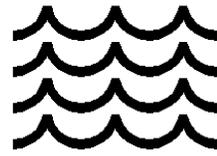


PARK CITIES WATER



DCPCMUD

**DALLAS COUNTY PARK CITIES
MUNICIPAL UTILITY DISTRICT**

WATER CONSERVATION PLAN

DRAFT

ADOPTED: APRIL 9, 2019

PREPARED BY:



**NATHAN D. MAIER
CONSULTING ENGINEERS, INC.**

12377 Merit Drive, Ste 700, Dallas, TX 75251 | 214.739.4741
Texas Reg. No. F-356 | TBPLS Reg. No. 100189-00

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**Water Conservation Plan for
Dallas County Park Cities Municipal Utility District**

April 2019

1. INTRODUCTION AND OBJECTIVES

Water supply has always been a key issue in the development of Texas. Additional supplies to meet increased demand will be difficult and expensive to develop. The Dallas County Park Cities Municipal Utility District (the District) is a wholesale water supplier who maintains senior water rights in Grapevine Lake. The District serves two wholesale treated water customers, the City of University Park (the City) and the Town of Highland Park (the Town). The District also sells raw water wholesale to the City of Grapevine and Brook Hollow Golf Club.

Recognizing the need for efficient use of existing water supplies, the Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation plans for public water suppliers. TCEQ guidelines and requirements are included in Appendix B. The objectives of this water conservation plan are as follows:

- Reduce seasonal peak demands.
- Reduce the loss and waste of water.
- Improve the efficient use of water.
- Decrease unaccounted for water.
- Maintain quality of life.

2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

The Texas Commission on Environmental Quality (TCEQ) rules governing the development of water conservation plans for municipal uses by public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.5 of the Texas Administrative Code (30 TAC §288.5), effective December 6, 2012. Required submittals for wholesale public water suppliers are found in Code 30 TAC §288.30, effective August 16, 2018. A complete copy of these rules is included in Appendix B. The TCEQ defines a water conservation plan as:

“A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).” 30 TAC§288.1(24)

Minimum Conservation Plan Requirements

The minimum requirements in the Texas Administrative Code for Water Conservation Plans are covered in this report as follows:

TCEQ Rule	Location in Plan	Description
288.5(1)(A)	Section 4.1	Utility Profile
288.5(1)(B)	Section 3	Specification of Goals
288.5(1)(C)	Section 4.2	Accurate Metering
288.5(1)(D)	Section 4.3	Record Management Program
288.5(1)(E)	Section 4.4	Metering, Leak Detection and Repair
288.5(1)(F)	Section 4.5	Provisions for New or Amended Wholesale Water Contract(s)
288.5(1)(G)	Section 4.6	Reservoir System Operation Plan
288.5(1)(H)	Section 4.7	Means of Implementation and Enforcement
288.5(1)(I)	Section 4.8	Coordination with Regional Water Planning Group
288.5(3)	Section 4.9	Review and Update of Plan
288.30(1)	Section 4.9	Submittal of Plan
288.30(2) & 288.30(10)(C)	Section 4.9	Implementation Reports*

*The TCEQ requires an Implementation Report be submitted every five years with the Water Conservation Plan Update. The TWDB requires Implementation Reports be submitted annually.

3. SPECIFICATION OF WATER CONSERVATION GOALS

Rule 288.5(1)(B) requires the adoption of specific water conservation goals for a water conservation plan. The District has developed 5-year and 10-year goals for the reduction of per capita municipal use, following TCEQ procedures described in the water utility profile (Appendix C). The TCEQ defines municipal use in gallons per capita per day as “the total average daily amount of water diverted or pumped for treatment for potable use by a public water supply system. The calculation is made by dividing the water diverted or pumped for treatment for potable use by the population served.”

The District has no retail customers, therefore its ability to influence conservation practices are limited to educational and public information programs and its influence over its wholesale customers to use conservation practices with their retail customers. Water conservation within the District is primarily governed by the Water Conservation Programs of its largest wholesale customers, The City of University Park (City) and the Town of Highland Park (Town). The City and Town are the Districts only treated wholesale water customers. The goals set forth in this Plan reflect those that are established in the 2019 updates to the City's and Town's Water Conservation Plans.

The 2002 5-year average (includes 1998-2002 water usage) is District's highest 5-year average water use for the period analyzed (1993 to present) and is now referred to as the average of record. Percent reduction goals as stated below are from the 2018 5-year District average and are summarized below as the Baseline Average. All baseline data and new 5-year and 10-year goals are summarized below.

- Average of Record (2002 5-year rolling average)
 - Total GPCD: 298.4
- Baseline Average (2018 5-year rolling average)
 - Total GPCD: 258.0
- 5-year goals
 - Target Date: December 31, 2023
 - Total water use of 247.4 GPCD (4.0% reduction over the next 5 years)
 - Maintain water loss at 10% or less.
- 10-year goals
 - Target Date: December 31, 2028
 - Total water use of 234.5 GPCD (9.0% reduction over the next 10 years)
 - Maintain water loss at 10% or less.
 - The 10-year goals will be reviewed and revised during the next Plan update, based on the District's and customer's implementation progress.

4. MINIMUM CONSERVATION PLAN REQUIREMENTS

4.1 Water Utility Profile

Rule 288.5(1)(A) requires the District to submit a Water Utility Profile to the TCEQ. The completed profile is included in Appendix C, which includes data on existing and projected service populations, number of connections, historical metered water sales and water production, and general utility system information.

4.2 Accurate Metering of Diverted Water

Raw water is released based on daily requests by the District to the Corps of Engineers. The District's request is combined with the City of Dallas' request and the City of Grapevine's request. A gate setting is used by the Corps and an approximate acre-foot volume is recorded. A weekly report of daily releases for all three entities is generated by Dallas and circulated to the District.

In addition, the Corps of Engineers provides a daily reservoir report to the District. The District accounts for the daily release of Grapevine Reservoir, plus inflows on a hydrologic computer model. This allows the District to estimate the evaporation loss from transporting of the release from the reservoir to the plant intake.

As the water enters the plant it is metered in two different ways. First the raw water volume is metered by multiplying pump capacity times run time. Secondly, the raw water is metered using a main raw water meter.

Throughout the plant, major uses of water are metered and recorded, such as sludge pumped, filter backwash water, and surface wash water. The water from all of these processes is recycled and reclaimed.

As the treated water leaves the plant, it is pumped into a 36-inch transmission line a metered using a 36-inch sonic meter. The sonic meter was calibrated at the factory to within an accuracy of $\pm 1.0\%$. It is metered again by venturi meters as it enters the respective Town/City at their point of entry. The venturi meters are calibrated biannually to within an accuracy of ± 1.0 .

4.3 Record Management System

The District currently records the release amount from the dam below Grapevine Lake, the raw water pumped into the treatment plant, the total volume treated at the water plant, the total volume pumped out of the treatment plant and the amount of water sold to both the City and the Town. Monitoring each of these water volumes allows the District to obtain water loss information for each transmission stage.

4.4 Metering, Leak Detection and Repair

As previously stated in Section 4.2, the District meters water into, through and out of the plant as well as at the entrance to the Town and the City. By comparing the total metered raw water to the total metered treated water, in-plant losses are calculated.

Comparing total treated water leaving the plant to the treated water sold, it can be determined if there are losses during transmission. This audit is preformed daily and trend graphs are updated daily to alert the District to potential leaks or other problems. If problem is thought to exist, maintenance personnel quickly ensure that the problem is quickly contained.

4.5 Wholesale Customer's Water Conservation Plan

The District requires that its wholesale customers develop and implement a water conservation plan. The District also requires that any potential new wholesale customer(s) develop and implement a water conservation plan.

4.6 Reservoir System Operation Plan

The District receives daily releases from Grapevine Lake. These releases are the only source of raw water for the District therefore a Reservoir System Operation Plan is not needed. However, the District currently implements a Reservoir Accounting Plan in conjunction with the City of Dallas and the City of Grapevine, who also have permitted storage and water rights in Grapevine Lake.

4.7 Implementation and Enforcement

Appendix F contains a resolution adopted by the District regarding this water conservation plan. The resolution designates responsible officials to implement and enforce the water conservation plan.

4.8 Coordination with Region C Water Planning Group

The District is located within the Region C Water-Planning Group. The District has provided a copy of this Water Conservation Plan to the Region C Water Planning Group. Documentation on coordination with Region C may be found in Appendix F.

4.9 Review, Update and Submittal of the Plan

Review and Update of the Water Conservation Plan

The District will continue to review and develop recognized Best Management Practices (BMPs) that are suitable for its customer water use over the duration of this Plan and assist the City and Town in implementation of their practices. This developmental process will include an annual evaluation of BMPs and recommend which measures should be increased, maintained, or eliminated. The table provided below is a summary of existing and future District, as well as customer, BMP strategies. Refer to this Plan and Appendix D for a description of these practices.

**Dallas County Park Cities MUD Best Management Practices
Implementation Schedule**

BMP	Description	Currently Implemented by the District¹
1	System Water Audit & Water Loss	✓ (1950)
7	School Education	✓ (2006)
14	Wholesale Agency Assistance Programs	✓ (1990)
16	Water Reuse ²	✓ (1950)
17	Public Information	✓ (1990)

1. Please refer to revised Water Conservation Plans by the City and Town for current and future BMP implementation.
2. Decant from the water treatment plant sludge lagoons is recycled and returned to the head of the treatment process.

Annual Implementation Report

- Annual evaluation of the implementation of this water conservation plan will be performed and submitted to the TWDB on May 1, 2010, and on an annual basis thereafter. The annual implementation report will follow the most recent annual reporting form supplied by the TWDB for each submittal.

Submittal of the Plan

As required by Rule 288.30(1) & 288.30(10), the water conservation plan will be revised and resubmitted to the TCEQ & TWDB every five years, beginning May 1, 2009. Appendix D includes the TCEQ implementation report and Appendix F contains the annual reports submitted to the TWDB for the previous planning period as required by Rule 288.30(1) & (2).

5. OTHER WATER CONSERVATION MEASURES

The District serves only two wholesale treated water customers, the Town and the City. Few means are available to the District to lower its municipal gpcd. The first available means of lowering the District's municipal gpcd is by lowering its unaccounted for water which include transmission losses, evaporation and treatment plant losses. The second means is by its customer cities lowering their municipal gpcd.

The District has multiple meters throughout the transmission line and the treatment plant. The transmission line is approximately 50-years old and is due to be replaced in the future. This should help lower the unaccounted for water. All water used in individual processes throughout the treatment plant is recycled to the extent available to minimize unaccounted for water losses.

The District has provided funding to the Town and City for elementary and high school science education through the Major Rivers program and for public information on water conservation as well as requiring both the Town and the City to write individual water conservation plans upon contract renewal. This will help lower the overall municipal gpcd of the District. Water Conservation information is also provided on the District's web site at: www.parkcitieswater.com.

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APPENDIX A

LIST OF REFERENCES

APPENDIX A

LIST OF REFERENCES

- (1) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.1, downloaded from: <https://www.tceq.texas.gov/rules/indxpdf.html#288>, Effective August 16, 2018
- (2) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.5, downloaded from: <https://www.tceq.texas.gov/rules/indxpdf.html#288>, Effective December 6, 2012
- (3) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter B, Rule 288.22, downloaded from: <https://www.tceq.texas.gov/rules/indxpdf.html#288>, Effective October 7, 2004
- (4) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter C, Rule 288.30, downloaded from: <https://www.tceq.texas.gov/rules/indxpdf.html#288>, Effective August 16, 2018
- (5) Nathan D. Maier Consulting Engineers, Inc.: *Dallas County Park Cities Municipal Utility District Water Conservation Plan, April 2009*, prepared for the Dallas County Park Cities Municipal Utility District
- (6) Alan Plummer Associates, Inc.: *Dallas County Park Cities Municipal Utility District Water Conservation Plan, April 2005*, prepared for the Dallas County Park Cities Municipal Utility District
- (7) City of Dallas Water Utilities Conservation Division: *Water Conservation and Drought Contingency Plan Updates, Briefing Materials for February 19, 2014 City Council Meeting*
- (8) City of Fort Worth: *City of Fort Worth 2005 Water Conservation Plan*, downloaded from: <http://www.fortworthgov.org/water/>
- (9) Texas Water Development Board: *Report 362: Water Conservation Best Management Practices Guide, November 2004*, developed by GDS Associates, Inc, et. al.
- (10) Texas Water Development Board: *Guidance and Methodology for Reporting on Water Conservation and Water Use, December 2012*, developed by the TWDB, TCEQ and the Water Conservation Advisory Council
- (11) Nathan D. Maier Consulting Engineers, Inc.: *City of University Park Water Conservation Plan, Draft March 2019*, prepared for the City of University Park
- (12) Nathan D. Maier Consulting Engineers, Inc.: *Town of Highland Park Water Conservation Plan, Draft March 2019*, prepared for the Town of Highland Park.

APPENDIX B

**TCEQ RULES ON WHOLESALE
WATER CONSERVATION PLANS**

SUBCHAPTER A: WATER CONSERVATION PLANS
§§288.1 - 288.7
Effective August 16, 2018

§288.1. Definitions.

The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Agricultural or Agriculture--Any of the following activities:

(A) cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;

(B) the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;

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

(D) raising or keeping equine animals;

(E) wildlife management; and

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

(2) Agricultural use--Any use or activity involving agriculture, including irrigation.

(3) Best management practices--Voluntary efficiency measures that save a quantifiable amount of water, either directly or indirectly, and that can be implemented within a specific time frame.

(4) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses.

(5) Commercial use--The use of water by a place of business, such as a hotel, restaurant, or office building. This does not include multi-family residences or agricultural, industrial, or institutional users.

(6) Drought contingency plan--A strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies. A drought contingency plan may be a separate document identified as such or may be contained within another water management document(s).

(7) Industrial use--The use of water in processes designed to convert materials of a lower order of value into forms having greater usability and commercial value, and the development of power by means other than hydroelectric, but does not include agricultural use.

(8) Institutional use--The use of water by an establishment dedicated to public service, such as a school, university, church, hospital, nursing home, prison, or government facility. All facilities dedicated to public service are considered institutional regardless of ownership.

(9) Irrigation--The agricultural use of water for the irrigation of crops, trees, and pastureland, including, but not limited to, golf courses and parks which do not receive water from a public water supplier.

(10) Irrigation water use efficiency--The percentage of that amount of irrigation water which is beneficially used by agriculture crops or other vegetation relative to the amount of water diverted from the source(s) of supply. Beneficial uses of water for irrigation purposes include, but are not limited to, evapotranspiration needs for vegetative maintenance and growth, salinity management, and leaching requirements associated with irrigation.

(11) Mining use--The use of water for mining processes including hydraulic use, drilling, washing sand and gravel, and oil field re-pressuring.

(12) Municipal use--The use of potable water provided by a public water supplier as well as the use of sewage effluent for residential, commercial, industrial, agricultural, institutional, and wholesale uses.

(13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, grow means the actual cultivation or propagation of

the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

(14) Pollution--The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to the public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.

(15) Public water supplier--An individual or entity that supplies water to the public for human consumption.

(16) Regional water planning group--A group established by the Texas Water Development Board to prepare a regional water plan under Texas Water Code, §16.053.

(17) Residential gallons per capita per day--The total gallons sold for residential use by a public water supplier divided by the residential population served and then divided by the number of days in the year.

(18) Residential use--The use of water that is billed to single and multi-family residences, which applies to indoor and outdoor uses.

(19) Retail public water supplier--An individual or entity that for compensation supplies water to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants when that water is not resold to or used by others.

(20) Reuse--The authorized use for one or more beneficial purposes of use of water that remains unconsumed after the water is used for the original purpose of use and before that water is either disposed of or discharged or otherwise allowed to flow into a watercourse, lake, or other body of state-owned water.

(21) Total use--The volume of raw or potable water provided by a public water supplier to billed customer sectors or nonrevenue uses and the volume lost during conveyance, treatment, or transmission of that water.

(22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in

this chapter shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

(23) Water conservation coordinator--The person designated by a retail public water supplier that is responsible for implementing a water conservation plan.

(24) Water conservation plan--A strategy or combination of strategies for reducing the volume of water withdrawn from a water supply source, for reducing the loss or waste of water, for maintaining or improving the efficiency in the use of water, for increasing the recycling and reuse of water, and for preventing the pollution of water. A water conservation plan may be a separate document identified as such or may be contained within another water management document(s).

(25) Wholesale public water supplier--An individual or entity that for compensation supplies water to another for resale to the public for human consumption. The term does not include an individual or entity that supplies water to itself or its employees or tenants as an incident of that employee service or tenancy when that water is not resold to or used by others, or an individual or entity that conveys water to another individual or entity, but does not own the right to the water which is conveyed, whether or not for a delivery fee.

(26) Wholesale use--Water sold from one entity or public water supplier to other retail water purveyors for resale to individual customers.

Adopted July 25, 2018

Effective August 16, 2018

§288.2. Water Conservation Plans for Municipal Uses by Public Water Suppliers.

(a) A water conservation plan for municipal water use by public water suppliers must provide information in response to the following. If the plan does not provide information for each requirement, the public water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for municipal uses by public water suppliers must include the following elements:

(A) a utility profile in accordance with the Texas Water Use Methodology, including, but not limited to, information regarding population and customer data, water use data (including total gallons per capita per day (GPCD) and residential GPCD), water supply system data, and wastewater system data;

(J) documentation of coordination with the regional water planning groups, in order to ensure consistency with appropriate approved regional water plans.

(b) A water conservation plan prepared in accordance with the rules of the United States Department of Agriculture Natural Resource Conservation Service, the Texas State Soil and Water Conservation Board, or other federal or state agency and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet application requirements in accordance with a memorandum of understanding between the commission and that agency.

(c) An agricultural water user shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. An agricultural water user shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Adopted November 14, 2012

Effective December 6, 2012

§288.5. Water Conservation Plans for Wholesale Water Suppliers.

A water conservation plan for a wholesale water supplier must provide information in response to each of the following paragraphs. If the plan does not provide information for each requirement, the wholesale water supplier shall include in the plan an explanation of why the requirement is not applicable.

(1) Minimum requirements. All water conservation plans for wholesale water suppliers must include the following elements:

(A) a description of the wholesaler's service area, including population and customer data, water use data, water supply system data, and wastewater data;

(B) specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable water loss, and the basis for the development of these goals. The goals established by wholesale water suppliers under this subparagraph are not enforceable;

(C) a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply;

(D) a monitoring and record management program for determining water deliveries, sales, and losses;

(E) a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system;

(F) a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of this chapter. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with applicable provisions of this chapter;

(G) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plans shall include optimization of water supplies as one of the significant goals of the plan;

(H) a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan; and

(I) documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

(2) Additional conservation strategies. Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of paragraph (1) of this section, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

(A) conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;

(B) a program to assist agricultural customers in the development of conservation pollution prevention and abatement plans;

(C) a program for reuse and/or recycling of wastewater and/or graywater; and

(D) any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

(3) Review and update requirements. The wholesale water supplier shall review and update its water conservation plan, as appropriate, based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan every five years to coincide with the regional water planning group.

Adopted November 14, 2012

Effective December 6, 2012

§288.6. Water Conservation Plans for Any Other Purpose or Use.

A water conservation plan for any other purpose or use not covered in this subchapter shall provide information where applicable about those practices, techniques, and technologies that will be used to reduce the consumption of water, prevent or reduce the loss or waste of water, maintain or improve the efficiency in the use of water, increase the recycling and reuse of water, or prevent the pollution of water.

Adopted April 5, 2000

Effective April 27, 2000

§288.7. Plans Submitted with a Water Right Application for New or Additional State Water.

(a) A water conservation plan submitted with an application for a new or additional appropriation of water must include data and information which:

(1) supports the applicant's proposed use of water with consideration of the water conservation goals of the water conservation plan;

SUBCHAPTER C: REQUIRED SUBMITTALS
§288.30
Effective August 16, 2018

§288.30. Required Submittals.

In addition to the water conservation and drought contingency plans required to be submitted with an application under §295.9 of this title (relating to Water Conservation and Drought Contingency Plans), water conservation and drought contingency plans are required as follows.

(1) Water conservation plans for municipal, industrial, and other non-irrigation uses. The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 1,000 acre-feet a year or more for municipal, industrial, and other non-irrigation uses shall develop, submit, and implement a water conservation plan meeting the requirements of Subchapter A of this chapter (relating to Water Conservation Plans). The water conservation plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the next revision of the water conservation plan for municipal, industrial, and other non-irrigation uses must be submitted not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive director within 90 days of adoption. The revised plans must include implementation reports. The requirement for a water conservation plan under this section must not result in the need for an amendment to an existing permit, certified filing, or certificate of adjudication.

(2) Implementation report for municipal, industrial, and other non-irrigation uses. The implementation report must include:

(A) the list of dates and descriptions of the conservation measures implemented;

(B) data about whether or not targets in the plans are being met;

(C) the actual amount of water saved; and

(D) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.

(3) Water conservation plans for irrigation uses. The holder of an existing permit, certified filing, or certificate of adjudication for the appropriation of surface water in the amount of 10,000 acre-feet a year or more for irrigation uses shall develop, submit, and implement a water conservation plan meeting the requirements of Subchapter A of this chapter. The water conservation plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the next revision of the water conservation plan for irrigation uses must be submitted not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive director within 90 days of adoption. The revised plans must include implementation reports. The requirement for a water conservation plan under this section must not result in the need for an amendment to an existing permit, certified filing, or certificate of adjudication.

(4) Implementation report for irrigation uses. The implementation report must include:

(A) the list of dates and descriptions of the conservation measures implemented;

(B) data about whether or not targets in the plans are being met;

(C) the actual amount of water saved; and

(D) if the targets are not being met, an explanation as to why any of the targets are not being met, including any progress on that particular target.

(5) Drought contingency plans for retail public water suppliers. Retail public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter (relating to Drought Contingency Plans) to the executive director after adoption by its governing body. The retail public water system shall provide a copy of the plan to the regional water planning group for each region within which the water system operates. These drought contingency plans must be submitted as follows.

(A) For retail public water suppliers providing water service to 3,300 or more connections, the drought contingency plan must be submitted to the executive director not later than May 1, 2005. Thereafter, the retail public water suppliers providing water service to 3,300 or more connections shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be

submitted to the executive director within 90 days of adoption by the community water system. Any new retail public water suppliers providing water service to 3,300 or more connections shall prepare and adopt a drought contingency plan within 180 days of commencement of operation, and submit the plan to the executive director within 90 days of adoption.

(B) For all the retail public water suppliers, the drought contingency plan must be prepared and adopted not later than May 1, 2005, and must be available for inspection by the executive director upon request. Thereafter, the retail public water suppliers shall prepare and adopt the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any new retail public water supplier providing water service to less than 3,300 connections shall prepare and adopt a drought contingency plan within 180 days of commencement of operation, and shall make the plan available for inspection by the executive director upon request.

(6) Drought contingency plans for wholesale public water suppliers. Wholesale public water suppliers shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter to the executive director not later than May 1, 2005, after adoption of the drought contingency plan by the governing body of the water supplier. Thereafter, the wholesale public water suppliers shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any new or revised plans must be submitted to the executive director within 90 days of adoption by the governing body of the wholesale public water supplier. Wholesale public water suppliers shall also provide a copy of the drought contingency plan to the regional water planning group for each region within which the wholesale water supplier operates.

(7) Drought contingency plans for irrigation districts. Irrigation districts shall submit a drought contingency plan meeting the requirements of Subchapter B of this chapter to the executive director not later than May 1, 2005, after adoption by the governing body of the irrigation district. Thereafter, the irrigation districts shall submit the next revision of the plan not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any new or revised plans must be submitted to the executive director within 90 days of adoption by the governing body of the irrigation district. Irrigation districts shall also provide a copy of the plan to the regional water planning group for each region within which the irrigation district operates.

(8) Additional submissions with a water right application for state water. A water conservation plan or drought contingency plan required to be

submitted with an application in accordance with §295.9 of this title must also be subject to review and approval by the commission.

(9) Existing permits. The holder of an existing permit, certified filing, or certificate of adjudication shall not be subject to enforcement actions nor shall the permit, certified filing, or certificate of adjudication be subject to cancellation, either in part or in whole, based on the nonattainment of goals contained within a water conservation plan submitted with an application in accordance with §295.9 of this title or by the holder of an existing permit, certified filing, or certificate of adjudication in accordance with the requirements of this section.

(10) Submissions to the executive administrator of the Texas Water Development Board.

(A) Water conservation plans for retail public water suppliers. For retail public water suppliers providing water service to 3,300 or more connections, a water conservation plan meeting the minimum requirements of Subchapter A of this chapter and using appropriate best management practices must be developed, implemented, and submitted to the executive administrator of the Texas Water Development Board not later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. Any revised plans must be submitted to the executive administrator within 90 days of adoption by the community water system. Any new retail public water suppliers providing water service to 3,300 or more connections shall prepare and adopt a water conservation plan within 180 days of commencement of operation, and submit the plan to the executive administrator of the Texas Water Development Board within 90 days of adoption.

(B) Water conservation coordinators for retail public water suppliers. Retail public water suppliers that provide potable water to 3,300 or more connections shall designate a person as the water conservation coordinator responsible for implementing the water conservation plan; and identify, in writing, the water conservation coordinator, including the contact information for that person, to the executive administrator of the Texas Water Development Board. Notification of the initial designated water conservation coordinator shall be provided as specified by the Texas Water Development Board and any changes to the water conservation coordinator shall be provided within 90 days of the effective date of the change.

(C) Water conservation plans. Each entity that is required to submit a water conservation plan to the commission shall submit a copy of the plan to the executive administrator of the Texas Water Development Board not later than

May 1, 2009, and every five years after that date to coincide with the regional water planning group.

(D) Annual reports. Each entity that is required to submit a water conservation plan to the Texas Water Development Board or the commission, shall file a report not later than May 1, 2010, and annually thereafter to the executive administrator of the Texas Water Development Board on the entity's progress in implementing the plan.

(E) Violations of the Texas Water Development Board's rules. The water conservation plans and annual reports shall comply with the minimum requirements established in the Texas Water Development Board's rules. The Texas Water Development Board shall notify the commission if the Texas Water Development Board determines that an entity has not complied with the Texas Water Development Board rules relating to the minimum requirements for water conservation plans or submission of plans or annual reports. The commission shall take appropriate enforcement action upon receipt of notice from the Texas Water Development Board.

Adopted July 25, 2018

Effective August 16, 2018

APPENDIX C

TCEQ & TWDB WATER UTILITY PROFILES



Texas Commission on Environmental Quality

PROFILE AND WATER CONSERVATION PLAN REQUIREMENTS FOR WHOLESALE PUBLIC WATER SUPPLIERS

This form is provided to assist wholesale public water suppliers in water conservation plan development. If you need assistance in completing this form or in developing your plan, please contact the conservation staff of the Resource Protection Team in the Water Availability Division at (512) 239-4691.

Name: Dallas County Park Cities Municipal Utility District

Address: 1811 Regal Row, Dallas, TX 75235

Telephone Number: (214) -6528639 Fax: (214) -6528643

Water Right No.(s): 2363

Regional Water Planning Group: C

Form Completed by: Larry McDaniel, PE

Title: General Manager

Person responsible for implementing conservation program: Larry McDaniel, PE Phone: (214) -6528639

Signature: _____ Date: / / _____

NOTE: If the plan does not provide information for each requirement, include an explanation of why the requirement is not applicable.

PROFILE

I. WHOLESALE SERVICE AREA POPULATION AND CUSTOMER DATA

A. Population and Service Area Data

1. Service area size (in square miles): 5.93
(Please attach a copy of service-area map)
2. Current population of service area: 31,410

3. Current population served for:

- a. Water 31,410
- b. Wastewater n/a

4. Population served for previous five years:

Year	Population
2014	31,350
2015	31,280
2016	31,150
2017	31,330
2018	31,410

5. Projected population for service area in the following decades:

Year	Population
2020	34,713
2030	35,001
2040	35,001
2050	35,001
2060	35,001

6. List source or method for the calculation of current and projected population size.

Past Population: 2014-2018 are NCTCOG population estimates for the Town of Highland Park and the City of University Park. Projected Population: 2020-2060 population projections are from the 2016 Region C Water Plan, Tables 5D.69 (Highland Park) and 5D.78 (University Park). Note: Populations listed above are for treated water customers only. The data provided in Part II.B.2 below includes all municipal diversions and population, including the City of Grapevine. The District also provides wholesale raw water for the City of Grapevine. The annual amount is equivalent to approximately 17% of the City of Grapevine's annual water demands per the 2016 Region C Water Plan. 2016 Region C projected populations, supplies and demands are included at the end of this Appendix for the District, City of University Park, Town of Highland Park and the City of Grapevine.

B. Customers Data

List (or attach) the names of all wholesale customers, amount of annual contract, and amount of annual use for each customer for the previous year:

Wholesale Customer	Contracted Amount (acre-feet)	Previous Year Amount of Water Delivered (acre-feet)
1. City of University Park	17,921	6,131
2. Town of Highland Park	13,441	3,030
3. City of Grapevine	4,480	3,614
4. Brook Hollow Golf Club	368	184
5. _____	_____	_____

II. WATER USE DATA FOR SERVICE AREA

A. Water Delivery

Indicate if the water provided under wholesale contracts is treated or raw water and the annual amounts for the previous five years (in acre feet):

Year	Treated Water	Raw Water
2014	9,295	3,409
2015	9,094	4,498
2016	8,764	3,799
2017	8,891	3,397
2018	9,162	3,798
Totals	45,206	18,901

B. Water Accounting Data

- Total amount of water diverted at the point of diversion(s) for the previous five years (in acre-feet) for all water uses:

Year	2014	2015	2016	2017	2018
<i>Month</i>					
January	826	745	902	786	807
February	777	710	901	788	334
March	938	763	942	952	829
April	986	666	968	945	961
May	959	661	970	1,058	1,165
June	1,182	1,289	1,123	1,067	1,567
July	1,362	1,784	1,471	1,263	1,771
August	1,414	1,971	1,436	1,230	1,605
September	1,374	1,563	1,277	1,285	1,166
October	1,167	1,353	772	1,195	815
November	895	883	928	1,080	530
December	823	895	840	900	836
Totals	12,702	13,281	12,531	12,550	12,386

2. Wholesale population served and total amount of water diverted for **municipal use** for the previous five years (in acre-feet):

Year	Total Population Served	Total Annual Water Diverted for Municipal Use
2014	79,410	12,537
2015	79,800	13,101
2016	80,070	12,387
2017	80,460	12,401
2018	80,650	12,201

C. Projected Water Demands

If applicable, project and attach water supply demands for the next ten years using information such as population trends, historical water use, and economic growth in the service area over the next ten years and any additional water supply requirements from such growth.

III. WATER SUPPLY SYSTEM DATA

A. Projected Water Demands

List all current water supply sources and the amounts authorized (in acre feet) with each.

Water Type	Source	Amount Authorized
Surface Water	Lake Grapevine	50,000
Groundwater		
Other	DWU Wholesale Treated	414

B. Treatment and Distribution System (if providing treated water)

1. Design daily capacity of system (MGD):24
2. Storage capacity (MGD):
 - c. Elevated _____
 - d. Ground 10
3. Please attach a description of the water system. Include the number of treatment plants, wells, and storage tanks.

IV. WASTEWATER SYSTEM DATA

A. Wastewater System Data (if applicable)

1. Design capacity of wastewater treatment plant(s) (MGD):
2. Briefly describe the wastewater system(s) of the area serviced by the wholesale public water supplier. Describe how treated wastewater is disposed. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and the receiving stream if wastewater is discharged.

B. Wastewater Data for Service Area (if applicable)

1. Percent of water service area served by wastewater system: _____ %
2. Monthly volume treated for previous five years (in 1,000 gallons):

<i>Year</i>	_____	_____	_____	_____	_____
<i>Month</i>	_____	_____	_____	_____	_____
January	_____	_____	_____	_____	_____
February	_____	_____	_____	_____	_____
March	_____	_____	_____	_____	_____
April	_____	_____	_____	_____	_____
May	_____	_____	_____	_____	_____
June	_____	_____	_____	_____	_____
July	_____	_____	_____	_____	_____
August	_____	_____	_____	_____	_____
September	_____	_____	_____	_____	_____
October	_____	_____	_____	_____	_____
November	_____	_____	_____	_____	_____
December	_____	_____	_____	_____	_____
Totals	_____	_____	_____	_____	_____

V. ADDITIONAL REQUIRED INFORMATION

In addition to the description of the wholesaler's service area (profile from above), a water conservation plan for a wholesale public water supplier must include, at a minimum, additional information as required by Title 30, Texas Administrative Code, Chapter 288.5. Note: If the water conservation plan does not provide information for each requirement an explanation must be included as to why the requirement is not applicable.

A. Specific, Quantified 5 & 10-Year Targets

The water conservation plan must include specific, quantified five-year and ten-year targets for water savings including, where appropriate, target goals for municipal use in gallons per capita per day for the wholesaler's service area, maximum acceptable unaccounted-for water, and the basis for the development of these goals. Note that the goals established by wholesale water suppliers under this subparagraph are not enforceable.

B. Metering Devices

The water conservation plan must include a description as to which practice(s) and/or device(s) will be utilized to measure and account for the amount of water diverted from the source(s) of supply.

C. Record Management Program

The water conservation plan must include a monitoring and record management program for determining water deliveries, sales, and losses.

D. Metering/Leak-Detection and Repair Program

The water conservation plan must include a program of metering and leak detection and repair for the wholesaler's water storage, delivery, and distribution system.

E. Reservoir Systems Operations Plan

The water conservation plan must include a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin. The reservoir systems operations plan shall include optimization of water supplies as one of the significant goals of the plan.

F. Contract Requirements for Successive Customer Conservation

The water conservation plan must include a requirement in every water supply contract entered into or renewed after official adoption of the water conservation plan, and including any contract extension, that each successive wholesale customer develop and implement a water conservation plan or water conservation measures using the applicable elements of Title 30 TAC Chapter 288. If the customer intends to resell the water, then the contract between the initial supplier and customer must provide that the contract for the resale of the water must have water conservation requirements so that each successive customer in the resale of the water will be required to implement water conservation measures in accordance with the provisions of this chapter.

G. Enforcement Procedure and Official Adoption

The water conservation plan must include a means for implementation and enforcement, which shall be evidenced by a copy of the ordinance, rule, resolution, or tariff, indicating official adoption of the water conservation plan by the water supplier; and a description of the authority by which the water supplier will implement and enforce the conservation plan.

H. Coordination with the Regional Water Planning Group(s)

The water conservation plan must include documentation of coordination with the regional water planning groups for the service area of the wholesale water supplier in order to ensure consistency with the appropriate approved regional water plans.

Example statement to be included within the water conservation plan:

The service area of the _____ (name of water supplier) is located within the _____ (name of regional water planning area or areas) and _____ (name of water supplier) has provided a copy of this water conservation plan to the _____ (name of regional water planning group or groups).

I. Plan Review and Update

A wholesale water supplier shall review and update its water conservation plan, as appropriate based on an assessment of previous five-year and ten-year targets and any other new or updated information. A wholesale water supplier shall review and update the next revision of its water conservation plan no later than May 1, 2009, and every five years after that date to coincide with the regional water planning group. The revised plan must also include an implementation report.

J. Additional Conservation Strategies

Any combination of the following strategies shall be selected by the water wholesaler, in addition to the minimum requirements of this chapter, if they are necessary in order to achieve the stated water conservation goals of the plan. The commission may require by commission order that any of the following strategies be implemented by the water supplier if the commission determines that the strategies are necessary in order for the conservation plan to be achieved:

1. Conservation-oriented water rates and water rate structures such as uniform or increasing block rate schedules, and/or seasonal rates, but not flat rate or decreasing block rates;
2. A program to assist agricultural customers in the development of conservation, pollution prevention and abatement plans;
3. A program for reuse and/or recycling of wastewater and/or graywater;
4. A cost-share program;
5. A technical assistance and outreach program;
6. A program for purchase and direct distribution of water conservation equipment; and
7. Any other water conservation practice, method, or technique which the wholesaler shows to be appropriate for achieving the stated goal or goals of the water conservation plan.

Best Management Practices

The Texas Water Developmental Board's (TWDB) Report 362 is the Water Conservation Best Management Practices (BMP) guide. The BMP Guide is a voluntary list of management practices that water users may implement in addition to the required components of Title 30, Texas Administrative Code, Chapter 288. The Best Management Practices Guide broken out by sector, including Agriculture, Commercial, and Institutional, Industrial, Municipal and Wholesale along with any new or revised BMP's can be found at the following link on the Texas Water Developments Board's website: <http://www.twdb.state.tx.us/conservation/bmps/index.asp>

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact 512-239-3282.

UTILITY PROFILE FOR WHOLESALE WATER SUPPLIER

Fill out this form as completely as possible.
If a field does not apply to your entity, leave it blank.

CONTACT INFORMATION

Name of Utility: _____

Public Water Supply Identification Number (PWS ID): _____

Certificate of Convenience and Necessity (CCN) Number: _____

Surface Water Right ID Number: _____

Wastewater ID Number: _____

Completed By: _____ Title: _____

Address: _____ City: _____ Zip Code: _____

Email: _____ Telephone Number: _____

Date: _____

Regional Water Planning Group: _____ [Map](#)

Groundwater Conservation District: _____ [Map](#)

Check all that apply:

Received financial assistance of \$500,000 or more from TWDB

Have a surface water right with TCEQ

Section I: Utility Data

A. Population and Service Area Data

1. Current service area size in square miles: _____
 (Attach or email a copy of the service area map.)

2. Provide projected and historical service area population below.

Year	Historical Population Served By Wholesale Water Service		Year	Projected Population Served By Wholesale Water Service
			2020	
			2030	
			2040	
			2050	
			2060	

4. Describe the source(s)/method(s) for estimating current and projected populations.

B. System Input

Provide system input data for the previous five years.

Total System Input = Self-supplied + Imported

Year	Self-supplied Water in Gallons	Purchased/Imported Water in Gallons	Total System Input	Total gal/day
Historic 5-year Average				

C. Water Supply System (Attach description of water system)

1. Designed daily capacity of system _____ gallons per day.

2. Storage Capacity:
 Elevated _____ gallons
 Ground _____ gallons

3. List all current water supply sources in gallons.

Water Supply Source	Source Type*	Total Gallons

*Select one of the following source types: *Surface water, Groundwater, or Contract*

4. If surface water is a source type, do you recycle backwash to the head of the plant?
 Yes _____ estimated gallons per day
 No

D. Projected Demands

1. Estimate the water supply requirements for the next ten years using population trends, historical water use, economic growth, etc.

Year	Population	Water Demands (gallons)

2. Describe sources of data and how projected water demands were determined. Attach additional sheets if necessary.

E. High Volume Customers

1. If applicable, list the annual water use for the five highest volume customers. Select one of the following water use categories to describe the customer; choose Municipal, Industrial, Commercial, Institutional, or Agricultural.

Customer	Water Use Category*	Annual Water Use	Treated or Raw

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use.](#)

F. Utility Data Comment Section

Provide additional comments about utility data below.

Section II: System Data

A. Wholesale Connections

- List the active wholesale connections by major water use category.

Water Use Category*	Active Wholesale Connections		
	Metered	Unmetered	Total Connections
Municipal			
Industrial			
Commercial			
Institutional			
Agricultural			
TOTAL			

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use.](#)

- List the net number of new wholesale connections by water use category for the previous five years.

Water Use Category*	Net Number of New Wholesale Connections				
Municipal					
Industrial					
Commercial					
Institutional					
Agricultural					
TOTAL					

*For definitions on recommended customer categories for classifying customer water use, refer to the [Guidance and Methodology for Reporting on Water Conservation and Water Use.](#)

B. Wholesale Water Accounting Data - Water Use Categories

For the previous five years, enter the number of gallons of WHOLESale water exported (*sold or transferred*) to each major water use category.

Customer Category*	Total Gallons of Wholesale Water				
Municipal					
Industrial					
Commercial					
Institutional					
Agricultural					
TOTAL					

*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use.](#)

C. Wholesale Water Accounting Data - Annual and Seasonal Use

For the previous five years, enter the number of gallons exported (*sold or transferred*) to WHOLESALÉ customers.

Month	Total Gallons of Treated Water				
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
TOTAL					



Month	Total Gallons of Raw Water				
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
TOTAL					

WHOLESALE						Average in Gallons
Summer Wholesale (Treated + Raw)						_____
						5yr Average
TOTAL Wholesale (Treated + Raw)						_____
						5yr Average



D. Water Loss

Provide Water Loss Data for the previous five years.

Water Loss GPCD = [Total Water Loss in Gallons ÷ Permanent Population Served] ÷ 365

Water Loss Percentage = [Total Water Loss ÷ Total System Input] x 100

Year	Total Water Loss in Gallons	Water Loss per day	Water Loss as a Percentage
5-year average			



E. Peak Day Use

Provide the Average Daily Use and Peak Day Use for the previous five years.

Year	Average Daily Use (gal)	Peak Day Use (gal)	Ratio (Peak/Avg)

F. Summary of Historic Water Use

Water Use Category	Historic 5-year Average	Percent of Water Use
Municipal		
Industrial		
Commercial		
Institutional		
Agricultural		

G. Wholesale System Data Comment Section

Provide additional comments about wholesale system data below.

Section III: Wastewater System Data

If you do not provide wastewater system services then you have completed the Utility Profile. Save and Print this form to submit with your Plan. Continue with the [Water Conservation Plan Checklist](#) to complete your Water Conservation Plan.

A. Wastewater System Data (Attach a description of your wastewater system)

1. Design capacity of wastewater treatment plant(s): _____
gallons per day.

2. List the active wastewater connections by major water use category.

Water Use Category*	Active Wastewater Connections			
	Metered	Unmetered	Total Connections	Percent of Total Connections
Municipal				
Industrial				
Commercial				
Institutional				
Agricultural				
TOTAL				

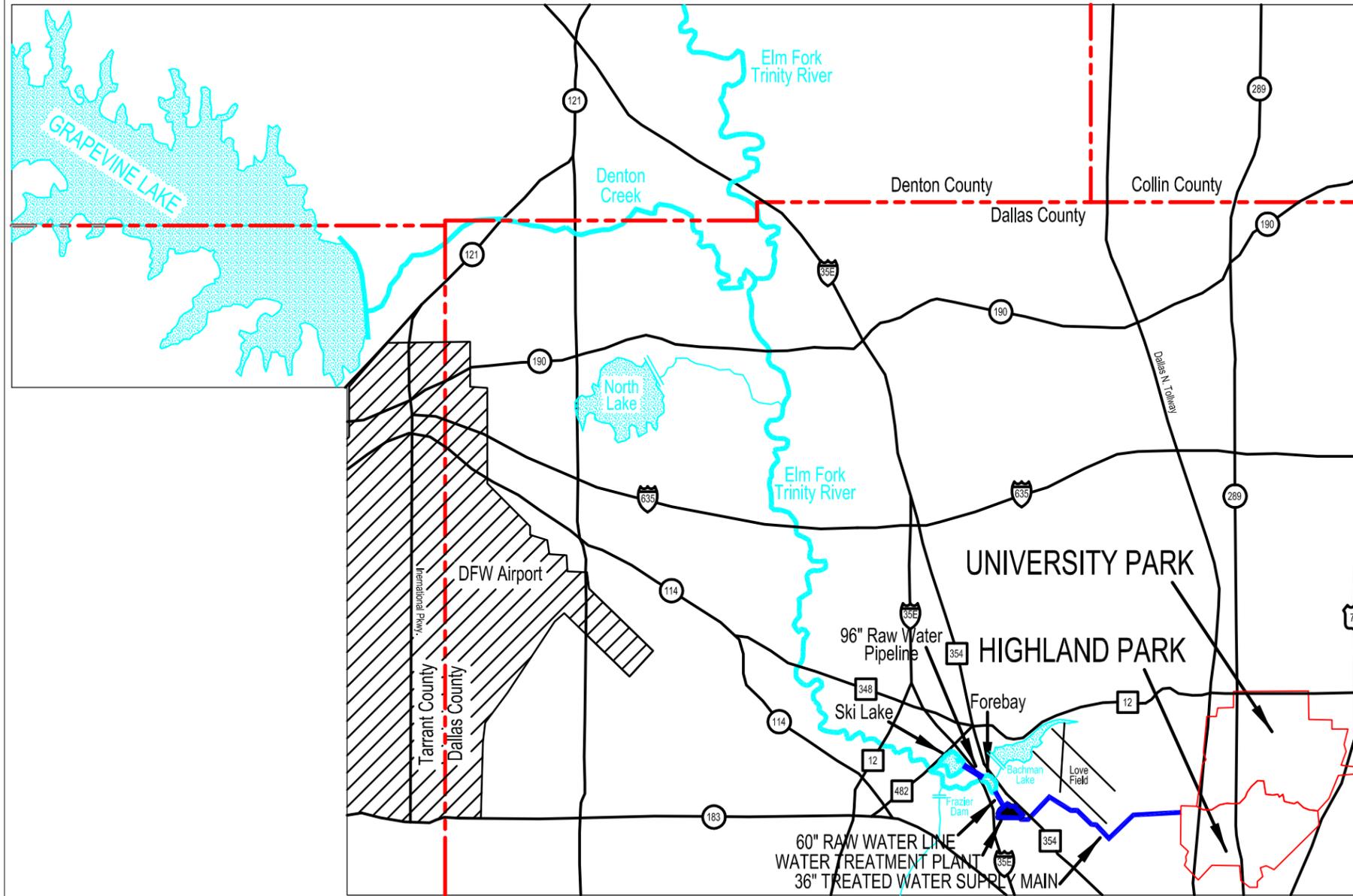
*For definitions on recommended customer categories for classifying customer water use, refer to the online [Guidance and Methodology for Reporting on Water Conservation and Water Use](#).

2. What percent of water is serviced by the wastewater system? ____%

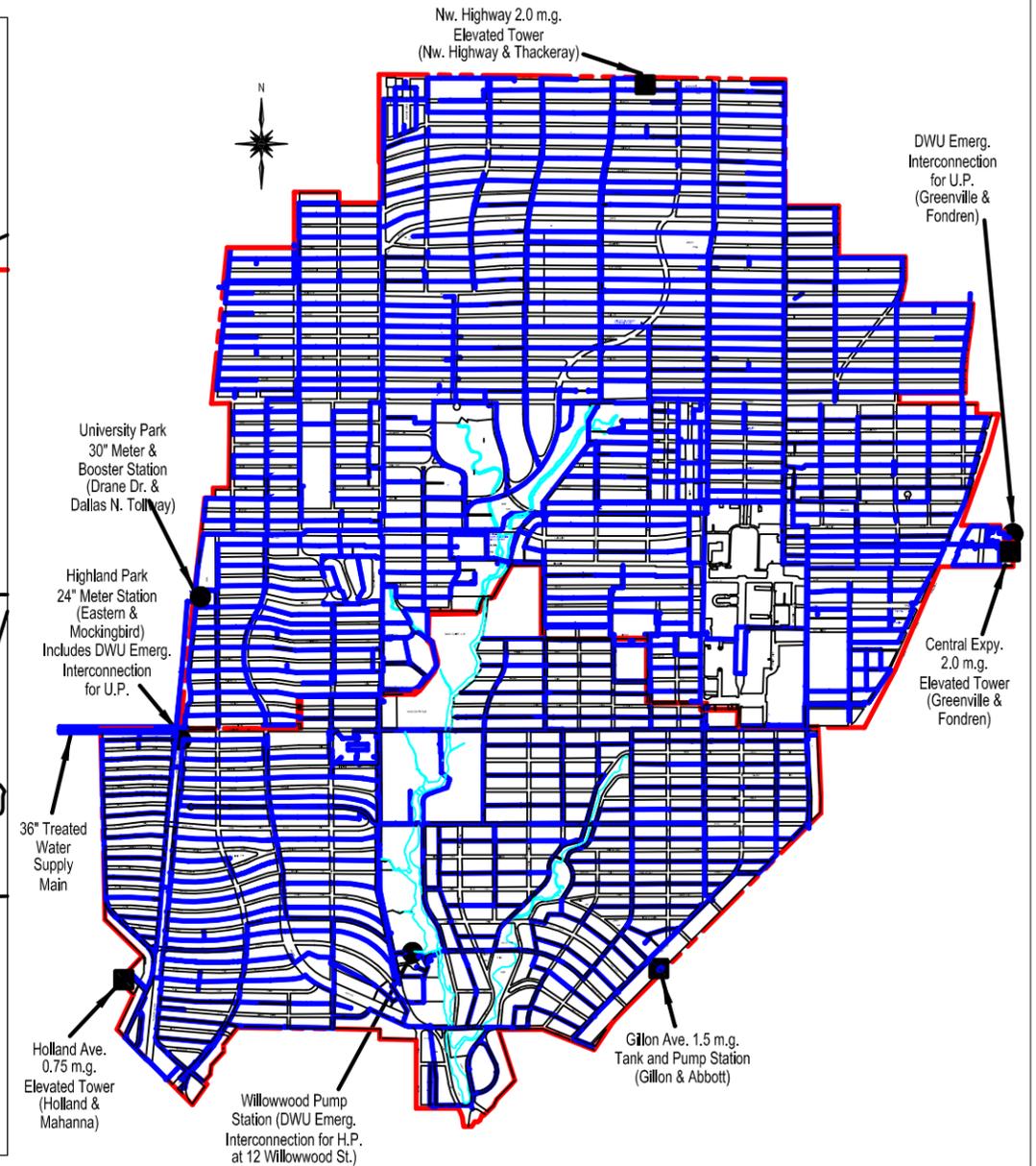
3. For the previous five years, enter the number of gallons of wastewater that was treated by the utility.

Month	Total Gallons of Treated Water				
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					
TOTAL					

Attachment A: Dallas County Park Cities Municipal Utility District Composite Map of Water Supply & Distribution System



Maps Not Precisely to Scale



**DALLAS COUNTY PARK CITIES
MUNICIPAL UTILITY DISTRICT**
1811 Regal Row, Dallas, Texas 75235
(214) 652-8639, Fax (214) 652-8643

Composite Map of Water Supply & Distribution System

REVISIONS

A	G
B	H
C	I
D	J
E	K
F	L

DESIGNED BY

DRAWING NUMBER

DRAWN BY

FILE NAME

SCALE

DATE



PAGE

01 of 01

Strategy	Date to be Developed	Quantity for GTUA (Ac-Ft/Yr)	GTUA Share of Capital Costs	Unit Cost (\$/1000 gal)		Table for Details
				With Debt Service	After Debt Service	
Add'l NTMWD (Current CGMA Facilities)	2020	1,708	\$0	\$1.75	\$1.75	None
CGMA-East West Pipeline (NTMWD)	2050	11,400	\$3,672,000	\$2.69	\$2.60	Q-65
Parallel CGMA Pipeline (NTMWD)	2060	14,541	\$59,492,000	\$3.78	\$2.73	Q-66
Total GTUA Capital Costs			\$205,386,000			

* GTUA has no retail sales, so conservation savings are reflected in their customers' conservation savings.

5C.1.9 Dallas County Park Cities Municipal Utility District

Dallas County Park Cities MUD supplies treated water to Highland Park and University Park and plans to continue doing so through the planning period. The MUD also sells reuse water from Lake Grapevine to the City of Grapevine for municipal and irrigation purposes. The MUD gets its water supplies from Lake Grapevine and has enough supply to meet projected demands through the planning period. The only strategy proposed for the MUD is the implementation of water conservation measures by its wholesale customers. The MUD has some amount of unused yield in Lake Grapevine, and an alternative strategy for the City of Grapevine would be to purchase some of this unused yield, up to 5,000 acre-feet per year.

Table 5C.20 shows the projected demand and supplies for Dallas County Park Cities MUD. Table 5C.21 gives information on the costs for the recommended water management strategy.

**Table 5C.20
Recommended Water Management Strategies
for the Dallas County Park Cities Municipal Utility District**

Planned Supplies (Ac-Ft/Yr)	2020	2030	2040	2050	2060	2070
Demands (Table H.7)	14,989	15,333	15,249	15,171	15,157	15,156
Currently Available Supplies						
<i>Lake Grapevine (Potable)</i>	16,900	16,750	16,600	16,450	16,300	16,150
<i>Reuse</i>	3,311	3,677	3,716	3,701	3,698	3,698
Currently Available Supplies	20,211	20,427	20,316	20,151	19,998	19,848
Need (Demand-Supply)	0	0	0	0	0	0

Planned Supplies (Ac-Ft/Yr)	2020	2030	2040	2050	2060	2070
Water Management Strategies						
Conservation (Wholesale Customers)	100	171	182	237	290	344
Supplies from Strategies	100	171	182	237	290	344
Total Supplies	20,311	20,598	20,498	20,388	20,288	20,192
Total Potable Supplies	17,000	16,921	16,782	16,687	16,590	16,494
Reserve or (Shortage)	5,322	5,265	5,249	5,217	5,131	5,036
Management Supply Factor	1.13	1.10	1.10	1.10	1.09	1.09

**Table 5C.21
Summary of Costs for Dallas County Park Cities MUD Recommended Strategy**

Strategy	Date to be Developed	Quantity for DCPCMUD (Ac-Ft/Yr)	DCPCMUD Share of Capital Costs	Unit Cost (\$/1000 gal)		Table for Details
				With Debt Service	After Debt Service	
Conservation	2020	344*	Included under County Summaries in Section 5D.			
Total DCPCMUD Capital Costs			\$0			

* DCPCMUD has no retail sales, so conservation savings are reflected in their customers' conservation savings.

5C.1.10 City of Corsicana

The City of Corsicana provides municipal and manufacturing water to much of Navarro County and portions of Ellis, Hill, and Limestone Counties. Future projected demands include steam electric power generation as well as municipal and manufacturing demands. The city's current water sources include Lake Halbert, Richland-Chambers Reservoir, and Navarro Mills Lake. The city also has a water right for 13,650 acre-feet per year from Richland-Chambers Reservoir. The supply currently available to Corsicana from Navarro Mills Reservoir is limited to 11,210 acre-feet per year because of the existing water treatment plant capacity. The supply from Lake Halbert and Richland Chambers is limited to 2,240 acre-feet per year for the same reason. To meet the projected water demands, the city will need to develop more than 11,000 acre-feet per year of additional supplies by 2070. The recommended strategies to meet these needs include:

- Conservation
- Increase pump station capacity to deliver additional water from Richland-Chambers Lake and Lake Halbert Water Treatment Plant
- Raw water supply from Richland-Chambers Lake for Proposed Power Plant

Grand Prairie

Grand Prairie is a city of about 181,000 in western Dallas County, eastern Tarrant County, and northwestern Ellis County. The city is a wholesale water provider, and there is a discussion of Grand Prairie’s water supply plans in Section 5C.2.

Highland Park

Highland Park is a city of about 8,500 people in central Dallas County and receives its water supply from the Dallas County Park Cities MUD. The only water management strategy for Highland Park is conservation. Table 5D.69 shows the projected population and demand, the current supplies, and the water management strategies for Highland Park.

**Table 5D.69
Projected Population and Demand, Current Supplies
and Water Management Strategies for the City of Highland Park**

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Projected Population	9,025	9,313	9,313	9,313	9,313	9,313
Projected Water Demand						
Municipal Demand	4,056	4,141	4,106	4,091	4,088	4,088
Total Projected Demand	4,056	4,141	4,106	4,091	4,088	4,088
Currently Available Water Supplies						
Dallas County Park Cities Municipal Utility District (Lake Grapevine)	4,022	4,093	4,065	4,036	4,020	4,006
Total Current Supplies	4,022	4,093	4,065	4,036	4,020	4,006
Need (Demand - Current Supply)	34	48	41	55	68	82
Water Management Strategies						
Water Conservation	34	48	41	55	68	82
Total Water Management Strategies	34	48	41	55	68	82
Reserve (Shortage)	0	0	0	0	0	0

Hutchins

Hutchins is located in southern Dallas County and has a population of about 5,400. The city receives its water supply from DWU. The city currently delivers water to Wilmer, but Wilmer will eventually (by 2040) construct their own direct connection to Dallas supply after which time the connection to Wilmer will be only used for emergency. (Wilmer also plans to begin receiving some of their Dallas supply through Lancaster beginning in 2020, but will continue getting some of their supply through Hutchins until the

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Additional Water from NTMWD	142	695	1,138	1,495	2,023	2,279
Total Water Management Strategies	185	779	1,267	1,661	2,241	2,517
Reserve (Shortage)	0	0	0	0	0	0

University Park

University Park is a city of about 23,000 people in central Dallas County and receives its water supply from the Dallas County Park Cities MUD. The only water management strategy for the city is conservation. Table 5D.78 shows the projected population and demand, the current supplies, and the water management strategy for University Park.

**Table 5D.78
Projected Population and Demand, Current Supplies
and Water Management Strategies for the City of University Park**

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Projected Population	25,688	25,688	25,688	25,688	25,688	25,688
Projected Water Demand						
Municipal Demand	7,622	7,515	7,427	7,379	7,371	7,370
Total Projected Demand	7,622	7,515	7,427	7,379	7,371	7,370
Currently Available Water Supplies						
Dallas County Park Cities MUD	7,558	7,427	7,353	7,281	7,248	7,223
Total Current Supplies	7,558	7,427	7,353	7,281	7,248	7,223
Need (Demand - Current Supply)	64	88	74	98	123	147
Water Management Strategies						
Water Conservation	64	88	74	98	123	147
Total Water Management Strategies	64	88	74	98	123	147
Reserve (Shortage)	0	0	0	0	0	0

Wilmer

Wilmer is a city of about 4,100 people located in southeastern Dallas County. The city receives its water supply from groundwater (Trinity aquifer) and DWU (through Hutchins). In the near future (2020), Wilmer plans to construct an additional take point to get DWU water through Lancaster. By 2040, Wilmer plans to participate in Dallas' construction of a 36" and 24" transmission main from which Wilmer will get the majority of its supply, leaving the connection with Hutchins to be an emergency connection only. Water

Grapevine

Grapevine is located in northeastern Tarrant County and has a population of about 48,000. The city gets its water supply from multiple sources – treated water from TRA (which gets raw water from TRWD), raw water from Lake Grapevine (based on the city’s portion of the firm yield), Dallas (DWU), and indirect reuse from Lake Grapevine purchased from Dallas County Park Cities MUD. Water management strategies for Grapevine include conservation, additional water from TRA, and additional water from Dallas (with only a very small increase above what is currently being purchased from Dallas). An alternative water management strategy for Grapevine would be to purchase a portion of Dallas County Park Cities MUD’s unused supply from Lake Grapevine yield. Grapevine does not require any additional infrastructure to take delivery or to treat their supplies in the future (beyond maintenance of existing facilities). Table 5D.329 shows the projected population and demand, the current supplies, and the water management strategies for Grapevine.

**Table 5D.329
Projected Population and Demand, Current Supplies,
and Water Management Strategies for the City of Grapevine**

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Projected Population	52,414	58,930	60,000	60,000	60,000	60,000
Projected Water Demand						
Municipal Demand	18,467	20,509	20,725	20,641	20,624	20,623
Golf Course (Tarrant County Irrigation)	1,121	1,121	1,121	1,121	1,121	1,121
Total Projected Demand	19,588	21,630	21,846	21,762	21,745	21,744
Currently Available Water Supplies						
Dallas Water Utilities	3,402	3,409	3,141	2,823	2,608	2,461
Indirect Reuse (Purchased from DCPCMUD)	3,311	3,677	3,716	3,701	3,698	3,698
Trinity River Authority (TRWD)	10,387	10,498	9,279	8,199	7,313	6,527
Lake Grapevine*	1,983	1,950	1,917	1,883	1,850	1,817
Total Current Supplies	19,084	19,535	18,053	16,606	15,469	14,503
Need (Demand - Current Supply)	504	2,095	3,793	5,156	6,276	7,241
Water Management Strategies						
Water Conservation	339	537	622	688	756	825
Additional Water from TRA	0	1,037	2,256	3,336	4,222	5,008
Additional Water from Dallas	165	522	915	1,132	1,298	1,408
Total Water Management Strategies	504	2,095	3,793	5,156	6,276	7,241

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Reserve (Shortage)	0	0	0	0	0	0
Alternative Water Management Strategy						
Purchase unused Lake Grapevine yield from DCPCMUD	5,222	5,094	5,067	4,980	4,841	4,692

* Lake Grapevine supply is based on Grapevine's portion of the firm yield as calculated by TCEQ WAM. It is significantly less than Grapevine's water right amount.

Haltom City

Haltom City has a population of about 42,700 and is located in central Tarrant County. The city purchases treated water from Fort Worth, which gets raw water from TRWD. Haltom City's water management strategies are conservation and additional water from Fort Worth. Table 5D.330 shows the projected population and demand, the current supplies, and the water management strategies for Haltom City.

**Table 5D.330
Projected Population and Demand, Current Supplies,
and Water Management Strategies for Haltom City**

(Values in Ac-Ft/Yr)	Projected Population and Demand					
	2020	2030	2040	2050	2060	2070
Projected Population (In City Only)	44,000	45,000	47,000	51,000	55,000	60,000
Projected Water Demand						
Municipal Demand	5,285	5,226	5,308	5,670	6,093	6,640
Total Projected Demand	5,285	5,226	5,308	5,670	6,093	6,640
Currently Available Water Supplies						
Fort Worth (TRWD)	5,241	4,215	3,628	3,490	3,432	3,439
Total Current Supplies	5,241	4,215	3,628	3,490	3,432	3,439
Need (Demand - Current Supply)	44	1,011	1,680	2,180	2,661	3,201
Water Management Strategies						
Water Conservation	44	61	53	76	102	133
Additional Water from Fort Worth	0	950	1,627	2,104	2,559	3,068
Total Water Management Strategies	44	1,011	1,680	2,180	2,661	3,201
Reserve (Shortage)	0	0	0	0	0	0

Haslet

Haslet is a city of about 1,600 people located in northern Tarrant County. The city's water supply is treated water from Fort Worth (which gets its raw water from TRWD) and groundwater from the Trinity aquifer. Water management strategies for Haslet are conservation and additional water from Fort Worth (which

DRAFT

APPENDIX D

TCEQ IMPLEMENTATION REPORT



**WATER CONSERVATION IMPLEMENTATION REPORT
FORM AND SUMMARY OF UPDATES/REVISIONS TO
WATER CONSERVATION PLAN**

(Texas Water Code §11.1271(b) and Title 30 Texas Administrative Code §288.30(1) to (4))

Please note, this form replaces the following forms: TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers)

This Form is applicable to the following entities:

1. **Water Right Holders of 1,000 acre-feet or more for municipal, industrial, and other non-irrigation uses.**
2. **Water Right Holders of 10,000 acre-feet or more for irrigation uses.**

The above noted entities are required by rule to submit updates to their water conservation plan(s) and water conservation implementation report(s) every five years. The most current five-year submittal deadline is **May 1st, 2019**. See 30 Texas Administrative Code (TAC) §288.30(1) to (4). Entities must also submit any revisions to their water conservation plan within 90 days of adoption when the plans are revised in between the five-year submittal deadlines. This form may be used for the five-year submittal or when revisions are made to the water conservation plans in the interim periods between five-year submittals. Please complete the form as directed below.

1. Water Right Holder Name: _____
2. Water Right Permit or Certificate Nos. _____

3. Please Indicate by placing an 'X' next to all that Apply to your Entity:

Water Right Holder of 1,000 acre-feet or more for non-irrigation uses

- _____ Municipal Water Use by Public Water Supplier
- _____ Wholesale Public Water Supplier
- _____ Industrial Use
- _____ Mining Use
- _____ Agriculture Non-Irrigation

Water Right Holder of 10,000 acre-feet or more for irrigation uses

- _____ Individually-Operated Irrigation System
- _____ Agricultural Water Suppliers Providing Water to More Than One User

Water Conservation Implementation Reports/Annual Reports

4. Water Conservation Annual Reports for the previous five years were submitted to the Texas Water Development Board (TWDB) for each of the uses indicated above as required by 30 TAC §288.30(10)(C)? Yes _____ No _____

TCEQ no longer requires submittal of the information contained in the detailed implementation report previously required in Forms TCEQ-20645 (Non-Public Water Suppliers) and TCEQ-20646 (Public Water Suppliers). However, the Entity must be up-to-date on its Annual Report Submittals to the TWDB.

Water Conservation Plans

5. For the five-year submittal (or for revisions between the five-year submittals), attach your updated or revised Water Conservation Plan for each of the uses indicated in Section 3, above. Every updated or revised water conservation plan submitted must contain each of the minimum requirements found in the TCEQ rules and must be duly adopted by the entity submitting the water conservation plan. Please include evidence that each water conservation plan submitted has been adopted.
- Rules on minimum requirements for Water Conservation Plans can be found in 30 TAC 288.
http://texreg.sos.state.tx.us/public/readtac%24ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288
 - Forms which include the minimum requirements and other useful information are also available to assist you. Visit the TCEQ webpage for Water Conservation Plans and Reports. https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/consERVE.html

Call 512-239-4691 or email to wcp@tceq.texas.gov for assistance with the requirements for your water conservation plan(s) and report(s).

6. For each Water Conservation Plan submitted, state whether the five and ten-year targets for water savings and water loss were met in your *previous* water conservation plan.
Yes_____ No_____
- If the targets were not met, please provide an explanation.

7. For each five-year submittal, does each water conservation plan submitted contain *updated* five and ten-year targets for water savings and water loss?
Yes_____ No_____

If yes, please identify where in the water conservation plan the updated targets are located (page, section).

8. In the box below (or in an attachment titled "Summary of Updates or Revisions to Water Conservation Plans), please identify any other revisions/updates made to each water conservation plan that is being updated or revised. Please specify the water conservation plan being updated and the location within the plan of the newly adopted updates or revisions.

9. Form Completed by (Point of Contact): _____
(If different than name listed above, owner and contact may be different individual(s)/entities)

Contact Person Title/Position: _____

Contact Address: _____

Contact Phone Number: _____ Contact Email Address: _____

Signature: _____

Date: _____

APPENDIX E

**TWDB ANNUAL REPORTS
2014-2018 CALENDAR YEAR**

Revise 8.25.15

Water Conservation Plan Annual Report Wholesale Water Supplier

CONTACT INFORMATION

Name of Entity: Dallas County Park Cities Municipal Utility District

Public Water Supply Identification Number (PWS ID): 0570078

CCN Number: NA

Water Rights ID Number: Certificate # 08-2363A

Wastewater ID Number: NA

Check all that apply:

- Retail Water Supplier
 Wholesale Water Supplier
 Wastewater Treatment Utility

Address: 1811 Regal Row City: Dallas Zip Code: 75235

Email: main@parkcitieswater.com Telephone Number: 214-652-8639

Regional Water Planning Group: C [Map](#)

Groundwater Conservation District: NA [Map](#)

Form Completed By: Larry McDaniel, P.E., R.S. Title: General Manager

Date: 03/13/2015

Reporting Period (check only one):
 Fiscal Period Begin(mm/yyyy) 10/2013 Period End(mm/yyyy) 09/2014
 Calendar Period Begin(mm/yyyy) _____ Period End(mm/yyyy) _____

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
 Have 3,300 or more retail connections
 Have a surface water right with TCEQ

SYSTEM DATA

1. For this reporting period, provide the **total volume of wholesale water exported** (transferred or sold): 3,372,995,000 gallons

2. For this reporting period, does your billing/accounting system have the capability to classify customers into the Wholesale Customer Categories?

Yes No

Wholesale Customer Categories*

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

*Recommended Customer Categories for classifying customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).

3. For this reporting period, select the category(s) used to calculate wholesale customer water usage:

<input checked="" type="checkbox"/>	Municipal
<input type="checkbox"/>	Industrial
<input type="checkbox"/>	Commercial
<input type="checkbox"/>	Institutional
<input type="checkbox"/>	Agricultural

4. For this reporting year, enter the gallons of **WHOLESALE water exported** (transferred or sold). Enter zero if a Customer Category does not apply.

Wholesale Customer Category	Gallons Exported (transferred or sold)	Number of Customers
Municipal	3,372,995,000	2
Industrial		
Commercial		
Institutional		
Agricultural		
Total	3,372,995,000	2

Water Use Accounting

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells.	3,280,993,719
Wholesale Water Imported: Purchased wholesale water transferred into the system.	0
System Input: Total water supplied to system and available for use.	3,280,993,719 <small>Produced + Imported = System Input</small>
Wholesale Water Exported: Wholesale water sold or transferred out of the system.	3,372,995,000
Gallons Per Day:	9,241,082 <small>Wholesale Water Exported ÷ 365 = Gallons Per Day</small>
Population: Estimated total population for municipal customers.	32,230
Municipal Gallons Per Capita Per Day:	287 <small>Municipal Exported ÷ Municipal Population ÷ 365 = Municipal Gallons Per Capita Per Day</small>

Provide the **specific and quantified five and ten-year targets** as listed in your most current Water Conservation Plan.

	Date to Achieve Target	Specified and Quantified Targets
Five-year target	2018	278.0 gpcd
Ten-year target	2023	276.6 gpcd

Water Conservation Programs and Activities

1. Water Conservation Plan

What year did your entity adopt or revise their most recent Water Conservation Plan? 2014

Does The Plan incorporate Best Management Practices? Yes No

2. Water Conservation Programs

Has your entity implemented any type of water conservation activity or program?

Yes No

If yes, select the type(s) of Best Management Practices or water conservation strategies implemented during this reporting period.

Wholesale Supplier Activities and Practices	
<input type="checkbox"/>	Agricultural Conservation Programs
<input type="checkbox"/>	Conservation Analysis & Planning
<input type="checkbox"/>	Conservation Rate Structures
<input type="checkbox"/>	Conservation Technology
<input checked="" type="checkbox"/>	Education & Public Awareness
<input type="checkbox"/>	Industrial Conservation Programs
<input checked="" type="checkbox"/>	Leak Detection/ Water Loss Program
<input type="checkbox"/>	Rebate, Retrofit, and Incentive Programs
<input type="checkbox"/>	Regulatory & Enforcement
<input checked="" type="checkbox"/>	System Operations
<input checked="" type="checkbox"/>	Water Efficient Landscape Programs
<input type="checkbox"/>	Water Use Audits

Other activities, list or describe.

3. Recycle/Reuse (Water or Wastewater Effluent)

For this reporting period, provide direct and indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	
Plant wash down	294,624,708
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe:	
Estimated Volume of Reuse	294,624,708

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs.

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
	294,624,708	294,624,708	\$ 679,110

1. Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved

2. Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What might your entity do to improve the effectiveness of your water conservation program?

7. Select the areas for which you would like to receive technical assistance:

- | | |
|---|--|
| <input type="checkbox"/> Agricultural Best Management Practices | <input type="checkbox"/> Water Conservation Plans |
| <input type="checkbox"/> Wholesale Best Management Practices | <input type="checkbox"/> Water IQ: Know Your Water |
| <input type="checkbox"/> Industrial Best Management Practices | <input type="checkbox"/> Water Loss Audits |
| <input type="checkbox"/> Drought Contingency Plans | <input checked="" type="checkbox"/> Rainwater Harvesting Systems |
| <input checked="" type="checkbox"/> Landscape Efficient Systems | <input type="checkbox"/> Recycling and Reuse |
| <input type="checkbox"/> Leak Detection and Equipment | |
| <input checked="" type="checkbox"/> Educational Resources | |

SUBMIT

Water Conservation Plan Annual Report Wholesale Water Supplier

CONTACT INFORMATION

Name of Entity: DALLAS COUNTY PARK CITIES MUNICIPAL UTILITY DISTRICT

Public Water Supply Identification Number (PWS ID): 0570078

CCN Number: NA

Water Rights ID Number: CERTIFICATE # 08-2363A

Wastewater ID Number: NA

Check all that apply:

- Retail Water Supplier
- Wholesale Water Supplier
- Wastewater Treatment Utility

Address: 1811 REGAL ROW City: DALLAS Zip Code: 75235

Email: MCDANIEL@PARKCITIESWATER.COM Telephone Number: 214-652-8639

Regional Water Planning Group: C [Map](#)

Groundwater Conservation District: NA [Map](#)

Form Completed By: LARRY MCDANIEL Title: GENERAL MANAGER

Date: 02-15-16

Reporting Period (calendar year):

Period Begin(mm/yyyy) 01/2015 Period End(mm/yyyy) 12/2015

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

SYSTEM DATA

1. For this reporting period, provide the **total volume of wholesale water exported** (transferred or sold): 2,963,184,000 gallons

2. For this reporting period, does your billing/accounting system have the capability to classify customers into the Wholesale Customer Categories?

Yes No

Wholesale Customer Categories*

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

*Recommended Customer Categories for classifying customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).

3. For this reporting period, select the category(s) used to calculate wholesale customer water usage:

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

4. For this reporting period, enter the gallons of **WHOLESALE water exported** (transferred or sold). Enter zero if a Customer Category does not apply.

Wholesale Customer Category	Gallons Exported (transferred or sold)	Number of Customers
Municipal	2,963,184,000	2
Industrial		
Commercial		
Institutional		
Agricultural		
Total Gallons ¹	2,963,184,000	2

¹ Municipal + Industrial + Commercial + Institutional + Agricultural = Wholesale Water Exported

Water Use Accounting

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells.	2,859,329,672
Wholesale Water Imported: Purchased wholesale water transferred into the system.	160,161,000
System Input: Total water supplied to system and available for use.	3,019,490,672 <small>Produced + Imported = System Input</small>
Wholesale Water Exported: Wholesale water sold or transferred out of the system.	2,963,184,000
Gallons Per Day:	8,118,312 <small>Wholesale Water Exported ÷ 365 = Gallons Per Day</small>
Population: Estimated total population for municipal customers.	33,346
Gallons Per Capita Per Day:	243 <small>(Wholesale Exported ÷ Population) ÷ 365 = Gallons Per Capita Per Day</small>

Provide the **specific and quantified five and ten-year targets** as listed in your most current Water Conservation Plan (either Gallons Per Day or Gallons Per Capita Per Day). Target dates and numbers should match your current Water Conservation Plan.

	Date to Achieve Target	Specified and Quantified Targets
Five-year target	2018	278.0 gpcd
Ten-year target	2023	276.6 gpcd

Water Conservation Programs and Activities

1. Water Conservation Plan

What year did your entity adopt or revise their most recent Water Conservation Plan? 2014

Does The Plan incorporate Best Management Practices? Yes No

2. Water Conservation Programs

Has your entity implemented any type of water conservation activity or program?

Yes No

If yes, select the type(s) of Best Management Practices or water conservation strategies implemented during this reporting period.

Wholesale Supplier Activities and Practices	
<input type="checkbox"/> Agricultural Conservation Programs	<input type="checkbox"/> Leak Detection/ Water Loss Program
<input type="checkbox"/> Conservation Analysis & Planning	<input type="checkbox"/> Rebate, Retrofit, and Incentive Programs
<input type="checkbox"/> Conservation Rate Structures	<input type="checkbox"/> Regulatory & Enforcement
<input type="checkbox"/> Conservation Technology	<input type="checkbox"/> System Operations
<input type="checkbox"/> Education & Public Awareness	<input type="checkbox"/> Water Efficient Landscape Programs
<input type="checkbox"/> Industrial Conservation Programs	<input type="checkbox"/> Water Use Audits
<input type="checkbox"/> Other – Please describe	
Provided \$1Million total to the Town of Highland Park and the City of University Park to aid them in the installation of new Smart Water meters. These new meters will give the Town and City the ability to monitor their customers' usage and detect any unusual usage and leaks.	

3. Recycle/Reuse (Water or Wastewater Effluent)

For this reporting period, provide direct and indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	
Plant wash down	278,160,328
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other, please describe:	
Estimated Volume of Reuse	278,160,328

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs.

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
	278,160,328	278,160,328	

1. Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved

2. Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What might your entity do to improve the effectiveness of your water conservation program?

We have rehabilitated most of our older water piping and plant equipment. Will complete adding new piping in 2016. Will also assist our 2 wholesale customers, where available and appropriate, with their conservation programs as well as provide educational materials to the HPISD as appropriate.

7. Select the areas for which you would like to receive technical assistance:

- | | |
|---|---|
| <input type="checkbox"/> Agricultural Best Management Practices | <input type="checkbox"/> Water Conservation Plans |
| <input type="checkbox"/> Wholesale Best Management Practices | <input type="checkbox"/> Water IQ: Know Your Water |
| <input type="checkbox"/> Industrial Best Management Practices | <input type="checkbox"/> Water Loss Audits |
| <input type="checkbox"/> Drought Contingency Plans | <input type="checkbox"/> Rainwater Harvesting Systems |
| <input checked="" type="checkbox"/> Landscape Efficient Systems | <input type="checkbox"/> Recycling and Reuse |
| <input type="checkbox"/> Leak Detection and Equipment | |
| <input checked="" type="checkbox"/> Educational Resources | |

SUBMIT

Water Conservation Plan Annual Report Wholesale Water Supplier

CONTACT INFORMATION

Name of Utility: Dallas County Park Cities MUD

Public Water Supply Identification Number (PWS ID): TX0570078

Certification of Convenience and Necessity (CCN) Number: _____

Surface Water Right ID Number: 2363-A

Wastewater ID Number: _____

Check all that apply:

- Retail Water Supplier
- Wholesale Water Supplier
- Wastewater Treatment Utility

Address: 1811 Regal Row City: Dallas Zip Code: 75235

Email: mcdaniel@parkcitieswater.com Telephone Number: 2146528639

Regional Water Planning Group: C

Groundwater Conservation District: _____

Contact: First Name: Larry Last Name: McDaniel

Title: General Manager

Regional Water Planning Group: C

Groundwater Conservation District: _____

Reporting Period (Calendar year):

Period Begin (mm/yyyy): 01/2016 Period End (mm/yyyy): 12/2016

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
- Have a surface water right with TCEQ

SYSTEM DATA

1. For this reporting period, provide the total volume of wholesale water exported (transferred or sold):

4,149,940,580

2. For this reporting period, does your billing/accounting system have the capability to classify customer into the Wholesale Customer Categories?

Yes No

Wholesale Customers Categories*

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

**Recommended Customer Categories for classifying customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).*

3. For this reporting period, select the category(s) used to calculate wholesale customer water usage:

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

4. For this reporting period, enter the gallons of **WHOLESALE water exported** (transferred or sold). Enter zero if a Customer Category does not apply.

Wholesale Customer Category	Gallons Exported (transferred or sold)	Number of Customers
Municipal	4,103,018,036	3
Industrial	0	0
Commercial	0	0
Institutional	0	0
Agricultural	46,922,544	1
Total Gallons¹	4149940580	4

¹Municipal + Industrial + Commercial + Institutional + Agricultural = Wholesale Water Exported

Water Use Accounting

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells	4,149,940,580
Wholesale Water Imported: Purchased wholesale water transferred into the system.	0
System Input: Total water supplied to system and available for use. Produced + Imported = System Input	4,149,940,580
Wholesale Water Exported: Wholesale water sold or transferred out of the system.	4,149,940,580
Gallons Per Day: Wholesale Water Exported / 365 = Gallons Per Day	11,369,700
Population: Estimated total population for municipal customers.	80,748
Gallons Per Capita Per Day: Wholesale Exported / Population / 365 = Gallons Per Capita Per Day	141

Provide the breakdown of Wholesale Water Exported into Raw and Treated water volumes.

	Gallons
Raw Wholesale Water Exported	1,238,136,044
Treated Wholesale Water Exported	2,911,804,536

Provide the specific and quantified five and ten-year targets as listed in your most current Water Conservation Plan.

	Date to Achieve Target	Specified and Quantified Targets
Five-year target	2019	278 gpcd
Ten-year target	2024	277 gpcd

Water Conservation Programs and Activities

1. Water Conservation Plan.

2014

What year did your entity adopt or revise their most recent Water Conservation Plan?

Does The Plan incorporate **Best Management Practices**? Yes No

2. Water Conservation Programs

Has your entity implemented any type of water conservation activity or program?

Yes No

If yes, select the type(s) of Best Management Practices or water conservation strategies implemented during this reporting period.

Wholesale Supplier Activities and Practices	
<input type="checkbox"/>	Agricultural Conservation Programs
<input type="checkbox"/>	Conservation Analysis & Planning
<input type="checkbox"/>	Conservation Rate Structures
<input checked="" type="checkbox"/>	Conservation Technology
<input checked="" type="checkbox"/>	Education & Public Awareness
<input type="checkbox"/>	Industrial Conservation Programs
<input type="checkbox"/>	Leak Detection/Water Loss Program
<input type="checkbox"/>	Rebate, Retrofit, and Incentive Programs
<input type="checkbox"/>	Regulatory & Enforcement
<input checked="" type="checkbox"/>	System Operations
<input checked="" type="checkbox"/>	Water Efficient Landscape Programs
<input type="checkbox"/>	Water Use Audits
<input type="checkbox"/>	Other

3. Recycle/Reuse (Water or Wastewater Effluent)

For this reporting period, provide direct and indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	

Plant wash down	254,635,335
Chlorination/de-chlorination	
Industrial	
Landscape irrigation (parks, golf courses)	
Agricultural	
Other	
Estimated Volume of Reuse	254,635,335

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs.

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
	254,635,335	254,635,335	606,032

¹Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved

²Estimated this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital cost due to conservation.

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What might your entity do to improve the effectiveness of your water conservation program?

Continue to get our customers to by into water conservation.

Note: We sell treated water to University Park and Highland Park and raw water to the City of Grapevine. Our numbers of water sold and population includes all 3 customers. Wasn't sure if report is just for treated water or not, but assumed not as there is no differentiation. Last year's report included only treated water sales, thus the big difference in water per capita per day figures.

7. Select the areas for which you would like to receive more technical assistance.

Technical Assistance Areas	
<input type="checkbox"/>	Agricultural Best Management Practices
<input checked="" type="checkbox"/>	Wholesale Best Management Practices
<input type="checkbox"/>	Industrial Best Management Practices
<input type="checkbox"/>	Drought Contingency Plans
<input type="checkbox"/>	Landscape Efficient Systems
<input type="checkbox"/>	Leak Detection and Equipment
<input checked="" type="checkbox"/>	Educational Resources
<input type="checkbox"/>	Water Conservation Plans
<input checked="" type="checkbox"/>	Water IQ: Know Your Water
<input type="checkbox"/>	Water Loss Audits
<input type="checkbox"/>	Rainwater Harvesting
<input type="checkbox"/>	Recycling and Reuse

Water Conservation Plan Annual Report Wholesale Water Supplier

CONTACT INFORMATION

Name of Utility: Dallas County Park Cities MUD

Public Water Supply Identification Number (PWS ID): TX0570078

Certification of Convenience and Necessity (CCN) Number: _____

Surface Water Right ID Number: 2363-A

Wastewater ID Number: _____

Check all that apply:

- Retail Water Supplier
- Wholesale Water Supplier
- Wastewater Treatment Utility

Address: 1811 Regal Row City: Dallas Zip Code: 75235

Email: mcdaniel@parkcitieswater.com Telephone Number: 2146528639

Regional Water Planning Group: C

Groundwater Conservation District: _____

Contact: First Name: Larry Last Name: McDaniel

Title: General Manager

Is this person the designated Conservation Coordinator? Yes No

Regional Water Planning Group: C

Groundwater Conservation District: _____

Reporting Period (Calendar year):

Period Begin (mm/yyyy): 01/2017 Period End (mm/yyyy): 12/2017

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
- Have a surface water right with TCEQ

SYSTEM DATA

1. For this reporting period, provide the total volume of wholesale water exported (transferred or sold):

4,055,001,027

2. For this reporting period, does your billing/accounting system have the capability to classify customer into the Wholesale Customer Categories?

Yes No

Wholesale Customers Categories*

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

**Recommended Customer Categories for classifying customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).*

3. For this reporting period, select the category(s) used to calculate wholesale customer water usage:

- Municipal
- Industrial
- Commercial
- Institutional
- Agricultural

4. For this reporting period, enter the gallons of **WHOLESALE water exported** (transferred or sold). Enter zero if a Customer Category does not apply.

Wholesale Customer Category	Gallons Exported (transferred or sold)	Number of Customers
Municipal	4,006,235,746	3
Industrial	0	
Commercial	0	
Institutional	0	
Agricultural	48,765,281	1
Total Gallons¹	4055001027	4

¹Municipal + Industrial + Commercial + Institutional + Agricultural = Wholesale Water Exported

Water Use Accounting

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells	4,037,756,027
Wholesale Water Imported: Purchased wholesale water transferred into the system.	17,245,000
System Input: Total water supplied to system and available for use. Produced + Imported = System Input	4,055,001,027
Wholesale Water Exported: Wholesale water sold or transferred out of the system.	4,055,001,027
Gallons Per Day: Wholesale Water Exported / 365 = Gallons Per Day	11,109,592
Population: Estimated total population for municipal customers.	80,140
Gallons Per Capita Per Day: Wholesale Exported / Population / 365 = Gallons Per Capita Per Day	139

Provide the breakdown of Wholesale Water Exported into Raw and Treated water volumes.

	Gallons
Raw Wholesale Water Exported	1,107,041,281
Treated Wholesale Water Exported	2,947,959,746

Provide the specific and quantified five and ten-year targets as listed in your most current Water Conservation Plan.

	Date to Achieve Target	Specified and Quantified Targets
Five-year target	2019	278 gpcd
Ten-year target	2024	277 gpcd

Water Conservation Programs and Activities

1. Water Conservation Plan.

2014

What year did your entity adopt or revise their most recent Water Conservation Plan?

Does The Plan incorporate **Best Management Practices**? Yes No

2. Water Conservation Programs

Has your entity implemented any type of water conservation activity or program?

Yes No

If yes, select the type(s) of Best Management Practices or water conservation strategies implemented during this reporting period.

Wholesale Supplier Activities and Practices	
<input type="checkbox"/>	Agricultural Conservation Programs
<input type="checkbox"/>	Conservation Analysis & Planning
<input type="checkbox"/>	Conservation Rate Structures
<input checked="" type="checkbox"/>	Conservation Technology
<input checked="" type="checkbox"/>	Education & Public Awareness
<input type="checkbox"/>	Industrial Conservation Programs
<input type="checkbox"/>	Leak Detection/Water Loss Program
<input checked="" type="checkbox"/>	Rebate, Retrofit, and Incentive Programs
<input type="checkbox"/>	Regulatory & Enforcement
<input type="checkbox"/>	System Operations
<input type="checkbox"/>	Water Efficient Landscape Programs
<input type="checkbox"/>	Water Use Audits
<input type="checkbox"/>	Other

3. Recycle/Reuse (Water or Wastewater Effluent)

For this reporting period, provide direct and indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	0

Plant wash down	252,669,973
Chlorination/de-chlorination	0
Industrial	0
Landscape irrigation (parks, golf courses)	0
Agricultural	0
Other	
Estimated Volume of Reuse	252,669,973

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs.

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
0	252,669,973	252,669,973	621,568

¹Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved

²Estimated this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital cost due to conservation.

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. What might your entity do to improve the effectiveness of your water conservation program?

Note: We provided the City of University Park and the Town of Highland Park, our wholesale customers, \$3M over the last 3 years for the installation of new meters with Smart Technology. This is a major water conservation measure in that the new meters are more accurate and real time data can alert the City/Town to any leaks that are occurring so they can respond in a timely manner. It also provides their citizens with data, showing them how much water they are using. This gives them a way to adjust their usage to minimize their costs and water used.

7. Select the areas for which you would like to receive more technical assistance.

	Technical Assistance Areas
<input type="checkbox"/>	Agricultural Best Management Practices
<input checked="" type="checkbox"/>	Wholesale Best Management Practices
<input type="checkbox"/>	Industrial Best Management Practices
<input type="checkbox"/>	Drought Contingency Plans
<input checked="" type="checkbox"/>	Landscape Efficient Systems
<input type="checkbox"/>	Leak Detection and Equipment
<input checked="" type="checkbox"/>	Educational Resources
<input type="checkbox"/>	Water Conservation Plans
<input type="checkbox"/>	Water IQ: Know Your Water
<input type="checkbox"/>	Water Loss Audits
<input type="checkbox"/>	Rainwater Harvesting
<input type="checkbox"/>	Recycling and Reuse

Dallas County Park Cities
 Municipal Utility District
 Summary of Calendar ~~2016~~ ²⁰¹⁷ Water Reuse
 (Reclaim and Backpulse Waste)

Month	Reclaim (gals)	BP Waste (gals)	Total (gals)
January	8,511,000	6,104,889	14,615,889
February	8,210,000	8,400,177	16,610,177
March	10,330,600	10,283,294	20,613,894
April	9,485,800	10,109,375	19,595,175
May	12,433,600	10,993,286	23,426,886
June	10,898,400	11,171,753	22,070,153
July	14,804,400	13,040,223	27,844,623
August	13,770,800	8,914,672	22,685,472
September	15,965,000	4,667,054	20,632,054
October	14,649,000	4,953,674	19,602,674
November	14,168,400	4,180,847	18,349,247
December	14,352,000	6,771,729	21,123,729
Total	147,579,000	99,590,973	247,169,973
Raw Screen Wash for Year			5,500,000
Grand Total			252,669,973

Water Conservation Plan Annual Report Wholesale Water Supplier

CONTACT INFORMATION

Name of Entity: Dallas County Park Cities Municipal Utility District

Public Water Supply Identification Number (PWS ID): TX0570078

CCN Number: CN600656391

Water Rights ID Number: 2363-A

Wastewater ID Number: _____

Check all that apply:

- Retail Water Supplier
- Wholesale Water Supplier
- Wastewater Treatment Utility

Address: 1811 Regal Row City: Dallas Zip Code: 75235

Email: mcdaniel@parkcitieswater.com Telephone Number: 2146528639

Regional Water Planning Group: C [Map](#)

Groundwater Conservation District: _____ [Map](#)

Form Completed By: Larry McDaniel, P.E. Title: General Manager

Date: 2/14/2019

Reporting Period (calendar year):

Period Begin (mm/yyyy) 01/2018 Period End (mm/yyyy) 12/2018

Check all that apply:

- Received financial assistance of \$500,000 or more from TWDB
- Have 3,300 or more retail connections
- Have a surface water right with TCEQ

SYSTEM DATA

1. For this reporting period, provide the **total volume of wholesale water exported** (transferred or sold): 4,263,353,387 gallons

2. For this reporting period, does your billing/accounting system have the capability to classify customers into the Wholesale Customer Categories?

Yes No

3. For this reporting period, select the category(s) used to calculate wholesale customer water usage:

Municipal
 Industrial
 Commercial
 Institutional
 Agricultural

Wholesale Customer Categories*

- > Municipal
- > Industrial
- > Commercial
- > Institutional
- > Agricultural

*Recommended Customer Categories for classifying customer water use. For definitions, refer to [Guidance and Methodology on Water Conservation and Water Use](#).

4. For this reporting year, enter the gallons of **WHOLESALE water exported** (transferred or sold). Enter zero if a Customer Category does not apply.

Wholesale Customer Category	Gallons Exported (transferred or sold)	Number of Customers
Municipal	4,203,370,344	3
Industrial	0	
Commercial	0	
Institutional	0	
Agricultural	59,983,043	1
Total Gallons¹	4,263,353,387	4

¹ Municipal + Industrial + Commercial + Institutional + Agricultural = Wholesale Water Exported

Water Use Accounting

	Total Gallons During the Reporting Period
Water Produced: Water from permitted sources such as rivers, lakes, streams, and wells.	3,970,354,387
Wholesale Water Imported: Purchased wholesale water transferred into the system.	292,999,000
System Input: Total water supplied to system and available for use.	4,263,353,387
	<small>Produced + Imported = System Input</small>
Wholesale Water Exported: Wholesale water sold or transferred out of the system.	4,263,353,387
Gallons Per Day:	11,680,420
	<small>Wholesale Water Exported ÷ 365 = Gallons Per Day</small>
Population: Estimated total population for municipal customers.	80,650
Gallons Per Capita Per Day:	145
	<small>(Wholesale Exported ÷ Population) +365 = Gallons Per Capita Per Day</small>

Provide the breakdown of Wholesale Water Exported into Raw and Treated water volumes.

	Gallons
Raw Wholesale Water Exported	1,237,721,043
Treated Wholesale Water Exported	3,025,632,344

Provide the **specific and quantified five and ten-year targets** as listed in your most current Water Conservation Plan.

	Date to Achieve Target	Specified and Quantified Targets
Five-year target	2019	278gpcd
Ten-year target	2024	277gpcd

Water Conservation Programs and Activities

1. Water Conservation Plan

What year did your entity adopt or revise their most recent Water Conservation Plan? 2014

Does The Plan incorporate Best Management Practices? Yes No

2. Water Conservation Programs

Has your entity implemented any type of water conservation activity or program?

Yes No

If yes, select the type(s) of Best Management Practices or water conservation strategies implemented during this reporting period.

Wholesale Supplier Activities and Practices
<input type="checkbox"/> Agricultural Conservation Programs
<input type="checkbox"/> Conservation Analysis & Planning
<input type="checkbox"/> Conservation Rate Structures
<input checked="" type="checkbox"/> Conservation Technology
<input checked="" type="checkbox"/> Education & Public Awareness
<input type="checkbox"/> Industrial Conservation Programs
<input type="checkbox"/> Leak Detection/ Water Loss Program
<input checked="" type="checkbox"/> Rebate, Retrofit, and Incentive Programs
<input type="checkbox"/> Regulatory & Enforcement
<input type="checkbox"/> System Operations
<input type="checkbox"/> Water Efficient Landscape Programs
<input type="checkbox"/> Water Use Audits

Other activities, list or describe.

Provided the Town of Highland Park and the City of University Park over \$3,000,000 to install Smart meters

3. Recycle/Reuse (Water or Wastewater Effluent)

For this reporting period, provide direct and indirect reuse activities.

Reuse Activity	Estimated Volume (in gallons)
On-site irrigation	0
Plant wash down	246,943,613
Chlorination/de-chlorination	0
Industrial	0
Landscape irrigation (parks, golf courses)	0
Agricultural	0
Other, please describe:	0
Estimated Volume of Reuse	246,943,613

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs.

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
0	246,943,613	246,943,613	\$ 606,519

1. Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved

2. Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
○	●	○	○

6. What might your entity do to improve the effectiveness of your water conservation program?

Still awaiting final installation and operation of the Smart Meters and technologies in the Park Cities to be able to quantify conservation results.

7. Select the areas for which you would like to receive technical assistance:

- | | |
|---|--|
| <input type="checkbox"/> Agricultural Best Management Practices | <input type="checkbox"/> Water Conservation Plans |
| <input checked="" type="checkbox"/> Wholesale Best Management Practices | <input type="checkbox"/> Water IQ: Know Your Water |
| <input type="checkbox"/> Industrial Best Management Practices | <input type="checkbox"/> Water Loss Audits |
| <input type="checkbox"/> Drought Contingency Plans | <input checked="" type="checkbox"/> Rainwater Harvesting Systems |
| <input checked="" type="checkbox"/> Landscape Efficient Systems | <input type="checkbox"/> Recycling and Reuse |
| <input type="checkbox"/> Leak Detection and Equipment | |
| <input checked="" type="checkbox"/> Educational Resources | |

SUBMIT

4. Water Savings

For this reporting period, estimate the savings that resulted from water conservation activities and programs.

Estimated Gallons Saved/Conserved	Estimated Gallons Recycled/Reused	Total Volume of Water Saved ¹	Dollar Value of Water Saved ²
	246,943,613	246,943,613	X

- Estimated Gallons Saved + Estimated Gallons Recycled/Reused = Total Volume Saved
- Estimate this value by taking into account water savings, the cost of treatment or purchase of water, and deferred capital costs due to conservation.

5. Program Effectiveness

In your opinion, how would you rank the overall effectiveness of your conservation programs and activities?

Less Than Effective	Somewhat Effective	Highly Effective	Does Not Apply
○	●	○	○

6. What might your entity do to improve the effectiveness of your water conservation program?

Still awaiting final installation and operation of the Smart Meters and technologies in the Park Cities to be able to quantify conservation results.

7. Select the areas for which you would like to receive technical assistance:

- | | |
|---|--|
| <input type="checkbox"/> Agricultural Best Management Practices | <input type="checkbox"/> Water Conservation Plans |
| <input checked="" type="checkbox"/> Wholesale Best Management Practices | <input type="checkbox"/> Water IQ: Know Your Water |
| <input type="checkbox"/> Industrial Best Management Practices | <input type="checkbox"/> Water Loss Audits |
| <input type="checkbox"/> Drought Contingency Plans | <input checked="" type="checkbox"/> Rainwater Harvesting Systems |
| <input checked="" type="checkbox"/> Landscape Efficient Systems | <input type="checkbox"/> Recycling and Reuse |
| <input type="checkbox"/> Leak Detection and Equipment | |
| <input checked="" type="checkbox"/> Educational Resources | |

$$* 246,944 \times \$2.4561 / 1000 = \$606,519$$

SUBMIT

Dallas County Park Cities Municipal Utility District

Summary of Calendar 2018 Water Reuse (Reclaim and Backpulse Waste)				Summary of Other Values for Water Conservation Annual Report			
Month	Reclaim (gals)	BP Waste (gals)	Total (gals)	Grapevine Billed (gals)	Brookhollow Billed (gals)	Total Raw (gals)	From DWU (gals)
January	9,733,000	8,263,122	17,996,122	94,150,000	0	186,930,000	0
February	2,275,800	8,883,484	11,159,284	85,081,000	3,225,000	31,550,000	123,766,000
March	8,922,200	8,554,321	17,476,521	97,331,000	0	190,350,000	5,596,000
April	12,710,000	10,025,147	22,735,147	88,045,000	0	247,890,000	0
May	13,229,000	12,241,699	25,470,699	92,984,000	0	312,130,000	0
June	20,007,000	4,602,966	24,609,966	96,184,000	19,074,043	420,110,000	0
July	22,341,000	6,058,838	28,399,838	102,349,000	18,819,000	484,180,000	0
August	24,945,000	6,765,991	31,710,991	100,347,000	13,118,000	441,080,000	0
September	17,172,000	4,717,103	21,889,103	100,021,000	2,112,000	299,690,000	0
October	9,485,000	4,319,397	13,804,397	118,164,000	3,635,000	157,660,000	51,829,000
November	3,410,000	5,888,793	9,298,793	99,518,000	0	82,340,000	111,808,000
December	11,497,000	5,395,752	16,892,752	103,564,000	0	185,650,000	0
Total	155,727,000	85,716,613	241,443,613	1,177,738,000	59,983,043	3,039,560,000	292,999,000
Raw Screen Wash for Year			5,500,000				
Grand Total			246,943,613				

Summary of Values to use on Report

Page 2:	Total Gallons Exported (Municipal)	4,203,370,344
	Total Gallons Exported (Agricultural)	59,983,043
	Grand Total	4,263,353,387
Page 3:	Water Produced	3,970,354,387
	Water Imported	292,999,000
	System Input	4,263,353,387
	Water Exported	4,263,353,387
	Gallons Per Day	11,680,420
	Population	80,140
	GPCPD	146
	Raw Water Exported	1,237,721,043
	Treated Water Exported	3,025,632,344
Page 4:	Onsite Irrigation	246,943,613

DRAFT

APPENDIX F
REGION C WATER
PLANNING GROUP DOCUMENTATION

DRAFT

APPENDIX G

ADOPTION OF WATER CONSERVATION PLAN