


TCEQ Interoffice Memorandum

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

THRU:  Chris Kozlowski, Team Leader
Water Rights Permitting Team

FROM: Sarah Henderson, Project Manager
Water Rights Permitting Team

DATE: August 8, 2019

SUBJECT: City of Huntsville
WRPERM 12754
CN600745566, RN109240747
Application No. 12754A to Amend Water Use Permit No. 12754
Texas Water Code § 11.122, Requiring Mailed and Published Notice
Mutliple Tributaries of the West Fork San Jacinto River and the West Fork
San Jacinto River, San Jacinto River Basin
Montgomery County

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY
2019 AUG -8 PM 2:38
CHIEF CLERKS OFFICE

The application and partial fees were received on December 11, 2018. Additional information and fees were received on July 30, 2019. The application was declared administratively complete and accepted for filing with the Office of the Chief Clerk on August 8, 2019. Published and mailed notice to the water right holders of record in the San Jacinto River Basin is required pursuant to Title 30 Texas Administrative Code § 295.158(b)(2).

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


Sarah Henderson, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

OCC Mailed Notice Required YES NO

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 8, 2019

Mr. Robert J. Brandes, P.E.
Robert J. Brandes Consulting
6000 Maurys Trail
Austin, Texas 78730

RE: City of Huntsville
WRPERM 12754
CN600745566, RN109240747
Application No. 12754A to Amend Water Use Permit No. 12754
Texas Water Code § 11.122, Requiring Mailed and Published Notice
Multiple Tributaries of the West Fork San Jacinto River and the West Fork San
Jacinto River, San Jacinto River Basin
Montgomery County

Dear Mr. Brandes:

This acknowledges receipt, on July 30, 2019, of additional information and fees in the amount of \$113.74 (Receipt No. M925338, copy enclosed).

The application was declared administratively complete and filed with the Office of the Chief Clerk on August 8, 2019. 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 this matter please contact me via email at sarah.henderson@tceq.texas.gov or by telephone at (512) 239-2535.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sarah Henderson".

Sarah Henderson, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Enclosure



July 30, 2019

Sarah Henderson, Project Manager
Water Rights Permitting Team
Texas Commission on Environmental Quality
12100 Park 35 Circle
Building F, 3rd Floor, MC 160
Austin, TX 78735

Re: City of Huntsville; WRPERM 12754; Application No. 12754A to Amend Water
Use Permit No. 12754

Dear Ms. Henderson

In response to your July 3, 2019 request for information to the City of Huntsville (City) wherein you requested written evidence that Aron Kulhavy has authorization to sign the application for the City, enclosed please find the Minutes from the Huntsville City Council Regular Meeting held on the 6th day of March, 2018, which under Item 5.a. authorizes the City Manager (Aron Kulhavy) to sign the application.

Additionally, you requested a check in the amount of \$113.74 to cover fees associated with the application, which is also enclosed.

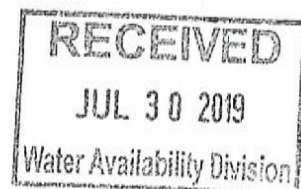
Should you need any further information from the City, please do not hesitate to contact me.

Sincerely

A handwritten signature in cursive script that reads 'Emily W. Rogers'.

Emily W. Rogers
Attorney for the City of Huntsville

EWR/dfb
Enclosures



MINUTES FROM THE HUNTSVILLE CITY COUNCIL REGULAR MEETING HELD ON THE 6TH DAY OF MARCH 2018, IN THE CITY HALL, LOCATED AT 1212 AVENUE M, IN THE CITY OF HUNTSVILLE, COUNTY OF WALKER, TEXAS, AT 6:00 P.M.

The Council met in a regular session with the following:

COUNCILMEMBERS PRESENT: Andy Brauninger, Joe Emmett, Tish Humphrey, Ronald Allen, Joe P. Rodriguez, Paul Davidhizar, Tyler McCaffety, Keith D. Olson, Clyde D. Loll

COUNCILMEMBERS ABSENT: None

OFFICERS PRESENT: Aron Kulhavy, Interim City Manager; Lee Woodward, City Secretary; Leonard Schneider, City Attorney

MAIN SESSION [6:00 p.m.]

1. CALL TO ORDER – Mayor Brauninger called the meeting to order at 6 00 p m.
2. INVOCATION AND PLEDGES
U.S. Flag
Texas Flag: Honor the Texas Flag I pledge allegiance to thee, Texas, one state under God, one, and indivisible
Mayor Brauninger gave an invocation and Calliope Lolley and Hailey Salazar of HISD led the pledges.
3. CONSENT AGENDA
Public Comments will be called for by the presiding officer before action is taken on these items. *(Approval of Consent Agenda authorizes the City Manager to implement each item in accordance with staff recommendations. An item may be removed from the Consent Agenda and added to the Statutory Agenda for full discussion by request of a member of Council.)*
 - a. Approve the minutes of the City Council meeting held on February 20. [Lee Woodward, City Secretary]
 - b. Authorize the Interim City Manager to approve purchase orders with several hardware and/or supply stores with terms of one year and one-year options to renew. [Steve Ritter, Director of Finance]
 - c. Approve the 2017 Annual Report for Tax Increment Reinvestment Zone #1 (TIRZ). [Steve Ritter]
 - d. Approve the nomination of Taylor Morrison to an unexpired term on the Cemetery Advisory Board. [Mayor Brauninger]
 - e. Ratify correction to property IDs 57003 and 57004 to 30203 and 30204 for the earnest money contract authorized at the February 6, 2018, City Council meeting. [Leonard Schneider, City Attorney]

Councilmember Allen asked to pull item e Councilmember Humphrey moved to approve the consent agenda, the motion was seconded by Councilmember Davidhizar. The motion for items a-d was approved, 9-0

Councilmember Humphrey moved to ratify correction to property IDs 57003 and 57004 to 30203 and 30204 for the earnest money contract authorized at the February 6, 2018, City Council meeting, the motion was seconded by Mayor Pro Tem Olson. The motion was adopted, 8-1, Councilmember Allen voting against
4. EXECUTIVE SESSION
 - a. City Council will convene in closed session as authorized by Texas Government Code Chapter 551, Section 551.071 -consultation with counsel on legal matters to receive legal advice on amendment to the City's Water Use Permit No. 12754 and amendments to the Option Agreement and Water Supply Agreement between the City of Huntsville and Montgomery County Municipal Utility District Nos. 8 and 9. [Leonard Schneider, City Attorney, and Emily Rogers, Attorney, Bickerstaff, Heath, Delgado, & Acosta].
The Council adjourned to Executive Session at 6 09 p m
5. RECONVENE
 - a. Take action on Executive Session items, if necessary.
The Council reconvened at 6 36 p m. Mayor Pro Tem moved to authorize the City Manager, or his designee, to prepare, file, and prosecute an application to amend Water Use Permit No. 12754, the motion was seconded by Councilmember Humphrey. The motion was adopted, 9-0. Councilmember Davidhizar moved to approve the amendments to the Option Agreement and Water Supply Agreement between the City of Huntsville and Montgomery County Municipal Utility District Nos. 8 and 9, the motion was seconded by Councilmember Loll. The motion was adopted, 9-0
6. CITY COUNCIL/CITY MANAGER/CITY ATTORNEY
 - a. *Presentation, public comment, discussion, and possible action* to consider agenda item submitted by Mayor Brauninger to discuss, consider, and possibly take action to direct City staff to take all necessary steps to make the remainder of the property located at 1930 A Sam Houston Avenue, Property ID #30286 (more specifically, the front 0.102 acres), available for sale to the public in accordance with state law, the City Charter, and the City's purchasing policies, second reading. [Aron Kulhavy, Interim City Manager]
At the February 20, 2018, meeting, Councilmember Allen moved to direct City staff to take all necessary steps to make the remainder of the property located at 1930 A Sam Houston Avenue, Property ID #30286 (more specifically, the front 0.102 acres), available for sale to the public in accordance with state law, the City Charter, and the City's purchasing policies, and the motion was seconded by Councilmember Rodriguez. The motion was postponed until this meeting and debate was resumed. The motion was adopted, 7-2. Councilmember Emmett and Mayor Pro Tem Olson voting against

7. REQUESTS FOR CITIZEN PARTICIPATION

An opportunity for citizens to be heard on any topic and for the City Council to participate in the discussion. No action will be taken.

No requests were received by noon on Tuesday February 27, 2018.

8. MEDIA INQUIRIES RELATED TO MATTERS ON THE AGENDA

There were no inquiries.

9. ITEMS OF COMMUNITY INTEREST

(Hear announcements concerning items of community interest from the Mayor, Councilmembers, and City staff, for which no action will be discussed or taken.)

Mayor Brauningner noted the return of the coveted *Mayors Bowl Trophy*. Established by former Mayor J. Turner, the Brenham High School vs. Huntsville High School annual football game was celebrated each year starting in September 2006. At the time, Lois Kolkhorst was the state representative for both cities. After the season, the losing team would bring Kolkhorst's favorite *Blue Bell* flavor peppermint to the winning team to share neighborhood camaraderie. It's been many years since Huntsville was able to claim the win, so we are excited that the trophy is back home! The Mayor also reported the *Career & Technology Education Showcase* held recently at Huntsville High School was a success with the program running 16 career clusters that are approved by the Texas Education Agency. He shared that the *22nd Annual HUB/Vendor Show* will be held March 29 from 11:30 a.m. – 2:30 p.m. at the Walker County Storm Shelter.

HISD Minute! Mayor Pro Tem Olson said that activities in the community for the *National Book Awards Festival* will begin around the end of March and added that for the fifth year *NBA at SHSU* will partner with HISD and the City of Huntsville to bring critically acclaimed authors and literary activities to schools and public events. Mayor Pro Tem Olson invited the public to visit SHSU.edu/NBA for more details.

CoH Clean Minute! Councilmember Humphrey asked residents who are out planting new bulbs and spreading new seeds to think about the appearance of the city as there may be many visitors in the community during spring break. She added that March 11th will be daylight saving time and one of two great times a year to check the batteries in smoke alarms. She also noted SHSU was fourth seed at the upcoming tournament in Katy and wished them well. Councilmember Humphrey also wished Chief Kevin Lunsford a happy birthday.

Councilmember Rodriguez shared that the Huntsville Main Street Program is hosting its first annual *Bacon and Brew Fest* on the square in downtown Huntsville on Saturday, March 24, 2018. The family-friendly event is from 10 a.m. to 9 p.m. and is free and open to all ages.

Councilmember Davidhizar reminded all of the upcoming permanent traffic changes around SHSU that will take place over Spring Break and take effect March 19.

Councilmember Allen announced the City's next *Brand Review* presentation which will be here at City Hall at 5:30 p.m. on Monday, March 19. There is also a questionnaire available online via the City's website and our social media pages. If you would like a presentation for your group (church or workplace), call 291-5403. We're happy to come visit you!

Councilmember Loll noted that *Coffee with a Cop* is on again Saturday, March 10, from 5:30-7 p.m. at Starbucks. Drop by to visit with HPD about neighborhood watch and more!

Councilmember Emmett announced the Huntsville Lions Club will be collecting used eyeglasses on April 14th. If you would like to donate a pair of glasses, find a drop-off box like the one located in the lobby here at City Hall.

Councilmember McCafferty announced Sam Houston State University is hosting *Leaderscast* on May 4th at the Gaertner Performing Arts Center. Tickets are available by calling 936-294-2277.

Mayor Brauningner let everyone know what a great day last March 2 was for the Sam Houston Birthday and Texas Independence Day events. He said a descendant of Davy Crockett attended and 32 people were baptized Texan. The Mayor also recalled the packed house for Fire Chief Tom Grisham's retirement event on February 28, recognizing 44 years of service. Councilmember Humphrey asked to let all know that a Neighborhood Watch meeting will be held at HPD on March 8 at 6 p.m.

10. EXECUTIVE SESSION

- a. City Council will meet in Executive Session pursuant to Texas Government Code Section 551.074 – personnel matters regarding the appointment, employment, evaluation, reassignment, duties, discipline, or dismissal of a public officer or employee, concerning City Secretary Lee Woodward.

The Council adjourned to Executive Session at 6:53 p.m.

11. RECONVENE

- a. Take action on Executive Session items, if necessary.
The Council reconvened at 7:58 p.m.

12. ADJOURNMENT

Mayor Brauningner adjourned the meeting without objection at 7:58 p.m.

Lee Woodward, City Secretary

Attest
Brenda Lee
City Secretary

Water Availability Division
Water Rights Permitting and Availability Section
Ph: 512-239-4691, MC 160

Please Return to: Nita Leifester/Sarah Henderson

Filing and recording fees: \$113.74

Amendment

Application No.:	WRPERM 12754
Date Check Received:	07/30/2019
Check No.	58169
Check Amount:	\$113.74
Payor's Name:	Bickerstaff Heath Delgado Acosta LLP
Payor's Address:	3711 S. Mopac Expy Building One, Ste 300 Austin, TX 78746
Payor's Phone No.:	

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



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 3, 2019

Mr. Robert J. Brandes, P.E.
Robert J. Brandes Consulting
6000 Maurys Trail
Austin, Texas 78730

CERTIFIED MAIL

RE: City of Huntsville
WRPERM 12754
CN600745566, RN109240747
Application No. 12754A to Amend Water Use Permit No. 12754
Texas Water Code § 11.122, Requiring Mailed and Published Notice
Unnamed Tributary of Persimmon Creek and Robinson Creek, San Jacinto River
Basin
Montgomery County

Dear Mr. Brandes:

This acknowledges receipt, on December 11, 2018, of the referenced water use amendment application and fees in the amount of \$112.50 (Receipt No. M908954).

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

1. Provide written evidence that Aron Kulhavy has authorization to sign the application for the City of Huntsville pursuant to Title 30 Texas Administrative Code (TAC) § 295.14(5), which states:

If the applicant is a corporation, public district, county, municipality or other corporate entity, the application shall be signed by a duly authorized official. Written evidence in the form of by-laws, charters, or resolutions which specify the authority of the official to take such action shall be submitted. A corporation may file a corporate affidavit as evidence of the official's authority to sign.

2. Remit fees in the amount of **\$113.74** described below. Please make checks payable to the TCEQ or Texas Commission on Environmental Quality.

Filing Fee (Amendment)	\$ 100.00
Recording Fee	\$ 12.50
<u>Notice Fee (San Jacinto River Basin)</u>	<u>\$ 113.74</u>
Total Fees	\$ 226.24
<u>Fees Received</u>	<u>\$ 112.50</u>
Fees Due	\$ 113.74

WRPERM No. 12754A

July 3, 2019

Page 2 of 2

Please provide the requested information and fees by August 2, 2019 or the application may be returned pursuant to Title 30 TAC § 281.18.

If you have any questions concerning this matter please contact me via email at sarah.henderson@tceq.texas.gov or by telephone at (512) 239-2535.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sarah Henderson", with a long horizontal flourish extending to the right.

Sarah Henderson, Project Manager
Water Rights Permitting Team
Water Rights Permitting and Availability Section

Enclosure



December 11, 2018

Via Courier

Ms. Lori Hamilton, Section Manager
Water Rights Permitting and Availability Section
Texas Commission on Environmental Quality
P.O. Box 13087, MC-160
Austin, TX 78711-3087

Re: Application for Amendment of Permit No. 12754 for Authorization for City of Huntsville, Texas to Divert Existing and Future Return Flows in the San Jacinto River Basin.

Dear Ms. Hamilton:

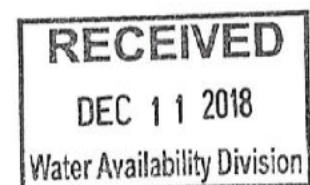
Enclosed for filing in the above-referenced matter, please find an original and six copies of the Application for Amendment of Permit No. 12754.

If you have any questions, please contact me at 512-472-8021 or email me at [REDACTED]

Sincerely,

Emily W. Rogers

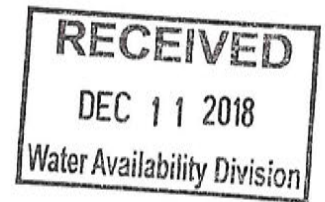
EWR/cg
Enclosures





CITY OF Huntsville

Incorporated in 1845 under the Republic of Texas



November 29, 2018

Ms. Lori Hamilton, Section Manager
Water Rights Permitting and Availability Section
Texas Commission on Environmental Quality
P.O. Box 13087, MC-160
Austin, Texas 78711-3087

RE: Application for Amendment of Permit No. 12754 for Authorization for City of Huntsville, Texas to Divert Existing and Future Return Flows in the San Jacinto River Basin.

Dear Ms. Hamilton:

On behalf of the City of Huntsville (COH or City), and pursuant to the requirements of Texas Water Code § 11.042 and other provisions of the Texas Water Code determined to be appropriate, please accept this application requesting an amendment to the City's existing bed and banks Permit No. 12754 to authorize the diversion and use of the City's existing and future groundwater-based and imported return flows from several additional watercourses that currently convey these return flows from two existing City-owned wastewater treatment plants (WWTP) to Lake Conroe on the West Fork San Jacinto River. Both of the WWTPs are owned and operated by the City's Department of Public Works. The proposed amendment does not request an increase in the rate or the annual volume of return flows that can be diverted and used under authority of Permit No. 12754. It only requests authority to divert the same annual amount of City return flows, either by the City or by others under contract with the City, from two additional diversion reaches comprised of the watercourses that convey the effluent discharged from the two WWTPs.

In accordance with TCEQ rules 30 TAC Chapter 295, Division 1 – General Requirements and Division 11 – Requirements for Applications for Authorization to Use Bed and Banks, please find the following information to support this application:

I. Background Information

Permit No. 12754 was issued by the Texas Commission on Environmental Quality (TCEQ) to the City on August 10, 2017, and it authorizes the City to convey the City's current and future wastewater effluent from the City's Robinson Creek and N. B. Davidson Wastewater Treatment Plants (WWTP), both located in the San Jacinto River Basin, to one or more diversions points on Lake Conroe on the West Fork San Jacinto River. Pursuant to Permit No. 12754, the City has entered into an agreement with Montgomery County Municipal Utility Districts (MUDs) 8 and 9 to sell the City's current and future wastewater effluent from these WWTPs to the MUDs. The MUDs' service area is located downstream, bordering the perimeter of Lake Conroe on the West Fork San Jacinto River. Figure 1 is a map of the area that identifies the locations of the outfalls for the two City WWTPs, the upstream and downstream limits of the two requested diversion reaches, and the diversion point(s) on Lake Conroe where the conveyed effluent is currently authorized to be withdrawn by the MUDs.

1212 Avenue M • Huntsville, TX 77340 • 936.291.5400 • 936.291.5409 fax • www.huntsvilletx.gov

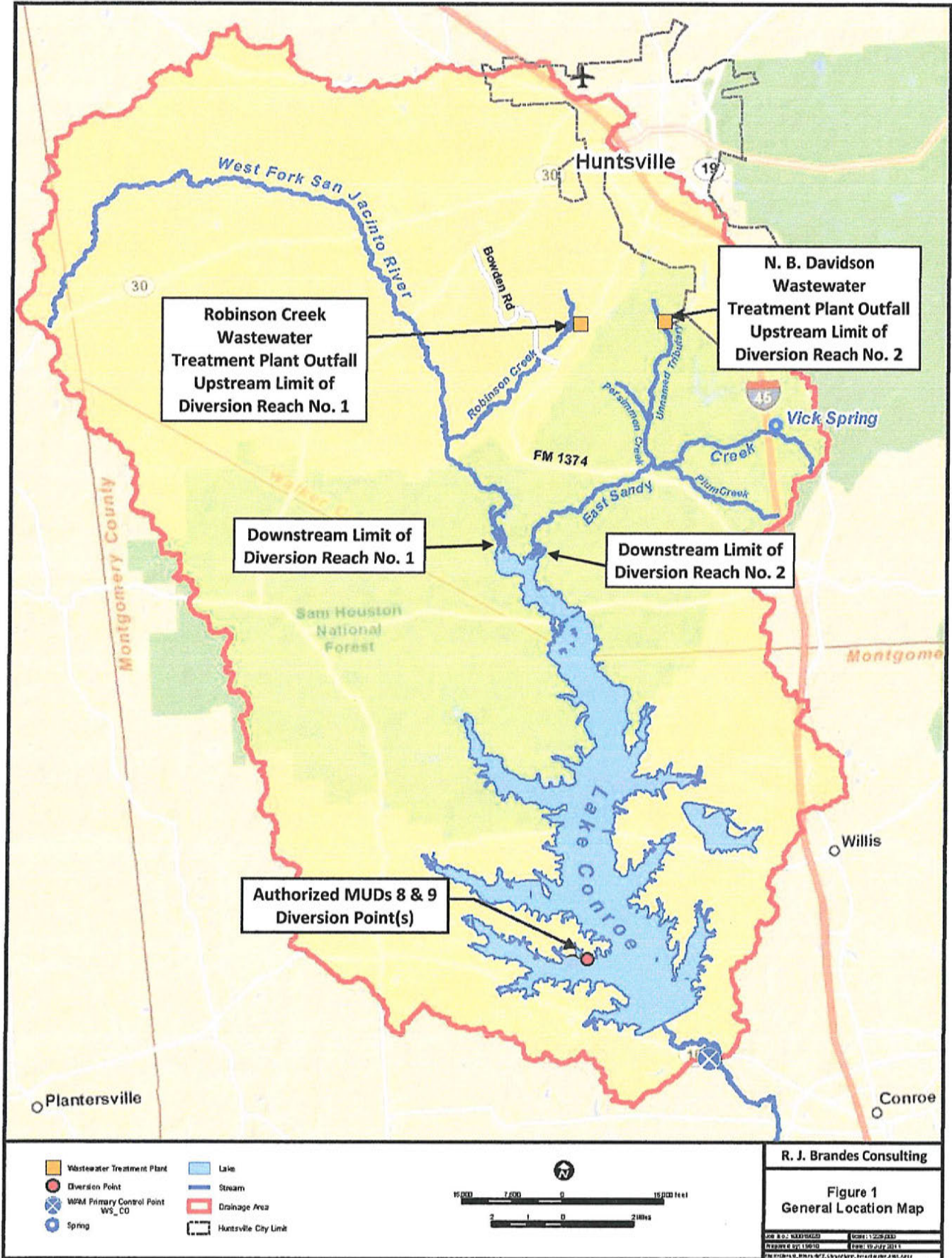


Figure 1 Map Showing Proposed Diversion Reaches

With this current application to amend Permit No. 12754, the City is requesting additional authorization to divert the conveyed effluent discharged from the Robinson Creek and N. B. Davidson WWTPs from all of the streams and watercourses that currently convey the effluent from the WWTPs to the headwaters of Lake Conroe. Referring to the map in Figure 1, this includes segments of Robinson Creek and the West Fork San Jacinto River currently used to convey effluent discharged from the Robinson Creek WWTP (designated as Diversion Reach No. 1) and segments of the unnamed tributary of Persimmon Creek, Persimmon Creek, and East Sandy Creek currently used to convey effluent discharged from the N. B. Davidson WWTP (designated as Diversion Reach No. 2). The existing Permit No. 12754 currently only authorizes diversions of the City's effluent at or inland from the perimeter of Lake Conroe at the indicated location in Figure 1.

II. Applicant Information (30 TAC §295.3)

Name of Applicant: City of Huntsville, Texas,
Address: 1212 Avenue M, Huntsville, TX 77340
Federal ID Number: 746001426
Authorized Representative: Brent S. Sherrod, P.E., Director of Public Works

Primary Contact for Application:

Robert J. Brandes, P.E.
Robert J. Brandes Consulting
6000 Maurys Trail
Austin, Texas 78730
Telephone: 512/461-1477
Email Address: [REDACTED]

III. Source of Supply (30 TAC §295.4)

Water supply for the City of Huntsville is obtained from two sources: (a) seven groundwater wells owned and operated by the City, and (b) surface water imported from the Trinity River Basin that is treated at the Huntsville Regional Water Supply System (HRWSS), which is owned and operated by the Trinity River Authority (TRA) of Texas¹. These two sources are blended, as needed, to provide an ample supply of water year-round for the City's customers. The water source for the return flows from the two wastewater treatment plants referenced in this application is comprised of approximately 40% groundwater and 60% surface water, with the latter supply originating from the HRWSS. Annual amounts of effluent historically discharged from these plants for the last five years are summarized in Table 1.

Pertinent information regarding the COH's Robinson Creek and N. B. Davidson WWTPs as the source of the return flows for the subject bed and banks permit amendment is summarized below. Attachment A contains a detailed map based on the *Huntsville 7.5'* Series U.S. Geological Survey topographic sheet that identifies the locations of the Robinson Creek and the N. B. Davidson WWTP outfalls within the San Jacinto River Basin where the subject return flows are discharged. Through the Texas Pollutant Discharge Elimination System (TPDES), the existing discharges of

¹ Water from the Huntsville Regional Water Supply System originates as surface water from the Trinity River Basin and is supplied to the City of Huntsville through a contract with the Trinity River Authority.

effluent from the Robinson Creek and N. B. Davidson WWTPs are already permitted and subject to compliance with State and Federal discharge regulations and water quality standards.

A. Robinson Creek Wastewater Treatment Plant

TPDES Permit No. WQ0010781004 (NPDES TX0116572)
Permitted Average Annual Discharge Rate: 2.5 million gallons per day
2,801 acre-feet per year
Permitted Maximum 2-Hour Discharge Rate: 5,208 gallons per minute
Latitude of Outfall: 30.645547° N
Longitude of Outfall: 95.595334° W
Location of Outfall: 24.564645° E, 1,339.95 feet from the southwest corner of the
W. McDonald tract; Original Survey No. 471; Abstract No.
543 in Walker County, Texas.
2008-2017 Average Annual Flow: 0.85 million gallons per day
852 acre-feet per year
Effluent Receiving Water: Robinson Creek to West Fork San Jacinto River and then
to Lake Conroe in Segment No. 1012 of the San Jacinto
River Basin

B. N.B. Davidson Wastewater Treatment Plant

TPDES Permit No. WQ0010781002 (NPDES TX0022373)
Permitted Average Annual Discharge Rate: 1.6 million gallons per day
1,792 acre-feet per year
Permitted Maximum 2-Hour Discharge Rate: 1,778 gallons per minute
Latitude of Outfall: 30.645275° N
Longitude of Outfall: 95.553197° W
Location of Outfall: 65.693236° E, 1,918.38 feet from the southwest corner of the
San Antonio & Mexican Gulf Railroad Co. tract; Original
Survey No. 471; Abstract No. 552 in Walker County, Texas
2008-2017 Average Annual Flow: 0.63 million gallons per day
706 acre-feet per year
Effluent Receiving Water: Unnamed tributary of Persimmon Creek, then to
Persimmon Creek, then to East Sandy Creek, and then to
Lake Conroe in Segment No. 1012 of the San Jacinto
River Basin

IV. Amount and Purpose of Diversion and Use (30 TAC §295.5)

The purpose of the proposed diversion of the COH's wastewater effluent is to provide an additional source of water supply for the City or entities that may contract with the City for use of the effluent for municipal, industrial and agricultural purposes. Under the proposed amendment of the existing bed and banks Permit No. 12754, the daily diversion and use of the City's wastewater effluent by all users will be limited to the quantity of effluent actually discharged from the City's Robinson Creek and N. B. Davidson WWTPs, less carriage losses between the points of discharge and the points of diversion. The currently authorized combined average annual discharge rate for these two WWTPs is 4.1 million gallons per day, or on an annual basis, 4,593 acre-feet per year. The

daily accounting plan will be amended and used to determine the allowable quantity of wastewater effluent that each individual user can divert on any given day considering stream segment location and travel time.

The stream travel time calculations for each of the WWTPs are summarized in Attachment B, with photographs of these streams presented in Attachment C. These are the same calculations presented as part of the original application for Permit No. 12754, without any changes. For purposes of the daily accounting, based on whole-day increments, a one-day travel time has been established for the effluent to flow from the City's WWTP outfalls to Lake Conroe, and another day of travel time has been used for transport through Lake Conroe to the MUDs diversion points. Thus, for any diversion of the City's effluent from any of the streams or watercourses upstream of Lake Conroe, a one-day lag is used in the daily accounting for quantifying the daily volume of effluent available for diversion, while a two-day lag time is used for quantifying the daily volume of effluent available for diversion at the MUDs' intake on Lake Conroe.

Calculations of average carriage losses for the conveyance of the wastewater effluent from the Robinson Creek WWTP and the N. B. Davidson WWTP to the headwaters of Lake Conroe also are described and summarized in Attachment B. Again, these are the same calculations presented as part of the original application for Permit No. 12754, without any changes, and the resulting values of these carriage losses previously have been adopted for purposes of the accounting plan in support of Permit No. 12754. For the Robinson Creek WWTP, the total stream travel distance is approximately 12.9 miles, and the average carriage loss has been estimated to be 1.0% of the amount of effluent discharged from the plant under conditions of average naturalized streamflow and currently-permitted WWTP discharge. For the N. B. Davidson WWTP, the total travel distance is approximately 10.4 miles, and the average carriage loss has been estimated to be 0.7% of the amount of effluent discharged from the plant under conditions of average naturalized streamflow and currently-permitted WWTP discharge.

V. Diversion Point Information (30 TAC §§ 295.6 and 295.7)

As described above, all diversions of the City's return flows from the Robinson Creek and N. B. Davidson WWTPs by the City or by prospective users under contract with the City will be located along the two designated stream reaches upstream of the headwaters of Lake Conroe that currently convey the effluent discharged from these WWTPs as delineated on the map in Figure 1. For purposes of this amendment, the stream segment conveying effluent discharged from the Robinson Creek WWTP is designated as Diversion Reach No. 1, and the stream segment conveying effluent discharged from the N. B. Davidson WWTP is designated as Diversion Reach No. 2. Attachment E contains the Worksheet 3.0 Diversion Point Information forms for these diversion reaches. The City has the power of eminent domain for legal acquisition of and/or access to property along these reaches to facilitate diversion operations.

The maximum diversion rate for withdrawal of effluent discharged from the Robinson Creek WWTP will not exceed the plant's authorized maximum two-hour discharge rate of 5,208 gallons per minute (11.6 cubic feet per second). The maximum diversion rate for withdrawal of effluent discharged from the N. B. Davidson WWTP will not exceed the plant's authorized maximum two-hour discharge rate of 1,778 gallons per minute (4.0 cubic feet per second). On any given day, the total effluent diverted from all locations either by the City or by users under contract with the City, including diversions from the streams above Lake Conroe and from Lake Conroe itself, will not

exceed the corresponding combined daily quantity of effluent discharged from the Robinson Creek and N. B. Davidson WWTPs, after taking into consideration travel time and carriage losses.

VI. Surplus or Re-Use (30 TAC § 295.8)

Any of the City's wastewater effluent discharged into the San Jacinto River Basin that the City or users under contract with the City are entitled to divert and use under authority of the amended Permit No. 12754 but that is not consumptively used by these users will either remain in or be discharged to the streams and watercourses in the San Jacinto River Basin which originally conveyed the effluent.

VII. Water Conservation and Drought Contingency Plans (30 TAC § 295.9)

The COH has approved water conservation and drought contingency plans on file with the TCEQ. The City's current water conservation and drought contingency plans are included in Attachment F. As required by 30 TAC §288.5, any water supply agreement that the City may enter into with users of effluent as authorized under the amended Permit No. 12754 will include the requirement that these users develop and implement water conservation and drought contingency plans using the applicable elements of Chapter 288 of Title 30 of the Texas Administrative Code. If required, these water supply agreements will be submitted to TCEQ for review and approval.

VIII. Storage in Another's Reservoir (30 TAC § 295.12)

Under the amended Permit No. 12754 being applied for herein, the COH is not seeking authority to store, nor will it store, in any reservoir on an intervening watercourse any of the wastewater effluent being conveyed from the COH's Robinson Creek and N. B. Davidson WWTPs to the authorized diversion points.

IX. Consistency with State and Regional Water Plans (30 TAC § 295.16)

Indirect reuse of wastewater is one of several recommended water management strategies to meet the future water needs in Montgomery County identified in the 2016 Region H Regional Water Plan. This application serves to facilitate such indirect reuse strategies in a manner that is consistent with the 2016 Region H Regional Water Plan and the State Water Plan because there is nothing in these Plans that conflicts with the scope of this proposed amendment.

X. Existing Water Rights Granted Based on Use or Availability of COH Return Flows

All of the existing water rights located downstream of the outfalls for the COH's Robinson Creek and N. B. Davidson WWTPs were examined at the time the original application for Permit No. 12754 was submitted to the TCEQ in 2011, and it was determined at that time that the proposed diversion of the City's return flows by the MUDs from Lake Conroe under authority of Permit No. 12754 would not adversely impact downstream water rights. Then, these downstream water rights were determined either: (1) to have been granted before operation of the City's WWTPs began and therefore could not have been granted in reliance on discharges from these WWTPs, (2) to have been granted after operation of the City's WWTPs began but were located on the tidally-influenced Houston Ship Channel with saline water diversions for their operations and therefore were not likely to have been granted based on the use or availability of the subject return flows, or (3) to

have been granted after 2000 when the TCEQ began using the Run 3 version of the water availability model for the San Jacinto Basin for evaluating applications for new appropriations, which by prescription does not include any return flows in the river system. Based on this earlier analysis, it is concluded that none of the existing water rights located on watercourses downstream from either the Robinson Creek or the N. B. Davidson WWTPs, even those granted since 2011, could be impacted by the diversion of return flows from these plants as proposed under the subject amendment of Permit No. 12754.

CLOSURE

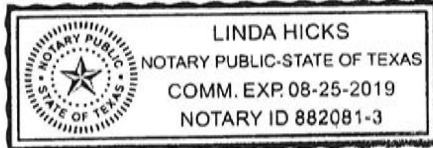
Fees required to process this application will be paid by the City immediately upon notification and request from TCEQ.

We would appreciate your timely review and processing of this application and the supporting materials to achieve administrative completeness as soon as possible. Should you have any questions or need additional information, please do not hesitate to contact me. Thank you for your time and consideration of this application.

Sincerely,
CITY OF HUNTSVILLE, TEXAS

Brent S. Sherrod, P.E.
Director of Public Works

SWORN TO AND SUBSCRIBED before me this 3rd day of December, 2018.



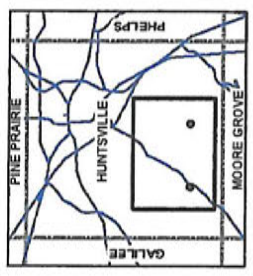
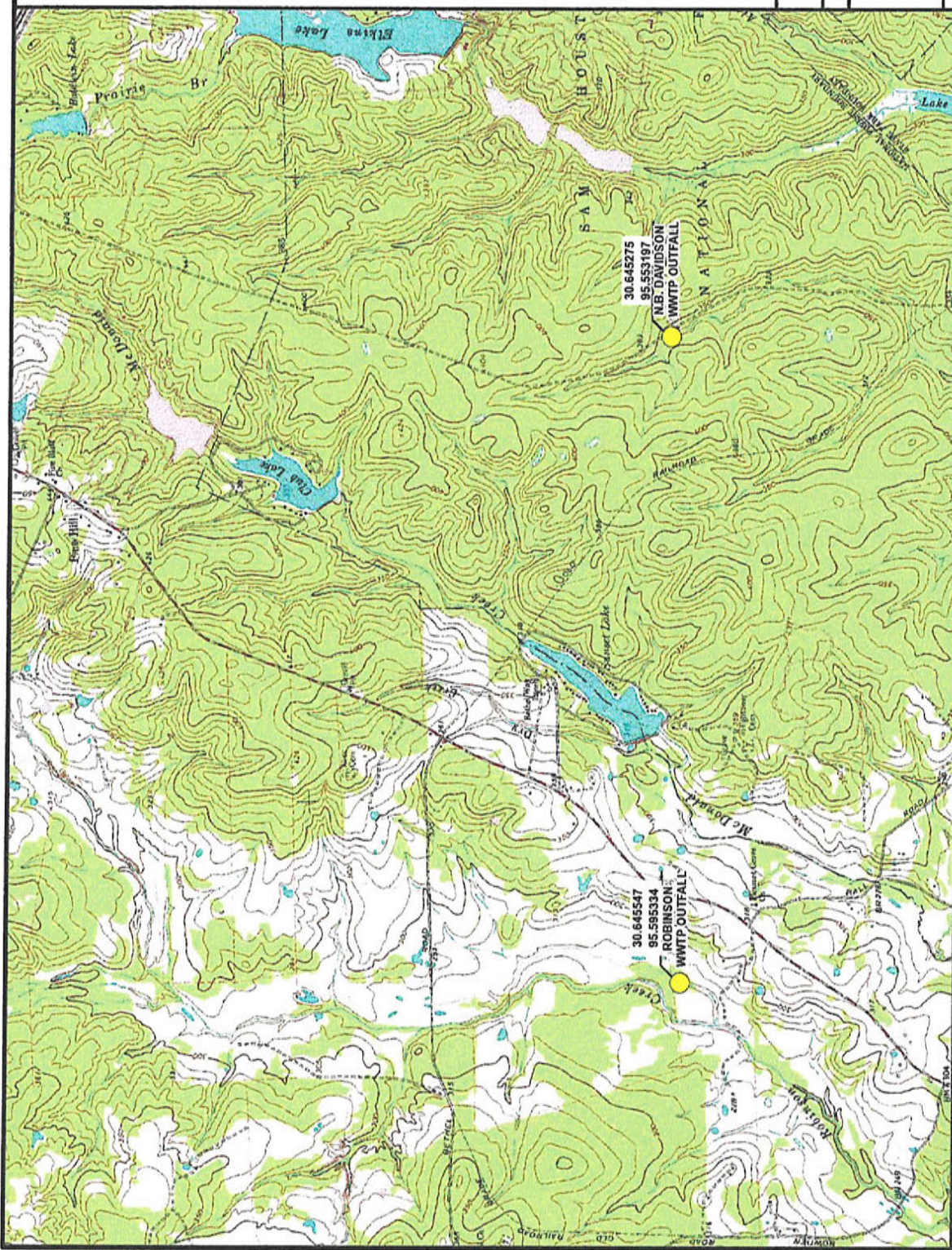
Linda Hicks
Notary Public for the State of Texas

- c: Emily Rogers, Bickerstaff, Heath, Delgado & Acosta, LLP
- Robert J. Brandes, Ph.D., P.E., Robert J. Brandes Consulting
- Carol Reed, Public Utilities Support Services

- Attachment A – USGS Map Showing Huntsville WWTP Outfall Locations
- Attachment B – Travel Time and Carriage Loss Calculations
- Attachment C – Photographs of Streams Along Effluent Conveyance Routes
- Attachment D – City of Huntsville TCEQ Administrative Information Report
- Attachment E – City of Huntsville TCEQ Technical Information Report and Worksheets
- Attachment F – City of Huntsville Water Conservation and Drought Contingency Plans

ATTACHMENT A

USGS Map Showing Huntsville WWTP Outfall Locations



7.5' Series USGS (1:24,000)

LATITUDE
LONGITUDE
FACILITY NAME
WWTP Outfall Location



Brandes Consulting
Huntsville, TX Bed & Banks
ATTACHMENT A
WWTP Outfall Locations
USGS Topographic Map
July 2011
100019023

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ATTACHMENT B

Travel Time and Carriage Loss Calculations

ATTACHMENT B

TRAVEL TIME AND CARRIAGE LOSS CALCULATIONS City of Huntsville Application for Amendment of Permit No. 12754

The potential for subsurface seepage losses along the streams downstream of the City of Huntsville's (COH or City) Robinson Creek and N. B. Davidson Wastewater Treatment Plants (WWTP) to Lake Conroe was assessed as part of the original application for Permit No. 12754. This investigation was based on information regarding local soil characteristics, hydrogeologic conditions, and springs in the area, and as a result of these analyses, it was concluded that these streams most likely are not flow-losing streams but rather flow-gaining streams as far as seepage is concerned. This flow-gaining condition was substantiated by sustained flows that were observed in tributary streams in the area that were not receiving effluent from either of the two COH WWTPs. Furthermore, Vick Spring, which is located in the headwaters of East Sandy Creek, the principal receiving stream for the N. B. Davidson WWTP, is evidence of groundwater discharges into local streams. Hence, with this evidence of sustained base flows in the area to support the soils and hydrogeologic assessment, it was considered very unlikely that the wastewater effluent being discharged into the receiving streams from the two WWTPs experiences any significant losses due to channel seepage.

Based on the current surface water rights master file posted by the Texas Commission on Environmental Quality (TCEQ), there are no surface water rights of record authorized on any of the receiving streams downstream of the Robinson Creek and N. B. Davidson WWTPs and upstream of West Fork San Jacinto River; hence, it is also not likely there are any significant diversions of flow from these streams. Furthermore, given that no extensive stands of aquatic plants were observed along these streams during the March 23rd, 2011, site visit, it does not appear that plant uptake is a significant factor that could cause streamflow losses. Any potential losses of streamflow due to evapotranspiration would likely be offset by reduced surface evaporation resulting from tree canopy that extends along most of the streams. Consequently, it has been concluded that the primary cause of any reduction in the quantity of wastewater effluent that may occur as the effluent is conveyed down these streams most likely will be due to surface evaporation, and it is these evaporation losses that were quantified for purposes of establishing carriage losses for the COH bed and banks Permit No. 12754.

For assessing the stream channel geometry and travel times related to the conveyance of wastewater effluent from the COH's Robinson Creek and N. B. Davidson WWTPs to Lake Conroe on the West Fork San Jacinto River, uniform flow calculations were performed for selected stream segments. Calculations were made for two stream segments downstream of the Robinson Creek WWTP: (1) from the WWTP outfall on Robinson Creek to the Bowden Road crossing of Robinson Creek, a distance of approximately 1.5 miles; and (2) from Bowden Road to the mouth of Robinson Creek at its confluence with the West Fork San Jacinto River, a distance of approximately 4.9 miles. For the stream reach downstream of the N. B. Davidson WWTP, two segments also were considered: (1) from the WWTP outfall on an unnamed tributary of Persimmon Creek to the confluence of Persimmon Creek with East Sandy Creek (just upstream of the FM 1374 crossing), a distance of approximately 4.8 miles; and (2) along East Sandy Creek from Persimmon Creek to Lake Conroe, a distance of approximately 5.6 miles.

For these calculations, it was assumed that the discharge from each of the City's WWTPs is equal to the currently authorized average annual amount specified in their respective TPDES permits. For the Robinson Creek WWTP, this is 2.5 million gallons per day (mgd), which is equivalent to a streamflow of 3.87 cubic feet per second (cfs) or an average annual flow of 2,801 acre-feet. For the N. B. Davidson WWTP, this authorized average annual discharge is 1.6 mgd, which is equivalent to a streamflow of 2.48 cfs or an average annual flow of 1,792 acre-feet.

Average flows for the streams conveying these discharges also were assumed based on naturalized flows as used in the TCEQ's water availability models. Since there are no existing water rights on the subject stream segments, naturalized flows provide a useful representation of actual streamflow conditions. While there are some water rights located on other tributaries of East Sandy Creek that do appropriate some streamflow, the impact of these on downstream flows were considered insignificant based on a comparison of simulated regulated flows with corresponding naturalized flows. The naturalized flow data set from the San Jacinto Basin water availability model for the primary control point identified as WS-CO located on the West Fork San Jacinto River just below Lake Conroe was extracted and used to derive average annual naturalized flows at specific locations on the subject stream segments based on relative drainage area sizes. These values are summarized below:

STREAM LOCATION	AC-FT/YEAR
<u>Below Robinson Creek WWTP</u>	
Robinson Creek at Robinson Creek WWTP Outfall	5,227
Robinson Creek at Bowden Road Crossing	5,693
Robinson Creek at W. F. San Jacinto River Confluence	8,278
West Fork San Jacinto River at Lake Conroe	98,012
<u>Below N. B. Davidson WWTP</u>	
Unnamed Persimmon Ck Tributary at Davidson WWTP	182
Mouth of Unnamed Persimmon Ck Tributary	1,672
Persimmon Creek at East Sandy Creek Confluence	2,518
East Sandy Creek at Persimmon Creek Confluence	14,821
Mouth of East Sandy Creek at Lake Conroe	19,520

Observations of the various streams at available access points made during the site visit to the area on March 23rd, 2011, were used to establish general stream channel and flow characteristics for the subject streams, and this information, together with the reported discharges from the WWTPs on that day, were used to perform a general calibration of the uniform flow representations of channel hydraulics. The calibrated uniform flow calculation process then was applied using the permitted discharges from the WWTPs and the average naturalized flows to determine estimates of average channel surface areas and travel times. These calculations are presented in Table B-1 for the stream segments downstream of the Robinson Creek WWTP and in Table B-2 for the stream segments downstream of the N. B. Davidson WWTP. Because access limitations did not allow field observations of the channel of the West Fork San Jacinto River to be made between the mouth of Robinson Creek and Lake Conroe, it was assumed for purposes of the surface area and travel time calculations that the average width of this reach is 50 feet and its average velocity is 1.0 feet per second, values that appeared to be reasonable based on aerial photography and the

uniform flow calculations for Robinson Creek and East Sandy Creek. Using these parameter values with the average annual naturalized flow for the West Fork San Jacinto River at the headwaters of Lake Conroe, the uniform flow calculations produced an average depth of 2.79 feet, which also appears to be reasonable for this stream reach.

The surface areas resulting from the uniform flow calculations for the stream segments downstream of the Robinson Creek and the N. B. Davidson WWTPs under average naturalized flow conditions with the WWTP discharges assumed at their currently permitted values were used in the evaporation loss calculations. These surface area values are highlighted and listed in Column 25 in Tables B-1 and B-2. The evaporation loss calculations are shown in Table B-3 for the stream segments downstream of the Robinson Creek WWTP and the N. B. Davidson WWTP. In these analyses, historical 1954-2010 average annual lake evaporation quantities from the Texas Water Development Board (TWDB) for Quadrant 712 are multiplied times the surface areas of the different stream segments under average naturalized flow and currently-permitted WWTP discharge conditions to calculate average annual evaporation loss quantities expressed in acre-feet per year. The portion of these evaporation losses attributable to the effluent flowing in each of the stream segments then was determined by multiplying the evaporation loss amount times the fraction of the total flow in the segment that is comprised of effluent, both expressed as annual flow quantities. The sum of these effluent-based average annual evaporation quantities for all of the conveyance segments downstream of each WWTP then was divided by the currently-permitted annual discharge from each WWTP to arrive at a percentage value for the evaporation losses associated with the discharge from each WWTP. As shown in Table B-3, this value is 1.02% for the stream segments downstream of the Robinson Creek WWTP and 0.67% for the stream segments downstream of the N. B. Davidson WWTP.

The total travel time for the conveyance of wastewater effluent from the Robinson Creek WWTP down Robinson Creek and the West Fork San Jacinto River to Lake Conroe was determined to be 20.6 hours based on the uniform flow calculations presented in Table B1 (see Column 26). Similarly, for the conveyance of effluent from the N. B. Davidson WWTP down the unnamed tributary of Persimmon Creek, then down Persimmon Creek, and then down East Sandy Creek to Lake Conroe, the total travel time was determined to be 16.1 hours as shown in Table B-2 (see Column 26). For purposes of accounting using increments of whole days, both of these travel times were scaled up to one day. This is the lag time that is to be used for accounting purposes when determining the allowable quantity of the COH's effluent that can be diverted from the stream segments located upstream of Lake Conroe on any given day. In essence, the pumping rate for withdrawals of effluent by the City or by users under contract with the City will be adjusted daily to ensure that the quantity of effluent diverted on any given day is no more than quantity of wastewater effluent that was discharged from the COH's Robinson Creek or N. B. Davidson WWTPs one day earlier, after adjusting for carriage losses.

Table B-1 Receiving Stream Channel Hydraulics for Robinson Creek WWTP (Robinson Creek and West Fork San Jacinto River)

Observed Conditions on March 23, 2011: Target Flow = 0.79 mgd = 1.22 cfs (Robinson Creek WWTP Discharge at 0.79 mgd)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
River Reach	Reach Definition		Length feet	Reach Characteristics		Velocity fps	Reach Slope ft/ft	Trapezoidal Channel Section Characteristics		Flow cfs	Velocity fps	Depth feet	Top/Bottom Widths, Side Slopes, Depth, Area & Wetted Perimeter	P (ft)
	Upstream Point	Downstream Point		Up Elev feet msl	Dn Elev feet msl			Manning's n value	T (ft)					
RCC	Bowden Rd	Bowden Rd	7,854	268.44	244.46	0.49	0.00305	8.0	7.0	1.50	1.50	0.33	2.48	8.2
RCC	Bowden Rd	Mouth of Robin Ck	25,724	244.46	209.35	0.42	0.00136	10.0	8.0	2.00	2.00	0.50	4.50	10.2

3/23/2011 Stream Observations

Reach	Flow cfs	Velocity fps	Depth feet	Top/Width feet
RCB	1-2	0.5-1	~0.33	8-10
RCC	1-2	0.5-1	0.5-2	10-12

(16)	(17)	(18)	(19)	(20)	(21)	(22)
River Reach	Reach Definition	Downstream Point	Conveyance Velocity fps	Flow cfs	Surface Area acres	Travel Time hours
RCC	Bowden Rd	Bowden Rd	0.49	1.22	1.44	4.4
RCC	Bowden Rd	Mouth of Robin Ck	0.42	1.91	5.91	16.8

Average Naturalized Flow Conditions With Permitted Robinson Creek WWTP Discharge: Target Flow = Avg Nat Flow + 3.87 cfs (2.50 mgd)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
River Reach	Reach Definition		Length feet	Reach Characteristics		Velocity fps	Reach Slope ft/ft	Trapezoidal Channel Section Characteristics		Flow cfs	Velocity fps	Depth feet	Top/Bottom Widths, Side Slopes, Depth, Area & Wetted Perimeter	P (ft)
	Upstream Point	Downstream Point		Up Elev feet msl	Dn Elev feet msl			Manning's n value	T (ft)					
RCC	Bowden Rd	Bowden Rd	7,854	268.44	244.46	0.49	0.00305	10.7	7.0	1.50	1.50	1.22	10.78	11.4
RCC	Bowden Rd	San Jac Rv	25,724	244.46	209.35	0.42	0.00136	14.1	8.0	2.00	2.00	1.52	16.78	14.8
WFSJR	Mouth of Robin Crk	HW of Lk Conroe	34,526	n/a	n/a	n/a	n/a	50.0	n/a	n/a	n/a	2.79	139.50	55.6
Combined Reaches:			68,105	or	12.90	miles								

(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
River Reach	Reach Definition	Downstream Point	Velocity fps	Nat Q ac-ft/yr	Nat Q cfs	WWTP cfs	Target Q cfs	Flow cfs	Surface Area acres	Travel Time hours
RCC	Bowden Rd	Bowden Rd	1.06	5,460	7.5	3.87	11.4	11.4	1.92	2.1
RCC	Bowden Rd	San Jac Rv	0.80	6,985	9.6	3.87	13.5	13.4	8.31	9.0
WFSJR	Mouth of Robin Crk	HW of Lk Conroe	1.00	98,012	135.4	3.87	139.3	139.5	39.63	9.6
Total Travel Time:										20.6

Trapezoidal Open Channel Design & Equations

$$Q = VA \quad V = \frac{k}{n} R^{2/3} S^{1/2} \quad R = \frac{A}{P} \quad A = \frac{y}{2}(b + T)$$

$$P = b + y \left(\sqrt{1 + z_1^2} + \sqrt{1 + z_2^2} \right) \quad T = b + y(z_1 + z_2)$$

$$F = V \sqrt{\frac{T}{gA \cos \theta}} \quad \theta = \tan^{-1}(S)$$

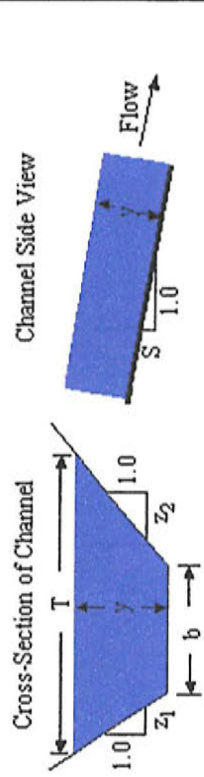


Table B-2 Receiving Stream Channel Hydraulics for N. B. Davidson WWTP Unnamed Tributary, Persimmon Creek and East Sandy Creek

Observed Conditions on March 23, 2011 - Target Flow = 0.73 mgd = 1.13 cfs (Davidson WWTP Discharge at 0.73 mgd)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
River Reach	Reach Definition		Reach Characteristics			Trapezoidal Channel Section Characteristics			Trapezoidal Channel Section Characteristics						
	Upstream Point	Downstream Point	Length feet	Up Elev feet msl	Dn Elev feet msl	Manning's n value	Reach Slope ft/ft	Reach Slope ft/ft	Top (ft)	Bottom Widths, Side Slopes, Depth, Area & Wetted Perimeter	z1 (ft)	z2(ft)	Depth (ft)	Area (sq ft)	P (ft)
ESCA	WWTP	PC-ESC Confluence	25,388	343.60	231.43	0.075	0.00442	0.00442	4.1	2.6	1.50	1.50	0.50	1.98	4.4
ESCB	PC-ESC Confluence	Lake Conroe	29,523	231.43	202.17	0.075	0.00099	0.00099	7.6	4.8	2.00	2.00	0.70	4.34	7.9

(16) (17) (18) (19) (20) (21) (22)

Reach Definition		Conveyance		Surface Area		Travel Time	
River Reach	Upstream Point	Downstream Point	Velocity fps	Flow cfs	Area acres	Area acres	Time hours
ESCA	WWTP	PC-ESC Confluence	0.69	1.16	2.39	2.39	10.2
ESCB	PC-ESC Confluence	Lake Conroe	0.42	1.82	5.15	5.15	19.6

3/23/2011 Stream Observations

River Reach	Flow cfs	Velocity fps	Depth feet	Top Width feet
ESCA	1-2	0.5-1	0.5-1	3-10
ESCB	1-2	0.5-1	0.5-2	10-15

Average Naturalized Flow Conditions With Permitted N. B. Davidson WWTP Discharge: Target Flow = Avg Nat Flow + 2.48 cfs (1.60 mgd)

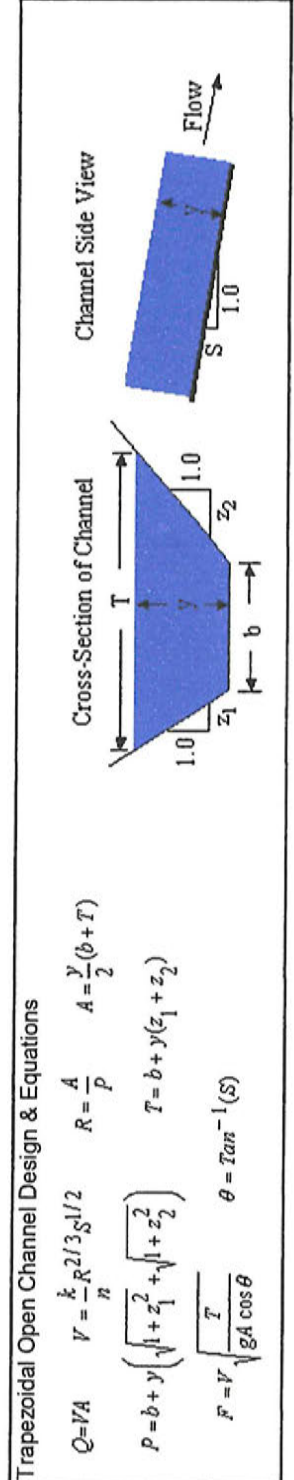
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	
River Reach	Reach Definition		Reach Characteristics			Trapezoidal Channel Section Characteristics			Trapezoidal Channel Section Characteristics						
	Upstream Point	Downstream Point	Length feet	Up Elev feet msl	Dn Elev feet msl	Manning's n value	Reach Slope ft/ft	Reach Slope ft/ft	Top (ft)	Bottom Widths, Side Slopes, Depth, Area & Wetted Perimeter	z1 (ft)	z2(ft)	Depth (ft)	Area (sq ft)	P (ft)
ESCA	WWTP	PC-ESC Confluence	25,388	343.60	231.43	0.075	0.00442	0.00442	5.8	2.6	1.50	1.50	1.05	4.38	6.4
ESCB	PC-ESC Confluence	Lake Conroe	29,523	231.43	202.17	0.075	0.00099	0.00099	16.1	4.8	2.00	2.00	2.83	29.60	17.5

Combined Reaches: 54,910 or 10.40 miles

(16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26)

Reach Definition		Conveyance			Surface Area		Travel Time			
River Reach	Upstream Point	Downstream Point	Velocity fps	Nat Q ac-ft/yr	Net Q cfs	WWTP cfs	Target cfs	Flow cfs	Surface Area acres	Travel Time hours
ESCA	WWTP	PC-ESC Confluence	1.03	1,457	2.0	2.48	4.5	4.5	3.35	6.9
ESCB	PC-ESC Confluence	Lake Conroe	0.89	17,171	23.7	2.48	26.2	26.3	10.93	9.2

Total Travel Time: 16.1



**Table B-3 Calculation of Stream Surface Water Evaporation Losses
Attributable to Conveyance of City of Huntsville Wastewater Effluent**

HISTORICAL WATER SURFACE EVAPORATION DATA

TWDB Quad 712 1954-2010 Average Lake Evaporation Rate (inches/year):	49.84
TWDB Quad 712 1954-2010 Average Lake Evaporation Rate (feet/year):	4.15

ROBINSON CREEK WWTP STREAM SEGMENT EVAPORATION LOSS CALCULATIONS

(1) Robinson Creek WWTP Permitted Discharge Capacity (mgd):	2.50
(2) Robinson Creek WWTP Permitted Discharge Capacity (ac-ft/yr):	2,801
<u>Reach RCB - Robinson WWTP to Bowden Road</u>	
(3) 1940-96 Average Naturalized Flow Between WWTP and Bowden Road (ac-ft/yr):	5,460
(4) Combined WWTP Flow and Naturalized Flow Between WWTP and Bowden Road (ac-ft/yr):	8,261
(5) Average Channel Surface Area Between WWTP and Bowden Road (acres):	1.92
(6) Average Water Surface Evaporation Loss Between WWTP and Bowden Road (ac-ft/yr):	7.99
(7) Flow-Weighted Average Evaporation Loss Attributable to WWTP Flow (ac-ft/yr):	2.71
<u>Reach RCC - Bowden Road to Mouth of Robinson Creek</u>	
(8) 1940-96 Average Naturalized Flow Between Bowden Road and Mouth (ac-ft/yr):	6,985
(9) Combined WWTP Flow and Naturalized Flow Between Bowden Road and Mouth (ac-ft/yr):	9,786
(10) Average Channel Surface Area Between Bowden Road and Mouth (acres):	8.31
(11) Average Water Surface Evaporation Loss Between Bowden Road and Mouth (ac-ft/yr):	34.53
(12) Flow-Weighted Average Evaporation Loss Attributable to WWTP Flow (ac-ft/yr):	9.88
<u>Reach WFSJR - West Fork San Jacinto River from Robinson Creek to Lake Conroe</u>	
(13) 1940-96 Average Naturalized Flow Between Robinson Creek and Lake Conroe (ac-ft/yr):	98,012
(14) Combined WWTP Flow and Naturalized Flow Between Robinson Creek and Lake Conroe (ac-ft/yr):	100,812
(15) Average Channel Surface Area Between Robinson Creek and Lake Conroe (acres):	139.50
(16) Average Water Surface Evaporation Loss Between Robinson Creek and Lake Conroe (ac-ft/yr):	579.39
(17) Flow-Weighted Average Evaporation Loss Attributable to WWTP Flow (ac-ft/yr):	16.10
<u>Combined Reaches RCB, RCC and WFSJR - Robinson Creek WWTP to Lake Conroe</u>	
(18) Average Evaporation Loss Between WWTP and Lake Conroe (ac-ft/yr):	621.92
(19) Average Evaporation Loss Between WWTP and Lake Conroe Attributable to WWTP Flow (ac-ft/yr):	28.69
(20) Average Percentage of WWTP Discharge Lost to Evaporation (%):	1.02%

N. B. DAVIDSON WWTP STREAM SEGMENT EVAPORATION LOSS CALCULATIONS

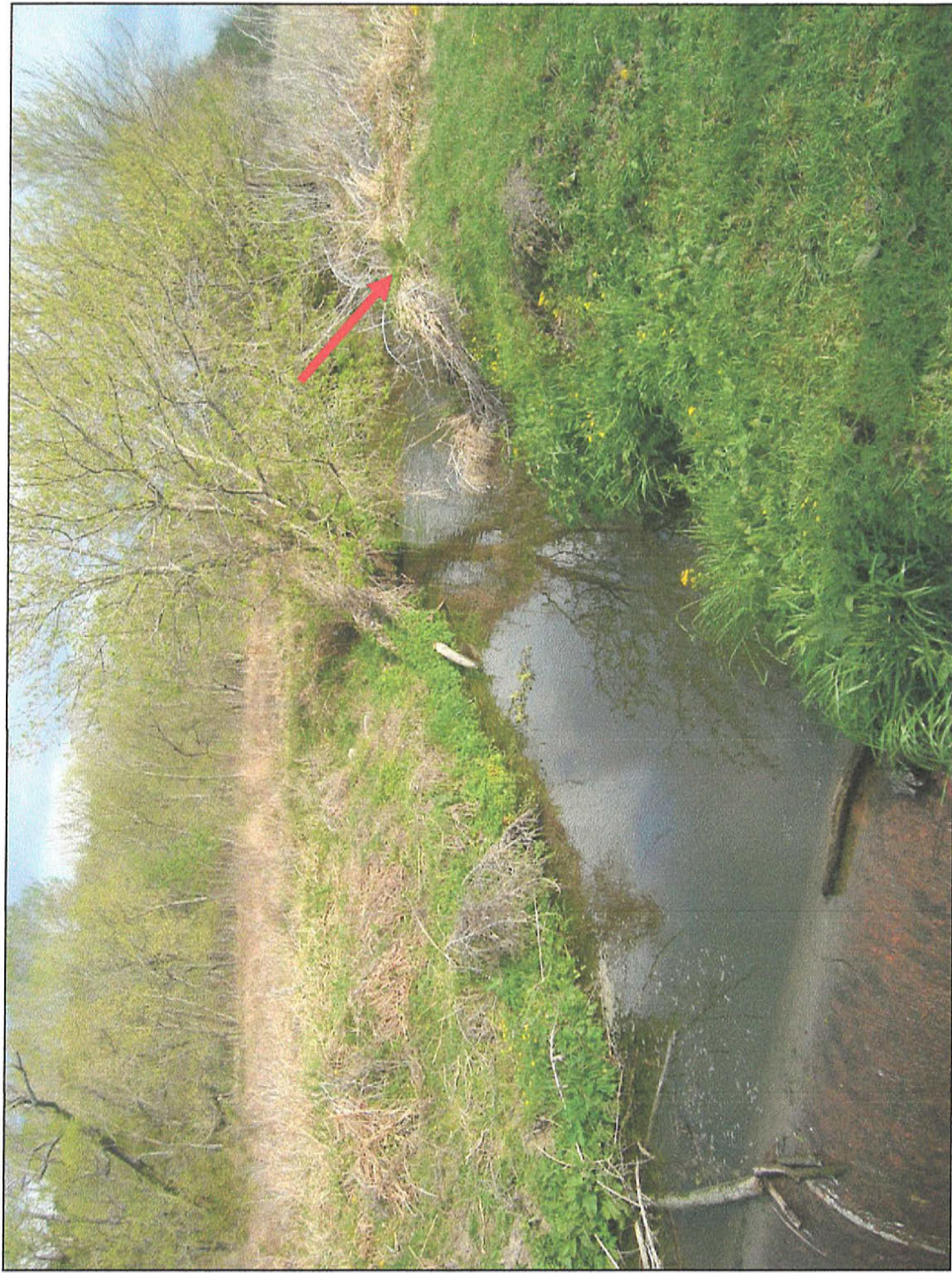
(21) Davidson WWTP Permitted Discharge Capacity (mgd):	1.60
(22) Davidson WWTP Permitted Discharge Capacity (ac-ft/yr):	1,792
<u>Reach ESCA - Davidson WWTP to Confluence of Persimmon Creek and E Sandy Creek</u>	
(23) 1940-96 Average Naturalized Flow Between WWTP and ESC/PC Confluence (ac-ft/yr):	1,457
(24) Combined WWTP and Naturalized Flow Between WWTP and ESC/PC Confluence (ac-ft/yr):	3,250
(25) Average Channel Surface Area Between WWTP and ESC/PC Confluence (acres):	3.35
(26) Average Water Surface Evaporation Loss Between WWTP and ESC/PC Confluence (ac-ft/yr):	13.92
(27) Flow-Weighted Average Evaporation Loss Attributable to WWTP Flow (ac-ft/yr):	7.68
<u>Reach ESCB - Confluence of Persimmon Creek and E Sandy Creek to Lake Conroe</u>	
(28) 1940-96 Average Naturalized Flow Between ESC/PC Confluence and Lake Conroe (ac-ft/yr):	17,171
(29) Combined WWTP and Naturalized Flow Between ESC/PC Confluence and Lake Conroe (ac-ft/yr):	18,963
(30) Average Channel Surface Area Between ESC/PC Confluence and Lake Conroe (acres):	10.93
(31) Average Water Surface Evaporation Loss Between ESC/PC Confluence and Lake Conroe (ac-ft/yr):	45.38
(32) Flow-Weighted Average Evaporation Loss Attributable to WWTP Flow (ac-ft/yr):	4.29
<u>Combined Reach ESCA and ESCB - Davidson WWTP to Lake Conroe</u>	
(33) Average Evaporation Loss Between WWTP and Lake Conroe (ac-ft/yr):	59.30
(34) Average Evaporation Loss Between WWTP and Lake Conroe Attributable to WWTP Flow (ac-ft/yr):	11.97
(35) Average Percentage of WWTP Discharge Lost to Evaporation (%):	0.67%

ATTACHMENT C

Photographs of Streams Along Effluent Conveyance Routes



Robinson Creek WWTP - Outfall



Robinson Creek WWTP – 20 Feet Downstream of Outfall (Arrow) Looking Upstream



Robinson Creek WWTP – Looking Downstream ~30 Feet Downstream of Outfall



Robinson Creek WWTP – Looking Downstream ~100 Feet Downstream of Outfall



N. B. Davidson WWTP - Outfall



N. B. Davidson WWTP – 5 Feet Downstream of Outfall Prior to Flowing into Unnamed Tributary of Persimmon Creek (Arrow)



N. B. Davidson WWTP – Looking Upstream on Unnamed Tributary of Persimmon Creek at Confluence with Outfall



N. B. Davidson WWTP – Looking Downstream on Unnamed Tributary of Persimmon Creek at Confluence with Outfall



Robinson Creek ~1 Mile Upstream of Robinson Creek WWTP at Robinson Creek Road (or Bethel Road) Looking Downstream



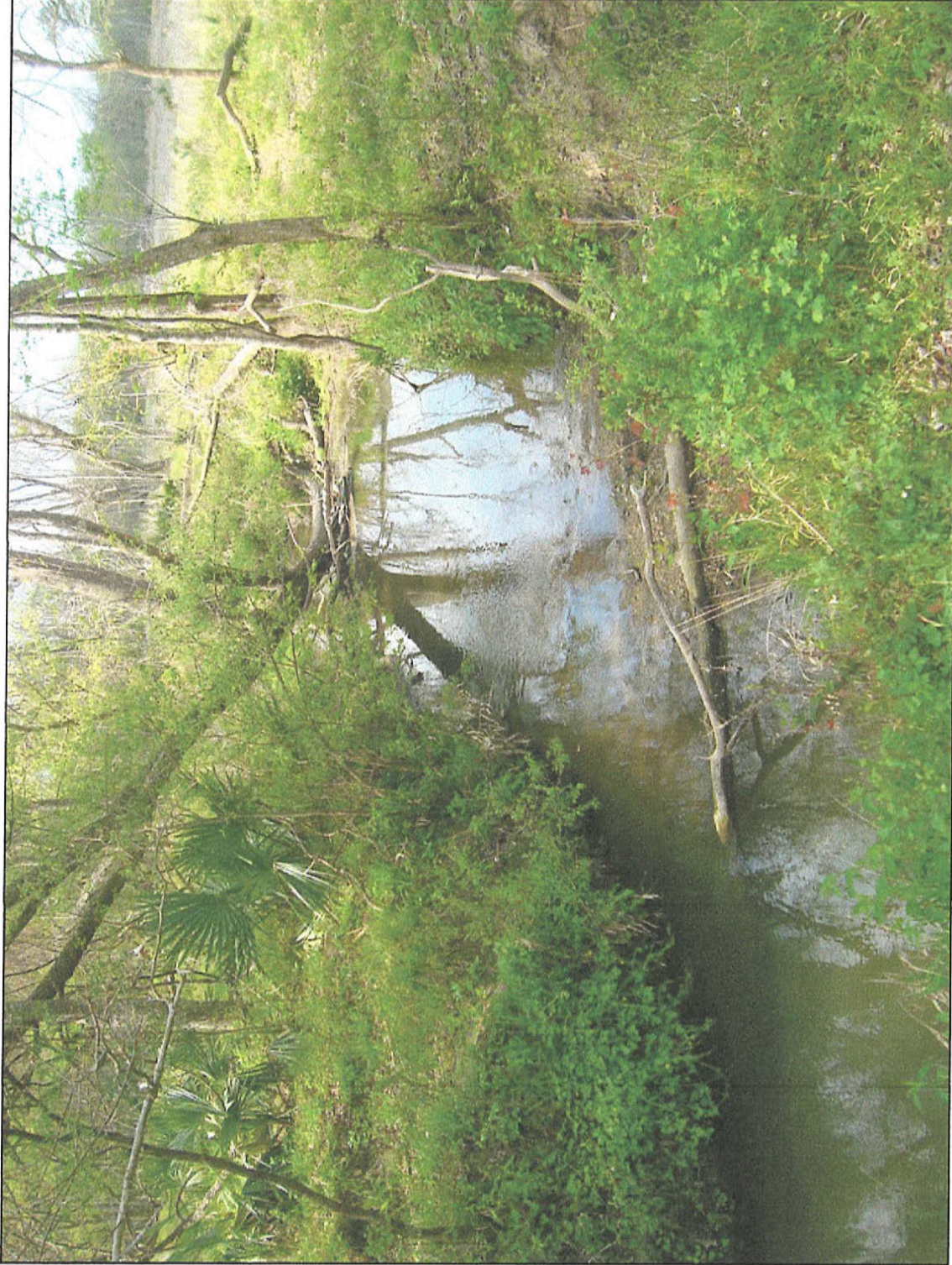
Robinson Creek ~1 Mile Upstream of Robinson Creek WWTP at Robinson Creek Road (or Bethel Road) Looking Upstream



Robinson Creek ~1.5 Miles Downstream of Robinson Creek WWTP at Bowden Road Looking Downstream



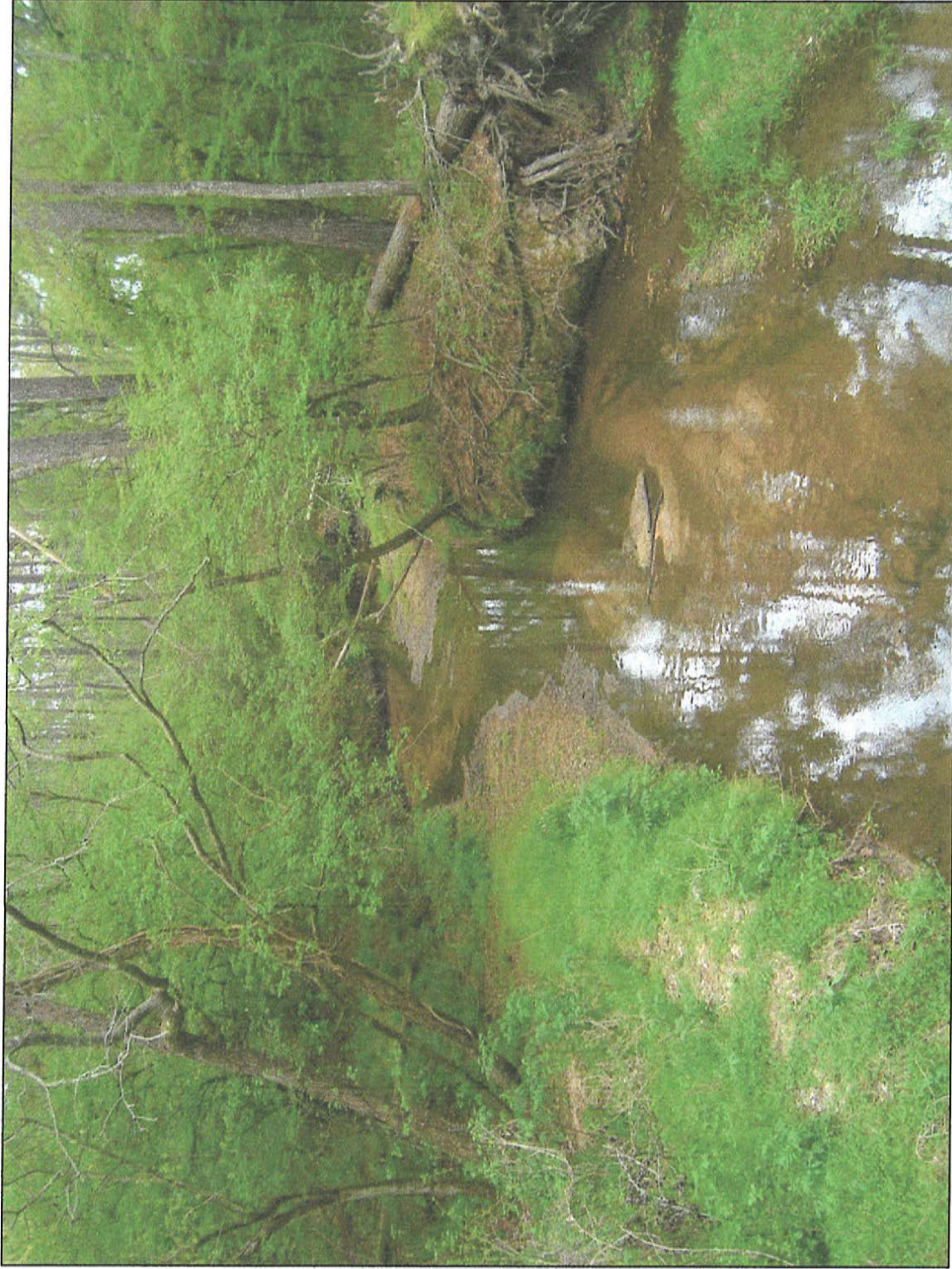
Robinson Creek ~1.5 Miles Downstream of Robinson Creek WWTP at Bowden Road Looking Upstream



Robinson Creek ~1.5 Miles Downstream of Robinson Creek WWTP ~200 Feet Downstream of Bowden Road Looking Downstream



East Sandy Creek at FM 1374 (Possum Walk Road) Looking Upstream



East Sandy Creek at FM 1374 (Possum Walk Road) Looking Downstream



Unnamed Tributary of East Sandy Creek Uninfluenced by N. B. Davidson WWTP Discharge but with Sustained Flow Looking Upstream



Unnamed Tributary of East Sandy Creek Uninfluenced by N. B. Davidson WWTP Discharge but with Sustained Flow Looking Downstream



Plum Creek, Tributary of East Sandy Creek, Uninfluenced by N. B. Davidson WWTP Discharge but with Sustained Flow at Dipping Vat Road Looking Upstream



Plum Creek, Tributary of East Sandy Creek, Uninfluenced by N. B. Davidson WWTP Discharge but with Sustained Flow at Dipping Vat Road Looking Downstream



Upper Reach of East Sandy Creek near Vick Spring Upstream of Interstate 45 Looking Upstream



Upper Reach of East Sandy Creek near Vick Spring Upstream of Interstate 45 Looking Downstream (Visible Spring Discharge at Arrow)



Visible Spring Discharge into Upper Reach of East Sandy Creek near Vick Spring Upstream of Interstate 45

ATTACHMENT D

**City of Huntsville TCEQ Administrative Information Report
Amendment of Permit No. 12754**

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

TCEQ WATER RIGHTS PERMITTING APPLICATION

ADMINISTRATIVE INFORMATION CHECKLIST

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

APPLICANT(S): CITY OF HUNTSVILLE, TEXAS

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

Y/N		Y/N	
<u>Y</u>	Administrative Information Report	<u>Y</u>	Worksheet 3.0
<u>N</u>	Additional Co-Applicant Information	<u>Y</u>	Additional W.S 3.0 for each Point
<u>N</u>	Additional Co-Applicant Signature Pages	<u>N</u>	Recorded Deeds for Diversion Points
<u>Y</u>	Written Evidence of Signature Authority	<u>N</u>	Consent For Diversion Access
<u>Y</u>	Technical Information Report	<u>N</u>	Worksheet 4.0
<u>Y</u>	USGS Map (or equivalent)	<u>N</u>	TPDES Permit(s)
<u>Y</u>	Map Showing Project Details	<u>N</u>	WWTP Discharge Data
<u>Y</u>	Original Photographs	<u>N</u>	24-hour Pump Test
<u>N</u>	Water Availability Analysis	<u>N</u>	Groundwater Well Permit
<u>N</u>	Worksheet 1.0	<u>N</u>	Signed Water Supply Contract
<u>N</u>	Recorded Deeds for Irrigated Land	<u>N</u>	Worksheet 4.1
<u>N</u>	Consent For Irrigation Land	<u>Y</u>	Worksheet 5.0
<u>N</u>	Worksheet 1.1	<u>N</u>	Addendum to Worksheet 5.0
<u>N</u>	Addendum to Worksheet 1.1	<u>N</u>	Worksheet 6.0
<u>N</u>	Worksheet 1.2	<u>N</u>	Water Conservation Plan(s)
<u>N</u>	Addendum to Worksheet 1.2	<u>N</u>	Drought Contingency Plan(s)
<u>N</u>	Worksheet 2.0	<u>N</u>	Documentation of Adoption
<u>N</u>	Additional W.S 2.0 for Each Reservoir	<u>Y</u>	Worksheet 7.0
<u>N</u>	Dam Safety Documents	<u>N</u>	Accounting Plan
<u>N</u>	Notice(s) to Governing Bodies	<u>Y</u>	Worksheet 8.0
<u>N</u>	Recorded Deeds for Inundated Land	<u>Y</u>	Fees
<u>N</u>	Consent For Inundation Land		

For Commission Use Only:

Proposed/Current Water Right Number: _____

Basin: _____ Watermaster area Y/N: _____

RECEIVED

DEC 11 2018

Water Availability Division

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) 239-4691.**

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."

The City of Huntsville currently owns Permit No. 12754 that authorizes the use of the bed and banks of watercourses that are tributary to the West Fork San Jacinto River to convey effluent from two City-owned wastewater treatment plants downstream to a diversion point(s) on Lake Conroe. This application requests an amendment to Permit No. 12754 to also authorize the diversion of the wastewater discharged from the two WWTPs at any point along the tributary watercourses that convey the effluent to Lake Conroe. This application does not request any increase in the annual volume of wastewater effluent that can be diverted under authority of Permit No. 12754.

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?

(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 : 600745566 (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: Aron Kulhavy

Title: City Manager

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

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: City of Huntsville

Mailing Address: 1212 Avenue M

City: Huntsville

State: TX

ZIP Code: 77340

Indicate an X next to the type of Applicant:

<input type="checkbox"/> Individual	<input type="checkbox"/> Sole Proprietorship-D.B.A.
<input type="checkbox"/> Partnership	<input type="checkbox"/> Corporation
<input type="checkbox"/> Trust	<input type="checkbox"/> Estate
<input type="checkbox"/> Federal Government	<input type="checkbox"/> State Government
<input type="checkbox"/> County Government	<input checked="" type="checkbox"/> City Government
<input type="checkbox"/> Other Government	<input type="checkbox"/> Other _____

For Corporations or Limited Partnerships, provide:

State Franchise Tax ID Number: _____ SOS Charter (filing) Number: _____

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

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

First and Last Name: **Robert J. Brandes**

Title: **Consultant**

Organization Name: **Robert J. Brandes Consultii**

Mailing Address: **6000 Maurys Trail**

City: **Austin**

State: **Texas**

ZIP Code: **78730**

Phone No.: **512/461-1477**

Extension:

Fax No.: **N/A**

E-mail Address: [REDACTED]

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

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

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

First and Last Name:

Title:

Organization Name:

Mailing Address:

City:

State:

ZIP Code:

Phone No.:

Extension:

Fax No.:

E-mail Address:

NOT APPLICABLE

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) 239-4691, 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 Yes**

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 Yes**

6. SIGNATURE PAGE (Instructions, Page. 11)

Applicant:

I, Aron Kulhavy

City Manager

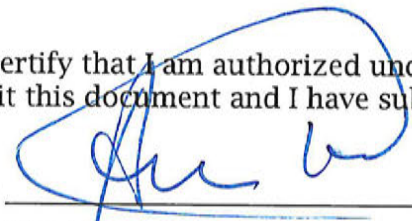
(Typed or printed name)

(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: _____



Date: _____

12/3/18

(Use blue ink)

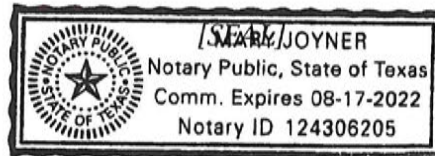
Subscribed and Sworn to before me by the said

on this 3rd day of December, 2018.

My commission expires on the 17th day of August, 2022.

Mary Joynes
Notary Public

Walker
County, Texas



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

ATTACHMENT E

**City of Huntsville TCEQ Technical Information Report and Worksheets
Amendment of Permit No. 12754**

TECHNICAL INFORMATION REPORT

WATER RIGHTS PERMITTING

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

Applicants are 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) 239-4691 to schedule a meeting. Applicant attended a pre-application meeting with TCEQ Staff for this Application? Y / N **N**

(If yes, date :November 16, 2017).

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

*If Applicant answered yes to (a) or (b) above, does Applicant also wish to be considered for a term permit pursuant to TWC § 11.1381? Y / N **N***

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

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. See instructions page. 6.*

Water Right (Certificate or Permit) number you are requesting to amend: 12754

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

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

- a. Applicant requests an amendment to an existing water right to increase the amount of the appropriation of State Water (diversion and/or impoundment)? Y / N **N**
If yes, application is a new appropriation for the increased amount, complete Section 1 of this Report PAGE. 1) regarding New or Additional Appropriations of State Water.
- b. Applicant requests to amend existing Term authorization to extend the term or make the water right permanent (remove conditions restricting water right to a term of years)? Y / N **N**
If yes, application is a new appropriation for the entire amount, complete Section 1 of this Report PAGE. 1) regarding New or Additional Appropriations of State Water.
- c. Applicant requests an amendment to change the purpose or place of use or to add an additional purpose or place of use to an existing Permit or Certificate? Y / N **N**
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 **Y**
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)
- e. Applicant requests amendment to add or modify an impoundment, reservoir, or dam? Y / N **N**
If yes, submit: Worksheet 2.0 - Impoundment/Dam Information Worksheet (submit one worksheet for each impoundment or reservoir)
- f. Other - Applicant requests to change any provision of an authorization not mentioned above? Y / N **N** *If yes, call the Water Availability Division at (512) 239-4691 to discuss.*

- Additionally, all amendments require:**
- **Worksheet 8.0 - Calculation of Fees; and Fees calculated - see instructions Page.34**
 - **Maps - See instructions Page. 15.**
 - **Additional Documents and Worksheets may be required (see within).**

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

- a. Pursuant to contract, Applicant requests authorization to convey, stored or conserved water to the place of use or diversion point of purchaser(s) using the bed and banks of a watercourse? TWC § 11.042(a). Y / N **N**

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

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

- b. Applicant requests to convey water imported into the state from a source located wholly outside the state using the bed and banks of a watercourse? TWC § 11.042 (a-1). Y / N **N**

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

- c. Applicant requests to convey Applicant's own return flows derived from privately owned groundwater using the bed and banks of a watercourse? TWC § 11.042(b). Y / N **N**

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

- d. Applicant requests to convey Applicant's own return flows derived from surface water using the bed and banks of a watercourse? TWC § 11.042(c). Y / N **N**

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

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

- e. Applicant requests to convey water from any other source, other than (a)-(d) above, using the bed and banks of a watercourse? TWC § 11.042(c). Y / N **N**

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

Worksheets and information: All required Worksheets are included in this Appendix E

- **Worksheet 1.0 - Quantity, Purpose, and Place of Use Information Worksheet** **N/A**
- **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) **N/A**
- **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) **N/A**
- **Worksheet 5.0 - Environmental Information Worksheet**
- **Worksheet 6.0 - Water Conservation Information Worksheet** **N/A**
- **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":

Indirect reuse of wastewater is one of several recommended water management strategies to meet the future water needs in Montgomery County identified in the 2016 Region H Regional Water Plan. This Application only requests additional diversion reaches for withdrawal of wastewater effluent from stream segments already authorized for bed and banks conveyance of effluent under an existing water right permit. Therefore, this Application serves to facilitate indirect reuse strategies in a manner that is consistent with the 2016 Region H Regional Water Plan and the State Water Plan because there is nothing in these Plans that conflicts with the scope of this Application. No authority for increasing the annual volume of wastewater effluent diversion is being requested with this Application, and no new appropriation of State water is being requested.

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

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

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

WORKSHEET 3.0 DIVERSION POINT (OR DIVERSION REACH) INFORMATION

Diversion Reach No. 1 – Below Robinson Creek WWTP

Upstream Limit of Reach

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. _____ Diversion Point No.
 2. X Upstream Limit of Diversion Reach No.
 3. _____ Downstream Limit of Diversion Reach No.
- b. Maximum Rate of Diversion for **this new point** 11.6 cfs (cubic feet per second)
Or 5,208 gpm (gallons per minute)
- c. Does this point share a diversion rate with other points? Y / N **Y**
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches 11.6 cfs or 5,208 gpm*

Permit No. 12754, which is being amended with this Application only to add additional diversion reaches, already authorizes the Applicant to convey and divert its return flows at the specified maximum diversion rate.

- d. For amendments, is Applicant seeking to increase combined diversion rate? Y / N **N**
*** 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 (V) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
X	Directly from stream	Proposed
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional	

- 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 **Y**

If yes, the drainage area is 12.66 sq. miles.

If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application.)

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): Robinson Creek in San Jacinto River Basin
- b. Zip Code: 77340
- c. Location of point: In the W. McDonald, Original Survey No. 471, Abstract No. 543, Walker 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.

Actual diversion points are yet to be determined for Diversion Reach No. 1, and when they are, appropriate documentation describing the diversion points and the legal authorization for property access and/or acquisition will be provided to TCEQ.

- d. Point is at: Outfall of Robinson Creek WWTP on east bank of Robinson Creek
Latitude 30.645547 °N, Longitude 95.595334 °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): Google Earth Pro
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38. **See Figure 1 in Application.**
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

WORKSHEET 3.0 DIVERSION POINT (OR DIVERSION REACH) INFORMATION

Diversion Reach No. 1 – Below Robinson Creek WWTP

Downstream Limit of Reach

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. _____ Diversion Point No.
 2. _____ Upstream Limit of Diversion Reach No.
 3. X Downstream Limit of Diversion Reach No.
- b. Maximum Rate of Diversion for **this new point** 11.6 cfs (cubic feet per second)
Or 5,208 gpm (gallons per minute)
- c. Does this point share a diversion rate with other points? Y / N **Y**
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches 11.6 cfs or 5,208 gpm*

Permit No. 12754, which is being amended with this Application only to add additional diversion reaches, already authorizes the Applicant to convey and divert its return flows at the specified maximum diversion rate.

- d. For amendments, is Applicant seeking to increase combined diversion rate? Y / N **N**
*** 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 (V) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
X	Directly from stream	Proposed
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional	

- 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 **Y**

If yes, the drainage area is 237.40 sq. miles.

If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application.)

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): West Fork San Jacinto River in San Jacinto River Basin
- b. Zip Code: 77340
- c. Location of point: In the B Vince Original Survey No. 471,
Abstract No. 50, Walker 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.

Actual diversion points are yet to be determined for Diversion Reach No. 1, and when they are, appropriate documentation describing the diversion points and the legal authorization for property access and/or acquisition will be provided to TCEQ.

- d. Point is at: Confluence of West Fork San Jacinto River with headwaters of Lake Conroe at top of conservation pool of reservoir at elevation 201 feet msl.

Latitude 30.587960 °N, Longitude 95.649420 °W.

Based on San Jacinto, Tex. USGS quadrangle topographic map

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): Google Earth Pro
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38. **See Figure 1 in Application.**
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

WORKSHEET 3.0 DIVERSION POINT (OR DIVERSION REACH) INFORMATION

Diversion Reach No. 2 – Below N. B. Davidson WWTP

Upstream Limit of Reach

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. _____ Diversion Point No.
 2. X Upstream Limit of Diversion Reach No.
 3. _____ Downstream Limit of Diversion Reach No.
- b. Maximum Rate of Diversion for **this new point** 4.0 cfs (cubic feet per second)
Or 1,778 gpm (gallons per minute)
- c. Does this point share a diversion rate with other points? Y / N **Y**
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches 4.0 cfs or 1,778 gpm*

Permit No. 12754, which is being amended with this Application only to add additional diversion reaches, already authorizes the Applicant to convey and divert its return flows at the specified maximum diversion rate.

- d. For amendments, is Applicant seeking to increase combined diversion rate? Y / N **N**
*** 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 (V) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
X	Directly from stream	Proposed
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional	

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

Applicant has calculated the drainage area. Y / N **N**

If yes, the drainage area is 0.44 sq. miles.

If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application.)

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): Unnamed tributary of Persimmon Creek in San Jacinto River Basin
- b. Zip Code: 77340
- c. Location of point: In the San Antonio & Mexican Gulf Railroad Co. Original Survey No. 471, Abstract No. 552, Walker 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.

Actual diversion points are yet to be determined for Diversion Reach No. 2, and when they are, appropriate documentation describing the diversion points and the legal authorization for property access and/or acquisition will be provided to TCEQ.

- d. Point is at: Outfall of N. B. Davidson WWTP on east bank of Unnamed Tributary of Persimmon Creek

Latitude 30.645275 °N, Longitude 95.553197 °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): Google Earth Pro
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38. **See Figure 1 in Application.**
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

WORKSHEET 3.0 DIVERSION POINT (OR DIVERSION REACH) INFORMATION

Diversion Reach No. 2 – Below N. B. Davidson WWTP

Downstream Limit of Reach

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. _____ Diversion Point No.
 2. _____ Upstream Limit of Diversion Reach No.
 3. X Downstream Limit of Diversion Reach No.
- b. Maximum Rate of Diversion for **this new point** 4.0 cfs (cubic feet per second)
Or 1,778 gpm (gallons per minute)
- c. Does this point share a diversion rate with other points? Y / N **Y**
*If yes, submit Maximum **Combined** Rate of Diversion for all points/reaches 4.0 cfs or 1,778 gpm*

Permit No. 12754, which is being amended with this Application only to add additional diversion reaches, already authorizes the Applicant to convey and divert its return flows at the specified maximum diversion rate.

- d. For amendments, is Applicant seeking to increase combined diversion rate? Y / N **N**
*** 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 (V) the appropriate box to indicate diversion location and indicate whether the diversion location is existing or proposed):

Check one		Write: Existing or Proposed
X	Directly from stream	Proposed
	From an on-channel reservoir	
	From a stream to an on-channel reservoir	
	Other method (explain fully, use additional	

- 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 **Y**

If yes, the drainage area is 47.28 sq. miles.

If assistance is needed, call the Surface Water Availability Team at (512) 239-4691, prior to submitting application.)

2. Diversion Location (Instructions, Page 25)

- a. On watercourse (USGS name): East Sandy Creek in San Jacinto River Basin
- b. Zip Code: 77340
- c. Location of point: In the G. W. Robinson Original Survey No. 471,
Abstract No. 454, Walker 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.

Actual diversion points are yet to be determined for Diversion Reach No. 2, and when they are, appropriate documentation describing the diversion points and the legal authorization for property access and/or acquisition will be provided to TCEQ.

- d. Point is at: Confluence of East Sandy Creek with headwaters of Lake Conroe at top of conservation pool of reservoir at elevation 201 feet msl.

Latitude 30.555900 °N, Longitude 95.617360 °W.

Based on Moore Grove, Tex. USGS quadrangle topographic map

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): Google Earth Pro
- f. Map submitted must clearly identify each diversion point and/or reach. See instructions Page. 38. **See Figure 1 in Application.**
- g. If the Plan of Diversion is complicated and not readily discernable from looking at the map, attach additional sheets that fully explain the plan of diversion.

WORKSHEET 5.0 ENVIRONMENTAL INFORMATION

Diversion Reach No. 1

Robinson Creek WWTP Outfall to Above Lake Conroe Headwaters

This worksheet is required for new appropriations of water in the Canadian, Red, Sulphur, and Cypress Creek Basins. The worksheet is also required in all basins for: requests to change a diversion point, applications using an alternate source of water, and bed and banks applications. **Instructions, Page 28.**

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

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: Robinson Creek, 1 to 2 feet; West Fork San Jacinto River, ~ 3 feet (assumed under normal flow conditions)

Other, specify: Width of Robinson Creek typically is on the order of 8 to 12 feet; width of West Fork San Jacinto River is unknown due to inaccessability.

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: On the USGS topographic maps of the area, portions of Robinson Creek are designated with a dashed blue line indicating intermittent flow conditions and other parts of Robinson Creek are designated with a solid blue line indicating perennial flow

conditions. The maximum permitted discharge for the Robinson Creek WWTP represents about 30% of the average flow of Robinson Creek and only about 3% of the average flow of the West Fork San Jacinto River based on naturalized flows from the TCEO water availability model for the San Jacinto River Basin.

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.

Photographs of Robinson Creek at several locations are included in Attachment C to the letter document for this application package.

2. Measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on the new diversion structure).

The intakes for any pumps installed along Diversion Reach No. 1 to facilitate diversions will be covered with a 1/4-inch mesh screen to prevent impingement and entrainment of aquatic organisms.

3. If the application includes a proposed reservoir, also include: **NOT APPLICABLE**
 - 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.

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

For all bed and banks applications:

- a. Indicate the measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on the new diversion structure).

The intakes for any pumps installed along Diversion Reach No. 1 to facilitate diversions will be covered with a 1/4-inch mesh screen to prevent impingement and entrainment of aquatic organisms.

- b. 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.

Daily diversions of wastewater effluent along Diversion Reach No. 1 will not exceed the corresponding daily quantity of effluent discharged from the Robinson Creek WWTP, and natural flows in Robinson Creek and the West Fork San Jacinto River will be unchanged by the proposed effluent diversions.

If the alternate source is treated return flows, provide the TPDES permit number N/A

If groundwater is the alternate source, or groundwater or other surface water will be discharged into a watercourse provide: **NOT APPLICABLE**

- a. 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.

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

WORKSHEET 5.0 ENVIRONMENTAL INFORMATION

Diversion Reach No. 2

N. B. Davidson WWTP Outfall to Above Lake Conroe Headwaters

This worksheet is required for new appropriations of water in the Canadian, Red, Sulphur, and Cypress Creek Basins. The worksheet is also required in all basins for requests to change a diversion point, applications using an alternate source of water, and bed and banks applications. **Instructions, Page 28.**

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

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: Persimmon Creek, 1 to 1.5 feet; East Sandy Creek, 2.5 to 3 feet (under normal flow conditions)

Other, specify: Width of Robinson Creek typically is on the order of 8 to 12 feet; width of West Fork San Jacinto River is unknown due to inaccessibility.

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: On the USGS topographic maps of the area, Persimmon Creek is designated with a dashed blue line indicating intermittent flow conditions and East Sandy Creek is designated with a solid blue line indicating perennial flow conditions. The maximum

permitted discharge for the N. B. Davidson Creek WWTP represents about half of the average flow of Persimmon Creek and only about 10% of the average flow of East Sandy Creek based on naturalized flows from the TCEQ water availability model for the San Jacinto River Basin.

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:

4. 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.

Photographs of Persimmon Creek and East Sandy Creek at several locations are included in Attachment C to the letter document for this application package.

5. Measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on the new diversion structure).

The intakes for any pumps installed along Diversion Reach No. 2 to facilitate diversions will be covered with a 1/4-inch mesh screen to prevent impingement and entrainment of aquatic organisms.

6. If the application includes a proposed reservoir, also include: **NOT APPLICABLE**
 - 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.

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

For all bed and banks applications:

- a. Indicate the measures the applicant will take to avoid impingement and entrainment of aquatic organisms (ex. Screens on the new diversion structure).

The intakes for any pumps installed along Diversion Reach No. 1 to facilitate diversions will be covered with a 1/4-inch mesh screen to prevent impingement and entrainment of aquatic organisms.

- b. 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.

Daily diversions of wastewater effluent along Diversion Reach No. 2 will not exceed the corresponding daily quantity of effluent discharged from the N. B. Davidson WWTP, and natural flows in Persimmon Creek and East Sandy Creek will be unchanged by the proposed effluent diversions.

If the alternate source is treated return flows, provide the TPDES permit number N/A

If groundwater is the alternate source, or groundwater or other surface water will be discharged into a watercourse provide: **NOT APPLICABLE**

- a. 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.

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

WORKSHEET 6.0

Water Conservation/Drought Contingency Plans

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

Instructions, Page 31.

*The TCEQ has developed guidance and model plans to help applicants prepare plans. Applicants may use the model plan with pertinent information filled in. For assistance submitting a plan call the Resource Protection Team (Water Conservation staff) at 512-239-4691, or e-mail wras@tceq.texas.gov. The model plans can also be downloaded from the TCEQ webpage. **Please use the most up-to-date plan documents available on the webpage.***

1. Water Conservation Plans

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

1. Request for a new appropriation or use of State Water.
2. Request to amend water right to increase appropriation of State Water.
3. Request to amend water right to extend a term.
4. Request to amend water right to change a place of use.
**does not apply to a request to expand irrigation acreage to adjacent tracts.*
5. Request to amend water right to change the purpose of use.
**applicant need only address new uses.*
6. Request for bed and banks under TWC § 11.042(c), when the source water is State Water
**including return flows, contract water, or other State Water.*

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

1. Municipal Use. See 30 TAC § 288.2. **
2. Industrial or Mining Use. See 30 TAC § 288.3.
3. Agricultural Use, including irrigation. See 30 TAC § 288.4.
4. Wholesale Water Suppliers. See 30 TAC § 288.5. **

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

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

appropriation; and evaluates any other feasible alternative to new water development.
See 30 TAC § 288.7.

Applicant has included this information in each applicable plan? Y / N **Y**

The City of Huntsville's Water Conservation Plan is included herewith in Attachment F.

2. Drought Contingency Plans

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

1 . Municipal Uses by public water suppliers. See 30 TAC § 288.20.

2 . Irrigation Use/ Irrigation water suppliers. See 30 TAC § 288.21.

3 . Wholesale Water Suppliers. See 30 TAC § 288.22.

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

The City of Huntsville's Drought Contingency Plan is included herewith in Attachment F.

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 512-239-4691 for information about accounting plan requirements, if any, for your application. **Instructions, Page 34.**

The existing Accounting Plan for Permit No. 12754 will be revised and submitted after the Application has been reviewed by and discussed with TCEQ Staff. This revised Accounting Plan will incorporate daily checks on discharges from the WWTPs, and it will determine the allowable diversions of the effluent from these WWTPs that can be made on a daily basis.

1. Is Accounting Plan Required

Accounting Plans are generally required:

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

2. Accounting Plan Requirements

a. A **text file** that includes:

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

b. A **spreadsheet** that includes:

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

diversions of other water discharged into and then stored in the reservoir.

WORKSHEET 8.0 CALCULATION OF FEES

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

1. NEW APPROPRIATION NOT APPLICABLE

	Description	Amount (\$)
Filing Fee	Circle fee correlating to the total amount of water* requested for any new appropriation and/or impoundment. Amount should match total on Worksheet 1, Section 1. Enter corresponding fee under Amount (\$) . In Acre-Feet a. Less than 100 \$100.00 b. 100 - 5,000 \$250.00 c. 5,001 - 10,000 \$500.00 d. 10,001 - 250,000 \$1,000.00 e. More than 250,000 \$2,000.00	
Recording Fee		\$25.00
Agriculture Use Fee	<i>Only for those with an Irrigation Use.</i> Multiply 50C 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 50C 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) 239-4691.	-
TOTAL		\$

2. AMENDMENT OR SEVER AND COMBINE

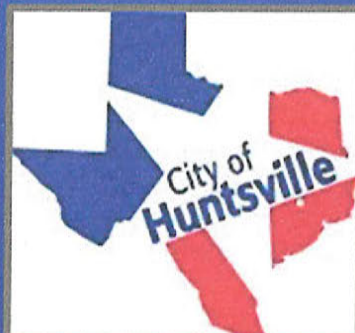
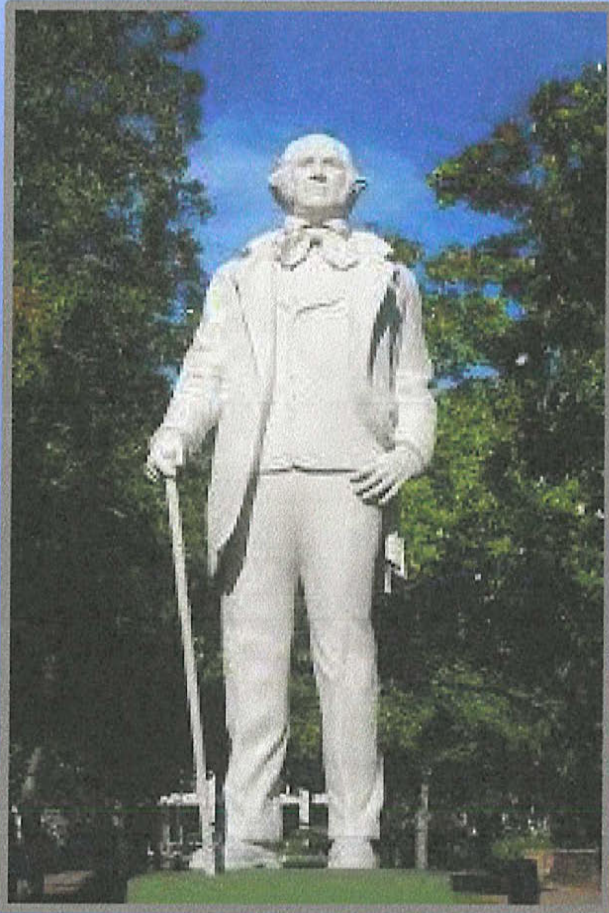
	Description	Amount (\$)
Filing Fee	Amendment: \$100 OR Sever and Combine: \$100 x _____ of water rights to combine	\$ 100.00
Recording Fee		\$12.50
Mailed Notice	Additional notice fee to be determined once application is submitted.	
TOTAL INCLUDED		\$ 112.50

3. BED AND BANKS NOT APPLICABLE

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

ATTACHMENT F

City of Huntsville Water Conservation and Drought Contingency Plans



City of Huntsville
Water Conservation and Drought Contingency Plan 2014

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Water Conservation and Drought Contingency Plan 2014

1. Introduction and Objectives

Water conservation is not limited to the recurring periods of Texas drought. Conserving water and avoiding water waste are important for long-term sustainability of the water supply even in times of abundant rainfall. This plan describes both the city's long-term commitment to conserving water and resources for future generations and the need to manage water demands during short-term conditions when water supplies are limited.

The City of Huntsville has adopted this Water Conservation and Drought Contingency Plan for City water customers to reduce the quantity of water used for residential and commercial purposes through implementation of efficient water use practices; to protect the integrity of water supply facilities, with particular regard for domestic water use, sanitation, and fire protection; to protect and preserve public health, welfare, and safety; and to minimize the adverse impacts of water supply shortages or other water supply emergency conditions.

The Texas Commission on Environmental Quality (TCEQ) has developed guidelines and requirements governing the development of water conservation and drought contingency plans for public water suppliers. The TCEQ guidelines and requirements for water suppliers are included in Appendix B. The City of Huntsville has adopted this Water Conservation and Drought Contingency Plan pursuant to TCEQ guidelines and requirements.

The objectives of the water conservation plan are to:

- reduce water consumption;
- reduce the loss and waste of water;
- improve efficiency in the use of water; and
- extend the life of current water supplies by reducing the rate of growth in per capita demand.

The objectives of the drought contingency plan are to:

- Conserve the available water supply in times of drought and emergency;
- Maintain supplies for domestic water use, sanitation, and fire protection;
- Protect and preserve public health, welfare, and safety;
- Minimize the adverse impacts of water supply shortages and emergency water supply conditions.

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2. Definitions

In the Water Conservation and Drought Contingency Plan, the following definitions apply only to City of Huntsville water customers:

Aesthetic water use: water use for ornamental or decorative purpose such as fountains, reflecting pools, and water gardens.

Base per capita use: per capita water use calculated based on water consumption during the months of January, February and December.

Commercial and institutional water use: water use which is integral to the operations of commercial and non-profit establishments and governmental entities such as retail establishments, hotels and motels, restaurants, and office buildings.

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

Customer: any person, company, or organization using water supplied by the City of Huntsville.

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, or for cleaning a residence, business, industry, or institution.

Even numbered addresses: street addresses, box numbers, or rural postal route numbers ending in 0,2,4,6, or 8 and locations without addresses.

Odd numbered addresses: street addresses, box numbers, or rural postal route numbers ending in 1,3,5,7, or 9.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped areas, whether publicly or privately owned, including residential and commercial lawns, gardens, golf courses, parks, and rights-of-ways and medians.

Non-essential water use: water uses that are not essential or required for the protection of public health, safety, and welfare, including:

- irrigation of landscape areas, including parks, athletic fields, and golf courses, except otherwise provided under this Water Conservation and Drought Contingency Plan;
- use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle unless specifically required by a local, state or federal guideline or regulation;
- use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced area;
- use of water to wash down buildings or structures for purposes other than immediate fire protection;
- flushing gutters or permitting water to run or accumulate in any gutter or street;
- use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
- use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life;

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- failure to repair a controllable leak within a reasonable period after having been given notice directing the repair of such leak(s); and
- use of water from hydrants for construction purposes or any other purposes other than firefighting.

Seasonal per capita use: per capita water use calculated by subtracting base per capita water use from summer per capita water use.

Summer per capita use: per capita water use calculated based on water consumption during the months of June, July and August.

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3. Texas Commission on Environmental Quality Rules

3.1 Conservation Plans

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

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

3.2 Drought Contingency Plans

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

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

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4. Minimum Required Water Conservation Plan Content

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

- §288.2(a)(1)(A) - Utility Profile – Section 4.1 and Appendix C
- §288.2(a)(1)(B) - Record Management System – Section 4.2
- §288.2(a)(1)(C) - Specification of Goals - Section 4.3
- §288.2(a)(1)(D) - Accurate Metering – Section 4.3 and 4.4
- §288.2(a)(1)(E) - Universal Meter- Section 4.4
- §288.2(a)(1)(F) - Determination and Control of Unaccounted water – Section 4.5
- §288.2(a)(1)(G) - Public Education and Information Program- Section 4.6
- §288.2(a)(1)(H) - Non- Promotional water Rates Structure- Section 4.7
- §288.2(a)(1)(J) - M e a n s of Implementation and Enforcement- Section 4.8
- §288.2(a)(1)(K) - Coordination with Regional Water Planning Group – Section 4.9

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4.1 Water Utility Profile Summary

Appendix C to this conservation plan is a water utility profile for the City of Huntsville. The table below summarizes key facts from the Water Utility Profile:

Water Service Area = 42.8 square miles

Miles of Distribution Pipe = 320

Water supply Source(s): Trinity River Authority (TRA) and Catahoula Aquifer

Population:

2009 population = **38,169**
 2013 population = **40,063**
 2050 population (projected) = **57,894**

Connections:

Current Connections = **9,418**
 Equivalent Connection based on population = **13,741**
 Total Increase in connections in Last 3 Years = **232**

Water Use Information:

Year	Use (1,000 gallons)	Estimated Population	Municipal per Capita	Residential per Capita	Unaccounted Water	Peak Day/ Average Day
2009	2,768,048	38,169	199	56	4.5%	1.59
2010	2,865,376	38,548	204	37	4.4%	1.48
2011	3,075,392	39,109	215	45	4.4%	1.38
2012	2,832,241	39,666	196	51	2.6%	1.44
2013	3,052,392	40,063	209	34	4.2%	1.42

Treatment and Distribution System:

Design Treatment Capacity	=	15 million gallons per day
Elevated Storage Capacity	=	2.5 million gallons
Ground Storage Capacity	=	5.5 million gallons

Total Annual Wastewater Flow = 1,411 million gallons in 2013

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4.2 Record Management System

As required by TAC Title 30, Chapter 288, Subchapter A, Rule §288.2(a)(2)(B), the record management system for the city of Huntsville records water received, water pumped, water delivered, and water sold; estimates water losses; and allows for the separation of water sales and uses into residential, commercial, public/institution, and industrial categories. This information will be included and carried throughout the conservation plan.

4.3 Water Conservation Goals

While the City of Huntsville encourages conservation and appropriate use of all water resources within the region, the specific water conservation goals described in this plan apply only to City water customers. The City of Huntsville conservation goals include the following:

Sewer:

- Make additions to its sewerage collection system to provide service to previously unsewered areas and remediate inflow and infiltration.

Water:

- Provide an adequate supply of suitable water to its customers.
- Accommodate growth with no net increase in overall water consumption.
- Make additions/improvements to its water distribution system, so that all areas covered by the City's water system will have an adequate and reliable source of water now and in the future.
- Review water and sewer rates annually to assure they are adequate to meet expenses and capital improvements, as well as appropriate reserve funds.
- Maintain the city's ongoing meter replacement program.
- Customer education is also necessary if a conservation plan is to succeed in effectively reducing water use and wastewater treatment flows.
- The City has established the following five- and ten-year numerical targets and goals:

(1) 5-year target and goals

- Per Capita Reduction Goal** - The City of Huntsville goals are to achieve a 0.5% annual reduction in per capita consumption. Based on the average residential per capita consumption from 2009 to 2013 of 205 gpcd, a 0.5% annual reduction will equate to a 2020 goal of **200 gpcd**. This represents a one gpcd reduction per year or a savings of 14.6 million gallons per year at current population numbers.
- Residential Per Capita Reduction Goal** - The City of Huntsville goals are to achieve a 0.5% annual reduction in residential per capita consumption. Based on the average per capita consumption from 2009 to 2013 of 205 gpcd, a 0.5% annual reduction will equate to a 2020 goal of **43.9 gpcd**. This represents potential savings of approximately 3,449,126 gallons per year from 2015 to 2020.
- Water Loss Goal** – The benchmark for unaccounted for water, established by the Texas Commission on Environmental Quality (TCEQ) is a water loss goal of no more than 10% for the potable water distribution system. As such, the water loss goal for 2020 is to operate at a system water loss of **20 gpcd** or less.

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(2) 10-year target and goals

- a. **Per Capita Reduction Goal** - Based on the average per capita consumption from 2009 to 2013, 0.5% annual reduction in per capita consumption will result in a 2025 goal of **195 gpcd**.
- b. **Residential Per Capita Reduction Goal** – Based on the average per capita consumption from 2009 to 2013, 0.5% annual reduction in per capita consumption will result in a 2025 goal of 42.8 gpcd.
- c. **Water Loss Goal** – The benchmark for unaccounted for water, established by the Texas Commission on Environmental Quality (TCEQ) is a water loss goal of no more than 10% for the potable water distribution system. As such, the water loss goal for 2025 is to operate at a system water loss of **19.5 gpcd** or less.

4.4 Accurate Metering of Raw Water Supplies and Treated Deliveries

The City of Huntsville meters raw water from **seven (7)** water wells and treated water from TRA entering the plant. The supplied treated water delivery to the distribution system is also being metered. Each meter has an accuracy of plus or minus 5 percent. The meters are calibrated on an annual basis by City of Huntsville personnel to maintain the required accuracy and are repaired and/or replaced as needed.

4.5 Reservoir System Operations

The City of Huntsville shall comply with any reservoir system operations implemented by the TRA.

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

Water usage for all customers of the City of Huntsville, including public and governmental users, is metered. An exception is made for new residential construction up to the time a certificate of occupancy is used. The two golf courses in the City limits, Elkins Lake and Raven's Nest, are irrigated with lake water and a private well respectively, and therefore are not impacted by the restrictions of this Plan.

4.7 Determination and Control of Unaccounted Water

Unaccounted water is the difference between water produced from wells or delivered by the TRA and metered water delivered to customers. Unaccounted water can include several categories:

- Line flushing;
- Inaccuracies in customer meters (customer meters tend to run more slowly as they age and under-report actual use);
- Losses due to water main breaks and leaks in the water distribution system;
- Theft;
- Firefighting;
- Inaccuracies of internal meters (plus or minus 5%); and
- Other unmetered uses.

The City of Huntsville will conduct an annual water audit using the outline provided by the Texas Water Development Board (TWDB). The city will conduct water audits using American Water Works Association guidelines published in Water Audits and Leak Detection (M36).

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As shown in the water utility profile (Appendix C), unaccounted water for the City of Huntsville has varied from 2.6% to 4.5% in the last five years. With the measures described in this plan, it is the goal of the city of Huntsville to maintain the unaccounted water below 10% annually.

4.8 Continuing Public Education and Information Campaign

The continuing public education and information campaign on water conservation for the City of Huntsville includes the following elements:

- Promote the city's water conservation measures (presented in Sections 4, and 5).
- Include inserts on water conservation with water bills at least twice per year. Inserts may include material developed by the City of Huntsville staff and material obtained from the American Water Works Association, TWDB, TCEQ, and other sources.
- Notify local organizations, schools, and civic groups that the City of Huntsville staff members are available to make presentations on the importance of water conservation and ways to save water.
- Make the Consumer Confidence Report (CCR), water conservation brochures, and other water conservation materials available to the public.
- Make information on water conservation available online at <http://www.huntsvilletx.gov> and include links to the CCR and to information on water conservation on the TWDB and TCEQ websites.

4.9 Non Promotional Water Rate Structure

CITY OF HUNTSVILLE WATER AND WASTEWATER RATES (Effective October 1, 2013) (First Billing November 2013)

Water Rates

Single-Family Residential:

First 3,000 gallons minimum monthly charge	See meter size table below
Between 3,000 – 7,000 gallons	\$4.34 per 1,000 gallons
Between 7,001 – 13,000 gallons	\$4.78 per 1,000 gallons
Over 13,000 gallons	\$5.43 per 1,000 gallons

Jointly Metered Residential:

First 3,000 gallons minimum monthly charge	See meter size table below
Between 3,000 – 7,000 gallons	\$4.34 per 1,000 gallons
Over 7,000 gallons	\$5.43 per 1,000 gallons

Commercial Metered:

First 3,000 gallons minimum monthly charge	See meter size table below
Over 3,000 gallons	\$5.43 per 1,000 gallons

Institutional Users:

First 3,000 gallons minimum monthly charge	See meter size table below
Over 3,000 gallons	\$5.86 per 1,000 gallons

Irrigation:

First 3,000 gallons minimum monthly charge	See meter size table below
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Residential between 3,000 – 7,000 gallons	\$4.34 per 1,000 gallons
Residential between 7,001 – 13,000 gallons	\$4.78 per 1,000 gallons
Residential all Over 13,000 gallons	\$5.43 per 1,000 gallons
Commercial all Over 3,000 gallons	\$5.43 per 1,000 gallons
Institutional all Over 3,000 gallons	\$5.86 per 1,000 gallons

Meter Size in Inches	Minimum Monthly Single Family & Jointly Metered Residential	Minimum Monthly Commercial & Institutional	Minimum Monthly Irrigation
0.7	\$13.00	\$15.00	\$15.00
1.0	\$19.00	\$21.00	\$21.00
1.5	\$25.00	\$27.00	\$27.00
2.0	\$41.50	\$43.50	\$43.50
3.0	\$163.00	\$165.00	\$165.00
4.0	\$208.00	\$210.00	\$210.00
6.0	\$313.00	\$315.00	\$315.00
8.0	\$433.00	\$435.00	\$435.00

Wastewater Rates

Single-family residential:

First 2,000 gallons, minimum monthly charge	\$13.00
All over 2,000 gallons	\$4.87 per 1,000 gallons

Note: Each individually metered residential dwelling unit shall be charged a monthly wastewater service charge and a volume charge based upon the average amount of water consumed during the months of November, December, January, and February of each year, rounded to the nearest 100 gallons. Customers moving into an existing, or newly constructed, single family residential unit shall be billed for sewer at eighty percent (80%) of current monthly consumption up to a maximum monthly amount for 10,000 gallons until the winter month history is established.

Jointly Metered Residential

First 2,000 gallons, minimum monthly charge	\$13.00
All over 2,000 gallons	\$4.87 per 1,000 gallons

Commercial/Institutional

First 2,000 gallons, minimum monthly charge	\$15.00
All over 2,000 gallons	\$4.87 per 1,000 gallons

Note: Residential customers not connected to the waterworks system of the city shall be billed monthly by the city for wastewater services at a calculated rate based on the average residential water consumption of 6,800 gallons, or at a rate based on the average water consumed during the months of November, December, January and February of each fiscal year from the billing records of a special water district. Commercial customers shall be billed at a rate that is consistent with the regular wastewater charge of similar type businesses, premises or users receiving service from the city.

Note: Water rates for customers outside the city limits are calculated in the same manner as rates for customers within the city limits; however, a multiplier of 1.25 shall be applied to the cost components listed above.

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Utility Billing Division: (936) 291-5431
After Hours Water Emergencies: (936) 294-8700

Water Maintenance: (936) 294-5700

**City of Huntsville, TX Water and Wastewater Rates Effective October 1, 2013*

4.10 Implementation and Enforcement of the Water Conservation Plan

Appendix E contains a copy of the ordinance of the City of Huntsville adopting the Water Conservation and Drought Contingency Plan. The ordinance designates responsible officials to implement and enforce the Water Conservation and Drought Contingency Plan. A copy of this plan will be submitted to the TCEQ.

4.11 Coordination with Regional Water Planning Group

A letter will be sent to the Chair of the Region H Water Planning Group with a copy of this Water Conservation and Drought Contingency Plan as well as a copy of the approved city ordinance.

5. Additional Required Water Conservation Plan Content

Title 30 of the Texas Administration Code also includes additional requirements for water conservation plans for public drinking suppliers that serve a population of 5,000 people or more and/or a projected population of 5,000 people or more within the next ten years:

- §288.2(a)(2)(A) – Leak Detection, Repair, and Water Loss Accounting
- §288.2(a)(2)(B) – Requirement that Wholesale Customers Develop and Implement a Water Conservation Plan

5.1 Leak Detection and Repair; Pressure Control

Measures to control unaccounted water are part of the routine of the City of Huntsville. Meter readers watch for and report signs of illegal connections so they can be addressed quickly. Crews look for and report evidence of leaks in the water distribution system. Maintenance crews respond quickly to repair leaks reported by the public and city personnel. Areas of water distribution system where numerous leaks and line breaks occur are targeted for replacement as funds are available.

5.2 Requirement that Wholesale Customers Develop and Implement a Water Conservation Plan

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

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6. Drought Contingency Plan

6.1 Introduction

This document is a drought contingency plan, intended to be available for adoption by the City of Huntsville and its customers. This plan addresses all of the current Texas Commission on Environmental Quality requirements for a drought contingency plan. The purpose of this drought contingency plan is as follows:

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

The City of Huntsville supplies treated water to its customers and the following provisions of the drought contingency plan apply only to those customers. In order to adopt this plan, the City of Huntsville city council will need to adopt ordinance(s) or regulation(s) implementing the plan, including the determination of fines and enforcement procedures.

6.2 Texas Commission on Environmental Quality Rules

The TCEQ rules governing development of drought contingency plans for retail public water suppliers are contained in Title 30, Part 1, Chapter 288, Subchapter B, Rule §288.20 of the Texas Administrative Code, which is included in Appendix A. For the purpose of these rules, a drought contingency plan is defined as "a strategy or combination of strategies for temporary supply and demand management responses to temporary and potentially recurring water supply shortages and other water supply emergencies."

6.3 State Requirements for Drought Contingency Plans

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

- §288.20(a)(1)(A) – Provisions to Inform the Public and Provide Opportunity for Public Input
Section 6.4
- §288.20(a)(1)(B) – Provisions for Continuing Public Education and Information – Section 6.5
- §288.20(a)(1)(C) – Coordination with Regional Water Planning Group – Section 7.4.1.2
- §288.20(a)(1)(D) – Criteria for Initiation and Termination of Drought Stages – Section 6.6
- §288.20(a)(1)(E) – Drought and Emergency Response Stages – Section 7
- §288.20(a)(1)(F) – Specific, Quantified Targets for Water Use Reduction – Section ??
- §288.20(a)(1)(G) – Water Supply and Demand Management Measures for Each Stage – Section 7
- §288.20(a)(1)(H) – Procedures for Initiation and Termination of Drought Stages – Section 6.6.1.2
- §288.20(a)(1)(I) – Procedures for Granting Variances – Section 7.4
- §288.20(a)(1)(J) – Procedures for Enforcement of Mandatory Restrictions – Section 7.4.1
- §288.20(b) – Notification of Implementation of Mandatory Measures – Section 7
- §288.20(c) – Review and Update of Plan – Section 7.4.1.5

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6.4 Provisions to Inform the Public and Opportunity for Public Input

The City of Huntsville council meets on select Tuesday's at 6:00 p.m. A meeting agenda is posted in accordance with the State law, listing items to be acted upon by the council. Meetings are open to the public, and the public is given an opportunity to speak and voice their views and opinions. Council meetings are attended by representatives of local newspapers and radio stations. The news media sources provide excellent distribution of events and subjects.

6.5 Provision for Continuing Public Education and Information Education

The City of Huntsville will inform its customers of various recommended methods to reduce water consumption by mailing brochures with monthly water bills, making available copies of "Homeowner's Guide to Water Use and Water Conservation," and will use resource materials made available by the Texas Water Development Board and other agencies and organizations.

6.6 Initiation and Termination of Drought Response Stages

6.6.1.1 Initiation of Drought Response Stages

The City Manager or his/her designee may order the implementation of a drought response stage or water emergency when one or more of the trigger conditions for that stage is met. The following actions will be taken when a drought stage is initiated:

- The public will be notified through local media and message boards
- If any mandatory provisions of the drought contingency plan are activated, the City of Huntsville will notify the Executive Director of the Texas Commission on Environmental Quality within 5 business days.

For other trigger conditions, the city manager or his/her designee may decide not to order the implementation of a drought response stage or water emergency even though one or more of the trigger criteria for the stage are met. Factors that could influence such a decision include, but are not limited to, the time of year, weather conditions, the anticipation of replenished water supplies, or the anticipation that facilities will become available to meet needs.

6.6.1.2 Termination of Drought Stages

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

- The public will be notified through local media.
- When any mandatory provisions of the drought contingency plan that have been activated are terminated, the city will notify the Executive Director of the TCEQ within 5 business days.

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

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7. Drought and Emergency Response Stages

At any time during the year, due to weather conditions or as requested by the TRA, the City may request voluntary drought contingency efforts aimed at delaying the need for more stringent drought management requirements.

7.1 Stage 1, Peak Day Water Use Management

7.1.1 Triggering and Termination Conditions for Stage 1, Peak Day

7.1.2 Stage 1- Peak Day Water Use Management

Average daily consumption ranged from 7.58 MGD in 2009 to 8.43 MGD in 2011. Peak daily consumption during this same period ranged from 11.14 MGD to 12.06 MGD. Increased consumption on the peak day is attributed primarily to outdoor irrigation.

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses defined in Section 2 of this Plan, when:

- (a) Average daily water consumption exceeds 80% of firm production capacity for a period of five (5) consecutive days; or
- (b) Weather conditions are considered to be in drought as determined by the National Integrated Drought Information System (NIDIS); or
- (c) As required by the Trinity River Authority (TRA).

7.1.3 Stage 1 Triggers- Water Shortage Conditions Terminate When

Requirements for termination

Stage 1 of the Plan may be rescinded when all of the conditions listed as triggering events have ceased to exist for a period described below.

- (a) Average daily water consumption falls below 80% of firm production capacity for a period of **10** consecutive days;
- (b) Weather conditions are not considered to be in drought as determined by the National Integrated Drought Information System (NIDIS); and
- (c) TRA no longer requires implementation of Stage 1.

7.1.4 Goal for Use Reduction and Actions Available Under Stage 1

Target: Reduce daily demand for the City of Huntsville water system to less than **80%** of firm production capacity.

- (a) Best Management Practices for Reducing Demand Include:
 - (1) The City may reduce or discontinue the flushing of water mains.
- (b) Water Use Restrictions for Reducing Demand Include:

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- (1) Landscape irrigation for all customers is prohibited between the hours of 7:00 AM to 7:00 PM. Watering with handheld hose or drip irrigation shall be allowed at any time.
- (2) Even numbered single-family residential addresses are permitted to irrigate on Tuesdays, Thursdays and Saturdays.
- (3) Odd numbered single-family residential addresses are permitted to irrigate on Wednesdays, Fridays and Sundays.
- (4) Multi-family residential, commercial, institutional and public water customers are permitted to irrigate on Mondays, Wednesdays and Fridays.

7.2 Stage 2, Peak Day Water Use Management

7.2.1 Stage 2 Triggers- Moderate Water Shortage Conditions Occur When

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non-essential water uses defined in Section 2 of this Plan when:

- (a) Average daily water consumption exceeds 90% of firm production capacity for a period of five (5) consecutive days; or
- (b) Weather conditions indicate moderate drought will continue; or
- (c) Storage capacity (water level) is not being maintained at 75% of available storage capacity; or
- (d) As required by TRA

7.2.2 Stage 2 Triggers- Moderate Water Shortage Conditions are Terminated When

Requirements for termination

Stage 2 of the Plan may be rescinded when:

- (a) Average daily water consumption falls below 80% of firm production capacity for 10 consecutive days;
- (b) Weather conditions indicate mild drought conditions have ceased to exist;
- (c) Storage capacity (water level) is being maintained at 75% of available storage capacity; and
- (d) TRA no longer requires implementation of Stage 2.

7.2.3 Stage 2 Goals for Use Reduction and Actions Available Under Moderate Water Conditions

Target: Reduce daily demand for the City of Huntsville water system to less than 80% of firm production capacity.

- (a) Best Management Practices for Reducing Demand Include:

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- (1) The City will discontinue the routine flushing of water mains, limiting the practice for the purpose of maintaining water quality.
- (b) Water Use Restrictions for Reducing Demand Include:
 - (1) Landscape irrigation for all customers is prohibited between the hours of 7:00 AM to 7:00 PM.
 - (2) Even numbered single-family residential addresses are permitted to irrigate on Tuesdays and Saturdays.
 - (3) Odd numbered single-family residential addresses are permitted to irrigate on Wednesdays and Sundays.
 - (4) Multi-family residential, commercial, institutional and public water customers are permitted to irrigate on Mondays & Fridays.
 - (5) Water use associated with such tasks as: washing house windows, sidings, eaves and roof with a hose without the use of a cutoff valve and bucket; washing driveways, streets, curbs and gutters; washing vehicles with a hose without cutoff valve and bucket; unattended hose end watering of landscape shrubs and grass; and draining and filling swimming pools is prohibited.
 - (6) All aesthetic water use is prohibited.

7.3 Stage 3, Peak Day Water Use Management

7.3.1 Stage 3 Triggers- Severe Water Shortage Conditions Occur When

Requirements for initiation

Customers shall be required to comply with the requirements and restrictions on certain non- essential water uses for Stage 3 of this Plan when:

- (a) Average daily water consumption will not enable storage levels to be maintained; or
- (b) Water system demand exceeds available high service pump capacity; or
- (c) Required by TRA; or
- (d) The water system is contaminated either accidentally or intentionally. Condition is reached immediately upon detection; or
- (e) The water system fails from acts of God (tornadoes, hurricanes) or man. Condition is reached immediately upon detection.

7.3.2 Stage 3 Trigger- Severe Water Shortage Conditions Terminate When

Requirements for termination

Stage 3 of the Plan may be rescinded when:

- (a) Average daily water consumption will enable storage levels to be maintained;
- (b) Water system demand ceases to exceed available high service pump capacity; and

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- (c) TRA no longer requires implementation of Stage 3; and
- (c) The water system is decontaminated; and
- (d) The water system is restored after acts of God (tornadoes, hurricanes) or man.

7.3.3 Stage 3 Goals for Use Reduction and Action Available Under Severe Water Shortage Conditions:

Target: Achieve a 50% reduction in the City of Huntsville daily water demand.

(a) Best Management Practices for Reducing Demand Include:

- (1) The City will discontinue the flushing of water mains.
- (2) The City will discontinue the irrigation of public landscaped areas.
- (3) The City will reduce system pressure where possible to conserve water.

(b) Water Use Restrictions for Reducing Demand Include:

- (1) All outdoor water use is prohibited, except for that required for the protection of public health, safety, and welfare.
- (2) The City may prioritize or curtail water service in accordance to the following sequence:
 - (i) Recreational
 - (ii) Residential
 - (iii) Commercial
 - (iv) Industrial
 - (v) Schools
 - (vi) Hospitals
- (3) The permitting and prioritization of water service shall not apply to raw clarified water provided under a contract with Tenaska Energy for the purpose of electrical power production.

7.4 Procedures for Granting Variances to the Plan

- A. The city manager or his/her designee may grant temporary variances for existing water uses otherwise prohibited under this drought contingency plan if one or more of the following conditions are met:
 - Failure to grant such a variance would cause an emergency condition adversely affecting health, sanitation, or fire safety for the public or the person requesting the variance.
 - Compliance with this Plan cannot be accomplished due to technical or other limitations.
 - Alternative methods that achieve the same level of reduction in water use can be implemented.
- B. Variances shall be granted or denied at the discretion of the city manager or his designee. All petitions for variances should be in writing and should include the following information:

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- Name and address of the petitioner(s).
 - Purpose of water use.
 - Specific provisions from which relief is requested.
 - Detailed statement of the adverse effect of the provision from which relief is requested.
 - Description of the relief requested.
 - Period of time for which the variance is sought.
 - Alternative measures that will be taken to reduce water use.
 - Other pertinent information.
- C. Persons using raw water for irrigation, whether from a customer owned and operated well or purchased raw water, must apply for a variance. The city manager may grant a raw water variance under the following conditions:
1. The property passes a cross-connection and backflow protection inspection as required by **Section 12.26 Chapter 12** of the City of Huntsville Code of Ordinances; and
 2. The Property owner erects and maintains a sign that clearly indicates that irrigation is with raw water.

7.4.1 Procedure Enforcing Mandatory Restrictions

Mandatory water use restrictions may be imposed in Stage 1, Stage 2, and Stage 3. These mandatory water restrictions will be enforced by Notices of Violation and penalties as follows:

- On the first violation, customers will be given a written notice of violation of the mandatory water use restriction.
- On the second and subsequent violations, citations may be issued to customers.
- After two violations have occurred, the City of Huntsville may install a flow restrictor in the line to limit the amount of water that may pass through the meter in a 24-hour period.
- After three violations have occurred, the City of Huntsville may terminate water service to the customer.

7.4.1.2 Wholesale Contract Provisions

In the event of an identified water shortage declaration, the City will distribute water to wholesale customers according to the Texas Water Code §11.039.

The City will include a provision in every wholesale water contract entered into or renewed after adoption of the plan, including contract extensions, that in case of a shortage of water resulting from drought, the water to be distributed shall be divided in accordance with Texas Water Code §11.039.

7.4.1.3 Coordination with Regional Water Planning Groups

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The planning area consists of the City of Huntsville and its extraterritorial jurisdiction which contains 112.8 square miles. Huntsville is the county seat of Walker County and has a population of approximately 40,063. This area is located within the Region H water planning area, and the City of Huntsville has provided a copy of this plan to the Region H Water Planning Group.

7.4.1.4 Authorization

The city manager or his/her designee is hereby authorized and directed to implement the applicable provisions of this Plan upon determination that such implementation is necessary to protect public health, safety, and welfare. The Director of Public Works or his/her designee shall have the authority to initiate or terminate drought or other water supply emergency response measures as described.

7.4.1.5 Application

The provisions of this Plan shall apply to all persons, customers, and property utilizing water provided by the City of Huntsville. The terms "person" and "customer" as used in the Plan include individuals, corporations, partnerships, associations, and all other legal entities.

7.4.1.6 Review and Update of Drought Contingency Plan

As required by Texas Commission on Environmental Quality rules, the City of Huntsville will review this drought contingency plan every five years, with the next update due on May 1, 2019. The plan will be updated as appropriate based on new or updated information. As the plan is reviewed and subsequently updated, a copy of the revised Drought Contingency Plan will be submitted to the Texas Commission on Environmental Quality and the Region H Water Planning Group (RHWPG) for their records.

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Water Conservation and Drought Contingency Plan 2014

Appendix A
List of References

- (1) City of Huntsville Water Utility Departments: "City of Huntsville Water Conservation Plan," adopted by the City Council, Huntsville, 2014.
- (2) Title 30 of the Texas Administrative Code, Part 1, Chapter 288, Subchapter A, Rule 288.1 and 288.2, and Subchapter B, Rule 288.20, accessed online at [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=4&ti=30&pt=1&ch=288)
- (3) Texas Commission on Environmental Quality: Water Utility Profile," accessed online at http://www.tceq.state.tx.us/permitting/water_rights/conserv.html
- (4) Texas Water Development Board: Water Demand Projections, 2011 Regional Water Plan Data," accessed online at <https://www.twdb.state.tx.us/waterplanning/rwp/plans/index.asp>
- (5) "Water Conservation Best Management Practices Guide," Water Conservation Implementation Task Force, Texas Water Development Board Report 362; accessed online at <https://www.twdb.texas.gov/conservation/BMPs/index.asp>
- (6) City of Huntsville ordinance, accessed online at www.huntsvilletx.gov.
- (7) Texas Commission on Environmental Quality: Model drought Contingency Plan," accessed online at http://www.tceq.texas.gov/permitting/water_rights/contingency.html

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(8) Region H Water Planning Group: "Draft Model Water Conservation and Drought Contingency Plan for Municipal Water Users Groups,"

(9) "Water Conservation Implementation Task Force Report to the 79th Legislature," accessed online at https://www.twdb.texas.gov/conservation/resources/doc/WCITF_Leg_Report.pdf

(10) City of Huntsville Water and Wastewater Rates Effective October 1, 2013, accessed online at http://www.huntsvilletx.gov/egov/documents/1381336016_31362.pdf

The following water conservation and drought contingency plans and related documents were reviewed in the development of this plan.

(1) City of Nacogdoches Water Conservation and Drought Contingency Plan, accessed online at <https://tx-nacogdoches.civicplus.com/DocumentCenter/View/39>

(2) City of Brenham Water Conservation and Drought Contingency Plan, accessed online at http://www.egovlink.com/public_documents300/brenham/published_documents/Agenda%20Items/2011/june22011/drought.pdf

(3) City of Bryan Water Conservation and Drought Contingency Plan, accessed online at <http://weblink.bryantx.gov/WebLink8/0/doc/6550/Page1.aspx>

(4) City of Lufkin Water Conservation and Drought Contingency Plan, accessed online at <http://cityoflufkin.com/pw/pdfs/DroughtContgPlan4.pdf>

(5) City of Lake Jackson Water Conservation and Drought Contingency Plan, accessed online at <http://www.lakejackson-tx.gov/>

(6) City San Marcos Water Conservation and Drought Contingency Plan, accessed online at <http://www.crystalclearsud.org/drought-contingency>

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Appendix B

Texas Administrative Code Title 30 Part I Chapter 288 Subchapter A Rule §288.1

<u>TITLE 30</u>	ENVIRONMENTAL QUALITY
<u>PART 1</u>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<u>CHAPTER 288</u>	WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS, GUIDELINES AND REQUIREMENTS
<u>SUBCHAPTER A</u>	WATER CONSERVATION PLANS
RULE §288.1	Definitions

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

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

- (A) cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;
- the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or non-soil media by a nursery grower;
- (C) raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;

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- (D) raising or keeping equine animals;
- (E) wildlife management; and
- (F) planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure

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

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

(4) Conservation--Those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water, or increase the recycling and reuse of water so that a water supply is made available for future or alternative uses. Texas Commission on Environmental Quality Page 2 Chapter 288 -Water Conservation Plans, Drought Contingency Plans, Guidelines and Requirements

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

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

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

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

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

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

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

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

(13) Nursery grower--A person engaged in the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, who grows more than 50% of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of Texas Commission on Environmental Quality Page 3 Chapter 288 -Water Conservation Plans, Drought Contingency Plans, Guidelines and Requirements. This definition, grow means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease, and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.

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

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

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

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

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

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

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

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

(22) Total gallons per capita per day (GPCD)--The total amount of water diverted and/or pumped for potable use divided by the total permanent population divided by the days of the year. Diversion volumes of reuse as defined in this chapter Texas Commission on Environmental Quality Page 4 Chapter 288 -Water Conservation Plans, Drought Contingency Plans, Guidelines and Requirements shall be credited against total diversion volumes for the purposes of calculating GPCD for targets and goals.

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

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

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

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Texas Administrative Code Title 30 Part I Chapter 288 Subchapter A Rule §288.2

TITLE 30 ENVIRONMENTAL QUALITY

PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 288 WATER CONSERVATION PLANS, DROUGHT CONTINGENCY
PLANS, GUIDELINES AND REQUIREMENTS

SUBCHAPTER A WATER CONSERVATION PLANS

**RULE §288.2 Water Conservation Plans for Municipal Uses by Public
Water Suppliers**

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

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

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

(B) a record management system which allows for the classification of water sales and uses into the most detailed level of water use data currently available to it, including, if possible, the sectors listed in clauses (i) - (vi) of this subparagraph.

- (i) Any new billing system purchased by a public water supplier must be capable of reporting detailed water use data as described in clauses (i) - (vi) of this subparagraph; residential;
 - a. single family
 - b. Multi-family
- (ii) commercial;
- (iii) (iii) institutional;
- (iv) (iv) industrial;
- (v) Agricultural
- (vi) Wholesale

(C) specific, quantified five-year and ten-year targets for water savings to include goals for water loss programs and goals for municipal use in total GPCD and residential GPCD. The goals established by a public water supplier under this subparagraph are not enforceable;

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(D) metering device(s), within an accuracy of plus or minus 5.0% in order to measure and account for the amount of water diverted from the source of supply;

(E) a program for universal metering of both customer and public uses of water, for meter testing and repair, and for periodic meter replacement;

(F) measures to determine and control water loss (for example, periodic visual inspections along distribution lines; annual or monthly audit of the water system to determine illegal connections; abandoned services; etc.);

(G) a program of continuing public education and information regarding water conservation;

(H) a water rate structure which is not "promotional," i.e., a rate structure which is cost-based and which does not encourage the excessive use of water;

(I) a reservoir systems operations plan, if applicable, providing for the coordinated operation of reservoirs owned by the applicant within a common watershed or river basin in order to optimize available water supplies; and

(J) a means of implementation and enforcement which shall be evidenced by:

(i) a copy of the ordinance, resolution, or tariff indicating official adoption of the water conservation plan by the water supplier; and

(ii) a description of the authority by which the water supplier will implement and enforce the conservation plan; and

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

(2) Additional content requirements. Water conservation plans for municipal uses by public drinking water suppliers serving a current population of 5,000 or more and/or a projected population of 5,000 or more within the next ten years subsequent to the effective date of the plan must include the following elements:

(A) a program of leak detection, repair, and water loss accounting for the water transmission, delivery, and distribution system;

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

(3) Additional conservation strategies. Any combination of the following strategies shall be selected by the water supplier, in addition to the minimum requirements in paragraphs (1) and (2) of this subsection, if they are necessary to achieve the stated water conservation goals of the plan. The commission may require that any of the following strategies be implemented by the water supplier if the commission determines that the strategy is necessary to achieve the goals of the water conservation plan:

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

(B) adoption of ordinances, plumbing codes, and/or rules requiring water-conserving plumbing fixtures to be installed in new structures and existing structures undergoing substantial modification or addition;

(C) a program for the replacement or retrofit of water-conserving plumbing fixtures in existing structures;

(D) reuse and/or recycling of wastewater and/or gray water;

(E) a program for pressure control and/or reduction in the distribution system and/or for customer connections;

(F) a program and/or ordinance(s) for landscape water management;

(G) a method for monitoring the effectiveness and efficiency of the water conservation plan; and

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

(b) A water conservation plan prepared in accordance with 31 TAC §363.15 (relating to Required Water Conservation Plan) of the Texas Water Development Board and substantially meeting the requirements of this section and other applicable commission rules may be submitted to meet

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application requirements in accordance with a memorandum of understanding between the commission and the Texas Water Development Board.

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

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Texas Administrative Code Title 30 Part I Chapter 288 Subchapter B Rule §288.20

TITLE 30 ENVIRONMENTAL QUALITY
PART 1 TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 288 WATER CONSERVATION PLANS, DROUGHT CONTINGENCY PLANS,
GUIDELINES AND REQUIREMENTS
SUBCHAPTER B DROUGHT CONTINGENCY PLANS
**RULE §288.20 Drought Contingency Plans for Municipal Uses by Public Water
Suppliers**

- (a) A drought contingency plan for a retail public water supplier, where applicable, must include the following minimum elements.
- (1) Minimum requirements. Drought contingency plans must include the following minimum elements.
- (A) Preparation of the plan shall include provisions to actively inform the public and affirmatively provide opportunity for public input. Such acts may include, but are not limited to, having a public meeting at a time and location convenient to the public and providing written notice to the public concerning the proposed plan and meeting.
- (B) Provisions shall be made for a program of continuing public education and information regarding the drought contingency plan.
- (C) The drought contingency plan must document coordination with the regional water planning groups for the service area of the retail public water supplier to ensure consistency with the appropriate approved regional water plans.
- (D) The drought contingency plan must include a description of the information to be monitored by the water supplier, and specific criteria for the initiation and termination of drought response stages, accompanied by an explanation of the rationale or basis for such triggering criteria.
- (E) The drought contingency plan must include drought or emergency response stages providing for the implementation of measures in response to at least the following situations:
- (i) Reduction in available water supply up to a repeat of the drought of record;
 - (ii) Water production or distribution system limitations;
 - (iii) Supply source contamination; or
 - (iv) System outage due to the failure or damage of major water system components (e.g., pumps).
- (F) The drought contingency plan must include specific, quantified targets for water use reductions to be achieved during periods of water shortage and drought. The entity preparing the plan shall establish the targets. The goals established by the entity under this subparagraph are not enforceable.
- (G) The drought contingency plan must include the specific water supply or water demand management measures to be implemented during each stage of the plan including, but not limited to, the following:
- (i) Curtailment of non-essential water uses; and

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- (ii) Utilization of alternative water sources and/or alternative delivery mechanisms with the prior approval of the executive director as appropriate (e.g., interconnection with another water system, temporary use of a non-municipal water supply, use of reclaimed water for non-potable purposes, etc.).
- (H) The drought contingency plan must include the procedures to be followed for the initiation or termination of each drought response stage, including procedures for notification of the public.
- (I) The drought contingency plan must include procedures for granting variances to the plan.
- (J) The drought contingency plan must include procedures for the enforcement of mandatory water use restrictions, including specification of penalties (e.g., fines, water rate surcharges, discontinuation of service) for violations of such restrictions.
- (2) Privately-owned water utilities. Privately-owned water utilities shall prepare a drought contingency plan in accordance with this section and incorporate such plan into their tariff.
- (3) Wholesale water customers. Any water supplier that receives all or a portion of its water supply from another water supplier shall consult with that supplier and shall include in the drought contingency plan appropriate provisions for responding to reductions in that water supply.
- (b) A wholesale or retail water supplier shall notify the executive director within five business days of the implementation of any mandatory provisions of the drought contingency plan.
- (c) The retail public water supplier shall review and update, as appropriate, the drought contingency plan, at least every five years, based on new or updated information, such as the adoption or revision of the regional water plan.

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Appendix C

Utility Profile Data

Name of Utility: **City of Huntsville PWS ID 2360001**

Address & Zip: **596 Palm Street, Huntsville, TX 77340**

Telephone Number: **936-291-5970**

Fax Number: **936-291-7259**

Form Completed by: **Eddie Wilcut**

Title: **Project Manager, Alan Plummer Associates, Inc.**

Signature:

Date: **March 24, 2014**

Name and phone number of person/department responsible for implementing a water conservation program:

Name: **City Manager or his/her designee**

Name: **Carol Reed, Director of Public Works, Phone 936-294-5768**

Name: **Joyce Hubbard, Water Services Superintendent, Phone 936-294-5762**

Name: **Kyle Matthews, Assistant Water Services Superintendent, Phone 936-294-5733**

I. Customer Data

A. Population and Service Area Data

1. A service area map is attached
2. Service area size (square miles): 42.8
3. Current population of service area: 40,063
4. Current population serviced by utility
Water: 40,063
Wastewater: 38,060
5. Miles of water distribution pipeline: 320
6. Population served by utility for previous five years:

Year	Census Population
2009	38,169

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2010	38,548
2011	39,109
2012	39,666
2013	40,063

7. Projected population service area in the following decades

Year	Population
2020	42,953
2030	47,447
2040	52,411
2050	57,894

8. List source(s)/ method(s) for the calculation of current and projected population:

An annual growth rate of 1.0% was calculated and was used to project future population estimates. Multiplying these population estimates by the anticipated per capita consumption, based on a 0.5% annual reduction, provided the estimated average daily usage for Huntsville through 2050.

The calculated numbers assume Huntsville will continue the growth trend it has followed for the past 55 years for the next 45, through 2050. The science of predicting population growth is by no means exact, changes in the economy, such as the addition of a new prison unit, or the continued expansion of Sam Houston State University could cause the projections to be less accurate, as well as a down turn in local economy.

B. Active Connections

1. Current number of active connections by user type.

Treated Water Users	Metered	Non-Metered	Total
Residential	7,575	0	7,575
Multi-family	315	0	315
Commercial	1,275	0	1,275
Industrial	N/A	0	N/A
Institutional	154	0	154
Public	97	0	97
Other (Elkins Lake)	1	0	1
Other (Tenaska)	1	0	1
Total	9,418	0	9,418

2. List the number of new connections per year for most recent three years:

Year	2011	2012	2013
Residential	70	59	73
Commercial	10	10	10

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Industrial	0	0	0
Public	0	0	0
Other	0	0	0
Total	80	69	83

C. High Volume Customers

Customer	Use (1,000 gal/yr)
Tenaska	1,357,762
Texas Department of Criminal Justice (T.D.C.J.)	1,254,583
Sam Houston State University (SHSU)	146,477
Arbors Apartments	21,279
Huntsville Independent School District (HISD)	16,777

II. Water Use Data for Service Area

A. Water Accounting Data

1. Amount of water use for previous five years (in 1,000 gal):
Treated Water from Production Reports

Year	2009	2010	2011	2012	2013
January	204,775	204,561	204,964	217,783	212,741
February	195,714	184,374	196,654	196,427	210,988
March	220,082	212,510	230,582	206,293	250,747
April	206,124	217,209	256,204	219,126	248,129
May	230,368	264,534	265,294	251,130	242,557
June	296,680	251,234	293,165	244,593	273,183
July	303,167	241,484	305,508	247,628	294,170
August	281,173	317,225	320,647	299,735	320,520
September	230,077	254,492	295,486	267,136	265,646
October	209,596	277,442	261,101	239,917	251,761
November	194,859	224,516	227,095	226,799	223,311
December	195,433	215,795	218,692	215,674	235,690
Total	2,768,048	2,865,376	3,075,392	2,832,241	3,029,443

*Source: City of Huntsville Monthly Water Production Reports 2009 to 2013

2. Please indicate how the above figures were determined (e.g., from a water meter located at the point of a diversion from a stream or located at a point where raw water enters the treatment plant, or from water sales).

The figure above is determined from multiple meters at different points. We receive treated water from the TRA mag meter that delivers straight to the Palm Street plant. The Palm Street old pump station has a Venturi meter that pumps into the distribution. The new pump station has a mag meter that measures pumpage into the distribution system, and the Spring Lake plant has a badger meter. The numbers are figured by adding the daily pumpage from Palm Street total wells, Spring Lake total wells, and total prison(s).

3. Metered amount of water (in 1,000 gallons) delivered (sold) as recorded by the following account types:
Note: The amount of water sold may reflect water pumped in a previous month.

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Year	Residential	Commercial & Institutional	Multi-family	Irrigation	Total Sold
2009	778,590	1,678,452	229,689	134,631	2,821,362
2010	522,855	2,050,709	232,227	162,618	2,968,409
2011	648,353	2,129,272	249,975	240,261	3,267,861
2012	734,796	1,581,409	215,647	125,128	2,656,980
2013	490,160	1,586,506	238,899	160,545	2,476,110

* Source: TWDB Worksheet for Water Usage Survey 2009-2013

4. List previous five years records for annual peak-to-average daily use ratio:

(The percentages are based on the master meters readings and billed water consumption not in correlation with the monthly billing cycles)

Year	Amount of Unaccounted for Water	% Unaccounted for Water Use
2009	125,837,000	4.5%
2010	124,869,000	4.4%
2011	133,801,000	4.4%
2012	74,006,000	2.6%
2013	128,764,000	4.2%

* Source: TWDB Water Loss Audits Reporting Forms 2009-2013

5. List previous five years records for annual peak-to-average daily use ratio

Year	Average MGD	Peak MGD	Ratio
2009	7.58	12.06	1.59
2010	7.85	11.65	1.48
2011	8.43	11.65	1.38
2012	7.76	11.14	1.44
2013	8.36	11.83	1.42

6. Total per capita water use for previous five years

Year	Population	Total Pumpage (1,000 gal)	Industrial Sales (1,000 gal)	Wholesale Sales (1,000 gal)	In-City Municipal Use (1,000 gal)	Municipal per Capita Use (gpcd)	Total per Capita Use (gpcd)
2009	38,169	2,768,048	0	0	0	0	199
2010	38,548	2,865,376	0	0	0	0	204
2011	39,109	3,075,392	0	0	0	0	215
2012	39,666	2,832,241	0	0	0	0	196
2013	40,063	3,052,392	0	0	0	0	209

*Source: City of Huntsville Monthly Water Production Reports 2009 to 2013

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7. Seasonal water use for previous five years (in gallons per capita per day)

Year	Population	Base per Capita Use (gpcd)	Summer per Capita Use (gpcd)	Seasonal Use (gpcd)
2009	38,169	199	258	59
2010	38,548	182	228	46
2011	39,109	176	261	85
2012	39,666	176	222	46
2013	40,063	189	246	57

*Source: City of Huntsville Monthly Water Production Reports 2009 to 2013

B. Projected Water Demands

Provide water supply requirements for at least the next ten years using population trends, historical water use, and economic growth, etc. Indicate sources of data and how projected water demands were determined.

Year	Projected Average Demand (MGD)	Source of Data	Groundwater Option Events	Conventional Surface Water Events
2013	8.36 (Actual)	2013 Production Numbers	24" Radial	24" Radial and 30" Redundancy
2015	8.4	Estimate	Phase 4 Ground Water	
2020	8.6	Estimate	Phase 5 Ground Water	
2030	9.0	Estimate		Storage/High Service Pumps
2040	9.5	Estimate	Expand TRA - 22 MGD 30" Redundancy	TRA Expansion-32 MGD
2050	10.0	Estimate		

III. Water Supply System

A. Water Supply Sources

List all current water supply sources and the amounts available with each:

Type	Source	Amount Available (MGD)
Surface Water	Trinity River Authority	12 MGD
Groundwater	Catahoula Aquifer	3.3 MGD (Safe Yield)
Contracts	Trinity River Authority	20 MGD
Other		

B. Treatment and Distribution System

Design daily capacity	Storage capacity: Elevated	Storage capacity: Ground
15.3 Million Gallons	2.5 Million Gallons	5.5 Million Gallons

* Source: City of Huntsville Water System Capacity Stud, Crestpo, 2011

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The City of Huntsville receives its water from both surface and groundwater sources. Surface water comes to the City as treated potable water that is delivered through a 30 inch pipe from the Trinity River Authority. Groundwater is provided from the City's Palm Street Water Plant and Spring Lake Plant.

Water at the Palm Street Plant is produced from five (5) wells that are owned and operated by the city. This facility includes five (5) million gallons of ground storage capacity and 2.5 million gallons of elevated storage capacity. The facility is supported by two (2) booster stations, which are capable of pumping at a combined rate of 13,000 gallons per minute (gpm) or 18.72 million gallons per day (mgd) with a firm capacity of 11,250 gpm or 16.2 mgd.

Water at the Spring Lake Plant is produced from two wells that are owned and operated by the City. This facility includes 500,000 gallons of ground storage capacity. The facility is supported by one (1) booster station capable of pumping at a rate of 2,000 gpm or 2.88 mgd with a firm capacity of 1.44 mgd.

Total pumping capacity from both water plants is 15,000 gpm or 21.6 mgd with a firm capacity of 12,250 gpm or 17.64 mgd. The total storage capacity is 8.0 million gallons, consisting of 2.5 million gallons of elevated storage capacity and 5.5 million gallons of ground storage capacity.

Miles of Water Distribution	Miles of Wastewater Mains	Fire Hydrants	MG Elevated Storage tank Capacity	MG Ground Storage Capacity	Wastewater Lift Stations
320	250	1,300	2.5	5.5	31

IV. Wastewater Utility System

A. Wastewater System Data

- Design capacity of wastewater treatment plant(s): **8.25 Million Gallons Per Day**
- Is treated effluent used for:

Use	Yes/No	Gallons per Month
On-Site Irrigation?	No	
Off-Site Irrigation?	No	
Plant Wash-down?	Yes	40,000
Chlorination/De-chlorination?	Yes	50,000

- Briefly describe the wastewater system(s) of the area serviced by water utility. Describe how treated wastewater is disposed of. Where applicable, identify treatment plant(s) with the TCEQ name and number, the operator, owner, and, if wastewater is discharged, the receiving stream. Please provide a sketch or map which locates the plants and discharge points or disposal sites.

Treatment Plant Name	TCEQ Number	Operator	Owner	Discharge	Activated Sludge Process
N.B.					

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Davidson WWTP	TPDES# 10781-002	Brady Larson	City of Huntsville	San Jacinto Basin	1.6 MGD
A.J. Brown WWTP	TPDES# 10781-003	William Lawler	City of Huntsville	Trinity River Basin	4.15 MGD
Robinson Creek WWTP	TPDES# 10781-004	Gavin Gann	City of Huntsville	San Jacinto Basin	2.5 MGD

B. Wastewater Data for Service Area

1. Percent of water service area served by wastewater system: 95%
2. Monthly wastewater volume for previous three years (in 1,000 gallons):

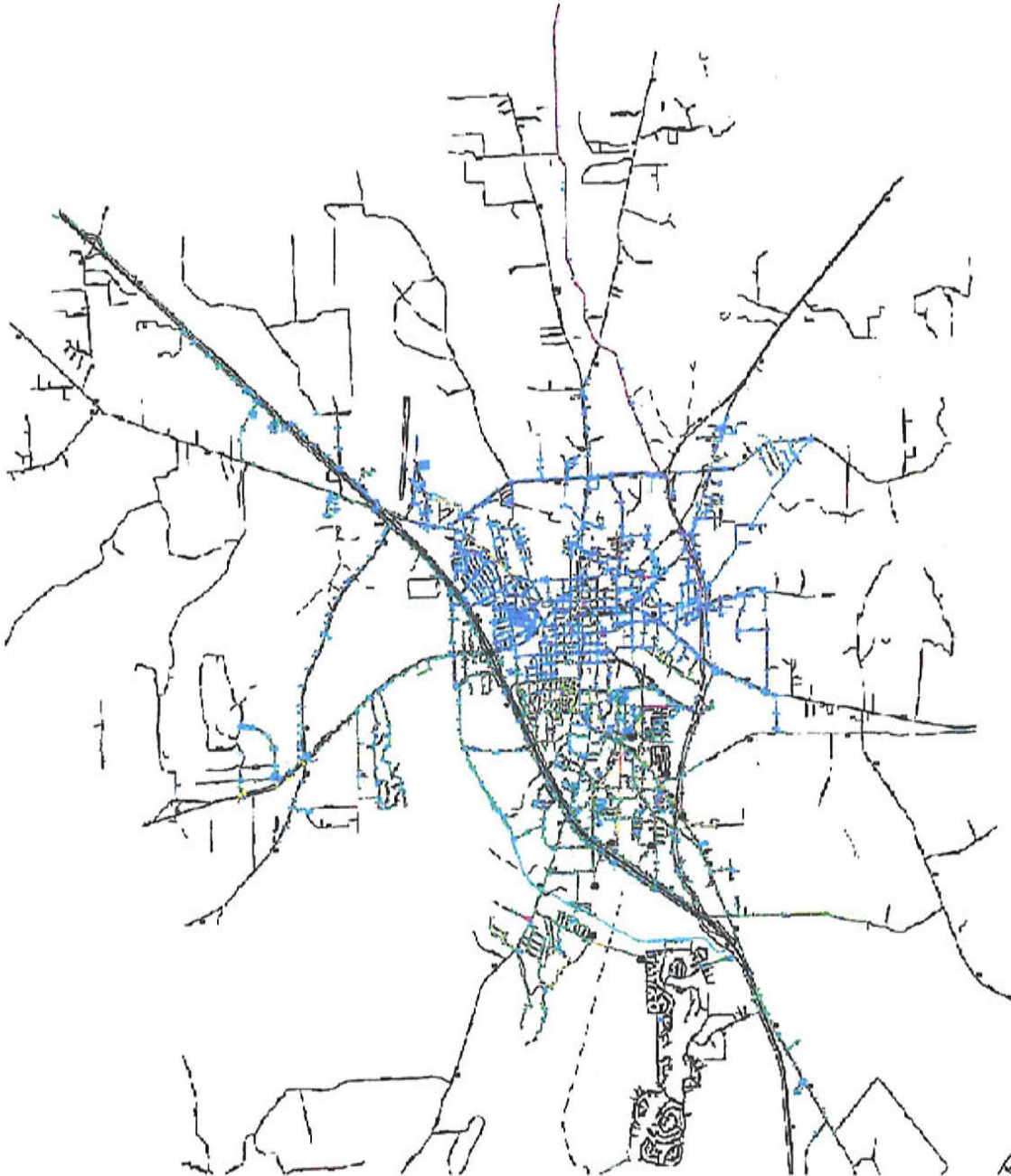
Year	2011	2012	2013
January	114,340	121,060	112,730
February	106,960	127,360	107,430
March	107,460	139,860	110,990
April	103,940	124,130	115,560
May	104,000	120,000	128,880
June	102,660	115,170	112,920
July	111,330	120,880	108,690
August	111,540	112,840	111,640
September	109,250	114,550	121,370
October	113,770	117,010	138,880
November	112,270	111,500	128,430
December	119,240	104,960	113,530
Total	1,316,760	1,429,320	1,411,050

* Source: City of Huntsville, Wastewater Production Report, 2009 to 2013

Appendix D

CITY OF HUNTSVILLE SERVICE AREA MAP

City of Huntsville
Water Conservation and Drought Contingency Plan 2014



APPENDIX E
CITY ORDINANCE

City of Huntsville

Water Conservation and Drought Contingency Plan 2014

ORDINANCE NO. 2014-25

AN ORDINANCE OF THE CITY OF HUNTSVILLE, TEXAS, ADOPTING A WATER CONSERVATION PLAN AND A DROUGHT CONTINGENCY PLAN; ESTABLISHING CRITERIA FOR THE INITIATION AND TERMINATION OF DROUGHT RESPONSE STAGES; ESTABLISHING RESTRICTIONS ON CERTAIN WATER USES; ESTABLISHING PENALTIES FOR VIOLATION OF THE PLANS; PROVIDING A SEVERABILITY CLAUSE; AND DECLARING AN EFFECTIVE DATE.

WHEREAS, the City of Huntsville, Texas recognizes that the amount of water available to the City and its water utility customers is limited and subject to depletion during periods of extended drought; and

WHEREAS, the City recognizes that natural limitations due to drought conditions and other acts of God cannot guarantee an uninterrupted water supply for all purposes; and

WHEREAS, Section 11.1272 of the Texas Water Code and applicable rules of the Texas Natural Resource Conservation Commission require all public water supply systems in Texas to prepare water conservation and drought contingency plans; and

WHEREAS, as authorized under law, and in the best interests of the citizens of Huntsville, Texas, the City Council deems it expedient and necessary to establish certain rules and policies for the orderly and efficient management of limited water supplies during the drought and other water supply emergencies; NOW, THEREFORE,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HUNTSVILLE, TEXAS, that:

SECTION 1: That the City of Huntsville, Texas Drought Contingency Plan attached hereto as Exhibit "A" and made a part hereof for all purposes and that City of Huntsville Water Conservation Plan attached hereto as Exhibit "B" and made a part hereof for all purposes be, and the same are hereby, adopted as the official policies of the City and referenced in the Code of Ordinances, Sections 46-49 and 46-50.

SECTION 2: Any person, corporation, partnership, association or other entity violating any drought contingency measure or water conservation measure implemented by the City of Huntsville pursuant to the City of Huntsville, Texas Drought Contingency Plan or the City of Huntsville Water Conservation Plan shall be subject to the general penalty provisions set out in Section 1-11 of the Code of Ordinances of the City of Huntsville, Texas, and a separate offense shall be deemed committed upon each and every day that any drought contingency measure is violated.

SECTION 3: All ordinances that are in conflict with the provisions of this Ordinance are, and that same are hereby, repealed and all other ordinances of the City not in conflict with the provisions of this Ordinance shall remain in full force and effect.

SECTION 4: Should any paragraph, sentence, clause, phrase or section of this Ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this Ordinance as a whole or any part or provision thereof, other than the part so declared to be invalid, illegal or unconstitutional.

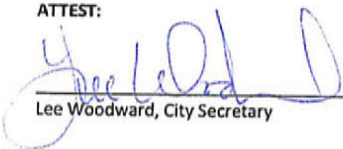
SECTION 5: This ordinance shall become effective from and after the date of its passage.

PASSED AND APPROVED THIS 15th DAY OF April 2014.




Mac Woodward, Mayor

ATTEST:



Lee Woodward, City Secretary

APPROVED AS TO FORM:



Leonard Schneider, City Attorney