RECEIVED
BY: TCEQ
DATE: 03/20/2025

March 17, 2025

Texas Commission on Environmental Quality
Water Availability Division, MC-160
12100 Park 35 Circle
Austin, TX 78753

RE: ***Highpointe Ranch Water Rights Permit Application***
City of Aubrey, Denton County, TX

Dear TCEQ Representative:

KL LB Buy 3 LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development located south of Blackjack Road and east of US Route 377 in the City of Aubrey, Denton County, Texas. The Applicants are applying for a Water Use Permit to request authorization to maintain a reservoir for recreation purposes. The reservoir is located on unnamed tributary of Pecan Creek. The water lost due to evaporation is intended to be replaced using groundwater wells as an alternate source. One existing groundwater well (HPR 1) and one new groundwater well (HPR 2) are proposed.

Enclosed is an application to obtain a Water Use Permit for the project in the City of Aubrey, Denton County, Texas. A pre-application meeting was held on January 30, 2025. The following items are included with this submittal package:

- Administrative Information Checklist
- Administrative Information Report
- Applicant Information
- KL LB Buy 3 LLC Signature Authority
- Technical Information Report
- Worksheets: 1.0, 2.0, 3.0, 4.0, 4.1, 5.0, 6.0, 7.0, and 8.0
- Public Involvement Plan Form
- USGS Map
- Project Details Map
- Drainage Area Map
- NTGCD Coordination
- Photographs and Photographs Key Map
- Groundwater Availability Report
- Property Survey
- Property Deeds
- Evaporation Calculations
- Notice Mailing List
- Letter Notice to Governing Bodies with Mail Receipts
- Well Operation Plan
- Accounting Plan

If you have any questions, please contact me at [redacted] or (972) 770-1399.

Sincerely,

Carolyn Cox

Carolyn Cox, P.E., CFM

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): KL LB BUY 3, LLC; Brandon Allen; Ariel Britt; Leanne Wilson; Zach Downtain; Justin Morse

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

*NOT AVAILABLE AT THIS TIME

ADMINISTRATIVE INFORMATION REPORT

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

****Applicants are REQUIRED 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.

X New Appropriation of State Water

_____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."

Highpointe Ranch is a single-family development. The project includes one existing on-channel wet pond/dam (previously exempt) along Unnamed Tributary to Pecan Creek that is proposed to remain. The impounded water will be used for recreational purposes. This application is requesting to maintain a reservoir using an alternate source of groundwater. Water lost due to evaporation will be replaced by two groundwater wells. More details can be found in the cover letter for this application.

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 6
(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?

KL LB BUY 3 LLC

(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 :_____(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: Nathan Holt

Title: Authorized Signatory

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: KL LB BUY 3 LLC

Mailing Address: 1601 Elm St STE 4360

City: Dallas State: TX ZIP Code: 75201

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	____City Government
____Other Government	X Other Limited Liability Company

For Corporations or Limited Partnerships, provide:
State Franchise Tax ID Number: 32095202589 SOS Charter (filing) Number: 0805561941

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 6
(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?

Brandon Allen

(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 :_____(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: Brandon Allen

Title: Assistant Secretary

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: Brandon Allen

Mailing Address: 4161 McKinney Ave STE 410

City: Dallas State: TX ZIP Code: 75204

Indicate an X next to the type of Applicant:

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

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

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 6
(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?

Ariel Britt

(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 :_____(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: Ariel Britt

Title: President

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: Ariel Britt

Mailing Address: 4161 McKinney Ave STE 410

City: Dallas State: TX ZIP Code: 75204

Indicate an X next to the type of Applicant:

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

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

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 6
(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?

Leanne Wilson

(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 :_____(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: Leanne Wilson

Title: Executive Director of Operations

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: Leanne Wilson

Mailing Address: 4161 McKinney Ave STE 410

City: Dallas State: TX ZIP Code: 75204

Indicate an X next to the type of Applicant:

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

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

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 6
(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?

Zach Downtain

(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 :_____(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: Zach Downtain

Title: N/A

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: Zach Downtain

Mailing Address: 4161 McKinney Ave STE 410

City: Dallas State: TX ZIP Code: 75204

Indicate an X next to the type of Applicant:

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

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

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

Indicate the number of Applicants/Co-Applicants 6
(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?

Justin Morse

(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 :_____(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: Justin Morse

Title: N/A

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: Justin Morse

Mailing Address: 4161 McKinney Ave STE 410

City: Dallas State: TX ZIP Code: 75204

Indicate an X next to the type of Applicant:

X Individual	___Sole Proprietorship-D.B.A.
___Partnership	___Corporation
___Trust	___Estate
___Federal Government	___State Government
___County Government	___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 Cox, P.E., CFM

Title: Project Engineer

Organization Name: Kimley-Horn and Associates

Mailing Address: 6160 Warren Parkway, Suite 210

City: Frisco State: TX ZIP Code: 75034

Phone Number: 972-770-1399

Fax Number: N/A

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: N/A

Title: N/A

Organization Name: N/A

Mailing Address: N/A

City: N/A State: N/A ZIP Code: N/A

Phone Number: N/A

Fax Number: N/A

E-mail Address: N/A

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** N

   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** N

   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. Applicant's 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** Y

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** Y

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Nathan Holt, Authorized Signatory
(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: Nathan Holt Date: October 29, 2024
(Use blue ink)

Subscribed and Sworn to before me by the said

on this 29th day of October, 2024.

My commission expires on the 5th day of August, 2026.

Julie Gillett
Notary Public

JULIE GILLETT
Notary Public - State of Arizona
MARICOPA COUNTY
Commission # 635441
Expires August 05, 2026

Maricopa County, Arizona
~~County, Texas~~

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

KENNEDY LEWIS INVESTMENT MANAGEMENT

I, Anthony Pasqua, in my capacity as

(1) the authorized signatory of the following entities, which collectively control **KL LB BOR 1 LLC**, the Member and controlling party of **KL LB BUY 1 LLC:** (a) **KL RES TRS HOLDCO LLC**, (b) **KL FUND II REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP II LLC, its Managing Member); (c) **KL FUND III REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member), and (d) **KL DELTA REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member);

(2) the authorized signatory of the following entities, which collectively control **KL LB BOR 2 LLC**, the Member and controlling party of **KL LB BUY 2 LLC**[1]**:** (a) **KL RES TRS HOLDCO LLC**, (b) **KL FUND III REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member), and (c) **KL DELTA REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member);

(3) the authorized signatory of **KL RES TRS HOLDCO LLC**, which controls **KL LB BOR 3 LLC**, the Member and controlling party of **KL LB BUY 3 LLC**; and

(4) the authorized signatory of the following entities, which collectively control **KL LB BOR 4 LLC**, the Member and controlling party of **KL LB BUY 4 LLC:** (a) **KL RES TRS HOLDCO LLC**; and (b) **KL DELTA EXCELSIOR ACCOUNT SPV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member); and

(5) the authorized signatory of the following entities, which collectively control **KL LB BOR 5 LLC**, the Member and controlling party of **KL LB BUY 5 LLC:** (a) **KL RES TRS HOLDCO LLC**, (b) **KLRES5 FUND III AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member), (c) **KL DELTA REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member) and (d) **KL DELTA EXCELSIOR REIT AIV LLC** (in my capacity as the authorized signatory of Kennedy Lewis GP III LLC, its Managing Member)

do hereby certify and represent as of the Execution Date (as defined below):

The following individual(s) is/are duly authorized to act as agent for the Entities for the following purposes: signing and executing memorandum of options, specialty warranty deeds, bill of sale and general assignment, option agreements, construction agreements, purchase agreements, notice of

[1] KL LB BUY 1 LLC, KL LB BUY 2 LLC, KL LB BUY 3 LLC, KL LB BUY 4 LLC and KL LB BUY 5 LLC are hereinafter referred to as the "Entities."

KENNEDY LEWIS INVESTMENT MANAGEMENT

termination of option and quitclaim, and anything else in the normal course as it relates to investments within the Entities and in connection with the Entities' land improvements and development activities, including the public facilities necessary to serve such development, including, but not limited to, (a) the formation, annexation or participation in special financing districts, including but not limited to, assessment districts and community facilities districts, pursuant to the Mello-Roos Community Facilities Act of 1982, as amended, or any other comparable or similar statute or regulation, (b) authorizing the levy of assessments or special taxes against the real property of the Company by any such special districts, (c) participation in land-secured or other municipal bond financing of improvements by any such special districts, including authorizing the issuance of bonds or other debt instruments by any such special districts, secured by a pledge of the proceeds of the special taxes or assessments levied on the real property of the Company.

The Entities have taken all necessary corporate action to authorize the following person(s) identified by name and specimen signature below, to act as authorized officer(s) empowered by it to individually take any of the foregoing actions on behalf of the Entities. Such persons are duly authorized officers of the Entities holding the respective office(s) or title(s) set forth opposite the names below. The signatures set forth below, opposite the respective name(s), are true and genuine signatures.

This certification supersedes all prior authorization, power of attorney or certification; it will remain in effect and fully binding until further notice. The power to represent the Entities as above provided may not be further delegated.

NAME		TITLE	SPECIMEN SIGNATURE
David Valiaveedan		Authorized Signatory	
Brieanne Nikrandt		Authorized Signatory	
Kevin O'Brien		Authorized Signatory	
Anthony Pasqua		Authorized Signatory	
Tricia Tiernan		Authorized Signatory	
Nathan Holt		Authorized Signatory	
Janelle Iturbe		Authorized Signatory	
Graig Bantle		Authorized Signatory	
Michael Lapat		Authorized Signatory	

KENNEDY LEWIS INVESTMENT MANAGEMENT

Roger Brush		**Authorized Signatory**	
Brian Jackson		**Authorized Signatory**	

[Remainder of this page intentionally left blank]

IN WITNESS WHEREOF, I have hereunto affixed my signature, this 13 day of September 2024 (the "Execution Date").

Anthony Pasqua
Authorized Signatory of KL RES TRS HOLDCO LLC

Anthony Pasqua
Authorized Signatory of Kennedy Lewis GP II LLC, the Managing Member of KL FUND II REIT AIV LLC

Anthony Pasqua
Authorized Signatory of Kennedy Lewis GP III LLC, the Managing Member of KL FUND III REIT AIV LLC

Anthony Pasqua
Authorized Signatory of Kennedy Lewis GP III LLC, the Managing Member of KLRES5 FUND III AIV LLC

Anthony Pasqua
Authorized Signatory of Kennedy Lewis GP III LLC, the Managing Member of KL DELTA REIT AIV LLC

Anthony Pasqua

KENNEDY LEWIS INVESTMENT MANAGEMENT

Authorized Signatory of Kennedy Lewis GP III LLC, the Managing Member of KL DELTA EXCELSIOR REIT AIV LLC

Anthony Pasqua
Authorized Signatory of Kennedy Lewis GP III LLC, the Managing Member of KL DELTA EXCELSIOR ACCOUNT SPV LLC

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Brandon Allen (Typed or printed name) Assistant Secretary (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: 11/13/2024

(Use blue ink)

Subscribed and Sworn to before me by the said

on this 13th day of November, 2024.

My commission expires on the 31st day of August, 2026.

Anna Pukanala Purpura

Notary Public

ANNA PUKANALA PURPURA
Notary Public, State of Texas
Comm. Expires 08-31-2026
Notary ID [redacted]

[SEAL]

Collin, Texas
County, Texas

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

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Ariel Britt (Typed or printed name) President (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: 11/13/2024

(Use blue ink)

Subscribed and Sworn to before me by the said

on this 13th day of November, 2024.

My commission expires on the 31st day of August, 2026.

Anna Pukanala Purpura

Notary Public

ANNA PUKANALA PURPURA
Notary Public, State of Texas
Comm. Expires 08-31-2026
Notary ID 124843260

Collin, Texas
County, Texas

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

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Leanne Wilson — Executive Director of Operations
(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: Leanne Wilson (Use blue ink) Date: 11/13/24

Subscribed and Sworn to before me by the said

on this 13th day of November, 2024.

My commission expires on the 31st day of August, 2026.

Anna Pukanala Purpura
Notary Public

ANNA PUKANALA PURPURA
Notary Public, State of Texas
Comm. Expires 08-31-2026
Notary ID 129848260

Collin, Texas
County, Texas

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

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Zach Downtain
(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: 12/18/2024
(Use blue ink)

Subscribed and Sworn to before me by the said

on this 18th day of December, 20 24.

My commission expires on the 1st day of September, 20 25.

Notary Public

CARSON H LUDDECKE
NOTARY ID #13330768-8
My Commission Expires
September 01, 2025

[SEAL]

County, Texas

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

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Justin Morse
(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: 11-27-2024
(Use blue ink)

Subscribed and Sworn to before me by the said

on this 27th day of November, 2024.

My commission expires on the 1st day of September, 2025.

Notary Public

CARSON H LUDDECKE
NOTARY ID #13330768-8
My Commission Expires
September 01, 2025

[SEAL]

County, Texas

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

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: 01/30/2025

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** Y

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** N (If yes, indicate the Certificate or Permit number: N/A)

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** N

c. Applicant requests to extend an existing Term authorization or to make the right permanent? **Y / N** N (If yes, indicate the Term Certificate or Permit number: N/A)

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: N/A

Applicant requests to sever and combine existing water rights from one or more Permits or Certificates into another Permit or Certificate? **Y / N** N/A (if yes, complete chart below):

List of water rights to sever	Combine into this ONE water right
N/A	N/A

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** N/A

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** N/A

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** N/A
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** N/A
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** N/A

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** N/A *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** N

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** N

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** N

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** N

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** N

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":

Highpointe Ranch is located within Denton County which is part of the Region C Planning Group for the State's Water Plan. This application proposes use of groundwater wells to replace water loss due to evaporation. This approach is consistent with the 2021 Region C Water Plan and 2022 State Water Plan because there is nothing in the plans that conflict with the application.

b. Did the Applicant perform its own Water Availability Analysis? **Y** / **N** N

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** Y

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*
43.03	Paluxy & Twin Mountains Aquifers	Recreation storage	Denton

32.11* Total amount of water (in acre-feet) to be used annually (*include losses for Bed and Banks applications*) *Based on monthly evaporation rates

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

a. Location Information Regarding the Lands to be Irrigated

i) Applicant proposes to irrigate a total of N/A 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 N/A acres in N/A County, TX.

ii) Location of land to be irrigated: In the N/A Original Survey No. N/A, Abstract No. N/A.

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 N/A 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**
N/A	N/A	N/A	N/A	N/A

**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 N/A 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 N/A acres in N/A County, TX.

ii. Location of land to be irrigated: In the N/A Original Survey No. N/A, Abstract No. N/A.

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 2.0
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: Unnamed Tributary to Pecan Creek

b. Provide amount of water (in acre-feet) impounded by structure at normal maximum operating level: 43.03.

c. The impoundment is on-channel X 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** Y

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** Y

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

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

1. Date of Construction: Unknown (prior to 1985)

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

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

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** Y
   Provide the date and the name of the Staff Person Johnny Cosgrove 12/4/2024

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** N
   b. Plans (with engineer's seal) for the structure required. **Y / N** Y
   c. Engineer's signed and sealed hazard classification required. **Y / N** Y
   d. Engineer's statement that structure complies with 30 TAC, Ch. 299 Rules required. **Y / N** Y

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** Y

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

1. Surface area (in acres) of on-channel reservoir at normal maximum operating level: 8.21.

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** Y
If yes, the drainage area is 0.507 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): Unnamed Tributary to Pecan Creek

b. Zip Code: 76227

c. In the F. Trevino Original Survey No. N/A, Abstract No. 1243, Denton 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 33.305303 °N, Longitude 96.969969 °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): Autodesk Civil 3D 2022

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

N/A

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. N/A Diversion Point No.
2. N/A Upstream Limit of Diversion Reach No.
3. N/A Downstream Limit of Diversion Reach No.

b. Maximum Rate of Diversion for **this new point** N/A cfs (cubic feet per second) or N/A gpm (gallons per minute)

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

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

*** 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	N/A
☐	From an on-channel reservoir	N/A
☐	From a stream to an on-channel reservoir	N/A
☐	Other method (explain fully, use additional sheets if necessary)	N/A

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** N/A

If yes, the drainage area is N/A 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): N/A

b. Zip Code: N/A

c. Location of point: In the N/A Original Survey No. N/A, Abstract No. N/A, N/A County, Texas.

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 N/A °N, Longitude N/A °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): N/A

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.

WORKSHEET 4.0
DISCHARGE INFORMATION

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 Recreation.

b. Provide the amount of water that will be lost to transportation, evaporation, seepage, channel or other associated carriage losses 32.11 ac-ft (% or amount) and explain the method of calculation: Calculated using TCEQ WRAP Net Evaporation for the Trinity River Basin using the max year (1956). See attached calculations

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

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

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 N/A, surface water N/A?
5. If any percentage is surface water, provide the base water right number(s) N/A.

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

1. Source aquifer(s) from which water will be pumped: Paluxy (HPR 2) and Twin Mountains (HPR 1)*
   *Table provided with details for each Well (HPR 1 & HPR 2)
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 *Table provided with details for each Well (HPR 1 & HPR 2).
3. Indicate how the groundwater will be conveyed to the stream or reservoir.

   Anticipated to be discharged with an air gap

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.

Existing well (HPR 1) and proposed well (HPR 2) for this site will operate as a "well system". NTGCD will require the two (2) wells to be permitted together through one (1) permit application and registration process. Email coordination is attached. NTGCD permit will be provided when available.

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

dii. Identify any other source of the water N/A

WORKSHEET 4.1
DISCHARGE POINT INFORMATION

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 32.11 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 0.14 cfs or 62 gpm.

c. Name of Watercourse as shown on Official USGS maps: Unnamed Tributary to Pecan Creek

d. Zip Code 76258

e. Location of point: In the F. Trevino Original Survey No. N/A, Abstract No. 1243, Denton County, Texas.

f. Point is at:
Latitude 33.305303 °N, Longitude 96.969969 °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): Autodesk Civil 3D 2022

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.**

N/A

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.** N/A

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 boc N/A

☐ Stream

☐ Reservoir

Average depth of the entire water body, in feet: _____

☐ Other, specify: _____

b. Flow characteristi N/A

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 aesthetic 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 N/A

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.(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 N/A

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. Existing Well (HPR 1) to remain. Proposed new well (HPR 2) will be similar sized well.

HPR 1 Information:

Parameter	Average Conc.	Max Conc.	No. of Samples	Sample Type	Sample Date/Time
Sulfate, mg/L	91.6	91.6	1	Single, Grab	10/30/2024; 12:15 PM
Chloride, mg/L	37.8	37.8	1	Single, Grab	10/30/2024; 12:15 PM
Total Dissolved Solids, mg/L	324	324	1	Single, Grab	10/30/2024; 12:15 PM
pH, standard units	6.4	6.4	1	Single, Grab	10/30/2024; 12:15 PM
Temperature*, degrees Celsius	22	N/A	1	Single, Grab	10/30/2024; 12:15 PM

* 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 240 ft (HPR 1) max 300 ft (HPR 2) and the name of the aquifer from which water is withdrawn Paluxy (HPR 2) and Twin Mountains (HPR 1).

N/A

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. N/A Municipal Use. See 30 TAC § 288.2. **

2. N/A Industrial or Mining Use. See 30 TAC § 288.3.

3. N/A Agricultural Use, including irrigation. See 30 TAC § 288.4.

4. N/A 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 N/A

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. N/A Municipal Uses by public water suppliers. See 30 TAC § 288.20.
2. N/A Irrigation Use/ Irrigation water suppliers. See 30 TAC § 288.21.
3. N/A 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** N/A

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:

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	100
Recording Fee		$25.00
Agriculture Use Fee	*Only for those with an Irrigation Use.* Multiply 50¢ x 0 Number of acres that will be irrigated with State Water. **	0
Use Fee	*Required for all Use Types, **excluding Irrigation Use**.* Multiply $1.00 x 0 Maximum annual diversion of State Water in acre-feet. **	0
Recreational Storage Fee	*Only for those with Recreational Storage.* Multiply $1.00 x 43.03 acre-feet of in-place Recreational Use State Water to be stored at normal max operating level.	43.03
Storage Fee	*Only for those with Storage, **excluding Recreational Storage.*** Multiply 50¢ x 0 acre-feet of State Water to be stored at normal max operating level.	0
Mailed Notice	Cost of mailed notice to all water rights in the basin. Contact Staff to determine the amount (512) 239-4600.	459.66
	TOTAL	$ 627.69

2. AMENDMENT *OR* SEVER AND COMBINE

	Description	Amount ($)
Filing Fee	Amendment: $100	
	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	$ N/A

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	$ N/A

Texas Commission on Environmental Quality

Public Involvement Plan Form for Permit and Registration Applications

The Public Involvement Plan is intended to provide applicants and the agency with information about how public outreach will be accomplished for certain types of applications in certain geographical areas of the state. It is intended to apply to new activities; major changes at existing plants, facilities, and processes; and to activities which are likely to have significant interest from the public. This preliminary screening is designed to identify applications that will benefit from an initial assessment of the need for enhanced public outreach.

All applicable sections of this form should be completed and submitted with the permit or registration application. For instructions on how to complete this form, see TCEQ-20960-inst.

Section 1. Preliminary Screening

☒ New Permit or Registration Application

☐ New Activity – modification, registration, amendment, facility, etc. (see instructions)

If neither of the above boxes are checked, completion of the form is not required and does not need to be submitted.

Section 2. Secondary Screening

☐ Requires public notice,

☐ Considered to have significant public interest, **and**

☐ Located within any of the following geographical locations:

- Austin
- Dallas
- Fort Worth
- Houston
- San Antonio
- West Texas
- Texas Panhandle
- Along the Texas/Mexico Border
- Other geographical locations should be decided on a case-by-case basis

If all the above boxes are not checked, a Public Involvement Plan is not necessary. Stop after Section 2 and submit the form.

☒ Public Involvement Plan not applicable to this application. Provide **brief** explanation.

A public involvement form is not applicable, as the project does not have significant public interest.

Section 3. Application Information

Type of Application (check all that apply):

Air ☐ Initial ☐ Federal ☐ Amendment ☐ Standard Permit ☐ Title V

Waste ☐ Municipal Solid Waste ☐ Industrial and Hazardous Waste ☐ Scrap Tire
☐ Radioactive Material Licensing ☐ Underground Injection Control

Water Quality

☐ Texas Pollutant Discharge Elimination System (TPDES)

- ☐ Texas Land Application Permit (TLAP)
- ☐ State Only Concentrated Animal Feeding Operation (CAFO)
- ☐ Water Treatment Plant Residuals Disposal Permit

☐ Class B Biosolids Land Application Permit

☐ Domestic Septage Land Application Registration

Water Rights New Permit

☐ New Appropriation of Water

☐ New or existing reservoir

Amendment to an Existing Water Right

☐ Add a New Appropriation of Water

☐ Add a New or Existing Reservoir

☐ Major Amendment that could affect other water rights or the environment

Section 4. Plain Language Summary

Provide a brief description of planned activities.

Section 5. Community and Demographic Information

Community information can be found using EPA's EJ Screen, U.S. Census Bureau information, or generally available demographic tools.

Information gathered in this section can assist with the determination of whether alternative language notice is necessary. Please provide the following information.

(City)

(County)

(Census Tract)
Please indicate which of these three is the level used for gathering the following information.

☐ City ☐ County ☐ Census Tract

(a) Percent of people over 25 years of age who at least graduated from high school

(b) Per capita income for population near the specified location

(c) Percent of minority population and percent of population by race within the specified location

(d) Percent of Linguistically Isolated Households by language within the specified location

(e) Languages commonly spoken in area by percentage

(f) Community and/or Stakeholder Groups

(g) Historic public interest or involvement

Section 6. Planned Public Outreach Activities

(a) Is this application subject to the public participation requirements of Title 30 Texas Administrative Code (30 TAC) Chapter 39?

☐ Yes ☐ No

(b) If yes, do you intend at this time to provide public outreach other than what is required by rule?

☐ Yes ☐ No

If Yes, please describe.

If you answered "yes" that this application is subject to 30 TAC Chapter 39, answering the remaining questions in Section 6 is not required.

(c) Will you provide notice of this application in alternative languages?

☐ Yes ☐ No

Please refer to Section 5. If more than 5% of the population potentially affected by your application is Limited English Proficient, then you are required to provide notice in the alternative language.

If yes, how will you provide notice in alternative languages?

☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

(d) Is there an opportunity for some type of public meeting, including after notice?

☐ Yes ☐ No

(e) If a public meeting is held, will a translator be provided if requested?

☐ Yes ☐ No

(f) Hard copies of the application will be available at the following (check all that apply):

☐ TCEQ Regional Office ☐ TCEQ Central Office

☐ Public Place (specify)

Section 7. Voluntary Submittal

For applicants voluntarily providing this Public Involvement Plan, who are not subject to formal public participation requirements.

Will you provide notice of this application, including notice in alternative languages?

☐ Yes ☐ No

What types of notice will be provided?

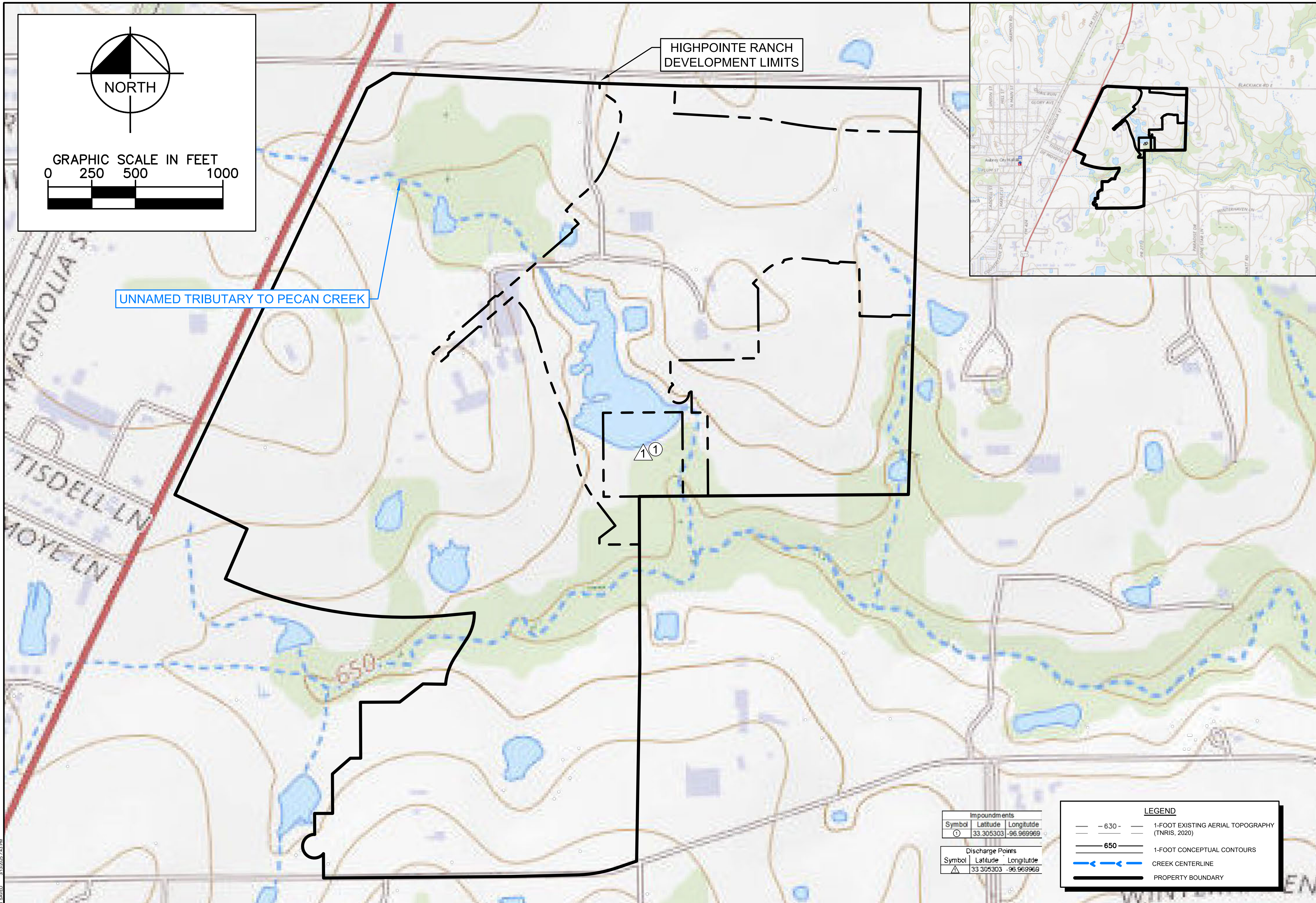
☐ Publish in alternative language newspaper

☐ Posted on Commissioner's Integrated Database Website

☐ Mailed by TCEQ's Office of the Chief Clerk

☐ Other (specify)

TCEQ Identifier	NTGCD Identifier	State Identifier	Latitude	Longitude	Aquifer	Production Rate (gpm)
HPR 1	To be provided	232452	33.307584	-96.970780	Twin Mountains	30
HPR 2	To be provided	To be provided	33.307595	-96.970364	Paluxy	35



Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
Engineering Firm Registration # F-928

HIGHPOINTE RANCH
AUBREY, TEXAS

USGS EXHIBIT

Impoundments		
Symbol	Latitude	Longitutde
①	33.305303	-96.969969

Discharge Points		
Symbol	Latitude	Longitutde
△1	33.305303	-96.969969

LEGEND
- 630 - 1-FOOT EXISTING AERIAL TOPOGRAPHY (TNRIS, 2020)
650 1-FOOT CONCEPTUAL CONTOURS
CREEK CENTERLINE
PROPERTY BOUNDARY

Scale: AS SHOWN
Designed by: TJN
Drawn by: TJN
Checked by: CFC
Date: MARCH 2025
Project No. 063930674?

SHEET
EXH 01

UNNAMED TRIBUTARY TO PECAN CREEK

POND 1
NWSEL = 650.13
SURFACE AREA = 8.21 AC
VOLUME BELOW NWSEL = 43.03 AC-FT

HPR 1

HPR 2

Well Locations		
Number	Latitude	Longitude
HPR 1	33.307984	-96.970780
HPR 2	33.307995	-96.970364

Impoundments		
Symbol	Latitude	Longitude
1	33.305303	-96.959969

LEGEND

- 1-FOOT EXISTING AERIAL TOPOGRAPHY (TNRIS, 2020)
- 1-FOOT SURVEY CONTOURS (2022, 2023)
- 1-FOOT CONCEPTUAL CONTOURS
- AREAS INUNDATED BY RESERVOIR
- CREEK CENTERLINE
- PROPERTY BOUNDARY

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

SHEET NUMBER
EXH 02

PROJECT DETAILS EXHIBIT

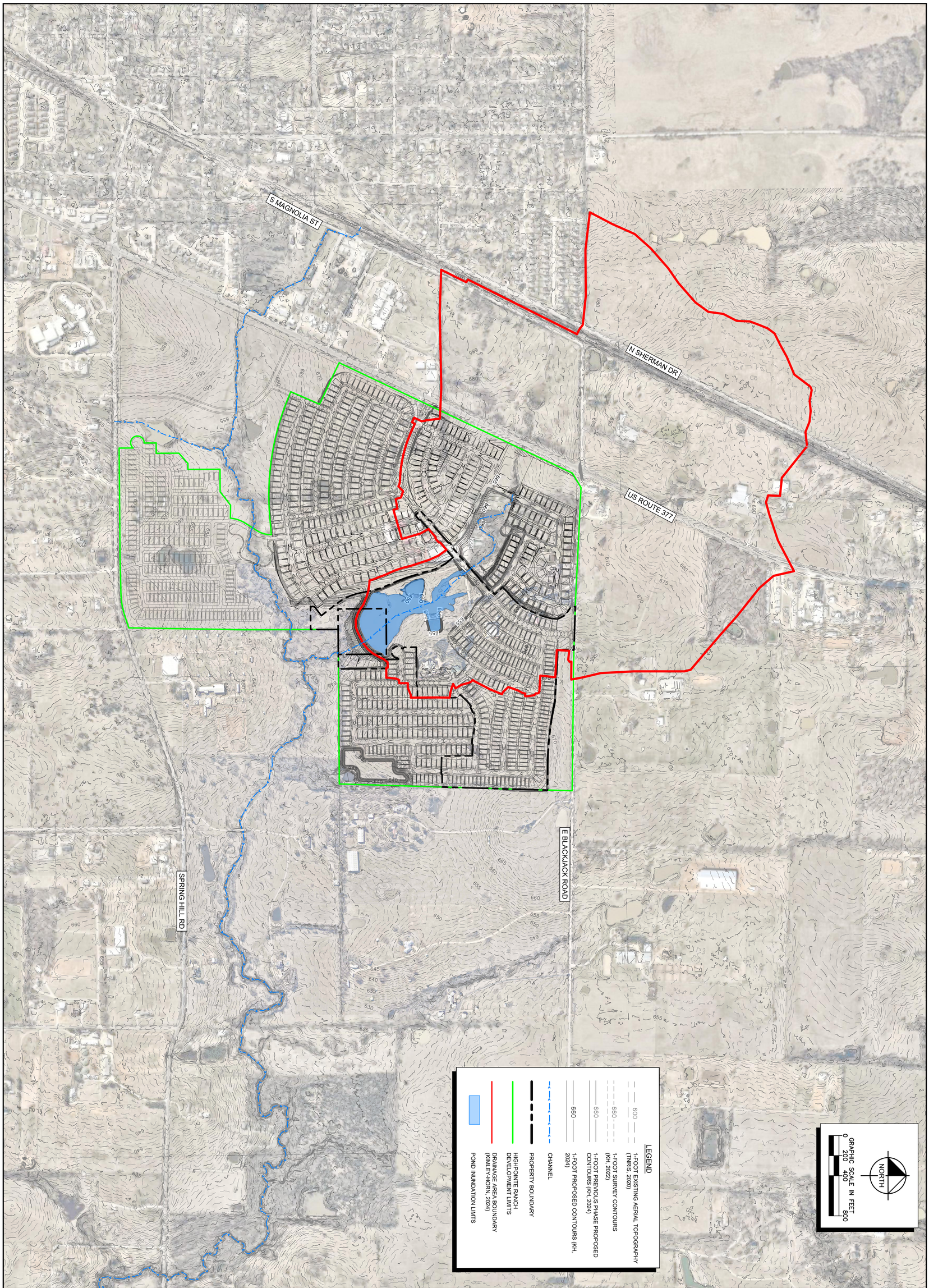
HIGH POINTE RANCH
CITY OF AUBREY
DENTON COUNTY, TEXAS

PROJECT NO.	069306747
DATE:	MARCH 2025
SCALE:	AS SHOWN
DESIGNED BY:	TJN
DRAWN BY:	TJN
CHECKED BY:	CFC

PRELIMINARY

Kimley»Horn
6160 Warren Parkway, Suite 210
FRISCO, TEXAS 75034
PHONE: 972-335-3580 FAX: 972-335-3779
TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY



EXH 03 SHEET NUMBER

DRAINAGE AREA MAP

HIGH POINTE RANCH
CITY OF AUBREY
DENTON COUNTY, TEXAS

PROJECT NO.	069306747
DATE:	MARCH 2025
SCALE:	AS SHOWN
DESIGNED BY:	TJN
DRAWN BY:	TJN
CHECKED BY:	CFC

PRELIMINARY

Kimley»Horn
6160 Warren Parkway, Suite 210
FRISCO, TEXAS 75034
PHONE: 972-335-3580 FAX: 972-335-3779
TEXAS REGISTERED ENGINEERING FIRM F-928

No.	REVISIONS	DATE	BY

Norwood, Tori

From: Adams, Darby
Sent: Monday, March 10, 2025 4:12 PM
To: Allen Burks; Paul Sigle
Cc: Norwood, Tori; Cox, Carolyn; Fletcher, Thomas; Brockman, Kyle
Subject: RE: Highpointe Ranch - Well(s)

Allen,

Thank you for taking my call earlier today.

As discussed, because the three (3) wells for this site will operate as a "well system", the wells will be permitted together through one (1) permit application and registration process. Since the combined well production rate does not exceed 200 gpm, a hydrogeologic study will not be required with the application.

Please let me know if I missed anything or am misunderstanding what was discussed.

Thank you,
Darby Adams, EIT
Kimley-Horn | 4411 98th St., Suite 300, Lubbock, TX 79424
Direct: (806) 319-6235 | Mobile: (361) 688-5299

From: Adams, Darby
Sent: Sunday, March 9, 2025 3:55 PM
To: Allen Burks [redacted]>; Paul Sigle [redacted]
Cc: Norwood, Tori [redacted]; Cox, Carolyn [redacted]; Fletcher, Thomas [redacted]; Brockman, Kyle [redacted]
Subject: RE: Highpointe Ranch - Well(s)

Allen,

From site data collected last year, it tested at 30 gpm. Please see the attached field records for reference!

Thank you,
Darby Adams, EIT
Kimley-Horn | 4411 98th St., Suite 300, Lubbock, TX 79424
Direct: (806) 319-6235 | Mobile: (361) 688-5299

From: Allen Burks [redacted]>
Sent: Thursday, March 6, 2025 3:34 PM
To: Adams, Darby [redacted]>; Paul Sigle [redacted]>
Cc: Norwood, Tori [redacted]>; Cox, Carolyn [redacted]>; Fletcher, Thomas [redacted]>; Brockman, Kyle [redacted]>
Subject: RE: Highpointe Ranch - Well(s)

Hi Darby,
Thank you for the information. Since they are all feeding the same pond, we consider that a system and combine the production capacities; therefore, all wells will need to be permitted. If they are all in the same aquifer, then it would just be one permit.

Do you know the capacity of the existing well? We will probably need to send one of our field techs out to do a flow test.

Thanks again,
Allen

From: Adams, Darby [redacted]
Sent: Thursday, March 6, 2025 8:25 AM
To: Allen Burks [redacted]>; Paul Sigle [redacted]>
Cc: Norwood, Tori [redacted]>; Cox, Carolyn <[redacted]>; Fletcher, Thomas [redacted]>; Brockman, Kyle <[redacted]>
Subject: Re: Highpointe Ranch - Well(s)

Allen,

These wells would all feed one singular existing pond site. The existing well does not have enough capacity to supplement the pond on its own, which is why the other two wells are proposed.

Our plan is to have individual transmission lines for each well that would combine and discharge at a single location on the pond for easier maintenance and monitoring. Due to this, we will also be submitting a well operational plan with our permit applications.

There are other wells on the site that we will be plugging in accordance with the GCD's standards. These wells were not viable options due to their integrity and locations.

Thank you,
Darby Adams, EIT
Kimley-Horn | 4411 98th St., Suite 300, Lubbock, TX 79424
Direct: (806) 319-6235 | Mobile: (361) 688-5299

Get Outlook for iOS

From: Allen Burks [redacted]>
Sent: Thursday, March 6, 2025 8:06 AM
To: Adams, Darby [redacted]>; Paul Sigle <[redacted]>
Cc: Norwood, Tori [redacted]>; Cox, Carolyn [redacted]>;
Fletcher, Thomas [redacted]; Brockman, Kyle [redacted]>
Subject: RE: Highpointe Ranch - Well(s)

Good morning, Darby.

What you are proposing sounds reasonable to us if each well is its own entity and not connected to any other well to form a system. I assume they are each feeding their own pond, correct?

If so, then your proposed applications sound appropriate.

Thanks,
Allen

From: Adams, Darby [redacted]>
Sent: Wednesday, March 5, 2025 10:29 AM
To: Paul Sigle [redacted]>; Allen Burks [redacted]>
Cc: Norwood, Tori [redacted]>; Cox, Carolyn [redacted]>; Fletcher, Thomas [redacted]>; Brockman, Kyle [redacted]
Subject: RE: Highpointe Ranch - Well(s)

Good Morning Paul and Allen,

We wanted to confirm from our email Monday if there are any additional considerations the GCD would proposing for these wells or if there are any concerns from GCD regarding what we are proposing.

Please let us know at your earliest convenience.

Thank you,
Darby Adams, EIT
Kimley-Horn | 4411 98th St., Suite 300, Lubbock, TX 79424
Direct: (806) 319-6235 | Mobile: (361) 688-5299

From: Adams, Darby
Sent: Monday, March 3, 2025 2:19 PM
To: Paul Sigle [redacted]>; Allen Burks [redacted]>
Cc: Norwood, Tori [redacted]>; Cox, Carolyn [redacted]; Fletcher, Thomas [redacted]; Brockman, Kyle [redacted]
Subject: Highpointe Ranch - Well(s)

Good Afternoon Paul and Allen,

I hope this email finds you well. We had previously discussed this project with Allen Burks and are reaching out now to coordinate with the GCD ahead of submitting well applications for three (3) wells to be located in the Highpointe Ranch development. These wells will be tied to a Water Rights Permit for the development site for pond impoundment purposes.

One of the wells is existing but has not been previously registered with the GCD. We will be registering that well as well as requesting an operating permit for it. For the other two wells, we will be registering but will not be requesting an operating permit, as they will both have production rates less than 17 gpm.

We can provide any additional preliminary information necessary at this time, but an official submittal will be sent out in the next few weeks.

Thank you,

Darby Adams, EIT
Kimley-Horn | 4411 98th St., Suite 300, Lubbock, TX 79424
Direct: (806) 319-6235 | Mobile: (361) 688-5299

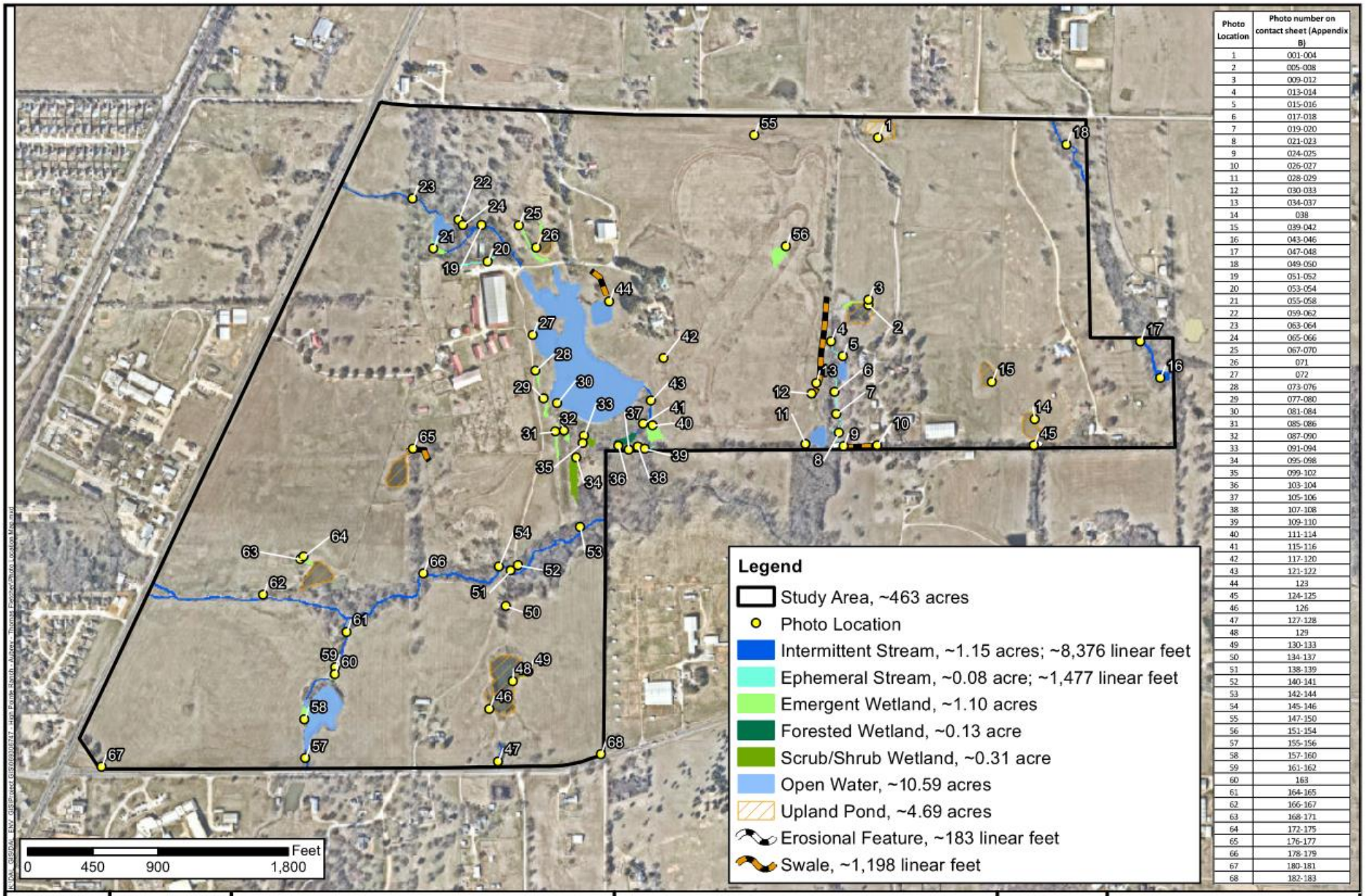


Photo Location	Photo number on contact sheet (Appendix B)
1	001-004
2	005-008
3	009-012
4	013-014
5	015-016
6	017-018
7	019-020
8	021-023
9	024-025
10	026-027
11	028-029
12	030-033
13	034-037
14	038
15	039-042
16	043-046
17	047-048
18	049-050
19	051-052
20	053-054
21	055-058
22	059-062
23	063-064
24	065-066
25	067-070
26	071
27	072
28	073-076
29	077-080
30	081-084
31	085-086
32	087-090
33	091-094
34	095-098
35	099-102
36	103-104
37	105-106
38	107-108
39	109-110
40	111-114
41	115-116
42	117-120
43	121-122
44	123
45	124-125
46	126
47	127-128
48	129
49	130-133
50	134-137
51	138-139
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FIGURE	DATE:	07/15/2021
1	DESIGN:	KRK
	CHECKED:	MREA
	KHA NO.:	069306747

Photo Location Map

Source: Nearmap February 2021

High Pointe Ranch

Aubrey, Denton County, Texas

Kimley»Horn

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Photos taken on 07/08/2021

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Photos taken on 07/14/2021

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Photos taken on 07/14/2021

March 13, 2025

Ms. Sandra Hernandez
Land Acquisition Manager
Lennar Homes
1707 Market Place Blvd., Suite 100
Irving, TX 75063

RE: ***Highpointe Ranch – Groundwater Availability and Quality Evaluation***
KHA No. 069306747

Dear Ms. Hernandez:

Kimley-Horn and Associates, Inc. (KHA) was hired by Lennar Homes to perform a groundwater availability analysis for supplementing water in a pond located on the development site. This reviews the preliminary findings and provides final recommendations.

EVALUATION PROCESS

Data Collection

Kimley-Horn performed a groundwater availability analysis utilizing the following steps and the corresponding collected information,

1. Determination of water quantity required based on the proposed losses due to evaporation.
2. Review of existing surrounding groundwater wells and their raw water quality and availability quantity.
3. Review of the nearby existing stream water quality of Pecan Creek, and Lewisville Lake.
4. Review of historical data regarding the Northern Trinity aquifer, specifically the Twin Mountains and Paluxy minor aquifers.
5. Review of the North Texas Groundwater Conservation District (NTGCD) requirements for groundwater wells.

The pond location and project site are shown in **Figure A**.

Figure A: Highpointe Ranch Project Site

Calculations for the estimated water quantity required from the groundwater wells for the pond feature onsite were based on the proposed losses due to evaporation. The existing ponds surface area at the normal pool elevation is approximately 8.21 acres. The maximum groundwater quantity was determined using the worst-case scenarios for no precipitation and high evaporation rates from the TCEQ Water Availability Model (WAM) and Water Rights Analysis Package (WRAP). The summary of the values utilized, and the maximum rate determined are provided in **Table A**. Final calculations are provided in **Appendix A**.

Table A: Evaporation Volume Summary and Maximum Rate Required

Month	Days in the Month	TCEQ WRAP Net Trinity River Basin Evaporation - for Max (1956) (in.)	Monthly Evaporation Volume (ac-ft)	Average Daily Evaporation Volume (gallons)
January	31	0.03	0.25	2,590
February	28	-0.17	-1.40	-16,248
March	31	0.35	2.87	30,215
April	30	0.26	2.14	23,194
May	31	0.27	2.22	23,309
June	30	0.59	4.85	52,632
July	31	0.72	5.91	62,157
August	31	0.86	7.06	74,243
September	30	0.72	5.91	64,229
October	31	0.26	2.14	22,446
November	30	0.00	0.00	0
December	31	0.02	0.16	1,727
Maximum Annual Evaporation (ac-ft)			32.11	-
Maximum Annual Evaporation (gallons)			10,463,998	-
Maximum Daily Evaporation (gallons)			74,243	-
Maximum Daily Groundwater Pump Rate (gpm)			62	-

Existing wells onsite were evaluated for use. Evaluation consisted of well inspections, production rate tests, and chemical analysis. From the evaluation it was determined that one (1) of the existing groundwater wells (HPR 1) and one (1) new well (HPR 2) should be utilized to meet the required maximum groundwater rate. From sampling of the existing wells onsite and reviewing the State's standards for stream and water quality, it was determined that the water quality of the selected existing onsite well (HPR 1) is acceptable for use as related to the site's Water Rights Permit application.

The existing well (HPR 1) was selected for use due to its proximity to the pond and its water quality, however the production rate is not high enough to meet the required maximum groundwater rate, so one new additional well (HPR 2) is proposed to be drilled. The existing well (HPR 1) is shown in **Figure B**, the proposed well (HPR 2) is shown on **Figure C.**

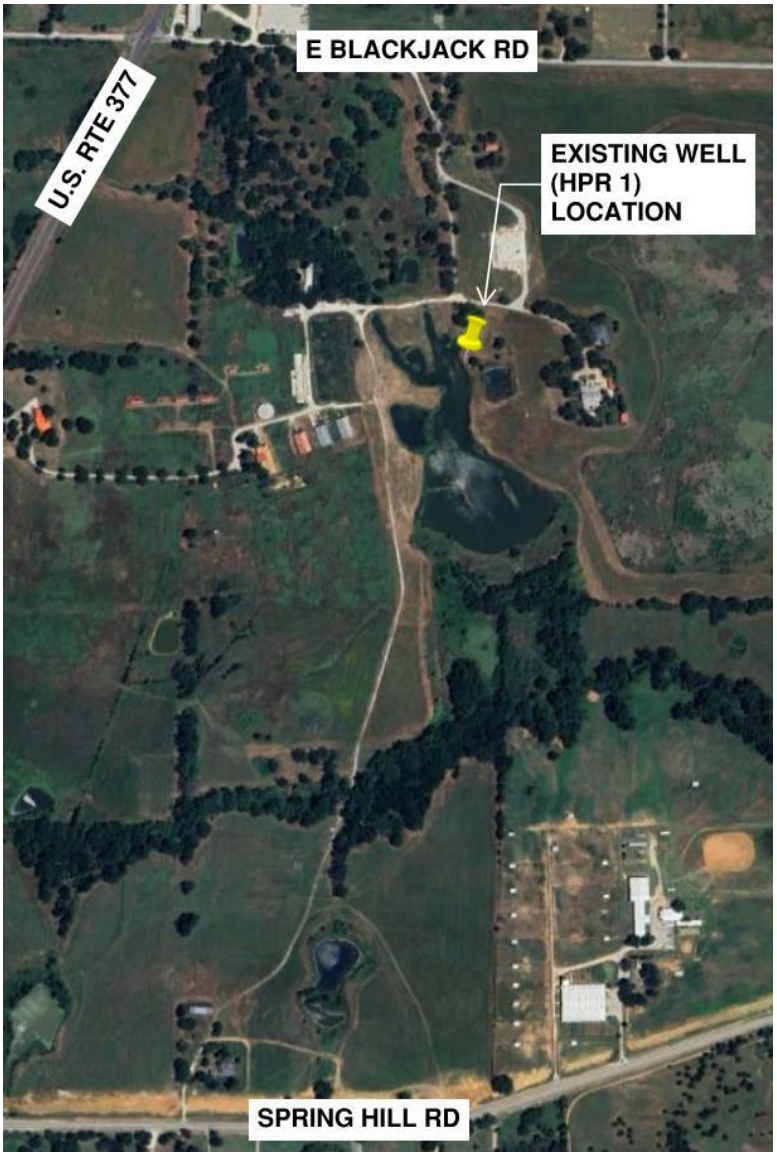

Figure B: Existing On-Site Well (HRP 1) Location

The existing well (HPR 1) selected produces groundwater from the Twin Mountains aquifer. The existing well (HPR 1) will be used in conjunction with one (1) future groundwater well (HPR 2) to meet the maximum daily groundwater pump rate of 62 gpm, to be constructed in the general location shown in **Figure C**. The future groundwater well (HPR 2) will be constructed to produce water from the Paluxy aquifer and will be at a maximum depth of 400 feet, with the goal of matching the water quality and well layout of the existing well (HPR 1).

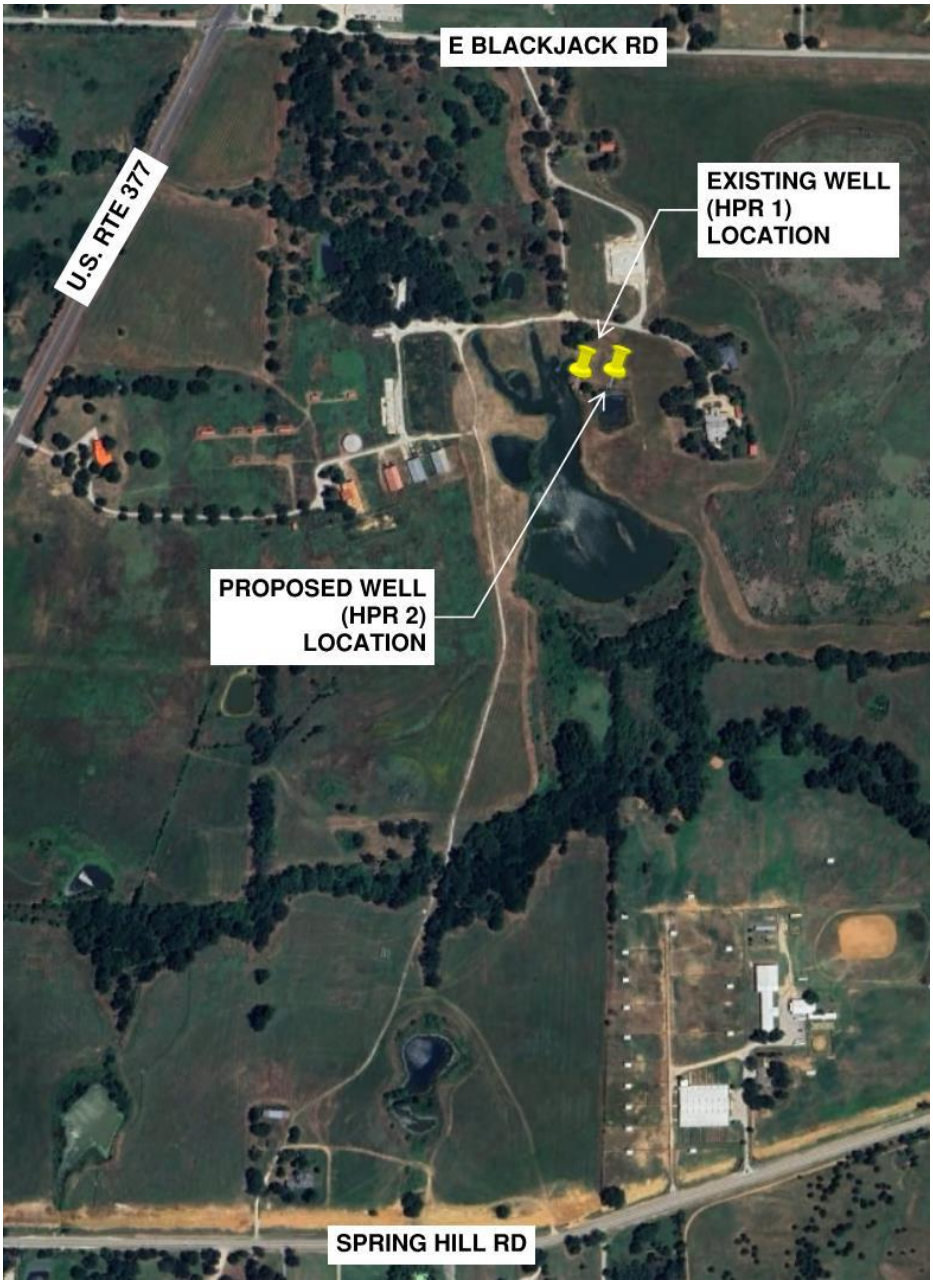

Figure C: Proposed New Well (HPR 2) Location

The selected existing well (HPR 1) production capacity is provided in **Table B,** and a summary of the existing well (HPR 1) groundwater quality is provided in **Table C**. Detailed documentation regarding the existing well (HPR 1) data collected is provided in **Appendix B**.

Table B: Existing Groundwater Well (HPR 1) Production Rate Summary

Well State ID No.	TCEQ Identifier	Well Depth (below ground surface, feet)	Aquifer/Aquifer Formation	Field Tested Well Production Rate (gpm)
232452	HPR 1	240	Twin Mountains	30

Table C: Existing Groundwater Well (HPR 1) Water Quality Summary

Parameter	Twin Mountains Aquifer Well Water Quality Concentrations (mg/L)
Silica	26.1
Calcium	47.9
Total Magnesium	10.7
Sodium	46.3
Potassium	2.12
Total Iron	0.111
Phosphorus (as Phosphate)	0.238
Phosphorus	0.0779
Carbonate as CaCO3	<0.5
Bicarbonate as CaCO3	125
Sulfate	91.6
Chloride	37.8
Ammonia	<0.0242
Ammonia Nitrogen	<0.020
Nitrate-Nitrogen	<0.0226
pH	6.4
TDS	324
Total Alkalinity as CaCO3	125
Total Hardness as CaCO3	164
Temperature (°C)	22

The water quality data reviewed from the well evaluated (HPR 1) indicate that the groundwater produced does not exceed the Texas Commission on Environmental Quality (TCEQ) primary standards, indicating the groundwater produced would not have adverse health and environmental impacts. The data reviewed indicates that the groundwater produced is not brackish, as the average total dissolved solids (TDS) for the well was below 1,000 mg/L.

In compliance with the standards outlined by the Dallas Water Utility (DWU), an adjacent water rights holder, the existing onsite groundwater well (HPR 1) was also tested for per- and polyfluoroalkyl

(PFAS) in accordance with the U.S. Environmental Protection Agency (EPA) fifth Unregulated Contaminant Monitoring Rule (UCMR5). There were no detectible traces of PFAS found in the groundwater and the test results for this sampling are provided in **Appendix B**.

Any runoff from the project site will flow to a short unnamed tributary, followed by a long unnamed tributary, before it reaches Pecan Creek, an unclassified intermittent stream that contributes to the Lewisville Lake (Segment 0823) of the Trinity River Basin. Since the short unnamed tributary, the long unnamed tributary, and Pecan Creek are unclassified, they do not have an assigned recreational use nor associated numerical criteria. To determine the impact of runoff from the site on the abovementioned bodies of water, KH, following TCEQ 30 TAC Rule §307.4(j)(3) for assigning presumed recreational uses to an unclassified water body, determined preliminary associated numerical criteria for each unclassified water body.

The criteria determined was based on assigning a presumed recreational use for each water body. The recreational uses of Secondary Contact Recreation 1 and General Use were selected for the unnamed tributaries to Pecan Creek, because of the average depth of the tributaries and the location of the water bodies regarding public access points. Per TCEQ 30 TAC §307.4(2)(D), Secondary Contact Recreation 1 applies to water bodies where water recreation can occur, but the nature of the recreation does not involve a significant risk of ingestion and applies to intermittent and perennial freshwaters where site-specific information demonstrates that Primary Contact Recreation 1 or 2 have little to no likelihood of occurring. To presume a Secondary Contact Recreation 1 use, the following characteristics must be demonstrated,

- During dry weather flows, the average depth at the mid-channel is less than 0.5 meters and there are no substantial pools with a depth of 1 meter or greater; and
- There are no existing recreational activities that create a significant risk of ingestion or uses for Primary Contact Recreation 1 or 2.

Based on data from the Water Quality Aspects of an Intermittent Stream and Backwaters in An Urban North Texas Watershed: Pecan Creek, Denton County Texas, the maximum average depth measured was less than 1 meter at the mid-channel.

The recreational uses of Primary Contact Recreation 1 and General Use were selected for Pecan Creek because it directly contributes to Lewisville Lake (Segment 0823), which has presumed uses of Aquatic Life Use, Primary Contact Recreation 1 Use, General Use, Fish Consumption Use, and Public Water Supply Use as per a 2002 Texas Water Quality Inventory, provided in **Appendix C**. Primary Contact Recreation 1 use includes wading by children, swimming, water sports, and fishing.

Following the guidance from TCEQ 30 TAC Rule §307.4(j)(3), numerical criteria were selected for each water body based on the presumed recreational uses determined. The selected criteria are equally stringent to the Primary Contact Recreation 1 standards as noted in both the EPA's Water Quality Standards and TCEQ's Surface Water Quality Standards. Constituent parameters for Pecan Creek, such as total dissolved solids (TDS), chloride, and sulfate were evaluated for screening criteria for the governed water bodies, based on the existing numerical criteria for Lewisville Lake (Segment 0823). **Table D** summarizes the assigned presumed uses and the corresponding presumed numerical criteria, as determined using the referenced TCEQ guidance and the historical data compiled in **Appendix C.**

Table D: Preliminary Assigned Uses and Numerical Criteria

Water Body	Presumed Uses	Preliminary DO Min. Limit (mg/L)	Preliminary TDS Max. Limit (mg/L)	Preliminary Chloride Max Limit (mg/L)	Preliminary Sulfate Max Limit (mg/L)	Preliminary pH Range	Temp. (°C)
Pecan Creek (Unclassified)	Primary Contact Recreation 1; General Use	5.0	500	80	60	6.5-9	32.2
Lewisville Lake (Classified)	Aquatic Life Use, Contact Recreation Use, General Use, Fish Consumption Use, Public Water Supply Use	5.0	500	80	60	6.5-9	32.2

Additionally, the groundwater quality of the selected well was compared to ambient concentrations noted in adjacent streams to the property as shown in **Table E.**

Table E: Comparison of Groundwater Quality to Adjacent Stream Quality

Parameter	Presumed Ambient Concentration for Little Elm Creek (mg/L)	Presumed Ambient Concentration for Aubrey Branch (mg/L)	Existing Groundwater Well (HPR 1) Concentrations (Twin Mountains Aquifer - mg/L)
Sulfate (Sulphate)	29	22	91.6
Chloride	17	21	37.8
TDS	239	322	324

Texas Water Quality Standards Compliance

As required by the TCEQ, under the Texas Administrative Code (TAC) Title 30, Part 1, Chapter 307, calculations were performed to ensure that supplementing the pond with the existing groundwater well (HPR 1) will maintain a quality of water, consistent with the State's standards for public health and enjoyment, propagation, and protection of terrestrial and aquatic life.

The initial calculations were developed to determine the impact of any runoff from the proposed groundwater supplement to the development site pond. Based on the water quality and characteristics of the existing groundwater well (HPR 1) and Pecan Creek, calculations were performed for sulfate, chloride, and TDS screenings. The results of these calculations are provided in **Table F**. Calculations are provided in detail in **Appendix D**.

Table F: Chapter 307 Screening Calculations Summary

Parameter	Presumed Ambient Concentration for Pecan Creek - Appendix E (mg/L)	Existing Groundwater Well (HPR 1) Concentrations (Twin Mountains Aquifer - mg/L)	Estimated Screening Value (mg/L)
Sulfate (Sulphate)	29	91.6	300
Chloride	17	37.8	400
TDS	239	324	2,500

From the Chapter 307 calculations, it was determined no estimated raw groundwater concentrations exceed the estimated screening values. Additionally, water quality impact concentrations were performed and are summarized in **Table G** and detailed in **Appendix D**.

Table G: Water Quality Impact Calculations Summary

Impact on Pecan Creek				
Water Quality Measure	**HPR 1 (mg/L)**	**Secondary Concentration Standard (mg/L)**	**Proposed Increase (%)**	**Resultant Concentration (mg/L)**
Sulfate	91.6	300	0.00009%	300
Chloride	37.8	400	0.00003%	400
TDS	324	2500	0.00004%	2500
Impact on Lake Lewisville				
Water Quality Measure	**HPR 1 (mg/L)**	**Secondary Concentration Standard (mg/L)**	**Proposed Increase (%)**	**Resultant Concentration (mg/L)**
Sulfate	91.6	300	0.000001%	300
Chloride	37.8	400	0.0000004%	300
TDS	324	2500	0.000001%	1000

SUMMARY

The groundwater quality data collected from the selected existing onsite well (HPR 1), was thoroughly evaluated in accordance with an adapted TCEQ screening protocol for an unclassified intermittent stream upstream of a classified lake. The screening calculations, which adhered to the guidance outlined in the 30 TAC, Chapter 307 for implementing Texas surface water quality standards, showed no concern regarding TDS, chloride or sulfate concentrations. These parameters were determined to be within acceptable limits, indicating the groundwater quality is consistent with the State required standards.

Furthermore, the groundwater quality data was compared with the water quality of adjacent streams, such as Little Elm Creek and the Aubrey Branch, revealing that the TDS concentration in the existing groundwater well (HPR 1) aligns with the concentration ranges typically found in both the Pecan Creek and Lewisville Lake watersheds. This comparison further supports that the proposed groundwater source is consistent with regional water quality trends and poses no risk to the surrounding aquatic ecosystems.

It is recommended that one (1) additional well (HPR 2) be constructed to supplement the existing well (HPR 1) selected for use to meet the 62 gpm maximum daily pump rate. The new well (HPR 2) will be constructed similar to the existing well (HPR 1) onsite but will produce groundwater from the Paluxy minor aquifer of the Northern Trinity major aquifer. The new well (HPR 2) will need to be constructed in accordance with the NTGCD. Both the existing well (HPR 1) and new well (HPR 2) will operate as a “well system” as defined by the NTGCD. Therefore, the wells (HPR 1 & HPR 2) will be permitted together through one (1) permit application and registration process. Since the combine well production rate does not exceed 200 gpm, NTGCD will not require a hydrogeologic study be completed with the application. Additionally, because of the proximity of the proposed well (HPR 2) to the existing well (HPR 1), a variance request regarding spacing will need to be submitted to NTGCD along with proof of ownership over both well properties.

We appreciate the opportunity to be of service to you on this project. Please do not hesitate to contact us if you have any questions.

Respectfully,

KIMLEY-HORN AND ASSOCIATES, INC.
Texas Firm Registration Number: F-928

Appendix A – Evaporation Rate Calculations
Appendix B – Existing Onsite Groundwater Well (HPR 1) Data
Appendix C – Additional Reference Resources
    2002 Water Quality Inventory Segment ID: 0823
    Texas Water Development Board Updated Evaluation of Water Resources in Part of North-Central Texas
    USGS Nutrient Loading to Lewisville Lake, North-Central Texas, 1984-87
Appendix D – Chapter 307 Analysis Calculations and Water Impact Calculations

APPENDIX A
Evaporation Rate Calculations

Monthly Evaporation Summary

Pond	Surface Area (ac.)	8.21

Evaporation Summary (Average)				
Year	Days in the Month	TWDB Evaporation - for Max (1956) (ft.)	Monthly Evaporation Volume (ac-ft)	Average Daily Evaporation Volume (gallons)
January	31	0.03	0.25	2,590
February	28	-0.17	-1.40	-16,248
March	31	0.35	2.87	30,215
April	30	0.26	2.14	23,194
May	31	0.27	2.22	23,309
June	30	0.59	4.85	52,632
July	31	0.72	5.91	62,157
August	31	0.86	7.06	74,243
September	30	0.72	5.91	64,229
October	31	0.26	2.14	22,446
November	30	0.00	0.00	0
December	31	0.02	0.16	1,727
Annual Evaporation (ac-ft)			32.11	-
Annual Evaporation (gallons)			10,463,998	-

Maximum Average Daily Evaporation (gallons)
74,243

Pump Rate (hrs/day)
20

Maximum Groundwater Pump Rate
62

TCEQ WRAP Input Files for Trinity River Basin														Total	
EV Record	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	(ft)	(in)
EV EV411	1940	0.05	-0.08	0.31	-0.07	0.12	0.2	0.49	0.6	0.64	0.33	-0.2	-0.02	2.37	28.44
EV EV411	1941	0.14	0.01	0.14	-0.15	0.31	0.29	0.47	0.28	0.48	-0.27	0.16	0	1.86	22.32
EV EV411	1942	0.08	0.12	0.2	0.02	0.26	0.14	0.67	0.31	0.2	0.05	0.14	-0.03	2.16	25.92
EV EV411	1943	0.19	0.18	0.06	0.25	-0.03	0.43	0.72	0.87	0.37	0.27	0.23	-0.14	3.4	40.8
EV EV411	1944	-0.07	-0.33	0.14	0.14	0.07	0.48	0.5	0.55	0.46	0.21	-0.02	-0.1	2.03	24.36
EV EV411	1945	0.06	-0.06	-0.04	0.1	0.25	0.17	0.26	0.5	0.18	0.16	0.17	0.12	1.87	22.44
EV EV411	1946	-0.08	0.11	0.06	0.09	-0.05	0.37	0.66	0.36	0.14	0.3	-0.11	0.13	1.98	23.76
EV EV411	1947	0.14	0.21	0.08	-0.03	0.19	0.33	0.67	0.55	0.55	0.2	0.05	-0.13	2.81	33.72
EV EV411	1948	0.05	0.05	0.22	0.45	0.21	0.44	0.2	0.66	0.61	0.32	0.31	0.19	3.71	44.52
EV EV411	1949	-0.33	0.01	0.05	0.09	0.11	0.32	0.59	0.49	0.17	-0.19	0.3	-0.08	1.53	18.36
EV EV411	1950	-0.12	0.21	0.31	0.24	0.14	0.39	-0.17	0.13	0.2	0.47	0.37	0.21	2.38	28.56
EV EV411	1951	0.1	-0.12	0.29	0.25	0.18	0.18	0.54	0.78	0.34	0.22	0.08	0.18	3.02	36.24
EV EV411	1952	0.14	0.07	0.04	-0.17	0.27	0.75	0.61	0.81	0.49	0.53	-0.14	-0.1	3.3	39.6
EV EV411	1953	0.13	0.06	-0.01	0.07	0.37	0.84	0.34	0.5	0.44	0.09	-0.05	0.1	2.88	34.56
EV EV411	1954	-0.14	0.29	0.35	0.13	-0.09	0.36	0.73	0.69	0.37	-0.22	0.17	-0.01	2.63	31.56
EV EV411	1955	0.01	-0.05	0.11	0.09	0	0.39	0.45	0.44	0.18	0.39	0.34	0.14	2.49	29.88
EV EV411	1956	0.03	-0.17	0.35	0.26	0.27	0.59	0.72	0.86	0.72	0.26	0	0.02	3.91	46.92
EV EV411	1957	-0.03	-0.07	-0.15	-0.29	0.04	0.42	0.58	0.5	-0.07	0.05	-0.34	0.1	0.74	8.88
EV EV411	1958	-0.03	0.11	-0.08	-0.07	0.27	0.27	0.45	0.41	0.09	0.19	0.05	0.05	1.71	20.52
EV EV411	1959	0.06	0.03	0.21	0.2	0.18	-0.01	-0.05	0.35	0.28	-0.23	0.07	-0.05	1.04	12.48
EV EV411	1960	0.01	0.02	0.12	0.19	0.16	0.3	0.13	0.23	0.12	0.05	0.13	-0.36	1.1	13.2
EV EV411	1961	0.07	-0.03	0.02	0.38	0.1	0.11	0.24	0.44	0.09	0.13	-0.14	-0.06	1.35	16.2
EV EV411	1962	0	0.08	0.09	0.06	0.4	-0.27	0.22	0.39	-0.1	0.08	-0.08	0.09	0.96	11.52
EV EV411	1963	0.12	0.15	0.25	0.08	0.27	0.49	0.29	0.59	0.39	0.49	0.15	-0.01	3.26	39.12
EV EV411	1964	0.02	0.03	-0.11	0.03	0.02	0.32	0.73	0.24	-0.25	0.31	-0.03	0.13	1.44	17.28
EV EV411	1965	0.03	-0.04	0.19	0.32	-0.17	0.23	0.59	0.5	0.03	0.23	0.01	0.07	1.99	23.88
EV EV411	1966	-0.02	-0.11	0.28	-0.19	0.23	0.3	0.43	0.03	0.08	0.29	0.22	-0.02	1.52	18.24
EV EV411	1967	0.2	0.15	0.25	-0.21	-0.21	0.51	0.3	0.56	-0.2	0.14	0.13	-0.05	1.57	18.84
EV EV411	1968	-0.13	0.1	0.1	0.27	0.17	0.12	0.24	0.48	-0.11	0.22	-0.05	0.09	1.5	18
EV EV411	1969	0.01	0.07	0.07	0.18	0.13	0.36	0.66	0.37	0.16	-0.08	0.18	-0.18	1.93	23.16
EV EV411	1970	0.05	-0.12	0.18	0.1	0.18	0.32	0.55	0.41	-0.32	0.03	0.21	0.13	1.72	20.64
EV EV411	1971	0.1	0.07	0.36	0.29	0.08	0.54	0.39	0.06	0.11	-0.15	0.13	0.02	2	24
EV EV411	1972	0.12	0.21	0.27	0.14	0.23	0.44	0.56	0.29	0.11	-0.27	-0.13	0.04	2.01	24.12
EV EV411	1973	-0.09	0.01	0.13	-0.05	0.16	-0.02	0.2	0.49	-0.24	0.2	0.25	0.15	1.19	14.28
EV EV411	1974	0.04	0.22	0.29	0.23	0.27	0.29	0.57	0.06	-0.02	-0.09	0.17	0.04	2.07	24.84
EV EV411	1975	0.07	0.04	0.02	0.27	-0.12	0.33	0.32	0.36	0.25	0.39	0.12	0.03	2.08	24.96
EV EV411	1976	0.23	0.23	0.02	-0.11	-0.15	0.17	0.13	0.4	0.21	-0.05	0.15	0.09	1.32	15.84
EV EV411	1977	-0.07	0.15	0.06	0.41	0.28	0.35	0.6	0.17	0.29	0.34	0.11	0.23	2.92	35.04
EV EV411	1978	-0.07	-0.16	0.04	0.28	0	0.4	0.72	0.47	0.31	0.37	-0.32	0.08	2.12	25.44
EV EV411	1979	-0.12	-0.13	-0.06	0.2	-0.08	0.49	0.3	0.24	0.29	0.24	0.19	-0.05	1.51	18.12
EV EV411	1980	0.01	0.1	0.19	0.26	0.06	0.52	0.84	0.81	-0.12	0.16	0.1	0.06	2.99	35.88
EV EV411	1981	0.12	0.05	0.07	0.2	-0.12	0.19	0.45	0.45	0.24	-0.46	0.2	0.21	1.6	19.2
EV EV411	1982	-0.02	0.08	0.22	0.12	-0.2	0.09	0.38	0.42	0.4	0.16	-0.24	-0.23	1.18	14.16
EV EV411	1983	0.11	0.01	0.1	0.26	-0.13	0.06	0.37	0.4	0.44	0.02	-0.02	-0.02	1.6	19.2
EV EV411	1984	0.03	0	-0.02	0.27	0.15	0.33	0.52	0.46	0.41	-0.43	0	-0.11	1.61	19.32
EV EV411	1985	0.08	-0.03	0.1	0.02	0.15	0.26	0.41	0.66	0.32	-0.22	-0.09	0.08	1.74	20.88
EV EV411	1986	0.23	0.15	0.31	-0.13	-0.1	0.29	0.67	0.44	0.03	-0.04	-0.21	-0.04	1.6	19.2
EV EV411	1987	0.07	-0.09	0.18	0.43	-0.22	0.19	0.38	0.53	0	0.2	-0.24	-0.2	1.23	14.76
EV EV411	1988	0.11	0.1	0.11	0.26	0.39	0.34	0.28	0.52	-0.05	0.13	0	-0.07	2.12	25.44
EV EV411	1989	-0.05	0.02	0.17	0.38	-0.03	-0.06	0.05	0.39	0.09	0.31	0.25	0.23	1.75	21
EV EV411	1990	-0.18	-0.06	0	0.12	0.13	0.44	0.4	0.39	0.21	0.14	-0.08	-0.12	1.39	16.68
EV EV411	1991	-0.09	0.07	0.21	-0.09	0.03	0.08	0.48	0.29	0.1	-0.14	0.1	0.12	1.16	13.92
EV EV411	1992	0.15	0.1	0.28	0.25	-0.12	-0.06	0.21	0.38	0.01	0.31	-0.05	-0.08	1.38	16.56
EV EV411	1993	0.06	-0.03	0.21	0.11	0.06	0.18	0.86	0.59	0.15	-0.09	0.07	0.03	2.2	26.4
EV EV411	1994	0.09	0.01	0.23	0.07	-0.07	0.36	-0.08	0.31	0.18	-0.18	-0.04	0.05	0.93	11.16
EV EV411	1995	0.11	0.06	0.13	0.14	-0.01	0.31	0.32	0.49	-0.03	0.39	0.22	-0.03	2.1	25.2
EV EV411	1996	0.15	0.42	0.21	0.31	0.47	0.33	0.28	0.13	0.06	0.24	-0.28	0.11	2.43	29.16

EV: Net reservoir evaporation minus precipitation rates
https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resources/wam.html

APPENDIX B

Existing On-Site Groundwater Well Data

Existing On-Site Groundwater Well (HPR 1) Data
State Well ID No. 232452

Source: https://www3.twdb.texas.gov/apps/waterdatainteractive/groundwaterdataviewer

Date Accessed: December 22, 2023

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Darby Adams
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Project
1123588

Printed: 11/11/2024

RESULTS

Sample Results

2350194 WELL 1 (HPR 1) Received: 10/31/2024

Drinking Water Collected by: LC2 SPL Kilgore PO:

Taken: 10/30/2024 11:10:00

Calculation Prepared: 11/06/2024 08:19:53 Calculated 11/06/2024 08:19:53 CAL

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Ammonia	<0.0242	mg/L	0.0242			

Calculation Prepared: 11/08/2024 15:25:29 Calculated 11/08/2024 15:25:29 CAL

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	Phosphorus (as Phosphate)	0.238	mg/L	0.122			

EPA 200.2.2.8 Prepared: 1145816 11/01/2024 09:30:00 Analyzed 1145816 11/01/2024 09:30:00 HLT

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Metal Digestion - Silica	50/50	ml				04

EPA 200.7 4.4 Prepared: 1145816 11/04/2024 13:22:00 Analyzed 1146045 11/04/2024 13:22:00 CAS

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	Silicon Recoverable	12.2	mg/L	0.100		7740-21-3	08

EPA 200.7 4.4 Prepared: 1146013 11/04/2024 09:00:00 Analyzed 1146246 11/05/2024 13:52:00 CAS

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	Calcium	47.9	mg/L	0.500		7440-70-2	10
NELAC	Iron, Total	0.111	mg/L	0.025		7439-89-6	10
NELAC	Magnesium, Total	10.7	mg/L	0.500		7439-95-4	10
NELAC	Potassium	2.12	mg/L	0.500	P	7440-09-7	10
NELAC	Sodium	46.3	mg/L	0.500		7440-23-5	10

EPA 200.7 4.4 Prepared: 1146427 11/06/2024 09:00:00 Analyzed 1146538 11/06/2024 16:28:00 CAS

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Phosphorus	0.0779	mg/L	0.040		7723-14-0	13

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2350194 WELL 1 (HPR 1) Received: 10/31/2024

Drinking Water Collected by: LC2 SPL Kilgore PO:

Taken: 10/30/2024 11:10:00

EPA 200.7 4.4 - Calc Prepared: 11/04/2024 13:56:06 Calculated 11/04/2024 13:56:06 CAL

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Silica (SiO2)	26.1	mg/L	0.214			

EPA 300.0 2.1 Prepared: 1145795 10/31/2024 15:08:00 Analyzed 1145795 10/31/2024 15:08:00 TTC

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	DW Nitrate-Nitrogen Total	<0.0226	mg/L	0.0226		14797-55-8	03

EPA 300.0 2.1 Prepared: 1146178 11/05/2024 00:08:00 Analyzed 1146178 11/05/2024 00:08:00 TTC

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Chloride	37.8	mg/L	3.00	D		03
NELAC	Sulfate	91.6	mg/L	3.00	PD		03

EPA 350.1 2 Prepared: 1145585 10/31/2024 13:22:36 Analyzed 1146321 11/05/2024 06:35:00 AMB

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Ammonia Nitrogen	<0.020	mg/L	0.020			06

EPA 533 Prepared: 1145462 11/01/2024 04:53:00 Analyzed 1145916 11/01/2024 13:47:00 CNH

	Parameter	Results	Units	RL	Flags	CAS	Bottle
U	11Cl-PF3OUdS - 11-Chloroeicosafl	<0.000933	ug/L	0.000933		763051-92-9	07
U	4:2 FTS - 1H,1H, 2H, 2H-Perfluor	<0.000987	ug/L	0.000987		757124-72-4	07
U	6:2 FTS - 1H,1H, 2H, 2H-Perfluor	<0.000987	ug/L	0.000987		27619-97-2	07
U	8:2 FTS - 1H,1H, 2H, 2H-Perfluor	<0.000987	ug/L	0.000987		39108-34-4	07
U	9Cl-PF3ONS - 9-Chlorohexadecaflu	<0.000923	ug/L	0.000923		756426-58-1	07
U	ADONA - 4,8-Dioxa-3H-perfluorono	<0.000948	ug/L	0.000948		919005-14-4	07
U	HFPO-DA - Hexafluoropropylene ox	<0.000987	ug/L	0.000987		13252-13-6	07
U	NFDHA - Nonafluoro-3,6-dioxahept	<0.000987	ug/L	0.000987		151772-58-6	07
U	PFBA - Perfluorobutanoic acid	<0.000987	ug/L	0.000987		375-22-4	07
U	PFBS - Perfluorobutanesulfonic a	<0.000874	ug/L	0.000874		375-73-5	07
U	PFDA - Perfluorodecanoic acid	<0.000987	ug/L	0.000987		335-76-2	07
U	PFDoA - Perfluorododecanoic acid	<0.000987	ug/L	0.000987		307-55-1	07
U	PFEESA - Perfluoro(2-ethoxyethan	<0.000987	ug/L	0.000987		113507-82-7	07
U	PFHpA - Perfluoroheptanoic acid	<0.000987	ug/L	0.000987		375-85-9	07
U	PFHpS - Perfluoroheptanesulfonic	<0.000987	ug/L	0.000987		375-92-8	07

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Printed: 11/11/2024

2350194 WELL 1 (HPR 1) Received: 10/31/2024

Drinking Water Collected by: LC2 SPL Kilgore PO:

Taken: 10/30/2024 11:10:00

EPA 533 Prepared: 1145462 11/01/2024 04:53:00 Analyzed 1145916 11/01/2024 13:47:00 CNH

	Parameter	Results	Units	RL	Flags	CAS	Bottle
U	PFHxA - Perfluorohexanoic acid	<0.000987	ug/L	0.000987		307-24-4	07
U	PFHxS - Perfluorohexanesulfonic	<0.000938	ug/L	0.000938		355-46-4	07
U	PFMBA - Perfluoro-4-methoxybutan	<0.000987	ug/L	0.000987		863090-89-5	07
U	PFMPA - Perfluoro-3-methoxypropa	<0.000987	ug/L	0.000987		377-73-1	07
U	PFNA - Perfluorononanoic acid	<0.000987	ug/L	0.000987		375-95-1	07
U	PFOA - Perfluorooctanoic acid	<0.000987	ug/L	0.000987		335-67-1	07
U	PFOS - Perfluorooctanesulfonic a	<0.000908	ug/L	0.000908		1763-23-1	07
U	PFPeA - Perfluoropentanoic acid	<0.000987	ug/L	0.000987		2706-90-3	07
U	PFPeS - Perfluoropentanesulfonic	<0.000987	ug/L	0.000987		2706-91-4	07
U	PFUnA - Perfluoroundecanoic acid	<0.000987	ug/L	0.000987		2058-94-8	07

EPA 537.1 2 Prepared: 1145958 11/05/2024 05:52:00 Analyzed 1146553 11/06/2024 02:10:00 CNH

	Parameter	Results	Units	RL	Flags	CAS	Bottle
U	11Cl-PF3OUdS - 11-chloroeicosafl	<0.000842	ug/L	0.000842		763051-92-9	09
U	9Cl-PF3ONS- 9-chlorohexadecafluo	<0.000842	ug/L	0.000842		756426-58-1	09
U	ADONA 4,8-dioxa-3H-perfluorononа	<0.000896	ug/L	0.000896		919005-14-4	09
U	HFPO-DA - Hexafluoropropylene ox	<0.000896	ug/L	0.000896		13252-13-6	09
U	NEtFOSAA N-ethyl perfluorooctane	<0.000896	ug/L	0.000896		2991-50-6	09
U	NMeFOSAA N-methyl perfluorooctan	<0.000896	ug/L	0.000896		2355-31-9	09
U	PFBS (L-PFBS) Perfluorobutanesul	<0.000788	ug/L	0.000788		375-73-5	09
U	PFDA Perfluorodecanoic acid	<0.000896	ug/L	0.000896		335-76-2	09
U	PFDoA Perfluorododecanoic acid	<0.000896	ug/L	0.000896		307-55-1	09
U	PFHpA Perfluoroheptanoic acid	<0.000896	ug/L	0.000896		375-85-9	09
U	PFHxA Perfluorohexanoic acid	<0.000896	ug/L	0.000896		307-24-4	09
U	PFHxS Perfluorohexanesulfonic ac	<0.000824	ug/L	0.000824		355-46-4	09
U	PFNA Perfluorononanoic acid	<0.000896	ug/L	0.000896		375-95-1	09
U	PFOA Perfluorooctanoic acid	<0.000896	ug/L	0.000896		335-67-1	09
U	PFOS Perfluorooctanesulfonic aci	<0.000842	ug/L	0.000842		1763-23-1	09
U	PFTA Perfluorotetradecanoic acid	<0.000896	ug/L	0.000896		376-06-7	09
U	PFTrDA Perfluorotridecanoic acid	<0.000896	ug/L	0.000896		72629-94-8	09
U	PFUnA Perfluoroundecanoic acid	<0.000896	ug/L	0.000896		2058-94-8	09

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Project
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Printed: 11/11/2024

2350194 WELL 1 (HPR 1) Received: 10/31/2024

Drinking Water Collected by: LC2 SPL Kilgore PO:

Taken: 10/30/2024 11:10:00

SM 2320 B-2011 Prepared: 1146572 11/07/2024 13:47:00 Analyzed 1146572 11/07/2024 13:47:00 TRC

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	Total Alkalinity (as CaCO3)	125	mg/L	1.00			03

SM 2340 B-2011 Prepared: 11/05/2024 15:55:43 Calculated 11/05/2024 15:55:43 CAL

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Total Hardness as CaCO3 -Ca/MgEq	164	mg/L	0.500			

SM 2540 C-2015 Prepared: 1146475 11/05/2024 08:15:00 Analyzed 1146475 11/05/2024 08:15:00 JMB

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Total Dissolved Solids	324	mg/L	20.0			03

SM 2550 B - 2010 Prepared: 1145550 10/30/2024 11:15:00 Analyzed 1145550 10/30/2024 11:15:00 LC2

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Temperature (onsite)	22	Degrees C	1			

SM 4500-CO2 D-1997 Prepared: 11/05/2024 09:49:35 Calculated 11/05/2024 09:49:35 CAL

Parameter	Results	Units	RL	Flags	CAS	Bottle
Hydroxide / Calc	<0.5	mg/L	0.5			

SM 4500-CO2 D-1997 Prepared: 11/07/2024 10:31:45 Calculated 11/07/2024 10:31:45 CAL

Parameter	Results	Units	RL	Flags	CAS	Bottle
Bicarbonate (as CaCO3) / Calc	125	mg/L	0.5			

SM 4500-CO2 D-1997 Prepared: 11/07/2024 10:36:40 Calculated 11/07/2024 10:36:40 CAL

Parameter	Results	Units	RL	Flags	CAS	Bottle
Carbonate (as CaCO3) / Calc	<0.5	mg/L	0.5			
Free Carbon Dioxide / Calc	58.0	mg/L	0.5			

SM 4500-CO2 D-1997 Prepared: 11/07/2024 10:43:43 Calculated 11/07/2024 10:43:43 CAL

Parameter	Results	Units	RL	Flags	CAS	Bottle

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Printed: 11/11/2024

2350194 WELL 1 (HPR 1)

Received: 10/31/2024

Drinking Water | Collected by: LC2 | SPL Kilgore | PO:
Taken: 10/30/2024 11:10:00

SM 4500-CO2 D-1997 Prepared: 11/07/2024 10:43:43 Calculated 11/07/2024 10:43:43 CAL

Parameter	Results	Units	RL	Flags	CAS	Bottle
Carbon Dioxide / Calc	168	mg/L	0.5			

SM 4500-H+ B-2011 Prepared: 1145516 10/30/2024 11:15:00 Analyzed 1145516 10/30/2024 11:15:00 LC2

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	pH (Onsite)	6.4	SU				

SM 4500-H+ B-2011 Prepared: 1146086 11/05/2024 06:15:00 Analyzed 1146086 11/05/2024 06:15:00 BEK

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	Laboratory pH	6.6 @ 18 C	SU	2.00			03

2350196 WELL 2

Received: 10/31/2024

Drinking Water | Collected by: LC2 | SPL Kilgore | PO:
Taken: 10/30/2024 11:25:00

Calculation Prepared: 11/06/2024 08:19:53 Calculated 11/06/2024 08:19:53 CAL

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Ammonia	0.433	mg/L	0.0242			

Calculation Prepared: 11/08/2024 15:25:29 Calculated 11/08/2024 15:25:29 CAL

	Parameter	Results	Units	RL	Flags	CAS	Bottle
z	Phosphorus (as Phosphate)	2.48	mg/L	0.122			

EPA 200.2.2.8 Prepared: 1145816 11/01/2024 09:30:00 Analyzed 1145816 11/01/2024 09:30:00 HLT

	Parameter	Results	Units	RL	Flags	CAS	Bottle
NELAC	Metal Digestion - Silica	50/50	ml				04

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Lab Number 2350194

PO Number

Phone 806/319-6235

Kimley-Horn Well water

☐ *Hand Delivered by Client to Region or LAB*

Matrix: Drinking Water Well #1 (HPR 1)

Sample Collection Start
Date: 10/30/24 Time: 1110

Sampler Printed Name: Lane Carlisle - SPL, Inc.

Sampler Affiliation:

Sampler Signature: Lane Carlisle

Samples Radioactive? ☐ Samples Contains Dioxin? ☐ Samples Biological Hazard? ☐

1 On Site Testing

z Short Hold pH pH (Onsite) SM 4500-H+ B-2011 (0.0104 days)

pH (Onsite)

Collected By LC2 Date 10/30 Time 1110 Analyzed By LC2 Date 10/30 Time 1115

Results 6.39 Units SU Temp. 21.9 C Duplicate 6.40 Units SU Temp. 21.8 C

NELAC Short Hold Temp Temperature (onsite) SM 2550 B - 2010 (0.0104 days)

Temperature (onsite)

Collected By LC2 Date 10/30 Time 1110 Analyzed By LC2 Date 10/30 Time 1115

Results 21.9 Units ~~21.9~~ LC2 10/30 °C Duplicate 21.8 Units °C

1 Polyethylene 1/2 gal (White)

NELAC ICIL Chloride EPA 300.0 2.1 (28.0 days)

NELAC Short Hold IN3W DW Nitrate-Nitrogen Total EPA 300.0 2.1 CAS:14797-55-8 (2.00 days)

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NELAC	!S4L	Sulfate	EPA 300.0 2.1 (28.0 days)
z	AlkT	Total Alkalinity (as CaCO3)	SM 2320 B-2011 (14.0 days)
	CO2	Carbon Dioxide / Calc	SM 4500-CO2 D-1997 (14.0 days)
	CO2F	Free Carbon Dioxide / Calc	SM 4500-CO2 D-1997 (14.0 days)
	CO3	Carbonate (as CaCO3) / Calc	SM 4500-CO2 D-1997 (14.0 days)
	HCO3	Bicarbonate (as CaCO3) / Calc	SM 4500-CO2 D-1997 (14.0 days)
	OH	Hydroxide / Calc	SM 4500-CO2 D-1997 (30.0 days)
z	pHLL	Laboratory pH	SM 4500-H+ B-2011
NELAC	TDS	Total Dissolved Solids	SM 2540 C-2015 (7.00 days)

0 Z -- No bottle required

NELAC	NH3	Ammonia	Calculation (28.0 days)
	UCMK	PFOAS Prep Kit	

1 HNO3 to pH <2 Polyethylene 500 mL for Metals

z	*Cal	Calcium	EPA 200.7 4.4 CAS:7440-70-2 (180 days)
NELAC	*Fel	Iron, Total	EPA 200.7 4.4 CAS:7439-89-6 (180 days)
NELAC	*Kl	Potassium	EPA 200.7 4.4 CAS:7440-09-7 (180 days)
NELAC	*Mgl	Magnesium, Total	EPA 200.7 4.4 CAS:7439-95-4 (180 days)
NELAC	*Nal	Sodium	EPA 200.7 4.4 CAS:7440-23-5 (180 days)
NELAC	*Pl	Phosphorus	EPA 200.7 4.4 CAS:7723-14-0 (180 days)
	*SiI	Silicon Recoverable	EPA 200.7 4.4 CAS:7740-21-3 (28.0 days)
NELAC	*SiO	Silica (SiO2)	EPA 200.7 4.4 - Calc (28.0 days)
	301L	Liquid Metals Digestion	EPA 200.2 2.8 (180 days)
NELAC	3011	Metal Digestion - Silica	EPA 200.2.2.8 (28.0 days)
	CPO4	Phosphorus (as Phosphate)	
NELAC	THC	Total Hardness as CaCO3 -Ca/MgEq	SM 2340 B-2011

1 H2SO4 to pH <2 250 ml Polyethylene

NELAC	NHaN	Ammonia Nitrogen	EPA 350.1 2 (28.0 days)

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1 8oz/250 mL UltraLab PP-Tris Mixture-1.25/ EPA 537.1

^PAS EPA 537.1 Exp Testing EPA 537.1 (14.0 days)

1 8oz/250ml PP with 250mg Ammonium Acetate EPA 533

z ^POS EPA-533 Exp Testing EPA 533 (28.0 days)

Ambient Conditions/Comments

Date	Time	Relinquished		Received	
		Printed Name: Lane Carlisle	Affiliation: SPL, Inc.	Printed Name: XPS	Affiliation
10/30/24	1700	Signature: Lane Carlisle		Signature	
		Printed Name: XPS	Affiliation	Printed Name: Ashley Vasquez - SPL, Inc.	Affiliation
10/31/24	0945	Signature		Signature	
		Printed Name	Affiliation	Printed Name	Affiliation
		Signature		Signature	
		Printed Name	Affiliation	Printed Name	Affiliation
		Signature		Signature	

Sample Received on Ice? Yes No
Cooler/Sample Secure? Yes No
If Shipped: Tracking Number & Temp - See Attached

The accredited column designates accreditation by A - A2LA, N - NELAC, or 2 - not listed under scope of accreditation. Unless otherwise specified, SPL shall provide these ordered services pursuant to our Standard Terms & Conditions Agreement. SPL personnel collect samples as specified by SPL SOP #0 0323.

Comments

COOLER CHECKIN

Region/Driver/Client	north texas
Date / Time:	10/31/24 / 0945
Cooler:	of
Shipping Company:	XPS

Temp Label:

10/31 0945 ANV
Date Time Tech
Temp: 1.7 1.5 C
Therm#: 6443 Corr Fact: 0.1 C

STATE OF TEXAS WELL REPORT for Tracking #232454

Owner:	**Circle Y Ranch**	Owner Well #:	**2**
Address:	**P.O. Box 305 Aubrey, TX 76227**	Grid #:	**18-41-4**
Well Location:	**285 Hwy 377 Aubrey, TX**	Latitude:	**33° 18' 32" N**
		Longitude:	**096° 58' 14" W**
Well County:	**Denton**	Elevation:	**No Data**
Type of Work:	**New Well**	Proposed Use:	**Domestic**

Drilling Start Date: **4/25/2009** Drilling End Date: **5/7/2009**

Borehole:

Diameter (in.)	*Top Depth (ft.)*	*Bottom Depth (ft.)*
8.5	**0**	**915**

Drilling Method: **Mud (Hydraulic) Rotary**

Borehole Completion: **Filter Packed**

Filter Pack Intervals:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Filter Material*	*Size*
760	**915**	**Gravel**	

Annular Seal Data:

Top Depth (ft.)	*Bottom Depth (ft.)*	*Description (number of sacks & material)*
0	**250**	**34 cement**
730	**750**	**16 cement**

Seal Method: **Displacement**

Sealed By: **Driller**

Distance to Property Line (ft.): **81**

Distance to Septic Field or other concentrated contamination (ft.): **na**

Distance to Septic Tank (ft.): **No Data**

Method of Verification: **No Data**

Surface Completion: **Alternative Procedure Used**

Water Level: **No Data**

Packers: **No Data**

Type of Pump: **No Data**

Well Tests: **Jetted** **Yield: 30 GPM with 60 ft. drawdown after 7 hours**

Water Quality:

Strata Depth (ft.)	Water Type
No Data	**No Data**

Chemical Analysis Made: **No**

Did the driller knowingly penetrate any strata which contained injurious constituents?: **No**

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the report(s) being returned for completion and resubmittal.

Company Information: **Strittmatter Irrigation**

800 N. Hwy 377
Pilot Point, TX 76258

Driller Name: **Alan Strittmatter** License Number: **54790**

Comments: **$mew; 4/20/2011 completed lithology from returned well report ^EO**

Lithology:
DESCRIPTION & COLOR OF FORMATION MATERIAL

Top (ft.)	Bottom (ft.)	Description
0	**25**	**Yellow and Gray Clay**
25	**50**	**Blue and Green Clay**
50	**68**	**Gray Clay**
68	**87**	**Gray and Green Clay**
87	**105**	**Gray Clay**
105	**115**	**Sand and Rock**
115	**123**	**Sand**
123	**130**	**Sand and Rock**
130	**175**	**Sand**
175	**180**	**Charcoal**
180	**216**	**White Clay**
216	**224**	**Sand Streaks**
224	**235**	**White and Green Clay**
235	**240**	**Sand**
240	**255**	**Charcoal and Gray Clay**
255	**310**	**Gray Clay**
310	**335**	**Rock**
335	**375**	**Gray Clay**

Casing:
BLANK PIPE & WELL SCREEN DATA

Dia. (in.)	New/Used	Type	Setting From/To (ft.)
4.5" New Steel Blank +2 - 860			
3.5" New S.S. Screen 860 - 890 .020			
3.5" New Steel Blank 890 - 915			

375	385	Rock
385	405	Rock and Shale
405	435	Rock
435	475	Gray Shale
475	485	Rock
485	520	Brown Clay
520	555	Rock
555	605	Rock and Shale
605	635	Rock
635	650	Gray Clay
650	685	Rock
685	695	Gray Clay
695	755	Rock and Shale
755	766	Rock
766	780	White and Gray Clay
780	790	Gray Clay
790	802	Sand
802	805	White Clay
805	810	White Clay and Rock
810	822	Sand
822	830	White Clay
830	840	Sand and shale Streaks
840	890	Sand
890	915	Green Clay

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking Number on your written request.

Texas Department of Licensing and Regulation
P.O. Box 12157
Austin, TX 78711
(512) 334-5540

APPENDIX C
Additional Reference Resources

Sources: TCEQ Rule 307.1; TWDB Water Quality Summaries
Date Accessed: December 19, 2023

Additional Reference Resources

2002 Water Quality Inventory
Segment ID: 0823

Date Accessed: December 22, 2023

Segment ID: 0823 Water body name: Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Aquatic Life Use

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
2002	Dissolved Oxygen grab average	No Concern	Hickory Creek arm	2,616	31	0	
2002	Dissolved Oxygen grab average	No Concern	Little Elm Creek arm	3,589	10	0	
2002	Dissolved Oxygen grab average	No Concern	Lowermost portion of reservoir	5,736	10	0	
2002	Dissolved Oxygen grab average	No Concern	Middle portion of reservoir east of Lake Dallas	5,851	10	0	
2002	Dissolved Oxygen grab average	Not Assessed	Stewart Creek arm	1,528	5		
2002	Dissolved Oxygen grab minimum	Fully Supporting	Hickory Creek arm	2,616	31	0	
2002	Dissolved Oxygen grab minimum	Fully Supporting	Little Elm Creek arm	3,589	10	0	
2002	Dissolved Oxygen grab minimum	Fully Supporting	Lowermost portion of reservoir	5,736	10	0	
2002	Dissolved Oxygen grab minimum	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851	10	0	
2002	Dissolved Oxygen grab minimum	No Concern-Limited Data	Stewart Creek arm	1,528	5	0	
2002	Dissolved Oxygen 24hr average	Not Assessed	Hickory Creek arm	2,616	0		
2002	Dissolved Oxygen 24hr average	Not Assessed	Little Elm Creek arm	3,589	0		
2002	Dissolved Oxygen 24hr average	Not Assessed	Lowermost portion of reservoir	5,736	0		
2002	Dissolved Oxygen 24hr average	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	0		
2002	Dissolved Oxygen 24hr average	Not Assessed	Stewart Creek arm	1,528	0		
2002	Dissolved Oxygen 24hr minimum	Not Assessed	Hickory Creek arm	2,616	0		
2002	Dissolved Oxygen 24hr minimum	Not Assessed	Little Elm Creek arm	3,589	0		
2002	Dissolved Oxygen 24hr minimum	Not Assessed	Lowermost portion of reservoir	5,736	0		
2002	Dissolved Oxygen 24hr minimum	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	0		
2002	Dissolved Oxygen 24hr minimum	Not Assessed	Stewart Creek arm	1,528	0		
2002	Acute Metals in water	Not Assessed	Hickory Creek arm	2,616	1		
2002	Chronic Metals in water	Not Assessed	Hickory Creek arm	2,616	1		
2002	Overall Aquatic Life Use	Fully Supporting	Hickory Creek arm	2,616			

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir Trinity River Basin Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Aquatic Life Use (continued)							
2002	Overall Aquatic Life Use	Fully Supporting	Little Elm Creek arm	3,589			
2002	Overall Aquatic Life Use	Fully Supporting	Lowermost portion of reservoir	5,736			
2002	Overall Aquatic Life Use	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Aquatic Life Use	Not Assessed	Remainder of reservoir	3,960			
2002	Overall Aquatic Life Use	Not Assessed	Stewart Creek arm	1,528			
Contact Recreation Use							
2002	Overall Recreation Use	Not Assessed	Hickory Creek arm	2,616			
2002	Overall Recreation Use	Not Assessed	Little Elm Creek arm	3,589			
2002	Overall Recreation Use	Not Assessed	Lowermost portion of reservoir	5,736			
2002	Overall Recreation Use	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Recreation Use	Not Assessed	Remainder of reservoir	3,960			
2002	Overall Recreation Use	Not Assessed	Stewart Creek arm	1,528			
General Use							
2002	Water Temperature	Fully Supporting	Hickory Creek arm	2,616	31	0	
2002	Water Temperature	Fully Supporting	Little Elm Creek arm	3,589	10	0	
2002	Water Temperature	Fully Supporting	Lowermost portion of reservoir	5,736	10	0	
2002	Water Temperature	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851	10	0	
2002	Water Temperature	No Concern-Limited Data	Stewart Creek arm	1,528	5	0	
2002	pH	Fully Supporting	Hickory Creek arm	2,616	31	0	
2002	pH	Fully Supporting	Little Elm Creek arm	3,589	10	0	
2002	pH	Fully Supporting	Lowermost portion of reservoir	5,736	10	0	
2002	pH	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851	10	0	
2002	pH	No Concern-Limited Data	Stewart Creek arm	1,528	5	0	

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
General Use (continued)							
2002	Chloride	Fully Supporting	Hickory Creek arm	2,616	40		22.5
2002	Chloride	Fully Supporting	Little Elm Creek arm	3,589	40		22.5
2002	Chloride	Fully Supporting	Lowermost portion of reservoir	5,736	40		22.5
2002	Chloride	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851	40		22.5
2002	Chloride	Fully Supporting	Remainder of reservoir	3,960	40		22.5
2002	Chloride	Fully Supporting	Stewart Creek arm	1,528	40		22.5
2002	Sulfate	Fully Supporting	Hickory Creek arm	2,616	15		33.9
2002	Sulfate	Fully Supporting	Little Elm Creek arm	3,589	15		33.9
2002	Sulfate	Fully Supporting	Lowermost portion of reservoir	5,736	15		33.9
2002	Sulfate	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851	15		33.9
2002	Sulfate	Fully Supporting	Remainder of reservoir	3,960	15		33.9
2002	Sulfate	Fully Supporting	Stewart Creek arm	1,528	15		33.9
2002	Total Dissolved Solids	Fully Supporting	Hickory Creek arm	2,616	66		218.65
2002	Total Dissolved Solids	Fully Supporting	Little Elm Creek arm	3,589	66		218.65
2002	Total Dissolved Solids	Fully Supporting	Lowermost portion of reservoir	5,736	66		218.65
2002	Total Dissolved Solids	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851	66		218.65
2002	Total Dissolved Solids	Fully Supporting	Remainder of reservoir	3,960	66		218.65
2002	Total Dissolved Solids	Fully Supporting	Stewart Creek arm	1,528	66		218.65
2002	Overall General Use	Fully Supporting	Hickory Creek arm	2,616			
2002	Overall General Use	Fully Supporting	Little Elm Creek arm	3,589			
2002	Overall General Use	Fully Supporting	Lowermost portion of reservoir	5,736			
2002	Overall General Use	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall General Use	Fully Supporting	Remainder of reservoir	3,960			
2002	Overall General Use	Fully Supporting	Stewart Creek arm	1,528			

Segment ID: 0823 Water body name: Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Fish Consumption Use							
2002	Human Health Criteria Metals	Not Assessed	Hickory Creek arm	2,616	1		
2002	Human Health Criteria Organics	Fully Supporting	Hickory Creek arm	2,616	24		
2002	Overall Fish Consumption Use	Fully Supporting	Hickory Creek arm	2,616			
2002	Overall Fish Consumption Use	Not Assessed	Little Elm Creek arm	3,589			
2002	Overall Fish Consumption Use	Not Assessed	Lowermost portion of reservoir	5,736			
2002	Overall Fish Consumption Use	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Fish Consumption Use	Not Assessed	Remainder of reservoir	3,960			
2002	Overall Fish Consumption Use	Not Assessed	Stewart Creek arm	1,528			
Public Water Supply Use							
2002	Finished Water: Running Avg	Fully Supporting	Hickory Creek arm	2,616			
2002	Finished Water: Running Avg	Fully Supporting	Little Elm Creek arm	3,589			
2002	Finished Water: Running Avg	Fully Supporting	Lowermost portion of reservoir	5,736			
2002	Finished Water: Running Avg	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Surface Water: Long-term average Nitrate+Nitrite Nitrogen	Fully Supporting	Hickory Creek arm	2,616	25		0.19
2002	Surface Water: Long-term average Nitrate+Nitrite Nitrogen	Fully Supporting	Little Elm Creek arm	3,589	10		0.34
2002	Surface Water: Long-term average Nitrate+Nitrite Nitrogen	No Concern-Limited Data	Lowermost portion of reservoir	5,736	5		0.28
2002	Surface Water: Long-term average Nitrate+Nitrite Nitrogen	No Concern-Limited Data	Middle portion of reservoir east of Lake Dallas	5,851	9		0.17
2002	Overall Public Water Supply Use	Fully Supporting	Hickory Creek arm	2,616			
2002	Overall Public Water Supply Use	Fully Supporting	Little Elm Creek arm	3,589			
2002	Overall Public Water Supply Use	Fully Supporting	Lowermost portion of reservoir	5,736			
2002	Overall Public Water Supply Use	Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851			

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir Trinity River Basin Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Public Water Supply Use (continued)							
2002	Overall Public Water Supply Use	Fully Supporting	Remainder of reservoir	3,960			
2002	Overall Public Water Supply Use	Fully Supporting	Stewart Creek arm	1,528			
Overall Use Support							
2002		Fully Supporting	Hickory Creek arm	2,616			
2002		Fully Supporting	Little Elm Creek arm	3,589			
2002		Fully Supporting	Lowermost portion of reservoir	5,736			
2002		Fully Supporting	Middle portion of reservoir east of Lake Dallas	5,851			
2002		Fully Supporting	Remainder of reservoir	3,960			
2002		Fully Supporting	Stewart Creek arm	1,528			
Nutrient Enrichment Concern							
2002	Ammonia Nitrogen	Concern	Hickory Creek arm	2,616	25	11	
2002	Ammonia Nitrogen	No Concern	Little Elm Creek arm	3,589	10	2	
2002	Ammonia Nitrogen	Not Assessed	Lowermost portion of reservoir	5,736	5		
2002	Ammonia Nitrogen	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	9		
2002	Nitrite + Nitrate Nitrogen	No Concern	Hickory Creek arm	2,616	25	5	
2002	Nitrite + Nitrate Nitrogen	Concern	Little Elm Creek arm	3,589	10	4	
2002	Nitrite + Nitrate Nitrogen	Not Assessed	Lowermost portion of reservoir	5,736	5		
2002	Nitrite + Nitrate Nitrogen	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	9		
2002	Orthophosphorus	No Concern	Hickory Creek arm	2,616	25	3	
2002	Orthophosphorus	No Concern	Little Elm Creek arm	3,589	10	0	
2002	Orthophosphorus	Not Assessed	Lowermost portion of reservoir	5,736	5		
2002	Orthophosphorus	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	9		
2002	Total Phosphorus	No Concern	Hickory Creek arm	2,616	25	1	

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Nutrient Enrichment Concern (continued)							
2002	Total Phosphorus	Not Assessed	Little Elm Creek arm	3,589	0		
2002	Total Phosphorus	Not Assessed	Lowermost portion of reservoir	5,736	0		
2002	Total Phosphorus	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	0		
2002	Overall Nutrient Enrichment Concerns	Concern	Hickory Creek arm	2,616			
2002	Overall Nutrient Enrichment Concerns	Concern	Little Elm Creek arm	3,589			
2002	Overall Nutrient Enrichment Concerns	Not Assessed	Lowermost portion of reservoir	5,736			
2002	Overall Nutrient Enrichment Concerns	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Nutrient Enrichment Concerns	Not Assessed	Remainder of reservoir	3,960			
2002	Overall Nutrient Enrichment Concerns	Not Assessed	Stewart Creek arm	1,528			
Algal Growth Concern							
2002	Chlorophyll a	No Concern	Hickory Creek arm	2,616	10	2	
2002	Chlorophyll a	Not Assessed	Little Elm Creek arm	3,589	0		
2002	Chlorophyll a	Not Assessed	Lowermost portion of reservoir	5,736	0		
2002	Chlorophyll a	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851	0		
2002	Chlorophyll a	Not Assessed	Remainder of reservoir	3,960			
2002	Chlorophyll a	Not Assessed	Stewart Creek arm	1,528			
Sediment Contaminants Concern							
2002	Overall Sediment Contaminant Concerns	Not Assessed	Hickory Creek arm	2,616			
2002	Overall Sediment Contaminant Concerns	Not Assessed	Little Elm Creek arm	3,589			

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir Trinity River Basin Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Sediment Contaminants Concern (continued)							
2002	Overall Sediment Contaminant Concerns	Not Assessed	Lowermost portion of reservoir	5,736			
2002	Overall Sediment Contaminant Concerns	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Sediment Contaminant Concerns	Not Assessed	Remainder of reservoir	3,960			
2002	Overall Sediment Contaminant Concerns	Not Assessed	Stewart Creek arm	1,528			
Fish Tissue Contaminants Concern							
2002	Overall Fish Tissue Contaminant Concerns	Not Assessed	Hickory Creek arm	2,616			
2002	Overall Fish Tissue Contaminant Concerns	Not Assessed	Little Elm Creek arm	3,589			
2002	Overall Fish Tissue Contaminant Concerns	Not Assessed	Lowermost portion of reservoir	5,736			
2002	Overall Fish Tissue Contaminant Concerns	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Fish Tissue Contaminant Concerns	Not Assessed	Remainder of reservoir	3,960			
2002	Overall Fish Tissue Contaminant Concerns	Not Assessed	Stewart Creek arm	1,528			
Public Water Supply Concern							
2002	Finished Water: Chloride	No Concern	Hickory Creek arm	2,616			
2002	Finished Water: Chloride	No Concern	Little Elm Creek arm	3,589			
2002	Finished Water: Chloride	No Concern	Lowermost portion of reservoir	5,736			
2002	Finished Water: Chloride	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Finished Water: Chloride	No Concern	Remainder of reservoir	3,960			
2002	Finished Water: Chloride	No Concern	Stewart Creek arm	1,528			

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Public Water Supply Concern (continued)							
2002	Finished Water: Sulfate	No Concern	Hickory Creek arm	2,616			
2002	Finished Water: Sulfate	No Concern	Little Elm Creek arm	3,589			
2002	Finished Water: Sulfate	No Concern	Lowermost portion of reservoir	5,736			
2002	Finished Water: Sulfate	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Finished Water: Sulfate	No Concern	Remainder of reservoir	3,960			
2002	Finished Water: Sulfate	No Concern	Stewart Creek arm	1,528			
2002	Finished Water: Total Dissolved Solids	No Concern	Hickory Creek arm	2,616			
2002	Finished Water: Total Dissolved Solids	No Concern	Little Elm Creek arm	3,589			
2002	Finished Water: Total Dissolved Solids	No Concern	Lowermost portion of reservoir	5,736			
2002	Finished Water: Total Dissolved Solids	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Finished Water: Total Dissolved Solids	No Concern	Remainder of reservoir	3,960			
2002	Finished Water: Total Dissolved Solids	No Concern	Stewart Creek arm	1,528			
2002	Finished Water: MTBE	No Concern	Hickory Creek arm	2,616			
2002	Finished Water: MTBE	No Concern	Little Elm Creek arm	3,589			
2002	Finished Water: MTBE	No Concern	Lowermost portion of reservoir	5,736			
2002	Finished Water: MTBE	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Finished Water: MTBE	No Concern	Remainder of reservoir	3,960			
2002	Finished Water: MTBE	No Concern	Stewart Creek arm	1,528			
2002	Finished Water: Perchlorate	Not Assessed	Hickory Creek arm	2,616			
2002	Finished Water: Perchlorate	Not Assessed	Little Elm Creek arm	3,589			
2002	Finished Water: Perchlorate	Not Assessed	Lowermost portion of reservoir	5,736			

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Public Water Supply Concern (continued)							
2002	Finished Water: Perchlorate	Not Assessed	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Finished Water: Perchlorate	Not Assessed	Remainder of reservoir	3,960			
2002	Finished Water: Perchlorate	Not Assessed	Stewart Creek arm	1,528			
2002	Finished Water: Overall	No Concern	Hickory Creek arm	2,616			
2002	Finished Water: Overall	No Concern	Little Elm Creek arm	3,589			
2002	Finished Water: Overall	No Concern	Lowermost portion of reservoir	5,736			
2002	Finished Water: Overall	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Finished Water: Overall	No Concern	Remainder of reservoir	3,960			
2002	Finished Water: Overall	No Concern	Stewart Creek arm	1,528			
2002	Surface Water: Chloride	No Concern	Hickory Creek arm	2,616	40		22.5
2002	Surface Water: Chloride	No Concern	Little Elm Creek arm	3,589	40		22.5
2002	Surface Water: Chloride	No Concern	Lowermost portion of reservoir	5,736	40		22.5
2002	Surface Water: Chloride	No Concern	Middle portion of reservoir east of Lake Dallas	5,851	40		22.5
2002	Surface Water: Chloride	No Concern	Remainder of reservoir	3,960	40		22.5
2002	Surface Water: Chloride	No Concern	Stewart Creek arm	1,528	40		22.5
2002	Surface Water: Sulfate	No Concern	Hickory Creek arm	2,616	15		33.9
2002	Surface Water: Sulfate	No Concern	Little Elm Creek arm	3,589	15		33.9
2002	Surface Water: Sulfate	No Concern	Lowermost portion of reservoir	5,736	15		33.9
2002	Surface Water: Sulfate	No Concern	Middle portion of reservoir east of Lake Dallas	5,851	15		33.9
2002	Surface Water: Sulfate	No Concern	Remainder of reservoir	3,960	15		33.9
2002	Surface Water: Sulfate	No Concern	Stewart Creek arm	1,528	15		33.9
2002	Surface Water: Total Dissolved Solids	No Concern	Hickory Creek arm	2,616	66		218.65
2002	Surface Water: Total Dissolved Solids	No Concern	Little Elm Creek arm	3,589	66		218.65

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir Trinity River Basin Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Public Water Supply Concern (continued)							
2002	Surface Water: Total Dissolved Solids	No Concern	Lowermost portion of reservoir	5,736	66		218.65
2002	Surface Water: Total Dissolved Solids	No Concern	Middle portion of reservoir east of Lake Dallas	5,851	66		218.65
2002	Surface Water: Total Dissolved Solids	No Concern	Remainder of reservoir	3,960	66		218.65
2002	Surface Water: Total Dissolved Solids	No Concern	Stewart Creek arm	1,528	66		218.65
2002	Surface Water: Overall	No Concern	Hickory Creek arm	2,616			
2002	Surface Water: Overall	No Concern	Little Elm Creek arm	3,589			
2002	Surface Water: Overall	No Concern	Lowermost portion of reservoir	5,736			
2002	Surface Water: Overall	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Surface Water: Overall	No Concern	Remainder of reservoir	3,960			
2002	Surface Water: Overall	No Concern	Stewart Creek arm	1,528			
2002	Overall Public Water Supply Concerns	No Concern	Hickory Creek arm	2,616			
2002	Overall Public Water Supply Concerns	No Concern	Little Elm Creek arm	3,589			
2002	Overall Public Water Supply Concerns	No Concern	Lowermost portion of reservoir	5,736			
2002	Overall Public Water Supply Concerns	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Public Water Supply Concerns	No Concern	Remainder of reservoir	3,960			
2002	Overall Public Water Supply Concerns	No Concern	Stewart Creek arm	1,528			

Segment ID: 0823 **Water body name:** Lewisville Lake

Reservoir | Trinity River Basin | Total size: 23,280 Acres

Assessment Year	Assessment Method	Status of Use Support or Concern	Location	Location size	# of samples	# of exceedances	Mean
Narrative Criteria Concern							
2002	Overall Narrative Criteria Concerns	No Concern	Hickory Creek arm	2,616			
2002	Overall Narrative Criteria Concerns	No Concern	Little Elm Creek arm	3,589			
2002	Overall Narrative Criteria Concerns	No Concern	Lowermost portion of reservoir	5,736			
2002	Overall Narrative Criteria Concerns	No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002	Overall Narrative Criteria Concerns	No Concern	Remainder of reservoir	3,960			
2002	Overall Narrative Criteria Concerns	No Concern	Stewart Creek arm	1,528			
Overall Secondary Concern							
2002		Concern	Hickory Creek arm	2,616			
2002		Concern	Little Elm Creek arm	3,589			
2002		No Concern	Lowermost portion of reservoir	5,736			
2002		No Concern	Middle portion of reservoir east of Lake Dallas	5,851			
2002		No Concern	Remainder of reservoir	3,960			
2002		No Concern	Stewart Creek arm	1,528			

Additional Reference Resources

Texas Water Development Board Updated Evaluation of Water Resources in Part of North-Central Texas

Date Accessed: December 22, 2023

Texas Water Development Board

Open-File Report 99-02

Updated Evaluation of Water Resources in Part of North-Central Texas

By

Lon Langley

September 1999

Well ID	County	Formation	Measurement Period	Average Yearly Difference (ft)	Total Water-Level Difference (ft)
19-20-801	Montague	Antlers	1970-1989	+2.20	+41.87
			1989-1997	-0.26	-2.09
19-51-901	Wise	Twin Mtns	1970-1989	-0.02	-0.41
			1989-1997	+0.52	+4.14
32-46-907	Johnson	Trinity	1972-1989	-22.41	-381.00
			1989-1997	-12.50	-100.00
19-15-701	Cooke	Antlers	1970-1989	-1.40	-26.65
			1989-1997	-1.52	-12.17
19-24-702	Cooke	Antlers	1960-1989	-7.00	-181.90
			1989-1997	-4.12	-32.99
33-19-101	Dallas	Twin Mtns	1970-1989	-6.26	-118.81
			1989-1998	+8.33	+74.98
32-16-101	Tarrant	Twin Mtns	1970-1989	-10.68	-203.00
			1989-1997	-29.36	-234.85

Table 1. Water-level differences within the Antlers and Twin Mountains Formations, Trinity aquifer (based on data from TWDB, 1998a).

Water levels in individual wells in the Paluxy Formation show a variety of historical water-level changes (Figure 9). Two wells show little change over the past 30 years (19-60-601, 32-02-101) while one shows an overall decline of about 220 ft (18-49-101). A well in Tarrant County (32-16-201) shows large historical variations including a 220 foot rise between 1972 and 1976 and 25 to 100 ft variations since 1980. Since 1989, water levels in selected wells have declined as much as 55 feet and rebounded less than 3 feet (Table 2). Rates of water-level changes between 1989-1997 range from +0.36 to −13.75 feet per year (Table 2).

Well ID	County	Formation	Measurement Period	Average Yearly Difference (ft)	Total Water-Level Difference (ft)
19-60-601	Wise	Paluxy	1970-1989	-2.63	-50.03
			1989-1996	+0.36	+2.52
32-02-101	Parker	Paluxy	1971-1989	+0.11	+2.03
			1989-1997	-2.47	-19.75
18-49-101	Denton	Paluxy	1970-1989	-9.99	-189.99
			1989-1996	-4.31	-30.16
32-16-201	Tarrant	Paluxy	1971-1989	+8.33	+150.00
			1989-1993	-13.75	-55.00

Table 2. Water-level differences within the Paluxy Formation, Trinity aquifer (based on data from TWDB, 1998a).

Groundwater flow in the Woodbine aquifer is generally to the east-southeast (Figure 10). Water-level elevations have not changed significantly since 1989 (Figure 11). The greatest water-level differences occur in northern Collin County, the central to northeastern portion of Denton County, eastern Cooke County, and northern Grayson County (Figure 11). Water levels have declined an average of 10 feet over most of this area, with declines of 60 feet observed in the northern part of Grayson County. Water levels in Johnson County have remained steady from 1989 to 1997.

Water levels in individual wells in the Woodbine aquifer show a variety of historical water-level changes (Figure 12). Some wells show little change over the past 30 years (18-25-301, 32-39-505, 17-12-101) while others show overall declines (18-50-202, 18-38-302, 33-50-502). A well in Fannin County (18-38-302) shows a decline of about 179 feet from 1971 to 1989 with generally stable water levels since 1989. Since 1989, water levels in selected wells have declined as much as 42 feet and rebounded less than 3 feet (Table 3). Rates of water-level changes between 1989-1997 range from +0.34 to –5.94 feet per year (Table 3).

Well ID	County	Formation	Measurement Period	Average Yearly Difference (ft)	Total Water-Level Difference (ft)
18-25-301	Grayson	Woodbine	1971-1989	-0.67	-12.07
			1989-1997	-0.17	-1.38
18-50-202	Collin	Woodbine	1969-1989	-1.25	-25.05
			1989-1997	-1.16	-9.27
32-39-505	Johnson	Woodbine	1966-1989	-0.90	-20.69
			1989-1997	+0.10	+0.82
17-12-101	Lamar	Woodbine	1959-1989	+0.14	+4.12
			1989-1997	+0.34	+2.70
18-38-302	Fannin	Woodbine	1971-1989	-9.94	-179.00
			1989-1997	-0.48	-3.80
33-50-502	Ellis	Woodbine	1971-1989	+0.14	+2.45
			1989-1996	-5.94	-41.60

Table 3. Water-level differences within the Woodbine aquifer (based on data from TWDB, 1998a).

Precipitation

The primary source of recharge to the Trinity and Woodbine aquifers is infiltration from precipitation falling on the outcrop (Nordstrom, 1982). The amount of recharge to the Trinity and Woodbine aquifers is estimated to be less than one inch per year (Nordstrom, 1982). This amounts to about 3 percent of average annual precipitation in the area.

Annual precipitation varies from 28-32 inches in the western part of the study area to 44-48 inches in the eastern part (Nordstrom, 1982). From 1960 through 1996, average

Parameter	No. of Samples	Average (mg/l)	Minimum (mg/l)	Maximum (mg/l)
TDS	131	717.67	221.00	2,038.00
Chloride	131	98.21	3.00	647.00
Sodium	131	245.26	8.80	657.00
Nitrate as N	129	1.00	<0.04	18.50
Sulfate	131	103.10	12.00	725.00
Fluoride	131	0.90	0.04	3.06

Table 4. Groundwater quality in the Antlers and Twin Mountains Formations, Trinity aquifer (based on data from TWDB 1998a).

Sulfate levels had an average of 103 mg/l (Table 4) with 4 samples exceeding 300 mg/l. The average fluoride concentration was 0.90 mg/l (Table 4) with the highest concentration reading 3.06 mg/l.

The highest TDS, chloride, and sodium levels were recorded in samples from well 32-06-104, located in north-central Tarrant County. The TDS concentration was 3,302 mg/l, chloride was 1,822 mg/l, and sodium was 1,210 mg/l. This area exhibits higher than normal TDS values possibly due to contamination from oil and gas production, as well as various other industries (Baker and others, 1990). Therefore, this well was not included in computing the average concentrations above.

Well 33-26-301, located in south-central Dallas County, is owned by the City of Lancaster and is currently used for backup purposes only. The TDS concentration was 2,038 mg/l, with chloride, sodium, and sulfate concentrations of 326 mg/l, 657 mg/l, and 725 mg/l, respectively, and probably reflects natural conditions.

The majority of samples exhibiting elevated TDS, chloride, sodium, and sulfate concentrations were collected from the Twin Mountains Formation. The areas showing high TDS concentrations include north-central Tarrant County and parts of Denton, Collin, Dallas, and Ellis Counties. Current TDS ranges are not significantly higher than historical values reported by Baker and others (1990).

In general, groundwater quality in the Paluxy Formation of the Trinity aquifer has remained acceptable throughout the study area. TDS concentrations for water samples collected from the Paluxy Formation averaged 607 mg/l (Table 5) with only 4 out of 51 wells sampled showing TDS concentrations above the secondary constituent level (Figure 16). The highest TDS concentration was 1,339 mg/l and was recorded at an irrigation well (18-58-503) located in Collin County. Chloride, sodium, sulfate and nitrate concentrations for this well were 31 mg/l, 431 mg/l, 590 mg/l and <0.04 mg/l, respectively.

Parameter	No. of Samples	Average (mg/l)	Minimum (mg/l)	Maximum (mg/l)
TDS	51	606.70	203.00	1,339.00
Chloride	51	36.08	4.00	273.00
Sodium	51	187.76	7.10	444.00
Nitrate as N	51	1.00	<0.04	25.85
Sulfate	51	101.25	0.89	590.00
Fluoride	51	1.06	0.17	4.10

Table 5. Groundwater quality in the Paluxy Formation, Trinity aquifer (based on data from TWDB, 1998a).

Chloride and nitrate as nitrogen levels averaged 36 mg/l and 1 mg/l, respectively, and were all within primary constituent levels with the exception of one nitrate sample (Table 5). The highest nitrate concentration originated from well 32-10-603, located north of Weatherford in Parker County.

Sulfate and fluoride levels averaged 103 mg/l and 0.9 mg/l, respectively (Table 5). This well is designated as a public supply well and had a nitrate level of 25.85 mg/l. One sulfate sample (from well 18-58-503, described above) and one fluoride sample (from well 32-39-805, located in Johnson County) exceeded secondary constituent levels.

Woodbine Aquifer

Generally, TDS concentrations increase downdip towards the eastern part of the study area (Figure 17). Average TDS was 877 mg/l (Table 6) with the highest concentration (2,278 mg/l) from a public supply well (32-47-805) for the city of Grandview in southeastern Johnson County well. Chloride has an average concentration of 86 mg/l (Table 6) with 5 wells exceeding secondary constituent levels. Well 18-55-401, a public supply well owned by Caddo Basin Special Utility District located in Greenville (Hunt County), had the highest chloride concentration of 507 mg/l.

Parameter	No. of Samples	Average (mg/l)	Minimum (mg/l)	Maximum (mg/l)
TDS	76	877.39	83.00	2,278.00
Chloride	76	85.88	4.07	507.00
Sodium	76	311.76	9.53	825.00
Nitrate as N	76	0.67	<0.04	10.41
Sulfate	76	209.18	5.42	1,263.00
Fluoride	76	1.30	0.24	6.27

Table 6. Groundwater quality of the Woodbine aquifer (based on data from TWDB, 1998a).

	1985	1990*	1995	2000	2010	2020	2030
Collin County [1]							
Allen	13,260	18,309	25,349	36,269	71,847	90,582	107,716
Celina	1,784	1,737	2,069	2,354	2,816	3,476	4,060
Dallas [2]	2,443	26,325	27,423	28,678	30,407	34,329	37,262
Fairview	1,178	1,554	2,189	2,461	3,051	3,855	4,581
Farmersville	2,810	2,640	3,178	3,537	4,125	4,999	5,761
Frisco [2]	4,557	6,141	12,331	13,783	32,295	39,227	45,450
Garland	14	15	16	22	25	31	35
Lucas	1,682	2,205	3,059	2,969	3,909	5,135	6,263
McKinney	19,568	21,283	29,492	32,950	50,712	58,632	65,912
Melissa	0	557	764	803	1,085	1,158	1,269
Murphy	1,202	1,547	2,195	1,855	2,265	2,834	3,343
New Hope	0	523	587	557	578	589	623
Parker	1,482	1,235	1,422	1,585	1,975	2,505	2,984
Plano [2]	102,806	128,713	167,858	186,713	253,734	340,688	397,380
Princeton	4,436	2,321	3,187	2,156	2,115	2,112	2,108
Prosper	0	1,018	1,281	1,356	1,743	2,256	2,726
Richardson [2]	6,333	9,979	11,381	11,828	12,620	14,007	15,358
Sachse [2]	49	194	287	472	565	635	738
Wylie	4,448	8,662	10,268	12,373	16,698	21,188	25,293
County Other [2]	20,678	31,724	38,143	44,729	34,724	78,279	143,903
Total	188,730	266,682	342,479	387,450	527,289	706,517	872,765
Cooke County							
Gainesville	14,101	14,256	14,843	14,531	15,667	17,052	18,023
Muenster	1,298	1,387	1,473	1,453	1,566	1,705	1,802
County Other [2]	13,615	16,384	16,112	16,535	17,860	17,941	18,081
Total	29,014	32,027	32,428	32,519	35,093	36,698	37,906
Dallas County							
Addision	6,995	8,783	10,579	11,892	14,382	16,128	17,893
Balch Springs	18,286	17,406	18,606	21,998	24,747	26,774	27,802
Carrollton [2]	32,204	40,024	47,400	48,387	53,102	56,692	58,280
Cedar Hill [2]	11,014	19,926	23,749	27,203	37,205	48,309	62,751
Cockrell Hill	4,085	3,746	4,168	4,057	4,153	4,270	4,267
Combine [2]	0	434	469	504	590	682	762
Coppell	7,813	16,878	23,608	23,368	32,345	42,230	55,062
Dallas [2]	989,758	966,168	1,006,575	1,005,780	1,039,119	1,071,352	1,104,535
De Soto	22,404	30,544	34,147	35,571	45,670	55,264	63,870
Duncanville	33,569	35,748	37,021	39,323	42,924	45,691	46,865
Farmers Branch	27,999	24,250	24,974	25,381	26,665	29,021	31,039
Garland [2]	168,772	180,635	189,626	196,391	213,697	227,069	232,590

*Based on 1990 Census.

Table 7. Historical and projected populations for the study area (TWDB, 1998b).

	1985	1990*	1995	2000	2010	2020	2030
Dallas County (continued)							
Glenn Heights [2]	1,174	3,768	4,678	5,010	5,972	6,889	7,763
Grand Prairie [2]	84,261	81,527	88,306	88,257	95,439	96,990	100,536
Grapevine [2]	54	83	94	99	110	122	133
Highland Park	9,158	8,739	9,635	8,905	9,071	9,497	10,137
Hutchins	3,777	2,719	2,842	3,085	3,594	4,290	5,235
Irving	124,672	155,037	169,265	177,002	188,410	205,810	229,994
Lancaster	18,958	22,117	26,050	24,640	28,184	30,759	32,146
Lewisville [2]	0	555	683	768	1,021	1,352	1,611
Mesquite	83,080	101,484	112,701	117,742	138,042	159,638	180,723
Ovilla [2]	63	279	352	319	366	424	483
Richardson [2]	71,506	64,861	74,026	73,526	76,162	81,876	86,364
Rowlett [2]	9,215	19,907	27,485	24,689	31,309	39,178	49,564
Sachse [2]	2,797	5,152	6,840	9,082	15,948	18,735	21,435
Seagoville	8,942	8,969	10,059	12,846	18,938	21,443	23,602
Sunnyvale	1,885	2,228	2,733	2,666	3,413	4,292	5,448
University Park	23,853	22,259	22,156	22,528	22,797	23,163	24,008
Wilmer	3,169	2,479	2,599	2,665	2,840	3,027	3,155
County Other	12,267	6,105	5,940	61,174	110,613	225,826	296,551
Total	1,781,730	1,852,810	1,987,366	2,074,858	2,286,828	2,556,793	2,784,604
Delta County [1]							
County Other	762	767	815	709	695	694	687
Total	762	767	815	709	695	694	687
Denton County							
Argyle	1,313	1,575	1,828	1,916	2,369	2,898	3,496
Aubrey	1,250	1,138	1,278	1,991	2,396	2,959	3,588
Carrollton [2]	25,582	42,145	49,920	48,645	56,008	61,351	64,222
Copper Canyon	0	978	1,302	1,539	1,967	2,489	2,647
Corinth	1,843	3,994	5,432	6,441	10,214	14,878	20,135
Dallas [2]	168	14,338	14,894	18,217	19,748	21,854	25,203
Denton	51,420	66,270	73,646	77,090	90,051	104,283	119,486
Double Oak	0	1,664	2,013	2,203	2,881	3,643	4,474
Flower Mound	7,205	15,527	28,379	28,195	51,198	73,949	99,685
Frisco [2]	112	268	538	603	1,406	1,629	1,962
Hebron	0	1,128	1,364	1,590	2,156	2,798	3,484
Hickory Creek	1,917	1,893	2,103	2,845	3,569	4,410	5,349
Highland Village	3,880	7,027	10,839	12,603	17,499	22,395	24,551
Justin	0	1,234	1,506	1,982	2,890	3,886	4,941
Krum	0	1,542	2,026	2,444	3,271	4,121	5,222
Lake Dallas	3,665	3,656	4,250	4,029	4,558	5,214	6,050

*Based on 1990 Census.

Table 7. Historical and projected populations for the study area (TWDB, 1998b) (continued).

	1985	1990*	1995	2000	2010	2020	2030
Denton County (continued)							
Lewisville	26,162	45,966	56,730	61,953	82,070	105,051	129,831
Little Elm	0	1,255	1,385	2,094	3,099	4,226	5,381
Oak Point	0	645	927	969	1,145	1,329	1,517
Pilot Point	2,421	2,538	2,876	3,652	4,770	5,910	7,573
Plano [2]	2	40	50	57	78	100	130
Roanoke	0	1,616	2,203	2,397	3,204	4,125	5,113
Sanger	3,632	3,508	4,052	4,638	6,057	7,594	9,734
Shady Shores	0	1,045	1,280	1,387	1,712	2,092	2,522
Southlake [2]	18	242	284	625	1,109	1,341	1,740
The Colony	24,850	22,113	25,466	27,160	31,143	34,036	33,026
Trophy Club	0	3,992	4,586	4,998	7,397	10,087	12,859
County Other	35,554	26,308	32,280	63,693	109,240	170,540	241,634
Total	190,994	273,645	333,437	385,956	523,205	679,188	845,555
Ellis County							
Cedar Hill [2]	2	50	59	68	102	137	181
Ennis	13,211	13,883	14,567	14,723	16,437	18,484	20,605
Ferris [2]	2,406	2,212	2,314	2,284	2,719	3,236	3,766
Glenn Heights [2]	28	796	988	964	1,194	1,387	1,612
Grand Prairie [2]	6	3	3	65	122	220	220
Italy	1,570	1,699	1,906	2,239	2,719	3,235	3,745
Mansfield [2]	60	142	172	430	716	1,064	1,457
Midlothian	5,099	5,141	5,690	9,185	11,938	14,789	17,552
Ovilla [2]	1,418	1,748	2,201	2,011	2,495	3,006	3,500
Palmer	1,619	1,659	1,727	2,325	2,848	3,407	3,957
Red Oak	2,694	3,124	3,724	4,604	5,881	7,213	8,510
Waxahachie	17,158	18,168	19,181	22,454	26,692	31,330	35,953
County Other	27,984	36,148	43,368	45,569	57,004	69,013	80,653
Total	73,255	84,773	95,900	106,921	130,867	156,521	181,711
Fannin County							
Bonham	7,156	6,686	6,717	7,186	7,026	6,502	6,313
Honey Grove [2]	1,820	1,681	1,742	1,793	1,753	1,613	1,566
Leonard [2]	1,423	1,744	1,830	2,046	2,093	2,039	2,063
County Other [2]	14,206	15,283	15,785	15,667	16,094	17,254	17,893
Total	24,605	25,394	26,074	26,692	26,966	27,408	27,835
Grayson County							
Collinsville	0	1,033	1,144	1,131	1,193	1,265	1,331
Denison [2]	24,504	21,505	21,723	22,950	23,759	23,841	23,697

*Based on 1990 Census.

Table 7. Historical and projected populations for the study area (TWDB, 1998b)(continued).

	1985	1990*	1995	2000	2010	2020	2030
Grayson County (continued)							
Howe [2]	2,471	2,173	2,192	2,250	2,545	2,635	2,776
Pottsboro	0	1,177	1,426	1,411	1,559	1,809	2,010
Sherman	31,460	31,601	32,465	32,889	35,134	36,378	38,340
Van Alstyne	2,127	2,090	2,257	2,388	2,595	2,930	3,202
Whitesboro [2]	3,323	3,209	3,323	3,301	3,340	3,286	3,268
Whitewright [2]	1,769	1,713	1,678	1,852	1,913	1,960	2,009
County Other [2]	31,020	30,520	31,780	33,947	34,239	36,539	38,069
Total	96,674	95,021	97,988	102,119	106,277	110,643	114,702
Hood County							
Granbury	5,038	4,045	4,854	6,469	7,837	9,399	10,925
County Other	20,556	24,936	27,144	29,485	36,392	44,041	51,733
Total	25,594	28,981	31,998	35,954	44,229	53,440	62,658
Hunt County [1]							
Wolfe City	1,657	1,505	1,561	1,620	1,753	1,842	1,976
County Other [2]	1,313	1,245	1,410	1,496	1,635	1,748	1,802
Total	2,970	2,750	2,971	3,116	3,388	3,590	3,778
Johnson County							
Alvarado	5,016	2,918	3,179	3,266	4,039	4,851	5,718
Burleson [2]	14,443	14,153	16,825	19,083	24,039	29,079	34,307
Cleburne	22,324	22,205	23,179	26,032	29,205	32,649	36,109
Grandview	1,348	1,245	1,296	1,511	1,650	1,805	1,958
Joshua	2,608	3,828	4,405	4,761	6,474	8,189	9,981
Keene [2]	3,156	3,944	4,433	4,636	4,994	5,412	6,732
Mansfield [2]	130	617	748	852	954	1,247	1,371
County Other [2]	38,648	48,255	53,124	59,337	74,097	88,936	103,550
Total	87,673	97,165	107,189	119,478	145,452	172,168	199,726
Kaufman County [1]							
Combine	785	895	1,712	1,108	1,303	1,499	1,666
Dallas [2]	1	7	7	8	8	8	8
Forney	1,155	1,083	1,247	1,527	1,753	1,913	1,973
County Other [2]	2,472	2,618	2,768	3,076	3,654	4,294	4,853
Total	4,413	4,603	5,734	5,719	6,718	7,714	8,500

*Based on 1990 Census.

Table 7. Historical and projected populations for the study area (TWDB, 1998b)(continued).

	1985	1990*	1995	2000	2010	2020	2030
Lamar County [1]							
Blossom	1,811	1,440	1,658	1,798	2,170	2,566	3,002
Paris [2]	26,252	24,699	25,257	25,035	25,464	26,047	26,507
Reno	1,169	1,784	2,284	2,201	2,465	2,774	3,090
County Other [2]	14,690	15,172	15,711	16,202	17,521	18,978	20,534
Total	43,922	43,095	44,910	45,236	47,620	50,365	53,133
Montague County [1]							
Bowie	4,688	4,047	4,344	3,953	3,872	3,793	3,630
Montague	233	500	490	479	470	460	440
Saint Jo [2]	1,210	1,048	1,123	1,084	1,102	1,134	1,163
County Other [2]	2,355	3,855	4,020	3,747	3,628	3,499	3,270
Total	8,486	9,450	9,977	9,263	9,072	8,886	8,503
Navarro County [1]							
Corsicana	1,702	1,650	1,717	1,745	1,850	1,937	2,014
County Other	6,936	9,038	9,447	10,056	11,056	11,837	12,599
Total	8,638	10,688	11,164	11,801	12,906	13,774	14,613
Parker County [1]							
Aledo	1,432	1,169	1,334	1,994	2,393	2,855	3,355
Azle [2]	1,235	1,203	1,420	1,844	2,179	2,398	2,642
Briar [2]	417	588	629	673	797	928	1,073
Reno	1,645	2,322	2,561	2,712	3,091	3,546	4,049
Springtown	2,578	1,740	1,917	2,432	3,149	3,873	4,638
Weatherford [2]	15,660	14,804	17,051	19,083	23,895	28,817	34,099
Willow Park	1,683	2,328	2,652	3,121	4,046	4,981	5,968
County Other [2]	30,327	37,926	42,316	45,356	55,739	66,377	77,974
Total	54,977	62,080	69,880	77,215	95,289	113,775	133,798
Red River County [1]							
Clarksville	4,724	4,311	4,345	4,162	4,135	4,068	3,865
County Other [2]	3,012	3,492	3,606	3,503	3,435	3,346	3,169
Total	7,736	7,803	7,951	7,665	7,570	7,414	7,034
Rockwall County [1]							
Dallas [2]	0	39	40	44	51	65	86
Heath [2]	1,774	2,108	2,829	3,018	4,254	5,957	8,084

*Based on 1990 Census.

Table 7. Historical and projected populations for the study area (TWDB, 1998b)(continued).

Aquifer	Use	1985	1990	1995
		(acre-feet per year)		
Trinity Aquifer				
	Municipal	76,626	71,027	58,994
	Manufacturing	3,990	4,077	3,211
	Power	3,203	889	241
	Mining	1,694	938	2,617
	Irrigation	814	711	745
	Livestock	3,644	3,830	4,067
	Total	89,971	81,472	69,875
Woodbine Aquifer				
	Municipal	8,823	9,353	10,407
	Manufacturing	1,394	1,030	1,126
	Power	359	206	314
	Mining	397	406	573
	Irrigation	5,441	2,613	3,031
	Livestock	1,289	1,470	1,656
	Total	17,703	15,078	17,107
Total-Study Area		**107,674**	**96,550**	**86,982**

Table 8. Estimated groundwater pumpage, 1985-1995 (TWDB, 1998a).

	(acre-feet per year)					
	1985		1990		1995	
	Surface	Ground	Surface	Ground	Surface	Ground
Total of Study Area:						
Total Municipal Water Use	710,274	79,587	774,970	75,053	836,233	67,663
Other Water Use						
Manufacturing	70,986	11,132	88,838	11,315	70,873	8,257
Irrigation	12,315	6,334	12,075	4,750	13,701	7,010
Steam-Electric	36,003	3,407	33,943	1,095	30,148	554
Mining	3,702	1,699	4,572	1,424	14,858	3,259
Livestock	13,227	5,206	13,251	5,508	14,362	5,961
Total Water Use	846,507	107,365	927,649	99,145	980,175	92,704
Total Combined Water Use	**953,872**		**1,026,794**		**1,072,879**	

[1]County partially included in study area.
[2] City or county other area partially within county included in study area.

Table 9. Historical water use for the study area (TWDB, 1998a)(continued).

	2000	2010	2020	2030
Municipal Use				
Major Cities				
		(acre-feet per year)		
Groundwater				
Trinity Aquifer	22,158	18,147	17,936	18,286
Woodbine Aquifer	4,398	4,581	4,923	5,324
Total Groundwater	26,556	22,728	22,859	23,610
Surface Water	958,345	1,044,793	1,083,239	1,121,364
Subtotal	984,901	1,067,521	1,106,098	1,144,974
County Other				
Groundwater				
Trinity Aquifer	21,709	23,255	22,747	19,019
Woodbine Aquifer	6,831	6,769	6,718	6,629
Total Groundwater	28,540	30,024	29,465	25,648
Surface Water	63,357	86,010	140,389	190,937
Subtotal	91,897	116,034	169,854	216,585
Total Municipal Use	1,076,798	1,183,555	1,275,952	1,361,559
Other Uses				
Groundwater				
Aquifer: Trinity Aquifer	6,470	6,725	6,543	5,186
Aquifer: Woodbine Aquifer	8,949	8,633	8,440	8,319
Total Groundwater	15,419	15,358	14,983	13,505
Surface Water	185,544	205,914	222,020	248,154
Subtotal	200,963	221,272	237,003	261,659
Study Area				
Groundwater				
Aquifer: Trinity Aquifer	50,337	48,127	47,226	42,491
Aquifer: Woodbine Aquifer	20,178	19,983	20,081	20,272
Total Groundwater	70,515	68,110	67,307	62,763
Surface Water				
Total Surface Water	1,207,246	1,336,717	1,445,648	1,560,455
Total for Study Area	**1,277,761**	**1,404,827**	**1,512,955**	**1,623,218**

Table 10. Projected water demands and supply sources for the study area (TWDB, 1998c).

County	Aquifer	Annual Effective Recharge	Annual Recoverable Storage	Estimated Average Annual Groundwater Availability (acre-feet)						
				1985	1990	1995	2000	2010	2020	2030
Cooke County	Trinity	3,753	776	4,529	4,529	4,529	4,529	4,529	4,529	3,753
	Woodbine	440	0	440	440	440	440	440	440	440
	Total	4,193	776	4,969	4,969	4,969	4,969	4,969	4,969	4,193
Denton County	Trinity	5,123	991	6,144	6,144	6,144	6,144	6,144	6,144	5,123
	Woodbine	1,010	0	1,010	1,010	1,010	1,010	1,010	1,010	1,010
	Total	6,133	991	7,154	7,154	7,154	7,154	7,154	7,154	6,133
Grayson County	Trinity	3,088	346	3,434	3,434	3,434	3,434	3,434	3,434	3,088
	Woodbine	5,710	0	5,710	5,710	5,710	5,710	5,710	5,710	5,710
	Total	8,798	346	9,144	9,144	9,144	9,144	9,144	9,144	8,798
Johnson County	Trinity	2,504	365	2,869	2,869	2,869	2,869	2,869	2,869	2,504
	Woodbine	866	0	866	866	866	866	866	866	866
	Total	3,370	365	3,735	3,735	3,735	3,735	3,735	3,735	3,370
Tarrant County	Trinity	4,996	0	4,996	4,996	4,996	4,996	4,996	4,996	4,996
	Woodbine	766	0	766	766	766	766	766	766	766
	Total	5,762	0	5,762	5,762	5,762	5,762	5,762	5,762	5,762
Parker County	Trinity	3,210	681	3,891	3,891	3,891	3,891	3,891	3,891	3,210
	Woodbine	0	0	0	0	0	0	0	0	0
	Total	3,210	681	3,891	3,891	3,891	3,891	3,891	3,891	3,210
Wise County	Trinity	4,163	805	4,968	4,968	4,968	4,968	4,968	4,968	4,163
	Woodbine	0	0	0	0	0	0	0	0	0
	Total	4,163	805	4,968	4,968	4,968	4,968	4,968	4,968	4,163

Table 11. Estimated groundwater availability (TDWR, 1990).

		(acre-feet per year)		
Cooke County		**1985**	**1990**	**1995**
	Estimated Supply	4,969	4,969	4,969
	Estimated Pumpage	6,392	6,223	6,656
	Difference	-1,423	-1,254	-1,687
Denton County				
	Estimated Supply	7,124	7,124	7,124
	Estimated Pumpage	9,038	10,235	10,807
	Difference	-1,914	-3,111	-3,683
Grayson County				
	Estimated Supply	9,144	9,144	9,144
	Estimated Pumpage	18,101	17,145	15,356
	Difference	-8,957	-8,001	-6,212
Johnson County				
	Estimated Supply	3,735	3,735	3,735
	Estimated Pumpage	8,035	7,950	9,010
	Difference	-4,300	-4,215	-5,275
Parker County				
	Estimated Supply	3,891	3,891	3,891
	Estimated Pumpage	4,351	5,133	5,802
	Difference	-460	-1,242	-1,911
Tarrant County				
	Estimated Supply	5,762	5,762	5,762
	Estimated Pumpage	17,822	14,952	13,329
	Difference	-12,060	-9,190	-7,567
Wise County				
	Estimated Supply	4,968	4,968	4,968
	Estimated Pumpage	3,669	3,776	4,285
	Difference	1,299	1,192	683

Table 12. Historical groundwater pumpage and supply as per the 1997 Consensus State Water Plan.

		2000	2010	2020	2030
		(acre-feet per year)			
Cooke County	Groundwater	5,594	3,454	3,290	3,140
	Surface Water	1,805	4,659	4,783	4,935
	Total	7,399	8,113	8,073	8,075
Denton County	Groundwater	7,124	7,048	7,124	6,133
	Surface Water	72,913	91,767	110,697	126,216
	Total	80,037	98,815	117,821	132,349
Grayson County	Groundwater	8,809	8,811	7,977	8,061
	Surface Water	16,929	17,170	18,162	18,658
	Total	25,738	25,981	26,139	26,719
Johnson County	Groundwater	3,077	3,005	3,014	3,119
	Surface Water	17,818	20,026	21,767	24,456
	Total	20,895	23,031	24,781	27,575
Parker County	Groundwater	5,790	5,981	6,198	5,824
	Surface Water	7,813	9,166	10,106	12,538
	Total	13,603	15,147	16,304	18,362
Tarrant County	Groundwater	5,678	5,668	5,670	5,654
	Surface Water	340,694	370,012	374,176	396,261
	Total	346,372	375,680	379,846	401,915
Wise County	Groundwater	4,968	4,968	4,968	4,163
	Surface Water	11,877	12,525	13,308	15,124
	Total	16,845	17,493	18,276	19,287

Table 13. Future water allocations as per the 1997 Consensus State Water Plan.

River Basin	Reservoir		Capacity (acre-feet)	Firm Yield (acre-feet)
Red River	Nocona		25,400	4,500
	Hubert H. Moss		23,210	4,500
	Texoma		2,643,300	147,500
	Pat Mayse		124,500	59,900
	Bonham		12,000	7,138
	Randall		5,400	5,280
	Crook		9,664	1,000
		Total	**2,843,474**	**229,818**
Sulphur River	Cooper		310,000	146,520
		Total	**310,000**	**146,520**
Sabine River	Tawakoni		927,400	235,160
		Total	**927,400**	**235,160**
Trinity River	Bridgeport		386,420	79,000
	Eagle Mountain		190,460	*
	Amon Carter		28,589	2,600
	Worth		38,130	2,400
	Weatherford		19,470	2,000
	Benbrook		88,250	9,800
	Grapevine		188,550	27,240
	Ray Roberts		799,600	110,000
	Lewisville		640,986	110,800
	Arlington		45,710	7,050
	Joe Pool		181,200	16,900
	Lavon		456,500	104,000
	Ray Hubbard		490,000	63,100
	Terrell		8,712	1,650
	Cedar Creek		679,200	162,500
	Waxahachie		13,500	2,400
	Bardwell		54,900	8,300
	Halbert		7,420	600
	Navarro Mills		63,300	23,100
	Richland Chambers		1,181,866	210,000
		Total	**5,562,763**	**943,440**
Brazos River	Possum Kingdom		504,100	233,500
	Palo Pinto		27,650	14,100
	Mineral Wells		6,760	1,500
	Granbury		153,500	66,500
	Pat Cleburne		25,560	4,600
		Total	**717,570**	**320,200**

* not available

Table 14. Reservoir capacity and firm yield (TWDB,1997).

Basin Totals	Capacity	Firm Yield
	(acre-feet)	(acre-feet)
Red River Basin	2,843,474	229,818
Sulphur River Basin	310,000	146,520
Sabine River Basin	927,400	235,160
Trinity River Basin	5,562,763	943,440
Brazos River Basin	717,570	320,200
Total for Study Area	**10,361,207**	**1,875,138**

Table 14. Reservoir capacity and firm yield (TWDB,1997) (continued).

Additional Reference Resources

USGS Nutrient Loading to Lewisville Lake, North-Central Texas, 1984-87

Date Accessed: December 22, 2023

NUTRIENT LOADING TO LEWISVILLE LAKE, NORTH-CENTRAL TEXAS, 1984–87

By W. Scott Gain and Stanley Baldys III

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations Report 95–4076

Prepared in cooperation with the
CITY OF DALLAS

Austin, Texas
1995

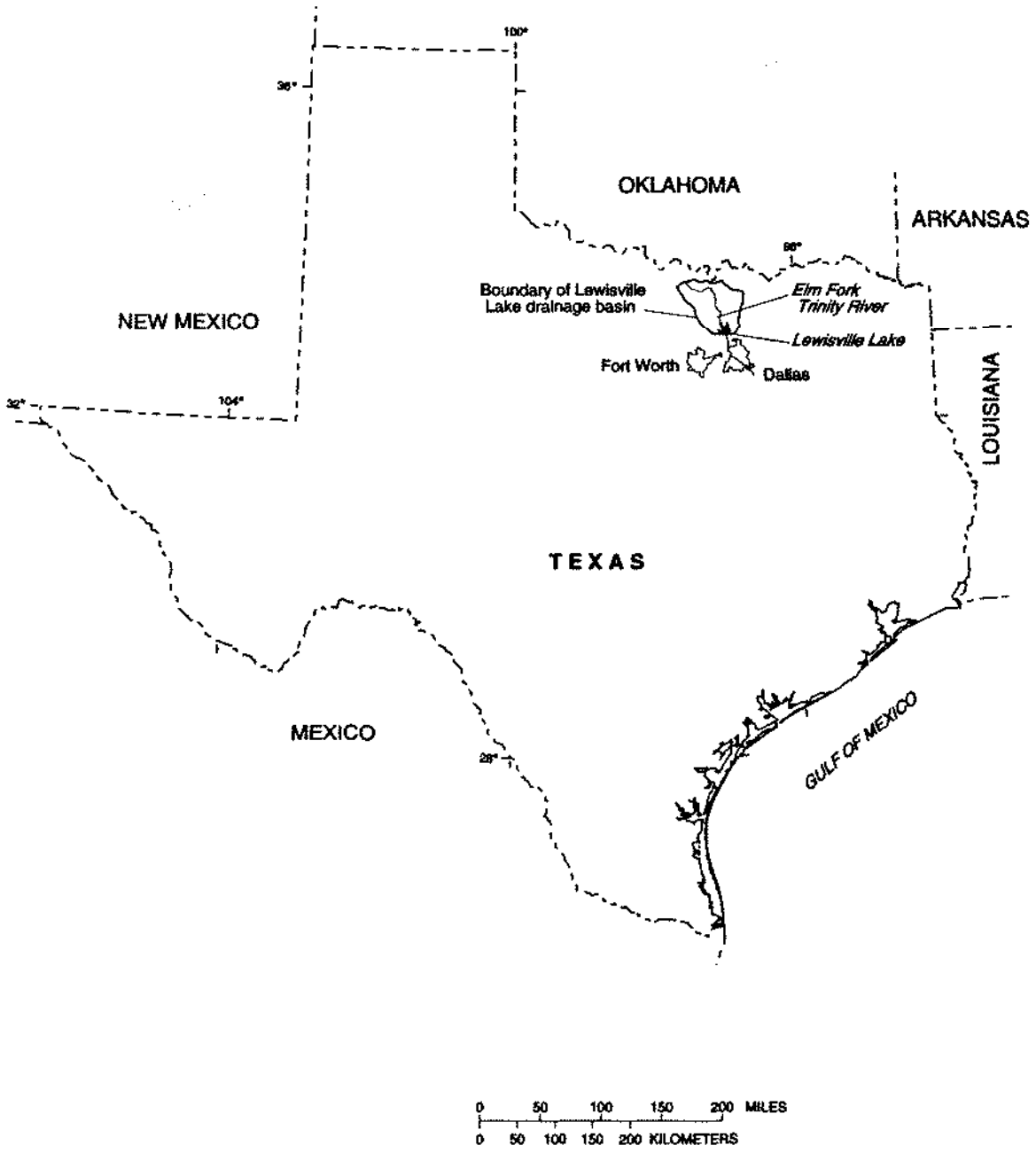


Figure 1. Location of Lewisville Lake.

Table 1. Location, physiographic region, and drainage area of synoptic-survey sites in the Lewisville Lake drainage basin

[mi^2, square miles; GP, Grand Prairie; ECT, East Cross Timbers; TBP, Texas Blackland Prairie]

Site number (pl. 1)	Location of site or streamflow-gaging station name (station number)	Physiographic region	Drainage area (mi^2)
Hickory Creek drainage area:			
H1	North Hickory Creek at US 380	GP	39.4
H2	South Hickory Creek at US 380	GP	20.1
H3	Dry Fork Hickory Creek at US 380	GP	4.13
[1]H4	Hickory Creek at Denton, Tex. (08052780)	GP	129
[1]H5	Fincher Branch at unnumbered county road	ECT	5.62
Clear Creek drainage area:			
C1	Clear Creek at FM 455	GP	257
C2	Duck Creek at FM 455	GP	31.4
C3	Clear Creek near Sanger, Tex. (08051500)	GP	295
[1]C4	Clear Creek at FM 2164	GP	323
[1]C5	Milam Creek at FM 2164	GP	12.4
Elm Fork Trinity River drainage area:			
E1	Elm Fork Trinity River at FM 2071	GP	182
E2	Elm Fork Trinity River at FM 922	GP	265
E3	Spring Creek at unnumbered county road	GP	71.1
[1]E4	Elm Fork Trinity River near Sanger, Tex. (08050500)	GP	381
Isle du Bois Creek drainage area:			
I1	Jordan Creek at unnumbered county road	ECT	65.3
I2	Isle du Bois Creek at unnumbered county road	ECT	205
[1]I3	Isle du Bois Creek near Pilot Point, Tex. (08051000)	ECT	266
Little Elm Creek drainage area:			
L1	Little Elm Creek at FM 455	TBP	46.7
[1]L2	Little Elm Creek near Aubrey, Tex. (08052700)	ECT	75.5
[1]L3	Mustang Creek at FM 428	ECT	22.2
[1]L4	Pecan Creek near Aubrey, Tex. (08052730)	ECT	32.2
[1]L5	Running Branch at FM 2931	ECT	2.79
Other streams in Lewisville Lake drainage basin:			
[1]O1	Cooper Creek at unnumbered county road	ECT	6.66
[1]O2	Alyne Branch at FM 424	ECT	7.02
[1]O3	Pecan Creek at FM 288	ECT	12.3
[1]O4	Button Branch at unnumbered county road	TBP	14.8
[1]O5	Panther Creek at FM 423	TBP	20.3
[1]O6	Cottonwood Branch at FM 423	TBP	9.45
[1]O7	Stewart Creek at unnumbered county road	TBP	8.73

[1] Downstream-most sites.

analyses were collected using depth-integrating suspended-sediment samplers and standard U.S. Geological Survey methods such as equal-width increment or equal-depth increment (Guy and Norman, 1970; Rantz and others, 1982). Immediately after collection, all nutrient samples were chilled and preserved with mercuric chloride. Analyses for determination of total nitrite plus nitrate nitrogen, total ammonia plus organic nitrogen, total nitrogen, total phosphorus, and total organic carbon concentrations were done by the U.S.

Geological Survey National Water Quality Laboratory in Arvada, Colorado, using standard analytical techniques (Skougstad and others, 1979).

Stormflow and Periodic Sampling

Following the synoptic surveys, the principal streams were selected for additional and more detailed study of nutrient-loading rates to evaluate and refine estimates of loading to the reservoir during stormflow conditions. Two of the streams had existing streamflow-gaging stations operated by the U.S. Geological Survey—Clear Creek near Sanger, Tex. (08051500, pl. 1), and Little Elm Creek near Aubrey, Tex. (08052700, pl. 1). A third streamflow-gaging station was installed in July 1985 on Hickory Creek at Denton, Tex. (08052780, pl. 1).

Stations on the two remaining principal streams in the study area (Elm Fork Trinity River near Sanger, Tex., and Isle du Bois Creek near Pilot Point, Tex.) could not be sampled because of backwater from construction of Ray Roberts Lake. Therefore, a streamflow-gaging station was installed on Elm Fork Trinity River near Pilot Point, Tex. (08051130, pl. 1), immediately below Ray Roberts Dam to provide additional nutrient-load data.

Samples were collected at Clear Creek near Sanger, Little Elm Creek near Aubrey, and Hickory Creek at Denton for about three stormflow events in each wet season (January to June) during the 1986–87 water years. Samples were collected periodically during the 1986–87 water years at the stormflow sampling stations and also at Elm Fork Trinity River near Pilot Point.

An automatic, vacuum-type water sampler, actuated by a float switch, was installed at each of the three stations above Lewisville Dam. During storms, the samplers operated at regular intervals (1 to 6 hours depending on the site and season) and marked the time of each sample collection on an event recorder. After storms, selected samples were withdrawn from the samplers, treated with mercuric chloride, and chilled. Instantaneous discharges were determined for each sampling period using the stage recorded at the time of sample collection and the stage-discharge rating for the station. Some storm samples were collected manually with a depth-integrating suspended-sediment sampler. In addition to stormflow samples, periodic samples (about six per year) were collected at the three stations during various flow conditions. Periodic samples also were collected at Elm Fork Trinity River near Pilot Point.

All samples were analyzed for total nitrite plus nitrate nitrogen, total ammonia plus organic nitrogen, and total phosphorus concentrations. Periodic samples also were analyzed for specific conductance, pH, hardness, and dissolved calcium, magnesium, sodium, potassium, sulfate, chloride, fluoride, and silica.

Discharge Characteristics Associated with Stormflow and Periodic Sampling

Daily mean discharge for the period of record at three streamflow-gaging stations used for stormflow and periodic sampling and one station used only for periodic sampling is given in the following table:

Streamflow-gaging station	Station number (pl. 1)	Daily mean discharge (ft^3/s)	Period of record[1]
	Stormflow and periodic sampling		
Clear Creek near Sanger, Tex.	08051500	87.0	1950–87
Little Elm Creek near Aubrey, Tex.	08052700	46.4	1957–76, 1980–87
Hickory Creek at Denton, Tex.	08052780	94.4	1986–87
	Periodic sampling		
Elm Fork Trinity River near Pilot Point, Tex.	08051130	[2]284	1950–84, 1986–87

[1] U.S. Geological Survey, 1987–88.

[2] Sum of daily mean discharge at Elm Fork Trinity River near Sanger and Isle du Bois Creek near Pilot Point used for 1950–84.

Table 3. Mean water-quality data for stormflow and periodic sampling at streamflow-gaging stations in the Lewisville Lake drainage basin, 1986–87 water years

[ft^3/s, cubic feet per second; µS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; N, nitrogen; P, phosphorus; $CaCO_3$, calcium carbonate; Ca, calcium]

Discharge or water-quality property or constituent	Stormflow and periodic sampling			Periodic sampling
	Clear Creek near Sanger (08051500)	Little Elm Creek near Aubrey (08052700)	Hickory Creek at Denton (08052780)	Elm Fork Trinity River near Pilot Point (08051130)
Instantaneous discharge (ft^3/s)	1,239	619	2,123	546
Specific conductance (µS/cm)	496	411	376	451
pH (standard units)	7.9	7.8	–	7.8
Nitrogen, nitrite plus nitrate, total (mg/L as N)	.78	2.0	1.1	.95
Nitrogen, ammonia plus organic, total (mg/L as N)	1.6	1.8	2.3	1.3
Phosphorus, total (mg/L as P)	.29	.37	.19	.20
Hardness, total (mg/L as $CaCO_3$)	210	140	160	160
Alkalinity (mg/L as $CaCO_3$)	169	120	139	142
Calcium, dissolved (mg/L as Ca)	69	51	59	55
Magnesium, dissolved (mg/L)	8.3	4.4	4.1	5.3
Sodium, dissolved (mg/L)	34	32	20	32
Potassium, dissolved (mg/L)	3	5	3	4
Sulfate, dissolved (mg/L)	36	81	30	37
Chloride, dissolved (mg/L)	54	12	14	34
Fluoride, dissolved (mg/L)	.2	.4	.2	.2
Silica, dissolved (mg/L)	10	7	11	8.7

relation of major ions in the water from each stream. Linear patterns in the arrangement of data in trilinear diagrams indicate mixing of dissimilar waters (Hem, 1985). The linear arrangement of the data for Clear Creek near Sanger (fig. 4) indicates the mixing of two dissimilar waters—one dominated by calcium carbonate and the other by sodium and chloride ions. This is attributed to Clear Creek draining from the West Cross Timbers and Grand Prairie physiographic regions. Dryer soils of the West Cross Timbers region could contain more sodium chloride than the prairie soils. As waters from the two regions mix, the major-ion ratios vary relative to the proportion of water from each of the regions.

A linear pattern, to a lesser degree than that of the Clear Creek near Sanger data, also can be seen in the data for Little Elm Creek near Aubrey (fig. 4), indicating a mixture of calcium carbonate- and sulfate-dominated water. Sulfate concentrations in Little Elm Creek generally are largest in low flows.

The data for Hickory Creek at Denton and Elm Fork Trinity River near Pilot Point indicate a calcium carbonate-dominated water (fig. 4). One sewage-treatment plant discharges above the sampling point on Hickory Creek (pl. 1).

Daily Mean Nutrient Loading

Daily mean nutrient loads for total nitrite plus nitrate nitrogen, total ammonia plus organic nitrogen, and total phosphorus were computed for each of four streamflow-gaging stations (on Clear Creek, Little Elm Creek, Hickory Creek, and Elm Fork Trinity River) (pl. 1), and for ungaged streams (collectively), in the

Table 4. Daily mean discharge and nutrient concentrations, loads, and yields for streamflow-gaging stations and ungaged streams in the Lewisville Lake drainage basin, 1986–87 water years

[mi^2, square miles; ft^3/s, cubic feet per second; $(ft^3/s)/mi^2$, cubic feet per second per square mile; mg/L, milligrams per liter; lb/d, pounds per day; $(lb/d)/mi^2$, pounds per day per square mile; --, not applicable; <, less than]

Streamflow-gaging station (number)	Drainage area (mi^2)	Water year	Daily mean discharge		Daily mean total nitrite plus nitrate nitrogen			Daily mean total ammonia plus organic nitrogen			Daily mean total phosphorus		
			(ft^3/s)	[$(ft^3/s)/mi^2$]	Concentration (mg/L)	Load (lb/d)	Yield [$(lb/d)/mi^2$]	Concentration (mg/L)	Load (lb/d)	Yield [$(lb/d)/mi^2$]	Concentration (mg/L)	Load (lb/d)	Yield [$(lb/d)/mi^2$]
Clear Creek near Sanger, Tex. (08051500)	295	1986	146	0.49	0.65	511	1.7	1.5	1,150	3.9	0.22	174	0.59
		1987	158	.54	.62	526	1.8	1.4	1,180	4.0	.21	177	.60
Little Elm Creek near Aubrey, Tex. (08052700)	75.5	1986	49.6	.66	1.9	503	6.7	1.8	469	6.2	.32	85.5	1.1
		1987	24.8	.33	1.6	216	2.9	1.7	223	3.0	.32	42.3	.56
Hickory Creek at Denton, Tex. (08052780)	129	1986	107	.83	1.1	646	5.0	2.1	1,210	9.4	.20	117	.91
		1987	81.7	.63	1.1	482	3.7	2.0	883	6.8	.19	85.2	.66
Elm Fork Trinity River near Pilot Point, Tex. (08051130)	692	1986	437	.63	1.0	2,450	3.5	1.3	2,970	4.3	.26	609	.88
		1987	365	.53	1.0	2,030	2.9	1.3	2,490	3.6	.26	502	.73
Ungaged streams in Lewisville Lake drainage basin	434	1986	272	.63	.97	[1]1,420	3.3	1.8	[1]2,650	6.1	.22	[1]324	.75
		1987	242	.56	.86	[1]1,130	2.6	1.7	[1]2,170	5.0	.21	[1]270	.62
Lewisville Lake (precipitation)[2]	36.0	1986	--	--	.18	107	3.0	.14	83.0	2.3	<.003	<1.80	<.05
		1987	--	--	.18	92.0	2.6	.14	72.0	2.0	<.003	<1.60	<.04
Total	1,660	1986	1,010	--	--	[1]5,640	--	--	[1]8,530	--	--	[1]1,310	--
		1987	870	--	--	[1]4,480	--	--	[1]7,020	--	--	[1]1,080	--

[1] Does not include loads from sewage-treatment plants.

[2] National Atmospheric Deposition Program, 1987a, b, 1988a, b.

APPENDIX D

Chapter 307 Analysis Calculations and Water Impact Calculations

TAC 30 - CHAPTER 307 - SCREENING AND PERMIT LIMITATION ESTIMATES SUMMARY

TDS

Calculated Screening Value Stream = 2,500.00 mg/L
Estimated Effluent Concentration = 324 mg/L
Permit Needed = *No Permit Limitations Necessary*

CHLORIDE

Calculated Screening Value Stream = 400.00 mg/L
Estimated Effluent Concentration = 37.8 mg/L
Permit Needed = *No Permit Limitations Necessary*

SULFATE

Calculated Screening Value Stream = 300.00 mg/L
Estimated Effluent Concentration = 91.6 mg/L
Permit Needed = *No Permit Limitations Necessary*

Screening: TDS
Stream Type: Intermittent Stream
Stream Name: Unnamed to Pecan Creek
Distance to Lake Lewisville: 8 miles

Step 1: Determine Screening Value for Intermittent Stream

Parameter	Existing Pecan Creek (mg/L) TDS Cc	Existing On Site Well Concentration (mg/L)	Estimated Screening Limit (mg/L)
TDS	500	324	2,500.00

Pond Evaporation Characteristics		
Evaporation Loss =	10,480,561	gallons/year
Supplemented Water for Pond =	62.00	gallons/minute
Supplemented Water for Pond =	0.14	cfs
Pond Surface Area =	8.21	acres

Stream/Segment Characteristics		*Data Below Accessed: 10/28/24*
Flow Type =	Intermittent Flow	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Equation for Screening =	Equation 1	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Ambient Concentration TDS (mg/L) =	239	Procedures to Implement the Texas Surface Water Quality Standards - 2022

Step 2: Determine Screening Value

Screening Value = 2,500.00 mg/L

Step 3: Determine if Control Measure is needed

Screening TDS Value = 2500 mg/L
Maximum Effluent TDS Proposed = 324 mg/L

If, Screening Value > or = Maximum Effluent TDS then no control measure needed
If, Screening Value < Maximum Effluent TDS then a control measure is needed

Control Measure = Control Measure Not Needed

Screening: Chloride
Stream Type: Intermittent Stream
Stream Name: Unnamed to Pecan Creek
Distance to Lake Lewisville: 8 miles

Step 1: Determine Screening Value for Intermittent Stream

Parameter	Existing Pecan Creek (mg/L) Cl Cc	Existing On Site Well Concentration (mg/L)	Estimated Screening Limit (mg/L)
Chloride	80	37.8	400.00

Pond Evaporation Characteristics		
Evaporation Loss =	10,480,561	gallons/year
Supplemented Water for Pond =	62.00	gallons/minute
Supplemented Water for Pond =	0.14	cfs
Pond Surface Area =	8.21	acres

Stream/Segment Characteristics		*Data Below Accessed: 10/28/24*
Flow Type =	Intermittent Flow	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Equation for Screening =	Cl Csv = (TDS Csv/TDS Cc) * Cl Cc	
Ambient Concentration Chloride (mg/L) =	17	Procedures to Implement the Texas Surface Water Quality Standards - 2022

Step 2: Determine Screening Value

Screening Value = 400.00 mg/L

Step 3: Determine if Control Measure is needed

Screening TDS Value = 400 mg/L
Maximum Effluent TDS Proposed = 37.8 mg/L

If, Screening Value > or = Maximum Effluent TDS then no control measure needed
If, Screening Value < Maximum Effluent TDS then a control measure is needed

Control Measure = Control Measure Not Needed

Screening: Sulfate
Stream Type: Intermittent Stream
Stream Name: Unnamed to Pecan Creek
Distance to Lake Lewisville: 8 miles

Step 1: Determine Screening Value for Intermittent Stream

Parameter	Existing Pecan Creek (mg/L) SO4 Cc	Existing On Site Well Concentration (mg/L)	Estimated Screening Limit (mg/L)
Sulfate	60	91.6	300.00

Pond Evaporation Characteristics		
Evaporation Loss =	10,480,561	gallons/year
Supplemented Water for Pond =	62.00	gallons/minute
Supplemented Water for Pond =	0.14	cfs
Pond Surface Area =	8.21	acres

Stream/Segment Characteristics		*Data Below Accessed: 10/28/24*
Flow Type =	Intermittent Flow	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Equation for Screening =	SO4 Csv = (TDS Csv/TDS Cc) * SO4 Cc	
Ambient Concentration Chloride (mg/L) =	29	Procedures to Implement the Texas Surface Water Quality Standards - 2022

Step 2: Determine Screening Value

Screening Value =	300.00	mg/L

Step 3: Determine if Control Measure is needed

Screening TDS Value =	300	mg/L
Maximum Effluent TDS Proposed =	91.6	mg/L

If, Screening Value > or = Maximum Effluent TDS then no control measure needed
If, Screening Value < Maximum Effluent TDS then a control measure is needed

Control Measure =	Control Measure Not Needed

Screening: TDS
Stream Type: Lake
Stream Name: Lake Lewisville Segment No. 0823

Step 1: Determine Screening Value for Intermittent Stream

Parameter	Existing Pecan Creek (mg/L) TDS Cc	Existing On Site Well Concentration (mg/L)	Estimated Screening Limit (mg/L)
TDS	500	324	2,500.00

Pond Evaporation Characteristics		
Evaporation Loss =	10,480,561	gallons/year
Supplemented Water for Pond =	62.00	gallons/minute
Supplemented Water for Pond =	0.14	cfs
Pond Surface Area =	8.21	acres

Stream/Segment Characteristics		*Data Below Accessed: 10/28/24*
Flow Type =	Intermittent Flow	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Equation for Screening =	Cc > or = (EF)(Ce)+(1-EF)(Ca)	
Ambient Concentration TDS (mg/L) =	239	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Effluent Fraction (EF) =	0.08	Default for Lakes from Critical Conditions Memo

Step 2: Evaluate Screening Value

New TDS Concentration (from Equation for Screening) = 245.80 mg/L
Change in Ambient TDS = 2.8%

Step 4: Permit Limit Determination

	WLA =	3,501.50
*LA = WLA * 0.93*	LTA =	3,256.40
*Daily Avg. = LTA * 1.47*	Daily Average =	4,786.90
*Daily Max. = LTA * 3.11*	Daily Maximum =	14,887.26
	70% of Daily Average =	3,350.83
	85% of Daily Average =	4,068.87

> No Permit Limitations Necessary

Screening: Chloride
Stream Type: Lake
Stream Name: Lake Lewisville Segment No. 0823

Step 1: Determine Screening Value for Intermittent Stream

Parameter	Existing Pecan Creek (mg/L) Cl Cc	Existing On Site Well Concentration (mg/L)	Estimated Screening Limit (mg/L)
Chloride	80	37.8	400.00

Pond Evaporation Characteristics		
Evaporation Loss =	10,480,561	gallons/year
Supplemented Water for Pond =	62.00	gallons/minute
Supplemented Water for Pond =	0.14	cfs
Pond Surface Area =	8.21	acres

Stream/Segment Characteristics		*Data Below Accessed: 10/28/24*
Flow Type =	Intermittent Flow	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Equation for Screening =	Cc > or = (EF)(Ce)+(1-EF)(Ca)	
Ambient Concentration TDS (mg/L) =	17	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Effluent Fraction (EF) =	0.08	Default for Lakes from Critical Conditions Memo

Step 2: Evaluate Screening Value

New TDS Concentration (from Equation for Screening) = 18.66 mg/L
Change in Ambient TDS = 9.79%

Step 4: Permit Limit Determination

	WLA =	804.50
*LA = WLA * 0.93*	LTA =	748.19
*Daily Avg. = LTA * 1.47*	Daily Average =	1,099.83
*Daily Max. = LTA * 3.11*	Daily Maximum =	3,420.48
	70% of Daily Average =	769.88
	85% of Daily Average =	934.86

> No Permit Limitations Necessary

Screening: Sulfate
Stream Type: Lake
Stream Name: Lake Lewisville Segment No. 0823

Step 1: Determine Screening Value for Intermittent Stream

Parameter	Existing Pecan Creek (mg/L) SO4 Cc	Existing On Site Well Concentration (mg/L)	Estimated Screening Limit (mg/L)
Sulfate	60	91.6	300.00

Pond Evaporation Characteristics		
Evaporation Loss =	10,480,561	gallons/year
Supplemented Water for Pond =	62.00	gallons/minute
Supplemented Water for Pond =	0.14	cfs
Pond Surface Area =	8.21	acres

Stream/Segment Characteristics		*Data Below Accessed: 10/28/24*
Flow Type =	Intermittent Flow	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Equation for Screening =	Cc > or = (EF)(Ce)+(1-EF)(Ca)	
Ambient Concentration TDS (mg/L) =	29	Procedures to Implement the Texas Surface Water Quality Standards - 2022
Effluent Fraction (EF) =	0.08	Default for Lakes from Critical Conditions Memo

Step 2: Evaluate Screening Value

New TDS Concentration (from Equation for Screening) = 34.01 mg/L
Change in Ambient TDS = 17.3%

Step 4: Permit Limit Determination

	WLA =	416.50
*LA = WLA * 0.93*	LTA =	387.35
*Daily Avg. = LTA * 1.47*	Daily Average =	569.40
*Daily Max. = LTA * 3.11*	Daily Maximum =	1,770.83
	70% of Daily Average =	398.58
	85% of Daily Average =	483.99

> No Permit Limitations Necessary

Source: https://www.tceq.texas.gov/downloads/permitting/water-quality-standards-implementation/jan-2003-
Date Last Accessed: 10/30/2024

Segment No.	Trinity River Basin Segment Names	Recreation Use	Aquatic Life Use	Domestic Water Supply Use	Other Uses	Cl^{-1} (mg/L)	SO_4^{-2} (mg/L)	TDS (mg/L)	Dissolved Oxygen (mg/L)	pH Range (SU)	Indicator Bacteria[1] #/100 mL	Temperature (degrees F)
0815	Bardwell Reservoir	PCR1	H	PS		50	50	300	5.0	6.5-9.0	126	91
0816	Lake Waxahachie	PCR1	H	PS		50	50	300	5.0	6.5-9.0	126	91
0817	Navarro Mills Lake	PCR1	H	PS		50	75	300	5.0	6.5-9.0	126	90
0818	Cedar Creek Reservoir	PCR1	H	PS		50	100	200	5.0	6.5-9.0	126	93
0819	East Fork Trinity River	PCR1	I			100	100	500	4.0	6.5-9.0	126	91
0820	Lake Ray Hubbard	PCR1	H	PS		100	100	500	5.0	6.5-9.0	126	93
0821	Lavon Lake	PCR1	H	PS		100	100	500	5.0	6.5-9.0	126	93
0822	Elm Fork Trinity River Below Lewisville Lake	PCR1	H	PS		80	60	500	5.0	6.5-9.0	126	90
0823	Lewisville Lake	PCR1	H	PS		80	60	500	5.0	6.5-9.0	126	90
0824	Elm Fork Trinity River Above Ray Roberts Lake	PCR1	H	PS[5]		110	90	700	5.0	6.5-9.0	126	90
0825	Denton Creek	PCR1	H	PS		80	60	500	5.0	6.5-9.0	126	90
0826	Grapevine Lake	PCR1	H	PS		80	60	500	5.0	6.5-9.0	126	93
0827	White Rock Lake	PCR1	H			100	100	400	5.0	6.5-9.0	126	93
0828	Lake Arlington	PCR1	H	PS		100	100	300	5.0	6.5-9.0	126	95
0829	Clear Fork Trinity River Below Benbrook Lake	PCR1	H	PS		100	100	500	5.0	6.5-9.0	126	93
0830	Benbrook Lake	PCR1	H	PS		75	75	300	5.0	6.5-9.0	126	93

Source: https://www.tceq.texas.gov/downloads/permitting/water-quality-standards-implementation/jan-2003-ip.pdf
Date Last Accessed: 10/29/2024

Segment Number	TSS[1] (mg/L)	pH[1] (s.u.)	Total Hardness[1] (mg/L as $CaCO_3$)	TDS[2] (mg/L)	Chloride[2] (mg/L)	Sulfate[2] (mg/L)
0813	1.5	6.4	94[(a)]	81	12	9
0814	16	7.5	76[(a)]	316	21	66.9
0815	5	7.4	94[(a)]	202[(b)]	12	26
0816	4	7.2	94[(a)]	187[(b)]	7	15
0817	5	7.5	94[(a)]	214[(b)]	14	39
0818	5.5	7.2	94[(a)]	114	12.7	25.4
0819	16	7.3	110	358	43	46
0820	5	7.5	94[(a)]	179	11	26
0821	5	7.7	94[(a)]	203	8	23
0822	12	7.53	100	269	23	40
0823	5	7.5	94[(a)]	239	17	29

WATER QUALITY IMPACT ESTIMATES SUMMARY

#1 - UNNAMED TO PECAN CREEK TO LAKE LEWISVILLE

Impact on Pecan Creek				
Water Quality Measure	**(HPR 1)** (mg/L)	Secondary Concentration Standard (mg/L)	Proposed Increase (%)	Resultant Concentration (mg/L)
Sulfate	92	300	0.00009%	300
Chloride	38	400	0.00003%	400
TDS	324	2500	0.0000%	2500
Impact on Lake Lewisville				
Water Quality Measure	**(HPR 1)** (mg/L)	Secondary Concentration Standard (mg/L)	Proposed Increase (%)	Resultant Concentration (mg/L)
Sulfate	92	300	0.000001%	300
Chloride	38	400	0.0000004%	300
TDS	324	2500	0.000001%	1000

WATER QUALITY IMPACTS ON PECAN CREEK			
Pecan Creek Watershed Area:	24.5	square miles	UNT Digital Library
Average Annual Rainfall:	36.70	inches	TWDB Water Data for Texas
Average Annual Rainfall Volume:	47,955	acre-feet	TWDB Water Data for Texas
Requested Annual Groundwater Volume from Northern Trinity:	0.140	acre-feet	From Irrigation Demand Calculations

Conversions		
1 ft. =	12	in.
1 sq. mi. =	640	ac.
1 ac-ft =	1,233,482	L
1 mg =	0.000001	kg

Flow Volume Ratio of pumped groundwater to Average Annual Rainfall: 0.00029%

Assuming the Lewisville Lake watershed meets the published requirements, the following would result:

Water Quality Measure	**(HPR 1)** (mg/L)	Secondary Concentration Standard (mg/L)	Annual Mass from **(HPR 1)** (kg)	Annual Mass from Little Elm Creek Watershed (kg)	Total Mass (kg)	Proposed Increase (%)	Resultant Concentration (mg/L)
Sulfate	92	300	16	17,745,489	17,745,505	0.00009%	300
Chloride	38	400	7	23,660,652	23,660,658	0.00003%	400
TDS	324	2500	56	147,879,073	147,879,129	0.0000%	2500

WATER QUALITY IMPACTS ON LEWISVILLE LAKE			
Lake Lewisville Watershed Area:	1,660	square miles	Lewisville Lake TWDB Page
Average Annual Rainfall:	40.96	inches	TWDB Water Data for Texas
Average Annual Rainfall Volume:	3,626,325	acre-feet	TWDB Water Data for Texas
Requested Annual Groundwater Volume from Northern Trinity:	0.140	acre-feet	From Irrigation Demand Calculations

Conversions		
1 ft. =	12	in.
1 sq. mi. =	640	ac.
1 ac-ft =	1,233,482	L
1 mg =	0.000001	kg

Flow Volume Ratio of pumped groundwater to Average Annual Rainfall: 0.0000039%

Assuming the Lewisville Lake watershed meets the published requirements, the following would result:

Water Quality Measure	**(HPR 1)** (mg/L)	Secondary Concentration Standard (mg/L)	Annual Mass from **(HPR 1)** (kg)	Annual Mass from Lewisville Lake Watershed (kg)	Total Mass (kg)	Proposed Increase (%)	Resultant Concentration (mg/L)
Sulfate	92	300	16	1,341,901,984	1,341,902,000	0.000001%	300
Chloride	38	400	7	1,789,202,645	1,789,202,652	0.0000004%	400
TDS	324	2500	56	11,182,516,534	11,182,516,590	0.000001%	2500

DESCRIPTION OF SURVEYED PROPERTY:

TRACT 1

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas and being all of a called 65.626-acre tract of land described as Tract 1 in a deed to KL LB Buy 3, LLC, recorded in Instrument Number 2024-66973, Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 5/8" iron rod with plastic cap stamped "KHA" set for the westernmost corner of said Tract 1, common to the northernmost northeast corner of a called 125.827-acre tract described in the deed to KLLB AIV, LLC., recorded in Instrument Number 2023-97316, Official Records of Denton County, Texas and being the beginning of a non-tangent curve to the left with a radius of 606.00 feet, a central angle of 01°51'47", and a chord bearing and distance of North 50°01'52" East, 19.70 feet;

THENCE along the northwesterly line of said Tract 1, the following courses and distances:

In an easterly direction, with said non-tangent curve to the left, an arc distance of 19.71 feet to a point for corner;

North 49°05'58" East, a distance of 106.29 feet to a point for corner;

North 04°05'58" East, a distance of 14.14 feet to a point for corner;

North 49°05'58" East, a distance of 50.00 feet to a point for corner;

South 85°54'02" East, a distance of 14.14 feet to a point for corner;

North 49°05'58" East, a distance of 226.40 feet to a point for corner;

North 04°05'58" East, a distance of 14.85 feet to a point for corner;

North 49°05'58" East, a distance of 50.00 feet to a point for corner;

South 85°54'02" East, a distance of 14.85 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 49°05'58" East, a distance of 560.89 feet to a point for corner;

North 03°29'37" East, a distance of 14.07 feet to a point for corner;

North 47°53'15" East, a distance of 50.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 42°06'45" West, a distance of 55.45 feet to a point at the beginning of a tangent curve to the left with a radius of 625.00 feet, a central angle of 04°34'45", and a chord bearing and distance of North 44°24'07" West, 49.94 feet;

In a northwesterly direction, with said tangent curve to the left, an arc distance of 49.95 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 43°18'30" East, a distance of 65.55 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 49°05'58" East, a distance of 93.53 feet to a point for corner;

North 46°06'01" East, a distance of 47.32 feet to a point for corner;

North 39°27'23" East, a distance of 47.34 feet to a point for corner;

North 33°23'34" East, a distance of 47.34 feet to a point for corner;

North 27°19'44" East, a distance of 47.34 feet to a point for corner;

North 22°42'35" East, a distance of 49.19 feet to a point for corner;

North 22°26'04" East, a distance of 99.61 feet to a point for corner;

North 18°26'49" East, a distance of 47.34 feet to a point for corner;

North 11°42'12" East, a distance of 58.96 feet to a point for corner;

North 04°54'39" East, a distance of 47.60 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 20°09'04" West, a distance of 27.65 feet to a point for corner;

North 27°44'47" West, a distance of 59.25 feet to a point for corner;

North 54°57'54" West, a distance of 105.36 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 01°50'14" East, a distance of 40.47 feet to a mag nail set for the northernmost northwest corner of said Tract 1 in Black Jack Road, a variable width right of way, no record found;

THENCE South 88°09'46" East, along the north line of said Tract 1 and said Black Jack Road, a distance of 432.22 feet to a mag nail set for the northerly northeast corner of said Tract 1;

THENCE South 02°28'04" West, departing said Black Jack Road and along the easterly line of said Tract 1, a distance of 159.74 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for an ell corner of said Tract 1;

THENCE South 86°46'49" East, along the northerly line of said Tract 1, a distance of 517.66 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a non-tangent curve to the left with a radius of 3,255.00 feet, a central angle of 11°24'47", and a chord bearing and distance of South 83°36'06" East, 647.32 feet;

THENCE in an easterly direction continuing along the northerly line of said Tract 1, with said non-tangent curve to the left, an arc distance of 648.39 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

THENCE South 89°18'30" East, continuing along the northerly line of said Tract 1, a distance of 241.16 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the easterly northeast corner of said Tract 1 on the west line of a called 61.611-acre tract of land described in a deed to FM Land Investments I, LLC, as recorded in Instrument No. 2021-31043 of the Official Records of Denton County, Texas;

THENCE South 01°40'23" West, along the east line of said Tract 1 and the west line of said 61.611-acre tract, a distance of 1,050.15 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the northerly southeast corner of said Tract 1, common to the northeast corner of a called 31.067 acre tract of land described as Tract 2 in aforesaid deed recorded in Instrument No. 2024-66973 of the Official Records of Denton County, Texas;

THENCE departing the west line of said 61.611-acre tract, and along the common line of said Tract 1 and said Tract 2, the following courses and distances:

North 89°18'30" West, a distance of 119.45 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 46°10'57" West, a distance of 14.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 89°44'37" West, a distance of 50.02 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 88°19'37" West, a distance of 128.96 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 00°25'03" West, a distance of 305.27 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a non-tangent curve to the right with a radius of 4,009.00 feet, a central angle of 01°34'30", and a chord bearing and distance of North 87°12'56" West, 110.20 feet;

In a westerly direction, with said non-tangent curve to the right, an arc distance of 110.20 feet to a point for corner;

South 46°36'46" West, a distance of 13.63 feet to a point for corner;

North 85°55'37" West, a distance of 50.15 feet to a point for corner;

North 42°57'26" West, a distance of 14.74 feet to a point at the beginning of a non-tangent curve to the right with a radius of 4,009.00 feet, a central angle of 02°01'20", and a chord bearing and distance of North 84°24'52" West, 141.49 feet;

In a westerly direction, with said non-tangent curve to the right, an arc distance of 141.50 feet to a point at the beginning of a reverse curve to the left with a radius of 275.00 feet, a central angle of 23°03'59", and a chord bearing and distance of South 85°03'48" West, 109.97 feet;

In a westerly direction, with said reverse curve to the left, an arc distance of 110.71 feet to a point for corner;

South 24°22'22" West, a distance of 13.35 feet to a point for corner;

South 66°13'51" West, a distance of 50.00 feet to a point for corner;

North 71°52'44" West, a distance of 13.34 feet to a point at the beginning of a non-tangent curve to the left with a radius of 275.00 feet, a central angle of 15°14'14", and a chord bearing and distance of South 51°18'46" West, 72.92 feet;

In a southwesterly direction, with said non-tangent curve to the left, an arc distance of 73.13 feet to a point for corner;

South 43°41'39" West, a distance of 75.68 feet to a point at the beginning of a tangent curve to the right with a radius of 325.00 feet, a central angle of 01°03'50", and a chord bearing and distance of South 44°13'34" West, 6.03 feet;

In a southwesterly direction, with said tangent curve to the right, an arc distance of 6.03 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 45°14'31" East, a distance of 40.60 feet to a point for corner;

South 00°25'03" East, a distance of 400.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°34'57" West, a distance of 120.00 feet to a point for corner;

South 00°25'03" East, a distance of 8.20 feet to a point for corner;

South 89°34'57" West, a distance of 385.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the northwest corner of said Tract 2, common to an ell corner of said Tract 1;

South 00°25'03" East, a distance of 120.20 feet to a point for corner;

South 35°45'20" East, a distance of 25.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a non-tangent curve to the left with a radius of 57.50 feet, a central angle of 233°57'26", and a chord bearing and distance of South 62°44'03" East, 102.49 feet;

In an easterly direction, with said non-tangent curve to the left, an arc distance of 234.79 feet to a point for corner;

North 49°35'53" East, a distance of 12.77 feet to a point for corner;

North 89°34'57" East, a distance of 5.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 120.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 89°34'57" East, a distance of 90.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 477.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southerly southeast corner of said Tract 1, common to the southwest corner of said Tract 2, being on the north line of a called 27.37-acre tract of land described in the deed to Deccan Ranch, LLC, recorded in Instrument No. 2019-327 Official Records of Denton County, Texas;

THENCE South 89°34'57" West, along the south line of said Tract 1 and the north line of said 27.37-acre tract, a distance of 143.48 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southeast corner of a called 5.000-acre tract of land described in a deed to Ariel Britt, as recorded in Instrument Number 2024-91987, Official Records of Denton County, Texas, in a deed to Justin Morse, as recorded in Instrument No. 2024-55014, Official Records of Denton County, Texas, in a deed to Brandon Allen, as recorded in Instrument No. 2024-55015, Official Records of Denton County, Texas, in a deed to Leanne Wilson, as recorded in Instrument No. 2024-26078, Official Records of Denton County, Texas, and in a deed to Zach Downtain, as recorded in Instrument No. 2024-26079, Official Records of Denton County, Texas, common to a southwest corner of said Tract 1;

THENCE North 00°25'03" West, departing the north line of said 27.37-acre tract, along the west line of said Tract 1 and the east line of said 5.000-acre tract, a distance of 480.00 feet to the northeast corner of said 5.000-acre tract, common to an ell corner of said Tract 1;

THENCE South 89°34'57" West, along the south line of said Tract 1 and the north line of said 5.000-acre tract, a distance of 453.75 feet to the northwest corner of said 5.000-acre tract, common to an ell corner of said Tract 1;

THENCE South 00°25'03" East, along the east line of said Tract 1 and the west line of said 5.000-acre tract, a distance of 480.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southwest corner of said 5.000-acre tract, common to an ell corner of said Tract 1;

THENCE North 89°34'57" East, along the north line of said Tract 1 and the south line of said 5.000-acre tract, a distance of 204.04 feet to a 1/2" iron rod found for the northwest corner of said 27.37-acre tract, common to a northeast corner of said Tract 1;

THENCE South 00°10'43" East, departing the south line of said 5.000-acre tract, along the west line of said 27.37-acre tract and the east line of said Tract 1, a distance of 274.51 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southernmost southeast corner of said Tract 1, common to the southerly northeast corner of aforesaid 125.827-acre tract;

THENCE South 89°44'50" West, along the south line of said Tract 1 and the north line of said 125.827-acre tract, a distance of 228.99 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for a northwest corner of said 125.827-acre tract;

THENCE departing said north line and along the westerly line of said Tract 1, the following courses and distances:

North 00°10'40" West, a distance of 37.64 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 52°23'03" East, a distance of 115.05 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 37°36'57" West, a distance of 234.04 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 30°40'34" West, a distance of 62.61 feet to a point for corner;

North 24°18'32" West, a distance of 63.01 feet to a point for corner;

North 17°56'30" West, a distance of 63.01 feet to a point for corner;

North 11°34'44" West, a distance of 67.77 feet to a point for corner;

North 11°02'25" West, a distance of 84.90 feet to a point for corner;

North 16°05'45" West, a distance of 100.87 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 23°14'14" West, a distance of 176.77 feet to a point for corner;

North 20°46'24" West, a distance of 69.38 feet to a point for corner;

North 17°59'04" West, a distance of 70.55 feet to a point for corner;

North 16°16'48" West, a distance of 245.06 feet to a point for corner;

North 27°19'42" West, a distance of 113.14 feet to a point for corner;

North 39°35'23" West, a distance of 103.49 feet to a point for corner;

South 49°05'58" West, a distance of 196.01 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 04°05'58" West, a distance of 14.14 feet to a point for corner;

South 49°05'58" West, a distance of 50.00 feet to a point for corner;

North 85°54'02" West, a distance of 14.14 feet to a point for corner;

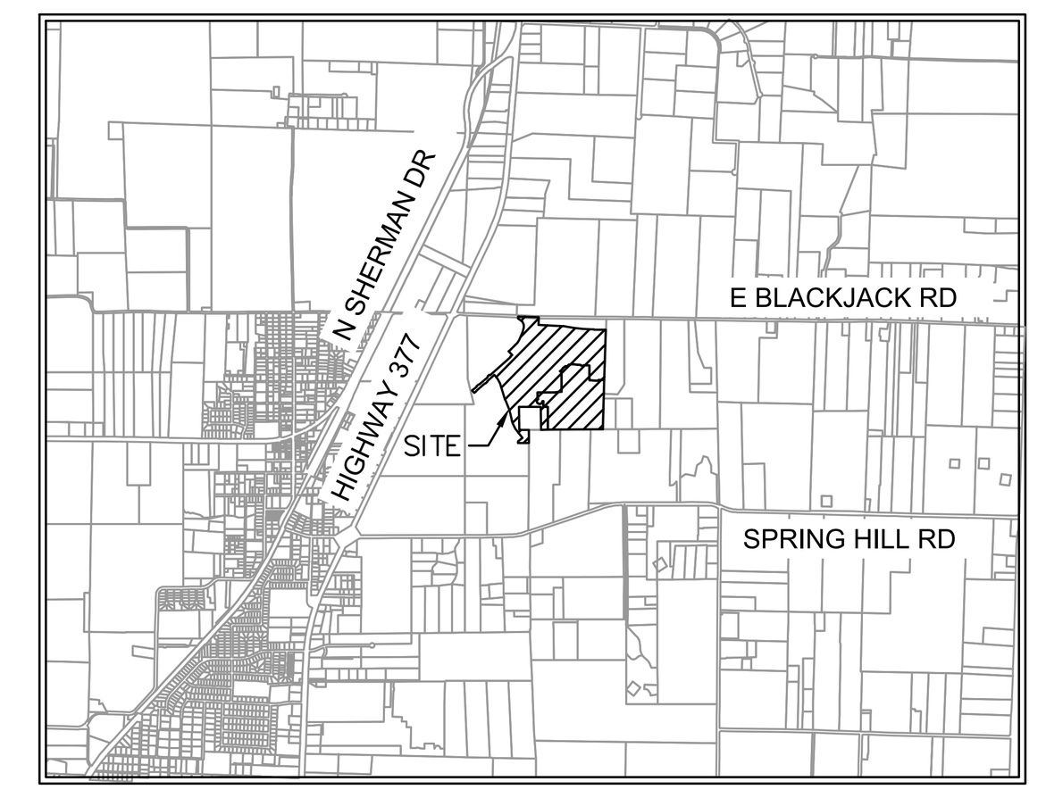
South 49°05'58" West, a distance of 228.50 feet to a point for corner;

South 09°23'51" West, a distance of 15.65 feet to a point for corner;

South 49°05'58" West, a distance of 50.86 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 77°49'37" West, a distance of 12.51 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for a northeast corner of aforementioned 125.827-acre tract, common to the westernmost southwest corner of said Tract 1;

THENCE North 39°02'15" West, along the northeasterly line of said 125.827-acre tract and continuing along the westerly line of said Tract 1, a distance of 60.35 feet to the **POINT OF BEGINNING** and containing 65.626-acres (2,858,653 square feet) of land, more or less.



VICINITY MAP

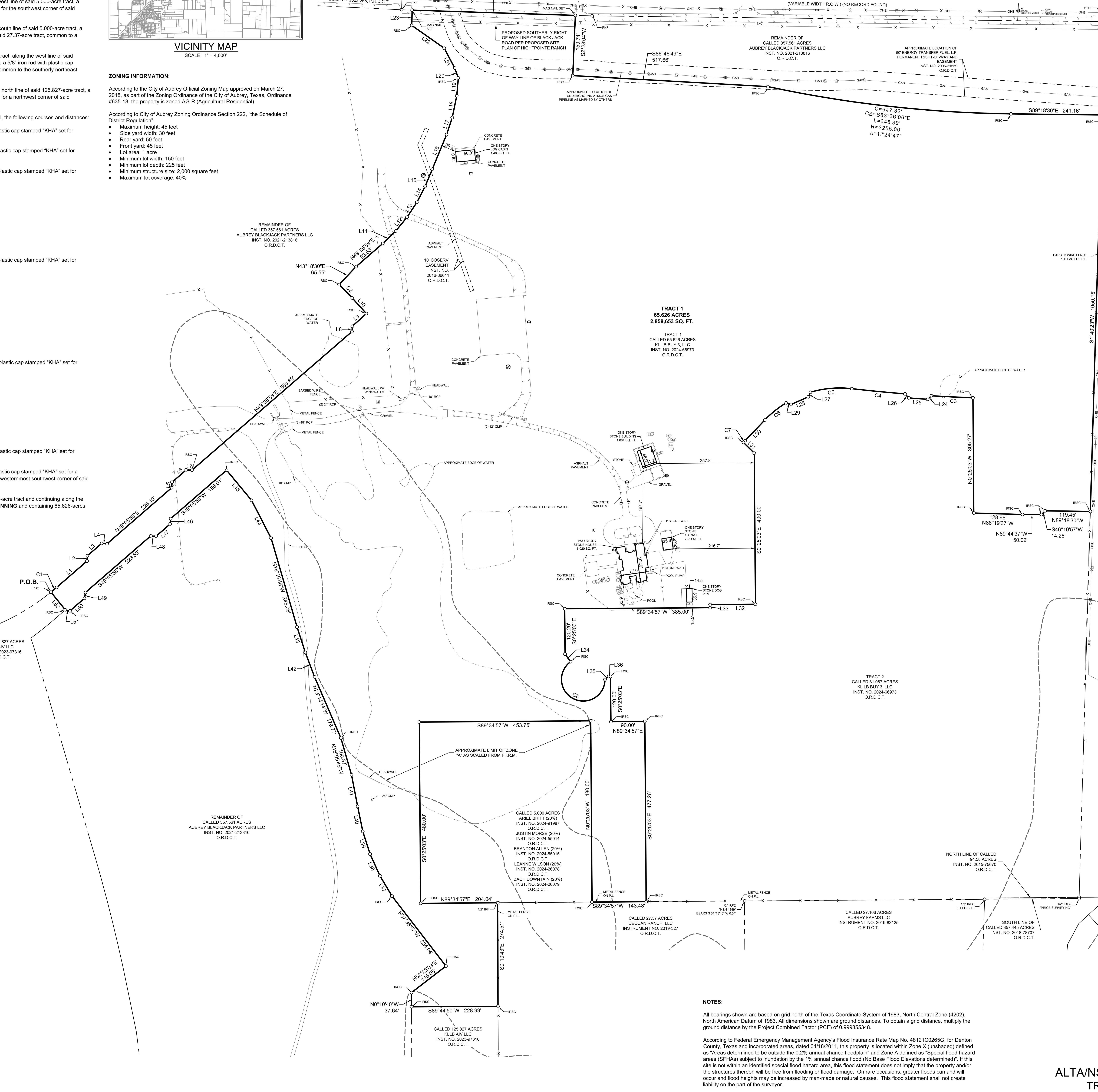
SCALE: 1" = 4,000'

ZONING INFORMATION:

According to the City of Aubrey Official Zoning Map approved on March 27, 2018, as part of the Zoning Ordinance of the City of Aubrey, Texas, Ordinance #635-18, the property is zoned AG-R (Agricultural Residential)

According to City of Aubrey Zoning Ordinance Section 222, "the Schedule of District Regulation":

- Maximum height: 45 feet
- Side yard width: 30 feet
- Rear yard: 50 feet
- Front yard: 45 feet
- Lot area: 1 acre
- Minimum lot width: 150 feet
- Minimum lot depth: 225 feet
- Minimum structure size: 2,000 square feet
- Maximum lot coverage: 40%



CURVE TABLE					
NO.	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD
C1	1°51'47"	606.00'	19.71'	N50°01'52"E	19.70'
C2	4°34'45"	625.00'	49.95'	N44°24'07"W	49.94'
C3	1°34'30"	4009.00'	110.20'	N87°12'56"W	110.20'
C4	2°01'20"	4009.00'	141.50'	N84°24'52"W	141.49'
C5	23°03'59"	275.00'	110.71'	S85°03'48"W	109.97'
C6	15°14'14"	275.00'	73.13'	S51°18'46"W	72.92'
C7	1°03'50"	325.00'	6.03'	S44°13'34"W	6.03'
C8	233°57'26"	57.50'	234.79'	S62°44'03"E	102.49'

LINE TABLE			LINE TABLE		
NO.	BEARING	LENGTH	NO.	BEARING	LENGTH
L1	N49°05'58"E	106.29'	L27	S24°22'22"W	13.35'
L2	N04°05'58"E	14.14'	L28	S66°13'51"W	50.00'
L3	N49°05'58"E	50.00'	L29	N71°52'44"W	13.34'
L4	S85°54'02"E	14.14'	L30	S43°41'39"W	75.68'
L5	N04°05'58"E	14.85'	L31	S45°14'31"E	40.60'
L6	N49°05'58"E	50.00'	L32	S89°34'57"W	120.00'
L7	S85°54'02"E	14.85'	L33	S00°25'03"E	8.20'
L8	N03°29'37"E	14.07'	L34	S35°45'20"E	25.00'
L9	N47°53'15"E	50.00'	L35	N49°35'53"E	12.77'
L10	N42°06'45"W	55.45'	L36	N89°34'57"E	5.00'
L11	N46°06'01"E	47.32'	L37	N30°40'34"W	62.61'
L12	N39°27'23"E	47.34'	L38	N24°18'32"W	63.01'
L13	N33°23'34"E	47.34'	L39	N17°56'30"W	63.01'
L14	N27°19'44"E	47.34'	L40	N11°34'44"W	67.77'
L15	N22°42'35"E	49.19'	L41	N11°02'25"W	84.90'
L16	N22°26'04"E	99.61'	L42	N20°46'24"W	69.38'
L17	N18°26'49"E	47.34'	L43	N17°59'04"W	70.55'
L18	N11°42'12"E	58.96'	L44	N27°19'42"W	113.14'
L19	N04°54'39"E	47.60'	L45	N39°35'23"W	103.49'
L20	N20°09'04"W	27.65'	L46	S04°05'58"W	14.14'
L21	N27°44'47"W	59.25'	L47	S49°05'58"W	50.00'
L22	N54°57'54"W	105.36'	L48	N85°54'02"W	14.14'
L23	N01°50'14"E	40.47'	L49	S09°23'51"W	15.65'
L24	S46°36'46"W	13.63'	L50	S49°05'58"W	50.86'
L25	N85°55'37"W	50.15'	L51	N77°49'37"W	12.51'
L26	N42°57'26"W	14.74'	L52	N39°02'15"W	60.35'

NOTES:

All bearings shown are based on grid north of the Texas Coordinate System of 1983, North Central Zone (4202), North American Datum of 1983. All dimensions shown are ground distances. To obtain a grid distance, multiply the ground distance by the Project Combined Factor (PCF) of 0.999855348.

According to Federal Emergency Management Agency's Flood Insurance Rate Map No. 48121C0265G, for Denton County, Texas and incorporated areas, dated 04/18/2011, this property is located within Zone X (unshaded) defined as "Areas determined to be outside the 0.2% annual chance floodplain" and Zone A defined as "Special flood hazard areas (SFHAs) subject to inundation by the 1% annual chance flood (No Base Flood Elevations determined)". If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.

Posted address of the surveyed property includes:
800 E. Black Jack Road, Aubrey, TX 76227

A locate request was made with Texas811 to locate underground utilities along the roadways adjacent to the surveyed property under ticket number 2465040108. Visible markings were found at the time of survey. The surveyor cannot guarantee that all underground utilities were marked or the accuracy of the markings.

No visible evidence of current earth moving work, building construction or building additions were observed at the time of survey.

The surveyed property has direct physical access to Black Jack Road, an asphalt paved public right of way.

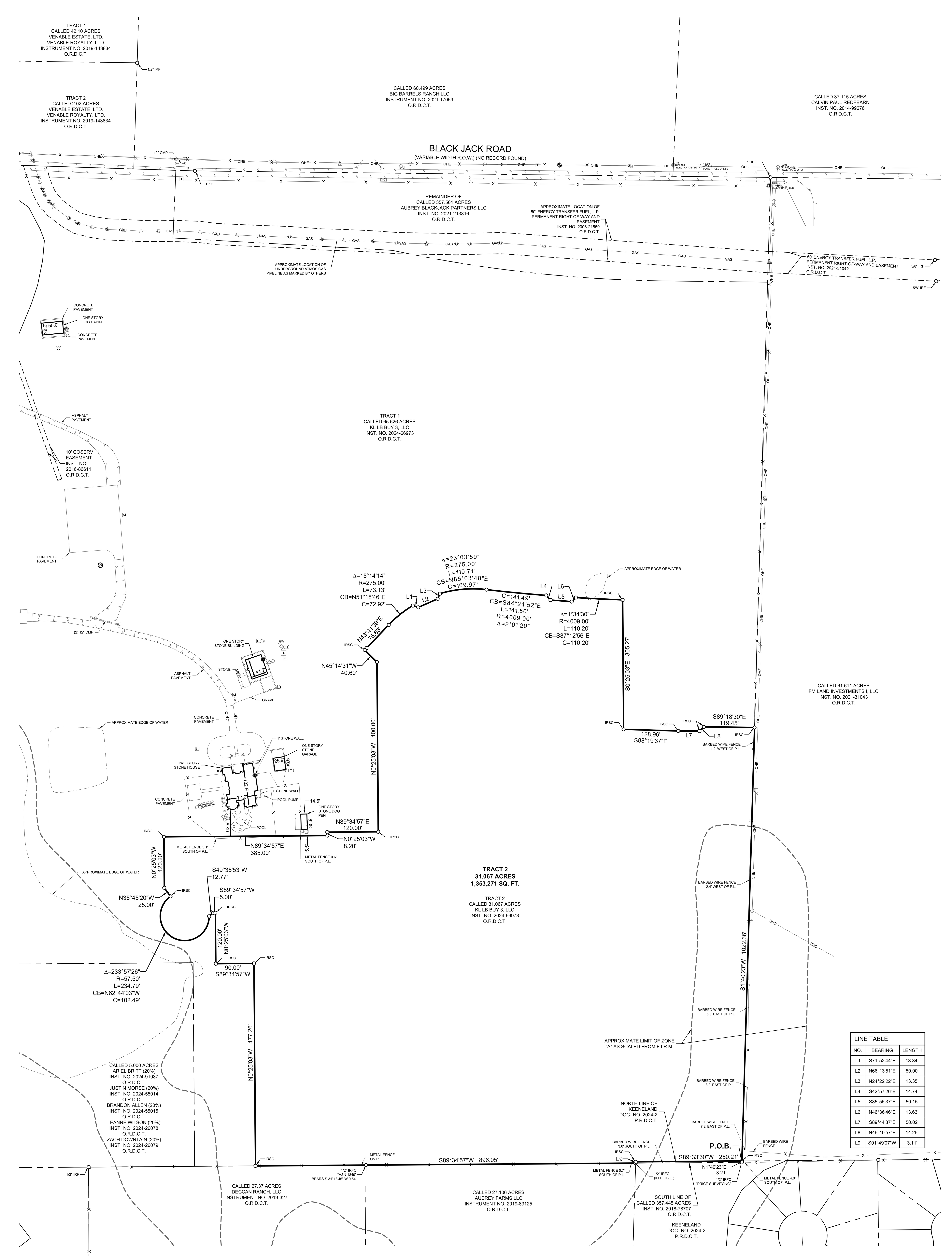
There are no gaps, gores and overlaps between Tracts 1 and 2 and the adjoining tracts.

ALTA/NSPS LAND TITLE SURVEY
TRACT 1: 65.626 ACRES
TRACT 2: 31.067 ACRES
F. TREVINO SURVEY, ABSTRACT NO. 1243
DENTON COUNTY, TEXAS

Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
FIRM # 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 100'	SG	KHA	05/22/2024	063451879	1 OF 2

DWG NAME: K:\FRI_SURVEY\069306747-HIGH POINT RANCH - AUBREY\DWG\063451861 PHASES 1C & 2 SURVEY.DWG PLOTTED BY GUNAWAN



LINE TABLE		
NO.	BEARING	LENGTH
L1	S71°52'44"E	13.34'
L2	N66°13'51"E	50.00'
L3	N24°22'22"E	13.35'
L4	S42°57'26"E	14.74'
L5	S85°55'37"E	50.15'
L6	N46°36'46"E	13.63'
L7	S89°44'37"E	50.02'
L8	N46°10'57"E	14.26'
L9	S01°49'07"W	3.11'

NOTES:

All bearings shown are based on grid north of the Texas Coordinate System of 1983, North Central Zone (4202), North American Datum of 1983. All dimensions shown are ground distances. To obtain a grid distance, multiply the ground distance by the Project Combined Factor (PCF) of 0.999855348.

According to Federal Emergency Management Agency's Flood Insurance Rate Map No. 48121C0265G, for Denton County, Texas and incorporated areas, dated 04/18/2011, this property is located within Zone X (unshaded) defined as "Areas determined to be outside the 0.2% annual chance floodplain" and Zone A defined as "Special flood hazard areas (SFHAs) subject to inundation by the 1% annual chance flood (No Base Flood Elevations determined)". If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This flood statement shall not create liability on the part of the surveyor.

Posted address of the surveyed property includes:
800 E. Black Jack Road, Aubrey, TX 76227

A locate request was made with Texas811 to locate underground utilities along the roadways adjacent to the surveyed property under ticket number 2465040108. Visible markings were found at the time of survey. The surveyor cannot guarantee that all underground utilities were marked or the accuracy of the markings.

There are no buildings observed on the surveyed property.

No visible evidence of current earth moving work, building construction or building additions were observed at the time of survey.

There are no known proposed changes in street right-of-way lines.

ZONING INFORMATION:

According to the City of Aubrey Official Zoning Map approved on March 27, 2018, as part of the Zoning Ordinance of the City of Aubrey, Texas, Ordinance #635-18, the property is zoned AG-R (Agricultural Residential)

According to City of Aubrey Zoning Ordinance Section 222, "the Schedule of District Regulation":

- Maximum height: 45 feet
- Side yard width: 30 feet
- Rear yard: 50 feet
- Front yard: 45 feet
- Lot area: 1 acre
- Minimum lot width: 150 feet
- Minimum lot depth: 225 feet
- Minimum structure size: 2,000 square feet
- Maximum lot coverage: 40%

DESCRIPTION OF SURVEYED PROPERTY:

TRACT 2

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas and being all of a called 31.067-acre tract of land described as Tract 2 in a deed to KL LB Buy 3, LLC, recorded in Instrument Number 2024-66973, Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 5/8 inch iron rod with plastic cap stamped "KHA" set for the southeast corner of said Tract 2 on the northerly line of Keeneland, according to the plat thereof recorded in Document No. 2024-2 of the Plat Records of Denton County, Texas;

THENCE South 89°33'30" West, along the southerly line of said Tract 2 and the northerly line of said Keeneland, a distance of 250.21 feet to a 5/8 inch iron rod with plastic cap stamped "KHA" set for the northwest corner of said Keeneland;

THENCE South 01°49'07" West, along the westerly line of said Keeneland and continuing along the southerly line of said Tract 2, a distance of 3.11 feet to a 1/2 inch iron rod with an illegible plastic cap found for the northeast corner of a called 27.106 acre tract of land described in a deed to Aubrey Farms LLC, as recorded in Instrument No. 2019-83125 of the Official Records of Denton County, Texas;

THENCE South 89°34'57" West, along said southerly line of said Tract 2, the northerly line of said 27.106 acre tract, and the northerly line of a called 27.37 acre tract of land described in a deed to Deccan Ranch, LLC, as recorded in Instrument No. 2019-327 of the Official Records of Denton County, Texas, a distance of 896.05 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southwest corner of said Tract 2, common to the southernmost southeast corner of a called 65.626-acre tract of land described as Tract 1 in a deed to KL LB Buy 3, LLC, recorded in Instrument Number 2024-66973, Official Records of Denton County, Texas;

THENCE departing the northerly line of said 27.37 acre tract and along the common line of said Tract 2 and said Tract 1, the following courses and distances:

North 00°25'03" West, a distance of 477.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°34'57" West, a distance of 90.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 00°25'03" West, a distance of 120.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°34'57" West, a distance of 5.00 feet to a point for corner;

South 49°35'53" West, a distance of 12.77 feet to a point at the beginning of a non-tangent curve to the right with a radius of 57.50 feet, a central angle of 233°57'26", and a chord bearing and distance of North 62°44'03" West, 102.49 feet;

In a westerly direction, with said non-tangent curve to the right, an arc distance of 234.79 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 35°45'20" West, a distance of 25.00 feet to a point for corner;

North 00°25'03" West, a distance of 120.20 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 89°34'57" East, a distance of 385.00 feet to a point for corner;

North 00°25'03" West, a distance of 8.20 feet to a point for corner;

North 89°34'57" East, a distance of 120.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 00°25'03" West, a distance of 400.00 feet to a point for corner;

North 45°14'31" West, a distance of 40.60 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a non-tangent curve to the left with a radius of 325.00 feet, a central angle of 01°03'50", and a chord bearing and distance of North 44°13'34" East, 6.03 feet;

In a northerly direction, with said non-tangent curve to the left, an arc distance of 6.03 feet to a point for corner;

North 43°41'39" East, a distance of 75.68 feet to a point at the beginning of a tangent curve to the right with a radius of 275.00 feet, a central angle of 15°14'14", and a chord bearing and distance of North 51°18'46" East, 72.92 feet;

In an easterly direction, with said tangent curve to the right, an arc distance of 73.13 feet to a point for corner;

South 71°52'44" East, a distance of 13.34 feet to a point for corner;

North 66°13'51" East, a distance of 50.00 feet to a point for corner;

North 24°22'22" East, a distance of 13.35 feet to a point at the beginning of a non-tangent curve to the right with a radius of 275.00 feet, a central angle of 23°03'59", and a chord bearing and distance of North 85°03'48" East, 109.97 feet;

In an easterly direction, with said non-tangent curve to the right, an arc distance of 110.71 feet to a point at the beginning of a reverse curve to the left with a radius of 4,009.00 feet, a central angle of 02°01'20", and a chord bearing and distance of South 84°24'52" East, 141.49 feet;

In an easterly direction, with said reverse curve to the left, an arc distance of 141.50 feet to a point for corner;

South 42°57'26" East, a distance of 14.74 feet to a point for corner;

South 85°55'37" East, a distance of 50.15 feet to a point for corner;

North 46°36'46" East, a distance of 13.63 feet to a point at the beginning of a non-tangent curve to the left with a radius of 4,009.00 feet, a central angle of 01°34'30", and a chord bearing and distance of South 87°12'56" East, 110.20 feet;

In an easterly direction, with said non-tangent curve to the left, an arc distance of 110.20 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 305.27 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 88°19'37" East, a distance of 128.96 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°44'37" East, a distance of 50.02 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 46°10'57" East, a distance of 14.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°18'30" East, a distance of 119.45 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the northeast corner of said Tract 2, common to the easternmost southeast corner of said Tract 1, being on the westerly line of a called 61.611 acre tract of land described in a deed to FM Land Investments I, LLC, as recorded in Instrument No. 2021-31043 of the Official Records of Denton County, Texas;

THENCE South 01°40'23" West, along the easterly line of Tract 2 and the westerly line of said 61.611 acre tract, a distance of 1,022.36 feet to the **POINT OF BEGINNING** and containing 31.067 acres (1,353,271 square feet) of land, more or less.

NOTES ADDRESSING SCHEDULE B EXCEPTIONS:

(Pursuant to Commitment for Title Insurance, issued by Doma Title Insurance, Inc., GF. No. 114729-002100, effective date May 23, 2024, issued June 3, 2024.)

10f. Easement executed by Mrs. P.C. Tidmore and son, W.R. Tidmore, to Texas Power & Light Company, dated September 24, 1924, recorded in Volume 194, Pages 552-553, Deed Records of Denton County, Texas. **DOES NOT AFFECT PROPERTY.**

10g. Easement executed by Len R. Henderson to Texas-Louisiana Power Company, dated November 21, 1929, recorded in Volume 229, Pages 44-45, Deed Records of Denton County, Texas. **DOES NOT AFFECT PROPERTY.**

10h. Easement executed by Len R. Henderson to Texas-Louisiana Power Company, dated November 19, 1929, recorded in Volume 229, Pages 54-55, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10i. Easement for Highway Purposes executed by J.O. Coffey to the State of Texas, dated August 4, 1960, recorded in Volume 459, Pages 332-333, Deed Records, Denton County, Texas. **DOES NOT AFFECT.**

10j. Easement for Highway Purposes executed by B.P. Sonntag and wife, Leona Sonntag, to the State of Texas, dated June 11, 1960, recorded in Volume 459, Pages 335-337, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10k. Easement granted in Judgement to State of Texas by R.J. DeMoye and wife, Margaret DeMoye, filed on December 3, 1960, recorded in Volume 462, Pages 356-359, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10l. Easement executed by B.P. Sonntag to Community Public Service Company, dated May 7, 1964, recorded in Volume 514, Page 13, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10m. Easement executed by J.O. Coffey to Community Public Service Company, dated May 23, 1972, recorded in Volume 651, Pages 147-148, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10n. Mineral and/or royalty interest in all of the oil, gas, and other minerals and/or other substances in and under the subject property, including royalties, bonuses, rentals, ingress/egress and all other rights as set out in Volume 680, Pages 573-576, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10o. Easement executed by J. Lee Youngblood to Community Public Service Company, dated July 16, 1980, recorded in Volume 1030, Pages 619-621, Deed Records of Denton County, Texas. **DOES NOT AFFECT.**

10p. Existence of an On-Site Sewage Facility requiring maintenance contract, together with the terms and conditions relative to the maintenance of same as evidenced by Affidavit to Public recorded in Volume 4873, Pages 38-39, Official Public Records of Denton County, Texas. **NOT A SURVEY RELATED MATTER**

10q. Easement executed by Youngblood, Ltd. to Energy Transfer Fuel, LP, dated November 2, 2007, recorded in Instrument No. 2007-130555, Official Public Records of Denton County, Texas. **DOES NOT AFFECT.**

10r. Electric Line Easement and Right of Way executed by ALW Land Properties, LLC to Denton County Electric Cooperative, Inc. d/b/a Coserv Electric, dated July 7, 2016, recorded Instrument No. 2016-86611, Official Public Records of Denton County, Texas. **AFFECTS PROPERTY, AS SHOWN ON SURVEY**

10s. Terms, provisions and conditions of Development Agreement executed by and between ALW 377, LLC, FM Land Investments I, LLC, and the City of Aubrey, Texas, dated June 30, 2021, recorded in Instrument No. 2021-131889, Official Public Records of Denton County, Texas. **AFFECTS SURVEYED PROPERTY, BLANKET IN NATURE**

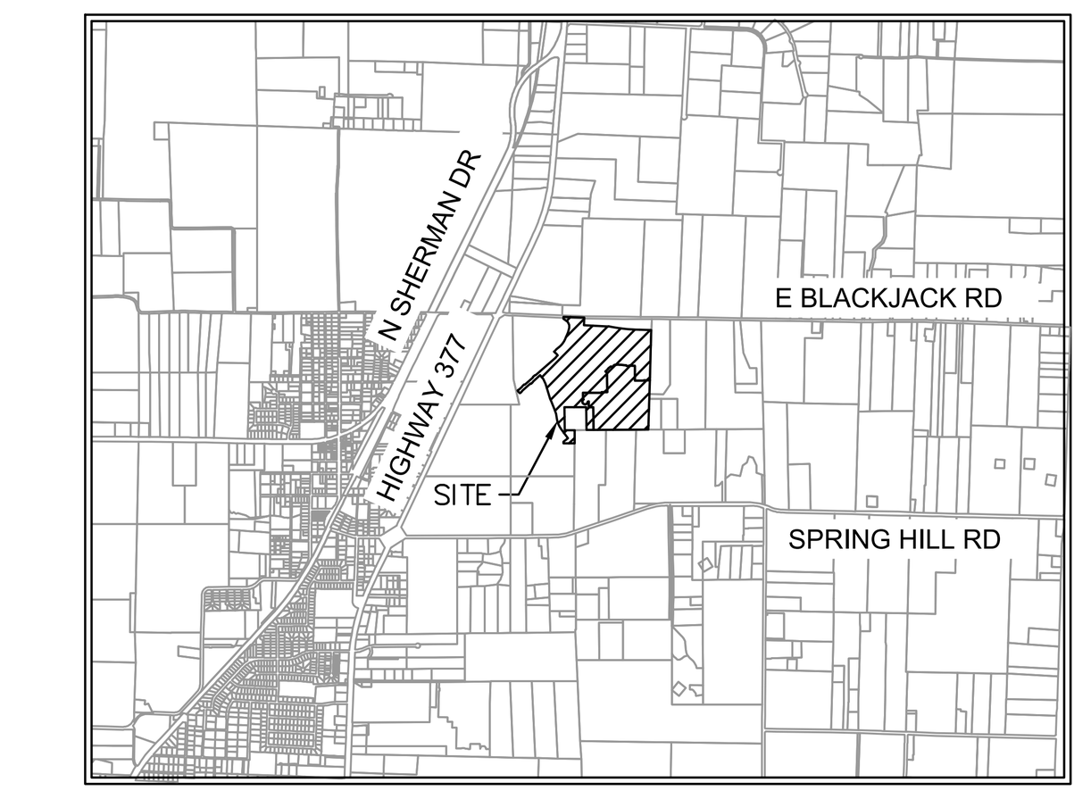
10t. The surveyed property is a portion of the property described in the mineral lease recorded in Instrument No. 2021-213816 of the Official Public Records of Denton County, Texas. This survey does not provide a determination or opinion concerning the mineral estates and interests and all rights incident thereto in the above recorded document. Only the mineral estate's location relative to the surveyed property was determined by the surveyor.

10u. The surveyed property is a portion of the Water rights as reserved in Deed executed by ALW377, LLC to Aubrey Blackjack Partners, LLC, dated November 19, 2021, recorded in Instrument No. 2021-213816 of the Official Public Records of Denton County, Texas.

Waiver of surface rights contained therein.

10v. Water and Sanitary Sewer Easement recorded under County Clerk's File No. 2022-63141, Official Public records, Denton County, Texas. **DOES NOT AFFECT.**

10w. Electric Distribution Line Easement to Texas New Mexico Power Company, recorded under County Clerk's File No. 2022171032, Official Public records, Denton County, Texas. **DOES NOT AFFECT.**



VICINITY MAP
SCALE: 1" = 4,000'

NORTH

GRAPHIC SCALE IN FEET
1" = 100' @ 36X48

LEGEND

LINE TYPE LEGEND

SURVEYORS CERTIFICATION:

To: Aubrey Blackjack Partners, LLC, a Texas limited liablilty company,
KL LB BUY 3 LLC, a Delaware limited liability company,
Lennar Homes of Texas Land and Construction, Ltd.,
North American Title Insurance Company,
Doma Title Insurance, Inc.
and Lennar Title, Inc.:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 2,3,4,6a,7a,7b1,8,9,11b,13,16,17,18 and 19 of Table A thereof. The field work was completed on 06/05/2024.

01/22/2025

Sylviana Gunawan
Registered Professional Land Surveyor No. 6461
Kimley-Horn and Associates, Inc.
6160 Warren Pkwy., Suite 210
Frisco, Texas 75034
Ph. 972-335-3580
[redacted]

STATE OF TEXAS REGISTERED SYLVIANA GUNAWAN 6461 PROFESSIONAL LAND SURVEYOR

ALTA/NSPS LAND TITLE SURVEY
TRACT 1: 65.626 ACRES
TRACT 2: 31.067 ACRES
F. TREVINO SURVEY, ABSTRACT NO. 1243
DENTON COUNTY, TEXAS

No.	DATE	REVISION DESCRIPTION
2	1/22/25	UPDATE TRACT 1 AND TRACT 2 OWNERSHIP INFORMATION
1	1/20/25	UPDATE ADJOINER INFORMATION

Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
FIRM # 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
1" = 100'	SG	KHA	05/22/2024	063451879	2 OF 2

DWG NAME: K:\FRI_SURVEY\069306747-HIGH POINT RANCH - AUBREY\DWG\063451861 PHASE 3 SURVEY.DWG PLOTTED BY GUNAWAN, SYLVIANA 1/22/2025 5:18 PM LAST SAVED 1/20/2025 9:14 AM

Denton County
Juli Luke
County Clerk

Instrument Number: 66973

ERecordings-RP

WARRANTY DEED

Recorded On: June 25, 2024 10:20 AM

Number of Pages: 14

" Examined and Charged as Follows: "

Total Recording: $77.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	66973
Receipt Number:	20240625000186
Recorded Date/Time:	June 25, 2024 10:20 AM
User:	Torey P
Station:	Station 22

Record and Return To:

Simplifile

STATE OF TEXAS
COUNTY OF DENTON

I hereby certify that this Instrument was FILED In the File Number sequence on the date/time printed hereon, and was duly RECORDED in the Official Records of Denton County, Texas.

Juli Luke
County Clerk
Denton County, TX

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

SPECIAL WARRANTY DEED

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF DENTON §

THAT, AUBREY BLACKJACK PARTNERS, LLC, a Texas limited liability company (hereinafter referred to as "Grantor"), for the sum of Ten and No/100 Dollars ($10.00) and other good and valuable consideration to the undersigned in hand paid by KL LB BUY 3, LLC, a Delaware limited liability company (hereinafter referred to as "Grantee"), whose address is c/o KL Servicers LLC, 6900 E. Camelback Road, Suite 800, Scottsdale, AZ 85251, the receipt and sufficiency of which are hereby acknowledged, has GRANTED, SOLD and CONVEYED and by these presents does GRANT, SELL and CONVEY to Grantee all those certain real property (the "Land") situated in Denton County, Texas, and described on Exhibit A attached hereto and incorporated herein by reference, together with (i) any and all minerals, improvements, rights and appurtenances belonging or pertaining thereto, (ii) all rights, title and interests of Grantor in and to any easements, leases, rights-of-way, rights of ingress or egress or other interests in, on or to any land, highway, street, road or avenue, open or proposed, in, on, in front of, abutting, adjoining or benefitting the Land, and (iii) all rights, title and interests of Grantor in and to all utilities, sewage treatment capacity and water capacity, if any, to serve or which will serve the Land (the Land and all of the foregoing set forth in the above subclauses (i)-(iii) are hereinafter collectively referred to as the "Property").

This conveyance is made and accepted subject only to those certain title exceptions more particularly described on Exhibit B attached hereto and made a part hereof for all purposes (the "Permitted Exceptions"), but only to the extent that such Permitted Exceptions are valid, subsisting and, in fact, affect the Property.

TO HAVE AND TO HOLD, the Property unto Grantee and Grantee's successors and assigns forever, and Grantor does hereby bind Grantor and Grantor's heirs, executors, administrators, legal representatives, successors and assigns to WARRANT AND FOREVER DEFEND, all and singular, the Property unto Grantee and Grantee's successors and assigns, against every person whomsoever lawfully claiming or to claim the Property or any part thereof, by, through or under Grantor, but not otherwise.

Ad valorem taxes relating to the Property have been prorated between Grantor and Grantee as of the date hereof. Furthermore, certain taxes, assessments, penalties and/or interest (collectively, the "Rollback Taxes") may be incurred or assessed against the Property, which Rollback Taxes accruing for all periods prior to and up through the date of this Deed, if any, are Grantee's sole responsibility. In this regard, Grantee hereby affirms its obligations to pay such Rollback Taxes accruing for all periods prior to and up through the date of this Deed and agrees to indemnify and defend Grantor and hold Grantor harmless from and against any and all costs, expenses or claims of any nature whatsoever, known or unknown, direct or indirect, in connection with such Rollback Taxes.

Save and except for the representations and warranties of Seller expressly contained in that certain Agreement dated April 13, 2023 by and between Grantor, as Seller and Grantee, as nominee for Lennar Homes of Texas Land and Construction Ltd., a Texas limited partnership as Purchaser, as amended (collectively, "Agreement"), it is understood and agreed that Grantor has not made and is not making and hereby specifically disclaims, and Grantee hereby specifically waives, any warranties, representations or guarantees of any kind or character, express or implied (or arising by operation of law), oral or written, past, present or future, with respect to or in any way related to or concerning the Property or its suitability for any particular purpose or use, including, but not limited to, warranties or representations as to matters of title, zoning, tax consequences, physical or environmental conditions, availability of access or utilities, ingress or egress, drainage, operating history or projections, valuation, governmental approvals, governmental regulations or any other matter or thing relating to or affecting the Property, including, without limitation, the following: (i) the nature and condition of the Property, including but not by way of limitation, the water, soil, geology and environmental condition of the Property, and the suitability thereof, and of the Property, for any and all activities and uses which Purchaser may elect to conduct thereon or any improvements Purchaser may elect to construct thereon, income to be derived therefrom or expenses to be incurred with respect thereto, or any obligations or any other matter or thing relating to or affecting the same; (ii) the manner or quality of construction (or of any materials incorporated into) and condition and state of repair or lack of repair of any improvements located thereon; (iii) the nature and extent of any easement, right of way, lease, possession, lien, encumbrance, license, reservation, condition or otherwise; (iv) the compliance of the Property or the operation of the Property with any laws, rules, codes, ordinances or regulations of any government or other body; (v) the value, condition, merchantability, marketability, profitability, suitability, habitability, or fitness for a particular use or purpose of the Property; and/or (vi) the manner or quality of the Property. Grantee acknowledges that (a) it is familiar with the Property and is a sophisticated purchaser of real estate, (b) it is relying and shall rely upon its own expertise and that of its consultants in purchasing the Property and that it will conduct such inspections and investigations as it deems necessary including, but not limited to, the physical and environmental conditions thereof and shall rely upon the same, and (c) it shall look solely to the experts and professionals selected or approved by Grantee to advise Grantee with respect to the condition of the Property and, without limitation of the foregoing, will not hold Grantor responsible for any environmental conditions or for any remediation activities in connection therewith, and hereby releases Grantor from any such liability. Subject to the representations and warranties of Seller expressly contained in the Agreement, Grantor sells and conveys the Property to Grantee, and Grantee acquires and accepts the Property, "AS IS, WHERE IS, and WITH ALL FAULTS".

When the context requires, singular nouns and pronouns include the plural.

[Signatures are on the following page.]

EXECUTED AND DELIVERED on this the 21 day of JUNE, 2024.

GRANTOR:

AUBREY BLACKJACK PARTNERS, LLC,
a Texas limited liability company

By: Charles S. Brown
Name: Charles S. Brown
Title: Vice President

STATE OF TEXAS §
§
COUNTY OF DALLAS §

This instrument was acknowledged before me on June 20, 2024, by Charles S. Brown, Vice President of Aubrey Blackjack Partners, LLC, a Texas limited liability company, on behalf of said entity.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 20 day of June 2024.

[SEAL]

MITCHELL EDWARDS
Notary Public, State of Texas
Comm. Expires 04-19-2026
Notary ID 133712516

NOTARY PUBLIC IN AND FOR
THE STATE OF TEXAS

My Commission Expires:
04/19/2026

After recording, send to:

KL LB BUY 3, LLC
c/o KL Servicers LLC
6900 E. Camelback Road, Suite 800
Scottsdale, AZ 85251
Attention: Tricia Tiernan

PLEASE SEND TAX STATEMENTS TO:

Lennar Homes of Texas Land and Construction, Ltd.
1707 Market Place Blvd., Suite 100
Irving, Texas 75063
Attn.: Greg Urech

EXHIBIT A
Legal Description of the Land

TRACT 1:

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas and being a portion of a remainder of a called 357.561acre tract of land described in a deed to Aubrey Blackjack Partners, LLC., recorded in Instrument Number 2021213816, Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 5/8" iron rod with plastic cap stamped "KHA" set for the northernmost northeast corner of a called 125.827 acre tract described in the deed to KLLB AIV, LLC., recorded in Instrument Number 202397316, Official Records of Denton County, Texas and being the beginning of a nontangent curve to the left with a radius of 606.00 feet, a central angle of 01°51'47", and a chord bearing and distance of North 50°01'52" East, 19.70 feet;

THENCE over and across said 357.561 acre tract of land the following courses and distances:
In an easterly direction, with said nontangent curve to the left, an arc distance of 19.71 feet to a point for corner;

North 49°05'58" East, a distance of 106.29 feet to a point for corner;

North 04°05'58" East, a distance of 14.14 feet to a point for corner;

North 49°05'58" East, a distance of 50.00 feet to a point for corner;

South 85°54'02" East, a distance of 14.14 feet to a point for corner;

North 49°05'58" East, a distance of 226.40 feet to a point for corner;

North 04°05'58" East, a distance of 14.85 feet to a point for corner;

North 49°05'58" East, a distance of 50.00 feet to a point for corner;

South 85°54'02" East, a distance of 14.85 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 49°05'58" East, a distance of 560.89 feet to a point for corner;

North 03°29'37" East, a distance of 14.07 feet to a point for corner;

North 47°53'15" East, a distance of 50.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 42°06'45" West, a distance of 55.45 feet to a point at the beginning of a tangent curve to the left with a radius of 625.00 feet, a central angle of 04°34'45", and a chord bearing and distance of North 44°24'07" West, 49.94 feet;

In a northwesterly direction, with said tangent curve to the left, an arc distance of 49.95 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 43°18'30" East, a distance of 65.55 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 49°05'58" East, a distance of 93.53 feet to a point for corner;

North 46°06'01" East, a distance of 47.32 feet to a point for corner;

North 39°27'23" East, a distance of 47.34 feet to a point for corner;

North 33°23'34" East, a distance of 47.34 feet to a point for corner;

North 27°19'44" East, a distance of 47.34 feet to a point for corner;

North 22°42'35" East, a distance of 49.19 feet to a point for corner;

North 22°26'04" East, a distance of 99.61 feet to a point for corner;

North 18°26'49" East, a distance of 47.34 feet to a point for corner;

North 11°42'12" East, a distance of 58.96 feet to a point for corner;

North 04°54'39" East, a distance of 47.60 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 20°09'04" West, a distance of 27.65 feet to a point for corner;

North 27°44'47" West, a distance of 59.25 feet to a point for corner;

North 54°57'54" West, a distance of 105.36 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 01°50'14" East, a distance of 40.47 feet to a mag nail set for corner on the north line of said 357.561acre tract and in Black Jack Road, a variable width right of way, no record found;

THENCE South 88°09'46" East, along the north line of said 357.561acre tract and said Black Jack Road, a distance of 432.22 feet to a mag nail set for corner;

THENCE South 02°28'04" West, departing the north line of said 357.561 acre tract and said Black Jack Road, and crossing said 357.561acre tract, a distance of 159.74 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

THENCE South 86°46'49" East, continuing across said 357.561acre tract, a distance of 517.66 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a nontangent curve to the left with a radius of 3,255.00 feet, a central angle of 11°24'47", and a chord bearing and distance of South 83°36'06" East, 647.32 feet;

THENCE in a easterly direction continuing across said 357.561 acre tract, with said nontangent curve to the left, an arc distance of 648.39 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

THENCE South 89°18'30" East, continuing across said 357.561 acre tract, a distance of 241.16 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner on the east line of said 357.561 acre tract and the west line of a called 61.611 acre tract of land described in a deed to FM Land Investments I, LLC, as recorded in Instrument No. 202131043 of the Official Records of Denton County, Texas;

THENCE South 01°40'23" West, along the east line of said 357.561 acre tract and the west line of said 61.611 acre tract, a distance of 1,050.15 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

THENCE departing the east line of said 357.561 acre tract and the west line of said 61.611acre tract, and crossing said 357.561 acre tract, the following courses and distances:

North 89°18'30" West, a distance of 119.45 feet to a 5/8" iron rod with plastic cap stamped "KHA"

set for corner;

South 46°10'57" West, a distance of 14.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 89°44'37" West, a distance of 50.02 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 88°19'37" West, a distance of 128.96 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 00°25'03" West, a distance of 305.27 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a nontangent curve to the right with a radius of 4,009.00 feet, a central angle of 01°34'30", and a chord bearing and distance of North 87°12'56" West, 110.20 feet;

In a westerly direction, with said nontangent curve to the right, an arc distance of 110.20 feet to a point for corner;

South 46°36'46" West, a distance of 13.63 feet to a point for corner;

North 85°55'37" West, a distance of 50.15 feet to a point for corner;

North 42°57'26" West, a distance of 14.74 feet to a point at the beginning of a nontangent curve to the right with a radius of 4,009.00 feet, a central angle of 02°01'20", and a chord bearing and distance of North 84°24'52" West, 141.49 feet;

In a westerly direction, with said nontangent curve to the right, an arc distance of 141.50 feet to a point at the beginning of a reverse curve to the left with a radius of 275.00 feet, a central angle of 23°03'59", and a chord bearing and distance of South 85°03'48" West, 109.97 feet;

In a westerly direction, with said reverse curve to the left, an arc distance of 110.71 feet to a point for corner;

South 24°22'22" West, a distance of 13.35 feet to a point for corner;

South 66°13'51" West, a distance of 50.00 feet to a point for corner;

North 71°52'44" West, a distance of 13.34 feet to a point at the beginning of a nontangent curve to the left with a radius of 275.00 feet, a central angle of 15°14'14", and a chord bearing and distance of South 51°18'46" West, 72.92 feet;

In a southwesterly direction, with said nontangent curve to the left, an arc distance of 73.13 feet to a point for corner;

South 43°41'39" West, a distance of 75.68 feet to a point at the beginning of a tangent curve to the right with a radius of 325.00 feet, a central angle of 01°03'50", and a chord bearing and distance of South 44°13'34" West, 6.03 feet;

In a southwesterly direction, with said tangent curve to the right, an arc distance of 6.03 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 45°14'31" East, a distance of 40.60 feet to a point for corner;

South 00°25'03" East, a distance of 400.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°34'57" West, a distance of 120.00 feet to a point for corner;

South 00°25'03" East, a distance of 8.20 feet to a point for corner;

South 89°34'57" West, a distance of 385.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 120.20 feet to a point for corner;

South 35°45'20" East, a distance of 25.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a nontangent curve to the left with a radius of 57.50 feet, a central angle of 233°57'26", and a chord bearing and distance of South 62°44'03" East, 102.49 feet;

In an easterly direction, with said non-tangent curve to the left, an arc distance of 234.79 feet to a point for corner;

North 49°35'53" East, a distance of 12.77 feet to a point for corner;

North 89°34'57" East, a distance of 5.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 120.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 89°34'57" East, a distance of 90.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 477.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set on the south line of said 357.561 acre tract and the north line of a called 27.37 acre tract of land described in the deed to Deccan Ranch, LLC, recorded in Instrument No. 2019327 Official Records of Denton County, Texas;

THENCE South 89°34'57" West, along the south line of said 357.561 acre tract, the north line of said 27.37 acre tract, a distance of 143.48 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southeast corner of a called 5.000 acre tract of land described in a deed to Joshua A. Bethke, Trustee, as recorded in Instrument Number 20248127, Official Records of Denton County, Texas;

THENCE North 00°25'03" West, departing the south line of said 357.561acre tract and the north line of said 27.37 acre tract, and along the easterly line of said 5.000 acre tract, a distance of 480.00 feet to the northeast corner of said 5.000 acre tract;

THENCE South 89°34'57" West, along the north line of said 5.000 acre tract, a distance of 453.75 feet to the northwest corner of said 5.000 acre tract;

THENCE South 00°25'03" East, along the west line of said 5.000 acre tract, a distance of 480.00

feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southwest corner of said 5.000 acre tract;

THENCE North 89°34'57" East, along the south line of said 5.000 acre tract, a distance of 204.04 feet to a 1/2" iron rod found for the northwest corner of said 27.37acre tract, common to an ell corner of said 357.561acre tract;

THENCE South 00°10'43" East, departing the south line of said 5.000 acre tract, along the west line of said 27.37acre tract and the east line of said 357.561 acre tract, a distance of 274.51 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southerly northeast corner of aforesaid 125.827 acre tract;

THENCE South 89°44'50" West, along the north line of said 125.827acre tract, a distance of 228.99 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for a northwest corner of said 125.827 acre tract;

THENCE departing said north line, over and across aforementioned 357.561acre tract the following courses and distances:

North 00°10'40" West, a distance of 37.64 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 52°23'03" East, a distance of 115.05 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 37°36'57" West, a distance of 234.04 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 30°40'34" West, a distance of 62.61 feet to a point for corner;

North 24°18'32" West, a distance of 63.01 feet to a point for corner;

North 17°56'30" West, a distance of 63.01 feet to a point for corner;

North 11°34'44" West, a distance of 67.77 feet to a point for corner;

North 11°02'25" West, a distance of 84.90 feet to a point for corner;

North 16°05'45" West, a distance of 100.87 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 23°14'14" West, a distance of 176.77 feet to a point for corner;

North 20°46'24" West, a distance of 69.38 feet to a point for corner;

North 17°59'04" West, a distance of 70.55 feet to a point for corner;

North 16°16'48" West, a distance of 245.06 feet to a point for corner;

North 27°19'42" West, a distance of 113.14 feet to a point for corner;

North 39°35'23" West, a distance of 103.49 feet to a point for corner;

South 49°05'58" West, a distance of 196.01 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 04°05'58" West, a distance of 14.14 feet to a point for corner;

South 49°05'58" West, a distance of 50.00 feet to a point for corner;

North 85°54'02" West, a distance of 14.14 feet to a point for corner;

South 49°05'58" West, a distance of 228.50 feet to a point for corner;

South 09°23'51" West, a distance of 15.65 feet to a point for corner;

South 49°05'58" West, a distance of 50.86 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 77°49'37" West, a distance of 12.51 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for the southernmost northeast corner of aforementioned 125.827acre tract;

THENCE North 39°02'15" West, along the northeasterly line of said 125.827acre tract, a distance of 60.35 feet to the POINT OF BEGINNING and containing 65.626 acres (2,858,653 square feet) of land, more or less.

TRACT 2:

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas and being a portion of a remainder of a called 357.561 acre tract of land described in a deed to Aubrey Blackjack Partners, LLC., recorded in Instrument Number 2021213816, Official Records of Denton County, Texas, and being more particularly described as follows:

COMMENCING at a 1/2 inch iron rod with plastic cap stamped "Price Surveying" found for the northerly southeast corner of said 357.561 acre tract;

THENCE North 01°40'23" East, along an easterly line of said 357.561 acre tract, a distance of 3.21 feet to a 5/8 inch iron rod with plastic cap stamped "KHA" set for corner on the northerly line of Keeneland, according to the plat thereof recorded in Document No. 20242 of the Plat Records of Denton County, Texas;

THENCE South 89°33'30" West, departing said easterly line of said 357.561 acre tract and along the northerly line of said Keeneland, a distance of 250.21 feet to a 5/8 inch iron rod with plastic cap stamped "KHA" set for the northwest corner of said Keeneland;

THENCE South 01°49'07" West, along the westerly line of said Keeneland, a distance of 3.11 feet to a 1/2 inch iron rod with an illegible plastic cap found for the northeast corner of a called 27.106 acre tract of land described in a deed to Aubrey Farms LLC, as recorded in Instrument No. 201983125 of the Official Records of Denton County, Texas, being on a southerly line of said 357.561 acre tract;

THENCE South 89°34'57" West, along said southerly line of said 357.561 acre tract, the northerly line of said 27.106 acre tract, and the northerly line of a called 27.37 acre tract of land described in a deed to Deccan Ranch, LLC, as recorded in Instrument No. 2019327 of the Official Records of Denton County, Texas, a distance of 896.05 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

THENCE departing said southerly line of 357.561 acre tract and the northerly line of said 27.37 acre tract, and crossing said 357.561 acre tract, the following courses and distances:

North 00°25'03" West, a distance of 477.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°34'57" West, a distance of 90.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 00°25'03" West, a distance of 120.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°34'57" West, a distance of 5.00 feet to a point for corner;

South 49°35'53" West, a distance of 12.77 feet to a point at the beginning of a nontangent curve to the right with a radius of 57.50 feet, a central angle of 233°57'26", and a chord bearing and distance of North 62°44'03" West, 102.49 feet;

In a westerly direction, with said nontangent curve to the right, an arc distance of 234.79 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 35°45'20" West, a distance of 25.00 feet to a point for corner;

North 00°25'03" West, a distance of 120.20 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 89°34'57" East, a distance of 385.00 feet to a point for corner;

North 00°25'03" West, a distance of 8.20 feet to a point for corner;

North 89°34'57" East, a distance of 120.00 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 00°25'03" West, a distance of 400.00 feet to a point for corner;

North 45°14'31" West, a distance of 40.60 feet to a 5/8" iron rod with plastic cap stamped "KHA" set at the beginning of a nontangent curve to the left with a radius of 325.00 feet, a central angle of 01°03'50", and a chord bearing and distance of North 44°13'34" East, 6.03 feet;

In a northerly direction, with said nontangent curve to the left, an arc distance of 6.03 feet to a point for corner;

North 43°41'39" East, a distance of 75.68 feet to a point at the beginning of a tangent curve to the right with a radius of 275.00 feet, a central angle of 15°14'14", and a chord bearing and distance of North 51°18'46" East, 72.92 feet;

In a easterly direction, with said tangent curve to the right, an arc distance of 73.13 feet to a point for corner;

South 71°52'44" East, a distance of 13.34 feet to a point for corner;

North 66°13'51" East, a distance of 50.00 feet to a point for corner;

North 24°22'22" East, a distance of 13.35 feet to a point at the beginning of a nontangent curve to the right with a radius of 275.00 feet, a central angle of 23°03'59", and a chord bearing and distance of North 85°03'48" East, 109.97 feet;

In a easterly direction, with said nontangent curve to the right, an arc distance of 110.71 feet to a point at the beginning of a reverse curve to the left with a radius of 4,009.00 feet, a central angle of 02°01'20", and a chord bearing and distance of South 84°24'52" East, 141.49 feet;

In a easterly direction, with said reverse curve to the left, an arc distance of 141.50 feet to a point for corner;

South 42°57'26" East, a distance of 14.74 feet to a point for corner;

South 85°55'37" East, a distance of 50.15 feet to a point for corner;

North 46°36'46" East, a distance of 13.63 feet to a point at the beginning of a nontangent curve to the left with a radius of 4,009.00 feet, a central angle of 01°34'30", and a chord bearing and distance of South 87°12'56" East, 110.20 feet;

In a easterly direction, with said nontangent curve to the left, an arc distance of 110.20 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 00°25'03" East, a distance of 305.27 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 88°19'37" East, a distance of 128.96 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°44'37" East, a distance of 50.02 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

North 46°10'57" East, a distance of 14.26 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner;

South 89°18'30" East, a distance of 119.45 feet to a 5/8" iron rod with plastic cap stamped "KHA" set for corner on an easterly line of said 357.561 acre tract and the westerly line of a called 61.611 acre tract of land described in a deed to FM Land Investments I, LLC, as recorded in Instrument No. 202131043 of the Official Records of Denton County, Texas;

THENCE South 01°40'23" West, along said easterly line of 61.611 acre tract and the westerly line of said 61.611 acre tract, a distance of 1,022.36 feet to the POINT OF BEGINNING and containing 31.067 acres (1,353,271 square feet) of land, more or less.

EXHIBIT B
Permitted Exceptions

1. Standby fees, taxes, and assessments by any taxing authority for the year 2024, and subsequent years.

2. Existence of an OnSite Sewage Facility requiring maintenance contract, together with the terms and conditions relative to the maintenance of same as evidenced by Affidavit to Public recorded in Volume 4873, Pages 38-39, Official Public Records of Denton County, Texas.

3. Electric Line Easement and Right of Way executed by ALW Land Properties, LLC to Denton County Electric Cooperative, Inc. d/b/a Coserv Electric, dated July 7, 2016, recorded Instrument No. 201686611, Official Public Records of Denton County, Texas. (Tract 1)

4. Terms, provisions and conditions of Development Agreement executed by and between ALW 377, LLC, FM Land Investments I, LLC, and the City of Aubrey, Texas, dated June 30, 2021, recorded in Instrument No. 2021131889, Official Public Records of Denton County, Texas.

5. All oil, gas, and other minerals of every character in, on, under, or that may be produced upon the herein described property reserved in instrument recorded in Instrument No. 2021213816, Official Records of Denton County, Texas, together with all royalties, bonuses, rentals, and all rights, express or implied, reference to which instrument is here made for all purposes.

6. Water rights as reserved in Deed executed by ALW 377, LLC to Aubrey Blackjack Partners, LLC, dated November 19, 2021, recorded in Instrument No. 2021213816, Official Public Records of Denton County, Texas.

7. Lack of right of access to and from TRACT 2.

8. Survey dated 5/22/2024, prepared by Sylviana Gunawan, RPLS 6461,: Fences do not follow property lines and traverse over and across the property line. Asphalt pavement and gravel traverse over and across the property line of Tract 1. Portion of Tract 1 lies in the Black Jack Road R.O.W. Apparent Easements as evidenced by those certain Electric meters, Sanitary Sewer Cleanout, Water Spigot, Water wells, Water meters, Sanitary Sewer Septic Tanks, Sanitary Sewer Line pumps, Flood lights, Gas meters, and Light Standards.

Denton County
Juli Luke
County Clerk

Instrument Number: 55015

ERecordings-RP

WARRANTY DEED

Recorded On: May 24, 2024 04:06 PM

Number of Pages: 4

" Examined and Charged as Follows: "

Total Recording: $37.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	55015
Receipt Number:	20240524000609
Recorded Date/Time:	May 24, 2024 04:06 PM
User:	Jessica S
Station:	Station 9

Record and Return To:

Corporation Service Company

STATE OF TEXAS
COUNTY OF DENTON

I hereby certify that this Instrument was FILED In the File Number sequence on the date/time printed hereon, and was duly RECORDED in the Official Records of Denton County, Texas.

Juli Luke
County Clerk
Denton County, TX

SPECIAL WARRANTY DEED

High Pointe Ranch Municipal Utility District No. 1 of Denton County – Directors Lot
(Undivided 20% Interest No. 3)

THE STATE OF TEXAS §
§ KNOW ALL PERSONS BY THESE PRESENTS:
COUNTY OF DENTON §

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVERS LICENSE NUMBER.

THAT Joshua A. Bethke, Trustee ("**Grantor**"), having an address of 16000 N. Dallas Parkway, Suite 350, Dallas, Texas 75248 for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration cash in hand paid by Brandon Allen, out of his sole and separate property, having an address of 4161 McKinney Ave., Suite 410 Dallas, TX 75204-8213 ("**Grantee**"), the receipt of which is hereby acknowledged, has granted, sold and conveyed, and by these presents does hereby grant, sell and convey unto Grantee, as his sole and separate property, an undivided 20% interest in the real property located in Denton County, Texas described in Exhibit "A" attached hereto.

This Deed and conveyance is expressly made subject to all liens, encumbrances, conditions and other exceptions appearing of record in the office of the County Clerk of Denton County, Texas and applicable to such property.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in any way belonging unto the Grantee, Grantee's heirs and assigns, forever; and Grantor does hereby bind himself and his successors to Warrant and Forever Defend all and singular the above-described premises unto the said Grantee, Grantee's heirs and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise.

EXECUTED to be effective as of the 26th day of January, 2024.

GRANTOR:

Joshua A. Bethke, Trustee

THE STATE OF TEXAS §
§
COUNTY OF DALLAS §

This instrument was acknowledged before me on the 26th day of January, 2024 by Joshua A. Bethke, Trustee, in the capacity therein stated.

Notary Public in and for the State of Texas

(SEAL)

CARSON H LUDDECKE
NOTARY ID #13330768-8
My Commission Expires
September 01, 2025

EXHIBIT "A"

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas, and being a portion of a called 357.561-acre tract of land described in a Special Warranty Deed with Vendor's Lien to Aubrey Blackjack Partners, LLC, as recorded in Instrument No. 2021-213816 of the Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod found for the northwest corner of a called 27.37-acre tract of land, described in a deed to Deccan Ranch, LLC, as recorded in Instrument No. 2019-327 of the Official Records of Denton County, Texas, common to an ell corner of said 357.561-acre tract, from which, a 1/2-inch iron rod with plastic cap stamped "Price Surveying", found for an angle point along the westerly line of said 27.37 acre tract, bears South 00°10'43" East, a distance of 956.88 feet;

THENCE South 89°34'57" West, crossing said 357.561-acre tract, a distance of 204.04 feet to a point for corner;

THENCE North 00°25'03" West, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner;

THENCE North 89°34'57" East, continuing across said 357.561-acre tract, a distance of 453.75 feet to a point for corner;

THENCE South 00°25'03" East, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner on the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract;

THENCE South 89°34'57" West, along the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract, a distance of 249.71 feet to the **POINT OF BEGINNING** and containing 5.000 acres (217,800 square feet) of land, more or less.

SYLVIANA GUNAWAN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6461
6160 WARREN PKWY., SUITE 210
FRISCO, TEXAS 75034
PH. 972-335-3580

STATE OF TEXAS
REGISTERED
SYLVIANA GUNAWAN
6461
PROFESSIONAL
LAND SURVEYOR

EXHIBIT "A"
5.000 ACRES
F. TREVINO SURVEY, ABSTRACT NO. 1243
DENTON COUNTY, TEXAS

Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
FIRM # 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
N/A	SG	SGA	Jun, 2023	065308747	1 OF 2

GUNAWAN, SYLVIANA 6/6/2023 11:28 AM K:\FRI_SURVEY\065308747-DEER POINT RANCH - AUBREY\DWG\065308747 DIRECTOR'S LOT.DWG

Denton County
Juli Luke
County Clerk

Instrument Number: 55014

ERecordings-RP

SPECIAL WARRANTY DEED

Recorded On: May 24, 2024 04:06 PM

Number of Pages: 4

" Examined and Charged as Follows: "

Total Recording: $37.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	55014
Receipt Number:	20240524000609
Recorded Date/Time:	May 24, 2024 04:06 PM
User:	Jessica S
Station:	Station 9

Record and Return To:

Corporation Service Company

STATE OF TEXAS
COUNTY OF DENTON

I hereby certify that this Instrument was FILED In the File Number sequence on the date/time printed hereon, and was duly RECORDED in the Official Records of Denton County, Texas.

Juli Luke
County Clerk
Denton County, TX

SPECIAL WARRANTY DEED

High Pointe Ranch Municipal Utility District No. 1 of Denton County – Directors Lot
(Undivided 20% Interest No. 2)

THE STATE OF TEXAS §
§ KNOW ALL PERSONS BY THESE PRESENTS:
COUNTY OF DENTON §

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVERS LICENSE NUMBER.

THAT Joshua A. Bethke, Trustee ("**Grantor**"), having an address of 16000 N. Dallas Parkway, Suite 350, Dallas, Texas 75248 for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration cash in hand paid by Justin Morse, out of his sole and separate property, having an address of 4161 McKinney Ave., Suite 410 Dallas, TX 75204-8213 ("**Grantee**"), the receipt of which is hereby acknowledged, has granted, sold and conveyed, and by these presents does hereby grant, sell and convey unto Grantee, as his sole and separate property, an undivided 20% interest in the real property located in Denton County, Texas described in Exhibit "A" attached hereto.

This Deed and conveyance is expressly made subject to all liens, encumbrances, conditions and other exceptions appearing of record in the office of the County Clerk of Denton County, Texas and applicable to such property.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in any way belonging unto the Grantee, Grantee's heirs and assigns, forever; and Grantor does hereby bind himself and his successors to Warrant and Forever Defend all and singular the above-described premises unto the said Grantee, Grantee's heirs and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise.

EXECUTED to be effective as of the 26th day of January, 2024.

GRANTOR:

Joshua A. Bethke, Trustee

THE STATE OF TEXAS §
§
COUNTY OF DALLAS §

This instrument was acknowledged before me on the 26th day of January, 2024 by Joshua A. Bethke, Trustee, in the capacity therein stated.

Notary Public in and for the State of Texas

(SEAL)

CARSON H LUDDECKE
NOTARY ID #13330768-8
My Commission Expires
September 01, 2025

EXHIBIT "A"

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas, and being a portion of a called 357.561-acre tract of land described in a Special Warranty Deed with Vendor's Lien to Aubrey Blackjack Partners, LLC, as recorded in Instrument No. 2021-213816 of the Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod found for the northwest corner of a called 27.37-acre tract of land, described in a deed to Deccan Ranch, LLC, as recorded in Instrument No. 2019-327 of the Official Records of Denton County, Texas, common to an ell corner of said 357.561-acre tract, from which, a 1/2-inch iron rod with plastic cap stamped "Price Surveying", found for an angle point along the westerly line of said 27.37 acre tract, bears South 00°10'43" East, a distance of 956.88 feet;

THENCE South 89°34'57" West, crossing said 357.561-acre tract, a distance of 204.04 feet to a point for corner;

THENCE North 00°25'03" West, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner;

THENCE North 89°34'57" East, continuing across said 357.561-acre tract, a distance of 453.75 feet to a point for corner;

THENCE South 00°25'03" East, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner on the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract;

THENCE South 89°34'57" West, along the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract, a distance of 249.71 feet to the **POINT OF BEGINNING** and containing 5.000 acres (217,800 square feet) of land, more or less.

SYLVIANA GUNAWAN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6461
6160 WARREN PKWY., SUITE 210
FRISCO, TEXAS 75034
PH. 972-335-3580
[redacted]

STATE OF TEXAS
REGISTERED
SYLVIANA GUNAWAN
6461
PROFESSIONAL
LAND SURVEYOR

EXHIBIT "A"
5.000 ACRES
F. TREVINO SURVEY, ABSTRACT NO. 1243
DENTON COUNTY, TEXAS

Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
FIRM # 10193822
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
N/A	SG	N/A	Jun. 2022	069308747	1 OF 2

GUNAWAN, SYLVIANA 6/8/2023 11:26 AM K:\FR_SURVEY\069308747-HIGH POINT RANCH - AUBREY\DWG\069308747 DIRECTOR'S LOT.DWG

Denton County
Juli Luke
County Clerk

Instrument Number: 26079

ERecordings-RP

SPECIAL WARRANTY DEED

Recorded On: March 13, 2024 01:56 PM

Number of Pages: 4

" Examined and Charged as Follows: "

Total Recording: $37.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	26079
Receipt Number:	20240313000261
Recorded Date/Time:	March 13, 2024 01:56 PM
User:	Jennifer K
Station:	Station 38

Record and Return To:

Corporation Service Company

STATE OF TEXAS
COUNTY OF DENTON

I hereby certify that this Instrument was FILED In the File Number sequence on the date/time printed hereon, and was duly RECORDED in the Official Records of Denton County, Texas.

Juli Luke
County Clerk
Denton County, TX

SPECIAL WARRANTY DEED

High Pointe Ranch Municipal Utility District No. 1 of Denton County – Directors Lot
(Undivided 20% Interest No. 5)

THE STATE OF TEXAS §
§ KNOW ALL PERSONS BY THESE PRESENTS:
COUNTY OF DENTON §

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVERS LICENSE NUMBER.

THAT Joshua A. Bethke, Trustee ("**Grantor**"), having an address of 16000 N. Dallas Parkway, Suite 350, Dallas, Texas 75248 for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration cash in hand paid by Zach Downtain, out of his sole and separate property, having an address of 4161 McKinney Ave., Suite 410 Dallas, TX 75204-8213 ("**Grantee**"), the receipt of which is hereby acknowledged, has granted, sold and conveyed, and by these presents does hereby grant, sell and convey unto Grantee, as his sole and separate property, an undivided 20% interest in the real property located in Denton County, Texas described in Exhibit "A" attached hereto.

This Deed and conveyance is expressly made subject to all liens, encumbrances, conditions and other exceptions appearing of record in the office of the County Clerk of Denton County, Texas and applicable to such property.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in any way belonging unto the Grantee, Grantee's heirs and assigns, forever; and Grantor does hereby bind himself and his successors to Warrant and Forever Defend all and singular the above-described premises unto the said Grantee, Grantee's heirs and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise.

EXECUTED to be effective as of the 26th day of January, 2024.

GRANTOR:

Joshua A. Bethke, Trustee

THE STATE OF TEXAS §
§
COUNTY OF DALLAS §

This instrument was acknowledged before me on the 26th day of January, 2024 by Joshua A. Bethke, Trustee, in the capacity therein stated.

Notary Public in and for the State of Texas

(SEAL)

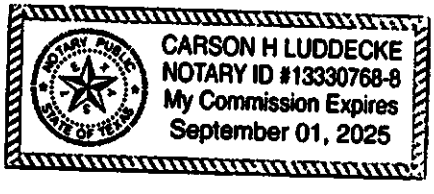


EXHIBIT "A"

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas, and being a portion of a called 357.561-acre tract of land described in a Special Warranty Deed with Vendor's Lien to Aubrey Blackjack Partners, LLC, as recorded in Instrument No. 2021-213816 of the Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod found for the northwest corner of a called 27.37-acre tract of land, described in a deed to Deccan Ranch, LLC, as recorded in Instrument No. 2019-327 of the Official Records of Denton County, Texas, common to an ell corner of said 357.561-acre tract, from which, a 1/2-inch iron rod with plastic cap stamped "Price Surveying", found for an angle point along the westerly line of said 27.37 acre tract, bears South 00°10'43" East, a distance of 956.88 feet;

THENCE South 89°34'57" West, crossing said 357.561-acre tract, a distance of 204.04 feet to a point for corner;

THENCE North 00°25'03" West, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner;

THENCE North 89°34'57" East, continuing across said 357.561-acre tract, a distance of 453.75 feet to a point for corner;

THENCE South 00°25'03" East, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner on the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract;

THENCE South 89°34'57" West, along the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract, a distance of 249.71 feet to the **POINT OF BEGINNING** and containing 5.000 acres (217,800 square feet) of land, more or less.

SYLVIANA GUNAWAN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6461
6160 WARREN PKWY., SUITE 210
FRISCO, TEXAS 75034
PH. 972-335-3580

STATE OF TEXAS
REGISTERED
SYLVIANA GUNAWAN
6461
PROFESSIONAL
LAND SURVEYOR

EXHIBIT "A"
5.000 ACRES
F. TREVINO SURVEY, ABSTRACT NO. 1243
DENTON COUNTY, TEXAS

Kimley»Horn

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
N/A	GG	KHA	Jun. 2023	069308747	1 OF 2

Denton County
Juli Luke
County Clerk

Instrument Number: 26078

ERecordings-RP

SPECIAL WARRANTY DEED

Recorded On: March 13, 2024 01:56 PM

Number of Pages: 4

" Examined and Charged as Follows: "

Total Recording: $37.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	26078
Receipt Number:	20240313000261
Recorded Date/Time:	March 13, 2024 01:56 PM
User:	Jennifer K
Station:	Station 38

Record and Return To:

Corporation Service Company

STATE OF TEXAS
COUNTY OF DENTON

I hereby certify that this Instrument was FILED In the File Number sequence on the date/time printed hereon, and was duly RECORDED in the Official Records of Denton County, Texas.

Juli Luke
County Clerk
Denton County, TX

SPECIAL WARRANTY DEED

High Pointe Ranch Municipal Utility District No. 1 of Denton County – Directors Lot
(Undivided 20% Interest No. 4)

THE STATE OF TEXAS §
§ KNOW ALL PERSONS BY THESE PRESENTS:
COUNTY OF DENTON §

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFERS AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVERS LICENSE NUMBER.

THAT Joshua A. Bethke, Trustee ("**Grantor**"), having an address of 16000 N. Dallas Parkway, Suite 350, Dallas, Texas 75248 for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration cash in hand paid by Leanne Wilson, out of his sole and separate property, having an address of 4161 McKinney Ave., Suite 410 Dallas, TX 75204-8213 ("**Grantee**"), the receipt of which is hereby acknowledged, has granted, sold and conveyed, and by these presents does hereby grant, sell and convey unto Grantee, as his sole and separate property, an undivided 20% interest in the real property located in Denton County, Texas described in Exhibit "A" attached hereto.

This Deed and conveyance is expressly made subject to all liens, encumbrances, conditions and other exceptions appearing of record in the office of the County Clerk of Denton County, Texas and applicable to such property.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in any way belonging unto the Grantee, Grantee's heirs and assigns, forever; and Grantor does hereby bind himself and his successors to Warrant and Forever Defend all and singular the above-described premises unto the said Grantee, Grantee's heirs and assigns against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise.

EXECUTED to be effective as of the 26th day of January, 2024.

GRANTOR:

Joshua A. Bethke, Trustee

THE STATE OF TEXAS §
§
COUNTY OF DALLAS §

This instrument was acknowledged before me on the 26th day of January, 2024 by Joshua A. Bethke, Trustee, in the capacity therein stated.

Notary Public in and for the State of Texas

(SEAL)

CARSON H LUDDECKE
NOTARY ID #13330768-8
My Commission Expires
September 01, 2025

EXHIBIT "A"

BEING a tract of land situated in the F. Trevino Survey, Abstract No. 1243, Denton County, Texas, and being a portion of a called 357.561-acre tract of land described in a Special Warranty Deed with Vendor's Lien to Aubrey Blackjack Partners, LLC, as recorded in Instrument No. 2021-213816 of the Official Records of Denton County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod found for the northwest corner of a called 27.37-acre tract of land, described in a deed to Deccan Ranch, LLC, as recorded in Instrument No. 2019-327 of the Official Records of Denton County, Texas, common to an ell corner of said 357.561-acre tract, from which, a 1/2-inch iron rod with plastic cap stamped "Price Surveying", found for an angle point along the westerly line of said 27.37 acre tract, bears South 00°10'43" East, a distance of 956.88 feet;

THENCE South 89°34'57" West, crossing said 357.561-acre tract, a distance of 204.04 feet to a point for corner;

THENCE North 00°25'03" West, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner;

THENCE North 89°34'57" East, continuing across said 357.561-acre tract, a distance of 453.75 feet to a point for corner;

THENCE South 00°25'03" East, continuing across said 357.561-acre tract, a distance of 480.00 feet to a point for corner on the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract;

THENCE South 89°34'57" West, along the southerly line of said 357.561-acre tract and the northerly line of said 27.37-acre tract, a distance of 249.71 feet to the **POINT OF BEGINNING** and containing 5.000 acres (217,800 square feet) of land, more or less.

SYLVIANA GUNAWAN
REGISTERED PROFESSIONAL
LAND SURVEYOR NO. 6461
6160 WARREN PKWY., SUITE 210
FRISCO, TEXAS 75034
PH. 972-335-3580

STATE OF TEXAS
REGISTERED
SYLVIANA GUNAWAN
6461
PROFESSIONAL
LAND SURVEYOR

EXHIBIT "A"
5.000 ACRES
F. TREVINO SURVEY, ABSTRACT NO. 1243
DENTON COUNTY, TEXAS

Kimley»Horn
6160 Warren Parkway, Suite 210
Frisco, Texas 75034
FIRM # 10193932
Tel. No. (972) 335-3580
Fax No. (972) 335-3779

Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
N/A	SG	SGA	Jun. 2022	069306747	1 OF 2

GUNAWAN, SYLVIANA 6/22/2022 11:28 AM K:\FRI_SURVEY\069306747-HIGH POINT RANCH - AUBREY\DWG\069306747 DIRECTOR'S LOT.DWG

Denton County
Juli Luke
County Clerk

Instrument Number: 91987

ERecordings-RP

SPECIAL WARRANTY DEED

Recorded On: August 27, 2024 10:33 AM

Number of Pages: 4

" Examined and Charged as Follows: "

Total Recording: $37.00

********** **THIS PAGE IS PART OF THE INSTRUMENT** **********
Any provision herein which restricts the Sale, Rental or use of the described REAL PROPERTY because of color or race is invalid and unenforceable under federal law.

File Information:

Document Number:	91987
Receipt Number:	20240827000168
Recorded Date/Time:	August 27, 2024 10:33 AM
User:	Kraig T
Station:	Station 21

Record and Return To:

Corporation Service Company

STATE OF TEXAS
COUNTY OF DENTON

I hereby certify that this Instrument was FILED In the File Number sequence on the date/time printed hereon, and was duly RECORDED in the Official Records of Denton County, Texas.

Juli Luke
County Clerk
Denton County, TX

SPECIAL WARRANTY DEED

High Pointe Ranch Municipal Utility District No. 1 of Denton County – Directors Lot
(Undivided 20% Interest No. 1)

THE STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF DENTON §

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OF THE FOLLOWING INFORMATION FORM THIS INSTRUMENT BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVERS LICENSE NUMBER.

THAT Clarke Overlander (hereinafter designated "Grantor"), for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration cash in hand paid by Ariel Britt (hereinafter designated "Grantee"), with an address of 4161 McKinney Ave., Suite 410 Dallas, TX 75204-8213, the receipt of which is hereby acknowledged, has granted, sold and conveyed, and by these presents does hereby grant, sell and convey unto Grantee, an undivided 20% interest in the real property located in Denton County, Texas described in Exhibit "A" attached hereto.

This Deed and conveyance is expressly made subject to all liens, encumbrances, conditions and other exceptions appearing of record in the office of the County Clerk of Denton County, Texas, and applicable to such property.

TO HAVE AND TO HOLD the above-described premises, together with all and singular the rights and appurtenances thereto in any wise belonging, unto the Grantee, Grantee's successors and assigns, forever; and Grantor does hereby bind Grantor and Grantor's heirs and successors, to Warrant and Forever Defend all and singular the premises unto the said Grantee, Grantee's successors and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, by, through or under Grantor, but not otherwise.

EXECUTED as of the 12th day of February 2024, to be effective the 19th day of August, 2024.

GRANTOR:

Clarke Overlander

THE STATE OF TEXAS §
§
COUNTY OF Collin §

This instrument was acknowledged before me on the 12th day of February 2024 by Clarke Overlander in the capacity therein stated.

Notary Public in and for the State of Texas

(NOTARY SEAL)

CARSON H LUDDECKE
NOTARY ID #13330768-8
My Commission Expires
September 01, 2025

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FRISCO, TEXAS 75034
PH. 972-335-3580

STATE OF TEXAS
REGISTERED
SYLVIANA GUNAWAN
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Scale	Drawn by	Checked by	Date	Project No.	Sheet No.
N/A	SG	N/A	Jan. 2023	069305747	1 OF 2

GUNAWAN, SYLVIANA 01/20/2023 11:28 AM K:\FW_SURVEY\069305747-HIGH POINT RANCH - AUBREY\DWG\069305747 DIRECTOR'S LOT.DWG

Monthly Evaporation Summary

Pond	Surface Area (ac.)	8.21

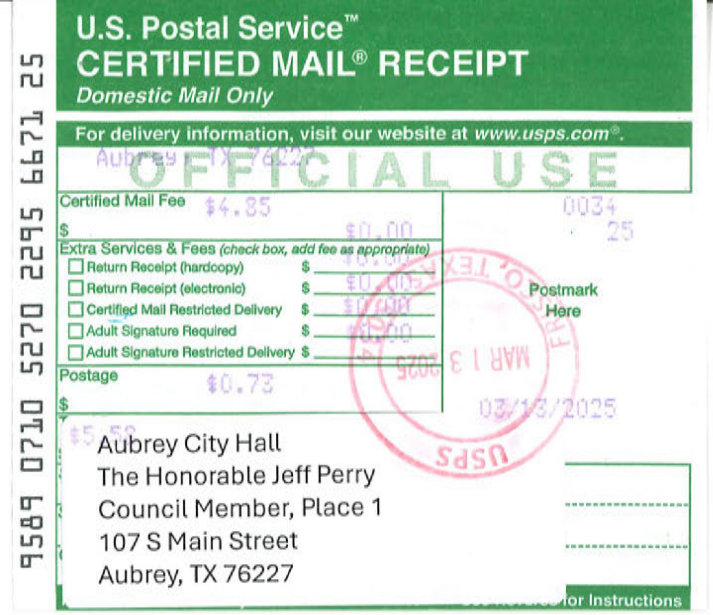
Evaporation Summary (Average)				
Year	Days in the Month	TCEQ WRAP Net Trinity River Basin Evaporation - for Max (1956) (ft)	Monthly Evaporation Volume (ac-ft)	Average Daily Evaporation Volume (gallons)
January	31	0.03	0.25	2,590
February	28	-0.17	-1.40	-16,248
March	31	0.35	2.87	30,215
April	30	0.26	2.14	23,194
May	31	0.27	2.22	23,309
June	30	0.59	4.85	52,632
July	31	0.72	5.91	62,157
August	31	0.86	7.06	74,243
September	30	0.72	5.91	64,229
October	31	0.26	2.14	22,446
November	30	0.00	0.00	0
December	31	0.02	0.16	1,727
Annual Evaporation (ac-ft)			32.11	-
Annual Evaporation (gallons)			10,463,998	-

Maximum Average Daily Evaporation (gallons)
74,243

Pump Rate (hrs/day)
20

Maximum Groundwater Pump Rate
62

TCEQ WRAP Input Files for Trinity River Basin														Total	
EV Record	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	(ft)	(in)
EV EV411	1940	0.05	-0.08	0.31	-0.07	0.12	0.2	0.49	0.6	0.64	0.33	-0.2	-0.02	2.37	28.44
EV EV411	1941	0.14	0.01	0.14	-0.15	0.31	0.29	0.47	0.28	0.48	-0.27	0.16	0	1.86	22.32
EV EV411	1942	0.08	0.12	0.2	0.02	0.26	0.14	0.67	0.31	0.2	0.05	0.14	-0.03	2.16	25.92
EV EV411	1943	0.19	0.18	0.06	0.25	-0.03	0.43	0.72	0.87	0.37	0.27	0.23	-0.14	3.4	40.8
EV EV411	1944	-0.07	-0.33	0.14	0.14	0.07	0.48	0.5	0.55	0.46	0.21	-0.02	-0.1	2.03	24.36
EV EV411	1945	0.06	-0.06	-0.04	0.1	0.25	0.17	0.26	0.5	0.18	0.16	0.17	0.12	1.87	22.44
EV EV411	1946	-0.08	0.11	0.06	0.09	-0.05	0.37	0.66	0.36	0.14	0.3	-0.11	0.13	1.98	23.76
EV EV411	1947	0.14	0.21	0.08	-0.03	0.19	0.33	0.67	0.55	0.55	0.2	0.05	-0.13	2.81	33.72
EV EV411	1948	0.05	0.05	0.22	0.45	0.21	0.44	0.2	0.66	0.61	0.32	0.31	0.19	3.71	44.52
EV EV411	1949	-0.33	0.01	0.05	0.09	0.11	0.32	0.59	0.49	0.17	-0.19	0.3	-0.08	1.53	18.36
EV EV411	1950	-0.12	0.21	0.31	0.24	0.14	0.39	-0.17	0.13	0.2	0.47	0.37	0.21	2.38	28.56
EV EV411	1951	0.1	-0.12	0.29	0.25	0.18	0.18	0.54	0.78	0.34	0.22	0.08	0.18	3.02	36.24
EV EV411	1952	0.14	0.07	0.04	-0.17	0.27	0.75	0.61	0.81	0.49	0.53	-0.14	-0.1	3.3	39.6
EV EV411	1953	0.13	0.06	-0.01	0.07	0.37	0.84	0.34	0.5	0.44	0.09	-0.05	0.1	2.88	34.56
EV EV411	1954	-0.14	0.29	0.35	0.13	-0.09	0.36	0.73	0.69	0.37	-0.22	0.17	-0.01	2.63	31.56
EV EV411	1955	0.01	-0.05	0.11	0.09	0	0.39	0.45	0.44	0.18	0.39	0.34	0.14	2.49	29.88
EV EV411	1956	0.03	-0.17	0.35	0.26	0.27	0.59	0.72	0.86	0.72	0.26	0	0.02	3.91	46.92
EV EV411	1957	-0.03	-0.07	-0.15	-0.29	0.04	0.42	0.58	0.5	-0.07	0.05	-0.34	0.1	0.74	8.88
EV EV411	1958	-0.03	0.11	-0.08	-0.07	0.27	0.27	0.45	0.41	0.09	0.19	0.05	0.05	1.71	20.52
EV EV411	1959	0.06	0.03	0.21	0.2	0.18	-0.01	-0.05	0.35	0.28	-0.23	0.07	-0.05	1.04	12.48
EV EV411	1960	0.01	0.02	0.12	0.19	0.16	0.3	0.13	0.23	0.12	0.05	0.13	-0.36	1.1	13.2
EV EV411	1961	0.07	-0.03	0.02	0.38	0.1	0.11	0.24	0.44	0.09	0.13	-0.14	-0.06	1.35	16.2
EV EV411	1962	0	0.08	0.09	0.06	0.4	-0.27	0.22	0.39	-0.1	0.08	-0.08	0.09	0.96	11.52
EV EV411	1963	0.12	0.15	0.25	0.08	0.27	0.49	0.29	0.59	0.39	0.49	0.15	-0.01	3.26	39.12
EV EV411	1964	0.02	0.03	-0.11	0.03	0.02	0.32	0.73	0.24	-0.25	0.31	-0.03	0.13	1.44	17.28
EV EV411	1965	0.03	-0.04	0.19	0.32	-0.17	0.23	0.59	0.5	0.03	0.23	0.01	0.07	1.99	23.88
EV EV411	1966	-0.02	-0.11	0.28	-0.19	0.23	0.3	0.43	0.03	0.08	0.29	0.22	-0.02	1.52	18.24
EV EV411	1967	0.2	0.15	0.25	-0.21	-0.21	0.51	0.3	0.56	-0.2	0.14	0.13	-0.05	1.57	18.84
EV EV411	1968	-0.13	0.1	0.1	0.27	0.17	0.12	0.24	0.48	-0.11	0.22	-0.05	0.09	1.5	18
EV EV411	1969	0.01	0.07	0.07	0.18	0.13	0.36	0.66	0.37	0.16	-0.08	0.18	-0.18	1.93	23.16
EV EV411	1970	0.05	-0.12	0.18	0.1	0.18	0.32	0.55	0.41	-0.32	0.03	0.21	0.13	1.72	20.64
EV EV411	1971	0.1	0.07	0.36	0.29	0.08	0.54	0.39	0.06	0.11	-0.15	0.13	0.02	2	24
EV EV411	1972	0.12	0.21	0.27	0.14	0.23	0.44	0.56	0.29	0.11	-0.27	-0.13	0.04	2.01	24.12
EV EV411	1973	-0.09	0.01	0.13	-0.05	0.16	-0.02	0.2	0.49	-0.24	0.2	0.25	0.15	1.19	14.28
EV EV411	1974	0.04	0.22	0.29	0.23	0.27	0.29	0.57	0.06	-0.02	-0.09	0.17	0.04	2.07	24.84
EV EV411	1975	0.07	0.04	0.02	0.27	-0.12	0.33	0.32	0.36	0.25	0.39	0.12	0.03	2.08	24.96
EV EV411	1976	0.23	0.23	0.02	-0.11	-0.15	0.17	0.13	0.4	0.21	-0.05	0.15	0.09	1.32	15.84
EV EV411	1977	-0.07	0.15	0.06	0.41	0.28	0.35	0.6	0.17	0.29	0.34	0.11	0.23	2.92	35.04
EV EV411	1978	-0.07	-0.16	0.04	0.28	0	0.4	0.72	0.47	0.31	0.37	-0.32	0.08	2.12	25.44
EV EV411	1979	-0.12	-0.13	-0.06	0.2	-0.08	0.49	0.3	0.24	0.29	0.24	0.19	-0.05	1.51	18.12
EV EV411	1980	0.01	0.1	0.19	0.26	0.06	0.52	0.84	0.81	-0.12	0.16	0.1	0.06	2.99	35.88
EV EV411	1981	0.12	0.05	0.07	0.2	-0.12	0.19	0.45	0.45	0.24	-0.46	0.2	0.21	1.6	19.2
EV EV411	1982	-0.02	0.08	0.22	0.12	-0.2	0.09	0.38	0.42	0.4	0.16	-0.24	-0.23	1.18	14.16
EV EV411	1983	0.11	0.01	0.1	0.26	-0.13	0.06	0.37	0.4	0.44	0.02	-0.02	-0.02	1.6	19.2
EV EV411	1984	0.03	0	-0.02	0.27	0.15	0.33	0.52	0.46	0.41	-0.43	0	-0.11	1.61	19.32
EV EV411	1985	0.08	-0.03	0.1	0.02	0.15	0.26	0.41	0.66	0.32	-0.22	-0.09	0.08	1.74	20.88
EV EV411	1986	0.23	0.15	0.31	-0.13	-0.1	0.29	0.67	0.44	0.03	-0.04	-0.21	-0.04	1.6	19.2
EV EV411	1987	0.07	-0.09	0.18	0.43	-0.22	0.19	0.38	0.53	0	0.2	-0.24	-0.2	1.23	14.76
EV EV411	1988	0.11	0.1	0.11	0.26	0.39	0.34	0.28	0.52	-0.05	0.13	0	-0.07	2.12	25.44
EV EV411	1989	-0.05	0.02	0.17	0.38	-0.03	-0.06	0.05	0.39	0.09	0.31	0.25	0.23	1.75	21
EV EV411	1990	-0.18	-0.06	0	0.12	0.13	0.44	0.4	0.39	0.21	0.14	-0.08	-0.12	1.39	16.68
EV EV411	1991	-0.09	0.07	0.21	-0.09	0.03	0.08	0.48	0.29	0.1	-0.14	0.1	0.12	1.16	13.92
EV EV411	1992	0.15	0.1	0.28	0.25	-0.12	-0.06	0.21	0.38	0.01	0.31	-0.05	-0.08	1.38	16.56
EV EV411	1993	0.06	-0.03	0.21	0.11	0.06	0.18	0.86	0.59	0.15	-0.09	0.07	0.03	2.2	26.4
EV EV411	1994	0.09	0.01	0.23	0.07	-0.07	0.36	-0.08	0.31	0.18	-0.18	-0.04	0.05	0.93	11.16
EV EV411	1995	0.11	0.06	0.13	0.14	-0.01	0.31	0.32	0.49	-0.03	0.39	0.22	-0.03	2.1	25.2
EV EV411	1996	0.15	0.42	0.21	0.31	0.47	0.33	0.28	0.13	0.06	0.24	-0.28	0.11	2.43	29.16



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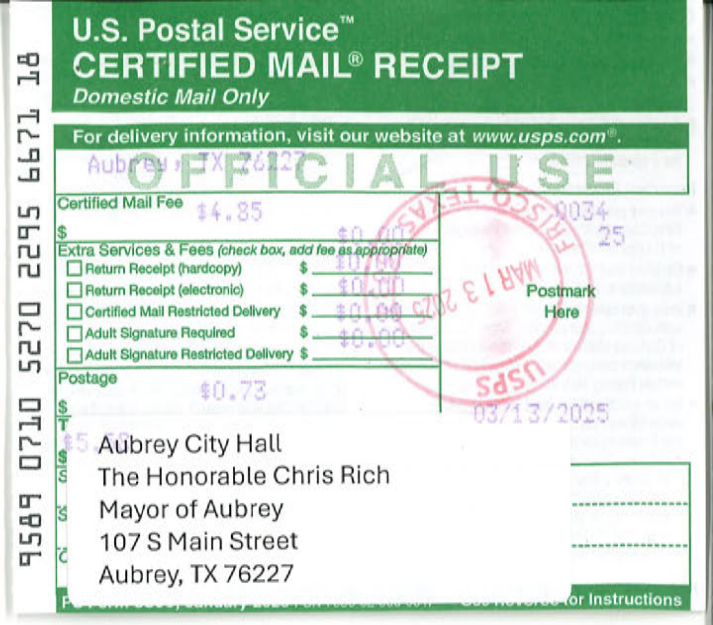
MAR 13 2025

03/13/2025

Aubrey City Hall
The Honorable Jeff Perry
Council Member, Place 1
107 S Main Street
Aubrey, TX 76227

9589 0710 5270 2295 6671 25



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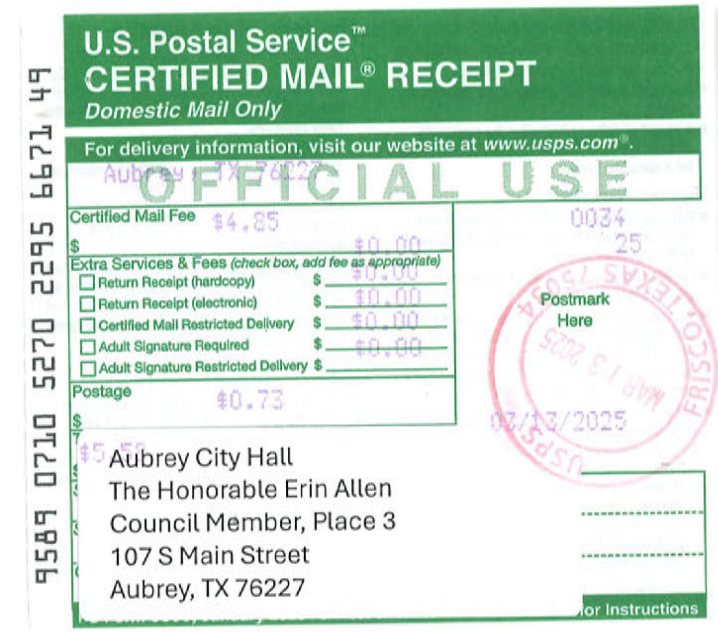
MAR 13 2025

03/13/2025

Aubrey City Hall
The Honorable Chris Rich
Mayor of Aubrey
107 S Main Street
Aubrey, TX 76227

9589 0710 5270 2295 6671 18



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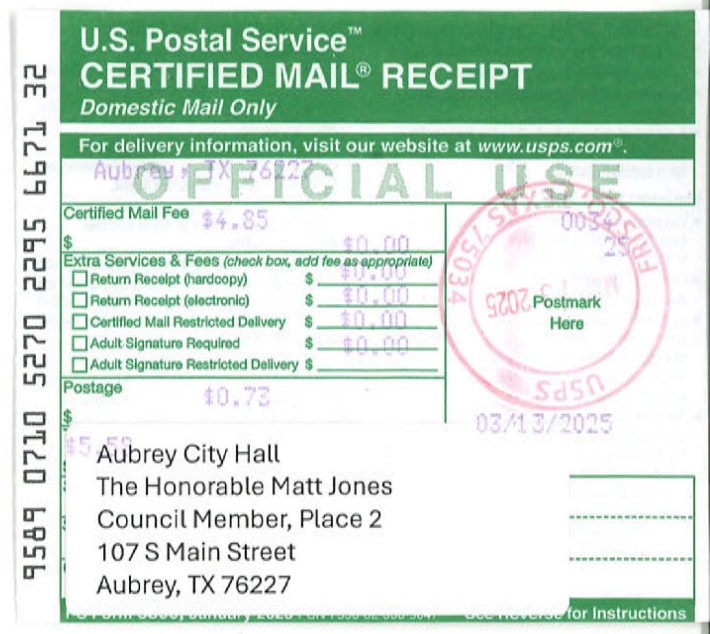
03/13/2025

Aubrey City Hall
The Honorable Erin Allen
Council Member, Place 3
107 S Main Street
Aubrey, TX 76227

9589 0710 5270 2295 6671 49



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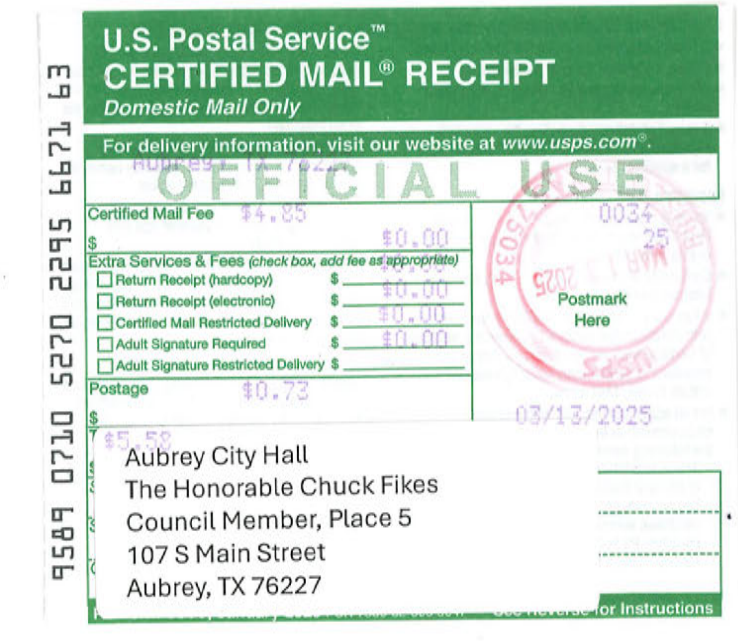
03/13/2025

Aubrey City Hall
The Honorable Matt Jones
Council Member, Place 2
107 S Main Street
Aubrey, TX 76227

9589 0710 5270 2295 6671 32



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The Honorable Chuck Fikes
Council Member, Place 5
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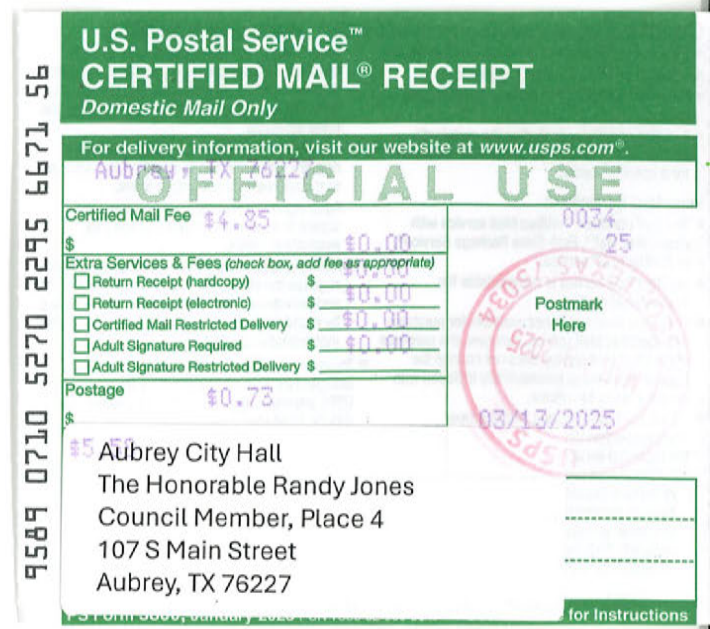

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The Honorable Randy Jones
Council Member, Place 4
107 S Main Street
Aubrey, TX 76227

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Denton County Commissioners Court
The Honorable Ryan Williams
Commissioner Precinct 1
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Denton County Commissioners Court
The Honorable Andy Eads
County Judge
1 Courthouse Drive, Suite 3100
Denton, TX 76208

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Denton County Commissioners Court
The Honorable Bobbie J. Mitchell
Commissioner Precinct 3
1 Courthouse Drive, Suite 3100
Denton, TX 76208

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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03/13/2025

Denton County Commissioners Court
The Honorable Kevin Falconer
Commissioner Precinct 2
1 Courthouse Drive, Suite 3100
Denton, TX 76208

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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Denton County Commissioners Court
The Honorable Dianne Edmondson
Commissioner Precinct 4
1 Courthouse Drive, Suite 3100
Denton, TX 76208

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

March 13, 2025

Chris Rich
Mayor of Aubrey
Aubrey City Hall
107 S Main Street
Aubrey, Texas 76227

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Mayor Rich:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

As part of the plan for the development the Applicants are applying for a Water Use Permit to request authorization to maintain a reservoir for recreation purposes. The reservoir is located on unnamed tributary of Pecan Creek, tributary of Little Elm Creek, tributary of Elm Fork Trinity River, tributary of the Trinity River, Trinity River Basin in Denton County. The water lost due to evaporation is intended to be replaced using groundwater wells as an alternate source.

The Applicants are pursuing this application to appropriate State Water with the Texas Commission on Environmental Quality (TCEQ). Notification of the application will be sent to all Water Rights holders in the Trinity River Basin as well as to all members of the Aubrey City Council and Denton County Commissioner Courts.

Sincerely,

Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Jeff Perry
Council Member, Place 1
Aubrey City Hall
107 S Main Street
Aubrey, Texas 76227

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Council Member Perry:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Sincerely,

Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Matt Jones
Council Member, Place 2
Aubrey City Hall
107 S Main Street
Aubrey, Texas 76227

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Council Member Jones:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Sincerely,

Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Erin Allen
Council Member, Place 3
Aubrey City Hall
107 S Main Street
Aubrey, Texas 76227

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Council Member Allen:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Sincerely,

Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Randy Jones
Council Member, Place 4
Aubrey City Hall
107 S Main Street
Aubrey, Texas 76227

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Council Member Jones:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Sincerely,

Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Chuck Fikes
Council Member, Place 5
Aubrey City Hall
107 S Main Street
Aubrey, Texas 76227

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Council Member Fikes:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Sincerely,

Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

The Honorable Andy Eads
County Judge
Denton County Commissioners Courtroom
1 Courthouse Drive, Suite 3100
Denton, TX 76208

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Judge Eads:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Nathan Holt, *Authorized Signatory of KL LB Buy 3 LLC*

Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Ryan Williams
Commissioner Precinct 1
Denton County Commissioners Courtroom
1 Courthouse Drive, Suite 3100
Denton, TX 76208

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Commissioner Williams:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Kevin Falconer
Commissioner Precinct 2
Denton County Commissioners Courtroom
1 Courthouse Drive, Suite 3100
Denton, TX 76208

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Commissioner Falconer:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Bobbie J. Mitchell
Commissioner Precinct 3
Denton County Commissioners Courtroom
1 Courthouse Drive, Suite 3100
Denton, TX 76208

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Commissioner Mitchell:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Sincerely,

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Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

March 13, 2025

Dianne Edmondson
Commissioner Precinct 4
Denton County Commissioners Courtroom
1 Courthouse Drive, Suite 3100
Denton, TX 76208

Subject: ***Highpointe Ranch Development***
Application for Permit to Appropriate State Water
City of Aubrey, Denton County, Texas

Dear Commissioner Edmondson:

KL LB BUY 3, LLC, Brandon Allen, Ariel Britt, Leanne Wilson, Zach Downtain, and Justin Morse (collectively "the Applicants") are proposing to construct Highpointe Ranch, a single-family development within the City of Aubrey, Denton County, Texas. The project is located south of Blackjack Road and east of US 377.

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Brandon Allen

Ariel Britt

Leanne Wilson

Zach Downtain

Justin Morse

HIGHPOINTE RANCH

DENTON COUNTY, TX

GROUNDWATER WELL OPERATIONAL PLAN

This operations plan describes all the activities needed to maintain the groundwater wells and associated water lines and appurtenances associated with the use of groundwater to supplement pond surface water onsite. This plan describes the daily, weekly, monthly, and yearly tasks that would enable any qualified operator to assume the operation of the water system in any circumstances, including an emergency. The plan also describes non-routine activities such as positive analytical results, emergency operational practices, record keeping, and other duties. The operations plan will be updated as needed, whenever changes occur.

PLAN DESCRIPTION AND OUTLINE

The Highpointe Ranch is a single-family development. There is an existing on-channel pond within the development that is proposed to remain and be used for detention and recreational purposes. Per the State laws regarding surface water use, the development will use groundwater, produced onsite, to supplement any surface water loss due to evaporation. The development plans to utilize groundwater from three (3) individual wells to supplement water loss due to evaporation from the pond. The wells will produce groundwater from the Northern Trinity aquifer for a total maximum daily production rate of 62 gpm. The wells will operate both immediately and in-sync with each other, as needed during operation. The wells will only be used to supplement water loss due to evaporation from the pond. In occurrences where there is no water loss, the wells will not be used.

Each well will be a maximum of 300 feet in depth. HPR 1 (existing) will produce a maximum daily rate of 30 gpm and will be permitted through the North Texas Groundwater Conservation District (NTGCD). The other well, HPR 2 (proposed), will produce a maximum daily rate of 35 gpm. Both wells will need to be permitted and registered through the NTGCD as a collective “well system”. Both wells will be associated with the development’s State Water Rights Permit and will be subject to the requirements of the final permit, upon issuance.

The wells will each pump raw groundwater into a single 200 linear feet of a transmission line that will carry groundwater from the wells to the pond. Water will discharge into the pond using an air gap that is a minimum of 18-inches from the maximum water surface level to prevent backflow. The discharge point will be outfitted as a water feature for aesthetics and to ensure the air gap is maintained at all times. There will also be check valves on each wells’ header and a check valve on the transmission line, as an additional effort to prevent backflow of water. Meters will be located on each wells’ header to account for production totals and ensure no excess water is being used or lost, as needed for State-required monitoring and reporting. Float level-transducers will be installed in the pond to signal when groundwater is needed and when it is not. Each well will cycle through pumping as needed. This will be controlled through VFDs and the float level-transducers, using one well as the “lead” and one as the “lag” for a lead-lag system.

No water treatment or disinfection will be included in the standard well operation, unless otherwise required or directed by TCEQ in the final Water Rights Permit.
The Operational Plan (the "Plan") described in this document will outline best management practices for the standard operation and maintenance of the groundwater wells and their appurtenances as related to supplementing surface water in the pond onsite.

The Plan consists of the following key aspects,

1. Routine Operational Procedures
    a. Visual Inspection of wells
    b. Physical Inspection and Exercise of Mechanical Equipment
    c. Maintenance
2. Monitoring and Reporting
    a. Groundwater Production Monitoring
    b. Pond Surface Water Levels
    c. Bacteriological Parameters
    d. Chemical Parameters
3. Emergency Operational Practices

ROUTINE OPERATIONAL PROCEDURES

Routine operational procedures for groundwater wells are critical for ensuring the efficiency and longevity of the wells. These procedures involve regular inspection, maintenance, and the implementation of best management practices to help prevent failures and negative environmental impacts. Below is a guide to the key routine operational procedures that will be involved in the Highpointe Ranch groundwater wells.

1. Visual Inspection of Wells
    a. Frequency: Monthly or Quarterly (dependent on well usage)
    b. Items to Check for:
        i. Signs of physical damage or wear
        ii. Proper well head seal
        iii. Corrosion, scaling, or rust on any metal components
        iv. Leaks
        v. Vent openings/screens
        vi. Abnormal pump vibrations
        vii. Valve operation
        viii. Debris/vegetation/erosion at site

2. Physical Inspection and Exercise of Mechanical Equipment
    a. Frequency: Monthly or Quarterly (dependent on well usage)
    b. Items to Consider:
        i. Pumps
            1. Pump casing, intake, and discharge connections

        a. Check for signs of damage or leakage
    2. Bearings and shaft
        a. Check for alignment issues or damage
    3. Run Test
        a. Run pump at different operational conditions to verify that it is operating within the expected parameters.
    4. Noise Test
        a. Listen for unusual noises, vibrations, or irregular operation of the pump

ii. Motor and Drive Mechanism
    1. Motor
        a. Check for signs of overheating, wear, or electrical faults
        b. Ensure motor is safely mounted and properly aligned with the pump
    2. Drive Shaft and Couplings
        a. Ensure securely connection
        b. Check for signs of fatigue or misalignment
    3. General
        a. Ensure all moving components are adequately lubricated to prevent friction and wear.

iii. Valve and Piping
    1. Check the operation of all valves
        a. Ensure they are functioning properly with no leaks or blockage
        b. Periodically open and close all valves to ensure they are operating without leaks or blockage.
    2. Inspect all connected piping for cracks, leaks, or corrosion
        a. Specifically note the condition of the joints and fittings
    3. Verify pressure relief valves are properly preventing over-pressurization.

iv. Flow Meter and Gauges
    1. Ensure they are providing reliable readings
    2. Calibrate as needed, according to manufacturer recommendations.

v. Emergency and Backup Systems
    1. Test backup power systems periodically
    2. Verify emergency shutoff switches and alarms are properly working and can be activated quickly in an emergency.

3. Pump Maintenance
    a. Frequency: Every 3 to 6 months (dependent on well usage)
    b. Items to Consider:
        i. Clean pump intake screens
        ii. Lubricate moving parts, as applicable
        iii. Check the electrical system, including wiring and control panels
        iv. Verify motor performance and check for overheating or vibrations

4. Well Maintenance
    a. Frequency: 1 to 3 years, or as needed (dependent on well usage)
    b. Items to Consider:
        i. Chemical treatment to remove scaling and biofouling, as needed
        ii. Mechanical cleaning to remove debris and sediment buildup
        iii. Test and confirm well yield before and after well cleaning to assess any changes in flow capacity.
        iv. Reline or re-cement casing, as/if needed

MONITORING AND REPORTING

Effective monitoring and reporting ensure the continuous assessment of the wells' performances, water quality, and system integrity, providing the data needed to make decisions regarding the operation of the well and maintain compliance with regulatory requirements. This section outlines the procedures and frequency for monitoring key well parameters, actions from data collection, and the required reporting practices to ensure the well operates efficiently and in compliance with regulatory agencies.

1. Monitoring
    a. Frequency: **Daily, and as required by regulatory agency**
    b. Items to Monitor:
        v. Water Levels
            1. Review and note any unusual trends such as significant rises or drops that could indicate issues
            2. *Accounting Plan to account for this and to be updated **daily** with new data*
        vi. Pump Performance
            1. Flow rates
            2. Run times
            3. Power supply
        vii. Operational Parameters
            1. Well yield

2. Drawdown
3. Recovery rate

2. Reporting
    a. Frequency: **As required by regulatory agency**
    b. Items to Report:
        i. Pond Surface Water Levels
            1. *Accounting Plan to account for this and to be updated **daily** with new data*
        ii. Bacteriological Parameters:
            1. E. coli
            2. Total coliform
        iii. Chemical Parameters:
            1. pH
            2. Temperature
            3. Sulfate
            4. Chloride
            5. TDS
            6. PFAS
        iv. Sampling locations
        v. Positive contaminant detection
        vi. Maintenance tasks completed
            1. Both on the wells and the associated transmission line
    c. Supplementary Tasks:
        vii. Keep detailed records of water levels, pump rates, maintenance schedules, and water quality results
        viii. Maintain compliance with regulatory agency per final issued permit

EMERGENCY OPERATIONAL PRACTICES

Emergency operational practices are essential for ensuring the quick and effective response to system failures that may disrupt the operation of the groundwater wells. These practices were developed to mitigate potential risks, safeguard environmental impact, and minimize damage to the well infrastructure. Emergency events may include equipment failures, power outages, contamination events, natural disasters, or any situation that jeopardizes the safe and reliable supply of water.

This section outlines the procedures to follow in the event of an emergency, detailing the steps for assessing the situation, implementing corrective actions, and communicating with stakeholders. It also includes protocols for maintaining system functionality during emergencies, activating backup systems, and ensuring that any safety measures or regulatory requirements are promptly met.

1. Emergency Response Protocols
    a. Immediate Assessment: Upon identification of an emergency, assess the circumstances and severity of the issue
    b. Emergency Team Activation: Contact the designated emergency response team, which includes the well operator, Owner, regulatory agencies, and emergency responders.
        i. Alert the response team of the specific situation and proposed solution as necessary.

2. Power Outage or Electrical Failure
    a. Backup Power Systems: Ensure backup power systems (e.g., generators or battery systems) are activated immediately.
        i. Ensure backup power sources are regularly tested and maintained.
    b. Manual Operation: In the event of backup power failure, assess if manual operation of the pump and system is feasible to maintain water supply until power is restored.
    c. **Notify Authorities:** *If a power outage is prolonged or widespread, notify local utility companies and relevant regulatory bodies to assess the situation and provide updates.*

3. Pump or Equipment Failure
    a. Pump Shutdown: If the pump experiences a mechanical failure, shut it down immediately to prevent further damage.
        i. Follow the manufacturer's recommended emergency procedure for safely deactivating and isolating the affected equipment.
    b. Spare Parts and Tools: Ensure spare parts and necessary tools are readily available for quick repairs or temporary fixes.
        i. Perform any emergency repairs, if possible, such as replacing or bypassing faulty components.

4. Water Contamination
    a. Shut Off Water Supply: In the event of suspected contamination, immediately shut off the potentially contaminated well's water supply to prevent the spread of contaminants.
    b. Water Testing: Conduct rapid water quality tests to identify contaminants.
        i. If contamination is confirmed, isolate the affected well from the distribution system and notify regulatory agencies immediately.
        ii. Test for contaminants at the pond discharge point as well to determine the impact of contaminants on the pond's water quality.

c. Notify Stakeholders: Inform local and relevant State authorities about the contamination and actions being taken to resolve the issue.

5. Flooding or Severe Weather Events
    a. Protect Well Infrastructure: In the case of flooding or severe weather, take measures to protect the well infrastructure from water damage such as,
        i. Elevating critical equipment
        ii. Sealing vulnerable areas
        iii. Adding sandbags around the wellhead
    b. Monitor Wellhead and Surroundings: Continuously monitor the wellhead and surrounding area for signs of erosion, debris accumulation, or structural damage caused by flooding or storms.
        i. Adjust the site and well, as/if possible, to prevent further impact from the weather event/conditions.
    c. Evacuate Personnel if Necessary: In the case of extreme weather or dangerous flooding occurrences, evacuate personnel from the site to ensure their safety, following established safety protocols.

6. Loss of Water Supply or Low Water Levels
    a. Water Level Monitoring: If the water level in the well is critically low due to over-pumping, drought, or equipment malfunction, immediately reduce the extraction rate or suspend pumping to allow recovery.
        i. Evaluate drawdown trends and equipment conditions to determine the cause in water level reduction.
        ii. Address the issues as determined from the evaluation.

7. Communication and Reporting
    a. Notify Stakeholders: Quickly notify all relevant stakeholders, including local authorities, regulatory bodies, operators, and Owner, about the emergency and the actions being taken.
    b. Provide Regular Updates: Throughout the emergency, provide regular updates to stakeholders on the status of the situation, expected resolution times, and any necessary actions they need to take.
    c. Document the Incident: Keep detailed records of the emergency response, including the nature of the issue, and actions taken for future reference and regulatory reporting.

8. Restoration of Normal Operations
    a. Inspect and Test Equipment: Once the emergency has been addressed, thoroughly inspect and test all equipment to ensure that everything is functioning properly.

        i. Components to check include pumps, motors, valves, meters, and electrical systems.
    b. Decontamination (if necessary): If contamination was a concern, confirm that the groundwater meets regulatory and permit standards before resuming normal operations.

9. Post-Emergency Review
    a. Evaluate Response Effectiveness: After the emergency is resolved, conduct a post-emergency review to evaluate the effectiveness of the response and identify areas for improvement.
        i. Discuss the emergency response, the timing of actions, and the coordination between teams.

- Update Emergency Operational Practices: Based on the review, update the emergency operational practices section of the Well Operational Plan to incorporate any improvements or lessons learned, to ensure better preparedness for future emergencies and a more robust emergency preparedness plan.

IMPLEMENTATION OF WELL OPERATIONAL PLAN

The implementation of the Well Operational Plan shall commence immediately upon the approval of the well for use. Upon approval, all relevant stakeholders, including well operators and maintenance personnel, will be notified to begin the operational processes outlined in the plan to ensure the well is fully prepared for continuous operation and meets all performance, compliance, and safety standards from day one.

High Pointe Ranch Pond
Water Accounting Record
Annual

Year	

Month	Diversion (ac-ft)	Groundwater Volume (ac-ft)	Net Evaporation (ac-ft)	Calculated Net Inflow (ac-ft)	Depleated Net Inflow (ac-ft)	Supplemental Groundwater Release (ac-ft)
January	0.000	0.000	0.25	0.25	0.25	0.25
Feburary	0.000	0.000	-1.40	-1.40	0.00	0.00
March	0.000	0.000	2.88	2.87	2.87	2.87
April	0.000	0.000	2.14	2.14	2.14	2.14
May	0.000	0.000	2.22	2.22	2.22	2.22
June	0.000	0.000	4.85	4.85	4.85	4.85
July	0.000	0.000	5.91	5.91	5.91	5.91
August	0.000	0.000	7.06	7.06	7.06	7.06
September	0.000	0.000	5.91	5.91	5.91	5.91
October	0.000	0.000	2.14	2.14	2.14	2.14
November	0.000	0.000	0.00	0.00	0.00	0.00
December	0.000	0.000	0.16	0.16	0.16	0.16
Total	0.000	0.000	32.11	32.11	33.51	33.51

Highpointe Ranch Pond
Water Accounting Record
January

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
0		N/A		N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
2		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
3		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
4		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
5		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
6		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
7		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
8		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
9		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
10		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
11		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
12		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
13		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
14		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	36,260	
15		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
16		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
17		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
18		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
19		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
20		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
21		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
22		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
23		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
24		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	36,260	
25		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
26		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
27		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
28		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
29		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
30		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
31		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
32		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
33		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
34		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
35		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
36		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
37		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
38		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	36,260	
39		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
40		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
41		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	7,770	
	Total Diversion	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**0.25**	**Summed Data**	**80,290**	**80,290**	**80,290**	

Highpointe Ranch Pond
Water Accounting Record
February

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
2		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
3		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
4		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
5		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
6		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
7		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
8		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
9		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
10		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
11		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
12		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
13		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
14		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0	0	
15		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
16		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
17		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
18		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
19		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
20		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
21		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
22		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
23		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0	0	
24		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
25		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
26		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
27		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
28		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
29		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
30		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
31		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
32		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
33		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
34		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
35		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
36		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0		
37		0		0				-0.07	-0.07	-0.07	-0.05	-16,248	-16,248	0	0	
38	-	-		-				-0.07	-0.07		-0.05	-16,248	-	-	-	
39	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**-1.40**	**Summed Data**	**-454,944**	**0**	**0**	

Note: If current year is NOT a leap year, enter a dash (-) for Irrigation Meter Reading, otherwise enter the current meter reading.

Highpointe Ranch Pond
Water Accounting Record
March

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
2		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
3		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
4		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
5		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
6		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
7		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
8		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
9		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
10		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
11		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
12		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
13		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
14		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
15		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
16		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
17		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
18		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
19		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
20		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
21		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
22		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
23		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
24		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
25		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
26		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
27		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
28		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
29		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
30		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
31		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
32		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
33		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
34		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
35		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
36		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
37		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
38		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
39		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
40		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	90,645	
41	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.88**	**Summed Data**	**936,665**	**936,665**	**936,665**	

Highpointe Ranch Pond
Water Accounting Record
April

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
2		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
3		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
4		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
5		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
6		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
7		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
8		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
9		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
10		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
11		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
12		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
13		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
14		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
15		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
16		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
17		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
18		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
19		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
20		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
21		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
22		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
23		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
24		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
25		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
26		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
27		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
28		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
29		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
30		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
31		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
32		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
33		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
34		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
35		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
36		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
37		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
38		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
39		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	46,388	
40	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.14**	**Summed Data**	**695,820**	**695,820**	**695,820**	

Highpointe Ranch Pond
Water Accounting Record
May

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
2		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
3		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
4		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
5		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
6		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
7		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
8		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
9		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
10		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
11		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
12		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
13		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
14		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
15		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
16		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
17		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
18		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
19		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
20		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
21		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
22		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
23		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
24		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
25		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
26		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
27		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
28		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
29		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
30		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
31		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
32		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
33		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
34		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
35		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
36		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
37		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
38		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
39		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
40		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	69,927	
41	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.22**	**Summed Data**	**722,579**	**722,579**	**722,579**	

Highpointe Ranch Pond
Water Accounting Record
June

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
2		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
3		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
4		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
5		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
6		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
7		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
8		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
9		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
10		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
11		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
12		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
13		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
14		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
15		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
16		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
17		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
18		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
19		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
20		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
21		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
22		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
23		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
24		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
25		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
26		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
27		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
28		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
29		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
30		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
31		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
32		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
33		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
34		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
35		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
36		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
37		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
38		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
39		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	105,264	
40	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**4.85**	**Summed Data**	**1,578,960**	**1,578,960**	**1,578,960**	

Highpointe Ranch Pond
Water Accounting Record
July

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
2		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
3		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
4		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
5		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
6		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
7		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
8		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
9		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
10		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
11		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
12		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
13		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
14		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
15		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
16		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
17		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
18		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
19		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
20		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
21		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
22		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
23		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
24		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
25		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
26		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
27		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
28		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
29		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
30		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
31		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
32		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
33		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
34		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
35		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
36		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
37		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
38		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
39		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
40		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	186,471	
41	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**5.91**	**Summed Data**	**1,926,867**	**1,926,867**	**1,926,867**	

Highpointe Ranch Pond
Water Accounting Record
August

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
2		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
3		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
4		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
5		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
6		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
7		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
8		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
9		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
10		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
11		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
12		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
13		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
14		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
15		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
16		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
17		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
18		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
19		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
20		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
21		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
22		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
23		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
24		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
25		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
26		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
27		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
28		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
29		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
30		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
31		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
32		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
33		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
34		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
35		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
36		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
37		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
38		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
39		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
40		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	222,729	
	Total Diversion	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**7.06**	**Summed Data**	**2,301,533**	**2,301,533**	**2,301,533**	

Highpointe Ranch Pond
Water Accounting Record
September

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
2		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
3		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
4		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
5		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
6		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
7		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
8		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
9		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
10		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
11		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
12		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
13		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
14		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
15		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
16		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
17		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
18		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
19		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
20		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
21		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
22		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
23		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
24		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
25		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
26		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
27		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
28		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
29		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
30		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
31		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
32		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
33		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
34		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
35		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
36		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
37		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
38		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
39		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	128,458	
	Total Diversion	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**5.91**	**Summed Data**	**1,926,870**	**1,926,870**	**1,926,870**	

Highpointe Ranch Pond
Water Accounting Record
October

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
2		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
3		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
4		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
5		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
6		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
7		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
8		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
9		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
10		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
11		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
12		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
13		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
14		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
15		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
16		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
17		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
18		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
19		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
20		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
21		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
22		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
23		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
24		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
25		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
26		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
27		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
28		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
29		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
30		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
31		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
32		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
33		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
34		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
35		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
36		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
37		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
38		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
39		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
40		0		0				0.10	0.10	0.10	0.07	22,446	22,446	67,338		
41	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.14**	**Summed Data**	**695,826**	**695,826**	**695,826**	

Highpointe Ranch Pond
Water Accounting Record
November

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.00	0.00	0.00	0.00	0	0	0		
2		0		0				0.00	0.00	0.00	0.00	0	0	0		
3		0		0				0.00	0.00	0.00	0.00	0	0	0		
4		0		0				0.00	0.00	0.00	0.00	0	0	0		
5		0		0				0.00	0.00	0.00	0.00	0	0	0		
6		0		0				0.00	0.00	0.00	0.00	0	0	0		
7		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
8		0		0				0.00	0.00	0.00	0.00	0	0	0		
9		0		0				0.00	0.00	0.00	0.00	0	0	0		
10		0		0				0.00	0.00	0.00	0.00	0	0	0		
11		0		0				0.00	0.00	0.00	0.00	0	0	0		
12		0		0				0.00	0.00	0.00	0.00	0	0	0		
13		0		0				0.00	0.00	0.00	0.00	0	0	0		
14		0		0				0.00	0.00	0.00	0.00	0	0	0		
15		0		0				0.00	0.00	0.00	0.00	0	0	0		
16		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
17		0		0				0.00	0.00	0.00	0.00	0	0	0		
18		0		0				0.00	0.00	0.00	0.00	0	0	0		
19		0		0				0.00	0.00	0.00	0.00	0	0	0		
20		0		0				0.00	0.00	0.00	0.00	0	0	0		
21		0		0				0.00	0.00	0.00	0.00	0	0	0		
22		0		0				0.00	0.00	0.00	0.00	0	0	0		
23		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
24		0		0				0.00	0.00	0.00	0.00	0	0	0		
25		0		0				0.00	0.00	0.00	0.00	0	0	0		
26		0		0				0.00	0.00	0.00	0.00	0	0	0		
27		0		0				0.00	0.00	0.00	0.00	0	0	0		
28		0		0				0.00	0.00	0.00	0.00	0	0	0		
29		0		0				0.00	0.00	0.00	0.00	0	0	0		
30		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
31		0		0				0.00	0.00	0.00	0.00	0	0	0		
32		0		0				0.00	0.00	0.00	0.00	0	0	0		
33		0		0				0.00	0.00	0.00	0.00	0	0	0		
34		0		0				0.00	0.00	0.00	0.00	0	0	0		
35		0		0				0.00	0.00	0.00	0.00	0	0	0		
36		0		0				0.00	0.00	0.00	0.00	0	0	0		
37		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
38		0		0				0.00	0.00	0.00	0.00	0	0	0		
39		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
40	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**0.00**	**Summed Data**	**0**	**0**	**0**	

Highpointe Ranch Pond
Water Accounting Record
December

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
2		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
3		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
4		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
5		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
6		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
7		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
8		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
9		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
10		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
11		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
12		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
13		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
14		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
15		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
16		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
17		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
18		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
19		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
20		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
21		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
22		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
23		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727	24,178	
24		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
25		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
26		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
27		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
28		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
29		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
30		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
31		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
32		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
33		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
34		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
35		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
36		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
37		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727	24,178	
38		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
39		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
40		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727	5,181	
	Total Diversion	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**0.16**	**Summed Data**	**53,537**	**53,537**	**53,537**	

High Pointe Ranch Pond
Water Accounting Record
Annual

Year	

Month	Diversion (ac-ft)	Groundwater Volume (ac-ft)	Net Evaporation (ac-ft)	Calculated Net Inflow (ac-ft)	Depleated Net Inflow (ac-ft)
January	0.000	0.000	0.25	0.25	0.25
Feburary	0.000	0.000	-1.40	-1.40	0.00
March	0.000	0.000	2.88	2.87	2.87
April	0.000	0.000	2.14	2.14	2.14
May	0.000	0.000	2.22	2.22	2.22
June	0.000	0.000	4.85	4.85	4.85
July	0.000	0.000	5.91	5.91	5.91
August	0.000	0.000	7.06	7.06	7.06
September	0.000	0.000	5.91	5.91	5.91
October	0.000	0.000	2.14	2.14	2.14
November	0.000	0.000	0.00	0.00	0.00
December	0.000	0.000	0.16	0.16	0.16
Total	0.000	0.000	32.11	32.11	33.51

Supplemental Groundwater Release (ac-ft)
0.25
0.00
2.87
2.14
2.22
4.85
5.91
7.06
5.91
2.14
0.00
0.16
33.51

Highpointe Ranch Pond
Water Accounting Record
January

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
0		N/A		N/A				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
1		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
2		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
3		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
4		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
5		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
6		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
7		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
8		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
9		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
10		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
11		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
12		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
13		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
14		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	36,260	
15		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
16		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
17		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
18		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
19		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
20		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
21		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
22		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
23		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
24		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	36,260	
25		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
26		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
27		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
28		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
29		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
30		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
31		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
32		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
33		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
34		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
35		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
36		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
37		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
38		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	36,260	
39		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
40		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590		
41		0		0				0.01	0.01	0.01	0.01	2,590	2,590	2,590	7,770	
	Total Diversion	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**0.25**	**Summed Data**	**80,290**	**80,290**	**80,290**	

Highpointe Ranch Pond
Water Accounting Record
February

Lake Surface Area (acres) 8.21

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)
1		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
2		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
3		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
4		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
5		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
6		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
7		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
8		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
9		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
10		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
11		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
12		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
13		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
14		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
15		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
16		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
17		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
18		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
19		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
20		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
21		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
22		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
23		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
24		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
25		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
26		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
27		0		0				-0.07	-0.07	-0.07	-0.05	-16,248
28		0		0				-0.07	-0.07	-0.07	-0.05	-16,248

Highpointe Ranch Pond
Water Accounting Record
March

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
2		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
3		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
4		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
5		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
6		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
7		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
8		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
9		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
10		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
11		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
12		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
13		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
14		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
15		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
16		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
17		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
18		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
19		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
20		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
21		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
22		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
23		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
24		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
25		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
26		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
27		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
28		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
29		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
30		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
31		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
32		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
33		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
34		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
35		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
36		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
37		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	211,505	
38		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
39		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215		
40		0		0				0.14	0.14	0.14	0.09	30,215	30,215	30,215	90,645	
41	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.88**	**Summed Data**	**936,665**	**936,665**	**936,665**	

Highpointe Ranch Pond
Water Accounting Record
April

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
2		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
3		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
4		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
5		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
6		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
7		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
8		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
9		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
10		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
11		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
12		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
13		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
14		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
15		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
16		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
17		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
18		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
19		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
20		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
21		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
22		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
23		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
24		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
25		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
26		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
27		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
28		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
29		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
30		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
31		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
32		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
33		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
34		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
35		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
36		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
37		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	162,358	
38		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194		
39		0		0				0.10	0.10	0.10	0.07	23,194	23,194	23,194	46,388	
40	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.14**	**Summed Data**	**695,820**	**695,820**	**695,820**	

Highpointe Ranch Pond
Water Accounting Record
May

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
2		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
3		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
4		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
5		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
6		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
7		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
8		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
9		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
10		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
11		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
12		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
13		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
14		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
15		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
16		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
17		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
18		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
19		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
20		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
21		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
22		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
23		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
24		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
25		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
26		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
27		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
28		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
29		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
30		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
31		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
32		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
33		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
34		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
35		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
36		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
37		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	163,163	
38		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
39		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309		
40		0		0				0.10	0.10	0.10	0.07	23,309	23,309	23,309	69,927	
Total Diversion		**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.22**	**Summed Data**	**722,579**	**722,579**	**722,579**	

Highpointe Ranch Pond
Water Accounting Record
June

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
2		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
3		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
4		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
5		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
6		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
7		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
8		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
9		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
10		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
11		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
12		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
13		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
14		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
15		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
16		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
17		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
18		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
19		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
20		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
21		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
22		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
23		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
24		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
25		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
26		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
27		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
28		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	368,424	
29		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632		
30		0		0				0.24	0.24	0.24	0.16	52,632	52,632	52,632	105,264	
	Total Diversion	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**4.85**	**Summed Data**	**1,578,960**	**1,578,960**	**1,578,960**	

Highpointe Ranch Pond
Water Accounting Record
July

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
2		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
3		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
4		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
5		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
6		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
7		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
8		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
9		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
10		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
11		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
12		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
13		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
14		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
15		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
16		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
17		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
18		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
19		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
20		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
21		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
22		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
23		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
24		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
25		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
26		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
27		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
28		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
29		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
30		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
31		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
32		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
33		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
34		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
35		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
36		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
37		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	435,099	
38		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
39		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157		
40		0		0				0.28	0.28	0.28	0.19	62,157	62,157	62,157	186,471	
41	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**5.91**	**Summed Data**	**1,926,867**	**1,926,867**	**1,926,867**	

Highpointe Ranch Pond
Water Accounting Record
August

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
2		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
3		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
4		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
5		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
6		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
7		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
8		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
9		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
10		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
11		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
12		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
13		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
14		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
15		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
16		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
17		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
18		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
19		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
20		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
21		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
22		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
23		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
24		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
25		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
26		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
27		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
28		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	519,701	
29		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
30		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243		
31		0		0				0.33	0.33	0.33	0.23	74,243	74,243	74,243	222,729	
Total		**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**7.06**	**Summed Data**	**2,301,533**	**2,301,533**	**2,301,533**	

Highpointe Ranch Pond
Water Accounting Record
September

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
2		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
3		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
4		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
5		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
6		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
7		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
8		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
9		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
10		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
11		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
12		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
13		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
14		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
15		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
16		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
17		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
18		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
19		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
20		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
21		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
22		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
23		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
24		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
25		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
26		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
27		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
28		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
29		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
30		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
31		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
32		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
33		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
34		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
35		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
36		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
37		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	449,603	
38		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229		
39		0		0				0.29	0.29	0.29	0.20	64,229	64,229	64,229	128,458	
40	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**5.91**	**Summed Data**	**1,926,870**	**1,926,870**	**1,926,870**	

Highpointe Ranch Pond
Water Accounting Record
October

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
2		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
3		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
4		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
5		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
6		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
7		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
8		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
9		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
10		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
11		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
12		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
13		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
14		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
15		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
16		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
17		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
18		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
19		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
20		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
21		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
22		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
23		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
24		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
25		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
26		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
27		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
28		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	157,122	
29		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
30		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446		
31		0		0				0.10	0.10	0.10	0.07	22,446	22,446	22,446	67,338	
Total Diversion		**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**2.14**	**Summed Data**	**695,826**	**695,826**	**695,826**	

Highpointe Ranch Pond
Water Accounting Record
November

Lake Surface Area (acres) 8.21

Signed: _____
Date: _____

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.00	0.00	0.00	0.00	0	0	0		
2		0		0				0.00	0.00	0.00	0.00	0	0	0		
3		0		0				0.00	0.00	0.00	0.00	0	0	0		
4		0		0				0.00	0.00	0.00	0.00	0	0	0		
5		0		0				0.00	0.00	0.00	0.00	0	0	0		
6		0		0				0.00	0.00	0.00	0.00	0	0	0		
7		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
8		0		0				0.00	0.00	0.00	0.00	0	0	0		
9		0		0				0.00	0.00	0.00	0.00	0	0	0		
10		0		0				0.00	0.00	0.00	0.00	0	0	0		
11		0		0				0.00	0.00	0.00	0.00	0	0	0		
12		0		0				0.00	0.00	0.00	0.00	0	0	0		
13		0		0				0.00	0.00	0.00	0.00	0	0	0		
14		0		0				0.00	0.00	0.00	0.00	0	0	0		
15		0		0				0.00	0.00	0.00	0.00	0	0	0		
16		0		0				0.00	0.00	0.00	0.00	0	0	0		
17		0		0				0.00	0.00	0.00	0.00	0	0	0		
18		0		0				0.00	0.00	0.00	0.00	0	0	0		
19		0		0				0.00	0.00	0.00	0.00	0	0	0		
20		0		0				0.00	0.00	0.00	0.00	0	0	0		
21		0		0				0.00	0.00	0.00	0.00	0	0	0		
22		0		0				0.00	0.00	0.00	0.00	0	0	0		
23		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
24		0		0				0.00	0.00	0.00	0.00	0	0	0		
25		0		0				0.00	0.00	0.00	0.00	0	0	0		
26		0		0				0.00	0.00	0.00	0.00	0	0	0		
27		0		0				0.00	0.00	0.00	0.00	0	0	0		
28		0		0				0.00	0.00	0.00	0.00	0	0	0		
29		0		0				0.00	0.00	0.00	0.00	0	0	0		
30		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
31		0		0				0.00	0.00	0.00	0.00	0	0	0		
32		0		0				0.00	0.00	0.00	0.00	0	0	0		
33		0		0				0.00	0.00	0.00	0.00	0	0	0		
34		0		0				0.00	0.00	0.00	0.00	0	0	0		
35		0		0				0.00	0.00	0.00	0.00	0	0	0		
36		0		0				0.00	0.00	0.00	0.00	0	0	0		
37		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
38		0		0				0.00	0.00	0.00	0.00	0	0	0		
39		0		0				0.00	0.00	0.00	0.00	0	0	0	0	
40	**Total Diversion**	**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**0.00**	**Summed Data**	**0**	**0**	**0**	

Highpointe Ranch Pond
Water Accounting Record
December

Signed: _____
Date: _____

Lake Surface Area (acres) 8.21

Day	Pond 1 Irrigation Meter Reading (10,000 gal)	Diversion (gal)	Groundwater Telemetric Reading (10,000 gal)	Groundwater Volume (gal)	Pond 1 Elevation (ft) (msl)	Lewisville Lake Precipitation (in)	Lewisville Lake Evaporation Rate (in)	Default Evaporation Rate (in)	Total Evaporation Rate (in)	Net Evaporation Rate (in)	Net Evaporation (ac-ft)	Net Evaporation (gal)	Calculated Net Inflow (gal)	Depleated Net Inflow (gal)	Supplemental Groundwater Release (gal)	Comments
1		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
2		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
3		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
4		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
5		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
6		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
7		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
8		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
9		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
10		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
11		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
12		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
13		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
14		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727	24,178	
15		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
16		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
17		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
18		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
19		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
20		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
21		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
22		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
23		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
24		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
25		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
26		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
27		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
28		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727	24,178	
29		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
30		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727		
31		0		0				0.01	0.01	0.01	0.01	1,727	1,727	1,727	5,181	
Total Diversion		**0**	**Total GW Volume**	**0**						**Total Net Evaporation**	**0.16**	**Summed Data**	**53,537**	**53,537**	**53,537**	

TCEQ TRIN3 NET

Month	Days in Month	TCEQ WRAP Net Trinity River Basin Evaporation - for Max (1956) Monthly Rate (in)	TCEQ WRAP Net Trinity River Basin Evaporation - for Max (1956) Daily Rate (in)
January	31	0.36	0.01
Februray	28	-2.04	-0.07
March	31	4.20	0.14
April	30	3.12	0.10
May	31	3.24	0.10
June	30	7.08	0.24
July	31	8.64	0.28
August	31	10.32	0.33
September	30	8.64	0.29
October	31	3.12	0.10
November	30	0.00	0.00
December	31	0.24	0.01

TWDB EVAP NET

Month	Days in Month	TWDB 75th Percentile Monthly Rate (in)	TWDB 75th Percentile Daily Rate (in)	Pan Factor
January	31	0.94	0.04	0.74
Februray	29	1.02	0.05	0.71
March	31	1.76	0.08	0.70
April	30	2.26	0.11	0.68
May	31	1.73	0.09	0.61
June	30	4.08	0.20	0.68
July	31	6.82	0.31	0.70
August	31	6.04	0.27	0.71
September	30	4.00	0.18	0.74
October	31	2.64	0.11	0.78
November	30	1.64	0.07	0.81
December	31	0.65	0.03	0.78

TCEQ TRIN3 NET

Month	Days in Month	TCEQ WRAP Net Trinity River Basin Evaporation - for Max (1956) Monthly Rate (in)	TCEQ WRAP Net Trinity River Basin Evaporation - for Max (1956) Daily Rate (in)
January	31	0.36	0.01
Februray	29	-2.04	-0.07
March	31	4.20	0.14
April	30	3.12	0.10
May	31	3.24	0.10
June	30	7.08	0.24
July	31	8.64	0.28
August	31	10.32	0.33
September	30	8.64	0.29
October	31	3.12	0.10
November	30	0.00	0.00
December	31	0.24	0.01

TCEQ WRAP Input Files

EV Record	YEAR	JAN	FEB	MAR	APR	MAY
EV EV411	1940	0.05	-0.08	0.31	-0.07	0.12
EV EV411	1941	0.14	0.01	0.14	-0.15	0.31
EV EV411	1942	0.08	0.12	0.2	0.02	0.26
EV EV411	1943	0.19	0.18	0.06	0.25	-0.03
EV EV411	1944	-0.07	-0.33	0.14	0.14	0.07
EV EV411	1945	0.06	-0.06	-0.04	0.1	0.25
EV EV411	1946	-0.08	0.11	0.06	0.09	-0.05
EV EV411	1947	0.14	0.21	0.08	-0.03	0.19
EV EV411	1948	0.05	0.05	0.22	0.45	0.21
EV EV411	1949	-0.33	0.01	0.05	0.09	0.11
EV EV411	1950	-0.12	0.21	0.31	0.24	0.14
EV EV411	1951	0.1	-0.12	0.29	0.25	0.18
EV EV411	1952	0.14	0.07	0.04	-0.17	0.27
EV EV411	1953	0.13	0.06	-0.01	0.07	0.37
EV EV411	1954	-0.14	0.29	0.35	0.13	-0.09
EV EV411	1955	0.01	-0.05	0.11	0.09	0
EV EV411	1956	0.03	-0.17	0.35	0.26	0.27
EV EV411	1957	-0.03	-0.07	-0.15	-0.29	0.04
EV EV411	1958	-0.03	0.11	-0.08	-0.07	0.27
EV EV411	1959	0.06	0.03	0.21	0.2	0.18
EV EV411	1960	0.01	0.02	0.12	0.19	0.16
EV EV411	1961	0.07	-0.03	0.02	0.38	0.1
EV EV411	1962	0	0.08	0.09	0.06	0.4
EV EV411	1963	0.12	0.15	0.25	0.08	0.27
EV EV411	1964	0.02	0.03	-0.11	0.03	0.02
EV EV411	1965	0.03	-0.04	0.19	0.32	-0.17
EV EV411	1966	-0.02	-0.11	0.28	-0.19	0.23
EV EV411	1967	0.2	0.15	0.25	-0.21	-0.21
EV EV411	1968	-0.13	0.1	0.1	0.27	0.17
EV EV411	1969	0.01	0.07	0.07	0.18	0.13
EV EV411	1970	0.05	-0.12	0.18	0.1	0.18
EV EV411	1971	0.1	0.07	0.36	0.29	0.08
EV EV411	1972	0.12	0.21	0.27	0.14	0.23
EV EV411	1973	-0.09	0.01	0.13	-0.05	0.16
EV EV411	1974	0.04	0.22	0.29	0.23	0.27
EV EV411	1975	0.07	0.04	0.02	0.27	-0.12
EV EV411	1976	0.23	0.23	0.02	-0.11	-0.15
EV EV411	1977	-0.07	0.15	0.06	0.41	0.28
EV EV411	1978	-0.07	-0.16	0.04	0.28	0
EV EV411	1979	-0.12	-0.13	-0.06	0.2	-0.08
EV EV411	1980	0.01	0.1	0.19	0.26	0.06
EV EV411	1981	0.12	0.05	0.07	0.2	-0.12
EV EV411	1982	-0.02	0.08	0.22	0.12	-0.2
EV EV411	1983	0.11	0.01	0.1	0.26	-0.13

EV EV411	1984	0.03	0	-0.02	0.27	0.15
EV EV411	1985	0.08	-0.03	0.1	0.02	0.15
EV EV411	1986	0.23	0.15	0.31	-0.13	-0.1
EV EV411	1987	0.07	-0.09	0.18	0.43	-0.22
EV EV411	1988	0.11	0.1	0.11	0.26	0.39
EV EV411	1989	-0.05	0.02	0.17	0.38	-0.03
EV EV411	1990	-0.18	-0.06	0	0.12	0.13
EV EV411	1991	-0.09	0.07	0.21	-0.09	0.03
EV EV411	1992	0.15	0.1	0.28	0.25	-0.12
EV EV411	1993	0.06	-0.03	0.21	0.11	0.06
EV EV411	1994	0.09	0.01	0.23	0.07	-0.07
EV EV411	1995	0.11	0.06	0.13	0.14	-0.01
EV EV411	1996	0.15	0.42	0.21	0.31	0.47

Max:	0.03	-0.17	0.35	0.26	0.27
75th Percentile:	0.11	0.11	0.22	0.26	0.23

s for Trinity River Basin

JUN	JUL	AUG	SEP	OCT	NOV	DEC
0.2	0.49	0.6	0.64	0.33	-0.2	-0.02
0.29	0.47	0.28	0.48	-0.27	0.16	0
0.14	0.67	0.31	0.2	0.05	0.14	-0.03
0.43	0.72	0.87	0.37	0.27	0.23	-0.14
0.48	0.5	0.55	0.46	0.21	-0.02	-0.1
0.17	0.26	0.5	0.18	0.16	0.17	0.12
0.37	0.66	0.36	0.14	0.3	-0.11	0.13
0.33	0.67	0.55	0.55	0.2	0.05	-0.13
0.44	0.2	0.66	0.61	0.32	0.31	0.19
0.32	0.59	0.49	0.17	-0.19	0.3	-0.08
0.39	-0.17	0.13	0.2	0.47	0.37	0.21
0.18	0.54	0.78	0.34	0.22	0.08	0.18
0.75	0.61	0.81	0.49	0.53	-0.14	-0.1
0.84	0.34	0.5	0.44	0.09	-0.05	0.1
0.36	0.73	0.69	0.37	-0.22	0.17	-0.01
0.39	0.45	0.44	0.18	0.39	0.34	0.14
0.59	0.72	0.86	0.72	0.26	0	0.02
0.42	0.58	0.5	-0.07	0.05	-0.34	0.1
0.27	0.45	0.41	0.09	0.19	0.05	0.05
-0.01	-0.05	0.35	0.28	-0.23	0.07	-0.05
0.3	0.13	0.23	0.12	0.05	0.13	-0.36
0.11	0.24	0.44	0.09	0.13	-0.14	-0.06
-0.27	0.22	0.39	-0.1	0.08	-0.08	0.09
0.49	0.29	0.59	0.39	0.49	0.15	-0.01
0.32	0.73	0.24	-0.25	0.31	-0.03	0.13
0.23	0.59	0.5	0.03	0.23	0.01	0.07
0.3	0.43	0.03	0.08	0.29	0.22	-0.02
0.51	0.3	0.56	-0.2	0.14	0.13	-0.05
0.12	0.24	0.48	-0.11	0.22	-0.05	0.09
0.36	0.66	0.37	0.16	-0.08	0.18	-0.18
0.32	0.55	0.41	-0.32	0.03	0.21	0.13
0.54	0.39	0.06	0.11	-0.15	0.13	0.02
0.44	0.56	0.29	0.11	-0.27	-0.13	0.04
-0.02	0.2	0.49	-0.24	0.2	0.25	0.15
0.29	0.57	0.06	-0.02	-0.09	0.17	0.04
0.33	0.32	0.36	0.25	0.39	0.12	0.03
0.17	0.13	0.4	0.21	-0.05	0.15	0.09
0.35	0.6	0.17	0.29	0.34	0.11	0.23
0.4	0.72	0.47	0.31	0.37	-0.32	0.08
0.49	0.3	0.24	0.29	0.24	0.19	-0.05
0.52	0.84	0.81	-0.12	0.16	0.1	0.06
0.19	0.45	0.45	0.24	-0.46	0.2	0.21
0.09	0.38	0.42	0.4	0.16	-0.24	-0.23
0.06	0.37	0.4	0.44	0.02	-0.02	-0.02

0.33	0.52	0.46	0.41	-0.43	0	-0.11
0.26	0.41	0.66	0.32	-0.22	-0.09	0.08
0.29	0.67	0.44	0.03	-0.04	-0.21	-0.04
0.19	0.38	0.53	0	0.2	-0.24	-0.2
0.34	0.28	0.52	-0.05	0.13	0	-0.07
-0.06	0.05	0.39	0.09	0.31	0.25	0.23
0.44	0.4	0.39	0.21	0.14	-0.08	-0.12
0.08	0.48	0.29	0.1	-0.14	0.1	0.12
-0.06	0.21	0.38	0.01	0.31	-0.05	-0.08
0.18	0.86	0.59	0.15	-0.09	0.07	0.03
0.36	-0.08	0.31	0.18	-0.18	-0.04	0.05
0.31	0.32	0.49	-0.03	0.39	0.22	-0.03
0.33	0.28	0.13	0.06	0.24	-0.28	0.11

0.59	0.72	0.86	0.72	0.26	0	0.02
0.4	0.59	0.53	0.34	0.29	0.17	0.1

Total	
(ft)	(in)
2.37	28.44
1.86	22.32
2.16	25.92
3.4	40.8
2.03	24.36
1.87	22.44
1.98	23.76
2.81	33.72
3.71	44.52
1.53	18.36
2.38	28.56
3.02	36.24
3.3	39.6
2.88	34.56
2.63	31.56
2.49	29.88
3.91	46.92
0.74	8.88
1.71	20.52
1.04	12.48
1.1	13.2
1.35	16.2
0.96	11.52
3.26	39.12
1.44	17.28
1.99	23.88
1.52	18.24
1.57	18.84
1.5	18
1.93	23.16
1.72	20.64
2	24
2.01	24.12
1.19	14.28
2.07	24.84
2.08	24.96
1.32	15.84
2.92	35.04
2.12	25.44
1.51	18.12
2.99	35.88
1.6	19.2
1.18	14.16
1.6	19.2

EV: Net reservoir evaporation minus precipitation rates
https://www.tceq.texas.gov/permitting/water_rights/wr_technical-resou

1.61	19.32
1.74	20.88
1.6	19.2
1.23	14.76
2.12	25.44
1.75	21
1.39	16.68
1.16	13.92
1.38	16.56
2.2	26.4
0.93	11.16
2.1	25.2
2.43	29.16

46.92

3.91

2.37

rces/wam.html

TWDB Link

https://waterdatafortexas.org/lake-evaporation-rainfall

Net Evaporation

Tabular Evaporation

							Texas Water Developm
							Monthly lake surface evaporation in inches, a
#QUAD	YEAR	JAN	FEB	MAR	APR	MAY	JUN
411	1954	-2.1	3.24	4.1	1.09	-2.42	3.94
411	1955	0.04	-0.86	0.81	0.68	-0.22	4.59
411	1956	0.41	-2.35	4.14	2.98	2.66	7.1
411	1957	-0.41	-0.79	-2.06	-9.58	-9.1	2.73
411	1958	-1.79	0.55	-2.36	-2.69	-1.62	2.85
411	1959	0.67	0.34	2.46	2.33	2.09	-0.46
411	1960	-1.52	-0.72	0.9	2.06	1.85	3.58
411	1961	-0.46	-1.16	-0.66	4.11	0.71	1.16
411	1962	-0.35	0.69	0.77	-0.33	4.41	-3.61
411	1963	1.18	1.64	2.81	0.49	0.86	5.36
411	1964	0.21	0.3	-1.41	-0.04	-0.58	3.52
411	1965	-0.2	-2.75	1.71	3.54	-3.21	1.92
411	1966	-0.32	-1.6	3.24	-7.39	2	3.49
411	1967	2.4	1.77	2.88	-3.11	-3.52	4.29
411	1968	-2.79	0.18	-3.19	-0.26	-2.47	0.5
411	1969	-1.28	-1.17	-1.21	0.99	-5.01	3.81
411	1970	0.16	-3.15	-0.72	-1.59	1.2	3.38
411	1971	1.19	0.73	4.25	3.46	0.92	6.45
411	1972	0.86	2.29	3.05	1.61	2.64	5.33
411	1973	-1.65	-0.96	-0.72	-2.73	0.82	-1.35
411	1974	-0.14	2.22	3.1	0.85	2.57	1.17
411	1975	-0.3	-1.48	-0.38	2.04	-2.6	0.92
411	1976	2.76	2.69	0.22	-1.42	-2.07	1.91
411	1977	-1.59	0.24	-2.81	0.95	3.05	4.07
411	1978	-0.81	-1.97	0.2	3.27	-0.32	4.63
411	1979	-1.43	-1.85	-2.3	1.05	-2.83	4.94
411	1980	0.01	1.12	2.17	3.06	0.54	6.2
411	1981	1.29	0.49	0.05	1.84	-2.64	-0.01
411	1982	-1.25	-0.47	1.78	1.08	-12.32	-1.53
411	1983	0.55	-1.97	-0.03	2.7	-1.84	0.59
411	1984	0.27	-0.2	-1.42	2.77	1.07	3.91
411	1985	-0.33	-1.59	-1.3	-1.27	0.19	2.76
411	1986	2.67	-1.26	3.15	-2.43	-2.4	-1.21
411	1987	-0.05	-2.43	0.18	4.87	-4.04	1.01
411	1988	0.97	0.56	0.38	2.72	4.59	4.08
411	1989	-1.5	-3.07	-1.25	4.19	-3.86	-5.36
411	1990	-2.62	-2.7	-4.66	-4.94	-4.77	4.44
411	1991	-1.55	0.42	2.36	-1.53	-0.53	0.56
411	1992	-0.69	-0.34	0.89	1.86	-1.91	-2

411	1993	-0.15	-3.59	-0.2	-0.05	0.02	1.65
411	1994	0.43	-0.57	1.71	0.78	-3.04	3.65
411	1995	0	0	-3.6	-1.31	-5.6	2.59
411	1996	0.81	4.86	1.2	2.49	4.38	3.48
411	1997	1.82	-5.02	0.83	-2.04	1.26	1.85
411	1998	-5.43	-1.21	-1.84	3.32	3.82	5.62
411	1999	1.25	2.57	0.18	2.02	-2.17	2.83
411	2000	1.05	1.79	-0.01	0.43	0.05	-1.92
411	2001	-0.96	-6.61	-1.94	1.75	-0.37	2.87
411	2002	-1.82	1.22	-4.37	-1.43	0	2.83
411	2003	1.89	-1	2.2	3.86	0.42	0.55
411	2004	-0.67	-1.94	2.19	0.49	2.37	-4.48
411	2005	-3.67	0.35	1.78	3.08	1.36	4.95
411	2006	1.86	0.25	-1.27	2.15	3.75	5.77
411	2007	-1.87	2.09	0.3	0.09	-4.9	-6.92
411	2008	2.06	-0.12	-5.3	0.41	0.89	3.49
411	2009	1.38	2.13	0.25	-3.39	-4.86	3.43
411	2010	-0.83	-1.05	0.6	2.3	2.67	4.62
411	2011	1.19	1.39	3.9	2.47	-1.22	6.16
411	2012	-3.52	0.68	-1.87	1.64	2.6	2.87
411	2013	-0.8	0.65	0.9	1.89	-1.03	4.29
411	2014	1.34	1.84	0.14	2.14	2.34	3.03
411	2015	-1.58	-0.3	-1.37	-1.52	-12.21	2.54
411	2016	0.78	1.37	-0.77	-2.5	-0.33	2.04
411	2017	0.04	1.4	2.61	-0.16	2.72	0.21
411	2018	1.48	-6.42	-0.28	2.14	2.57	5.54
411	2019	0.19	-0.21	0.54	-1.88	-5.52	0.59
411	2020	-2.62	-1.05	-5.7	1.95	-2.94	2.72
411	2021	-1.05	-0.21	1.06	-1.23	-2.52	-0.68
411	2022	2.42	1.36	0.75	-0.02	-1.08	3.61
411	2023	0.83	-1.52	-0.8	0.38	-0.57	0.25
411	2024	-1.37	1.21	-1.71			

75th Percentile:	0.94	1.02	1.76	2.26	1.73	4.08

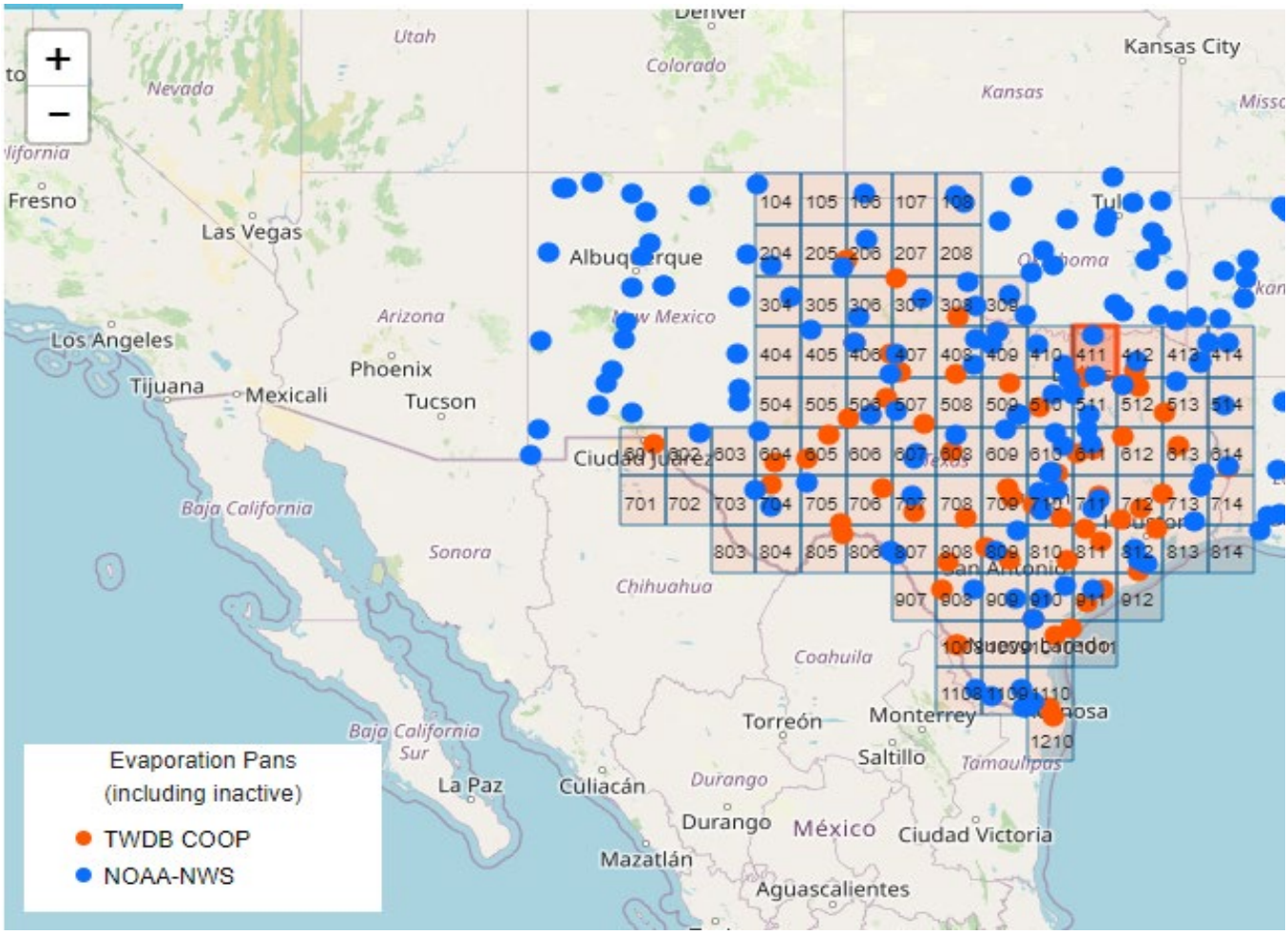
ent Board

nnual total evaporation in inches

JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
8.74	8.24	4.49	-2.81	1.98	-0.13	28.36
5.32	5.29	2.11	4.63	4.03	1.7	28.12
8.58	10.37	8.68	3.07	-0.01	0.18	45.81
6.89	6.05	-0.89	0.6	-6.91	0.24	-13.23
5.28	4.95	0.8	2.22	0.56	0.56	9.31
-0.68	4.23	3.35	-3.05	0.51	-2.13	9.66
1.54	2.68	1.35	0.58	1.51	-5.11	8.7
2.8	5.26	0.99	1.35	-1.86	-1.28	10.96
2.55	4.64	-4.6	0.73	-1.49	0.39	3.8
3.33	7.07	4.68	5.91	1.84	-0.12	35.05
8.72	2.92	-6.19	3.58	-3.23	0.9	8.7
6.98	6	0.29	2.78	0.09	0.73	17.88
5.13	0.26	0.82	3.46	2.65	-0.24	11.5
3.57	6.68	-3.53	1.46	1.32	-1.15	13.06
2.19	5.52	-1.8	2.23	-1.04	0.14	-0.79
7.83	4.49	1.93	-1.06	2.17	-2.5	8.99
6.59	4.9	-3.8	0.36	2.48	1.52	11.33
4.68	0.75	1.3	-3.29	1.11	-6.76	14.79
6.69	3.49	1.33	-3.24	-1.87	0.34	22.52
2.2	5.84	-5.8	-2.83	-0.16	0.96	-6.38
6.8	0.58	-4.16	-2.7	-1.28	-1.01	8
3.67	4.32	3.01	4.73	1.42	0.38	15.73
1.43	4.8	2.37	-0.73	1.65	0.82	14.43
7.23	2.04	3.52	4.04	1.33	2.8	24.87
8.69	5.68	3.67	4.48	-3.89	1	24.63
3.47	2.87	3.49	2.93	2.29	-0.62	12.01
10.05	9.69	-1.55	1.59	1.04	0.16	34.08
5.24	5.35	2.77	-11.73	-1.53	2.44	3.56
3.81	4.98	4.8	1.94	-2.99	-3.69	-3.86
4.34	4.74	5.3	0.19	-0.25	-0.34	13.98
6.21	5.46	4.97	-5.13	-0.34	-3.69	13.88
4.79	7.94	3.79	-2.78	-1.81	0.32	10.71
7.89	5.26	0.33	-0.6	-2.98	-0.89	7.53
4.42	6.38	0.02	2.38	-3.05	-4.15	5.54
3.39	6.28	-0.58	1.58	0.04	-1.03	22.98
0.12	4.68	1.06	3.7	2.94	2.7	4.35
4.72	4.6	2.48	1.16	-0.95	-1.52	-4.76
5.62	3.33	1.18	-4.2	0.6	-5.34	0.92
1.93	4.17	-0.03	3.68	-0.71	-2.44	4.41

10.35	7.07	1.75	-3	0.53	-1.43	12.95
-2.34	2.54	0.98	-4.46	-5.07	-1.33	-6.72
3.83	5.81	-0.41	4.65	2.62	-0.91	7.67
2.86	-2.14	-0.15	1.4	-6.32	-0.18	12.69
5.28	3.56	5.37	-2	0.25	-4.53	6.63
8.01	5.94	3.37	-1.79	-1.56	-4.02	14.23
6.83	7.48	3.83	2.72	2.77	-0.82	29.49
6.16	7.65	4.97	-0.54	-4.85	-2	12.78
7.24	2.41	-1.38	0.86	1.1	-2.11	2.86
1.9	3.17	2.99	-4.62	1.62	-2.09	-0.6
6.2	4.17	-0.85	3.2	0.25	1.62	22.51
2.51	3	4	-1.21	-5.59	1.67	2.34
2.31	4.28	5.43	3.9	3.35	2.81	29.93
7.8	6.32	2.52	0.14	-0.51	-1.21	27.57
-1.33	4.38	2.31	0.45	2.62	-0.87	-3.65
7.15	2.19	2.68	3.33	1.81	1.94	20.53
2.23	3.77	-3.17	-9.16	1.64	-0.81	-6.56
2.58	6.44	-3.24	1.58	0.34	0.8	16.81
7.8	8.27	5.82	1.68	0.83	-0.81	37.48
6.28	4.85	4.36	2.14	3.66	-0.16	23.53
3.75	6.84	3.91	-1.74	-0.25	-0.81	17.6
0.38	5.58	3.99	1.4	1.53	0.09	23.8
6.04	7.75	5.18	-2.67	-9.14	-2.55	-9.83
6.64	1.63	1.05	3.6	-0.13	1.18	14.56
2.08	-4.81	5.23	1.43	2.14	-1.28	11.61
6.19	2.64	-9.65	-7.48	1.06	-3.68	-5.89
5.95	3.45	4.81	-1.62	-1.64	0.61	5.27
3.39	3.85	-3.19	1.4	1.4	0.66	-0.13
2.61	1.6	4.13	0.9	0.72	2.16	7.49
7.92	1.81	5.18	-1.1	-4.38	-0.56	15.91
2.79	7.91	4.61	-4.03	1.84	-0.52	11.17

6.82	6.04	4.00	2.64	1.64	0.65	17.81


Utah
Colorado
Kansas City
Kansas
Nevada
Fresno
Las Vegas
Albuquerque
Arizona
New Mexico
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Phoenix
Tijuana
Mexicali
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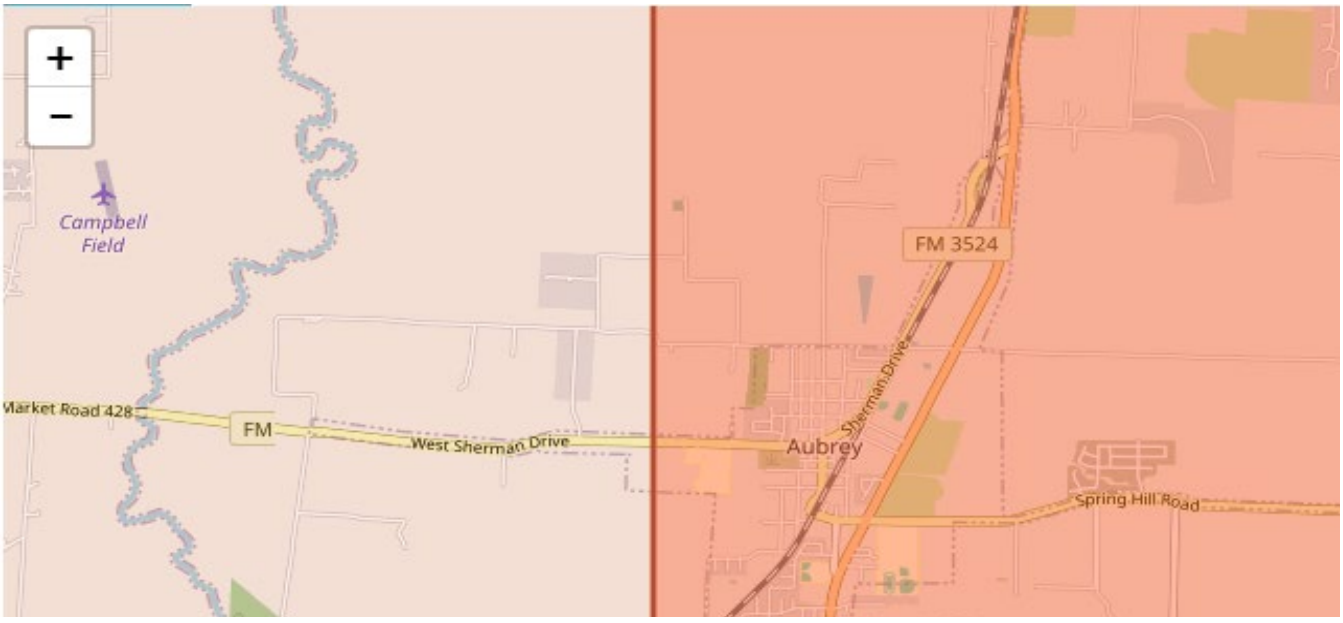
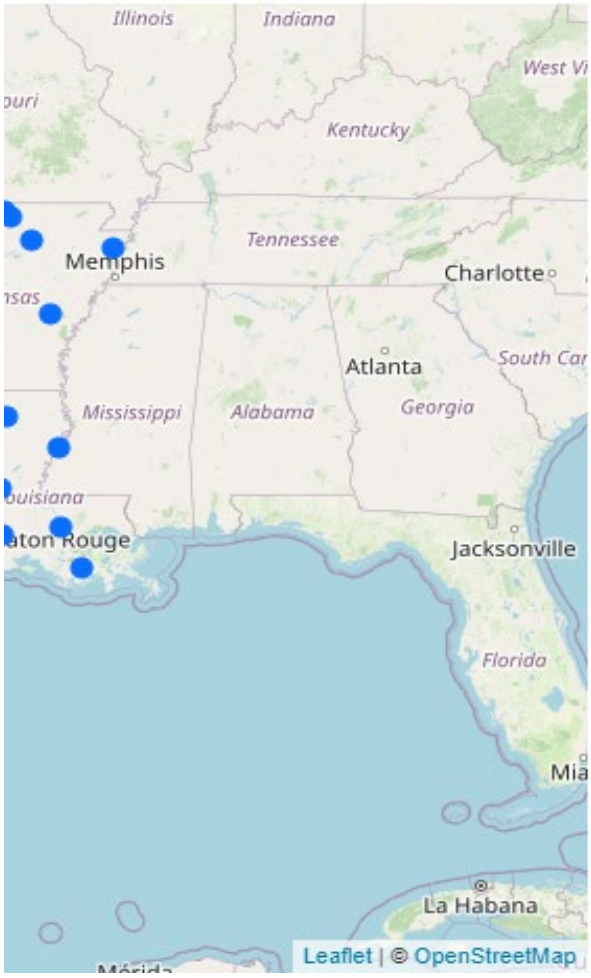
Ciudad Juárez
Baja California
Sonora
Chihuahua
Coahuila
Baja California Sur
La Paz
Culiacán
Durango
Torreón
Monterrey
Saltillo
Tamaulipas
México
Ciudad Victoria
Mazatlán
Aguascalientes
Evaporation Pans
(including inactive)
TWDB COOP
NOAA-NWS


Campbell Field
FM 3524
Market Road 428
FM
West Sherman Drive
Sherman Drive
Aubrey
Spring Hill Road


US 377
Krugerville
High Country
at Silverado
Evaporation Pans
(including inactive)
TWDB COOP
NOAA-NWS


Illinois
Indiana
Kentucky
Tennessee
Memphis
Charlotte
Atlanta
Mississippi
Alabama
Georgia
Jacksonville
Florida
La Habana
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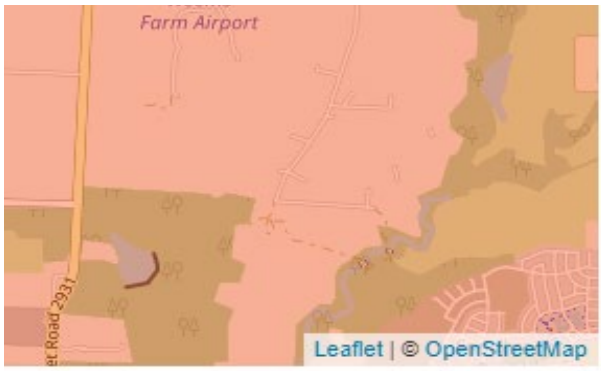
FM 2931
Mustang Community Airfield
FM 428
Weems


Farm Airport
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TWDB Link
https://waterdatafortexas.org/lake-evaporation-rainfall

Texas Water Development Board
Monthly Pan Coefficients Used in ThEvap

Quad	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
410	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
411	0.74	0.71	0.7	0.68	0.61	0.68	0.7	0.71	0.74
412	0.75	0.72	0.71	0.69	0.62	0.69	0.71	0.72	0.75
413	0.76	0.73	0.72	0.71	0.65	0.71	0.72	0.73	0.76
414	0.77	0.74	0.73	0.72	0.66	0.72	0.73	0.74	0.77
501	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
502	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
503	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
504	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
505	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
506	0.71	0.68	0.68	0.65	0.58	0.65	0.67	0.68	0.71
507	0.72	0.69	0.68	0.65	0.57	0.65	0.68	0.69	0.72
508	0.72	0.69	0.68	0.65	0.57	0.65	0.68	0.69	0.72
509	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
510	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
511	0.74	0.71	0.7	0.68	0.61	0.68	0.7	0.71	0.74
512	0.75	0.72	0.71	0.69	0.62	0.69	0.71	0.72	0.75
513	0.76	0.73	0.72	0.71	0.65	0.71	0.72	0.73	0.76
514	0.77	0.74	0.73	0.72	0.66	0.72	0.73	0.74	0.77
601	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
602	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
603	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
604	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
605	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
606	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
607	0.72	0.69	0.68	0.67	0.61	0.67	0.68	0.69	0.72
608	0.72	0.69	0.68	0.67	0.61	0.67	0.68	0.69	0.72
609	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
610	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
611	0.74	0.71	0.7	0.69	0.63	0.69	0.7	0.71	0.74
612	0.75	0.72	0.71	0.69	0.62	0.69	0.71	0.72	0.75
613	0.75	0.73	0.73	0.72	0.67	0.72	0.73	0.73	0.75
614	0.76	0.74	0.74	0.73	0.68	0.73	0.74	0.74	0.76
701	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
702	0.68	0.67	0.66	0.64	0.6	0.66	0.67	0.68	0.71
703	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
704	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
705	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
706	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
707	0.72	0.69	0.68	0.67	0.61	0.67	0.68	0.69	0.72
708	0.72	0.69	0.68	0.67	0.61	0.67	0.68	0.69	0.72

709	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
710	0.73	0.7	0.69	0.67	0.6	0.67	0.69	0.7	0.73
711	0.73	0.71	0.71	0.7	0.65	0.7	0.71	0.71	0.73
712	0.74	0.72	0.72	0.71	0.66	0.71	0.72	0.72	0.74
713	0.75	0.73	0.73	0.72	0.67	0.72	0.73	0.73	0.75
714	0.76	0.74	0.74	0.73	0.68	0.73	0.74	0.74	0.76
801	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
802	0.68	0.67	0.66	0.64	0.6	0.66	0.67	0.68	0.71
803	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
804	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
805	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
806	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
807	0.72	0.69	0.68	0.67	0.61	0.67	0.68	0.69	0.72
808	0.71	0.69	0.69	0.68	0.63	0.68	0.69	0.69	0.71
809	0.72	0.7	0.7	0.69	0.64	0.69	0.7	0.7	0.72
810	0.72	0.7	0.7	0.69	0.64	0.69	0.7	0.7	0.72
811	0.73	0.71	0.71	0.7	0.65	0.7	0.71	0.71	0.73
812	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
813	0.75	0.73	0.73	0.73	0.69	0.73	0.73	0.73	0.75
814	0.76	0.74	0.74	0.73	0.68	0.73	0.74	0.74	0.76
901	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
902	0.68	0.67	0.66	0.64	0.6	0.66	0.67	0.68	0.71
903	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
904	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
905	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
906	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
907	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
908	0.71	0.69	0.69	0.68	0.63	0.68	0.69	0.69	0.71
909	0.72	0.7	0.7	0.69	0.64	0.69	0.7	0.7	0.72
910	0.72	0.7	0.7	0.69	0.64	0.69	0.7	0.7	0.72
911	0.73	0.71	0.71	0.7	0.65	0.7	0.71	0.71	0.73
912	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
913	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
914	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1001	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
1002	0.68	0.67	0.66	0.64	0.6	0.66	0.67	0.68	0.71
1003	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
1004	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
1005	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
1006	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
1007	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
1008	0.71	0.69	0.69	0.68	0.63	0.68	0.69	0.69	0.71
1009	0.72	0.7	0.7	0.69	0.64	0.69	0.7	0.7	0.72
1010	0.72	0.7	0.7	0.7	0.66	0.7	0.7	0.7	0.72
1011	0.73	0.71	0.71	0.7	0.65	0.7	0.71	0.71	0.73
1012	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1013	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74

1014	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1101	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
1102	0.68	0.67	0.66	0.64	0.6	0.66	0.67	0.68	0.71
1103	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
1104	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
1105	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
1106	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
1107	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
1108	0.71	0.69	0.69	0.69	0.65	0.69	0.69	0.69	0.71
1109	0.72	0.7	0.7	0.7	0.66	0.7	0.7	0.7	0.72
1110	0.72	0.7	0.7	0.7	0.66	0.7	0.7	0.7	0.72
1111	0.73	0.71	0.71	0.7	0.65	0.7	0.71	0.71	0.73
1112	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1113	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1114	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1201	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
1202	0.68	0.67	0.66	0.64	0.6	0.66	0.67	0.68	0.71
1203	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
1204	0.69	0.67	0.67	0.66	0.61	0.66	0.67	0.67	0.69
1205	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
1206	0.7	0.67	0.66	0.65	0.59	0.65	0.66	0.67	0.7
1207	0.71	0.68	0.67	0.66	0.6	0.66	0.67	0.68	0.71
1208	0.71	0.69	0.69	0.69	0.65	0.69	0.69	0.69	0.71
1209	0.72	0.7	0.7	0.7	0.66	0.7	0.7	0.7	0.72
1210	0.72	0.7	0.7	0.7	0.66	0.7	0.7	0.7	0.72
1211	0.73	0.71	0.71	0.7	0.65	0.7	0.71	0.71	0.73
1212	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1213	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74
1214	0.74	0.72	0.72	0.72	0.68	0.72	0.72	0.72	0.74

Oct	Nov	Dec	Ann
0.77	0.8	0.77	0.7
0.78	0.81	0.78	0.71
0.79	0.82	0.79	0.72
0.79	0.81	0.79	0.73
0.8	0.82	0.8	0.74
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.75	0.78	0.75	0.68
0.77	0.81	0.77	0.69
0.77	0.81	0.77	0.69
0.77	0.8	0.77	0.7
0.77	0.8	0.77	0.7
0.78	0.81	0.78	0.71
0.79	0.82	0.79	0.72
0.79	0.81	0.79	0.73
0.8	0.82	0.8	0.74
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.74	0.76	0.74	0.68
0.75	0.77	0.75	0.69
0.75	0.77	0.75	0.69
0.77	0.8	0.77	0.7
0.77	0.8	0.77	0.7
0.77	0.79	0.77	0.71
0.79	0.82	0.79	0.72
0.78	0.79	0.78	0.73
0.79	0.8	0.79	0.74
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.73	0.75	0.73	0.67
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.75	0.77	0.75	0.69
0.75	0.77	0.75	0.69

0.77	0.8	0.77	0.7
0.77	0.8	0.77	0.7
0.76	0.77	0.76	0.71
0.77	0.78	0.77	0.72
0.78	0.79	0.78	0.73
0.79	0.8	0.79	0.74
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.72	0.73	0.72	0.67
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.75	0.77	0.75	0.69
0.74	0.75	0.74	0.69
0.75	0.76	0.75	0.7
0.75	0.76	0.75	0.7
0.76	0.77	0.76	0.71
0.76	0.76	0.76	0.72
0.77	0.77	0.77	0.73
0.79	0.8	0.79	0.74
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.72	0.73	0.72	0.67
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.74	0.76	0.74	0.68
0.74	0.75	0.74	0.69
0.75	0.76	0.75	0.7
0.75	0.76	0.75	0.7
0.76	0.77	0.76	0.71
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.72	0.73	0.72	0.67
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.74	0.76	0.74	0.68
0.74	0.75	0.74	0.69
0.75	0.76	0.75	0.7
0.74	0.74	0.74	0.7
0.76	0.77	0.76	0.71
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72

0.76	0.76	0.76	0.72
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.72	0.73	0.72	0.67
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.74	0.76	0.74	0.68
0.73	0.73	0.73	0.69
0.74	0.74	0.74	0.7
0.74	0.74	0.74	0.7
0.76	0.77	0.76	0.71
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72
0.74	0.76	0.74	0.68
0.74	0.76	0.74	0.68
0.72	0.73	0.72	0.67
0.72	0.73	0.72	0.67
0.73	0.75	0.73	0.67
0.73	0.75	0.73	0.67
0.74	0.76	0.74	0.68
0.73	0.73	0.73	0.69
0.74	0.74	0.74	0.7
0.74	0.74	0.74	0.7
0.76	0.77	0.76	0.71
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72
0.76	0.76	0.76	0.72