	3,153	3,152
C	PALOMA CREEK	TRINITY	2,562	3,472	3,470	3,468	3,465	3,464
C	PILOT POINT	TRINITY	891	1,070	1,449	1,965	2,615	3,527
C	PLANO	TRINITY	1,932	1,982	2,011	2,000	1,998	1,998
C	PONDER	TRINITY	254	343	451	574	718	883
C	PROSPER	TRINITY	193	1,223	3,111	5,863	8,614	8,613
C	PROVIDENCE VILLAGE WCID	TRINITY	938	931	929	927	926	925
C	ROANOKE	TRINITY	2,263	2,807	3,356	3,350	3,348	3,348
C	SANGER	TRINITY	1,202	1,452	1,763	2,119	2,545	3,034
C	SHADY SHORES	TRINITY	461	516	511	508	507	506
C	SOUTHLAKE	TRINITY	421	541	683	844	1,032	1,247
C	STEAM ELECTRIC POWER, DENTON	TRINITY	646	733	819	906	993	1,088
C	THE COLONY	TRINITY	7,762	8,632	9,106	9,857	9,844	9,841
C	TROPHY CLUB	TRINITY	5,730	5,701	5,683	5,673	5,670	5,669
C	WESTLAKE	TRINITY	29	39	50	63	78	95

Projected Water Demands
TWDB 2017 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.

Sum of Projected Water Demands (acre-feet)	**185,710**	**226,706**	**265,820**	**306,284**	**353,071**	**392,342**

Projected Water Supply Needs
TWDB 2017 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	-1,613	-4,753	-5,938	-6,732	-7,563	-8,495
C	ANNA	TRINITY	-77	-296	-998	-2,236	-6,577	-11,230
C	BLUE RIDGE	TRINITY	0	-93	-270	-1,320	-3,129	-5,369
C	CADDO BASIN SUD	SABINE	-15	-48	-83	-116	-155	-203
C	CADDO BASIN SUD	TRINITY	-8	-24	-40	-56	-75	-101
C	CARROLLTON	TRINITY	-1	-1	-1	-2	-2	-2
C	CELINA	TRINITY	-1,395	-5,951	-12,322	-20,663	-20,662	-21,114
C	COPEVILLE SUD	TRINITY	-25	-88	-133	-199	-390	-749
C	COUNTY-OTHER, COLLIN	SABINE	-2	-10	-8	-9	-10	-11
C	COUNTY-OTHER, COLLIN	TRINITY	-86	-244	-304	-1,567	-2,599	-4,800
C	CULLEOKA WSC	TRINITY	-26	-86	-178	-247	-304	-426
C	DALLAS	TRINITY	-735	-2,110	-3,571	-4,492	-5,209	-5,705
C	EAST FORK SUD	TRINITY	-21	-78	-119	-164	-223	-296
C	FAIRVIEW	TRINITY	-365	-1,245	-2,084	-2,369	-2,664	-2,992
C	FARMERSVILLE	SABINE	-2	0	0	0	-2	-2
C	FARMERSVILLE	TRINITY	-73	-540	-675	-767	-860	-966
C	FRISCO	TRINITY	-3,200	-9,170	-14,253	-15,740	-17,276	-18,983
C	GARLAND	TRINITY	-4	-15	-24	-32	-43	-59
C	HICKORY CREEK SUD	TRINITY	5	1	-2	-4	-5	-7
C	IRRIGATION, COLLIN	SABINE	57	54	50	47	45	44
C	IRRIGATION, COLLIN	TRINITY	2,486	2,334	2,170	2,064	1,983	1,927
C	JOSEPHINE	SABINE	-22	-91	-152	-214	-241	-271
C	LAVON	TRINITY	-44	-166	-318	-465	-1,175	-2,968
C	LAVON SUD	TRINITY	-26	-85	-125	-160	-419	-1,175
C	LIVESTOCK, COLLIN	SABINE	14	14	14	14	14	14
C	LIVESTOCK, COLLIN	TRINITY	128	128	128	128	128	128
C	LOWRY CROSSING	TRINITY	-17	-60	-90	-102	-115	-129
C	LUCAS	TRINITY	-168	-562	-930	-1,179	-1,465	-1,646
C	MANUFACTURING, COLLIN	TRINITY	-233	-855	-1,221	-1,532	-1,884	-2,302
C	MARILEE SUD	TRINITY	141	142	144	129	115	91
C	MCKINNEY	TRINITY	-2,700	-9,554	-17,363	-25,694	-28,891	-32,454
C	MELISSA	TRINITY	-105	-450	-785	-2,105	-3,992	-6,766

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

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

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	MURPHY	TRINITY	-415	-1,228	-1,539	-1,748	-1,964	-2,205
C	NEVADA	SABINE	-1	-3	-5	-20	-55	-112
C	NEVADA	TRINITY	-7	-23	-34	-156	-440	-888
C	NEW HOPE	TRINITY	-9	-33	-51	-70	-94	-126
C	NORTH COLLIN WSC	TRINITY	-61	-204	-290	-373	-481	-619
C	PARKER	TRINITY	-201	-3,969	-5,651	-5,647	-5,646	-5,646
C	PLANO	TRINITY	-5,271	-16,040	-20,869	-23,787	-26,726	-30,022
C	PRINCETON	TRINITY	-76	-289	-460	-1,230	-2,180	-3,346
C	PROSPER	TRINITY	-402	-2,348	-4,218	-5,262	-6,049	-6,049
C	RICHARDSON	TRINITY	-620	-1,827	-2,356	-2,744	-3,085	-3,465
C	ROYSE CITY	SABINE	-14	-146	-392	-739	-1,580	-1,909
C	SACHSE	TRINITY	-112	-332	-414	-469	-529	-593
C	SEIS LAGOS UD	TRINITY	-47	-140	-175	-199	-223	-251
C	SOUTH GRAYSON WSC	TRINITY	71	66	38	22	3	-19
C	ST. PAUL	TRINITY	-21	-70	-95	-112	-131	-147
C	STEAM ELECTRIC POWER, COLLIN	TRINITY	-56	-141	-217	-199	-294	-306
C	WESTON	TRINITY	-71	-625	-4,379	-11,333	-18,288	-18,286
C	WYLIE	TRINITY	-498	-1,654	-2,222	-2,652	-3,084	-3,564
C	WYLIE NORTHEAST SUD	TRINITY	-20	-75	-116	-262	-491	-881
	Sum of Projected Water Supply Needs (acre-feet)		**-18,865**	**-65,722**	**-105,470**	**-145,168**	**-177,270**	**-207,655**

COOKE COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	BOLIVAR WSC	TRINITY	3	-17	-36	-53	-71	-86
C	COUNTY-OTHER, COOKE	RED	0	0	52	0	0	-201
C	COUNTY-OTHER, COOKE	TRINITY	0	0	200	0	0	-1,154
C	GAINESVILLE	RED	0	0	0	0	0	-2
C	GAINESVILLE	TRINITY	0	0	0	0	0	-1,475
C	IRRIGATION, COOKE	RED	-20	-20	-20	-20	-20	-20
C	IRRIGATION, COOKE	TRINITY	-46	-46	-46	-46	-46	-46
C	LAKE KIOWA SUD	TRINITY	43	39	29	16	3	3
C	LINDSAY	TRINITY	14	8	4	-2	-146	-447
C	LIVESTOCK, COOKE	RED	29	29	29	29	29	29
C	LIVESTOCK, COOKE	TRINITY	31	31	31	31	31	31

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

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

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	MANUFACTURING, COOKE	TRINITY	0	0	0	0	0	-178
C	MINING, COOKE	TRINITY	-783	-150	-78	-146	-211	-286
C	MOUNTAIN SPRING WSC	TRINITY	63	39	20	0	-291	-766
C	MUENSTER	TRINITY	17	24	22	25	18	18
C	TWO WAY SUD	RED	0	-2	-4	-6	-7	-9
C	VALLEY VIEW	TRINITY	0	-4	-7	-10	-12	-15
C	WOODBINE WSC	RED	1	-4	-9	-14	-20	-26
C	WOODBINE WSC	TRINITY	6	-45	-100	-164	-234	-306
	Sum of Projected Water Supply Needs (acre-feet)		**-849**	**-288**	**-300**	**-461**	**-1,058**	**-5,017**

DENTON COUNTY

All values are in acre-feet

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	ARGYLE	TRINITY	-36	-444	-1,058	-1,317	-1,416	-1,547
C	ARGYLE WSC	TRINITY	36	50	-2	-90	-123	-169
C	AUBREY	TRINITY	0	-163	-331	-515	-680	-902
C	BARTONVILLE	TRINITY	-1	-151	-266	-354	-387	-429
C	BOLIVAR WSC	TRINITY	6	-112	-267	-460	-700	-981
C	CARROLLTON	TRINITY	-642	-1,895	-3,180	-4,000	-4,640	-5,086
C	CELINA	TRINITY	-44	-661	-2,704	-6,888	-6,887	-7,036
C	COPPELL	TRINITY	-14	-39	-67	-85	-97	-107
C	COPPER CANYON	TRINITY	0	-11	-27	-49	-69	-101
C	CORINTH	TRINITY	-847	-2,143	-2,688	-3,087	-3,254	-3,426
C	COUNTY-OTHER, DENTON	TRINITY	1,059	642	217	-1,120	-3,638	-9,747
C	CROSS ROADS	TRINITY	-1	-137	-297	-389	-428	-468
C	DALLAS	TRINITY	-306	-928	-1,763	-2,471	-3,090	-3,503
C	DENTON	TRINITY	-3,076	-11,473	-20,957	-33,278	-55,059	-72,765
C	DENTON COUNTY FWSD #10	TRINITY	0	-680	-1,214	-1,608	-1,770	-1,939
C	DENTON COUNTY FWSD #1A	TRINITY	-57	-1,213	-2,619	-3,490	-3,934	-4,543
C	DENTON COUNTY FWSD #7	TRINITY	0	-758	-1,330	-1,753	-1,931	-2,109
C	DOUBLE OAK	TRINITY	0	-26	-46	-60	-62	-80
C	FLOWER MOUND	TRINITY	-2,399	-5,807	-8,139	-9,859	-10,935	-11,959
C	FORT WORTH	TRINITY	-265	-1,905	-4,758	-8,130	-11,810	-15,918
C	FRISCO	TRINITY	-2,132	-6,113	-9,502	-10,493	-11,516	-12,658

Projected Water Supply Needs
TWDB 2017 State Water Plan Data

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

RWPG	WUG	WUG Basin	2020	2030	2040	2050	2060	2070
C	HACKBERRY	TRINITY	-24	-92	-146	-206	-283	-384
C	HICKORY CREEK	TRINITY	0	-133	-295	-504	-548	-603
C	HIGHLAND VILLAGE	TRINITY	0	-478	-844	-1,118	-1,213	-1,377
C	IRRIGATION, DENTON	TRINITY	995	956	914	887	867	852
C	JUSTIN	TRINITY	-244	-367	-672	-813	-865	-941
C	KRUGERVILLE	TRINITY	-1	-69	-145	-223	-246	-270
C	KRUM	TRINITY	0	-180	-448	-781	-1,095	-1,515
C	LAKE DALLAS	TRINITY	-1	-205	-429	-557	-612	-676
C	LAKEWOOD VILLAGE	TRINITY	135	116	93	67	36	0
C	LEWISVILLE	TRINITY	-929	-2,978	-5,954	-9,090	-12,198	-12,194
C	LITTLE ELM	TRINITY	-322	-1,075	-1,347	-1,529	-1,717	-1,929
C	LIVESTOCK, DENTON	TRINITY	307	307	307	307	307	307
C	MANUFACTURING, DENTON	TRINITY	-116	-383	-694	-992	-1,311	-1,569
C	MINING, DENTON	TRINITY	0	-170	-540	-1,208	-1,841	-2,687
C	MOUNTAIN SPRING WSC	TRINITY	1	1	1	0	-5	-10
C	MUSTANG SUD	TRINITY	4	-449	-1,436	-2,760	-3,977	-6,601
C	NORTHLAKE	TRINITY	-3	-699	-2,258	-4,099	-5,832	-6,386
C	OAK POINT	TRINITY	-1	-272	-685	-1,178	-1,594	-1,754
C	PALOMA CREEK	TRINITY	-1	-773	-1,357	-1,788	-1,967	-2,282
C	PILOT POINT	TRINITY	211	32	-347	-863	-1,513	-2,425
C	PLANO	TRINITY	-151	-462	-590	-668	-751	-844
C	PONDER	TRINITY	222	133	25	-98	-242	-407
C	PROSPER	TRINITY	-16	-402	-1,582	-3,590	-5,857	-5,855
C	PROVIDENCE VILLAGE WCID	TRINITY	0	-208	-363	-479	-526	-573
C	ROANOKE	TRINITY	-44	-543	-1,062	-1,288	-1,462	-1,614
C	SANGER	TRINITY	-3	11	-117	-351	-616	-1,019
C	SHADY SHORES	TRINITY	0	-91	-156	-207	-229	-253
C	SOUTHLAKE	TRINITY	-10	-105	-216	-324	-451	-601
C	STEAM ELECTRIC POWER, DENTON	TRINITY	0	0	0	0	0	0
C	THE COLONY	TRINITY	-336	-1,171	-1,904	-2,555	-2,943	-3,262
C	TROPHY CLUB	TRINITY	-218	-1,103	-1,799	-2,181	-2,476	-2,733
C	WESTLAKE	TRINITY	-1	-8	-16	-24	-34	-46
	Sum of Projected Water Supply Needs (acre-feet)		**-12,241**	**-47,075**	**-86,617**	**-128,970**	**-174,830**	**-216,283**

Projected Water Management Strategies
TWDB 2017 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]	660	851	1,002	1,048	1,113	1,180
CONSERVATION, WATER LOSS CONTROL - ALLEN	DEMAND REDUCTION [COLLIN]	103	103	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	200	442	475	558	390	276
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	149	2,499	2,844	3,484	2,553	1,899
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	472	788	599	384	15	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	836
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	936	1,161	1,493	1,120
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,439	1,671
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	32	73	82	98	72	52
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,091
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	488	370
		1,616	4,756	5,938	6,733	7,563	8,495
ANNA, TRINITY (C)							
CONSERVATION - ANNA	DEMAND REDUCTION [COLLIN]	25	48	36	64	153	276
CONSERVATION, WATER LOSS CONTROL - ANNA	DEMAND REDUCTION [COLLIN]	54	163	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	10	81	152	239	258
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	56	482	952	1,563	1,773

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	18	102	105	9	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	780
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	151	268	772	927
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	744	1,385
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	0	32	174	609	953
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	0	38	211	828	276
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	20	98	343	533
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	43	206	711	1,106
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	35	171	598	938
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	1	13	27	44	48
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,992
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	252	306
		79	**296**	**1,033**	**2,428**	**6,865**	**11,551**

BLUE RIDGE, TRINITY (C)

CONSERVATION - BLUE RIDGE	DEMAND REDUCTION [COLLIN]	0	1	4	19	54	109
CONSERVATION, WATER LOSS CONTROL - BLUE RIDGE	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	13	30	134	190	201

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	72	177	835	1,242	1,381
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	23	37	92	7	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	608
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	58	278	726	814
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	700	1,216
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	1	6	24	35	39
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	794
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	237	269
		0	**110**	**312**	**1,382**	**3,191**	**5,431**
CADDO BASIN SUD, SABINE (C)							
CHAPMAN RAW WATER PIPELINE AND NEW WTP(GREENVILLE)	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	13	62	128
CONSERVATION - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	1	1	2	2
CONSERVATION, WATER LOSS CONTROL - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	8	11	9	6
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	33	47	70	61	53
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	10	10	7	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	23

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	15	24	35	31
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	40	46
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	1	2	2	1
WTP EXPANSION (GREENVILLE)	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	15	48	82	102	92	75
		29	**98**	**164**	**230**	**303**	**367**
CADDO BASIN SUD, TRINITY (C)							
CHAPMAN RAW WATER PIPELINE AND NEW WTP(GREENVILLE)	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	6	30	63
CONSERVATION - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	0	1	1	1
CONSERVATION, WATER LOSS CONTROL - CADDO BASIN SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	3	4	6	5	4
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	16	23	35	30	25
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	4	5	5	4	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	11
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	8	11	18	15
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	20	23
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	1	1	1
WTP EXPANSION (GREENVILLE)	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	8	24	40	50	46	37

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
		16	48	81	114	151	180
CARROLLTON, TRINITY (C)							
CONSERVATION - 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 - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	1	1	1	2	2	2
		1	1	1	2	2	2
CELINA, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	673
CONSERVATION - CELINA	DEMAND REDUCTION [COLLIN]	61	193	450	771	847	925
CONSERVATION, WATER LOSS CONTROL - CELINA	DEMAND REDUCTION [COLLIN]	23	22	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	41	176	1,498	1,697	1,789
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	129	554	1,368	1,332	1,275
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	153	230	355	219	136
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	866	1,374	2,221	1,429	934
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	273	289	244	8	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	411
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	453	740	836	550
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	806	823
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	26	62	133	116	127
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	25	39	63	40	25

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	4,386
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	852	1,486
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	586	567
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	94	213	196	452
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	186	406	364	817
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	265	990	2,229	2,052	2,366
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	930	2,251	4,948	6,158	5,014
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	163	346	0	24	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	234	473	0	0	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	998	2,209	5,248	5,480	3,180	0
		1,479	**5,951**	**12,396**	**20,693**	**20,718**	**22,756**
COPEVILLE SUD, TRINITY (C)							
CONSERVATION - COPEVILLE SUD	DEMAND REDUCTION [COLLIN]	1	3	5	8	17	35
CONSERVATION, WATER LOSS CONTROL - COPEVILLE SUD	DEMAND REDUCTION [COLLIN]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	10	13	19	23	27
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	4	55	74	117	148	185
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	12	17	16	13	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	82

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	24	39	86	110
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	83	163
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	1	3	4	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	107
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	28	36
		25	**89**	**133**	**199**	**390**	**749**

COUNTY-OTHER, COLLIN, SABINE (C)

CONSERVATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	0	0	0	1	0
CONSERVATION, WATER LOSS CONTROL - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	1	1	1	0
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	8	5	6	4	6
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	1	1	1	1	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	1
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	2	2	1
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1	0
		3	**10**	**8**	**10**	**12**	**11**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, COLLIN, TRINITY (C)							
CONSERVATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	5	11	16	70	123	238
CONSERVATION, WATER LOSS CONTROL - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	8	8	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	17	27	28	147	149	173
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	13	149	168	920	982	1,183
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	42	49	35	101	5	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	523
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	56	307	575	700
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	554	1,045
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	5	5	26	28	33
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	683
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	187	232
		88	**249**	**308**	**1,571**	**2,603**	**4,810**
CULLEOKA WSC, TRINITY (C)							
CONSERVATION - CULLEOKA WSC	DEMAND REDUCTION [COLLIN]	1	2	6	10	13	20
CONSERVATION, WATER LOSS CONTROL - CULLEOKA WSC	DEMAND REDUCTION [COLLIN]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	9	16	24	18	15
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	4	54	99	145	115	105
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	13	17	21	16	1	0

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	46
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	33	48	67	62
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,075	93
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	3	4	3	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	716
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	22	21
		26	**86**	**178**	**247**	**1,314**	**1,082**
DALLAS, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	633
CONSERVATION - DALLAS	DEMAND REDUCTION [COLLIN]	542	1,343	1,814	1,820	1,717	1,636
CONSERVATION, WATER LOSS CONTROL - DALLAS	DEMAND REDUCTION [COLLIN]	79	75	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	108	164	423	1,381	1,614	1,684
DWU UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	0	0	0	5	11	5
DWU UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	0	0	6	11	4
DWU UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	0	0	4	7	2
DWU UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	6	5	3	14	23	8
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	523	1,331	1,262	1,268	1,200
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	558	534
		735	**2,110**	**3,571**	**4,492**	**5,209**	**5,706**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
EAST FORK SUD, TRINITY (C)							
CONSERVATION - EAST FORK SUD	DEMAND REDUCTION [COLLIN]	1	2	4	6	10	14
CONSERVATION, WATER LOSS CONTROL - EAST FORK SUD	DEMAND REDUCTION [COLLIN]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	4	9	11	15	13	10
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	48	65	99	86	75
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	11	16	15	10	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	32
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	22	32	48	43
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	47	64
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	2	2	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	42
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	16	14
		21	**79**	**119**	**164**	**223**	**296**
FAIRVIEW, TRINITY (C)							
CONSERVATION - FAIRVIEW	DEMAND REDUCTION [COLLIN]	68	122	219	243	266	290
CONSERVATION, WATER LOSS CONTROL - FAIRVIEW	DEMAND REDUCTION [COLLIN]	23	23	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	64	128	179	208	145	102
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	48	723	1,075	1,303	950	701
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	152	228	226	144	6	0

Projected Water Management Strategies
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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	309
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	354	434	555	414
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	535	617
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	10	21	31	37	26	19
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	403
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	181	137
		365	**1,245**	**2,084**	**2,369**	**2,664**	**2,992**
FARMERSVILLE, SABINE (C)							
CONSERVATION - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
CONSERVATION, WATER LOSS CONTROL - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	0	0	0	2	2
		2	**0**	**0**	**0**	**2**	**2**
FARMERSVILLE, TRINITY (C)							
CONSERVATION - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	3	15	23	31	38	46
CONSERVATION, WATER LOSS CONTROL - FARMERSVILLE	DEMAND REDUCTION [COLLIN]	5	5	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	16	60	63	72	50	34
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	342	376	451	324	237
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	37	108	79	50	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	105

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	124	150	191	141
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	184	211
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	10	10	13	9	8
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	138
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	62	47
		73	**540**	**675**	**767**	**860**	**967**

FRISCO, TRINITY (C)

CONSERVATION - FRISCO	DEMAND REDUCTION [COLLIN]	913	1,463	2,143	2,276	2,410	2,543
CONSERVATION, WATER LOSS CONTROL - FRISCO	DEMAND REDUCTION [COLLIN]	125	125	0	0	0	0
FRISCO DIRECT REUSE	DIRECT REUSE [COLLIN]	1,344	2,016	3,390	3,390	3,390	3,390
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	191	647	838	988	694	493
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	143	3,660	5,026	6,174	4,543	3,388
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	454	1,154	1,059	680	26	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	1,491
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1,654	2,058	2,657	1,998
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	2,561	2,982
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	31	107	143	174	127	94

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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,947
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	868	659
		3,201	**9,172**	**14,253**	**15,740**	**17,276**	**18,985**
GARLAND, TRINITY (C)							
CONSERVATION - GARLAND	DEMAND REDUCTION [COLLIN]	1	1	1	1	2	3
CONSERVATION, WATER LOSS CONTROL - GARLAND	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	2	3	2	2
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	9	14	19	17	16
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	2	3	3	2	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	6
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	4	6	10	8
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	13
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	0	1	0	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	8
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	3	3
		4	**15**	**24**	**32**	**43**	**59**
HICKORY CREEK SUD, TRINITY (C)							
CONSERVATION - HICKORY CREEK SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
CONSERVATION, WATER LOSS CONTROL - HICKORY CREEK SUD	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DRILL NEW WELLS (HICKORY CREEK SUD, WOODBINE, SABINE)	WOODBINE AQUIFER [HUNT]	0	0	2	4	5	7
		0	**0**	**2**	**4**	**5**	**7**
IRRIGATION, COLLIN, SABINE (C)							
CONSERVATION, IRRIGATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	2	4	5	5	6
		0	**2**	**4**	**5**	**5**	**6**
IRRIGATION, COLLIN, TRINITY (C)							
CONSERVATION, IRRIGATION - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	5	81	155	194	232	269
		5	**81**	**155**	**194**	**232**	**269**
JOSEPHINE, SABINE (C)							
CONSERVATION - JOSEPHINE	DEMAND REDUCTION [COLLIN]	1	3	5	8	10	12
CONSERVATION, WATER LOSS CONTROL - JOSEPHINE	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	10	14	20	14	10
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	4	58	85	126	91	67
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	18	18	14	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	29
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	28	42	53	39
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	51	59
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	2	4	3	3
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	39
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	18	13
		22	**91**	**152**	**214**	**241**	**271**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
LAVON, TRINITY (C)							
CONSERVATION - LAVON	DEMAND REDUCTION [COLLIN]	8	16	33	19	52	141
CONSERVATION, WATER LOSS CONTROL - LAVON	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	8	17	27	43	68	106
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	6	97	165	274	445	734
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	19	31	35	30	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	323
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	54	91	260	433
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	251	646
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	3	5	8	11	20
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	422
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	85	143
		45	**167**	**319**	**465**	**1,175**	**2,968**
LAVON SUD, TRINITY (C)							
CONSERVATION - LAVON SUD	DEMAND REDUCTION [COLLIN]	2	3	5	6	18	55
CONSERVATION, WATER LOSS CONTROL - LAVON SUD	DEMAND REDUCTION [COLLIN]	2	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	9	10	15	24	44
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	5	54	71	95	159	291
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	14	17	15	10	2	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	127
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	22	32	92	171
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	90	256
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	1	3	2	4	8
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	167
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	30	56
		27	**85**	**126**	**160**	**419**	**1,175**

LOWRY CROSSING, TRINITY (C)

CONSERVATION - LOWRY CROSSING	DEMAND REDUCTION [COLLIN]	1	2	3	4	5	6
CONSERVATION, WATER LOSS CONTROL - LOWRY CROSSING	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	8	10	7	5
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	38	50	60	44	33
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	9	12	11	7	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	14
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	17	20	25	19
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	24	28
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	1	1	2	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	18
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	8	6
		18	**60**	**90**	**102**	**115**	**129**
LUCAS, TRINITY (C)							
CONSERVATION - LUCAS	DEMAND REDUCTION [COLLIN]	28	52	95	118	143	156
CONSERVATION, IRRIGATION RESTRICTIONS – LUCAS	DEMAND REDUCTION [COLLIN]	3	7	10	11	13	13
CONSERVATION, WATER LOSS CONTROL - LUCAS	DEMAND REDUCTION [COLLIN]	50	145	176	196	217	217
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	20	41	62	83	66	47
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	16	236	374	524	432	327
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	47	74	79	58	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	144
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	123	175	253	193
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	244	288
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	4	7	11	14	12	9
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	188
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	83	64
		168	**562**	**930**	**1,179**	**1,466**	**1,646**

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MANUFACTURING, COLLIN, TRINITY (C)							
COLLIN COUNTY MANUFACTURING ADDITIONAL GROUNDWATER (NEW WELLS)	WOODBINE AQUIFER [COLLIN]	0	78	78	78	78	78
CONSERVATION, MANUFACTURING - COLLIN COUNTY	DEMAND REDUCTION [COLLIN]	0	8	90	133	145	157
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	60	99	108	134	102	78
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	45	564	645	839	668	539
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	143	178	136	92	4	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	237
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	212	280	391	318
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	377	475
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	10	17	18	24	19	16
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	310
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	128	105
		258	**944**	**1,287**	**1,580**	**1,912**	**2,313**
MARILEE SUD, TRINITY (C)							
CONSERVATION - MARILEE SUD	DEMAND REDUCTION [COLLIN]	2	3	5	7	9	10
CONSERVATION, WATER LOSS CONTROL - MARILEE SUD	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
GTUA - GRAYSON COUNTY WSP	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	18	33	54	77
		5	**9**	**23**	**40**	**63**	**87**

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MCKINNEY, TRINITY (C)							
CONSERVATION - MCKINNEY	DEMAND REDUCTION [COLLIN]	472	899	1,786	2,575	2,829	3,085
CONSERVATION, WATER LOSS CONTROL - MCKINNEY	DEMAND REDUCTION [COLLIN]	284	572	578	752	751	751
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	456	939	1,443	2,193	1,531	1,080
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	341	5,315	8,644	13,708	10,021	7,430
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	1,079	1,676	1,822	1,511	58	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	3,269
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	2,846	4,569	5,861	4,381
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5,648	6,538
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	73	156	245	387	279	205
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	4,269
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,913	1,446
		2,705	**9,557**	**17,364**	**25,695**	**28,891**	**32,454**
MELISSA, TRINITY (C)							
CONSERVATION - MELISSA	DEMAND REDUCTION [COLLIN]	39	73	122	299	532	852
CONSERVATION, WATER LOSS CONTROL - MELISSA	DEMAND REDUCTION [COLLIN]	8	8	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	14	43	63	177	210	223
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	244	381	1,106	1,369	1,535
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	32	77	81	123	8	0

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	676
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	126	369	801	906
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	772	1,351
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	7	12	31	38	42
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	882
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	262	299
		105	**452**	**785**	**2,105**	**3,992**	**6,766**

MURPHY, TRINITY (C)

CONSERVATION - MURPHY	DEMAND REDUCTION [COLLIN]	71	114	157	175	191	208
CONSERVATION – WASTE PROHIBITION, MURPHY	DEMAND REDUCTION [COLLIN]	27	53	53	53	53	53
CONSERVATION, WATER LOSS CONTROL - MURPHY	DEMAND REDUCTION [COLLIN]	26	26	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	68	120	128	149	104	73
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	51	680	766	932	681	505
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	161	214	161	103	4	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	222
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	252	311	398	297
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	384	444

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	11	21	22	26	19	15
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	290
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	130	98
		415	**1,228**	**1,539**	**1,749**	**1,964**	**2,205**
NEVADA, SABINE (C)							
CONSERVATION - NEVADA	DEMAND REDUCTION [COLLIN]	0	0	0	1	2	5
CONSERVATION, WATER LOSS CONTROL - NEVADA	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	0	2	3	4
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	2	3	12	21	29
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	1	1	1	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	12
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	4	12	16
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	12	24
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	0	0	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	16
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	4	5
		1	**3**	**5**	**20**	**55**	**112**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NEVADA, TRINITY (C)							
CONSERVATION - NEVADA	DEMAND REDUCTION [COLLIN]	0	1	1	6	20	42
CONSERVATION, WATER LOSS CONTROL - NEVADA	DEMAND REDUCTION [COLLIN]	0	0	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	3	3	14	26	32
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	15	19	92	166	218
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	4	4	4	10	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	97
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	6	31	97	129
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	94	194
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	3	5	7
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	126
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	32	43
		7	**23**	**34**	**156**	**441**	**888**
NEW HOPE, TRINITY (C)							
CONSERVATION - NEW HOPE	DEMAND REDUCTION [COLLIN]	0	1	2	3	4	6
CONSERVATION, WATER LOSS CONTROL - NEW HOPE	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	3	5	6	5	5
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	21	28	41	36	31
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	5	7	6	5	0	0

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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	14
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	9	14	21	18
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	20	27
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1	1	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	18
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	7	6
		9	33	51	70	94	126
NORTH COLLIN WSC, TRINITY (C)							
CONSERVATION - NORTH COLLIN WSC	DEMAND REDUCTION [COLLIN]	3	6	10	15	21	29
CONSERVATION, WATER LOSS CONTROL - NORTH COLLIN WSC	DEMAND REDUCTION [COLLIN]	4	4	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	13	22	27	35	28	23
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	127	161	220	182	153
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	31	40	34	24	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	67
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	53	73	107	90
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	103	135
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	5	5	6	5	4

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	88
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	35	30
		63	**204**	**290**	**373**	**482**	**619**
PARKER, TRINITY (C)							
CONSERVATION - PARKER	DEMAND REDUCTION [COLLIN]	35	147	254	282	310	338
CONSERVATION, WATER LOSS CONTROL - PARKER	DEMAND REDUCTION [COLLIN]	13	13	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	36	356	342	342	216	145
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	27	2,013	2,046	2,138	1,415	993
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	86	635	431	236	8	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	437
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	552	563	727	543
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	700	811
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	176	472	527	433	342
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	197	560	640	588	490
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	129	300	298	244	192
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	276	630	626	508	397
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	222	523	518	425	337

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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	6	58	58	59	41	28
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	530
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	237	179
		203	**4,222**	**6,168**	**6,229**	**5,852**	**5,762**
PLANO, TRINITY (C)							
CONSERVATION - PLANO	DEMAND REDUCTION [COLLIN]	1,084	1,740	2,567	2,390	2,624	2,861
CONSERVATION, WATER LOSS CONTROL - PLANO	DEMAND REDUCTION [COLLIN]	335	335	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	901	1,622	1,759	2,098	1,459	1,025
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	677	9,181	10,547	13,115	9,541	7,051
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	2,136	2,893	2,223	1,444	55	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	3,103
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	3,472	4,370	5,581	4,158
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5,379	6,206
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	146	269	301	370	266	195
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	4,051
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,822	1,372
		5,279	**16,040**	**20,869**	**23,787**	**26,727**	**30,022**

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
PRINCETON, TRINITY (C)							
CONSERVATION - PRINCETON	DEMAND REDUCTION [COLLIN]	3	8	16	49	97	158
CONSERVATION, WATER LOSS CONTROL - PRINCETON	DEMAND REDUCTION [COLLIN]	5	5	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	16	32	43	115	126	121
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	12	181	256	724	825	828
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	38	57	54	80	5	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	364
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	84	241	483	488
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	465	728
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	7	21	22	23
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	475
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	158	161
		77	**289**	**460**	**1,230**	**2,181**	**3,346**
PROSPER, TRINITY (C)							
CONSERVATION - PROSPER	DEMAND REDUCTION [COLLIN]	165	289	405	448	494	523
CONSERVATION, WATER LOSS CONTROL - PROSPER	DEMAND REDUCTION [COLLIN]	26	23	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	49	212	267	316	219	147
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	36	1,199	1,598	1,976	1,437	1,010
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	118	377	337	218	8	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	445
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	458	532	730	549
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	704	820
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	50	265	446	474	378
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	56	315	542	644	81
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	37	169	252	267	211
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	79	356	530	554	437
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	63	294	439	465	371
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	9	35	45	56	41	27
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	995
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	238	181
		403	**2,420**	**4,509**	**5,755**	**6,275**	**6,175**
RICHARDSON, TRINITY (C)							
CONSERVATION - RICHARDSON	DEMAND REDUCTION [COLLIN]	142	205	276	309	336	363
CONSERVATION, WATER LOSS CONTROL - RICHARDSON	DEMAND REDUCTION [COLLIN]	40	39	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	103	184	200	239	166	117
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	77	1,041	1,198	1,492	1,090	805

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All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	244	328	253	164	6	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	354
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	395	498	636	475
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	613	709
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	17	30	34	42	30	22
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	463
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	208	157
		623	**1,827**	**2,356**	**2,744**	**3,085**	**3,465**
ROYSE CITY, SABINE (C)							
CONSERVATION - ROYSE CITY	DEMAND REDUCTION [COLLIN]	1	4	13	29	69	89
CONSERVATION, WATER LOSS CONTROL - ROYSE CITY	DEMAND REDUCTION [COLLIN]	1	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	17	36	70	92	69
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	92	217	434	599	472
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	7	29	47	48	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	208
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	73	146	350	279
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	337	416

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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	6	12	16	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	271
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	114	92
		14	**146**	**392**	**739**	**1,580**	**1,909**

SACHSE, TRINITY (C)

CONSERVATION - SACHSE	DEMAND REDUCTION [COLLIN]	19	31	42	47	51	56
CONSERVATION, WATER LOSS CONTROL - SACHSE	DEMAND REDUCTION [COLLIN]	7	7	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	20	34	36	42	29	20
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	15	193	214	257	190	140
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	48	61	45	29	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	61
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	71	87	110	82
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	106	123
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	6	6	7	6	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	80
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	36	27
		112	**332**	**414**	**469**	**529**	**593**

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SEIS LAGOS UD, TRINITY (C)							
CONSERVATION - SEIS LAGOS UD	DEMAND REDUCTION [COLLIN]	31	36	41	43	45	47
CONSERVATION, WATER LOSS CONTROL - SEIS LAGOS UD	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	11	13	16	11	8
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	2	66	77	96	71	53
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	7	21	16	11	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	23
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	25	32	42	32
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	40	47
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	3	3	2	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	31
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	14	10
		47	**140**	**175**	**200**	**224**	**252**
SOUTH GRAYSON WSC, TRINITY (C)							
CONSERVATION - SOUTH GRAYSON WSC	DEMAND REDUCTION [COLLIN]	1	1	2	4	5	7
CONSERVATION, WATER LOSS CONTROL - SOUTH GRAYSON WSC	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
GTUA - GRAYSON COUNTY WSP	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	25	27	30	32	32	33
		27	**29**	**32**	**36**	**37**	**40**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
ST. PAUL, TRINITY (C)							
CONSERVATION - ST PAUL	DEMAND REDUCTION [COLLIN]	1	2	3	4	6	7
CONSERVATION, WATER LOSS CONTROL - ST. PAUL	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	8	9	11	8	5
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	44	53	66	49	36
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	14	11	7	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	16
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	17	22	28	21
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	28	32
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	1	2	2	3	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	21
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	7
		21	70	95	112	131	147
STEAM ELECTRIC POWER, COLLIN, TRINITY (C)							
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	13	16	21	19	18	11
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	10	92	125	133	145	99
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	31	29	26	3	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	35

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	41	41	39	26
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	66	70
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	4	4	3	3	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	46
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	22	15
		56	**141**	**217**	**199**	**294**	**306**
WESTON, TRINITY (C)							
CONSERVATION - WESTON	DEMAND REDUCTION [COLLIN]	2	7	48	157	312	374
CONSERVATION, WATER LOSS CONTROL - WESTON	DEMAND REDUCTION [COLLIN]	3	3	0	0	0	0
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	829	4,600	11,501	18,301	18,237
WESTON - NEW WELLS IN WOODBINE AQUIFER	WOODBINE AQUIFER [COLLIN]	71	71	71	71	71	71
		76	**910**	**4,719**	**11,729**	**18,684**	**18,682**
WYLIE, TRINITY (C)							
CONSERVATION - WYLIE	DEMAND REDUCTION [COLLIN]	21	47	76	106	137	168
CONSERVATION, WATER LOSS CONTROL - WYLIE	DEMAND REDUCTION [COLLIN]	32	32	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	105	183	206	249	178	128
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	77	1,036	1,237	1,561	1,167	882
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	248	326	261	172	7	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	388

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	407	520	682	520
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	657	775
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	17	30	35	46	33	24
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	507
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	223	172
		500	**1,654**	**2,222**	**2,654**	**3,084**	**3,564**
WYLIE NORTHEAST SUD, TRINITY (C)							
CONSERVATION - WYLIE NORTHEAST SUD	DEMAND REDUCTION [COLLIN]	1	2	4	10	22	42
CONSERVATION, WATER LOSS CONTROL - WYLIE NORTHEAST SUD	DEMAND REDUCTION [COLLIN]	1	1	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	8	11	24	29	31
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	47	65	155	186	219
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	15	14	17	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	96
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	21	52	109	129
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	105	192
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	2	1	4	4	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	125

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)		All values are in acre-feet					
Water Management Strategy	**Source Name [Origin]**	**2020**	**2030**	**2040**	**2050**	**2060**	**2070**
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	35	42
		20	**75**	**116**	**262**	**491**	**881**
Sum of Projected Water Management Strategies (acre-feet)		**19,074**	**66,651**	**107,178**	**147,429**	**180,115**	**211,626**

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	2
CONSERVATION - BOLIVAR WSC	DEMAND REDUCTION [COOKE]	1	1	1	2	3	3
CONSERVATION, WATER LOSS CONTROL - BOLIVAR WSC	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	1	5	7	6
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	6	8	9	10	11
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	2	5	5	4
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	0	1	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	14
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	2	5
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	2	2
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	0	1	1	2
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	1	1	3

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	1	4	8	8	8
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	3	10	17	25	17
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	0	2	3	4	5	5
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	7	8	10	10
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	13	21	24	27	26
		2	**31**	**58**	**84**	**107**	**118**
COUNTY-OTHER, COOKE, RED (C)							
CONSERVATION - COOKE COUNTY	DEMAND REDUCTION [COOKE]	1	2	3	4	6	11
CONSERVATION, WATER LOSS CONTROL - COOKE COUNTY	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	190
		2	**3**	**3**	**4**	**6**	**201**
COUNTY-OTHER, COOKE, TRINITY (C)							
CONSERVATION - COOKE COUNTY	DEMAND REDUCTION [COOKE]	3	6	9	17	25	64
CONSERVATION, WATER LOSS CONTROL - COOKE COUNTY	DEMAND REDUCTION [COOKE]	5	5	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,090
		8	**11**	**9**	**17**	**25**	**1,154**
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 SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	2
		0	**0**	**0**	**0**	**0**	**2**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
GAINESVILLE, TRINITY (C)							
CONSERVATION - GAINESVILLE	DEMAND REDUCTION [COOKE]	8	17	27	37	56	93
CONSERVATION, WATER LOSS CONTROL - GAINESVILLE	DEMAND REDUCTION [COOKE]	12	12	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,382
		20	**29**	**27**	**37**	**56**	**1,475**
IRRIGATION, COOKE, RED (C)							
GAINESVILLE ADDITIONAL DIRECT REUSE	DIRECT REUSE [COOKE]	21	21	21	21	21	21
		21	**21**	**21**	**21**	**21**	**21**
IRRIGATION, COOKE, TRINITY (C)							
GAINESVILLE ADDITIONAL DIRECT REUSE	DIRECT REUSE [COOKE]	49	49	49	49	49	49
		49	**49**	**49**	**49**	**49**	**49**
LAKE KIOWA SUD, TRINITY (C)							
CONSERVATION - LAKE KIOWA SUD	DEMAND REDUCTION [COOKE]	3	5	8	11	14	17
CONSERVATION, WATER LOSS CONTROL - LAKE KIOWA SUD	DEMAND REDUCTION [COOKE]	4	4	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	91	92	89	86	83
		7	**100**	**100**	**100**	**100**	**100**
LINDSAY, TRINITY (C)							
CONSERVATION - LINDSAY	DEMAND REDUCTION [COOKE]	0	1	2	2	5	12
CONSERVATION, WATER LOSS CONTROL - LINDSAY	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	141	435
		1	**2**	**2**	**2**	**146**	**447**
MANUFACTURING, COOKE, TRINITY (C)							
CONSERVATION, MANUFACTURING - COOKE COUNTY	DEMAND REDUCTION [COOKE]	0	0	5	8	8	9
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	169
		0	**0**	**5**	**8**	**8**	**178**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MINING, COOKE, TRINITY (C)							
COOKE COUNTY MINING DIRECT REUSE	DIRECT REUSE [COOKE]	99	67	71	74	77	80
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	684	83	7	72	134	206
		783	**150**	**78**	**146**	**211**	**286**
MOUNTAIN SPRING WSC, TRINITY (C)							
CONSERVATION - MOUNTAIN SPRING WSC	DEMAND REDUCTION [COOKE]	2	3	5	7	14	26
CONSERVATION, WATER LOSS CONTROL - MOUNTAIN SPRING WSC	DEMAND REDUCTION [COOKE]	2	2	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	277	740
		4	**5**	**5**	**7**	**291**	**766**
MUENSTER, TRINITY (C)							
CONSERVATION - MUENSTER	DEMAND REDUCTION [COOKE]	1	2	6	7	9	10
CONSERVATION, WATER LOSS CONTROL - MUENSTER	DEMAND REDUCTION [COOKE]	1	1	0	0	0	0
DEVELOP LAKE MUENSTER SUPPLY	MUENSTER LAKE/RESERVOIR [RESERVOIR]	280	280	280	280	280	280
		282	**283**	**286**	**287**	**289**	**290**
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 - GRAYSON COUNTY WSP	TEXOMA LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	4	6	7	9
		0	**2**	**4**	**6**	**7**	**9**
VALLEY VIEW, TRINITY (C)							
CONSERVATION - VALLEY VIEW	DEMAND REDUCTION [COOKE]	0	0	1	1	1	1
CONSERVATION, WATER LOSS CONTROL - VALLEY VIEW	DEMAND REDUCTION [COOKE]	0	0	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	4	6	9	11	14

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
		0	**4**	**7**	**10**	**12**	**15**
WOODBINE WSC, RED (C)							
CONSERVATION - WOODBINE WSC	DEMAND REDUCTION [COOKE]	0	1	1	1	1	1
CONSERVATION, WATER LOSS CONTROL - WOODBINE WSC	DEMAND REDUCTION [COOKE]	0	0	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	3	8	13	19	25
		0	**4**	**9**	**14**	**20**	**26**
WOODBINE WSC, TRINITY (C)							
CONSERVATION - WOODBINE WSC	DEMAND REDUCTION [COOKE]	2	4	6	9	13	18
CONSERVATION, WATER LOSS CONTROL - WOODBINE WSC	DEMAND REDUCTION [COOKE]	3	3	0	0	0	0
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	38	94	155	221	288
		5	**45**	**100**	**164**	**234**	**306**
Sum of Projected Water Management Strategies (acre-feet)		**1,184**	**739**	**763**	**956**	**1,582**	**5,443**

DENTON COUNTY

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
ARGYLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	57
CONSERVATION - ARGYLE	DEMAND REDUCTION [DENTON]	19	45	89	99	109	118
CONSERVATION, WATER LOSS CONTROL - ARGYLE	DEMAND REDUCTION [DENTON]	18	55	69	69	69	69
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	11	40	178	184	151
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	36	127	163	145	108
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	7	14	16	13	11

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	325
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	63	110
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	64	48
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	22	25	21	38
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	43	48	39	69
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	74	227	265	223	200
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	260	517	589	666	424
		37	**488**	**1,148**	**1,452**	**1,596**	**1,728**
ARGYLE WSC, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	12
CONSERVATION - ARGYLE WSC	DEMAND REDUCTION [DENTON]	24	38	42	45	48	51
CONSERVATION – WASTE PROHIBITION, ARGYLE WSC	DEMAND REDUCTION [DENTON]	6	12	12	12	12	12
CONSERVATION, WATER LOSS CONTROL - ARGYLE WSC	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	2	27	36	31
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	8	25	28	22
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	2	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	67
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	12	23

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	12	10
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	1	4	4	8
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	3	7	8	14
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	14	40	43	41
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	31	90	129	87
		35	**55**	**114**	**252**	**334**	**380**
AUBREY, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	32
CONSERVATION - AUBREY	DEMAND REDUCTION [DENTON]	2	5	8	13	20	29
CONSERVATION, WATER LOSS CONTROL - AUBREY	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	13	69	86	86
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	14	42	63	67	61
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	5	6	6	6
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	185
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	30	63
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	30	27
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	10	10	22
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	14	19	18	39

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	30	74	103	104	113
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	103	168	232	309	241
		5	**163**	**331**	**515**	**680**	**904**
BARTONVILLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	17
CONSERVATION - BARTONVILLE	DEMAND REDUCTION [DENTON]	11	20	27	30	33	36
CONSERVATION, WATER LOSS CONTROL - BARTONVILLE	DEMAND REDUCTION [DENTON]	4	4	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	11	52	55	46
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	13	35	48	43	32
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	4	5	4	3
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	97
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	19	33
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	19	14
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	12	14	12	21
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	28	63	77	66	60
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	96	142	172	197	126
		15	**168**	**294**	**398**	**448**	**485**
BOLIVAR WSC, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	27
CONSERVATION - BOLIVAR WSC	DEMAND REDUCTION [DENTON]	3	6	12	18	27	39

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CONSERVATION, WATER LOSS CONTROL - BOLIVAR WSC	DEMAND REDUCTION [DENTON]	4	4	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	1	5	44	68	72
GAINESVILLE UNALLOCATED SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	39	60	82	104	127
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	3	18	40	54	51
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	3	5	4	6
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	153
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	24	52
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	24	23
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	4	6	7	17
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	6	13	15	33
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	4	32	65	83	95
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	16	72	145	244	199
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	0	12	24	35	50	58
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	26	52	73	100	114
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	86	159	208	268	294
		7	**198**	**447**	**734**	**1,072**	**1,360**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CARROLLTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	711
CONSERVATION - CARROLLTON	DEMAND REDUCTION [DENTON]	191	313	426	469	515	562
CONSERVATION, WATER LOSS CONTROL - CARROLLTON	DEMAND REDUCTION [DENTON]	72	72	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	402	366	669	1,858	1,946	1,889
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	1,166	2,108	1,696	1,528	1,347
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	673	599
		665	**1,917**	**3,203**	**4,023**	**4,662**	**5,108**
CELINA, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	224
CONSERVATION - CELINA	DEMAND REDUCTION [DENTON]	2	21	99	257	283	308
CONSERVATION, WATER LOSS CONTROL - CELINA	DEMAND REDUCTION [DENTON]	1	2	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	39	499	566	596
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	14	122	456	444	425
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	17	50	119	73	45
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	0	96	302	740	477	312
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	0	30	64	82	3	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	137
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	99	247	279	184
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	269	274

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	14	45	39	43
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	3	9	21	13	9
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,462
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	284	496
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	196	189
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	21	71	65	151
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	41	136	121	272
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	30	217	743	684	789
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	103	494	1,650	2,054	1,671
UTRWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [HOPKINS]	5	39	0	8	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	7	53	0	0	0	0
UTRWD UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	31	246	1,152	1,827	1,060	0
		46	**661**	**2,723**	**6,901**	**6,910**	**7,587**
COPPELL, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	15
CONSERVATION - COPPELL	DEMAND REDUCTION [DENTON]	4	6	9	10	11	12
CONSERVATION, WATER LOSS CONTROL - COPPELL	DEMAND REDUCTION [DENTON]	2	1	0	0	0	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	9	8	14	39	41	39
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	24	44	36	32	28
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	14	13
		15	**39**	**67**	**85**	**98**	**107**
COPPER CANYON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	6
CONSERVATION - COPPER CANYON	DEMAND REDUCTION [DENTON]	4	6	9	10	13	14
CONSERVATION, WATER LOSS CONTROL - COPPER CANYON	DEMAND REDUCTION [DENTON]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	1	2	13	16	14
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	2	7	11	13	11
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	1	1	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	32
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5	11
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	6	5
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	2	3	3	7
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	4	12	18	19	20
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	14	26	41	58	41
		5	**28**	**59**	**97**	**134**	**162**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CORINTH, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	67
CONSERVATION - CORINTH	DEMAND REDUCTION [DENTON]	57	108	149	165	181	198
CONSERVATION, IRRIGATION RESTRICTIONS – CORINTH	DEMAND REDUCTION [DENTON]	5	13	13	13	13	13
CONSERVATION, WATER LOSS CONTROL - CORINTH	DEMAND REDUCTION [DENTON]	21	21	0	0	0	0
CORINTH NEW WELLS IN TRINITY AQUIFER-2020	TRINITY AQUIFER [DENTON]	561	561	561	561	561	561
CORINTH NEW WELLS IN TRINITY AQUIFER-2030	TRINITY AQUIFER [DENTON]	0	561	561	561	561	561
CORINTH UPSIZE EXISTING WELL	TRINITY AQUIFER [DENTON]	286	286	286	286	286	286
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	17	46	208	214	177
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	55	144	190	168	126
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	11	16	19	15	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	382
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	76	129
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	74	56
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	24	30	25	45
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	48	57	46	81
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	113	256	310	259	235
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	397	584	687	775	497
		930	**2,143**	**2,688**	**3,087**	**3,254**	**3,427**

Projected Water Management Strategies
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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
COUNTY-OTHER, DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	407
CONSERVATION - DENTON COUNTY	DEMAND REDUCTION [DENTON]	13	28	46	86	174	390
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY	DEMAND REDUCTION [DENTON]	19	19	0	0	0	0
DENTON COUNTY OTHER NEW WELLS IN TRINITY AQUIFER	TRINITY AQUIFER [DENTON]	504	504	504	504	504	504
DENTON COUNTY OTHER NEW WELLS IN WOODBINE AQUIFER	WOODBINE AQUIFER [DENTON]	1,000	1,000	1,000	1,000	1,000	1,000
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	13	43	349	656	1,081
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	42	136	319	515	771
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	31	47	51	58	40	28
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	23	271	301	364	264	195
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	74	85	63	40	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	86
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	99	121	155	115
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	149	171
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	8	16	31	45	77
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	6	9	8	11	7	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	2,524
		1,670	**2,298**	**2,931**	**4,554**	**7,307**	**13,704**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	321	855
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	227	343
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	24	51	77	276
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	44	92	138	488
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	87	243	520	794	1,430
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	185	353	1,008	2,239	2,958
		1,670	**2,298**	**2,931**	**4,554**	**7,307**	**13,704**

CROSS ROADS, TRINITY (C)

ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	16
CONSERVATION - CROSS ROADS	DEMAND REDUCTION [DENTON]	7	13	23	25	28	30
CONSERVATION, WATER LOSS CONTROL - CROSS ROADS	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	11	51	52	43
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	11	35	46	41	31
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	4	4	4	3
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	92
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	18	31
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	18	14
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	6	7	6	11

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	12	14	11	20
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	24	63	75	63	58
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	81	143	167	187	119
		9	**137**	**297**	**389**	**428**	**468**
DALLAS, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	389
CONSERVATION - DALLAS	DEMAND REDUCTION [DENTON]	226	591	895	1,001	1,018	1,004
CONSERVATION, WATER LOSS CONTROL - DALLAS	DEMAND REDUCTION [DENTON]	33	33	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	45	72	209	760	958	1,034
DWU UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	0	0	0	3	7	3
DWU UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	0	0	3	6	2
DWU UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	0	0	2	4	1
DWU UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	2	2	2	8	14	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	230	657	694	752	737
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	331	328
		306	**928**	**1,763**	**2,471**	**3,090**	**3,503**
DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	3,291
CONSERVATION - DENTON	DEMAND REDUCTION [DENTON]	385	811	1,410	1,982	2,983	3,966
CONSERVATION, WATER LOSS CONTROL - DENTON	DEMAND REDUCTION [DENTON]	145	145	0	0	0	0
DENTON UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	6,275	8,160	10,606	13,445	15,857	18,184

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DENTON UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	291	1,082	2,151	4,369	6,217
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	258	864	1,560	2,881	3,738
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	567	1,845	3,237	5,782	7,198
DENTON UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	0	896	2,957	5,268	9,630	12,388
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	87	539	2,953	6,375	8,778
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	258	1,654	2,684	4,989	6,237
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	2,196	2,774
		6,805	**11,473**	**20,957**	**33,280**	**55,062**	**72,771**
DENTON COUNTY FWSD #10, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	67
CONSERVATION - DENTON COUNTY FWSD #10	DEMAND REDUCTION [DENTON]	20	68	94	105	114	124
CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD #10	DEMAND REDUCTION [DENTON]	1	7	7	7	7	7
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #10	DEMAND REDUCTION [DENTON]	7	7	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	18	45	208	214	177
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	55	143	189	168	126
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	11	16	19	14	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	382
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	73	129

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	74	56
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	24	29	24	45
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	48	56	46	81
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	114	256	309	259	235
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	400	581	686	777	497
		28	680	1,214	1,608	1,770	1,939
DENTON COUNTY FWSD #1A, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	262
CONSERVATION - DENTON COUNTY FWSD #1A	DEMAND REDUCTION [DENTON]	49	140	234	259	285	310
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #1A	DEMAND REDUCTION [DENTON]	18	18	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	34	80	196	711	756	697
DWU UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	1	29	33	40	19
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	253	620	651	594	496
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	16	27	31	25	24
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	729
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	122	247
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	262	220

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	41	49	41	86
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	80	94	77	155
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	157	426	516	433	448
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	549	969	1,146	1,300	948
		101	**1,214**	**2,622**	**3,490**	**3,935**	**4,641**
DENTON COUNTY FWSD #7, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	73
CONSERVATION - DENTON COUNTY FWSD #7	DEMAND REDUCTION [DENTON]	45	74	102	113	125	136
CONSERVATION, IRRIGATION RESTRICTIONS – DENTON COUNTY FWSD #7	DEMAND REDUCTION [DENTON]	4	8	8	8	8	8
CONSERVATION, WATER LOSS CONTROL - DENTON COUNTY FWSD #7	DEMAND REDUCTION [DENTON]	17	17	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	19	50	226	233	193
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	61	157	207	183	137
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	13	18	20	16	14
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	415
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	80	141
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	81	61
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	27	32	27	49

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	53	61	51	88
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	126	280	337	282	255
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	440	635	749	845	540
		66	**758**	**1,330**	**1,753**	**1,931**	**2,110**
DOUBLE OAK, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	7
CONSERVATION - DOUBLE OAK	DEMAND REDUCTION [DENTON]	8	12	16	18	20	22
CONSERVATION, WATER LOSS CONTROL - DOUBLE OAK	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	1	4	26	23	18
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	4	12	18	18	13
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	1	2	2	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	40
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5	11
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	8	6
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	4	5	5	8
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	8	22	29	27	25
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	29	49	63	78	53
		11	**58**	**108**	**155**	**186**	**204**

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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
FLOWER MOUND, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	744
CONSERVATION - FLOWER MOUND	DEMAND REDUCTION [DENTON]	252	500	688	763	838	913
CONSERVATION, WATER LOSS CONTROL - FLOWER MOUND	DEMAND REDUCTION [DENTON]	95	95	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	242	306	620	2,098	2,181	1,977
DWU UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	152	130	78	10	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	234	189	117	12	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	230	165	94	9	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	556	345	0	0	0	0
DWU UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	828	629	318	29	0	0
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	975	1,955	1,914	1,713	1,409
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	54	75	85	67	58
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,738
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	333	589
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	754	627
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	113	135	113	204
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	221	257	209	369
		2,589	**5,807**	**8,139**	**9,859**	**10,935**	**11,959**

Projected Water Management Strategies
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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	538	1,180	1,411	1,183	1,070
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	1,881	2,680	3,136	3,544	2,261
		2,589	**5,807**	**8,139**	**9,859**	**10,935**	**11,959**
FORT WORTH, TRINITY (C)							
CONSERVATION - FORT WORTH	DEMAND REDUCTION [DENTON]	207	406	676	993	1,362	1,771
CONSERVATION, WATER LOSS CONTROL - FORT WORTH	DEMAND REDUCTION [DENTON]	714	951	463	434	277	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	0	0	321	0
FORT WORTH ALLIANCE DIRECT REUSE	DIRECT REUSE [TARRANT]	0	129	425	539	634	716
FORT WORTH DIRECT REUSE	DIRECT REUSE [TARRANT]	34	41	49	62	73	82
FORT WORTH FUTURE DIRECT REUSE	DIRECT REUSE [TARRANT]	0	320	443	561	661	745
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	391	905	936	688	263
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	5,888
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	2,116	3,263	2,163
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	48	26	414	445	287	162
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	31	6	106	135	249	523
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	65	828	1,331	2,381	2,626
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	911	629	1,541	1,179
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	73	0
		1,034	**2,335**	**5,220**	**8,181**	**11,810**	**16,118**
FRISCO, TRINITY (C)							
CONSERVATION - FRISCO	DEMAND REDUCTION [DENTON]	609	975	1,429	1,517	1,606	1,695
CONSERVATION, WATER LOSS CONTROL - FRISCO	DEMAND REDUCTION [DENTON]	83	83	0	0	0	0
FRISCO DIRECT REUSE	DIRECT REUSE [COLLIN]	896	1,344	2,260	2,260	2,260	2,260

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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	128	431	559	658	463	328
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	96	2,440	3,349	4,116	3,028	2,261
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	303	769	706	454	18	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	994
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	1,103	1,372	1,772	1,332
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1,707	1,988
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	21	72	96	116	85	62
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,298
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	578	440
		2,136	**6,114**	**9,502**	**10,493**	**11,517**	**12,658**

HACKBERRY, TRINITY (C)

CONSERVATION - HACKBERRY	DEMAND REDUCTION [DENTON]	4	9	15	20	28	36
CONSERVATION, WATER LOSS CONTROL - HACKBERRY	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	5	9	13	18	16	13
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	54	76	114	101	90
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	10	17	16	12	1	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	40
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	25	38	59	53

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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	57	79
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	2	1	4	2	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	52
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	19	18
		24	**93**	**146**	**206**	**283**	**385**
HICKORY CREEK, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	23
CONSERVATION - HICKORY CREEK	DEMAND REDUCTION [DENTON]	5	8	9	14	18	22
CONSERVATION, WATER LOSS CONTROL - HICKORY CREEK	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	4	12	72	74	60
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	13	39	66	58	43
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	4	6	5	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	131
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	25	44
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	26	19
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	10	9	15
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	13	20	16	28

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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	26	70	107	89	80
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	89	161	239	266	172
		8	**146**	**315**	**534**	**586**	**641**
HIGHLAND VILLAGE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	65
CONSERVATION - HIGHLAND VILLAGE	DEMAND REDUCTION [DENTON]	51	86	117	130	143	156
CONSERVATION, WATER LOSS CONTROL - HIGHLAND VILLAGE	DEMAND REDUCTION [DENTON]	19	19	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	15	40	194	209	172
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	47	128	177	164	123
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	10	14	17	14	12
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	371
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	71	126
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	72	55
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	22	28	24	44
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	43	53	45	79
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	97	228	288	252	228
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	339	518	639	756	484
		70	**613**	**1,110**	**1,526**	**1,750**	**1,915**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
IRRIGATION, DENTON, TRINITY (C)							
CONSERVATION, IRRIGATION - DENTON COUNTY	DEMAND REDUCTION [DENTON]	2	37	72	90	107	124
UTRWD - ADDITIONAL DIRECT REUSE	DIRECT REUSE [DENTON]	0	560	1,121	2,240	2,240	2,240
		2	**597**	**1,193**	**2,330**	**2,347**	**2,364**
JUSTIN, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	32
CONSERVATION - JUSTIN	DEMAND REDUCTION [DENTON]	2	8	17	23	29	35
CONSERVATION, WATER LOSS CONTROL - JUSTIN	DEMAND REDUCTION [DENTON]	3	3	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	21	95	102	84
JUSTIN NEW WELLS IN TRINITY AQUIFER	TRINITY AQUIFER [DENTON]	244	244	244	244	244	244
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	15	65	88	80	60
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	7	9	7	6
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	181
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	35	61
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	35	27
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	11	14	12	21
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	22	26	22	38
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	31	117	143	123	111
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	106	266	318	370	236
		249	**415**	**770**	**961**	**1,059**	**1,136**

Projected Water Management Strategies
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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
KRUGERVILLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	10
CONSERVATION - KRUGERVILLE	DEMAND REDUCTION [DENTON]	1	2	4	6	7	9
CONSERVATION, WATER LOSS CONTROL - KRUGERVILLE	DEMAND REDUCTION [DENTON]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	2	6	30	31	26
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	6	18	27	24	18
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	2	3	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	55
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	11	19
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	11	8
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	3	4	4	6
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	6	8	7	12
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	13	32	45	37	34
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	44	74	100	112	71
		2	**69**	**145**	**223**	**246**	**270**
KRUM, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	58
CONSERVATION - KRUM	DEMAND REDUCTION [DENTON]	16	30	52	70	92	120
CONSERVATION, WATER LOSS CONTROL - KRUM	DEMAND REDUCTION [DENTON]	6	6	0	0	0	0

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	20	117	153	155
KRUM NEW WELLS IN TRINITY AQUIFER	TRINITY AQUIFER [DENTON]	577	707	866	1,025	1,025	1,025
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	17	62	107	120	110
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	7	10	11	11
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	333
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	52	113
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	53	49
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	11	17	18	39
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	21	32	33	71
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	34	110	173	185	204
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	119	249	385	556	432
		599	**922**	**1,398**	**1,936**	**2,298**	**2,720**
LAKE DALLAS, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	27
CONSERVATION - LAKE DALLAS	DEMAND REDUCTION [DENTON]	4	8	13	18	22	27
CONSERVATION, WATER LOSS CONTROL - LAKE DALLAS	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	6	18	82	86	71
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	19	58	75	68	51

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	7	7	6	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	153
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	29	52
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	30	23
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	10	12	10	18
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	19	22	18	32
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	40	103	123	104	94
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	138	234	274	310	198
		9	**220**	**462**	**613**	**683**	**751**

LAKEWOOD VILLAGE, TRINITY (C)

ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	2
CONSERVATION - LAKEWOOD VILLAGE	DEMAND REDUCTION [DENTON]	0	1	1	2	3	4
CONSERVATION, WATER LOSS CONTROL - LAKEWOOD VILLAGE	DEMAND REDUCTION [DENTON]	0	0	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	0	0	4	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	3	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	11
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	1	4
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	1	2

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	0	0	0	1
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	0	1	2
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	0	0	4	7
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	12	14
		0	**1**	**1**	**2**	**29**	**56**
LEWISVILLE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,661
CONSERVATION - LEWISVILLE	DEMAND REDUCTION [DENTON]	266	484	755	952	1,166	1,272
CONSERVATION, IRRIGATION RESTRICTIONS – LEWISVILLE	DEMAND REDUCTION [DENTON]	13	32	39	47	55	55
CONSERVATION, WATER LOSS CONTROL - LEWISVILLE	DEMAND REDUCTION [DENTON]	100	100	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	550	560	1,177	4,041	4,918	4,420
DWU UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	19	274	361	499	236
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	1,784	3,709	3,689	3,861	3,150
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	1,699	1,400
		929	**2,979**	**5,954**	**9,090**	**12,198**	**12,194**
LITTLE ELM, TRINITY (C)							
CONSERVATION - LITTLE ELM	DEMAND REDUCTION [DENTON]	14	31	46	61	76	91
CONSERVATION, WATER LOSS CONTROL - LITTLE ELM	DEMAND REDUCTION [DENTON]	21	21	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	68	119	125	144	100	70
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	51	673	750	900	649	478

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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	160	212	158	99	4	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	210
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	247	300	379	281
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	366	420
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	10	20	21	25	19	12
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	274
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	124	93
		324	**1,076**	**1,347**	**1,529**	**1,717**	**1,929**
MANUFACTURING, DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	81
CONSERVATION, MANUFACTURING - DENTON COUNTY	DEMAND REDUCTION [DENTON]	0	3	38	57	62	68
DENTON COUNTY MANUFACTURING ADDITIONAL GROUNDWATER	WOODBINE AQUIFER [DENTON]	184	184	184	184	184	184
DENTON UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DENTON]	315	323	353	383	360	369
DENTON UNALLOCATED SUPPLY UTILIZATION	FORK LAKE/RESERVOIR [RESERVOIR]	0	12	36	61	99	126
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY HUBBARD LAKE/RESERVOIR [RESERVOIR]	0	10	29	44	65	76
DENTON UNALLOCATED SUPPLY UTILIZATION	RAY ROBERTS-LEWISVILLE-GRAPEVINE LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	22	61	92	131	146
DENTON UNALLOCATED SUPPLY UTILIZATION	TAWAKONI LAKE/RESERVOIR [RESERVOIR]	0	35	98	150	219	252
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	7	9	27	120	185	215

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	25	83	106	142	153
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	2	3	3	2	2
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	1	13	14	19	15	12
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	3	4	3	2	0	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	5
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	5	6	9	7
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	11
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	1	1	1	1	1
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	1	0	0	1	0	1
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	41
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	1	9	13
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	0	1	0	0	0
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	1	1	0
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	1	2	2	1	2
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	1	2	1	1
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	63	67
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	1	2	2	3
		512	**676**	**993**	**1,306**	**1,638**	**1,900**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	3	4	3	6
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	7	15	20	19	18
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	25	35	45	56	40
		512	**676**	**993**	**1,306**	**1,638**	**1,900**
MINING, DENTON, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	99
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	5	22	168	239	263
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	16	70	153	187	188
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	3	8	15	16	19
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	567
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	81	192
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	83	84
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	12	24	28	67
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	23	46	51	120
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	32	124	249	290	349
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	114	282	553	866	739
		0	**170**	**541**	**1,208**	**1,841**	**2,687**

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
MOUNTAIN SPRING WSC, TRINITY (C)							
CONSERVATION - MOUNTAIN SPRING 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 SUPPLY UTILIZATION	HUBERT H MOSS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	5	10
		0	**0**	**0**	**0**	**5**	**10**
MUSTANG SUD, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	253
CONSERVATION - MUSTANG SUD	DEMAND REDUCTION [DENTON]	6	24	52	91	142	204
CONSERVATION, WATER LOSS CONTROL - MUSTANG SUD	DEMAND REDUCTION [DENTON]	9	9	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	15	66	420	558	674
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	48	207	383	438	480
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	10	23	37	38	48
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,450
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	190	491
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	193	214
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	35	60	64	170
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	69	114	120	308
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	99	369	623	675	891
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	345	840	1,383	2,018	1,887

Projected Water Management Strategies
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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
		15	**550**	**1,661**	**3,111**	**4,436**	**7,070**
NORTHLAKE, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	181
CONSERVATION - NORTHLAKE	DEMAND REDUCTION [DENTON]	12	74	186	287	403	440
CONSERVATION, WATER LOSS CONTROL - NORTHLAKE	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	15	69	439	581	480
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	76	163	178	170	115
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	46	218	401	734	342
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	10	25	39	40	34
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	1,469
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	56	323	497
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	12	40	42	58	39
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	3	10	12	24	53
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	32	114	236	225	181
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	54	131	73	86
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	201	152
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	37	62	67	121
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	73	119	125	219
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	95	388	653	711	636

Projected Water Management Strategies
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Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	334	882	1,450	2,101	1,348
		17	**702**	**2,259**	**4,105**	**5,836**	**6,393**
OAK POINT, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	66
CONSERVATION - OAK POINT	DEMAND REDUCTION [DENTON]	4	10	21	35	53	63
CONSERVATION, WATER LOSS CONTROL - OAK POINT	DEMAND REDUCTION [DENTON]	5	5	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	8	29	170	213	176
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	26	92	155	168	126
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	5	10	15	15	13
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	379
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	73	129
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	74	56
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	16	24	25	45
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	31	46	46	80
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	54	164	252	258	233
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	189	374	561	774	494
		9	**297**	**737**	**1,258**	**1,699**	**1,860**

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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
PALOMA CREEK, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	79
CONSERVATION - PALOMA CREEK	DEMAND REDUCTION [DENTON]	35	75	104	115	127	138
CONSERVATION, WATER LOSS CONTROL - PALOMA CREEK	DEMAND REDUCTION [DENTON]	13	13	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	20	51	232	239	210
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	63	161	212	187	150
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	13	18	21	16	15
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	452
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	81	153
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	82	67
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	27	33	28	53
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	54	63	51	96
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	131	287	346	290	280
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	458	655	766	866	589
		48	**773**	**1,357**	**1,788**	**1,967**	**2,282**
PILOT POINT, TRINITY (C)							
CONSERVATION - PILOT POINT	DEMAND REDUCTION [DENTON]	3	4	14	26	44	71
CONSERVATION, WATER LOSS CONTROL - PILOT POINT	DEMAND REDUCTION [DENTON]	4	4	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	14	137	227	258

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
PILOT POINT ADDITIONAL GROUNDWATER	TRINITY AQUIFER [DENTON]	269	269	269	269	269	269
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	5	12	16	18
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	556
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	77	188
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	78	82
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	19	26	65
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	15	37	49	138
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	77	203	275	342
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	176	451	827	726
		276	**277**	**577**	**1,154**	**1,888**	**2,693**
PLANO, TRINITY (C)							
CONSERVATION - PLANO	DEMAND REDUCTION [DENTON]	31	50	73	67	74	80
CONSERVATION, WATER LOSS CONTROL - PLANO	DEMAND REDUCTION [DENTON]	10	10	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	26	47	50	59	41	29
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	19	265	297	369	268	199
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	62	84	63	41	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	87
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	98	123	157	117

Projected Water Management Strategies
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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	151	174
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	4	8	9	10	7	5
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	114
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	51	39
		152	**464**	**590**	**669**	**751**	**844**

PONDER, TRINITY (C)

ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	13
CONSERVATION - PONDER	DEMAND REDUCTION [DENTON]	1	2	5	8	12	18
CONSERVATION, WATER LOSS CONTROL - PONDER	DEMAND REDUCTION [DENTON]	1	1	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	0	1	16	31	35
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	3	15	24	25
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	0	1	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	75
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	10	25
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	10	11
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	1	2	3	9
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	1	4	6	16

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

All values are in acre-feet

WUG, Basin (RWPG) / Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	0	48	142	225	273
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	0	12	55	110	97
		2	3	71	243	433	599
PROSPER, TRINITY (C)							
CONSERVATION - PROSPER	DEMAND REDUCTION [DENTON]	6	49	152	306	478	507
CONSERVATION, WATER LOSS CONTROL - PROSPER	DEMAND REDUCTION [DENTON]	1	4	0	0	0	0
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	2	36	100	216	213	142
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	3	205	600	1,348	1,391	978
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	4	65	126	148	8	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	430
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	172	363	707	532
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	681	793
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [COLLIN]	0	9	100	304	458	365
NTMWD UNALLOCATED SUPPLY UTILIZATION	INDIRECT REUSE [DALLAS]	0	10	118	370	623	78
NTMWD UNALLOCATED SUPPLY UTILIZATION	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	6	63	172	258	205
NTMWD UNALLOCATED SUPPLY UTILIZATION	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	14	134	361	536	423
NTMWD UNALLOCATED SUPPLY UTILIZATION	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	11	110	299	450	360
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	6	17	39	39	27

Projected Water Management Strategies
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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	963
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	231	176
		16	**415**	**1,692**	**3,926**	**6,073**	**5,979**
PROVIDENCE VILLAGE WCID, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	20
CONSERVATION - PROVIDNECE 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 - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	6	14	65	66	55
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	18	46	59	52	39
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	4	5	6	5	4
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	117
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	25	40
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	23	17
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	8	9	8	14
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	15	18	14	25
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	38	81	96	80	72
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	131	185	214	238	151
		8	**208**	**363**	**479**	**526**	**573**

Projected Water Management Strategies
TWDB 2017 State Water Plan Data

WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
ROANOKE, TRINITY (C)							
CONSERVATION - ROANOKE	DEMAND REDUCTION [DENTON]	31	61	101	112	123	134
CONSERVATION, IRRIGATION RESTRICTIONS – ROANOKE	DEMAND REDUCTION [DENTON]	2	6	7	7	7	7
CONSERVATION, WATER LOSS CONTROL - ROANOKE	DEMAND REDUCTION [DENTON]	11	11	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	291	406	319	237	161
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	389	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	604
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	99	174	205
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	46	100	75	83	55
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	11	26	23	32	74
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	117	287	423	315	254
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	135	234	102	120
		44	**543**	**1,062**	**1,292**	**1,462**	**1,614**
SANGER, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	52
CONSERVATION - SANGER	DEMAND REDUCTION [DENTON]	4	10	18	28	42	61
CONSERVATION, WATER LOSS CONTROL - SANGER	DEMAND REDUCTION [DENTON]	6	6	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	2	13	92	133	138
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	8	40	84	104	98
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	5	8	9	10

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	296
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	45	100
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	46	44
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	7	13	15	35
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	14	25	28	63
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	16	73	136	160	182
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	55	167	302	481	385
		10	**99**	**337**	**688**	**1,063**	**1,464**
SHADY SHORES, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	10
CONSERVATION - SHADY SHORES	DEMAND REDUCTION [DENTON]	2	3	5	7	8	10
CONSERVATION, WATER LOSS CONTROL - SHADY SHORES	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	0	3	7	31	32	27
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	8	21	28	25	19
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	2	2	3	2	2
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	58
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	11	20
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	11	8

Projected Water Management Strategies
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WUG, Basin (RWPG) — All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	INDIRECT REUSE [HOPKINS]	0	0	4	4	4	7
UTRWD - CONTRACT RENEWAL WITH COMMERCE FOR LAKE CHAPMAN WATER	CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION [RESERVOIR]	0	0	7	8	7	12
UTRWD - RALPH HALL RESERVOIR AND REUSE	INDIRECT REUSE [FANNIN]	0	18	38	46	39	35
UTRWD - RALPH HALL RESERVOIR AND REUSE	RALPH HALL LAKE/RESERVOIR [RESERVOIR]	0	60	87	103	119	76
		4	96	171	230	258	284
SOUTHLAKE, TRINITY (C)							
CONSERVATION - SOUTHLAKE	DEMAND REDUCTION [DENTON]	8	14	24	32	42	55
CONSERVATION, WATER LOSS CONTROL - SOUTHLAKE	DEMAND REDUCTION [DENTON]	2	2	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	56	83	80	73	60
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	119	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	224
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	99	53	76
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	9	20	19	25	20
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	2	5	6	10	27
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	22	58	61	96	94
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	26	28	33	45
		10	105	216	325	451	601
THE COLONY, TRINITY (C)							
ANRA-COL - LAKE COLUMBIA	COLUMBIA LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	304
CONSERVATION - THE COLONY	DEMAND REDUCTION [DENTON]	26	58	91	131	164	197

Projected Water Management Strategies
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WUG, Basin (RWPG) All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
CONSERVATION, WATER LOSS CONTROL - THE COLONY	DEMAND REDUCTION [DENTON]	39	39	0	0	0	0
DWU - MAIN STEM REUSE	INDIRECT REUSE [DALLAS]	190	152	288	867	869	809
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	485	906	792	683	577
NTMWD - ADDITIONAL LAKE LAVON	LAVON LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	19	52	60	75	56	42
NTMWD - LOWER BOIS D'ARC CREEK RESERVOIR	LOWER BOIS D ARC LAKE/RESERVOIR [RESERVOIR]	14	292	357	469	367	290
NTMWD - MAIN STEM PUMP STATION	INDIRECT REUSE [COLLIN]	46	92	75	52	2	0
NTMWD - OKLAHOMA	OKLAHOMA RUN-OF-RIVER [OKLAHOMA]	0	0	0	0	0	128
NTMWD - TEXOMA BLENDING	TEXOMA LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	0	0	118	156	214	171
NTMWD - TOLEDO BEND PHASE I	TOLEDO BEND LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	207	255
REMOVAL OF CHAPMAN SILT BARRIER	CHAPMAN/COOPER LAKE/RESERVOIR NORTH TEXAS MWD SYSTEM [RESERVOIR]	3	8	10	13	12	9
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	167
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	70	56
UNM-ROR-NECHES RUN OF RIVER	NECHES RUN-OF-RIVER [ANDERSON]	0	0	0	0	301	257
		337	**1,178**	**1,905**	**2,555**	**2,945**	**3,262**
TROPHY CLUB, TRINITY (C)							
CONSERVATION - TROPHY CLUB	DEMAND REDUCTION [DENTON]	189	236	283	301	320	339
CONSERVATION, WATER LOSS CONTROL - TROPHY CLUB	DEMAND REDUCTION [DENTON]	29	29	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	590	688	540	401	272
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	623	0

Projected Water Management Strategies
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WUG, Basin (RWPG)

All values are in acre-feet

Water Management Strategy	Source Name [Origin]	2020	2030	2040	2050	2060	2070
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	977
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	155	279	331
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	65	152	119	132	90
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	16	39	36	51	119
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	167	433	667	506	412
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	205	367	164	193
		218	1,103	1,800	2,185	2,476	2,733
WESTLAKE, TRINITY (C)							
CONSERVATION - WESTLAKE	DEMAND REDUCTION [DENTON]	1	1	1	2	3	4
CONSERVATION, WATER LOSS CONTROL - WESTLAKE	DEMAND REDUCTION [DENTON]	0	0	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	4	6	6	5	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	0
SULPHUR BASIN SUPPLY	MARVIN NICHOLS LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	0	17
SULPHUR BASIN SUPPLY	WRIGHT PATMAN LAKE/RESERVOIR [RESERVOIR]	0	0	0	2	5	6
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	INDIRECT REUSE [NAVARRO]	0	1	2	1	1	2
TRWD - ADDITIONAL CEDAR CREEK AND RICHLAND-CHAMBERS	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	0	0	0	1	2
TRWD - CEDAR CREEK WETLANDS	INDIRECT REUSE [HENDERSON]	0	2	4	9	7	7
TRWD - TEHUACANA	TEHUACANA LAKE/RESERVOIR [RESERVOIR]	0	0	3	4	3	3
		1	8	16	24	34	46
Sum of Projected Water Management Strategies (acre-feet)		**20,410**	**52,460**	**94,346**	**139,273**	**186,137**	**228,578**