

TCEQ Interoffice Memorandum

TO: Office of the Chief Clerk
Texas Commission on Environmental Quality

THRU: Chris Kozlowski, Team Leader
Water Rights Permitting Team

FROM: Jenna Rollins, Project Manager
Water Rights Permitting Team

DATE: September 8, 2021

SUBJECT: Trinity River Authority of Texas
ADJ 4248
CN601265945, RN105652945
Application No. 08-4248F to Amend Certificate of Adjudication No. 08-4248
Texas Water Code § 11.122, Requiring Limited Mailed Notice
Trinity River, Trinity River Basin
Dallas, Ellis, Henderson, Freestone, Polk, Liberty, San Jacinto, Trinity,
Walker, and Anderson Counties

The application and partial fees were received on July 14, 2021. Additional fees were received on September 7, 2021. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on September 8, 2021. Mailed notice to the interjacent water right holders of record in the Trinity River Basin is required pursuant to Title 30 TAC § 295.158(c)(3)(D).

All fees have been paid and the application is sufficient for filing.

Jenna L. Rollins

Jenna Rollins, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

OCC Mailed Notice Required YES NO

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 8, 2021

Ms. Alexis Long
Associate General Counsel
Trinity River Authority of Texas
5300 S. Collins St.
Arlington, Texas 76018

VIA-EMAIL

RE: Trinity River Authority of Texas
ADJ 4248
CN601265945, RN105652945
Application No. 08-4248F to Amend Certificate of Adjudication No. 08-4248
Texas Water Code § 11.122, Requiring Limited Mailed Notice
Trinity River, Trinity River Basin
Dallas, Ellis, Henderson, Freestone, Polk, Liberty, San Jacinto, Trinity, Walker, and
Anderson Counties

Dear Ms. Long:

This acknowledges receipt, on September 7, 2021, of fees in the amount of \$147.00 (Receipt No. M200139, copy attached).

The application was declared administratively complete and filed with the Office of the Chief Clerk on September 8, 2021. Staff will continue processing the application for consideration by the Executive Director.

Please be advised that additional information may be requested during the technical review phase of the application process.

If you have any questions concerning the application, please contact me via email at jenna.rollins@tceq.texas.gov or by phone at 512-239-1845.

Sincerely,

A handwritten signature in cursive script that reads "Jenna L. Rollins".

Jenna Rollins, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Attachment



07-SEP-21 10:47 AM

TCEQ - A/R RECEIPT REPORT BY ACCOUNT NUMBER

<u>Fee Description</u>	<u>Fee Code</u> <u>Account#</u> <u>Account Name</u>	<u>Ref#1</u> <u>Ref#2</u> <u>Paid In By</u>	<u>Check Number</u> <u>Card Auth.</u> <u>User Data</u>	<u>CC Type</u> <u>Tran Code</u> <u>Rec Code</u>	<u>Slip Key</u> <u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
NOTICE FEES-WUP- WATER USE PERM	PTGU	M200139	202464		BS00088576	07-SEP-21	-\$147.00
	PTGU	ADJ084248	090721	N	D2800027		
	NOTICE FEES WUP WATER USE PERMITS	TRA	VHERNAND	CK			
Total (Fee Code):							-\$147.00

J. Rollins

RECEIVED
SEP 08 2021
Water Availability Division

Jenna Rollins

From: Jenna Rollins
Sent: Monday, August 23, 2021 11:27 AM
To: [REDACTED]
Subject: Trinity River Authority of Texas, 08-4248F
Attachments: Trinity_River_Authority_08-4248F_RFI_Sent_8.23.21.pdf

Dear Ms. Long,

Attached is a request for information letter for the Trinity River Authority of Texas application No. 08-4248F. Please review and provide a response by September 22, 2021.

Thank you,
Jenna Rollins, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section
512-239-1845

Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 23, 2021

Ms. Alexis Long
Associate General Counsel
Trinity River Authority of Texas
5300 S. Collins St.
Arlington, Texas 76018

VIA-EMAIL

RE: Trinity River Authority of Texas
ADJ 4248
CN601265945, RN105652945
Application No. 08-4248F to Amend Certificate of Adjudication No. 08-4248
Texas Water Code § 11.122, Requiring Limited Mailed Notice
Trinity River, Trinity River Basin
Anderson County

Dear Ms. Long:

This acknowledges receipt, on July 14, 2021, of the referenced application, and fees in the amount of \$112.50 (Receipt No. M120472, copy attached).

Additional fees are required before the application can be declared administratively complete.

1. Remit fees in the amount of **\$ 147.00** as described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.

Filing Fee (Amendment)	\$ 100.00
Recording Fee	\$ 12.50
Notice Fee (\$2.94 x 50 Interjacent Water Right Holders)	\$ 147.00
<u>TOTAL FEES</u>	<u>\$ 259.50</u>
<u>FEES RECEIVED</u>	<u>\$ 112.50</u>
BALANCE DUE	\$ 147.00

Please provide the requested information by September 22, 2021 or the application may be returned pursuant to Title 30 Texas Administrative Code § 281.18.

Ms. Alexis Long
Application No. 08-4248F
August 23, 2021
Page 2 of 2

If you have any questions concerning this matter, please contact me via email at jenna.rollins@tceq.texas.gov or by telephone at (512) 239-1845.

Sincerely,

A handwritten signature in cursive script that reads "Jenna L. Rollins".

Jenna Rollins, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Attachment



19-JUL-21 01:56 PM

TCEQ - A/R RECEIPT REPORT BY ACCOUNT NUMBER

<u>Fee Description</u>	<u>Fee Code</u> <u>Account#</u> <u>Account Name</u>	<u>Ref#1</u> <u>Ref#2</u> <u>Paid In By</u>	<u>Check Number</u> <u>Card Auth.</u> <u>User Data</u>	<u>CC Type</u> <u>Tran Code</u> <u>Rec Code</u>	<u>Slip Key</u> <u>Document#</u>	<u>Tran Date</u>	<u>Tran Amount</u>
WTR USE PERMITS	WUP	M120472	202133		BS00087751	19-JUL-21	-\$112.50
	WUP		071921	N	D1803825		
	WATER USE PERMITS	TRA	JARIVERA	CK			
					Total (Fee Code):		-\$112.50
					Grand Total:		-\$1,913.50

RECEIVED

JUL 21 2021

Water Availability Division

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): Trinity River Authority of Texas

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

Y/N

- Administrative Information Report**
- Additional Co-Applicant Information
- Additional Co-Applicant Signature Pages
- Written Evidence of Signature Authority
- Technical Information Report**
- USGS Map (or equivalent)
- Map Showing Project Details
- Original Photographs
- Water Availability Analysis
- Worksheet 1.0**
- Recorded Deeds for Irrigated Land
- Consent For Irrigation Land
- Worksheet 1.1**
- Addendum to Worksheet 1.1
- Worksheet 1.2**
- Addendum to Worksheet 1.2
- Worksheet 2.0**
- Additional W.S 2.0 for Each Reservoir
- Dam Safety Documents
- Notice(s) to Governing Bodies
- Recorded Deeds for Inundated Land
- Consent For Inundation Land

Y/N

- Worksheet 3.0**
- Additional W.S 3.0 for each Point
- Recorded Deeds for Diversion Points
- Consent For Diversion Access
- Worksheet 4.0**
- TPDES Permit(s)
- WWTP Discharge Data
- 24-hour Pump Test
- Groundwater Well Permit
- Signed Water Supply Contract
- Worksheet 4.1**
- Worksheet 5.0**
- Addendum to Worksheet 5.0
- Worksheet 6.0**
- Water Conservation Plan(s)
- Drought Contingency Plan(s)
- Documentation of Adoption
- Worksheet 7.0**
- Accounting Plan
- Worksheet 8.0**
- Fees

For Commission Use Only:

Proposed/Current Water Right Number: _____

Basin: _____ Watermaster area Y/N: _____

ADMINISTRATIVE INFORMATION REPORT

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

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

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

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

New Appropriation of State Water

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."

Applicant is seeking an amendment to an existing water right for an additional diversion point
and an additional purpose of use for wildlife management. The Applicant is seeking to add a new
diversion point to divert water from the Trinity River to a small (under 200 acre-feet) reservoir
for use as a migratory bird habitat from November to January (the migratory season). At the end
of the migratory season, the water will be returned to the Trinity River. The Applicant also seeks
to add Anderson County as an additional place of use.

2. APPLICANT INFORMATION (Instructions, Page. 6)

a. Applicant

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

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

Trinity River Authority of Texas

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

If the applicant is currently a customer with the TCEQ, what is the Customer Number (CN)? You may search for your CN on the TCEQ website at

<http://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=cust.CustSearch>

CN : 601265945 (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: J. Kevin Ward

Title: General Manager

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

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: Trinity River Authority of TX

Mailing Address: 5300 S. Collins

City: Arlington

State: Texas

ZIP Code: 76018

Indicate an X next to the type of Applicant:

- Individual
- Partnership
- Trust
- Federal Government
- County Government
- Other Government
- Sole Proprietorship-D.B.A.
- Corporation
- Estate
- State Government
- City Government
- Other _____

For Corporations or Limited Partnerships, provide:

State Franchise Tax ID Number: n/a SOS Charter (filing) Number: n/a

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: Alexis Long

Title: Associate General Counsel

Organization Name: Trinity River Authority of T

Mailing Address: 5300 S. Collins

City: Arlington

State: Texas

ZIP Code: 76018

Phone No.: (817) 467-4343

Extension: n/a

Fax No.: n/a

E-mail Address: 

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:

Organization Name:

Mailing Address:

City:

State:

ZIP Code:

Phone No.:

Extension:

Fax No.:

E-mail Address:

5. MISCELLANEOUS INFORMATION (Instructions, Page. 9)

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

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

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

Account number:

Amount past due:

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

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

Enforcement order number:

Amount past due:

b. If the Applicant is a taxable entity (corporation or limited partnership), the Applicant must be in good standing with the Comptroller or the right of the entity to transact business in the State may be forfeited. See Texas Tax Code, Subchapter F. 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 n/a**

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).

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

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, J. Kevin Ward

General Manager

(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: J. Kevin Ward
(Use blue ink)

Date: 6-30-2021

Subscribed and Sworn to before me by the said

on this 30th day of June, 2021.

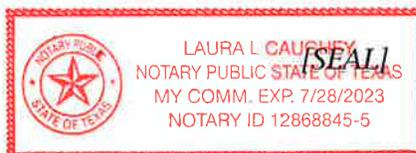
My commission expires on the 28th day of July, 2023.

Laura L. Caughey

Notary Public

Tarrant

County, Texas



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

**Evidence of
Signature
Authority**

RESOLUTION NO. R-1572

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE TRINITY RIVER AUTHORITY OF TEXAS AUTHORIZING THE GENERAL MANAGER OF THE TRINITY RIVER AUTHORITY OF TEXAS TO EXECUTE AN APPLICATION OR APPLICATIONS FOR AMENDMENT TO A WATER RIGHT IN A FORM DEEMED REASONABLE AND APPROPRIATE IN HIS JUDGMENT, TO SUBMIT THE SAME TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND TO TAKE ALL SUCH ACTIONS DEEMED NECESSARY BY THE GENERAL MANAGER TO SECURE SAID AMENDMENT OR AMENDMENTS.

Preamble

WHEREAS, Certificate of Adjudication No. 08-4248 incorporates the rights of the Authority with respect to the Lake Livingston and Wallisville system; and

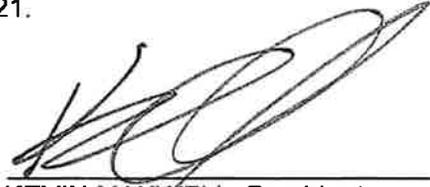
WHEREAS, Certificate of Adjudication No. 08-4248 has been amended several times at the request of the Authority to incorporate multiple uses, to authorize diversion of return flows, to permit hydropower operations and for other lawful purposes deemed necessary by the Authority; and

WHEREAS, it is necessary and desirable to further amend Certificate of Adjudication No. 08-4248, for the purpose of adding an additional diversion point on the Trinity River, an additional place of use in Anderson County and an additional purpose of use for wildlife management.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE TRINITY RIVER AUTHORITY OF TEXAS:

- (1) That the General Manager of the Trinity River Authority of Texas is hereby authorized to execute and file all the necessary documents, in a form deemed reasonable and appropriate in his judgment, to amend Certificate of Adjudication No. 08-4248 for the purpose of adding an additional diversion point, place of use and purpose of use, and to take all such actions deemed necessary by the General Manager to secure said amendment or amendments;
- (2) That the General Manager may engage such outside services as he deems necessary for the purpose of prosecuting said application or applications for compensation deemed reasonable and necessary in his judgment; and
- (3) That this Resolution shall take effect from and after its date of adoption and it is accordingly ordered.

Adopted this 23rd day of June, 2021.



KEVIN MAXWELL, President
Board of Directors
Trinity River Authority of Texas

ATTEST:



HOWARD S. SLOBODIN, Secretary
Board of Directors

(SEAL)



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, Applicant are directed to submit additional Worksheets (provided herein). A completed Administrative Information Report is also required for each application.

Applicants are strongly encouraged 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 call Water Availability Division at (512) 239-4600 to schedule a meeting. Applicant attended a pre-application meeting with TCEQ Staff for this Application? Y / N^{Yes}_____ (If yes, date : 03/11/2021).

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

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

- a. Applicant requests a new appropriation (diversion or impoundment) of State Water? Y / N^{No}_____
- b. Applicant requests an amendment to an existing water right requesting an increase in the appropriation of State Water or an increase of the overall or maximum combined diversion rate? Y / N^{No}_____ (If yes, indicate the Certificate or Permit number: _____)

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_____

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

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

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

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

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

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

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

Water Right (Certificate or Permit) number you are requesting to amend: 08-4248

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

List of water rights to sever	Combine into this ONE water right
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** No

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

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

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

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

If yes, submit:

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

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

If yes, submit:

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

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

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

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

Additionally, all amendments require:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Worksheets and information:

- **Worksheet 1.0 – Quantity, Purpose, and Place of Use Information Worksheet**
- **Worksheet 2.0 - Impoundment/Dam Information Worksheet** (submit one worksheet for each impoundment or reservoir owned by the applicant through which water will be conveyed or diverted)
- **Worksheet 3.0 - Diversion Point Information Worksheet** (submit one worksheet for the downstream limit of each diversion reach for the proposed conveyances)
- **Worksheet 4.0 – Discharge Information Worksheet** (for each discharge point)

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

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

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

Applicant is not in conflict with State and Regional Water Plans.

- b. Did the Applicant perform its own Water Availability Analysis? Y / NNo

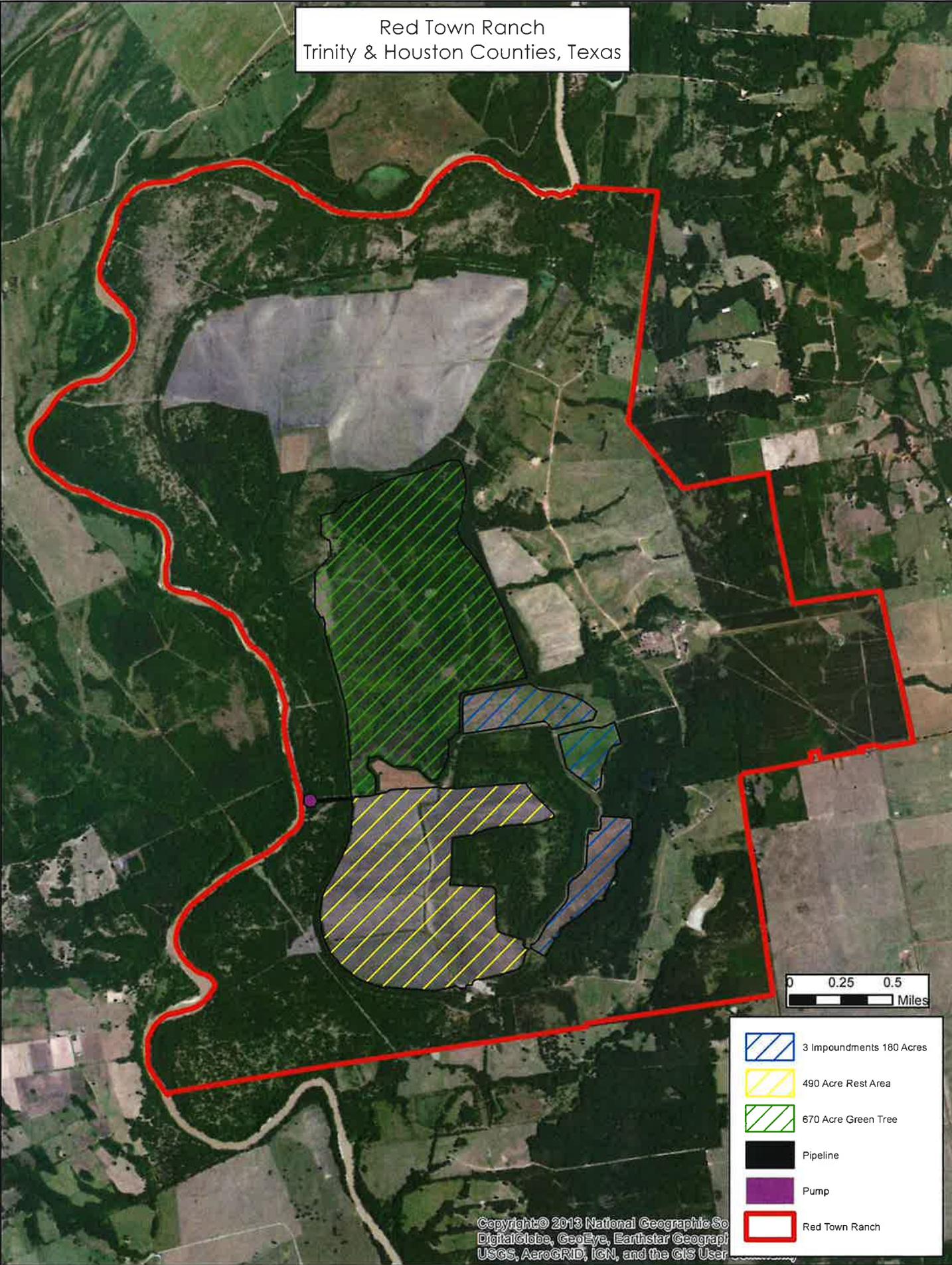
If the Applicant performed its own Water Availability Analysis, provide electronic copies of any modeling files and reports.

- c. Does the application include required Maps? (Instructions Page. 15) Y / NYes

Addendum

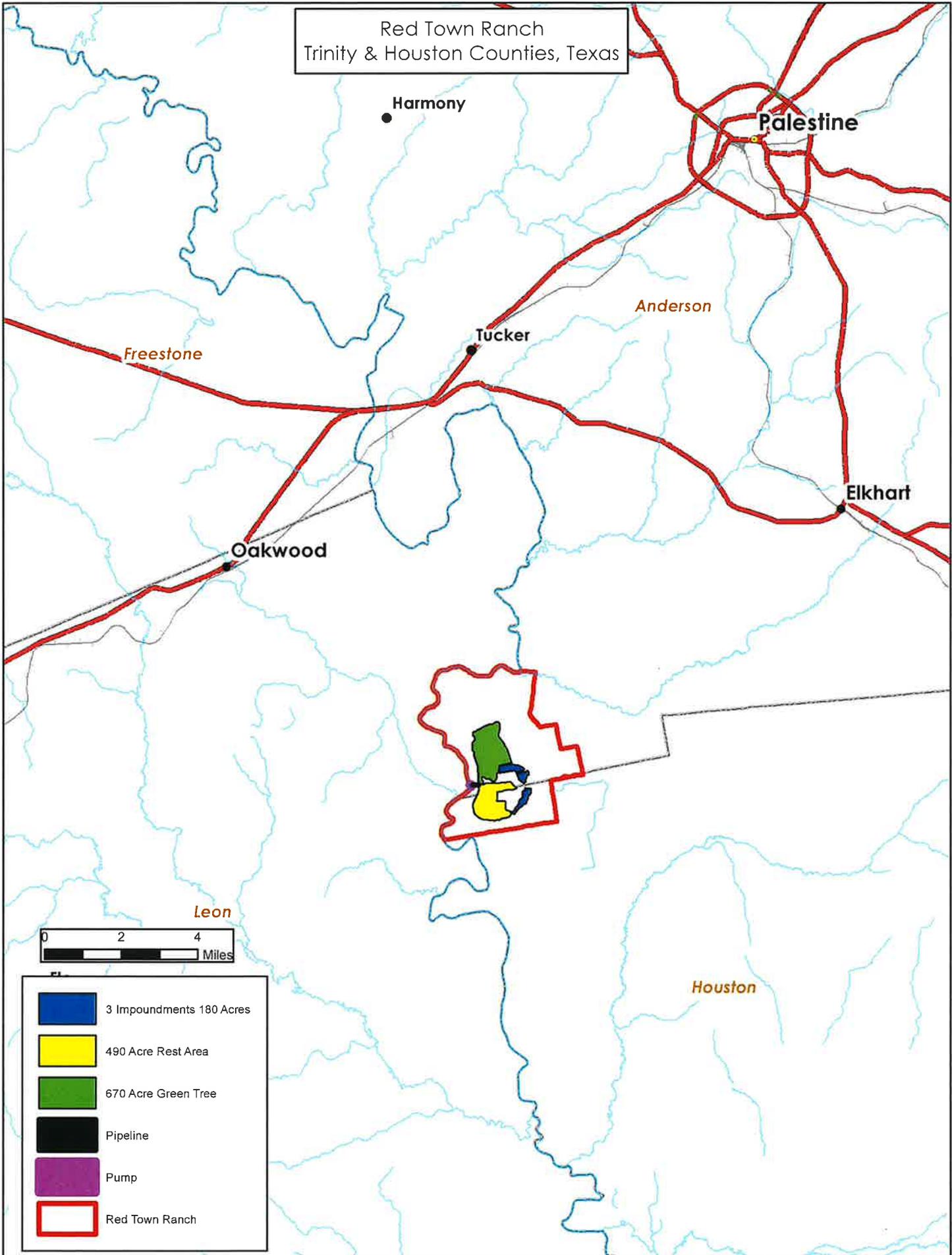
Required Maps

Red Town Ranch
Trinity & Houston Counties, Texas



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Red Town Ranch
Trinity & Houston Counties, Texas



Harmony

Palestine

Anderson

Tucker

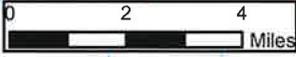
Elkhart

Freestone

Oakwood

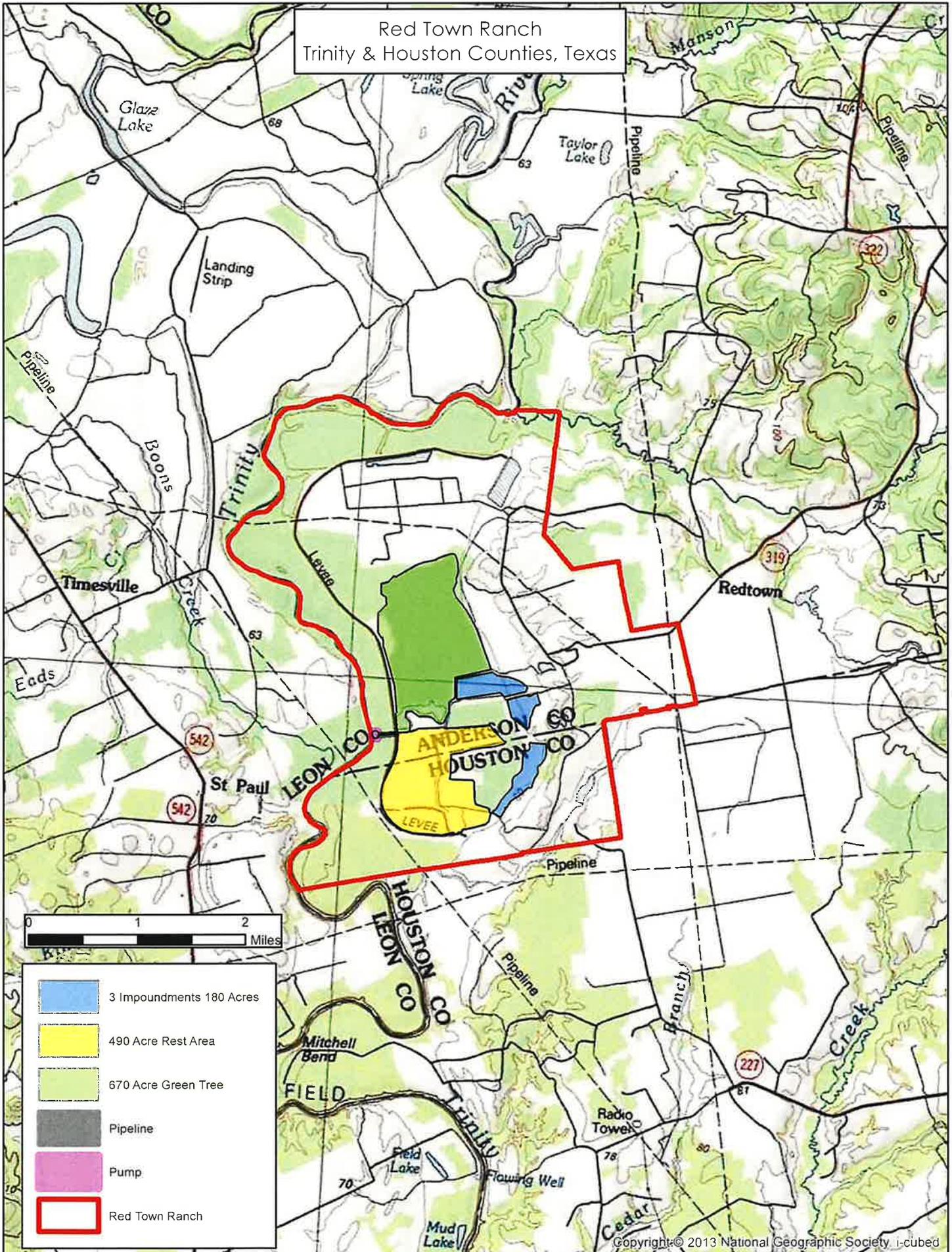
Leon

Houston

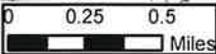
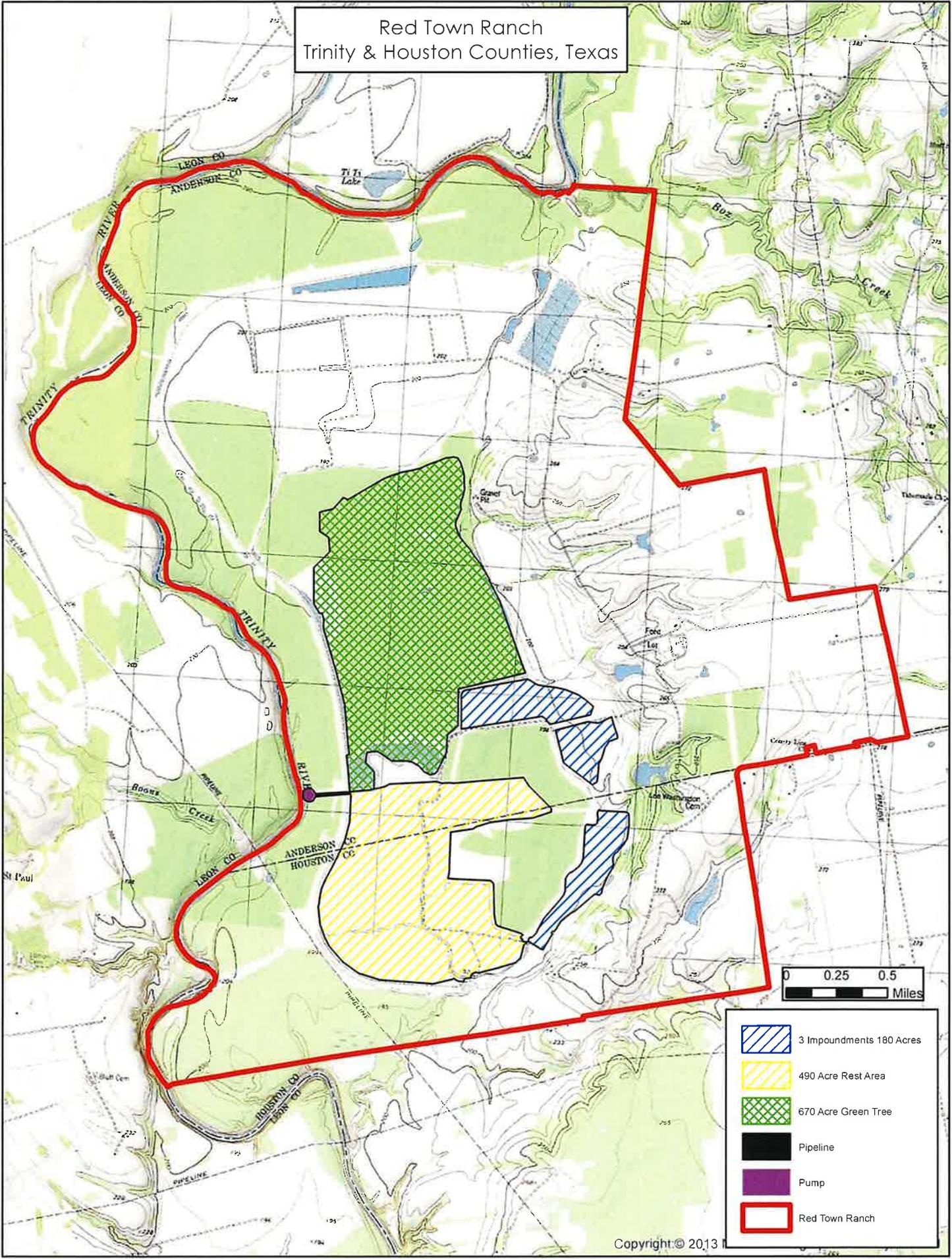


- 3 Impoundments 180 Acres
- 490 Acre Rest Area
- 670 Acre Green Tree
- Pipeline
- Pump
- Red Town Ranch

Red Town Ranch
Trinity & Houston Counties, Texas



Red Town Ranch
Trinity & Houston Counties, Texas



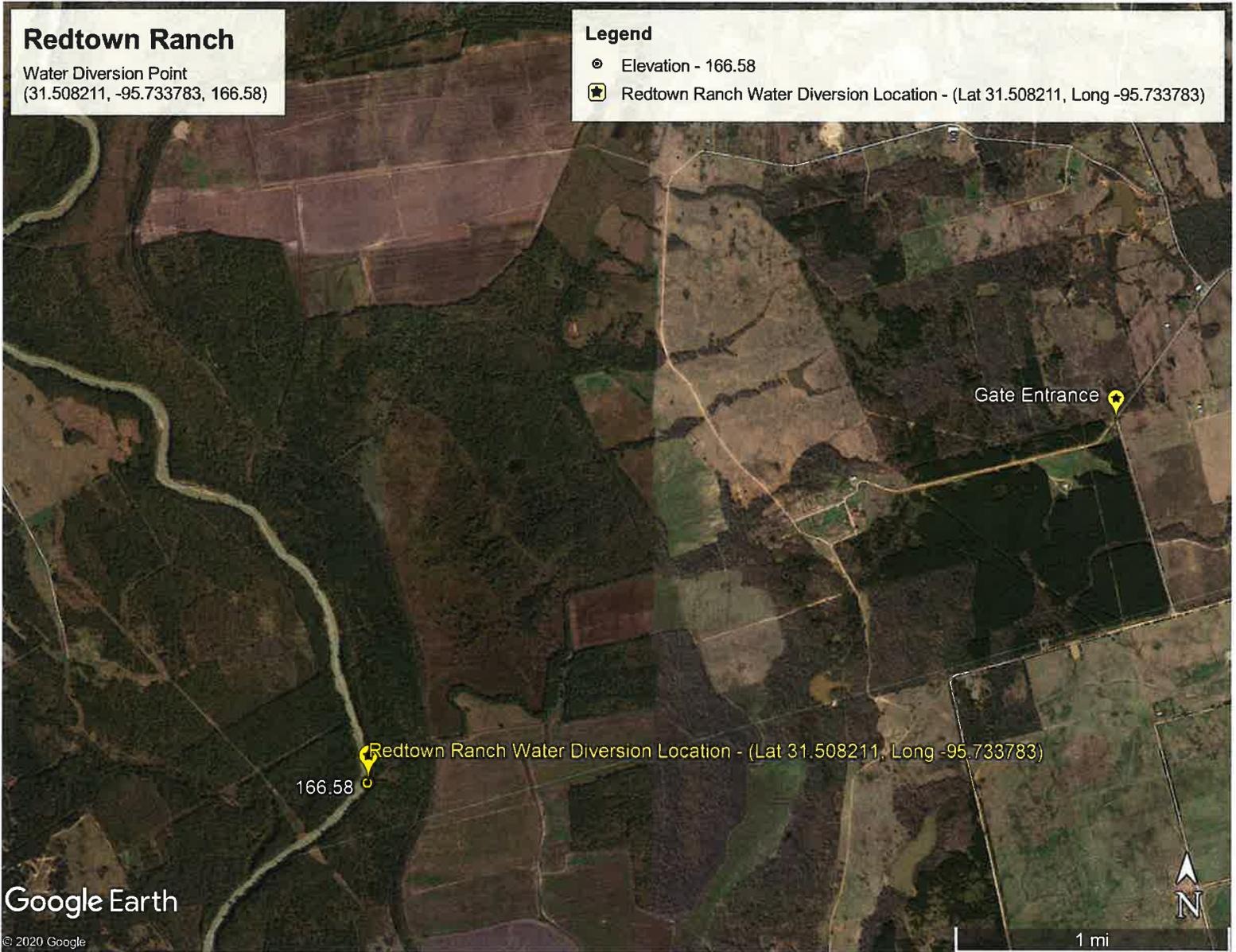
-  3 Impoundments 180 Acres
-  490 Acre Rest Area
-  670 Acre Green Tree
-  Pipeline
-  Pump
-  Red Town Ranch

Redtown Ranch

Water Diversion Point
(31.508211, -95.733783, 166.58)

Legend

- Elevation - 166.58
- 📍 Redtown Ranch Water Diversion Location - (Lat 31.508211, Long -95.733783)



Google Earth

© 2020 Google

1 mi

WORKSHEET 1.0

Quantity, Purpose and Place of Use

I. 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) <i>(Include losses for Bed and Banks)</i>	State Water Source (River Basin) or Alternate Source <i>*each alternate source (and new appropriation based on return flows of others) also requires completion of Worksheet 4.0</i>	Purpose(s) of Use	Place(s) of Use <i>*requests to move state water out of basin also require completion of Worksheet 1.1 Interbasin Transfer</i>
n/a	n/a	n/a	n/a

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

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

a. Location Information Regarding the Lands to be Irrigated

i) Applicant proposes to irrigate a total of 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 Purpose(s) or Place(s) of Use, complete the following:

Quantity (acre-foot)	Existing Purpose(s) of Use	Proposed Purpose(s) of Use*	Existing Place(s) of Use	Proposed Place(s) of Use**
140	Domestic, Agricultural (Irrigation), Municipal, Mining, Industrial	Additional purpose of use for Wildlife Management	Trinity, Polk, San Jacinto, Liberty, Chambers, Jefferson, Leon, Houston, Walker, Galveston, Grimes, Freestone, Madison	Additional place of use in Anderson County

*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:
- 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.
 - 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.

- Submit Worksheet 1.1, Interbasin Transfers, for any request to change the place of use which moves State Water to another river basin.
- See Worksheet 1.2, Marshall Criteria, and submit if required.
- See Worksheet 6.0, Water Conservation/Drought Contingency, and submit if required.

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. 1 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** ^{1,032.49} _____ cfs (cubic feet per second)
or _____ gpm (gallons per minute)

c. Does this point share a diversion rate with other points? Y / N ^{Yes} _____
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches* ^{1,032.49} _____ cfs or _____ gpm

d. For amendments, is Applicant seeking to increase combined diversion rate? Y / N ^{No} _____

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

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

Applicant has calculated the drainage area. Y / N ^{No} _____

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

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): Trinity River
- b. Zip Code: 75839
- c. Location of point: In the Samuel C. Box League Original Survey No. _____, Abstract No. 12, Anderson 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 31.508211 °N, Longitude -95.733783 °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): GIS
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38.
- 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.

Addendum to Worksheet 3

Consent to Divert
Deed(s)

STATE OF TEXAS §
COUNTIES OF ANDERSON & HOUSTON §

GENERAL WARRANTY DEED WITH VENDOR'S LIEN

Date: August 24, 1995

Grantor: Vernon Calhoun, Individually and as Independent
Executor of the Estate of Sue Calhoun, Deceased;
Vernon Calhoun Packing Company, a Texas
corporation; Puzzlewood, Inc., a Texas
corporation

Grantee: Southern Pine Plantations of Georgia, Inc.

Address: 6304 Peake Road
Macon, Georgia 31210

Consideration: TEN AND NO/100 DOLLARS (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged and the further consideration of the execution and delivery by Grantee of its one certain promissory note of even date herewith in the principal sum of \$5,263,300.00, payable to the order of Farm Credit Bank of Texas, at its office in Brazos County, Texas, as therein provided; Farm Credit Bank of Texas, at the instance and request of Grantee herein having advanced and paid in cash to the Grantors herein that portion price of the herein described property as is evidenced by the hereinbefore described \$5,263,300.00 note, the vendor's lien, together with the superior title of said property as retained herein for the benefit of Farm Credit Bank of Texas and the same are hereby transferred and assigned to Farm Credit Bank of Texas.

Legal Description of Real Property:

All the lots, tracts, or parcels of land owned by Grantor in the following surveys:

Anderson County, Texas

The S. C. Box Survey, A-12, R. W. Box Survey, A-11, and the Martin Murchison Survey, A-509.

Houston County, Texas

The James E. Box Survey, A-13, W. E. Parker Survey, A-819, R. H. Whitley Survey, A-1083, Wm. Whitley Survey, A-1081, Heirs of Margaret Lathrop Survey, A-705, M. Hunt Survey, A-541, Wm. Smith Survey, A-959, James Moncure Survey, A-759, J. Kyle Survey, A-661, J. Kyle Survey, A-662, D. W. Reeves Survey, A-868, John Edens Survey, A-31, John Kirkpatrick Survey, A-665, Nathaniel Parton Survey, A-820, Garrison Greenwood Survey, A-37, T. H. Barrow Survey, A-1366, J. W. Cleveland Survey, A-248, and the C. Miller Survey, A-742.

Such tracts herein conveyed include, but are not limited to, the tracts of land described by metes and bounds on Exhibit "A" which is attached hereto and incorporated by reference.

Reservations From Conveyance: This Warranty Deed is executed by Grantor expressly subject to the following:

- (a) All mineral and royalty reservations of record;
- (b) All visible and apparent easements and rights-of-way, the existence of which do not appear of record;
- (c) All reservations, restrictions, easements and rights-of-way of record.

Grantor, for the consideration and subject to the reservations from and exceptions to conveyance and warranty, GRANTS, SELLS, and CONVEYS to Grantee the real property, together with all and singular the rights and appurtenances thereto in anywise belonging, TO HAVE AND TO HOLD to Grantee, Grantee's heirs, executors, administrators, successors, or assigns forever. Grantor hereby binds Grantor and Grantor's heirs, executors, administrators, and successors to WARRANT AND FOREVER DEFEND all and singular the property to Grantee and Grantee's heirs, executors, administrators, successors, and assigns, against every person whomsoever lawfully claiming or to claim the same or any part thereof, except as to the reservations from conveyance.

GRANTORS:

**VERNON CALHOUN, Individually
and as Independent Executor of
the Estate of Sue Calhoun,
Deceased**

Vernon Calhoun
VERNON CALHOUN

**VERNON CALHOUN PACKING COMPANY,
a Texas corporation**

By: *Vernon Calhoun*
Printed Name: VERNON CALHOUN
Title: PRESIDENT

**PUZZLEWOOD, INC.,
a Texas corporation**

By: *Vernon Calhoun*
Printed Name: VERNON CALHOUN
Title: PRESIDENT

STATE OF TEXAS §
COUNTY OF Anderson §

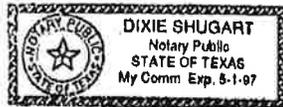
This instrument was acknowledged before me on the 24th day of August, 1995, by VERNON CALHOUN.



Dixie Shugart
NOTARY PUBLIC, STATE OF TEXAS

STATE OF TEXAS §
COUNTY OF Anderson §

This instrument was acknowledged before me on the 24th day of August, 1995, by VERNON CALHOUN of VERNON CALHOUN PACKING COMPANY, a Texas corporation, on behalf of said corporation.



Dixie Shugart
NOTARY PUBLIC, State of Texas

STATE OF TEXAS §
COUNTY OF Anderson §

This instrument was acknowledged before me on the 24th day of August, 1995, by VERNON CALHOUN of PUZZLEWOOD, INC., a Texas corporation, on behalf of said corporation.



Dixie Shugart
NOTARY PUBLIC, State of Texas

602

HOUSTON COUNTY LANDS

FIRST TRACT. All that certain 1910 acres of land, situated in Houston and Anderson Counties, Texas, the same being parts of the following original grants: JAMES E. BOX SURVEY, Abstract No. 13, Houston County, S.C. BOX LEAGUE, Abst. No. 12, (Anderson County Abst. No.) R.W. BOX LEAGUE, Abst. No. 11 (Anderson County Abstract No.), W.E. PARKER SURVEY, Abst. No. 819, Houston County, R.W. WHITLEY SURVEY, Abst. No. 1093, Houston County, WILLIAM WHITLEY SURVEY, Abst. No. 1091, Houston County, HEIRS OF MARGARET LATHROP SURVEY, Abst. No. 705, Houston County, and T.H. BARROW SURVEY, Abst. No. 1366, Houston County, said 1910 acres more particularly described as follows:

BEGINNING on the South line of the R.W. Box League, A-11 on or near the County line of Anderson and Houston Counties, at the S W corner of the tract conveyed by W.L. Horn and wife, to George W. Whitley, by deed recorded in Book 37, Page 445 of the Anderson County Deed Records, being the S E corner of the Holloway Powell tract;

THENCE N 15 W with the W line of said tract 1367 vrs, its N W corner in a S line of 115 acres conveyed by John C. Adair and wife, to said Whitley, per deed recorded in Vol. P, Page 138 of said records;

THENCE S 75 W 284 vrs to S W corner of said 115 acres being Isaac Parker's S E corner;

THENCE N 2 W with Parker's E line 1222 vrs said Isaac Parker's N E corner on the N line of the S C Box League, A-12 in the road;

THENCE with the road, N 17 E 306 vrs, N 75 E 201 vrs, N 56 E 213 vrs, S 82 E 119 vrs, S 88 E 190 vrs, N 80 E 78 vrs, N 76 E 466 vrs, N 60 E 268 vrs, N 47 E 242 vrs to the East line of the R.W. Box League, A-11;

THENCE with said line S 13 E at 2051 vrs pass the S E corner of said league and at 1632 vrs. a division corner between Helm and Whitley on a branch;

THENCE Eastward up the branch with its meanderings to the East line of S.C. Box League, A-12;

THENCE S 15 E 583 vrs to the N E corner of the graveyard;

THENCE S 75 W 85 vrs to the N W corner of same;

THENCE S 5 E 190 vrs to its S W corner;

THENCE N 75 E 110 vrs to the S E corner of said S.C. Box League, A-12 and the S E corner of the graveyard;

THENCE S 10 E with the fence 662 vrs;

THENCE S 75 W 30 vrs to the fence corner;

THENCE S with the fence 206 vrs to the N W line of the John Edens League, A-362;

THENCE S 30 W with said line 447 vrs to an iron stake in the gate, the S E corner of 22 acres sold by G.W. Whitley and wife to R.F. Kolb, by deed recorded in Vol. 61, Page 266, Houston County Deed Records;

THENCE N 15 W 251 vrs rock the N E corner of said 22 acres;

THENCE S 60 W 1025 vrs the N W or West corner of said 22 acres at a large cottonwood marked X;

THENCE S 75 W 428 vrs to the S W corner of the North half of the Wm. E. Parker Survey, A-819;

THENCE S 15 E 904 vrs to the S W corner of said Parker Survey being the S E corner of the M. Lathrop Survey, A-705;

THENCE S 75 W with Lathrop's S line 183 vrs to the N E corner, of the R.H. Whitley 160 acre Survey, A-1083;

THENCE S 15 E 278 vrs to another one of R.H. Whitley's corner on the N W line of John Kyle Survey, A-662;

THENCE S 30 W with said line 873 vrs to said R.H. Whitley's S E corner;

THENCE S 75 W 473 vrs to the S.W. corner of R.H. Whitley Survey, A-1083 in the EBL of the C. Miller Survey, A-742;

THENCE S with the WBL of the S. Romick Survey, A-1381 to the NBL of the J. Edens Survey, A-362;

THENCE N 15 W 1105 vrs to R.H. Whitley Survey, A-1083 N W corner;

THENCE N 75 E 360 vrs to N E corner of R.H. Whitley Survey, A-1083 on the W line of Wm. Whitley's survey;

THENCE N 15 W with Wm. Whitley's W line 336 vrs to his N W corner on the S line of the Jas E. Box 1/4 League, A-13;

THENCE with the S line of the Jas E Box Survey, A-13 S 75 W 514 vrs to the S W corner of the East division of said 1/4 league which was conveyed to G.W. Whitley by Robert D. Box by deed recorded in Vol. "T", Page 1 of the Houston County Deed Records;

THENCE N 15 W 625 vrs to the N W corner of said last named tract on the S line of the S C Box League, A-13;

THENCE with the said line N 75 \pm 1136 vrs to the beginning, CONTAINING 1910 acres of land, more or less.

Being the lands conveyed by Claud B. Hamill to R.E. Smith by deed dated August 15, 1944, recorded in Volume 223, page 567 of the Houston County Deed Records.

SECOND TRACT:

(1) The M. HUNT 320 ACRE SURVEY, Abstract No. 541, lying and being situated in Houston County, Texas and more particularly described by field notes as follows:

BEGINNING at a post 610 varas from the North West corner of Wm. E. Parker's 320 acre Survey, A-819 South 75 West a stake from which a post oak brs South 56 West 25-3/10 vrs another brs North 9 West 2-1/10 varas;

THENCE South 15 East 1344 varas to a corner from which a Willow Oak bears North 45 West 7-8/10 varas and a post oak bears North 55 East 5-2/10 varas;

THENCE South 75 West 1344 varas to a corner on an Elm from which a Willow Oak bears North 58 West 4-8/10 varas another brs North 24-30' East 6-7/10 varas;

THENCE North 15 West 1344 varas to corner post from which a Willow Oak brs South 37 East 6-8/10 varas another brs South 34 East 1 vara;

THENCE North 75 East 1344 varas to the place of beginning.

(2) The CHAS. MILLER 320 ACRE SURVEY, Abstract No. 742, situated in Houston County, Texas, and more particularly described by field notes as follows:

BEGINNING at the South East corner of the Wm. Smith 320 acre Survey, A-959, a stake for corner from which a Pin Oak 12 in dia brs South 42 West 2-5/10 varas and a post oak brs South 75 East 6-5/10 varas;

THENCE South 75 deg West with Wm Smith Survey, A-959 south line 1544 varas a corner from which a Black Jack 12 in dia brs South 70 West 10 varas and a post oak brs North 16 East 14 varas to NEC of James Moncure Survey, A-759;

THENCE South 15 East at 1170-1/15 varas a corner from which a post oak 24 in dia brs North 20 East 9-7/10 varas and a Do brs North 34 West 5 varas;

THENCE North 75 East at 1544 varas a corner from which a post oak 28 in dia brs North 8 West 11-8/10 varas and a Do brs North 87 West 15 varas;

THENCE North 15 West passing corner of R. Whitley Survey, A-1081 at 1170-1/15 varas to the place of beginning.

THIRD TRACT: The entire WILLIAM SMITH SURVEY, Abstract No. 959 in Houston County, Texas, and also the tract described in Patent from The State of Texas to Zee Horn Assignee of Wm. Smith, Patent No. 37, Vol. 15, described as follows:

BEGIN on South boundary of M. Hunt Survey, A-541 at N W corner of R. Whitley Survey, A-1083 a stake from which a pin oak 8 in bears N 63 E 3/10 vrs. and ash brs S 27 E 2 3/10 vrs;

THENCE S 57 W with Hunt Survey, A-541 south line 984 vrs. to S.W. corner of said Hunt Survey, a pin oak brs N 56 W S 3/10 vrs;

THENCE N 15 W with Hunt Survey W line 2344 vrs to J.E. Box Survey, A-13 line stake from which a pin oak 12 in brs S 32 E 10 vrs and a pin oak bears S 34 E 5 vrs;

THENCE S 75 W with Box Survey line 1260 vrs, intersect Reeves Survey, A-868, corner post oak 24 in brs S 61 W 7 5/10 vrs. and a post oak brs N 26 E 5 5/10 vrs;

THENCE S 15 E 2394.5 vrs a black jack 9 in brs S 87 W 9 vrs and a P O bears N 66 W 13 5/10 vrs to NBL of the James Moncure Survey, A-759;

THENCE N 75 E 2244 vrs intersect R.W. Whitley Survey, A-1083 west line a post oak 12 in bears S 22 W 2 8/10 vrs and post oak brs S 79 E 9 5/10 vrs;

THENCE N 15 W 50 vrs to the beginning.

FOURTH TRACT:

All that certain 1237-3/4 acres, more or less, situated in Houston County, Texas, being known as the JAMES MONCURE 1280 ACRE SURVEY, ABST. NO. 759, located about 25 miles North West from the Town of Crockett, and more particularly described by field notes as follows:

BEGINNING at the South East cor of the J. H. Kerchoffer 640 acre Survey, A-653, a stk from which a Pin Oak 20 in dia mkd M brs N 24 W 8/10 vrs. a Do 26 in dia mkd M brs S 81-1/2 E 11-1/2 vrs;

THENCE North 13 West with Kerchoffer's East Bdry line at 1211-1/2 vrs to his North East cor a stk from which a double Pin Oak 20 in mkd M brs N 45 E 1-9/10 vrs, a Do 24 in dia mkd M brs S 57-1/2 W 9-1/2 vrs;

THENCE North 77 East 155 vrs to the South East cor of J.W. Cleveland Survey, A-248 a stk from which a P O 36 in dia mkd X brs S 36 W 12-1/2 vrs a Pin Oak 10 in dia mkd X brs N 1 E 2-3/10 vrs;

THENCE North 13 West 387 vrs to I.A. Smith Survey, A-966 S W cor a stake from which a R O 30 in dia mkd X T brs S 61 W 17 vrs a Do 10 in dia mkd X brs N 77 W 1-7/10 vrs;

THENCE North 76-35' East with the South Bdry line of Smith's survey at 689 vrs to his South East cor a stk a P O 30 in dia mkd X T brs N 75 W 10 vrs a Do 26 in dia mkd XT brs S 13 E 1-8/10 vrs;

THENCE North 13 West at 672 vrs cross the Navarro Road (CSE) at 897-1/2 vrs set stake for cor in the SBL of the D.W. Reaves Survey, A-868 from which a R O 28 in dia mkd X brs S 87-1/2 W 3-2/10 vrs a P O 10 dia mkd X brs 15-2/10 vrs;

THENCE North 77 East 624 vrs to a stk for cor in the North edge of a large pond from which a Post Oak 30 in dia mkd X brs N 59-1/4 E 17-7/10 vrs;

THENCE North 13 West at 163-7/10 vrs to a stk for cor from which a R O 16 in dia mkd X brs S 62-1/2 E ___ vrs a Hickory 10 in dia mkd X brs S 43-1/2 E 9-8/10 vrs. to WM. SMITH SURVEY, A-959 to Wm. Smith Survey, A-919 SBL;

THENCE North 75 East 719-4/10 vrs a stk for cor from which a P O 30 in dia mkd X brs S 63-1/4 W 21-9/10 vrs;

THENCE South 15 East 1190 vrs to a stk for cor from which a P O 30 in dia mkd X brs N 20 W 9-9/10 vrs a Hole in ground where a P O stood brs N 20 E 9-7/10 vrs;

THENCE North 75-18' East 1552-1/2 vrs to a stk for corner in the WBL of the S. Romick Survey, A-1381 from which a P O 40 in dia mkd X brs N 8 W 11-8/10 vrs a R O 10 in dia mkd X brs N 86 W 7-2/10 vrs;

THENCE South 15 East 54-9/10 vrs to a stk for cor in the NBL of the J. Edens Survey, A-362 from which a P O 12 in dia mkd X brs N 84-1/4 W 14-2/10 vrs a R O 12 in dia mkd X brs S 24 W 12-1/2 vrs;

THENCE South 35 East 1046 vrs with the WBL of the John Edens Survey, A-362 to a stk in the SEC of J. Moncure Survey, A-759 from which a R O 26 in dia mkd X brs N 34 E 11 vrs a hickory 12 in dia mkd X brs S 87 E 8-9/10 vrs. a Do 26 in dia mkd X brs S 22-3/4 E 11-9/10 vrs;

THENCE South 55 W 337.5 vrs to the NEC of Tract 11 of 37.25 acres in the J. Kirkpatrick Survey, A-665;

THENCE Southwest with the most Northerly NWL of the Jno. Edens Survey, A-362 to its most Westerly NWC;

THENCE North 35 West at 129-2/10 vrs to a stk for cor from which a R O 10 in dia mkd X brs South 45 West 7-2/10 vrs a P O 16 in dia mkd X brs South 21-1/2 E 5-8/10 vrs;

THENCE South 55 West 1231 vrs a stk for cor;

THENCE North 35 West 237-6/10 vrs to a stk for cor;

THENCE South 76-36 West at 300 vrs cross Cedar Branch at 2206-7/10 vrs to the place of beginning. Being the land conveyed by Elizabeth Moody Wieboldt et vir et al to R.E. Smith by deed dated April 4, 1953, recorded in Volume 298, Page 276 of the Houston County Deed Records.

FIFTH TRACT:

(1) Being 80 acres, more or less, a part of the W.E. PARKER 320 ACRE SURVEY, Abst. No. 819 in Houston County, Texas, described as follows:

BEGINNING at a stake at the N E corner of Dave Jones 80 acre tract, a cottonwood brs N 7 E 4-2/10 vrs. a P O brs S 4 W 5-1/2 vrs;

THENCE N 75 E 966 vrs, the original corner of the 160 acre tract;

THENCE SW with the Edens Survey, A-31 line to most Northerly corner of 10th Tract herein 1357 vrs, Dave Jones S E corner from which a Blk Jack brs N 48 W 4 vrs;

THENCE N 15 W 941 vrs to the place of beginning, CONTAINING 80 acres of land, more or less.

(2) 22 acres, more or less, a part of the W.E. PARKER 320 ACRE SURVEY, Abst. No. 819 in Houston County, Texas, described as follows:

BEGINNING at the N W corner of an 80 acre survey out of the W.E. Parker 320 acre survey, a large cottonwood for a corner tree;

THENCE N 75 E at 990 vrs to a corner of the N W boundary line of John Edens League, an iron stake for corner;

THENCE N 15 W at 251 vrs. a corner a rock for corner, from which a Post Oak 15 in dia brs N 15-1/2 W 10-3/10 vrs;

THENCE S 60 W 1025 vrs to the place of beginning, and CONTAINING 22 acres of land, more or less, both tract comprising 102 acres more or less, and being the lands conveyed by J. Ed Robeau, Jr. to R.E. Smith by deed dated August 21, 1961, recorded in Volume 362, Page 163, Houston County Deed Records.

SIXTH TRACT: 160 acres, more or less, a part of the J. KYLE SURVEY, ABST. NO. 662, in Houston County, Texas, described as follows:

BEGINNING at the S W Bdry line of the John Edens League, A-31, at the Southerly East cor of the James Kyle 211 acre Survey, A-662, a stk from which a B J brs N 52 W 5 vrs, a red oak brs S 2 E 5.7 vrs;

THENCE N 60 W with Edens line at 613.2 vrs. to most westerly SW corner;

THENCE N 30 E with the NW line of said Edens League, A-31 at 642 vrs intersects the Wm. Parker Survey, A-819 a stk from which a B.J. brs N 10 W 12 vrs;

THENCE S 75 W with Parker line 600 vrs a cor from which a Hickory brs S 74 E 6.2 vrs;

THENCE S 15 E at 278 vrs a cor from which a B J brs N 59 W 16 vrs a red oak brs S 33 E 19.7 vrs;

THENCE S 30 W 873.4 vrs to the NEC of John Edens Survey, A-362 from which a post oak brs S 362 E 11 vrs. another brs S 3 W 133 vrs;

THENCE S 60 E 867 vrs intersects James Kyle Survey, A-661 N W line a stk from which a post oak brs S 48 W 6.8 vrs another brs N 19 E 15 vrs;

THENCE N 30 E with Kyle Survey, A-661 849.9 vrs. to the place of beginning, marked "X" containing 160 acres of land, Abst. No. 662.

Being the land described in Warranty Deed executed by Oscar Jones and wife, Bettie May Jones to R.E. Smith, dated April 14, 1962, recorded in Vol. 370, Page 70 of the Deed Records of Houston County, Texas.

SEVENTH TRACT: Being the entire J.E. BOX SURVEY, A-13, situated in Houston County, Texas, described by metes and bounds as follows:

Situated on the East Margin of Trinity River and adjoins that of SAMUEL C. BOX, A-12 at the south west corner where the 1st land mark was formed by raising a mound of earth around a stake, from which an elm 18 inches in diameter bears North 52 deg. East 10 8/10 varas distant, and a white oak 14 inches in diameter bears South 64 West 14 varas distant;

THENCE North 75 East 9625 varas were measured and the 2nd landmark was raised, from which a black jack 12 inches in diameter bears North 75 West 2 varas distant and a black jack 15 inches in diameter bears North 52 East 5 2/10 varas distant;

THENCE South 15 East 625 varas were measured and the 3rd land mark was raised from which a black jack 12 inches in diameter bears South 65 1/2 West 4 8/10 varas distant, and another black jack 10 inches in diameter bears North 42 East 4 4/10 varas distant;

THENCE South 75 West 10375 varas were measured and the fourth and last land mark was raised on the East margin of the Trinity River, being the SW corner of S.E. Box Survey, A-12, from which an elm 18 inches in diameter bears North 52 East 10 8/10 varas distant and a hickory 14 inches in diameter bears South 64 West 4 varas distant;

THENCE following said river along its meanders up to the first land mark completing this the survey of the one-fourth league of land. Of said land, two labors belong to the class of arable land and 4 1/4 remaining ones to that of pasture land.

SAVE AND EXCEPT: All that certain tract or parcel of land situated in the County of Houston, State of Texas, and being a part of the J.E. BOX 1/4 of a LEAGUE, A-13, and being the same tract of land allotted to R.H. Horn by decree of the District Court of Anderson County, Texas, in Case No. 6426 Carrie Horn by next friend, W.L. Horn et al as appears in Minutes Book Y, Page 466 of the District Court Minutes of Anderson County, Texas. Said land is described as follows, to-wit:

BEGINNING at G.W. Whitley's corner on the J.E. Box Survey, A-13 line a B J for corner from which a B J bears N 45 E 4 vrs;

THENCE S 15 E 625 vrs. a Pin Oak;

THENCE S 75 W 500 vrs a stake from which a B J bears S 80 W, 5 vrs;

THENCE N 15 W 625 vrs. S.C. Box League, A-12 LINE a B J from which a P O bears S 44-1/2 E 9 vrs;

THENCE North 75 E 500 vrs. to the place of beginning, containing 57-1/2 acres of land, more or less, and being the East half of a 115 acre tract of land conveyed by Wilse Parker and B.J. Parker, Executor to Mollie E. Horn by Deed dated January 28th, 1924, and recorded in Book 8, Page 361 and 362, Deed Records of Houston County, Texas, to which reference is hereby made.

FURTHER SAVE AND EXCEPT that portion of the J.E. BOX SURVEY, A-13, being heretofore described and included within a portion of First Tract above described.

EIGHTH TRACT: All that certain tract or parcel of land situated in Houston County, Texas and being 99.52 acres of land, a part of the J.W. CLEVELAND 900 acre Survey, A-248, in said Houston County, Texas, and described by metes and bounds as follows:

BEGINNING at the NW corner of said J.W. Cleveland Survey and the S W cor of D.W. Reeves Survey at a point on the E Bank of the Trinity River a stake for corner;

THENCE N 77 deg. E with the division line between said Cleveland and said Reeves Surveys and along an old marked line and remains of old fence at 1467 vrs a stake for cor from which a 10 in hackberry marked X bears N 34 Deg W 9 vrs and a 10 in overcup oak marked X bears N 84 Deg E 10 vrs;

THENCE S 13 Deg. E 118.5 vrs to a 6 in locust marked X for cor on the Bank of Trinity River;

THENCE up said river with its meanders as follows: S 80-1/2 Deg W 123 vrs; S 55 Deg W 150 vrs; S 35-3/4 Deg W 221 vrs; S 38 Deg. W 78 vrs; S 41-1/2 Deg W 82 vrs; S 37-1/2 Deg W 219 vrs; S 48-1/4 Deg W 46 vrs; S 63 Deg W 135 vrs; S 79 Deg. W 75 vrs; S 87-1/2 Deg W 85 vrs; N 79-3/4 Deg W 91 vrs; N 61 Deg W 179 vrs; N 56-1/4 Deg. W 121 vrs; N 42 Deg W 169 vrs; N 45 Deg W 55 vrs; and N 13 Deg. 44' 30" W 147.55 vrs. to the Place of Beginning, and containing 99.52 acres of land, as surveyed by W.B. Chambers Licensed State Land Surveyor, on November 14, 1949.

NINTH TRACT: Being the entire D.W. REAVES SURVEY, A-868 containing 1,476.1 acres of land, more or less in Houston County, Texas, described by metes and bounds as follows:

Third of a league, or 8,333,333 1/2 sq. varas of land, being 1,476.1 acres situated and described as follows, in Houston County on the East bank of the Trinity River, beginning at J.E. Box Survey, A-13, lower southwest corner on the river;

THENCE South 13 deg. 30' West with the meanders of the river one thousand six hundred and thirteen varas (1613 vrs) to a stake from which a pecan marked W bears North 53 deg. East 1 5/10 varas and a red oak marked X bears South 10 deg. West 4 5/10 varas;

THENCE North 77 deg. East six thousand one hundred and one varas (6,101 varas) to a stake from which a willow oak marked X bears South 70 deg. West 8 varas and a post oak marked W bears North 31 deg. West 11 5/10 varas;

THENCE North 13 deg. West one thousand four hundred and forty-four (1,444 varas) to a stake in the SBL of the J.E. Box Survey, A-13, same being the NWC of the William Smith Survey, A-959, from which a post oak marked W bears South 15 deg. West 10 8/10 varas;

THENCE S 76 deg. 59' 42" W 5381.29 vrs. with J.E. Box Survey, A-13 south boundary line five thousand three hundred and eighty-one varas (5,381 varas) to a stake and place of beginning, from which an elm bears North 72 deg. West 5 varas marked W, another elm bears South 83 deg. West marked X 8 3/10 varas containing three million square varas of arable land and five million, three hundred and thirty-three thousand and three hundred and thirty-three and 1/3 square varas of pasture land.

TENTH TRACT: 187.03 acres, more or less, a part of the John Edens Original Survey, A-31, in Houston County, Texas, and being the same land deeded from B.F. Edens to I.M. Baber dated December 5, 1885, and recorded in Volume 18, Page 50 of the Deed Records of Houston County, Texas, and being more particularly described by metes and bounds as follows, to-wit:

BEGINNING at the west corner of I.M. Baber Est. 187.03 acre tract, a point in the NW BL of the JOHN EDENS ORIGINAL SURVEY, A-31, Houston County, Texas, at the North corner of a W.L. Moody Estate 474 acre tract, an iron pipe driven from which a 15" post oak brg N 85-1/2 W at 9.5 vrs. was found mrkd //x// and witness //x// was marked on a 14" post oak brg N 40 1/2 E at 15.5 vrs and a 6" post oak brg N 85 E at 7.5 vrs;

THENCE with NE BL of Moody Tract and SW BL Baber Tract, a fence line, the general courses of which are as follows: S 68-37 E, 200.0 vrs; S 58-51 E, 200.0 vrs and S 56-46 E, 1260.1 vrs to an iron pipe driven at fence corner post from which a 6" red oak brg N 26 1/2 W

at 4.5 vrs and a 12" sweet gum brg N 12 1/2 E at 11.8 vrs were marked //x//;

THENCE in a westerly BL of the W.R. Nanse Tract, being an irregular fence, the general courses of which are as follows: N 12-00 W, 300.0 vrs; N 14-43 W, 500.0 vrs; and N 13-13 W, 470.5 vrs. to an iron pipe in the north ditch of a public road at the SE corner of a Hortense Gregory 80 acre tract;

THENCE with North BL of Baber Tract, with the line of an old wagon road bed, which lies generally with the north edge of the present roadway N 59-20 W, 779.3 vrs. an iron pipe driven, in the northerly projection of the WBL fence of said Baber Tract;

THENCE with a fence line and fence, S 30-09 W, 886.0 vrs., being the E BL of a J.F. Kolb 80 acre tract and the NW BL of Edens Survey to the point of beginning, CONTAINING 187.03 acres of land, more or less.

ELEVENTH TRACT: All that certain tract or parcel of land, situated in Houston County, Texas, about 18 miles Northwest from the City of Crockett, Texas, and being a part of the JOHN KIRKPATRICK SURVEY, Abstract #665, more fully described as follows:

BEGINNING at the N.W. corner of a survey made for Bertha Denby out of the John Kirkpatrick 160 acre Survey, A-665, a stake for corner from which a Pin Oak brs. N. 65 E. 4.7 vrs;

THENCE S 55 W with Kirkpatrick line 501 vrs. a corner from which a P.O. brs. S. 16 E. 2.1 vrs;

THENCE S 35 E. with Kirkpatrick S.W. bdy. line at 420 vrs. a corner from which a Pin Oak brs. S. 20 E. 4.5 vrs;

THENCE N 55 E. at 501 vrs. to a set stake for corner on Bertha Denby's S.W. bdy. line of a 37-1/4 acre survey from which a R.O. brs. S 88 1/2 W. 12 vrs;

THENCE N. 35 W. at 420 vrs. to the place of beginning, containing 37-1/4 acres of land, more or less, and being the same land as that described in a deed from Ellen Thompson et al to Mary Taylor Isadore, dated October 4, 1924, and recorded in Vol. 113, Page 601 of the Deed Records of Houston County, Texas, to which deed and the record thereof reference is here made for all purposes.

TWELFTH TRACT: All that certain tract or parcel of land, a part of the NATHANIEL PARSON ORIGINAL SURVEY, Abstract No. 820, in Houston County, Texas, located about 17 miles Northwest of Crockett, Texas, and described by metes and bounds as follows, to-wit:

BEGINNING at a stake for corner on South boundary line of Ellen Thompson 60 acre tract, 830 feet S. 54-31 West from the S.E. corner of same;

THENCE N. 35 W. 1169-2/10 feet to a stake for corner on North boundary line of said 60 acre tract;

THENCE S. 54-50 West with said North boundary line 166 feet to a stake for corner;

THENCE S. 35 E. 1166-6/10 feet to a stake for corner on South boundary line of said 60 acre tract;

THENCE N. 55 deg. 43' 51" East with said line 166 feet to the place of beginning, containing 4-1/2 acres of land, more or less, and being the same land as that described in a deed from Wm. Taylor et al to Mary Isadore, dated April 8, 1938, and recorded in Vol. 190, Page 633 of the Deed Records of Houston County, Texas, to which deed and the record thereof reference is here made for all purposes.

THIRTEENTH TRACT: All that certain tract or parcel of land situated in Houston County, Texas about 12 miles N W from the town of Grapeland, same being a part of the W.E. PARKER SURVEY, A-819, described by metes and bounds as follows, to-wit:

BEGINNING at the S W corner of the David Jones 160 acre survey;

THENCE N 15 W with said David Jones W Bdry. line at 285-3/10 varas a stake for corner;

THENCE N 75 E at 153 varas a stake for corner on the W Bdry. line of an 80 acre survey;

THENCE S 15 E at 285-3/10 varas the S W corner of an 80 acre survey;

THENCE S 75 W with S. bdry line of the above named 160 acre survey at 453 varas to the place of beginning, CONTAINING 22-6/7 acres of land, more or less, surveyed by J.E. Bean, February 5, 1918. Being the land conveyed by Willie Jones et al to John Jones by deed dated June 20, 1918, recorded in Volume 153, page 329, Houston County Deed Records.

SAVE AND EXCEPT that certain tract or parcel of land being and situated in the County of Houston, State of Texas, and more fully described by field notes as follows:

BEGINNING at the N W corner of the John Jones 22-6/7 acre survey on the W bdry line of the David Jones 160 acre survey;

THENCE N 15 W at 143 varas Frank Jones S W corner;

THENCE N 75 E with Frank Jones bdry at 452 varas his corner on Robert Kolbs W boundary line;

THENCE S 15 E with said Kolbs line at 143 varas John Jones N E corner;

THENCE S 75 W with said John Jones North boundary line at 452 varas to the place of beginning, CONTAINING 11-3/7 acres of land, more or less. Surveyed for Roxie Justies February 5, 1918. Being the land conveyed by John Jones to Frank Justice et ux by deed dated June 20, 1918 recorded in Volume 87, Page 351, Houston County Deed Records.

FOURTEENTH TRACT: 473-3/4 acres of the JOHN EDENS LEAGUE, A-31, 193-3/4 acres of the NATHANIEL PARTON SURVEY, LEAGUE, A-820, and the JAMES KYLE SURVEY, A-661 OF 219.33 acres, all situated in Houston County, about 16 miles Northwest from the town of Crockett, and described by field notes, as follows:

BEGINNING at the N E corner of the Greenwood League, A-37 S G 24" brs S 31 1/2 W 4-8/10 vrs. a do 24" brs N 63 1/2 W 8-2/10 vrs both mkd X;

THENCE North 60 W 1349.9 vrs (va 7-39' East) to SE corner of 187.03 acre tract, a corner on the W B line of said Edens League, A-31, P O stump brs N 30 E 2 vrs;

THENCE S 30 W with said line 962 vrs the Edens S W corner an Elm 10" brs S 60 E 25-3/10 vrs mkd;

THENCE S 60 E with Edens S B line 640-7/10 vrs to most easterly NE corner of James Kyle Survey, A-662 and Jas Kyle Survey, A-661, most northerly corner, a B.J. stump 18" brs N 50 W 6 vrs two R O mkd X;

THENCE S 30 W (va 7-53 E) with J. KYLE SURVEY, A-661 W B line (at 866 vrs. pass Jas Kyle Survey A-661 and Edens Survey, A-362 corner) 1348-6/10 vrs. Kyle Survey, A-661 and Edens Survey, A-362 interior corner a R O 36" brs S 16 W 1-7/10 vrs mkd XX a do 20" brs S 31 E 4 1/2 vrs mkd X a P O stump brs N 26 W 2-6/10 vrs (the first R O is now dead);

THENCE S 60 E (vs 7-53 East) 240-7/10 vrs. Kyle Survey, A-661 corner on the N B line of the N. Parton Survey, A-820, a P O 6" brs S 72 1/4 W 7-4/10 vrs a R O 36" brs N 17 W 10 1/2 vrs. both mkd x;

THENCE N 55 E with Parton N B line 56-4/10 vrs a corner in Moody field a R O 8" brs S 40 1/2 W 21-7/10 vrs a do 12" brs S 43 3/4 W 28.1/10 vrs both mkd X;

THENCE S 55 E 955-3/1 vrs a corner on the N B line of the Garrison Greenwood League, A-37 a lynn 20" brs N 00 W 4-1/10 vrs mkd X;

THENCE North 56 deg. 12' 23" E with Greenwood line (1145 vrs pass Parton and Kyle corner 1890 vrs. pass Kyle and Edens corner) 2611.148 vrs to the place of beginning, containing 886.83 acres of land, more or less.

FIFTEENTH TRACT 37.7 acres being a part of the GARRISON GREENWOOD LEAGUE, A-37 in Houston County, Texas, about 18 miles N W from the City of Crockett and about 10 miles West from the town of Grapeland on Elkhart Creek and on the Daily and Elkhart Public Road and being out of the N E corner of said Greenwood League, A-37 and is bounded as follows, to-wit;

BEGINNING at the N E corner of said league a S G 24" brs S 31 1/2 W 4-8/10 vrs a Dc 24" brs N 63 1/2 W 8-2/10 vrs both mkd X;

THENCE S 35 E with Greenwood's E B line 214 vrs a corner;

THENCE S 55 W 54 vrs a stake for corner on the South bank of said Elkhart Creek a S G 48" brs S 38 E 10 vrs mxd X;

THENCE with Dailey's and Moody's fence as follows: S 6 1/2 W 80 vrs, S 18 W 50 vrs; S 45 W 25 vrs; S 71 1/2 W 80 vrs; S 50 1/4 W 190 vrs; S 85 W 80 vrs; S 78 W 70 vrs; S 89 W 100 vrs; S 70 W 86 vrs; S 76 1/2 W 100 vrs (at 60 vrs crossed Elkhart Creek) S 51 W 90 vrs; S 43 W 53 vrs; S 58 W 40 vrs a corner in old Creek bed --- N 70 W 80 vrs; N 72 W 104 1/2 vrs a corner on the NWB line of said Greenwood League, A-37 an elm 8" brs S 35 3/4 W 6 vrs a S G 8" brs S 56 1/2 W 9 1/10 vrs both mkd X;

THENCE N 55 E with Greenwood line 1109 vrs. to the place of beginning, CONTAINING 37-7/10 acres of land, more or less.

ANDERSON COUNTY PROPERTY

EXHIBIT "A"

Tract I:

The North 1019 acres of land in Anderson County, Texas being out of a Nineteen Hundred and Ten (1910) acre tract of land, more or less, the same being parts of the James E. Box Survey, S. C. Box and R. W. Box Leagues, the W. E. Parker Survey, the R. H. Whitley Survey, the William Whitley and Heirs of Margaret Lathrop Surveys, more particularly described by metes and bounds as follows:

BEGINNING on the South line of the S. C. Box League, on or near the County line of Anderson and Houston Counties, at the S.W. corner of the tract conveyed by W. L. Horn and wife to George W. Whitley, by deed recorded in Volume 37, Page 445, Anderson County Records, being the S.E. corner of the Holloway Power 291 acre tract;

THENCE N 15 W with the W line of said tract 1367 vrs. its N W corner in S line of 115 acres conveyed by John C. Adair and wife to said Whitley per deed recorded in Volume P, page 138 of said records;

THENCE S 75 W 284 vrs. to S W corner of said 115 acres being Isaac Parker's S E corner;

THENCE N 2 W with Parker's E line 1222 vrs. said Isaac Parker's N E corner on the N line of the S. C. Box League, A-12 in the road;

THENCE with the road N 17 E 306 vrs., N 75 E 201 vrs., N 56 E 213 vrs., S 82 E 119 vrs., S 88 190 vrs., N 80 E 78 vrs., N 76 E 466 vrs., N 60 E 268 vrs., N 47 E 242 vrs. to the East line of the R. W. Box League, A-11;

THENCE with said line S 13 E at 419 vrs. pass the S E corner of said league, and at 1632 vrs. a division corner between Helm and Whitley on a branch;

THENCE Eastward up the branch with its meanderings to the East line of S. C. Box League;

THENCE S. 15 E. 583 vrs. to the N. E. corner of the graveyard;

THENCE S 75 W 85 vrs. to the N.W. corner of same;

THENCE S 5 E 190 vrs. to its S.W. corner;

THENCE N 75 E 110 vrs. to the S E corner of said S. C. Box League, and the S.E. corner of the graveyard;

THENCE S 10 E with the fence 662 vrs.;

THENCE S 75 W 30 vrs. to the fence corner;

THENCE S with the fence 206 vrs. to the N.W. line of the John Edens League;

THENCE S 30 W with said line 447 vrs. to an iron stake in the gate, the S E corner of 22 acres sold by G. W. Whitley and wife to R. F. Kolb, by deed recorded in Vol. 61, page 266, Houston County Records;

THENCE N 15 W 251 vrs. rock, the N E corner of said 22 acres;

THENCE S 60 W 1025 vrs. the N W or West corner of said 22 acres at a large cottonwood marked X;

THENCE S 75 W 428 vrs. to the S.W. corner of the North half of the Wm. E. Parker Survey;

THENCE S 15 E 904 vrs. to the S.W. corner of the said Parker Survey being the S.E. corner of the M. Lathrop Survey;

THENCE S 75 W with Lathrop's S line 183 vrs. to the N E corner of the R. H. Whitley 160 acre survey;

THENCE S 15 E 278 vrs. to another one of R. H. Whitley's corners on the N.W. line of John Kyle Survey;

THENCE S 30 W with said line 873 vrs. to said R. H. Whitley's S E corner;

THENCE S 75 W 473 vrs. to his S.W. corner;

THENCE N. 15 W 1105 vrs. to his N.W. corner;

THENCE N. 75 E 360 vrs. to one of his N.E. corners on the W line of Wm. Whitley's Survey;

THENCE N. 15 W. with Wm. Whitley's W. line 1336 vrs. to his N.W. corner on the S line of the Jas. E. Box 1/4 League;

THENCE with the S line of the Jas. E. Box Survey S 75 W 514 vrs. to the S.W. corner of the East division of said 1/4 League, which was conveyed to G. W. Whitley by Robert D. Box by deed recorded in Vol. T, page 1, of the Houston County Deed Records;

THENCE N 15 W 625 vrs. to the N. W. corner of said last named tract, on the S line of the S. C. Box League;

THENCE with the said line N. 75 E 1136 vrs. to the place of beginning, and being the same property as that described in that certain trustee's deed from W. A. Streich and wife, Bertha Streich, by J. W. Young, substitute trustee, to Henry P. Drought, dated February 7, 1922, and recorded in Volume 192, Page 281 of the Deed Records of Houston County, Texas, and in Volume 139, Page 196 of the Deed Records of Anderson County, Texas to which deed and the records thereof reference is here given for greater certainty of description of the land hereby conveyed.

SAVE AND EXCEPT:

One (1) acre of land in the Rolan W. Box Survey, Abstract No. 11 and being part of a 1910 acre tract deeded from R. E. Smith to Vernon Calhoun in a Deed dated the 28th day of December, 1967, and recorded in Volume 742, page 735, of the Anderson County Deed Records, and being more particularly described as follows:

BEGINNING In the east line of the Rolan W. Box Survey and in the South right-of-way of FM 319;

THENCE South 56 deg. 49 min. west with the south right-of-way of FM 319 a distance of 18.16 feet to a point for corner in the center line of a county road;

THENCE with the meanders of the center line of the county road south 31 deg. 16 min. west 56.80 feet, south 46 deg. 00 min. west a distance of 144.36 feet, south 33 deg. 16 min. west a distance of 109.97 feet;

THENCE south 74 deg. 28 min. east a distance of 280.34 feet to a point for corner in the east line of said survey and the east line of the above mentioned 1910 acre tract;

THENCE North 10 degrees 38 min. west with the east line of the above mentioned 1910 acre tract a distance of 331.40 feet to the place of beginning, containing 1 acre of land.

Tract II:

Being all that certain 291-acre tract of land located in the Samuel C. Box League, Abstract No. 12, and known as Block No. 2 of the Southern Half of said Samuel C. Box League, and more particularly described as follows, to-wit:

BEGINNING at the S. W. corner of Block No. 1;

THENCE South 75 deg. West 1096-1/2 vrs. to a stake, from which a Pin Oak 5 in. dia. brs. S. 70 deg. W. 2 vrs. and a Pin Oak 4 in. dia. brs. S. 80 deg. W. 4 vrs.;

THENCE North 15 deg. West 1527 vrs. to a stake, from which a hickory 8 in. dia. brs. S. 16 deg. W. 27 vrs. and a Black Jack 6 in. dia. brs. E.;

THENCE North 75 deg. East 1096-1/2 vrs. to a stake, from which a hickory 6 in. dia. brs. S. 15 deg. W. 25 links, a hickory 6 in. dia. brs. S. 62 deg. W. 21 links;

THENCE South 5 deg. East 1527 vrs. with Block No. 1, to the place of beginning, containing 291 acres of land, more or less, and being the same land described in deed dated November 12, 1915, from Holloway Power and wife, Mary E. Power to Levi Wagner, as shown of record in Vol. 110, Page 55 of the Deed Records of Anderson County, Texas.

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Tract III:Parcel A:

Being all that certain lot, tract or parcel of land located in Anderson County, Texas, on the R. W. BOX SURVEY, A-11, being described as 2278.73 acres of land, more or less, as follows, to-wit:

BEGINNING at the Northwest corner of the R. W. Box Survey, A-11, in Anderson County, Texas, below the lower Comanche crossing, on the East margin of the Trinity River, where Surveyor Arthur Henrie formed a mound of earth around a stake;

THENCE North 75° East 4900.5 varas, more or less to a fence corner in concrete for corner at the Northwest corner of a 412.35 acre tract described in deed from Lloyd L. Neff, et al to J. Ronald Burke of record in Volume 357 at Page 058, Deed Records of Anderson County, Texas;

THENCE South 02° 51' 30" West 1936.98 varas to a 1/2" Iron Rod set for corner at an ell corner of said 412.35 acre tract;

THENCE S 41° 56' 05" East 59.4 varas to a 1/2" Iron Rod for corner at the Northwest corner of a called 389.52 acre tract recorded in Volume 399 at Page 459, Deed Records of Anderson County, Texas;

THENCE South 43° 46' 04" East 735.72 varas to the Southwesternmost corner of a 263.57 acre tract of land conveyed to InterFinancial Development Group, Inc. of record in Volume 1178 at Page 151, Land Records of Anderson County, Texas;

THENCE South 75° West 4900.5 varas along the north line of the S. C. Box Survey, A-12 in Anderson County, Texas to the Southwesternmost corner of the R. W. Box Survey, a stake for corner;

THENCE in a Northerly direction with the meanders of the Trinity River to the place of beginning, containing 2278.73 acres of land, more or less.

Parcel B:

Being all that certain lot, tract or parcel of land located on the S. C. BOX SURVEY, A-12 in Anderson County, Texas being all the land owned or claimed by Dan LaRoe and Fagan Parker in Anderson County Levee Improvement District, described as 622.98 acres of land, more or less, same being more particularly described as follows:

BEGINNING at the Southwesternmost corner of the subject tract of land at its point of intersection with the Trinity River;

THENCE North 75° 0' East, 2350 varas to the Southeasternmost corner of the subject tract in the West boundary line of a 30 acre tract;

THENCE North 15° 0' West, 401.5 varas to a point for corner;

THENCE North 20° 45' West, 602 varas to a point for corner;

THENCE North 54° 24' West, 825.3 varas to the Northeasternmost point of the subject tract, in the Northern boundary line of the S. C. Box League, A-12;

THENCE South 75° West with the Northern boundary line of the S. C. Box League, A-12, to its intersection with the Trinity River;

THENCE with the meanders of the Trinity River as follows:

THENCE South 75° 35' West, 2350 varas;

THENCE South 74° 45' West, 72 varas;

THENCE South 70° 00' East, 300 varas;

THENCE South 60° 00' East, 110 varas;

THENCE North 73° 05' East, 210 varas;

THENCE South 78° 30' East, 300 varas;

THENCE South 53° 20' East, 150 varas;

THENCE South 15° 00' East, 1292.4 varas to the place of beginning.

Parcel C:

All that certain tract or parcel of land, situated in Anderson County, State of Texas, and being a part of the SAMUEL C. BOX LEAGUE, meted and bounded as follows:

BEGINNING at the south west corner of said league, on the east bank of the Trinity River, it being the south west corner of Anderson County;

THENCE N. 75 deg. E. with the south boundary line of said league 3700 vrs. a stake in prairie for corner;

THENCE N. 12-1/2 deg. W. 685 vrs. a stake for corner;

THENCE N. 75 deg. E. 2147 vrs. a stake for corner from which a red oak brs. N. 58 deg. W. 6 vrs., another brs. S. 75 deg. W. 1 vara;

THENCE S. 15 deg. E. 770 vrs., a stake in the south boundary line of said league;

THENCE N. 75 deg. E. 860 vrs. a stake, and the south west corner of Block 3 from which a hickory 8 in. dia. brs. N. 24 deg. W. 6 vrs.;

THENCE N. 15 deg. W. 1364 vrs., a stake from which a red oak-in dia. brs. N. 68 deg. W. 3-4/10 vrs.;

THENCE N. 65 deg. W. 158 vrs. a stake in the division line of said league, from which a post oak 24 in. dia. brs. S. 54 deg. E. 3-7/10 vrs., another 4 in. dia. brs. N. 3 deg. E. 6-4/10 vrs.;

THENCE South 75 deg. W. 3175 vrs. to stake in prairie;

THENCE South 25 deg. E. 250 vrs. to a stake in prairie;

THENCE South 75 deg. W. 2247 vrs. to a stake in the bank of the Trinity River, from which a Burr oak 20 in. dia. brs. N. 74 deg. W. 1 vara, and elm 18 in. dia. brs. S. 26-1/2 E. 15-3/10 vrs.;

THENCE down said river with its meanderings S. 14 deg. E. 9 vrs., S. 6 deg. E. 254 vrs., S. 16 deg. E. 160 vrs., S. 28 deg. E. 227 vrs., S. 31 deg. E. 165 vrs., S. 198 vrs., S. 29 deg. W. 163 vrs., S. 45 deg. W. 243 vrs., S. 61-1/2 deg. W. 137 vrs., S. 42 deg. W. 92 vrs., S. 50 deg. W. 61 vrs., S. 26 deg. W. 46 vrs., S. 57-1/2 deg. 234 vrs., S. 40 deg. W. 106 vrs. to the place of beginning. Save and Except the following described tracts of land:

280 acres, more or less, and consisting of the following surveys and parts of surveys, to-wit: Belng Part Abstract No. 12, S. C. BOX, Patent dated May 8, 1935, described by metes and bounds as follows:

BEGINNING North 75 East 6707 varas from the Southwest corner of the Box Survey at a point in the South boundary line of Anderson County and in the North boundary line of Houston County, and at the Southwest corner of Block 3, of the Subdivision of the South 1/2 of said League, this is the Southeast corner of Tract 3 of 50 acres, described in Deed from Elkhart State Bank to O. L. Lively, dated Novr. 25, 1932, which is of record in Vol. 216, page 179, Deed Records Anderson County, Texas;

THENCE South 75° West with the county line and South lines of Tracts 3 and 5 in the above mentioned deed, 869 varas to the Southwest corner of said Tract 5 of 50 acres, this corner is also the Southwest corner of 323.89 acre tract a stake for corner;

THENCE North 15° West 647 varas to the Northwest corner of said Tract 5 in the South line of Tract 2;

THENCE South 75° West 985 varas with the South line of Tract 2 and Tract 4 to a stake in the East line of Levee District Number 2 where same crosses the North line of Block 6 and the South line of Block 7, Subdivision of the South half of the Box League, this corner is the Southwest corner of Tract 4, called 51 acres;

THENCE North 7° 30 minutes East 840 varas with the East line of the Levee District to a stake in the North line of the South half of the Box League;

THENCE North 75° East 15 varas to a Post Oak 16 inches in diameter marked X; this corner is the Northwest corner of a 62-1/2 acre tract conveyed by Elkhart State Bank to Fagan Parker, by Deed dated November 22, 1928;

THENCE South 15° East 200 varas to the Southwest corner of Fagan Parker tract, a 6 inch Post Oak marked X bears South 6° West 1-1/4 varas;

THENCE North 75° East 1422.5 varas with the South line of said Fagan Parker tract to its Southeast corner;

THENCE North 15° West 200 varas to its Northeast corner a point in the North line of the South half of the Box League;

THENCE North 75° East 88 varas to the Northeast corner of a Negro Church lot, same being the Northwest corner of Block 3 and the Northeast corner of Tract 1 in the above mentioned deed;

THENCE South 15° East 1421 varas to the PLACE OF BEGINNING, and containing 281 acres of land, LESS 1 acre out of the Northeast corner for a Negro Church lot, leaving a net acreage of 280 acres, more or less;

AND BEING the same land described as five tracts in deed from The Elkhart State Bank to O. L. Lively dated November 25, 1932, recorded in Vol. 216, page 179, Deed Records of Anderson County, Texas.

Parcel D:

All that tract, piece or parcel of land lying and being situate in Anderson County, Texas and in Anderson County Levee District No. 2, containing 152.06 acres of land in the S. C. BOX SURVEY, A-12, and being the same land and all of the land in said survey and in said county and shown on the plat and plan of reclamation for said District in the name of Bailey Whitley, said tract being the same land and all the land conveyed to Robert W. Erskine by Sheriff of Anderson County, Texas, by deed dated August 5, 1930, and duly recorded in Volume 204 at Page 290, Deed Records of said county.

Parcel E:

All that certain tract of land out of the S. C. BOX LEAGUE in Anderson County, Texas, being all of Block #3 of the partition of the North 1/2 of said League, save and except a sixty acre tract off of the Southwest end of said Block #3 conveyed to Bob Tolliver by Deed dated April 22, 1911, and recorded in Volume 97 at Page 691, Deed Records of Anderson County, Texas, and being more particularly described as follows:

BEGINNING at the N. E. cor. of Block No. 2, at a point on the West line of Block No. 1, of the Partition of the N. 1/2 of said Box League, an 18" Water Oak mkd. X for cor.;

THENCE N. 15° W. with the West line of said Block No. 1, 611 vrs. to the N. W. cor. of same at a point on the South bndy. line of the R. W. Box League, and the North bndy. line of the S. C. Box League, a stake in a pond for cor. from which an 18" P. O. mkd. X brs. S. 55-1/2 W. 27-1/2 vrs.;

THENCE S. 75° W. with said League line at 640 vrs. intersect the East bndy. line of Levee District No. 2, in Anderson and Houston Counties, and at a total distance of 2919 vrs. the N. E. cor. of said above named Tolliver 60 acre tract, (now owned by Henry Dally) a stake for cor. from which a 12" P. O. mkd. X brs. S. 44-1/2 E. S. vrs. and a 10" P. O. mkd. X brs. S. 9 E. 7 vrs.;

THENCE S. 55° E. with the N. E. line of said above named 60 acre tract 797-6/10 vrs. to the East or S. E. cor. of same at a point on the North line of Block No. 2 of said Box Partition, a stake for cor. from which a 10" P. O. mkd. X brs. N. 35 W. 6 vrs. and an 8" P. O. mkd. X brs. N. 1-1/2° W. 8-1/2 vrs.;

THENCE N. 75° E. along the North line of said Block No. 2, 1678 vrs. to the place of beginning, containing 209-15/100 acres of land.

Parcel F:

All that certain tract or parcel of land lying and situated in Anderson County, Texas, known as the Dailey Tract about 1-1/2 miles N. 75 E. from the Trinity River and about 1-1/2 miles N. 15 W. from the Anderson-Houston County Line; and being a part of and out of Block #3 of the S. C. BOX SURVEY, A-12, Anderson County, Texas, and described by metes and bounds as follows, to-wit:

BEGINNING at the W. corner of Block #3 of the subdivision of the S. C. Box Survey, a point in the common Survey BL of the R. W. Box Survey, A-11, and the S. C. Box Survey, A-12, Anderson County, Texas, a 3/4" iron pipe for corner from which a 48" pecan tree marked X bears N 31-1/2 W at 5.4 vrs.;

THENCE S 51-45 E. 395 vrs. with the projection of an old fence row, joining with and following with same; and continuing S 46-30 E, 331.0 vrs. with the same fence line, partially removed by recent levee construction operations to the S. corner of the said Dailey Tract with is also the W. corner of the Lois Parker Lane 240 acre tract, a 3/4" iron pipe driven at large fence corner post for corner;

THENCE N. 74-36 E. 735.0 vrs. with the NWBL of the said Lane Tract to a point in the center of a public road, from which point a 20" post oak marked X bears N. 20-1/4 E at 16 vrs. THENCE N. 31 W 107.0 vrs. with centerline of said road to its point of intersection with the line of a fence on the NEBL of the Dailey Tract;

THENCE N. 55-1/2 W 658.0 vrs. with fence, partially still intact in place and partially down, but physically evidenced all along this course, to the N corner of the said Dailey Tract, a 3/4" iron pipe for corner at the W corner of the O. P. Leonard (formerly Weiss) 209.15 acre tract from which old witness trees marked X bear as follows: a 10" post oak S 09 E at 7.0 vrs. and a 12" post oak S. 42-1/2 E at 5.0 vrs. (corner set in 1950, by Mr. W. B. Chambers, County Surveyor, Anderson County, Texas);

THENCE S 74-24 W 584.0 vrs. with common Survey Line of the R. W. Box and S. C. Box Surveys to the point of beginning, and containing 77.80 acres of land, more or less.

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Tract IV:

280 acres, more or less, and consisting of the following surveys and parts of surveys, to-wit: Being Part Abstract No. 12, S. C. BOX, Patent dated May 8, 1935, described by metes and bounds as follows:

BEGINNING North 75° East 6707 varas from the Southwest corner of the Box Survey at a point in the South boundary line of Anderson County and in the North boundary line of Houston County, and at the Southwest corner of Block 3, of the Subdivision of the South 1/2 of said League, this is the Southeast corner of Tract 3 of 50 acres, described in Deed from Elkhart State Bank to O. L. Lively, dated Novr. 25, 1932, which is of record in Vol. 216, page 179, Deed Records Anderson County, Texas;

THENCE South 75° West with the county line and South lines of Tracts 3 and 5 in the above mentioned deed, 869 varas to the Southwest corner of said Tract 5 of 50 acres, this corner is also the Southwest corner of 323.89 acre tract a stake for corner;

THENCE North 15° West 647 varas to the Northwest corner of said Tract 5 in the South line of Tract 2;

THENCE South 75° West 985 varas with the South line of Tract 2 and Tract 4 to a stake in the East line of Levee District Number 2 where same crosses the North line of Block 6 and the South line of Block 7, Subdivision of the South half of the Box League, this corner is the Southwest corner of Tract 4, called 51 acres;

THENCE North 7° 30 minutes East 840 varas with the East line of the Levee District to a stake in the North line of the South half of the Box League;

THENCE North 75° East 15 varas to a Post Oak 16 inches in diameter marked X; this corner is the Northwest corner of a 62-1/2 acre tract conveyed by Elkhart State Bank to Fagan Parker, by Deed dated November 22, 1928;

THENCE South 15° East 200 varas to the Southwest corner of Fagan Parker tract, a 6 Inch Post Oak marked X bears South 6° West 1-1/4 varas;

THENCE North 75° East 1422.5 varas with the South line of said Fagan Parker tract to its Southeast corner;

THENCE North 15° West 200 varas to its Northeast corner a point in the North line of the South half of the Box League;

THENCE North 75° East 88 varas to the Northeast corner of a Negro Church lot, same being the Northwest corner of Block 3 and the Northeast corner of Tract 1 in the above mentioned deed;

THENCE South 15° East 1421 varas to the PLACE OF BEGINNING, and containing 281 acres of land, LESS 1 acre out of the Northeast corner for a Negro Church lot, leaving a net acreage of 280 acres, more or less;

AND BEING the same land described as five tracts in deed from The Elkhart State Bank to O. L. Lively dated November 25, 1932, recorded in Vol. 216, page 179, Deed Records of Anderson County, Texas.

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Tract V:

All that certain tract or parcel of land, containing 151.52 acres of land, in Anderson County, Texas, out of the S. C. Box League, Abstract No. 12, consisting of Lot No. 3 and Lot No. 4 of Horn's Subdivision, and that part of Block 6 lying East of the First Levee District line and of the fence along the West side of the land herein conveyed, known locally as the Beth Newberry tract of land, which is described by metes and bounds as follows:

BEGINNING at a point in the center of a lane on the first levee district line;

THENCE N. 77° 06' 02" E at 110.47 varas pass the Northwest corner of Lot No. 3, Horn's Subdivision, in all 1084.48 varas to a 1-inch galvanized iron pipe at a former fence corner, the Northeast corner of Lot No. 3;

THENCE with an old fence line and poorly marked line through the timber S 16° 18' 38" E 674.18 varas to an old black 14 inches in diameter, a post oak corner post for the Southeast corner of Lot No. 4, Horn's subdivision;

THENCE with the South line of Lot No. 4, being the South line of S. C. Box League, which is also the South line of Anderson County, S 73° 50' 23" W 972.28 varas to a 20-inch Black Jack tree in the fence line, said tree having a hollow through it North and South, and being the original corner tree called for in Horn's Subdivision as the Southwest corner of Lot No. 4;

THENCE continuing along the South line of S. C. Box League, the South line of Anderson County and the South line of Block No. 6, S 73° 56' 24" W 326.45 varas to a corner in the road, from which a Hickory 10 inches in diameter, marked "X" with two hacks above and two hacks below, bears N 73° 56' 24" E 17 varas, and a post oak 16 inches in diameter, partly dead, marked "X" with two hacks above and two hacks below, bears S 51° 10' E 10.1 varas, and a fence corner bears S 22° 50' E 10.4 varas;

THENCE along a random fence Northerly through Block No. 6 as follows: N 3° 02' 20" W 70.36 varas; N 0° 33' 18" W 151.79 varas, N 7° 00' 47" W 100.41 varas; N 2° 08' 41" W 206.55 varas; N 0° 12' 30" W 137.54 varas to the first levee district line; and

THENCE with the first levee district line N 14° 43' 00" E 105.57 varas to the place of beginning.

Tract VI:**Parcel 1:**

95-2/10 acres of land out of the North 1/2 of the S. C. Box League in Anderson County, Texas, the same being that same tract of land commonly called as 100 acres of land conveyed by Phoebe Parker to Ed C. Horn, in deed dated December 19, 1891, recorded in Vol. 47, page 286, of the Deed Records of Anderson County, Texas, but described by actual survey as follows:

BEGINNING at the N. W. corner of S. B. Parker's 100 acre tract of land out of the North 1/2 of said S. C. Box League, at a point on the South B. L. of the R. W. Box League, an Iron Buggy axle for corner from which a 14" P.O. marked X brs. S. 43 deg. E 10.8 vrs.;

THENCE S. 75 deg. W. with the South B. L. of the R. W. Box League, along an old marked line and with an old wire fence, 430 vrs. to the N. E. corner of a 110.8 acre tract of land out of the North portion of said S. C. Box League, which tract is now owned by the Royall National Bank, said corner is located in the center of a road, from which corner a 12" Hickory marked X bears N. 78 deg. W. 4.7 vrs.;

THENCE S. 15 deg. E. with the East line of said Banks 110.8 acre tract 1250 vrs. to the S. E. corner of same, at a point on the South line of the North 1/2 of said S. C. Box League, an Iron stake in road for corner, from which an 18" Hickory marked X bears S. 77-1/2 deg. W. 20-1/2 vrs.;

THENCE N. 75 deg. E. with the South line of the North 1/2 of said S. C. Box League, along a lane or road, 430 vrs. to a stake in a flat or pond known as "Texana Pond", said point being the S. W. corner of S. B. Parker's 100 acre tract;

THENCE N. 15 deg. W. with said S. B. Parker's West line, with an old fence, an old marked line, 1250 vrs. to the place of beginning, containing 95-2/10 acres of land.

SAVE AND EXCEPT:

All that certain tract or parcel of land, being a part of the S. C. Box League, A-12, Anderson County, Texas, also being all of that certain called 1.76 acre tract conveyed to the Tabernacle Baptist Church of Anderson County, Texas by Lula Parker, et al, August 25, 1955, recorded in Volume 839 at Page 684 of the Deed Records of Anderson County, Texas, and also being a part of that certain called 95 acre tract conveyed to Vernon Calhoun Packing Company by Wardlaw W. Lane, et ux, September 17, 1971, recorded in Volume 787 at Page 686 of the Deed Records of Anderson County, Texas, and being more completely described as follows, to-wit:

BEGINNING at a 1/2" Iron Rod for corner at the Southwest corner of the above mentioned 1.76 acre tract and in the Southwest line of the above mentioned 95 acre tract, said corner Brs. N 13° 49' 31" W - 1622.77 feet from the Southwest corner of said 95 acre tract and the Southeast corner of a called 110.80 acre tract;

THENCE N 13° 49' 31" W with the Southwest line of said 1.76 acre tract and the Southwest line of said 95 acre tract, 288.40 feet passing the Northwest corner of said 1.76 acre tract, containing a total distance of 1129.21 feet to a 1/2" Iron Rod for corner in the Southwest margin of an oiled County Road;

THENCE with the Southwest margin of said oiled County Road as follows: S 23° 11' 14" E - 76.72 feet, S 29° 23' 27" E - 128.98 feet, S 38° 08' 17" E - 204.08 feet and S 41° 12' 08" E, at 328.28 feet passing the Northwest corner of said 1.76 acre tract, containing a total distance of 504.28 feet to a 1/2" Iron Rod for corner at the Southeast corner of said 1.76 acre tract and in the northwest R.O.W. line of F. M. Road No. 319;

THENCE with the Southeast line of said 1.76 acre tract and the Northwest R.O.W. line of F. M. Road No. 319, a curve to the left which has a Delta Angle of 1° 42' 31", a R. of 1898.979 feet, a T. of 28.312 feet, a L. of 56.62 feet and a D. of 3,10719° to the P. T. of said curve and S 36° 39' 54" W, at 124.08 feet passing the end of F. M. Road No. 319, continuing a total distance of 411.44 feet to the place of beginning, containing 4.239 acres of land.

Parcel 2:

Being a part of the S. C. Box League, A-12 beginning at a stake in the S.W. corner of Lot No. 1 in the division among the heirs of Judith Parker, from which a Post Oak bears N, 47 W, 3 vrs, another brs. N. 18 E 3 vrs.;

THENCE S. 75 W. with the division line 2192 varas, a stake in Horn's line in the Prairie;

THENCE N. 20 W. 614 vrs. a stake in the Prairie;

THENCE N. 75 E. 2245 vrs. to the W. line of Lot No. 1;

THENCE S. 15 E. 611 vrs. to the place of beginning, containing 240 acres of land, be the same more or less.

Parcel 3:

All that certain tract or parcel of land situate, lying and being in the County of Anderson and State of Texas, and part of the S. E. BOX LEAGUE, described as Second Tract in Deed dated March 31st, 1925, from E. C. Horn, et ux to Lois Parker, of record in Volume 153 at Page 509, Deed Records of Anderson County, Texas, bounded and described as follows, to-wit:

Beginning at a stake in the R. W. Box league line, a Pln Oak brs. N. 88 E. 8 vrs. a P. O. brs. N. 81 W. 12 vrs.;

THENCE N 75 E. 185 vrs. a stake in said R. W. Box league line, a P.O. brs. N. 81 W. 13 feet, another N. 20 W. 8 feet;

THENCE S. 15 E. and parallel with E. C. Horn's E. line 1222 vrs. a stake the S. C. Box division line, a Red Oak brs. S. 76 W. 27 feet, another N. 20 E. 18 ft.;

THENCE S. 75 W. 185 vrs. a stake and the S.E. corner a 240 acre tract now owned by E.C. Horn, a P.O. brs. 43 W. 3 vrs. another N. 18 W. 3 vrs.;

THENCE N. 15 W. with said Horn line 1222 vrs. to the place of beginning, containing 40 acres of land more or less.

Parcel 4:

All that certain tract or parcel of land out of the South one-half of the S. C. Box League in Anderson County, Texas, and described as follows:

BEGINNING at the N. E. corner of a 51 acre tract of land this day (November 22, 1928) conveyed by Elkhart State Bank to M. B. Parker out of said 323-89/100 acre tract a 16 inch P. O. mkd. X for corner;

THENCE S. 15 deg. E. 200 vrs. to an interior N. E. corner of said 51 acre tract a 6 inch P. O. mkd. X, brs. S. 60 deg. W. 1-4/10 vrs.;

THENCE N. 75 deg. E. 1422 vrs. to a stake for corner being an interior N. W. corner of an 80-9/10 acre tract of land, this day conveyed by Elkhart State Bank to Robt. and Stephen Bennett, out of the above named 323-89/100 acre tract;

THENCE N. 15 deg. W. 200 vrs. to a stake in the N. line of the South one-half of said Box League at or near the N. W. corner of a one acre tract out of the N. E. corner of said 323-89/100 acre tract, which was set aside for a negro church lot;

THENCE S. 75 deg. W. 1422 vrs. to the place of beginning, containing 52-1/2 acres of land more or less.

Parcel 5:

All that tract, piece and parcel of land lying and being situated in Anderson County, Texas, and out of the North portion of the South one-half of the S. C. BOX LEAGUE and beginning at the Southwest corner of the E. C. Horn 240 acre tract out of said League, an iron stake for corner;

THENCE South 24 degrees 30 minutes East with old wire fence 306 varas to an iron stake for corner;

THENCE North 62 degrees 30 minutes East 749 varas to an iron stake for corner;

THENCE North 24 degrees 30 minutes West 142.6 varas to a stake for corner on the South line of the said Horn 240 acre tract;

THENCE South 75 degrees West with the Southeast line of the said Horn 240 acre tract 756 varas to the place of beginning and containing approximately 30 acres of land.

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Tract VII:

The residue of 100 acres, more or less, said 100 acres being a part of the S. C. Box League, Abstract 12, in Anderson County, Texas, and being described as follows:

BEGINNING at the N. E. corner of the E. C. Horn 100 acre tract and on the S. B. line of the R. W. Box and N. B. line of S. C. Box League lines a P. O. 14" marked "X" brs. N. 28 E. 11.5 vrs. and a S. G. 14" marked "X" brs. S. 43 E. 10.8 vrs.;

THENCE N. 75 E. with said league line at 460 vrs. passes the original offset corner of the 226 acres tract and at 462.1 vrs. a stake in league line, a S. J. 12" marked "X" brs. S. 30 W. 7.3 vrs. and a P. O. marked "X" 8" brs. 67-1/2 W. 7 vrs.;

THENCE S. 15 E with the W. B. line of Inez Sheridan's 126 acre tract 1,222 vrs. to a stake in the division line of the said S. C. Box League and being Sheridan's S. W. corner of her 126 acre tract;

THENCE S. 75 W. with said division line of said Box League 462.1 vrs. a stake, in pond and being the original S. W. corner of the original 226 acre tract above mentioned;

THENCE N. 15 W. 1,222 vrs. to beginning, containing 100 acres of land, more or less.

SAVE AND EXCEPT 2 acres described in a Deed from S. A. Bennett to A. D. and C. L. Parker dated Nov. 13, 1952, and recorded at Vol. 448, Page 418, Deed Records of Anderson County, Texas, and additionally

SAVE AND EXCEPT that portion of the 100 acres which was deeded by S. A. Bennett to C. L. Parker on Jan. 20, 1958, as shown in a deed recorded in Vol. 566, Page 203, of the Deed Records of Anderson County, Texas, and being the 30 acres of land, more or less, northwest of FM 319.

Total acreage: 70 acres, more or less.

Tract VIII:

Parcel 1:

All that certain tract or parcel of land, a part of the S. C. Box League, and being a part of the 226 acre tract estate of I. T. Parker and being the West portion of said 226 acre tract conveyed by Fagan Parker to I. T. Parker, dated December 20, 1905, and recorded in Volume 81 at Page 359 of the Deed Records of Anderson County, Texas, and bounded and described as follows, to-wit:

BEGINNING at the N. E. corner of the E. C. Horn 100 acre tract and on the S. B. line of the R. W. Box and N. B. line of S. C. Box League lines a P. O. 14" marked "X" brs. N. 28 E. 11.5 vrs. and a S. G. 14" marked "X" brs. S. 43 E. 10.8 vrs.;

THENCE N. 75 E. with said league line at 460 vrs. passes the original offset corner of the 226 acres tract and at 462.1 vrs. a stake in league line, a S. J. 12" marked "X" brs. S. 30 W. 7.3 vrs. and a P. O. marked "X" 8" brs. 67-1/2 W. 7 vrs.;

THENCE S. 15 E with the W. B. line of Inez Sheridan's 126 acre tract 1,222 vrs. to a stake in the division line of the said S. C. Box League and being Sheridan's S. W. corner of her 126 acre tract;

THENCE S. 75 W. with said division line of said Box League 462.1 vrs. a stake, in pond and being the original S. W. corner of the original 226 acre tract above mentioned;

THENCE N. 15 W. 1,222 vrs. to beginning, containing 100 acres of land, more or less, and being the same tract and parcel of land described in a deed from G. C. Davis, et ux to S. A. Bennett, dated October 20, 1943, of record in Vol. 331 at Page 277 of the Deed Records of Anderson County, Texas, to which reference is hereby made for all purposes.

SAVE AND EXCEPT that part of said tract of land lying on the SE side of F.M. Road No. 319, leaving a balance of 30 acres of land, more or less.

Parcel 2:

All that certain tract or parcel of land, a part of that certain 100 acre tract of land conveyed by Phoebe Parker to Ed Horn, by deed dated December 19, 1891, recorded in Volume 47 at Page 286 of the Deed Records of Anderson County, Texas, and described by metes and bounds as follows, to-wit:

BEGINNING at a point in the East line of the above named 100 acre tract, where the NW Right-of-Way line of F.M. Road 319 crosses the East line of said 100 acre tract, a post for corner;

Tract IX:

All that certain tract or parcel of land out of the Martin Murchison Survey, lying in Anderson County, Texas, and being described by metes and bounds as follows:

BEGINNING at a stake on the East bank of the Trinity River, at the S. W. corner of J. A. Walston 160 acre survey from which a 20" Elm Mkd. X (very old) brs. S. 8 E. 2 vrs. and a 12" ash mkd. X brs. N. 33 W. 4 vrs.;

THENCE East with the S. B. line of said Walston survey 774 vrs. to the S. E. corner of same, on the W. B. line of the John A. Box League, a stake from which an Elm 12" dia. brs. N. 36 W. 4 vrs.; an Elm 16" dia. mkd. X brs. S. 37 E. 4-1/2 vrs.;

THENCE South with the W. B. line of said Box League 1286 vrs. to the S. W. corner of same in the N. B. line of the Thos. N. Little 237 acre survey, a stake from which a 16" locust mkd. S brs. N. 72-1/2 W. 4 vrs., an ash 18" dia. brs. S. 17-1/2 W. 8.8 vrs.;

THENCE West with the N. B. line of said Little Survey 262 vrs. to the N. W. corner of same, a 12" Elm mkd. X brs. N. 2 E. 3 vrs., Do. brs. S. 22 W. 3-1/2 vrs., a 16" W. O. mkd. X brs. N. 64-1/2 W. 3-1/2 vrs.;

THENCE S. along the W. B. line of said Little Survey 995 vrs. to the S. W. corner of same on the South side and near Box's Creek on the NW boundary line of the R. W. Box League, found the original witness trees called for the Patent Field Notes of said Little Survey, a 22" O. C. mkd. X brs. N. 32 W. 8 vrs.; and a 20" Elm mkd. X brs. S. 58 W. 7 vrs.;

THENCE S. 75 W. with the N. W. line of said R. W. Box League 4383 vrs. to an iron buggy axle on the East bank of the Trinity River for the N. W. corner of said Box League, and the S. W. corner of the Martin Murchison Survey, found original witness trees, an Ash now 40" dia. which brs. N. 38 E. 5.8 vrs., also several hackberries mkd. X at this corner;

THENCE up said Trinity River with the following meanders: N. 78 W. 31 vrs.; N. 39 W. 208 vrs.; N. 34-1/2 W. 66 vrs.; N. 31 W. 45 vrs.; N. 16-1/2 W. 76 vrs.; N. 1-3/4 E. 129 vrs.; N. 23-1/2 E. 132 vrs.; N. 31 E. 100 vrs.; N. 29 E. 95 vrs.; N. 22 E. 129 vrs.; N. 19 E. 208 vrs.; N. 75 E. 244 vrs.; N. 84 E. 172 vrs.; N. 59 E. 188 vrs.; N. 66 E. 78 vrs.; N. 80 E. 131 vrs.; N. 76 E. 69 vrs.; N. 85 E. 144 vrs.; S. 87 E. 119 vrs.; S. 60 E. 108 vrs.; S. 64 E. 100 vrs.; S. 73-1/2 E. 130 vrs.; S. 67 E. 141 vrs.; S. 64-1/2 E. 181 vrs.; S. 86 E. 217 vrs.; S. 88-1/2 E. 133 vrs.; N. 82-1/4 E. 233 vrs.; N. 56-1/2 E. 136 vrs.; N. 41-1/2 E. 246 vrs.; N. 37-1/2 E. 340 vrs.; N. 48 E. 176 vrs.; N. 74-1/2 E. 129 vrs.; S. 82-1/2 E. 153 vrs.; S. 66-3/4 E. 172 vrs.; S. 61 E. 124 vrs.; S. 52 E. 210 vrs.; N. 66-1/2 E. 121 vrs.; N. 70 E. 203 vrs., at 65 vrs. cross Box Creek; N. 17 E. 85 vrs.; N. 20 W. 230 vrs.; N. 29 W. 103 vrs.; N. 23-1/2 W. 173 vrs.; N. 11 W. 129 vrs.; N. 14-1/2 W. 93 vrs.; N. 1 W. 618 vrs.; N. 6-1/2 E. 154 vrs.; N. 5 E. 121 vrs.; N. 0 deg. 45' W. 107 vrs.; N. 21 W. 90 vrs. to the place of beginning, containing 832.83 acres of land, more or less.

SAVE AND EXCEPT that certain portion of said land conveyed by Red Town Farms Company to John Stubblefield, et al by Deed dated November 23, 1945, recorded in Volume 362 at Page 359, Deed Records of Anderson County, Texas, and more particularly described as follows:

BEGINNING on the East bank of the Trinity River at northwest corner of the Martin Murchison Survey and the Southwest corner of the J. A. Walston Survey;

THENCE East 774 vrs. to the Northeast corner of the Martin Murchison Survey and the Southeast corner of the J. E. Walston Survey;

THENCE South with the most easterly east line of the Martin Murchison Survey 1286 vrs. to the North line of the Thos. N. Little Survey;

THENCE West with the North line of the Thos. N. Little Survey 262 vrs. to the Northwest corner of the Thos N. Little Survey and an inside corner of the Martin Murchison Survey;

THENCE South with the line between the Thos. N. Little Survey and the Martin Murchison Survey 948 vrs. to Box Creek;

THENCE in a generally northwesterly direction with the meanders of the creek to its intersection with the Trinity River;

THENCE in a generally northerly direction with the East bank of the Trinity River to the place of beginning, containing 215.3 acres of land and being all that part of the Martin Murchison Survey lying north of Box Creek.

ATTYR\8-3429.EXA\10676

FILED FOR RECORD AT 9 26 O'CONNOR A N Aug 25 95
 LEWA BETH, CLERK COUNTY COURT, ANDERSON CO., TEXAS BY MARY O'CONNOR DEPUTY

RETURN:
 R.G. Schleier
 116 N. Kilgore
 Kilgore TX 75662

March 18, 2021

Trinity River Authority of Texas
5300 S. Collins
Arlington, Texas 76018

Re: Red Town Ranch Water Permit, Consent to Divert

To Whom it May Concern,

Southern Pine Plantations of Georgia, Inc. (Southern Pine Plantations), the owner of property known as the Red Town Ranch, desires to purchase raw water from the Trinity River Authority to be used for wildlife management purposes in Anderson County, Texas. Southern Pine Plantations will divert that water under a contract to be executed by Southern Pine Plantations and the Trinity River Authority of Texas. Southern Pine Plantations consents to the diversion of water and will divert that water for the foregoing purpose on its property.



[name] Al Bayme
[title] Manager

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 29.**

Intake screen structure designed to meet appropriate aquatic organism size; taking in consideration river intake velocity, pump rate of intake and placement of intake.

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

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

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

a. Identify the appropriate description of the water body.

Stream

Reservoir

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

Other, specify: _____

b. Flow characteristics

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

Intermittent - dry for at least one week during most years

Intermittent with Perennial Pools - enduring pools

Perennial - normally flowing

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

USGS flow records

Historical observation by adjacent landowners

Personal observation

Other, specify: _____

c. Waterbody aesthetics

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

- Wilderness: outstanding natural beauty; usually wooded or unpastured area; water clarity exceptional
- Natural Area: trees and/or native vegetation common; some development evident (from fields, pastures, dwellings); water clarity discolored
- Common Setting: not offensive; developed but uncluttered; water may be colored or turbid
- Offensive: stream does not enhance aesthetics; cluttered; highly developed; dumping areas; water discolored

d. Waterbody Recreational Uses

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

- Primary contact recreation (swimming or direct contact with water)
- Secondary contact recreation (fishing, canoeing, or limited contact with water)
- Non-contact recreation

Submit the following information in a Supplemental Attachment, labeled Addendum to Worksheet 5.0:

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 map submitted 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.** *n/a*

- a. For all bed and banks applications:
 - i. Submit an assessment of the adequacy of the quantity and quality of flows remaining after the proposed diversion to meet instream uses and bay and estuary freshwater inflow requirements.
- b. For all alternate source applications:
 - i. If the alternate source is treated return flows, provide the TPDES permit number _____
 - ii. If groundwater is the alternate source, or groundwater or other surface water will be discharged into a watercourse provide:
Reasonably current water chemistry information including but not limited to the following parameters in the table below. Additional parameters may be requested if there is a specific water quality concern associated with the aquifer from which water is withdrawn. If data for onsite wells are unavailable; historical data collected from similar sized wells drawing water from the same aquifer may be provided. However, onsite data may still be required when it becomes available. Provide the well number or well identifier. Complete the information below for each well and provide the Well Number or identifier.

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

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

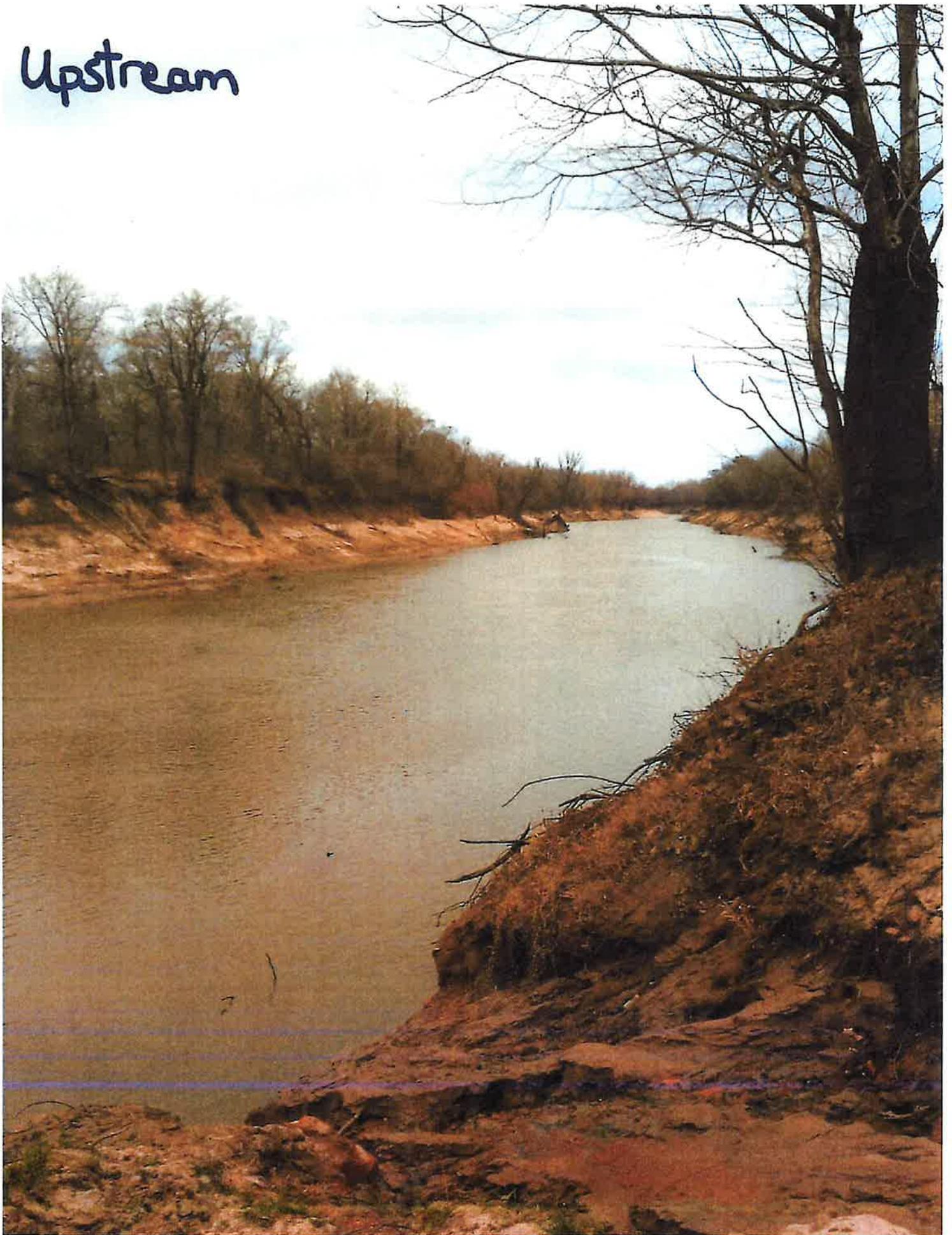
- iii. If groundwater will be used, provide the depth of the well _____ and the name of the aquifer from which water is withdrawn _____.

Addendum to Worksheet 5.0

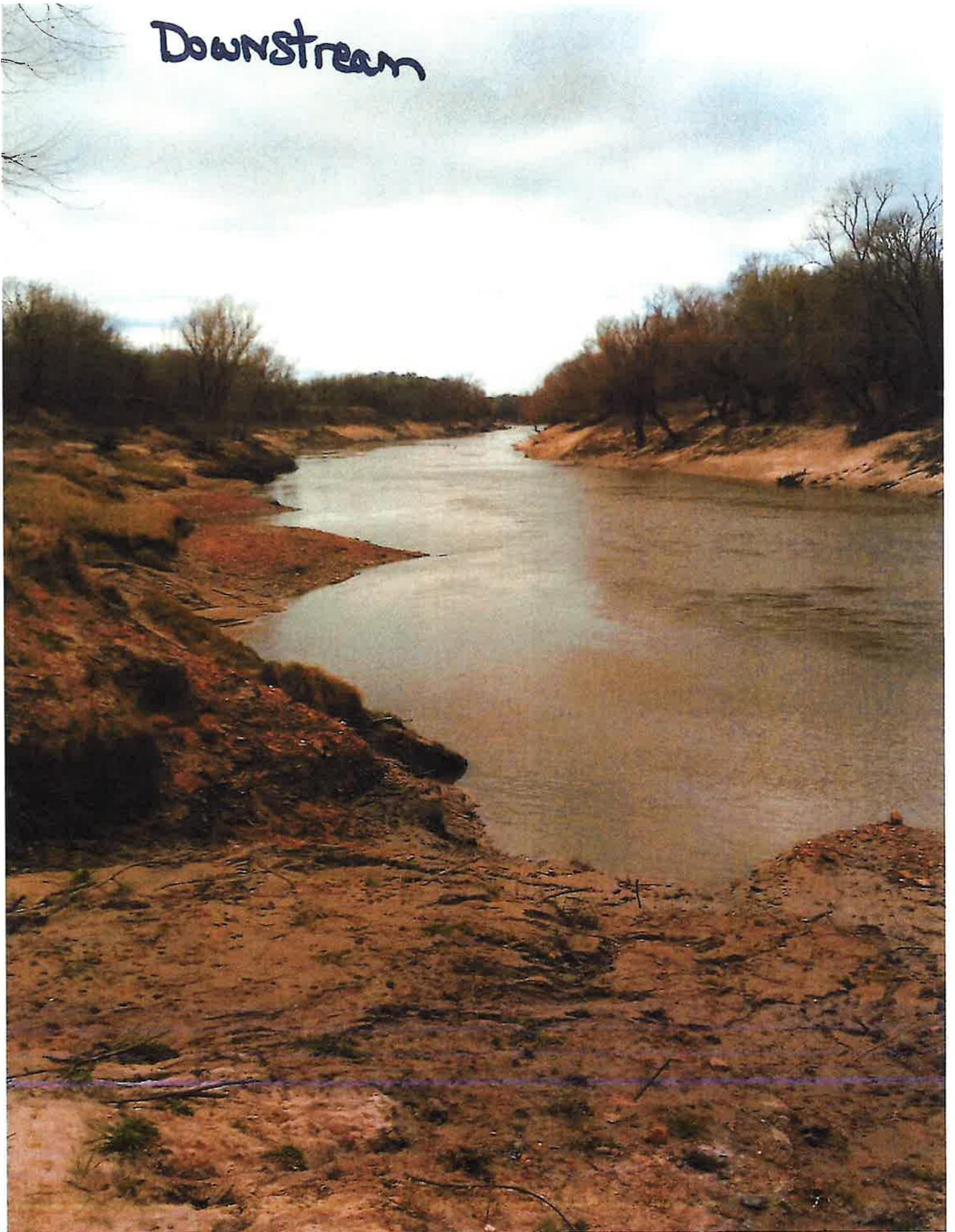
Required Submittals; Worksheet 5.0 – Environmental Information

E. 1 Photographs: Attached

Upstream

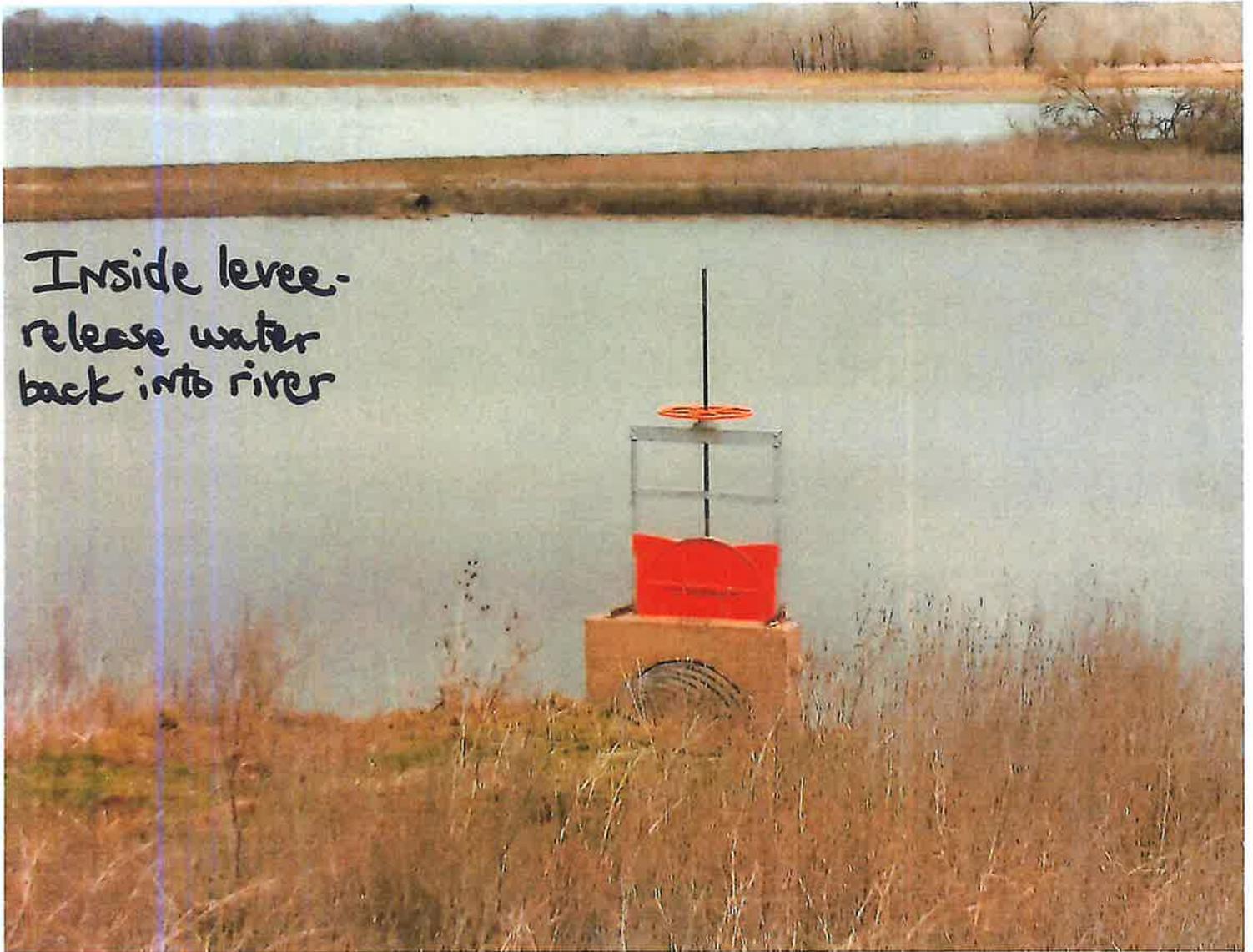


Downstream





Intake gate -
river side of
levee



Reservoir - to be filled



Rest area - not filled



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.

Addendum to Worksheet 7.0

Accounting Plan

TRA Accounting Plan

This plan accounts for the disposition of water discharged into the Trinity River from the Trinity River Authority's Central Regional Wastewater System (CRWS), Ten Mile Creek Regional Wastewater System (TMCRRWS) and Red Oak Creek Regional Wastewater System (ROCRWS) and diverted downstream under a bed and banks authorization pursuant to CA 08-4248 as amended.

Definitions:

CFS – cubic feet per second.

Channel Loss – the amount of water that exits the Trinity River system through evaporation, transpiration, and infiltration. Channel loss rates are taken from the Trinity WAM. Also known as Carriage Loss.

CRWS – Central Regional Wastewater Treatment Plant. Also known as Central.

MSPS – Main Stem Pump Station. Diversion location located on the Main Stem of the Trinity River located near HWY 34 and the city of Rosser.

MGD – millions of gallons per day.

ROCRWS – Red Oak Creek Regional Wastewater Treatment Plant. Also known as Red Oak.

Settlement Agreement – Agreement between TRA and Houston dated 11 August, 2006. Under the terms of this agreement, TRA will limit its diversions of return flows under CA 08-4248, as amended, to 70% of total discharges.

TMCRRWS – Ten Mile Creek Regional Wastewater Treatment Plant. Also known as Ten Mile.

WORKSHEETS

Discharge Diversion Calculation

This worksheet shows the accounting of water from discharge to diversion. Specific columns and functions are listed below:

Column 1-3 (A, B, C)

Year, month and day. A new worksheet will be created for each year. The numbering of the days will be modified to recognize leap years as appropriate.

Column 4 (D)

This value is received from the "Trinidad Gage Readings" worksheet column 4 and reflects the instantaneous gage reading at 8 a.m. on the date specified in columns 1, 2 and 3. The Trinidad gage is the closest gage downstream to the end of the diversion reach.

Column 5 (E)

Converts river flow gage readings from cfs to millions of gallons.

Column 6 (F)

This column adds upstream diversions made under the permits associated with this plan (including the city of Irving) as well as channel losses between the diversion point and the Trinidad gage, back into the gaged flow reading. Because diversions are made upstream of measured stream flow at the Trinidad gage, the amount diverted would have passed the gage and been counted towards meeting environmental flow requirements had it not been diverted. It is therefore appropriate to account for these quantities in the stream-flow measurement.

Column 7 (G)

Amount of return flows (in millions of gallons) discharged from the TRA Central Regional Wastewater System over the 24 hour period associated with the given date. Note that flows are not available for diversion until the following day.

Column 8 (H)

Amount of return flows (in millions of gallons) discharged from the TRA Ten Mile Creek Regional Wastewater System over the 24 hour period associated with the given date. Flows are not available for diversion until the following day.

Column 9 (I)

Amount of return flows (in millions of gallons) discharged from the TRA Red Oak Creek Wastewater System over the 24 hour period associated with the given date. Flows are not available for diversion until the following day.

Column 10 (J)

Adds columns 7, 8 and 9. Reflects the total amount of water discharged by the three plants for the day and month specified.

Column 11 (K)

Multiplies the total amount discharged from the three plants by 30%. This reflects the amount of return flows that TRA agrees not divert upstream of Livingston under the terms of the TRA-Houston Settlement Agreement.

Column 12 (L)

Multiplies the total amount discharged by 70%. This reflects the amount available for diversion net of the TRA settlement agreement with Houston before channel losses or withdrawals by third parties (e.g. Irving).

Column 13 (M)

Reports the amount of water diverted by the City of Irving under reuse permit (CA 03-4799) as governed by a contractual agreement between TRA and Irving dated April 18, 2005. Under the terms of the permit and agreement, Irving is limited to a maximum of 25 MGD return flows from TRA's Central facility. Because it is diverted under a separate permit, the amount of this diversion is not shown in any other accounting of diversions from CRWS under this plan.

Column 14 (N)

Subtracts Irving diversions from the amount of CRWS return flows discharged.

Column 15 (O)

Calculates the amount of channel loss on return flows from Central facility net of Irving diversions and the 30% set-aside provided for under the TRA Houston settlement agreement. The loss rate used is for the reach between the point of discharge and the point of diversion (MSPS) as specified in the worksheet "Carriage Loss Rates."

Column 16 (P)

Calculates channel loss on return flows from Ten Mile facility net of the 30% set-aside provided for under the TRA Houston settlement agreement. The loss rate used is for the reach between the point of discharge and the point of diversion (MSPS) as specified in the worksheet "Carriage Loss Rates."

Column 17 (Q)

Calculates the amount of channel loss on return flows from Red Oak facility net of the 30% set-aside provided for under the TRA Houston settlement agreement. The loss rate used is for the reach between the point of discharge and the point of diversion (MSPS) as specified in the worksheet "Carriage Loss Rates."

Column 18 (R)

Calculates the amount of return flows available for diversion net of diversions from third parties (e.g. Irving).

Column 19 (S)

Calculates the combined total amount of channel losses from all three facilities to the end of the diversion reach.

Column 20 (T)

Calculates the amount of return flows from all three facilities available for diversion net of diversions from third parties, channel losses and the 30% TRA Houston settlement agreement set aside. This represents the maximum amount of return flows available for diversion at the MSPS.

Column 21 (U)

Compares 30% set aside to measured flow at Trinidad and reports the larger value.

Column 22 (V)

Compares the value reported in Column 21 to environmental flow criteria (special condition ____) as listed in worksheet "Environmental Flows." If the value adjusted flow at the Trinidad gage is above the base-flow in-stream target specified, a "BASE" value is returned indicating that flow is above base flow requirements and diversions can be made. If flow is below the base flow requirement but above subsistence requirements, a "SUBSISTENCE" value is returned. This indicates that only flows between subsistence and base targets are available for diversion. If flow is below subsistence targets, a "NO DIV" value is returned indicating that diversions cannot be made.

Column 23 (W)

Compares the maximum of adjusted stream flow at Trinidad or the required set aside (column 21) to environmental flow criteria (special condition ____) as listed in worksheet "Environmental Flows." If the reported value (column 21) is above the base flow in-stream target specified, the amount associated with the base flow target for that season is returned. This is the amount of water that must be allowed to pass the diversion reach and is not available for diversion. If flow is below the base flow requirement but above subsistence requirements, the amount associated with the subsistence flow target for that season is returned. This indicates that only flows between subsistence and base targets are available for diversion. If flow is below subsistence targets, a "NO DIV" value is returned indicating that diversions cannot be made.

Column 24 (X)

Subtracts the environmental flow targets from the reported flow (column 21) to determine the portion of in-stream flows accessible and potentially available for diversion subject to permit limitations.

Column 25 (Y)

Compares Available discharges from the previous day (column 20) to available in-stream flow (column 24). The lesser of the two represents the amount of flow available for diversion under this accounting plan.

Column 26 (Z)

Documents the amount of flow diverted by NTMWD for a given date. This should not exceed the amount available (column 25) for the same day

Column 27 (AA)

Reports the amount of documented diversion charged to the Central facility.

Column 28 (AB)

Reports the amount of documented diversion charged to the Ten Mile facility.

Columns 29

Reports the amount of documented diversion charged to the Red Oak facility.

Columns 30-32 (AD-AF)

Reports the channel loss associated with the amounts diverted by NTMWD and charged to the respective facilities.

Column 33 (AG)

Determines if the amount of water diverted exceeded the amount available. If so, a deficit is created that must be recuperated by under-diverting allowable flows in subsequent days.

Column 34 (AH)

Provides a running total of the amount of water diverted above the available amount.

Column 35 (AI)

Predicts the amount of water that should flow past the diversion reach on route to Lake Livingston net of all losses and inclusive of return flows from the NTMWD diversion. The calculated annual return flow for NTMWD's service area for the year prior will be used to estimate the percentage of flows diverted by NTMWD that will be returned to the river after use.

Return flow factor for calendar year 2017 was 48.3%¹

Column 36

This value reflects the instantaneous gage reading from the USGS gauge at Oakwood at 8 a.m. on the date specified in columns 1, 2 and 3. The Oakwood gage is the closest gage to the Redtown diversion point.

Column 37

Converts the Oakwood gauge reading to MGD.

Column 38

Compares the value reported in Column 36 to environmental flow criteria as listed in worksheet "Environmental Flows." If the flow at the Oakwood gauge is above the base-flow in-stream target specified, a "BASE" value is returned indicating that flow is above base flow requirements and diversions can be made. If flow is below the base flow requirement but above subsistence requirements, a "SUBSISTENCE" value is returned. This indicates that only flows between subsistence and base targets are available for diversion. If flow is below subsistence targets, a "NO DIV" value is returned indicating that diversions cannot be made.

Column 39

Compares the stream flow at Oakwood to the environmental flow criteria as listed in worksheet "Environmental Flows" based on the appropriate season. If the reported value (column 39) is above the base flow in-stream target specified, the amount associated with the base flow target for that season is returned. This is the amount of water that must be allowed to pass the diversion reach and is not available for diversion. If flow is below the base flow requirement but above subsistence requirements, the amount associated with the subsistence flow target for that season is returned. This indicates that only flows between subsistence and base targets are available for diversion. If flow is below subsistence targets, a "NO DIV" value is returned indicating that diversions cannot be made.

¹ Tom Gooch, personal communication with Glenn Clingenpeel on May 29, 2018.

Column 40

Reports the amount of return flows minus Irving allocation, 30% set aside, channel losses to the Main Stem Pump Station, and NTMWD diversions. This value represents the volume of original (first tier) return flows in the river after the NTMWD diversion.

Column 41

Calculates the incremental channel loss from the MSPS to the Oakwood gauge. A value of 0.0375 percent was used to determine channel loss. This value represents the average channel loss from all three plants between the MSPS and the Oakwood gauge (see Carriage Loss worksheet).

Column 42

Subtracts the incremental carriage loss between the MSPS and the Oakwood gauge from the residual, original return flows.

Column 43

Reports the amount of water, in CFS, in the Trinity River at Oakwood above the applicable environmental flow criterion.

Column 44

Converts column 43 into MGD

Column 45

Determines the amount of return flows that are available for diversion after accounting for the required environmental flow pass-through (column 39).

Column 46

Reports the amount of water diverted at the Redtown Diversion Point.

Column 47

Calculates the difference between available flows (column 45) and diverted flows (column 46).

Column 48

Maintains a running balance of diversions that exceed available flows.

Column 49

Calculates the amount of residual return flows in MGD, including second tier flows from the NTWD diversion, that remain in the river after the Redtown diversion. Because there is no additional channel loss in the river between Oakwood and Livingston (based on the Trinity WAM), this represents the volume of return flows that reach Lake Livingston for impoundment or use there.

Trinidad Gauge Readings

This worksheet allows for entry of gauge readings from the USGS Trinidad Gauge (08062700). Instantaneous flow is entered as measured at 8 a.m. for the given date and converts the value in CFS to MGD.

Oakwood Gauge Readings

This worksheet allows for entry of gauge readings from the USGS Oakwood Gauge (08065000). Instantaneous flow is entered as measured at 8 a.m. for the given date and converts the value in CFS to MGD.

Environmental Flows

This worksheet shows environmental flow targets. Table EF 4 displays standards adapted from the USGS Oakwood gage (08065000) as specified in TAC §298.225(3). Table EF 1 shows the same values adjusted to the MSPS diversion point using an area-proportional method to convert standards to the naturally-occurring lower-flows at the Trinidad gage (08062700).

Table EF 1 lists environmental flow requirements for each month in cubic feet per second and millions of gallons. Requirements are provided for both base and subsistence flows. This table is used in "Discharge Diversion Calculation."

Table EF 2 is a reference table that lists the months associated with each season (per TAC 298).

Table EF 3 is a reference table that shows the seasonally-dependent, area-adjusted environmental flow standards for the Trinidad gage as specified in special condition ____.

Table EF 4 lists environmental flow requirements at the Oakwood gauge for each month in cubic feet per second and millions of gallons. Requirements are provided for both base and subsistence flows.

Carriage Loss Rates

This worksheet shows the carriage loss rates for 11 reaches. Each reach is defined in the table. The table also provides the average loss rate for each discharge location between the MSPS and the

Oakwood gauge. While this value should be constant, the extraction method from the WAM and subsequent incremental reach calculations resulted in minor differences (i.e. 0.35%).

Totals

This worksheet contains a monthly and annual summary of discharges, flows diverted by North Texas Municipal Water District, and carriage losses. Table T1 provides these summaries in millions of gallons. Table T2 provides these summaries in acre feet.

TRINITY RIVER AUTHORITY
INDIRECT WATER REUSE ACCOUNTING PLAN

Note: Yellow-shaded cells require data to be entered.

CENTRAL REGIONAL, TEN MILE CREEK AND RED OAK CREEK WASTEWATER TREATMENT PLANT REUSE ACCOUNTING

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Year	Month	Day	Trinity River Gaged Flow at Trinidad	Trinity River Gaged Flow at Trinidad Adjusted for Irving and NTMWD Diversions Less Losses	TRA CRWS Discharge	TRA TMCRRWS Discharge	TRA ROCRWS Discharge	Total Combined Discharge	30% Discharge By-Pass as Per Houston Agreement	70% of Discharge Available for Diversion	Irving Diversion from Trinity River of TRA CRWS Discharge (max 25 MGD)	TRA CRWS Discharge After Diversion by Irving	Loss on 70% of TRA CRWS Discharge After Irving Diversion	Loss on 70% of TRA TMCRRWS Discharge	Loss on 70% of TRA ROCRWS Discharge	Combined Available Total Discharge After Irving Diversion	Combined Loss on 70% of Total TRA Discharges After Irving Diversion	TRA Discharge Available for Diversion at the MWS After Irving Diversion, 30% Set-Aside and Losses	Maximum of Trinity River Gaged Flow at Trinidad Adjusted for Irving and NTMWD Diversions Less Losses or 30% Discharge Bypass	E-Flow Check on Adjusted Trinity River Flow (Col. 21)	Required E-Flow Bypass Flow Based on Trinity E-Flow Standard	Trinidad Flow Available for Diversion Above E-Flow Standard	Allowable Discharge Available for Diversion Considering Irving Diversion, 30% Set-Aside, Losses and E-Flow By-Pass	NTMWD Mainstem Return Flow Diversions For Previous 24 Hours Assigned First to TMCRRWS, Next to ROCRWS, and Finally to CRWS				Channel Losses Associated With Diverted Return Flows [(1 - Loss Factor) - 1]			Under or (Over) Allowable Discharge In Col 24	Running Sum of Net Diversion Over Allowable Discharge By Event	Amount of TRA Return Flow to Lake Livingston Including NTMWD TRG Return Flows RF Factor =	
Instantaneous			Rates/Volumes for Previous 24 Hours																	Based on Previous Days' Flow				Total	ROCRWS	TMCRRWS	CRWS	ROCRWS	TMCRRWS	CRWS	Col 25 - Col 26	0.480		
Specified	Input From Trinidad Gauge Tab	(Col 4 * 0.6463)	(Col 5 + Col 13 Loss Adjusted + Col 26 Loss Adjusted)	Input	Input	Input	(Sum Cols 7,8,9)	(Col 10 * 30%)	(Col 10 - Col 11)	Input	(Col 7 - Col 13)	(Col 14 * 70% * CRWS Loss Factor)	(Col 8 * 70% * TMCRRWS Loss Factor)	(Col 9 * 70% * ROCRWS Loss Factor)	(Sum Cols 8, 9, 14)	(Sum Cols 15, 16, & 17)	(Col 18 - Col 11 - Col 19)	MAX of Col 6 or Col 11	Logical E-Flow Check	Either Base or Subs Flow	MAX of (Col 21 - Col 23) or 0	MIN of Col 20 or Col 24	Input	1st	2nd	3rd	Based on Col 27	Based on Col 28	Based on Col 29	Col 25 - Col 26				
2019	FEB	5	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	6	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	7	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	8	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	9	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	10	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	11	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	12	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	13	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	14	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	15	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	16	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	17	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	18	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	19	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	20	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	21	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	22	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	23	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	24	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	25	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	26	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	27	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	28	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	FEB	29	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	146.06	500.24	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	1	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	2	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	3	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	4	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	5	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	6	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00
2019	MAR	7	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	6														

TRINITY RIVER AUTHORITY																																			
INDIRECT WATER REUSE ACCOUNTING PLAN																																			
CENTRAL REGIONAL, TEN MILE CREEK AND RED OAK CREEK WASTEWATER TREATMENT PLANT REUSE ACCOUNTING																																			
Note: Yellow-shaded cells require data to be entered.																																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	
Year	Month	Day	Trinity River Gaged Flow at Trinidad	Trinity River Gaged Flow at Trinidad Adjusted for Irving and NTMWD Diversions Less Losses	TRA CRWS Discharge	TRA TMCRRWS Discharge	TRA ROCRRWS Discharge	Total Combined Discharge	30% Discharge By-Pass as Per Houston Agreement	70% of Discharge Available for Diversion	Irving Diversion from Trinity River of TRA CRWS Discharge (max 25 MGD)	TRA CRWS Discharge After Diversion by Irving	Loss on 70% of TRA CRWS Discharge After Irving Diversion	Loss on 70% of TRA TMCRRWS Discharge	Loss on 70% of TRA ROCRRWS Discharge	Combined Available Total Discharge After Irving Diversion	Combined Loss on 70% of Total TRA Discharges After Irving Diversion	TRA Discharge Available for Diversion at the MSPS After Irving Diversion, 30% Set-Aside and Losses	Maximum of Trinity River Gaged Flow at Trinidad Adjusted for Irving and NTMWD Diversions Less Losses or 30% Discharge Bypass	E-Flow Check on Adjusted Trinidad River Flow (Col. 21)	Required E-Flow Bypass Flow Based on Trinity E-Flow Standard	Trinidad Flow Available for Diversion Above E-Flow Standard	Allowable Discharge Available for Diversion Considering Irving Diversion, 30% Set-Aside, Losses and E-Flow By-Pass	NTMWD Mainstem Return Flow Diversions For Previous 24 Hours Assigned First to ROCRRWS, Next to TMCRRWS, and Finally to CRWS			Channel Losses Associated With Diverted Return Flows Loss = Diverted Return Flow x [(1 / (1 - Loss Factor)) - 1]			Under or (Over) Allowable Discharge In Col.24	Running Sum of Net Diversion Over Allowable Discharge By Event	Amount of TRA Return Flow to Lake Livingston Including NTMWD TRA Return Flows RF Factor =			
Instantaneous			Rates/Volumes for Previous 24 Hours														Based on Previous Days' Flow										Total	ROCRWS	TMCRRWS	CRWS	ROCRWS	TMCRRWS	CRWS	Col 25 - Col 26	0.480
Specified	Input From Trinidad Gauge Tab	(Col 4 * 0.6463)	(Col 5 + Col 13 Loss Adjusted + Col 26 Loss Adjusted)	Input	Input	Input	(Sum Coils 7,8,9)	(Col 10 * 30%)	(Col 10 - Col 11)	Input	(Col 7 - Col 13)	(Col 14 * 70% * CRWS Loss Factor)	(Col 8 * 70% * TMCRRWS Loss Factor)	(Col 9 * 70% * ROCRRWS Loss Factor)	(Sum Coils 8, 9, & 14)	(Sum Coils 15, 16, & 17)	(Col 18 - Col 11 - Col 19)	MAX of Col 6 or Col 11	Logical E-Flow Check	Either Base or Subs Flow	MAX of (Col 21 - Col 23) or 0	MIN of Col 20 or Col 24	Input	1st	2nd	3rd	Based on Col 27	Based on Col 28	Based on Col 29	Col 25 - Col 26					
2019	APR	10	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	11	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	12	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	13	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	14	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	15	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	16	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	17	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	18	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	19	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	20	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	21	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	22	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	23	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	24	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	25	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	26	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	
2019	APR	27	1,000.00	646.30	646.30	130.00	10.00	5.00	145.00	43.50	101.50	0.00	130.00	6.69	0.19	0.00	145.00	6.88	94.62	646.30	BASE	193.24	453.06	94.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	94.62	0.00	145.00	

2016	JAN	30	0.00	0.00
2016	JAN	31	0.00	0.00
2016	FEB	1	0.00	0.00
2016	FEB	2	0.00	0.00
2016	FEB	3	0.00	0.00
2016	FEB	4	0.00	0.00
2016	FEB	5	0.00	0.00
2016	FEB	6	0.00	0.00
2016	FEB	7	0.00	0.00
2016	FEB	8	0.00	0.00
2016	FEB	9	0.00	0.00
2016	FEB	10	0.00	0.00
2016	FEB	11	0.00	0.00
2016	FEB	12	0.00	0.00
2016	FEB	13	0.00	0.00
2016	FEB	14	0.00	0.00
2016	FEB	15	0.00	0.00
2016	FEB	16	0.00	0.00
2016	FEB	17	0.00	0.00
2016	FEB	18	0.00	0.00
2016	FEB	19	0.00	0.00
2016	FEB	20	0.00	0.00
2016	FEB	21	0.00	0.00
2016	FEB	22	0.00	0.00
2016	FEB	23	0.00	0.00
2016	FEB	24	0.00	0.00
2016	FEB	25	0.00	0.00
2016	FEB	26	0.00	0.00
2016	FEB	27	0.00	0.00
2016	FEB	28	0.00	0.00
2016	FEB	29	0.00	0.00
2016	MAR	1	193.00	124.74
2016	MAR	2	0.00	0.00
2016	MAR	3	0.00	0.00
2016	MAR	4	0.00	0.00
2016	MAR	5	0.00	0.00
2016	MAR	6	0.00	0.00
2016	MAR	7	0.00	0.00
2016	MAR	8	0.00	0.00
2016	MAR	9	0.00	0.00

2016	MAR	10	0.00	0.00
2016	MAR	11	0.00	0.00
2016	MAR	12	0.00	0.00
2016	MAR	13	0.00	0.00
2016	MAR	14	0.00	0.00
2016	MAR	15	0.00	0.00
2016	MAR	16	0.00	0.00
2016	MAR	17	0.00	0.00
2016	MAR	18	0.00	0.00
2016	MAR	19	0.00	0.00
2016	MAR	20	0.00	0.00
2016	MAR	21	0.00	0.00
2016	MAR	22	0.00	0.00
2016	MAR	23	0.00	0.00
2016	MAR	24	0.00	0.00
2016	MAR	25	0.00	0.00
2016	MAR	26	0.00	0.00
2016	MAR	27	0.00	0.00
2016	MAR	28	0.00	0.00
2016	MAR	29	0.00	0.00
2016	MAR	30	0.00	0.00
2016	MAR	31	0.00	0.00
2016	APR	1	0.00	0.00
2016	APR	2	0.00	0.00
2016	APR	3	0.00	0.00
2016	APR	4	0.00	0.00
2016	APR	5	0.00	0.00
2016	APR	6	0.00	0.00
2016	APR	7	0.00	0.00
2016	APR	8	0.00	0.00
2016	APR	9	0.00	0.00
2016	APR	10	0.00	0.00
2016	APR	11	0.00	0.00
2016	APR	12	0.00	0.00
2016	APR	13	0.00	0.00
2016	APR	14	0.00	0.00
2016	APR	15	0.00	0.00
2016	APR	16	0.00	0.00
2016	APR	17	0.00	0.00
2016	APR	18	0.00	0.00

2016	APR	19	0.00	0.00
2016	APR	20	0.00	0.00
2016	APR	21	0.00	0.00
2016	APR	22	0.00	0.00
2016	APR	23	0.00	0.00
2016	APR	24	0.00	0.00
2016	APR	25	0.00	0.00
2016	APR	26	0.00	0.00
2016	APR	27	0.00	0.00
2016	APR	28	0.00	0.00
2016	APR	29	0.00	0.00
2016	APR	30	0.00	0.00
2016	MAY	1	0.00	0.00
2016	MAY	2	0.00	0.00
2016	MAY	3	0.00	0.00
2016	MAY	4	0.00	0.00
2016	MAY	5	0.00	0.00
2016	MAY	6	0.00	0.00
2016	MAY	7	0.00	0.00
2016	MAY	8	0.00	0.00
2016	MAY	9	0.00	0.00
2016	MAY	10	0.00	0.00
2016	MAY	11	0.00	0.00
2016	MAY	12	0.00	0.00
2016	MAY	13	0.00	0.00
2016	MAY	14	0.00	0.00
2016	MAY	15	0.00	0.00
2016	MAY	16	0.00	0.00
2016	MAY	17	0.00	0.00
2016	MAY	18	0.00	0.00
2016	MAY	19	0.00	0.00
2016	MAY	20	0.00	0.00
2016	MAY	21	0.00	0.00
2016	MAY	22	0.00	0.00
2016	MAY	23	0.00	0.00
2016	MAY	24	0.00	0.00
2016	MAY	25	0.00	0.00
2016	MAY	26	0.00	0.00
2016	MAY	27	0.00	0.00
2016	MAY	28	0.00	0.00

2016	MAY	29	0.00	0.00
2016	MAY	30	0.00	0.00
2016	MAY	31	0.00	0.00
2016	JUN	1	0.00	0.00
2016	JUN	2	0.00	0.00
2016	JUN	3	0.00	0.00
2016	JUN	4	0.00	0.00
2016	JUN	5	0.00	0.00
2016	JUN	6	0.00	0.00
2016	JUN	7	0.00	0.00
2016	JUN	8	0.00	0.00
2016	JUN	9	0.00	0.00
2016	JUN	10	0.00	0.00
2016	JUN	11	0.00	0.00
2016	JUN	12	0.00	0.00
2016	JUN	13	0.00	0.00
2016	JUN	14	0.00	0.00
2016	JUN	15	0.00	0.00
2016	JUN	16	0.00	0.00
2016	JUN	17	0.00	0.00
2016	JUN	18	0.00	0.00
2016	JUN	19	0.00	0.00
2016	JUN	20	0.00	0.00
2016	JUN	21	0.00	0.00
2016	JUN	22	0.00	0.00
2016	JUN	23	0.00	0.00
2016	JUN	24	0.00	0.00
2016	JUN	25	0.00	0.00
2016	JUN	26	0.00	0.00
2016	JUN	27	0.00	0.00
2016	JUN	28	0.00	0.00
2016	JUN	29	0.00	0.00
2016	JUN	30	0.00	0.00
2016	JUL	1	0.00	0.00
2016	JUL	2	0.00	0.00
2016	JUL	3	0.00	0.00
2016	JUL	4	0.00	0.00
2016	JUL	5	0.00	0.00
2016	JUL	6	0.00	0.00
2016	JUL	7	0.00	0.00

2016	JUL	8	0.00	0.00
2016	JUL	9	0.00	0.00
2016	JUL	10	0.00	0.00
2016	JUL	11	0.00	0.00
2016	JUL	12	0.00	0.00
2016	JUL	13	0.00	0.00
2016	JUL	14	0.00	0.00
2016	JUL	15	0.00	0.00
2016	JUL	16	0.00	0.00
2016	JUL	17	0.00	0.00
2016	JUL	18	0.00	0.00
2016	JUL	19	0.00	0.00
2016	JUL	20	0.00	0.00
2016	JUL	21	0.00	0.00
2016	JUL	22	0.00	0.00
2016	JUL	23	0.00	0.00
2016	JUL	24	0.00	0.00
2016	JUL	25	0.00	0.00
2016	JUL	26	0.00	0.00
2016	JUL	27	0.00	0.00
2016	JUL	28	0.00	0.00
2016	JUL	29	0.00	0.00
2016	JUL	30	0.00	0.00
2016	JUL	31	0.00	0.00
2016	AUG	1	0.00	0.00
2016	AUG	2	0.00	0.00
2016	AUG	3	0.00	0.00
2016	AUG	4	0.00	0.00
2016	AUG	5	0.00	0.00
2016	AUG	6	0.00	0.00
2016	AUG	7	0.00	0.00
2016	AUG	8	0.00	0.00
2016	AUG	9	0.00	0.00
2016	AUG	10	0.00	0.00
2016	AUG	11	0.00	0.00
2016	AUG	12	0.00	0.00
2016	AUG	13	0.00	0.00
2016	AUG	14	0.00	0.00
2016	AUG	15	0.00	0.00
2016	AUG	16	0.00	0.00

2016	AUG	17	0.00	0.00
2016	AUG	18	0.00	0.00
2016	AUG	19	0.00	0.00
2016	AUG	20	0.00	0.00
2016	AUG	21	0.00	0.00
2016	AUG	22	0.00	0.00
2016	AUG	23	0.00	0.00
2016	AUG	24	0.00	0.00
2016	AUG	25	0.00	0.00
2016	AUG	26	0.00	0.00
2016	AUG	27	0.00	0.00
2016	AUG	28	0.00	0.00
2016	AUG	29	0.00	0.00
2016	AUG	30	0.00	0.00
2016	AUG	31	0.00	0.00
2016	SEP	1	0.00	0.00
2016	SEP	2	0.00	0.00
2016	SEP	3	0.00	0.00
2016	SEP	4	0.00	0.00
2016	SEP	5	0.00	0.00
2016	SEP	6	0.00	0.00
2016	SEP	7	0.00	0.00
2016	SEP	8	0.00	0.00
2016	SEP	9	0.00	0.00
2016	SEP	10	0.00	0.00
2016	SEP	11	0.00	0.00
2016	SEP	12	0.00	0.00
2016	SEP	13	0.00	0.00
2016	SEP	14	0.00	0.00
2016	SEP	15	0.00	0.00
2016	SEP	16	0.00	0.00
2016	SEP	17	0.00	0.00
2016	SEP	18	0.00	0.00
2016	SEP	19	0.00	0.00
2016	SEP	20	0.00	0.00
2016	SEP	21	0.00	0.00
2016	SEP	22	0.00	0.00
2016	SEP	23	0.00	0.00
2016	SEP	24	0.00	0.00
2016	SEP	25	0.00	0.00

2016	SEP	26	0.00	0.00
2016	SEP	27	0.00	0.00
2016	SEP	28	0.00	0.00
2016	SEP	29	0.00	0.00
2016	SEP	30	0.00	0.00
2016	OCT	1	0.00	0.00
2016	OCT	2	0.00	0.00
2016	OCT	3	0.00	0.00
2016	OCT	4	0.00	0.00
2016	OCT	5	0.00	0.00
2016	OCT	6	0.00	0.00
2016	OCT	7	0.00	0.00
2016	OCT	8	0.00	0.00
2016	OCT	9	0.00	0.00
2016	OCT	10	0.00	0.00
2016	OCT	11	0.00	0.00
2016	OCT	12	0.00	0.00
2016	OCT	13	0.00	0.00
2016	OCT	14	0.00	0.00
2016	OCT	15	0.00	0.00
2016	OCT	16	0.00	0.00
2016	OCT	17	0.00	0.00
2016	OCT	18	0.00	0.00
2016	OCT	19	0.00	0.00
2016	OCT	20	0.00	0.00
2016	OCT	21	0.00	0.00
2016	OCT	22	0.00	0.00
2016	OCT	23	0.00	0.00
2016	OCT	24	0.00	0.00
2016	OCT	25	0.00	0.00
2016	OCT	26	0.00	0.00
2016	OCT	27	0.00	0.00
2016	OCT	28	0.00	0.00
2016	OCT	29	0.00	0.00
2016	OCT	30	0.00	0.00
2016	OCT	31	0.00	0.00
2016	NOV	1	0.00	0.00
2016	NOV	2	0.00	0.00
2016	NOV	3	0.00	0.00
2016	NOV	4	0.00	0.00

2016	NOV	5	0.00	0.00
2016	NOV	6	0.00	0.00
2016	NOV	7	0.00	0.00
2016	NOV	8	0.00	0.00
2016	NOV	9	0.00	0.00
2016	NOV	10	0.00	0.00
2016	NOV	11	0.00	0.00
2016	NOV	12	0.00	0.00
2016	NOV	13	0.00	0.00
2016	NOV	14	0.00	0.00
2016	NOV	15	0.00	0.00
2016	NOV	16	0.00	0.00
2016	NOV	17	0.00	0.00
2016	NOV	18	0.00	0.00
2016	NOV	19	0.00	0.00
2016	NOV	20	0.00	0.00
2016	NOV	21	0.00	0.00
2016	NOV	22	0.00	0.00
2016	NOV	23	0.00	0.00
2016	NOV	24	0.00	0.00
2016	NOV	25	0.00	0.00
2016	NOV	26	0.00	0.00
2016	NOV	27	0.00	0.00
2016	NOV	28	0.00	0.00
2016	NOV	29	0.00	0.00
2016	NOV	30	0.00	0.00
2016	DEC	1	0.00	0.00
2016	DEC	2	0.00	0.00
2016	DEC	3	0.00	0.00
2016	DEC	4	0.00	0.00
2016	DEC	5	0.00	0.00
2016	DEC	6	0.00	0.00
2016	DEC	7	0.00	0.00
2016	DEC	8	0.00	0.00
2016	DEC	9	0.00	0.00
2016	DEC	10	0.00	0.00
2016	DEC	11	0.00	0.00
2016	DEC	12	0.00	0.00
2016	DEC	13	0.00	0.00
2016	DEC	14	0.00	0.00

2016	DEC	15	0.00	0.00
2016	DEC	16	0.00	0.00
2016	DEC	17	0.00	0.00
2016	DEC	18	0.00	0.00
2016	DEC	19	0.00	0.00
2016	DEC	20	0.00	0.00
2016	DEC	21	0.00	0.00
2016	DEC	22	0.00	0.00
2016	DEC	23	0.00	0.00
2016	DEC	24	0.00	0.00
2016	DEC	25	0.00	0.00
2016	DEC	26	0.00	0.00
2016	DEC	27	0.00	0.00
2016	DEC	28	0.00	0.00
2016	DEC	29	0.00	0.00
2016	DEC	30	0.00	0.00
2016	DEC	31	0.00	0.00

Year	Month	Day	Discharge	Discharge
Input	Input	Input	Input	(Col 4 * 0.6463)

Table EF 1. Monthly Environmental Flow Targets at USGS Trinidad Gauge (08062700)

	CFS		MGD	
	Base Flow	Subsistance Flow	Base Flow	Subsistance Flow
JAN	226	80	146.06	51.70
FEB	226	80	146.06	51.70
MAR	299	107	193.24	69.15
APR	299	107	193.24	69.15
MAY	299	107	193.24	69.15
JUN	167	50	107.93	32.32
JUL	167	50	107.93	32.32
AUG	167	50	107.93	32.32
SEP	173	67	111.81	43.30
OCT	173	67	111.81	43.30
NOV	173	67	111.81	43.30
DEC	226	80	146.06	51.70

Table EF 2. Months that Comprise Seasons

Fall	September	to	November
Spring	March	to	May
Summer	June	to	August
Winter	December	to	February

Table EF 3. Seasonally-dependent Environmental Flow Targets at USGS Trinidad Gauge

Season	Base	Subsistence
Spring (Mar-May)	299	107
Summer (Jun-Aug)	167	50
Fall (Sep-Nov)	173	67
Winter (Dec-Feb)	226	80

Table EF 4. Monthly Environmental Flow Targets at USGS Oakwood Gauge (08065000)

	CFS		MGD	
	Base Flow	Subsistance Flow	Base Flow	Subsistance Flow
JAN	340	120	219.74	77.56
FEB	340	120	219.74	77.56
MAR	450	160	290.84	103.41
APR	450	160	290.84	103.41
MAY	450	160	290.84	103.41
JUN	250	75	161.58	48.47
JUL	250	75	161.58	48.47
AUG	250	75	161.58	48.47
SEP	260	100	168.04	64.63
OCT	260	100	168.04	64.63
NOV	260	100	168.04	64.63
DEC	340	120	219.74	77.56

Table EF 5. Seasonally-dependent Environmental Flow Targets at USGS Oakwood Gauge

Season	Base	Subsistence
Spring (Mar-May)	450	160
Summer (Jun-Aug)	250	75
Fall (Sep-Nov)	260	100
Winter (Dec-Feb)	340	120

Reach Specific Loss Factors

Reach No.	Reach Description	Loss Factor From WAM
1	From CRWS to NTMWD Mainstem Pump Station [1]	0.0735
2	From Ten Mile RWS to NTMWD Mainstem Pump Station [1]	0.0270
3	From Red Oak RWS to NTMWD Mainstem Pump Station [1]	0.0000
4	From Rosser Gage to Trinidad	0.0180
5	From CRWS to Trinidad	0.0860
6	From CRWS to Oakwood	0.1090
7	From Ten Mile RWS to Oakwood	0.0650
8	From Red Oak RWS to Oakwood	0.0390
9	CRWS from MSPS to Oakwood	0.0355
10	Ten Mile RWS from MSPS to Oakwood	0.0380
11	Red Oak RWS from MPS to Oakwood	0.0390
12	Average loss rate from MSPS to Oakwood	0.0375

0.35%

Note [1] Loss factor actually is to Rosser gage.

Table T1. Annual Summary (Values in Million Gallons)

	CRWS				TMCRRS				ROCRWS			
Column												
Month	WWTP Discharge (MG)	Discharge Diverted by NTMWD (MG)		Carriage Loss (MG)	WWTP Discharge (MG)	Discharge Diverted by NTMWD (MG)		Carriage Loss (MG)	WWTP Discharge (MG)	Discharge Diverted by NTMWD (MG)		Carriage Loss (MG)
JAN	4,030.00	39.69		3.15	310.00	6.81		0.19	155.00	3.50		0.00
FEB	3,770.00	0.00		0.00	290.00	0.00		0.00	145.00	0.00		0.00
MAR	4,030.00	0.00		0.00	310.00	0.00		0.00	155.00	0.00		0.00
APR	3,900.00	0.00		0.00	4,350.00	0.00		0.00	150.00	0.00		0.00
MAY	4,030.00	0.00		0.00	4,495.00	0.00		0.00	155.00	0.00		0.00
JUN	3,900.00	0.00		0.00	4,350.00	0.00		0.00	150.00	0.00		0.00
JUL	4,030.00	0.00		0.00	4,495.00	0.00		0.00	155.00	0.00		0.00
AUG	4,030.00	0.00		0.00	4,495.00	0.00		0.00	155.00	0.00		0.00
SEP	3,900.00	21.71		1.72	4,350.00	34.06		0.94	150.00	19.15		0.00
OCT	4,030.00	0.00		0.00	4,495.00	0.00		0.00	155.00	0.00		0.00
NOV	3,900.00	0.00		0.00	4,350.00	0.00		0.00	150.00	0.00		0.00
DEC	4,030.00	0.00		0.00	4,495.00	0.00		0.00	155.00	0.00		0.00
TOTAL	47,580.00	61.40			40,785.00	40.87		1.13	1,830.00	22.65		0.00

T 2. Annual Summary (Values in Acre-Feet)

	CRWS				TMCRRS				ROCRWS			
Column												
Month	WWTP Discharge (AF)	Discharge Diverted by NTMWD (AF)	Discharge Diverted by Redtown (AF)	Carriage Loss (AF)	WWTP Discharge (AF)	Discharge Diverted by NTMWD (AF)	Discharge Diverted by Redtown (AF)	Carriage Loss (AF)	WWTP Discharge (AF)	Discharge Diverted by NTMWD (AF)	Discharge Diverted by Redtown (AF)	Carriage Loss (AF)
JAN	12,367.67	121.80		9.66	951.36	20.90		0.58	475.68	10.74		0.00
FEB	11,569.75	0.00		0.00	889.98	0.00		0.00	444.99	0.00		0.00
MAR	12,367.67	0.00		0.00	951.36	0.00		0.00	475.68	0.00		0.00
APR	11,968.71	0.00		0.00	13,349.72	0.00		0.00	460.34	0.00		0.00
MAY	12,367.67	0.00		0.00	13,794.71	0.00		0.00	475.68	0.00		0.00
JUN	11,968.71	0.00		0.00	13,349.72	0.00		0.00	460.34	0.00		0.00
JUL	12,367.67	0.00		0.00	13,794.71	0.00		0.00	475.68	0.00		0.00
AUG	12,367.67	0.00		0.00	13,794.71	0.00		0.00	475.68	0.00		0.00
SEP	11,968.71	66.63		5.29	13,349.72	104.51		2.90	460.34	58.76		0.00
OCT	12,367.67	0.00		0.00	13,794.71	0.00		0.00	475.68	0.00		0.00
NOV	11,968.71	0.00		0.00	13,349.72	0.00		0.00	460.34	0.00		0.00
DEC	12,367.67	0.00		0.00	13,794.71	0.00		0.00	475.68	0.00		0.00
TOTAL	146,018.26	188.43		14.95	125,165.09	125.41		3.48	5,616.09			0.00

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 (\$) . <u>In Acre-Feet</u>	
	a. Less than 100	\$100.00
	b. 100 - 5,000	\$250.00
	c. 5,001 - 10,000	\$500.00
	d. 10,001 - 250,000	\$1,000.00
	e. More than 250,000	\$2,000.00
Recording Fee		\$25.00
Agriculture Use Fee	<i>Only for those with an Irrigation Use.</i> Multiply 50¢ x _____ Number of acres that will be irrigated with State Water. **	
Use Fee	<i>Required for all Use Types, excluding Irrigation Use.</i> Multiply \$1.00 x _____ Maximum annual diversion of State Water in acre-feet. **	
Recreational Storage Fee	<i>Only for those with Recreational Storage.</i> Multiply \$1.00 x _____ acre-feet of in-place Recreational Use State Water to be stored at normal max operating level.	
Storage Fee	<i>Only for those with Storage, excluding Recreational Storage.</i> Multiply 50¢ x _____ acre-feet of State Water to be stored at normal max operating level.	
Mailed Notice	Cost of mailed notice to all water rights in the basin. Contact Staff to determine the amount (512) 239-4600.	
TOTAL		\$

2. AMENDMENT OR SEVER AND COMBINE

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

3. BED AND BANKS

	Description	Amount (\$)
Filing Fee		\$100.00
Recording Fee		\$12.50
Mailed Notice	Additional notice fee to be determined once application is submitted.	
TOTAL INCLUDED		\$