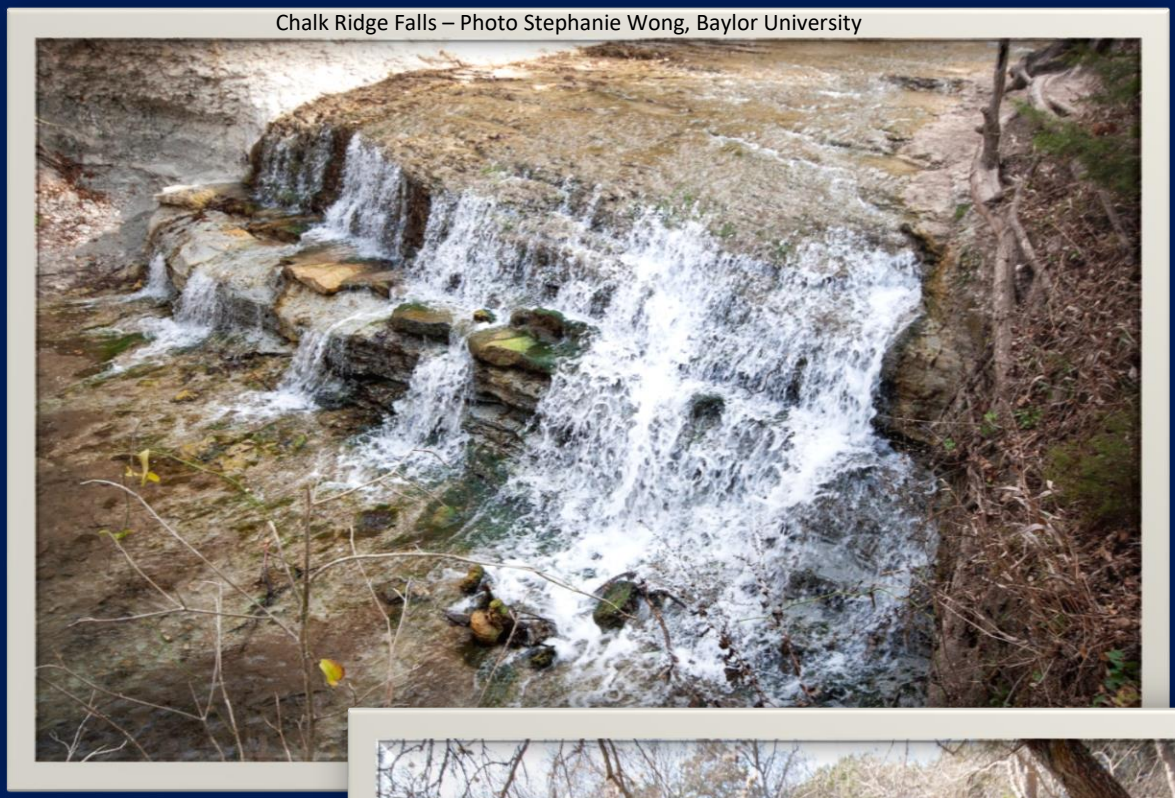
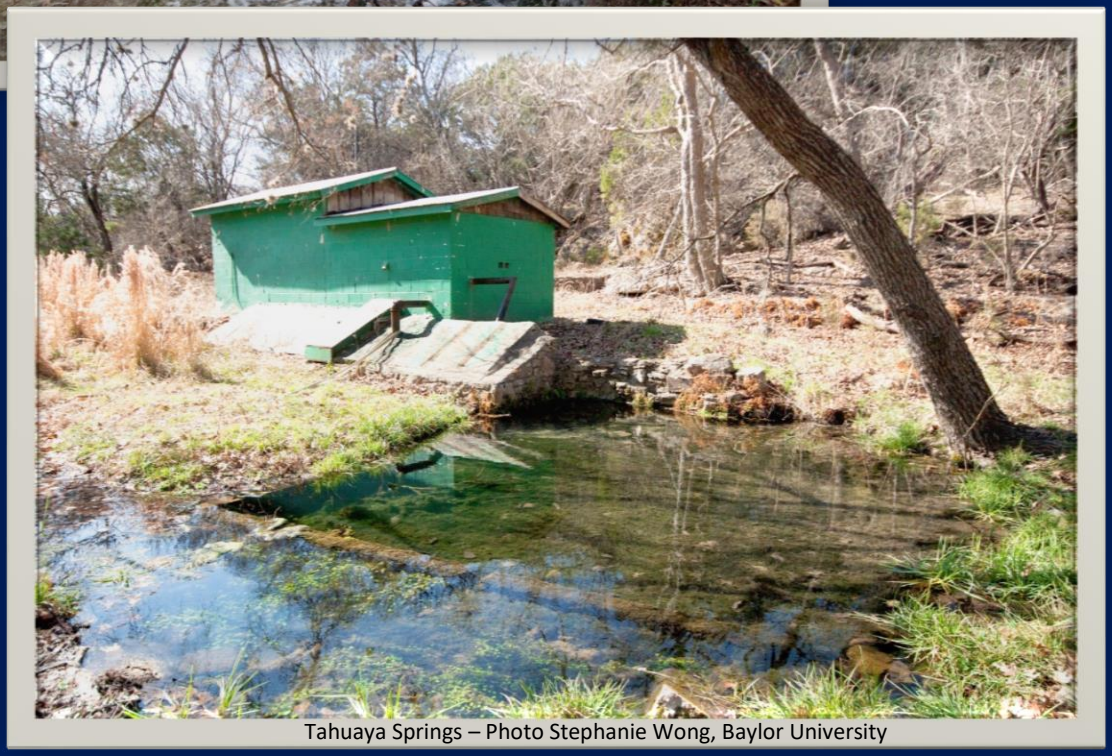
2017 ANNUAL REPORT



Chalk Ridge Falls – Photo Stephanie Wong, Baylor University



Tahuaya Springs – Photo Stephanie Wong, Baylor University

Clearwater UWCD

Belton, Texas

www.cuwcd.org

Clearwater Underground Water Conservation District

Every drop counts!

District Mission Statement

Develop and Implement an efficient, economical and environmentally sound groundwater management program to protect and enhance the water resources of the District.

Clearwater Underground Water Conservation District

Annual Report - Fiscal Year 2017

The Annual Report for Fiscal Year 2017 (FY17) is presented to the Directors of the Clearwater Underground Water Conservation District (CUWCD or District) by May of the following Fiscal Year (May 2018). This report summarizes the activities and accomplishments of the District during FY17 focusing on administrative tasks, management plan requirements, and miscellaneous activities. Most activities are based on the District's fiscal year; however, information dealing with well registration, permitting, and production are based on the 2017 calendar year.

2016-2017 Board of Directors

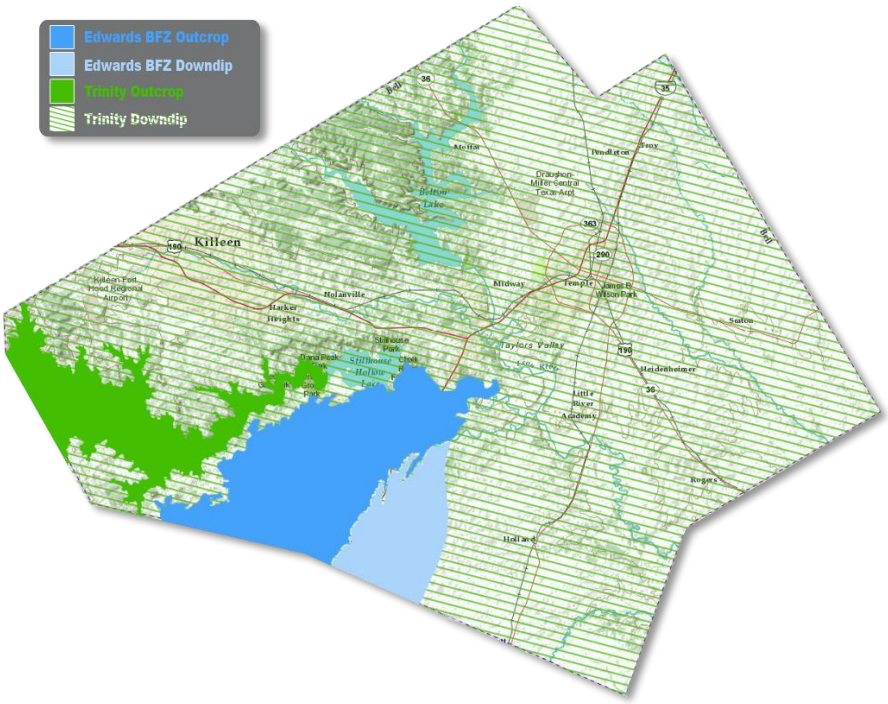
David Cole	Wallace Biskup	Leland Gersbach	Judy Parker	Gary Young
At-Large	Precinct 3	Precinct 1	Precinct 4	Precinct 2

Contents

1. Introduction

The Clearwater Underground Water Conservation District was created by the State legislature in 1989 to manage the groundwater resources of Bell County. The District was approved by the voters of Bell County in August 1999 and opened its doors for business in February 2002. Clearwater's fiscal year runs from October 1st through September 30th. This report summarizes the accomplishments and activities of the District during FY17; but reflects registration, permitting, and production figures for the calendar year 2017.

The District manages the groundwater resources from two major aquifers: The Trinity and The Edwards (BFZ) in Bell County, TX. The Trinity aquifer underlies all of Bell County and is below the Edwards (BFZ), while the Edwards (BFZ) is located in just the southern part of the county.



The Trinity aquifer is comprised of three water bearing layers within the boundaries of Bell County. These layers are the Upper Trinity (Glen Rose), Middle Trinity (Hensell), and Lower Trinity (Hosston). Other water bearing formations in Bell County are Alluvium, Austin Chalk, Buda, Edwards Equivalent, Kemp, Lake Waco, Ozan, and Pecan Gap.

2. Administrative Tasks

Administrative tasks include internal administrative activities necessary for a groundwater district to function effectively. Management Plan requirements include the required tasks and activities identified in the District's Management Plan. Miscellaneous activities include other activities and programs that have been an integral part of the District but are not required by the Management Plan.

A. Contracts / Agreements

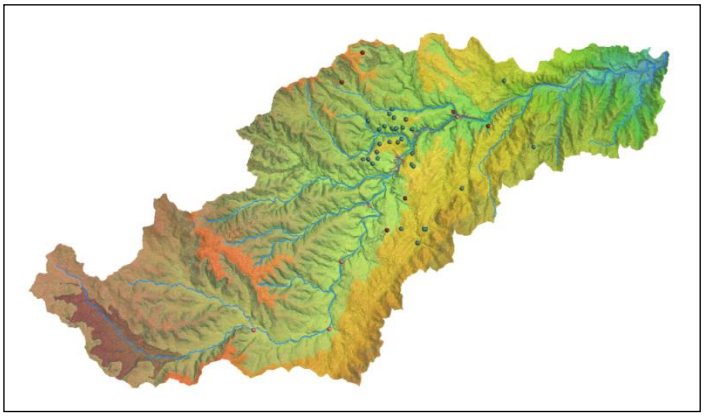
1. Technical Consulting Services

LBG-Guyton Associates

Clearwater UWCD has continued with a professional services contract for general consulting with LBG-Guyton Associates that began in calendar year 2014 and included fiscal years FY14, FY15, FY16 and FY17. The firm provides administrative and technical reviews of drilling and operating permits along with investigative analysis of aquifer conditions and well construction complaints. LBG-Guyton Associates also continues to provide technical representation of the district in GMA 8 relating to development of desired future conditions associated with required joint planning.

Allan R. Standen, LLC

Clearwater UWCD maintains a professional services contract with Allan R. Standen LLC for general consulting services and the annual update of our 3D model. The 2017 updates included the addition of new geophysical and well drilling logs from throughout the county to the 3D model. Updating our model on an annual basis allows for a more accurate analysis and use of this tool by district staff, consulting hydrogeologist, and landowners for well development and prognosis of the aquifer depths prior to drilling. The tool also continues to assist the district in source aquifer determination of newly drilled wells.



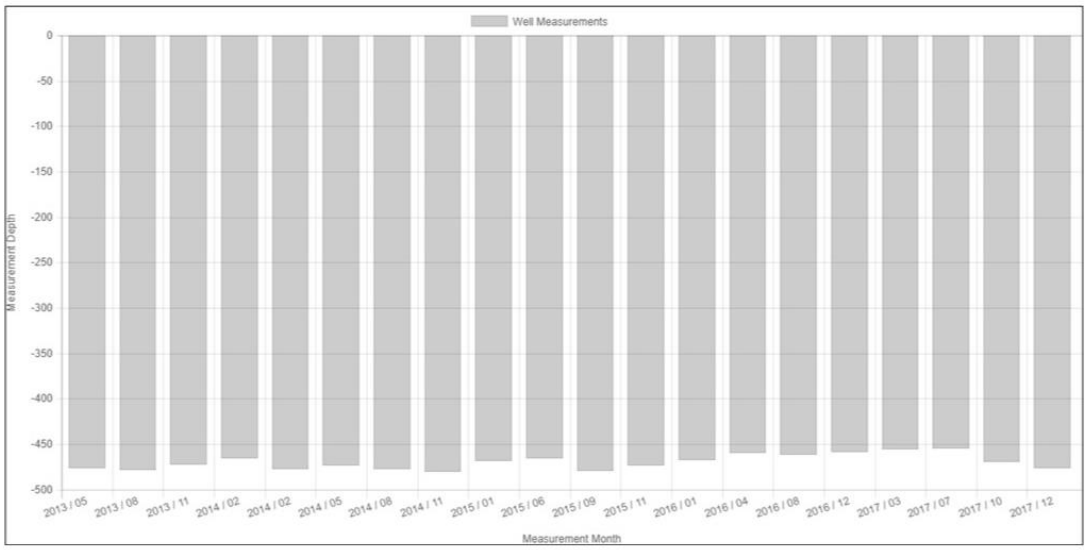
Salado Creek Watershed from Bell County 3D Groundwater Model

Halff Associates, Inc

Halff Associates, Inc. created and continues to manage the District's online GIS website. This GIS platform allows the District web based access to the entire database of wells that has been compiled through the years. All well information is available online to staff as well as the public. Some of the information available includes well latitude and longitude along with ground level elevation of the well head and total depth of well. In 2017, Halff Associates enhanced water level graphs and added water quality data to the platform. The image on the next page shows the information provided by the water level graph.

Water Levels for StillmanValley Monitor Well (M-13-001P)

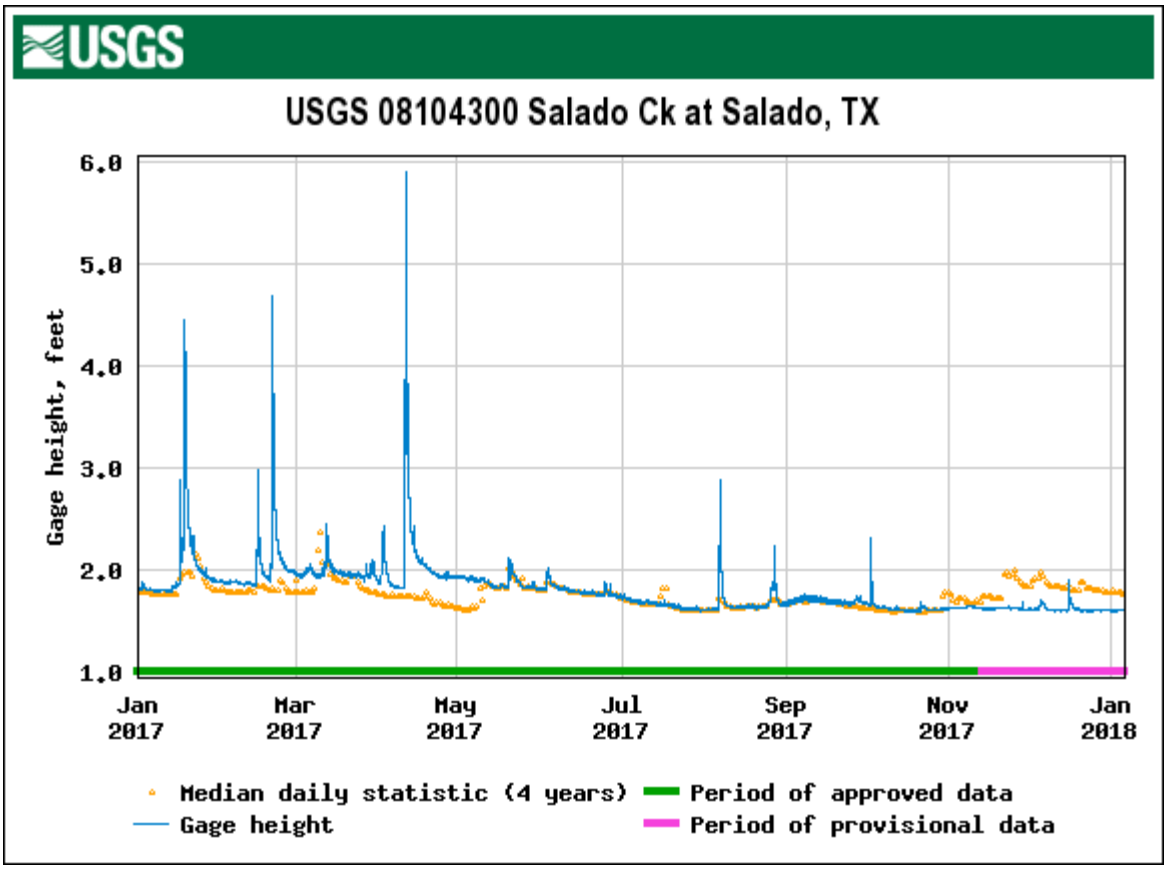
Well Depth = 647 ft



Date	Source	Type	Well Activity	Depth to Water	MP Height	Water Level
5/20/2013	CUWCD	Acoustic Meter	Static	-476	3	-476
8/1/2013	CUWCD	Acoustic Meter	Static	-478.2	3	-478.2
11/1/2013	CUWCD	Acoustic Meter	Static	-472	3	-472
2/1/2014	CUWCD	Acoustic Meter	Static	-464.5	3	-464.5
2/27/2014	Owner	E-Line	Static	-477	3	-477
5/1/2014	CUWCD	Acoustic Meter	Static	-473.3	3	-473.3
8/1/2014	CUWCD	Acoustic Meter	Static	-476.7	3	-476.7
11/1/2014	CUWCD	Acoustic Meter	Static	-479.4	3	-479.4
1/1/2015	CUWCD	Acoustic Meter	Static	-467.9	3	-467.9
6/1/2015	CUWCD	Acoustic Meter	Static	-464.9	3	-464.9
9/14/2015	CUWCD	Acoustic Meter	Static	-478.3	3	-478.3
11/30/2015	CUWCD	Acoustic Meter	Static	-472.6	3	-472.6
1/5/2016	CUWCD	Acoustic Meter	Static	-467	3	-467
4/19/2016	CUWCD	Acoustic Meter	Static	-458.7	3	-458.7
8/30/2016	CUWCD	Acoustic Meter	Static	-461	3	-461
12/30/2016	CUWCD	Acoustic Meter	Static	-457.8	3	-457.8
3/30/2017	CUWCD	Acoustic Meter	Static	-455.3	3	-455.3
7/7/2017	CUWCD	Acoustic Meter	Static	-453.6	3	-453.6
10/2/2017	CUWCD	E-Line	Static	-469.1	3	-469.1
12/27/2017	CUWCD	Acoustic Meter	Static	-476	3	-476

U. S. Geological Survey, Texas Water Science Survey

During the spring of 2013 the U.S.G.S gauging system was installed and the process of analyzing the data and recalibrating the system began. Through the year of 2017 the system was continuously fine-tuned to ensure accuracy of the data collected. This gauging system and relationship with the USGS has proved to be an important step forward in monitoring spring flow both now and well into the future. The image on the next page shows the 2017 stream flow data taken by the gauging system in Salado Creek. Also in 2017, USGS collected a variety of geophysical logs/data as part of a toolbox approach at 4 wells in the District. Data received from these efforts allows for recalibration of the 3D model and virtual bore tool.



The live data can be found online on our website.

http://www.cuwcd.org/salado-springs/salado-creek-gauges/

Baylor University, Department of Geology

Clearwater UWCD continues to contract with the Department of Geology at Baylor University to conduct research projects. The overall goal for the proposed research is to gain a deeper understanding of the Northern Segment of the Edwards Aquifer. Specifically, knowledge of how much recharge occurs and the pathways that recharge takes to the aquifer will greatly assist groundwater resource management. An enhanced scientific understanding of the Northern Segment of the Edwards Aquifer will provide insight to CUWCD and community stakeholders, as well as support collaboration between the district and community in future decision-making processes that will be impacted by the Endangered Species Act.

The studies the District has funded can be found on our website.

http://www.cuwcd.org/aquifer-science/edwards-bfz-aquifer/

2. Legal Services

The District requests legal consulting services on an as-needed basis and utilizes Lloyd Gosselink Rochelle & Townsend, P.C. (LGRT) for consultation. LGRT was the District's sole advisor during FY17 which included the following issues:

- Research and guidance on permitting issues, spacing issues, rule interpretation, public hearing notices, meeting cancellation notices, conservation easements and topics allowed for discussion in closed session.
- Representation of groundwater districts at Texas Water Conservation Association Groundwater Sub-Committee on Desired Future Conditions.
- Research and guidance on the listing of the Salado Salamander, the process for comments and support of CUWCD as they engaged as a stakeholder with the Bell County Adaptive Management Coalition.

3. Other Services

Bell County Adaptive Management Coalition

The Board entered into an interlocal agreement beginning in fiscal year 2012 that continued into fiscal year 2017. CUWCD, the Bell County Commissioners Court, Village of Salado, Salado Water Supply Corporation, Temple Area Builders Association and Billie Hanks, Jr. have collectively contributed $269,500 since 2012 to evaluate current science and to develop new science regarding the Edwards (BFZ) aquifer and the Salado Salamander habitat. Total expenditures for FY12 - FY17 are $204,680.16 leaving a balance of $65,348.76 to fund the FY18 studies. The District defends the position that regulating mechanisms are in place (by CUWCD) on spring flow to protect the specie.

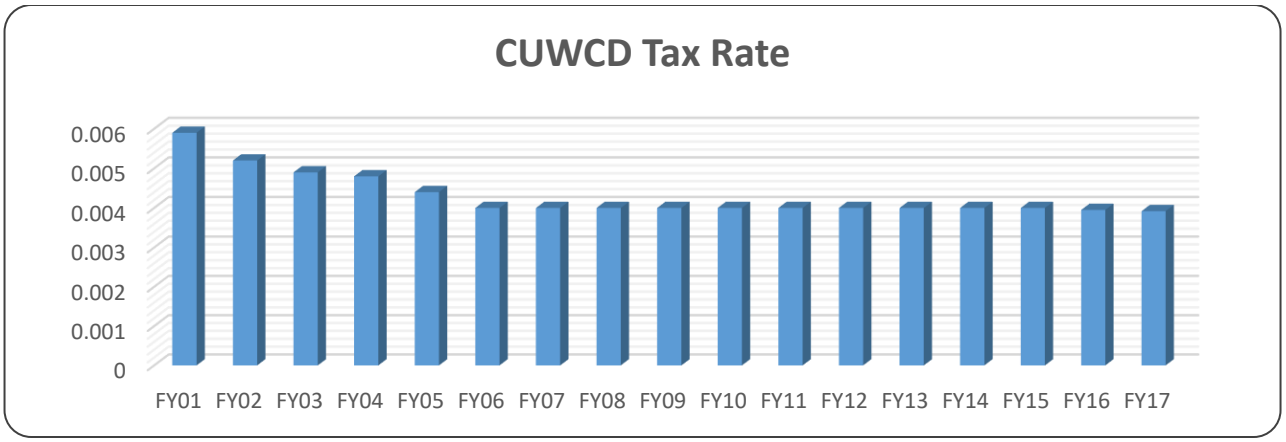
Alton D. Thiele, P.C.

An annual audit of the District's finances is required by Chapter 36.153 of the Texas Water Code to determine the financial condition of the district. Alton D. Thiele, P.C., Certified Public Accountant located in Belton Texas provides the annual financial audit for the District. For more information, see section "B.2 Financial Audit" later in this report.

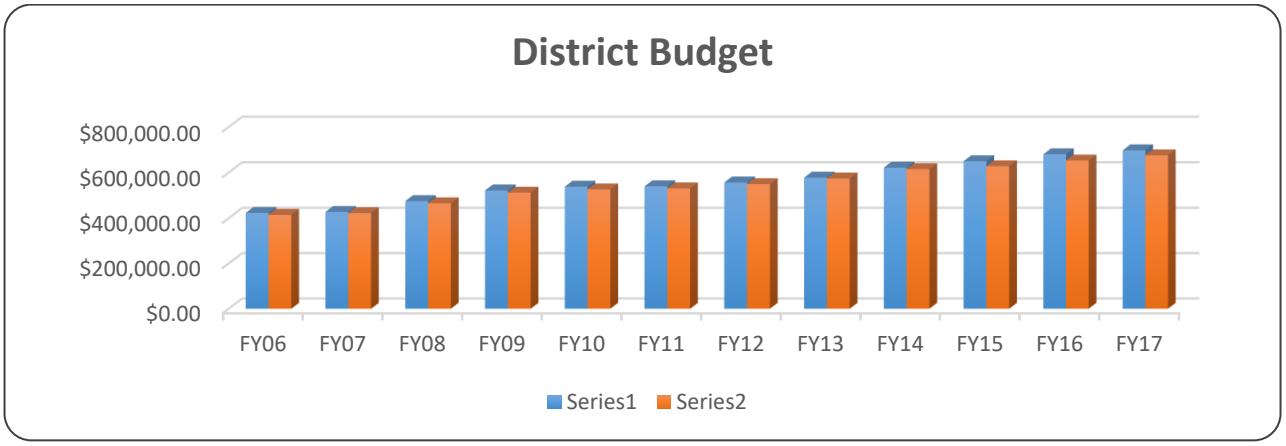
B. Financial Items

1. Budget and Tax Rate

The adopted tax rate for FY17 was $0.00392/$100 valuation. The Board voted to lower the tax rate for the second consecutive year. Since the inception of the District, the Board has consistently lowered or kept the same tax rate since it began assessing taxes. Two workshops (June and July) were held in 2016 to develop an operating budget for the upcoming fiscal year (FY17) and to set the corresponding ad valorem tax rate. The Board voted to lower the tax rate for FY17 to $0.00392/$100 valuation.



The Budget for FY17 was $697,564.00, actual income collected was $675,664.84 and ended with the adjusted income of $780,554.57. The Board of Directors voted to amend the budget in FY17 to pay for the construction of the onsite storage facility that was approved in FY16, therefore, $104,889.73 was moved from the reserve funds to capital improvements. The total expenditures for FY17 were $714,796.62. The Board prescribed closing the year with $65,757.95 being returned to the Reserve Fund.



The approved budget for FY17, along with the schedule of revenues and expenditures is attached as Appendix A.
Online: http://www.cuwcd.org/public-records/cuwcd-budget/

2. Financial Audit

An annual audit of the District's finances is required by Chapter 36.153 of the Texas Water Code to determine the financial condition of the district. Alton D. Thiele, P.C., Certified Public Accountant located in Belton, Texas provided the 2017 annual financial audit for the District. The audit began immediately at the closing of FY17 on September 30, 2017 and they concluded their audit and submitted their findings to the District in February 2018.
See Appendix B for FY17 Financial Audit.
Online: http://www.cuwcd.org/public-records/audits/

C. Miscellaneous Policies / Issues

1. District Rule Amendments

The Board amended the District Rules in March 2016 in accordance with Chapter 36 requiring public notice, a public hearing, and Board approval. The suggestions to the rule amendments were based on the legislative mandates from the seven bills that were passed by the Texas Legislature that affected Chapter 36 of the Texas Water Code, previous discussions, construction standards and water quality within the District.

See our website for complete rules: http://www.cuwcd.org/regulatory-program/district-rules/

2. Bylaws Revised

At the time the District Rules were amended, the rules that addressed the operations of the District were deleted and moved to the Bylaws. The Board of Directors approved the amendments to the Bylaws by resolution on April 13, 2016.

See our website for complete Bylaws: http://www.cuwcd.org/district-overview/bylaws/

D. Board of Directors

1. District Officers

The Board of Directors, per District bylaws, elect officers annually at the first board meeting of the calendar year. The FY 2017 Officers are identified below, along with the office they held and precinct they represent. The map to the right is a map of the Bell County Commissioner Precincts which also serves as the precinct boundaries for the District.

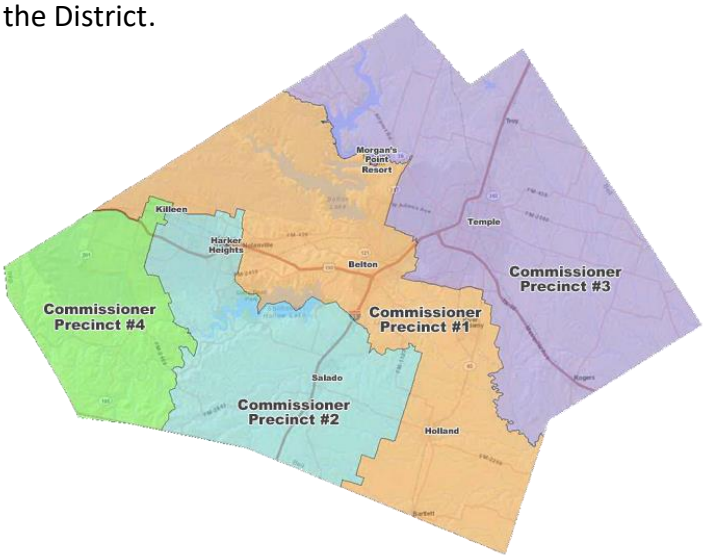
Leland Gersbach, President – Precinct 1

Wallace Biskup, Vice President – Precinct 3

Judy Parker, Secretary – Precinct 4

Gary Young, Director – Precinct 2

David Cole, Director – At Large



2. Meetings - FY17 (Oct 2016-Sept 2017)

The Board of Directors held 13 Board meetings and 1 informational meeting in FY17. The Workshops and regular Board meeting agendas included discussion and presentations on the topics listed below.

- Presentations by USGS Water Science Group
- Presentations by Baylor University regarding current status of the Edwards (BFZ) Aquifer
- Legislative updates
- Conduct hearings on drilling and operating permits
- Salado Salamander issues as it pertains to CUWCD's governance of groundwater
- Presentations by LBG-Guyton regarding the proposed Desired Future Conditions

All board meeting agendas, minutes, and financial reports can be viewed online by visiting http://www.cuwcd.org/public-records/

3. Public Advisory Committee

The Public Advisory Committee (PAC) serves as a liaison between the Clearwater Board and the residents of Bell County. Each Board member selects one person to serve for a one-year term. The public advisory members meet as needed, and regularly attend the monthly Board meetings.

Throughout FY17, most PAC members regularly attended the Clearwater Board meetings. The PAC has provided valuable comments to the Board members at these meetings and they continue to value the input from the PAC. The Board can assign tasks to them as needed.

In January 2017, Henry Bunke passed away unexpectedly. Mr. Bunke was recognized by the District on July 12, 2017. Mr. Bunke's family was presented with a plaque and a resolution honoring his service and commitment to the District.

In FY18, the District will be reevaluating the size and scope of the PAC.

Tom Madden	-	Precinct 1
Henry Bunke	-	Precinct 2
Marvin Green, PAC Chair	-	Precinct 3
Bradley Ware	-	Precinct 4
Bill Schumann	-	At-Large

E. Management Plan

Texas Water Code, Chapter 36.1071--36.1073, states the District Management Plan must be reviewed and readopted every 5 years. The plan is then subject to approval by the Texas Water Development Board (TWDB). Clearwater's management plan was due to the TWDB by March 6, 2016. Proposed revisions for the 5-year update to the District Management Plan went through one preliminary review by the Texas Water Development Board (TWDB). The revised Management Plan was accepted on January 13, 2016 by the Board following the public hearing on the revised Management Plan. Afterwards, the Board adopted the revised plan. The Management Plan was sent to TWDB for approval prior to the due date, March 6, 2016. The district received approval from TWDB on February 19, 2016. The District Management Plan can be found on CUWCD's website at: http://www.cuwcd.org/district-overview/management-plan/

4. Management Plan Requirements

The District Management Plan identifies the goals and objectives of the District and provides performance standards and tracking methods to measure the District's effectiveness in meeting these goals. The District goals are mandated by Texas Water Code Chapter 36, Section 36.1071. Although all groundwater conservation districts are subject to these goals, each district chooses how to best implement the goals within their district by establishing their own objectives and performance standards.

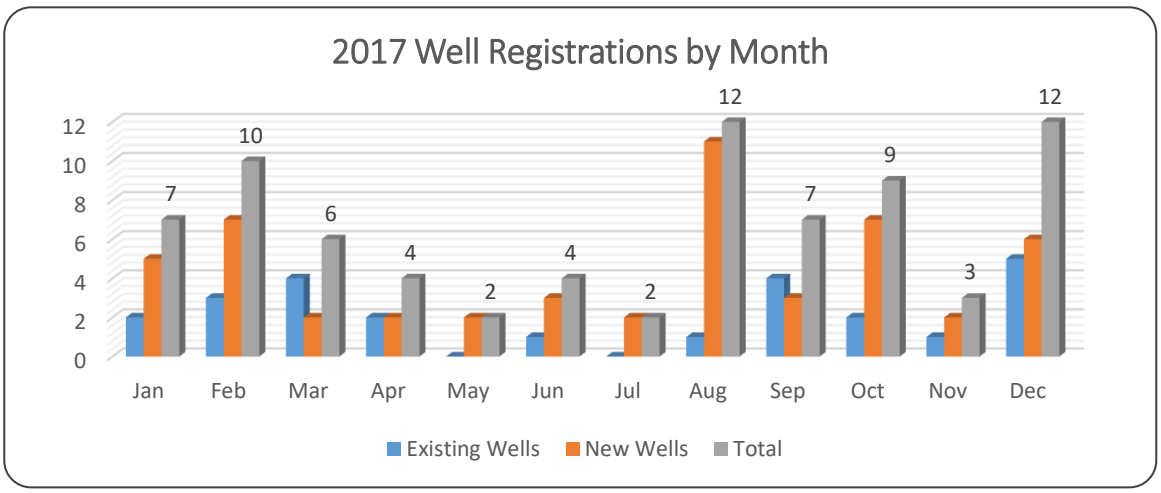
A. Providing the Most Efficient Use of Groundwater

1. Well Registrations

Objective: Each year, the District will require the registration of all wells within the District's jurisdiction.

Objective Satisfied

During calendar year 2017, 78 wells were registered. The tables below summarize well registration and permitting activity from January 1, 2017 through December 31, 2017.



Appendix C for Master Registration Table

2. Permitted Well Applications

Objective: Each year, the District will require permits for all non-exempt use of groundwater in the District as defined in the District rules, in accordance with adopted procedures.

Objective Satisfied

Of the 78 wells registered in 2017, only 4 of those were classified as non-exempt. The Table below summarizes the non-exempt wells or permits that were approved during 2017 and the corresponding permits that were issued where applicable.

Non-Exempt Permitted Well Registrations for 2017 Calendar Year

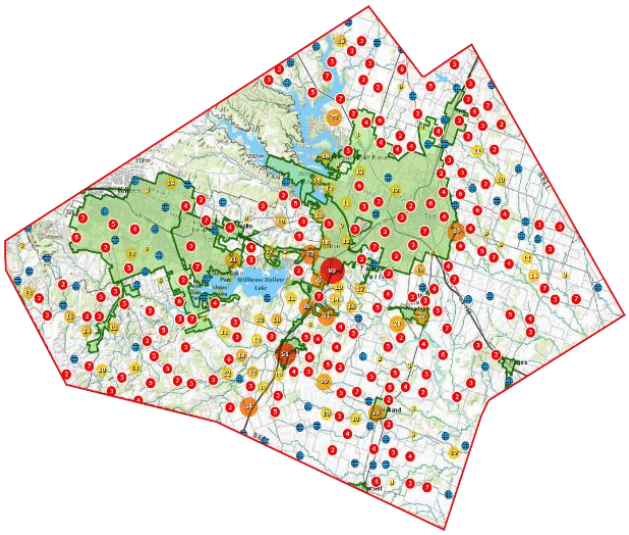
Well #	Land Owner	Ac-Ft / Year	Aquifer	Use	Permit Type
N1-17-001P	Robert & Victoria Lewis	0.82	Middle Trinity	Domestic	Drilling & Operating
N1-17-002P	Advanced Electrical Systems	0.88	Middle Trinity	Domestic	Drilling & Operating
N2-17-001P	Heart of Texas Feed	0.14	Edwards BFZ	Domestic	Drilling & Operating
N2-14-005P	Central Texas WSC	1050	Lower Trinity	Public Water Supply	Operating

3. Groundwater Database

Objective: Each year, the District will maintain a groundwater database to include information relating to well location, production volume, and other pertinent information deemed necessary by the District to enable effective monitoring of groundwater in Bell County.

Objective Satisfied

District GIS Database



The District maintains an online GIS system and works closely with Halff Associates, Inc. to provide web based access to our ever growing database of well information. Every well registered in the District is available in our database with latitude and longitude and also the elevation of the land surface at the well head. With the well information, the District has the ability to attach production and permit information along with other pertinent data. The public maps are available on the District website's homepage, or by going to the following web address and clicking on Public Access Maps: http://www.cuwcd.org/

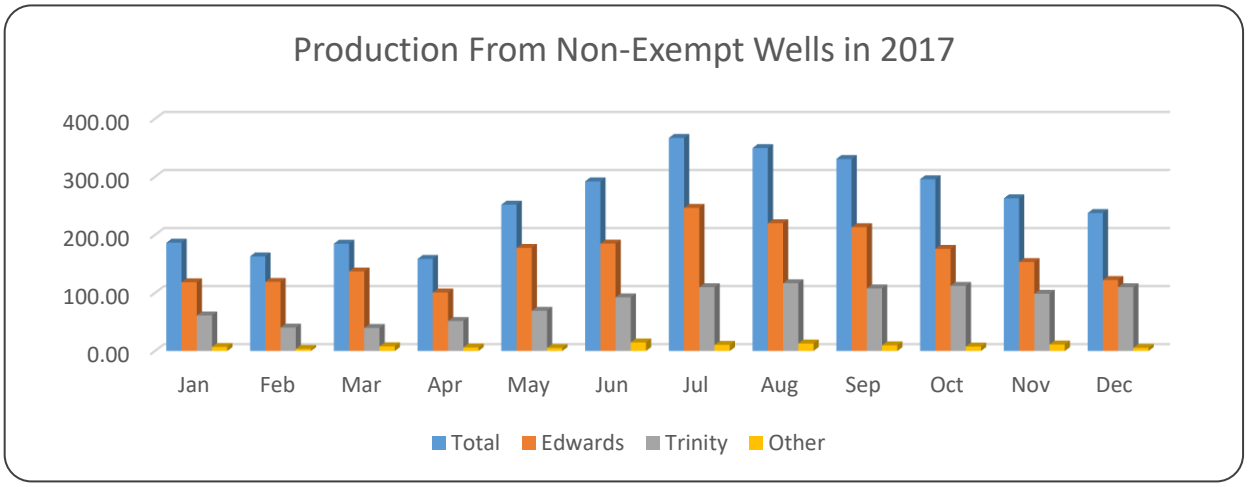
Non-exempt Well Production

The District continued collecting data from non-exempt wells during 2017. Monthly production reports are required by the 5th day of the following month for all wells with operating permits. The tables below show the total permitted amount for the non-exempt wells and their total production. In 2017, actual water production figures were significantly lower than the amount permitted. Part of this is due to the issuance of Historic and Existing Use Permits (HEUP). The HEUPs are issued for the full permit amount, regardless of whether the permittee will be using this amount during the year.

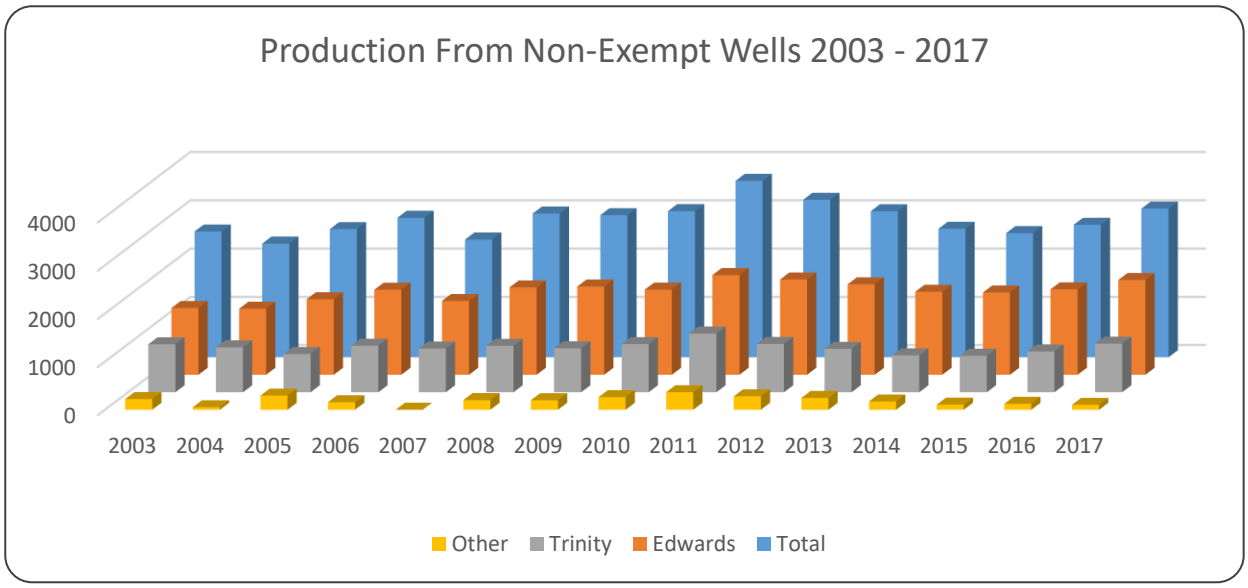
2017 Permitted Wells

	Permitted Ac-Ft	# Permitted Wells	Actual Use Ac-Ft	# Active Permitted Wells	% Usage
Edwards (BFZ)	2,509.35	55	1,969.76	42	78.50%
Trinity (total)	4,543.53	57	1,010.22	43	22.23%
Glen Rose	182.05	6	58.59	3	32.18%
Hensell	447.75	28	80.14	21	17.90%
Hosston	3,913.73	23	871.49	19	22.27%
Other Aquifers	578.50	20	102.27	10	17.68%
Total	7,631.38	132	3,082.25	95	40.39%

The following chart shows 2017 production by month and aquifer. Production was at its highest level during the month of July with a monthly withdrawal of 367.15 ac-ft. Throughout the year, withdrawals from the Edwards BFZ were consistently higher than from the Trinity aquifer. Production from other source formations was minimal throughout the year. Production from other source formations is higher during summer months which reflects agriculture irrigation necessary at that time of year.



In the following graph, production from 2017 (95 wells) is shown compared to production in years 2003 through 2017. Overall production in 2017 was 3,082.25 ac-ft which is slightly higher than the total production in 2016. The Edwards (BFZ) had a total production for 2017 of 1,969.76 ac-ft, total Trinity aquifer production was 1,010.22 ac-ft, and other formations produced 102.27 ac-ft of water.



See Appendix D for 2017 Well Production Report

Groundwater Transport

During 2017, six entities in Bell County transported groundwater outside the District. A total transport of 29.39 ac-ft. occurred from the Edwards BFZ aquifer and 104.82 ac-ft. from the Trinity aquifer. The District is allowed by state law to charge a transport fee of $0.025/1,000 gallons transported. This generated a total revenue of $1,093.52 for 2017.

Entity	Aquifer	County	Ac-Ft	Gallons	Fee
Bell-Milam-Falls WSC	Lower Trinity	Falls, Milam, Williamson	100.91	32,883,000	$822.08
Central Texas WSC	Lower Trinity	Falls, Milam	0.72	233,000	$5.83
East Bell WSC	Lower Trinity	Falls	0.69	223,674	$5.59
Jarrell Schwertner WSC	Edwards (BFZ)	Williamson	29.39	9,576,000	$239.40
Little Elm Valley WSC	Lower Trinity	Falls	1.34	436,264	$10.91
O&B WSC	Lower Trinity	Falls	0.62	201,993	$5.05
		TOTAL	133.67	43,740,433	$1,093.52

Water Loss in Public Water Systems

The District tracks water loss of all public water supply systems in Bell County that utilize groundwater. Real Losses, also referred to as physical losses, are actual losses of water from the system and consist of leakage from transmission and distribution mains, leakage and overflows from the water system's storage tanks and leakage from service connections up to and including the meter.

Water leaking from a supply line

Bell County Water Loss 2012-2017

Entity	2017 Loss (% of water)	2016 Loss (% of water)	2015 Loss (% of water)	2014 Loss (% of water)	2013 Loss (% of water)	2012 Loss (% of water)
Armstrong WSC	11.12	15.74	15	13	N/R*	N/R*
Bell Co. WCID #2	9.20	8.34	11	9	12.54	13.80
Bell Co. WCID #5	20.97	10.64	14	15	9.00	12.00
Bell-Milam-Falls WSC	29.03	32.06	26	34	26.45	22.00
Central Texas WSC	8.30	9.25	NA	NA	NA	NA
City of Troy	17.20	9.94	N/R*	24.5	33.00	8.07
East Bell WSC	12.54	8.23	14.64	13.71	17.04	18.00
Jarrell-Schwertner WSC	49.33	50.72	56.45	54.25	48.72	38.00
Little Elm Valley WSC	22.16	25.30	33	27	23.75	21.00
Moffat WSC	19.68	10.43	16	6.37	4.16	6.90
Oenaville/Bellfalls WSC	8.99	15.29	16.6	14.47	9.64	11.46
Pendleton WSC	20.30	23.94	17.23	22.73	23.18	18.00
Salado WSC	7.60	8.80	9.8	9.6	14.47	8.00

** Not Reported*

Exempt Well Production

Each year, the exempt wells that have been registered are evaluated. The aquifer from which they are producing is determined and an estimate of their total annual production is calculated. The results are shown below for exempt wells registered through December 31, 2017. Most of the exempt wells in Bell County are used for domestic purposes and their use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.84 persons/household (U.S. Census - Bell County Average 2016). Exempt well use estimate factors out all plugged, capped, monitor and inactive wells in the database.

2017 Exempt Well Production

	Reserved	Estimated Use*	# Wells
Edwards (BFZ)	825 ac-ft	453 ac-ft	756
Trinity	1,419 ac-ft	514 ac-ft	1,341
Other Aquifers	N/A	677 ac-ft	1,467
Total	2,244 ac-ft	1,645 ac-ft	3,564

** Domestic use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.84 persons/household (U.S. Census - Bell County average 2016)*

See Appendix E for 2017 Exempt Well Use

Combined Well Production Data

Combining the production from the non-exempt wells with the estimated production from the exempt wells, the following production figures result:

Aquifer	Non-Exempt Well Production (Ac-Ft / Year)	% of Total Permitted	Estimated Exempt Well Production (Ac-Ft / Year)	% of Total Reserved	Total Production (Ac-Ft / Year)	% of Total Available
Edwards (BFZ)	1,969.76	78.50	453	54.91	2,422.76	37.45
Trinity	1010.22	22.23	514	36.22	1,524.22	21.57
Other Aquifers	102.27	17.68	677	N/A	779.27	N/A
Total	3,082.25	40.39	1,645	43.09	4,727.25	29.16

The chart above shows that overall, exempt wells account for approximately 43.09% of all the

groundwater produced in Bell County. In the Trinity, 36.22% of production is attributed to exempt wells and in the Edwards BFZ, exempt wells account for 54.91% of groundwater production.

Overall, production from the Edwards BFZ aquifer accounts for 37.45% of total groundwater used in Bell County and the Trinity aquifer accounts for 21.57% of total groundwater used in Bell County.

Modeled Available Groundwater - Analysis of Permits and Exempt Use Reserves (in acre feet)

Aquifer	MAG Modeled *	Reserved for Exempt	Managed	HEU Permit	Operating Permit	Remaining MAG
Edwards (BFZ)	6,469	825	5,644	2,209.70	299.65	3,134.65
Trinity	7,068	1,419	5,649	1,502.60	2,002.39	1,105.47
Paluxy	96			0	0	96
Glen Rose (Upper)	880	693	187	61.90	120.15	4.95
Hensell (Middle)	1,099	548	551	259.30	188.45	103.25
Hosston (Lower)	4,993	178	4,815	1,181.40	2,732.33	901.27

** The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB.*

See Appendix F for the 2017 Edwards and Trinity Aquifer Status Reports

4. Annual Newsletter

Objective: Each year, the District will disseminate educational information on groundwater through publication of a District newsletter.

Objective Satisfied

Annually, the District publishes a newsletter and mails it to registered well owners in Bell County. In 2017 the total number of newsletters printed were 3,450 with 3,000 copies directly mailed to well owners. The others are handed out to people that come into the office and electronic copies are emailed out to permit holders and other interested parties.

See Appendix G for Annual Newsletter.
Online: http://www.cuwcd.org/district-overview/district-newsletter/

B. Controlling and Preventing Waste of Groundwater

Outreach and Education

Objective: Each year, the District will disseminate educational information on controlling and preventing the waste of groundwater focusing on water quality protection through at least one classroom or public presentation.

Objective Satisfied

District staff is available to speak to any group within our geographical boundaries. In 2017, District staff reached over 2,138 adults and children in Bell County directly through giving presentations and making contact at event booths. We often give power point presentations to adult groups explaining the District and how we function along with covering important water topics like conservation and watershed management.

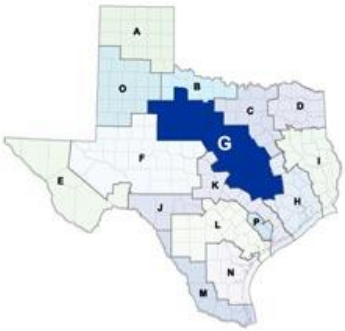
In the classroom, we provide the Major Rivers curriculum and give supporting presentations with an Enviroscape watershed model and rainfall simulator. We make sure to always have handouts for the kids like color changing pencils, rulers and cups that change color when cold water is poured in. All handouts are branded with district information and most items have water conservation tips printed on them.

See Appendix H for Education and Outreach Events.

C. Addressing Conjunctive Surface Water Management Issues

Regional Planning Process Participation

Objective: Each year, the District will participate in the regional planning process by attending a minimum of two meetings of the Brazos G Regional Water Planning Group per fiscal year.



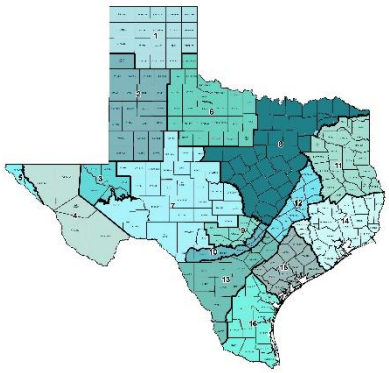
Objective Satisfied

During FY17, District Representative Judy Parker and District General Manager Dirk Aaron attended the scheduled meetings listed below. Judy Parker was also elected by the GMA8 Membership to represent the Groundwater Management Area as an appointed member of Region G.

April 5, 2017	Attended
August 16, 2017	Attended

Online: http://www.brazosgwater.org/

In addition to the regional planning group, District Representative Judy Parker and District General Manager Dirk Aaron also attended the meetings for Groundwater Management Area 8. Groundwater Management Areas were created in order to provide for the conservation, preservation, protection, recharging, and prevention of waste of the groundwater, and of groundwater reservoirs or their subdivisions, and to control subsidence caused by withdrawal of water from those groundwater reservoirs or their subdivisions, consistent with the objectives of Section 59, Article XVI, Texas Constitution.



January 31, 2017 Attended

Online: http://www.gma8.org

D. Addressing Natural Resource Issues Which Impact the Use and Availability of Groundwater, and which are impacted by the Use of Groundwater

Monitoring Water Quality

Objective: Each year the District will monitor water quality within the District by obtaining water samples from wells and testing the water quality of at least 6 wells.

Objective Satisfied

The District has an in-house water quality lab and offers a free screening service to registered well owners. Testing parameters include coliform bacteria; alkalinity; conductivity / total dissolved solids; fluoride; hardness; nitrate; nitrite; pH; phosphate; and sulfate. During FY17, the staff conducted screening on 83 groundwater samples. 15 samples tested were from the Edwards (BFZ) aquifer, 6 samples from the Upper Trinity, 42 samples from the Middle Trinity, 4 samples from the Lower Trinity, and 16 samples from other formations.

The District's lab is intended to provide a general water quality screening only. When a certified test is needed, the District sends properly collected well samples to BioChem located in West, Texas. During FY17, 1 sample was sent out for certified testing.

A summary of the well screening results are shown in Appendix I.

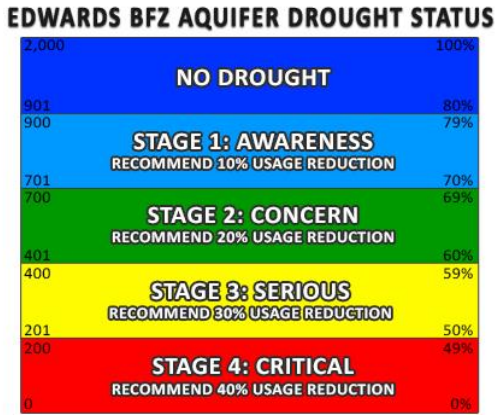
E. Addressing Drought Conditions

The District's Management Plan requires that the General Manager, Staff and Board of Directors review the District's drought status on a monthly basis. The decisions to declare drought levels per the Districts Drought Management Plan approved December 17, 2009, are reviewed weekly by the General Manager. The Drought Management plans are designed to reflect conditions of the Trinity

and Edwards (BFZ) Aquifers independently of each other based on the specified triggers (PDI and/or Spring Flow).

1. Monitor Drought Conditions in the Edwards Aquifer

Objective: Each year, the District will monitor drought conditions in the Edwards aquifer through the process established in the drought management plan for the Edwards aquifer adopted by the Board of Directors.



Objective Satisfied

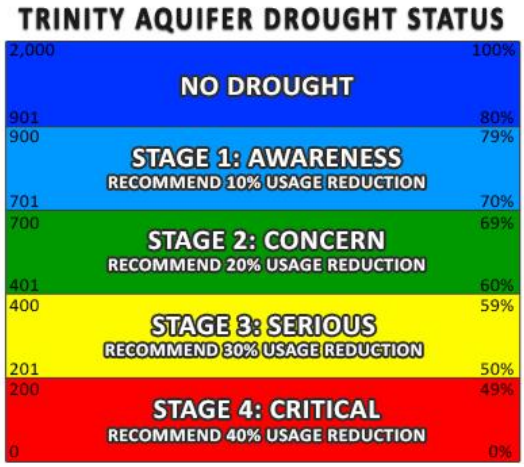
Under the Edwards BFZ Drought Management Plan, a drought stage is triggered when either the Precipitation Deficit Index (PDI) is less than a drought state trigger condition exceeding for a period of 28 consecutive days and shall be reduced or terminated when the PDI is greater than the trigger condition exceeding for a period of 42 consecutive days, or the average spring discharge measured via stream flow gauges in Salado Creek fall below the trigger level for the periods described time.
Online: http://www.cuwcd.org/regulatory-program/drought-management/edwards-drought-management-plan/

Below are the declared stages during the fiscal year.

Date	Declared Drought Stage	Salado Creek Acre ft/Month	Salado Creek CFS	PDI Total	PDI % Total
10/9/2016	No Drought	2,737	46	53.78	62.95
11/14/2016	No Drought	2,321	39	44.56	135.02
12/12/2016	No Drought	3,213	54	44.052	133.49
12/28/2016	No Drought	1,963.64	33	41.95	127.11
2/5/2017	No Drought	2,165.95	36.4	44.346	134.38
3/6/2017	No Drought	2,582.48	43.4	45.48	137.81
4/12/2017	No Drought	1,844.63	31	43.99	133.29
5/9/2017	No Drought	2,760	46.4	40.93	124.01
6/4/2017	No Drought	2,013	33.8	34.94	105.87
6/27/2017	No Drought	1,787.50	30.04	36.26	109.86
8/7/2017	No Drought	3,088	51.9	36.31	110.03
9/6/2017	No Drought	1,278	21.48	32.79	99.38

2. Monitor Drought Conditions in the Trinity Aquifer

Objective: Each year, the District will monitor drought conditions in the Trinity aquifer through the process established in the drought management plan for the Trinity aquifer adopted by the Board of Directors.



Objective Satisfied

Under the Trinity Aquifer Drought Management Plan, a drought stage is only to be triggered when the Precipitation Deficit Index (PDI) is less than a drought state trigger condition exceeding for a period of 28 consecutive days and shall be reduced or terminated when the PDI is greater than the trigger condition exceeding for a period of 42 consecutive days.
Online: http://www.cuwcd.org/regulatory-program/drought-management/edwards-drought-management-plan/

Below are the declared stages during the fiscal year.

Date	Declared Drought Stage	PDI Total	PDI % Total
10/9/2016	No Drought	54.81	166.07
11/14/2016	No Drought	44.16	133.83
12/12/2016	No Drought	43.57	131.86
12/28/2016	No Drought	40.83	123.71
2/5/2017	No Drought	43.172	130.82
3/6/2017	No Drought	43.91	133.04
4/11/2017	No Drought	42.84	129.80
5/8/2017	No Drought	40.93	124.01
6/4/2017	No Drought	34.19	103.61
6/27/2017	No Drought	35.96	108.97
8/7/2017	No Drought	36.03	109.17
9/6/2017	No Drought	32.85	99.54

F. Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, and Brush Control, Where Appropriate and Cost-Effective

1. Conservation

Objective: Each year, the District will promote conservation by conducting an annual scholastic contest on water conservation or; distributing conservation brochures/literature to the public.

Objective Satisfied

The District's Management Plan requires promotion of conservation by one outreach method/activity. During 2017, the District exceeded this requirement by aggressive outreach through classroom presentations, District's website, and other public presentations such as the annual Water Symposium. District staff reached over 2,138 adults and children in Bell County directly through giving presentations and making contact at event booths where conservation materials were both discussed and handed out.

See Appendix H for Education and Outreach Events.

2. Rainwater Harvesting

Objective: Each year, the District will promote rainwater harvesting by posting information on rainwater harvesting on the District web site.

Objective Satisfied

The District's Management Plan requires promotion of rainwater harvesting by posting information on the District website. The District satisfied this requirement by including a segment on rainwater harvesting on its website under the Education menu tab along with a link to the Texas A&M AgriLife Extension website and their Rainwater Harvesting Manual. Also included are links to Rainwater Harvesting Contacts and Suppliers and to the Texas A&M AgriLife Extension manual on Rainwater Harvesting Landscape Methods. The District's office has a rainwater harvesting setup for demonstration purposes.

http://www.cuwcd.org/education/rainwater-harvesting/

A copy of the posted information is included under Appendix J.

3. Brush Control

Objective: Each year, the District will provide information relating to brush control on the District web site.

Objective Satisfied

The District's Management Plan requires promotion of conservation by providing information relating to brush control on the District website. The District satisfied this requirement by including

a segment on brush control on its website under the Education menu tab. For additional information on brush control, links to the Texas A&M AgriLife Extension website are provided. Also included is a link to the Brush Management Fact Sheet produced by Environmental Defense.

http://www.cuwcd.org/education/brush-control/

A copy of the posted information is included under Appendix K.

4. Recharge Enhancement

Objective: Each year, the District will provide information relating to recharge enhancement on the District web site.

Objective Satisfied

The District's Management Plan requires promotion of conservation by providing information relating to recharge enhancement, and the District satisfied this requirement by including a segment on recharge enhancement on its website under the Education menu tab. For additional information on recharge enhancement, links to the Texas State Soil and Water Conservation website, and the Leon River Restoration Project website are provided. In addition, the District has contracted with Baylor University to help gain a better scientific understanding of the Edwards (BFZ) and its recharge zone.

http://www.cuwcd.org/education/recharge-enhancement/

A copy of the posted information is included under Appendix L.

G. Addressing in a Quantitative Manner the Desired Future Conditions of the Groundwater Resources

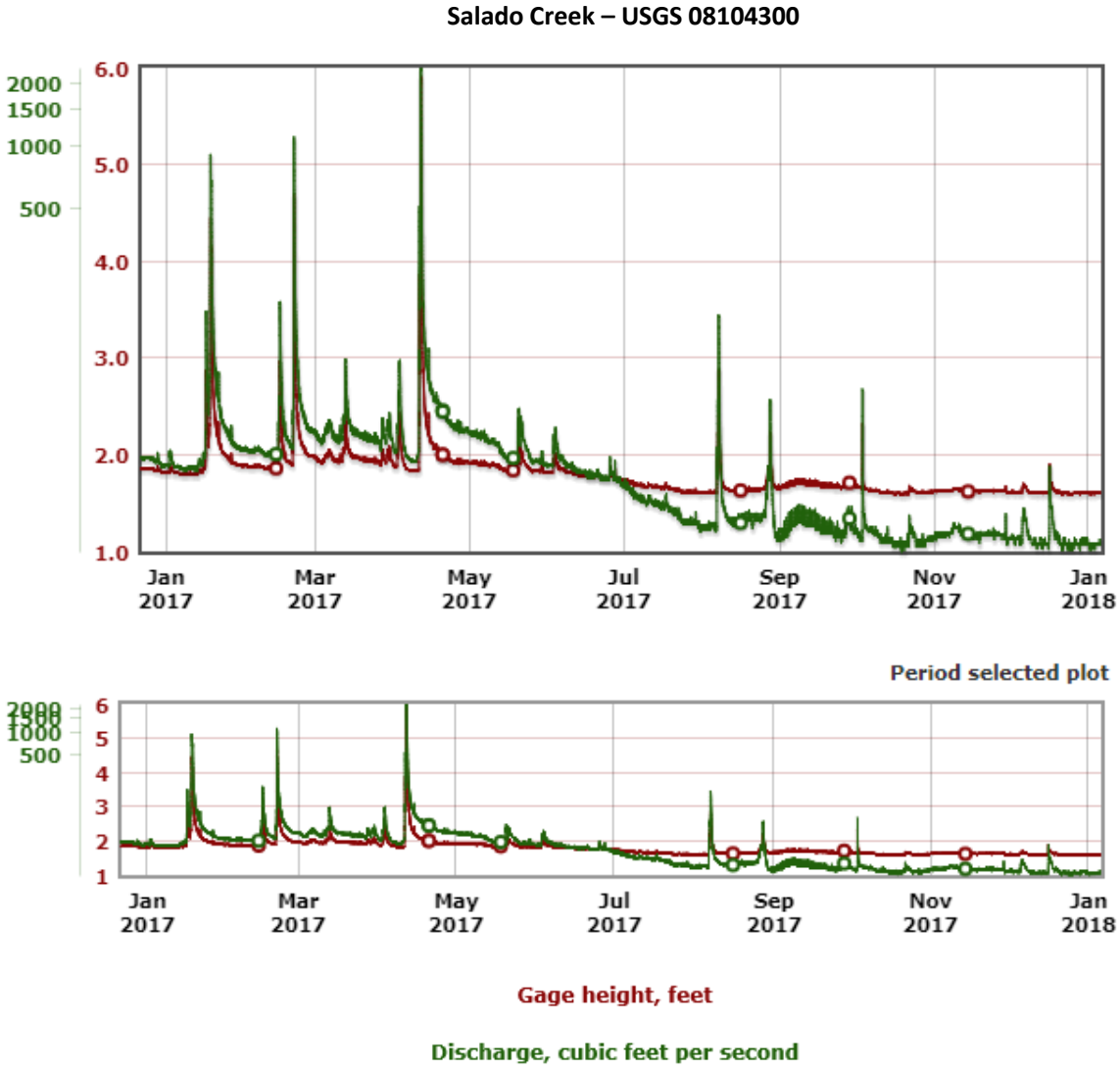
1. Salado Springs

Objective: Each year, the District will include a summary of the monthly average discharge rate of Salado Springs and a discussion of the conservation measures implemented (if any are necessary) to avoid impairment of the Desired Future Conditions for the Edwards aquifer established by GMA-8, in the Annual Report to the Board of Directors.

Objective Satisfied

The gauges in the Salado Creek have been an important mechanism to protect spring flow. The District began collecting data from the Salado Creek stream flow gauges during FY08 with the assistance of multiple contractors. During the spring of 2013 an upgraded gauge package by the USGS Water Science Group was installed and the process of analyzing the data and recalibrating the system began. This process was lengthy, but essential to ensure accuracy of the data collected. The new gauges and relationship with the USGS have proved to be an important step forward in monitoring spring flow.

Below is a screen shot of the spring flow data for the calendar year 2017.



The live data can be found online on our website.

http://www.cuwcd.org/salado-springs/salado-creek-gauges/

2. (a) Static Water Level Measurements

Objective: Each year, the District will collect at least 5 water-level measurements from the Trinity aquifer monitor wells located in the District.

Objective Satisfied

The Texas Water Development Board (TWDB) typically measures water levels in selected wells in January each year. Clearwater measures water levels in selected wells four times annually to collect more comprehensive data on water levels in Bell County.

Comparing the water level measurements taken by the District with those taken by the TWDB is sometimes difficult due to differences in measurement procedures and equipment. Clearwater primarily uses a Sonic Wave Meter and only utilizes an e-line if necessary. Large producers are asked to turn the pump off at least one hour prior to the measurement to allow the aquifer levels time to stabilize. TWDB typically uses a steel tape or an airline and does not request the pump to be turned off. During calendar year 2017, the District took 7 water level measurements from 44 wells.

The District has been increasing continuous monitor well locations throughout Bell County, thus some wells have very little historical information. Adding these wells is essential to have a broader spectrum of data to analyze in future years. The District has 13 continuous monitor wells that are monitored by TWDB. The continuous water level measurements can be viewed on TWDB's website at: https://waterdatafortexas.org/groundwater.

A copy of the measurements is included under Appendix M.

2. (b) Changes in Water Levels

Objective: Each year, the Annual Report to the Board of Directors will include a discussion of the change in water-levels in each Trinity aquifer subdivision for which a Desired Future Condition is established by GMA-8.

Objective Satisfied

The District prepares a monthly status report (Appendix F – Trinity Aquifer Status Report 2017) that explains the status or the Trinity aquifers by layer at any given time. The DFC analysis from 2000 to present compares DFC adopted drawdown to actual drawdown figures for Bell County. In addition, potential production from both permitted wells and exempt wells is compared to MAG with figures showing how much actual water is available for permitting.

5. Miscellaneous Activities

In addition to the Management Plan requirements, Clearwater is involved in several miscellaneous activities as follows:

A. Abandoned Wells

The District continues to coordinate with the Texas Department of Licensing and Regulation (TDLR) to identify and investigate reports of abandoned wells. After initial investigation, staff refers abandoned wells to TDLR for further investigation, determination of corrective action, and enforcement. The District did not refer any abandoned wells to TDLR during the calendar year 2017.

The District continues to work with the Bell County Public Health District for assistance in locating abandoned wells when septic systems are inspected. The District promotes the plugging of abandoned wells by distributing educational information at various conferences and events and hosting well plugging demonstrations with the Texas A&M AgriLife Extension.

According to records from the Texas Department of Licensing and Regulation, during 2017 a total of 11 wells were plugged in Bell County.

B. Bell County Water Symposium

Clearwater sponsored its seventeenth annual water symposium on November 15, 2017 at the Texas A&M University - Central Texas Campus. Event partners included Bell County Engineer's Office, HALFF Associates, LBG-Guyton Associates, Lloyd Gosselink Attorneys at Law, and Texas A&M AgriLife Extension-Bell County.

Topics that were discussed:

- *State of the District* - Leland Gersbach, Board President, Clearwater UWCD and Dirk Aaron, General Manager, Clearwater UWCD
- *GCDs: What They Do and Why They Matter & Reflections on the 1917 Conservation Amendment: 100th Anniversary* - Sarah Rountree Schlessinger, Executive Director, Texas Alliance of Groundwater Districts
- *Overview of the TWCA Organization and the 85th Legislative Session* - Stacey Allison Steinbach, Assistant General Manager, Texas Water Conservation Association and Adeline Fox, Communications Director, Texas Water Conservation Association
- *The State of Water Resources in Texas* - Bech Bruun, Chairman, Texas Water Development Board
- *Brazos River Basin Update* - David Collinsworth, Lower/Central Basin Region Manager, Brazos River Authority
- *Water Planning and Implementation in Texas, Now or Never* - Lyle Larson, Chairman, House Natural Resources Committee, Texas House of Representatives, District 122
- *Understanding the Geology of the Aquifers in Bell County for ASR* - James Beach, P.G., Senior Vice-President, LBG-Guyton Associates
- *ASR Feasibility: Can We Make It Work?* - Dr. Gretchen Miller, Associate Professor, Civil Engineering, Texas A&M University and Dr. June Wolfe, Associate Research Scientist, Texas A&M AgriLife Research
- *Scientific Initiatives and Tools Addressing Aquifer Conditions* - James Beach, P.G., Senior Vice-President, LBG-Guyton Associates and Brant Konetchy, Hydrologist 1, LBG-Guyton Associates
- *TexMesonet: Statewide Earth Observation Network* - Dr. Leyon Greene, Hydrologist & Meteorologist, TexMesonet, Texas Water Development Board
- *Watershed Protection in Central Texas* - Lisa Prcin, Research Associate, Texas A&M AgriLife Research
- *Evaluation* - Whitney Grantham, Natural Resource Extension Agent, Texas A&M AgriLife Extension

The District set up a display booth and distributed water conservation packets as well as other information on water quality protection and information on the aquifers in Bell County. Approximately 165 people attended the symposium.

Refer to Appendix N for an agenda of the meeting.
Online: http://www.cuwcd.org/education/annual-water-symposium/

C. Internet Site

The District's web site continues to grow on a monthly basis. The web site contains general information about the District and Board of Directors along with a calendar of events and meeting

agendas. Press releases and other water related articles are posted to continually provide water related resources to the residents of Bell County.

Below are some highlights of the new website available to the public:

- Current Drought Status
- Educational Resources
- Texas Drought Monitor
- Salado Creek Gauges
- District Rules
- Management Plan
- Access to online GIS Maps
- Link to TWDB Groundwater Levels
- Link to TWDB Texas Reservoir Levels
- Public Records
- District Forms and Documents

The website can be viewed at http://www.cuwcd.org

6. Summary

Based on the leadership of the Board of Directors and management under the executive direction of the General Manager, District staff continued expanding their efforts in developing in-depth aquifer science, enhancing educational outreach to public schools and civic organizations, and refining data base management for the District records.

The District staff has expanded the educational efforts in a partnership with Texas A&M AgriLife Extension, Master Naturalist, and Master Gardener programs. Strategies include: an education trailer (mobile classroom), classroom curriculum, science day events, field days, Earth Day events, and informative presentations for civic organizations.

Clearwater UWCD has maintained the relationships with Bell County, the Village of Salado, USGS, and Baylor University to continue efforts to better understand the Edwards BFZ Aquifer and its complex of springs and recharge features. Knowing that the Salado Salamander is designated as threatened by USFWS, validated the continued need to better understand the habitat and identified threats. Maintaining the regulatory system of protecting the spring flow has been validated by the USFWS decision to list the salamander as threatened rather than endangered. The 2015, 2016 and 2017 final reports from USFWS can be found on our website at http://www.cuwcd.org/salado-springs/salado-salamander/.

The District is also committed to continuing our efforts to enhance the network of monitor wells in the three layers of the Trinity Aquifer in order to measure drawdown relative to pumping. This allows the Board of Directors to manage the aquifers to the DFC rather than simply to the MAG. The District continues to monitor over 50 wells in both the Trinity and Edwards (BFZ) Aquifers.

Appendix A

Clearwater Underground Water Conservation
Adopted Budget FY2017

REVENUE	
Application Fee Income	20,000.00
Bell CAD Current Year Tax	669,564.00
Bell CAD Delinquents Tax	5,000.00
Interest Income	2,000.00
Transport Fee Income	1,000.00
Total Income	**697,564.00**
EXPENDITURES	
Administrative Expenses	
Audit	6,000.00
Conferences & Prof Development	3,500.00
Contingency Fund	33,214.00
Director Expenses	7,500.00
Director Fees	12,000.00
Dues & Memberships	2,500.00
Election Expense	1,500.00
GMA 8 Expenses	15,000.00
Meals	1,000.00
Mileage Reimbursements	7,000.00
Travel & Hotel	3,500.00
Total Administrative Expenses	92,714.00
Salary Costs	
Administrative Assistant	45,840.00
Educational Coord/Support Tech	35,000.00
Manager	76,000.00
Part Time/Intern	0.00
Office Assistant	30,000.00
Health Insurance	24,000.00
Payroll Taxes & Work Comp	20,600.00
Retirement	8,410.00
Payroll Expenses	125.00
Total Salary Costs	239,975.00
Operating Expenses	
Advertisement	3,500.00
Appraisal District	7,200.00
Clearwater Studies	84,550.00
Spring Flow Gage System	16,000.00
Computer Consulting	10,000.00
Computer Licenses/Virus Prtctn	1,500.00
Computer Repairs and Supplies	1,500.00
Computer Software & Hardware	5,500.00
Copier/Scanner/Plotter	6,000.00
Educational Outreach/Marketing	82,000.00
Furniture & Equipment	5,000.00
Legal	68,000.00
Office Supplies	3,000.00
Permit Reviews	20,000.00
Postage	2,500.00
Printing	3,900.00
Reserve for Uncollected Taxes	20,000.00
Storage Unit	650.00
Subscriptions	900.00
Total Operating Expenses	341,700.00
Total Facility Costs	11,575.00
Total Utilities	11,600.00
Total Expense	**697,564.00**

For a detailed copy of the FY17 Budget, please contact CUWCD at 254-933-012

08/31/2016

Appendix B

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

BASIC FINANCIAL STATEMENTS AND INDEPENDENT AUDITORS' REPORT

SEPTEMBER 30, 2017

ALTON D. THIELE, P.C.
CERTIFIED PUBLIC ACCOUNTANT
300 E. AVENUE C
P.O. BOX 808
BELTON, TX 76513-0808

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
TABLE OF CONTENTS

ALTON D. THIELE, P.C.

CERTIFIED PUBLIC ACCOUNTANT
300 EAST AVENUE C
P.O. BOX 808
BELTON, TX 76513-0808

INDEPENDENT AUDITORS' REPORT

To the Board of Directors
Clearwater Underground Water Conservation District
Belton, Texas

We have audited the accompanying financial statements for the governmental activities and the aggregate remaining fund information of the Clearwater Underground Water Conservation District (the District), as of and for the year ended September 30, 2017, which collectively comprise the District's basic financial statements as listed in the table of contents, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the net position of the governmental activities and the aggregate remaining fund information of Clearwater Underground Water Conservation District, as of September 30, 2017, and the respective changes in fund balances in conformity with accounting principles generally accepted in the United States of America.

Report Issued In Accordance with *Government Auditing Standards*

In accordance with *Government Auditing Standards,* we have also issued our report dated February 9, 2018, on our consideration of the District's internal control over financial reporting (internal control) and on our tests of its compliance with certain provisions of laws, regulations, contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control and compliance, and the results of that testing, and not to provide an opinion on internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* and should be considered in assessing the results of our audit.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 5 and budgetary comparison information on page 17 be presented to supplement the financial statements. Such information, although not a required part of the basic financial statements, is required by the Governmental Accounting Standards Board (GASB), who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise the District's basic financial statements. The Texas Supplementary Information, on pages 18 through 21, is presented for purposes of additional analysis and is not a required part of the basic financial statements of the District. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly presented in all material respects, in relation to the basic financial statements taken as a whole.

Belton, Texas
February 9, 2018

The management of the Clearwater Underground Water Conservation District (the District), offers readers of the District's annual financial report this narrative overview and analysis of the District's financial performance during the fiscal year ended September 30, 2017. This discussion and analysis is intended to be an easily readable analysis of the District's financial activities based on currently known facts, decisions, and conditions. Please read it in conjunction with the Independent Auditors' Report and the District's basic financial statements and the related notes.

FINANCIAL HIGHLIGHTS

The District's total net position,	$ 1,249,737
Cash and investments,	$ 662,835
Deferred Inflows of Resources	$ 20,369
Total tax revenues,	$ 660,854
Operational expenditures,	$ 563,449

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual financial report consists of, but is not limited to, the following: Management's Discussion and Analysis (this section, which is intended to serve as an introduction to the basic financial statements), the basic financial statements, and the related notes to the financial statements. The District is a governmental entity and follows the accrual basis of fund accounting for a governmental entity. The District is funded primarily by property tax revenue from within the District's boundaries to provide a means by which underground water is controlled and monitored throughout the District.

REPORT LAYOUT

In addition to the Management's Discussion and Analysis (MD&A) (pages 3-5), the report consists of basic financial statements, notes to the financial statements, and supplementary information. The basic financial statements are highly condensed and present a government-wide view of the District's finances.

These *Government-wide Financial Statements* (pages 6–9) are designed to be more corporate-like in that all activities are consolidated into a total for the District. The totals represent the *Statement of Net Position*, which presents the assets, liabilities, with the difference of the two reported as net position and the *Statement of Activities* which presents information on how the District's net position changed during the year.

The *Notes to the Financial Statements* (pages 10-14) provide additional information that is essential to a full understanding of the data provided in the government-wide basic financial statements.

Required and other supplemental information (pages 16-21) is also provided for additional information and analysis.

FINANCIAL ANALYSIS OF THE DISTRICT

Statement of Net Position: The following table summarizes the net position of the District

	2017	2016	Change
Assets			
Current Assets	$ 683,924	$ 723,246	$ (39,322)
Capital Assets (Net of Accumulated Depreciation)	586,182	425,143	161,039
Total Assets	$ 1,270,106	$ 1,148,389	$ 121,717
Liabilities	$ -	$ -	$ -
Deferred Inflows of Resources	$ 20,369	$ 20,559	$ (190)
Net Position:			
Investment in Capital Assets	$ 586,182	$ 425,143	$ 161,039
Unreserved Net Position	663,555	702,687	(39,132)
Total Net Position	1,249,737	1,127,830	121,907
Total Liabilities, Deferred Inflows, and Net Position	$ 1,270,106	$ 1,148,389	$ 121,717

Statement of Activities: The following table summarizes the changes in net position

	2017	2016	Change
Tax Revenue	$660,854	$640,702	$ 20,152
Interest and Other Revenues	21,731	12,386	9,345
Expenditures	(563,449)	(568,477)	5,028
Change in Net Position	$119,136	$ 84,611	$ 34,525

As shown in the above information, the District improved financially, overall. However, the District's change in net position increased by $ 34,525. With the operational expenditures of $(563,449), part of that was reported as depreciation of $(27,254). Capital outlay of $188,293 with the accumulated depreciation, created an increase in the investment in capital assets of $161,039.

BUDGETARY HIGHLIGHTS

Actual tax revenues received were less than the budgeted tax revenues by $(13,710) or 2%. However, actual operational expenditures were 15% less than budgeted expenditures. This resulted in an increase in net position of $119,136. The budget was legally adopted according to established guidelines and the Board of Directors legally adopted amendments to individual budget items during the fiscal year. (See page 17 for details)

CAPITAL ASSETS

During the year, capital expenditures were made, so that at September 30, 2017, the District had a net increase in Capital Assets of $161,039. The Investment in Capital Assets, net of depreciation and related debt, at fiscal year-end was $586,182.

Additional information regarding Capital Assets can be found in the notes to the financial statements. (Note-3, page 13)

DEBT OUTSTANDING

The District had no long-term debt as of the fiscal year ended September 30, 2017.

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET AND RATES

The District's property tax rate for the 2017/2018 fiscal year (FY18) was lowered to $0.00385 per $100 valuation. The estimated taxable property value is 18,091,429,000 for total expected tax revenue of $696,520. Other Income and delinquent property taxes is estimated at $28,000. The District's budgeted expenditures for FY18 are expected to be $724,520 resulting in a balanced budget for the coming fiscal year.

FINANCIAL CONTACT

The District's financial statements are designed to present users (citizens, taxpayers, creditors, and regulatory agencies) with a general overview of the District's finances and to demonstrate the District's accountability. If you have questions about the report or need additional financial information, please contact the District Manager at 700 Kennedy Ct., PO Box 1989, Belton, TX 76513.

BASIC FINANCIAL STATEMENTS, WITH RELATED NOTES

AS OF SEPTEMBER 30, 2017

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
STATEMENT OF NET POSITION AND GOVERNMENTAL FUNDS BALANCE SHEET

SEPTEMBER 30, 2017

	Governmental Funds		Statement of Net Position
	General Fund	Adjustments	
ASSETS			
Cash in Banks	$ 9,185	$ -	$ 9,185
Invested Funds	653,650	-	653,650
Receivables			
Taxes	20,369	-	20,369
Fees	720	-	720
Capital Assets (net of accumulated depreciation)			
Infrastructure		586,182	586,182
Total Assets	$ 683,924	$ 586,182	$ 1,270,106
LIABILITIES			
Liabilities			
Current and Non-current	$ -	-	$ -
Total Liabilities	$ -	$ -	$ -
DEFERRED INFLOWS OF RESOURCES			
Property Tax Revenue	$ 20,369	$ -	$ 20,369
FUND EQUITY			
Fund Balances			
Unreserved	$ 663,555	$ (663,555)	$ -
Total Fund Equity	663,555	(663,555)	-
Total Deferred Inflows, Liabilities, and Fund Equity	$ 683,924		
NET POSITION			
Investment in Capital Assets		586,182	586,182
Unreserved		663,555	663,555
Total Net Position		$ 1,249,737	1,249,737
Total Deferred Inflows, Liabilities, and Net Position			$ 1,270,106

The accompanying notes are an integral part of these financial statements.
See Independent Auditors' Report.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
RECONCILIATION OF THE GOVERNMENTAL FUNDS BALANCE SHEET TO THE STATEMENT OF NET POSITION
SEPTEMBER 30, 2017

Total Fund Balances for Governmental Funds (Page 6)		$ 663,555
Total Net Position Reported for Governmental Activities in the Statement of Net Position is Different Because:		
Capital assets used in governmental acitivites are not financial resources and therefore are not reported in the funds. Those assets consist of:		
Land, Infrastructure, and Easements	$ 586,182	
Total Capital Assets (See p10, Note 1.B.2 and p13 Note 3)		586,182
Total Net Position of Governmental Activities (Page 6)		$ 1,249,737

The accompanying notes are an integral part of these financial statements.
See Independent Auditors' Report.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
STATEMENT OF ACTIVITIES AND GOVERNMENTAL FUNDS REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE AND NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2017

	Governmental Funds		
	General Fund	Adjustments	Statement of Activities
EXPENDITURES			
Operations			
Director Fees	$ 10,650	$ -	$ 10,650
Administrative	28,126	-	28,126
Compensation and Benefits	233,264	-	233,264
Depreciation	-	27,254	27,254
Facilities Costs	23,373	-	23,373
Clearwater Studies	84,620	-	84,620
Legal and Professional	62,950	-	62,950
Collection Fees	7,475	-	7,475
Advertising	1,847	-	1,847
Other Operating Expenditures (net of relevant contributions)	83,890	-	83,890
Capital Outlay	188,293	(188,293)	-
Total Expenditures	724,488	(161,039)	563,449
REVENUES			
General Revenues			
Property Taxes	660,854	-	660,854
Permits, Licenses, and Other Fees	7,767	-	7,767
Interest and Other Income	7,044	-	7,044
Donations Received	6,920	-	6,920
Total Revenues	682,585	-	675,665
Excess (Deficiency) of Revenues over Expenditures	(41,903)	161,039	119,136
Change in Fund Balance/Net Position	(41,903)	161,039	119,136
NET POSITION			
Adjustments to Fund Balance	2,771	-	2,771
Beginning of Year	702,687	425,143	1,127,830
End of Year	$ 663,555	$ 586,182	$ 1,249,737

The accompanying notes are an integral part of these financial statements.
See Independent Auditors' Report.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
RECONCILIATION OF THE GOVERNMENTAL FUNDS REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCE AND NET POSITION TO THE STATEMENT OF ACTIVITIES
FOR THE YEAR ENDED SEPTEMBER 30, 2017

Net Change in Fund Balance - Total Governmental Funds (Page 8)		$ (41,903)
The Change in Net Position Reported for Governmental Activities in the Statement of Activities is Different Because:		
Governmental funds report capital outlays as expenditures. In the Statement of Activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense.		
Capital assets reported as capital outlay in governmental fund statements:	188,293	
Depreciation expense reported in statement of activities:	(27,254)	
Amount by which capital outlays are greater (less) than depreciation in current period:		161,039
Change in Net Position of Governmental Activities (Page 8)		$ 119,136

The accompanying notes are an integral part of these financial statements.
See Independent Auditors' Report.

NOTE 1 – SIGNIFICANT ACCOUNTING POLICIES AND BASIS OF ACCOUNTING

The basic financial statements of Clearwater Underground Water Conservation District (the District) have been prepared in conformity with accounting principles generally accepted in the United States of America (US GAAP) as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the acceptable standard-setting body for establishing governmental accounting and financial reporting principles. The significant accounting principles and policies utilized by the District are described below:

A. Reporting Entity

The District was created in 1989 by resolution of the Commissioners Court of Bell County, Texas, pursuant to H.B. 3172, Chapter 524, Acts of the 71st Legislature (1989 Session) (the "Act"). The District is a governmental agency and a body politic and corporate, created by and acting pursuant to the Act as amended by S.B. 404, Chapter 22, Act of the 77th Legislature (2001 Session), S.B. 1755, Chapter 64, Act of the 81st Legislature (2009 Session), and by applicable law including the provisions of Chapters 36 and 49 of the *Texas Water Code*. A five-member group, which constitutes the Board of Directors, is the level of government which has responsibility over all related activities within the jurisdiction of the Clearwater Underground Water Conservation District. The District receives funding from local property taxes; certain well, pump, and transmission fees; and interest resulting from investments of excess funds.

The District is not included in any other governmental reporting entity. The taxpayers within the jurisdiction of the District elect the Board members. The Directors have decision-making authority, the power to designate management, the responsibility of operations, and the primary accountability of fiscal and fiduciary matters.

B. Government-wide and Fund Financial Statements

The accounts of the District are organized on the basis of funds and account groups, each of which is considered a separate accounting entity. Operations of each fund are accounted for with a separate set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues, and expenditures, as appropriate. The government-wide financial statements report all the activities of the District. These activities are primarily supported by property taxes, license, registration, and other fees. The following are descriptions of the fund types and account groups used by the District.

1. Governmental funds

General Fund – All unrestricted financial resources except those required to be accounted for in another fund are recorded in the general fund. It is the District's general operating fund. Taxes and fees are the major sources of revenue. Expenditures include all costs associated with the daily operations of the District. There are no other governmental funds at this time.

2. Account groups

Capital Assets, account group – All capital assets of the District are accounted for in this group. The account group is not a fund. It only measures financial position and is not involved with measurement of results of activities.

C. Basis of Accounting

All funds of the District use the accrual basis of accounting. Under this method, revenues are recorded when susceptible to accrual (i.e., both measurable and available). Funds are considered available when they are collectible in the current period or soon enough thereafter to pay current liabilities. All revenues of the District are susceptible to accrual. Expenditures, if measurable, are recognized as incurred.

D. Assets, Liabilities, Deferred Outflows/Inflows of Resources, and Net Position or Fund Balance

1. Cash and Cash Equivalents

The District's cash and cash equivalents are considered to be cash on hand, demand deposits, and certificates of deposit.

2. Budgets and Budgetary Accounting

The adoption of an annual budget, for the general fund, is required prior to the beginning of each fiscal year on a basis consistent with accounting principles generally accepted in the United States of America. Thirty to sixty days prior to the beginning of each fiscal year, District management will submit a proposed budget for the fiscal year beginning on the following October 1st. The operating budget includes proposed expenditures and the means of financing them. After consideration the Board of Directors will adopt the budget by appropriate board action. Any revisions that alter the budget must also be considered and approved by board action.

3. Accounts Receivable

Accounts receivable are recorded at gross amount with uncollectable amounts recognized under the direct write-off method. No allowance for uncollectible accounts has been provided since it is believed that the amount of such allowance would not be material to the basic financial statements.

4. Capital Assets

Capital Assets have been acquired for general governmental purposes. Assets purchased or constructed are recorded as expenditures in the applicable governmental fund type and capitalized at historical cost in the Capital Asset, account group. Contributed capital assets are recorded at estimated fair market value at the time received. Infrastructure assets are also included in the Capital Asset account group.

The full depreciation of the applicable capital assets is being recognized in compliance with the implementation of GASB Statement 34. Depreciation is calculated on the straight-line basis according to the following useful lives:

Building and Improvements	20 – 40 years
Office and Field Equipment	5 - 15 years

5. Deferred Outflows/Inflows of Resources

The District is compliant with GASB Statement No. 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position* and GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*. In addition to assets, the statement of net position will sometimes report a section for deferred outflow of resources. This separate financial statement element represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expenditures) until then. The District currently does not have any items that qualify for reporting in this category.

In addition to liabilities, the statement of net position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The District has one type of item that qualifies for reporting in this category; delinquent property taxes. The amount of this item is deferred and will be recognized as an inflow of resources in the period the amount is collected and remitted to the District.

6. Equity Classifications

In the government-wide financial statements, equity is shown as net position and classified into three components; Net Investment in Capital Assets, Restricted, and Unrestricted. The District uses two of these classifications.

a. *Net Investment in Capital Assets* – Capital Assets, net of accumulated depreciation and reduced by any outstanding debt that poses an encumbrance.

b. *Unrestricted* – All other assets that do not meet the definition of net investment in capital assets.

The District reports the governmental fund balance as, unassigned; not previously classed as:

Non-spendable – Amounts that cannot be spent because they are either not in a spendable form or, legally or contractually required to be maintained intact.

Restricted – Amounts with restrictions imposed externally by creditors, grantors, contributors, or laws or regulations of other governments, constitutional provisions or enabling legislation.

Committed – Amounts that can only be used for specific purposes and imposed by formal action of the board of directors.

Assigned – Amounts informally constrained by District management but not formally restricted by the board of directors.

7. Risks, uncertainties, and use of estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenditures during the reporting period. Actual results could differ from those estimates.

NOTE 2 – PROPERTY TAXES

Property taxes are levied October 1 on the assessed property value as of the prior January 1 for all real and business personal property located in the district in conformity with Subtitle E, Texas Property Tax Code. Taxes are due on receipt of the tax bill and are delinquent if not paid before February 1 of the year following the year in which imposed. On January 31 of each year, a tax lien attaches to property to secure the payment of all taxes, penalties, and interest ultimately imposed. The District's property taxes are billed and collected by the Tax Appraisal District of Bell County. Property tax revenues are considered available (1) when they become due or past due and receivable within the current period and (2) when they are expected to be collected during a 60-day period at the close of the District's fiscal year.

The net assessed value after adjustments, based on 100 percent of the assessed valuation of real and personal property within the District on the 2016 tax roll, was $17,063,799,755. The 2016 tax rate of $0.0392 per $100 valuation was assessed and allocated to the General Fund. The resulting tax levy was $ 668,901.

Deferred tax revenue is reported as deferred inflows of resources (Note 1.D.5 para 2) by the District on its Governmental Funds balance sheet under the General Fund and arises when potential revenue does not meet the "measurable" and "available" criteria for recognition in the current period. In subsequent periods, when both revenue recognition criteria are met, the liability for the deferred tax revenue is removed from the balance sheet and the revenue is recognized. The current Deferred Inflow of Resources is $20,369.

NOTE 3 – CHANGES IN CAPITAL ASSETS

A summary of changes in capital assets is as follows:

	Primary Government			
2017	Beginning investment	Increase	Retirements	Ending Investment
Capital Assets not Depreciated				
Land	$ 59,981	$ -	$ -	$ 59,981
Total not Depreciated	59,981	-	-	59,981
Capital Assets Depreciated				
Land Improvements	19,000	-	-	19,000
Buildings	304,470	104,382	-	408,852
Monitor Wells	50,238	-	-	50,238
Mobile Classroom	-	76,990	-	76,990
Field Equipment	17,244	-	-	17,244
District Vehicles	-	6,920	-	6,920
Office Equipment	59,939	-	-	59,939
Total Depreciated	450,891	188,292	-	639,183
Total Capital Assets	510,872	188,292	-	699,164
Accumulated Depreciation	(85,729)	(27,253)	-	(112,982)
Net Investment in Capital Assets	$ 425,143	$ 161,039	$ -	$ 586,182

NOTE 4 – CASH DEPOSITS AND INVESTMENTS WITH FINANCIAL INSTITUTIONS

The District's checking deposits were fully covered by federal depository insurance and Texas Treasury Safekeeping Trust Company (TexPool) investments at September 30, 2017, were not covered by federal depository insurance or pledged securities. In accordance with GASB Statement No. 31, *Accounting and Reporting for Certain Investments and External Investment Pools*, the District reports all investments at fair value.

The District's cash and invested funds at September 30, 2017, were as follows:

	General Fund
First State Bank of Central Texas	
Operating account	$ 9,185
TexPool Accounts	
LGI Pool	326,070
Prime	327,580
Total TexPool accounts	653,650
Total cash and invested funds	$ 662,835

The market value for the above listed accounts is not materially different from the carrying value of the accounts.

Policies, Governing Deposits and Investments

The District has implemented an investment policy and is authorized, according to the *Public Funds Investment Act* (PFIA) (Government Code Chapter 2256), to invest any and all of its funds in certificates of deposit, direct debt securities of the United States of America or the State of Texas, fully collateralized repurchase agreements, certain types of commercial paper, certain types of municipal bonds and local government investment pools created under the Interlocal Cooperation Act, wherein all funds were invested as listed above.

In compliance with the Public Funds Investments Act, the District has adopted a deposit and investment policy where that policy addresses the following risks:

Custodial Credit Risk – Deposits: This is the risk that in the event of bank failure, the District's deposits may not be returned to it. The District was not exposed to custodial credit risk since deposits, in the bank during the year ended September 30, 2017, were covered by depository insurance.

Custodial Credit Risk – Investments: This is the risk that, in the event of the failure of the counterparty, the District will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. Investments are subject to custodial credit risk only if they are evidenced by securities that exist in physical or book entry form. Thus, positions in external investment pools are not subject to custodial credit risk because they are not evidenced by securities that exist in physical or book entry form.

NOTE 5 – EMPLOYEE BENEFITS

A. Annual Leave

Annual leave (vacation) is a benefit provided to eligible, full-time, employees of the District. A full-time employee is one who is regularly scheduled to work thirty to forty hours per week. Annual leave is accrued at eight hours per pay period immediately upon employment but cannot be taken until the employee has reached the one hundred eighty (180) day probationary period. The accrual maximum is twelve days for an employee with up to five years of continuous service. After five years, an employee is entitled to accrue an additional three days for a total of fifteen days per year. An employee may carry-over leave up to a maximum of twenty-four days per fiscal year. Remaining accrued leave is payable upon separation. Accrual at fiscal year-end was not material to these financial statements.

B. Sick Leave

A full-time employee, as previously defined, is entitled to six days per year. Accrual of sick leave is at four hours per pay period and a full-time employee can accumulate up to twelve days with carry-over. Upon termination of employment, no accumulated sick leave will be paid.

C. Retirement Plan

The District has established a Governmental 457 Deferred Compensation Plan as their retirement plan for full-time eligible employees. UMB Bank, N.A. is designated as trustee and Security Financial Resources, Inc. is the plan service provider. The District agrees to match employee contributions at 100% of the first 3% and 50% of the next 3% for a maximum match of up to 4.5% depending on the contribution of the employee. As of September 30, 2017, the employer match was $ 7,825.

NOTE 6 - SUBSEQUENT EVENTS

District management has evaluated subsequent events as of the date of the ***Independent Auditors' Report***, the date the financial statements were available to be issued. No change to the financial statements for the fiscal year ending September 30, 2017 is deemed necessary as a result of this evaluation.

REQUIRED AND OTHER SUPPLEMENTAL INFORMATION

ALTON D. THIELE, P.C.

CERTIFIED PUBLIC ACCOUNTANT
300 E. AVENUE C
P.O. BOX 808
BELTON, TX 76513-0808

INDEPENDENT AUDITORS' REPORT ON COMPLIANCE AND ON INTERNAL CONTROL OVER FINANCIAL REPORTING BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Board of Directors
Clearwater Underground Water Conservation District
700 Kennedy Ct.
Belton, TX, 76513

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of governmental activities and the aggregate remaining fund balance information of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2017, and the related notes to the financial statements, which collectively comprise the basic financial statements, and have issued our report thereon dated February 9, 2018.

Internal Control Over Financial Reporting
In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance
As part of obtaining reasonable assurance about whether the District's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance that are required to be reported under *Government Auditing Standards*.

Purpose of this Report
The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Belton, Texas
February 9, 2018

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

INDEX OF SUPPLEMENTAL SCHEDULES INCLUDED IN THIS REPORT

SEPTEMBER 30, 2017

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
GOVERNMENTAL FUNDS REVENUES, EXPENDITURES AND CHANGES IN NET POSITION - BUDGET TO ACTUAL
FOR THE YEAR ENDED SEPTEMBER 30, 2017

	General Fund				Statement of Activities	VARIANCE Positive
	Adopted Budget	Amendments	Final Budget		Actual	(Negative)
REVENUES						
Property taxes	$ 674,564	-	$ 674,564		$ 660,854	$ (13,710)
Application fee	20,000	-	20,000		6,400	(13,600)
Transport fee	1,000	-	1,000		1,367	367
Interest	2,000	-	2,000		7,044	5,044
Other income (expense)	-	-	-		6,920	6,920
Total revenues	697,564	-	697,564		682,585	(14,979)
EXPENDITURES						
Administrative expenses	92,714	(41,040)	51,674		44,776	6,898
Compensation and benefits	239,975	(6,711)	233,264		233,264	-
Clearwater studies	84,550	70	84,620		84,620	-
Educational outreach/marketing	82,000	(69,443)	12,557		12,557	-
Spring flow gage	16,000	(550)	15,450		15,450	-
Computer systems	24,500	7,374	31,874		31,874	-
Legal fees	68,000	(11,050)	56,950		56,950	-
Reserve for uncollected taxes*	20,000	(1,796)	18,204	*	-	18,204
Other operating expenses (net)	46,650	(15,623)	31,027		33,331	(2,304)
Depreciation	-	-	-		27,254	(27,254)
Capital expenditures*	-	104,890	104,890	*	-	104,890
Net loss of capital assets	-	-	-		-	-
Facility costs	11,575	3,173	14,748		15,722	(974)
Utilities	11,600	(3,949)	7,651		7,651	-
Total expenditures	697,564	(34,655)	662,909		563,449	99,460
Excess (deficiency) of revenues over expenditures	-		34,655		119,136	84,481
Change in net position					119,136	
NET POSITION						
Adjustment to fund balance					2,771	
Beginning of fiscal year					1,127,830	
End of fiscal year					1,249,737	
* Budget reserves for balance sheet items						
Reserve for uncollected taxes*	20,000	(1,796)	18,204		20,369	(2,165)
Capital expenditures*	-	104,890	104,890		181,880	(76,990)

Note: For clarification, the General Fund Budget is presented compared to the Statement of Activities in general.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
SCHEDULE OF GENERAL FUND EXPENDITURES
FOR THE YEAR ENDED SEPTEMBER 30, 2017

Current			
Compensation and benefits	$	233,264	
(Number of persons employed by the District: 4 - Full-time)			
Professional Services			
Auditing		6,000	
Legal		56,950	
Clearwater studies		84,620	
Utilities		7,651	
Facility costs		15,722	
Administrative expenses (including director fees)		38,776	
Capital outlay			
Acquisition of capital assets		188,293	
Net loss of capital assets (theft)		-	
Educational outreach/marketing		12,557	
Computer systems		31,874	
Other operating expenses		48,781	
Other expenditures		-	
TOTAL	$	724,488	(see page 8)
Depreciation	$	27,254.00	

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
SCHEDULE OF TEMPORARY INVESTMENTS
FOR THE YEAR ENDED SEPTEMBER 30, 2017

Governmental Funds	Pool / Type	Interest Rate	Maturity Date	Balance at End of Year
General Fund				
Local Government Investment Pools				
TexPool	449	1.0270%	Demand	$ 326,070
TexPool - Prime	590	1.2719%	Demand	327,580
TOTAL				653,650
Other accounts				
First State Bank of Central Texas - Operations Account	Transaction	N/A	Demand	9,185
TOTAL				9,185
TOTAL ALL ACCOUNTS				$ 662,835

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
ANALYSIS OF TAXES LEVIED AND RECEIVABLE
FOR THE YEAR ENDED SEPTEMBER 30, 2017

	Maintenance Taxes
Taxes receivable at October 1, 2016	$ 20,559
2016 Original tax roll, net of adjustments	660,664
Total to be accounted for	681,223
Tax Collections:	
Current year	(647,470)
Prior years	(13,384)
Total collections	(660,854)
Taxes receivable, September 30, 2017	$ 20,369
Taxes receivable by years:	
2010 and years prior to	$ 5,049
2011	1,136
2012	1,270
2013	1,594
2014	2,028
2015	2,967
2016	6,325
Taxes receivable, September 30, 2017	$ 20,369

	2016	2015	2014
Property Valuations	$ 17,063,799,755	$ 16,526,207,088	$ 15,564,029,000
Tax rates per $100 valuation:			
Debt service tax rates	N/A	N/A	N/A
Maintenance tax rates	0.00392	0.00395	0.004
Total tax rates per $100 valuation:	0.00392	0.00395	0.004
Gross Original tax levy	$ 668,901	$ 652,785	$ 622,561
Percent of taxes collected to taxes levied**	98.80%	98.15%	97.91%

** Calculated as taxes collected from current and previous years divided by the original tax levy.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
SCHEDULE OF BOARD MEMBERS, CONSULTANTS, AND KEY PERSONNEL
SEPTEMBER 30, 2017

Complete District Mailing Address: PO Box 1989, Belton, TX 76513

District Business Telephone Number: (254) 933-0120

Submission Date of the most recent District Registration Form: N/A
(TWC Sections 36.054 and 49.054)

Limit on Fees of Office that a Director may receive during a fiscal year: $9,000
(TWC Section 36.060) Fee: $150 per day while on District busines

Name and addresses	Precinct and Terms of Office 4-year terms	Fees Paid as of 09/30/2016	Expense Reimbursement	Title as of 09/30/2016	Property owner within the District
Board Members					
Leland Gersbach 7872 Hackberry Holland, TX 76534	Precinct 1 2016 to 2020	Waived	-	President	Yes
Gary Young 1314 Creek View, Salado, TX 76571	Precinct 2 Dec. 2014 to 2018	$2,550	$754	Director	Yes
Wallace Biskup PO Box 265 Troy, TX 76579	Precinct 3 2016 to 2020	$2,100	-	Vice President	Yes
Judy Parker 1235 River Ridge Ranch Road Killeen, TX	Precinct 4 2014 to 2018	$3,300	$613	Secretary	Yes
David Cole 2401 Brown Circle Killeen, TX 76543	At-Large 2014 to 2018	$2,700	$754	Director	Yes
Consultants					
Lloyd Gosselink Attorneys at Law 816 Congress Ave Suite 1900 Austin, TX 78701-4071	N/A	$60,781	N/A	Attorney	N/A
Alton D Thiele, P.C. P.O. Box 808 Belton, TX 76513	N/A	$6,000	N/A	Auditor	N/A
Key Personnel					
Dirk Aaron	N/A	$76,000		District Manager	
Shelly Chapman	N/A	$45,840		District Administrative Assistant	

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

COMMUNICATION OF SIGNIFICANT DEFICIENCIES AND MATERIAL WEAKNESSES AS REQUIRED BY STATEMENT ON AUDITING STANDARDS NO. 115

SEPTEMBER 30, 2017

ALTON D. THIELE, P.C.
CERTIFIED PUBLIC ACCOUNTANT
300 E. AVENUE C
P.O. BOX 808
BELTON, TX 76513-0808

ALTON D. THIELE, P.C.

CERTIFIED PUBLIC ACCOUNTANT
300 E. AVENUE C
P.O. BOX 808
BELTON, TX 76513-0808

Clearwater Underground Water Conservation District
700 Kennedy Ct.
PO Box 1989
Belton, TX 76513

In planning and performing our audit of the basic financial statements of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2017, in accordance with auditing standards generally accepted in the United States of America, we considered the District's internal control over financial reporting (internal control) as a basis for designing our auditing procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or combination of deficiencies, in internal control, such that there is a reasonable possibility a material misstatement of the District's financial statements will not be prevented, or detected and corrected, in a timely basis.

Our consideration of internal control was for the limited purpose described in the first paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations during our audit, we did not identify any deficiencies in internal control that we consider to be material weaknesses or significant deficiencies. However, material weaknesses and other deficiencies may exist that have not been identified.

This communication is intended solely for the information and use of management, the Board of Directors and others within the District, and is not intended to be and should not be used by anyone other than these specified parties.

ALTON D. THIELE, P.C.
Belton, Texas
February 9, 2018

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

COMMUNICATIONS WITH THOSE CHARGED WITH GOVERNANCE

SEPTEMBER 30, 2017

ALTON D. THIELE, P.C.
CERTIFIED PUBLIC ACCOUNTANT
300 E. AVENUE C
P.O. BOX 808
BELTON, TX 76513-0808

ALTON D. THIELE, P.C.

Certified Public Accountant
300 East Avenue C
P. O. Box 808
Belton, Texas 76513-0808

February 9, 2018

To the Board of Directors
Clearwater Underground Water Conservation District
700 Kennedy Ct.
PO Box 1989
Belton, TX 76513

We have audited the basic financial statements of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2017. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter dated August 2, 2017. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings
Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by Clearwater Underground Water Conservation District are described in NOTE 1 to the financial statements. The application of existing policies was not changed during the fiscal year ended September 30, 2017. We noted no transactions entered into by the District during the year for which there is a lack of authoritative guidance or consensus. All significant transactions, we are aware of, have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The two most sensitive estimates affecting the financial statements were:

> Management's estimate of the useful lives of its capital assets is significant due to the very nature of determining how long an item might last. We evaluated the key factors and assumptions used to develop these estimates in determining that it is reasonable in relation to the financial statements taken as a whole.
>
> Management's estimate of the budget of the District is significant due to the changing needs of the district and the changing property tax base within the District boundaries. We evaluated the key factors and assumptions used to develop these estimates in determining their reasonableness in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosure affecting the financial statements was:

> The disclosure of the expense of the compensation and benefits since this expense is estimated to be over one third of the total annual budget comparatively.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to the financial statements taken as a whole.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting or auditing matter, whether or not resolved to our satisfaction that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the Management Representation Letter dated February 9, 2018.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the District's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the District's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition of retention.

One issue of note pertains to the District's investment in TexPool. While TexPool complies implicitly with the Texas Public Funds Investment Act, TexPool still disclaims the security of funds invested with the entity as subject to loss. The District has a fiduciary responsibility to safeguard the public funds it receives. Governmental Investment Pools are not subject to the custodial risk provision as stated in the *Notes to the Financial Statements*, page 14; however, the risk of loss still exists.

Other Matters

With respect to the supplementary information accompanying the financial statements, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

This information is intended solely for the use of the Board of Directors and Management of Clearwater Underground Water Conservation District and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,

Alton D. Thiele, P.C.
Belton, TX

Appendix C

Well Registration Totals

Year	Exempt Wells		Non-Exempt Wells			Monitor Wells		Total
	Grandfathered	New	Grandfathered	Class 1	Class 2	Water	Envr	
2002-2016	4092	885	104	24	43	21	36	**5205**
2017 Jan	2	5	0	0	0	0	0	**7**
Feb	3	7	0	0	0	0	0	**10**
Mar	4	2	0	0	0	0	0	**6**
Apr	2	2	0	0	0	0	0	**4**
May	0	2	0	0	0	0	0	**2**
June	1	3	0	0	0	0	0	**4**
July	0	2	0	0	0	0	0	**2**
Aug	1	10	0	1	0	0	0	**12**
Sept	4	1	0	1	1	0	0	**7**
Oct	2	7	0	0	0	0	1	**10**
Nov	1	2	0	0	0	0	0	**3**
Dec	5	6	0	0	0	0	0	**11**
Total 2017	**25**	**49**	**0**	**2**	**1**	**0**	**1**	**78**
Totals	**4117**	**934**	**104**	**26**	**44**	**21**	**37**	**5361**

Adjustments

Adjustment Type	Exempt Wells		Non-Exempt Wells			Monitor Wells		Total
	Grandfathered	New	Grandfathered	Class 1	Class 2	Water	Envr	
2002-Present	**4117**	**934**	**104**	**26**	**44**	**21**	**37**	**5361**
Never Drilled	N/A	-24	N/A	-3	-4	0	0	-31
Plugged	-135	-31	-13	-1	-1	-2	-15	-198
Totals	**3982**	**879**	**91**	**22**	**39**	**19**	**22**	**5132**

Appendix D

Non-Exempt Wells--Edwards BFZ

File No.	State #	Name	Acre-Feet Hist. Permit	Acre-Feet Oper. Permit	Acre-Feet Total Permit	2017 Monthly Production (gallons) Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	YTD ac-ft	% Permit
		Chick Landscaping	**0.00**	**2.29**	**2.29**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**2,400**	**28,800**	**0.08**	**3.49%**
N2-06-001G		Chick Landscaping Well #1 (Plugged)				1,200	1,200	1,200	1,200	0	0	0	0	0	0	0	0	**4,800**	**0.01**	**0.44%**
N2-06-002G		Chick Landscaping Well #2				1,200	1,200	1,200	1,200	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400	**24,000**	**0.07**	**3.06%**
		Jarrell-Schwertner WSC	**301.20**	**153.00**	**454.20**	**7,705,175**	**7,001,954**	**7,531,587**	**7,460,782**	**9,668,485**	**9,479,220**	**10,158,321**	**9,429,368**	**9,056,857**	**8,780,442**	**7,266,072**	**6,693,824**	**100,232,087**	**307.61**	**67.73%**
N2-02-041G	5804808	JSWSC (Prairie Dell 2)				2,775,365	2,466,673	2,826,144	2,774,438	3,907,089	3,592,537	3,851,595	3,466,052	3,421,385	3,339,037	2,758,900	2,575,565	**37,754,780**	**115.87**	**25.51%**
N2-02-042G	5804811	JSWSC (Prairie Dell 5)				3,638,935	3,348,568	3,432,461	3,427,487	3,866,571	4,282,760	4,607,529	4,327,223	4,112,427	3,972,072	3,285,964	3,010,490	**45,312,487**	**139.06**	**30.62%**
N2-03-005P		JSWSC (Prairie Dell 8)				1,290,875	1,186,713	1,272,982	1,258,857	1,894,825	1,603,923	1,699,197	1,636,093	1,523,045	1,469,333	1,221,208	1,107,769	**17.164.820**	**52.68**	**11.60%**
		Not Aggregated																		
N2-02-016G		Arthur, W. Capps	70.50		**70.50**	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	90,000	**1,080,000**	**3.31**	**4.70%**
N2-07-010G		Bloomer Mfg.		2.07	**2.07**	2,220	3,388	4,264	3,130	6,266	6,858	5,734	8,459	16,448	16,463	17,976	8,313	**99.519**	**0.31**	**14.98%**
N2-11-004P	5804631	Charles Broecker		0.99	**0.99**	0	4,000	8,000	8,000	15,000	25,000	25,000	25,000	22,000	22,000	15,000	5,000	**174,000**	**0.53**	**53.54%**
N2-16-002G		Charles Dunifer		0.60	**0.60**	300	440	397	423	3,260	13,510	28,480	14,850	6,820	200	547	350	**69.577**	**0.21**	**35.00%**
N1-09-004P		Domingo Perez		0.53	**0.53**	14,416	14,416	14,416	14,416	14,416	14,416	14,416	14,416	14,416	14,416	14,416	14,416	**172,992**	**0.53**	**100.00%**
N2-17-001P		Heart of Texas Feed		0.14	**0.14**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-11-005P		James & Terry Boston		1.66	**1.66**	1,114	1,299	950	1,582	1,264	892	1,524	1,194	1,155	1,535	612	1,348	**14,469**	**0.04**	**2.41%**
N2-10-002P		James Construction		0.96	**0.96**	2,774	1,948	781	1,238	730	812	701	546	515	857	599	549	**12,050**	**0.04**	**4.17%**
N1-07-001P		James Schnitker		1.84	**1.84**	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	**600,000**	**1.84**	**100.00%**
N1-13-002P		Janet Stone		0.34	**0.34**	9,233	9,233	9,233	9,233	9,233	9,233	9,233	9,233	9,233	9,233	9,233	9,233	**110,796**	**0.34**	**100.00%**
N1-14-001P		Karen Duerr		0.27	**0.27**	7,331	7,331	7,331	7,331	7,331	7,331	7,331	7,331	7,331	7,331	7,331	7,331	**87,972**	**0.27**	**100.00%**
N1-10-001P		Kenneth Stone		0.57	**0.57**	15,445	15,445	15,445	15,445	15,445	15,445	15,445	15,445	15,445	15,445	15,445	15,445	**185,340**	**0.57**	**100.00%**
N2-08-004P		Lonnie Sherman		1.10	**1.10**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-09-002P		O. W. Lowery		1.84	**1.84**	39,080	47,080	30,250	63,760	63,760	57,720	84,110	123,250	29,690	56,290	99,120	12,700	**706,810**	**2.17**	**117.93%**
N1-07-005P		Patricia Suarez		0.38	**0.38**	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	**123,996**	**0.38**	**100.00%**
N2-07-005G		RLF Salado Quarries (Office)		3.91	**3.91**	1,490	1,375	1,060	150	332	388	714	665	1,750	1,250	930	98	**10,202**	**0.03**	**0.77%**
N1-07-003P		Ronald Gravette		0.38	**0.38**	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	10,333	**123,996**	**0.38**	**100.00%**
N2-15-003P		Roy Zingelmann		0.60	**0.60**	0	1,000	1,100	800	920	940	520	310	510	630	630	520	**7,880**	**0.02**	**3.33%**
N2-03-004G	5804627	Salado ISD (MS)	1.50		**1.50**	9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720	9,720	**116,640**	**0.36**	**24.00%**
N2-09-004G		Salado UMC		1.86	**1.86**	3,860	14,960	27,200	24,420	38,060	28,580	39,260	45,190	45,340	52,200	54,130	21,030	**394.230**	**1.21**	**65.05%**
N2-15-004P		Scott Law Well #1		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-005P		Scott Law Well #2		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-006P		Scott Law Well #3		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-007P		Scott Law Well #4		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-008P		Scott Law Well #5		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-009P		Scott Law Well #6		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-010P		Scott Law Well #7		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-011P		Scott Law Well #8		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-15-012P		Scott Law Well #9		0.60	**0.60**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-04-017G		Sonic of Salado		0.86	**0.86**	1	1,935	0	2,643	0	4,312	2,512	2,056	2,228	2,305	1,867	2,119	**21,978**	**0.07**	**8.14%**
		Salado WSC	**1,472.30**	**36.99**	**1,509.29**	**21,950,000**	**21,538,000**	**27,717,000**	**15,150,000**	**37,373,000**	**39,291,000**	**57,255,000**	**49,010,000**	**49,010,000**	**36,366,000**	**32,341,000**	**24,854,000**	**411,855,000**	**1,263.94**	**83.74%**
N2-02-010G	5804512	7KX Ranch (#8)				0	0	0	0	7,779,000	10,730,000	19,618,000	15,885,000	15,885,000	9,307,000	6,173,000	0	**85,377,000**	**262.01**	**17.36%**
N2-02-011G	5804513	7KX Ranch (#9)				5,994,000	5,329,000	5,819,000	5,572,000	1,421,000	0	0	1,000	1,000	4,000	337,000	5,070,000	**29,548,000**	**90.68**	**6.01%**
N2-02-003G	5804602	Salado WSC (#1)				0	3,000	0	0	0	292,000	398,000	270,000	270,000	0	0	738,000	**1.971.000**	**6.05**	**0.40%**
N2-02-004G	5804604	Salado WSC (#2)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-005G	5804508	Salado WSC (#3)				0	23,000	603,000	199,000	4,820,000	8,301,000	10,059,000	9,109,000	9,109,000	7,201,000	7,204,000	5,931,000	**62.559.000**	**191.99**	**12.72%**
N2-02-006G	5804621	Salado WSC (#4)				2,980,000	3,400,000	4,456,000	6,023,000	2,468,000	619,000	1,536,000	1,100,000	1,100,000	21,000	0	709,000	**24,412,000**	**74.92**	**4.96%**
N2-02-007G	5804509	Salado WSC (#5)				231,000	255,000	1,498,000	1,774,000	15,172,000	10,577,000	2,126,000	1,374,000	1,374,000	99,000	32,000	33,000	**34,545,000**	**106.01**	**7.02%**
N2-02-008G	5804510	Salado WSC (#6)				12,745,000	12,528,000	15,341,000	1,562,000	5,300,000	7,896,000	18,647,000	18,333,000	18,333,000	19,183,000	18,466,000	12,137,000	**160,471,000**	**492.47**	**32.63%**
N2-02-009G	5804626	Salado WSC (#7)				0	0	0	20,000	413,000	876,000	4,871,000	2,938,000	2,938,000	551,000	129,000	236,000	**12,972,000**	**39.81**	**2.64%**
		Schwertner Farms	**328.90**	**74.05**	**402.95**	**8,342,452**	**9,596,171**	**8,714,687**	**9,748,150**	**10,164,144**	**10,794,472**	**11,994,654**	**11,994,654**	**10,982,201**	**11,640,619**	**9,912,867**	**8,010,507**	**121,895,578**	**374.07**	**92.83%**
N2-04-005G		Schwertner Farms Blackwell				233,580	201,569	245,803	274,380	281,520	278,460	279,174	279,174	270,810	367,370	326,383	312,511	**3,350,734**	**10.28**	**2.55%**
N2-04-001G		Schwertner Farms CCL #1				2,017,997	2,522,652	2,070,800	2,442,593	2,553,100	2,742,628	3,130,613	3,130,613	2,804,122	2,938,526	2,397,850	1,837,465	**30,588,959**	**93.87**	**23.30%**
N2-04-002G		Schwertner Farms CCL #2				2,017,997	2,522,652	2,070,800	2,442,593	2,553,100	2,742,628	3,130,613	3,130,613	2,804,122	2,938,526	2,397,850	1,837,465	**30,588,959**	**93.87**	**23.30%**
N2-04-003G		Schwertner Farms CCL #3				2,017,997	2,522,652	2,070,800	2,442,593	2,553,100	2,742,628	3,130,613	3,130,613	2,804,122	2,938,526	2,397,850	1,837,465	**30,588,959**	**93.87**	**23.30%**
N2-04-004G		Schwertner Farms Eastland W.				271,864	232,492	280,092	269,280	288,660	283,050	285,804	285,804	371,484	363,360	351,050	324,462	**3.607.402**	**11.07**	**2.75%**
N2-04-006G		Schwertner Farms ES #1				110,190	98,834	118,503	117,211	122,906	125,830	135,860	135,860	121,240	154,322	171,679	94,482	**1,506,917**	**4.62**	**1.15%**
N2-04-007G		Schwertner Farms ES #2				598,026	530,944	654,228	699,754	685,559	768,655	766,989	766,989	689,605	634,168	722,041	725,492	**8.242.450**	**25.30**	**6.28%**
N2-04-008G		Schwertner Farms ES #3				623,543	555,968	745,239	612,986	664,547	663,833	666,196	666,196	664,938	837,318	721,786	641,053	**8,063,603**	**24.75**	**6.14%**
N2-10-006P		Schwertner Farms Little D.				451,258	408,408	458,422	446,760	461,652	446,760	468,792	468,792	451,758	468,503	426,378	400,112	**5,357,595**	**16.44**	**4.08%**
		Stagecoach Inn	**35.30**	**7.02**	**42.32**	**309,300**	**381,000**	**410,600**	**166,000**	**342,100**	**358,400**	**567,500**	**856,900**	**109,000**	**180,300**	**29,900**	**18,500**	**3,729,500**	**11.45**	**27.06%**
N2-02-002G	5804623	Stagecoach (deep)				309,300	381,000	410,600	166,000	342,100	358,400	567,500	856,900	109,000	180,300	29,900	18,500	**3,729,500**	**11.45**	**27.06%**
N2-02-037G		Stagecoach (spring)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
Totals:			**2,209.70**	**299.65**	**2,509.35**	**38,576,977**	**38,813,761**	**44,667,087**	**32,850,289**	**57,896,532**	**60,281,315**	**80,383,241**	**71,731,653**	**69,503,725**	**57,340,302**	**49,960,461**	**39,848,069**	**641,853,412**	**1,969.76**	**78.50%**

Non-Exempt Wells--Trinity

File No.	State #	Name	Acre-Feet Hist. Permit	Acre-Feet Oper. Permit	Acre-Feet Total Permit	2017 Monthly Production (gallons) Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	YTD ac-ft	% Permit
		Armstrong WSC	**154.90**	**333.00**	**487.90**	**1,494,020**	**1,208,020**	**1,016,060**	**1,300,460**	**1,820,880**	**1,810,950**	**3,568,950**	**4,555,150**	**3,293,560**	**2,960,660**	**2,356,000**	**2,254,440**	**27,639,150**	**84.82**	**17.38%**
N2-02-024G	5805202	Armstrong WSC #1				20	5,020	4,060	7,460	16,880	17,950	17,950	27,150	13,560	8,660	0	2,440	**121,150**	**0.37**	**0.08%**
N2-10-001P		Armstrong WSC #2				1,494,000	1,203,000	1,012,000	1,293,000	1,804,000	1,793,000	3,551,000	4,528,000	3,280,000	2,952,000	2,356,000	2,252,000	**27,518,000**	**84.45**	**17.31%**
		Bell Milam Falls WSC	**262.20**	**0.00**	**262.20**	**5,168,100**	**5,000**	**156,500**	**2,610,400**	**3,160,000**	**6,965,700**	**10,576,700**	**11,343,200**	**9,175,600**	**6,613,600**	**7,831,600**	**7,150,900**	**70,757,300**	**217.15**	**82.82%**
N2-02-046G	5814402	Bell-Milam-Falls WSC (Bartlett)				2,554,000	5,000	74,000	2,452,000	3,160,000	3,441,000	4,883,000	5,190,000	4,017,000	3,215,000	4,009,000	2,956,000	**35,956,000**	**110.35**	**42.09%**
N2-02-038G	5806601	Bell-Milam-Falls WSC (Rogers)				2,614,100	0	82,500	158,400	0	3,524,700	5,693,700	6,153,200	5,158,600	3,398,600	3,822,600	4,194,900	**34,801,300**	**106.80**	**40.73%**
		Central Texas WSC	**0.00**	**1,776.00**	**1,776.00**	**0**	**0**	**0**	**0**	**0**	**233,000**	**0**	**0**	**0**	**0**	**0**	**0**	**233,000**	**0.72**	**0.04%**
N2-14-004P		CTWSC Doc Curb				0	0	0	0	0	233,000	0	0	0	0	0	0	**233,000**	**0.72**	**0.04%**
N2-14-005P		CTWSC System Split Well				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
		East Bell WSC	**69.70**	**114.85**	**184.55**	**2,248,000**	**961,000**	**745,000**	**576,000**	**671,000**	**765,000**	**1,830,000**	**2,243,000**	**2,017,000**	**750,000**	**437,000**	**432,000**	**13,675,000**	**41.97**	**22.74%**
N2-02-034G	4063501	East Bell WSC #1				1,783,000	652,000	149,000	128,000	178,000	257,000	1,278,000	1,472,000	955,000	28,000	0	105,000	**6,985,000**	**21.44**	**11.62%**
N2-04-010P	5806301	East Bell WSC #2				465,000	309,000	596,000	448,000	493,000	508,000	552,000	771,000	1,062,000	722,000	437,000	327,000	**6,690,000**	**20.53**	**11.12%**
		Leon River Turkey Farms	**60.90**	**0.00**	**60.90**	**14,300**	**22,000**	**26,800**	**14,700**	**26,900**	**19,100**	**25,700**	**24,000**	**25,300**	**15,000**	**15,500**	**18,500**	**247,800**	**0.76**	**1.25%**
N2-02-045G	5805403	Leon River Turkey				12,000	19,000	24,000	12,200	24,000	16,000	22,000	20,000	1,800	12,000	13,000	16,000	**192,000**	**0.59**	**0.97%**
N2-02-043G	4053301	Leon River Turkey (East)				1,200	2,000	1,800	1,500	1,700	1,800	2,200	2,500	22,000	1,800	1,500	1,400	**41,400**	**0.13**	**0.21%**
N2-02-044G	4053302	Leon River Turkey (West)				1,100	1,000	1,000	1,000	1,200	1,300	1,500	1,500	1,500	1,200	1,000	1,100	**14,400**	**0.04**	**0.07%**
		Lhoist	**40.00**	**0.00**	**40.00**	**378,000**	**342,000**	**414,000**	**360,000**	**396,000**	**360,000**	**378,000**	**414,000**	**378,000**	**396,000**	**360,000**	**360,000**	**4,536,000**	**13.92**	**34.80%**
N2-03-002G	4060101	LHoist #1				378,000	342,000	414,000	360,000	396,000	360,000	378,000	414,000	378,000	396,000	360,000	360,000	**4,536,000**	**13.92**	**34.80%**
N2-03-003G		LHoist #2				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
		Moffat WSC	**47.70**	**157.80**	**205.50**	**58,000**	**150,000**	**4,000**	**8,000**	**6,000**	**30,000**	**9,000**	**30,000**	**20,000**	**20,000**	**2,740,000**	**5,956,000**	**9,031,000**	**27.72**	**13.49%**
N2-02-022G	4053406	Moffat WSC #1				54,000	137,000	0	0	0	0	0	0	0	0	0	0	**191,000**	**0.59**	**0.29%**
N2-08-006P	4053507	Moffat WSC #2				4,000	13,000	4,000	8,000	6,000	30,000	9,000	30,000	20,000	20,000	2,740,000	5,956,000	**8,840,000**	**27.13**	**13.20%**
		Not Aggregated																		
N1-17-002P		Advanced Electrical Systems		0.29	**0.29**	0	0	0	0	0	0	0	0	24,000	24,000	24,000	24,000	**96,000**	**0.29**	**100.00%**
N1-07-006P		Advanced Electrical Systems (Plugged)		0.59	**0.59**	24,000	24,000	24,000	24,000	24,000	24,000	24,000	24,000	0	0	0	0	**192,000**	**0.59**	**100.00%**
N1-11-002P		Andrew Robertson		0.59	**0.59**	16,021	16,021	16,021	16,021	16,021	16,021	16,021	16,021	16,021	16,021	16,021	16,021	**192,252**	**0.59**	**100.00%**
N2-07-008G		Apache Stone		22.66	**22.66**	154,330	399,620	351,100	471,050	246,640	382,590	388,370	308,350	344,280	332,640	422,200	321,290	**4,122,460**	**12.65**	**55.83%**
N2-02-001G	5806102	Bell Co. WCID #2	184.20	21.60	**205.80**	1,132,000	2,661,000	2,960,000	3,257,000	3,645,000	3,360,000	1,440,000	4,382,000	4,408,000	4,282,000	3,442,000	3,064,000	**38,033,000**	**116.72**	**56.72%**
N2-02-040G	4062801	Bell Co. WCID #5	20.70	8.00	**28.70**	0	74,600	308,300	327,800	23,800	616,400	931,700	771,600	513,400	629,700	571,000	821,300	**5,589,600**	**17.15**	**59.76%**
N2-03-001G	4062401	Cen. TX Vet. Hospital		60.00	**60.00**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-04-011P		Central Texas Strike Zone		1.30	**1.30**	0	0	0	71	565	1,542	1,531	1,626	427	0	0	0	**5,762**	**0.02**	**1.54%**
N2-08-003G		City of Harker Heights		1.16	**1.16**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-013G	5805901	City of Holland	158.40		**158.40**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-012G	5807701	City of Rogers	139.40		**139.40**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-036G	4054503	City of Troy #1	119.90	100.60	**220.50**	3,787,600	3,603,500	3,133,500	1,932,700	3,994,100	5,322,000	2,836,500	2,055,200	1,241,800	3,686,600	5,893,400	5,435,200	**42,922,100**	**131.72**	**59.74%**
N1-16-005P		David Cole		0.39	**0.39**	10,590	10,590	10,590	10,590	10,590	10,590	10,590	10,590	10,590	10,590	10,590	10,590	**127,080**	**0.39**	**100.00%**
N1-07-002P		Ingo Smith		1.57	**1.57**	42,766	42,766	42,766	42,766	42,766	42,766	42,766	42,766	42,766	42,766	42,766	42,766	**513,192**	**1.57**	**100.00%**
N2-13-002P	5806201	Jack Hilliard Dozer and Materials		73.20	**73.20**	0	0	0	0	0	0	0	0	4,191,300	5,970,300	992,200	1,206,100	**12,359,900**	**37.93**	**51.82%**
N1-05-001P		John Kurzyniec		0.67	**0.67**	18,250	18,250	18,250	18,250	18,250	18,250	18,250	18,250	18,250	18,250	18,250	18,250	**219,000**	**0.67**	**100.00%**
N2-07-003G		Killeen Crushed Stone		36.00	**36.00**	576,350	576,350	0	584,600	697,700	331,600	1,086,500	818,300	174,300	1,000,900	915,500	1,130,800	**7,892,900**	**24.22**	**67.28%**
N2-09-001P		Kimberly Langston		12.32	**12.32**	0	0	0	84,070	565,970	957,980	488,630	276,530	190,860	362,000	309,530	1,290	**3,236,860**	**9.93**	**80.60%**
N2-08-001P		Kirby Stone		16.03	**16.03**	180,000	218,000	190,000	325,650	228,330	490,800	357,940	410,000	363,000	249,000	242,700	331,000	**3,586,420**	**11.01**	**68.68%**
N1-09-003P		Laurie Gehring		0.34	**0.34**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-039G	4054801	Little Elm Valley WSC	91.20		**91.20**	1,561,500	96,700	103,800	1,673,900	1,671,800	1,861,300	2,388,800	2,399,600	2,084,100	1,848,100	1,521,000	2,087,800	**19,298,400**	**59.22**	**64.93%**
N2-07-006G		Maxdale Cowboy Church		0.16	**0.16**	2,650	70	0	0	0	0	0	0	0	0	0	0	**2,720**	**0.01**	**6.25%**
N1-16-004P		Michael Maples		0.39	**0.39**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-035G		Mill Creek Country Club, LLC	61.90	60.00	**121.90**	0	0	0	0	360,000	1,800,000	3,600,000	3,240,000	2,160,000	3,600,000	720,000	1,440,000	**16,920,000**	**51.93**	**42.60%**
N2-02-014G		Miller Springs Materials		50.00	**50.00**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-017G	4055701	Oenaville / Belfalls WSC	16.20	20.79	**36.99**	69,613	67,058	51,674	51,086	78,603	152,331	196,707	172,935	371,770	370,396	405,996	76,983	**2,065,152**	**6.34**	**17.14%**
N2-07-009G		Parrie Haynes Ranch		13.80	**13.80**	45,960	55,000	38,940	12,290	15,050	44,110	82,160	57,001	19,570	22,810	23,460	13,880	**430,231**	**1.32**	**9.57%**
N2-07-007G		Patriot Retreat		0.01	**0.01**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-09-005G		R S Materials Group		16.67	**16.67**	327,220	345,010	301,130	282,000	369,100	324,930	230,170	352,700	237,640	266,120	205,870	388,400	**3,630,290**	**11.14**	**66.83%**
N1-16-001P		Richard Ross		0.70	**0.70**	19,008	19,008	19,008	19,008	19,008	19,008	19,008	19,008	19,008	19,008	19,008	19,008	**228,096**	**0.70**	**100.00%**
N1-17-001P		Robert & Victoria Lewis		0.82	**0.82**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N1-16-006P		Ronald Ham		0.53	**0.53**	14,391	14,391	14,391	14,391	14,391	14,391	14,391	14,391	14,391	14,391	14,391	14,391	**172,692**	**0.53**	**100.00%**
N2-05-004P		Salado B.P. / Ronnie Tynes		11.05	**11.05**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-08-002P		Salado ISD (HS)		21.41	**21.41**	267	599	570	637	1,420	2,287	2,287	1,996	171	101,308	70,172	42,039	**223,753**	**0.69**	**3.22%**
N2-07-011G	5804624	Stagecoach (Spa)		0.05	**0.05**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-07-012G		Temple Park Estates		9.50	**9.50**	37,580	42,160	82,580	92,000	119,600	171,150	284,280	104,090	119,330	105,470	73,580	746,880	**1,978,700**	**6.07**	**63.89%**
N2-05-003P	40589	Texas Veterans Land Board		36.80	**36.80**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-11-003G		UMHB		7.50	**7.50**	1,976	9,691	8,579	5,909	16,838	11,580	8,252	16,958	18,602	16,899	8,175	2,503	**125,962**	**0.39**	**5.20%**
N2-06-008P		VillasDelSol / John Henderson		3.13	**3.13**	5,300	3,600	6,200	7,100	8,750	8,200	22,000	38,000	23,000	12,500	9,200	11,500	**155,350**	**0.48**	**15.34%**
N1-08-001P		Yong Conway		1.59	**1.59**	43,120	43,120	43,120	43,120	43,120	43,120	43,120	43,120	43,120	43,120	43,120	43,120	**517,440**	**1.59**	**100.00%**
		Pendleton WSC	**75.30**	**47.07**	**122.37**	**2,526,300**	**2,139,400**	**2,857,400**	**2,693,300**	**4,279,600**	**3,926,100**	**4,893,700**	**3,807,700**	**3,594,100**	**2,793,600**	**2,358,400**	**2,351,000**	**38,220,600**	**117.30**	**95.86%**
N2-02-047G	4054401	Pendleton WSC (#1)				2,071,600	1,021,400	1,361,200	1,288,200	2,066,900	1,921,200	2,380,300	1,949,800	1,811,100	1,414,400	1,207,900	1,219,100	**19,713,100**	**60.50**	**49.44%**
N2-02-048G	4054502	Pendleton WSC (#2)				454,700	1,118,000	1,496,200	1,405,100	2,212,700	2,004,900	2,513,400	1,857,900	1,783,000	1,379,200	1,150,500	1,131,900	**18,507,500**	**56.80**	**46.42%**
Totals:			**1,502.60**	**3,040.93**	**4,543.53**	**19,957,212**	**13,168,524**	**12,944,279**	**16,858,869**	**22,591,792**	**30,136,796**	**35,816,023**	**38,012,082**	**35,153,256**	**36,593,749**	**32,112,629**	**35,831,951**	**329,177,162**	**1,010.22**	**22.23%**

Non-Exempt Wells--Other

File No.	State #	Name	Acre-Feet			2017 Monthly Production (gallons)														
			Hist. Permit	Oper. Permit	Total Permit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD	YTD ac-ft	% Permit
		Bradley Ware	**0.00**	**160.00**	**160.00**	**2,232,083**	**1,107,895**	**2,574,226**	**1,922,523**	**1,629,258**	**2,150,620**	**3,356,270**	**1,531,501**	**3,095,588**	**2,443,886**	**3,584,366**	**1,694,428**	**27,322,644**	**83.85**	**52.41%**
N2-11-001G		Bradley B. Ware				1,384,869	749,458	1,661,842	1,433,746	1,042,725	1,759,598	2,671,982	1,238,235	2,346,130	2,052,864	2,737,152	1,335,991	**20,414,592**	**62.65**	**39.16%**
N2-11-002G		Bradley B. Ware				847,214	358,437	912,384	488,777	586,533	391,022	684,288	293,266	749,458	391,022	847,214	358,437	**6,908,052**	**21.20**	**13.25%**
		Not Aggregated																		
N2-07-014P		Barking Oaks		0.62	**0.62**	5,987	5,967	5,196	5,634	5,879	5,290	5,194	5,920	6,127	6,176	6,076	5,671	**69,117**	**0.21**	**33.87%**
N2-10-007P		Goode Towing		0.05	**0.05**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-08-005G		Lone Star Paving		1.07	**1.07**	1,420	0	750	850	2,280	2,330	3,560	2,869	3,065	3,162	2,958	126	**23.370**	**0.07**	**6.54%**
N2-14-001G		Mikeska		100.00	**100.00**	0	0	0	0	0	2,592,000	0	2,592,000	0	0	0	0	**5,184,000**	**15.91**	**15.91%**
N2-06-007G		Misty Creek HOA		6.45	**6.45**	14,200	12,000	14,500	14,700	15,200	15,500	17,050	17,000	15,000	15,800	15,000	14,300	**180,250**	**0.55**	**8.53%**
N1-11-001P		Roy Rodriquez		0.55	**0.55**	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	**180,000**	**0.55**	**100.00%**
N2-16-001P		Sparta Plaza Ltd.		0.12	**0.12**	1,108	970	935	1,112	840	970	1,260	874	874	738	675	680	**11,036**	**0.03**	**25.00%**
N1-04-001P		Stephen Spinn		0.56	**0.56**	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	15,207	**182,484**	**0.56**	**100.00%**
N2-07-013G		Temple TAG		2.47	**2.47**	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-08-007G		Trio Investments		0.18	**0.18**	300	300	300	100	200	300	200	800	200	1,000	100	200	**4.000**	**0.01**	**5.56%**
N1-16-007P		Wells Fargo Bank		0.79	**0.79**	0	0	0	0	21,390	21,390	21,390	21,390	21,390	21,390	21,390	21,390	**171,120**	**0.53**	**67.09%**
		Strasburger Farms	**271.80**	**33.84**	**305.64**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.00**	
N2-02-030G		Strasburger Farms (#10)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-031G		Strasburger Farms (#11)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-032G		Strasburger Farms (#15)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-033G		Strasburger Farms (#16)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-026G		Strasburger Farms (#2)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-027G		Strasburger Farms (#4)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
N2-02-029G		Strasburger Farms (#6)				0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.00**	**0.00%**
Totals:			**271.80**	**306.70**	**578.50**	**2,285,305**	**1,157,339**	**2,626,114**	**1,975,126**	**1,705,254**	**4,818,607**	**3,435,131**	**4,202,561**	**3,172,451**	**2,522,359**	**3,660,772**	**1,767,002**	**33,328,021**	**102.27**	**17.68%**

Appendix E

Clearwater UWCD Summary of Exempt Well Use Through December 2017

Aquifer	Total Number of Registered Exempt Wells	Registered Number of Domestic Wells	Estimated Domestic Use Gallons/Day	Estimated Domestic Use Ac-ft/Year	Registered Number of Stock Wells	Estimated Stock Use Gallons/Day	Estimated Stock Use Ac-ft/Year	Total Estimated Use Gallons/Day	Total Estimated Exempt Well Use Ac-ft/Year
Glen Rose (Upper Trinity)	*543*	*440*	*132,458*	*148*	*104*	*66,560*	*75*	*199,018*	*223*
Hensell (Middle Trinity)	*666*	*618*	*186,043*	*208*	*48*	*30,720*	*34*	*216,763*	*243*
Hosston (Lower Trinity)	*131*	*119*	*35,824*	*40*	*12*	*7,680*	*9*	*43,504*	*49*
Trinity (Total)	1,341	1,177	354,324	397	164	104,960	118	459,284	514
Edwards BFZ	756	624	320,118	359	132	84,480	95	404,598	453
Edwards Equivalent	378	287	86,398	97	91	58,240	65	144,638	162
Buda	32	19	5,720	6	13	8,320	9	14,040	16
Lake Waco	8	3	903	1	5	3,200	4	4,103	5
Austin Chalk	231	143	43,049	48	88	56,320	63	99,369	111
Ozan	166	117	35,222	39	49	31,360	35	66,582	75
Pecan Gap	67	44	13,246	15	23	14,720	16	27,966	31
Kemp	15	11	3,311	4	4	2,560	3	5,871	7
Alluvium	570	362	108,976	122	208	133,120	149	242,096	271
Other	1,467	986	296,825	332	481	307,840	345	604,665	677
CUWCD Total	**3,564**	**2,787**	**971,268**	**1,088**	**777**	**497,280**	**557**	**1,468,548**	**1,645**

Domestic use estimate assumes 106 gallons/person per day (USGS estimate of domestic use outside of a municipal water system) and 2.84 persons/houshold (U.S. Census - Bell County average 2016)

Exempt well use estmate factors out all plugged, capped, monitor and inactive wells in the database.

Source of stock water estimates is Texas Agrilife Extension @ 18 gallons water per day per cow.

Livestock water use estimates are based on the 2011 TWDB Water Use Survey Historical Summary Estimates by County as of 12/26/13.

Trinity Aquifer wells registered with unknown depth are assigned to the Middle Trinity per Board decision.

The total registered exempt wells include all domestic wells, livestock wells, inactive wells and monitor wells with exempt status.

The other designation is the total of minor aquifer and alluvium source designation of the exempt wells.

Clearwater
Underground Water Conservation District
Every drop counts!

Appendix F

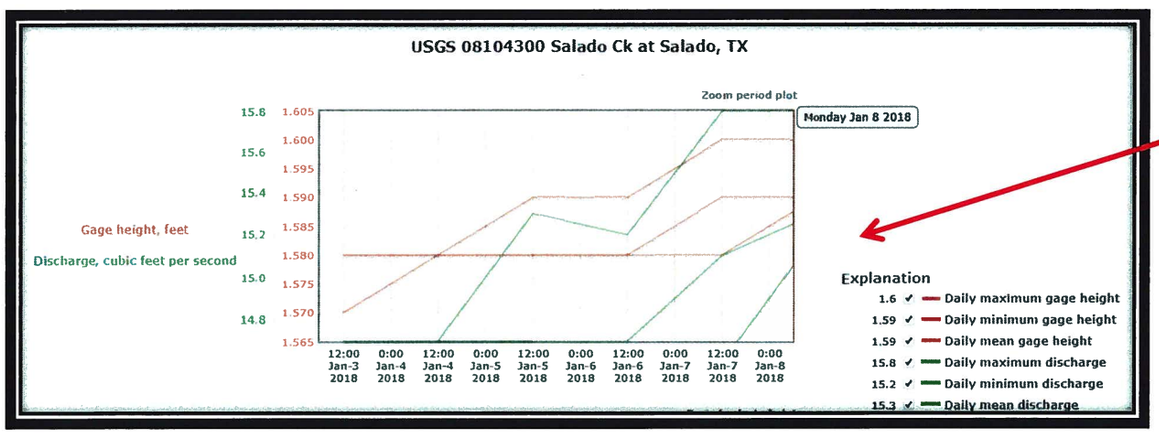
Edwards (BFZ) Aquifer Status Report – January 2018

DFC Analysis Over Time (2000-Present) Modeled Available Groundwater				*HEUP and OP Permit Analysis* Relative to the Modeled Available Groundwater			*2017 YTD Prod.* Jan - Dec 1969.76 Ac-ft 78.50%	*Pending Applications*		*Exempt Well Reservations*		
	DFC Adopted * Minimum Spring Flow	**Status of DFC **** Current / Low	**MAG** *** Ac-ft	HEUP Ac-ft	OP Ac-ft	Total Permitted Ac-ft	2016 Actual Production	Available for Permitting Ac-ft	Pending Applications Ac-ft	Exempt Well Reservation Ac-ft	Exempt Well Use Estimation Ac-ft	Available Exempt Use Ac-ft
Edwards (BFZ) Aquifer	**100 Ac-ft** or **1.68 cfs** per month	**841 Ac-ft** 1/31/2018 vs **220 Ac-ft** 08/20/2014	6469	2209.7	299.65	**2509.35**	1775.78 Ac-ft 70.77%	3134.65	0	825	453	372

**Desired Future Conditions (DFC) established by Clearwater UWCD and approved by GMA8 and TWBD, is the description of how the aquifer should look in the future (50 years based on maintaining the Salado Spring Complex discharge during a repeat of drought conditions similar to the drought of record in the 1950's, under drought of record, a five-day average of discharge amounting to 200 ac-ft-month is preferred and 100 ac-ft-/month is the minimum acceptable spring flow. Spring flow is measured and estimated by the USGS Gage in Salado Creek located below the Salado Creek Spring Complex.*

***Status of the DFC is the estimated spring flow over a five-day average from the springs releasing artesian pressure from the Edwards BFZ Aquifer expressed as acre feet per month of spring flow into Salado Creek.*

****The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB, based on the desired future conditions.*



CFS is measured continuously at the downstream gage with USGS developing the rating curve according to industry standards and maintaining the information for public access on the USGS website.

5 - day average for Jan 3rd – Jan 8th was 13.22 CFS =787 ac-ft/month

5 – day average for Dec 5th – Dec 10th was 15.78 CFS = 939 ac-ft/month

Trinity Aquifer Status Report – February 2018

DFC Analysis Over Time (2000-Present) Modeled Available Groundwater				*HEUP and OP Permit Analysis* Relative to the Modeled Available Groundwater			*2017 YTD Total Prod.* Jan-Dec 1010.21 Ac-ft 22.48%		*Pending Applications*		*Exempt Well Reservations*		
Trinity Aquifer (by layer)	**DFC Adopted *** **Average Drawdown** (by layer)	**MAG **** Ac-ft		**HEUP Ac-ft** (by layer)	**OP Ac-ft** (by layer)	**Total Permitted Ac-ft** (by layer)	**2016 Actual Prod.** (by layer)	**2017 YTD Prod.** (by layer)	**Available for Permitting Ac-ft** (by layer)	**Pending Applications Ac-ft** (by layer)	**Exempt Well Reserve Ac-ft** (by layer)	**2017 Exempt Well Use Estimate Ac-ft** (by layer)	**Available Exempt Use Ac-ft** (by layer)
		Current	Proposed										
Pawluxy	NA	96	0	0	0	**0**	0	0	0	0			0
Glen Rose (upper)	**-3.1 ft/yr** -155 ft/50 yrs	880	974	61.9	120.15	**182.05**	24.4	58.59	4.95	0	693	223	470
Hensell (middle)	**-5.72 ft/yr** -286 ft/50 yrs	1099	1894	259.3	188.45	**447.75**	99.91	91.28	103.25	0	548	243	305
Hosston (lower)	**-6.38 ft/yr** -319 ft/50 yrs	4993	7193	1181.4	2732.33	**3913.73**	722.97	860.34	901.27	*** 1952.8	178	49	129
Total		**7068**	10061	1502.6	3040.93	**4543.53**	846.98 (24.24%)	1010.21	1105.47	**1952.8**	1419	514	904

**Desired Future Conditions (DFC) is the description of how the aquifer should look in the future (50 years).*

***The Modeled Available Groundwater (MAG) is the estimated amount of water available for permitting assigned to Clearwater UWCD by the Executive Administrator of TWDB.*

****Pending applications in the Hosston Layer (Lower), and Hensell of the Trinity Aquifer (Middle)*

City of Troy Drilling Permit Well #2 (250 ac-ft/yr)

Trinity Oasis LLC Operating Permit N2-13-002P (1702.8 ac-ft/yr)

Appendix G

Clearwater Source

Clearwater Underground Water Conservation District

www.cuwcd.org

2017 Annual Newsletter | October 2017 | Volume 13, Issue 1

A Message From The President

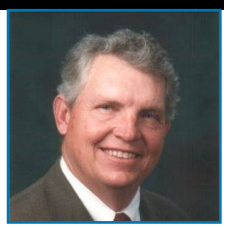
It is fall again and it has been a fairly normal year for rainfall in the Central Texas area with periods of rain and drought. Your district recently passed the budget for 2018 that allocates approximately 60% to groundwater science while being able to lower your tax rate. There is still much to be learned about our groundwater resources so we are partnering with Baylor University, The United States Geological Survey (USGS), and LBG-Guyton, our hydrologist, to further enhance this understanding. We will continue to enhance our District website to provide better information, mapping and our 3D modeling to you, our groundwater users and constituents.

This past year we have invested in an educational trailer to take to our area schools and local events to educate our youth and citizens about groundwater and conservation. Your Bell County Commissioners donated the District a used pickup that was to be put into auction to pull the trailer and to use in our District travels. We would like to publicly thank the Commissions for this donation as they partner with us to manage your groundwater and to keep our costs and taxes low. The trailer will be at our Water Symposium that will be held on November 15th at the Texas A&M University Central Texas campus in Killeen so we encourage you to visit it when you attend. Please contact the District office to make your reservation. There is no cost to attend and lunch will be provided.

It is also, with great pleasure, to announce to you that our District Manager, Dirk Aaron, was recently elected to be the president of the Texas Alliance of Groundwater Districts (TAGD) and will be serving a two year term. This is a great honor to him and our District as we continue to be recognized as one of the leaders in Texas in groundwater management. We hope to see you at the 17th Annual Bell County Water Symposium.

Leland Gersbach, President
Clearwater UWCD

Protecting Our Most Valuable Resource



Concerns about water resources for Central Texas are certainly not new. Over a half century ago, far-sighted leaders took steps to build two major reservoirs in Bell County to secure surface water resources. Initially, the driving force was the need to secure a dependable water supply to sustain Fort Hood. The added benefit was an adequate supply for a rapidly growing population. Those early efforts have served us well.

Concerns for groundwater management were later coming, and more complicated. The surge in population growth in Bexar and Travis counties as early as the 1970's offered the first real glimpse of things to come for our region. At the same time, a philosophical debate about the future of groundwater management began to bubble up. Since groundwater is treated as a property right under Texas law, it came to be viewed as valuable economic resource, and efforts to mine and sell water began to pop up in some thirsty parts of the state. Hydrologists soon realized that groundwater is in reality a shared resource. Aquifers don't recognize boundary lines and one land owner's pumping may affect another's supply. In the case of the Edwards aquifer, groundwater systems and fluvial systems are interrelated, further complicating the issue. So discussions about regulation became more intense and the push-back from property rights advocates became more strident.

Historically, the legislature has taken a hands-off position on the question of groundwater regulation. Rather than adopt sweeping changes to a long-standing body of law, the issue was largely left to local entities. To that end, various local jurisdictions have been authorized by statute to create groundwater districts over time. The enabling legislation for Clearwater Underground Water Conservation District was enacted in the 71st Legislature in 1989 (House Bill 3172 by Shine and Schleuter). This bill authorized the Commissioners Court to call an election to determine whether or not to stand up a district in Bell County. The initiative was confirmed by the voters and Clearwater UWCD was created in 1999.

The District's primary regulatory tool is tied to permitting authority and protection of exempt wells for domestic use. The early years of operation focused on developing policy and establishing the rules and procedures for permitting of wells. From the beginning, the District leadership has been very focused on striking a balance between accommodating need and, at the same time, protecting long-term sustainability. This challenge is further complicated by the diverse geology of the region. Aquifer conditions vary greatly from one part of the county to another. So in recent years, the District has become more focused on science and has invested in a sophisticated tool set to compile hydrologic data and build and support modelling capabilities to underpin permitting decisions. This is a model approach for responsible regulation.

This focus on science has been particularly valuable with the addition of a new challenge related to endangered species. The discovery of *Eurycea Chisholmensis*, a species of salamander unique to spring settings in the northern Edwards aquifer, has raised the issue of federal regulation. The District, working in collaboration with Bell County, Village of Salado and other local entities, has funded additional focused research designed to enhance our understanding of the northern Edwards and its associated spring systems, as well as biological research on species dependent on those systems, in order to satisfy mandates of federal law. To date, the official designation of *Eurycea* as threatened, rather than endangered, is a major victory, resulting in a lower threshold for environmental permitting for projects such as the construction of I-35 and the proposed Salado wastewater system. Species protection aside, the underlying goal of protecting the integrity of a valuable resource is advanced as well.

Maintaining this balanced regulatory approach and an ongoing commitment to science-based resource management will be critical as competition for available resources increases over time.

Tim Brown, Bell County Commissioner, Pct. 2

Board of Directors

Leland Gersbach - Precinct 1
2013-2017 (President)

Wallace Biskup - Precinct 3
2013-2017 (Vice President)

Gary Young - Precinct 2
2014-2017 (Director)

Judy Parker - Precinct 4
2011-2017 (Secretary)

David Cole - At large
2013-2017 (Director)

Mission Statement

To implement an efficient, economical, and environmentally sound groundwater management program to protect and enhance the water resources of the District.

Water Quality Screening

The District's in-house lab offers registered well owners free screening for common constituents and bacteria. Annual screening is recommended.

Lawn and Landscape Water Conservation for Landowners

It hasn't been on the minds of those in Central Texas lately. When the stock tanks are full and the streams are flowing, water conservation doesn't appear as an immediate concern. However, those that call Texas home know that conditions can change in the blink of an eye. Being prepared and taking preventative measures to ensure that our land, livestock, and future generations will have sufficient supply is key to weathering dry conditions.

Up to 25% percent of water usage in urban areas can be attributed to irrigation, but even up to half of that can be lost to inefficiencies in those systems. Just drive through our communities and see that one goal both large and small land owners in Central Texas have in common is producing healthy, lush grass and doing it in an efficient way. Whether it be for production or simply for an aesthetic look, the number one factor in achieving that goal is making sure that the grass you have planted is receiving enough water. There are different varieties or grasses that can help landowners meet their goals.

Not all grass is created equal. St. Augustine thrives the best in shady moist conditions while Bermuda is a sun loving, drought tolerant variety. The solution is to utilize a variety that not only works for the landowner but is functional and water conscious at the same time.

Two varieties come to mind when I think of grass that fits these low water landscape use categories; Buffalo and Bermuda. Buffalo grass is a native grass and the most drought tolerant choice, but it is not well adapted for use as a lawn grass. It does not make a tight sod, but it grows well in low rain fall areas. If grown for grazing or ground cover, mowed to six inches, Buffalo grass will flourish in full sun with minimal water requirements. Land owners that want to utilize a native pasture grass with water conservation or drought conditions in mind will find that this grass is a highly practical choice.

Bermuda grass is almost as drought tolerant as buffalo grass, but it is much easier to manage as a manicured turf grass. Both tolerant to frequent mowing (1 ½ inches or less) and high traffic areas, Bermuda is a top choice among small land owners. During harsh drought conditions Bermuda tends to green up rapidly after irrigation or a fair rain. Just like the Buffalo grass, it also fairs well in full sun. Bermuda is well known for its use and hardiness on golf courses and is the most common warm-season turf grass used in the U.S.

The money you invest in high quality landscape soil and seeding can be paid back in one drought seasons worth of lawn watering, but changing your practices to conserve water for our future generations is a priceless concept. Whatever the grass you select, six inches of soil is imperative to serve as a reservoir for roots and moisture. When it comes to watering, monitor your grass and watch for wilt. Watering only when needed and watering thoroughly, produces a deep-rooted lawn which is more water efficient and drought enduring.

When water is so inexpensive, it's easy to misuse. Municipal water in Belton, Texas costs a home owner $3.70 for 1,000 gallons. That shakes out to less than half a penny per gallon. If you're pumping from an existing, managed well, the input is the utility cost of pumping. Nevertheless, protecting and conserving Texas' vital water resource is an important job that is in all of our hands. Texas A&M AgriLife provides programming in conservation that focuses on reducing household water use and improving irrigation efficiencies in lawns, landscapes, and agricultural production systems. For more information on water wise conservation practices, visit http://water.tamu.edu/water-conservation/ or contact the Bell County Extension Office at (254) 933-5305.

Whitney Grantham, Natural Resources Agent
Texas A&M AgriLife Extension, Bell County

Investing in tomorrow's Leaders
The Texas 4-H Water Ambassadors Program

With the support of Clearwater and many others in the Texas water industry, a new 4-H initiative is helping to grow the next generation of water industry leaders. This summer marked the debut of the Texas 4-H Water Ambassador Program. Sixteen high school youth, including Kolby Dague of Bell County, were selected to participate in the summer 4-H2O Youth Leadership Academy. This 8-day educational tour experience covered 2,200 miles, featured 30 tours and educational presentations, and engaged nearly 80 water industry professionals across Texas.

The summer Academy exposed Ambassadors to a wide range water issues and provided a broad perspective of challenges faced by local communities. Topics covered water law, policy, and management as well as hydrogeology, water treatment, and emerging technologies in irrigation management, reuse, desalination, and aquifer storage and recovery. A highlight of the tour was a stop in Temple, where water ambassadors met with District staff, learned about groundwater management, and toured the mobile aquifer classroom.

As Water Ambassadors, these youth are charged with providing water education and service back in their communities over the next year. They will also further their learning about Texas water through continuing education, participate in water industry events, and meet with local groundwater district and water professionals. Recently, ten Water Ambassadors attended the Texas Groundwater Summit in San Marcos where they had the opportunity to thank Program sponsors and share their 4-H2O Youth Leadership Academy experience.

Kolby is already gaining visibility in his new role as Water Ambassador. In addition to participating in the Groundwater Summit, he has delivered presentations for both Clearwater and Post Oak Savannah Groundwater Conservation District Boards. Whitney Grantham, Bell County extension agent, is very supportive of the Water Ambassadors Program. Whitney assisted during the summer Academy and will continue to help Kolby by facilitating education and service opportunities.

Applications will open in February 2018 for the second cohort of Water Ambassadors.

Special thanks to the District Board, Dirk Aaron, and staff for their continued support of this important program!

David Smith, 4-H2O Program Coordinator
Texas A&M AgriLife Extension
Texas 4-H Youth Development

Whitney Grantham (CEA - NR) and Kolby Dague present to the CUWCD Board of Directors about the 4-H2O program.

Kolby Dague and the 4-H2O Ambassadors near Halfway looking at efficient irrigation research.

Kolby Dague and the 4-H2O Ambassadors tour the Spanish Irrigation Canal system in Menard.

Kolby Dague and the 4-H2O Ambassadors at the Texas A&M AgriLife Research & Extension Center in Dallas learning about youth water education activities.

Natural Resources Extension Agent

Whitney Grantham has been with Texas A&M AgriLife Extension in Bell County as the Natural Resources agent for just over a year now. Within the county, she takes the lead in coordinating adult programing efforts in the areas of water, soil, wildlife, and conservation alongside managing the county 4-H Ag and Natural Resources program. Ag Agent Lyle Zoeller and Whitney work together to provide research based education material for their clientele. In her position, Whitney works with two very important groups of people; the Central Texas Master Naturalists, an organization who consists of trained volunteers that regularly assist them with their education and outreach efforts and a Natural Resources committee which is comprised of several different agency and organization representatives from the area. Their goal in partnership is to provide programming and cover topics that are best suited for the county. Clearwater is one of their major partners, and the extension service greatly appreciates their continued support. If you have any questions for Whitney, she would be happy to speak with you. Her office number is (254) 933-5305.

TWCA: Leader for Water Resources in Texas

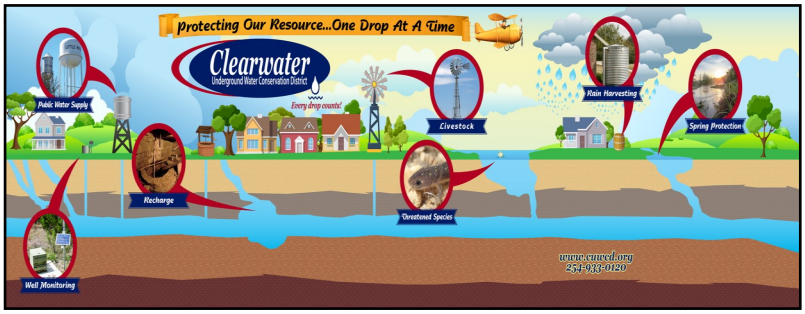
The Texas Water Conservation Association (TWCA) is a nonprofit association of water professionals and organizations in Texas. Members represent river authorities, municipalities, navigation and flood control districts, drainage and irrigation districts, utility districts, and groundwater conservation districts, as well as water users and related interests.

TWCA's mission is to serve as a resource to its members, state agencies, and lawmakers about relevant Texas water issues. The association offers unique opportunities for members to learn about these issues and network with other professionals during TWCA conferences and events. TWCA works with water stakeholders to reach consensus and solve some of the more pressing water policy problems of the day and shares information with the public using website and social media platforms and through the *Confluence*, its quarterly newsletter.

TWCA has five employees: General Manager Dean Robbins, who joined TWCA 20 years ago after a successful career at the Texas Commission on Environmental Quality; Assistant General Manager, Stacey Steinbach, an attorney who has experience in nonprofit management and representing water districts of all types; Office Manager Lisa Henley, who has been with TWCA for nearly 20 years and plans all of TWCA's events; Director of Communications, Adeline Fox, who has experience working with groundwater conservation districts, managing communications platforms, and coordinating membership outreach; and Administrative Assistant, Becky Arledge, who brings more than 15 years of experience to TWCA. Stacey and Adeline look forward to seeing you at the Bell County Water Symposium.

Adeline Fox, Communications Director,
Texas Water Conservation Association
Texas Ground Water Association

Stacey Allison Steinbach, Assistant General Manager,
Texas Water Conservation Association
Texas Ground Water Association



Join the District for the 17th Annual

Bell County Water Symposium

November 15, 2017 8:00 A.M. --- 4:00P.M.
Texas A&M University - Central Texas

This event is free but requires RSVP by November 9th

Key Topics and Speakers

State of the District
Leland Gersbach, President, Clearwater UWCD
Dirk Aaron, General Manager, Clearwater UWCD

GCDs: What They Do, Why They Matter & Reflections on the 1917 Conservation Amendment
Sarah Rountree Schlessinger, Executive Director
Texas Alliance of Groundwater Districts

Overview of the TWCA Organization and the 85th Legislative Session
Stacey Allison Steinbach, Asst. General Manager
Texas Water Conservation Association
Adeline Fox, Communications Director
Texas Water Conservation Association

The State of Water Resources in Texas
Bech Bruun, Chairman, Texas Water Development Board

Understanding the Geology of the Aquifers for ASR
James Beach, P.G., Senior Vice President, LBG-Guyton Associates

Water Planning and Implementation in Texas, Now or Never
Lyle Larson, Chairman, House Natural Resources Committee
Texas House of Representatives, District 122

ASR Feasibility: Can We Make it Work?
Dr. Gretchen Miller, Associate Professor,
Civil Engineering Texas A&M University
Dr. June Wolfe, Associate Research Scientist,
Texas A&M AgriLife Research,
Blackland Research and Extension Center

Scientific Initiatives and Tools Addressing Aquifer Conditions
James Beach, P.G., Senior Vice President, LBG-Guyton Associates
Brant Konetchy, Hydrologist 1, LBG-Guyton Associates

Statewide Earth Observation Network
Dr. Leyon Greene, Hydrologist & Meteorologist, TexMesonet
Texas Water Development Board

Watershed Protection in Central Texas
Lisa Prcin, Research Associate, Texas A&M AgriLife Research,
Blackland Research and Extension Center

Event Sponsors

Clearwater UWCD
Lloyd-Gosselink Attorneys at Law
LBG-Guyton Associates
Bell County Engineers Office
HALFF Associates
Texas AgriLife Extension Service
Texas A&M University - Central Texas

Clearwater Underground Water Conservation District
Every drop counts!
P.O. Box 1989
Belton, TX 76513

The Manager's Comments

Clearwater Underground Water Conservation District has set the 17th Annual Bell County Water Symposium for November 15, 2017 in Killeen at the campus of Texas A&M University - Central Texas. The theme of this year's event is "*Collaboration in Developing Scientific Discernment*".

Last year's symposium focused on the House Research Organization of the Texas Legislature's report in their Interim News Briefs and update on the state studies of surface water loss and exploring the potential for ASR. Because of the importance of ASR as a viable strategy for the future, we will be having speakers address this concept in order to validate why Clearwater is supportive.

I want to point out that the House Research Organization stated, "*ASR involves collecting water during wet periods and storing it underground in an aquifer from which it can be drawn during periods of peak demand.*" Peak periods of demand and an increase in population in Central Texas necessitates the need for an increase in water.

According to the Texas Water Development Board, about 7.2 million acre-feet of water, currently stored in surface water reservoirs, evaporates in an average year. While surface reservoirs continue to feature prominently in the recently adopted 2017 state water plan, many consider ASR to have several advantages over reservoirs that justify its expanded use. In addition to resisting water loss through evaporation, ASR does not involve the acquisition and flooding of land above ground, which can be expensive and result in destruction of wildlife habitat and private property.

The current Chairman of the House Natural Resources Committee, Representative Lyle Larson, will give our Keynote Address this year. He will discuss his sense of urgency for forward planning now and not later to address our future water needs. In 2015, the 84th Legislature enacted HB 655 by Larson, which resulted in several changes to the way ASR is regulated. The bill specified how ASR facilities must account for the water they inject and recover and the role of groundwater conservation districts in such projects. The new law establishes the same regulatory framework for all ASR projects, whether the source of the stored water is groundwater, surface water, or treated wastewater. The new law also prescribes measures designed to protect water quality in the receiving aquifer and modifies the requirement that water meet drinking water standards before being injected.

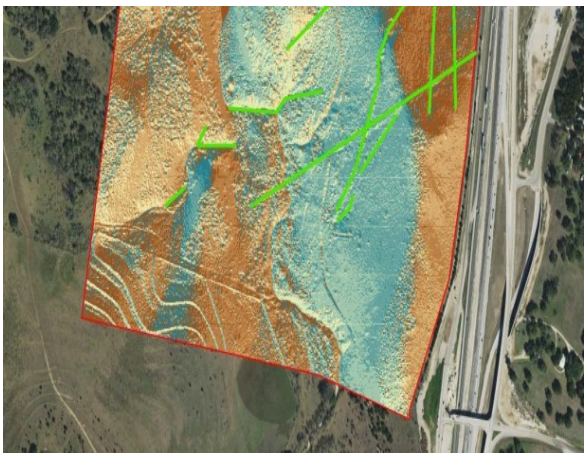
CUWCD embraced this bill and believes that ASR is a critical strategy to help answer the regional question "How can we meet the growing need for water in both Bell and Williamson Counties?" Growth in the entire IH35 corridor is eminent and water is limited.

In addition to scientific discussion, we will have leadership from Statewide organizations committed to supporting all the water related industries in Texas. We also look forward to showcasing our new Mobile Classroom while hosting another successful Water Symposium with our partners.

Dirk Aaron, General Manager

Recharge Pathways and Mechanisms in the Edwards Aquifer

Baylor University and the Bell County Adaptive Management Coalition have worked together to advance the collective knowledge of groundwater in the Northern Segment of the Edwards aquifer since 2011. The research began during the drought of 2011 with the impending listing of the Salado Salamander as possibly an endangered species. The focus was on the spring mechanisms and potential recharge pathways that would be beneficial to both the people of Bell County and the aquatic organisms that use the same aquifer. Phase 1 of the study efforts showed a well-managed aquifer maintaining consistent water levels and minimum spring flow in the Northern Segment of the Edwards aquifer during an epic drought. Although some of the spring openings stopped flowing in 2011 a dye test showed that the downtown springs were a connected system and the efforts to maintain minimum spring flows for the system still allowed for salamander habitat. The good management practices of CUWCD and the productive research including the studies by students and faculty at Baylor University helped convince the Unites States Fish and Wildlife Service to reduce the listing classification to that of a "threatened" versus and "endangered" species.



Linear features identified from slope aspect investigations.

Phase two of the research efforts used lidar to investigate fractures as potential recharge pathways and added insight into the Groundwater and surface-water interactions of the downtown springs and Salado Creek. State-of-the-art tools such as infrared photography and natural tracers found in the dissolved gasses of the aquifer helped quantify spring flow and classify the spring using national protocols. A sensor that monitored (and recorded) water levels and basic water quality (salinity and temperature) in a well immediately upgradient of the spring system has been maintained since 2013 and shows insight into the timing of recharge events. The hydrographs produced by this monitoring device will be used in phase three to learn more about where recharge may occur during certain seasons and events.

Phase three is currently underway and has added a study of detailed precipitation patterns using the 88D radar data currently collected by CUWCD and recently installed recording rain gages to help calibrate the radar data. The research will include the entire basin of Salado Creek and the portion of the aquifer thought to contribute to the recharge of the springs and the local groundwater system.

Stephanie S. Wong, Doctoral Student, Hydrogeology, Baylor University
Joe C. Yelderman Jr. Ph. D., P.G. #2941—Hydrogeology Professor, Baylor University

Mobile Classroom

The Mobile Classroom is part of a dynamic educational program sponsored by the Clearwater Underground Water Conservation District of Bell County. The 24-foot classroom features a fully operational aquifer model, well model, and indoor conservation lab. A large awning can drop down for shade and a colorful wrap covers the outside of the entire trailer with a visual story about water conservation in relation to agricultural, residential, industrial, municipal and recreational use. There are also roll-out features that include an Enviroscape demonstration and drawdown demonstration.

The Mobile Classroom is enjoyed by all ages, but targeted toward third grade through high school. **There is no charge for the Mobile Classroom Program—it is courtesy of the Clearwater Underground Water Conservation District.**

The Mobile Classroom experience will address Texas Essential Knowledge and Skills (TEKS):

- What is solubility of water?
- What is the geology below land surface?
- What is the water cycle?
- Inform on the importance of conservation.
- Inform on collecting data associated with understanding.
- Inform on scientific investigation of groundwater availability.
- Witnessing changes that occur in environmental models.

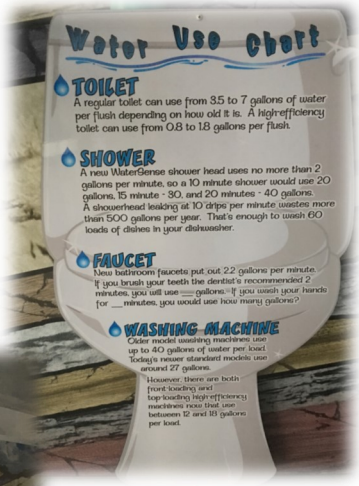
Inside the Mobile Classroom

Aquifer Model

- Participants will learn the importance of aquifers in Central Texas.
- How aquifers are formed.
- How aquifers respond to pumping.
- How contamination of aquifers can occur.
- How important proper construction of water wells is.
- How recharge of aquifers occurs.
- How aquifers are part of the water cycle.

Groundwater Well Construction

- Groundwater well construction experience.
- Groundwater well terminology.
- Who constructs groundwater wells?
- Who enforces groundwater well regulations?
- Why should we have groundwater well environmental protection?



Conservation Station

- Understanding how you can conserve for the future.
- Why conserve water.
- What is the importance of water?
- How can you reduce your water use?
- Applying math to our understanding of water.
- Applying chemistry to our understanding of water.

Groundwater Conservation Districts

FAQs

What is a Groundwater Conservation District?

GCDs are political subdivisions of the state created to protect and balance private groundwater interests with the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and the control of subsidence caused by withdrawal.

What does a GCD do?

Establish rules for the spacing and drilling of all water wells
Consider and permit non-exempt water wells
Maintain records of non-exempt wells in a district
Submit management plans to Texas Water Development Board for approval
Collaborate regionally in joint planning for the establishment of DFCs
Collect water level and water quality data on aquifers
Educate stakeholders on water conservation
Work to prevent harm to the aquifer due to pumping or contamination

How do GCDs allocate their budgets?

Education & Outreach
Science & Research
Operations
Conservation
Regional Planning

How many GCDs are there in Texas?

Currently, there are **98** GCDs plus 2 subsidence districts.

What rules must a GCD follow?

GCDs are governed by Chapter 36 of the Texas Water Code. As political subdivisions of the state, they are also subject to Chapter 49 of the Texas Administrative Code. Based on the rules established by the State, each GCD creates policies to accomplish the goals of their District.

Do I have to register my well with my GCD?

Yes, state law requires all wells to be registered with the GCD. This does not mean that all wells require a permit. All domestic wells and livestock wells that produce less than 25,000 gallons per day are exempt from permits. A GCD has the ability to exempt others in their rules.

More GCD FAQs

What is a management plan?

A management plan outlines a GCD's goals and course of action to achieve those goals. The management plan is submitted to TWDB for approval, and rules necessary to implement the management plan are adopted by each district.

What is a Desired Future Condition?

The desired future condition is a metric that is established during the joint planning process by GCDs in a common Groundwater Management Area (GMA). The DFCs provide for consistency in groundwater management in the GMA and a balance between groundwater protection and production.

How are GCDs funded?

GCDs are funded through property taxes, permitting fees and/or usage fees.

Groundwater Terms

Aquifer

An underground geological formation able to store and yield water in useable amounts. Aquifers in Texas can consist of sand, gravel, limestone, granite, and many other rock types that have pores or spaces for water to pass through.

Aquitard

An aquitard, or confining layer, is a zone within the earth that restricts the flow of groundwater.

Total Dissolved Solids (TDS)

TDS refers to the total concentration of dissolved constituents in solution. A TDS level of less than 1000 ppm is often considered freshwater, although many Texans' drinking water has a higher TDS.

Cone of Depression

A cone of depression is a conically shaped area of decreased water level (or pressure) that occurs when water is withdrawn from an aquifer. If wells are too close to each other, these cones may overlap and cause interference resulting in abnormally low water levels in those wells. In areas that withdraw more water than is recharged or flows to that area, a semi-permanent regional cone of depression may occur.

Abandoned Wells & Water Quality

There is a high environmental risk associated with abandoned or deteriorated wells, as they are a direct conduit from the surface to our groundwater resources. Because of this risk, it is highly recommended to have abandoned or deteriorated wells plugged. Some GCDs have have established programs to assist landowners in plugging abandoned wells.

How often should I have my well water tested?

It is recommended that well owners have their water professionally tested annually or when an observed change in water quality occurs.

Who can disinfect my well water?

It is recommend to contact a licensed water well driller or a pump installer to professionally disinfect your well.

Appendix H

CUWCD 2017 Education and Outreach Events

Date	People	Event Information	Presentation	Booth
1/17/17	250	Texas A&M AgriLife Crops & Livestock Conference		X
1/24/17	450	Texas A&M AgriLife Professional Grounds Keepers & Irrigators Conference		X
3/1/17	34	2016 Master Gardener Class	X	
4/7/17	170	Annual Fort Hood Earth Day Event	X	
5/10/17	27	Texas Sustainable Agriculture Research & Education Fellows, County Extension Agents and guests	X	
5/16/17	135	Chisholm Trail Elementary	X	
6/1/17	70	Field Day at Blackland Research & Extension Center		X
6/22/17	78	Bell County 4-H Environmental Safety Day	X	
7/11/17	24	4-H20 Youth Ambassadors	X	
9/21/17	87	Conservation Expo	X	X
10/5/17	68	Texas Ag Industries Meeting	X	
10/7/17	350	Sirena Festival		X
11/15/17	165	Annual Bell County Water Symposium	X	X
11/17/17	160	Career Day at Lakewood Elementary	X	
Total	**2,138**			

Appendix I

Results of Groundwater Samples in CUWCD Lab

Test Date	District Well #	Latitude	Longitude	Elevation	Depth (ft)	Aquifer	Coliform Bacteria	Ecoli Presence	Conductivity	Total Dissolved Solids	Salinity	pH	Alkalinity	Hardness	Nitrite	Nitrate	Phosphate	Sulfate	Fluoride
FY17																			
10/18/2016	E-16-046P	30.92297043	-97.72924055	797.23	580	Middle Trinity	Presence	Presence	2059	1027	1.03	7.78	400	180	0.005	0.12	0	547	404
10/26/2016	E-16-042P	31.0102829	-97.87987995	841.65	490	Lower Trinity	Absence	Absence	1792	900	0.91	7.78	360	120	0.008	2.2	0.15	80	4
10/26/2016	N1-16-001P	30.9500229	-97.70594641	780.52	600	Middle Trinity	Presence	Absence	1175	581	0.58	8.18	360	80	0.026	1	0.14	60	1.72
10/26/2016	E-13-032P	30.944242	-97.580967	700.86	895	Middle Trinity	Not Tested	Not Tested	6070	3220	3.3	7.72	500	380	0.006	0.166	0.18	1560	4.15
10/27/2016	E-16-031P	30.93606272	-97.50802143	636.95	320	Edwards (BFZ)	Absence	Absence	1458	727	0.73	7.07	340	140	0	3.4	0.08	40	5.36
10/27/2016	E-16-032P	30.92736207	-97.77357539	778.49	500	Middle Trinity	Absence	Absence	2210	1117	1.13	8.15	400	80	0	0.7	0.21	20	3.6
10/27/2016	E-16-023P	30.9717654	-97.80326895	788.93	420	Middle Trinity	Absence	Absence	1685	844	8.6	8.12	360	120	0	0.2	0.07	240	3.96
11/1/2016	E-16-022P	30.92286294	-97.61027787	759.99	120	Edwards (BFZ)	Absence	Absence	647	315	0.31	7.56	320	320	0.005	4.14	0	19	0.67
11/1/2016	E-16-021P	30.91385211	-97.61389014	668.81	70	Edwards (BFZ)	Absence	Absence	819	401	0.4	7.53	380	360	0.01	3.75	0.08	51	0.49
11/1/2016	E-16-035P	30.9278229	-97.60586332	746.47	880	Middle Trinity	Absence	Absence	1853	880	0.89	7.91	360	180	0.007	0.16	0.06	370	4
11/8/2016	E-16-057G	30.89225339	-97.33012405	444.76		Alluvium	Not Tested	Not Tested	3005	1565	1059	7.87		380	0.544	13	0.57	54	5.52
11/14/2016	N1-16-006P	31.06202202	-97.91035666	963.80	400	Middle Trinity	Presence	Absence	3670	1887	1.91	7.97	360	240	0.007	0.15	0	668	3.2
11/14/2016	N1-16-001P	30.9500229	-97.70594641	780.52	600	Middle Trinity	Presence	Absence	3670	1887	1.91	7.97	360	240	0.149	0.007		668	3.2
12/21/2016	E-04-049P	30.93790953	-97.58608921	695.62	870	Middle Trinity	Absence	Absence	1358	675	0.68	7.95	340	80	0.004	0.06	0.08	136	2.37
12/21/2016	E-10-078P	30.936477	-97.585671	692.70	890	Middle Trinity	Absence	Absence	1357	375	0.68	7.95	360	100	0.005	0.093	0.06	135	2.5
12/21/2016	E-03-330G	31.0189532	-97.49267156	584.95	90	Edwards Equivalent	Presence	Absence	606	294	0.29	7.67	340	300	0.005	2.92	0.06	14	0.45
1/17/2017	E-16-041P	30.952462	-97.308593	466.58	80	Alluvium	Absence	Absence	862	422	0.42	7.49	400	220	0.013	1.79	0.16	52	0.14
1/17/2017	E-16-062P	30.91043668	-97.71584934	892.00	770	Middle Trinity	Presence	Absence	978	482	0.48	7.89	360	200	0.036	0.364	0	108	0.88
1/17/2017	E-08-054P	30.935833	-97.598336	718.74	150	Edwards (BFZ)	Not Tested	Not Tested	782	383	0.38	7.65	360	340	0.009	2.98	0.08	24	0.26
1/26/2017	N1-16-007P	30.89265203	-97.40309774	554.40	60	Alluvium	Absence	Absence	592	289	0.29	7.4	280	260	0.008	3.59	0.06	29	0.38
1/26/2017	E-16-048P	30.97555139	-97.81890335	801.36	520	Lower Trinity	Absence	Absence	1857	923	0.93	8.59	380	80	0.846	0.033	0.14	114	3.48
1/26/2017	E-03-325P	31.016505	-97.740007	812.99	550	Middle Trinity	Absence	Absence	3040	1522	1.57	7.88	360	280	0.009	0.107	0.07	759	5.4
1/31/2017	E-10-051P	30.94105436	-97.60778981	726.40	870	Middle Trinity	Absence	Absence	1129	558	0.56	7.78	340	200	0.098	1.05	0.32	108	1.54
2/7/2017	E-16-055P	30.91752887	-97.60505421	680.02	860	Middle Trinity	Absence	Absence	1402	699	0.7	8.77	380	120	0.003	0.104	0.08	193	2.31
2/14/2017	E-16-040P	30.9473243	-97.60145768	743.16	110	Edwards (BFZ)	Absence	Absence	647	313	0.31	7.42	320	400	0.008	1.96	0	16	0.14
2/14/2017	E-17-006P	30.94637097	-97.59551807	736.61	900	Middle Trinity	Absence	Absence	1592	795	0.8	8.73	360	100	0.009	0.111	0.06	215	2.33
2/15/2017	E-16-044P	30.97410758	-97.31844588	491.92	60	Austin Chalk	Not Tested	Not Tested	578	280	0.28	7.63	280	320	0.005	5.81	0.02	27	0.69
2/21/2017	E-17-005G	30.97954148	-97.49613239	600.04	180	Edwards (BFZ)	Absence	Absence	1530	772	0.78	8.12	320	120	0.009	0.765	0	249	5.6
2/21/2017	E-17-015G	30.943202	-97.535715	575.35	42	Edwards (BFZ)	Presence	Absence	603	293	0.29	7.76	280	320	0.009	4.25	0.02	25	0.33
2/21/2017	E-16-039P	30.989429	-97.392395	493.98	50	Austin Chalk	Not Tested	Not Tested	1137	562	0.65	7.57	440	380	0.012	23	0.12	60	0.46
2/23/2017	E-16-049P	30.83299763	-97.31997835	463.20	40	Austin Chalk	Absence	Absence	1353	672	0.67	7.45	340	520	0.018	11.7	0.18	140	1.06
2/23/2017	E-05-110P	30.97777	-97.803359	826.80	460	Middle Trinity	Absence	Absence	1526	762	0.77	8.36	340	140	0.007	1.16	0.01	291	4.2
2/23/2017	E-16-060P	30.88238597	-97.58019864	769.90	200	Edwards (BFZ)	Presence	Absence	573	280	0.28	7.55	240	320	0.007	7.11	0.01	21	0.33
2/23/2017	E-17-014G	30.997162	-97.809161	834.46	460	Middle Trinity	Presence	Absence	2830	1445	1.47	8.5	460	60	0.006	0.117	0	110	5.16
2/27/2017	E-17-002P	30.90485392	-97.78582139	875.98	540	Middle Trinity	Presence	Absence	2290	1159	1.17	8.01	320	220	0.303	0.489	0	645	6.4
2/27/2017	N1-16-005P	31.02405142	-97.6677512	716.30	595	Middle Trinity	Presence	Absence	1807	919	0.97	8.4	360	120	0.018	0.162	0.07	432	5.8
2/27/2017	E-16-051P	30.92606093	-97.7784635	809.75	460	Middle Trinity	Presence	Absence	1364	680	0.68	8.06	340	120	0.006	0.13	0.92	230	4.08
3/2/2017	E-16-056P	30.9049761	-97.67937934	836.26	780	Middle Trinity	Presence	Presence	1227	607	0.61	7.93	320	120	0.004	1.3	0.17	40	1.6
3/3/2017	E-16-043P	30.9270275	-97.72035259	799.61	725	Middle Trinity	Not Tested	Not Tested	2086	1054	1.06	8.81	460	60	0.006	0.129	0.02	11	7.8
3/17/2017	E-17-007P	30.93191305	-97.60650172	755.58	890	Middle Trinity	Not Tested	Not Tested	1375	686	0.69	8.73	360	80	0	1.6	0.17	60	2
3/30/2017	E-06-096P	31.007612	-97.483946	539.40	160	Edwards (BFZ)	Presence	Absence	552	268	0.27	7.89	300	300	0.007	0.4	0.11	4	1.4
3/30/2017	E-16-045P	30.9223069	-97.78608915	822.59	466	Middle Trinity	Not Tested	Not Tested	1427	711	0.71	8.2	360	80	0.005	0.147		255	5.36
3/31/2017	E-16-026P	30.98149922	-97.64692495	772.21	700	Middle Trinity	Presence	Absence	1320	650	0.65	8.87	340	60	0.003	2.2	0.12	100	1.9
3/31/2017	E-04-013G	31.01118795	-97.6891179	735.85	480	Upper Trinity	Presence	Presence	4220	2195	2.24	8.04	560	300	0	0.03	0.03	780	1.78
4/6/2017	E-17-024G	31.15075	-97.396931	645.22	1017	Upper Trinity	Not Tested	Not Tested	2540	1288	1.3	8.26	420	160	0.003	0	0.49	360	2.3
4/20/2017	E-02-3413G	30.90922269	-97.38390795	557.43	30	Alluvium	Presence	Absence	680	331	0.33	7.68	320	320	0	4.3	0.32	12	0.3
4/28/2017	N1-16-007P	30.89265203	-97.40309774	554.40	60	Alluvium	Absence	Absence	635	309	0.31	7.92	300	260	0.001	3.94	0	20	0.37
5/26/2017	E-14-027P	31.2110366	-97.46386275	661.02	910	Middle Trinity	Absence	Absence	1290	651		7.5	380	200	0.001	1.3	0.06	250	
5/26/2017	E-14-056G	30.979195	-97.814395	735.41	350	Middle Trinity	Presence	Absence	1541	770	0.77	8.17	340	120	0.006	1.46	0.13	321	3.6
5/26/2017	N1-08-002P	31.17278536	-97.44750726	660.40	940	Middle Trinity	Not Tested	Not Tested	5000	4178					0.1	0.1		2381	5

Test Date	District Well #	Latitude	Longitude	Elevation	Depth (ft)	Aquifer	Coliform Bacteria	Ecoli Presence	Conductivity	Total Dissolved Solids	Salinity	pH	Alkalinity	Hardness	Nitrite	Nitrate	Phosphate	Sulfate	Fluoride
5/26/2017	E-13-061G	31.10533578	-97.24917147	512.83	20	Alluvium	Presence	Presence	491	329		8.3	200	200	0.001	9.6	0.21		1.3
6/7/2017	E-02-2546P	30.969809	-97.803017	830.03	460	Middle Trinity	Not Tested	Not Tested	1365	675	0.68	8.98	320	60	0	0.4	0.13	121	2.2
6/13/2017	E-17-030G	31.249261	-97.503147	771.69	900	Upper Trinity	Not Tested	Not Tested	1936	980	1	8.59	380	140	0.033	1.4	0.23	390	1.9
6/15/2017	E-02-2546P	30.969809	-97.803017	830.03	460	Middle Trinity	Absence	Absence											
6/16/2017	E-16-064P	31.06090597	-97.40075575	482.60	50	Alluvium	Not Tested	Not Tested	1183	590	0.59	7.54	320	500	0.005	0	0.22	271	1
6/16/2017	E-16-019G	31.064366	-97.239786	489.17	20	Austin Chalk	Not Tested	Not Tested	832	409	0.41	7.93	340	300	0	0	0.71	78	0.9
6/20/2017	E-15-011P	30.97556	-97.798602	739.73	410	Middle Trinity	Absence	Absence											
6/28/2017	E-02-1249G	31.038023	-97.203058	469.41	19	Ozan	Presence	Presence	2390	1213	1.23	7.76	360	400	0.07	16.4	0.29	410	7.4
6/29/2017	E-02-1248G	31.037586	-97.202034	471.47	21	Ozan	Not Tested	Not Tested	1758	879	0.88	7.48	440	640	0.004	7.4	0.22	252	0.8
7/5/2017	E-05-097P	30.939917	-97.608088	703.95	860	Middle Trinity	Not Tested	Not Tested	5140	2700	2.77	8.22	540	440	0.004	0.074	0.07	2040	4.92
7/6/2017	E-17-010P	30.94634659	-97.59048398	729.70	140	Edwards (BFZ)	Not Tested	Not Tested	692	337	0.34	7.72	320	540	0.006	3.16	0.21	12	0.14
7/24/2017	E-02-722G	31.0122	-97.882507	838.66	200	Upper Trinity	Not Tested	Not Tested	1946	980	0.99	7.97	320	240	0.005	0.128	0.19	222	2.1
7/24/2017	E-02-721G	31.012199	-97.882869	838.67	200	Upper Trinity	Not Tested	Not Tested	1925	968	0.98	8.11	340	220	0.003	0.086	0.28	218	2.1
7/26/2017	E-17-029P	30.927222	-97.776944	801.96	510	Middle Trinity	Not Tested	Not Tested	1869	934	0.94	8.26	340	160	0.003	0.131	0.02	406	2.2
8/2/2017	E-15-050P	31.159854	-97.473682	659.18	900	Middle Trinity	Absence	Absence	3430	1761	1.79	8.3	400	220	0.003	0.5	0.11	848	2.3
8/10/2017	E-17-028P	30.97268	-97.48719	569.72	200	Edwards (BFZ)	Not Tested	Not Tested	2360	1200	1.21	8.21	360	100	0	2.7	0.24	426	2.2
8/10/2017	E-17-012P	30.94638	-97.580701	707.88	900	Middle Trinity	Not Tested	Not Tested	1447	719	0.72	9.09	340	80	0.002	1	0.67	198	1.9
8/10/2017	E-17-004P	30.94315095	-97.5945163	715.91	880	Middle Trinity	Not Tested	Not Tested	1657	829	0.84	8.39	300	0	0.014	1.1	0.18	283	2
8/10/2017	E-17-032P	30.944311	-97.580822	699.37	900	Middle Trinity	Not Tested	Not Tested	1420	708	0.71	8.47	340	60	0.004	1.3	0.72	201	1.9
8/11/2017	E-17-021P	31.003939	-97.535849	678.61	100	Edwards (BFZ)	Not Tested	Not Tested	532	258	0.26	7.95	180	220	0	1.6	0.29	9	0.2
8/11/2017	E-17-016P	30.934947	-97.60638	725.68	865	Middle Trinity	Not Tested	Not Tested	1503	747	0.75	8.49	340	80	0.002	1.7	0.35	203	1.9
8/11/2017	E-17-025P	30.94698	97.58328	724.00	900	Middle Trinity	Not Tested	Not Tested	1500	750	0.75	8.01	340	80	0	0.5	0.19	211	2
8/14/2017	E-17-011P	30.970759	-97.808851	844.21	480	Lower Trinity	Not Tested	Not Tested	1212	600	0.6	9	320	40	0.004	0.4	0.15	95	2.2
8/18/2017	E-17-001P	30.96090468	-97.51356049	586.27	160	Edwards (BFZ)	Not Tested	Not Tested	1158	572	0.57	8.31	260	180	0.046	0.2	0.33	98	2.3
8/18/2017	E-17-043P	30.94175	-97.58683	704.94	890	Middle Trinity	Not Tested	Not Tested	1562	779	0.78	8.87	340	80	0	0.1	0.17	224	1.8
8/22/2017	E-17-026P	30.92575	-97.75592	837.91	600	Middle Trinity	Not Tested	Not Tested	2260	1146	1.16	8.63	340	80	0.017	0.242	0.01	606	2.3
8/30/2017	E-17-031P	30.99596	-97.378777	498.93	30	Alluvial	Not Tested	Not Tested	802	392	0.39	7.87	240	240	0.02	23.9	0.12	20	0.5
8/30/2017	E-17-039P	30.933922	-97.495628	689.32	400	Edwards (BFZ)	Not Tested	Not Tested	2190	1105	1.11	8.81	360	120	0.005	0	0.17	328	2.3
8/31/2017	E-17-013P	31.160358	-97.472027	645.24	910	Middle Trinity	Not Tested	Not Tested	3320	1714	1.75	8.22	380	240	0.211	0.3	0.22	873	3.1
8/31/2017	E-17-045G	30.923097	-97.795073	835.36	385	Upper Trinity	Not Tested	Not Tested	1414	699	0.7	9	320	60	0.006	0.8	0.15	222	2.9
9/18/2017	E-17-038P	30.842571	-97.363173	543.69	30	Alluvial	Not Tested	Not Tested	2320	1177	1.19	7.72	300	680	0.053	13.5	0	245	0.8
9/20/2017	E-02-1480G	30.977314	-97.83472	796.63	460	Lower Trinity	Absence	Absence	2012	1026	1.04	8.81	420	60	0.019	0.174	0.13	79	2.2
9/27/2017	E-02-049P	30.924264	-97.579137	695.37	120	Edwards (BFZ)	Presence	Absence	691	337	0.34	8.16	320	340	0.007	4.72	0.38	14	0.11

Appendix J

Rainwater Harvesting

Rainwater harvesting is an innovative alternative water supply approach anyone can use. Rainwater harvesting captures, diverts, and stores rainwater for later use.

Implementing rainwater harvesting is beneficial because it reduces demand on existing water supply, and reduces run-off, erosion, and contamination of surface water.

Rainwater can be used for nearly any purpose that requires water. These include landscape use, stormwater control, wildlife and livestock watering, in-home use, and fire protection.

A rainwater harvesting system can range in size and complexity. All systems have basics components, which include a catchment surface, conveyance system, storage, distribution, and treatment.

For more information, please visit the **Texas A&M AgriLife Extension – Rainwater Harvesting website** and the **Texas Water Development Board – Rainwater Harvesting website**.

Related Resources

Rainwater Harvesting Book: Homeowners and landowners can construct systems to capture, store and use rainwater to water their landscape plants.

SEARCH CUWCD

Search

Appendix K

Brush Control

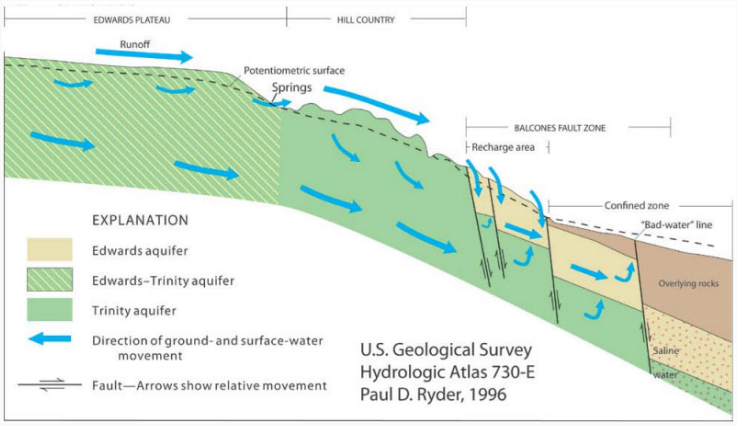
Brush Busters is a cooperative program of the Texas AgriLife Research and Extension Service to expedite the adoption of Tactical Brush Management Systems (TBMS) technology.

Brush Busters methods are easily understood, even by those with little or no previous experience in brush control. We recommend only "select" treatments capable of killing at least 7 out of 10 of the plants treated. Brush Busters methods make every attempt to keep equipment costs and complexity to a minimum, and whenever possible, to use non-restricted herbicides. One-page pamphlets are available from most County Extension offices that describe, in a simple 3-step process, the Brush Busters control methods for mesquite, pricklypear and cedar. Videos are available for checkout through most County Extension offices that demonstrate the Brush Busters control methods. For those who are computer literate, a CD-ROM Brush Busters program is a vailable that uses interactive video, audio and graphics to teach the use of Brush Buster methods for mesquite control.

- Cedar
  - Leaf Spray Method
  - Spot Spray Method
  - Top Removal Method
  - How to Estimate Costs for Controlling Small Cedar
- Cut Stumps
  - Cut Stump Spray for Hardwood Species
  - Cut Stump Spray for Redberry Cedar
- Huisache
  - Leaf Spray Method
  - Stem Spray Method
- Macartney Rose
  - Leaf Spray Method
- Mesquite
  - Leaf Spray Method
  - Stem Spray Method
  - How to Estimate Cost for Controlling Mesquite
- Pricklypear
  - Pad or Stem Spray Method
  - Top Removal Method
  - How to Estimate Costs for Controlling Pricklypear
- Saltcedar
  - Leaf Spray Method
  - Stem Spray Method
- Tallowtrees
  - Leaf Spray Method
  - Stem Spray Method
- Yucca
  - Herbicide + Oil Whorl Spray
  - Undiluted Whorl Spray
- Equipment

Appendix L

Recharge Enhancement



Recharge enhancement is an important tool to help encourage recharge of our groundwater. Urban development decreases direct recharge from precipitation but introduces new sources of water which, in most instances, can increase groundwater recharge if applied properly.

Best Management Practices for Recharge Enhancement

Onion Creek Recharge Enhancement

SEARCH CUWCD

Search

Appendix M

State #	58-04-628	58-04-502	58-04-508	58-04-509	58-04-602	58-04-623	58-04-702	58-04-510	58-04-626	58-04-512	58-04-513	58-04-816	58-04-627	58-04-409	None	58-04-408	58-04-631	58-13-502	None	58-03-702	None	None
CUWCD #	M-08-002G	M-13-004G	N2-02-005G	N2-02-007G	N2-02-003G	N2-02-002G	M-06-001G	N2-02-008G	N2-02-009G	N2-02-010G	N2-02-011G	M-08-001G	N2-03-004G	E-04-077P	E-08-054P	E-10-005P	N2-11-004P	M-12-014G	E-13-009P	M-14-001P	N2-15-005P	N2-15-004P
Well Name	Salado Cemetary	Salado ISD	Salado WSC (#3)	Salado WSC (#5)	Salado WSC (#1)	Stagecoach (deep)	Patterson's Crossing	Salado WSC (#6)	Salado WSC (#7)	7KX Ranch (#8)	7KX Ranch (#9)	Rest Stop	Salado ISD (MS)	Peters	Young	Coppin	Charles Broecker	City of Bartlett	Thaler	Gault - Edwards	Scott Law Well #2	Scott Law Well #1
Highest	-4.49	-38.30	-56.70	-68.64	-23.00	-66.10	-69.82	-80.50	-58.40	-76.29	-74.19	-117.89	-34.60	-28.50	-37.30	-58.30	-67.10	-37.10	-79.30	-53.32	-46.90	-47.40
Lowest	-89.10	-55.90	-71.54	-112.10	-63.20	-93.70	-78.25	-115.90	-93.70	-102.70	-103.21	-129.44	-50.70	-39.40	-37.60	-73.30	-78.10	-73.80	-105.10	-59.10	-58.50	-59.50
01/2003		-48.50			-63.20	-83.40	-78.25						-38.20	-28.50								
07/2003		-55.90			-38.20	-88.00	-71.96						-41.00									
01/2004		-49.00			-29.50	-88.10	-72.72						-39.80									
07/2004		-48.40			-32.70	-81.20	-71.84						-37.90									
01/2005		-47.00			-27.20	-84.70	-72.20						-37.50									
07/2005		-51.60			-36.00	-85.60	-72.17						-41.80					-37.10				
01/2006		-51.60			-36.50	-81.40							-41.70					-47.30				
07/2006		-43.40			-41.84	-93.70	-72.73						-42.00					-49.30				
09/2006		-42.90			-34.09	-81.20	-72.87						-41.50					-52.90				
10/2006		-44.40			-33.21	-84.20	-72.95						-43.00					-57.40				
11/2006		-43.60			-30.09	-79.40	-73.05						-42.20					-62.10				
01/2007		-49.30			-27.55	-78.70	-72.08						-39.20					-57.80				
07/2007		-44.60			-31.50	-70.70	-69.87											-46.50				
07/2007													-34.60									
01/2008		-49.60			-31.42	-84.90	-72.07						-40.30					-43.60				
07/2008		-52.00			-40.17	-70.70	-69.82					-124.80	-42.00					-43.50				
01/2009	-71.91	-51.40			-38.92	-87.20	-72.88					-125.47	-41.80					-58.00				
07/2009	-83.61	-53.50			-34.92	-84.10	-73.19					-128.15	-49.90					-60.30				
01/2010	-39.81	-48.20			-27.12	-66.10	-70.43					-118.18	-38.00			-58.30						
07/2010	-72.83	-50.50			-31.53	-80.10						-120.46	-40.50					-55.00				
01/2011	-64.63	-49.20			-31.43	-81.00	-72.05					-121.76	-41.40					-55.80				
07/2011	-81.51	-53.30			-35.52	-85.60	-71.05					-125.39	-42.90					-58.20				
09/2011	-89.10	-53.80			-37.83	-87.60	-71.15					-126.41	-44.20					-65.60				
11/2011	-80.97	-52.60			-32.53	-82.00	-72.08					-126.09	-42.80				-76.40	-73.80				
01/2012	-64.78	-50.00			-30.73	-78.10	-74.20					-125.18	-41.00					-73.00				
05/2012	-79.17	-50.60			-31.20	-80.30	-73.83					-123.57	-40.20					-64.40				
01/2013	-71.54	-49.60			-32.40	-83.80	-71.20					-125.18	-40.60					-65.90				
01/2013			-58.00	-76.00				-109.60	-66.10	-87.00	-101.90											
03/2013																			-83.90			
04/2013			-59.50	-78.50				-114.30	-67.60	-89.70	-102.30											
05/2013	-64.79	-49.80			-31.60	-84.90	-73.57					-126.78	-40.40					-60.00				
08/2013	-84.93	-52.30			-32.20	-82.50	-73.70					-129.44	-42.80			-73.30	-67.10	-61.70				
08/2013			-70.24	-89.90				-115.90	-93.70	-97.45	-85.30											
11/2013	-53.35	-49.50			-29.40	-79.50	-73.60					-125.05	-42.10	-32.30		-66.90						
12/2013			-57.60	-74.60				-83.90	-64.50	-85.67	-93.30											
01/2014			-58.30	-73.50				-102.30	-63.90	-85.67	-102.50											
02/2014	-67.54	-49.70			-30.20	-78.40	-73.64					-124.22	-40.60	-32.50		-67.00	-72.80	-59.20		-59.10		
04/2014			-60.34	-75.60				-108.72	-65.50	-87.17	-102.90											
05/2014	-72.25	-52.00			-31.00	-88.70	-73.98					-125.66	-45.30	-37.70		-70.70	-77.00	-61.40		-57.20		
08/2014	-82.71	-52.50			-33.80	-90.20	-74.24					-128.09	-45.50	-37.90		-70.90		-62.80		-57.30		

State #	58-04-628	58-04-502	58-04-508	58-04-509	58-04-602	58-04-623	58-04-702	58-04-510	58-04-626	58-04-512	58-04-513	58-04-816	58-04-627	58-04-409	None	58-04-408	58-04-631	58-13-502	None	58-03-702	None	None
CUWCD #	M-08-002G	M-13-004G	N2-02-005G	N2-02-007G	N2-02-003G	N2-02-002G	M-06-001G	N2-02-008G	N2-02-009G	N2-02-010G	N2-02-011G	M-08-001G	N2-03-004G	E-04-077P	E-08-054P	E-10-005P	N2-11-004P	M-12-014G	E-13-009P	M-14-001P	N2-15-005P	N2-15-004P
Well Name	Salado Cemetary	Salado ISD	Salado WSC (#3)	Salado WSC (#5)	Salado WSC (#1)	Stagecoach (deep)	Patterson's Crossing	Salado WSC (#6)	Salado WSC (#7)	7KX Ranch (#8)	7KX Ranch (#9)	Rest Stop	Salado ISD (MS)	Peters	Young	Coppin	Charles Broecker	City of Bartlett	Thaler	Gault - Edwards	Scott Law Well #2	Scott Law Well #1
Highest	-4.49	-38.30	-56.70	-68.64	-23.00	-66.10	-69.82	-80.50	-58.40	-76.29	-74.19	-117.89	-34.60	-28.50	-37.30	-58.30	-67.10	-37.10	-79.30	-53.32	-46.90	-47.40
Lowest	-89.10	-55.90	-71.54	-112.10	-63.20	-93.70	-78.25	-115.90	-93.70	-102.70	-103.21	-129.44	-50.70	-39.40	-37.60	-73.30	-78.10	-73.80	-105.10	-59.10	-58.50	-59.50
08/2014			-70.74	-88.30				-115.80	-91.80	-95.77	-83.91											
11/2014	-77.79	-43.70			-31.20	-87.00	-74.33					-127.60	-50.70	-32.90		-67.60	-78.10	-56.80		-58.58		
12/2014			-58.44	-77.14				-110.90	-66.90	-88.27	-102.50											
01/2015	-30.01	-41.10			-29.60	-77.70	-73.77					-125.52	-47.50	-33.20		-67.40	-72.70	-59.00		-59.01		
01/2015			-58.30	-76.30	-31.07			-89.90	-66.10	-87.57	-102.10											
02/2015			-58.24	-83.04	-29.77			-108.10	-65.70	-86.47	-102.71											
03/2015			-58.44	-74.74	-30.67			-105.90	-64.70	-86.37	-102.81											
04/2015			-57.94	-83.50	-29.17			-108.70	-65.70	-86.07	-103.10											
05/2015			-67.54	-84.54	-29.77			-110.60	-88.90	-86.87	-103.21											
06/2015	-23.43	-38.30	-64.64	-81.14	-23.97	-74.80	-72.97	-106.30	-63.50	-80.47	-76.61	-121.67	-45.60	-32.90		-61.10	-70.50	-53.80		-53.32		
07/2015			-69.34	-80.74	-26.77			-83.20	-62.50	-83.07	-76.61											
08/2015			-69.74	-82.14	-54.87			-110.50	-85.30	-87.47	-77.70											
09/2015	-77.55	-50.40	-68.04	-83.54	-27.70	-79.30	-72.70	-113.50	-65.30	-88.89	-78.51	-122.76	-44.10	-39.40		-69.20	-76.30	-59.50		-58.26		
10/2015			-68.54	-84.84	-28.47			-113.20	-66.50	-91.30	-79.80											
11/2015			-57.54	-83.04	-25.07			-91.60	-64.70	-82.87	-77.21											
11/2015	-16.20	-45.40			-23.90	-70.80	-72.03					-120.44	-38.80	-35.10		-61.20	-72.90	-59.00		-54.33		
12/2015			-57.34																			
12/2015			-57.34	-71.14	-24.77			-84.00	-61.20	-79.27	-102.60											
01/2016				-71.14			-72.83															
01/2016			-57.34		-24.60			-83.50	-61.30	-78.09	-102.49											
01/2016	-61.53	-47.00		-79.54	-24.60	-69.30	-71.91					-119.60	-38.80	-33.00		-62.20	-73.80	-55.40		-57.16		
02/2016			-57.50		-25.60			-80.50	-60.20	-79.69	-102.59											
03/2016			-57.90	-70.34	-26.60			-105.50	-61.50	-81.69	-102.69											
04/2016			-66.34	-71.94	-25.80			-109.10	-62.70	-81.10	-102.79											
04/2016				-73.50										-30.90								
04/2016	-15.78	-47.50			-26.30	-68.50	-71.39					-120.16	-38.14			-62.65	-71.50	-50.50		-56.49		
05/2016			-58.50		-25.40			-105.10	-61.30	-80.00	-102.69											
06/2016				-71.54			-71.27					-117.89								-55.51		
06/2016	-4.49																					
06/2016			-56.70		-23.00			-101.90	-58.40	-76.29	-102.99											
07/2016			-67.50	-68.64	-25.20			-109.70	-61.00	-82.69	-74.19											
08/2016			-67.74	-73.74	-26.40			-109.20	-83.70	-85.20	-75.79											
08/2016			-65.94	-80.30	-25.40			-109.00	-61.70	-82.09	-74.89											
08/2016	-53.40	-48.33		-72.54		-74.22	-71.40					-119.40						-53.60		-56.90	-58.50	-59.50
10/2016			-61.40		-26.40			-111.90	-62.90	-84.49	-76.49											
10/2016	-74.40			-73.54			-71.60					-120.43										
10/2016	-73.02						-71.75					-121.11								-57.56		
11/2016							-71.78					-121.40								-57.75		
11/2016	-72.91																					
11/2016	-72.91		-59.14		-27.20			-110.30	-62.90	-82.69	-76.69											

State #	58-04-628	58-04-502	58-04-508	58-04-509	58-04-602	58-04-623	58-04-702	58-04-510	58-04-626	58-04-512	58-04-513	58-04-816	58-04-627	58-04-409	None	58-04-408	58-04-631	58-13-502	None	58-03-702	None	None
CUWCD #	M-08-002G	M-13-004G	N2-02-005G	N2-02-007G	N2-02-003G	N2-02-002G	M-06-001G	N2-02-008G	N2-02-009G	N2-02-010G	N2-02-011G	M-08-001G	N2-03-004G	E-04-077P	E-08-054P	E-10-005P	N2-11-004P	M-12-014G	E-13-009P	M-14-001P	N2-15-005P	N2-15-004P
Well Name	Salado Cemetary	Salado ISD	Salado WSC (#3)	Salado WSC (#5)	Salado WSC (#1)	Stagecoach (deep)	Patterson's Crossing	Salado WSC (#6)	Salado WSC (#7)	7KX Ranch (#8)	7KX Ranch (#9)	Rest Stop	Salado ISD (MS)	Peters	Young	Coppin	Charles Broecker	City of Bartlett	Thaler	Gault - Edwards	Scott Law Well #2	Scott Law Well #1
Highest	-4.49	-38.30	-56.70	-68.64	-23.00	-66.10	-69.82	-80.50	-58.40	-76.29	-74.19	-117.89	-34.60	-28.50	-37.30	-58.30	-67.10	-37.10	-79.30	-53.32	-46.90	-47.40
Lowest	-89.10	-55.90	-71.54	-112.10	-63.20	-93.70	-78.25	-115.90	-93.70	-102.70	-103.21	-129.44	-50.70	-39.40	-37.60	-73.30	-78.10	-73.80	-105.10	-59.10	-58.50	-59.50
11/2016			-58.74	-73.34	-27.40			-108.70	-62.50	-82.89	-76.69											
11/2016				-72.74			-71.95					-121.79								-57.79		
12/2016	-65.21						-71.93					-121.67								-57.74		
12/2016	-51.22		-58.14		-27.57			-101.70	-63.14	-83.29	-102.69											
12/2016			-58.34	-72.50	-27.77			-107.30	-63.20	-83.29	-102.49											
12/2016		-48.80		-72.54		-75.80	-72.00					-121.90	-40.80				-74.50	-51.40		-58.00	-47.70	-47.40
01/2017	-63.20																		-84.10			
01/2017			-58.34		-27.80			-107.50	-63.70	-84.09	-102.69											
01/2017			-58.14	-73.54	-27.37		-72.06	-88.30	-62.90	-83.09	-85.23	-121.71								-57.52		
02/2017	-53.37			-73.54			-72.23					-121.11								-57.43		
03/2017			-57.94		-27.20			-86.80	-62.10	-82.29	-83.69											
03/2017	-43.11	-48.10		-72.74		-75.40	-72.35					-120.90	-47.20	-35.30		-65.50		-47.20	-81.30	-57.48	-46.90	-47.60
03/2017	-60.13		-61.70		-26.97			-86.90	-62.10	-102.70	-82.49											
04/2017			-67.94	-72.74	-55.17		-72.46	-112.70	-86.70	-83.29	-102.99	-121.15								-57.26		
05/2017	-69.82			-82.94			-72.48					-121.34								-57.43		
06/2017			-68.44		-27.37			-82.10	-62.60	-84.19	-76.49											
06/2017	-63.60		-70.94	-79.94				-110.80	-85.30	-90.99	-79.29											
07/2017		-44.70		-83.14		-89.30	-72.59					-122.22	-50.30	-32.70	-37.40	-66.50	-75.00	-45.60	-105.10	-58.06	-58.00	-58.60
07/2017	-73.75		-71.54		-31.17			-114.90	-87.10	-94.89	-81.59											
07/2017				-85.04			-72.67					-122.76								-57.88		
08/2017	-71.86						-72.70					-123.00								-56.92		
09/2017	-54.90				-28.77			-111.80	-90.50	-93.09	-80.49											
09/2017			-70.54	-76.74	-29.07			-110.80	-66.00	-92.89	-79.69											
10/2017		-52.20		-75.14		-79.80							-44.10	-33.10	-37.30	-66.90	-74.50	-51.70	-99.10		-56.50	-57.30
10/2017			-70.14		-29.37		-72.85		-64.70	-91.99	-80.09	-123.66								-58.36		
11/2017	-54.90		-70.54	-74.74	-29.77		-72.85	-111.90	-91.50	-86.99	-102.89	-123.96								-58.41		
12/2017	-56.04	-51.20		-112.10		-81.60	-72.94					-123.84		-33.50	-37.60	-66.70	-74.70	-52.30	-79.30	-58.49	-47.50	-48.50
12/2017	-61.67		-61.54	-76.24	-50.37				-64.40	-85.29	-102.29		-43.60									
01/2018																						
02/2018	-56.45			-83.80								-124.09										
02/2018							-72.95															
02/2018																				-58.50		
02/2018					-50.47																	
02/2018			-70.14																			
02/2018																						
02/2018								-84.90	-64.90													
02/2018				-74.44						-86.09												
02/2018											-102.59											
02/2018			-61.64		-50.47		-72.92	-86.50	-64.60	-89.69	-102.59	-124.30								-58.53		

State #	58-04-628	58-04-502	58-04-508	58-04-509	58-04-602	58-04-623	58-04-702	58-04-510	58-04-626	58-04-512	58-04-513	58-04-816	58-04-627	58-04-409	None	58-04-408	58-04-631	58-13-502	None	58-03-702	None	None
CUWCD #	M-08-002G	M-13-004G	N2-02-005G	N2-02-007G	N2-02-003G	N2-02-002G	M-06-001G	N2-02-008G	N2-02-009G	N2-02-010G	N2-02-011G	M-08-001G	N2-03-004G	E-04-077P	E-08-054P	E-10-005P	N2-11-004P	M-12-014G	E-13-009P	M-14-001P	N2-15-005P	N2-15-004P
Well Name	Salado Cemetary	Salado ISD	Salado WSC (#3)	Salado WSC (#5)	Salado WSC (#1)	Stagecoach (deep)	Patterson's Crossing	Salado WSC (#6)	Salado WSC (#7)	7KX Ranch (#8)	7KX Ranch (#9)	Rest Stop	Salado ISD (MS)	Peters	Young	Coppin	Charles Broecker	City of Bartlett	Thaler	Gault - Edwards	Scott Law Well #2	Scott Law Well #1
Highest	-4.49	-38.30	-56.70	-68.64	-23.00	-66.10	-69.82	-80.50	-58.40	-76.29	-74.19	-117.89	-34.60	-28.50	-37.30	-58.30	-67.10	-37.10	-79.30	-53.32	-46.90	-47.40
Lowest	-89.10	-55.90	-71.54	-112.10	-63.20	-93.70	-78.25	-115.90	-93.70	-102.70	-103.21	-129.44	-50.70	-39.40	-37.60	-73.30	-78.10	-73.80	-105.10	-59.10	-58.50	-59.50
Since Last	-6.41	1.00	8.50	0.20	0.00	-1.80	0.03	-1.60	0.30	-3.60	0.00	-0.21	0.50	-0.40	-0.30	0.20	-0.20	-0.60	19.80	-0.03	9.00	8.80
Historic	9.05	-2.70	-3.64	1.76	12.73	1.80	5.33	23.10	1.50	-2.69	-0.69	0.50	-5.40	-5.00	-0.20	-8.40	1.70	-15.20	4.60	0.57	11.00	11.00

	E-line Measurement
	Sonic Measurement
	Steel Tape Measurement
	Airline Measurement

Min Measurements	3
Average Recovery	0.29 ft/yr

Keep in mind that the Edwards (BFZ) is a Karst aquifer and static water levels are a measurement of aquifer health in conjunction with spring flow. The desired future conditions established by Clearwater for the Edwards (BFZ) aquifer are based on maintaining Salado Spring discharge into Salado Creek during a repeat of conditions similar to the 1950's drought of record. Under the drought of record conditions, a spring discharge of 200 acre-feet per month is preferred and 100 acre-feet per month is the minimum acceptable spring flow.

State #	40-57-902	40-57-903	40-58-201	57-15-903
CUWCD #	E-02-721G	E-02-722G	M-10-001P	M-17-CTGCD_Robinson
Well Name	McCallum #1	McCallum #2	CTC	Robinson
Highest	-131.20	-131.10	-77.83	-4.93
Lowest	-172.60	-173.30	-87.59	-64.19
11/2006	-142.10	-142.50		
11/2006	-142.10	-144.20		
01/2007	-144.30	-131.10		
07/2007	-131.20	-134.40		
01/2008	-134.50	-151.50		
07/2008	-151.80	-145.00		
01/2009	-145.40	-159.50		
07/2009	-159.60	-152.00	-87.59	-7.38
01/2010	-152.10	-151.30	-77.83	-14.51
07/2010	-150.60	-150.00	-79.64	-16.03
01/2011	-149.70	-165.70	-80.53	-16.42
07/2011	-166.80	-170.90	-81.01	-28.97
09/2011	-170.10	-164.30	-80.28	-48.35
11/2011	-163.80	-157.30	-79.72	-64.19
01/2012	-156.50	-157.60	-78.99	-13.83
05/2012	-156.40	-157.30	-81.66	-16.64
01/2013	-155.00	-161.30	-82.13	-16.34
05/2013	-160.80	-173.30	-82.70	-15.16
08/2013	-172.60	-160.00	-82.35	-13.11
11/2013	-159.20	-157.70	-82.68	-14.94
02/2014	-156.80	-162.90	-83.07	-15.95
05/2014	-163.00	-167.70	-83.56	-15.96
08/2014	-169.70	-166.60	-83.42	-21.88
11/2014	-165.10	-158.40	-83.54	-15.98
01/2015	-157.60	-154.20	-83.92	-10.12
06/2015	-153.20	-167.90	-83.48	-15.17
09/2015	-167.90	-156.50	-82.72	-10.51
11/2015	-155.50			-4.93
01/2016		-155.60	-83.50	
01/2016	-154.70	-157.07	-83.82	-7.72
04/2016	-155.03			-8.28
06/2016		-162.50	-84.45	
08/2016	-159.00		-84.30	
10/2016			-84.25	
10/2016			-84.07	

State #	40-57-902	40-57-903	40-58-201	57-15-903
CUWCD #	E-02-721G	E-02-722G	M-10-001P	M-17-CTGCD_Robinson
Well Name	McCallum #1	McCallum #2	CTC	Robinson
Highest	-131.20	-131.10	-77.83	-4.93
Lowest	-172.60	-173.30	-87.59	-64.19
12/2016			-83.91	
12/2016		-153.80		
12/2016	-153.30		-83.90	
01/2017			-83.92	
02/2017			-83.96	
03/2017		-154.40	-84.00	
03/2017	-153.80		-84.23	
05/2017			-84.21	
06/2017		-162.90	-84.51	
07/2017	-162.40		-83.28	
08/2017			-83.37	
09/2017		-161.40	-83.30	
10/2017	-160.60			-14.20
10/2017			-83.29	
11/2017				-14.05
11/2017			-83.20	
12/2017				-14.12
12/2017		-156.80	-83.31	
12/2017	-156.40			-13.81
12/2017			-83.18	
Since Last	4.20	4.60	0.13	0.31
Historic	-14.30	-14.30	4.41	-6.43
	E-line Measurement		Min Measurements	3
	Sonic Measurement			
	Steel Tape Measurement		Average Drawdown	-0.58 ft/yr
	Airline Measurement			

The desired future conditions established by Clearwater Underground Water Conservation District for the Upper Trinity is no more than 155 feet of drawdown after 50 years.The average drawdown goal per year is - 3.1 feet.

State #	58-02-302	58-04-405	None	58-05-901	None	58-04-407	58-04-406	58-04-514	None	None	None	None	40-58-903	None	None	58-04-104	None	40-57-601	58-03-504	None	58-02-901	58-03-701	None	None	None	58-01-202	58-09-303	None	None	57-24-503	None	58-09-201	None
CUWCD #	M-16-001G	E-05-083P	N2-11-003G	N2-02-013G	E-10-078P	E-02-1407G	E-02-1406G	E-02-1409G	N2-07-006G	E-03-444P	N2-04-011P	E-07-011P	E-06-063P	N2-07-003G	N2-08-002P	E-08-005P	N1-09-003P	M-09-001P	E-10-003P	N2-10-003P	M-13-001P	M-14-002P	N2-14-003P	E-14-053P	N1-16-001P	M-17-TWDB Kempner	M-17-TWDB Briggs	N1-16-005P	N1-16-006P	M-17-CTGCD_Mattingly	M-17-CTGCD_Konecci	M-17-CTGCD_Allen	M-17-CTGCD_Fischer
Well Name	River Ridge Monitor Well	Lester (Murphy)	UMHB	City of Holland	McBurney	Reavis	H. Springs	H. Spring Park	Maxdale Cowboy Church	McLemore	Central Texas Strike Zone	Brooks	Veterans Monitor Well	Killeen Crushed Stone	Salado ISD (HS)	Stephenson	Laurie Gehring	Copperas Cove - Middle	Christian	James Construction	StillmanValley Monitor Well	Gault - Middle Trinity		Pedigo	Richard Ross			David Cole	Ronald Ham	Mattingly	Konecci	Allen	Fischer
Highest	-254.90	-281.40	-301.20	-17.20	-268.30	-370.30	-373.50	-313.50	-157.50	-399.58	-305.50	-565.40	-359.70	-343.30	-288.10	-346.90	-422.70	-295.47	-555.40	-318.30	-453.60	-623.72	-696.30	-402.90	-421.80	-83.64	-427.76	-381.20	-253.00	-337.27	-338.70	-398.07	-213.65
Lowest	-343.30	-416.20	-326.30	-56.00	-268.90	-424.10	-421.00	-364.20	-175.60	-475.30	-333.70	-678.00	-440.60	-450.10	-337.40	-432.50	-424.90	-319.94	-584.40	-357.00	-479.40	-655.90	-696.50	-415.30	-443.80	-102.00	-450.72	-393.10	-280.70	-340.30	-389.00	-412.60	-225.62
01/2003				-23.70																													
07/2003				-25.30																													
01/2004				-26.20																													
07/2004				-28.20																													
01/2005				-29.90																													
07/2005				-31.80																													
01/2006				-26.00										-376.80																			
07/2006				-28.30																													
09/2006				-28.00																													
10/2006				-21.50																													
11/2006		-312.60		-27.10						-417.58			-397.70																				
01/2007	-265.50	-281.40		-26.10						-410.92			-373.60																				
02/2007												-565.40																					
07/2007	-254.90	-287.20		-27.00						-399.58			-377.90																				
01/2008	-260.50	-290.70		-28.80						-410.58			-380.80	-343.30																			
01/2008																-346.90																	
07/2008	-278.80	-333.20		-30.80						-433.42			-440.60	-375.10																			
08/2008															-288.10																		
01/2009	-282.90	-322.60		-34.00						-426.67			-387.90	-376.80		-368.40																	
07/2009	-292.20	-367.40		-36.60						-445.58			-368.50	-376.20		-377.40										-97.32							
01/2010	-280.10	-325.30		-36.60						-429.58			-361.20	-382.40		-371.40		-306.94								-84.67	-427.97			-337.38			
07/2010	-285.90	-344.00		-38.80						-436.38			-376.80	-374.50		-377.30		-295.47								-84.71	-427.76			-337.27			
01/2011	-285.40	-333.80		-39.90						-436.70			-379.20	-380.10		-380.10		-308.10								-91.56	-430.89			-337.42			
07/2011	-310.60	-402.20		-41.10						-468.16			-360.70	-413.40		-404.50		-313.40								-97.59	-437.89			-338.13			
09/2011	-323.80	-403.50		-41.70									-360.50	-423.20		-411.00		-319.94								-102.00				-339.31			
11/2011	-318.00	-384.80		-42.10						-470.40			-363.00	-415.40		-412.30		-316.65								-100.99	-444.40			-338.50		-408.18	
01/2012	-307.00	-356.10		-43.10						-456.93			-361.00	-408.90		-402.30		-311.90								-98.49	-442.74			-338.37		-406.30	
05/2012	-302.80	-375.60		-44.10						-456.93			-360.60	-403.90		-398.60		-309.74								-92.28	-438.81			-338.66		-398.07	
01/2013	-301.70	-369.40		-42.10						-454.34			-359.70	-405.90		-400.50		-312.56								-98.91	-446.13			-338.83		-403.08	-218.47
05/2013	-311.40	-387.70		-50.40						-461.13			-365.80	-421.00		-411.20		-311.45	-555.40		-476.00					-97.72				-338.87		-402.45	-218.88
05/2013																																	
08/2013	-323.80	-416.20		-50.00		-424.10	-421.00	-364.20		-472.46			-369.80	-430.40		-422.20		-317.87	-568.20		-478.20					-99.63	-448.42			-338.96		-404.83	-225.45
11/2013	-325.50	-385.00		-51.30		-393.80	-390.60	-335.90					-369.40	-431.10		-421.70		-314.73	-572.40		-472.00					-100.00				-338.99		-405.83	-222.98
02/2014	-320.50	-373.60		-51.30		-386.50	-383.40	-322.90					-368.50	-438.20		-416.10		-311.78	-565.80		-464.50	-630.00				-99.77				-338.82		-404.89	
02/2014																					-477.00												
05/2014		-389.30		-56.00		-405.50	-401.60	-335.20					-373.40	-440.20		-417.80		-313.33	-572.70		-473.30	-645.00				-98.87	-447.29			-338.98		-405.21	
05/2014	-330.20																																
08/2014	-336.90	-411.00		-55.30		-413.10	-409.30	-351.90					-373.50	-445.80		-425.50		-314.87	-581.20		-476.70	-655.90				-100.09	-448.41			-339.06		-406.32	-224.91
11/2014	-343.30	-405.50	-326.30	-52.80		-415.10	-410.80	-348.80			-333.70	-677.40	-375.90	-446.50	-337.40	-432.50		-316.99	-584.40		-479.40	-650.98				-101.46	-450.72			-339.01		-407.45	-224.34
01/2015	-327.90	-374.40	-317.90	-42.40		-388.50	-385.60	-324.30			-328.00	-664.60	-370.60	-444.80	-319.90	-420.60		-312.52	-568.70		-467.90	-648.91		-412.60		-100.32	-449.74			-338.90		-406.51	-223.19
01/2015																				-324.30													
06/2015	-320.30	-376.00	-313.30	-34.20		-386.30	-383.70	-324.00			-325.40	-658.60	-371.10	-427.60	-318.90	-415.50		-307.36	-563.30		-464.90	-630.83		-411.60		-97.48	-443.67					-403.68	-219.65
06/2015																											-446.92						
09/2015	-341.60																																
09/2015		-410.50	-326.30	-33.30			-411.10	-352.20			-332.20	-678.00	-375.70	-450.10	-335.70	-429.00		-314.51	-582.80		-478.30	-652.11				-96.14						-405.49	-223.84
11/2015	-333.10																																
11/2015		-377.10	-313.30	-20.60			-387.00	-327.20			-322.20	-663.20	-371.90	-435.50	-324.30	-423.60		-313.26	-571.10		-472.60	-642.10				-94.14	-446.60					-405.04	-219.49
12/2015																				-324.30													
01/2016	-326.80																									-88.66	-445.45					-403.70	-216.98
01/2016		-370.90	-308.30	-19.30			-382.30	-319.90			-319.00	-656.60	-368.40	-429.40	-315.90	-421.20		-307.95	-562.70		-467.00	-639.33											
04/2016	-324.00																																
04/2016		-368.74	-302.20	-18.50			-373.60	-316.85			-310.30	-649.40	-366.50	-422.27	-310.80	-413.60		-306.26	-556.80		-458.70	-629.44				-85.61	-443.86					-401.55	-214.67
06/2016																										-83.64	-442.94					-406.45	-213.65
08/2016	-330.90		-305.40	-24.00						-469.60	-312.20	-655.60	-372.20	-431.10	-321.50		-424.80	-309.65			-461.00	-629.95				-87.62	-444.12					-408.73	-217.75
09/2016		-369.90				-387.10	-374.20	-317.70								-414.30			-557.10														
10/2016																		-307.50															
10/2016																										-88.87	-444.33					-409.11	-217.39
10/2016																		-308.40				-634.53											
10/2016																													-263.00				
11/2016																										-90.24	-444.70					-409.47	-218.21
11/2016																													-263.00				
11/2016	-329.00																																
11/2016				-26.98																													
12/2016																		-308.10								-91.24	-444.46					-408.94	-217.98
12/2016																		-308.32				-633.60											
12/2016		-364.70	-304.30								-309.00				-312.90									-407.00									
12/2016													-370.70																-258.20				
12/2016						-377.20	-373.50	-313.50	-175.60			-650.30		-428.40					-561.30		-457.80													
01/2017	-326.20			-17.20												-411.10		-308.10				-635.50				-92.31	-444.46					-408.95	-217.68
01/2017										-459.70																							
02/2017	-338.84																	-306.11								-92.94	-444.40			-340.00		-408.49	-218.95
03/2017																		-304.97				-629.62				-91.98	-444.34			-339.80		-407.45	-220.90
03/2017	-327.46																																
03/2017																						-629.20											
03/2017	-321.90								-160.90	-459.60		-644.70	-369.30	-417.70		-407.00		-304.80			-455.30				-421.80			-381.20	-253.00				
03/2017		-365.10	-301.20	-23.40		-370.30	-375.20	-313.50			-307.50				-307.70											-90.05	-444.10			-340.30		-407.13	-221.75
04/2017																				-338.50				-402.90									
05/2017	-318.42																	-304.75								-90.18	-444.22			-340.00		-407.31	-217.53

State #	58-02-302	58-04-405	None	58-05-901	None	58-04-407	58-04-406	58-04-514	None	None	None	None	40-58-903	None	None	58-04-104	None	40-57-601	58-03-504	None	58-02-901	58-03-701	None	None	None	58-01-202	58-09-303	None	None	57-24-503	None	58-09-201	None
CUWCD #	M-16-001G	E-05-083P	N2-11-003G	N2-02-013G	E-10-078P	E-02-1407G	E-02-1406G	E-02-1409G	N2-07-006G	E-03-444P	N2-04-011P	E-07-011P	E-06-063P	N2-07-003G	N2-08-002P	E-08-005P	N1-09-003P	M-09-001P	E-10-003P	N2-10-003P	M-13-001P	M-14-002P	N2-14-003P	E-14-053P	N1-16-001P	M-17-TWDB Kempner	M-17-TWDB Briggs	N1-16-005P	N1-16-006P	M-17-CTGCD_Mattingly	M-17-CTGCD_Konecci	M-17-CTGCD_Allen	M-17-CTGCD_Fischer
Well Name	River Ridge Monitor Well	Lester (Murphy)	UMHB	City of Holland	McBurney	Reavis	H. Springs	H. Spring Park	Maxdale Cowboy Church	McLemore	Central Texas Strike Zone	Brooks	Veterans Monitor Well	Killeen Crushed Stone	Salado ISD (HS)	Stephenson	Laurie Gehring	Copperas Cove - Middle	Christian	James Construction	StillmanValley Monitor Well	Gault - Middle Trinity		Pedigo	Richard Ross			David Cole	Ronald Ham	Mattingly	Konecci	Allen	Fischer
Highest	-254.90	-281.40	-301.20	-17.20	-268.30	-370.30	-373.50	-313.50	-157.50	-399.58	-305.50	-565.40	-359.70	-343.30	-288.10	-346.90	-422.70	-295.47	-555.40	-318.30	-453.60	-623.72	-696.30	-402.90	-421.80	-83.64	-427.76	-381.20	-253.00	-337.27	-338.70	-398.07	-213.65
Lowest	-343.30	-416.20	-326.30	-56.00	-268.90	-424.10	-421.00	-364.20	-175.60	-475.30	-333.70	-678.00	-440.60	-450.10	-337.40	-432.50	-424.90	-319.94	-584.40	-357.00	-479.40	-655.90	-696.50	-415.30	-443.80	-102.00	-450.72	-393.10	-280.70	-340.30	-389.00	-412.60	-225.62
06/2017	-333.97																	-305.41				-623.72				-91.49	-444.38			-340.10		-407.58	-216.77
06/2017																															-387.56		
06/2017																	-422.70																
07/2017		-398.40	-303.10	-36.90		-392.70	-389.80	-336.30			-305.50				-320.90		-424.85			-357.00		-630.74		-409.40		-94.02	-444.89			-339.70	-388.09	-408.44	-218.63
07/2017	-334.92								-157.50	-469.80			-370.90			-413.90		-306.37	-562.80		-453.60				-431.80			-387.20	-261.00				
07/2017												-655.90		-437.40																			
08/2017	-339.20																	-309.02				-634.75				-97.19	-445.48			-339.90	-388.74	-410.60	-225.42
09/2017	-337.44																	-309.10				-638.78				-97.97	-445.58						-224.73
09/2017																																-411.00	
09/2017																															-338.70		
09/2017																														-339.80			
10/2017	-338.16								-158.70	-475.30		-666.80	-376.50	-436.30		-423.40		-310.50	-574.00		-469.10				-438.90	-98.46	-446.89	-393.10	-280.70				
10/2017																																-411.70	
10/2017																															-389.00		
10/2017																																	-222.44
10/2017																														-340.00			
10/2017		-397.10		-39.00	-268.90	-403.70	-400.00	-341.10							-327.30					-320.30				-415.30								
10/2017			-308.40														-424.90																
10/2017														-445.90																			
11/2017	-335.84																	-309.61				-644.98				-99.03	-446.12						
11/2017																																-411.80	
11/2017																															-386.90		
11/2017																																	-221.69
11/2017																														-339.10			
12/2017	-335.59													-444.10				-309.17				-646.20											
12/2017																																-412.30	
12/2017																															-386.90		
12/2017																																	-220.66
12/2017																														-339.10			
12/2017																							-696.50										
12/2017	-334.40								-171.10	-464.20		-663.20	-371.90			-420.90		-308.66	-575.80		-476.00			-414.60	-443.80	-99.43	-446.30	-390.60	-261.10				
12/2017																																-412.60	
12/2017																															-387.50		
12/2017																																	-225.62
12/2017																														-339.30			
12/2017		-378.80	-307.90	-47.00	-268.30	-392.70	-388.90	-326.80			-308.70			-442.10	-322.90		-422.70			-318.30		-647.15											
01/2018																							-696.30										
02/2018																						-652.21											
02/2018	-332.83																																
02/2018																		-309.69															
02/2018																										-99.86							
02/2018																											-446.35						
03/2018	-330.97																	-309.47															
Since Last	1.86	18.30	0.50	-8.00	0.60	11.00	11.10	14.30	-12.40	11.10	-3.20	3.60	4.60	2.00	4.40	2.50	2.20	0.22	-1.80	2.00	-6.90	-5.06	0.20	0.70	-4.90	-0.43	-0.05	2.50	19.60	-0.20	-0.60	-0.30	-4.96
Historic	-65.47	-66.20	18.40	-23.30	0.60	31.40	32.10	37.40	4.50	-46.62	25.00	-97.80	25.80	-65.30	-34.80	-74.00	2.10	-2.53	-20.40	6.00	0.00	-22.21	0.20	-2.00	-22.00	-2.54	-18.38	-9.40	1.90	-1.92	0.06	-4.42	-7.15

	E-line Measurement	Min Measurements	3
	Sonic Measurement		
	Steel Tape Measurement	Average Drawdown	-0.83 ft/yr
	Airline Measurement		

The desired future conditions established by Clearwater Underground Water Conservation District for the Middle Trinity is no more than 286 feet of drawdown after 50 years. The average drawdown goal per year is -5.72 feet.

State #	40-53-406	40-54-701	40-61-509	40-62-401	40-62-501	40-63-501	58-05-202	58-06-102	58-06-301	40-57-602	None	58-06-201	40-53-405	None	None	None
CUWCD #	N2-02-022G	M-13-006G	M-13-007G	N2-03-001G	M-13-005G	N2-02-034G	N2-02-024G	N2-02-001G	N2-04-010P	M-09-002P	N2-10-001P	N2-13-002P	E-13-039G	N2-14-005P	N2-14-004P	M-17-CTGCD_Carlile
Well Name	Moffat WSC #1	Cearley-City of Temple #2	Pea Ridge-City of Temple #3	Cen. TX Vet. Hospital	Acres-City of Temple #1	East Bell WSC #1	Armstrong WSC #1	Bell Co. WCID #2	East Bell WSC #2	Copperas Cove - Lower	Armstrong WSC #2	Jack Hilliard Dozer and Materials	CUWCD-Tanglewood Monitor Well	CTWSC System Split Well	CTWSC Doc Curb	Carlile
Highest	-329.70	-456.00	-239.20	-404.70	-339.50	-220.00	-245.80	-186.20	-268.00	-290.13	-305.80	-173.40	-445.40	-184.30	-453.90	-370.70
Lowest	-485.50	-477.14	-253.86	-406.70	-357.77	-285.00	-257.80	-262.50	-378.00	-298.30	-357.70	-186.95	-456.20	-184.75	-455.85	-371.69
01/2003	-332.70															
07/2003	-415.50															
01/2004	-333.70															
07/2004	-413.80															
01/2005	-337.70															
01/2007	-330.70															
07/2007	-379.00															
01/2008	-329.70															
07/2008	-355.90															
01/2009	-434.40															
07/2009	-355.90															
01/2010	-397.40									-291.16						
07/2010	-406.70									-292.71						
01/2011	-360.50									-290.13						
07/2011	-346.50								-268.00	-290.25						
09/2011	-457.10									-291.93						
11/2011	-454.80	-456.40								-292.44						
01/2012	-453.20								-378.00	-293.85						
05/2012	-456.50								-278.00	-293.47						
01/2013	-468.80								-280.00	-294.22						
05/2013	-466.30								-285.00	-294.96						
08/2013	-473.10								-282.00	-295.11	-329.83					
10/2013											-328.00					
11/2013	-466.60								-290.00	-295.85		-173.40				
12/2013												-177.70				
02/2014	-466.20					-230.00			-290.00	-295.70						
05/2014	-469.50					-230.00			-285.00	-296.14		-174.00				
08/2014	-471.70	-456.00	-239.20		-348.68	-230.00			-285.00	-296.00		-176.00				
09/2014		-465.05														
09/2014			-241.10													
11/2014	-470.40					-235.00			-290.00	-296.91		-177.79				
11/2014							-247.90				-329.60					
12/2014							-246.30				-327.40					

State #	40-53-406	40-54-701	40-61-509	40-62-401	40-62-501	40-63-501	58-05-202	58-06-102	58-06-301	40-57-602	None	58-06-201	40-53-405	None	None	None
CUWCD #	N2-02-022G	M-13-006G	M-13-007G	N2-03-001G	M-13-005G	N2-02-034G	N2-02-024G	N2-02-001G	N2-04-010P	M-09-002P	N2-10-001P	N2-13-002P	E-13-039G	N2-14-005P	N2-14-004P	M-17-CTGCD_Carlile
Well Name	Moffat WSC #1	Cearley-City of Temple #2	Pea Ridge-City of Temple #3	Cen. TX Vet. Hospital	Acres-City of Temple #1	East Bell WSC #1	Armstrong WSC #1	Bell Co. WCID #2	East Bell WSC #2	Copperas Cove - Lower	Armstrong WSC #2	Jack Hilliard Dozer and Materials	CUWCD-Tanglewood Monitor Well	CTWSC System Split Well	CTWSC Doc Curb	Carlile
Highest	-329.70	-456.00	-239.20	-404.70	-339.50	-220.00	-245.80	-186.20	-268.00	-290.13	-305.80	-173.40	-445.40	-184.30	-453.90	-370.70
Lowest	-485.50	-477.14	-253.86	-406.70	-357.77	-285.00	-257.80	-262.50	-378.00	-298.30	-357.70	-186.95	-456.20	-184.75	-455.85	-371.69
01/2015		-456.00	-239.70		-340.10	-235.00			-290.00	-296.84		-175.10				
01/2015	-467.79															
01/2015							-246.40				-327.70					
02/2015		-456.20														
02/2015							-246.70				-327.70					
03/2015	-468.79															
03/2015							-247.00				-328.30					
03/2015		-465.05	-241.60													
04/2015	-468.70						-247.90				-329.20					
05/2015	-469.00															
05/2015							-245.80				-330.30					
05/2015															-454.00	
06/2015	-467.80				-339.50	-230.00			-290.00	-296.69		-175.10				
06/2015							-248.50				-331.00					
06/2015		-456.20														
07/2015	-468.50					-230.00			-290.00							
07/2015							-248.70				-330.60					
08/2015	-485.20					-265.00			-290.00							
09/2015	-481.10															
09/2015						-275.00			-290.00							
09/2015							-247.30				-330.60					
09/2015		-469.26			-347.84					-297.06		-180.79				
10/2015	-477.70															
11/2015	-478.00															
11/2015						-270.00	-248.80		-290.00		-330.80					
11/2015		-468.20			-349.07					-297.43		-177.70				
12/2015	-471.70															
01/2016	-470.80	-467.91			-349.98	-260.00	-249.00		-295.00	-297.43	-331.10	-175.89				
03/2016	-470.90															
04/2016	-472.20															
04/2016						-260.00	-250.30		-295.00		-332.10					
04/2016		-466.87														
04/2016					-349.38					-297.21		-176.50				

State #	40-53-406	40-54-701	40-61-509	40-62-401	40-62-501	40-63-501	58-05-202	58-06-102	58-06-301	40-57-602	None	58-06-201	40-53-405	None	None	None
CUWCD #	N2-02-022G	M-13-006G	M-13-007G	N2-03-001G	M-13-005G	N2-02-034G	N2-02-024G	N2-02-001G	N2-04-010P	M-09-002P	N2-10-001P	N2-13-002P	E-13-039G	N2-14-005P	N2-14-004P	M-17-CTGCD_Carlile
Well Name	Moffat WSC #1	Cearley-City of Temple #2	Pea Ridge-City of Temple #3	Cen. TX Vet. Hospital	Acres-City of Temple #1	East Bell WSC #1	Armstrong WSC #1	Bell Co. WCID #2	East Bell WSC #2	Copperas Cove - Lower	Armstrong WSC #2	Jack Hilliard Dozer and Materials	CUWCD-Tanglewood Monitor Well	CTWSC System Split Well	CTWSC Doc Curb	Carlile
Highest	-329.70	-456.00	-239.20	-404.70	-339.50	-220.00	-245.80	-186.20	-268.00	-290.13	-305.80	-173.40	-445.40	-184.30	-453.90	-370.70
Lowest	-485.50	-477.14	-253.86	-406.70	-357.77	-285.00	-257.80	-262.50	-378.00	-298.30	-357.70	-186.95	-456.20	-184.75	-455.85	-371.69
05/2016	-472.40															
05/2016													-445.40			
07/2016	-485.50															
08/2016	-484.00															
08/2016						-272.00			-290.00							
08/2016	-476.80				-351.60	-265.00	-252.80		-292.00	-297.10	-334.10	-176.70	-451.00			
08/2016																-371.39
09/2016			-239.50													
09/2016	-485.10															
10/2016						-268.00			-290.00	-297.14						
10/2016		-471.54			-352.23		-251.70				-334.50					
10/2016								-262.50								-371.17
10/2016					-353.20					-297.65						
11/2016	-477.30					-268.00			-270.00							-371.69
11/2016							-254.10				-335.50		-450.00			
11/2016													-455.90			
12/2016	-476.30	-472.58			-352.85	-268.00	-252.90		-290.00	-297.58	-305.80					-371.46
12/2016		-472.68	-250.00		-352.84					-298.17						
01/2017	-475.60					-262.00			-290.00							
01/2017		-472.30	-249.90		-353.20		-254.60			-298.30	-356.30					-371.12
01/2017												-183.79				
02/2017	-476.30					-262.00	-254.60		-290.00		-336.20					
02/2017								-225.50								
02/2017		-472.18	-249.99		-353.35					-297.72						-371.03
03/2017						-251.00			-292.00							
03/2017					-353.20					-297.65						-371.13
03/2017		-471.30	-249.90													
03/2017							-254.00				-336.50					
03/2017		-472.20	-249.50		-353.20					-297.60						
03/2017																-370.70
04/2017	-476.80					-253.00			-294.00				-453.90			
04/2017							-253.70				-335.00					

State #	40-53-406	40-54-701	40-61-509	40-62-401	40-62-501	40-63-501	58-05-202	58-06-102	58-06-301	40-57-602	None	58-06-201	40-53-405	None	None	None
CUWCD #	N2-02-022G	M-13-006G	M-13-007G	N2-03-001G	M-13-005G	N2-02-034G	N2-02-024G	N2-02-001G	N2-04-010P	M-09-002P	N2-10-001P	N2-13-002P	E-13-039G	N2-14-005P	N2-14-004P	M-17-CTGCD_Carlile
Well Name	Moffat WSC #1	Cearley-City of Temple #2	Pea Ridge-City of Temple #3	Cen. TX Vet. Hospital	Acres-City of Temple #1	East Bell WSC #1	Armstrong WSC #1	Bell Co. WCID #2	East Bell WSC #2	Copperas Cove - Lower	Armstrong WSC #2	Jack Hilliard Dozer and Materials	CUWCD-Tanglewood Monitor Well	CTWSC System Split Well	CTWSC Doc Curb	Carlile
Highest	-329.70	-456.00	-239.20	-404.70	-339.50	-220.00	-245.80	-186.20	-268.00	-290.13	-305.80	-173.40	-445.40	-184.30	-453.90	-370.70
Lowest	-485.50	-477.14	-253.86	-406.70	-357.77	-285.00	-257.80	-262.50	-378.00	-298.30	-357.70	-186.95	-456.20	-184.75	-455.85	-371.69
04/2017												-184.20				
04/2017					-353.31											
05/2017	-477.30					-267.00			-294.00							
05/2017							-252.40				-335.00					
05/2017		-471.93	-249.84							-292.70						-371.04
06/2017						-269.00			-295.00							
06/2017							-254.00				-335.70					
06/2017					-353.90					-297.28						-371.41
06/2017	-480.70	-473.45	-250.00													
06/2017								-186.20								
07/2017	-478.00					-268.00			-295.00							
07/2017		-473.83	-250.63		-354.40							-185.10	-451.20			-371.28
07/2017							-254.70			-297.35	-336.00					
08/2017	-478.60					-270.00			-295.00							
08/2017							-255.00				-335.50					
08/2017															-453.90	
08/2017		-474.52	-251.31		-355.22					-297.20						-371.28
08/2017				-404.70												
09/2017	-482.20					-285.00			-294.00							
09/2017							-253.20				-336.70					
09/2017		-474.84	-251.74							-296.91						-371.50
10/2017	-484.40					-283.00			-295.00	-297.80						-371.30
10/2017							-256.60	-193.17			-337.30	-183.60				
10/2017				-405.30									-451.60			
11/2017	-477.90															
11/2017							-257.20				-337.90			-184.40	-455.00	
11/2017						-283.00			-297.00							
11/2017		-475.80			-356.97					-297.87		-185.29				
11/2017																-371.40
12/2017	-484.00					-220.00			-297.00							
12/2017		-476.26			-357.15					-297.94		-186.29		-184.30	-455.40	
12/2017																-371.20
12/2017							-256.77				-338.30					

State #	40-53-406	40-54-701	40-61-509	40-62-401	40-62-501	40-63-501	58-05-202	58-06-102	58-06-301	40-57-602	None	58-06-201	40-53-405	None	None	None
CUWCD #	N2-02-022G	M-13-006G	M-13-007G	N2-03-001G	M-13-005G	N2-02-034G	N2-02-024G	N2-02-001G	N2-04-010P	M-09-002P	N2-10-001P	N2-13-002P	E-13-039G	N2-14-005P	N2-14-004P	M-17-CTGCD_Carlile
Well Name	Moffat WSC #1	Cearley-City of Temple #2	Pea Ridge-City of Temple #3	Cen. TX Vet. Hospital	Acres-City of Temple #1	East Bell WSC #1	Armstrong WSC #1	Bell Co. WCID #2	East Bell WSC #2	Copperas Cove - Lower	Armstrong WSC #2	Jack Hilliard Dozer and Materials	CUWCD-Tanglewood Monitor Well	CTWSC System Split Well	CTWSC Doc Curb	Carlile
Highest	-329.70	-456.00	-239.20	-404.70	-339.50	-220.00	-245.80	-186.20	-268.00	-290.13	-305.80	-173.40	-445.40	-184.30	-453.90	-370.70
Lowest	-485.50	-477.14	-253.86	-406.70	-357.77	-285.00	-257.80	-262.50	-378.00	-298.30	-357.70	-186.95	-456.20	-184.75	-455.85	-371.69
12/2017										-297.80		-186.95				
12/2017																-371.30
12/2017		-476.82	-253.86		-357.33								-456.20	-184.75	-455.85	
01/2018	-483.90					-220.00			-297.00							
01/2018							-257.80				-357.70					
01/2018				-406.70												
02/2018							-257.80				-338.40					
02/2018		-476.98														
02/2018			-253.68													
02/2018					-357.54											
02/2018										-298.02						
03/2018	-484.50						-257.60									
03/2018											-338.20					
03/2018		-477.14	-253.65		-357.77					-297.72						
03/2018												-186.70				
Since Last	-0.60	-0.16	0.03	-1.40	-0.23	0.00	0.20	-6.97	0.00	0.30	0.20	0.25	-4.60	-0.45	-0.45	-0.10
Historic	-151.80	-20.74	-14.45	-2.00	-9.09	10.00	-9.70	69.33	-29.00	-6.56	-8.37	-13.30	-10.80	-0.35	-1.85	0.09

	E-line Measurement
	Sonic Measurement
	Steel Tape Measurement
	Airline Measurement

Min Measurements	3
Average Recovery	1.75 ft/yr

The desired future conditions established by Clearwater Underground Water Conservation District for the Lower Trinity is no more than 319 feet of drawdown.

Appendix N

17th Annual

Bell County Water Symposium

"Collaboration in Developing Scientific Discernment"

November 15, 2017

8:00 a.m. - 3:30 p.m.

Location: Texas A&M University - Central Texas, 1001 Leadership Place, Killeen

AGENDA

8:00 a.m. **Registration**

8:30 a.m. **Welcome & Introduction & Theme of the Day**
Leland Gersbach, Board President, Clearwater UWCD

8:35 a.m. **Clearwater UWCD: State of the District**
Leland Gersbach, Board President, Clearwater UWCD
Dirk Aaron, General Manager, Clearwater UWCD

9:00 a.m. **GCDs: What They Do and Why They Matter & Reflections on the 1917 Conservation Amendment : 100th Anniversary**
Sarah Rountree Schlessinger, Executive Director, Texas Alliance of Groundwater Districts

9:30 a.m. **Overview of the TWCA Organization and the 85th Legislative Session**
Stacey Allison Steinbach, Assistant General Manager, Texas Water Conservation Association
Adeline Fox, Communications Director, Texas Water Conservation Association

10:00 a.m. **15 Minute Break**

10:15 a.m. **The State of Water Resources in Texas**
Bech Bruun, Chairman, Texas Water Development Board

11:00 a.m. **Brazos River Basin Update**
David Collinsworth, Lower/Central Basin Region Manager, Brazos River Authority

11:30 a.m. **Keynote: Water Planning and Implementation in Texas, Now or Never**
Lyle Larson, Chairman, House Natural Resources Committee, Texas House of Representatives, District 122

12:00 - Lunch **Welcome Address**
Dr. Marc Nigliazzo, President, Texas A&M University - Central Texas

1:00 p.m. **Understanding the Geology of the Aquifers in Bell County for *ASR***
James Beach, P.G. Senior Vice-Pres., LBG-Guyton Associates

1:30 p.m. **ASR Feasibility: Can We Make it Work?**
Dr. Gretchen Miller, Associate Professor, Civil Engineering, Texas A&M University
Dr. June Wolfe, Associate Research Scientist, Texas A&M AgriLife Research

2:00 p.m. **Scientific Initiatives and Tools Addressing Aquifer Conditions**
James Beach, P.G. Senior Vice-Pres., LBG-Guyton Associates
Brant Konetchy, Hydrologist 1, LBG-Guyton Associates

2:30 p.m. **TexMesonet: Statewide Earth Observation Network**
Dr. Leyon Greene, Hydrologist & Meteorologist, TexMesonet, Texas Water Development Board

3:00 p.m. **Watershed Protection in Central Texas**
Lisa Prcin, Research Associate, Texas A&M AgriLife Research, Blackland Research & Extension Center

3:30 p.m. **Evaluation**
Whitney Grantham, County Extension Agent - Natural Resources, Texas A&M AgriLife Extension - Bell County

- - - - - - - - - - - - Symposium Sponsors - - - - - - - - - - - -

Clearwater UWCD
LBG-Guyton Associates
HALFF Associates
Lloyd Gosselink Attorneys at Law
Bell County Engineer's Office
Texas A&M AgriLife Extension Service

Texas A&M University - Central Texas

For more information or to RSVP please contact Clearwater at 254-933-0120