CITY OF DENTON

APPLICATION NO. 08-2348 B

TO

UPDATE DENTON'S WATER RIGHTS IN LAKE LEWISVILLE
(PLACE OF USE, PURPOSE OF USE, DIVERSION POINT, AND DIVERSION RATE FROM RESERVOIR)

City of Denton
Water Rights Application 08-2348 B
Lake Lewisville

SUMMARY OF REQUEST

City of Denton's state-issued water rights to store, divert, and use water from Lake Lewisville are authorized in Certificate of Adjudication No. 08-2348, as amended ("CA 08-2348"). Lake Lewisville is owned by the federal government and operated by the United States Army Corps of Engineers.

By this application to further amend CA 08-2348, City of Denton seeks to modernize those provisions of the certificate related to place of use and diversion point, to add additional purposes of use, and to increase the authorized rate of diversion from Lake Lewisville to meet the City's operational needs without increasing its appropriated diversion amount. (Application No. CA 08-2335 B is submitted separately and concurrently for similar amendment of City of Denton's water rights related to Lake Ray Roberts.)

The following documents are included in this application.

1. Administrative Information Checklist (Application)
2. Evidence of City of Denton Authorizing Signature
3. Technical Information Report
4. Maps of Lake Lewisville and Reference Point
5. City of Denton's Combined Water Conservation Plan and Drought Contingency Plan, with City Ordinance No. 19-863 (2019)
6. City of Denton's Reuse Accounting Plan Narrative as Proposed for Revision With Regard to Diversion Rate and Minor Correction

Denton's Reuse Accounting Plan (required by Amendment A to CA 08-2348 and previously approved by the Executive Director) was provided for discussion during a pre-application meeting, and Denton understands that no modification of the plan is considered necessary at this time to accommodate the currently requested authorizations.

Payment of filing and recording fees as calculated in Worksheet 8.0 is submitted concurrently with a hard copy of this application package. City of Denton requests that the Executive Director calculate the amount of additional notice fees that will be required.

City of Denton reserves the right to supplement this application, including with information that may be requested by the Executive Director during administrative or technical review.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

TCEQ WATER RIGHTS PERMITTING APPLICATION

ADMINISTRATIVE INFORMATION CHECKLIST

Complete and submit this checklist for each application. See Instructions Page. 5.

APPLICANT(S): CITY OF DENTON, TEXAS

Indicate whether the following items are included in your application by writing either Y (for yes) or N (for no) next to each item (all items are not required for every application).

Y/N		Y/N	
Y	**Administrative Information Report**	Y	**Worksheet 3.0**
N	Additional Co-Applicant Information	N	Additional W.S 3.0 for each Point
N	Additional Co-Applicant Signature Pages	N	Recorded Deeds for Diversion Points
Y	Written Evidence of Signature Authority	N	Consent For Diversion Access
Y	**Technical Information Report**	N	**Worksheet 4.0**
Y	USGS Map (or equivalent)	N	TPDES Permit(s)
N	Map Showing Project Details	N	WWTP Discharge Data
N	Original Photographs	N	Groundwater Well Permit
N	Water Availability Analysis	N	Signed Water Supply Contract
Y	**Worksheet 1.0**	N	**Worksheet 4.1**
N	Recorded Deeds for Irrigated Land	Y	**Worksheet 5.0**
N	Consent For Irrigation Land	N	Addendum to Worksheet 5.0
N	**Worksheet 1.1**	Y	**Worksheet 6.0**
N	Addendum to Worksheet 1.1	Y	Water Conservation Plan(s)
N	**Worksheet 1.2**	Y	Drought Contingency Plan(s)
N	Additional W.S 2.0 for Each Reservoir	Y	Documentation of Adoption
N	Dam Safety Documents	Y	**Worksheet 7.0**
N	Notice(s) to Governing Bodies	N	Accounting Plan
N	Recorded Deeds for Inundated Land	Y	**Worksheet 8.0**
N	Consent For Inundation Land	Y	Fees

ADMINISTRATIVE INFORMATION REPORT

The following information **is required** for **all** new applications and amendments.

****Applicants are strongly encouraged to schedule a pre-application meeting with TCEQ Staff to discuss Applicant's needs prior to submitting an application. Call the Water Rights Permitting Team to schedule a meeting at* (512) 239-4600.

1. TYPE OF APPLICATION (Instructions, Page. 6)

Indicate, by marking X, next to the following authorizations you are seeking.

_____New Appropriation of State Water

__Y__Amendment to a Water Right *

_____Bed and Banks

If you are seeking an amendment to an existing water rights authorization, you must be the owner of record of the authorization. If the name of the Applicant in Section 2, does not match the name of the current owner(s) of record for the permit or certificate or if any of the co-owners is not included as an applicant in this amendment request, your application could be returned. If you or a co-applicant are a new owner, but ownership is not reflected in the records of the TCEQ, submit a change of ownership request (Form TCEQ-10204) prior to submitting the application for an amendment. See Instructions page. 6. Please note that an amendment application may be returned, and the Applicant may resubmit once the change of ownership is complete.

Please summarize the authorizations or amendments you are seeking in the space below or attach a narrative description entitled "Summary of Request."

PLEASE SEE INCLUDED SUMMARY OF REQUEST

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 1
(Include a copy of this section for each Co-Applicant, if any)

What is the Full Legal Name of the individual or entity (applicant) applying for this permit?

CITY OF DENTON, TEXAS

(If the Applicant is an entity, the legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal documents forming the entity.)

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch

CN : **CN600358980** (leave blank if you do not yet have a CN).

What is the name and title of the person or persons signing the application? Unless an application is signed by an individual applicant, the person or persons must submit written evidence that they meet the signatory requirements in *30 TAC § 295.14*.

First/Last Name: **STEPHEN D. GAY**

Title: **DIRECTOR OF WATER UTILITIES**

Have you provided written evidence meeting the signatory requirements in 30 TAC § 295.14, as an attachment to this application? **Y/N** Y

What is the applicant's mailing address as recognized by the US Postal Service (USPS)? You may verify the address on the USPS website at https://tools.usps.com/go/ZipLookupAction!input.action.

Name: **STEPHEN D. GAY, DIRECTOR OF WATER UTILITIES**

Mailing Address: **901-A TEXAS STREET**

City: **DENTON** State: **TEXAS** ZIP Code: **76209**

Indicate an X next to the type of Applicant:

___Individual	___Sole Proprietorship-D.B.A.
___Partnership	___Corporation
___Trust	___Estate
___Federal Government	___State Government
___County Government	X City Government
___Other Government	___Other_____

For Corporations or Limited Partnerships, provide:
State Franchise Tax ID Number:_____SOS Charter (filing) Number: _____

3. APPLICATION CONTACT INFORMATION (Instructions, Page. 9)

If the TCEQ needs additional information during the review of the application, who should be contacted? Applicant may submit their own contact information if Applicant wishes to be the point of contact.

First and Last Name: CAROLYN AHRENS

Title: OUTSIDE LEGAL COUNSEL

Organization Name: OF COUNSEL, BOOTH & ASSOCIATES, P.C.

Mailing Address: 5701 W. SLAUGHTER LANE, A130

City: AUSTIN State: TEXAS ZIP Code: 78749

Phone Number: 512.619.4079 (CELL) 512.472.3263 (OFFICE)

Fax Number: 512.473.2609

E-mail Address: [redacted]

4. WATER RIGHT CONSOLIDATED CONTACT INFORMATION (Instructions, Page. 9)

This section applies only if there are multiple Owners of the same authorization. Unless otherwise requested, Co-Owners will each receive future correspondence from the Commission regarding this water right (after a permit has been issued), such as notices and water use reports. Multiple copies will be sent to the same address if Co-Owners share the same address. Complete this section if there will be multiple owners and **all** owners agree to let one owner receive correspondence from the Commission. Leave this section blank if you would like all future notices to be sent to the address of each of the applicants listed in section 2 above.

I/We authorize all future notices be received on my/our behalf at the following:

First and Last Name: _____

Title: _____

Organization Name: _____

Mailing Address: _____

City: _____ State: _____ ZIP Code: _____

Phone Number: _____

Fax Number: _____

E-mail Address: _____

5. MISCELLANEOUS INFORMATION (Instructions, Page. 9)

a. The application will not be processed unless all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and Penalty Protocol by all applicants/co-applicants. If you need assistance determining whether you owe delinquent penalties or fees, please call the Water Rights Permitting Team at (512) 239-4600, prior to submitting your application.

1. Does Applicant or Co-Applicant owe any fees to the TCEQ? **Yes / No** NO

   If **yes**, provide the following information:

   Account number:_____ Amount past due:_____

2. Does Applicant or Co-Applicant owe any penalties to the TCEQ? **Yes / No** NO

   If **yes**, please provide the following information:

   Enforcement order number:_____ Amount past due: _____

b. If the Applicant is a taxable entity (corporation or limited partnership), the Applicant must be in good standing with the Comptroller or the right of the entity to transact business in the State may be forfeited. See Texas Tax Code, Subchapter F. Applicants may check their status with the Comptroller at https://mycpa.cpa.state.tx.us/coa/
Is the Applicant or Co-Applicant in good standing with the Comptroller? **Yes / No** _____

c. The commission will not grant an application for a water right unless the applicant has submitted all Texas Water Development Board (TWDB) surveys of groundwater and surface water use – if required. See TWC §16.012(m) and 30 TAC § 297.41(a)(5). Applicants should check survey status on the TWDB website prior to filing: https://www3.twdb.texas.gov/apps/reports/WU/SurveyStatus_PriorThreeYears

Applicant has submitted all required TWDB surveys of groundwater and surface water?
Yes / No YES

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, STEPHEN D. GAY, DIRECTOR OF WATER UTILITIES FOR CITY OF DENTON, TEXAS
(Typed or printed name) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that I am authorized under Title 30 Texas Administrative Code §295.14 to sign and submit this document and I have submitted written evidence of my signature authority.

Signature: _____ Date: 11/02/2022
(Use blue ink)

Subscribed and Sworn to before me by the said Stephen D. Gay

on this 2 day of November, 2022.

My commission expires on the 16 day of February, 2023.

Patti Kim Mankin
Notary Public Patti Kim Mankin

Denton County
County, Texas

[SEAL]

PATTI KIM MANKIN
Notary Public, State of Texas
Comm. Expires 02-16-2023
Notary ID 126007079

If the Application includes Co-Applicants, each Applicant and Co-Applicant must submit an original, separate signature page

City Secretary's Office
215 E. McKinney St., Denton, TX 76201 • (940) 349-8303

CERTIFICATE OF CITY SECRETARY

THE STATE OF TEXAS

COUNTY OF DENTON

CITY OF DENTON

I, the undersigned City Secretary of the City of Denton, Texas, (the "City") **DO HEREBY CERTIFY** that according to the records of the City, of which I am a custodian, the attached is a true and accurate copy of the following duly filed with the City Secretary's Office:

Ordinance 22-1994

as approved by the City of Denton City Council on **October 18, 2022**.

TO CERTIFY WHICH, witness my official signature and the seal of said City, this the 3rd day of November, 2022.

CITY OF DENTON
DENTON, TEXAS

ROSA RIOS
CITY SECRETARY
CITY OF DENTON, TEXAS

ORDINANCE NO. 22-1994

AN ORDINANCE OF THE CITY OF DENTON, A TEXAS HOME-RULE MUNICIPAL CORPORATION, AUTHORIZING THE FILING OF APPLICATIONS WITH TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ("TCEQ") BY THE CITY MANAGER, OR THEIR DESIGNEE, FOR AND PURSUING GENERAL AMENDMENT OF WATER RIGHTS AUTHORIZATIONS, PURSUANT TO CHAPTER 11 OF THE TEXAS WATER CODE, IN LAKE LEWISVILLE AND LAKE RAY ROBERTS, AND ADDITIONAL BED AND BANKS CONVEYANCE, DIVERSION AND USE AUTHORITY RELATED TO DISCHARGED WATER FROM DENTON'S MUNICIPAL WASTEWATER TREATMENT FACILITIES; PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Denton, Texas (Denton) owns water rights authorizing storage, conveyance, diversion, and use of water in Lake Lewisville, as evidenced by Certificate of Adjudication No. 08-2348, as amended; and

WHEREAS, Amendment A to Certificate of Adjudication No. 08-2348 granted Denton water rights authority to use the bed and banks of named state watercourses including Lake Lewisville to convey, divert, and reuse surface-water based return flows discharged from Denton's municipal wastewater treatment facilities under two water quality permits issued by the Texas Commission on Environmental Quality (TCEQ); and

WHEREAS, Denton owns water rights authorizing storage, diversion, and use of water in Lake Ray Roberts, as evidenced by Certificate of Adjudication No. 08-2335, as amended; and

WHEREAS, Denton uses the authorizations in Certificate of Adjudication Nos. 08-2348, as amended, and 08-2335, as amended, for providing water supply to its retail and wholesale customers; and

WHEREAS, Denton has an opportunity to enhance the city's flexibility and efficiency in meeting the needs of its retail and wholesale customers for water through amendments to the provisions of Certificate of Adjudication Nos. 08-2348 and 08-2335 that do not require increasing the city's maximum authorized annual water use; and

WHEREAS, Denton also has an opportunity to further supplement and diversify its water supply assets through additional water rights permitting of bed and banks water conveyance, diversion, and reuse based on new and increased water quality authorizations for discharge from its municipal wastewater treatment facilities; and

WHEREAS, special conditions included in Denton's existing bed and banks reuse authority in Amendment A to Certificate of Adjudication No. 08-2348 requires such additional water rights permitting prior to diversion of new and increased discharge amounts; and

WHEREAS, amendment of Certificates of Adjudication Nos. 08-2358 and 08-2335 for flexibility and efficiency, and obtaining new bed and banks conveyance, diversion, and reuse authority, require application to, and authorization by, the Texas Commission on Environmental Quality pursuant to Chapter 11 of the Texas Water Code; and

WHEREAS, the City Council finds that it is in the public interest to seek and obtain such amendments and new authority.

NOW, THEREFORE THE COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

Section 1. The Council hereby authorizes and directs the City Manager or their designee, to take such actions as they find reasonable and appropriate to file applications for and pursue amendment of the City's water rights and to obtain new water reuse rights, consistently with the intents and purposes this ordinance, including but not limited to the following:

A. to have prepared, to sign, and to have filed documents before any administrative agency or judicial forum;

B. to pursue, to negotiate as necessary to obtain, and to enforce the right to implement new and amended City water rights before any administrative agency or judicial forum;

C. to retain, on behalf of the City, legal counsel and consulting services as he finds reasonable and appropriate associated with the actions authorized herein; and

D. to provide for payment of all necessary regulatory and notice fees associated with the actions authorized herein.

Section 2: This Ordinance shall be effective immediately upon and after its adoption and approval.

The motion to approve this ordinance was made by Brian Beck and seconded by Jesse Davis, the ordinance was passed and approved by the following vote [7 - 0]:

	Aye	Nay	Abstain	Absent
Mayor Gerard Hudspeth:	✓			
Vicki Byrd, District 1:	✓			
Brian Beck, District 2:	✓			
Jesse Davis, District 3:	✓			
Alison Maguire, District 4:	✓			
Brandon Chase McGee, At Large Place 5:	✓			
Chris Watts, At Large Place 6:	✓			

PASSED AND APPROVED this the 18th day of October, 2022.

GERARD HUDSPETH, MAYOR

ATTEST: DEPUTY
~~ROSA RIOS~~, CITY SECRETARY
JESUS SALAZAR

By:_____

APPROVED AS TO LEGAL FORM:
MACK REINWAND, CITY ATTORNEY

By:_____

CITY OF DENTON
DENTON, TEXAS

CITY OF DENTON

City Manager's Office
215 E. McKinney St., Denton, TX 76201 • (940) 349-8307

November 1, 2022

Rosa Rios, City Secretary
City of Denton
215 E. McKinney Street
Denton, Texas 76201

Re-designation of Signature Authority for Water Rights Authorizations

Dear Ms. Rios:

I am providing this letter as my official delegation of signature authorization for Water Utilities to take such actions as they find reasonable and appropriate to file applications for and pursue amendments of the City's water rights and to obtain new water reuse rights, consistent with the intents and purposes of this ordinance.

Pursuant to the authority granted to me as the City Manager under Ordinance 22-1994, adopted by City Council on October 18, 2022, I delegate to the City Official serving in the Director of Water Utilities capacity for the City of Denton the authority to fulfil the responsibilities of the City included but not limited to the following:

- to have prepared, to sign, and to have filed documents before any administrative agency or judicial forum;
- to pursue, to negotiate as necessary to obtain, and to enforce the right to implement new and amended City water rights before any administrative agency or judicial forum;
- to retain, on behalf of the City, legal counsel, and consulting services as he finds reasonable and appropriate associated with the actions authorized herein; and
- to provide for payment of all necessary regulatory and notice fees associated with the actions authorized herein.
- Certifying all other requirements of Ordinance 22-1994 are met with respect to all requisitions.

Please retain this letter on file for validation of any actions taken by the City Official serving in the Director of Water Utilities capacity for the City of Denton.

Sincerely,

DocuSigned by:
Sara Hensley
5236DB296270423...

Sara Hensley
City Manager

TECHNICAL INFORMATION REPORT
WATER RIGHTS PERMITTING

This Report is required for applications for new or amended water rights. Based on the Applicant's responses below, Applicants are directed to submit additional Worksheets (provided herein). A completed Administrative Information Report is also required for each application.

Applicants are REQUIRED to schedule a pre-application meeting with TCEQ Permitting Staff to discuss Applicant's needs and to confirm information necessary for an application prior to submitting such application. Please contact the Water Availability Division at (512) 239-4600 or WRPT@tceq.texas.gov to schedule a meeting.

Date of pre-application meeting: August 15, 2022

1. New or Additional Appropriations of State Water. Texas Water Code (TWC) § 11.121 (Instructions, Page. 12)

State Water is: *The water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state. TWC § 11.021.*

a. Applicant requests a new appropriation (diversion or impoundment) of State Water? **Y / N** No

b. Applicant requests an amendment to an existing water right requesting an increase in the appropriation of State Water or an increase of the overall or maximum combined diversion rate? **Y / N** Yes (If yes, indicate the Certificate or Permit number: 08-2348)

If Applicant answered yes to (a) or (b) above, does Applicant also wish to be considered for a term permit pursuant to TWC § 11.1381? **Y / N** No

c. Applicant requests to extend an existing Term authorization or to make the right permanent? **Y / N** No (If yes, indicate the Term Certificate or Permit number: _____)

If Applicant answered yes to (a), (b) or (c), the following worksheets and documents are required:

- **Worksheet 1.0 – Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir requested in the application)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for each diversion point and/or one worksheet for the upstream limit and one worksheet for the downstream limit of each diversion reach requested in the application)
- **Worksheet 5.0 – Environmental Information Worksheet**
- **Worksheet 6.0 – Water Conservation Information Worksheet**
- **Worksheet 7.0 – Accounting Plan Information Worksheet**
- **Worksheet 8.0 – Calculation of Fees**
- **Fees calculated on Worksheet 8.0 –** see instructions **Page. 34.**
- **Maps –** See instructions **Page. 15**.
- **Photographs** - See instructions **Page. 30**.

Additionally, if Applicant wishes to submit an alternate source of water for the project/authorization, see Section 3, Page 3 for Bed and Banks Authorizations (Alternate sources may include groundwater, imported water, contract water or other sources).

Additional Documents and Worksheets may be required (see within).

2. Amendments to Water Rights. TWC § 11.122 (Instructions, Page. 12)

This section should be completed if Applicant owns an existing water right and Applicant requests to amend the water right. ***If Applicant is not currently the Owner of Record in the TCEQ Records, Applicant must submit a Change of Ownership Application (TCEQ-10204) prior to submitting the amendment Application or provide consent from the current owner to make the requested amendment. If the application does not contain consent from the current owner to make the requested amendment, TCEQ will not begin processing the amendment application until the Change of Ownership has been completed and will consider the Received Date for the application to be the date the Change of Ownership is completed.*** **See instructions page. 6.**

Water Right (Certificate or Permit) number you are requesting to amend: 08-2348

Applicant requests to sever and combine existing water rights from one or more Permits or Certificates into another Permit or Certificate? **Y / N** No (if yes, complete chart below):

List of water rights to sever	Combine into this ONE water right

a. Applicant requests an amendment to an existing water right to increase the amount of the appropriation of State Water (diversion and/or impoundment)? **Y / N** Yes

If yes, application is a new appropriation for the increased amount, complete ***Section 1 of this Report (PAGE. 1) regarding New or Additional Appropriations of State Water.***

b. Applicant requests to amend existing Term authorization to extend the term or make the water right permanent (remove conditions restricting water right to a term of years)? **Y / N** No

If yes, application is a new appropriation for the entire amount, complete ***Section 1 of this Report (PAGE. 1) regarding New or Additional Appropriations of State Water.***

c. Applicant requests an amendment to change the purpose or place of use or to add an additional purpose or place of use to an existing Permit or Certificate? **Y / N** Yes
If yes, submit:

- **Worksheet 1.0 – Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 1.2 - Notice: "Marshall Criteria"**

d. Applicant requests to change: diversion point(s); or reach(es); or diversion rate? **Y / N** Yes
If yes, submit:

- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for each diversion point or one worksheet for the upstream limit and one worksheet for the downstream limit of each diversion reach)
- **Worksheet 5.0 – Environmental Information** (Required for <u>any</u> new diversion points that are not already authorized in a water right)

e. Applicant requests amendment to add or modify an impoundment, reservoir, or dam? **Y / N** No

If yes, submit: **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir)

f. Other - Applicant requests to change any provision of an authorization not mentioned above? **Y / N** No *If yes, call the Water Availability Division at (512) 239-4600 to discuss.*

Additionally, all amendments require:

- **Worksheet 8.0 – Calculation of Fees; and Fees calculated – see instructions Page. 34**
- **Maps – See instructions Page. 15.**
- **Additional Documents and Worksheets may be required (see within).**

3. Bed and Banks. TWC § 11.042 (Instructions, Page 13)

a. Pursuant to contract, Applicant requests authorization to convey, stored or conserved water to the place of use or diversion point of purchaser(s) using the bed and banks of a watercourse? TWC § 11.042(a). **Y/N** No

If yes, submit a signed copy of the Water Supply Contract pursuant to 30 TAC §§ 295.101 and 297.101. Further, if the underlying Permit or Authorization upon which the Contract is based does not authorize Purchaser's requested Quantity, Purpose or Place of Use, or Purchaser's diversion point(s), then either:

1. *Purchaser must submit the worksheets required under Section 1 above with the Contract Water identified as an alternate source; or*
2. *Seller must amend its underlying water right under Section 2.*

b. Applicant requests to convey water imported into the state from a source located wholly outside the state using the bed and banks of a watercourse? TWC § 11.042(a-1). **Y / N** No

If yes, submit worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps and fees from the list below.

c. Applicant requests to convey Applicant's own return flows derived from privately owned groundwater using the bed and banks of a watercourse? TWC § 11.042(b). **Y / N** No

If yes, submit worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps, and fees from the list below.

d. Applicant requests to convey Applicant's own return flows derived from surface water using the bed and banks of a watercourse? TWC § 11.042(c). **Y / N** No

If yes, submit worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, Maps, and fees from the list below.

Please note, if Applicant requests the reuse of return flows belonging to others, the Applicant will need to submit the worksheets and documents under Section 1 above, as the application will be treated as a new appropriation subject to termination upon direct or indirect reuse by the return flow discharger/owner.

e. Applicant requests to convey water from any other source, other than (a)-(d) above, using the bed and banks of a watercourse? TWC § 11.042(c). **Y / N** No

If yes, submit worksheets 1.0, 2.0, 3.0, 4.0, 5.0, 7.0, 8.0, Maps, and fees from the list below.

Worksheets and information:

- **Worksheet 1.0 – Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir owned by the applicant through which water will be conveyed or diverted)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for the downstream limit of each diversion reach for the proposed conveyances)

- **Worksheet 4.0 – Discharge Information Worksheet** (for each discharge point)
- **Worksheet 5.0 – Environmental Information Worksheet**
- **Worksheet 6.0 – Water Conservation Information Worksheet**
- **Worksheet 7.0 – Accounting Plan Information Worksheet**
- **Worksheet 8.0 – Calculation of Fees; and Fees calculated – see instructions Page. 34**
- **Maps –** See instructions **Page. 15.**
- **Additional Documents and Worksheets may be required (see within).**

4. General Information, Response Required for all Water Right Applications (Instructions, Page 15)

a. Provide information describing how this application addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement (*not required for applications to use groundwater-based return flows*). Include citations or page numbers for the State and Regional Water Plans, if applicable. Provide the information in the space below or submit a supplemental sheet entitled "Addendum Regarding the State and Regional Water Plans":

This application addresses Denton's continued use of its exising water rights in Lake Lewisville, and is consistent with Region C and State water supply planning. Volume 1, Table 5E.98, of the 2021 Region C Water Plan, for example, summarizes City of Denton's increasing projected demands and currently available supplies. (Table 5E.98 is on Page 123).

b. Did the Applicant perform its own Water Availability Analysis? **Y / N** No

If the Applicant performed its own Water Availability Analysis, provide electronic copies of any modeling files and reports.

c. Does the application include required Maps? (**Instructions Page. 15**) **Y / N** Yes

WORKSHEET 1.0
Quantity, Purpose and Place of Use

1. New Authorizations (Instructions, Page. 16)

Submit the following information regarding quantity, purpose and place of use for requests for new or additional appropriations of State Water or Bed and Banks authorizations:

Quantity (acre-feet) (*Include losses for Bed and Banks*)	**State Water Source (River Basin) or Alternate Source** *each *alternate source* (*and new appropriation based on return flows of others*) *also requires completion of Worksheet 4.0*	**Purpose(s) of Use**	**Place(s) of Use** **requests to move state water out of basin also require completion of Worksheet 1.1 Interbasin Transfer*

_____Total amount of water (in acre-feet) to be used annually (*include losses for Bed and Banks applications*)

If the Purpose of Use is Agricultural/Irrigation for any amount of water, provide:

a. Location Information Regarding the Lands to be Irrigated

i) Applicant proposes to irrigate a total of_____acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of_____acres in_____County, TX.

ii) Location of land to be irrigated: In the_____Original Survey No. _____, Abstract No._____.

A copy of the deed(s) or other acceptable instrument describing the overall tract(s) with the recording information from the county records must be submitted. Applicant's name must match deeds.

If the Applicant is not currently the sole owner of the lands to be irrigated, Applicant must submit documentation evidencing consent or other documentation supporting Applicant's right to use the land described.

Water Rights for Irrigation may be appurtenant to the land irrigated and convey with the land unless reserved in the conveyance. 30 TAC § 297.81.

2. Amendments - Purpose or Place of Use (Instructions, Page. 12)

a. Complete this section for each requested amendment changing, adding, or removing Purpose(s) or Place(s) of Use, complete the following:

Quantity (acre-feet)	Existing Purpose(s) of Use	Proposed Purpose(s) of Use*	Existing Place(s) of Use	Proposed Place(s) of Use**
58,424	municipal and domestic	municipal, domestic, industrial, recreation, agricultural use	Distribution system / communities in dam watershed	**Applicant's service area, and the service area of its wholesale customers, in the Trinity River Basin**
13,497	municipal and domestic	municipal, domestic, industrial, recreation, agricultural use	Denton County, Trinity River Basin	**Applicant's service area, and the service area of its wholesale customers, in the Trinity River Basin**

**If the request is to add additional purpose(s) of use, include the existing and new purposes of use under "Proposed Purpose(s) of Use."*

***If the request is to add additional place(s) of use, include the existing and new places of use under "Proposed Place(s) of Use."*

Changes to the purpose of use in the Rio Grande Basin may require conversion. 30 TAC § 303.43.

b. For any request which adds Agricultural purpose of use or changes the place of use for Agricultural rights, provide the following location information regarding the lands to be irrigated:

i. Applicant proposes to irrigate a total of_____acres in any one year. This acreage is all of or part of a larger tract(s) which is described in a supplement attached to this application and contains a total of_____acres in_____ County, TX.

ii. Location of land to be irrigated: In the_____Original Survey No. _____, Abstract No._____.

A copy of the deed(s) describing the overall tract(s) with the recording information from the county records must be submitted. Applicant's name must match deeds. If the Applicant is not currently the sole owner of the lands to be irrigated, Applicant must submit documentation evidencing consent or other legal right for Applicant to use the land described.

Water Rights for Irrigation may be appurtenant to the land irrigated and convey with the land unless reserved in the conveyance. 30 TAC § 297.81.

c. Submit Worksheet 1.1, Interbasin Transfers, for any request to change the place of use which moves State Water to another river basin.

d. See Worksheet 1.2, Marshall Criteria, and submit if required.

e. See Worksheet 6.0, Water Conservation/Drought Contingency, and submit if required.

WORKSHEET 1.1 N/A
INTERBASIN TRANSFERS, TWC § 11.085

Submit this worksheet for an application for a new or amended water right which requests to transfer State Water from its river basin of origin to use in a different river basin. A river basin is defined and designated by the Texas Water Development Board by rule pursuant to TWC § 16.051.

Applicant requests to transfer State Water to another river basin within the State? **Y / N**_____

1. Interbasin Transfer Request (Instructions, Page. 20)

a. Provide the Basin of Origin._____

b. Provide the quantity of water to be transferred (acre-feet)._____

c. Provide the Basin(s) and count(y/ies) where use will occur in the space below:

_____

2. Exemptions (Instructions, Page. 20), TWC § 11.085(v)

Certain interbasin transfers are exempt from further requirements. Answer the following:

a. The proposed transfer, which in combination with any existing transfers, totals less than 3,000 acre-feet of water per annum from the same water right. **Y/N**_

b. The proposed transfer is from a basin to an adjoining coastal basin? **Y/N**___

c. The proposed transfer from the part of the geographic area of a county or municipality, or the part of the retail service area of a retail public utility as defined by Section 13.002, that is within the basin of origin for use in that part of the geographic area of the county or municipality, or that contiguous part of the retail service area of the utility, not within the basin of origin? **Y/N**__

d. The proposed transfer is for water that is imported from a source located wholly outside the boundaries of Texas, except water that is imported from a source located in the United Mexican States? **Y/N**__

3. Interbasin Transfer Requirements (Instructions, Page. 20)

For each Interbasin Transfer request that is not exempt under any of the exemptions listed above Section 2, provide the following information in a supplemental attachment titled "Addendum to Worksheet 1.1, Interbasin Transfer":

a. the contract price of the water to be transferred (if applicable) (also include a copy of the contract or adopted rate for contract water);

b. a statement of each general category of proposed use of the water to be transferred and a detailed description of the proposed uses and users under each category;

c. the cost of diverting, conveying, distributing, and supplying the water to, and treating the water for, the proposed users (example - expert plans and/or reports documents may be provided to show the cost);

d. describe the need for the water in the basin of origin and in the proposed receiving basin based on the period for which the water supply is requested, but not to exceed 50 years (the need can be identified in the most recently approved regional water plans. The state and regional water plans are available for download at this website: (http://www.twdb.texas.gov/waterplanning/swp/index.asp);

e. address the factors identified in the applicable most recently approved regional water plans which address the following:

   (i) the availability of feasible and practicable alternative supplies in the receiving basin to the water proposed for transfer;
   (ii) the amount and purposes of use in the receiving basin for which water is needed;

   (iii) proposed methods and efforts by the receiving basin to avoid waste and implement water conservation and drought contingency measures;

   (iv) proposed methods and efforts by the receiving basin to put the water proposed for transfer to beneficial use;

   (v) the projected economic impact that is reasonably expected to occur in each basin as a result of the transfer; and

   (vi) the projected impacts of the proposed transfer that are reasonably expected to occur on existing water rights, instream uses, water quality, aquatic and riparian habitat, and bays and estuaries that must be assessed under Sections 11.147, 11.150, and 11.152 in each basin *(if applicable*). If the water sought to be transferred is currently authorized to be used under an existing permit, certified filing, or certificate of adjudication, such impacts shall only be considered in relation to that portion of the permit, certified filing, or certificate of adjudication proposed for transfer and shall be based on historical uses of the permit, certified filing, or certificate of adjudication for which amendment is sought;

f. proposed mitigation or compensation, if any, to the basin of origin by the applicant; and

g. the continued need to use the water for the purposes authorized under the existing Permit, Certified Filing, or Certificate of Adjudication, if an amendment to an existing water right is sought.

N/A

WORKSHEET 1.2
NOTICE. "THE MARSHALL CRITERIA"

This worksheet assists the Commission in determining notice required for certain **amendments** that do not already have a specific notice requirement in a rule for that type of amendment, and *that do not change the amount of water to be taken or the diversion rate.* The worksheet provides information that Applicant **is required** to submit for amendments such as certain amendments to special conditions or changes to off-channel storage. These criteria address whether the proposed amendment will impact other water right holders or the on- stream environment beyond and irrespective of the fact that the water right can be used to its full authorized amount.

*This worksheet is **not required for Applications in the Rio Grande Basin** requesting changes in the purpose of use, rate of diversion, point of diversion, and place of use for water rights held in and transferred within and between the mainstems of the Lower Rio Grande, Middle Rio Grande, and Amistad Reservoir. See 30 TAC § 303.42.*

*This worksheet is **not required for amendments which are only changing or adding diversion points, or request only a bed and banks authorization or an IBT authorization**. However, Applicants may wish to submit the Marshall Criteria to ensure that the administrative record includes information supporting each of these criteria*

1. The "Marshall Criteria" (Instructions, Page. 21)

Submit responses on a supplemental attachment titled "Marshall Criteria" in a manner that conforms to the paragraphs (a) – (g) below:

a. Administrative Requirements and Fees. Confirm whether application meets the administrative requirements for an amendment to a water use permit pursuant to TWC Chapter 11 and Title 30 Texas Administrative Code (TAC) Chapters 281, 295, and 297. An amendment application should include, but is not limited to, a sworn application, maps, completed conservation plan, fees, etc.

b. Beneficial Use. Discuss how proposed amendment is a beneficial use of the water as defined in TWC § 11.002 and listed in TWC § 11.023. Identify the specific proposed use of the water (e.g., road construction, hydrostatic testing, etc.) for which the amendment is requested.

c. Public Welfare. Explain how proposed amendment is not detrimental to the public welfare. Consider any public welfare matters that might be relevant to a decision on the application. Examples could include concerns related to the well-being of humans and the environment.

d. Groundwater Effects. Discuss effects of proposed amendment on groundwater or groundwater recharge.

e. State Water Plan. Describe how proposed amendment addresses a water supply need in a manner that is consistent with the state water plan or the applicable approved regional water plan for any area in which the proposed appropriation is located or, in the alternative, describe conditions that warrant a waiver of this requirement. The state and regional water plans are available for download at: http://www.twdb.texas.gov/waterplanning/swp/index.asp.

f. Waste Avoidance. Provide evidence that reasonable diligence will be used to avoid waste and achieve water conservation as defined in TWC § 11.002. Examples of evidence could include, but are not limited to, a water conservation plan or, if required, a drought contingency plan, meeting the requirements of 30 TAC Chapter 288.

g. Impacts on Water Rights or On-stream Environment. Explain how the proposed amendment will not impact other water right holders or the on-stream environment beyond and irrespectiveof the fact that the water right can be used to its full authorized amount.

WORKSHEET 2.0 N/A
Impoundment/Dam Information

This worksheet **is required** for any impoundment, reservoir and/or dam. Submit an additional Worksheet 2.0 for each impoundment or reservoir requested in this application.

If there is more than one structure, the numbering/naming of structures should be consistent throughout the application and on any supplemental documents (e.g., maps).

1. Storage Information (Instructions, Page. 21)

a. Official USGS name of reservoir, if applicable:_____

b. Provide amount of water (in acre-feet) impounded by structure at normal maximum operating level:_____.

c. The impoundment is on-channel_____or off-channel_____(mark one)

i. Applicant has verified on-channel or off-channel determination by contacting Surface Water Availability Team at (512) 239-4600? **Y / N**_____
ii. If on-channel, will the structure have the ability to pass all State Water inflows that Applicant does not have authorization to impound? **Y / N**_

d. Is the impoundment structure already constructed? **Y / N**____

i. For already constructed **on-channel** structures:

1. Date of Construction:_____

2. Was it constructed to be an exempt structure under TWC § 11.142? **Y / N**___
   a. If Yes, is Applicant requesting to proceed under TWC § 11.143? **Y / N**____
   b. If No, has the structure been issued a notice of violation by TCEQ? **Y / N**_____

3. Is it a U.S. Natural Resources Conservation Service (NRCS) (formerly Soil Conservation Service (SCS)) floodwater-retarding structure? **Y / N**___
   a. If yes, provide the Site No._____and watershed project name_____;
   b. Authorization to close "ports" in the service spillway requested? **Y / N**____

ii. For **any** proposed new structures or modifications to structures:

1. Applicant **must** contact TCEQ Dam Safety Section at (512) 239-0326, *prior to submitting an Application.* Applicant has contacted the TCEQ Dam Safety Section regarding the submission requirements of 30 TAC, Ch. 299? **Y / N**____
   Provide the date and the name of the Staff Person_____

2. As a result of Applicant's consultation with the TCEQ Dam Safety Section, TCEQ has confirmed that:
   a. No additional dam safety documents required with the Application. **Y / N**_____
   b. Plans (with engineer's seal) for the structure required. **Y / N**_____
   c. Engineer's signed and sealed hazard classification required. **Y / N**____
   d. Engineer's statement that structure complies with 30 TAC, Ch. 299 Rules required. **Y / N**___

3. Applicants **shall** give notice by certified mail to each member of the governing body of each county and municipality in which the reservoir, or any part of the reservoir to be constructed, will be located. (30 TAC § 295.42). Applicant must submit a copy of all the notices and certified mailing cards with this Application. Notices and cards are included? **Y / N**____

iii. Additional information required for **on-channel** storage:

1. Surface area (in acres) of on-channel reservoir at normal maximum operating level:_____.

2. Based on the Application information provided, Staff will calculate the drainage area above the on-channel dam or reservoir. If Applicant wishes to also calculate the drainage area they may do so at their option.
Applicant has calculated the drainage area. **Y/N**_____
If yes, the drainage area is_____sq. miles.
(*If assistance is needed, call the Surface Water Availability Team prior to submitting the application, (512) 239-4600).*

2. Structure Location (Instructions, Page. 23)

a. On Watercourse (if on-channel) (USGS name):_____

b. Zip Code: _____

c. In the_____Original Survey No._____, Abstract No._____, _____County, Texas.

* ***A copy of the deed(s) with the recording information from the county records must be submitted describing the tract(s) that include the structure and all lands to be inundated.***

*****If the Applicant is not currently the sole owner of the land on which the structure is or will be built and sole owner of all lands to be inundated, Applicant must submit documentation evidencing consent or other documentation supporting Applicant's right to use the land described.***

d. A point on the centerline of the dam (on-channel) or anywhere within the impoundment (off-channel) is:

Latitude_____°N, Longitude_____°W.

****Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places***

i. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program):_____

ii. Map submitted which clearly identifies the Impoundment, dam (where applicable), andthe lands to be inundated. See instructions Page. 15. **Y / N**___

WORKSHEET 3.0
DIVERSION POINT (OR DIVERSION REACH) INFORMATION

This worksheet **is required** for each diversion point or diversion reach. Submit one Worksheet 3.0 for **each** diversion point and two Worksheets for **each** diversion reach (one for the upstream limit and one for the downstream limit of each diversion reach).

The numbering of any points or reach limits should be consistent throughout the application and on supplemental documents (e.g., maps).

1. Diversion Information (Instructions, Page. 24)

a. This Worksheet is to add new (select 1 of 3 below):

1. _X_ Diversion Point No.
2. ____ Upstream Limit of Diversion Reach No.
3. ____ Downstream Limit of Diversion Reach No.

b. Maximum Rate of Diversion for **this new point** 200 cfs (cubic feet per second) or 89,766 gpm (gallons per minute)

c. Does this point share a diversion rate with other points? **Y / N** Yes
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches* 200 cfs or 89,766 gpm

d. For amendments, is Applicant seeking to increase combined diversion rate? **Y / N** Yes

*** An increase in diversion rate is considered a new appropriation and would require completion of Section 1, New or Additional Appropriation of State Water.*

e. Check (√) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
☐	Directly from stream	
☑	From an on-channel reservoir	Existing and Proposed
☐	From a stream to an on-channel reservoir	
☐	Other method (explain fully, use additional sheets if necessary)	

f. Based on the Application information provided, Staff will calculate the drainage area above the diversion point (or reach limit). If Applicant wishes to also calculate the drainage area, you may do so at their option.

Applicant has calculated the drainage area. **Y / N** No

If yes, the drainage area is _____ sq. miles.
(*If assistance is needed, call the Surface Water Availability Team at (512) 239-4600, prior to submitting application*)

2. Diversion Location (Instructions, Page 25)

a. On watercourse (USGS name): **Elm Fork Trinity River, Trinity River Basin**

b. Zip Code: **76208 75077 75065 75057 75056 75034 75068 76210**

c. Location of point: In the_____Original Survey No._____, Abstract No._____, _____County, Texas.

****Please see note below**

A copy of the deed(s) with the recording information from the county records must be submitted describing tract(s) that include the diversion structure.

For diversion reaches, the Commission cannot grant an Applicant access to property that the Applicant does not own or have consent or a legal right to access, the Applicant will be required to provide deeds, or consent, or other documents supporting a legal right to use the specific points when specific diversion points within the reach are utilized. Other documents may include, but are not limited to a recorded easement, a land lease, a contract, or a citation to the Applicant's right to exercise eminent domain to acquire access.

d. Point is at:
Latitude **33.069344** °N, Longitude **-96.964539** °W.
Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places

e. Indicate the method used to calculate the location (examples: Handheld GPS Device, GIS, Mapping Program): **TCEQ Water Rights Viewer**

f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 15.

g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

****Applicant seeks authority to divert anywhere along the perimeter of Lake Lewisville and in Lake Lewisville. as represented on the attached maps at a point on the centerline of the dam, and including from Applicant's currently authorized diversion point. Applicant has municipal authority of eminent domain to acquire access.**

WORKSHEET 4.0
DISCHARGE INFORMATION

N/A

This worksheet required for any requested authorization to discharge water into a State Watercourse for conveyance and later withdrawal or in-place use. Worksheet 4.1 is also required for each Discharge point location requested. **Instructions Page. 26.** ***Applicant is responsible for obtaining any separate water quality authorizations which may be required and for insuring compliance with TWC, Chapter 26 or any other applicable law.***

a. The purpose of use for the water being discharged will be_____.

b. Provide the amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses_____(% or amount) and explain the method of calculation:_____

c. Is the source of the discharged water return flows? **Y / N**_____If yes, provide the following information:

1. The TPDES Permit Number(s)._____(attach a copy of the **current** TPDES permit(s))
2. Applicant is the owner/holder of each TPDES permit listed above? **Y / N**_____

PLEASE NOTE: If Applicant is not the discharger of the return flows, or the Applicant is not the water right owner of the underlying surface water right, or the Applicant does not have a contract with the discharger, the application should be submitted under Section 1, New or Additional Appropriation of State Water, as a request for a new appropriation of state water. If Applicant is the discharger, the surface water right holder, or the contract holder, then the application should be submitted under Section 3, Bed and Banks.

3. Monthly WWTP discharge data for the past 5 years in electronic format. (Attach and label as "Supplement to Worksheet 4.0").
4. The percentage of return flows from groundwater_____, surface water_____?
5. If any percentage is surface water, provide the base water right number(s)_____.

d. Is the source of the water being discharged groundwater? **Y / N**___ If yes, provide the following information:

1. Source aquifer(s) from which water will be pumped:_____
2. If the well has not been constructed, provide production information for wells in the same aquifer in the area of the application. See http://www.twdb.texas.gov/groundwater/data/gwdbrpt.asp. Additionally, provide well numbers or identifiers_____.
3. Indicate how the groundwater will be conveyed to the stream or reservoir.

4. A copy of the groundwater well permit if it is located in a Groundwater Conservation District (GCD) or evidence that a groundwater well permit is not required.

di. Is the source of the water being discharged a surface water supply contract? **Y / N**____
If yes, provide the signed contract(s).

dii. Identify any other source of the water_____

WORKSHEET 4.1
DISCHARGE POINT INFORMATION

N/A

This worksheet is required for **each** discharge point. Submit one Worksheet 4.1 for each discharge point. If there is more than one discharge point, the numbering of the points should be consistent throughout the application and on any supplemental documents (e.g., maps). **Instructions, Page 27.**

For water discharged at this location provide:

a. The amount of water that will be discharged at this point is_____acre-feet per year. The discharged amount should include the amount needed for use and to compensate for any losses.

b. Water will be discharged at this point at a maximum rate of_____cfs or_____gpm.

c. Name of Watercourse as shown on Official USGS maps: _____

d. Zip Code _____

e. Location of point: In the_____Original Survey No._____, Abstract No._____,_____County, Texas.

f. Point is at:

Latitude_____˚N, Longitude_____˚W.

**Provide Latitude and Longitude coordinates in decimal degrees to at least six decimal places*

g. Indicate the method used to calculate the discharge point location (examples: Handheld GPS Device, GIS, Mapping Program):_____

Map submitted must clearly identify each discharge point. See instructions Page. 15.

WORKSHEET 5.0
ENVIRONMENTAL INFORMATION

1. Impingement and Entrainment

This section is required for any new diversion point that is not already authorized. Indicate the measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on any new diversion structure that is not already authorized in a water right). **Instructions, Page 28.**

Permittee shall implement reasonable measures at any new diversion structure(s) in order to reduce impacts to aquatic resources due to entrainment or impingement. Such measures shall include, but shall not be limited to, the installation of screens at any new diversion structure(s).

2. New Appropriations of Water (Canadian, Red, Sulphur, and Cypress Creek Basins only) and Changes in Diversion Point(s)

This section is required for new appropriations of water in the Canadian, Red, Sulphur, and Cypress Creek Basins and in all basins for requests to change a diversion point. **Instructions, Page 30.**

Description of the Water Body at each Diversion Point or Dam Location. (Provide an Environmental Information Sheet for each location),

a. Identify the appropriate description of the water body.

☐ Stream

■ Reservoir

Average depth of the entire water body, in feet: 25 Feet

☐ Other, specify: _____

b. Flow characteristics

If a stream, was checked above, provide the following. For new diversion locations, check one of the following that best characterize the area downstream of the diversion (check one).

☐ Intermittent – dry for at least one week during most years

☐ Intermittent with Perennial Pools – enduring pools

☐ Perennial – normally flowing

Check the method used to characterize the area downstream of the new diversion location.

☐ USGS flow records

☐ Historical observation by adjacent landowners

☐ Personal observation

☐ Other, specify: _____

c. Waterbody aesthetics **N/A**

Check one of the following that best describes the aesthetics of the stream segments affected by the application and the area surrounding those stream segments.

☐ Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional

☐ Natural Area: trees and/or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored

☐ Common Setting: not offensive; developed but uncluttered; water may be colored or turbid

☐ Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

d. Waterbody Recreational Uses

Are there any known recreational uses of the stream segments affected by the application?

■ Primary contact recreation (swimming or direct contact with water)

☐ Secondary contact recreation (fishing, canoeing, or limited contact with water)

☐ Non-contact recreation

e. Submit the following information in a Supplemental Attachment, labeled Addendum to Worksheet 5.0: **N/A**

1. Photographs of the stream at the diversion point or dam location. Photographs should be in color and show the proposed point or reservoir and upstream and downstream views of the stream, including riparian vegetation along the banks. Include a description of each photograph and reference the photograph to the mapsubmitted with the application indicating the location of the photograph and the direction of the shot.

2. If the application includes a proposed reservoir, also include:

   i. A brief description of the area that will be inundated by the reservoir.

   ii. If a United States Army Corps of Engineers (USACE) 404 permit is required, provide the project number and USACE project manager.

   iii. A description of how any impacts to wetland habitat, if any, will be mitigated if the reservoir is greater than 5,000 acre-feet.

3. Alternate Sources of Water and/or Bed and Banks Applications

This section is required for applications using an alternate source of water and bed and banks applications in any basins. **Instructions, page 31.**

a. For all bed and banks applications:

   i. Submit an assessment of the adequacy of the quantity and quality of flows remaining after the proposed diversion to meet instream uses and bay and estuary freshwater inflow requirements.

b. For all alternate source applications:

   i. If the alternate source is treated return flows, provide the TPDES permit number_____

   ii. If groundwater is the alternate source, or groundwater or other surface water will be discharged into a watercourse provide:
   Reasonably current water chemistry information including but not limited to the following parameters in the table below. Additional parameters may be requested if there is a specific water quality concern associated with the aquifer from which water is withdrawn. If data for onsite wells are unavailable; historical data collected from similar sized wells drawing water from the same aquifer may be provided. However, onsite data may still be required when it becomes available. Provide the well number or well identifier. Complete the information below for each well and provide the Well Number or identifier.

Parameter	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Sulfate, mg/L					
Chloride, mg/L					
Total Dissolved Solids, mg/L					
pH, standard units					
Temperature*, degrees Celsius					

* Temperature must be measured onsite at the time the groundwater sample is collected.

   iii. If groundwater will be used, provide the depth of the well_____and the name of the aquifer from which water is withdrawn_____.

WORKSHEET 6.0
Water Conservation/Drought Contingency Plans

This form is intended to assist applicants in determining whether a Water Conservation Plan and/or Drought Contingency Plans is required and to specify the requirements for plans. **Instructions, Page 31.**

The TCEQ has developed guidance and model plans to help applicants prepare plans. Applicants may use the model plan with pertinent information filled in. For assistance submitting a plan call the Resource Protection Team (Water Conservation staff) at 512-239-4600, or e-mail wras@tceq.texas.gov. The model plans can also be downloaded from the TCEQ webpage. ***Please use the most up-to-date plan documents available on the webpage.***

1. Water Conservation Plans

a. The following applications must include a completed Water Conservation Plan (30 TAC § 295.9) for each use specified in 30 TAC, Chapter 288 (municipal, industrial or mining, agriculture – including irrigation, wholesale):

1. Request for a new appropriation or use of State Water.

2. Request to amend water right to increase appropriation of State Water.

3. Request to amend water right to extend a term.

4. Request to amend water right to change a place of use.
   **does not apply to a request to expand irrigation acreage to adjacent tracts.*

5. Request to amend water right to change the purpose of use.
   **applicant need only address new uses.*

6. Request for bed and banks under TWC § 11.042(c), when the source water is State Water.
   **including return flows, contract water, or other State Water.*

b. If Applicant is requesting any authorization in section (1)(a) above, indicate each use for which Applicant is submitting a Water Conservation Plan as an attachment:

1. _X_ Municipal Use. See 30 TAC § 288.2. **

2. _____ Industrial or Mining Use. See 30 TAC § 288.3.

3. _____ Agricultural Use, including irrigation. See 30 TAC § 288.4.

4. _X_ Wholesale Water Suppliers. See 30 TAC § 288.5. **

If Applicant is a water supplier, Applicant must also submit documentation of adoption of the plan. Documentation may include an ordinance, resolution, or tariff, etc. See 30 TAC §§ 288.2(a)(1)(J)(i) and 288.5(1)(H). Applicant has submitted such documentation with each water conservation plan? **Y / N Yes

c. Water conservation plans submitted with an application must also include data and information which: supports applicant's proposed use with consideration of the plan's water conservation goals; evaluates conservation as an alternative to the proposed

appropriation; and evaluates any other feasible alternative to new water development. See 30 TAC § 288.7.
Applicant has included this information in each applicable plan? **Y / N**____ **N/A**

2. Drought Contingency Plans

a. A drought contingency plan is also required for the following entities if Applicant is requesting any of the authorizations in section (1) (a) above – indicate each that applies:

1. X Municipal Uses by public water suppliers. See 30 TAC § 288.20.
2. ____ Irrigation Use/ Irrigation water suppliers. See 30 TAC § 288.21.
3. X Wholesale Water Suppliers. See 30 TAC § 288.22.

b. If Applicant must submit a plan under section 2(a) above, Applicant has also submitted documentation of adoption of drought contingency plan (*ordinance, resolution, or tariff, etc. See 30 TAC § 288.30*) **Y / N** Yes

WORKSHEET 7.0
ACCOUNTING PLAN INFORMATION WORKSHEET

The following information provides guidance on when an Accounting Plan may be required for certain applications and if so, what information should be provided. An accounting plan can either be very simple such as keeping records of gage flows, discharges, and diversions; or, more complex depending on the requests in the application. Contact the Surface Water Availability Team at 512-239-4600 for information about accounting plan requirements, if any, for your application. **Instructions, Page 34.**

1. Is Accounting Plan Required

Accounting Plans are generally required:

- For applications that request authorization to divert large amounts of water from a single point where multiple diversion rates, priority dates, and water rights can also divert from that point;
- For applications for new major water supply reservoirs;
- For applications that amend a water right where an accounting plan is already required, if the amendment would require changes to the accounting plan;
- For applications with complex environmental flow requirements;
- For applications with an alternate source of water where the water is conveyed and diverted; and
- For reuse applications.

2. Accounting Plan Requirements

a. A **text file** that includes: **Text file only, as discussed in pre-application meeting.**

1. an introduction explaining the water rights and what they authorize;
2. an explanation of the fields in the accounting plan spreadsheet including how they are calculated and the source of the data;
3. for accounting plans that include multiple priority dates and authorizations, a section that discusses how water is accounted for by priority date and which water is subject to a priority call by whom; and
4. Should provide a summary of all sources of water.

b. A **spreadsheet** that includes:

1. Basic daily data such as diversions, deliveries, compliance with any instream flow requirements, return flows discharged and diverted and reservoir content;
2. Method for accounting for inflows if needed;
3. Reporting of all water use from all authorizations, both existing and proposed;
4. An accounting for all sources of water;
5. An accounting of water by priority date;
6. For bed and banks applications, the accounting plan must track the discharged water from the point of delivery to the final point of diversion;
7. Accounting for conveyance losses;
8. Evaporation losses if the water will be stored in or transported through a reservoir. Include changes in evaporation losses and a method for measuring reservoir content resulting from the discharge of additional water into the reservoir;
9. An accounting for spills of other water added to the reservoir; and
10. Calculation of the amount of drawdown resulting from diversion by junior rights or diversions of other water discharged into and then stored in the reservoir.

WORKSHEET 8.0
CALCULATION OF FEES

This worksheet is for calculating required application fees. Applications are not Administratively Complete until all required fees are received. **Instructions, Page. 34**

1. NEW APPROPRIATION

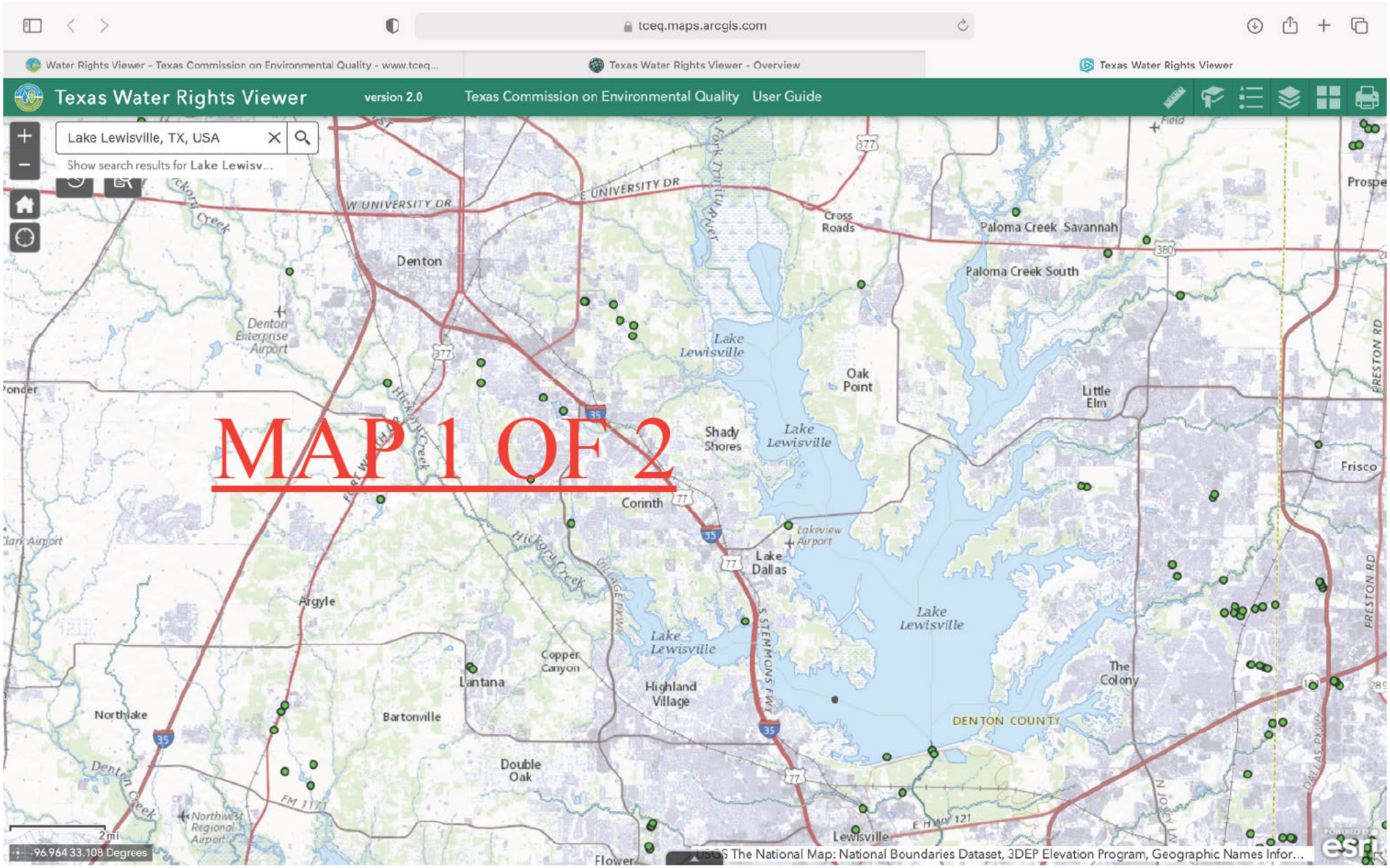
	Description	Amount ($)
Filing Fee	Circle fee correlating to the total amount of water* requested for any new appropriation and/or impoundment. Amount should match total on Worksheet 1, Section 1. Enter corresponding fee under **Amount ($).** In Acre-Feet a. Less than 100 $100.00 b. 100 - 5,000 $250.00 c. 5,001 - 10,000 $500.00 d. 10,001 - 250,000 $1,000.00 e. More than 250,000 $2,000.00	
Recording Fee		$25.00
Agriculture Use Fee	*Only for those with an Irrigation Use.* Multiply 50¢ x_____Number of acres that will be irrigated with State Water. **	
Use Fee	*Required for all Use Types, **excluding Irrigation Use.*** Multiply $1.00 x_____Maximum annual diversion of State Water in acre-feet. **	
Recreational Storage Fee	*Only for those with Recreational Storage.* Multiply $1.00 x_____acre-feet of in-place Recreational Use State Water to be stored at normal max operating level.	
Storage Fee	*Only for those with Storage, **excluding Recreational Storage.*** Multiply 50¢ x_____acre-feet of State Water to be stored at normal max operating level.	
Mailed Notice	Cost of mailed notice to all water rights in the basin. Contact Staff to determine the amount (512) 239-4600.	
	TOTAL	$

2. AMENDMENT *OR* SEVER AND COMBINE

	Description	Amount ($)
Filing Fee	Amendment: $100	$100.00
	OR Sever and Combine: $100 x___of water rights to combine	
Recording Fee		$12.50
Mailed Notice	Additional notice fee to be determined once application is submitted.	
	TOTAL INCLUDED	$ 112.50

3. BED AND BANKS

	Description	Amount ($)
Filing Fee		$100.00
Recording Fee		$12.50
Mailed Notice	Additional notice fee to be determined once application is submitted.	
	TOTAL INCLUDED	$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Water Rights Viewer - Texas Commission on Environmental Quality - www.tceq...
Texas Water Rights Viewer - Overview
Texas Water Rights Viewer
Texas Water Rights Viewer
version 2.0
Texas Commission on Environmental Quality
User Guide
Lake Lewisville, TX, USA
Show search results for Lake Lewisv...
MAP 1 OF 2
Denton
Denton Enterprise Airport
W UNIVERSITY DR
E UNIVERSITY DR
Cross Roads
Paloma Creek Savannah
Paloma Creek South
Lake Lewisville
Oak Point
Little Elm
Shady Shores
Corinth
Lakeview Airport
Lake Dallas
Frisco
Argyle
Copper Canyon
Lantana
Highland Village
Bartonville
Northlake
Double Oak
Northwest Regional Airport
The Colony
DENTON COUNTY
Lewisville
PRESTON RD
STEMMONS FWY
FM 1171
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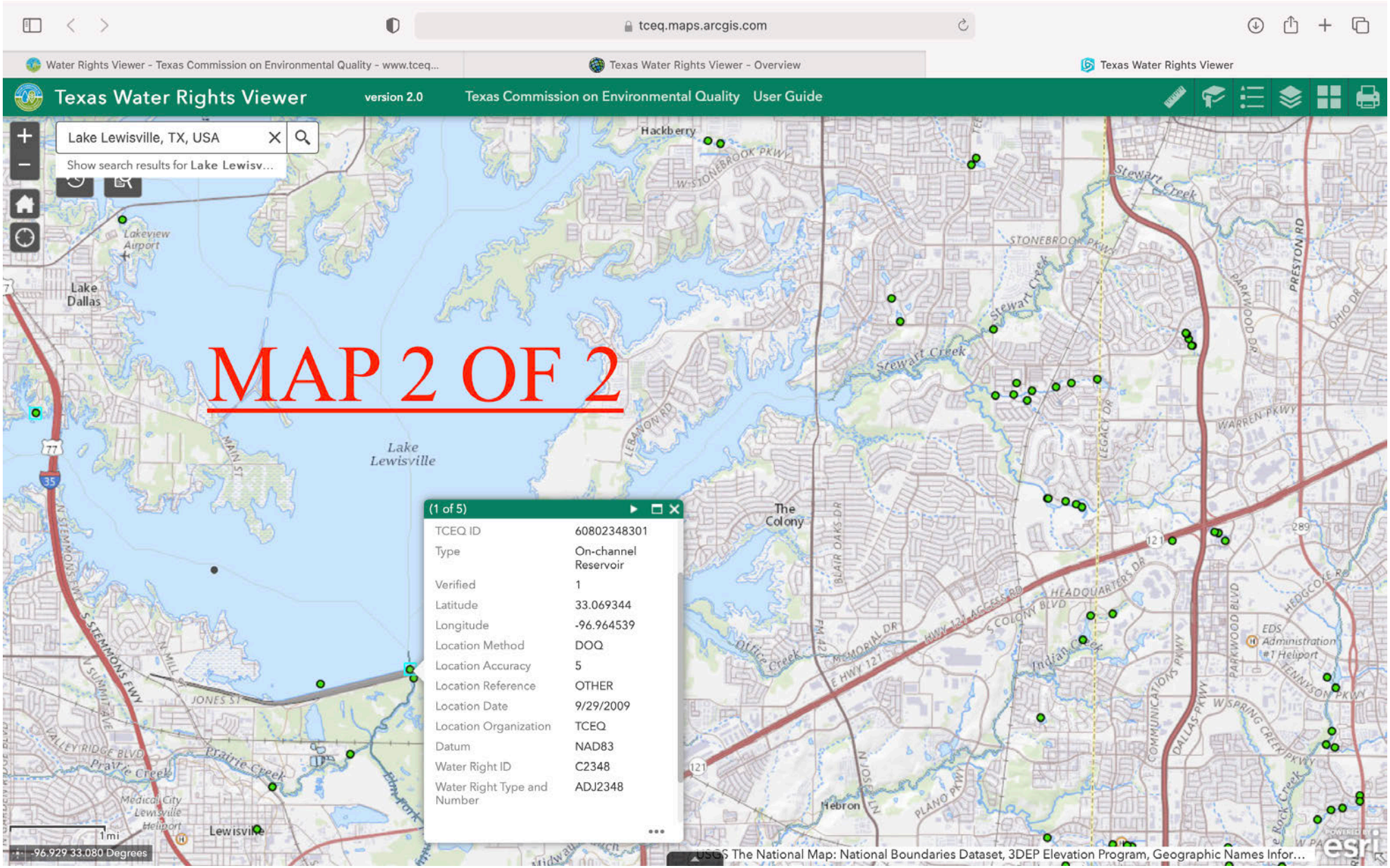
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Water Rights Viewer - Texas Commission on Environmental Quality - www.tceq...
Texas Water Rights Viewer - Overview
Texas Water Rights Viewer
Texas Water Rights Viewer
version 2.0
Texas Commission on Environmental Quality
User Guide
Lake Lewisville, TX, USA
Show search results for Lake Lewisv...
MAP 2 OF 2
(1 of 5)
TCEQ ID 60802348301
Type On-channel Reservoir
Verified 1
Latitude 33.069344
Longitude -96.964539
Location Method DOQ
Location Accuracy 5
Location Reference OTHER
Location Date 9/29/2009
Location Organization TCEQ
Datum NAD83
Water Right ID C2348
Water Right Type and Number ADJ2348
Hackberry
Lake Dallas
Lakeview Airport
Lake Lewisville
The Colony
Hebron
Lewisville
Stewart Creek
Prairie Creek
Office Creek
Indian Creek
Elm Fork
-96.929 33.080 Degrees
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Infor...
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ORDINANCE NO. 19-863

AN ORDINANCE AMENDING THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN OF THE CITY OF DENTON, TEXAS PREVIOUSLY ADOPTED BY THE CITY COUNCIL IN ORDINANCE NO. 2014-109 ENACTED ON THE 15TH DAY OF APRIL, 2014 AMENDING THE DROUGHT AND EMERGENCY RESPONSE STAGES OF THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN; AMENDING THE ENFORCEMENT PROVISIONS OF MANDATORY RESTRICTIONS OF THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN; PROVIDING FOR THE STAGES OF ENFORCEMENT FOR VIOLATORS OF THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN; PROVIDING FOR RATES TO BE CHARGED FOR WATER USAGE IN THE WATER CONSERVATION PLAN AND THE DROUGHT CONTINGENCY PLAN IN THE EVENT OF HIGH USAGE; PROVIDING FOR ADMINISTRATIVE FEES TO BE CHARGED TO VIOLATORS FOR CERTAIN VIOLATIONS OF THE DROUGHT CONTINGENCY PLAN; PROVIDING A CRIMINAL PENALTY NOT TO EXCEED $2,000 PER VIOLATION OF THE DROUGHT CONTINGENCY PLAN; PROVIDING A CIVIL PENALTY NOT TO EXCEED $1,000 PER DAY PER VIOLATION OF THE DROUGHT CONTINGENCY PLAN; PROVIDING CIVIL LEGAL REMEDIES FOR THE CITY OF DENTON, TEXAS; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council is cognizant of the persistent drought and near-drought conditions that can occur in this geographic area and is also aware that water supply in area lakes and reservoirs can become severely depleted; it further coming to the attention of the City Council that the City of Dallas, Texas enacted an ordinance that limits certain uses and the timing of such uses of water, and provides for violations of that ordinance; and

WHEREAS, §11.1271 and 11.1272 of the Texas Water Code and the applicable rules of the Texas Commission on Environmental Quality require the City to include specific, quantified five-year and ten-year targets for water savings and specific quantified targets for water use reductions during periods of water shortages and drought in the Water Conservation and Drought Contingency Plan; and

WHEREAS, on April 19, 2005, the City Council adopted the ordinance providing for the Water Conservation and Drought Contingency Plan for the City, by enacting Ordinance No. 2005-121; and

WHEREAS, on May 2, 2006, the City Council adopted the ordinance providing for the Amended Water Conservation and Drought Contingency Plan for the City, by enacting Ordinance No. 2006-127, by adding Appendix "G" to said plan, which was the "Lawn and Landscape Irrigation and Water Waste Ordinance"; and

WHEREAS, on June 2, 2009, the City Council adopted the ordinance providing for the further Amended Water Conservation and Drought Contingency Plan, by enacting Ordinance No. 2009-134, by including two additional Texas Water Development Board Best Management

Practices recommended by the Task Force's *Water Conservation Best Management Practices Guide* that relate to park and athletic field conservation; and

WHEREAS, on March 6, 2012 the City Council recognized that the amount of water available to the City and its water utility customers is limited, is subject to depletion and should be used efficiently; and the City Council desired to further amend the said Water Conservation and Drought Contingency Plan to include amendments to Sections 6.6 and 6.7 thereof; as evidenced by Ordinance No. 2012-064; and

WHEREAS, on April 15, 2014 the City Council adopted the ordinance providing for the further Amended Water Conservation and Drought Contingency Plan, by enacting Ordinance No. 2014-109, by adjusting the four-stage drought contingency plan to a three-stage plan; and

WHEREAS. the Public Utilities Board of the City of Denton, Texas after considering the proposed changes to the Water Conservation Plan and the Drought Contingency Plan, as contained in Exhibit "A" attached hereto and incorporated by reference herein, unanimously approved the proposed changes at its public meeting on April 8, 2019; and

WHEREAS, the City Council received a presentation of this item at its public work session on April 9, 2019 and supported the proposed changes to the Water Conservation Plan and the Drought Contingency Plan; and

WHEREAS, on March 14, 2019, at 6:00p.m. at a public information meeting held at the Denton Civic Center, Staff provided an opportunity for the public to comment on the proposed changes to the Water Conservation Plan and the Drought Contingency Plan; and

WHEREAS, the City Council accordingly finds that this ordinance is necessary to protect the public health of the residents of the City of Denton, Texas, in accordance with §54.001 and §54.004 of the Texas Local Government Code; and

WHEREAS, the City Council deems it in the public interest to adopt the following amendments to the Amended Water Conservation Plan and the Drought Contingency Plan adopted on April 15, 2014, by adopting the provisions attached in the "2019 Water Conservation and Drought Contingency Plan" that is attached hereto as Exhibit "A", said Plans are incorporated by reference herewith; NOW, THEREFORE,

THE CITY COUNCIL OF THE CITY OF DENTON HEREBY ORDAINS:

SECTION 1. The Preamble to this ordinance is incorporated by reference herewith, and made a part of this ordinance for all purposes.

SECTION 2. City of Denton Ordinance No. 2005-121, pertaining to the "Water Conservation and Drought Contingency Plan," and codified in Chapter 26 of the Code of Ordinances of the City of Denton, Texas, at §§26-233 and 26-234, amended, by City of Denton Ordinance No. 2006-127, by adding to it Appendix "G", which is the "Land and Landscape Irrigation and Water Waste Ordinance"; and as further amended by the "Water Conservation and

Drought Contingency Plan – April 2009" by City of Denton Ordinance No. 2009-134; and as further amended by the "April 2009 – Water Conservation and Drought Contingency Plan (updated February 2012)" by City of Denton Ordinance No. 2012-064; and as amended by the "April 2014 Water Conservation and Drought Contingency Plan (updated April 2014)" by City of Denton Ordinance No. 2014-109; and as now amended by this ordinance:

"Sec. 26-233. Water conservation and drought contingency plan.

(a) *Adoption of plans.* The Water Conservation and Drought Contingency Plan of the City adopted dated April 19, 2005, and the previous amendment thereto adopted by ordinance dated May 2, 2006, and the "City of Denton - Water Conservation and Drought Contingency Plan - April 2009" are hereby adopted by reference herein; and the attached "City of Denton - Water Conservation and Drought Contingency Plan (updated February 2012); and the attached Water Conservation Plan and the Drought Contingency Plan (updated to April 2014); and "2019 Water Conservation and Drought Contingency Plan" is hereby added to, and incorporated by reference herewith, being attached as Exhibit "A" hereto, and made a part of this Code of Ordinances for all purposes, as if fully set forth herein (hereafter collectively referred to as the "Plan").

Sec. 26-234. Criminal and Civil Penalties.

(a) A person commits an offense if he or she knowingly makes, causes, or permits a use of water contrary to the measures implemented in the Water Conservation Plan or the Drought Contingency Plan, as amended. For purposes of this section, it is presumed that a person has knowingly made, caused, or permitted a use of water contrary to the measures implemented if the mandatory measures have been implemented according to the Plan and any one of the following conditions apply:

(1) The Plan prohibits the manner of use; or

(2) The amount of water used exceeds the amount allowed by the Plan; or

(3) The amount of use or the amount used violates the terms and conditions of a compliance agreement following a variance granted by the Assistant City Manager for Utilities; or

(4) The violation of any provision of the "Land and Landscape Irrigation and Water Waste Ordinance".

(b) The following penalty shall apply during Stage 3 of the Water Conservation Plan and the Drought Contingency Plan, as amended. Any person who knowingly violates any provision of this article shall, upon conviction, be punished by a fine not to exceed two thousand dollars ($2,000.00). Each day that one or more provisions in this Plan is violated shall be considered to be a separate offense.

(c) The City Attorney is authorized to commence an action for appropriate legal or equitable relief in a court of competent jurisdiction in addition to the penalty mentioned in the above Subsection (b). Such additional relief may include:

(1) An injunction to prevent a violation of this chapter, or of the Water Conservation and the Drought Contingency Plan, as amended;

(2) Recovery for expenses incurred by the City in responding to a violation of this Chapter, or of the Water Conservation or the Drought Contingency Plan, as amended;

(3) A civil fine of up to one thousand dollars ($1,000.00) per day for violations of §26-233 or for violations of the Water Conservation Plan or the Drought Contingency Plan, as amended;

(4) All other damages, costs, remedies and legal processes to which the City may be entitled.

SECTION 3. This ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances of the City of Denton, Texas, as amended, except when provisions of this ordinance are in direct conflict with the provisions of such ordinances and such Code. All conflicting provisions of such ordinances and such Code are hereby repealed to the extent of that conflict only.

SECTION 4. It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable, and, if any phrase, clause, sentence, paragraph, or section of this ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this ordinance since the same would have been enacted by the City Council without the incorporation of this ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 5. This ordinance shall become effective fourteen (14) days from the date of its passage, and the City Secretary is hereby directed to cause the caption of this ordinance to be published twice in the *Denton Record-Chronicle,* the official newspaper of the City of Denton, Texas, within ten days of the date of its passage.

The motion to approve this ordinance was made by John Ryan and seconded by Keely Briggs, the ordinance was passed and approved by the following vote [7 - 0]:

	Aye	Nay	Abstain	Absent
Mayor Chris Watts:	✓			
Gerard Hudspeth, District 1:	✓			
Keely G. Briggs, District 2:	✓			

Don Duff, District 3:	✓			
John Ryan, District 4:	✓			
Deb Armintor, At Large Place 5:	✓			
Paul Meltzer, At Large Place 6:	✓			

PASSED AND APPROVED this the 16th day of April, 2019.

CHRISTOPHER WATTS, MAYOR

ATTEST:
ROSA RIOS, CITY SECRETARY

By: _____

APPROVED AS TO LEGAL FORM:
AARON LEAL, CITY ATTORNEY

By: _____

CITY OF DENTON

Water Conservation Plan

April 2019

1. INTRODUCTION AND OBJECTIVES

Water supply has always been a key issue in the development of Texas. In recent years, the increasing population and economic development in Region C have led to growing demands for water. Additional supplies to meet higher demands will be expensive and difficult to develop. Therefore, it is important that we make efficient use of existing supplies and make them last as long as possible. This will delay the need for new supplies, minimize the environmental impacts associated with developing new supplies, and delay the high cost of additional water supply development.

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 and drought contingency plans for public water suppliers.[1] The TCEQ guidelines and requirements for water suppliers are included in Appendix B. The City of Denton has adopted this water conservation and drought contingency plan pursuant to TCEQ guidelines and requirements.

The objectives of the water conservation plan are:

- To reduce water consumption.
- To reduce the loss and waste of water.
- To identify the level of water reuse.
- To improve efficiency in the use of water.
- To extend the life of current water supplies by reducing the rate of growth in demand.

The objectives of the drought contingency plan are:

- To conserve the available water supply in times of drought and emergency.
- To maintain supplies for domestic water use, sanitation, and fire protection.
- To protect and preserve public health, welfare, and safety.
- To minimize the adverse impacts of water supply shortages.
- To minimize the adverse impacts of emergency water supply conditions.

2. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY RULES

2.1 Conservation Plans

The TCEQ rules governing development of water conservation plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2 of the Texas Administrative Code, which is included in Appendix B. For the purpose of these rules, a water conservation plan is defined 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)."[1]

According to TCEQ rules, water conservation plans for public water suppliers must have a certain minimum content (Section 3), must have additional content for public water suppliers that are projected to supply 5,000 or more people in the next ten years (Section 4), and may have additional optional content (Section 5).

2.2 Drought Contingency Plans

The TCEQ rules governing development of drought contingency plans for public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code, which is included in Appendix B. The rules for wholesale water suppliers are contained in Rule 288.22, included in Appendix B. For the purpose of these rules, a drought contingency plan is defined as:

> "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)."[1]

The drought contingency plan for the City of Denton is contained in Section 6 of this water conservation and drought contingency plan.

3. MINIMUM REQUIRED WATER CONSERVATION PLAN CONTENT

The minimum requirements in the Texas Administrative Code for water conservation plans for public drinking water suppliers covered in this report are as follows:

- 288.2(a)(1)(A) – Utility Profile – Section 3.1 and Appendix C
- 288.2(a)(1)(B) – Specification of Goals Before May 1, 2005 – Section 3.2
- 288.2(a)(1)(C) – Specification of Goals After May 1, 2005 – Section 3.2
- 288.2(a)(1)(D) – Accurate Metering – Sections 3.3 and 3.4
- 288.2(a)(1)(E) – Universal Metering – Section 3.4
- 288.2(a)(1)(F) – Determination and Control of Unaccounted Water – Section 3.5
- 288.2(a)(1)(G) – Public Education and Information Program – Section 3.6
- 288.2(a)(1)(H) – Non-Promotional Water Rate Structure – Section 3.7
- 288.2(a)(1)(I) – Reservoir System Operation Plan – Section 3.8
- 288.2(a)(1)(J) – Means of Implementation and Enforcement – Section 3.9, Appendix D
- 288.2(a)(1)(K) – Coordination with Regional Water Planning Group – Section 3.10 and Appendix E

TCEQ places additional requirements on wholesale water suppliers in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.5 of the Texas Administrative Code. This Rule is included in Appendix B.

TCEQ's minimum requirements for water conservation plans are addressed in the following subsections of this report:

- 288.5(1)(C) – Maximum Acceptable Unaccounted-For Water Goal – Section 3.5

3.1 Utility Profile

Appendix C to this water conservation plan is a water utility profile for the City of Denton, based on the format recommended by the TCEQ.[2]

3.2 Specification of Water Conservation Goal

Specific elements of the Water Conservation Plan are discussed in the subsequent sections of this document. The development of this plan involved the identification and examination of numerous conservation strategies. The conservation strategies chosen for the plan were derived from numerous sources including state agency recommendations, the Region C planning group, water conservation literature, and the City's existing Water Conservation Plan.

Prior to 2019, Denton's water conservation goal was a 15 percent reduction in per capita water use by 2050. This goal was established in Denton's Water Conservation and Drought Contingency Plan adopted December 7, 1999.

The City's water conservation goals after May 1, 2005 include the following:

- Achieve 2024 per capita water use of 152 gpcd or less, as shown in Table 3-2 (five-year target). This represents a reduction of 37 gpcd from year 2000 per capita water use.
- Achieve 2029 per capita water use of 152 gpcd or less, as shown in Table 3-2 (ten-year target). This represents a reduction of 37 gpcd from year 2000 per capita water use.

The City's conservation goal was articulated in 2005 as a one percent reduction yearly in per-capita usage for ten years. This goal was based on: 1) per-capita reduction goals recommended by the Texas Water Development Board's Task Force on Water Conservation; and 2) an indication in recent data that per capita water demand had started to decline. However, weather patterns over the same period of time were such that declining per capita consumption may have been weather related.

Denton's specific goal was mildly exceeded, with a per-capita savings by 2008 of 10 gpcd. This savings is a reflection of the effects of conservation programs referenced above as well as weather variability during years pasted.

Unit	Unit	2009	2014	2019	2024	2029
City of Denton Population		111,814	120,820	133,610	147,516	162,870
Gallons PerCapita per Day	gpcd	160	158	140	152	152
Residential Gallons Per-Capita per Day	gpcd	70	70.3	58.3	69	69
Savings from Low-Flow Fixtures and Federal Clothes Washer Standard	gpcd				5	5
Savings from Conservation Measures	gpcd				2.5	2.5
Savings from Reuse	gpcd				.5	.5
Projected Per-Capita Savings	gpcd				8	8
Projected Per-Capita Reduction	percent				5%	5%
Actual Per-Capita Savings	gpcd	9	2	18		
Actual Per-Capita Reduction	percent	15.4%	1.25%	11.4%		

3.3 Accurate Metering of Raw Water Supplies and Treated Water Deliveries

The City of Denton meters all raw water diversions from Lake Lewisville and Lake Ray Roberts to each of the Water Treatment Plants. The City of Denton also meters all treated water deliveries to the distribution system from each water treatment plant. Each meter has an accuracy of plus or minus one percent. The meters are calibrated on a semiannual basis by City of Denton personnel to maintain the required accuracy and are repaired or replaced as needed. Replaced two of 4 in that last few years and two more are coming. Raw meters were replaced in 2018 Raw RR replaced on 5-22 and finished on 12-10. Lewisville plans to replace their soon.

3.4 Metering of Customer and Public Uses and Meter Testing, Repair, and Replacement

Water usage for all customers of the City of Denton, including public and governmental use, is metered. As part of the water conservation plan, the City of Denton will continue to implement a meter replacement program. Denton Water Utility (DWU) staff conducted an extensive study in 2004 in which over 2,000 water meters were bench tested for accuracy. Throughout the years since this study was conducted, it has been updated and to date holds validity in results. In addition a cost-benefit analysis was conducted in order to maximize the efficiency of the meters versus the costs of the replacement program. Based on the study, ¾ to 2-inch meters are replaced on a twelve- to fourteen-year cycle. The program focused on replacing the oldest meters in the system first. From 2009 to 2013 DWU has replaced meters to meet the twelve- to fourteen-year cycle. Meters that are 3-inch or larger are tested every year and repaired or replaced as necessary.

In addition, meters registering any unusual or questionable readings are automatically flagged in the billing process and be tested and repaired to restore full functionality.

3.5 Determination and Control of Water Loss

The amended 2003, Texas Water Code (Chapter 16.0121) requires that DWU (a retail public utility that provides potable water) to file an annual audit of system water loss. DWU continues to follow annually in compliance with the TWC.

DWU staff performs a yearly water audit, using the International Water Association/ American Water Works Association (IWA/AWWA) method required by the TWDB. DWU staff has been conducting water audits since the early 1990s. Historically, the City of Denton's non-revenue water, has always been below the AWWA goal. The City of Denton unaccounted-for water is also below the national average and the 2017

Texas average. The City of Denton's system has always met the suggested targets of the newer IWA/AWWA methodology as specified by the TWDB Task Force on water conservation.

The City of Denton will continue to conduct annual water audits using the IWA/AWWA methodologies.

Non-revenue water for the City of Denton has varied from 3.3 percent to 7.5 percent in the last five years, with the highest value still under review regarding accuracy of a source meter. Previous audits led to the discovery and correction of a systematic source metering error at the Ray Roberts Water Treatment Plant. Staff will continue to conduct comprehensive water audits annually and take appropriate measure to minimize system water loss.

3.6 Public Education and Information; Partnerships with Non-profits

The City of Denton continues to have an active role in the education of water conservation with several methods of outreach and public information. Along with their Partnerships with Non-Profits, they execute campaigns throughout the year(s) to spread information on conservation. The continuing public education and information campaign and the partnerships with Non-Profit organizations on water conservation includes the following elements:

- Promote the City's water conservation measures (presented in Sections 3, 4, and 5).
- Encourage voluntary twice-a-week watering schedule for landscape.
- Include inserts on water conservation with water bills at least twice per year. Inserts will include material developed by City of Denton staff and material obtained from the TWDB, the TCEQ, and other sources that pertain to water conservation, irrigation conservation, and protecting pipes from freezing.
- Encourage local media coverage of water conservation issues and the importance of water conservation.
- Make the Texas Smartscape materials, water conservation brochures, and other water conservation materials available to the public at the City of Denton Utility Department, other City facilities, and at special events.
- Make information pertaining to water conservation and irrigation conservation available online at www.sustainabledenton.com and include links to the Texas Smartscape website and to information relating to water conservation on the TWDB and TCEQ web sites.
- Provide a Xeriscape class once a year to promote conservation landscaping and conservation irrigation practices.

- Encourage attendance at Texas A&M Water University water classes. Offered options include Rain barrel and Drip irrigation classes.
- Promote and educate with non-profit conservation partners such as Master Naturalist, Master Gardeners, and Natural Plant Society, organizations that actively hold informational and educational meetings and volunteer opportunities regularly within our community.
- Offer presentations to local organizations, schools, and civic groups on the importance of water conservation and ways to save water.

3.7 Non-Promotional Water Rate Structure

With the intent of encouraging water conservation and discouraging waste and excessive use of water, the City of Denton adopted an increasing block (inverted-block) rate in 1998. In an inverted-block structure the unit price of water increases with increasing water use.

The City of Denton employs an inverted-block rate from May through October. The structure consists of four blocks (Table 5-2). The first block provides enough water to cover a typical household's water usage, which includes a moderate amount for irrigation. The second, third, and fourth blocks are designed to curb discretionary and seasonal outdoor water use. The inverted-block structure only applies to residential customers. DWU bills commercial customers on a flat rate, but has implemented seasonal pricing on commercial irrigation meters to curb summer peak demand.

TABLE 2	
DWU Residential Block Rate Structure per thousand gallons	
Less than 15,000 gals	$4.15
15,001 – 30,000 gals	$5.90
30,000-50,000 gals	$8.15
More than 50,000 gals	$10.90

TABLE 3	
DWU Seasonal Commercial Irrigation Rates	
Winter (November-April)	Summer (May-October)
$4.45 per thousand gallons	$6.15 per thousand gallons

3.8 Reservoir System Operation Plan

The City of Denton has the right to divert water from Lake Lewisville and Lake Ray Roberts, which we limit to firm yield calculations as follows:

- 19.76 MGD from Lake Ray Roberts
- 4.34 MGD from Lake Lewisville

The City of Denton is the minority water right holder in both reservoirs. The current agreement with the City of Dallas (majority water right holder) delegates comprehensive coordination of reservoir management to the City of Dallas.

3.9 Implementation and Enforcement of the Water Conservation Plan

Appendix D contains a copy of the resolution of the City of Denton City Council adopting this water conservation and drought contingency plan. The resolution designates responsible officials to implement and enforce the water conservation and drought contingency plan.

3.10 Coordination with Regional Water Planning Group

The City of Denton will provide a copy of this water conservation and drought contingency plan to the Region C Water Planning Group, which is currently developing the Regional Water Plan. Appendix E includes a copy of a letter sent to the Chair of the Region C Water Planning Group.

4. ADDITIONAL REQUIRED WATER CONSERVATION PLAN CONTENT

The Texas Administrative Code also includes additional requirements for water conservation plans for public drinking water suppliers that serve a population of 5,000 people or more and/or a projected population of 5,000 people or more within the next 10 years:

- §288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting – Sections 3.5, 4.1, and 5.5
- §288.2(a)(1)(B) – Record Management System – Section 4.2
- §288.2(a)(2)(C) – Requirement for Water Conservation Plans by Wholesale Customers – Section 4.3

4.1 Leak Detection and Repair; Pressure Control

Measures to control unaccounted-for water are part of the routine operations of the City of Denton. Meter readers, water and wastewater utility personnel, and the public report leaks in the system. Maintenance crews are on-call 24-hours a day and respond quickly to repair reported leaks. DWU has invested in leak detection and correlator equipment that helps in identifying more leaks and locating leaks more accurately for repair.

The City of Denton also proactively decreases water loss through the waterline replacement program. The City of Denton spends approximately 2 million per year to replace water distribution lines with two construction and maintenance crews. Areas of the water distribution system in which numerous leaks and line breaks occur are targeted for replacement.

DWU will continue analysis on the life cycle of transmission lines. These pipes have an assumed lifespan of 75 years, however the role of these lines within the distribution system makes them critical. The DWU will assess the current condition of existing transmission lines, research pipe maintenance history, and review published research. As a result, DWU will revise the replacement schedule for all existing transmission lines. This is expected to reduce water loss from main breaks by better estimating end of useful live.

To reduce real water losses, the City of Denton will maintain a proactive water loss program. As part of this program, the City will implement the following actions:

- Continue to implement the waterline replacement program.
- Conduct an analysis to revise the replacement schedule of transmission lines.
- Conduct regular inspections of all water main fittings and connections during periods of maintenance and repair.

4.2 Record Management System

As required by TAC Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(1)(B), the record management system for the City of Denton records water pumped, water delivered, and water sold. However, the City of Denton's record management system does not allow for the separation of water sales and uses into residential, commercial, public/institutional, and industrial categories as required.

The current billing system separates sales and uses into residential, commercial, and wholesale user classes. At such time that the City of Denton procures a new record management system, such system will have the capabilities required in section 288.2(a)(1)(B).

4.3 Requirement for Water Conservation Plans by Wholesale Customers

Each contract for the wholesale sale of water by the City of Denton will include a requirement that the wholesale customer develop and implement a water conservation plan meeting the requirements of Title 30, Part 1, Chapter 288, Subchapter A, Rule 288.2(a)(2)(c) of the Texas Administrative Code. 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 Chapter 288.

5. OPTIONAL WATER CONSERVATION PLAN CONTENT

TCEQ rules also list optional (not required) conservation strategies, which may be adopted by suppliers to achieve the stated goals of the plan. The following optional strategies are listed in the rules; some are not included in this plan:

- §288.2(a)(3)(A) – Conservation Oriented Water Rates – Section 3.7
- §288.2(a)(3)(B) – Ordinances, Plumbing Codes or Rules on Water-Conserving Fixtures – Section 5.1
- §288.2(a)(3)(C) – Programs for the Replacement or Retrofit of Water-Conserving Plumbing Fixtures in Existing Structures – (Not included in plan)
- §288.2(a)(3)(D) – Reuse and Recycling of Wastewater – Section 5.2
- §288.2(a)(3)(E) – Pressure Control and/or Reduction – (Not included in plan)
- §288.2(a)(3)(F) – Landscape Water Management Ordinance – Section 5.3
- §288.2(a)(3)(G) – Monitoring Method – Section 5.4
- §288.2(a)(3)(H) – Other Conservation Methods – Section 5.5 and 5.6

5.1 Ordinances, Plumbing Codes, or Rules on Water-Conserving Fixtures

The State of Texas has required 2.5 gpm faucets, 3.0 gpm showerheads, and 1.6 gpf toilets for new construction since 1992. Similar standards are also required under federal law. Denton's Plumbing Code complies with the State of Texas requirements. The implementation of the federal rules requiring energy-conserving clothes washers in 2007 improved the water-efficiency of residential clothes washers.

5.2 Reuse and Recycling of Wastewater

The City of Denton's current reuse program delivers approximately 0.5 MGD of reclaimed wastewater effluent. The current distribution system has a maximum capacity of 4 MGD.

5.3 Landscape Management Ordinance

As part of the development of this water conservation plan, the City of Denton has implemented a lawn and landscape irrigation and water waste ordinance. This ordinance is intended to minimize waste in landscape irrigation and other uses. The ordinance was implemented in 2006, during a drought period when public awareness of the drought was high. The ordinance includes the following elements:

- Prohibition of outdoor watering, except by hand and for watering foundations, from 10:00 a.m. to 6:00 p.m. every day from June 1 through September 30.
- Requirement that all new irrigation systems include rain and freeze sensors.
- Prohibition of designs and installations that spray directly onto impervious surfaces such as sidewalks and roads or onto other non-irrigated areas.
- Prohibition of use of poorly maintained sprinkler systems that waste water.
- Requirement that any outside faucet or service line leak be repaired.
- Enforcement of the ordinance by a system of warnings followed by fines for continued or repeat violations.

5.4 Monitoring Method

Until such time as there is an industry wide method for monitoring per-capita the City of Denton will use the five-year rolling average suggested by the Texas Water Development Board.

5.5 Customer Water Audit

The City of Denton will continue to conduct water audits for single- and multi-family residential customers. The four main purposes are to: educate customers about conservative water use habits and replacement of inefficient toilets, clothes washers, and dishwashers; educate customers about water-efficient showerheads and faucet aerators; identify leaks; and optimize irrigation water usage. The City's auditor will review the water use habits of the customer, inspect the system for leaks and excessive use, and recommend any equipment repairs or changes to increase the efficiency of both the domestic and irrigation water systems. Although overall water savings from residential water audits are minimal, residential water audits are crucial to maintaining good customer relations particularly related to high billing complaints.

The City of Denton has and will explore new organizational options that would allow for expansion of the water audit program. In addition to increasing availability of personnel for residential water audits, DWU will begin to expand its focus and implement a program for commercial customers. As Denton's highest

volume water customers are in the commercial sector, commercial water efficiency is expected to make a significant impact toward overall reductions.

5.6 Park, Athletic Field and Golf Course Conservation

The City of Denton will explore the possibility of additional savings by the proper management of park and athletic field irrigation, landscape, and turf practices. The Texas Water Development Board Water Conservation Best Management Practices Guide includes guidelines for water conservation in parks, athletic fields and golf courses.[3] DWU will work with other city departments to determine the potential for water and cost savings by proper management practices and implement them when practical.

6. DROUGHT CONTINGENCY PLAN

6.1 Introduction

The purpose of this drought contingency plan is as follows:

- To conserve the available water supply in times of drought and emergency.
- To maintain supplies for domestic water use, sanitation, and fire protection.
- To protect and preserve public health, welfare, and safety.
- To minimize the adverse impacts of water supply shortages.
- To minimize the adverse impacts of emergency water supply conditions.

6.2 State Requirements for Drought Contingency Plans

This drought contingency plan is consistent with Texas Commission on Environmental Quality (TCEQ) guidelines and requirements for the development of drought contingency plans by public drinking water suppliers, contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.20 of the Texas Administrative Code. This rule is included in Appendix B.

TCEQ's minimum requirements for drought contingency plans are addressed in the following subsections of this report:

- 288.20(a)(1)(A) – Provisions to Inform the Public and Provide Opportunity for Public Input – Section 6.3
- 288.20(a)(1)(B) – Provisions for Continuing Public Education and Information – Section 6.4
- 288.20(a)(1)(C) – Coordination with the Regional Water Planning Group – Section 6.9
- 288.20(a)(1)(D) – Criteria for Initiation and Termination of Drought Stages – Section 6.5
- 288.20(a)(1)(E) – Drought and Emergency Response Stages – Section 6.6
- 288.20(a)(1)(F) – Specific, Quantified Targets for Water Use Reductions – Section 6.6
- 288.20(a)(1)(G) – Water Supply and Demand Management Measures for Each Stage – Section 6.6
- 288.20(a)(1)(H) – Procedures for Initiation and Termination of Drought Stages – Section 6.6
- 288.20(a)(1)(I) - Procedures for Granting Variances – Section 6.8
- 288.20(a)(1)(J) - Procedures for Enforcement of Mandatory Restrictions – Section 6.7
- 288.20(a)(3) – Consultation with Wholesale Supplier – Not applicable
- 288.20(b) – Notification of Implementation of Mandatory Measures – Section 6.6

288.20(c) – Review and Update of Plan – Section 6.10TCEQ places additional requirements on wholesale water suppliers in Title 30, Part 1, Chapter 288, Subchapter B, Rule 288.22 of the Texas Administrative Code. This Rule is included in Appendix B.

TCEQ's minimum requirements for drought contingency plans are addressed in the following subsections of this report:

- 288.22(a)(1) – Provisions to Inform Wholesale – Section 6.3
- 288.22(a)(7) – Water Supply and Demand Management Measures Conform to Texas Water Code 11.039 – Section 6.6
- 288.22(a)(8) – Wholesale Contract Supply Provisions Conform to Texas Water Code 11.039 – Section 6.6

6.3 Provisions to Inform the Public and Opportunity for Public Input

The City of Denton provided opportunity for public input in the development of this drought contingency plan in [*date of Council meeting*] by the following means:

- Provided written notice of the proposed plan and the opportunity to comment on the plan by newspaper, posted notice, and notice on City of Denton's web site, www.cityofdenton.com.
- A public hearing was held at the City of Denton Council Meeting on [*date of Council meeting*].
- The public may comment on updates to the plan.
- The plan will be available at the City of Denton's web site www.cityofdenton.com.
- The plan will be provided to anyone requesting a copy.
- The plan will be provided to Upper Trinity Regional Water District in its capacity as a wholesale customer.

The City of Denton shares water rights with the City of Dallas. Denton is the minority water right holder in both water supply reservoirs. Also, Denton is a wholesale customer of the City of Dallas. Due to these factors, it is by design that Denton's Drought Contingency Plan closely resembles Dallas' plan. The need to coordinate Denton's Plan with the Dallas plan is appropriate due to the following reasons:

- The water supply reservoirs (Lake Ray Roberts and Lake Lewisville) are shared by the two cities and Denton is the minority water rights holder in both reservoirs. Denton is an untreated water supply customer of Dallas and will be affected by restrictions that may be initiated by the Dallas plan.

- Consistent communication to customers in a television and media market common to many different water utility entities will provide for a more effective implementation of Drought Contingency Plans.

6.4 Provisions for Continuing Public Education and Information

The City of Denton will inform and educate the public about its drought contingency plan by the following means:

- Making the plan available to the public through the City of Denton web site at www.cityofdenton.com.
- Including information about the drought contingency plan on the City of Denton's web site, www.cityofdenton.com.
- Upon request, make presentations to local organizations, schools, and civic groups on the drought contingency plan (usually in conjunction with presentations on water conservation programs).
- Open public meetings with the Public Utilities Board, Environment Committee, and City Council.

Any time the drought contingency plan is activated or the drought stage changes, the City of Denton will notify local media of the issues, the drought response stage, and the specific actions required of the public. The information will also be publicized on the City of Denton web site, www.cityofdenton.com. Billing inserts will be used as appropriate.

6.5 Initiation and Termination of Drought Response Stages

6.5.1 Initiation of Drought Response Stages

The Director of Water Utilities or designee may order the implementation of a drought response stage or water emergency when one or more of the trigger conditions for that stage is met. The following actions will be taken when a drought stage is initiated:

- The public will be notified through local media.
- Wholesale customers will be notified by telephone with a follow-up letter or fax.
- If any mandatory provisions of the drought contingency plan are activated, the City of Denton will notify the Executive Director of the TCEQ within 5 business days.

The Director of Water Utilities or designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met.

Factors that could influence such a decision include, but are not limited to, the time of the year, weather conditions, the anticipation of replenished water supplies, or the anticipation that additional facilities will become available to meet needs.

Trigger Condition Types: The three types of water management conditions are discussed below:

For a ***Type A situation*****,** preservation of the total water supply will be critical and corresponding water management measures should stress overall reductions in water use. This condition is measured by a reduction in lake supply and results from extended drought. The best opportunity to respond to a drought is early in the drought cycle. Drought Contingency measures should stress overall reductions in water demand (i.e., average-day water demand).

For a ***Type B situation***, in which the water demand approaches the delivery capacity of the system, the peak water demand will be critical, and corresponding drought contingency measures should stress water-use reductions or shifts to off-peak hours. In this situation, the ultimate goal of Stages 1 and 2 will be to avoid triggering the next stage. A Stage 3 trigger requires immediate and severe water demand reductions. Equipment or system failures that result from increased stresses to the transmission, treatment, or distribution systems can worsen a ***Type B*** situation. This condition is a result of an increase in demand. In the short term, this typically occurs during the summer months when irrigation requires more water. In the long term, it could occur if treatment plant or distribution system expansions do not keep pace with the growth in consumer demand. Drought contingency measures should stress reductions in peak water demand or redistribution of the demand to off-peak hours.

For a ***Type C situation*** where deficiencies limit the supply capacity, both water-use reductions and shifts to off-peak hours may be necessary. Although the area involved may be localized, immediate action requiring water demand reduction is necessary. Depending upon the severity of the triggering conditions, it is feasible that the plan could proceed immediately to implementation of stage 3. This condition is a result of a break in a large transmission main, mechanical failure to one or more large pumps, or production plant breakdown. Contamination of water supplies or other unforeseen occurrences may also instigate this condition. They may arise with little warning and require immediate and/or aggressive actions.

Drought contingency measures should stress reductions in peak water demand and/or redistribution of the demand to off-peak hours.

6.5.2 Termination of Drought Response Stages

The Director of Water Utilities or designee may order the termination of a drought response stage or water emergency when the conditions for termination are met or at his/her discretion. The following actions will be taken when a drought stage is terminated:

- The public will be notified through local media.
- Wholesale customers will be notified by telephone with a follow-up letter or fax.
- When any mandatory provisions of the drought contingency plan that have been activated are terminated, the City of Denton will notify the Executive Director of the TCEQ within 5 business days.

The Director of Water Utilities or designee may decide not to order the termination of a drought response stage or water emergency even though the conditions for termination of the stage are met. Factors that could influence such a decision include, but are not limited to, the time of the year, weather conditions, or the anticipation of conditions that warrant the continuation of the drought stage.

CITY OF DENTON

Drought Contingency Plan

April 2019

6.6 Drought and Emergency Response Stages

6.6.1 Stage 1, Mild

6.6.1.1 Triggering and Termination Conditions for Stage 1, Mild

6.6.1.1.1 ***Type A*** *Water Management Condition*

Total raw water supply in (1) Denton and Dallas connected lakes (east and west); or (2) western connected lakes; or (3) eastern connected lakes drops below 65% of the total conservation storage of the lakes

6.6.1.1.2 ***Type B*** *Water Management Condition*

Water demand reaches or exceeds 85% of delivery capacity for 4 consecutive days

6.6.1.1.3 ***Type C*** *Water Management Condition*

- Water demand approaches a reduced delivery capacity for all or part of the system, as determined by DWU
- A major water line breaks, or a pump or system failure occurs, which cause unprecedented loss of capability to provide treated water service
- Natural or man-made contamination of the water supply

Requirements for Termination:

Stage 1 may be terminated when Stage 1 conditions no longer exist and would be unlikely to recur upon termination.

6.6.1.2 Goal For Use Reductions And Actions Available Under Stage 1, Mild

The goal for water use reduction under Stage 1, Mild, is a 5 percent reduction of the use that would have occurred in the absence of drought contingency measures. The Director of Water Utilities or a designee can order the implementation of any of the actions listed below, or other actions not listed, as deemed necessary:

All Water Users

(a) Require that all landscape watering be limited to the day-of-week schedule between the hours of 6:00 PM to 10:00AM. Irrigation of landscaped areas with hose-end sprinklers, or automatic irrigation systems should be limited to Sundays and Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8) and for locations without addresses and limited to Saturdays and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9). Apartments, office building complexes or other property containing multiple addresses may be identified by the lowest address number.

(b) Encourage reduction in frequency of watering new and first year landscaping.

(c) Encourage only initial filling of ornamental fountains.

(d) Encourage reduction in frequency of washing or rinsing of vehicles. Use of bucket/container, hand-held hose with positive shut-off valve or commercial car wash is required.

(e) Encourage the elimination of draining and refilling of swimming pools.

(f) Encourage reduction in frequency of recreational water use including use of faucets, hoses or hydrants.

(g) Foundations may be watered on any day of the week between the hours of 10 PM and 6 AM. Foundations may be watered with a soaker hose or a hand-held hose equipped with a positive shutoff nozzle only.

(h) Recommend that customers do not hose off paved areas, buildings, windows or other surfaces.

City Government

(a) Staff will begin review of the problems initiating Stage 1 actions and will identify possible solutions to address the water shortage.

(b) Initiate public education campaign teaching and encouraging reduced water use practices.

(c) Intensify normal leak detection and repair activities on water pipes and mains.

(d) Restrict water use for the irrigation of parks by 25 percent. Park landscape may be irrigated on any day of the week.

(e) Only flush newly constructed mains and mains that are essential for water quality maintenance.

(f) Encourage 25 percent reduction in frequency of wet street sweeping and city vehicle washing and rinsing.

Commercial Customers

(a) Identify and encourage voluntary reduction measures by high-volume water users through water use audits.

(b) Restrict water use for the irrigation of parks by 25 percent. Park landscape may be irrigated on any day of the week.

(c) Reduce water use for landscape nursery stock by 25 percent.

(d) Require reduction of water use through day-of-week landscape watering schedule for golf courses.

(e) Encourage area restaurants to serve customers water by request only.

(f) Encourage hotel/motels to request multiple day patrons to reuse linens instead of changing every day.

Interruptible Customers

(a) Reduce usage for interruptible customers per contract terms.

Wholesale Customer Cities

(a) Encourage implementation of like procedures by wholesale customers.

Notifications

City of Denton

- Notify major City departments, by telephone and follow-up memo, of Water Awareness Stage #1 and request voluntary water use reduction.
- Stress voluntary elimination of non-essential uses.

External Customers

- Issue press release, radio and video public service announcement to area media describing Water Awareness Stage #1 and the voluntary restrictions that apply.
- Distribute water conservation materials to Denton Independent School District, UNT, TWU and community groups if appropriate.
- Post Water Awareness notices at public buildings including city buildings, county buildings and the federal post office.
- Encourage reduction of water use through the publication of the voluntary landscape watering schedule and request watering only during off-peak hours.

Wholesale Customers

- Advise wholesale customers by telephone and follow-up memo, of Water Awareness Stage #1 and request voluntary water use reduction consistent with actions taken by the City of Denton.

6.6.2 Stage 2, Moderate

6.6.2.1 Triggering Conditions For Stage 2, Moderate

6.6.2.1.1 ***Type A*** *Water Management Condition*

Total raw water supply in (1) Denton and Dallas connected lakes (east and west); or (2) western connected lakes; or (3) eastern connected lakes drops below 50% of the total conservation storage

6.6.2.1.2 ***Type B*** *Water Management Condition*

Water demand reaches or exceeds 90% of delivery capacity for 3 consecutive days

6.6.2.1.3 ***Type C*** *Water Management Condition*

- Water demand equals a reduced delivery capacity for all or part of the system, as determined by DWU
- A major water line breaks, or a pump or system failure occurs, which cause unprecedented loss of capability to provide treated water service
- Natural or man-made contamination of the water supply

Requirements for Termination:

Stage 2 may be terminated when Stage 2 conditions no longer exist and would be unlikely to recur upon termination.

6.6.2.2 Goal For Use Reduction And Actions Available Under Stage 2, Moderate

The goal for water use reduction under Stage 2, Moderate, is a 15 percent reduction of the use that would have occurred in the absence of drought contingency measures. The Director of Water Utilities or a designee can order the implementation of any of the actions listed below, or other actions not listed, as deemed necessary:

All Water Users

(a) Require that all landscape watering be limited to the day-of-week schedule between the hours of 6:00 PM to 10:00AM. Irrigation of landscaped areas with hose-end sprinklers or automatic irrigation systems should be limited to Thursdays for customers with a street address ending in an even number (0, 2, 4, 6 or 8) and for locations without addresses, and Wednesdays for water customers with a street address ending in an odd number (1, 3, 5, 7 or 9). Apartments, office building complexes or other property containing multiple addresses may be identified by the lowest address number.

(b) Restrict operation of ornamental fountains or ponds to initial only filling except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(c) Prohibit recreational water use including use of faucets, hoses or hydrants.

(d) Restrict washing of any motor vehicle, motorbike, boat, trailer, airplane or other vehicle to the use of a hand-held bucket or a hand-held hose equipped with a positive shutoff nozzle for quick rinses on the designated watering day. Vehicle washing may be done at any time on the immediate premises of a commercial car wash or commercial service station. Further, such washing may be exempted from these regulations if the health, safety, and welfare of the public is contingent upon frequent vehicle cleansing, such as garbage trucks and vehicles used to transport food and perishables.

(e) Restrict water use to replacing losses during normal use and replacing evaporation in order to maintain proper water quality and proper operation of the pool equipment. Request that use of water to fill, refill, or add to any indoor or outdoor swimming, wading, or jacuzzi pools be limited to the day-of-week schedule.

(f) Prohibit hosing off paved areas, buildings, windows or other surfaces.

(g) Foundations may be watered for a two-hour period only between the hours of 10 PM and 6 AM on the designated watering day with soaker or hand-held hose equipped with a positive shutoff nozzle on the watering schedule.

City Government

(a) Staff will begin review of the problems initiating Stage 2 actions and will identify possible solutions to address the water shortage.

(b) Accelerate public education campaign teaching and encouraging reduced water use practices.

(c) Restrict flushing of new mains not immediately required to provide service.

(d) Continue intensified leak detection and repair activities on water pipes and mains.

(e) Restrict water use for the irrigation of parks by 50 percent. Park landscape may be irrigated on any day of the week.

(f) Increase enforcement efforts.

(g) Reduce frequency of wet street sweeping and city vehicle washing by 50 percent.

(h) Use of water from fire hydrants limited to fire fighting, essential distribution system. All other water use from fire hydrants will be by special permit only.

Commercial Customers

(a) Require day-of-week watering schedule for golf courses.

(b) Reduce water use for landscape nursery stock by 50 percent.

(c) Restrict water use for the irrigation of parks by 50 percent. Park landscape may be irrigated on any day of the week.

Interruptible Customers

(a) Reduce usage for interruptible customers per contract terms.

Wholesale Customers

(a) Require water demand reductions in accordance with contract obligations for wholesale customers.
(b) Wholesale water systems asked to abide by City of Denton policy for both internal operations and all retail customers. Reduction in rate of flow controller settings by 10% -20% are optional.

Notifications

City of Denton

- By telephone and attached follow-up memo, notify all major City department water users of Water Watch Stage #2 and the water use restrictions under this stage. Instruct them to implement restrictions on non-essential uses. Use city department contacts in Appendix F.
- Coordinate distribution of water emergency plan details, posters, and handouts to customer service representatives, utility dispatch personnel and Denton public access buildings.

Retail Customers

- TCEQ notified of Stage 2 restrictions.
- Issue press release, radio and video public service announcement to area media describing Water Watch Stage #2 and the water use restrictions under this stage. Keep media updated on the water situation. Use media contacts listed in Appendix F.
- By telephone and follow-up letter, notify major area water users of Water Watch Stage #2 and the restrictions that apply. Use plant manager contacts listed in Appendix F.
- Accelerate public education campaign to promote and encourage efficient water use.
- If applicable, notify the U.S. Corp of Engineers by telephone and follow-up letter of the Water Watch Stage #2 conservation measures.

Wholesale Customers

Advise wholesale customers by telephone and attached letter of the actions taken by the City of Denton in response to Water Watch Stage #2 and require the implementation of like procedures among their customers. Wholesale customer cities shall either impose water use restrictions equivalent to those imposed on Denton's

retail customers OR where applicable, Denton may reduce rate-of-flow controller settings by 10%-20%. Use wholesale customer contacts in Appendix F.

Penalties

- Initiate a 10% rate increase for residential customers for water usage greater than 15,000 gallons per account per 30 days.
- Impose a 10% surcharge penalty for commercial and industrial customers for monthly water use above 80% of prior billing volumes for a 30-day period.
- Initiate code enforcement fines for any violation of the Drought Contingency Plan.

6.6.3 Stage 3, Severe

6.6.3.1 Triggering Conditions For Stage 3, Severe

6.6.3.1.1 ***Type A*** *Water Management Condition*

Total raw water supply in (1) Denton and Dallas connected lakes (east and west); or (2) western connected lakes; or (3) eastern connected lakes drops below 35% of the total conservation storage

6.6.3.1.2 ***Type B*** *Water Management Condition*

Water demand reaches or exceeds 95% of delivery capacity for 2 consecutive days

6.6.3.1.3 ***Type C*** *Water Management Condition*

- Water demand exceeds a reduced delivery capacity for all or part of the system, as determined by DWU
- A major water line breaks, or a pump or system failure occurs, which cause unprecedented loss of capability to provide treated water service
- Natural or man-made contamination of the water supply

Requirements for Termination:

Stage 3 may be terminated when Stage 3 conditions no longer exist and would be unlikely to recur upon termination.

6.6.3.2 Goal For Use Reduction And Actions Available Under Stage 3, Severe

The goal for water use reduction under Stage 3, Severe, is a reduction of 20 percent of the use that would have occurred in the absence of drought contingency measures. If the circumstances warrant, the Director of Water Utilities or a designee can set a goal for greater water use reduction. The Director of Water Utilities or a

designee can order the implementation of any of the actions listed below, or other actions not listed, as deemed necessary:

All Water Users

(a) Irrigation of landscape is absolutely prohibited unless otherwise indicated within this section.

(b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane other vehicle not occurring on the premises of a commercial car wash and commercial service stations and not in the immediate interest of public health, safety, and welfare is prohibited. Further, such vehicle washing at commercial car washes and commercial service stations shall occur only between the hours of 6 PM to 10 AM.

(c) The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi type pools is prohibited. Existing pools may add water to replace losses during normal use and to replace evaporation in order to maintain proper water quality and proper operation of the pool equipment.

(d) Prohibit operation of ornamental fountains or ponds to initial filling except where necessary to support aquatic life or where such fountains or ponds are equipped with a recirculation system.

(e) Foundations may be watered for a two-hour period only between the hours of 10 PM and 6 AM on the designated watering day from Stage 2 with soaker or hand-held hose equipped with a positive shutoff nozzle on the watering schedule.

(f) No application for new, additional, expanded, or increased-in-size water service connections, meters, service lines, pipeline extensions, mains, or water service facilities of any kind shall be approved, and time limits for approval of such applications are hereby suspended for such time as this drought response stage or a higher-numbered stage shall be in effect.

(g) Permitting of new swimming pools, hot tubs, spas, ornamental ponds and fountain construction is prohibited.

(h) Request a 25% reduction of indoor water uses.

City Government

(a) Wet street sweeping and city vehicle washing or rinsing is prohibited, except when in the immediate interest of public health, safety, and welfare.

(b) Restrict water use for the irrigation of parks by 75 percent. Park landscape may be irrigated on any day of the week.

(c) Restrict use of water from fire hydrants to fire fighting, essential distribution system maintenance and related activities. All other water use from fire hydrants will be by special permit only.

Commercial Customers

(a) Restrict watering of golf course greens and tee boxes restricted to the allowed watering hours and the day-of-week watering schedule from Stage 2; watering of other golf course areas and parks is prohibited unless the golf course utilizes a water source other than that provided by the City of Denton.

(b) Reduce water use for landscape nursery stock by 75 percent.

(c) Restrict water use for the irrigation of parks by 75 percent. Park landscape may be irrigated on any day of the week.

Interruptible Customers

(a) Service to interruptible customers is temporarily suspended.

Wholesale Customers

(a) Same external restrictions apply to wholesale suppliers.

Notifications

City of Denton

- Coordinate dissemination of water conservation plan details, posters, and handouts to customer service representatives, utility dispatch personnel and public access buildings.
- By telephone and attached follow-up memo, notify all major City department users of Water Warning Stage #3 and of the water use restrictions under this stage. Instruct them to eliminate non-essential uses including street and vehicle washing and operation of ornamental fountains, and to implement restrictions on essential uses. Use same contacts as those listed in Appendix F.

Retail Customers

- TCEQ notified of Stage 3 restrictions.
- Issue press release, radio and video public service announcement to area media describing Water Warning Stage #3 and the water use restrictions under this stage. Keep media updated on the water situation. Use same media contacts as those in Appendix F.
- By telephone and follow-up letter, notify major water users of Water Warning #3 and the mandatory water use reduction. Use contacts listed in Appendix F.
- Post Water Warning notices at public buildings including city buildings, county buildings, and the federal post office.

- If applicable, notify U.S. Corps of Engineers by telephone and attached letter of the Water Warning Stage #3 conservation measures.

Wholesale Customers

- Advise wholesale customers by telephone and attached letter of actions being taken by the City in response to Water Warning Stage #3 and mandatory implementation of similar procedures among their customers. Wholesale customer cities shall impose water use restrictions equivalent to those imposed on Denton's retail customers or, where applicable, reduce their rate-of-flow controller settings by a percentage determined by the Director of Water Utilities. Appendix F lists wholesale customers that need to be contacted.

Penalties

- Initiate a 20% rate increase for residential customers for water usage greater than 15,000 gallons per account per 30 days.
- Impose a 20% surcharge penalty for commercial and industrial customers for monthly water use above 70% of prior billing volumes for a 30-day period.
- Initiate code enforcement fines for any violation of the Drought Contingency Plan.

Water Allocation

Retail Customers:

During Stages 2 and 3 of the Drought Contingency Plan, DWU may impose a retail water rate increase to discourage water use. All rates for usage in excess of 15,000 gallons per month (per single-family residential account), or any other usage amount above 15,000 gallons per month, as deemed appropriate by the Director, may be increased by an additional 10 percent or any other percentage deemed appropriate by the Director.

Wholesale Customers

In the event that the triggering criteria specified in Section 6 of the Plan for Stage 3 have been met, the Director is hereby authorized to initiate allocation of water supplies on a pro rata basis in accordance with the latest revision of Texas Water Code Section 11.039. Texas Water Code Section 1.039, Distribution of Water During Shortage, states:

(a) If a shortage of water in a water supply not covered by a water conservation plan prepared in compliance with Texas Commission on Environmental Quality or Texas Water Development Board rules results from drought, accident, or other cause, the water to be distributed shall be divided among all customers pro rata, according to the amount each may be entitled to, so that preference is given to no one and everyone suffers alike.

(b) If a shortage of water in a water supply covered by a water conservation plan prepared in compliance with Texas Commission on Environmental Quality or Texas Water Development Board rules results from drought, accident, or other cause, the person, association of person, or corporation owning or controlling the water shall divide the water to be distributed among all customers pro rata, according to:

1. the amount of water to which each customer may be entitled; or
2. the amount of water to which each customer may be entitled, less the amount of water the customer would have saved if the customer had operated its water system in compliance with water conservation plan.

(c) Nothing in Subsection (a) or (b) precludes the person, association of persons or corporation owning or controlling the water from supplying water to a person who has a prior vested right to the water under the laws of this state.

DWU may curtail water deliveries or reduce diversions in accordance with the terms and conditions of its wholesale water supply contracts. If necessary, or if specific contract provisions are not provided for, DWU may curtail water deliveries or reduce diversions in accordance with Texas Water Code Section 11.039. DWU will have authority to restrict flow to its wholesale water customers through the rate-of-flow controllers.

The Director will establish pro rata water allocations, determined as a percentage reduction of the wholesale customer's water usage, at the time of implementation. The total volume reduction for each wholesale customer will be calculated monthly, based on average water usage for the previous three years. The Director will establish the percentage reduction based on an assessment of the severity of the water shortage condition and the need to curtail water diversions and/or deliveries, and the percentage reduction may be adjusted periodically by the Director. Once pro rata allocation is in effect, water diversions by, or deliveries to, each wholesale customer will be limited to the allocation established for each month.

6.7 Procedures for Enforcement of Mandatory Restrictions

Violations

A person commits an offense if he or she knowingly makes, causes, or permits a use of water contrary to the measures implemented in the Drought Contingency Plan. It is presumed that a person has knowingly made, caused, or permitted use of water contrary to the measures implemented if the mandatory measures have been implemented according to the Plan and any one of the following conditions apply:

- The Drought Contingency Plan prohibits the manner of use.
- The amount of water used exceeds that allowed by the Drought Contingency Plan.
- The manner of use or the amount used violates the terms and conditions of a compliance agreement made following a variance granted by the ACM/Utilities.

Any person in apparent control of the property where a violation occurs or originates shall be presumed to be the violator, and proof that the violation occurred on the person's property shall constitute a rebuttable presumption that the person in apparent control of the property committed the violation, but any such person shall have the right to show that he/she did not commit the violation. Parents shall be presumed to be responsible for their minor children and proof that a violation, committed by a child, occurred on the property within control of the parents shall constitute a rebuttable presumption that the parent committed the violation. But, any such parent may be excused if he/she proves that he/she had previously directed the child not to use the water as it was used in violation of this Plan and that the parent could not have reasonably known of the violation.

Any Code Enforcement Officer, Police Officer, or other city employee designated by the Assistant City Manager/Utilities, may issue a citation to a person he/she reasonably believes to be in violation of this Ordinance. The citation shall be prepared in duplicate and shall contain the name and address of the alleged violator, if known, the offense charged, and shall direct him/her to appear in municipal court on the date shown on the citation.

Any person who violates this Plan is guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not less than $250 and not more than $2,000. Each day that one or more provisions in this Plan is violated shall constitute a separate offense. Flow restrictors may be placed in lines after two violations have occurred to limit the amount of water passing through the meter in a 24-hour period. The City of Denton Utilities reserves the right to temporarily cancel water service to the customer until the situation can be resolved. Services

discontinued under such circumstances shall be restored only upon payment of a re-connection charge, hereby established at an amount not to exceed $135.00 (or as adjusted by City ordinance), and any other costs incurred by the DWU in discontinuing service. In addition, suitable assurance must be given to the Director that the same action will not be repeated while the Plan is in effect. Compliance with this Plan may also be sought through injunctive relief in the district court.

6.8 Procedures for Granting Variances

Granting a Variance

The ACM/Utilities may grant variances from the Drought Contingency Plan in special cases to persons demonstrating extreme hardship and need. In order to obtain a variance, the applicant must sign a compliance agreement on forms provided by the ACM/Utilities and approved by the City Attorney. The applicant must agree to use the water only in the amount and manner permitted by the variance. A variance must meet the following conditions:

- Granting of a variance must not cause an immediate significant reduction in the City's water supply.
- The applicant must demonstrate that the extreme hardship or need is related to the health, safety, or welfare of the person requesting it.
- The variance will not adversely affect the health, safety, or welfare of other persons.
- No variance is retroactive nor can it justify any violation of this Drought Contingency Plan before its issuance.
- The variance will remain in effect during the stage in which it was issued and will expire when the Plan is no longer in effect or a new stage is activated.

Revoking a Variance

The ACM/Utilities may revoke a variance granted when the Director of Water Utilities determines any one of the following:

- Conditions causing initial issuance of the variance are no longer applicable.
- Violation of the terms of the compliance agreement.
- The health, safety, or welfare of other persons requires revocation.

Wholesale Customer Variances

The ACM/Utilities may grant variances from the Drought Contingency Plan to wholesale water customers in special cases. Wholesale water customers may request reduced variance allocations for the following conditions:

- The designated period does not accurately reflect a wholesale customer's normal water usage.
- The customer agrees to transfer part of its allocation to another wholesale customer.
- Other objective evidence demonstrates that the designated allocation is inaccurate under present conditions.

In order to grant a variance, the applicant must sign a compliance agreement on forms provided by the ACM/Utilities and approved by the City Attorney. No variance shall be retroactive or otherwise justify any violation of this Drought Contingency Plan occurring before the issuance of the variance.

6.9 Coordination with the Regional Water Planning Group

The City of Denton is located within the Region C water planning area. Appendix E includes a copy of a letter sent to the Chair of the Region C Water Planning Group (RCWPG) along with the water conservation and drought contingency plan.

6.10 Review and Update of Drought Contingency Plan

As required by TCEQ rules, the City of Denton will review this drought contingency plan every five years, beginning in 2009. The plan will be updated as appropriate based on new or updated information. As the plan is reviewed and subsequently updated, a copy of the revised Drought Contingency Plan will be submitted to the TCEQ and the RCWPG for their records.

7.0 Severability

The City of Denton Public Utility Board agrees that sections, paragraphs, sentences, clauses, and phrases of this Drought Contingency Plan are severable. If any phrase, clause, sentence, paragraph, or section of this Drought Contingency Plan is declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Drought Contingency Plan, since the same would not have been enacted by the

City of Denton Public Utility Board without the incorporation into this Drought Contingency Plan of any such unconstitutional phrase clause, sentence paragraph, or section.

APPENDIX A

List of References

1. Texas Commission on Environmental Quality: "Water Conservation Plans for Municipal Uses by Public Water Suppliers," Texas Administrative Code Title 30 Part I Subchapter A §288.2, effective October 7, 2004

2. Texas Commission on Environmental Quality: "Utility Profile & Water Conservation Plan Requirements for Municipal Water Use by Public Water Suppliers," TCEQ publication 10218 Rev 11-04 and "Utility Profile & Water Conservation Plan Requirements for Wholesale Public Water Suppliers," TCEQ publication 20162 Rev 11-04

3. Texas Water Development Board: "Water Conservation Best Management Practices Guide," Report 362, Water Conservation Implementation Task Force, published November 2004

Draft Denton Reuse Accounting Plan Narrative

Existing Authorization

Certificate of Adjudication 08-2348 Lake Lewisville granting the right to impound 68,424 acre-feet, and divert and use 58,424 acre-feet per year at a maximum diversion rate of ~~100~~ cfs (maximum amended to 200 cfs pursuant to application submitted 2022)

Requested Authorization

An amendment to Certificate of Adjudication 08-2348 Lake Lewisville to reuse a maximum of 13,497 acre-feet per year of diverted water (authorization granted as Amendment A in 2019)

Accounting Plan Summary

Denton has water rights and intake points at Lake Ray Roberts and Lake Lewisville. By contract with the City of Dallas, the two lakes are operated as a system to maximize yield and minimize downstream spillage. By the terms of the raw water supply contract signed by Dallas and Denton in 1985, Denton's share of the firm yield on the two lakes was established at 19.76 mgd for Ray Roberts and 4.34 mgd for Lewisville, for a total of 24.1 mgd. The contract specified terms for purchase of additional raw water from Dallas by Denton.

Under the proposed permit special conditions, Denton will receive credit for half of its total annual discharge, as measured at Pecan Creek and Clear Creek WRPs. Qualifying discharges will exclude carriage losses of 0.3% per stream mile. To account for wastewater collection system inflow and infiltration that occasionally increase the volume of discharge above intake volume, the qualifying discharges will be capped at the total intake volume.

We assume that any raw water purchased from Dallas will not include reuse rights, so purchased water is excluded from reuse calculations. To simplify calculations and prevent them from being circular, reuse credits are applied to the following day's intake.

Under the proposed permit special conditions, Denton's reuse diversions will be capped at half of Denton's total water right diversions during the year. Denton recognizes that return flows will be certified under a new priority date, which is junior to some other water right holders in the basin. The accounting plan includes considerations for senior water right holders.

Sheet Descriptions

Narrative

Background on reuse authorization, description of accounting plan sheets and columns, calculations, and logic

Denton reuse summary

Repeat of results columns from 'Denton reuse calcs' for ease of comparison

Denton reuse calcs

Inputs, calculations, logic, and assumptions of Denton's indirect reuse accounting

Calculation Assumptions

Constant values to be used in daily calculations

Validation Lists

Valid values for cells restricted to specific values

Chart

Graphic of Denton withdrawals by source

Descriptions for 'Calculation Assumptions'

Item 1 Carriage loss per stream mile

In this accounting plan, carriage losses are assumed at a rate of 0.3% per stream mile.

Item 2 Pecan Creek reach length to Lake Lewisville (mi)

Pecan Creek discharges travel an assumed 17.2 stream miles from the discharge point to City of Denton's diversion point on Lake Lewisville.

Item 3 Clear Creek reach length to Lake Lewisville (mi)

Clear ~~Pecan~~ Creek discharges travel an assumed 21.1 stream miles from the discharge point to City of Denton's diversion point on Lake Lewisville.

Item 4 Ray Roberts + Lewisville Annual Water Right (mg)

City of Denton's right to divert and use 74576.5 million gallons per year.

Item 5 Ray Roberts + Lewisville Daily Water Right (mg)

City of Denton's right to divert and use 591.5 million gallons per day.

Item 6 Ray Roberts + Lewisville Annual Firm Yield (mg)

Firm Yield is established at 19.76 mgd for Ray Roberts and 4.34 mgd for Lake Lewisville, for a total of 24.1 mgd, based on the 7 year drought of record. In this accounting plan, Denton's firm yield is based on 24.1 mgd, totaling 8,796.5 million gallons per year. This value may be updated based on future yield studies.

Column Descriptions for 'Denton reuse summary'

Column A: Day

The plan is based on daily accounting, so this will be the date of the calculations. Reuse diversion is calculated for one day and used the next day. This column pulls directly from column 1 on the Denton Reuse Calcs spreadsheet.

Column B: Total Intake (mg)

Denton Reuse Calcs Column 4a

Daily raw water intake as calculated in Column 4a of Denton Reuse Calcs.

Column C: Total Qualifying Discharge (mg)

Denton Reuse Calcs Column 9a

Daily wastewater discharge as calculated in Column 9a of Denton Reuse Calcs.

Column D: Reuse Diverted (mg)

Denton Reuse Calcs Column 12a

Denton's reuse water claimed for use within the year as calculated in Column 12a of Denton Reuse Calcs.

Column E: Cumulative (ac-ft)

Denton Reuse Calcs Column 12c

Cumulative total of Denton's reuse water claimed for use within the year as calculated in Column 12c of Denton Reuse Calcs.

Column F: Water Right Diverted (mg)

Denton Reuse Calcs Column 14a

Denton's water right used daily as calculated in Column 14a of Denton Reuse Calcs.

Column G: Cumulative (ac-ft)

Denton Reuse Calcs Column 14c

Cumulative total of Denton's water right used within the year as calculated in Column 14c of Denton Reuse Calcs.

Column H: Raw Purchase (mg)

Denton Reuse Calcs Column 15a

Water purchased by Denton to meet daily raw water needs as calculated in Column 15a of Denton Reuse Calcs.

Column I: Cumulative (ac-ft)

Denton Reuse Calcs Column 15c

Cumulative total of water purchased by Denton to meet daily raw water needs as calculated in Column 15c of Denton Reuse Calcs

Column J: Reuse % of Discharge

Denton Reuse Calcs Column 19a

Today's reuse as a percent of yesterday's discharges as calculated in Column 19a of Denton Reuse Calcs. This value serves as an indicator of how water use and operations are driving reuse available and demonstrates that reuse never exceeds half of daily qualifying discharges.

Column K: Reuse % of Water Right

Denton Reuse Calcs Column 19b

Today's reuse as a percent of yesterday's water right diversions. This value serves as an indicator of how water use and operations are driving reuse available and demonstrates that reuse never exceeds half of daily water right diversions.

Column L: Reuse % of Firm Yield

Denton Reuse Calcs Column 19c

Cumulative reuse to date as a percentage of firm yield. This value serves as an indicator of how water use and operations are driving reuse available and demonstrates that reuse never exceeds half of firm yield.

Column Descriptions for 'Denton reuse calcs'

Column1: Day

The plan is based on daily accounting, so this will be the date of the calculations. Reuse diversion is calculated for one day and used the next day.

Column2: Year

Accounting plan is based on a January to December calendar year per TCEQ directive.

Denton Flows

Data entry and tabulation of plant flows data

Column3a: Ray Roberts Intake (mg)

Raw water intake as measured by calibrated electronic raw water meters at the Ray Roberts plant

Column3b: Lewisville Intake (mg)

Raw water intake as measured by calibrated electronic raw water meters at the Lewisville plant

Column4a: Total Intake (mg)

Column 3a + Column 3b

Total raw water intake from both plants.

Column4b: Total Intake (ac-ft)

Converts Column 4a to acre-feet

Column 4c: Cumulative (ac-ft)

Calculates a running total of intake from Column 4b. This number is reset at the beginning of each year.

Column 5a: Pecan Discharge (mg)

Treated discharge entering Pecan Creek as measured by calibrated electronic raw water meters at the Pecan Creek WRP

Column 5b: Clear Discharge (mg)

Treated discharge entering Clear Creek as measured by calibrated electronic raw water meters at the Clear Creek WRP

Column 6: Total Discharge (mg)

Column 5a + Column 5b

Total discharge flow to the lake, calculated as total discharge from both plants.

Column 7a: Pecan Carriage Losses (mg)

*Column 5a * Calculation Assumption 1 * Calculation Assumption 2*

Carriage losses from Pecan Discharge, calculated as Pecan Discharge times the assumed carriage loss percent per stream mile times the distance in stream miles from the discharge point to Lake Lewisville.

Column 7b: Clear Carriage Losses (mg)

*Column 5b * Calculation Assumption 1 * Calculation Assumption 3*

Carriage losses from Clear Discharge, calculated as Clear Discharge times the assumed carriage loss percent per stream mile times the distance in stream miles from the discharge point to Lake Lewisville.

Column 8: Inflow and Infiltration (mg)

If Column 6 is less than Column 4a, then 0, else Column 6 - Column 4a

Assumed Inflow and Infiltration (I/I) from total discharge. If total discharge volume is greater than total intake volume, then I/I is assumed to be the difference between total discharge and total intake. If total discharge volume is less than total intake volume, I/I is assumed to be 0.

Column 9a: Qualifying Discharge (mg)

Column 6 - Column 7a - Column 7b - Column 8

Qualifying Discharge is calculated as total discharge volume excluding Carriage Losses and Inflow and Infiltration (I/I), calculated as Total Discharge less Carriage Losses and Inflow and Infiltration.

Column 9b: Qualifying Discharge (ac-ft)

Converts Column 9a to acre-feet

Column9c: Cumulative (ac-ft)

Calculates a running total of intake from Column 9b. This number is reset at the beginning of each year.

Source Breakdown

Applies the volumes above to each water source: reuse credits, Denton's original water right, and purchases from Dallas.

Column10: Reuse Available by Priority Date (Y/N)

The value in this column will be "Yes" by default. If at any time Denton's Reuse Water Right is unavailable based on priority date, this field will be marked "No," preventing any claims to reuse water diversions on this day.

Column11: Reuse Water Available (mg)

Yesterday's Column 17

Reuse credits available according to the prior day's reuse calculations.

Column12a: Reuse Diverted (mg)

If Column 11 is less than Column 3b, then Column 11, else Column 3b

Reuse water diverted, calculated as reuse water available up to the total flows diverted at the Lake Lewisville intake. Due to restrictions in Denton's operations, Lake Lewisville reuse water may not be diverted to the Lake Ray Roberts plant.

Column12b: Reuse Diverted (ac-ft)

Converts Column 12a to acre-feet

Column12c: Cumulative (ac-ft)

Calculates a running total of intake from Column 12b (Diversions). This number is reset at the beginning of each year.

Column13: Water Right Available (mg)

If Date Is January 1, Then Calculation Assumption 4, Else Yesterday's Column 13 - Column 14a

Calculates water right on an annual basis, including Denton's share in Lake Lewisville and Lake Ray Roberts as specified in Denton's Certificate of Adjudication. The total annual water right volume becomes available on January 1 and is reduced by diversions from our water right throughout the year.

Column14a: Water Rights Diverted (mg)

Least of Column 4a - Column 12a, Column 13, and Calculation Assumption 5

Diversions from Denton's water right are first calculated as total raw intake less reuse diversions. If this volume is larger than either Denton's available water right on that day or Denton's daily diversion limit, then water right diversions are capped to ensure neither value is exceeded.

Column14b: Water Rights Diverted (ac-ft)

Converts Column 14a to acre-feet

Column14c: Cumulative (ac-ft)

Calculates a running total of diversions from Column 14b. This number is reset at the beginning of each year.

Column15a: Raw Purchase (mg)

Column 4a - Column 12a - Column 14a

Daily intake is first debited from Denton's original water right less any available reuse. If reuse is available, that water is then applied to daily intake. Any remaining diversions are then purchased from Dallas.

Column15b: Raw Purchase (ac-ft)

Converts Column 15a to acre-feet

Column15c: Cumulative (ac-ft)

Calculates a running total of diversions from Column 15b. This number is reset at the beginning of each year.

Reuse Logic

Column16a: Reuse Limit by Discharges (mg)

Column 9a / 2

Reuse water resulting from Denton's daily discharges in to Lake Lewisville, calculated as Qualifying Discharges divided by 2. This ensures reuse never exceeds half of Denton's daily discharges into Lewisville Lake.

Column16b: Reuse Limit by Water Right Diversions (mg)

Column 14a / 2

Reuse water resulting from Denton's daily diversions from water right, calculated as Water Right Diverted divided by 2. This ensures reuse never exceeds half of Denton's daily water right diversions.

Column16c: Reuse Limit by Firm Yield (mg)

If Date Is January 1, Then Calculation Assumption 6 / 2, Else Yesterday's Column 16a - Column 1aa

Reuse limit based on half of firm yield. On January 1, half of annual firm yield becomes available, calculated as Calculation Assumption 6 divided by 2. Daily reuse diversions are subtracted from this value until the cap is reached. This ensures reuse never exceeds half of Denton's share of firm yield in Lake Lewisville and Lake Ray Roberts during the year, consistent with Denton's contract with the City of Dallas.

Column17: Reuse Limit (mg)

Least of Column 16a, Column 16b, and Column 16c

Reuse limit resulting from today's flows, calculated as the least of the 3 reuse limits. This ensures none of the 3 reuse limits are exceeded on any day.

Calc Method

Column18: Calc method

If Column 17 = Column 16a, then "discharges", else if Column 17 = Column 16b, then "Water right", else "firm yield"

This is an indicator of which limit resulted in today's reuse limit. "Discharges" indicates reuse was limited to half of qualifying discharge. "Water right" indicates reuse was limited to half of daily water right diversions. "Firm Yield" indicates reuse was capped at half of firm yield.

Column19a: Reuse % of Discharge

Column 12a / yesterday's Column 9a

Today's reuse as a percent of yesterday's discharges. This value serves as an indicator of how water use and operations are driving reuse available and demonstrates that reuse never exceeds half of daily qualifying discharges.

Column19b: Reuse % of Water Right

Column 12a / yesterday's Column 14a

Today's reuse as a percent of yesterday's water right diversions. This value serves as an indicator of how water use and operations are driving reuse available and demonstrates that reuse never exceeds half of daily water right diversions.

Column19c: Reuse % of Firm Yield

*Column 12c / (Calculation Assumption 6 * 1,000,000 / 325,851)*

Cumulative reuse to date as a percentage of firm yield. This value serves as an indicator of how water use and operations are driving reuse available and demonstrates that reuse never exceeds half of firm yield.