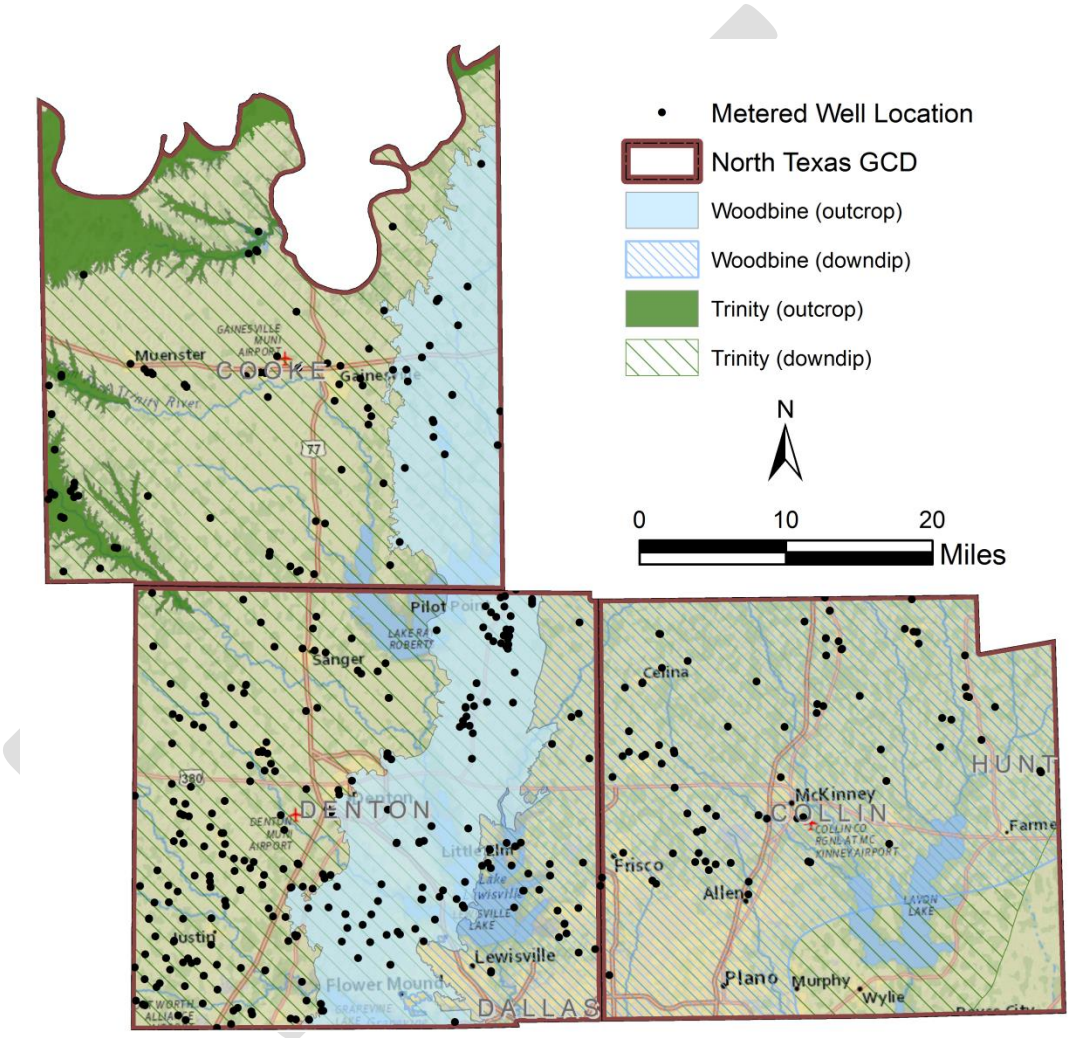
NORTH TEXAS
GROUNDWATER CONSERVATION DISTRICT
MANAGEMENT PLAN



As Adopted on March 21, 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
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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.

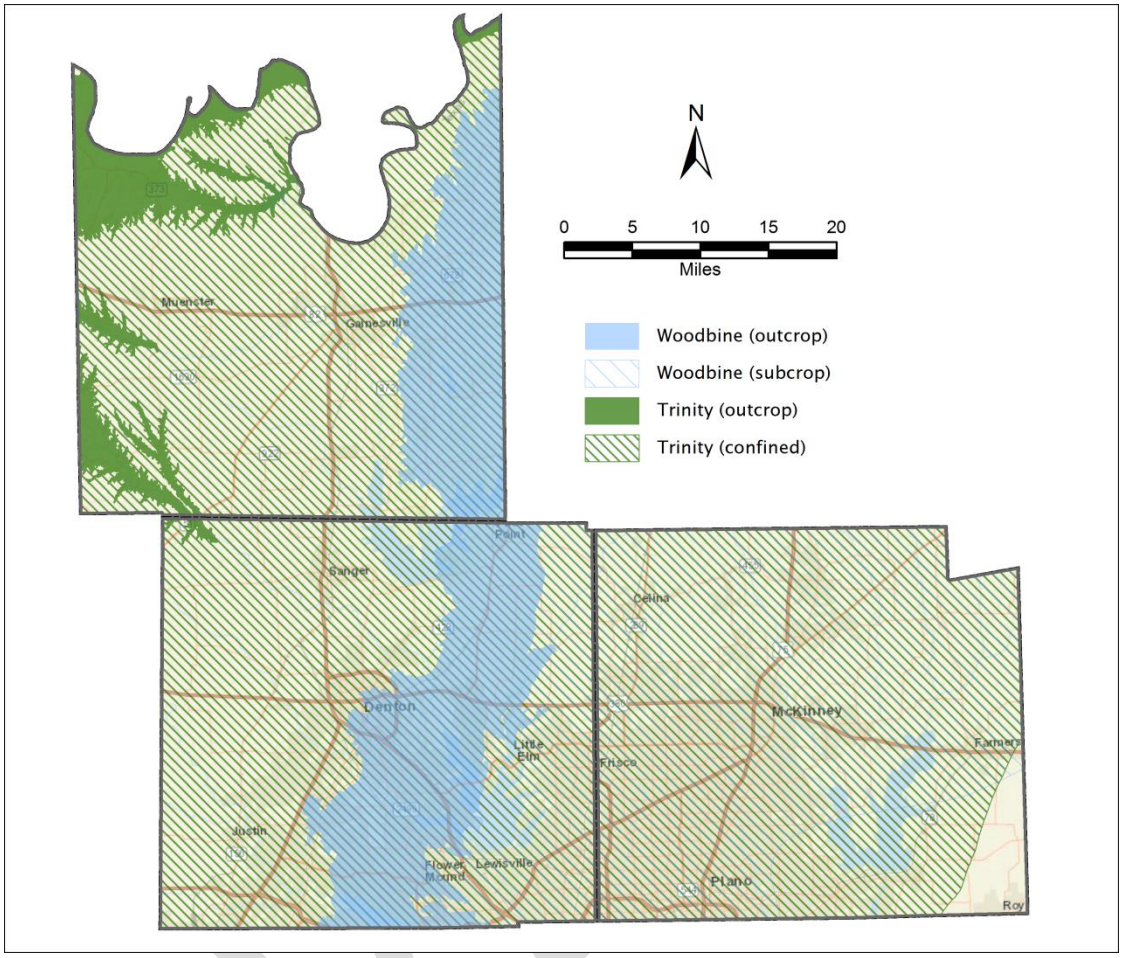


Figure 1. District aquifer map

4. CRITERIA FOR PLAN CERTIFICATION

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

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. A copy of the District's rules is included as Appendix D and may 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 manger 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. To derive DFCs for Region 1 Trinity - Antlers, the DFCs for the Paluxy, Glen Rose, Hensell and Hosston must be averaged. For Region 2 Trinity – Twin Mountains, the DFCs for the Hensell and Hosston must be averaged.

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. The DFCs of the Northern Trinity aquifer in GMA 8 are documented in Table 1 of GAM Run __, which is included as Appendix E. The DFCs are based on average drawdown in feet after 50 years for each Trinity aquifer unit. The DFCs for the Woodbine aquifer are documented in Table 1 of GAM Run __, which is included as Appendix E.

The current DFCs and associated MAGs are listed in Tables 1 and 2, respectively. These values are the maximum drawdown (in feet) allowed over the 50-year planning period.

Table 1. Desired future conditions (from North Trinity-Woodbine GAM Run 10).

County	Aquifer Region	Aquifer	Average Drawdown, Feet
Collin	1	Woodbine	278
		Antlers	556
	2	Woodbine	443
		Paluxy	774
		Twin Mtn	492
Cooke	1	Woodbine	1
		Antlers	166
Denton	1	Woodbine	12
		Antlers	384
	2	Woodbine	28
		Paluxy	566
		Twin Mtn	684

Table 2. Desired future conditions and estimates of modeled available groundwater for pumping in the Northern Trinity Aquifer

County	Desired future condition - feet of	Modeled available
Collin	Paluxy – 298 ft	1,762
Collin	Glen Rose – 247 ft	0
Collin	Hensell – 224	103
Collin	Hosston – 236 ft	239
Collin	County Total	2,104
Cooke	Paluxy – 26 ft	3,528
Cooke	Glen Rose – 42 ft	0
Cooke	Hensell – 60 ft	1,611
Cooke	Hosston – 78 ft	1,711
Cooke	County Total	6,850
Denton	Paluxy – 98 ft	9,822
Denton	Glen Rose – 134 ft	0
Denton	Hensell – 180 ft	3,112
Denton	Hosston – 214 ft	6,399
Denton	County Total	19,333
District Total		**28,287**

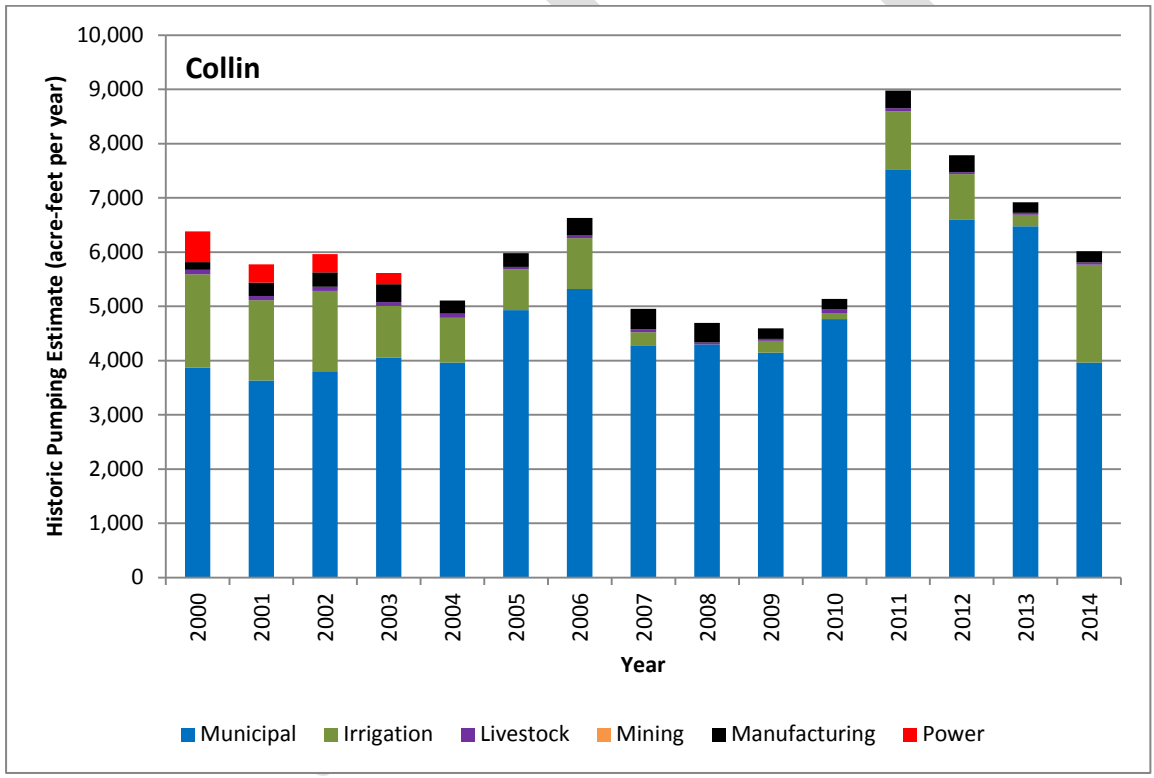
8.2 AMOUNT OF GROUNDWATER BEING USED WITHIN THE DISTRICT

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 2014 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 2014 was 78 percent for municipal use, 18 percent for irrigation use, 2 percent for livestock use, 1 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 37,500 acre-feet in 2011, generally decreased from 2011 through 2014. Total groundwater use reached a minimum in 2014 at around 14,000 acre-feet. Pumpage for irrigation purposes was greatest from 2000 through 2006 and decreased to zero in 2008. Pumpage for mining purposes increased significantly in 2008 through2011. Livestock pumpage remained on average, 1,000 acre-feet per year from 2000 through 2004 and then decreased by about half to around 500 acre-feet per year from 2008 through 2011. Pumpage for steam-electric power generation varied from over 500 acre-feet per year in 2000 to approximately 300 acre-feet per year in 2001 and 2002. No pumpage for power use occurred in 2004 through 2014. Generally, municipal pumpage has been greater than about 15,000 acre-feet per year throughout the historical record with maximum pumpage in 2011 through 2013.



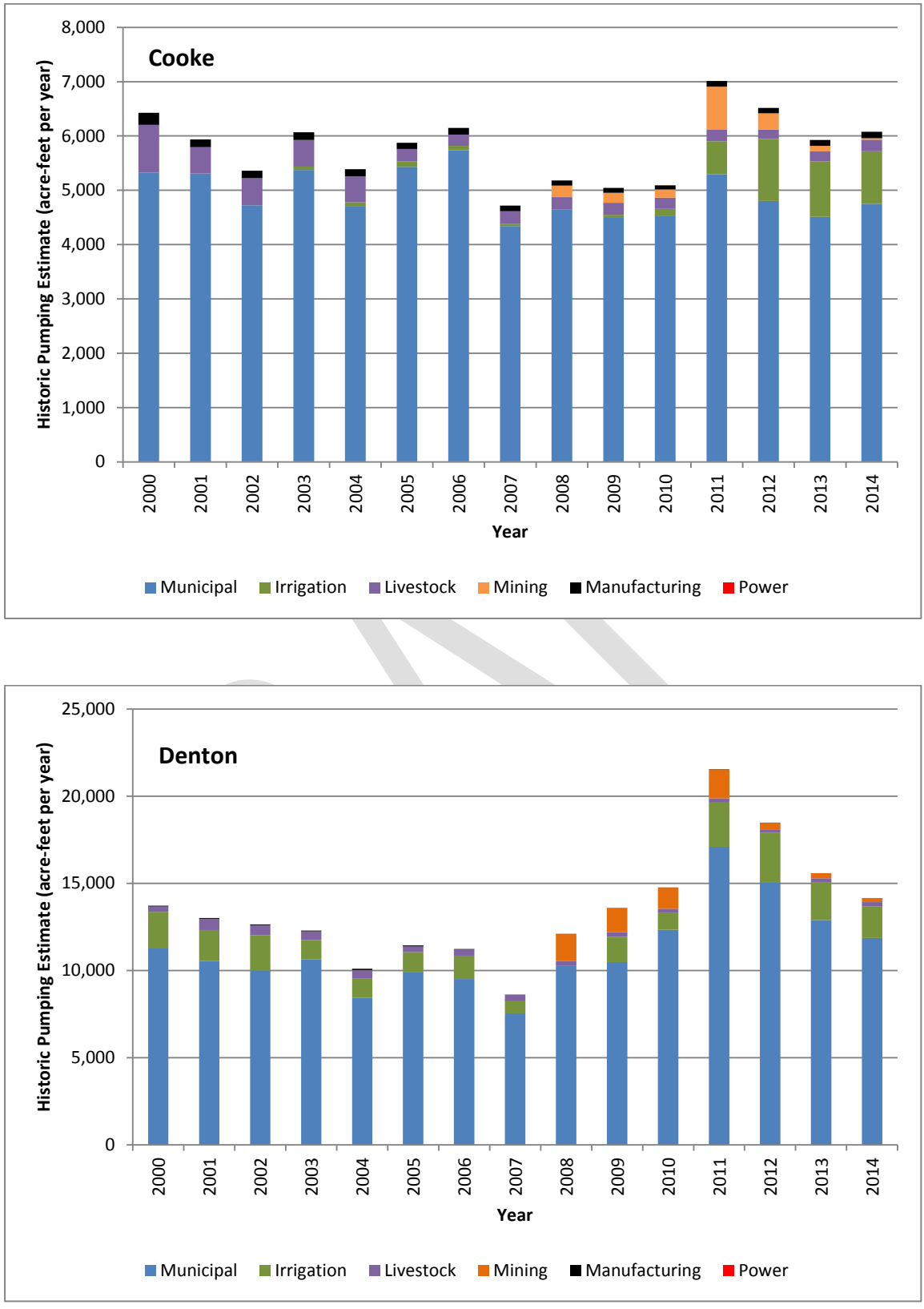


Figure 2. Historical groundwater use estimates by county, 2000-2014

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.

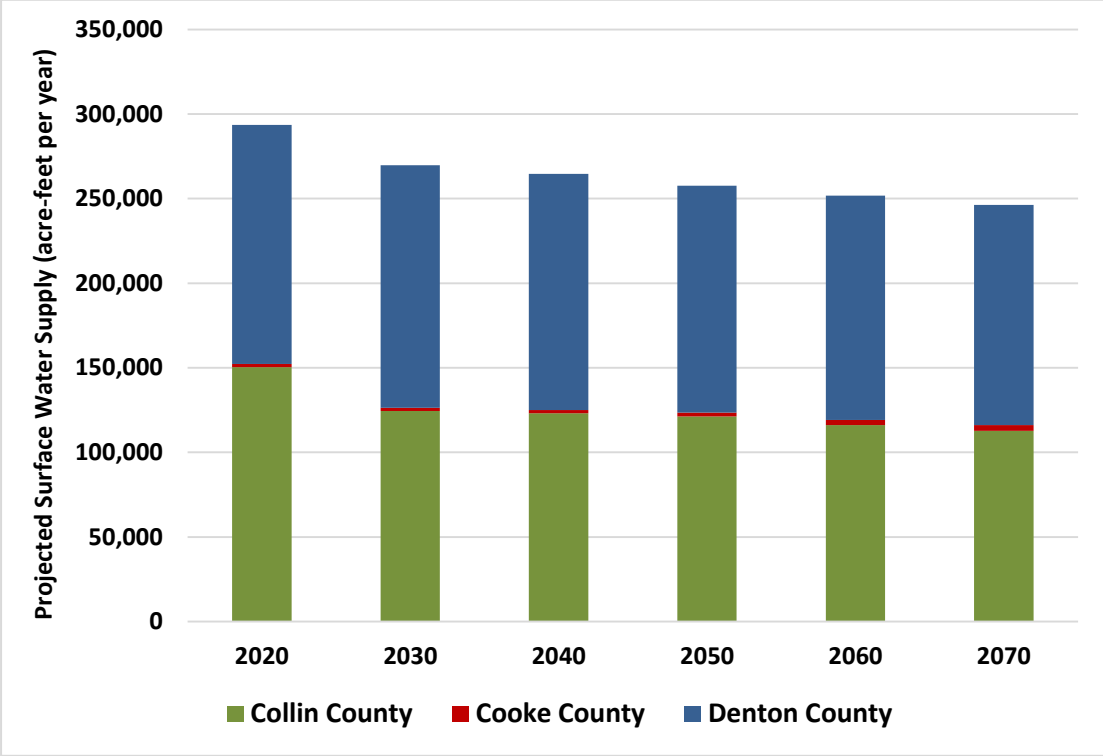


Figure 3. Projected surface water supply within the District by county

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).

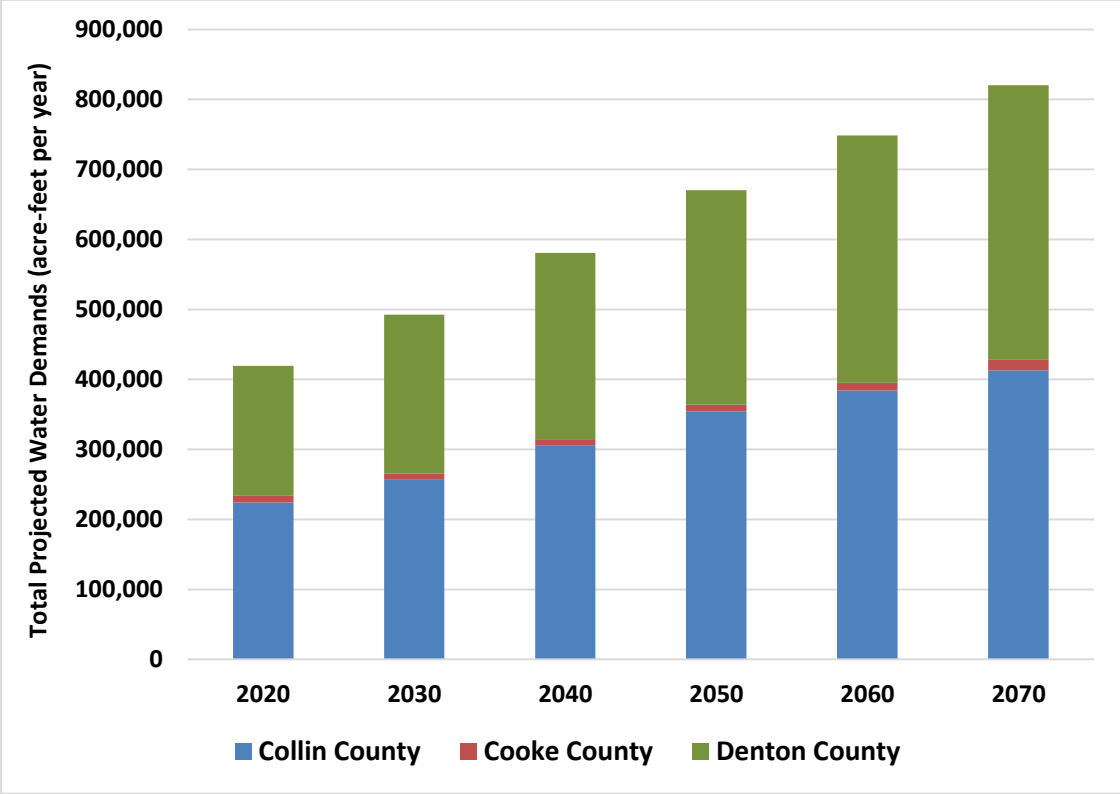


Figure 4. Water demand projections within the District by county

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.

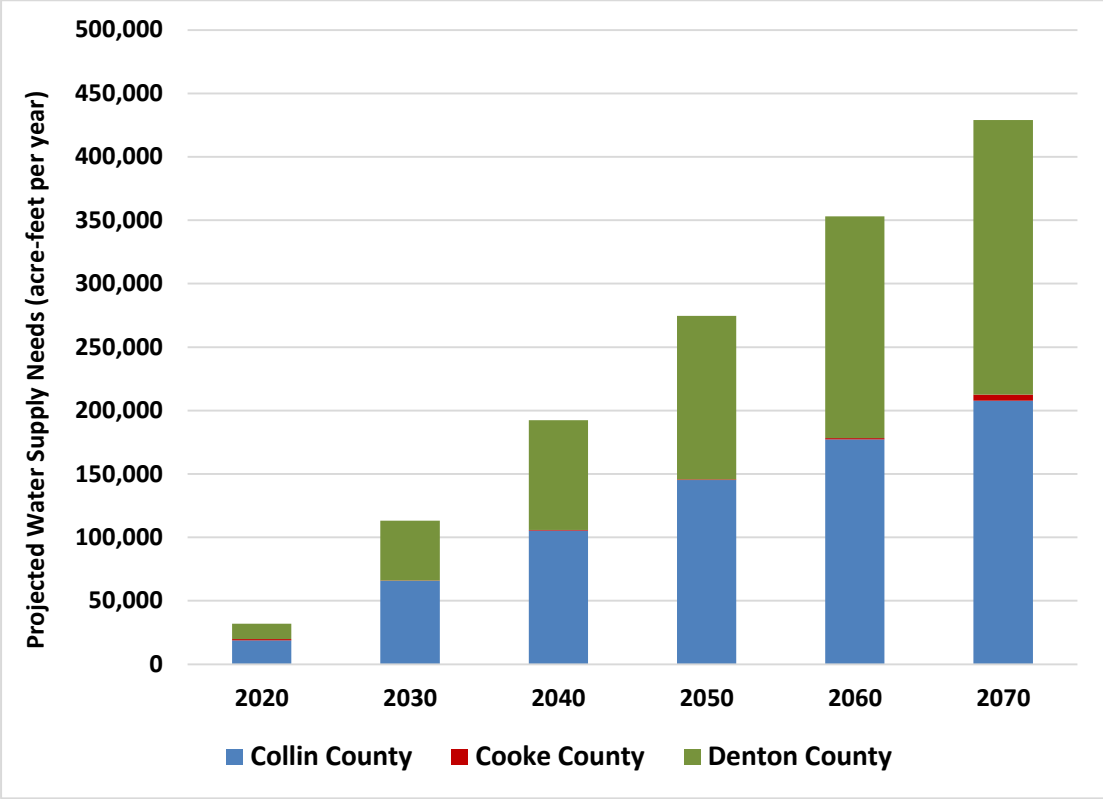


Figure 5. Total projected water supply needs within the District by county

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

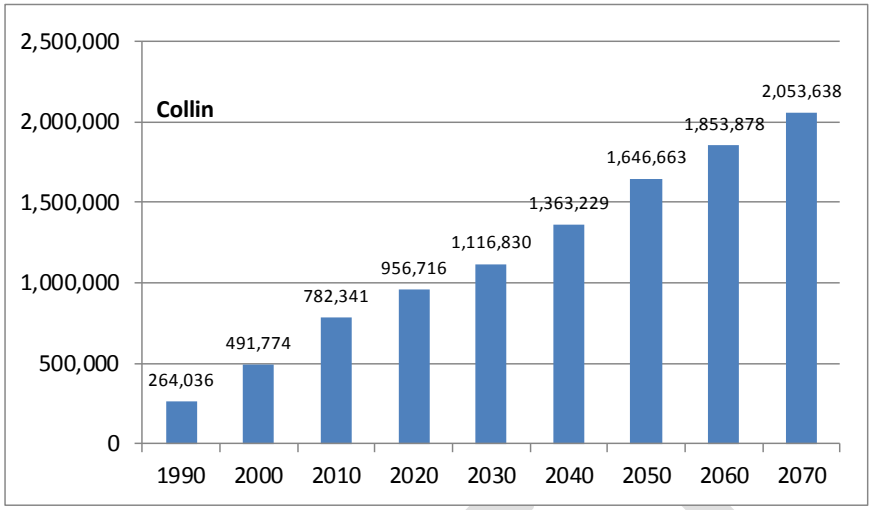
Water Use and Water Demands are now addressed in Sections 10.B and 10.G.

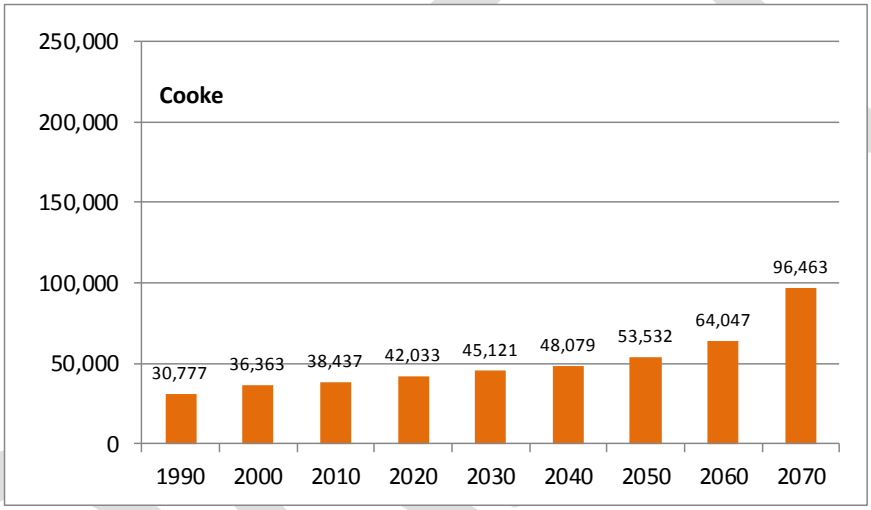
Primary activities involved in the development of a water resources management plan include the analysis and development of projections of population, historical and current water use, and water demands in the future (for a defined period of time). In order to develop projections for how much water supply 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





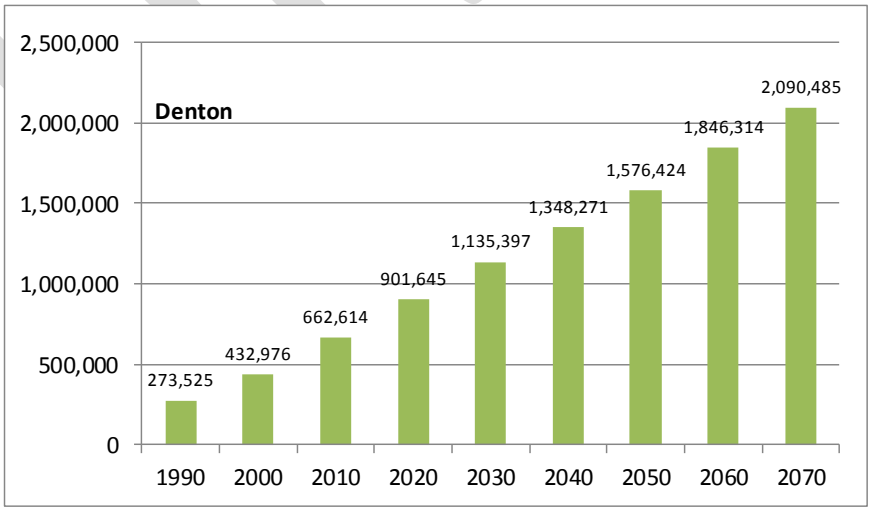


Figure 6. Population trends, by county

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.

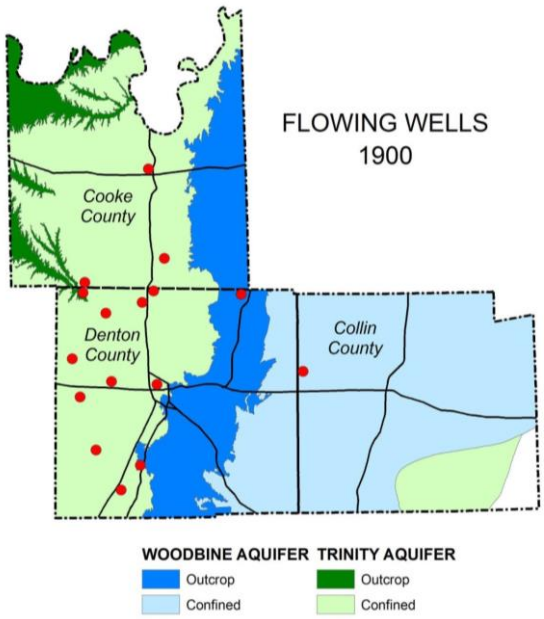


Figure 7. Location of wells flowing at the land surface in 1900 (Hill, 1901).

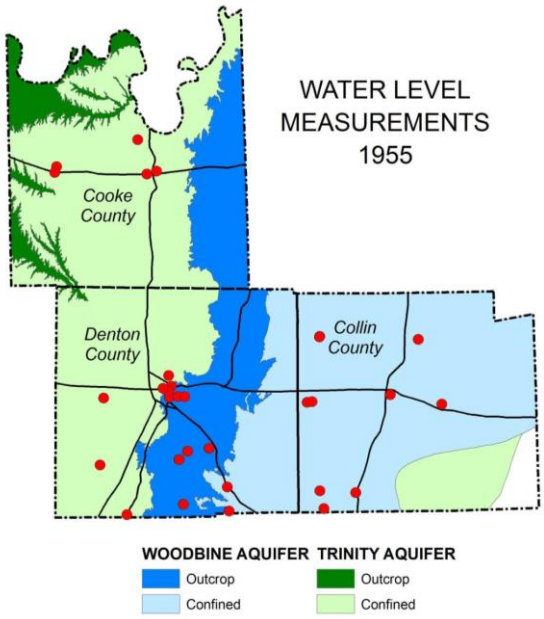


Figure 8. Location of wells having water-level measurements taken in 1955 (Nordstrom, 1982).

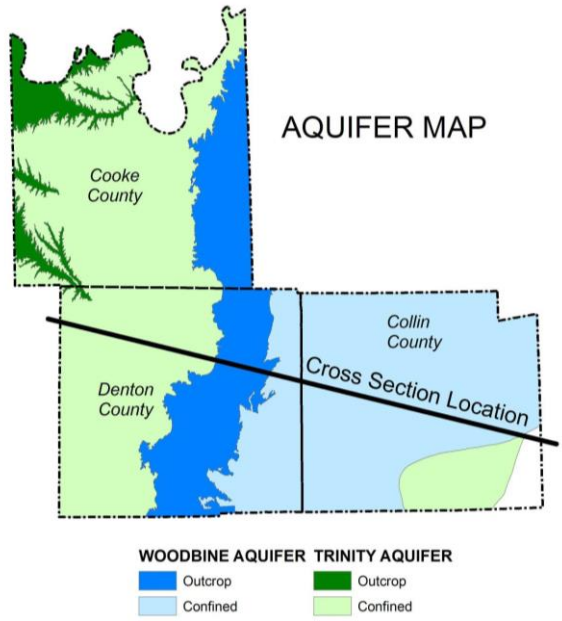


Figure 9. Aquifer Map

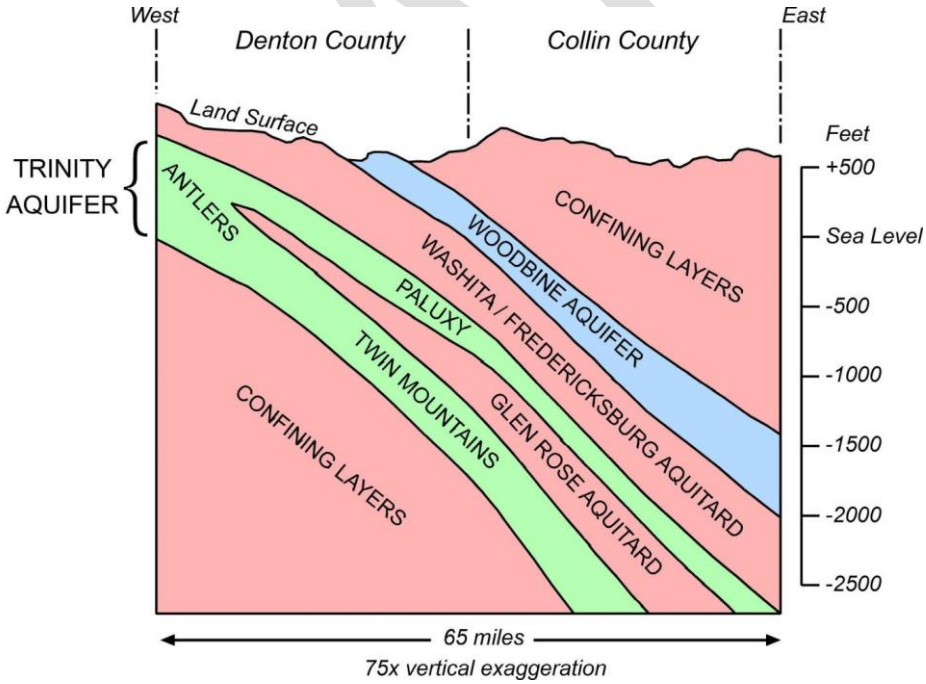


Figure 10. Cross section of the Trinity and Woodbine aquifers in the North Texas GCD.

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.

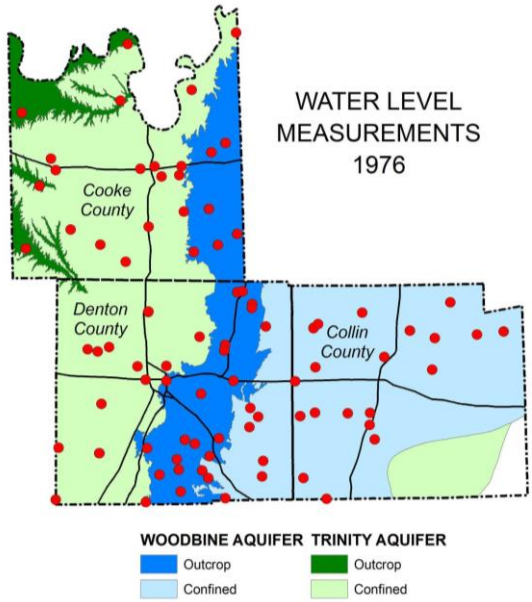


Figure 11. Location of wells having water-level measurements taken in 1976 (Nordstrom, 1982).

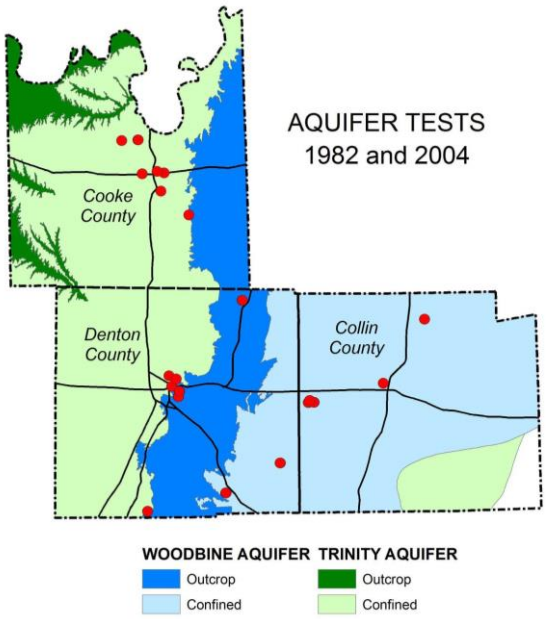


Figure 12. Location of wells having pumping test data reported by Nordstrom (1982) and used by Bene and others (2004) in the Northern Trinity/Woodbine GAM.

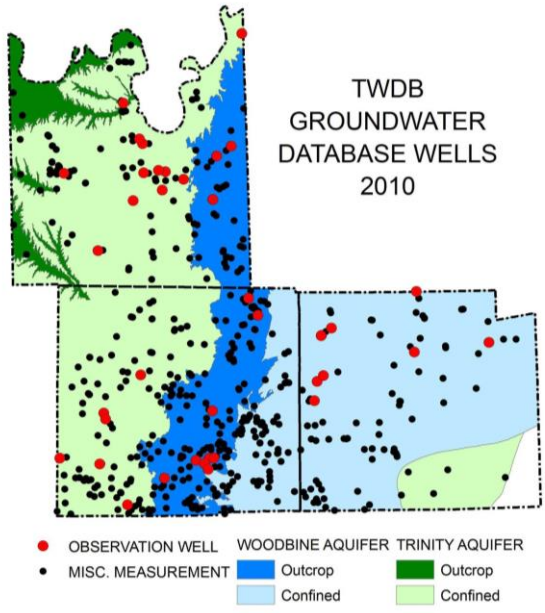


Figure 13. Location of wells having water-level measurements in the TWDB groundwater database. Observation wells that are monitored annually are shown in red.

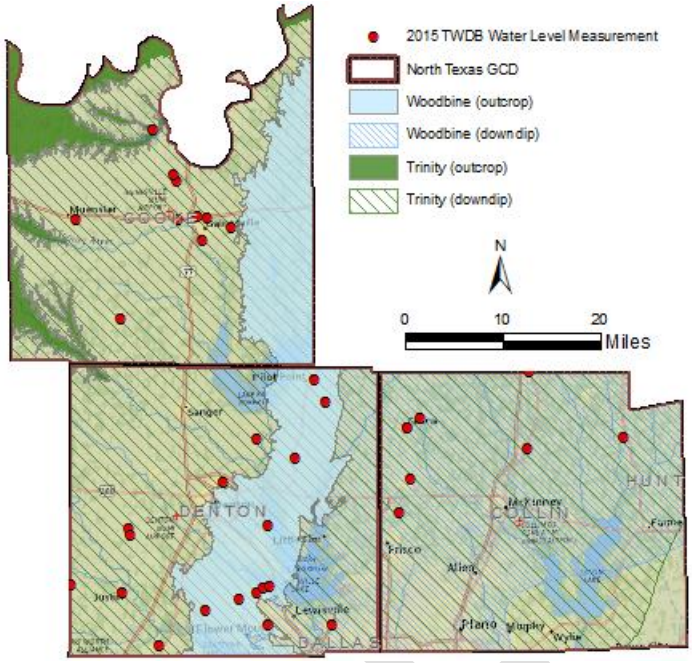


Figure 14. Location of wells having water-level measurements in the TWDB database in year 2015.

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).

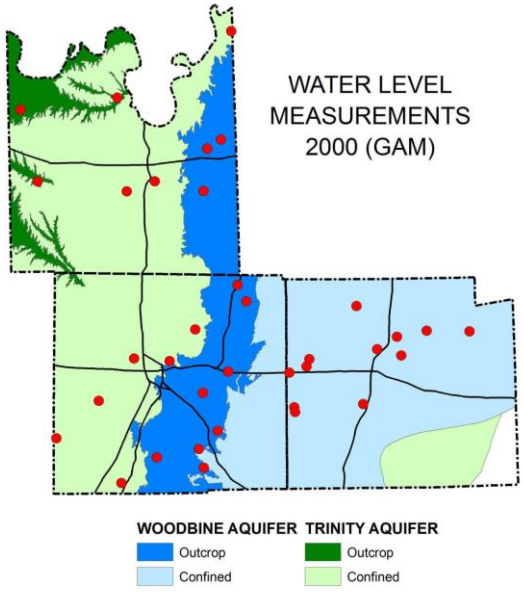


Figure 14. Location of wells having water-level measurements taken in 2000 that were used in the Northern Trinity/Woodbine GAM (Bene and others, 2004).

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.

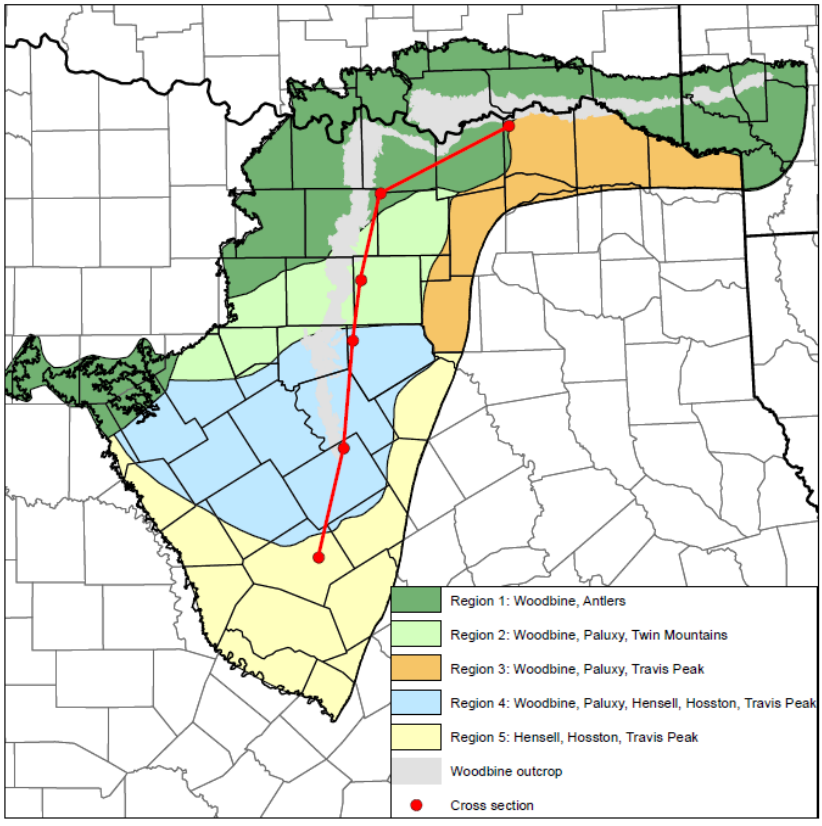


Figure 15. Northern Trinity GAM Regions (from Kelley and others, 2014).

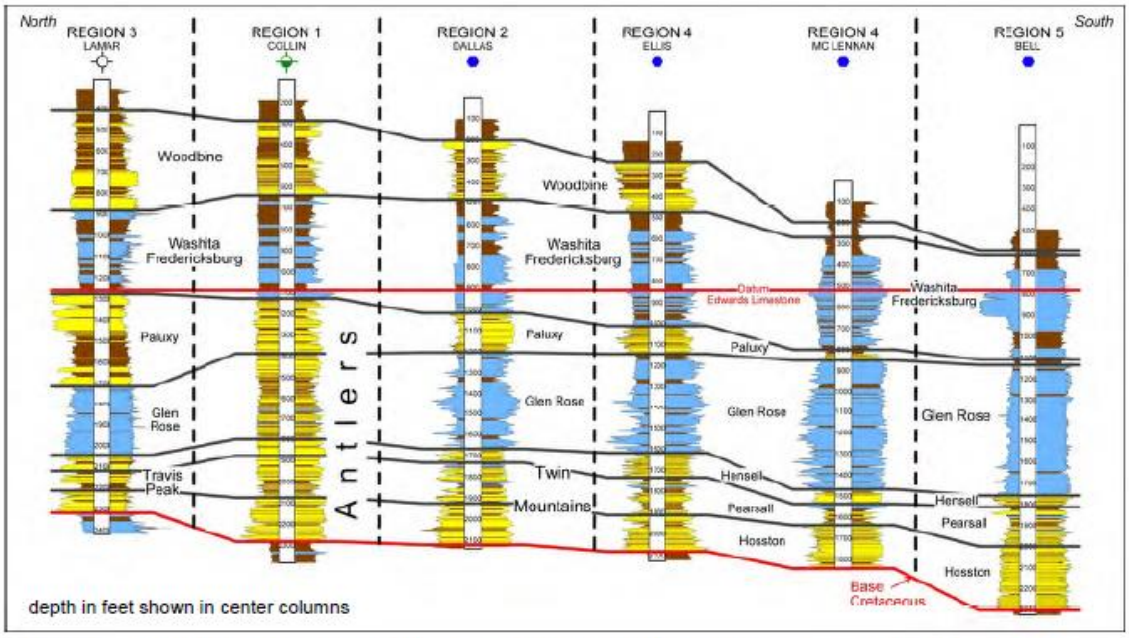


Figure 16. Cross section through Regions 1 through 5 (from Kelley and others, 2014).

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 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
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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	10,478	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

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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
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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

Projected Surface Water Supplies
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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

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
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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

Projected Surface Water Supplies
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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

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

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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

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

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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

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

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

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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

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
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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]	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	64
		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**

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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
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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

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

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]	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

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]	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

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]	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

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
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
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, 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
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	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**

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	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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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	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	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

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

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
		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
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
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

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
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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]	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

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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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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

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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)

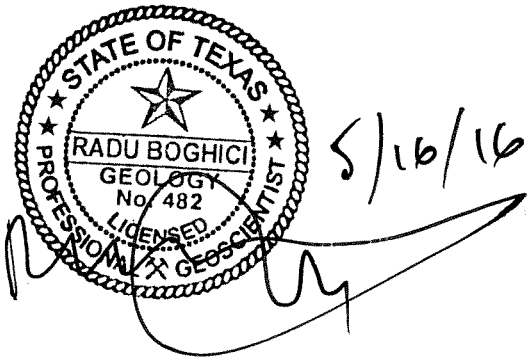
CONSERVATION - WESTLAKE	DEMAND REDUCTION [DENTON]	1	1	1	2	3	4
CONSERVATION, WATER LOSS CONTROL - WESTLAKE	DEMAND REDUCTION [DENTON]	0	0	0	0	0	0
FORT WORTH UNALLOCATED SUPPLY UTILIZATION	TRWD LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	4	6	6	5	5
LAKE PALESTINE	PALESTINE LAKE/RESERVOIR [RESERVOIR]	0	0	0	0	9	0
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.

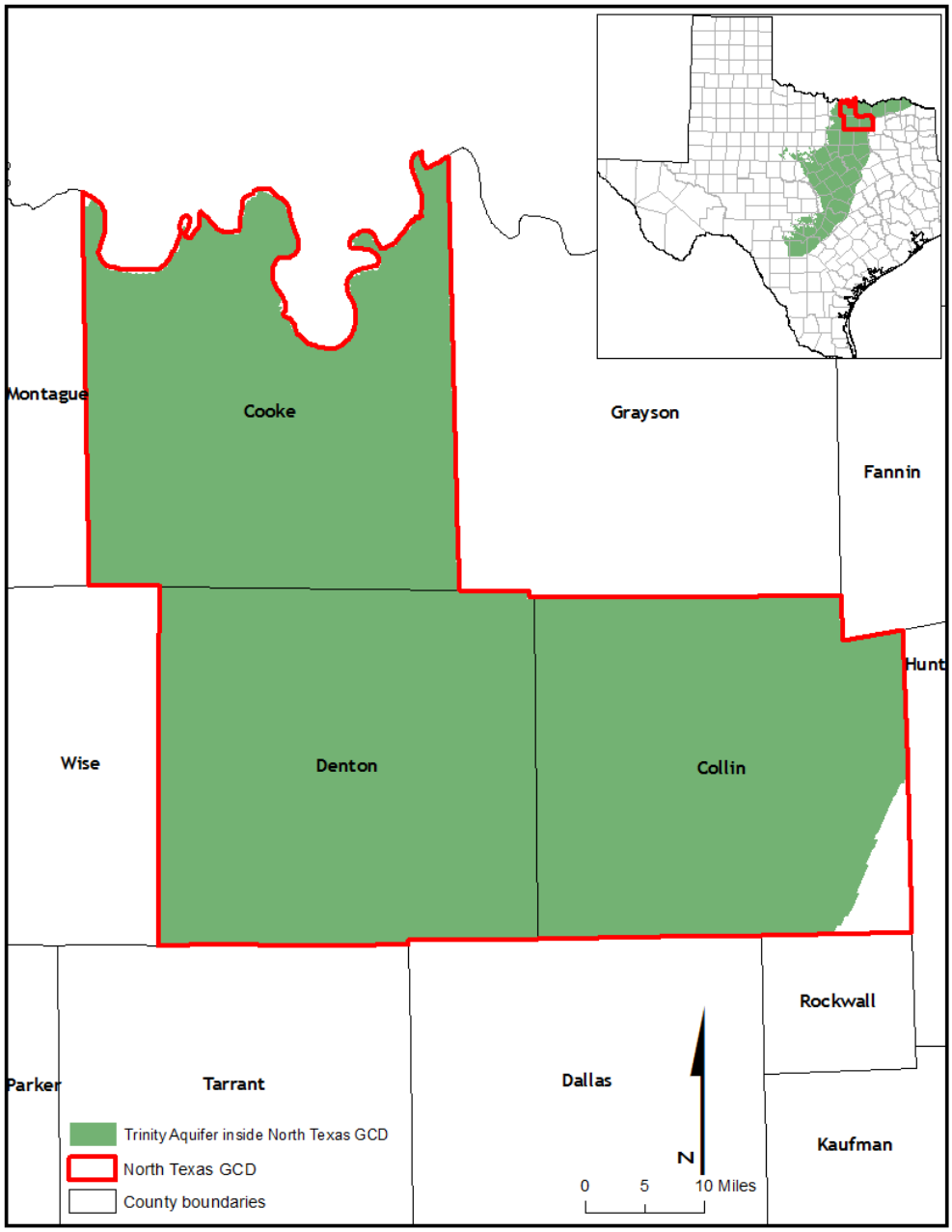

FIGURE 1: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE TRINITY AQUIFER FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED FOR THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT (GCD).

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

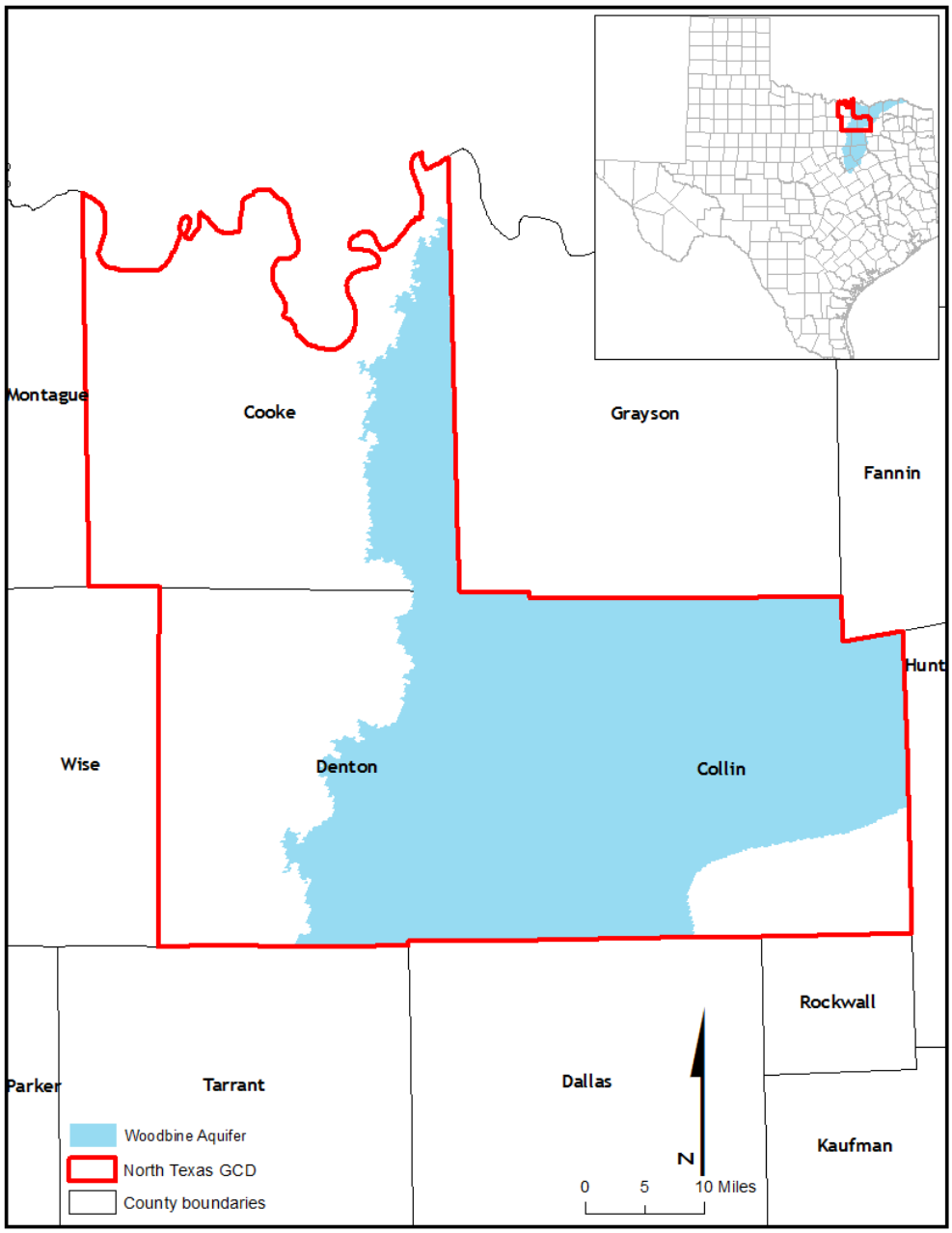

FIGURE 2: AREA OF THE GROUNDWATER AVAILABILITY MODEL FOR THE WOODBINE AQUIFER FROM WHICH THE INFORMATION IN TABLE 2 WAS EXTRACTED FOR THE NORTH TEXAS GROUNDWATER CONSERVATION DISTRICT (GCD).

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.

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