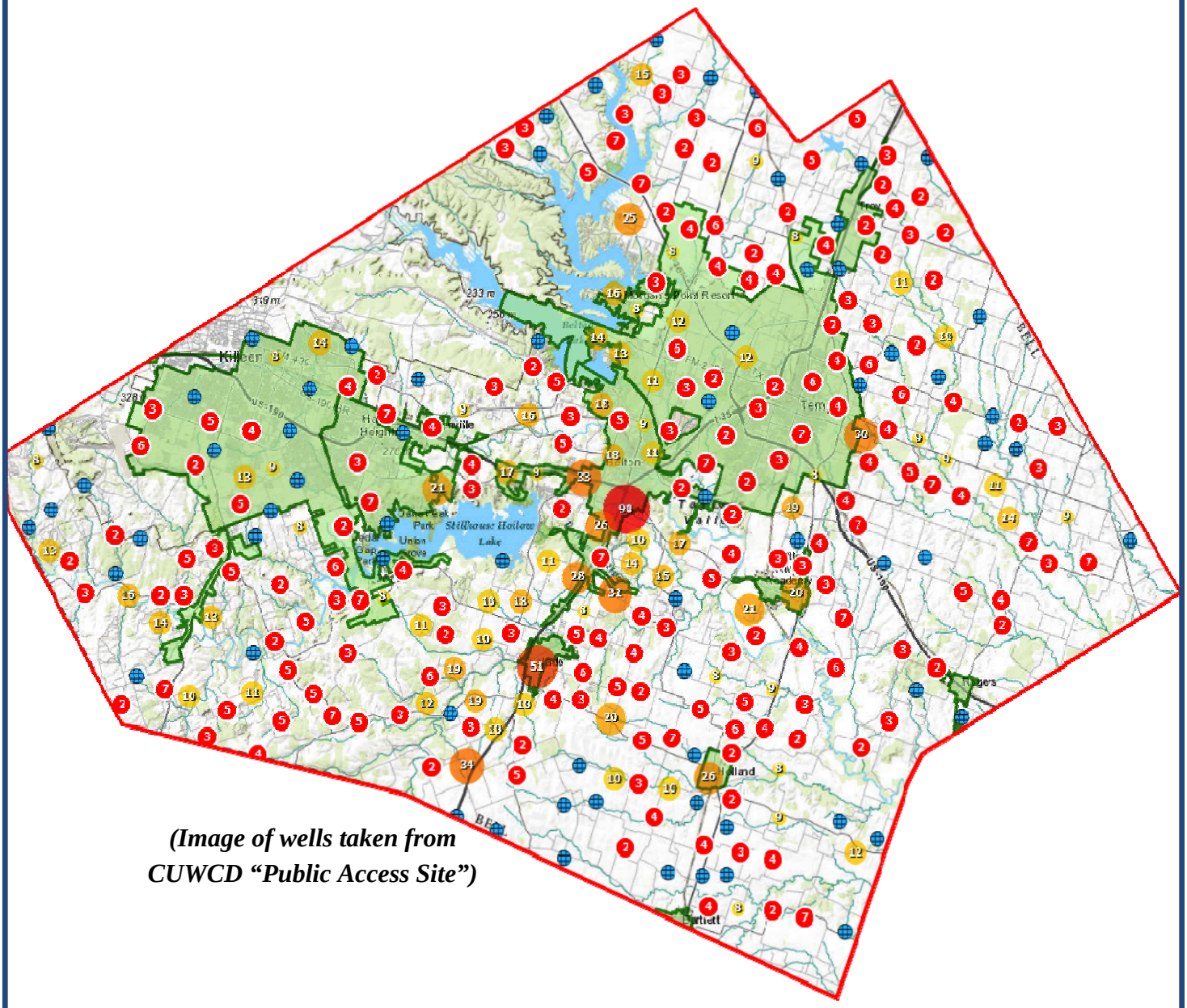
Clearwater
Underground Water Conservation District
Every drop counts!

Annual Report

Fiscal Year 2012



(Image of wells taken from CUWCD "Public Access Site")

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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 2012

The Annual Report for Fiscal Year 2012 (FY12) is presented to the Directors of the Clearwater Underground Water Conservation District (CUWCD or District) by May of the following Fiscal Year (May 2013). This report summarizes the activities and accomplishments of the District during FY12 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 2012 calendar year.

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

TABLE OF CONTENTS

6. Appendix

A. Approved Budget for FY12

B RFQ & FY12 Financial Audit

C. Revised Administrative Fee Schedule

D. Revised Bylaws

E. Newspaper Articles

F. Activity Reports

G. Water Quality Testing

H. Rainfall Map / Drought Status Reports

I. PDI

J. Rainwater Harvesting

K. Recharge Enhancement & Brush Control

L. Water Symposium

M. Book Covers

N. Salado Springs Gauge System

O. Static Water Level Measurements

P. Edwards BFZ Recharge Study

Q. Newsletter

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. Groundwater resources in Bell County include the following:

Edwards BFZ

Trinity

Others:

- Alluvium
- Austin Chalk
- Buda
- Edwards Equivalent
- Kemp
- Lake Waco
- Ozan
- Pecan Gap

Clearwater's fiscal year runs from October 1st through September 30th . This report summarizes the accomplishments and activities of the District during FY12; but reflects registration, permitting, and production figures for the calendar year 2012.

During FY10, the selected contractor began upgrading the District's stream flow gauge system in Salado Creek to automate the collection of data and the posting of the data on the District website. The upgrade also included a new file server system, automated processing and publication of rainfall data and website improvements to support the District's drought management plans. The Drought Management Plan for the Trinity aquifer was adopted and the Drought Management Plan for the Edwards BFZ was re-adopted with minor revisions. Data was collected for four Edwards BFZ aquifer recharge zone studies.

Unfortunately, the Stream Flow Gauge system was destroyed on September 18, 2010. The district Staff contracted with Hamson Consulting to repair the gauge system with the involvement of AECOM as the design and survey provider. System was back functioning October 2011. The Staff was then able in November and December of 2011 to focus on the drought status reports that reflected the need for users in the Edwards BFZ to take the Epic Drought of 2011 seriously. Thus, this robust effort of communication continued through 2012.

The District proceeded with plans to become a stand alone entity thus separate from Central Texas Council of Governments (CTCOG), effective March 31, 2012. These activities and others are discussed in this report. The information in this report is presented in three categories as follows:

Administrative Tasks

Management Plan Requirements

Miscellaneous Activities

2. ADMINISTRATIVE TASK

A detailed discussion of each of these activities follows below.

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.

Major administrative tasks and activities during FY12 include the following:

A. Contracts/Agreements:

- **Central Texas Council of Governments (ending March 31, 2012)**
- **Technical Consulting Services**

(1) AECOM, Inc.
(2) Bar-W Groundwater Exploration, LLC.
(3) Halff Associates
(4) U. S. Geological Survey, Texas Water Science Survey
(5) Hamson Consulting
(6) Folkerson Communication, LLC

- **Legal Services**

(1) Lloyd, Gosselink, Rochelle & Townsend, P.C.

- **Other Service**

(1) Keilla Group (Construction)
(2) Larry Neal Architect / Construction Mgmt
(3) Village of Salado (ESA Stakeholders)
(4) Texas AgriLife Extension Institute of Renewable Natural Resources (ESA Stakeholder)
(5) Bell County (ESA Stakeholder)
(6) Salado WSC (ESA Stakeholder)
(7) Jarrell Schwertner WSC (ESA Stakeholder)

B. Financial Items:

Budget and Tax Rate
Financial Audit

C. Miscellaneous Policies/Issues:

Administrative Fee Schedule Revised
Bylaws Revised
Onboard to 700 Kennedy Court

D. Board of Directors:

District Officers
Meetings

E. District Rules:

Expiration date on incomplete permit applications

F. Management Plan:

A detailed discussion of each of these activities follows below.

A. CONTRACTS/AGREEMENTS

1. Central Texas Council of Governments

The District originally contracted with CTCOG for administrative and planning services in March 2000. This contract includes the use of CTCOG staff, equipment, and facilities. While this contract has proven beneficial for both parties, the Clearwater Board has notified the CTCOG that the District will end their contractual agreement by March 31, 2012 and become a stand-alone entity at 700 Kennedy Court, Belton, Texas.

Clearwater did renew its contract with CTCOG, September 2011 for six months ending March 31, 2012. The 60 day termination notice was included to allow flexibility as the building construction progressed.

2. Technical Consulting Services

The District initiated a contract with AECOM, Inc. (previously TCB, Inc.) in March 2001 for technical consulting services and has continued a contractual relationship over the years. During FY09, the head geoscientist assigned to Clearwater left AECOM to establish a private consulting firm — BAR-W Groundwater Exploration, LLC (BAR- W). Clearwater has contracts with both AECOM and BAR-W. AECOM provides limited technical support with regard to the Salado Creek stream flow gauge system. BAR-W provides general technical consulting and various studies. High point of recommendations and strategies conducted completed in calendar years 2011 and 2012 are identified below:

- Provide technical review of drilling and operating permits.
- Designate aquifers for exempt wells and provide estimate of production.
- Review Drought Management Plan for the Trinity aquifer and revisions for and trained staff on applying the plan as pilot effort.
- Edwards BFZ aquifer Voluntary Drought Management Plan and its pilot implementation in the fall of 2011 and applied pilot in all of 2012.
- Review system upgrade needs and preparation of bid documents.
- Review data from three continuous monitoring wells in the Trinity aquifer and compare with desired future conditions.
- Provide guidance to staff in collection of data from selected wells for use in the understanding the character of the Aquifers.
- Review data from Salado Creek stream flow gauges.
- Provided Technical training to new General Manager on stream flow system and its application to the voluntary drought management plan.
- Provided recommendations to get the gauge system back on line in September 2011 and maintained through 2012.
- Research historic spring elevations in Salado Springs system to address concerns with data from steam flow gauges.
- Provide recommendations for replacement of damaged components of the stream flow gauge system in early 2011, adapted gauge system electronic data transfer to ATT Wireless modem, and evaluated work of Hamson and AECOM personnel efforts to effectively assure the system is reliable.

Several of the items above are discussed in more detail throughout this report.

3. Legal Services

The District requests legal consulting services on an as-needed basis and utilizes two law firms. Lloyd, Gosselink, Rochelle & Townsend, P.C. (LGRT) for consultation regarding water-related issues. LGBRT was the District's primary advisor during FYl2 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.
- Review of documents to include contracts and bylaw revisions, investment policy, bank policy, and documents necessary to separate from CTCOG.
- Preparation of Board resolutions associated with the new legislation effective September 1, 2012; per legislative changes.
- Application of Professional Services Procurement Act in selecting Construction Management and RFQ to select design build contractor.
- 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 Bell Count, Village of Salado, Salado WSC, Jarrell Schwertner WSC, Texas AgriLife Extension Institute of Renewable and Natural Resources, Texas Home Builders Association, and Hank's Family Ranch.

4.Other Services

Hamson Consulting: The Board contracted with Hamson Consulting in December 2009 to provide information technology consulting services. The work was composed of improvements to the stream gauge network on Salado Creek to automate the collection and processing of gauge data to support the District's drought management plans. The collection and processing of NOAA. Nex-Rad rainfall intensity data was also automated. Relationship on the Nex-Rad system has continued in 2012.

Assisted the General Manager in preparing the new building for network by providing labor and design for hard wiring the offices for future network.

Managed the Website server and maintained the equipment off site until installation at the new office building in March of 2012.

Provided new staff members with limited content management of the website and provided additional content management as needed to the site as requested.

Supported the District on an as needed bases to manage the gauges owned by CUWCD.

Village of Salado: The Board entered into an interlocal agreement with the Village of Salado (VOS) in April 2010 to allow VOS to use data from the District's Salado Creek stream gauge network to develop an early warning system of flood conditions in the Creek. Progress developing the system due to destruction from September 18, 2010 flood. 2011 the gauges were in place and operational with ATT cell connection but cost and reliability is still and issue due to weak signal and no signal during weather conditions necessary for the system to be reliable. The System has been operating and functional for all of 2012.

Bell County Stakeholders Group Interlocal Agreement: The Board entered into an interlocal agreement in calendar year 2012 with Bell County Commissioners Court, Village of Salado, Salado Water Supply Corporation, Jarrell Schwertner Water Supply Corporation, Texas Home Builders Association, Texas A&M AgriLife Extension Institute of Renewable and Natural Resources, Baylor University Geologist - Dr. Joe Yelderman for the purposes of analyzing specie assessment of the Salado Salamander and the United States Fish and Wildlife services proposed rules to list the Salado Salamander as an Endangered Species. The Stakeholders group collectively contributed funds up to $65,000 ($15,000 contributed by CUWCD) to evaluate current science, develop new science, and prepare comments as a group opposing the listing. Clearwater UWCD defends the position that regulating mechanisms are in place (by CUWCD) on spring flow to protect the specie.

B. FINANCIAL ITEMS

1. Budget and Tax Rate

The District held three workshops (June, July and August 2011) to develop an operating budget for the upcoming fiscal year (FY12) and to set the corresponding ad valorem tax rate. The District has consistently lowered or kept the same tax rate since it began assessing taxes. The adopted tax rate for FY11-12 was $0.0040/$100 valuation, the same rate as the previous three fiscal years.

The Budget for FY12 was $565,933.33 and ended FY12 with adjusted income of $558,621.24 and total expenditures of $514,737.21. The district came in under budget by $$43,884.03.

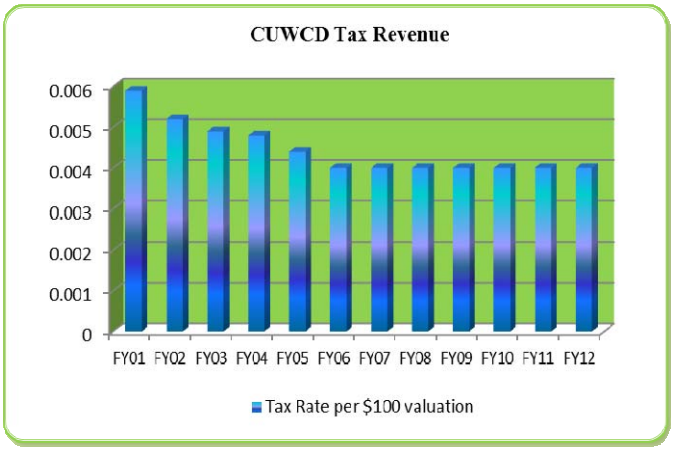
The Board approved in FY12, withdraw of $327,000.00 from Reserve Funds for the purpose of Construction, Landscaping and Rainwater Harvest at the new facility located at 700 Kennedy Court. The project cost was $323,470.08 thus $4,029.92 will return to Reserve Fund.

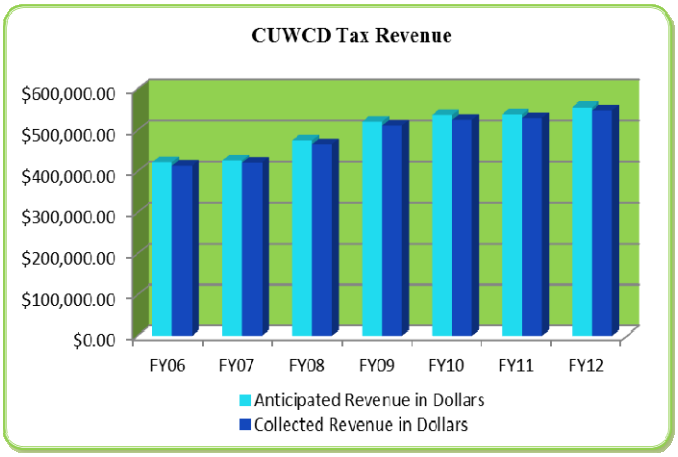
The Board prescribed closing the year with $47,913.95 returned to Reserve Fund.

The approved budget for FY12, along with the ending schedule of revenues and expenditures for FY12, is attached as **Appendix A.**

2. Financial Audit

An annual audit of the District's finances is required by Chapter 36.153 of the Texas Water Code.





Clearwater's audit occurs in conjunction with CTOG's audit until the District's contract ended March 31, 2012. The fiscal year for CTCOG runs from July 1st through June 30th of each year.

The District conducted an RFQ process in November and December 2012 to select an auditing firm. The District selected Alton Thiele from a pool of auditing firms notified of the process.

See Appendix B for RFQ's and FY12 Financial Audit.

C. MISCELLANEOUS POLICIES/ISSUES

1. Administrative Fee Schedule Revised

The Board revised the Administrative Fee Schedule in January 2010 to incorporate costs associated with the technical and legal review that occurs in processing permit applications. In the past, these expenses were paid by Clearwater; the revised fee schedule places this burden on the permit applicant.

In August 2011 the Fee Schedule was revised to remove the $100 drillers log deposit requirement due to new legislation requiring well drillers to provide the log to all GCD's and UWCD's. No changes were made in 2012.

See Appendix C for revised Fee Schedule..

2. Bylaws Revised

In February 2012, the Board revised the District Bylaws as follows:

- Corrected District Headquarters to: 700 Kennedy Court, Belton, TX.

ARTICLE I

DESCRIPTION OF ENTITY AND ITS OFFICES

Section 1. The Clearwater Underground Water Conservation District ("District") has been created 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) and 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*. These bylaws are adopted to facilitate the conduct of the business of the District. In the event of any conflict between these Bylaws and applicable law, it is expressly recognized that such conflict is inadvertent and unintended, and the law shall govern.

Section 2. Principal Office. The principal office of the District is located at 700 Kennedy Court, Belton, Texas 76513, or at such other place as the Board of Directors may establish by Board resolution from time to time.

See Appendix D for Bylaws and Resolution.

3. Plans to Separate from CTCOG

In March 2010, the Board renewed the CTCOG contract for a one year period with consideration for renewal to occur in September 2010. The District was in the process of purchasing property in the Belton Business Park. The property purchase would solidify plans to separate from CTCOG. As such, the Board began looking at building and staffing needs. Architectural Edge, Inc. was selected to lead the architectural/engineering team. The majority of the board wished to construct an energy and water efficient building not to exceed 2,800 sq. ft. in size incorporating LEED features if not cost prohibitive.

In May 2011, the Board hired a New General Manager, Dirk Aaron, to replace the Administrative Manager, Cheryl Maxwell. The new GM led the staff, while being trained by Mrs. Maxwell. She was retained at 1/2 salary for the remainder of calendar year 2011. New GM will work toward a temporary staffing pattern of 2 FTE's and one part-time staffer (max 30 hours per week) to continue the operation of the District and on-boarding of the District to the new facility in the first three months of 2012. Staffing pattern in FY2012 was revisited by the new GM and the board in the budgeting process for FY13. The Board moved that staff size could be increased to three FTE's: General Manager, Administrative Assistant, and Educational Coordinator / Field Technician. Staff positions were completed and in place by October 1, 2012.

The Board of Directors in May 2011, selected Keilla Group under a design build contract to construct the new facility at 700 Kennedy Court in Belton on the two lots purchased by the Board in FY10. The Board contracted with the Larry Neal Architecture Firm for construction management required as a part of the design building process.

The new facility was redesigned to not have a classroom facility but will have a board room, central work area, 3 offices, lab area, and open lobby. The square footage is at 2400 square feet with an open design and energy efficient. The structure is all brick with rainwater catchment for landscape water needs. The external and internal windows allow for great lighting and staff efficiency. Con-construction started in the summer of 2011 and the facility will turned to Clearwater Staff on March 15, 2012. Staff moved in to the new facility on April 1, 2012.

D. BOARD OF DIRECTORS

1. District Officers and District Board Meetings

District Officers for 2013 were designated at the meeting following the general election held on November 6, 2012. The 2012 Officers are identified below, along with the office they held and precinct they represent. John Mayer, At-Large Director (elected November 2, 2010) resigned in September 2011. The board announced his intention to resign for personal reasons and took action to appoint a replacement in October 2011.

Applications were taken and the appointee, David Cole, was selected to the At-Large Directorship until a special election for the remaining two years of John Mayer's position to be held, November 6, 2012 at the General Election. Pre-clearance with the Secretary of State's office for the special election was sent in August, 2012.

Clearwater UWCD contracted with the Bell County Clerk's office to conduct the election for the three Board positions during the November 6, 2012 general election. The terms for Directors are staggered with positions in Precincts 1 and 3 up for election in 2012, and Precincts 2, 4, and At-Large up for election in 2014.

The At-Large position was a special election for the final two years of the position John Mayer resigned from in August of 2011. David Cole (appointed Sept. 13, 2011), filed for the position as did Steven L. Hoskins, Joe F. Torralva, and Bradley B. Ware.

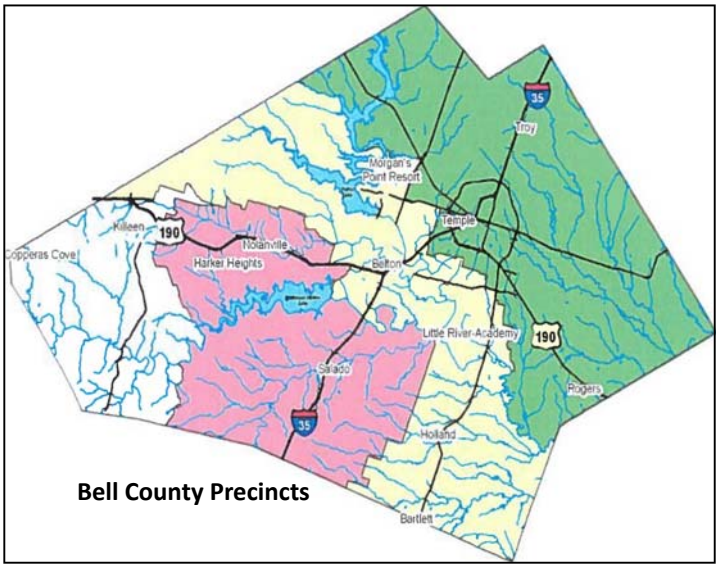
The Precincts 1 & 3 candidates were incumbents Leland Gersbach and Wallace Biskup respectfully , with no opposition.

Results after the election confirmed David Cole as At-Large Director for a two year term. Precincts 1 & 3 incumbents were confirmed for four year terms.

The election was canvassed on November 19, 2012.

Following is a map of the Bell County Commissioner Precincts which also serves as the precinct boundaries for the District.

Leland Gersbach, President	**Precinct 1**	**Pct. 1**
Bill Bartlett, Director	**Precinct 2**	**Pct. 2**
Wallace Biskup, Vice President	**Precinct 3**	**Pct. 3**
Judy Parker, Secretary	**Precinct 4**	**Pct. 4**
David Cole, Director	**At-Large**	



Bell County Precincts

2. Meetings - FY12 (Oct 2011-Sept 2012)

The Board of Directors held 13 Board meetings, 13 Workshops, 1 Open House, and 3 Informational meetings in FY12. The Workshops and regular Board meeting agendas included discussion on the following topics:

- Topics associated with establishing offices at new building, landscaping, utilities, phone and internet provider, IT maintenance, and building security..
- Policies associated with Investments, Employee Handbook, By-laws revision, Retirement Plan.
- Decisions on permitting new N1 & N2 wells.
- Conduct hearings on drilling and operating permits.
- Salado Salamander issues as it pertains to CUWCD's governance of groundwater.
- Reviewed effectiveness of voluntary drought contingency plan.
- Approve providers of ArcGIS Support and development of Web-map, Public Access, and ISO App.

E. DISTRICT RULES

During FY 12 the District did not amend the Rules. During FY11, on January 11, 2011, was the last major amendments to the District Rules which were adopted and summarized below:

A) Rule 10: Reworking and Replacing a Well to address administrative approval of replacement wells. The amendment allows staff to approve requests where the new well may be located up to 50 feet from the existing well provided extenuating circumstances exist and other requirements are satisfied. Requests to locate a well beyond 50 feet of the existing well may only be granted by the Board. The amendment also clarifies that the applicant may appeal staff's decision.

B) Rule 1.1: Definitions of Terms, Rule 8.3 Permit Exclusions & Exemptions, and Rule 12.3 pollution of Groundwater to address the status and processing of geothermal wells. "Open Loop Geothermal Well" means any geothermal well designed to produce groundwater from any aquifer or groundwater source for geothermal use and where the produced water may subsequently be used for any other purpose or injected or re-circulated back into the original or any other aquifer or groundwater source.

During FY11, on August 9, 2011 the Board of Directors approved at the conclusion of the required public hearing and proper notification District Rules that reflect the following recommendations from Staff, Consultants and Legal Advisory

A) Rules that addresses the District's well log deposit and removes the deposit and requires Well Drillers to provide the log directly to the District Staff.

B) Rules that addresses the District's statutory requirements and procedures regarding the District's permitting process.

C) Rules that address the changes made to Chapter 36 of the Texas Water Code by the Texas Legislature during the 82nd Regular Session, including but not limited to language related to the ownership of groundwater, the process for adopting Desired Future Conditions, clarification of the language on permitting exemptions, the filing of well logs and geophysical logs with the District, the process for conducting permit hearings, clarification of language related to the District's Management Plan, the change from Managed Available Groundwater to Modeled Available Groundwater, and considerations in reviewing permit applications begin the five year update to the District Management Plan. Managed Available Groundwater (MAG) figures that were developed for the Edwards BFZ and Trinity aquifers through the joint planning process by Groundwater Management Area 8 were included in the District Management Plan after the update which occurred in FY11.

Groundwater districts may be audited by the State every seven years to determine if the District is actively engaged in achieving the objectives of its management plan. The Clearwater District has not yet been audited but expects and is prepared for such audit in 2013. A detailed discussion of the District's Management Plan activities based on the 2011 approved Plan is included later in this report.

F. MANAGEMENT PLAN

Texas Water Code, Chapter 36.1071--36.1073, the District Management Plan must be reviewed and readopted every 5 years. The plan is subject to approval by the Texas Water Development Board (TWDB). Clearwater's management plan was due to the TWDB by March 6, 2011. In September 2010, Clearwater approved a Task Order with Bar W Groundwater Exploration, LLC (Randy Williams), to update this plan.

Proposed revisions for the 5 year update to the District Management Plan have gone through two preliminary reviews by the Texas Water Development Board (TWDB). The revised Management Plan was accepted by the Board following the public hearing on the revised Management Plan, which was held at Tuesday February 8, 2011 meeting, after which the Board adopted the revised plan. The Management Plan was sent to TWDB for approval prior to the due date, March 6, 2011. The district received approval from TWDB on April 13, 2011.

The total Modeled Available Groundwater (Old MAG) as a whole is 6,489 ac-ft/year and for the Trinity Aquifer is 7,068 ac-ft/year. The Management Plan states that by the year 2050, exempt well use in the Trinity Aquifer as a whole may reach 1419 ac-ft/year, and the Edwards BFZ may reach 825 ac-ft/year. Thus, this leaves the District with 5,649 ac-ft/year in the Trinity and 5,644 ac-ft/year in the Edwards BFZ available for permitting. These two totals are known as the Managed Available Groundwater (New MAG).

3. 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. The District goals are as follows:

- Providing the most efficient use of groundwater;
- Controlling and preventing waste of groundwater;
- Addressing conjunctive surface water management issues;
- Addressing natural resource issues which impact the use and availability of groundwater, and which are impacted by the use of groundwater;
- Addressing drought conditions;
- Addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, or brush control where appropriate and cost-effective; and
- Addressing in a quantitative manner the desired future conditions of the groundwater resources.

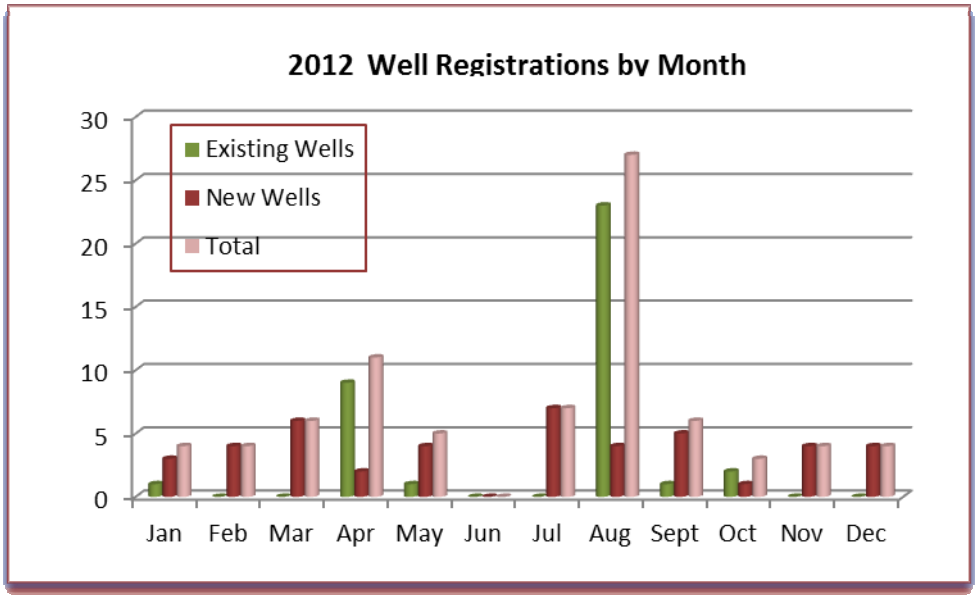
The following is a summary of the District's activities related to these goals.

A. PROVIDING THE MOST EFFICIENT USE OF GROUNDWATER

Objectives A.1 and A.2: Registration & Permitting of Wells.

Objective Satisfied

The registration and permitting of wells is an ongoing process. During calendar year 2012, **81 wells were registered**, and 1 of the wells was non-exempt. The tables below summarize the well registration and permitting activity through December 31, 2012.



Well Registration Summary
2002 through 2012

Year	Exempt Wells		Non-Exempt Wells*				Total
	Grandfathered	New	Grandfathered	New	New I	New II	
2002	3513	74	50	0	0	0	**3637**
2003	377	77	4	2	0	0	**460**
2004	18	81	15	1	1	1	**117**
2005	22	90	15	0	2	3	**132**
2006	16	80	6	0	0	2	**104**
2007	22	52	11	0	5	2	**92**
2008	11	45	4	0	2	4	**66**
2009	14	43	2	0	2	6	**67**
2010	17	66	0	0	1	7	**91**
2011	17	66	3	0	2	2	**90**
2012	36	44	1	0	0	0	**81**
Grand Total	**4063**	**718**	**111**	**3**	**15**	**27**	**4937**

*Effective March 1, 2004, the District began designating new non-exempt wells as either Classification 1 or Classification 2 as follows:

Classification 1:

a. A well used for domestic purposes or for watering livestock or poultry.
b. A well drilled, equipped or completed so it is incapable of producing more than 25,000 gpm (17 gpm).
c. A well located on a tract of land less than 10 acres in size, created after March 1, 2004.

Classification 2:

a. A well used for purposes other than domestic, livestock or poultry, regardless of production.
b. A well drilled, equipped or completed so it is capable of producing more than 25,000 gpm (17 gpm) regardless of the use.

Well registration totals over time may no longer accurately reflect the number of wells actually drilled into the ground. This is because some of the registered wells are never drilled or have been plugged. Additionally, some exempt wells may be converted to a non-exempt well at a later date. The table below shows a more accurate reflection of the number of wells on the ground.

Well Registration Details

Type of Adjustment	Exempt Wells		Non-Exempt Wells				
	Grandfathered	New	Grandfathered	New	New I	New II	Accumulative Total
Total as of 2012	4063	718	111	3	15	27	4937
Never Drilled[2]	0	-25	0	0	-1	-5	-31
Plugged[3]	-135	-16	-9	0	0	0	-160
						TOTAL	4746

As we have seen in recent years, registration figures for 2012 show that the majority of exempt wells registered are new wells. With regard to non-exempt wells, 2012 was similar to past years in that the majority of wells registered were new wells.

The Table below summarizes the non-exempt wells that were registered during 2012 and the corresponding permits that were issued where applicable.

Non-Exempt Well Registration/Permitted During 2012Calendar Year

File No.	Well Owner/	Ac-ft/	Aquifer	Use	Permit Type
N1-12-002P	Strasburger		Alluvium	Ag/Irrigation	Created and plugged
N1-12-001P	Smitherman			Domestic	Application Withdrawn

During 2012, five entities in Bell County transported groundwater outside the District. A total transport of 33.98 ac-ft occurred from the Edwards BFZ aquifer and 100.65 ac-ft from the Trinity aquifer. This signified a decrease of 10.58 ac-ft from the Edwards BFZ aquifer and an increase of 1.91 ac-ft from the Trinity aquifer.

The Edwards BFZ transport for each respective year is: 2009 =12.54 acre feet; 2010 = 32.98 acre feet, 2011 = 44.56 acre feet, and 2012 = 33.98 acre feet.

The Trinity transport for each respective year is: 2009 = 34.72 acre feet, 2010 = 63.27 acre feet, 2011 = 98.74 acre feet, and 2012 = 100.65 acre-feet.

The District is allowed by state law to charge a transport fee of $0.025/$1,000 gallons transported. This generated total revenue of $1,096.72 for 2012, $1,167.33 for 2011, $784.06 for 2010, and $385.00 in 2009. A summary of transport activity for 2012 is shown in the following table.

Summary of Groundwater Transport for 2012

Entity (Water Supply Corporation)	Well Number	Aquifer	Destination County	Gallons	Acre-Ft	Transport Fee
Jarrell Schwertner	N-02-042G	Edwards BFZ	Williamson	11,072,952,	33.98	$276.82
Bell-Milam-Falls	N-02-038G N-02-046G	Lower Trinity	Falls, Milam, Williamson	30,349,200	93.14	$758.73
Little Elm Valley	N-02-039G	LowerT rinity	Falls	750,954	2.31	$18.78
East Bell	N-02-034G	Lower Trinity	Falls	1,372,063	4.21	$34.31
Oenavill & Bell Falls	N-02-017G	Lower Trinity	Falls	323,081	.99	$8.08
Total				43,868,220	134.63	$1,096.72

Objective A.3: Maintain a Groundwater Database.

Objective Satisfied

The District's database is continually updated as new information is acquired.

1. Groundwater Production:

   The District continued collecting data from non-exempt wells during 2012. Monthly production reports are required by the 10th 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 2012, 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.

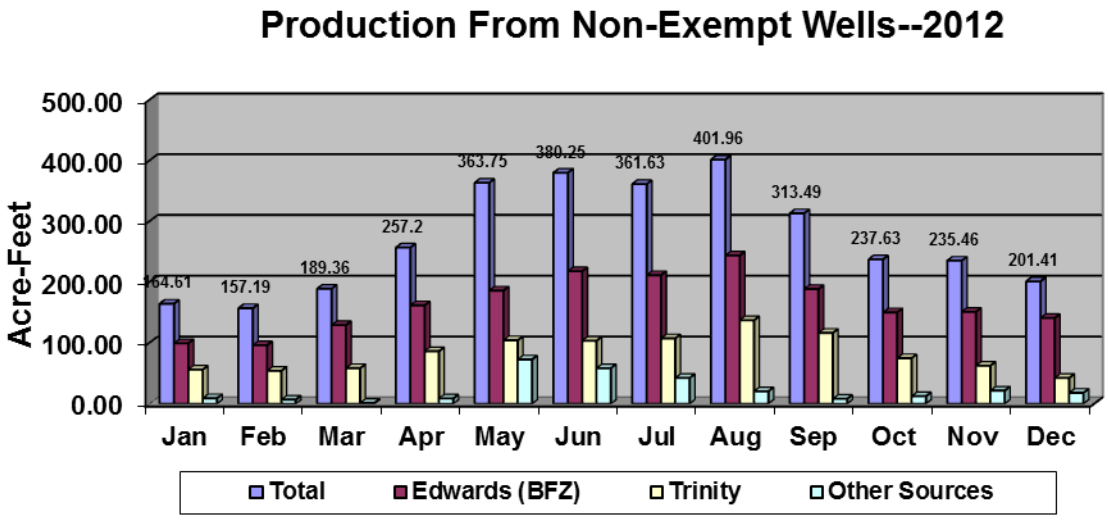
2012 Permitted Volume for Non-Exempt Wells

Edwards BFZ:	2,501.55 ac-ft (47 wells)
Trinity:	2,199.46 ac-ft (48 wells)
Other Aquifers:	477.04 ac-ft (17 wells)
TOTAL:	**5,178.05 ac-ft (112wells)**

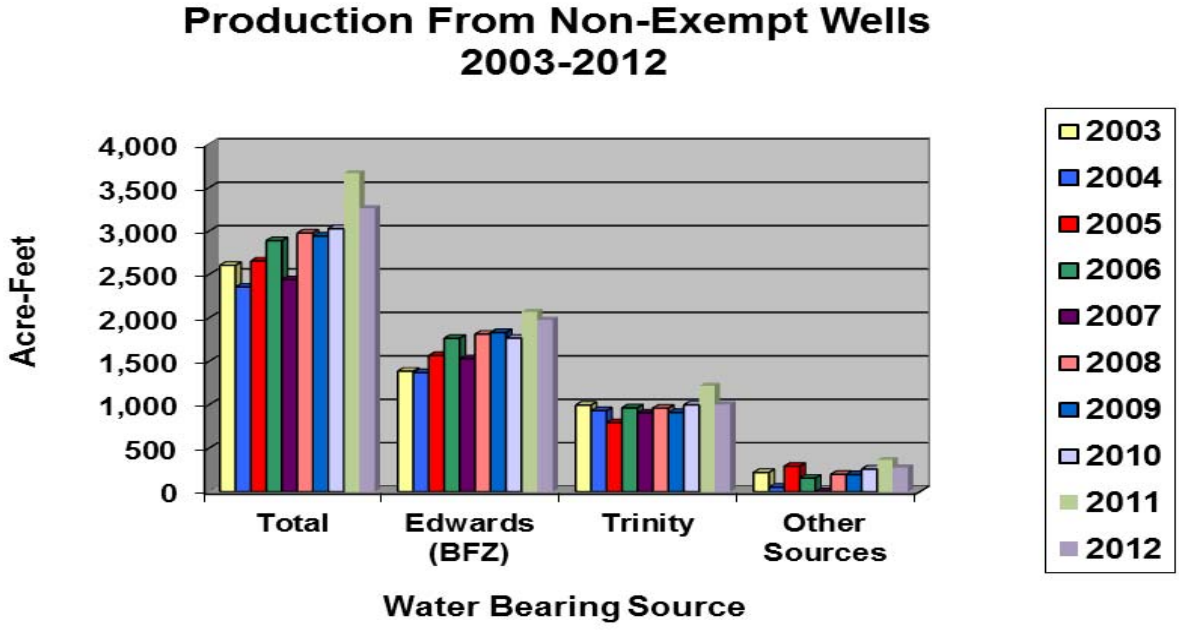
2012 Annual Production from Non-Exempt Wells

Edwards BFZ:	1,979.41 ac-ft (43 wells)
Trinity:	1,004.91 ac-ft (43 wells)
Other Aquifers:	279.58 ac-ft (11 wells)
TOTAL:	**3,263.91 ac-ft (97 wells)**

The following chart shows 2012 production by month and aquifer. Production was at its highest level during the month of August with a monthly withdrawal of 401.96 ac-ft. This is down from the previous year which saw a peak in production of 460.87 ac-ft. during the month of July. Throughout the year, withdrawals from the Edwards BFZ were consistently higher than from the Trinity aquifer. Production from Other source aquifers was minimal throughout the year. Production from Other source aquifers is higher during May, June, and July which reflects agriculture irrigation necessary at that time of year.

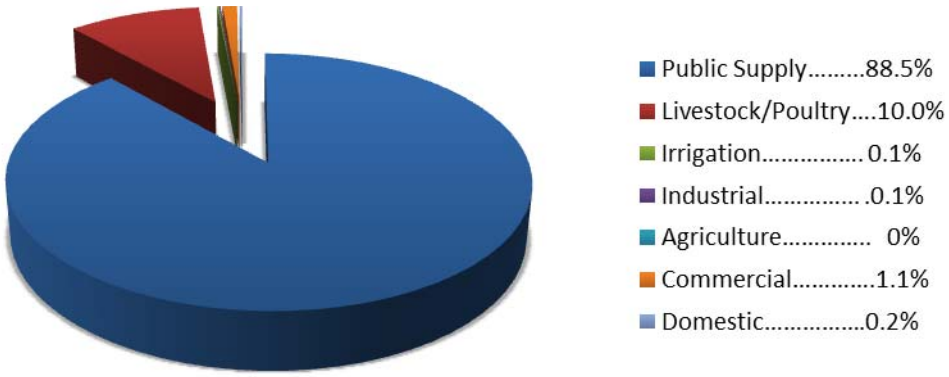


In the following graph, production from 2012 (97 wells) is shown compared to production in years 2003 through 2011. Production in 2012 was similar to the previous years with production from the Edwards BFZ aquifer slightly lower during 2012 and production from the Trinity and Other sources also slightly lower.

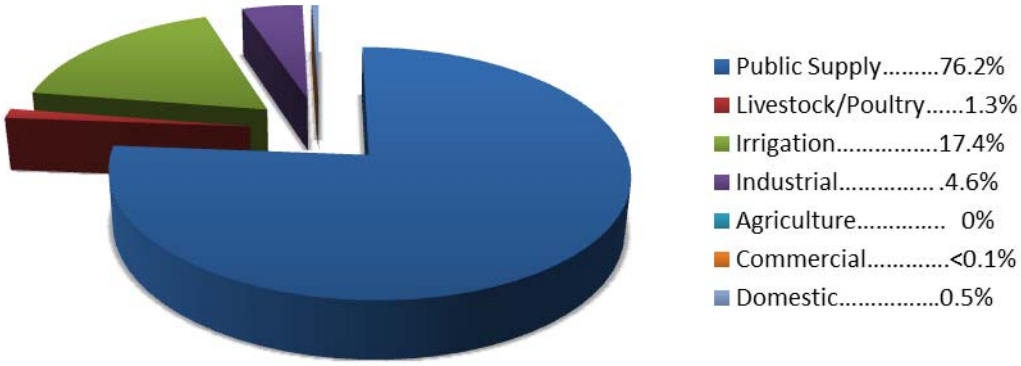


The following pie charts show how the groundwater from the different aquifers was used during 2012. In the Edwards BFZ and Trinity aquifers, water produced from non- exempt wells is used primarily for public supply purposes (88.5% and 76.2% respectively), while water produced from non-exempt wells in other formations was used primarily for agricultural use (99.4%).

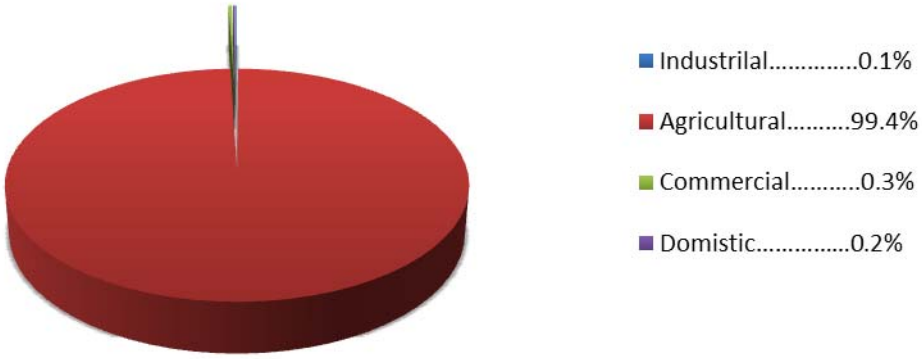
2012 Use of Groundwater
By Non-Exempt Wells - Edwards BFZ Aquifer



2012 Use of Groundwater
By Non-Exempt Wells - Trinity Aquifer



2012 Use of Groundwater
By Non-Exempt Wells - Other Groundwater Sources



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 provided. The results are shown below for exempt wells registered through December 31, 2012.

***Summary of Exempt Well Production**

Aquifer	Number of Wells	Estimated Use Acre-feet/Year
Edwards (BFZ	712	478
Trinity	1946	1308
Other Aquifers	1948	1309
TOTAL	**4606**	**3095**

**Calculations for exempt well production excluded wells that were plugged, monitor wells, and wells that were never drilled. Annual Summary conducted by District Geoscientist, Tandy Williams, Bar-W Exploration.*

*** Estimations are preliminary based on provisional numbers of exempt wells by aquifer .*

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

Production Summary for All Wells

Aquifer	Non-Exempt Well Production (Ac-Ft/Year)	% of Total	Estimated Exempt Well Production (Ac-Ft/Year)	% of Total	Total Production (Ac-Ft/Year)	% of Total
Edwards (BFZ)	1979	81%	478	19%	2457	39%
Trinity	1003	43%	1308	57%	2311	37%
Other Aquifers	216	14%	1309	86%	1525	24%
TOTAL	**3198**	**51%**	**3095**	**49%**	**6293**	**100%**

The Chart above shows that overall, exempt wells account for 49% of all the groundwater produced in Bell County. In the Trinity, 57% of production is attributed to exempt wells; however, in the Edwards BFZ, exempt wells only account for 19% of groundwater production, with the vast majority coming from non-exempt wells. During 2012, 86% of the production from wells producing from other groundwater sources is attributed to exempt wells.

Overall, production from the Edwards BFZ aquifer accounts for 39% of total groundwater used in Bell County, with the Trinity aquifer accounting for 37%, and other aquifers accounting for 24%.

Managed Available Groundwater

Analysis of Permits and Exempt Use Reserves

Aquifer	** MAG Modeled	Reserved for Exempt	Managed	HEU Permit	Operating Permit	Total Permitted	Remaining MAG
Edwards (BFZ)	6469 ac-ft.	825 ac-ft.	5644 ac-ft.	2209.7 ac-ft.	291.85 ac-ft.	2501.55	3142.45
Trinity	7068 ac-ft.	1419 ac-ft.	5649 ac-ft	***1502.6 ac-ft.	*761.06 ac-ft	2199.46 ac-ft	3449.54 ac-ft

* Drilling permits to Moffat WSC (55.24 ac-ft) and Armstrong WSC (483.9 ac-ft), in the Lower Trinity are in place. Operating permits will be reviewed upon completion of the wells. Drilling permit does not guarantee production at these levels.

** MAG's are assigned by TWDB based on GMA8 approved DFC's.

*** Total reflects City of Holland and City of Rogers HEU Permit on wells no longer in production.

2. Aquifer Monitoring:

The Texas Water Development Board (TWDB) typically measures water levels in selected wells in January each year. Clearwater measures water levels in selected wells twice annually (January and July).

The following include a table and graphs that provide a summary of the monitoring data. NOTE: Larger numbers represent greater depth necessary to reach the surface of the aquifer, i.e. a decline in the aquifer level. Numbers in red were taken by the TWDB (or are continuous monitoring wells), whereas numbers in blue were taken by Clearwater. 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 but utilizes an e-line if necessary. Air lines are used when available. 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. The TWDB typically uses a steel tape or an airline and does not request the pump to be turned off.

Edwards (BFZ) Aquifer

Water Level- Depth Below Land Surface in Feet

State We #	CUWCD We #	Date of Measurement																								
		Other	Jan-Mar 03	Jul-03	Jan-Feb 04	Jul-04	Jan-05	Jul-05	Jan-Feb 06	Jul-06	Sep-06	Oct-06	Nov-46	Jan-Feb 07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Jan-10	Jul-10	Jan-11	Jul-11	Sep-11	Nov-11	Jan-12	May-12	Jan-13
58-34-627 (Salado ISD)	W-03-304G	--	39.9	42.6	41.42	39.54	39.05	43.42	43.34	43.58	43.09	44.55	43.75	43.84	35.17	41.92	43.59	43.42	51.5	39.62	42.12	43.30	44.46	45.32	44.42	42.62	41.92	42.22
58-34-502 (Salado ISD)	W-03-305G	(1995) 50.5	48.7	56.14	49.17	48.58	47.16	51.93	51.79	52.39	53.09	52.96	52.23	49.5	44.93	45.93	52.16	51.59	53.65	48.39	50.75	45.95	53.49	54.19	52.53	50.23	53.95	45.93
58-34-603 (Salado WSC)*	W-03-309G	(1981) 29.27	43.2	36.17	25.5	32.71	27.17	36.39	36.5	41.84	34.39	39.21	33.39	27.55	21.53	31.42	40.17	38.62	34.62	27.12	31.53	31.43	35.52	37.39	32.53	30.73	31.25	32.43
58-13-502 (City of Bartlett)*		--	--	--	--	--	42.62	40.13	50.29	52.29	55.92	50.37	55.12	53.76	43.45	46.62	46.46	51.34	53.33	NA	58.34	56.80	61.21	58.59	76.79	75.99	67.35	66.90
58-34-622 (Foster Stagh)*	W-03-302G	(1993) 95.39	95	95.58	99.69	92.79	96.3	97.1*	93	95.25	92.75	95.75	91	50.30	72.34	96.51	72.34	88.75	95.67	97.67	91.67	92.64	97.21	99.22	93.62	79.72	91.92	95.43
58-34-625 (Cemetery)***	W-03-308G		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	71.51	70.91	75.91	72.90	64.93	91.51	96.13	90.57	64.73	73.17	71.54
58-34-702 (TxDOT)***	W-03-306G	(1980) 71	73.25	71.96	72.72	71.94	72.2	72.1*	72.93	72.73	72.97	72.95	73.05	72.20	69.97	72.07	69.92	72.99	73.19	70.43	NA	72.35	71.35	71.15	72.39	74.2	73.95	71.20
58-34-915 (TxDOT)***	W-03-303G		--	--	--	--	--	--	--	--	--	--	--	--	--	--	124.90	125.47	129.15	119.19	120.45	121.75	125.39	126.41	126.19	125.19	123.57	125.15
58-34-801 (Unknown)	W-03-319G	(1988) 134.39	144.15	137.42	141.34	141.25	134.1	137.58	143.25	143.5	141.75	141.75	141.58	137.7	129.39	135.73	136.91	150.75	143.25	133.43	135.58	139.30	135.91	140.32	140.79	*NA	NA	NA

*Pump turned off at least 1-2 hours prior to measurement — TWDB measurement — CUWCD measurement

**Continuous monitor equipment installed ; data available: http://www.twdb.state.tx.us/groundwater/data/dbhydrowells.htm

***Daily trend from continuous monitor site on date of water level measurements ; November 2012

Pump in use less than one hour prior to measurement

****Well is no longer available

Trinity Aquifer

Water Level- Depth Below Land Surface in Feet

Well Number	CUWCD Well #	Date of Measurement																								
		Other	Jan-Mar 03	Jul-03	Jan-Mar 04	Jul-04	Jan-05	Jul-05	Jan-Feb 06	Jul-06	Sep-06	Oct-06	Nov-06	Jan-Feb 07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Jan-10	Jul-10	Jan-11	Jul-11	Sep-11	Nov-11	Jan-12	May-12	Jan-13
	E-02-721G (McCallum #1)	--	--	--	--	--	--	--	--	--	--	--	143.33	145.5	132.42	136.67	153.00	146.59	160.84	153.27	151.83	150.9	166.03	*171.334	165.03	157.73	157.63	155.23
	E-02-722G (McCallum #2)	--	--	--	--	--	--	--	--	--	--	--	143.25	145.00	131.92	135.17	152.25	145.83	160.25	152.83	152.07	150.8	166.5	171.67	165.1	158.07	158.37	153.07
	E-02-804G (Dotson)	--	--	--	--	--	--	--	--	--	--	--	--	335.75	324.50	328.71	338.92	356.42	359.83	351.65	NA	362.4	375.31	385.35	381.65	378.05	376.65	374.4
4C-58-201 (Central TX College)**	N2-09-006P	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	87.59	77.85	75.64	80.53	81.01	80.28	79.72	79.95	81.66
	E-38-005P (Stephenson)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	369.54	378.45	372.54	378.38	381.225	406.56	412.08	413.38	403.38	399.63	401.56
58-02-103 (Mayer)	E-02-139G (Mayer) E-06-053P (Texas Vet. Land Board)	--	--	--	182.1	189	*80.38	201.72	200.62	227.16	203.7	209.86	187.91 399.41	133.29 375.25	217.94 379.58	204.08 382.50	228.49 442.33	266.45 389.58	201.77 370.17	241.04 352.93	192.53 378.53	185.6 380.933	197.15 362.353	204.08 362.18	204.8 364.7	199.45 362.73	201.77 362.33	204.26 361.4
	E-03-444P (Purnell)	--	--	--	--	--	--	--	--	--	--	--	418.58	411.52	400.59	411.58	434.42	429.67	446.58	430.58	437.38	437.7	469.16	NA	471.4	457.93	457.93	455.34
	E-05-053P (Murphy)												313.83	282.63	268.42	291.92	334.42	323.76	368.58	336.54	345.24	335	403.38	404.7	386.04	357.34	376.8	370.6
	N2-07-003G (Killeen Crushed Stone)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	344.42	376.17	377.92	377.25	383.5	375.56	381.225	414.48	424.33	416.48	409.97	404.97	405.96
4C-53-102 (USCOE- Leona Park)	N2-04-002G	(1993) 55.14	68.35	70.42	71.28	71.92	72.6	73.33	74.16	74.5	74.66	75.00	75.25	75.35	--	76.55	77.66	78.98	78.71	79.28	79.96	80.58	81.12	85.21	81.58	79.9	78.2	81.68
58-05-901 (City of Hdland)	N-02-013G	(1995) +1.2 (flowing)	23.7	25.3	26.19	28.21	29.9	31.84	26.96	28.3	27.96	21.45	27.13	26.1	27.04	28.80	30.79	34.04	36.53	36.63	38.825	39.9	41.13	41.73	42.13	43.125	44.125	42.1
4C-45-701 (USCOE-Winkler Park)	N2-04-003G	--	bad reading	--	bad reading	326.09	bad reading	--	333.29	335.54	337.04	339.13	339.63	bad reading	--	--	344.63	349.46	352.88	356.76	358.26	360.61	366.54	400.86	406.16	372.26	372.5	373.06
4C-57-601 (Copperas Cove)***	N2-09-007P	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	306.54	295.47	308.1	313.4	319.94	316.55	311.9	309.74	312.56
	N2-05-010G (River Ridge Ranch Common Park)	--	--	--	--	--	--	--	--	--	--	--	219.33	256.68	266.25	261.92	280.17	284.25	293.58	281.46	287.33	286.783	312.02	325.18	319.4	308.38	304.13	303.06
4C-53-406 (Moffat WSC)	N-02-022G	(1967) 243.55	335	417.83	336	416.06	340	not avail.	not avail.	not avail.	not avail.	not avail.	not avail.	333	361.26	332.00	358.16	436.70	358.16	399.74	408.98	362.78	346.82	459.36*	457.05	455.49	458.6	471.09
	N-04-010P (East Bell WSC Well #2) **																									378	289	191
4C-63-501 (East Bell WSC Well #1) **	N-02-034G	(1962) +135 (flowing)	--	--	--	--	--	--	--																	378.00	278.00	280.00
4C-57-602 (Copperas Cove)***	N-02-008P	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	291.16	292.71	290.13	290.25	291.93	292.44	293.65	293.47	294.22

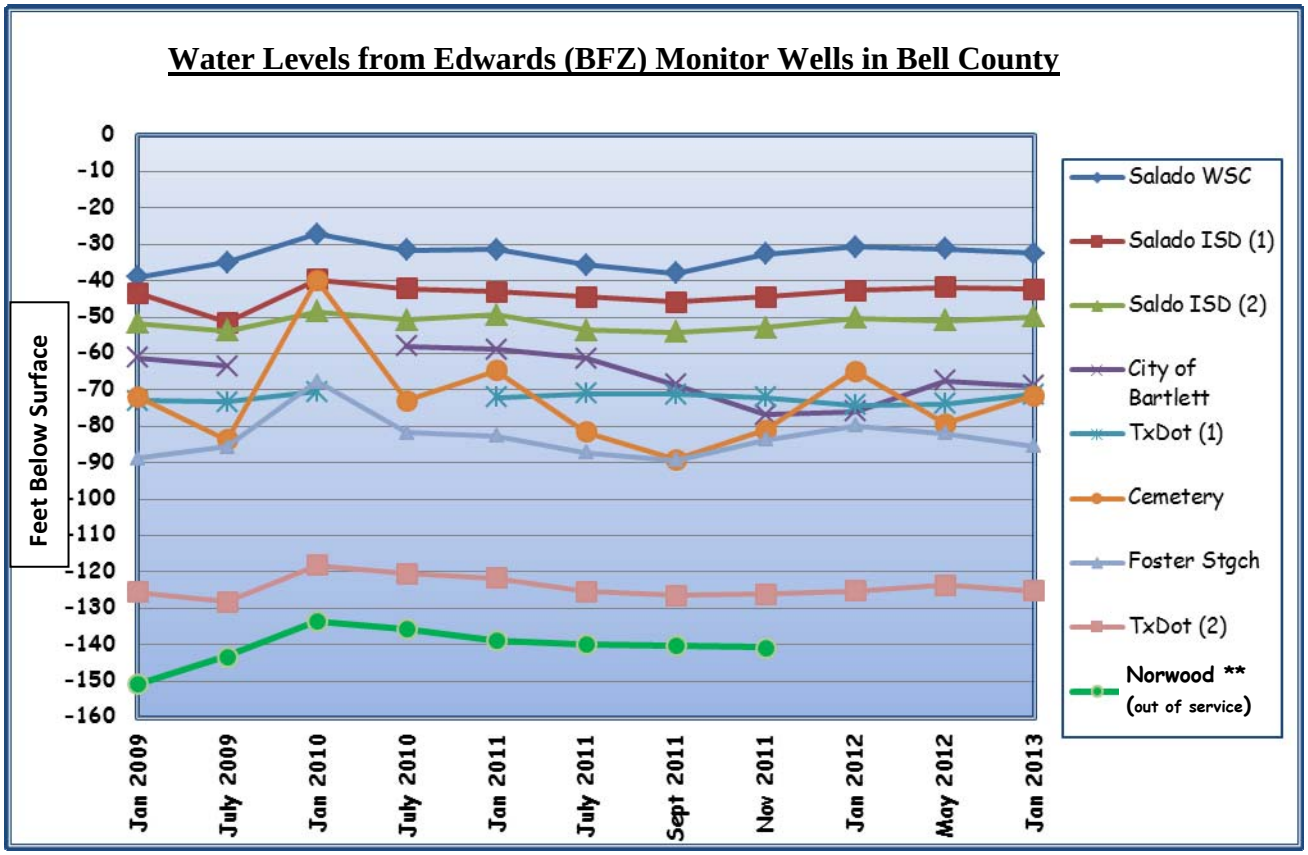
*Pump turned off at least 12 hours prior to measurement — TWDB measurement — CUWCD measurement

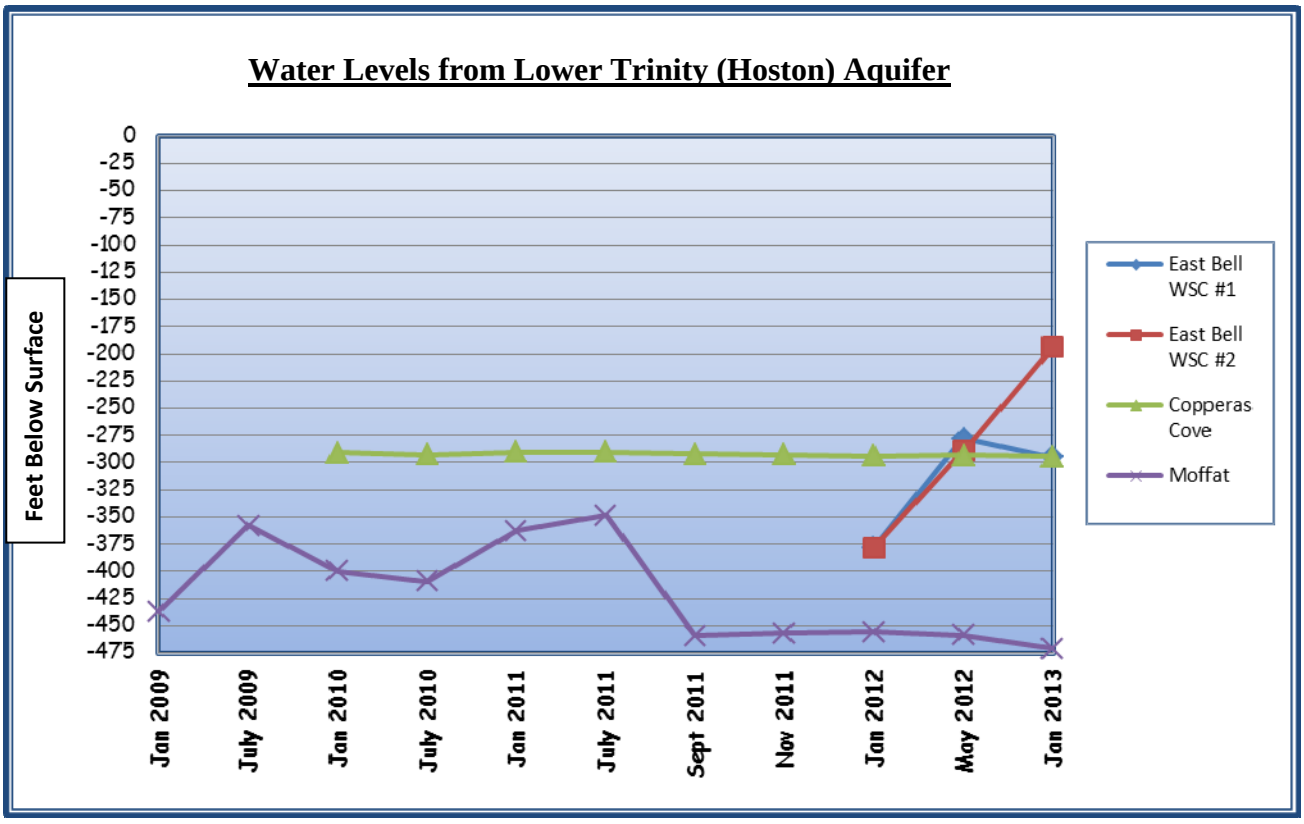
Method of measurement: 1-Steel Tape; 2-E-Line; 3-Air-Line; 4-Sonic Water Meter; 5-TWDB Continuous Monitor

**Measurement as reported by East Bell WSC — Lower Thirty Feet Rise — Middle Thirty Feet Rise — Upper Thirty Feet Rise

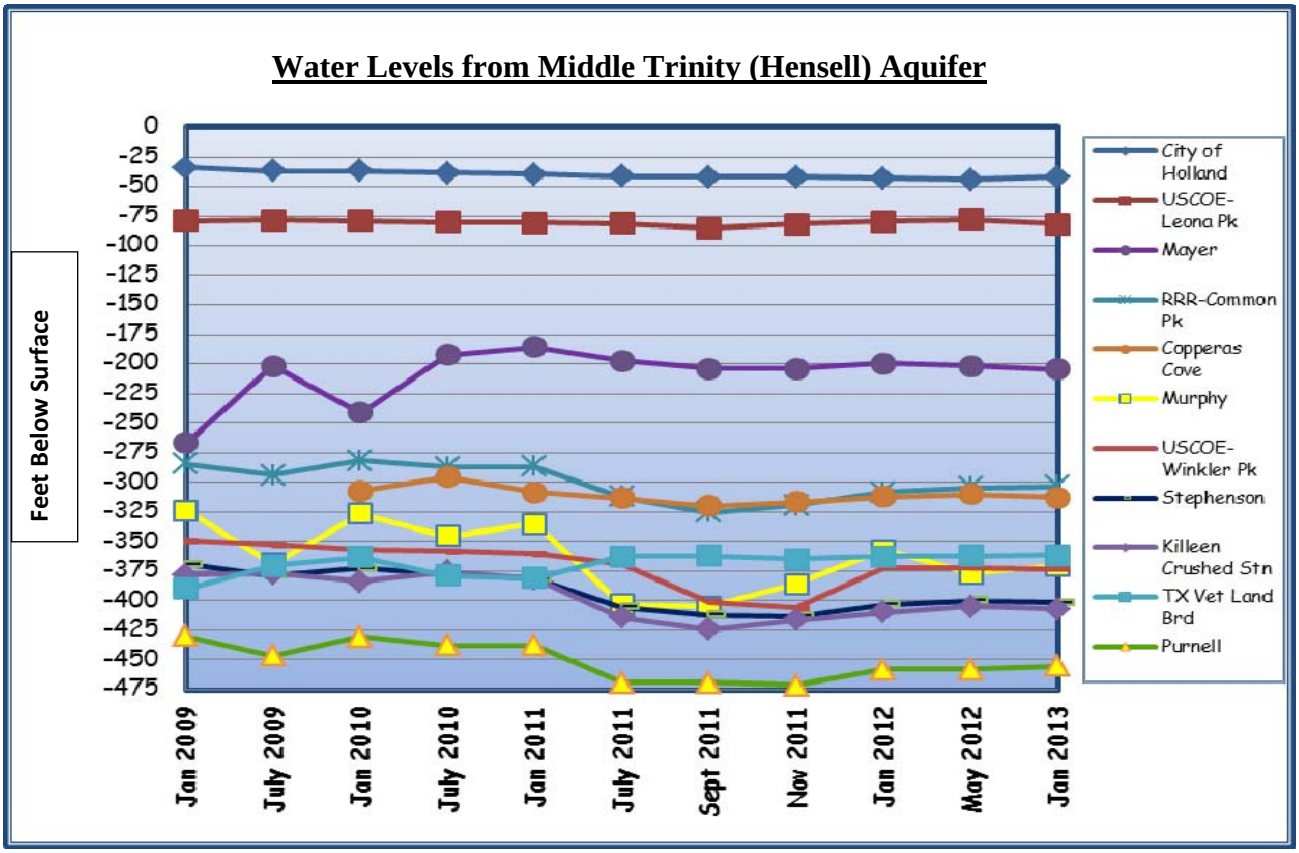
***Daily trend from continuous monitor site on date of water level measurements ; November 2012

The date for some of the TWDB well sites and a few of the sites measured by the District for the Edwards BFZ and Trinity aquifers are shown in the following charts.

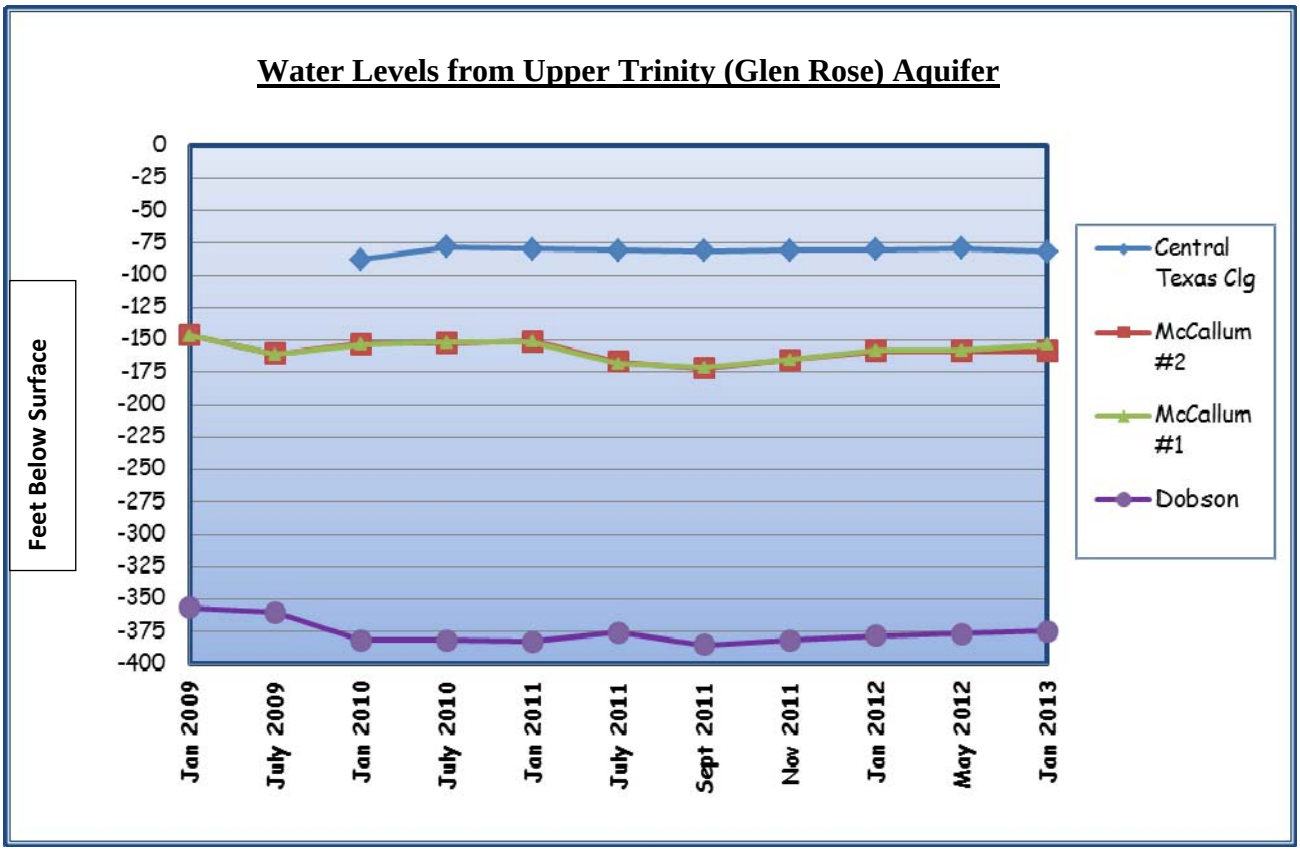




Water Levels from Middle Trinity (Hensell) Aquifer



Water Levels from Upper Trinity (Glen Rose) Aquifer



Objective A.4: Education—Water Cycle and Aquifer Status

Objective Satisfied

The District's Management Plan requires the dissemination of educational information regarding the water cycle and the status of the aquifers through at least two outreach methods/activities, and the District newsletter. During 2012 the District satisfied this requirement as follows:

1) Local Newspapers publish 51 articles in 2012 that involved CUWCD. The articles included topics on drought conditions, water conservation, up coming events, and ESA -Salado salamander issues. YNN, a local news station, also did a story on the aquifer. These articles were published in the following newspapers:

Killeen Daily Herald

Temple Daily Telegram

Salado Village Voice

A list of the articles is provided in Appendix E.


TEMPLE DAILY TELEGRAM

Senate hopefuls trade barbs in heated debate

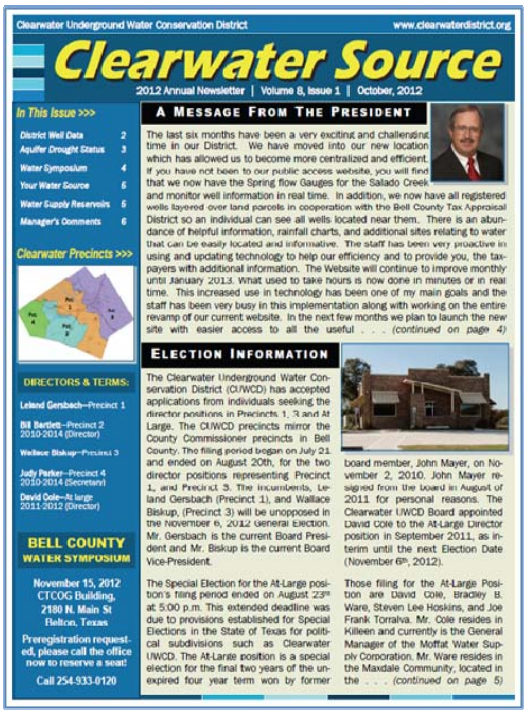
National Night Out

Trial testimony centers on who drew officer's gun

Bell Co. prisoner files federal lawsuit against Temple PD

Area aquifers near pre-drought levels

US widening its covert war in North Africa


Clearwater Source

2012 Annual Newsletter | Volume 8, Issue 1 | October, 2012

A Message From The President

Election Information

2) The District published its annual newsletter –*The Clearwater Source*– during the latter part of FY12. The newsletter was mailed in October 2012 to all registered well owners. Newsletter articles included an update of the move to the new facility, water sources for Bell County, water conservation, water quality protection, District activities, well registration and production, data on rainfall and aquifer levels, and the president's message on Clearwater's progress.

A copy of the newsletter is provided in **Appendix Q**.

3) Teacher in-service Educational Event was held on July 25, 2012 and July 26, 2012. A total of 8 teachers attended representing various schools in Belton ISD and Academy ISD. Training was taught by CUWCD Staff and Central Texas Master Naturalists on the "Major Rivers" Curriculum and utilized the teacher guides in conjunction with student guides and hands on activities. Each teacher received at least 3 sets of curriculum, a certificate of completion, and agreed to distribute materials at their respective campus. The Central Texas Master Naturalist went through the Major Rivers training July 19th, prior to the Teacher in-service event.

See Appendix F for activity report & course flyer.

Central Texas Master Naturalist complete Major River Training July 19, 2012

Several teachers present at the Major Rivers In-service Training July 25 & 26 pose for a picture with General Manger, Dirk Aaron.

4) Aquifer Status Reporting:

a) The District publishes information on the status of Bell County's aquifers on the District's website. For 2012, this information included water level measurements for 8 Edwards BFZ wells and 19 Trinity wells. This information is continually updated as new measurements and wells are added. Rainfall data and spring flow gauges are highlighted articles on the website and Facebook.

b) The District published its annual newsletter in October 2012 that included graphs depicting changes in the aquifer levels for the three Edwards BFZ aquifer wells and the three Trinity aquifer wells equipped with continuous monitoring systems.

B. CONTROLLING AND PREVENTING WASTE OF GROUNDWATER

Objective: Water Quality Protection.

Objective Satisfied

The District's Management Plan requires the dissemination of educational information on eliminating and reducing the wasteful use of groundwater. It focuses on water quality protection through at least two outreach methods/activities. During FY12, the District satisfied this requirement as follows. The District met the standard by promoting well plugging as part of the Annual Water Symposium, CUWCD website, well owner network, and the annual newsletter. In 2012 the District was challenged to document well plugging efforts due to the major highway expansion along IH-35.

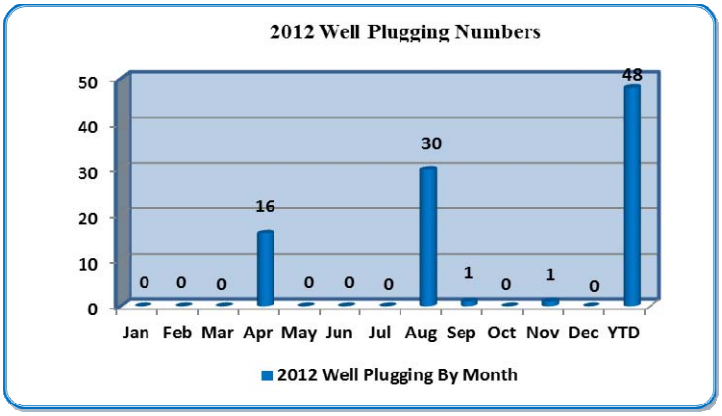
1) Well Plugging Education Outreach:

The District sponsored a well plugging demonstrations during FY10. The demonstration well was a large diameter hand dug well located at 4950 Atkins Road in the Salado area. The event occurred on July 21, 2010. The Texas AgriLife Extension partnered with the District in this event. In 2011, due to staff budget cuts, this cost program was discontinued by Texas AgriLife Extension. During calendar year 2012, the District website and Annual Water Symposium provide information on well plugging.

The demonstrations showed the proper way to plug a well and emphasized the importance of plugging abandoned wells to prevent groundwater contamination. In FY11, the collaborative effort to conduct on-site well plugging demonstrations with TAMU-Texas AgriLife Extension Service was no longer possible due to their budget constraints and reduction in staff.

Reports indicate 160 wells plugged between 2002 - 2012. 48 of those wells were plugged in 2012. The majority of plugged wells are a result of the IH-35 highway expansion by TxDot extending North and South throughout Bell County.

Well Plugging Demonstration - Hand Dug Well Atkins Road, Salado, Texas July 21, 2010



Example of Cistern vs. Hand-dug well. Site visit made to assist landowner and evaluate such structures

2) Classroom Presentations

Clearwater staff conducted several classroom presentations during the year that included a segment on non-point source pollution. The presentations consisted of a PowerPoint presentation and a groundwater model to demonstrate groundwater basics and the impact of non-point source pollution on both groundwater and surface water. Presentations were given to the following schools:

Killeen ISD - Nolanville Elementary (4 visits)
Nolanville Middle School
Belton ISD - Leon Heights Elementary
Academy ISD - Academy Middle School

Clearwater staff also conducted other presentation during the year within the Bell County community. Such presentations were given to the following clubs and organizations:

Bell County Water Symposium
FFA Leadership Development Contest (Judging/Networking)
ABWA Meeting-Salado
Annual Crops Clinic—AgriLife Ext. Service
Boy Scouts of America
Central Texas Master Naturalist
Leadership –Central Texas
Rotary Club-Temple

Refer to Appendix F for a complete list of items distributed during these events.

C. ADDRESSING CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES

Objective: Participate in Regional Water Planning Process.

Objective Satisfied

The District's Management Plan requires participation in the regional planning process by attending a minimum of two meetings of the Brazos G Regional Water Planning Group per fiscal year. During FY12 District representatives attended all meetings. District representative for October 1, 2011 - September 30, 2012 was Director, Judy Parker. Mrs. Parker was also elected by the GMA8 Membership to represent the Groundwater Management Area as and appointed member of Region G.

2012 Region G Meetings: January 26, 2012
April 4, 2012
August 17, 2012
October 23, 2012 (cancelled)

D. ADDRESSING NATURAL RESOURCE ISSUES WHICH IMPACT THE USE AND AVAILABILITY OF GROUNDWATER, AND WHICH ARE IMPACTED BY THE USE OF GROUNDWATER

Objective: Monitor Water Quality.

Objective Satisfied

The District's Management Plan requires monitoring of water quality by obtaining and testing water samples from at least six wells within the District. The District has an in-house water quality lab and offers free testing service to registered well owners. Testing parameters include coliform bacteria; alkalinity; conductivity/total dissolved solids; fluoride; hardness; nitrate; nitrite; pH; phosphate; and sulfate. During FY2012, the District satisfied this requirement as follows:

FY2012 Water Quality Testing

Test Date	CUWCD #	Aquifer
10/18/2011	E-02-382G	Edwards BFZ
10/25/2011	E-02-001G	Upper Trinity
11/8/2011	E-02-1957G	Edwards BFZ
11/22/2011	E-02-382G	Upper Trinity
12/6/2011	E-03-418P	Middle Trinity
12/20/2011	E-02-382G	Edwards BFZ
1/31/2012	E-02-1399G	Ozan
5/9/2012	E-12-017G	Null
6/26/2012	E-03-354G	Upper Trinity
6/28/2012	E-05-082P	Upper Trinity
8/7/2012	E-10-022P	Upper Trinity

Staff conducted 11 testing events on groundwater samples brought in by well owners. Three samples tested were from the Edwards BFZ aquifer; five samples from the Upper Trinity; one sample from the Middle Trinity; and one samples Ozan. There were no samples brought in for testing from the Lower Trinity or Edwards Equivalent..

A summary of the well testing results are shown in Appendix G.

E. ADDRESSING DROUGHT CONDITIONS

Objective E.1 and E.2: Edwards BFZ and Trinity Aquifer Rainfall Precipitation Deficit Index Reports and the Drought Status Reports from Clearwater UWCD Staff.

Objective Satisfied

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 17th, 2009, are reviewed weekly by the General Manager and an aggressive review and monitoring of the stream flow gage system was put at as a priority during the Epic Drought of 2011. 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).

The Board of Directors designated the General Manager as the designee to evaluate conditions and if triggers warrant, a declaration of any kind, the GM must base that decision on the facts that impact the triggers per DM Plan. Due to the epic drought of 2011-2012 the District worked closely with the Water Supply Corporations in Bell County that have Historic and Existing Use Permits as well as Operating Permits.

Prior to hiring the new General Manager, the Board President, Leland Gersbach, declared on May 10, 2011, (per a press release) that Clearwater Underground Water Conservation District Board of Directors determined that current conditions were creating an adverse effect on the recharge of the Trinity Aquifer and the Edwards BFZ, thus triggering the initiation of Drought Management Stage 1. Clearwater Board President Leland Gersbach said, "It is imperative in this historical period of lack of winter and spring rainfall that the citizens of Bell County start to conserve water as we enter the high use and evaporation period of our year."

Under the Trinity Aquifer Drought Management Plan, a drought stage is only 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.

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.

The PDI on May 10, 2011 for the Trinity was at 72%, which is within Stage 1 (70-79%): Awareness. The conservation goal of the District, under Stage 1, would be a voluntary 10% reduction using the suggested conservation measures. The Edwards BFZ Aquifer, at 79% PDI, has not reached the conditions to warrant initiation of a stage within the Edwards BFZ Drought Management Plan, but the Board continued to closely monitor the drought indices and took action at declared appropriate designation in July. The stream flow gage system was still not operational until the last week of September 2011, and upon that time the Edwards BFZ DMP was fully functioning per the two separate trigger measurement.

The Board instructed staff to inform the media of their action taken and justification for that action. The staff worked from this point on to the end of 2011 to weekly evaluate the rainfall data and monitor the spring flow estimates. In addition to the rainfall data the staff prepared the drought status reports. The Board's designee, Dirk Aaron (New General Manager, effective June 1, 2011) was authorized to monitor the drought indices and to take appropriate action to initiate the drought stages as needed beginning June 1, 2011 and instructed to inform the Board President at the time the action is taken and to present monthly defense of this action at each monthly board meeting. District Staff focused at the same level in 2012 on a weekly and monthly bases.

See Appendix H for Rainfall Map and Drought Status Reports.

Public notification of the initiation or termination of drought stages was by the District's website, press releases to newspaper(s) of general circulation, radio announcement, or District mailing, fax, or email to owners/operators of permitted wells. This strategy was implemented each week starting in June of 2011. This same strategy was maintained and continues in 2012 (see Appendix F). The General Manager subsequently coordinated a formal roundtable meeting on September 9, 2011 with all of the Water Supply Corporations permitted within the District for groundwater. The presentation; by Staff and District Consulting Geoscientist, Randy Williams (Bar-W Groundwater Exploration) focused on the drought conditions of the region and State and trigger mechanisms of the Clearwater UWCD Volunteer Drought Management Plan. The leadership of the Water Supply Corporations, responded by providing feedback on their Drought Management Plans that have significantly different triggers. Each agreed to utilize the District's recommendations as they make decisions on their own respective drought declarations for the remainder of the current drought.

The Precipitation Deficit Index (PDI), the daily maximum spring discharge, and average spring discharge values were monitored weekly (starting September 2011) and presented to the District Board at all monthly Board meetings in the remainder of 2012.

Drought stage triggers continued to move to Stage 1 (Awareness) by the end of calendar year 2012. The final trigger level for the Trinity (Appendix E: Trinity Drought Status Report December 26, 2012) was 24.9 inches of rainfall by the PDI which was 75% of annual rainfall in previous 365 days over the defined Trinity Aquifer Recharge area.

Drought stage triggers continued to move toward Stage 2 (Concerned) by the end of the calendar year for the Edwards BFZ. The final trigger levels for the PDI of the Edwards was 24.52 inches of rainfall which was 74% of annual rainfall in the previous 365 days over the defined Edwards BFZ recharge zone. This information defended the Districts aggressive recommendation to all well owners and users that reduction by 20% (Concerned Stage 2 DMP) is necessary and was important to the health of both Aquifers to insure that draw down is stabilized and the spring flow of the Confluent of Springs in Salado Proper remain above 100 acre feet per month (1.50 cubic feet per second flow). The lowest spring flow measurement was 190 acre-feet per month (3.2 cfs), and was taken on February 17, 2012. The highest measurement of spring flow was taken on April 18, 2012 and measured 2683 acre-feet per month (45.1 cfs). This high measurement did not hold for long due to very dry conditions the remainder of 2012. By June 18, 2012 the springs had already fallen to 524 acre-feet (9.6 cfs).

**The Edwards BFZ PDI described as: Monitored daily on a running-year basis over a defined area consisting generally of the area of the Edwards aquifer and contributing areas in Bell and portions of Williamson Counties and which is based on NEX-RAD rainfall data provided by the National Oceanic and Atmospheric Administration. The PDI trigger condition must be exceeded for a period of 28 consecutive days.*

The Edwards BFZ Spring Discharge described as: Spring Flow monitored daily for discharge values (averaged over a period of five consecutive days) on a running five day basis. Upper Gage located (FM 2483 Patterson's Crossing) above the confluent of Salado Springs Proper, and low gage located just below the springs at Inn on the Creek (owned by Will Lowery).

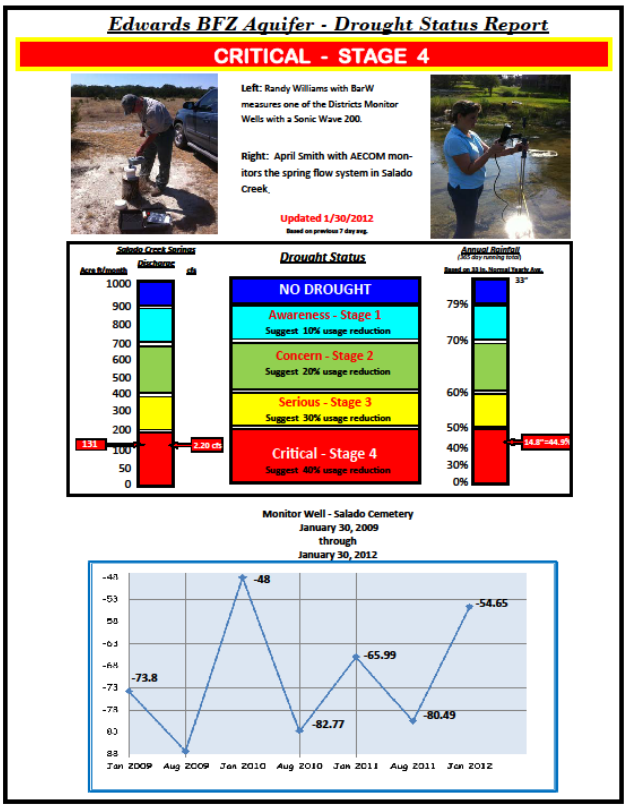
The Edwards BFZ Termination of Stages described as: If a drought stage is in effect it shall be reduced or terminated when both the PDI and the average spring discharge values are greater than the trigger conditions of the drought stage in effect for the periods of no less than 42 consecutive days.

**The Trinity Aquifer PDI trigger described as: Rainfall totals monitoring daily on a running-year basis over a defined area consisting generally of the area of the Trinity aquifer and contributing areas in Bell, Lampasas, Burnet, McLennan and portions of Williamson Counties and which is based on NEX-RAD rainfall data provided by the National Oceanic and Atmospheric Administration. The PDI trigger condition must be exceeded for a period of 28 consecutive days. If a drought stage is in effect it shall be reduced or terminated when both the PDI and the average spring discharge values are greater than the trigger conditions of the drought stage in effect for the periods of no less than 42 consecutive days.*

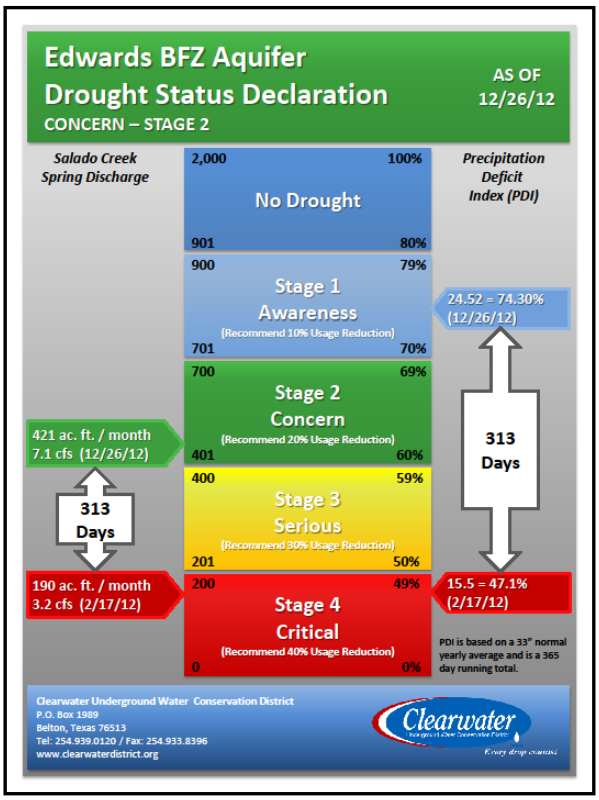
****references listed are posted on Clearwater's website and in Appendix F***

2012 PDI Drought Data for Edwards BFZ Recharge Zone

Day	Daily Avg	Annual Total	% of Avg	Defecit	Stage	28 days	42 days	Declared
12/31/2012	0.0136	24.576	74.4727	-8.424	1	0	1	0
12/1/2012	0.0000	26.892	81.4909	-6.108	0	0	0	0
11/1/2012	0.0000	28.0382	84.9642	-4.9618	0	0	0	0
10/1/2012	0.0020	29.774	90.2242	-3.226	0	0	0	0
9/1/2012	0.0000	26.8578	81.3873	-6.1422	0	0	1	1
8/1/2012	0.0000	24.018	72.7818	-8.982	1	1	2	2
7/1/2012	0.0180	21.5852	65.4097	-11.4148	2	2	2	2
6/1/2012	0.0544	21.7068	65.7782	-11.2932	2	1	2	1
5/1/2012	0.0000	22.9404	69.5164	-10.0596	2	1	2	2
4/1/2012	0.0000	23.4414	71.0345	-9.5586	1	1	3	3
3/1/2012	0.0010	18.0194	54.6042	-14.9806	3	3	4	4
2/1/2012	0.0000	14.8142	44.8915	-18.1858	4	4	4	4
1/1/2012	0.0000	15.2244	46.1345	-17.7756	4	4	4	4



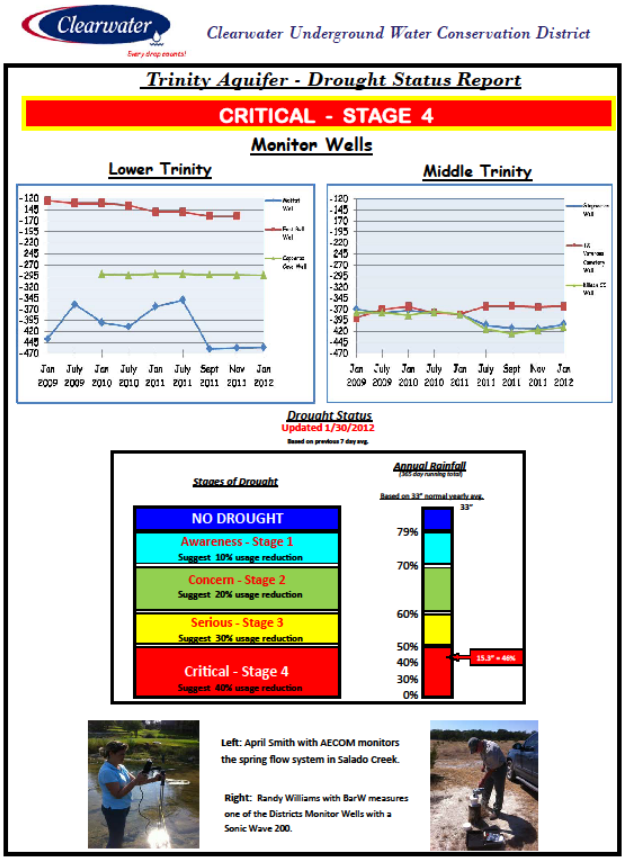
January 2012



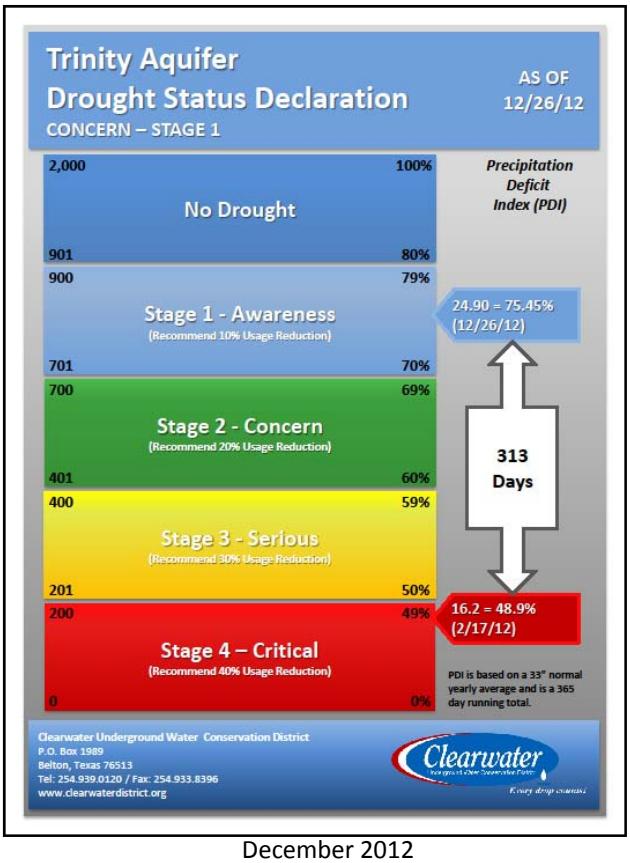
December 2012
(New Format)

Drought Status Reports for the Trinity and Edwards BFZ aquifers are shown below. These reports are generated once a month, or as needed, and posted on the CUWCD Website. The information for the report is based on the Precipitation Deficit Indicator Report for each Aquifer.

2012 PDI Drought Data for Trinity Recharge Zone								
Day	Daily Avg	Annual Total	% of Avg	Defecit	Stage	28 days	42 days	Declared
12/31/2012	0.0099	25.0149	75.8027	-7.9851	1	0	1	0
12/1/2012	0.0000	27.6466	83.7776	-5.3534	0	0	0	0
11/1/2012	0.0000	29.207	88.5061	-3.793	0	0	0	0
10/1/2012	0.0089	30.9356	93.7442	-2.0644	0	0	0	0
9/1/2012	0.0009	27.7785	84.1773	-5.2215	0	0	1	1
8/1/2012	0.0000	26.0848	79.0448	-6.9152	1	1	1	1
7/1/2012	0.0037	23.9701	72.6367	-9.0299	1	1	1	1
6/1/2012	0.1093	23.4547	71.0749	-9.5453	1	1	1	1
5/1/2012	0.0000	24.2886	73.6018	-8.7114	1	1	1	1
4/1/2012	0.0000	24.5976	74.5382	-8.4024	1	1	3	3
3/1/2012	0.0043	18.5584	56.2376	-14.4416	3	3	4	4
2/1/2012	0.0000	15.3552	46.5309	-17.6448	4	4	4	4
1/1/2012	0.0000	15.5363	47.0797	-17.4637	4	4	4	4

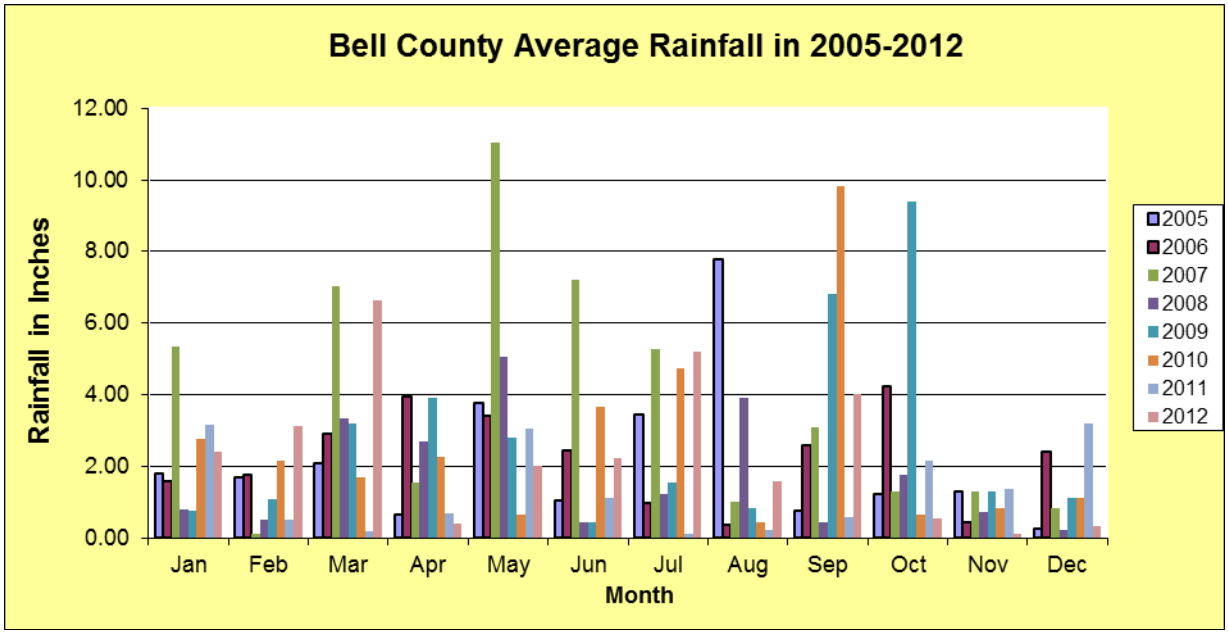


January 2012

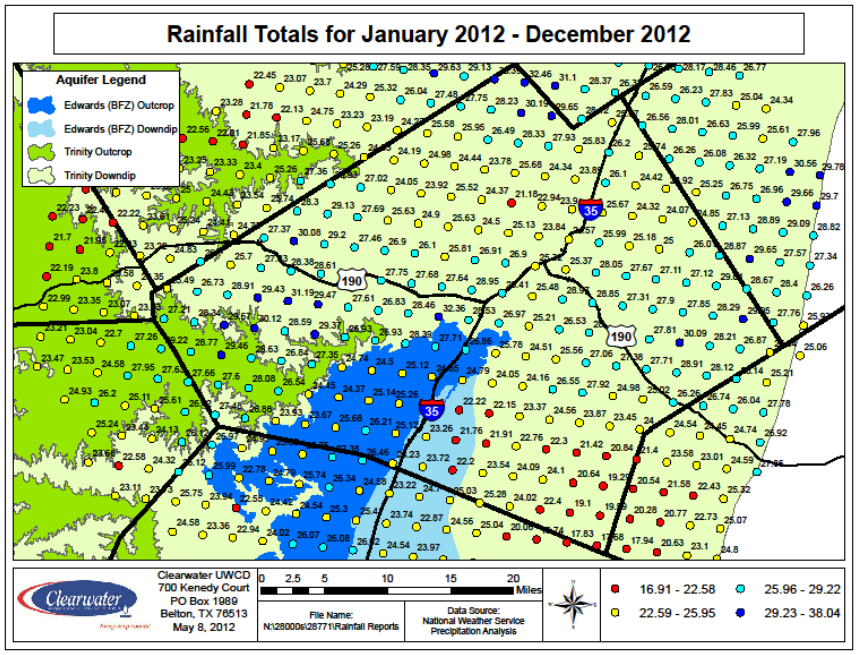


December 2012
(New Format)

The Chart below shows the average monthly rainfall for bell county from 2005-2012. Information obtained through the NOAA - National Weather Service site.



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2005	1.81	1.69	2.10	0.64	3.78	1.06	3.45	7.79	0.77	1.23	1.30	0.27
2006	1.59	1.76	2.89	3.95	3.41	2.44	0.98	0.38	2.57	4.22	0.42	2.39
2007	5.35	0.11	7.03	1.53	11.04	7.22	5.26	1.00	3.09	1.28	1.31	0.82
2008	0.81	0.51	3.32	2.69	5.05	0.45	1.21	3.90	0.42	1.75	0.74	0.23
2009	0.76	1.09	3.20	3.90	2.81	0.43	1.56	0.84	6.80	9.38	1.30	1.11
2010	2.76	2.14	1.70	2.27	0.66	3.66	4.74	0.44	9.82	0.65	0.82	1.11
2011	3.16	0.50	0.18	0.70	3.05	1.12	0.13	0.23	0.59	2.16	1.35	3.18
2012	2.40	3.13	6.62	0.39	2.02	2.21	5.21	1.60	4.01	0.56	0.13	0.32



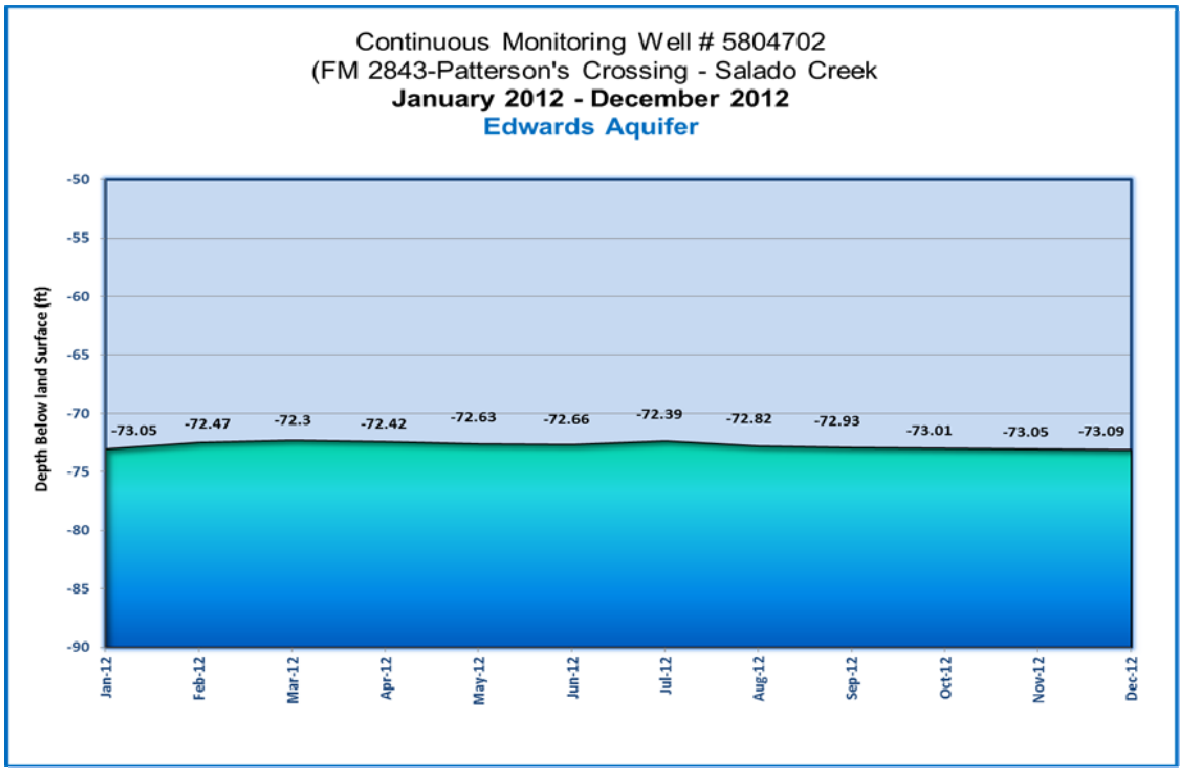
Objective E.1 and E.2: TWDB Continuous Monitoring Well, Assist in Drought Management:

Objective Satisfied

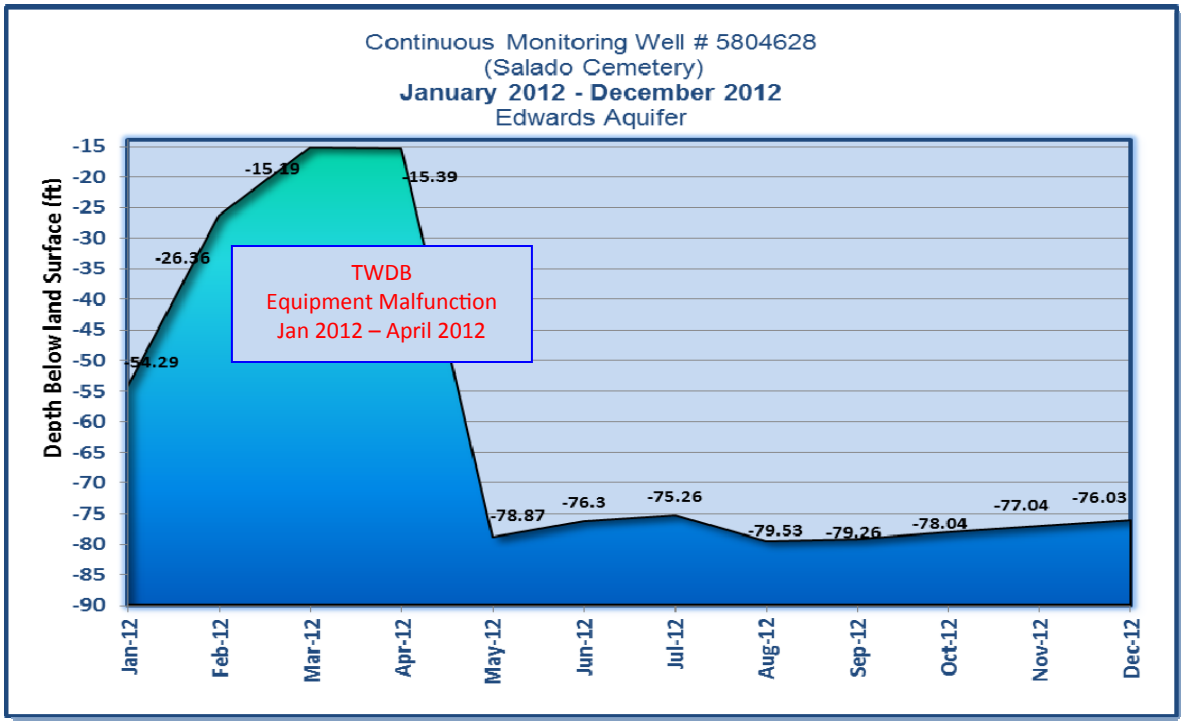
The District's Management Plan requires monitoring of drought conditions by reviewing data from the TWDB monitor wells in Bell County that are equipped with a continuous monitoring system. Three wells in the Edwards BFZ aquifer and three wells in the Trinity aquifer are equipped with continuous monitoring systems. Clearwater is considered a Cooperator with the TWDB in providing monitoring well data. Data from the wells is tied into the TWDB satellite system and is available for viewing on their website. In October 2012, the District approved the funding of three new monitor wells to be constructed during FY13. Two wells will be constructed in the Lower Trinity Aquifer and one well will be constructed in the Edwards BFZ.

The graphs below show the data collected by the continuous monitor wells in the Edwards BFZ and Trinity Aquifers. Measurements are collected every hour.

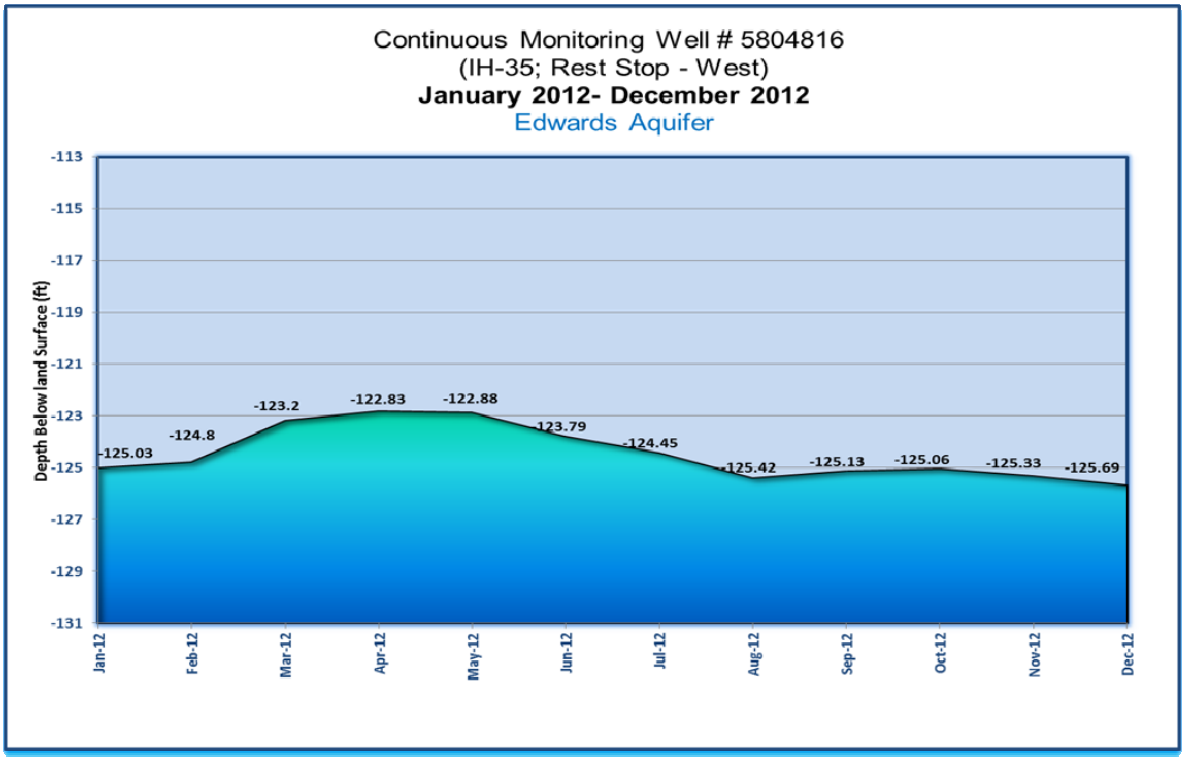
The graph below represents readings from the continuous monitor site at Patterson's Crossing - Salado Creek in the Edwards BFZ Aquifer. These readings illustrate a relatively constant water level from January 2012 through December 2012. Water level readings ranged from –73.05 ft. below land surface (BLS) in January 2012 up to its highest level of –72.30 ft. BLS in May 2012 and back down to –73.09 ft. BLS in December 2012.



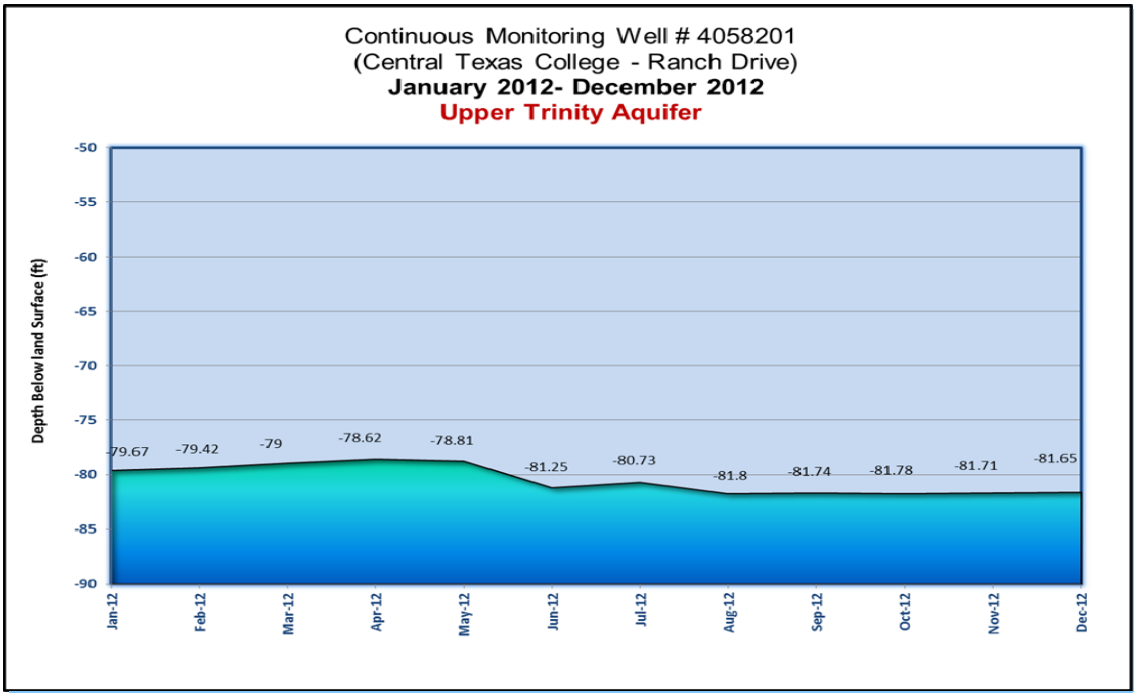
The next graph shows the data collected by the continuous monitor site located at the Salado Cemetery in the Edwards BFZ aquifer during calendar year 2012. TWDB had equipment malfunctions on this well from January 2012 through April 2012, therefore we were not able to report accurate readings for that period. TWDB replaced the equipment and the well was up and running again near the end of May 2012. Water level readings from May 2012 through December 2012 ranged from —78.87 ft. below land surface (BLS) in May up to its highest level of –76.03 ft. BLS in December.



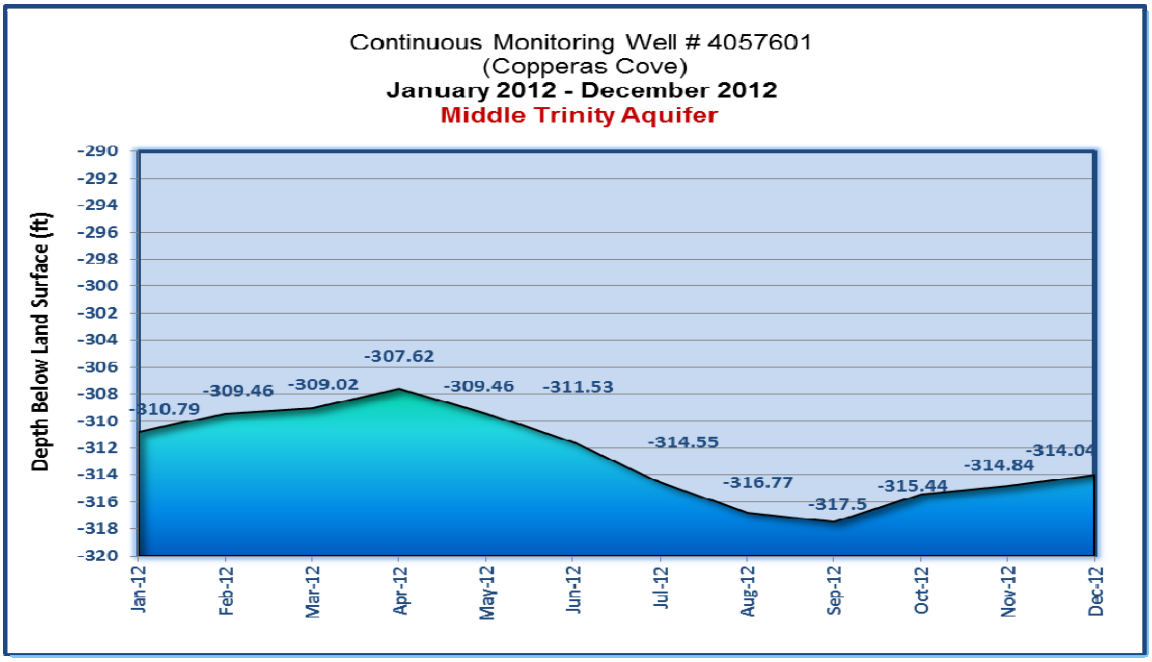
The graph below shows data collected by the continuous monitoring site located along the south-bound lanes of I-35 at the Salado rest stop during calendar year 2012. This Well is also located in the Edwards BFZ aquifer. These readings show a steady increase in the water level from January 2012 through April 2012 when the water level begins to decrease again. Water level readings ranged from –125.03 ft. below land surface (BLS) in January 2012 up to its highest level of –122.83 ft. BLS in April 2012 and back down to –125.69 ft. BLS in December 2012.



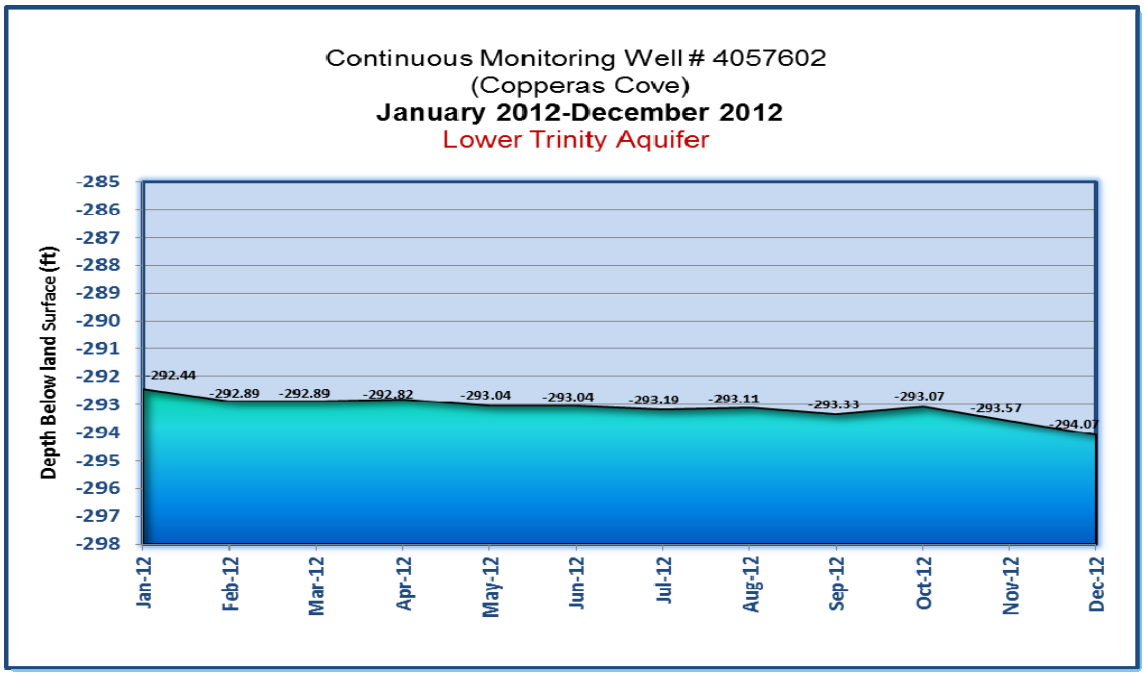
The graph below shows data collected by the continuous monitoring site located at the Central Texas College Campus during calendar year 2012. This well is in the Upper Trinity aquifer. As indicated by the graph, the water level remains relatively constant throughout 2012 with a slight decrease in June. Water level readings ranged from –79.67 ft. below land surface (BLS) in January 2012 up to –78.81 ft. BLS in May and back down to its lowest reading of –81.8 ft. BLS in August 2012. The year end reading in December 2012 was –81.65 ft. BLS.



The next graph shows data collected by the continuous monitoring site located in Copperas Cove, in the Middle Trinity aquifer, during calendar year 2012. This Well is also located in the Middle Trinity aquifer. These readings illustrate a gradual increase from January 2012 through April 2012 when the levels begin to drop off through September 2012. From October 2012 through December 2012, the levels begin to increase. Water levels ranged from –310.79 ft. below land surface (BLS) in January 2012 to its highest level of –307.62 ft. BLS in April 2012 and dropping to its lowest level of –317.5 ft. BLS.



The final graph shows data collected by the continuous monitoring site also located in Copperas Cove, but in the Lower Trinity aquifer, during calendar year 2012. As indicated by the graph, the water level remains relatively constant throughout 2012. However, we do begin to see a slight decrease from October 2012 through December 2012.



F. ADDRESSING CONSERVATION RECHARGE ENHANCEMENT, RAINWATER HARVESTING, PRECIPITATION ENHANCEMENT, OR BRUSH CONTROL, WHERE APPROPRIATE AND COST-EFFECTIVE

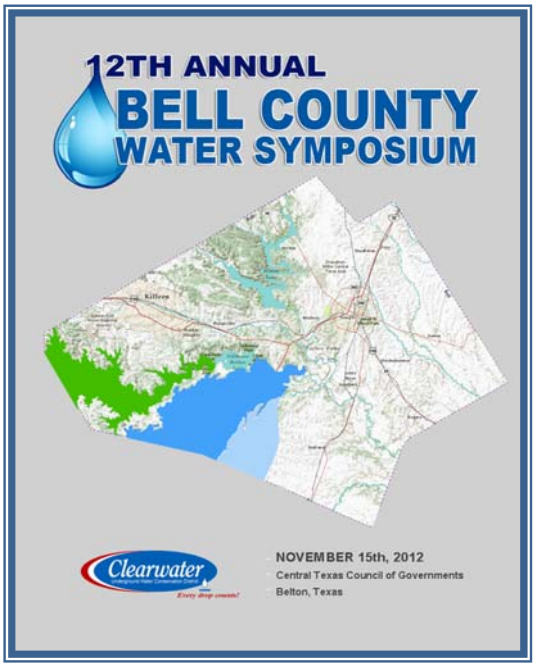
Objective F1: Promote Conservation.

Objective Satisfied

The District's Management Plan requires promotion of conservation by one outreach method/activity. During 2012, the District met this requirement by aggressive outreach through the CUWCD website, social media (Facebook), and public presentations such as the annual Water Symposium.

See Appendix L for the Water Symposium Agenda.

Dr. Joe Yelderman, Hydrogeologist - Baylor University, gives a presentation to approximately 150 people at the Water Symposium.



Objective F2: Promote Rainwater Harvesting.

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 AgriLife Extension website and their Rainwater Harvesting Manual. Also included are links to Rainwater Harvesting Contacts and Suppliers and to the Texas AgriLife Extension manual on Rainwater Harvesting Landscape Methods. The new facility has a rainwater harvesting setup for demonstration purposes.

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

Objective F3 and F4: Provide Information on Recharge Enhancement and Brush Control.

Objective Satisfied

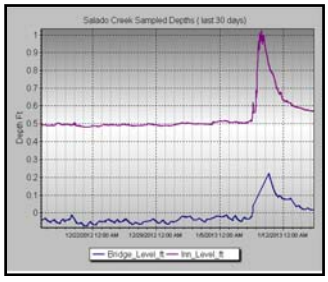
The District's Management Plan requires promotion of conservation by providing information relating to recharge enhancement and brush control on the District website. The District satisfied this requirement by including a segment on recharge enhancement and brush control on its website under the Education menu tab. For additional information on recharge enhancement and brush control, links to the Texas State Soil and Water Conservation website, the Leon River Restoration Project website, and the Texas AgriLife Extension website are provided. Also included is a link to the Brush Management Fact Sheet produced by Environmental Defense.

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

G. ADDRESSING IN A QUANTITATIVE MANNER THE DESIRED FUTURE CONDITIONS OF THE GROUNDWATER RESOURCES

Objective G1: Operate a gauge system on Salado Creek to estimate spring discharge.

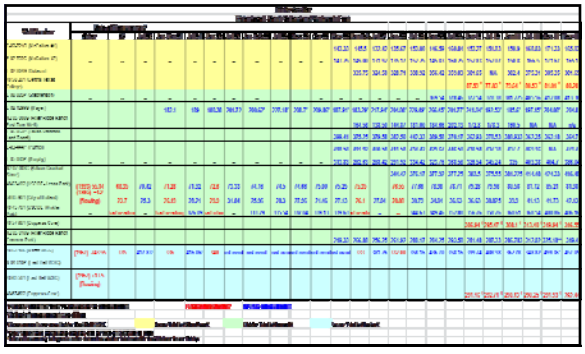
Objective Satisfied



The District contracted with AECOM, Bar-W Exploration and Hamson Consulting to reconstruct the system after the September 2010 flood. New General Manager put this system back on line by October 1, 2011 and was fully functioning at that time. The lowest measurement on record was December 31, 2011 at 130 ac-ft/month or 2.20 cfs. (see page 30 - system described on Drought Response. Clearwater contracted with USGS Water Science group in Austin, Texas to construct an additional gauge for redundancy and accuracy.

See Appendix N for Salado Springs Gauge System.

Objective G2(a) and G2(b): Collection of at least 5 water level measurements from the Trinity Aquifer monitor wells located in the District.



Objective Satisfied

The following pages are tables that provide a summary of the monitoring data. Refer to Appendix A for a map of the aquifer monitoring sites. NOTE: Larger numbers represent greater depth necessary to reach the surface of the aquifer, i.e. a decline in the aquifer level. Numbers in red were taken by the TWDB (or are continuous monitoring wells), whereas numbers in blue were taken by Clearwater. 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 an e-line;and a sonic wave meter; an airline is used if the well is equipped with one. 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. The TWDB typically uses a steel tape or an airline and does not request the pump to be turned off.

See Appendix O for static water level measurements.

Objective G2(c): Addressing in a quantitative manner the desired future conditions of the groundwater resources.

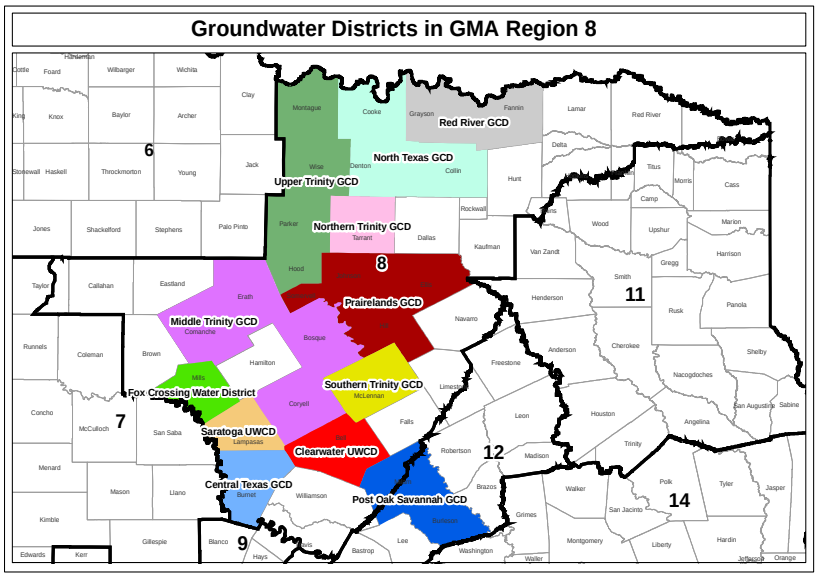
Objective Satisfied

Clearwater has been working toward this management goal since November 2005 when the first meeting of Groundwater Management Area 8 (GMA8) was held. GMA8 is responsible for determining desired future conditions (DFC) for the nine major and minor aquifers within its 45 county boundary. These aquifers are as follows:

Edwards BFZ	Brazos River Alluvium	Ellenburger-San Saba
Trinity	Blossom	Hickory
Woodbine	Nacatoch	Marble Falls

DFCs for all of these aquifers were set by GMA8 before the September 2010 deadline. The TWDB prepares the resulting managed available groundwater (MAG) figures based on the DFC statements and then forwards these figures to the Regional Water Planning Groups. At the end of FY10 MAGs were provided by TWDB for all the aquifers except the Nacatoch. The MAG figures for the Edwards BFZ and Trinity aquifers are being used by the District and will be included in the next revision of the District management plan.

During FY11, fiscal and administrative responsibilities for GMA8 were turned over from Clearwater to the North Texas Groundwater Conservation District.. Two GMA8 meetings were held in 2012. These meetings were held on



4. MISCELLANEOUS ACTIVITIES

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

A. Edwards BFZ Aquifer Recharge Zone Studies
B. Salado Creek Stream Flow Gauging Program
C. Strategic Plan Update
D. Abandoned Wells
E. Bell County Water Symposium
F. Newsletter
G. Major Rivers Water Education Program
E. Book Cover Distribution
F. Literature Packet Distribution
G. Water Conservation Kits
H. Presentations and Outreach
I. Public Advisory Committee
J. Internet Site

These activities are discussed in more detail below.

A. EDWARDS BFZ AQUIFER RECHARGE ZONE STUDIES

In 2012, Clearwater UWCD began a study with Dr. Joe Yelderman, Professional Geoscientist at Baylor University, to increase and summarize our current understanding of karst hydrology in the north segment of the Edwards BFZ Aquifer, especially the recharge in the Salado water shed, to expand our knowledge and identify the Salado spring shed and its known recharge area.

See Appendix P for Edwards Recharge Study

B. SALADO CREEK STREAM FLOW GAUGING PROGRAM

The District began collecting data from the Salado Creek stream flow gauge during FY08. During FY10-FY12, the Board contracted with Hamson Consulting to upgrade various aspects of the system which would include the automatic collection of data and posting of this data on the District website. In September 2010, following a major flooding event, both gauges were lost and the system was therefore incapacitated. As a result, the automation was temporarily place on hold. Replacing the gauge system was ongoing into FY11. New General Manager, Hamson Consulting, and EACOM Staff completed the repairs. The gauges became a functioning key component of Drought monitoring in 2011. The gauges have been an important mechanism to protect spring flow. The district approved expenditures of $23,500 for an additional gauge by USGS Water Science Group ("The Gold Standard") in October 2012 (FY13).

C. STRATEGIC PLAN

The District developed a Strategic Plan during FY08, to prioritize the District's activities and objectives. This Plan was reviewed and completed through FY12. The District is to review the Strategic Plan in July of 2013 and determine the path forward based on needs assessment.

D. 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 FY12.

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 AgriLife Extension. According to records from the Texas Department of Licensing and Regulation, during FY12 a total of 48 wells were plugged in Bell County.

E. BELL COUNTY WATER SYMPOSIUM

During FY12, Clearwater sponsored its eleventh annual water symposium on November 15, 2012 at the Central Texas Council of Governments Building. The District partnered with the Texas AgriLife Extension and was able to provide Continuing Education Units for Private and Commercial Pesticide Applicators. Other partners included Bell County, Bar-W Groundwater Exploration, LLC, HALFF Associates, and Lloyd Gosselink Attorneys at Law.

Board President, Leland Gersbach, welcomes guests to the 2012 Water Symposium.

Kristen Fancher, Lloyd Gosselink Attorneys At Law, speaking on Groundwater issues across Texas

Topics to be discussed:

"The Weather Forecast (2011 vs 2012?)"
Dr. John Nielsen-Gammon, State Climatologist at Texas A&M University

"300 Years of Groundwater Management in Texas"
Dr. Charles Porter, Assistant Professor, School of Behavioral and Social Sciences, St. Edwards University, Austin Texas

"Status of Surface Water Supply in Central Texas and Future Water Plans"
David Collinsworth, Brazos River Authority, Central Basin Business Development Manager

"Old PGMA vs New PGMA Process"
Kelly Mills, Groundwater Planning & Assessment Team Leader, Water Availability Division, TCEQ

" Clearwater Public Information & Access System Overview "
Dirk Aaron, Clearwater General Manager
Todd Strait, Clearwater Education Coordinator

"Ground Water Issues Across Texas"
Kristen Fancher, Lloyd Gosselink Attorneys at Law

"The Economic Impact of the Endangered Species Act"
Cary Dupuy & Lisa Elledge, Natural Resource Policy Advisors, Texas Comptroller of Public Accounts

" New Understanding of the Northern Segment of the Edwards BFZ"
Dr. Joe Yelderman, Hydrogeologist, Baylor University

"Understanding the Geochemistry of the Edwards BFZ"
Dr. Marylynn Musgrove, Research Hydrologist, U.S. Geological Survey

"Water Conservation Opportunities and Resources in Texas"
Mr. Lyle Zoeller, County Extension Agent Agriculture, Texas A&M AgriLife Extension Service, Bell County

The District set up a display and distributed water conservation kits as well as other information on water conservation, water quality protection and information on the aquifers. Approximately 150 people attended the symposium.

Refer to Appendix L for an agenda of the meeting.
Appendix F contains the Activity Report that lists the items distributed during this event.

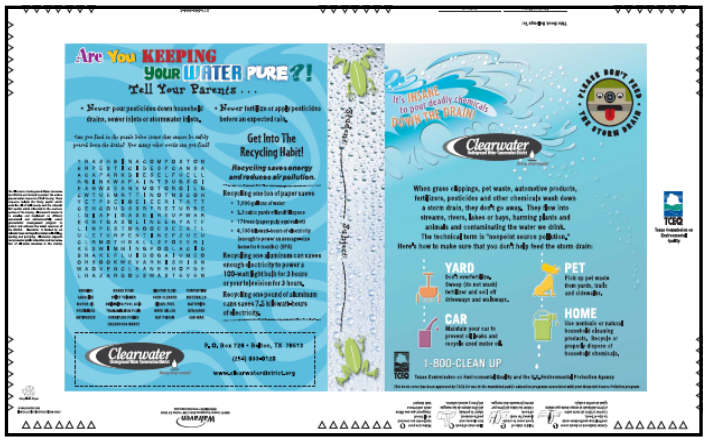
F. MAJOR RIVERS WATER EDUCATION PROGRAM

Each year the District sponsors the Major Rivers Water Education Program. This program is geared toward 4th and 5th grade students. During the spring of 2012 an order was placed for 40 Educational Kits. One kit includes: teacher's binder and transparencies, CD-Rom, Introductory DVD video, 30 student workbooks, and 30 take home leaflets. Materials were distributed at a free teacher in-service that was held on July 26-27, 2012 at CUWCD's new facility. Six schools were represented at the in-service.

A list of participating schools is provided in Appendix F, Activity Reports.

G. BOOK COVER DISTRIBUTION

The District again participated in purchasing book covers during FY12 for all middle and high school students in Bell County with distribution to occur during the 2011/2012 school year. The book covers provide information on the importance of water and water conservation, and a brief overview of the District, including its goals and objectives. A total of 20,000 book covers were distributed to the schools in May 2012 for the 2012/2013 school year.



The book covers distributed are shown in Appendix M.

H. LITERATURE PACKET DISTRIBUTION

The District compiles literature packets containing a variety of information on water conservation, the water cycle, and water quality. The packets are distributed to Bell County schools—one per campus—for each fall semester. Packets were distributed during the month of May 2012 and included 106 packets. Literature is also distributed at every event conducted or participated in by CUWCD.

See Appendix F for a list of items distributed at all events.

I. WATER CONSERVATION KITS

To promote public awareness and encourage water conservation, the District distributes water conservation kits at special events. The water conservation kits include the following items: faucet aerator; one touch on/off tap saver; 7 spray water saving hose nozzle; toilet leak detector dye tablets; and lawn and garden rain gauge. These items were available for distribution at the following events: Annual Bell County Water Symposium (11/15/12); Annual Crops Clinic (1/24/12) and Central Texas master naturalist training (7/25-26/12); ABWA Meeting 8/2/12; Leadership Central Texas (6/28/12); and Rotary Club Temple (5/10/12).

See Appendix F for the Activity Report that lists the items distributed at these events.

J. PRESENTATIONS AND OUTREACH

Clearwater continues to promote public awareness of the District, water resources in Bell County and water conservation. Board members and staff have spoken to several groups and schools throughout the year and have attended various events and provided information for distribution regarding the District, groundwater resources, water cycle, water quality protection, and water conservation as identified below.

(See Appendix F for the Activity Report that lists the material distributed.)

School Presentation		Date	# of Participants
Leon Heights Elem _BISD	5th grade	1/12/12	51
Nolanville Elem-Chalkridge	4th Grade	12/2/11	100
Nolanville Elem-Science Day	5th Grade	10/2//11	100
Nolanville Elem-Chalkridte	5th Grade	3/5/12	100
Nolanville Middle School	6th Grade	11/8/11	110
Nolanville Middle School	7th Grade	11/9/11	110
Major Rivers In-service	BISD/AISD Teachers	7/25/12 & 7/26/12	8
Earth Fest 2012 - Ft. Hood	Area Elem Schools	4/27/12	1100 (approx.)
TOTAL			**1679**

Other Events		Date	# of Participants
ABWA Meeting-Salado		8/2/12	20
Annual Crops Conference		1/24/12	500
Boy Scout Merit Badge Training	8 Boys	11/19/11	8
Central Texas Master Naturalist		7/18/12	8
Leadership Central Texas		6/28/12	40
Rotary Club—Temple		5/10/12	40
TOTAL			**616**

K. PUBLIC ADVISORY COMMITTEE

The PAC members for FY12 are as follows

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

The PAC meets on an as-needed basis; no meetings were held during FY12. Throughout FY12, PAC members have regularly attended the Clearwater Board meetings, providing representation at all but one of the regular monthly Board meetings. The PAC has provided valuable comments to the Board members at these meetings. The Board continues to value the input from the PAC and will assign tasks to them as needed.

L. INTERNET SITE

The District's web site (www.CUWCD.org) continues to grow since it was first developed in the spring of 2001. The web site contains general information about the District and Board of Directors; calendar of events; press releases; meeting agendas; District Management Plan; District Rules; links to water-related sites; District forms; an overview of the District including a summary of activities; aquifer data; and educational information including data on water use and water conservation tips. Information will be added to the website during the next year as needed.

5. SUMMARY

During FY12 and calendar year 2012, Clearwater continued to acquire data for use in managing Bell County's groundwater resources. Data was collected regularly from the stream flow gauge sites in Salado Creek which are used to estimate spring discharge from the Edwards BFZ aquifer. The District continues to support TWDB monitor wells (six wells) financially as in years past.

Data acquisition also included ongoing projects like the aquifer monitoring program and monthly production reports from non-exempt wells, as well as estimates of exempt well use which are updated biannually. Samples from wells were also collected for testing at a certified lab to provide an example of water quality in a given area.

During FY12, Clearwater continued to pilot the voluntary drought management plan for the Trinity aquifer and the Edwards BFZ aquifer.

Public education and service continued to be a focus of Clearwater during FY11. District staff visited several schools giving presentations focusing on Bell County's aquifers, water conservation, and non-point source pollution. In addition, the annual water symposium continued to be a major outreach opportunity.

The District selected Kiella Group to design/build the new facility in Belton's Business Park. Larry Neal Architect as the Construction Manager to over see Clearwater's investment during the construction phase. Projected cost is $324,000 and completion was attained March 15, 2012. The District officially opened the doors to the new facility April, 1, 2012. The Directors and Staff held and Open House and Dedication on April 24, 2012. The Open House was attended by 70+ public officials and community members.

Appendix A

Clearwater Underground Water Conservation District

Adopted Budget FY12

REVENUE

* Bell County Tax Appraisal District	$	556,566
Reserve Funds Dedicated to New Building Construction	$	300,000
Application Fees	$	4,500
Transport Fees	$	800
Interest	$	1,000
Total	**$**	**862,866**

*Based on 2011 Certified values of $13,914,150,445.00
Tax rate per $100 valuation is $0.0040

EXPENDITURES

Contracts		
Administrative	$	320,000
Legal	$	30,000
Election Expenses	$	3,000
Professional/Technical Consulting	$	25,000
Permit Reviews	$	4,700
Appraisal District	$	6,300
Director's Compensation	$	12,000
Director Expenses	$	5,000
Furniture/Equipment	$	27,000
Supplies	$	1,000
Insurance	$	1,500
Printing	$	3,900
Communications	$	7,500
New Building Construction Expenses		
Design Build Team	$	300,000
Construction Management	$	5,000
Soil Tests	$	3,500
Special Programs		
Education	$	12,500
Education Supplies	$	8,000
Other	$	5,500
Water Quality Grant	$	1,000
Studies	$	18,000
GMA 8	$	3,000
Misc. Moving Exp.	$	15,000
Contingency Fund	$	25,000
Reserves for Uncollected Taxes	$	19,466
Total	**$**	**862,866**

8/24/2011

Appendix B

Clearwater Underground Water Conservation District
P.O. Box 1989, Belton, Texas 76513
Phone: 254/933-0120 Fax: 254/933-8396
www.clearwaterdistrict.org

Every drop counts!

DATE:

TO: Audit Firms

FROM: Dirk Aaron, General Manager

SUBJECT: Request for Qualifications for Auditing Services

The Clearwater Underground Water Conservation District (CUWCD) is soliciting proposals from qualified firms of certified public accountants to audit the CUWCD's financial statements for the fiscal year ending September 30, 2012 with the option of auditing the District's financial statements for the two (2) subsequent fiscal years. General meeting with Firms to discuss our current year audit issues and a general overview of the District is scheduled for 1:30 p.m. on October 16, 2012 the Clearwater UWCD office located at 700 Kennedy Court in the Belton Business Park.

To be considered for this engagement, your firm must meet the qualifications and satisfy the requirements set forth in the RFP. Completed proposals must be received at the address listed below by 5:00p.m. on Wednesday, October 31, 2012.

Mailing Address:
Clearwater UWCD
Attn: Dirk Aaron, General Manager
P.O. Box 1989
Belton, TX 76513

Physical Address:
Clearwater UWCD
Attn: Dirk Aaron, General Manager
700 Kennedy Court
Belton, TX 76513

All questions and correspondence should be directed to Dirk Aaron, in writing at the above address or by email at dirk.aaron@clearwaterdistrict.org. Contact with personnel other than Dirk Aaron regarding the RFP may be grounds for elimination form the selection process.

Every drop counts!

Clearwater Underground Water Conservation District

REQUEST FOR PROPOSAL

FOR

PROFESSIONAL AUDITING SERVICES

October 2012

I. INTRODUCTIONS

A. General Information

The Clearwater UWCD is requesting proposals from qualified and experienced public accounting firms, whose principal officers are independent certified public accountants to obtain independent audit services for performance of the District's annual financial audit for the fiscal year ending September 30, 2012, with the option of auditing its financial statements for each of the two (2) subsequent fiscal years, based upon satisfactory performance. This audit is to be performed in accordance with generally accepted auditing standards.

Be it known that Clearwater UWCD was under direct contract with Central Texas Council of Governments (CTCOG) October 1, 2011 until the dissolution of the contract on March 31, 2012. The Clearwater UWCD was relocated and established independently at 700 Kennedy Court on April 1, 2012. Thus, the audit will be constricted to April 1, 2012 until September 30, 2012 fiscal year.

B. Proposal Information

Deadline for Proposals is 5:00 pm Wednesday, October 31, 2012.

Submit Proposals to:

Mailing Address:	Clearwater UWCD Attn: Dirk Aaron, General Manager P.O. Box 1989 Belton, TX 76513
Physical Address:	Clearwater UWCD Attn: Dirk Aaron, General Manager 700 Kennedy Court Belton, TX 76513

One original and three (3) copies of the Proposal should be returned in a sealed envelope clearly bearing the name and address of the Respondent and the **RFP No. 2012.**

Acceptance – all Proposals must include a statement that they are valid for a minimum period of 60 days subsequent to the RFP closing date.

Late Proposals – will not be considered. Each Respondent shall be solely responsible for ensuring that the General Manager receives the Proposal within the time limit indicated.

Non-appropriation – the District may cancel the contract should the present or any future Clearwater UWCD Board non-appropriate funds in any fiscal year for the payment of this agreement. No penalty shall attach in the event of any such non-appropriation. In the event of non-appropriation, the District shall give the successful Respondent written notice of cancellation and the District shall not be obligated to make any payments beyond the end of the fiscal year for which funds were appropriated (related to a subsequent fiscal year).

Right of rejection – the Clearwater UWCD reserves the right to reject any or all proposals submitted and to waive any informality in proposals received. Proposals submitted will be evaluated by staff with final approval by the Clearwater Board of Directors at the November 13, 2012 Board Meeting.

Award – it is anticipated that the Clearwater UWCD Board of Directors will award the contract for auditing services on November 13, 2012.

C. Term of Engagement

Three one year contacts are contemplated, subject to the annual review and recommendation of the General Manager, the satisfactory negotiation of terms (including a price acceptable to both the District and the selected firm), the concurrence of the Clearwater UWCD Board members and the annual availability of an appropriation.

II. NATURE OF SERVICE REQUIRED

A. General

The Clearwater UWCD is requesting proposals from qualified and experienced public accounting firms, whose principal officers are independent certified public accountants to obtain independent audit services for performance of the District's financial audit for the fiscal year ending September 30, 2012, with the option of auditing its financial statements for each of the two (2) subsequent fiscal years, based upon satisfactory performance. This audit is to be performed in accordance with generally accepted auditing standards.

B. Scope of Work to be performed

The district wants the selected respondent (Auditor) to express an opinion on the fair presentation of its basic financial statements in conformity with generally accepted accounting principles.

Clearwater UWCD's Annual Financial Report for the Fiscal Year ending September 30, 2012 is attached as exhibit A.

C. References

Provide a listing of your firm's current Texas Municipal clients with contact information.

D. Proposed Schedule and Pricing

Provide a proposed schedule and pricing.

E. Litigation or Pending Claims

Provide a list of current litigation or any pending claims against your firm.

F. Proposed Audit Team

Please provide a listing of your proposed audit team and a listing of their credentials.

III. Evaluation of Proposals

The evaluation of the received proposals will be made by an evaluation team that will consist of the General Manager, Board Vice Chairman and Board Secretary. The evaluation criteria will be based on qualifications, municipal experience, pricing and schedule.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

GENERAL PURPOSE FINANCIAL STATEMENTS AND INDEPENDENT AUDITORS' REPORT

SEPTEMBER 30, 2012

ALTON D. THIELE, P.C.

Certified Public Accountant

Belton, Texas

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

GENERAL PURPOSE FINANCIAL STATEMENTS AND INDEPENDENT AUDITORS' REPORT

SEPTEMBER 30, 2012

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
TABLE OF CONTENTS

ALTON D. THIELE, P.C.

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

Independent Auditors' Report

Board of Directors
Clearwater Underground Water Conservation District
Belton, Texas 76513

We have audited the accompanying financial statements of the governmental activities and aggregate remaining fund information of Clearwater Underground Water Conservation District (the District) for the year ended September 30, 2012 which comprise the District's financial statements as listed in the table of contents. These financial statements are the responsibility of management of the District. Our responsibility is to express an opinion on these general purpose financial statements based on our audit.

We conducted the audit in accordance with U.S. generally accepted accounting principles and the standards applicable to financial statement audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the general purpose financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall general purpose financial statement presentation. We believe our audit provides a reasonable basis for our opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Clearwater Underground Water Conservation District as of September 30, 2012, and the changes in its financial position for the year then ended, in conformity with U.S. generally accepted accounting principles.

In accordance with *Government Auditing Standards*, we have also issued our report dated February 6, 2013 on our consideration of the District's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grants, agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Governmental Audit Standards and should be considered in assessing the results of our audit.

The accompanying Management's Discussion and Analysis on Pages 2 to 3 is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Clearwater Underground Water Conservation District's basic financial statements. The supplementary information on pages 13 to 19 is presented for purposes of additional analysis and is not a required part of the basic financial statements. This information has not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly we express no opinion on it.

Alton D. Thiele P.C.

February 6, 2013
Belton, TX 76513

As management of the Clearwater Underground Water Conservation District (the District), we offer 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, 2012. 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 District's financial statements and the related notes.

REPORT LAYOUT

In addition to the Management's Discussion and Analysis (MD&A), 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 statements are designed to be more corporate-like in that all activities are consolidated into a total for the District. The notes to the financial statements provide additional information that is essential to a full understanding of the data provided in the government-wide basic financial statements.

OVERVIEW OF THE FINANCIAL STATEMENTS

This annual financial report consists of two parts: Management's Discussion and Analysis (this section) and the basic 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.

FINANCIAL HIGHLIGHTS

** The District's total net assets were $ 823,554.
** Cash and investments $ 470,122.
** The District's liabilities were $ 95,270.
** Tax revenues were $ 549,448.
** Capital expenditures were $ 427,728
** Operational expenditures were $ 492,193.

FINANCIAL ANALYSIS OF THE DISTRICT

Net Assets: The following table summarizes the changes in Net Assets

2012	General Fund	General Capital Assets
Current Assets	$ 491,096	
Capital Assets (Net of Accum Dep)		$ 427,728
Liabilities	(95,270)	
Net Assets: Unreserved	$ 395,826	
Investment in General Capital Assets		$ 427,728

Operating Activities: The following table summarizes the change in Net Assets

2012	General Fund	Total
Tax Revenue	$ 549,448	$ 549,448
Interest and Other Revenues	9,173	9,173
Expenditures	(492,193)	(492,193)
Change in Net assets	$ 66,428	$ 66,428

As shown in the above information, the District improved financially. The District's net assets increased. In addition to the operational expenditures, the District expended $ 434,366 in the construction of new offices with accumulated depreciation of $ 6,638 creating an additional increase in net assets of $ 427,728.

BUDGETARY HIGHLIGHTS

Actual tax revenues were less than the expected tax revenues by $(7,118) or 1.3%. However, actual operational expenditures were 13% less than budgeted expenditures. This resulted in an increase in net assets of $ 66,428 where there was a zero increase budget. 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.

CAPITAL ASSETS

At October 1, 2011, the District had no investment in Capital Assets. During the year, new facilities to house the District offices were constructed and equipment was purchased so that at September 30, 2012, the District had a net increase in Capital Assets of $427,728.

2012	Investment in Capital Assets
Land	$ 55,366
Land improvements	19,000
Building	304,470
Field equipment	9,998
Office equipment	45,532
Total	434,366
Accumulated depreciation	(6,638)
Total Capital Assets (net of accum dep)	$ 427,728

Additional information regarding Capital Assets can be found in the notes to the financial statements.

DEBT OUTSTANDING

The District has no long term debt as of the fiscal year ended September 30, 2012.

ECONOMIC FACTORS AND NEXT YEAR'S BUDGET AND RATES

The District's property tax rate for 2012/2013 remains $0.004 per $100 valuation. The estimated taxable property value is 14,184,598,250 for a total expected tax revenue of $567,384. Income other than from property taxes is estimated at $10,000. The District's budgeted expenditures for 2012/2013 are $577,875.

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

AND RELATED NOTES

AS OF SEPTEMBER 30, 2012

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
STATEMENT OF NET ASSETS AND GOVERNMENTAL FUNDS BALANCE SHEET
SEPTEMBER 30, 2012

	Governmental Funds		
	General	Adjustments	Statement of Net Assets
ASSETS			
Cash in Banks	$ 48,430		$ 48,430
Invested Funds	421,692		421,692
Receivables			
Taxes	20,974		20,974
Capital Assets (net of accumulated depreciation)			
Infrastructure		427,728	427,728
Total Assets	$ 491,096	$ 427,728	$ 918,824
LIABILITIES			
Liabilities			
Accounts Payable	$ 74,296		$ 74,296
Deferred Revenues	20,974		20,974
Total Liabilities	95,270		95,270
Fund Equity			
Fund Balances			
Unreserved	395,826	(395,826)	
Total Fund Equity	395,826	(395,826)	
Total Liabilities and Fund Equity	$ 491,096		
Net Assets			
Investment in General Capital Assets (Net of related debt)		427,728	427,728
Unreserved		395,826	395,826
Total Net Assets		$ 823,554	$ 823,554

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 NET ASSETS
FOR THE YEAR ENDED SEPTEMBER 30, 2012

	General Fund	Adjustments	Statement of Activities
EXPENDITURES			
Operations			
Director Fees	$ 9,000		$ 9,000
Administrative	81,431		81,431
Compensation and benefits	141,817		141,817
Depreciation	6,638		6,638
Facilities costs	11,732		11,732
Clearwater studies	89,930		89,930
Legal and professional	77,917		77,917
Collection fees	6,354		6,354
Advertising	1,582		1,582
Other operating expenitures	65,792		65,792
Capital expenditures	427,728	(427,728)	-
Total Expenditures	919,921	(427,728)	492,193
REVENUES			
General Revenues			
Property Taxes	549,448		549,448
Other Revenue	8,367		8,367
Interest	806		806
Total Revenues	558,621		558,621
Excess (Deficiency) of Revenues over Expenditures	(361,300)	427,728	66,428
Change in Capital Assets	427,728	(427,728)	
Change in Net Assets		427,728	427,728
FUND BALANCE/NET ASSETS			
Beginning of year	329,398	-	329,398
End of year	$ 395,826	$ 427,728	$ 823,554

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 accompanying financial statements of Clearwater Underground Water Conservation District (the District) conform to accounting principles generally accepted in the United States of America as applicable to governments.

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.

Fund accounting
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. A description of the fund types and account groups used by the District follows.

Governmental fund
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 interest are the major sources of revenue. Expenditures include all costs associated with the daily operations of the District.

Account group
General capital asset 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.

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 with the exception of principal and interest on general long-term debt which is recognized when due.

NOTE 1 – SIGNIFICANT ACCOUNTING POLICIES AND BASIS OF ACCOUNTING (CONTINUED)

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

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.

Capital assets
General 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 General 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 General 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

Risks and uncertainties
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 value 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 Bell County Appraisal District. 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 2011 tax roll, was $13,905,864,198. The 2011 tax rate of $0.004 per $100 valuation was assessed and allocated to the General Fund. The resulting tax levy was $ 556,242.

Deferred tax revenue is reported by the District on its General Fund balance sheet 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 revenue is removed from the balance sheet and the revenue is recognized. The current Deferred Revenue is $ 20,974.

NOTE 3 – CHANGES IN GENERAL CAPITAL ASSETS

A summary of changes in general capital assets is as follows:

	Primary Government			
2012	Beginning investment	Increase	Retirements	Ending Investment
Capital Assets not depreciated				
Land	$ 0.00	$ 55,366		$ 55,366
Total not depreciated	0.00	55,366		55,366
Capital Assets depreciated				
Land improvements	-0-	19,000		19,000
Building	-0-	304,470		304,470
Field equipment	-0-	9,998		9,998
Office equipment	-0-	45,532		45,532
Total depreciated	-0-	379,000		379,000
Total Capital Assets	-0-	434,366		434,366
Accumulated depreciation	-0-	(6,638)		(6,638)
Total Capital Assets (net)	$ 0.00	$ 427,728		$ 427,728

NOTE 4 – CASH DEPOSITS WITH FINANCIAL INSTITUTIONS

The District's checking deposits and TexPool investments at September 30, 2012, were fully covered by federal depository insurance and/or pledged securities.

The District's cash and invested funds at September 30, 2012, were as follows:

	General Fund
First State Bank of Central Texas	
Operating account	$ 44,430
TexPool Accounts	
LGI Pool	221,561
Prime	200,131
Total TexPool accounts	421,692
Total cash and invested funds	$ 466,122

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

The cash deposits held at financial institutions can be categorized according to three levels of risk. These three levels of risk are:

Category 1 – Deposits which are insured or collateralized with securities held by the entity or by its agents in the entity's name.

Category 2 – Deposits which are collateralized with securities held by the pledging financial institution's trust department or agent in the entity's name.

Category 3 – Deposits which are not collateralized.

Based on these three levels of risk, all of the District's cash deposits as of September 30, 2012, are classified as *Category 1*.

The District is authorized, by law, 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.

NOTE 5 – EMPLOYEE BENEFITS

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 can carry-over leave up to a maximum of twenty-four days per fiscal year. Remaining accrued leave is payable upon termination. Accrual at fiscal year-end was not material to these financial statements.

NOTE 5 – EMPLOYEE BENEFITS (continued)

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.

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, 2012, the employer match was $ 1,890.

NOTE 6 - SUBSEQUENT EVENTS

District management has evaluated subsequent events through February 6, 2013; the date the financial statements were available to be issued. No change to the financial statements for the fiscal year ending September 30, 2012 is deemed necessary as a result of this evaluation.

ALTON D. THIELE, P.C.

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

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 the financial statements of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2012, and have issued our report thereon dated February 6, 2012. We conducted our audit in accordance with U.S. generally accepted auditing standards and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

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*. However, we refer to the *Communication of Significant Deficiencies and Material Weaknesses as Required by Statements on Auditing Standards No. 115* for recommendations on future compliance issues.

Internal Control Over Financial Reporting

In planning and performing our audit, we considered the District's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide assurance on the internal control over financial reporting. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be material weaknesses.

A material weakness is a condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We have noted matters involving the internal control over financial reporting and its operation that we consider to be material weaknesses and refer to the *Communication of Significant Deficiencies and Material Weaknesses as Required by Statements on Auditing Standards No. 115.*

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

Belton, Texas
February 6, 2013

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Member American Institute of Certified Public Accountants
12
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SUPPLEMENTAL INFORMATION

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
INDEX OF SUPPLEMENTAL SCHEDULES INCLUDED IN THIS REPORT
SEPTEMBER 30, 2012

Schedules Included*

YES	NO	
	X	Notes required by the Water District Accounting Manual
X		Budgetary Comparison Schedule
X		Schedule of General Fund Expenditures
X		Schedule of Temporary Investments
X		Schedule of Service and Rates
X		Analysis of Taxes Levied and Receivable
	X	Analysis to Changes in Long-Term Debt
	X	General Long-Term Debt Service Requirements by Years
	X	Analysis of Changes in General Fixed Assets
	X	Comparative Schedule of Revenues and Expenditures - Five Years - General Fund
	X	Analysis of Changes in Assets and Liabilities - Agency Fund
X		Schedule of Board Members, Key Personnel, and Consultants

* Schedules not included are not applicable to this entity.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

BUDGETARY COMPARISON SCHEDULE

FOR THE YEAR ENDED SEPTEMBER 30, 2012

	General Fund		VARIANCE Positive (Negative)
	BUDGET	Actual	
REVENUES			
Property taxes	$ 556,566	$ 549,448	$ (7,118)
Application fee	7,200	7,200	-
Transport fee	1,167	1,167	-
Interest	1,000	789	(211)
Other income	-	17	17
Total revenues	565,933	558,621	(7,312)
EXPENDITURES			
Administrative expenses	125,855	90,431	35,424
Compensation and benefits	144,070	141,817	2,253
Clearwater studies	83,397	89,930	(6,533)
Educational outreach/marketing	13,156	9,884	3,272
Computer systems	30,000	31,996	(1,996)
Legal fees	66,400	77,916	(11,516)
Other operating expenses	42,427	31,848	10,579
Depreciation	-	6,638	(6,638)
Reserve for uncollected taxes*	19,000	-	19,000
Furniture and equipment*	28,678	-	28,678
Facility costs	7,000	5,816	1,184
Utilities	5,950	5,917	33
Total expenditures	565,933	492,193	73,740
Excess (deficiency) of revenues over expenditures	-	66,428	66,428
* Budget reserves for balance sheet items			
Reserve for uncollected taxes*	19,000	20,974	(1,974)
Furniture and equipment*	28,679	29,181	(502)

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

SCHEDULE OF GENERAL FUND EXPENDITURES

FOR THE YEAR ENDED SEPTEMBER 30, 2012

Current		
Compensation and benefits*	$	141,817
Professional Services		
Auditing		-
Legal		77,916
Clearwater studies		89,930
Utilities		5,917
Facility costs		5,816
Administrative expenses		90,431
Capital outlay		
Acquisition of capital assets		434,366
Educational outreach/marketing		9,884
Computer systems		31,996
Other operating expenses		31,848
Other expenditures		-
TOTAL	$	919,921

* Number of persons employed by the District: 2 - Full-time and 1 - Part-time

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

SCHEDULE OF TEMPORARY INVESTMENTS

FOR THE YEAR ENDED SEPTEMBER 30, 2012

Governmental Funds	Pool / Type	Interest Rate	Maturity Date	Balance at End of Year
General Fund				
Local Government Investment Pools				
TexPool	449	0.1501%	Demand	$ 221,561
TexPool - Prime	590	0.1757%	Demand	200,131
TOTAL				421,692
Other accounts				
First State Bank of CT Operations account	Transaction	N/A	Demand	48,430
TOTAL				48,430
TOTAL ALL ACCOUNTS				$ 470,122

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

SCHEDULE OF SERVICE AND RATES

FOR THE YEAR ENDED SEPTEMBER 30, 2012

1. Services Provided by the district during the Fiscal Year:

___ Retail Water ___ Wholesale Water ___ Drainage
___ Retail Wastewater ___ Wholesale Wastewater ___ Irrigation
___ Parks/Recreation ___ Fire Protection ___ Security
___ Solid Waste/Garbage ___ Flood Control ___ Roads
___ Participates in joint venture, regional system and/or wastewater service (other than emergency interconnect)
_X_ Other (specify): Underground Water Conservation District

2. Retail Service Providers

a. Retail Rates Based on a 5/8" Meter (or equivalent):

	Minimum Charge	Minimum Usage	Flat Rate Y/N	Rate per 1000 Gallons Over Minimum Use	Usage Levels (gallons)
WATER	$ -		N	$ -	N/A
WASTEWATER	$ -			$ -	N/A
SURCHARGE	$ -			$ -	N/A

District employs winter averaging for wastewater usage? Yes ____ No _X_
Total water and sewer charges per 10,000 gallons usage (including surcharge) $ $ -

b. Water and Wastewater Retail Connections:

Meter size	Total Connections	Active Connections	ESFC Factor	Active ESFC's
Total Water				
Total Wastewater				

3. Total water consuption (rounded to the nearest 1,000) during fiscal year:

Gallons pumped into system: N/A Water Accountability Ratio (Gallons billed /Gallons Pumped)
Gallons billed to customers: N/A

4. Standby Fees: (authorized only under TWC Section 49.231):
Does the District assess standby fees? Yes ___ No _X_

5. Location of District

County(ies) in which the district is located: Bell County

Is the district located entirely within one county? Yes _X_ No ___

Is the district Located within a city? Entirely ___ Partly _X_ Not at all ___

City(ies) in which the district is located: District boundary co-exists with that of Bell Co.

Is the District located within a city's extra-territorial Jurisdiction (ETJ)? N/A
Entirely ___ Partly ___ Not at all ___

Are Board members appointed by an office outside the District? Yes ___ No _X_

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
ANALYSIS OF TAXES LEVIED AND RECEIVABLE
FOR THE YEAR ENDED SEPTEMBER 30, 2012

	Maintenance Taxes
Taxes receivable at October 1, 2011	$ 14,971
2011 Original tax roll, net	556,242
Total to be accounted for	571,213
Tax Collections:	
Current year	(539,552)
Prior years	(10,687)
Total collections	(550,239)
Taxes receivable, September 30, 2012	$ 20,974
Taxes receivable by years:	
2005 and years prior to	$ 4,171
2006	1,117
2007	1,289
2008	1,779
2009	2,408
2010	3,641
2011	6,569
Taxes receivable, December 31, 2011	20,974
	2011
Property Valuations	$ 13,905,864,198
Tax rates per $100 valuation:	
Debt service tax rates	N/A
Maintenance tax rates	0.004
Total tax rates per $100 valuation:	0.004
Original tax levy	$ 556,235
Percent of taxes collected to taxes levied**	98.92%

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

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
SCHEDULE OF BOARD MEMBERS, CONSULTANTS, AND KEY PERSONNEL
SEPTEMBER 30, 2012

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 09/30/2012	Expense Reimbursement	Title as of 09/30/2012	Property owner within the District
Board Members					
Leland Gersbach 7872 Hackberry Holland, TX 76534	Precinct 1 2012 to 2016	Waived	$0	President	Yes
Bill Bartlett 1530 Rose Lane PO Box 183 Salado, TX 76571	Precinct 2 2010 to 2014	$1,650	$0	Director	Yes
Wallace Biskup PO Box 265 Troy, TX 76579	Precinct 3 2012 to 2016	$2,400	$78	Vice President	Yes
Judy Parker 1235 River Ridge Ranch Road Killeen, TX	Precinct 4 2010 to 2014	$4,200	$1,136	Secretary	Yes
David Cole 2401 Brown Circle Killeen, TX 76543	At-Large 2010 to 2014	Waived	$0	Director	Yes
Consultants					
Lloyd Gosselink Attorneys at Law 816 Congress Ave Suite 1900 Austin, TX 78701-4071	N/A	$77,917	N/A	Attorney	N/A
Alton D Thiele, P.C. P.O. Box 808 Belton, TX 76513	N/A	$0	N/A	Auditor	N/A
Key Personnel					
Dirk Aaron	N/A	$52,000		District Manager	
Shelly Chapman	N/A	$32,000		District Administrative Assistant	

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

COMMUNICATIONS WITH THOSE CHARGED WITH GOVERNANCE

SEPTEMBER 30, 2012

ALTON D. THIELE, P.C.

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

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

We have audited the financial statements of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2012. Professional standards require that we provide you with information about our responsibilities under auditing standards generally accepted in the United States of America, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter dated February 6, 2013. 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. All accounting policies used by Clearwater Underground Water Conservation District were new and adopted while the application of existing policies used by CTCOG on behalf of the District were not changed during the fiscal year ended September 30, 2012. 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 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 most sensitive estimate affecting the financial statements was:

Management's estimate of the estimated useful lives of fixed assets is based on historical experience. We evaluated the key factors and assumptions used to develop the lives in determining that it is reasonable in relation to the financial statements taken as a whole.

Difficulties Encountered in Performing the Audit

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

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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 6, 2013.

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. Please refer to the *Communication of Significant Deficiencies Material Weaknesses as Required by Statement on Auditing Standards No. 115;* other matters for Board consideration.

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,

February 6, 2013

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

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

SEPTEMBER 30, 2012

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 financial statements of Clearwater Underground Water Conservation District (the District) as of and for the year ended September 30, 2012, in accordance with auditing standards generally accepted in the United States of America, we considered Clearwater Underground Water Conservation District's internal control over financial reporting (internal control) as a basis for designing our auditing procedures 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.

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 considered material weaknesses or significant deficiencies. However, as discussed below, we identified certain deficiencies in internal control that we consider to be material weaknesses.

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 District's financial statements will not be prevented, or detected and corrected, on a timely basis. We consider the following deficiencies in the District's internal control to be material weaknesses.

Preparation of Financial Statements

We need to provide some historical background to explain why this procedure, or the absence thereof, is of such significance. In the early 1990s, financial fraud disclosure was undermining the reliability of financial statements, as well as the audit firm's "clean" opinions on these statements. There were significant issues with financial statement reliability, as presented to the outside auditors. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) was created in response to the heightened need for greater reliability of financial statements. The Treadway Commission is also known as the National Commission on Fraudulent Reporting. One of the landmark statements issued by COSO states, in part, that internal control over financial reporting is "... a process, effected by those charged with governance, management and other personnel, designed to provide reasonable assurance about the achievement of the District's objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations and compliance with applicable laws and regulations... the term *financial reporting* relates to the preparation of reliable financial statements that are fairly presented in conformity with accounting principles generally accepted in the United States of America (GAAP)."

The governing regulatory body(ies), in your case, the Governmental Accounting Standards Board (GASB), has adopted this "Integrated Framework" to represent their expectations regarding financial statements. In this light, the minimum threshold for GAAP-based financial statements, which management (that is, the Board of Directors) is asserting "present fairly, in all material respects, the financial condition ..." is this higher level of preparation and presentation from your staff. These are not the audit firm's financial statements. The only ownership the auditor asserts is over the opinion on your financial statements.

So, with that short synopsis, we need to point out to the Board of Directors that Clearwater Underground Water Conservation District does not have personnel with the needed technical skills and experience to properly draft financial statements, including footnote disclosures, as envisioned by the "Integrated Framework" of COSO and adopted by all other oversight, regulatory agencies, including the American Institute of Certified Public Accountants, through its standard-setting committee known as the Auditing Standards Board, referred to as SAS No. 115. Accordingly, the inability to prepare such statements is considered a material weakness for internal control purposes.

Clearwater Underground Water Conservation District has limited staff to perform office management and clerical functions to maintain divisions of duties for adequate checks and balances. To compensate for these limitations, Board members provide additional oversight and have sufficient knowledge and experience to mitigate this inability to provide compliant interim financial statements. However, the office staff should receive additional training in the preparation of GAAP compliant interim financial statements for presentation at Board meetings. This compliance includes correct structure and titles of the respective statements.

Taxes Receivable and Delinquent Tax Recognition

Presently, internal controls do not include the proper recognition and documentation of property taxes receivable and delinquent. Therefore, the interim financial statements do not correctly present the taxes receivable, defined as measurable and collectable. This resulted in a material adjustment at fiscal year end to present the taxes receivable and delinquent correctly in the audited financial statements. We recommend taxes receivable and delinquent be examined by District management monthly for material changes and appropriate journal entries made.

Other Matters for Board Consideration

While the following issues did not rise to the level of material weaknesses or significant deficiencies, management indicated that they be presented to the Board for approval to proceed. These issues are considered part of the "learning curve" after separation from the services provided by the Central Texas Council of Governments (CTCOG) who served as a contract service provider of administrative accounting.

Chart of Accounts

Your Chart of Accounts, (the Chart), was established using descriptive references to accounts without any indexing numbers. As the Chart expands accounts with similar descriptions can cause entries to be incorrectly made. To avoid this, we recommend numbering the Chart in a manner consistent with account types. Some account types needed to be changed due to the manner in which QuickBooks accounting software regards them. There were modifications to some descriptions needed due to the accounting implications posed by the initial descriptions. There are also accounts to be added and removed as necessary for audit adjustments.

Audit Adjusting Entries

There were a number of adjusting entries required in order to correct initial entries after separation from CTCOG and in order to properly recognize certain accounting requirements regarding capital assets and fund equity. An entry was also needed to recognize current depreciation.

Capital Assets Inventory and Capitalization Policy

Tracking and documenting Capital Assets is necessary to accurately present the District's investment. There is no current policy setting any guidelines management is to follow when deciding to capitalize or expense an acquisition. Management should also keep a record of Capital Assets annually to track what is still useful and what should be retired or replaced. An asset summary was produced in order to determine current depreciation on the straight-line basis with useful lives from 5 to 40 years. This summary can be used as a basis for the asset inventory.

Bank Reconciliations

During the audit, a bank reconciliation was performed using a date inconsistent with traditional month-end and closed period internal controls. We recommended using the last day of the month if the statement ending date is other than the last day. There were outstanding transactions not properly recognized on the reconciliation in question but were not of a material amount.

Texas Water Code Compliance issues

There are two filings that have not been made and we recommend their submission immediately after approval. The first is the TCEQ District Registration Form in compliance with §49.054, §36.054, and §49.055 to cite three. The second is the Annual Filing Affidavit; §49.194.

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.

Belton, Texas
February 6, 2013

Clearwater Underground Water Conservation District
P.O. Box 1989, Belton, Texas 76513
Phone: 254/933-0120 Fax: 254/933-8396
www.clearwaterdistrict.org

Every drop counts!

DATE:

TO: Audit Firms

FROM: Dirk Aaron, General Manager

SUBJECT: Request for Qualifications for Auditing Services

The Clearwater Underground Water Conservation District (CUWCD) is soliciting proposals from qualified firms of certified public accountants to audit the CUWCD's financial statements for the fiscal year ending September 30, 2012 with the option of auditing the District's financial statements for the two (2) subsequent fiscal years. General meeting with Firms to discuss our current year audit issues and a general overview of the District is scheduled for 1:30 p.m. on October 16, 2012 the Clearwater UWCD office located at 700 Kennedy Court in the Belton Business Park.

To be considered for this engagement, your firm must meet the qualifications and satisfy the requirements set forth in the RFP. Completed proposals must be received at the address listed below by 5:00p.m. on Wednesday, October 31, 2012.

Mailing Address:
Clearwater UWCD
Attn: Dirk Aaron, General Manager
P.O. Box 1989
Belton, TX 76513

Physical Address:
Clearwater UWCD
Attn: Dirk Aaron, General Manager
700 Kennedy Court
Belton, TX 76513

All questions and correspondence should be directed to Dirk Aaron, in writing at the above address or by email at dirk.aaron@clearwaterdistrict.org. Contact with personnel other than Dirk Aaron regarding the RFP may be grounds for elimination form the selection process.

Every drop counts!

Clearwater Underground Water Conservation District

REQUEST FOR PROPOSAL

FOR

PROFESSIONAL AUDITING SERVICES

October 2012

I. INTRODUCTIONS

A. General Information

The Clearwater UWCD is requesting proposals from qualified and experienced public accounting firms, whose principal officers are independent certified public accountants to obtain independent audit services for performance of the District's annual financial audit for the fiscal year ending September 30, 2012, with the option of auditing its financial statements for each of the two (2) subsequent fiscal years, based upon satisfactory performance. This audit is to be performed in accordance with generally accepted auditing standards.

Be it known that Clearwater UWCD was under direct contract with Central Texas Council of Governments (CTCOG) October 1, 2011 until the dissolution of the contract on March 31, 2012. The Clearwater UWCD was relocated and established independently at 700 Kennedy Court on April 1, 2012. Thus, the audit will be constricted to April 1, 2012 until September 30, 2012 fiscal year.

B. Proposal Information

Deadline for Proposals is 5:00 pm Wednesday, October 31, 2012.

Submit Proposals to:

Mailing Address:	Clearwater UWCD Attn: Dirk Aaron, General Manager P.O. Box 1989 Belton, TX 76513
Physical Address:	Clearwater UWCD Attn: Dirk Aaron, General Manager 700 Kennedy Court Belton, TX 76513

One original and three (3) copies of the Proposal should be returned in a sealed envelope clearly bearing the name and address of the Respondent and the **RFP No. 2012.**

Acceptance – all Proposals must include a statement that they are valid for a minimum period of 60 days subsequent to the RFP closing date.

Late Proposals – will not be considered. Each Respondent shall be solely responsible for ensuring that the General Manager receives the Proposal within the time limit indicated.

Non-appropriation – the District may cancel the contract should the present or any future Clearwater UWCD Board non-appropriate funds in any fiscal year for the payment of this agreement. No penalty shall attach in the event of any such non-appropriation. In the event of non-appropriation, the District shall give the successful Respondent written notice of cancellation and the District shall not be obligated to make any payments beyond the end of the fiscal year for which funds were appropriated (related to a subsequent fiscal year).

Right of rejection – the Clearwater UWCD reserves the right to reject any or all proposals submitted and to waive any informality in proposals received. Proposals submitted will be evaluated by staff with final approval by the Clearwater Board of Directors at the November 13, 2012 Board Meeting.

Award – it is anticipated that the Clearwater UWCD Board of Directors will award the contract for auditing services on November 13, 2012.

C. Term of Engagement

Three one year contacts are contemplated, subject to the annual review and recommendation of the General Manager, the satisfactory negotiation of terms (including a price acceptable to both the District and the selected firm), the concurrence of the Clearwater UWCD Board members and the annual availability of an appropriation.

II. NATURE OF SERVICE REQUIRED

A. General

The Clearwater UWCD is requesting proposals from qualified and experienced public accounting firms, whose principal officers are independent certified public accountants to obtain independent audit services for performance of the District's financial audit for the fiscal year ending September 30, 2012, with the option of auditing its financial statements for each of the two (2) subsequent fiscal years, based upon satisfactory performance. This audit is to be performed in accordance with generally accepted auditing standards.

B. Scope of Work to be performed

The district wants the selected respondent (Auditor) to express an opinion on the fair presentation of its basic financial statements in conformity with generally accepted accounting principles.

Clearwater UWCD's Annual Financial Report for the Fiscal Year ending September 30, 2012 is attached as exhibit A.

C. References

Provide a listing of your firm's current Texas Municipal clients with contact information.

D. Proposed Schedule and Pricing

Provide a proposed schedule and pricing.

E. Litigation or Pending Claims

Provide a list of current litigation or any pending claims against your firm.

F. Proposed Audit Team

Please provide a listing of your proposed audit team and a listing of their credentials.

III. Evaluation of Proposals

The evaluation of the received proposals will be made by an evaluation team that will consist of the General Manager, Board Vice Chairman and Board Secretary. The evaluation criteria will be based on qualifications, municipal experience, pricing and schedule.

Appendix C

Clearwater Underground Water Conservation District
P.O. Box 729, Belton , TX 76513
Phone: 254/933-0120 Fax: 254/770-2360

ADMINISTRATIVE FEE SCHEDULE

Effective September 01, 2011

DESCRIPTION	*FEE*
Well Registration	**No Fee**
Application for Permit[1]	**N1: $200** **N2 < 10 ac-ft/year: $700** **N2 from 10 to 37 ac-ft/year: $1,000** **N2 > 37 ac-ft/year: $1,500**
Transport Surcharge[2]	**$0.025/1,000 Gallons of Water**
District Documents[3]	**1st Copy—No Fee** Additional copies provided at cost See Miscellaneous Copying
Miscellaneous Copying	**Provided at Cost** $0.09/black & white; 1st ten—no fee $0.23/color; 1st four—no fee
Maps (Printing & Copying)	**$3.00 - $17.00 Based on Size**

1 Except for N1 wells, fees shown are for anticipated technical review costs and potential legal consultation over $100. If technical and legal expenses are higher than fees shown, N2 applicants pay additional cost; if less, N2 applicants are refunded. Full payment of all fees is required before permit may be issued. See back of this sheet for a description of N1 and N2 permits
No is required for a change in well ownership.

2 As allowed in Texas Water Code, Chapter 36.122.

3 Includes documents such as Rules, Management Plan, Bylaws, Annual Report, etc. This does not include studies such as *Groundwater Resources Management Information.* Studies are available at cost.
NOTE: Several documents are available on the District's web site—www.clearwaterdistrict.org.

Printing & Copying Fees
Maps

Map Size	Prices per Map Color	B&W
8.5" x 11"	$5	$3
11" x 17"	$7	$5
17" x 22"	$9	$7
22" x 34"	$11	$9
28" x 40"	$13	$11
34" x 44"	$15	$13
Larger—up to 36" wide	$17	$15

N1: A **NON-EXEMPT WELL, CLASSIFICATION 1**, is a well that satisfies the following conditions:

A water well used for domestic purposes or for watering livestock or poultry that is drilled, equipped or completed so that it is incapable of producing more than 25,000 gallons per day, and is located on a tract of land consisting of less than 10 acres as of March 1, 2004.

Any water well used for other purposes or that is capable of producing more than 25,000 gallons per day, is a Non-Exempt Well, Classification 2 (N2).

N1 wells meet all of the criteria for an exempt well except for the minimum tract size of 10 acres or more.

N2: A **NON-EXEMPT WELL, CLASSIFICATION 2** is a well that satisfies the following conditions:

1) A water well used for purposes other than domestic, livestock or poultry; or
2) A water well that is drilled, equipped or completed so that it is capable of producing more than 25,000 gallons/day.

Appendix D

RESOLUTION
OF THE BOARD OF DIRECTORS OF THE
CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
MEETING HELD FEBRUARY 14, 2012

A RESOLUTION AMENDING THE DISTRICT BYLAWS

WHEREAS, the Clearwater Underground Water Conservation District (the "District") is a political subdivision of the State of Texas organized and existing under and by virtue of Article XVI, § 59, of the Texas Constitution, and a groundwater conservation district acting under Chapters 36 and 49 of the Texas Water Code and the District's enabling act, Act of the 71st Legislature, Regular Session, Chapter 524, 1989, as amended by Act of the 77th Legislature, Regular Session, Chapter 22, 2001, and by Act of the 81st Legislature, Regular Session, Chapter 64, 2009;

WHEREAS, the District is a governmental agency and a body politic and corporate;

WHEREAS, Texas Water Code § 36.057(f) authorizes groundwater conservation districts to adopt bylaws to govern the affairs of the districts to perform their purposes;

WHEREAS, the Board of Directors (the "Board") of the District believes it is necessary for the District to establish bylaws pursuant to such authority as the District carries out its authorized purposes, including the governance of its own affairs in managing the groundwater resources of Bell County, Texas;

WHEREAS, the Board initially adopted District Bylaws on June 18, 1999 and has amended its bylaws since the initial adoption;

WHEREAS, Article IX, Section 1, of the District Bylaws provides that the Board may amend the District Bylaws by the affirmative vote of a majority of the Directors;

WHEREAS, the Board and staff of the District have identified an amendment that needs to be made to the District Bylaws to change the address for the District's Principal Office;

WHEREAS, the Board finds that the attached amendments to the District Bylaws meet the requirements of Chapter 36, Water Code, and other applicable laws; and

WHEREAS, the Board of Directors of the District met in a public meeting, noticed properly in accordance with applicable law, and considered adoption of the attached amendments to the District's Bylaws and approval of this resolution.

NOW THEREFORE BE IT RESOLVED THAT:

The above recitals are true and correct;

The Board of Directors for the District hereby adopts the attached amended bylaws for the District;

The Board of Directors, its officers, and the District employees are further authorized to take any and all actions necessary to implement this resolution; and

The amended bylaws attached hereto and adopted by the Board of Directors shall be effective on April 1, 2012.

AND IT IS SO ORDERED.

Upon motion duly made by Director David Cole, and seconded by Director Wallace Biskup, and upon discussion, the Board voted 5 in favor and 0 opposed, 0 abstained, and 0 absent, and the motion thereby PASSED on this 14th day of February, 2012.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

By: Leland Gersbach
Leland Gersbach
Board President

ATTEST:

Judy Parker
Judy Parker
Board Secretary

BYLAWS

OF

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

ARTICLE I

DESCRIPTION OF ENTITY AND ITS OFFICES

Section 1. The Clearwater Underground Water Conservation District ("District") has been created 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) and 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*. These bylaws are adopted to facilitate the conduct of the business of the District. In the event of any conflict between these Bylaws and applicable law, it is expressly recognized that such conflict is inadvertent and unintended, and the law shall govern.

Section 2. Principal Office. The principal office of the District is located at 700 Kennedy Court, Belton, Texas 76513, or at such other place as the Board of Directors may establish by Board resolution from time to time.

ARTICLE II

MEMBERS OF THE BOARD OF DIRECTORS

The business and affairs of the District shall be managed by its Board of Directors, who may exercise all powers relating to the District.

The Members of the Board of Directors shall consist of five (5) members, with the initial Board of Directors appointed by the Commissioners Court of Bell County, to serve until election of a new Board of Directors at the election confirming creation of the District. Thereafter, the Members elected to the Board of Directors shall serve for their respective terms as provided by law.

ARTICLE III

TERMS, REMOVAL, COMPENSATION

Section 1. Terms and Election of Successors. After the confirmation election, all Members of the Board of Directors shall serve for their terms as provided by law. Vacancies shall be filled by appointment of the Board of Directors for the balance of the unexpired term, or as otherwise provided by law. Each member shall serve until him or her position is filled by a successor.

Section 2. Removal of Directors. A Director may be removed only in the manner provided by law.

Section 3. Compensation of Initial Directors. A Director may be reimbursed for out-of-pocket expenses incurred in connection with serving as a Director. No member of the initial Board of Directors shall receive compensation for serving as a member of the Board of Directors. Following the confirmation election, the Directors elected may elect to set compensation, not to exceed the amount allowed by law.

ARTICLE IV

MEETINGS OF THE BOARD OF DIRECTORS

Section 1. Board of Directors Meetings. Except as otherwise provided below, the Board of Directors may hold its meetings, both regular and special, at such places within Bell County, Texas, as the Board of Directors may determine from time to time. On special occasions, as determined by a majority of the Board of Directors, the Board of Directors may meet at places outside of Bell County.

Section 2. Regular Meetings. Regular meetings of the Board of Directors shall be held at the principal office set forth in Article I, Section 2 above and shall be held at least quarterly.

Section 3. Special Meetings. Special meetings may be called by the President on notice to each Director and upon further notice, in the manner set forth in Article V, Section 1, below. Special meetings shall be called by the President or Secretary in like manner and on like notice on the written request of at least four Directors. The business to be transacted and the purpose of, any regular or special meeting shall be specified in a notice thereof.

Section 4. Quorum. At all meetings of the Board of Directors, the presence of a majority of the Directors shall be necessary and sufficient to constitute a quorum, and a concurrence of a majority of the entire membership of the Board of Directors is sufficient for the transaction of business.

ARTICLE V

NOTICES

Section 1. Methods of Notice. Notice of meetings shall be given in the manner provided by the Texas Open Meetings Act, Chapter 551, *Government Code.*

ARTICLE VI

OFFICERS

Section 1. The officers of the Board of Directors shall be elected by the Directors, and shall be a President, a Vice President and a Secretary. The Board of Directors may also choose one or more Assistant Secretaries and Assistant Treasurers. All officers must be members of the Board of Directors except Assistant Secretaries, who need not be Board of Directors members.

Section 2. Agents and Employees, etc. The Board of Directors may employ or appoint such other agents and employees, consultants and independent contractors as it shall deem necessary, who shall be employed or appointed for such terms and shall exercise such powers and perform such duties as shall be determined from time to time by the Board of Directors.

Section 3. Salaries. The salaries or compensation of any agents, employees, consultants or independent contractors of the Board of Directors shall be fixed by the Board of Directors.

Section 4. Terms of Office. Each officer of the Board of Directors shall hold office for a term of approximately one year, subject to reelection. The officers shall be elected annually at the first meeting held in each calendar year. If an office becomes vacant for any reason, the vacancy shall be filled by the Board of Directors.

Section 5. The President. The President shall be the chief executive officer of the District, shall preside at all meetings of the Board of Directors, shall execute all documents on behalf of the District, shall see that all orders and resolutions of the Board of Directors are carried into effect, and shall perform such other duties as the Board of Directors may prescribe from time to time.

Section 6. The Vice President. The Vice President shall have such powers and perform such duties as the Board of Directors may from time to time prescribe or as the President may from time to time delegate to him or her. The Vice President shall act as President in the case of the absence or disability of the President.

Section 7. The Secretary. The Secretary is responsible for seeing that all records and books of the District are properly kept and shall attest the President's signature on all documents.

Section 8. Assistant Secretaries. Each Assistant Secretary shall have such powers and perform such duties as the Board of Directors may from time to time prescribe or as the President or Secretary may from time to time delegate to him or her.

ARTICLE VII

GENERAL PROVISIONS

Section 1. No Private Benefit. No part of any funds received by the Board of Directors shall inure to the benefit of any private person, including but not limited to any director or officer.

Section 2. Checks. All checks or withdrawals of funds shall be signed by such officer or officers or such other person or persons as the Board of Directors may from time to time designate, and as required by law.

Section 3. Fiscal Year. The fiscal year of the District shall be fixed by resolution of the Board of Directors, but in the absence of such designation shall be from each October 1 to the following September 30.

Section 4. Indemnification. To the full extent allowed by law, the District shall indemnify any director, officer, or employee, or former director, officer, or employee of the Board of Directors, or any person who may have served at its request, against expenses actually and necessarily incurred by him or her, and any amount paid in satisfaction of judgments in connection with any action, suit or proceeding, whether civil or criminal in nature, in which he or she is made a party by reason of being or having been such a director, officer, of employee (whether or not a director, officer or employee at the time such costs or expenses are incurred by or imposed upon him or her) except in relation to matters as to which he or she shall be adjudged in such action, suit or proceeding to be liable for gross negligence or willful misconduct in the performance of duty. The District may also reimburse any director, officer or employee the reasonable costs of settlement of any such action, suit

or proceeding, if it shall be found by a majority of the directors not involved in the matter in controversy, that it was in the interests of the District that such settlement be made and that such director, officer or employee was not guilty of gross negligence or willful misconduct. Such rights of indemnification and reimbursement shall not be deemed exclusive of any other rights to which such director, officer or employee may be entitled by law or under any Bylaw, board resolution, agreement, or otherwise.

Section 6. Audit. The Board of Directors may cause an annual audit or other examination (the "Audit") to be made by a firm of certified public accountants, to be chosen by the Board of Directors.

Section 7. Actions of the Board of Directors. Unless otherwise expressly provided herein, any actions taken by the Board of Directors, including, but not limited to any amendment to these Bylaws, must be approved by the affirmative vote of the majority of the members of the entire membership of the Board of Directors during a meeting of the Board of Directors at which there is a quorum present.

Section 8. Seal. The District shall have no seal.

ARTICLE VIII

COMMITTEES

The Board of Directors may create from time to time such standing and special committees of the Board of Directors as it deems proper and name the members thereof.

ARTICLE IX

AMENDMENTS

Section 1. Any provision of Bylaws not required by law may be altered, amended or repealed at any meeting of the Board of Directors at which a quorum is present by the affirmative vote of a majority of the Directors present at such meeting, provided notice of the proposed alteration, amendment or repeal is contained in the notice of such meeting.

Initial Bylaws PASSED AND ADOPTED on the 18th day of June, 1999. Revisions PASSED AND ADOPTED on October 24, 2000, August 17, 2004, August 16, 2005, September 14, 2010, and February 14, 2012.

President Leland Gersbach

Secretary Judy Parker

Appendix E

2012 Newspaper Articles

Paper Name	Date	Article Heading
Temple Daily Telegram	1/24/12	Clearwater Urges Conservation
Killeen Daily Herald	2/15/12	Water District gets Update on Salado Salamander Conservation
Temple Daily Telegram	2/15/12	Salamander Focus of Clearwater Meeting
Killeen Daily Herald	2/18/12	Clearwater's New Building More Accessible
Killeen Daily Herald	2/25/12	Court's Ruling Concerns Local Water Experts
Temple Daily Telegram	4/10/12	Salado Salamander Efforts Could Help With Water Quality
Temple Daily Telegram	4/11/12	Clearwater Board Approves Funding for Edwards Aquifer, Salamander Research
Temple Daily Telegram	4/12/12	Officials: Recent Rain Good For Aquifers, But Crisis Not Over Yet
Temple Daily Telegram	4/12/12	Clearwater Considers Funding Research
Temple Daily Telegram	4/25/12	Clearwater Holds Open House for New Headquarters Building
Temple Daily Telegram	4/28/12	Local Aquifers Still in "Serious" Drought
Temple Daily Telegram	5/9/12	Habitat Research-Salamander
Temple Daily Telegram	5/20/12	Water Control: Clearwater Board Discusses Mandatory Water Restriction
Salado Village Voice	6/7/12	Salamander Meeting June 18th
Killeen Daily Herald	6/19/12	2 Scientists Studying the Amphibian for Bell County
Temple Daily Telegram	6/20/12	Clearwater to Draw Less Water From Saladl Springs
Temple Daily Telegram	6/20/12	Legislation Wont Stop Salamander Study
Salado Village Voice	6/21/12	Residents Want Better Science on Slalmander
Temple Daily Telegram	7/1/12	Water Conservation Still Crucial in Area
Salado Village Voice	7/5/12	Clearwater Manager Will Speak At ABWA
Temple Daily Telegram	7/19/12	Clearwater Board Lowers Aquifers' Drought Stages
Salado Village Voice	7/26/12	FWS Postpones EPA Proposal on Salamanders
Temple Daily Telegram	7/27/12	Sen. Cornyn Seeks To Exempt Local Salamanders From Endangered list
Temple Daily Telegram	8/5/12	Professor says Area Salamanders All One Species, Not Endangered
Temple Daily Telegram	8/7/12	Water District Encourages Conservation
Killeen Daily Herald	8/7/12	Rainfall Across Aquifers Below Normal
Temple Daily Telegram	8/15/12	District Aims To Maintain Tax Rate
Temple Daily Telegram	8/19/12	Filing Period For Clearwater Board Ends Monday
Temple Daily Telegram	8/20/12	Notice of Public Hearing on Tax Rate
Killeen Daily Herald	8/20/12	Notice of Public Hearing on Tax Rate
Killeen Daily Herald	8/22/12	Gov't Backs Protection for Salado Salamander
Austin American Statesman	8/22/12	Protection Proposal Enters the final Stage - Salamander
Temple Daily Telegram	8/22/12	Protection recommended for 4 Salamander Species
Salado Village Voice	8/23/12	FWS Will Propose Salado Salamander Critical Habitat Area
Temple Daily Telegram	8/28/12	Bell Adopts 1-cent Tax Increase (CUWCD Nov. Election)
Temple Daily Telegram	9/1/12	District: Role is to Protect Edwards Aquifer
Killeen Daily Herald	9/1/12	Clearwater Disputes Recommendation About Salamander
Killeen Daily Herald	9/6/12	Fish & Wildlife's Salamander Proposal Criticized
Killeen Daily Herald	9/16/12	Grownth in Sourthern Killeen Threatens Water and Other Natural Resources
Temple Daily Telegram	10/3/12	Area Aquifers Near Pre Drought Levels
YNN	10/3/12	Recent Rains Provide Needed Relief for Area Aquifers
Temple Daily Telegram	10/26/12	Water Symposium Registration Begins
Temple Daily Telegram	10/28/12	Candidates Explain Their Positions
Temple Daily Telegram	10/29/12	Clearwater to Hold 12th Annual Water Symposium
Killeen Daily Herald	10/29/12	Electio Preview: A Look At Clearwater Board Rivals
Temple Daily Telegram	11/1/12	CUWCD - 12th Annual Bell County Water Symposium
Killeen Daily Herald	11/1/12	CUWCD - 12th Annual Bell County Water Symposium
Salado Village Voice	11/29/12	Clearwater District Formed To Protect Groundwater
Salado Village Voice	12/6/12	Salado Slalamander Meeting Dec 12 TO Discuss New Science on Species
Temple Daily Telegram	12/12/12	Meeting Tonight To Discuss Salado Salamander
Temple Daily Telegram	12/13/12	Experts Cant Locate Salado Salamanders to Perform Study


TEMPLE DAILY TELEGRAM

Senate hopefuls trade barbs in heated debate

US widening its covert war in North Africa

Appendix F

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

10/28/11

Activity Report

CUWCD Representative: Jennifer Lawyer

Activity: Science Day

Date(s)/Location: October 28, 2011 - Nolanville Elem.

Information Distributed and Quantity: 100 Water wheels, rulers, pencils, Brochures on ways to conserve water, bookmarkers, and stickers

Notes: Presentation was given on watershed model to approx. 100 5th grade students.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

11/8/12

Activity Report

CUWCD Representative: **Jennifer Lawyer**

Activity: **Mastering the effects of human activity on groundwater, watershed, and aquifers.**

Date(s)/Location: **November 8-9, 2011 - Nolanville Middle School**

Information Distributed and Quantity: **225 Water wheels, rulers, pencils and Brochures on ways to conserve water.**

Notes: This was a 2 day event with approximately 110 students each day.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

12/22/11

Activity Report

CUWCD Representative: Jennifer Lawyer

Activity: Chalkridge Field Trip – Nolanville Elem

Date(s)/Location: December 2, 2011.

Information Distributed and Quantity: 100 Cups, pencils, and Frizzbees

Notes: Presentation given to apporx 100 4th grade students on watershed.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

12/22/11

Activity Report

CUWCD Representative: Jennifer Lawyer-Lauren Hamson

Activity: Water conservation

Date(s)/Location: Jan 12, 2012 – Leon Heights Elem.

Information Distributed and Quantity: 51 Cups, pencils, rulers, water wheels

Notes: Presentation given to 51 5th grade students on watershed/aquifer model and water conservation.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

01/24/2012

Activity Report

CUWCD Representative: Dirk Aaron, General Manager

Activity: Annual Crops Clinic

Date(s) 01-24-2012

Location: Bell County Expo

Information Distributed and Quantity: See Attached

Notes: Approximately 500 people attended the event.

Item	Quantity
CUWCD	
CUWCD Brochure folder	10
CUWCD Fall 2010 Newsletter	5
Water Wheels—Home Water Conservation	50
Cups	100
Rulers	100
Pencils	100
Ink Pens	100
Frisbees	57
Spray Bottles—Indoor Use	50
Spray Bottles—Outdoor Use	50
Calendars—Magnetic	47
Brochure—Water: Vital Resource	4
Brochure—Water Conservation	7
Slide Guide—Protect Your Water	7
Slide Guide—Save Water	5
Recyclable Shopping Bag	50
Groundwater Foundation	
Groundwater Basics brochure	13
Bookmark—The Water Cycle	8
Bookmark—Top 10 Ways to Protect and Conserve Groundwater	4
Texas Groundwater Protection Committee	
Plugging Abandoned Water Wells Brochure	10
TWDB	
Texas Lawn Watering Guide	10
Water Wise Brochure-Outside	37
Miscellaneous	
Auto Not Pollute Slide Card	7
Water Conservation Sticker Sheets	13
Water Conservation Items:	
Faucet Aerator	50
One Touch On/Off Tap Saver	50
Shower Flow Meter Bag	7
Toilet Leak Detector Dye Tablets	44
7 Spray Water Saving Hose Nozzle	50
Lawn & Garden Rain Gauge	50
TOTAL	**1,095**

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

3/5/12

Activity Report

CUWCD Representative: Jennifer Lawyer

Activity: Chalkridge Field Trip 5th grade

Date(s)/Location: March 5, 2012 – Nolanville Elem.

Information Distributed and Quantity: 100 Water cycle bookmarkers

Notes: Field trip for Nolanville Elem 5th grade to Chalkridge. They have seen the presentation of the water models in class recently and received good bags at then.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

04/27/2012

Activity Report

CUWCD Representative: Dirk Aaron

Activity: Earth Day: 10 ten minute presentations to area elementary school students approximately 1100 students will attend.

Date(s)/Location: 04/27/2012, Fort Hood

Information Distributed and Quantity: 200 water cycle bookmarks, 200 "Top 10" bookmarks, 500 Pencils, 300 Rulers.

Notes: Display and Teach the students about Groundwater.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

05/10/2012

Activity Report

CUWCD Representative: Dirk Aaron

Activity: Presentation, met with 40 members of the Rotary Club

Date(s)/Location: May 10, 2012 @ Wildfire Country Club, Temple, Texas

Information Distributed and Quantity: 40 Small white Clearwater information folders

Notes: Dirk Aaron gave a presentation to the Rotary Club from 11:30 till 1:00 p.m.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

06/28/2012

Activity Report

CUWCD Representative: Dirk Aaron, General Manager, Judy Parker, Board Secretary

Activity: Leadership – Central Texas Day 2

Date(s)/Location: June 28, 2012

Information Distributed and Quantity: Small Clearwater Information Folder (40), Power Point Presentation (40 copies), booklets 11x17 (40), Blue Canvas Bags (5), Moisture Meter(5), Clearwater coffee mugs(5), Rain gauge (5), Shower head (5), pen (5), Pencil (5), Ruler (5), Clearwater Cup (5), Frisbee (5), Sink Restrictor (5) and Variety of Brochures (5ea).

Notes: There were 40 Attendees and Clearwater presented 5 filled bags as door prizes.

Development District
OF CENTRAL TEXAS

LEADERSHIP-Central Texas, Day 2: June 28, 2012

9:30 – 10:00 Networking and REVIEW DISCUSSION TABLES

10:00 – 10:30: **CENTRAL TEXAS COUNCIL OF GOVERNMENTS – Jim Reed**

Facilitator: Ginger Watkins

10:30 – 11:15 **KILLEEN-TEMPLE METROPOLITAN PLANNING ORGANIZATION**
Charlotte Humpherys, Annette Shepherd, Tim Brown

11:15 – 11:30 **RURAL PLANNING ORGANIZATION (RPO) – Jim Reed**

11:30 – 11:40 **QUESTIONS AND ANSWERS for KTMPO**

11:40 – 12:40 **LUNCH PROVIDED - Guest Speaker: Andrea Gardner, Copperas Cove City Manager**

12:40 – 12:50 **BREAK**

Facilitator

12:50 – 1:10 **TEXAS WATER DEVELOPMENT BOARD – Kathleen Ligon**

1:10 – 1:25 **GROUNDWATER MANAGEMENT AREA 8 – Judy Parker**

1:25 – 1:45 **CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT**
Dirk Aaron

1:45 – 2:05 **BRAZOS G REGIONAL WATER PLANNING GROUP – David Blackburn**

2:05 – 2:25 **LOWER COLORADO REGIONAL WATER PLANNING GROUP –James Kowis**

2:25 – 2:35 **BREAK**

2:35 – 2:55 **CENTRAL TEXAS REGIONAL TRANSPORTATION ADVISORY GROUP**
Carole Warlick and Robert Ator

2:55 - 3:10 **HILL COUNTRY TRANSIT DISTRICT BOARD – Carole Warlick**

3:10 – 4:00 **Facilitator Questions, Day 3 preparation and Networking**

***All Members to all Boards and Committees will be invited to attend each day for the end of day questions and answers.**

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

07/18-19/2012

Activity Report

CUWCD Representative: Dirk Aaron and Shelly Chapman

Activity: Central Texas Master Naturalist 2 day training for "Major Rivers"

Date(s)/Location: July 18-19, 2012 @ Clearwater UWCD @ 700 Kennedy Court, Belton, Texas

Information Distributed and Quantity: 8 Large Clearwater Information Folders, various literature sheets, 8 Blue Clearwater Canvas bags, 8 Rain Gauge, 8 sink restrictors, 8 coffee mugs, 8 moisture meters, 8 pens, 8 rulers, 8 pencils, 8 shower heads, 8 " Major Rivers" Curriculum.

Notes: 2 day training was held for the Naturalists to prepare them to train 4th and 5th Grade teachers on "Major Rivers" curriculum.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

07/25/2012

Activity Report

CUWCD Representative: Dirk Aaron / Central Texas Master Naturalists

Activity: "Major Rivers" training for 4th and 5th Grade Teachers

Date(s)/Location: July 25, 2012 @ Clearwater U.W.C.D. @ 700 Kennedy Court, Belton, Texas

Information Distributed and Quantity: 4 Large Clearwater Information Folders, Various literature sheets, 4 Blue Clearwater Canvas Bags, 4 coffee cups, 4 shower heads, 4 sink restrictors, 4 moisture meters, 4 rulers, 4 pens, 4 pencils, 4 plastic cups, 15 Major River Curriculum

Notes: One day training on "Major Rivers" curriculum and a brief description of Clearwater and what Clearwater does.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

07/26/2012

Activity Report

CUWCD Representative: Dirk Aaron / Central Texas Master Naturalists

Activity: "Major Rivers" training for 4th and 5th Grade Teachers

Date(s)/Location: July 26, 2012 @ Clearwater U.W.C.D. @ 700 Kennedy Court, Belton, Texas

Information Distributed and Quantity: 4 Large Clearwater Information Folders, Various literature sheets, 4 Blue Clearwater Canvas Bags, 4 coffee cups, 4 shower heads, 4 sink restrictors, 4 moisture meters, 4 rulers, 4 pens, 4 pencils, 4 plastic cups, 15 Major River Curriculum

Notes: One day training on "Major Rivers" curriculum and a brief description of Clearwater and what Clearwater does.

Clearwater
Underground Water Conservation District

Every drop counts!

July 25 & 26, 2012

Major River Teacher In-Service Agenda

9:00 a.m.	Welcome
9:05 a.m.	Introductions
9:10 a.m.	Clearwater Overview
9:30 a.m.	Regional Water Planning
BREAK	
10:20 a.m.	Office Walk Through
10:30 a.m.	What is "Major Rivers"? Chapters 1-3
12:00 p.m.	**LUNCH**
1:00 p.m.	Watershed Model Demo
1:30 p.m.	What is "Major Rivers"? Chapters 4-8

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

08/02/2012

Activity Report

CUWCD Representative : Dirk Aaron

Activity: ABAW Meeting

6:00 p.m.

Date(s)/Location: 08/02/2012 Salado, Texas

Information Distributed and Quantity: 15 small Clearwater information folders, 15 sink restrictors, and 15 rain gauges.

Notes : Dirk Aaron speaking to a group of 15-20 people in Salado

Clearwater
Every drop counts!

Clearwater Underground Water Conservation District

P.O. Box 1989, Belton, Texas 76513

Phone: 254/933-0120 Fax: 254/933-8396

www.clearwaterdistrict.org

Activity Reports

Date: 10/10/2012

Location and Contact: Academy Middle School / Donna Beach

Contact Count: 99 students

Items Distributed: None

CUWCD Representative: Dirk Aaron and Todd Strait

Activity: Clearwater introduction and Academy water sources specific to their community. Demonstrated watershed model to show possible contaminations and how they pollute the aquifer.

Date: 10/11/2012

Location and Contact: Academy Middle School / Donna Beach

Contact Count: 99 students (4 Classroom Periods)

Items Distributed: 99 Mood Pencils, 24 Frisbees, and 24 Rulers

CUWCD Representative: Todd Strait

Activity: Did a Q&A about the previous days presentation and answered many questions for clarification. As requested I provided an in-depth review for the Major Rivers post test lasting 30 minutes. The review covered all aspects of the test and tied concepts together for better understanding before the test was handed out.

Date: 10/25/2012

Location and Contact: Nolanville Elementary School / Julee Manley

Contact Count: 110 students (4 Classroom Periods)

Items Distributed: 110 Mood Pencils, 15Cups, 10 Magnifiers, and 55 Rulers

CUWCD Representative: Todd Strait

Activity: Presented to rotating classes throughout the morning at their Science Day event. Demonstrated the Rain Fall Simulator to each group and explained the different conditions that affect aquifer recharge to include pollutants. Also discussed water conservation techniques and watershed management.

Date: 11/12/2012

Location and Contact: FFA Leadership Development Contest / Academy

Contact Count: 100+ students and ag teachers from throughout the county

Items Distributed: Insulated Cups(25), Clearwater Info Packets(25), Rain Gauges (25),

CUWCD Representative: Dirk Aaron and Todd Strait

Activity: Judged "Ag Issues" presentations by students of Academy, Troy, and Salado and networked with various ag teachers.

Date: 11/15/2012

Location and Contact: 12th Annual Bell County Water Symposium / Clearwater

Contact Count: 130 people in attendance

Items Distributed: Cups(75), Pens(75), Various Brochures (50), Rain Gauges(30), Magnifiers(75),

CUWCD Representative: Leland Gersbach, David Cole, Bill Bartlett, Wallace Biskup, Dirk Aaron, Todd Strait, Shelly Chapman

Activity: Event held at COG in Belton, Texas. Organized 10 presentations throughout the day and provided a lunch meal with beverages and cookies during the breaks.

Appendix G

Results of Groundwater Samples Tested During FY2012[1]

Test Date	CUWCD #	Aquifer[2]	Depth (ft)	Coliform Bacteria[3]	Fecal Matter	Alkalinity (mg/L)	Conductivity (µs/cm)	Total Dissolved Solids (mg/L)	Fluoride[4] (mg/L)	Hardness (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	pH	Phosphate (mg/L)	Sulfate[4] (mg/L)
10/18/2011	E-02-382G	Edwards BFZ	180	Present	negative	440	803	538	*2.3 (limit)	260	1.60	0.000	7.70	0.12	*80(limit)
10/25/2011	E-02-001G	Upper Trinity	615	absence	negative	460	2.40	1489	*2.3 (limit)	180	2.40	0.008	8.1	0.10	*80(limit)
11/8/2011	E-02-1957G	Edwards BFZ	212	absence	negative	380	1314	926	*2.3 (limit)	120	2.3	0.059	8.0	0.17	*80(limit)
11/22/2011	E-02-382G	Upper Trinity	0	Present	**negative**	360	790	547	*2.3 (limit)	200	0.7	0.003	7.7	0.20	*80(limit)
12/6/2011	E-03-418P	Middle Trinity	760	Present	negative	360	584	412	1.30	200	1.3	0.001	8.0	0.18	*80(limit)
12/20/2011	E-02-382G	Edwards BFZ	180	absence	negative	340	897	647	*2.3 (limit)	240	2.1	0.005	7.5	0.17	*80(limit)
1/31/2012	E-02-1399G	Ozan	25	absence	negative	300	484	278	0.7	480	5.3	0.015	7.3	0.36	*80(limit)
5/9/2012	E-12-017G	Null	840	absence	negative	260	926	709	2.0	360	1.1	0.001	7.5	0.21	*80(limit)
6/26/2012	E-03-354G	Upper Trinity	150	absence	negative	400	1291	850	*2.3 (limit)	180	0.4	0.003	7.9	0.23	*2.3(limit)
6/28/2012	E-05-082P	Upper Trinity	660	Present	negative	360	1715	1018	*2.3 (limit)	200	0.9	0.005	8.0	0.36	*80(limit)
8/7/2012	E-10-022P	Upper Trinity	870	absence	negative	500	2.00	1738	*2.3 (limit)	240	0.0	0.000	7.8	0.19	*80(limit)

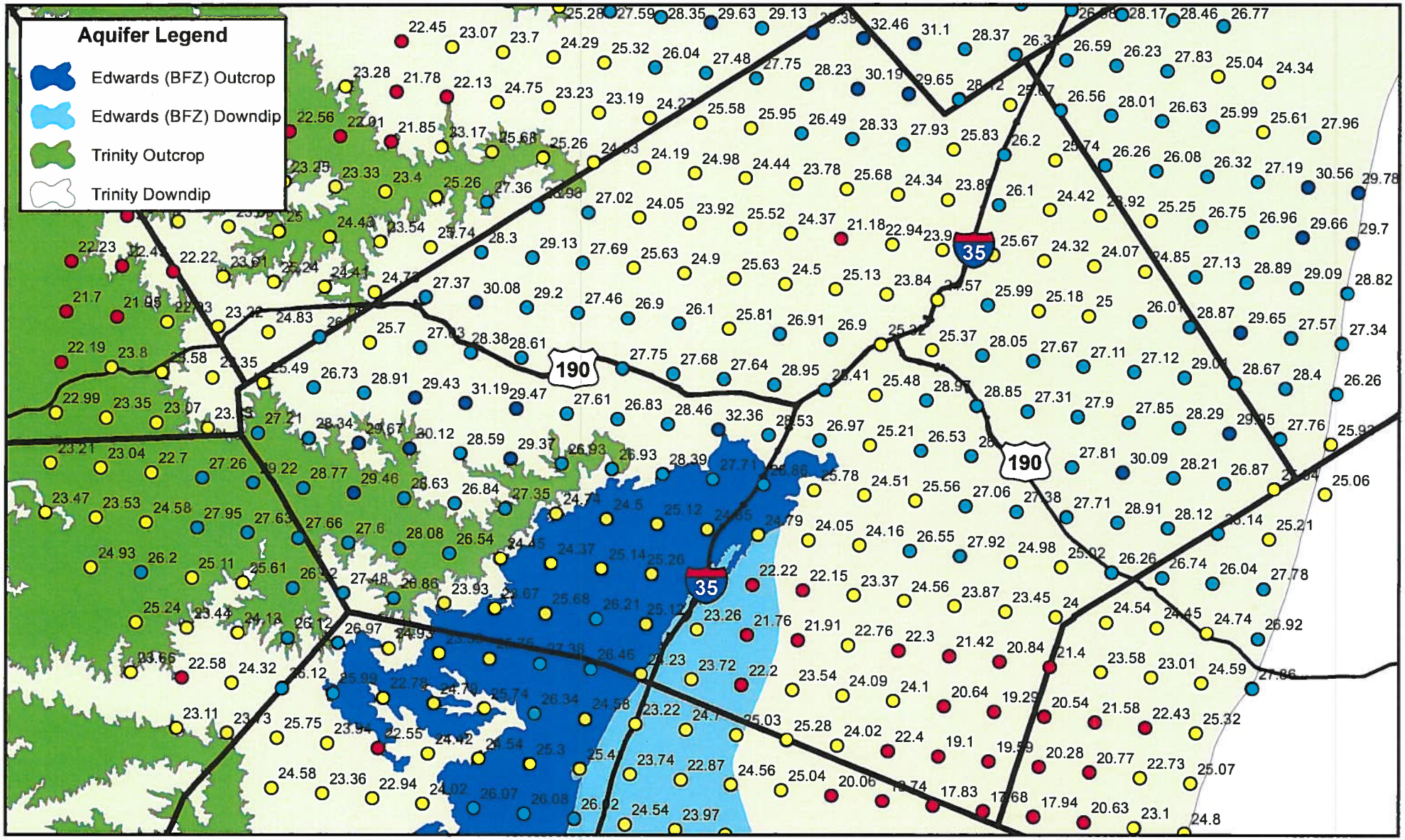
Results Summary (REVISED 4/26/13)					
	#of samples tested	(+) Coliform	%	(+) Fecal Matter	%
FY2005 totals	11	4	36%	0	0%
FY2006 totals	18	4	22%	0	0%
FY2007 totals	55	32	58%	9	16%
FY2008 totals	27	13	48%	0	0%
FY2009 totals	30	18	60%	4	13%
FY2010 totals	9	4	44%	0	0%
FY2011 totals	4	2	50%	0	0%
FY2012 totals	11	3	36%	0	0%
TOTALS	**165**	**80**	**48%**	**13**	**8%**

Notes:

1. Samples were collected by the well owner and tested by the Clearwater staff within 24 hours of collection. The well owner was given instructions on collecting the sample and was asked to draw the sample as close to the wellhead as possible. Laboratory results were not conducted by a certified lab, therefore, the data is provided for informational purposes only.
2. The aquifer designation was determined by AECOM, Inc.
3. **The presence/absence test only indicates if total coliform is present. No distinction is made on the origin of the bacteria.**
4. The limit of the Fluoride test is 2.3 mg/L and the limit of the Sulfate test is 80 mg/L.
5. NT means not tested because the test was not requested or the test could not be performed because the equipment was under repair.

Appendix H

Rainfall Totals for January 2012 - December 2012



Clearwater
Every drop counts!

Clearwater UWCD
700 Kenedy Court
PO Box 1989
Belton, TX 76513
May 8, 2012

0 2.5 5 10 15 20 Miles

File Name:
N:\28000s\28771\Rainfall Reports

Data Source:
National Weather Service
Precipitation Analysis

N
W E
S

16.91 - 22.58
22.59 - 25.95
25.96 - 29.22
29.23 - 38.04

Edwards BFZ Aquifer - Drought Status Report

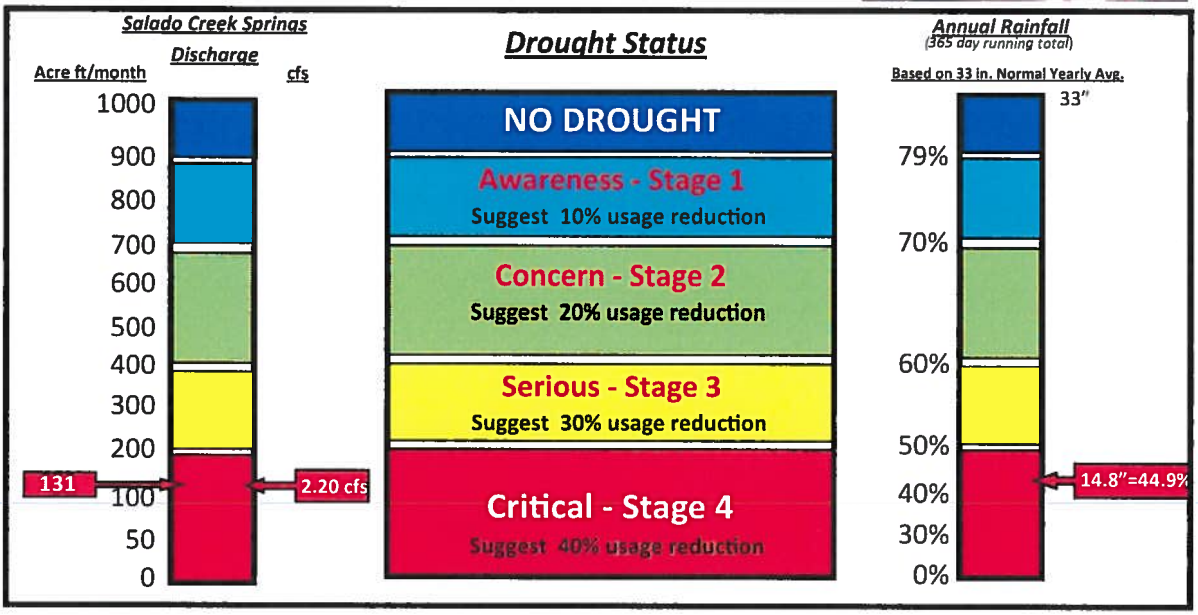
CRITICAL - STAGE 4

Left: Randy Williams with BarW measures one of the Districts Monitor Wells with a Sonic Wave 200.

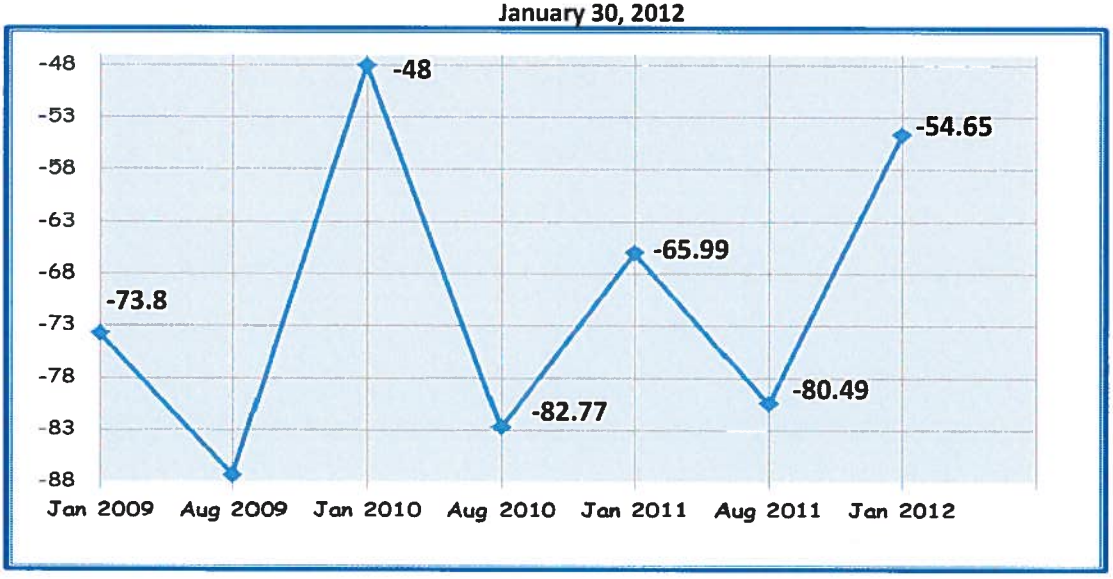
Right: April Smith with AECOM monitors the spring flow system in Salado Creek.

Updated 1/30/2012

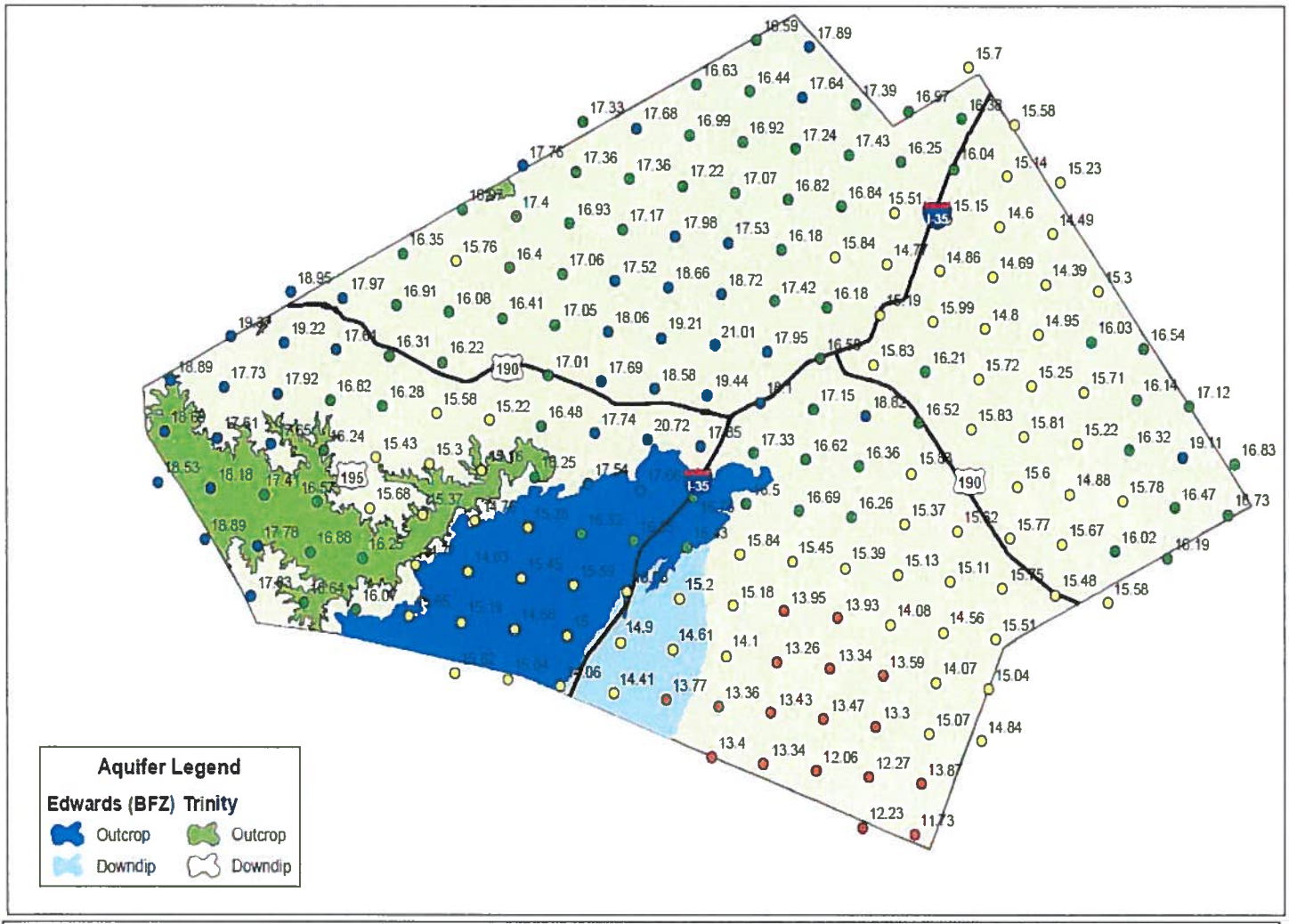
Based on previous 7 day avg.



Monitor Well - Salado Cemetery
January 30, 2009
through
January 30, 2012



Rainfall Totals for January - December 2011



Clearwater Underground Water Conservation District
2180 N. Main St., PO Box 729
Belton, TX 76504
December 9, 2011

2.5 1.25 0 2.5 5 7.5 10 Miles

File Name:
KUNDAA Rainfall Monthly Reports

Data Source:
National Weather Service
Precipitation Analysis

Rainfall In Inches

- 11.73 - 14.00
- 14.01 - 16.00
- 16.01 - 17.50
- 17.51 - 21.25

Edwards BFZ Aquifer - Drought Status Report

Serious - STAGE 3

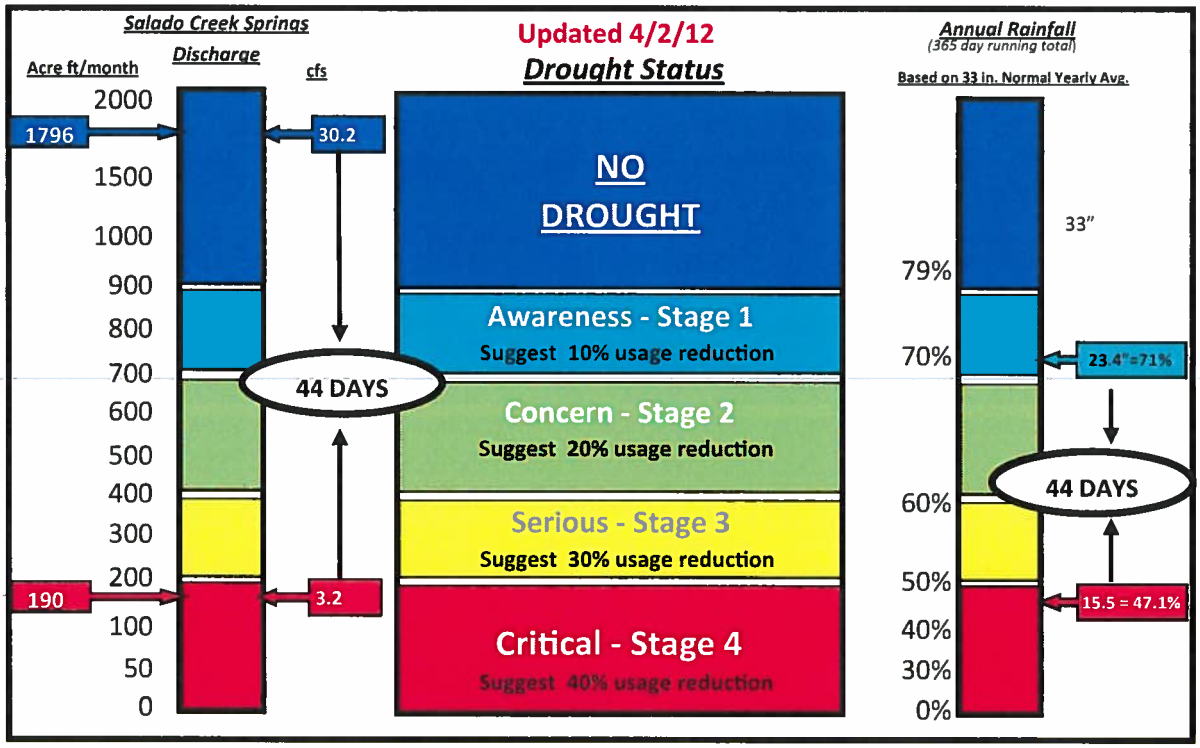
"Clearwater Underground Water Conservation District has taken a very cautious position on moving from the current Stage 4 Drought Declaration made last December" says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities who have permitted wells to be supportive of this very conservative position".

Unlike the surface water providers, the District does not feel the aquifers have recovered to the point that we can say "the crisis has past", because facts do not support that position.

Aaron agreed that, "yes, the Edwards has responded due to the recent rains, but the District's system of watching and recording rainfall averages over both the Edwards and Trinity Aquifers still shows that we are more than 9 inches (Trinity) and 8.4 inches (Edwards BFZ) behind the annual rainfall expected on a 365 day running total. Couple these facts to the positive increase in the Salado Spring Flow, Aaron states "Conventional wisdom says for the District Staff to be cautiously optimistic but measured".

Looking at the positive moves the District made to reduce Aquifer pumpage last year and the 42 day required triggers for reducing the level of declaration shows that the District could make another positive move to the Stage 2 (Concern Level) in mid to late May.

The Board of Directors, in their monthly meeting, will review the General Manager's position and declaration. Aaron states, "The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought".



Serious - Stage 3 - Suggest 30% usage reduction

- Continue to increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks
- Re-use or re-circulate water whenever possible.
- Limit watering of landscape (lawns, trees, shrubs, etc.) to only once every 5-7 days between the hours of 7 p.m. and 7 a.m. Agriculture and horticulture operations are exempted from this measure but are encouraged to reduce tree, plant, and crop watering by 30%.
- Wash vehicles at car wash only as needed.
- No washing of buildings, driveways, streets, patios or other outdoor surfaces except as required for human/animal health and safety needs or fire prevention.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 30% reduction in water usage.
- Filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of less than 50,000 gallons is discouraged.
- Keep swimming pools, landscape or decorative ponds and fountains covered (where possible), re-circulate water, and do not fill except to support aquatic life.
- Water livestock in leak-proof troughs - pumping water into ponds is discouraged.
- Water for dust control on when required by law.

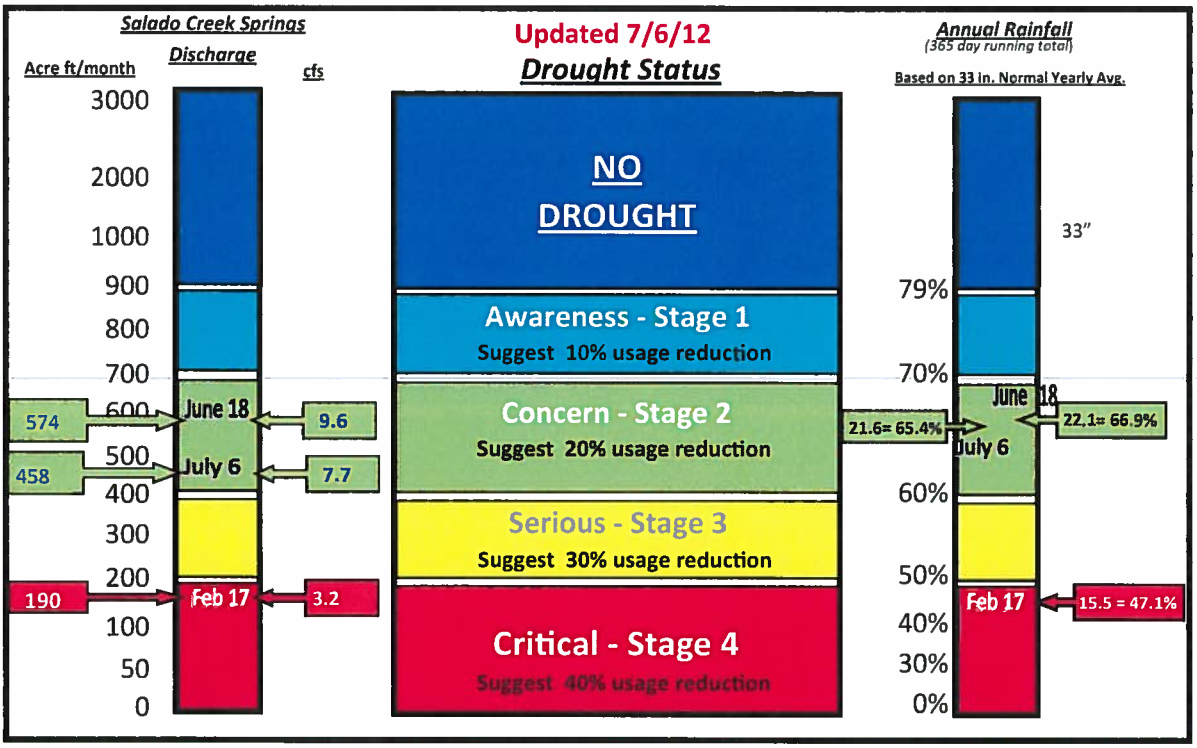
Edwards BFZ Aquifer - Drought Status Report

CONCERN - Stage 2

"Clearwater Underground Water Conservation District has continued their very cautious position on moving from the current Stage 3 Drought Declaration made last month," says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities that have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of wells in the Edwards Aquifer are encouraged to remain actively conserving under the "Concern" Stage 2 Declaration Level.

Aaron stressed, "The Edwards aquifer has responded due to the recent rains and the District's system of watching and recording rainfall averages over the Edwards Aquifer. The Data shows that we are still -10.9 inches behind in the Edwards Recharge Zone based on the 33.33 inches of annual rainfall expected over the previous 365 day running total. Couple these facts to the positive increase in the Salado Spring Flow of 9.6 cfs, meaning 574 acre feet." Aaron states, "Conventional wisdom says the District's Staff should be cautiously optimistic but measured."

The Board of Directors, in their monthly meeting, will review the General Manager's position on this declaration. Aaron states, "The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought. We realize businesses and homeowners have a significant investment in their landscape, and feel a need to protect that investment". "Our position," states Aaron "is to properly protect the Aquifers in accordance with the District's Management Plan and available groundwater data pursuant with Chapter 36 Texas Water Code. We have a job to do and that is to protect water quantity for the future."



Concern—Stage 2 - Suggest 20% Usage Reduction

- Continue or increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks.
- Re-use or re-circulate water whenever possible.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 20% reduction in water usage.
- Limit watering of landscape (lawns, trees, shrubs, etc.) to only once every 5 to 7days. Agriculture and horticulture operations are exempted from this measure But are encouraged to reduce tree, plant, and crop watering by 20%.
- Only water landscape at night between the hours of 7 pm and 7 am.
- Keep swimming pools, landscape or decorative ponds and fountains covered (where possible), re-circulate water, and wait 5 to 7 days to refill.
- Wash vehicles at car wash only as needed.
- Do not wash buildings, driveways, streets, patios, or other outdoor surfaces except as required for human or animal health and safety needs, or for fire prevention.
- Water livestock in leak-proof troughs as much as practical.

Clearwater
Every drop counts!

Clearwater Underground Water Conservation District

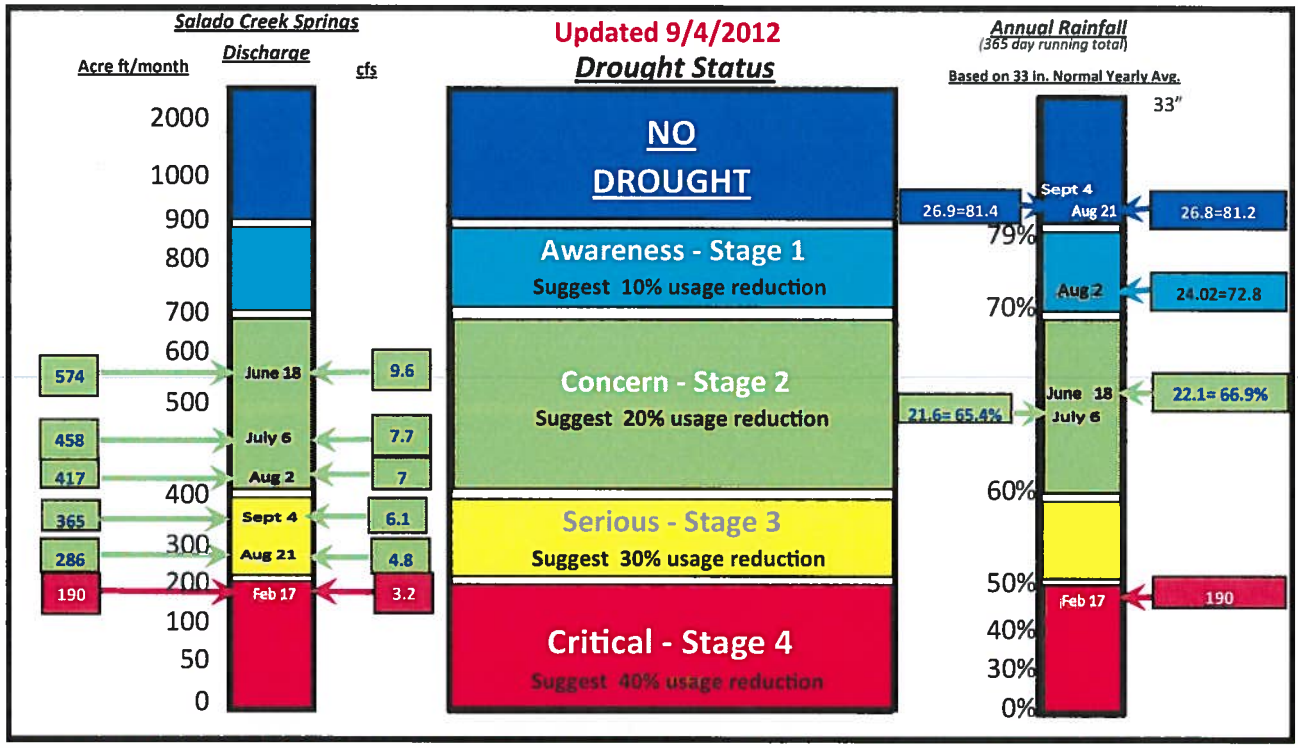
Edwards BFZ Aquifer - Drought Status Report

CONCERN - Stage 2

"Clearwater Underground Water Conservation District has continued their very cautious position on moving from the current Stage 3 Drought Declaration made last month," says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities that have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of wells in the Edwards Aquifer are encouraged to remain actively conserving under the "Concern" Stage 2 Declaration Level.

Aaron stressed, "The Edwards aquifer has responded due to the recent rains and the District's system of watching and recording rainfall averages over the Edwards Aquifer. The Data shows that we are still –6.1 inches behind in the Edwards Recharge Zone based on the 33.33 inches of annual rainfall expected over the previous 365 day running total. Concern abounds as we see a decrease to 6.1 cfs (365 acre feet) as compared to 4.8 cfs on August 21st. Aaron states, "Conventional wisdom says the District's Staff should be measured."

The Board of Directors, in their monthly meeting, will review the General Manager's position on this declaration. Aaron states, "The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought. We realize businesses and homeowners have a significant investment in their landscape, and feel a need to protect that investment". "Our position," states Aaron "is to properly protect the Aquifers in accordance with the District's Management Plan and available groundwater data pursuant with Chapter 36 Texas Water Code. We have a job to do and that is to protect water quantity for the future."



Concern—Stage 2 - Suggest 20% Usage Reduction

- Continue or increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks.
- Re-use or re-circulate water whenever possible.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 20% reduction in water usage.
- Limit watering of landscape (lawns, trees, shrubs, etc.) to only once every 5 to 7days. Agriculture and horticulture operations are exempted from this measure But are encouraged to reduce tree, plant, and crop watering by 20%.
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- Keep swimming pools, landscape or decorative ponds and fountains covered (where possible), re-circulate water, and wait 5 to 7 days to refill.
- Wash vehicles at car wash only as needed.
- Do not wash buildings, driveways, streets, patios, or other outdoor surfaces except as required for human or animal health and safety needs, or for fire prevention.
- Water livestock in leak-proof troughs as much as practical.

Clearwater Underground Water Conservation District

Every drop counts!

Trinity Aquifer - Drought Status Report

AWARENESS - STAGE 1

"Clearwater Underground Water Conservation District has taken a very cautious position on remaining at the current Stage 1 Drought Declaration," says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities who have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of wells in the Trinity Aquifer are encouraged to conserve under the "Concern" Stage 2 Declaration Level. Permit holders and well owners with wells in the Trinity Aquifer are still encouraged to remain actively conserving even under the "Awareness" Stage 1 Declaration Level.

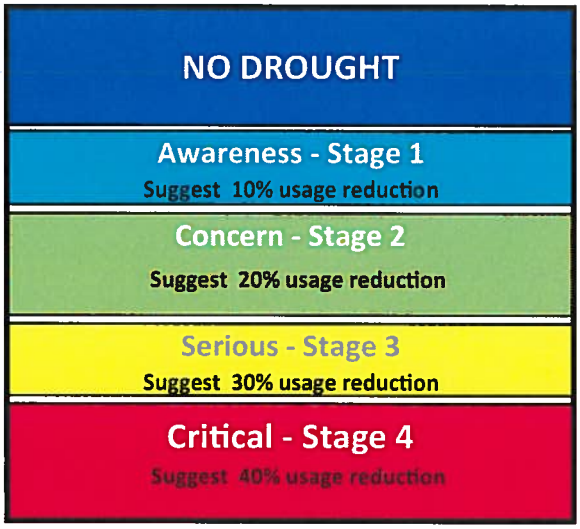
The Trinity Aquifer's ability to respond to rainfall is a much more complex and slow process. But the District's drought trigger is only the rainfall deficit measurement based on the very specific rainfall over the identified recharge region of the Trinity Aquifer. The recorded rainfall data and average deficit over the Trinity Aquifer region is currently –3.8 inches. This simply means we expect 33.33 inches of rain over a running 12 month period, but the District's data measurement system says that only 29.2 inches of rain has fallen in the Trinity Recharge Region. "Going into the driest season," states Aaron, "It is prudent to declare Stage 1 at this time. Trinity well owners in west Bell County should support this after experiencing severe drawdown in their wells last summer and fall."
Reflecting back to the District's aggressive move made to reduce Aquifer pumpage last year and the required 42 day required trigger for reducing the level of declaration clarifies the District's move to Stage 1 (Awareness Level) for the Trinity wells is appropriate.

"The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought. We Have a job to do and this is to protect water quantity for the future," states Aaron.

Updated 10/30/2012

Based on previous 7 day avg.

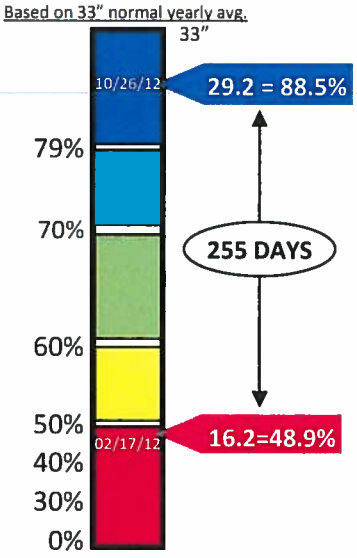
Stages of Drought



Annual Rainfall

(365 day running total)

Based on 33" normal yearly avg.



AWARENESS—STAGE 1: Suggest 10% Usage Reduction

- Continue or increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks.
- Re-use or re-circulate water whenever possible.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 10% reduction in water usage.

Clearwater Underground Water Conservation District

Every drop counts!

Trinity Aquifer - Drought Status Report

AWARENESS - STAGE 1

"Clearwater Underground Water Conservation District has taken a very cautious position on remaining at the current Stage 1 Drought Declaration," says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities who have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of wells in the Trinity Aquifer are encouraged to conserve under the "Concern" Stage 2 Declaration Level. Permit holders and well owners with wells in the Trinity Aquifer are still encouraged to remain actively conserving even under the "Awareness" Stage 1 Declaration Level.

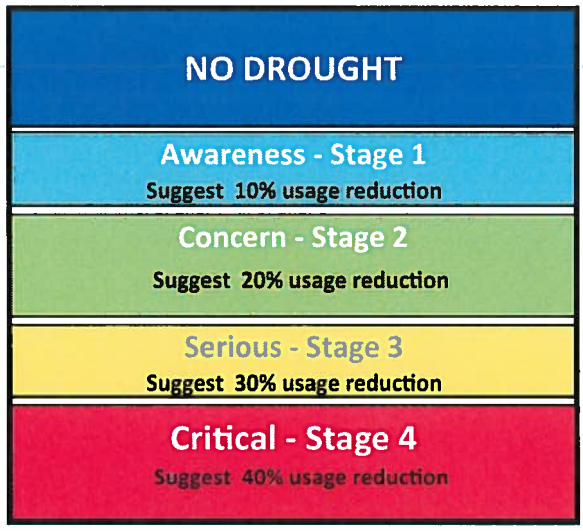
The Trinity Aquifer's ability to respond to rainfall is a much more complex and slow process. But the District's drought trigger is only the rainfall deficit measurement based on the very specific rainfall over the identified recharge region of the Trinity Aquifer. The recorded rainfall data and average deficit over the Trinity Aquifer region is currently –3.78 inches. This simply means we expect 33.33 inches of rain over a running 12 month period, but the District's data measurement system says that only 29.22 inches of rain has fallen in the Trinity Recharge Region. "Going into the driest season," states Aaron, "It is prudent to declare Stage 1 at this time. Trinity well owners in west Bell County should support this after experiencing severe drawdown in their wells last summer and fall." Reflecting back to the District's aggressive move made to reduce Aquifer pumpage last year and the required 42 day required trigger for reducing the level of declaration clarifies the District's move to Stage 1 (Awareness Level) for the Trinity wells is appropriate.

"The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought. We Have a job to do and this is to protect water quantity for the future," states Aaron.

Updated 11/19/2012

Based on previous 7 day avg.

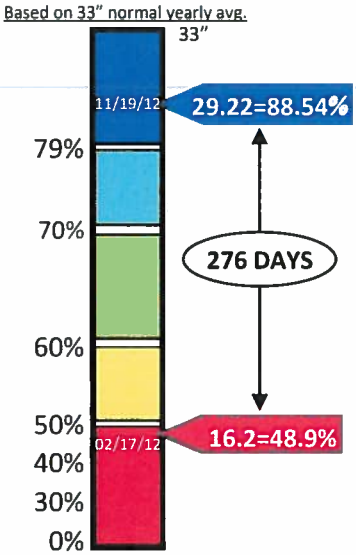
Stages of Drought



Annual Rainfall

(365 day running total)

Based on 33" normal yearly avg.



AWARENESS—STAGE 1: Suggest 10% Usage Reduction

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Clearwater Underground Water Conservation District

Every drop counts!

Trinity Aquifer - Drought Status Report

AWARENESS - STAGE 1

"Clearwater Underground Water Conservation District has taken a very cautious position on remaining at the current Stage 1 Drought Declaration," says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities who have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of wells in the Trinity Aquifer are encouraged to conserve under the "Concern" Stage 2 Declaration Level. Permit holders and well owners with wells in the Trinity Aquifer are still encouraged to remain actively conserving even under the "Awareness" Stage 1 Declaration Level.

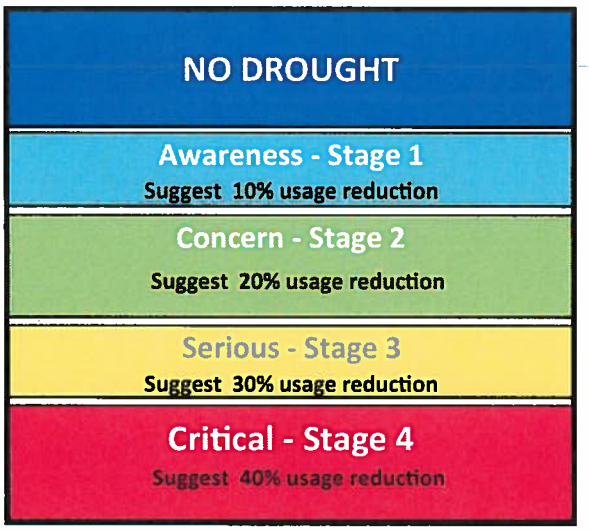
The Trinity Aquifer's ability to respond to rainfall is a much more complex and slow process. But the District's drought trigger is only the rainfall deficit measurement based on the very specific rainfall over the identified recharge region of the Trinity Aquifer. The recorded rainfall data and average deficit over the Trinity Aquifer region is currently –5.44 inches. This simply means we expect 33 inches of rain over a running 12 month period, but the District's data measurement system says that only 27.56 inches of rain has fallen in the Trinity Recharge Region. "Going into the driest season," states Aaron, "It is prudent to declare Stage 1 at this time. Trinity well owners in west Bell County should support this after experiencing severe drawdown in their wells last summer and fall."
Reflecting back to the District's aggressive move made to reduce Aquifer pumpage last year and the required 42 day required trigger for reducing the level of declaration clarifies the District's move to Stage 1 (Awareness Level) for the Trinity wells is appropriate.

"The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought. We Have a job to do and this is to protect water quantity for the future," states Aaron.

Updated 12/2/2012

Based on previous 7 day avg.

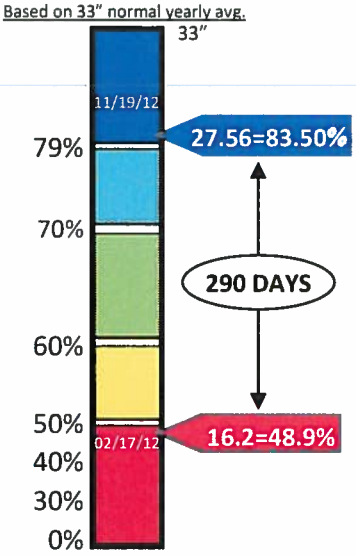
Stages of Drought



Annual Rainfall

(365 day running total)

Based on 33" normal yearly avg.

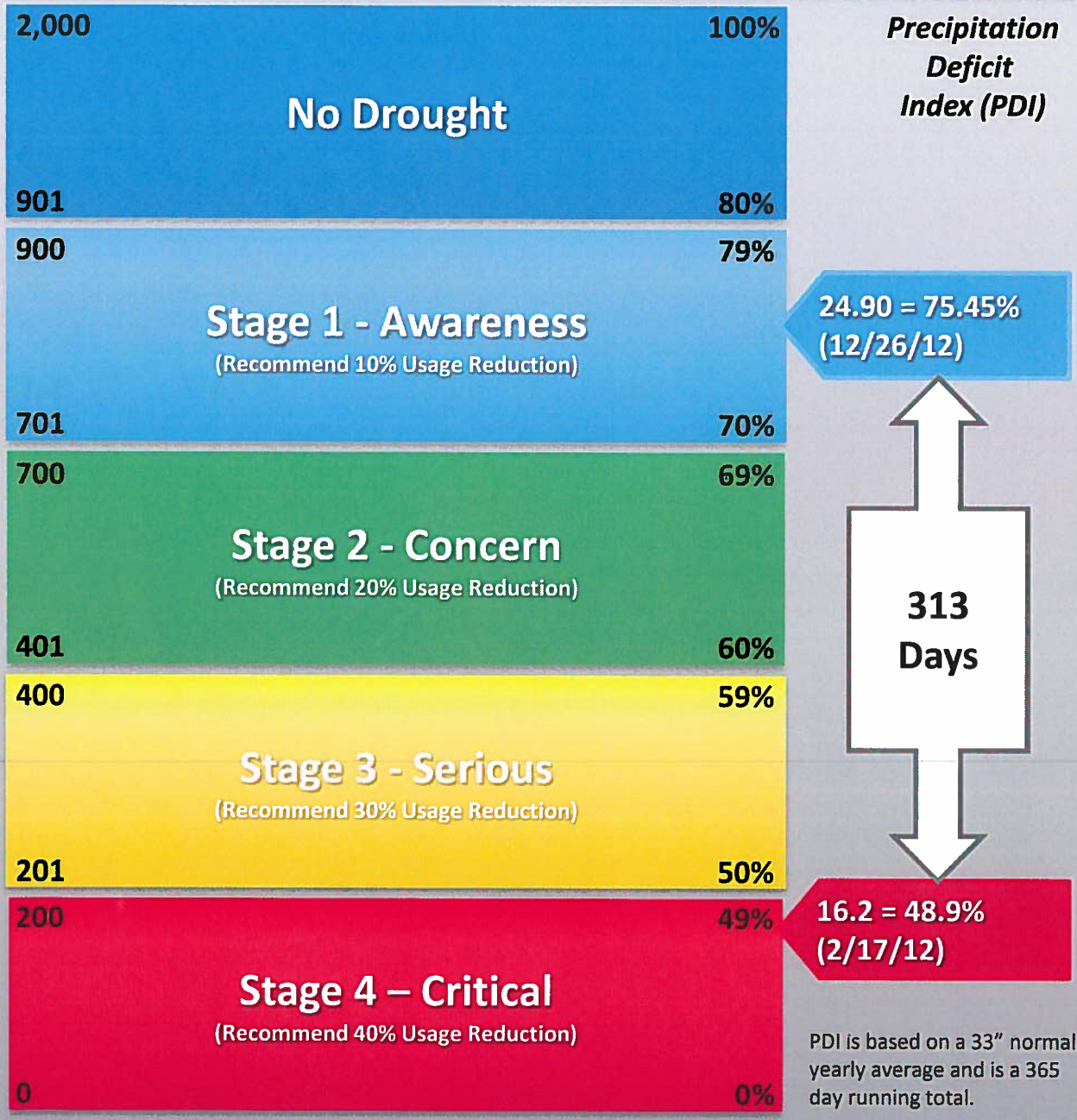


AWARENESS—STAGE 1: Suggest 10% Usage Reduction

- Continue or increase voluntary reduction in various uses.
- Check for and correct all plumbing leaks.
- Re-use or re-circulate water whenever possible.
- No filling of ponds, lakes, tanks, reservoirs, swimming pools or other surface impoundments for holding water that have a total capacity of more than 50,000 gallons, except for public water supply systems. Public water supply systems are encouraged to implement measures to achieve a 10% reduction in water usage.

Trinity Aquifer
Drought Status Declaration
CONCERN – STAGE 1

AS OF
12/26/12



Precipitation Deficit Index (PDI)

24.90 = 75.45%
(12/26/12)

313
Days

16.2 = 48.9%
(2/17/12)

PDI is based on a 33" normal yearly average and is a 365 day running total.

Clearwater Underground Water Conservation District
P.O. Box 1989
Belton, Texas 76513
Tel: 254.939.0120 / Fax: 254.933.8396
www.clearwaterdistrict.org

Clearwater
Underground Water Conservation District
Every drop counts!

Blue

0	0	0
104	138	144
174	232	229

Green

55	60	74
145	158	186
55	60	74

Red

196	232	255
0	28	13
0	28	13

Appendix I

Edwards BFZ PDI: Monthly for 2012

2012-12-31	edwards	0.0136	24.576	74.4727	-8.424	1	0	1	0
2012-12-01	edwards	0.0000	26.892	81.4909	-6.108	0	0	0	0
2012-11-01	edwards	0.0000	28.0382	84.9642	-4.9618	0	0	0	0
2012-10-01	edwards	0.0020	29.774	90.2242	-3.226	0	0	0	0
2012-09-01	edwards	0.0000	26.8578	81.3873	-6.1422	0	0	1	1
2012-08-01	edwards	0.0000	24.018	72.7818	-8.982	1	1	2	2
2012-07-01	edwards	0.0180	21.5852	65.4097	-11.4148	2	2	2	2
2012-06-01	edwards	0.0544	21.7068	65.7782	-11.2932	2	1	2	1
2012-05-01	edwards	0.0000	22.9404	69.5164	-10.0596	2	1	2	2
2012-04-01	edwards	0.0000	23.4414	71.0345	-9.5586	1	1	3	3
2012-03-01	edwards	0.0010	18.0194	54.6042	-14.9806	3	3	4	4
2012-02-01	edwards	0.0000	14.8142	44.8915	-18.1858	4	4	4	4
2012-01-01	edwards	0.0000	15.2244	46.1345	-17.7756	4	4	4	4

Trinity PDI: Monthly for 2012

2012-12-31	trinity	0.0099	25.0149	75.8027	-7.9851	1	0	1	0
2012-12-01	trinity	0.0000	27.6466	83.7776	-5.3534	0	0	0	0
2012-11-01	trinity	0.0000	29.207	88.5061	-3.793	0	0	0	0
2012-10-01	trinity	0.0089	30.9356	93.7442	-2.0644	0	0	0	0
2012-09-01	trinity	0.0009	27.7785	84.1773	-5.2215	0	0	1	1
2012-08-01	trinity	0.0000	26.0848	79.0448	-6.9152	1	1	1	1
2012-07-01	trinity	0.0037	23.9701	72.6367	-9.0299	1	1	1	1
2012-06-01	trinity	0.1093	23.4547	71.0749	-9.5453	1	1	1	1

2012-05-01	trinity	0.0000	24.2886	73.6018	-8.7114	1	1	1	1
2012-04-01	trinity	0.0000	24.5976	74.5382	-8.4024	1	1	3	3
2012-03-01	trinity	0.0043	18.5584	56.2376	-14.4416	3	3	4	4
2012-02-01	trinity	0.0000	15.3552	46.5309	-17.6448	4	4	4	4
2012-01-02	trinity	0.0000	15.5363	47.0797	-17.4637	4	4	4	4

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**.

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

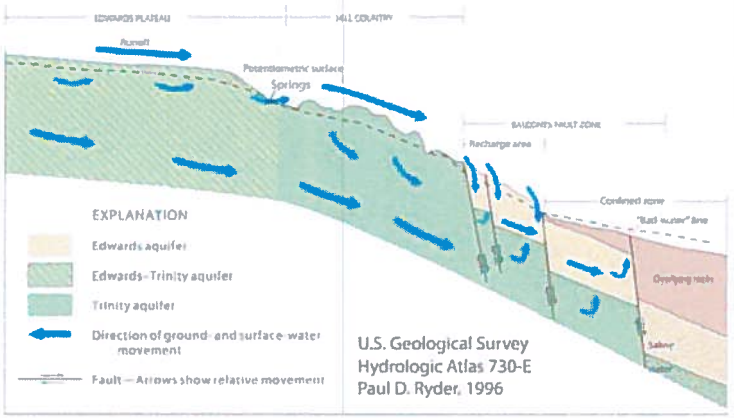
UPCOMING EVENTS

- May 14th @ 1:30 pm
  May Board Meeting
- May 14th @ 1:30 pm
  Permit Hearing
- May 27th @ *(All Day)*
  Memorial Day
- June 20th @ 8:00 am
  Texas Well Owner Network
- July 4th @ *(All Day)*
  Independence Day

View All Events

Appendix K

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

Urban-Enhanced Groundwater Recharge

Appendix C Technical Evaluation Procedures for Edwards Aquifer Recharge Enhancement

Fact Sheet 4C.4 Edwards Recharge (L-18a)

Fact Sheet 4C.4 Edwards Recharge (L-18c)

SEARCH CUWCD

Search

UPCOMING EVENTS

- May 14th @ 1:30 pm
  May Board Meeting
- May 14th @ 1:30 pm
  Permit Hearing
- May 27th @ *(All Day)*
  Memorial Day
- June 20th @ 8:00 am
  Texas Well Owner Network
- July 4th @ *(All Day)*
  Independence Day

View All Events

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

SEARCH CUWCD

Search

UPCOMING EVENTS

- May 14th @ 1:30 pm
  May Board Meeting
- May 14th @ 1:30 pm
  Permit Hearing
- May 27th @ *(All Day)*
  Memorial Day
- June 20th @ 8:00 am
  Texas Well Owner Network
- July 4th @ *(All Day)*
  Independence Day

View All Events

- 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

12th Annual

Bell County Water Symposium

November 15, 2012

8:30 a.m.—3:30 p.m.

Location: Central Texas Council of Governments, 2180 N Main, Belton, TX

AGENDA

8:30 a.m.	Registration
9:00 a.m.	Welcome & Overview of Clearwater Activities Leland Gersbach—Clearwater District Board President
9:30 a.m.	The Weather Forecast (2011 vs 2012?) Dr. John Nielsen-Gammon, State Climatologist at Texas A&M University
10:30 a.m.	Break
10:45 a.m.	300 Years of Groundwater Management in Texas (Viceroys to GCD's) Dr. Charles Porter, Assistant Professor, School of Behavioral and Social Sciences, St. Edwards University, Austin Texas
11:15 a.m.	Status of Surface Water Supply in Central Texas and Future Water Plans David Collinsworth, Brazos River Authority Central Basin Business Development Manager
11:40 a.m.	Old PGMA vs New PGMA Process Kelly Mills, Groundwater Planning & Assessment Team Leader Water Availability Division, TCEQ
12:00	Lunch Clearwater Public Information and Access System Overview Dirk Aaron, Clearwater General Manager Todd Strait, Clearwater Education Coordinator
12:45 p.m.	Ground Water Issues Across Texas Kristen Fancher, Lloyd Gosselink Attorneys at Law
1:30 p.m.	The Economic Impact of the Endangered Species Act Cary Dupuy, Natural Resource Policy Advisor, Lisa Elledge, Natural Resource Policy Advisor, Texas Comptroller of Public Accounts
1:45 p.m.	Break
2:00 p.m.	New Understanding of the Northern Segment of the Edwards BFZ Dr. Joe Yelderman, Hydrogeologist, Baylor University
2:30 p.m.	Understanding the Geochemistry of the Edwards BFZ Dr. Marylynn Musgrove, Research Hydrologist, U.S. Geological Survey
3:15 p.m.	Water Conservation Opportunities and Resources in Texas Mr. Lyle Zoeller, County Extension Agent Agriculture

Three CEUs available for Licensed Private and Commercial Pesticide Applicators
($10 fee by Texas AgriLife Extension Service for CEU's)

Symposium sponsored by the following:

Clearwater Underground Water Conservation District
Texas A&M AgriLife Extension-Bell County
HALFF Associates

BarW Groundwater Exploration, LLC
Lloyd Gosselink Attorneys at Law
Bell County

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

Appendix M

Are You KEEPING YOUR WATER PURE?!

Tell Your Parents . . .

- Never pour pesticides down household drains, sewer inlets or stormwater inlets.
- Never fertilize or apply pesticides before the expected rain.

Can you find in the puzzle below some of the words that can be safely poured down the drain? How many other words can you find?

Get Into The Recycling Habit!

Recycling saves energy and reduces air pollution.

Recycling one ton of paper saves

- 7,000 gallons of water
- 17 trees
- enough energy to run a refrigerator for six months
- 4,100 kilowatt-hours of electricity (enough to power a home entertainment center for one year)

Recycling one aluminum can saves enough electricity to power a 100-watt lightbulb for 3 hours or your television for 2 hours.

Recycling one pound of aluminum cans saves 7 kilowatt-hours of electricity.

Clearwater

P. O. Box 718 • Dallas, TX 75613

(254) 933-0710

www.clearwaterdistrict.org

It's NO JOKE to pour deadly chemicals down the drain!

PLEASE DON'T FEED THE STORM DRAIN

Clearwater

When grass clippings, pet waste, automotive products, fertilizers, paints, oils and other chemicals wash down a storm drain, they don't go away. They flow into streams, rivers, lakes or bays, harming plants and animals and contaminating the water we drink.

The technical term is "nonpoint source pollution."

Here's how to make sure that you don't help feed the storm drain:

YARD

Don't overwater. Sweep clippings and fertilizer and soil off driveways and walkways.

PET

Pick up pet waste from yards, trails and sidewalks.

CAR

Maintain your car to prevent oil leaks and recycle used motor oil.

HOME

Use minimal or natural household cleaning products. Recycle or properly dispose of household chemicals.

1-800-CLEAN UP

TCEQ

Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency

Book Cover Distribution List

School District	School	Contact	Qty	Boxes	Delivered	Comments
Belton ISD	Belton High School	Mr. Diem	1,000	2 bx	Yes	
Killeen ISD	Killeen High School	Mr. Huggins	2,000	4 bx	Yes	
	Shoemaker High School	Secretary	2,000	4 bx	Yes	
	Live Oak Ridge Middle School	Mr. Cooper	1,750	3.5 bx	Yes	
	Manor Middle School	Alice	2,250	4.5	Yes	
	Nolan Middle School	Mrs. Hunter	1,250	2.5 bx	Yes	
	Palo Alto Middle School	Mrs. Ferguson	1,250	2.5 bx	Yes	
	Rancier Middle School	Collett Tores	750	1.5 bx	Yes	
	Smith Middle School	Niki Bartz	1,250	2.5 bx	Yes	
	Timeber Ridge Elementary	Anna Leach	750	1.5 bx	Yes	
Rogers ISD	Rogers High School	Tammy Tucker	250	.5 bx	Yes	
	Rogers Middle School	Tammy Tucker	250	.5 bx	Yes	
Salado ISD	Salado High School	Mr. Moses	500	1 bx	Yes	
	Salado Middle School	Mr. Moses	0	0 bx	Yes	
Temple ISD	Temple High School	Gloria Allen	2,000	4 bx	Yes	
	Bonham Middle School	Sue Lamb	500	1 bx	Yes	
	Lamar Middle School	Rosa Ortiz	750	1.5 bx	Yes	
	Travis Middle School	Debby	500	1 bx	Yes	
Troy ISD	Troy High School	Carol Cox	500	1 bx	Yes	
	Troy Middle School	Carol Ellis	500	1 bx	Yes	

Appendix N

Bar-W GROUNDWATER EXPLORATION

Memorandum

To: Dirk Aaron, General Manager
Clearwater Underground Water Conservation District

From: Charles R. Williams, P.G. No. 526

Date: March 9, 2013

STATE OF TEXAS
CHARLES R. WILLIAMS
GEOLOGY
No. 526
LICENSED
PROFESSIONAL GEOSCIENTIST

Re: Background on Salado Creek Gauge System Implementation and Application

Purpose

At the request of Clearwater Underground Water Conservation District (CUWCD) Bar-W Groundwater Exploration LLC (Bar-W) developed a statement giving the regulatory policy considerations that led CUWCD to determine that a gauge system was needed on Salado Creek to provide estimates of Salado Springs discharge, how CUWCD implemented and maintained the gauge system, and the applications for the gauge system to CUWCD management of groundwater in the Edwards (BFZ) aquifer.

Introduction

The CUWCD Salado Creek gauge system was established in 2007 and consists of two stream gauges located on reaches of Salado Creek above and below Salado Springs. The purpose of the gauge system is to provide CUWCD with estimates of Salado Springs discharge. CUWCD employs the Salado Springs discharge estimates to provide a metric for a schedule of trigger conditions to impose conservation pumping restrictions. CUWCD imposes conservation pumping restrictions to insure that the minimum discharge (100 acre-feet per month) specified in the Desired Future Condition of the Edwards (BFZ) aquifer is achieved at all times including periods of climatic stress.

A similar two-gauge system was previously operated by the United States Geologic Survey (USGS) for several years but had been removed prior to the creation of CUWCD. The CUWCD gauges are located at the FM 2843 crossing of Salado Creek (approximately 5 stream miles above Salado Springs) and at the Inn on the Creek in the Village of Salado (approximately less than ¼ mile below Salado Springs) (Figure 1) CUWCD undertook a lengthy process to identify feasible gauge sites but encountered community resistance. The selected sites were identified as feasible gauge sites and offered CUWCD guaranteed access to appropriate reaches of Salado Creek. The gauges consist of a pressure transducer and data logger to continuously record stage height at each gauge. CUWCD developed a process to subtract the flow-rate at the upper gauge from the (increased) flow-rate at the lower gauge to estimate Salado Springs discharge.

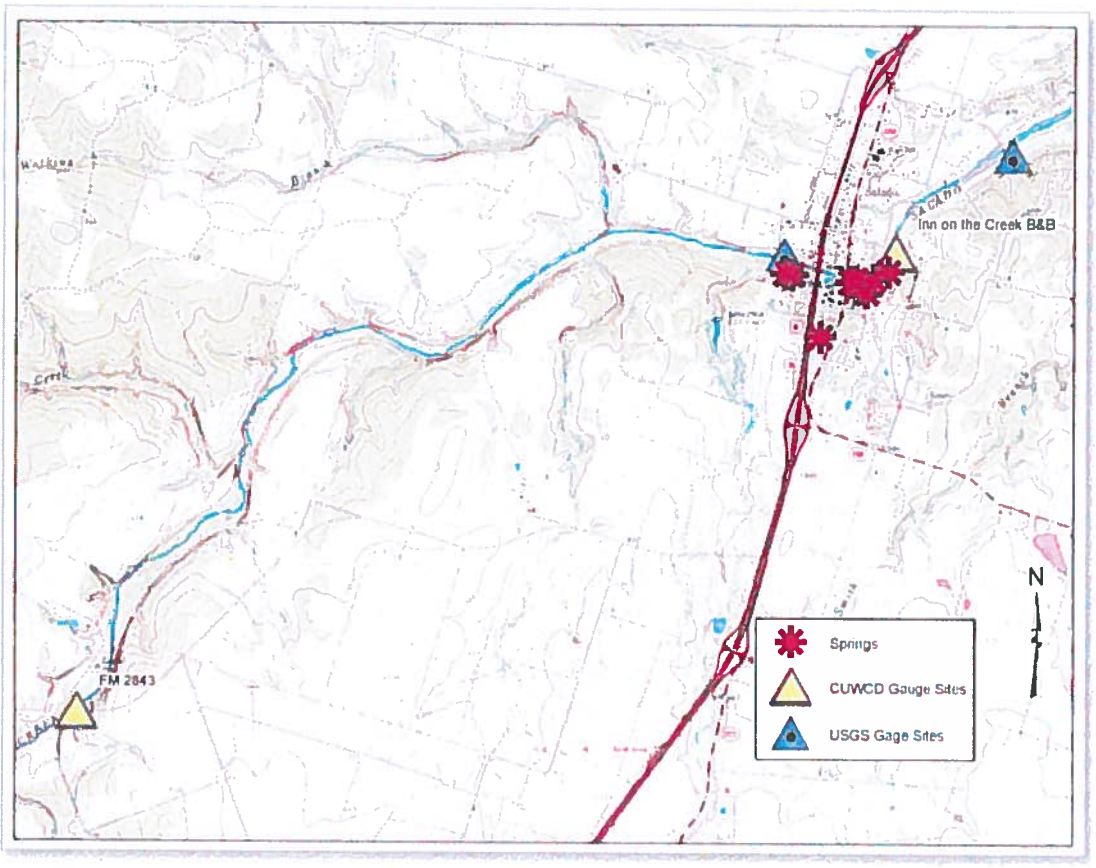


Figure 1, Salado Creek in the Vicinity of Salado, Texas; Showing Locations of Salado Springs, Current CUWCD Gauge System Sites and Previous USGS Gauge Sites

CUWCD Policy Considerations

In 2004 CUWCD elected to employ the newly released Texas Water Development Board (TWDB) Groundwater Availability Model (GAM) for the Edwards (BFZ) aquifer to define the amount of groundwater that could be used from the aquifer in Bell County. The CUWCD Board of Directors (Board) determined that the use of the Edwards (BFZ) aquifer in Bell County should be sustainable. To identify and consider options for the metric of sustainable aquifer use, the Board held a series of workshops. Options considered by the Board were the maintenance of specified water-level elevations; maintenance of aquifer use at or below estimated recharge volumes and the maintenance of a minimum discharge from Salado Springs. Ultimately the Board selected maintaining the discharge of Salado Springs as the preferred metric of sustainable use of the Edwards (BFZ) aquifer. In selecting the maintenance of Salado Springs discharge, the Board recognized Salado Springs as a key environmental indicator of the state of the Edwards (BFZ) aquifer as well as their intrinsic value to the Village of Salado.

The basis of the Board selection of a specific volume of discharge from Salado Spring to be maintained was a series of iterative trial-pumping scenarios. The rates of annual pumping simulated in the scenarios ranged from approximately 2,500 ac-ft per year to approximately 10,000 ac-ft per year. The iterative scenarios considered by the Board featured several approaches intended to make the simulations more realistic. (Williams, 2006) The increases in pumping were centered along the IH-35 corridor. The minimum time-step was decreased from 1-year to 1-month. As opposed to maintaining constant pumping, the simulation series employed seasonal variation with greater pumping during summer months and reduced winter-month pumping. The final 10 years of the simulations replicated a repeat of the drought-of-record (DOR) in the 1950's by using recorded monthly rainfall totals for the Bell County area. In order to simulate the drought management of the aquifer by a groundwater conservation district (GCD), pumping was reduced approximately 20% during identified critical months with low rainfall in preceding months. (Figure 2) The Board considered the simulation-scenario results and found that implementing aquifer management measures could maintain at least 100 acre-feet per month (30-day period) during the worst month of the worst year of the 10-year DOR with reasonable aquifer use.

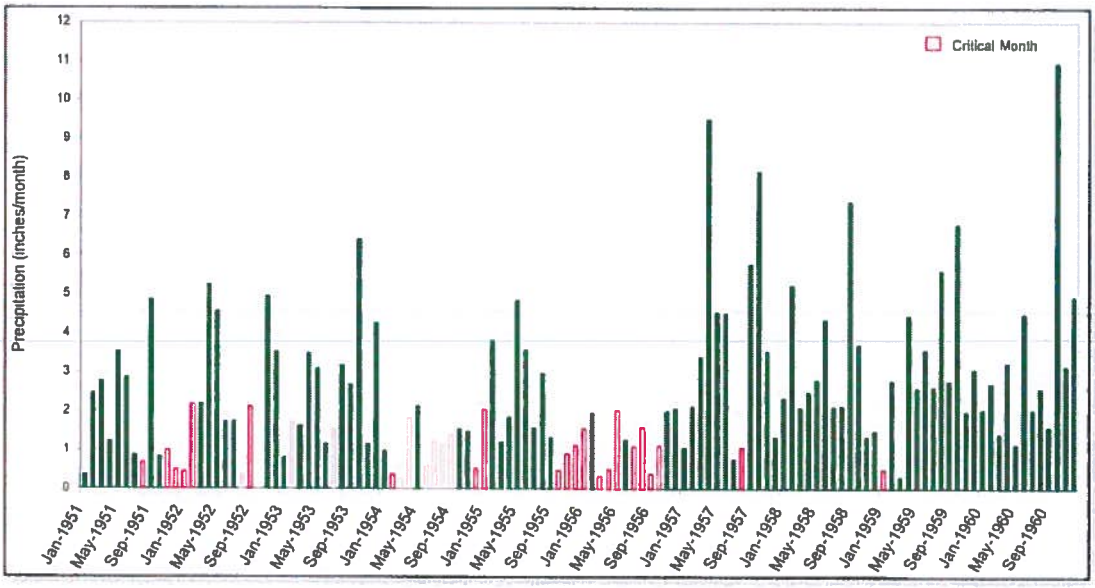


Figure 2, Monthly Rainfall Totals for the Bell County Area during the Decade of the 1950's with Months Where Pumping was reduced by approximately 20% to Simulate Impositions of Conservation Measures Shown in Red

Establishing the Gauge System

In 2005, after receiving the results of the sustainable aquifer use investigation, CUWCD determined that a means of verifying Salado Springs discharge was needed. In 2006, CUWCD began evaluating potential gauge sites and approaches to gauging. (Williams, 2006b) The Board was concerned that constructed weirs might disrupt the channel of Salado Creek and be subject to destruction during flooding events. The site-evaluation process then focused on locating sites with a reasonably stable channel profile. The limestone terrain in the vicinity of the Village of Salado facilitated locating sites with a stable channel. (Figures 3, 4 and 5) After meeting initial community resistance to allowing CUWCD a permanent easement to the sites, CUWCD was able to locate suitable gauge sites where access could be assured. (Figures 6) CUWCD acquired the instruments to equip the gauge system, constructed and brought the system into operation in 2007.

Figure 3, Evaluating Salado Creek Channel Stability in Salado, Texas

Figure 4, Example of Stable Channel at Inn on the Creek Site

Figure 5, Stable Channel at FM 2843 Site

Figure 6, Gauge Installation at FM 2843 Site, 2007

Approach to Gauging

CUWCD employs a two-gauge system in order to resolve base-flow in the stream reach above the identified Salado Springs from the combined base-flow and spring discharge in the reach below the identified Salado Springs. The gauges are located at sites with reasonably stable natural stream channel with bedded limestone bottom. (Figure 4 and 5) A surveyed stream-channel profile and a low-flow stream flow measurements with digital Doppler-sensors are used to establish a gauge-height rating at each gauge site. (Figures 7 and 8)

Figure 7, Low-Flow Stream Measurement at FM 2843 Site

Figure 8, Low-Flow Stream Measurement at Inn on the Creek Site

A pressure transducer either anchored to the stream channel or in a stilling well, provides gauge height data when polled by a data logger. (Figure 9) Data loggers are housed in a shelter sealed against inundation. Gauge sites are equipped with telemetry to allow remote data access and reporting of significant gauge height changes. (Figure 10, 11 and 12)

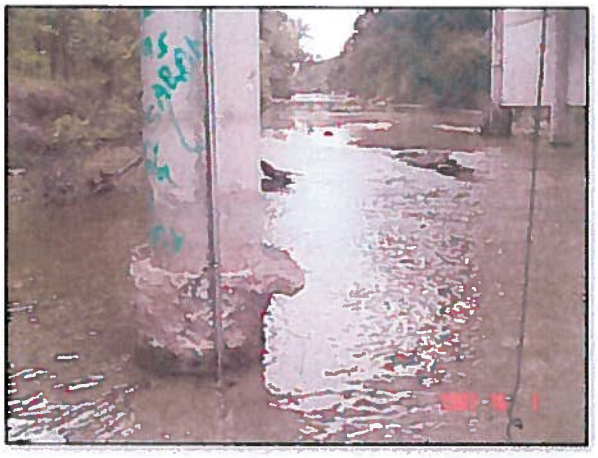


Figure 9, Anchored Transducer at FM 2843 Site prior to Flood of 2009

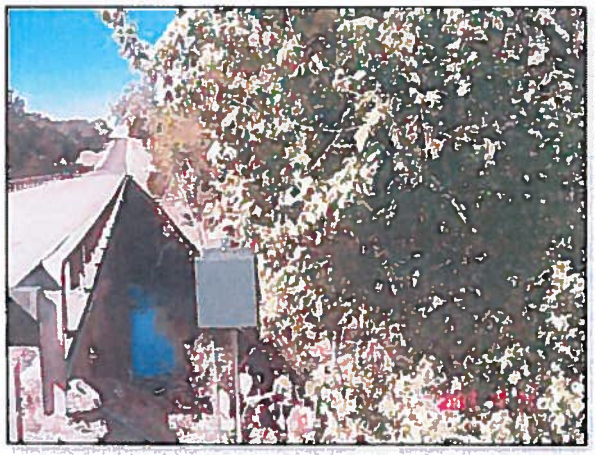


Figure 10, Protection of FM 2843 Gauge from Inundation

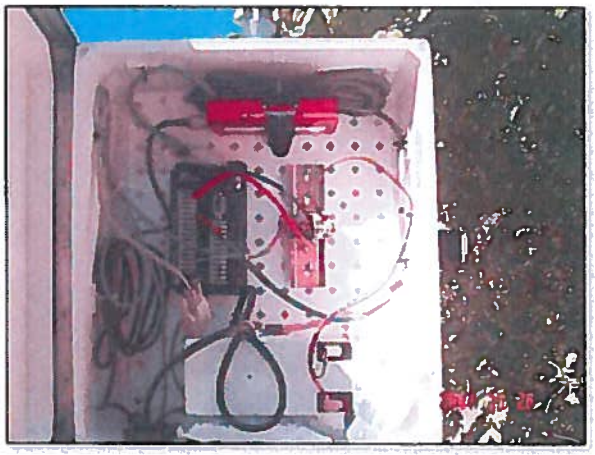


Figure 11, Interior of FM 2843 Gauge with Data Logger and Telemetry Modem Visible

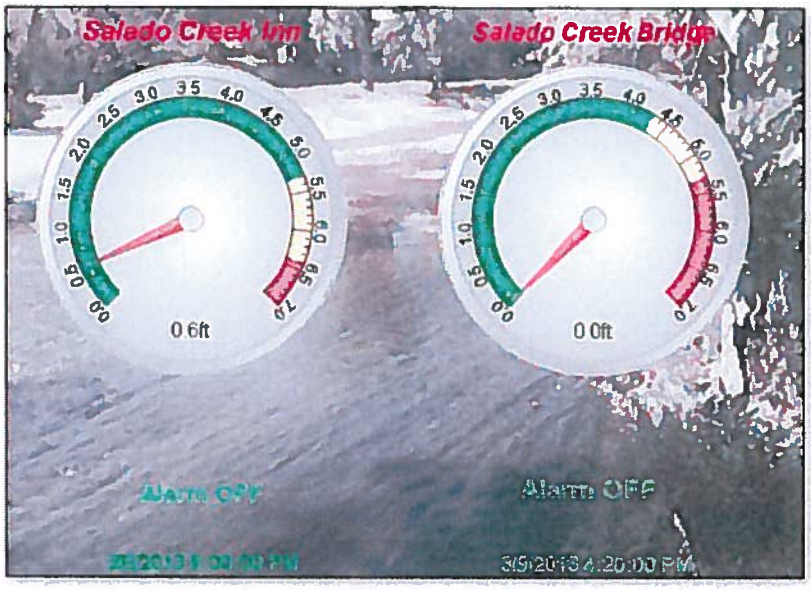


Figure 12, Gauge Height Indicators showing Status of Gauge-Height Change Alarms

Gauge-System Limitations

The use of the natural stream channel at the gauge sites required periodic surveys of the channel-profile and re-rating. A channel-profile survey and re-rating are required after significant high-flow events. Because of the confluence of tributary streams to the reach of Salado Creek between the upper and lower gauges, Salado Spring discharge estimates may be unavailable during high-flow events or extended wet-periods.

Estimating Spring Discharge

The gauge height at each gauge is sampled and recorded every 10 minutes. (Figure 13) The recorded gauge height values are downloaded on a daily basis. The gauge height data is converted to flow values using the rating curve for each site using software developed for CUWCD. The processing software subtracts upper-gauge flow values from time-equivalent lower-gauge values to give estimates of Salado Spring discharge. (Figure 14) The daily Salado Springs discharge estimate is tracked for application to CUWCD groundwater management processes.

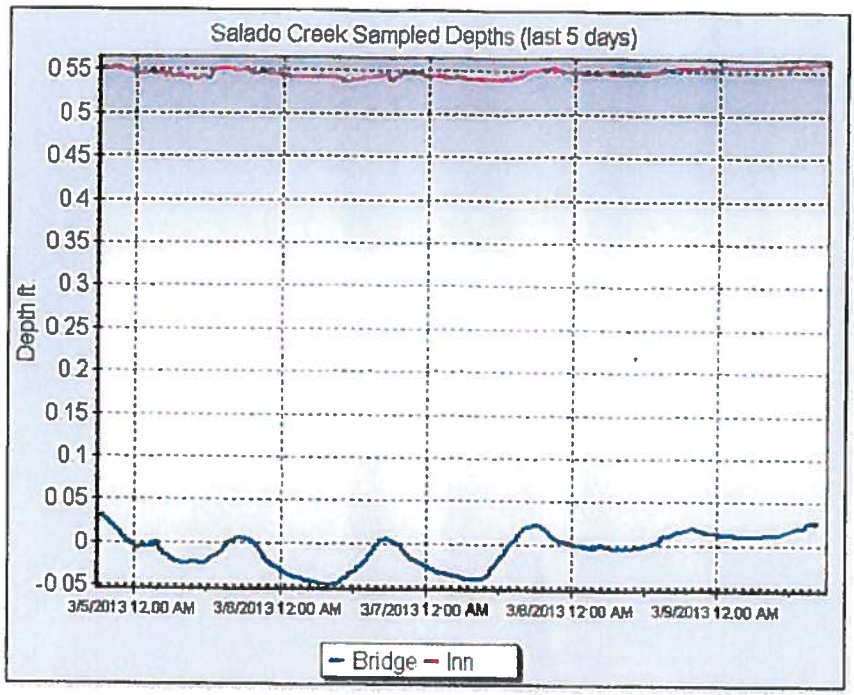


Figure 13, Example of Continuous Gauge Height Data Recorded by Gauge System

Month	Inn Gauge				Bridge Gauge				Avg Est Spring Discharge (cfs)	Avg Est Spring Discharge (ac-ft/mo)
	Start Date	End Date	Q_{avg} (cfs)	Q_{avg} (ac-ft/mo)	Start Date	End Date	Q_{avg} (cfs)	Q_{avg} (ac-ft/mo)		
No-11	11/2	11/30	2.92	174	11/2	11/30	0.01	1	2.91	173
De-11	12/1	12/31	3.76	224	12/1	12/31	0.29	17	3.47	206
Jan-12	1/1	1/31	3.91	233	1/1	1/31	1.10	65	2.81	167
Fe-12	2/1	2/29	26.39	1,570	2/1	2/29	20.91	1,245	5.47	326
Ma-12	3/1	3/31	125.4	7,464	3/1	3/31	68.37	4,068	57.07	3,396
Apr-12	4/1	4/30	36.16	2,152	4/1	4/30	0.39	23	35.78	2,129
Ma-12	5/1	5/31	14.13	841	5/1	5/31	0.03	2	14.10	839
Jun-12	6/1	6/30	9.54	568	6/1	6/30	0.00	0	9.54	567
Jul-12	7/1	7/31	8.09	481	7/1	7/31	0.01	0	8.08	481
Au-12	8/1	8/31	6.83	406	8/1	8/31	0.13	8	6.70	399
Se-12	9/1	9/30	6.46	384	9/1	9/30	0.00	0	6.46	384
Oct-12	10/1	10/31	7.60	452	10/1	10/31	0.00	0	7.60	452
No-12	11/1	11/30	7.12	424	11/1	11/30	0.00	0	7.12	424
De-12	12/1	12/31	6.94	413	12/1	12/31	0.00	0	6.94	413
Jan-13	1/1	1/31	10.67	635	1/1	1/31	0.03	2	10.63	633
Fe-13	2/1	2/28	8.99	535	2/1	2/28	0.01	0	8.98	535
Ma-13	3/1	3/4	8.80	524	3/1	3/4	0.00	0	8.80	524

Table1, Example of CUWCD Computation of Flow in Salado Creek at Gauge Sites from Gauge Height Data and Estimation of Salado Springs Discharge

Spring Discharge & Gauge System Basis of Regulatory Mechanisms

In 2007 CUWCD suggested that the maintenance of minimum discharge be used as the basis of defining sustainable use of the Edwards (BFZ) aquifer within Groundwater Management Area (GMA) 8. GMA 8 adopted the maintenance minimum spring discharge as the basis of the Desired Future Condition (DFC) of the Edwards (BFZ) aquifer for Bell, Williamson and the northern portion of Travis Counties. The information from the original CUWCD comparative pumping scenarios was provided to TWDB. TWDB used the information to verify the CUWCD findings calculate what is now known as the Modeled Available Groundwater (MAG). The MAG indicates the volume of annual use of the aquifer projected to maintain the specified minimum spring discharge values for each of the three counties.

In 2008, CUWCD began developing a Drought Management Plan (DMP) for the Edwards (BFZ) aquifer. The purpose of the DMP is to provide a regulatory mechanism for CUWCD to insure that the minimum Salado Springs discharge specified in the DFC was achieved at all times. The DMP includes a schedule of conservation pumping restrictions. CUWCD used Salado Springs discharge estimates from the Salado Creek gauge system as a metric for triggering DMP pumping reductions. Salado Spring discharge of less than 900 ac-ft per month can trigger conservation pumping reductions. (Table 2)

Clearwater Drought Management Stage	Precipitation Deficit Index for Edwards Aquifer Region in Bell County % of Average Rainfall*	Salado Springs Discharge in ac-ft/month	Percent Pumping Reduction	Compliance Status
Stage 1 Awareness	70 – 7[illegible] (mild drought)	[illegible]	[illegible]	[illegible]
Stage 2 Concern	60 – 69% (moderate drought)	700	20	Voluntary
Stage 3 Serious	50 – 59% (severe drought)	400	30	Voluntary
Stage 4 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Table 2, CUWCD Drought Management Plan showing Salado Spring Discharge and Precipitation Deficit Trigger Conditions and Reductions Schedule as adopted in 2009

During development of the DMP, it was recognized that a deficit of rainfall could serve as a leading indicator of potential reductions in Salado Springs discharge. CUWCD included a Precipitation Deficit Index (PDI) to the DMP. The PDI tracks daily rainfall as reported from the National Oceanic and Atmospheric Administration (NOAA) NEXRAD radar nodes located in the vicinity of Bell County. (Figure 14)

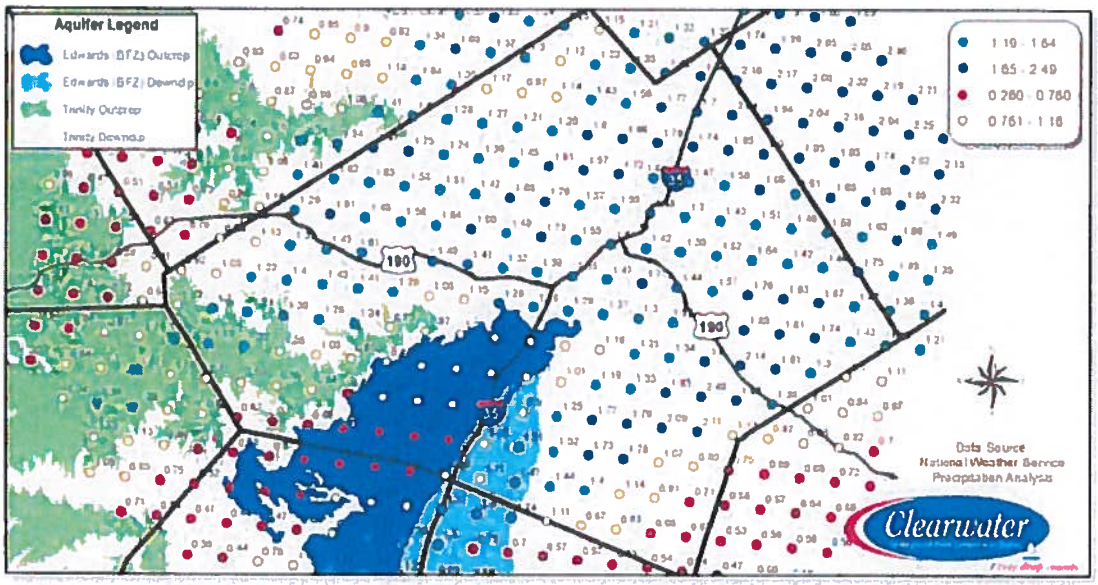


Figure 14, NOAA NEXRAD Daily Rainfall Radar Tracking Nodes in the Vicinity of Bell County, Texas

The daily rainfall occurring at an identified set of NOAA radar nodes located in the Edwards (BFZ) aquifer Artesian, Recharge and Contributing Zones in Bell, Williamson and Burnet Counties is averaged and summed over a 365-day period. (Figure 15) The 365-day rainfall value is compared to a long-term average annual rainfall value to give a value for the Percentage of Average Annual Rainfall that has occurred over the last 365-day period. (Table 3) A PDI value of less than 70 percent triggers conservation pumping reductions even if Salado Springs discharge is greater than 900 ac-ft per month.

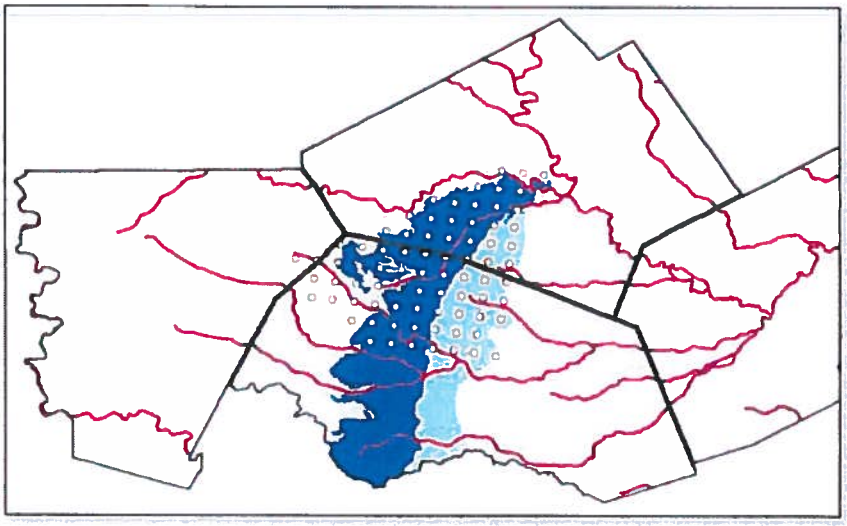


Figure 15, Location of NOAA NEXRAD Rainfall Nodes Used for the Edwards (BFZ) Aquifer Precipitation Deficit Index in the CUWCD Drought Management Plan

Date	Area	Daily Average Rainfall (inches)	Total Rainfall Over Last 365 Days (inches)	365 Day Rainfall as Percent of Average Annual Rainfall	Delta from Average Annual (inches)	Drought Stage Indicated by POA Today	Drought Stage Indicated by POA for Last 28 Days	Drought Stage Indicated by POA for Last 42 Days	Drought Stage Declared by CUWCD
03/01/2013	Edwards	0.000	22.91	69.42	-10.09	2	1	1	2

Table 3, Example of CUWCD Tracking and Processing of Precipitation Deficit Index Values for the Edwards (BFZ) Aquifer

In 2009, CUWCD adopted and implemented the DMP conservation measure triggers on a voluntary basis. After observing the trial implementation of the DMP, CUWCD made the conservation measure specified in the DMP mandatory in 2011. CUWCD makes current information regarding the volumes of Salado Springs discharge and PDI status available to the public through the CUWCD website www.cuwcd.org to cultivate public awareness and cooperation with conservation initiatives. (Figure 16)

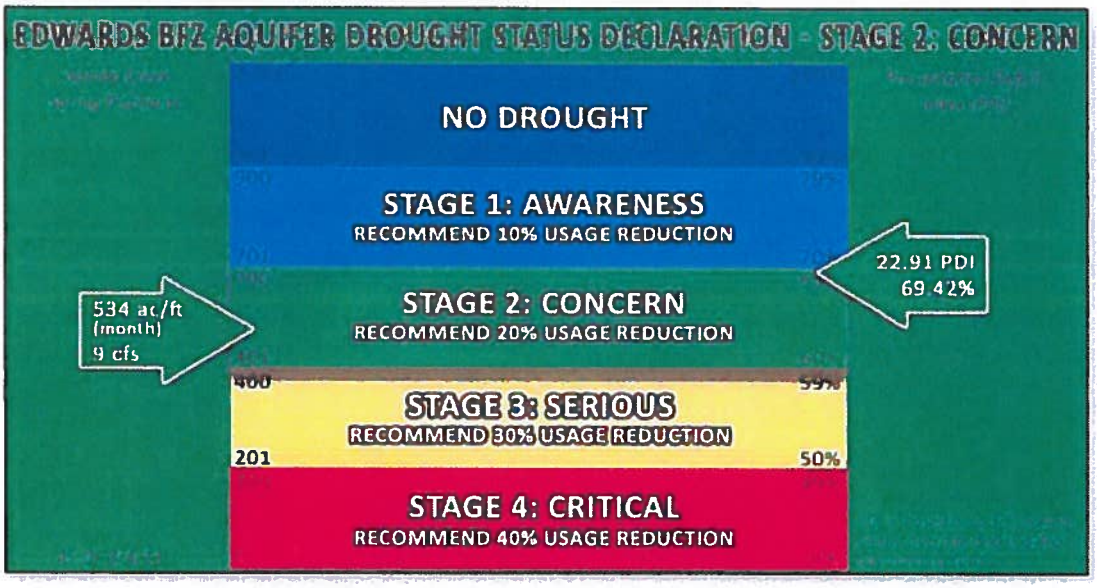


Figure 16, Example of CUWCD Drought Management Information Made Available to the Public Regarding Drought Management Plan Stage, Salado Springs Discharge and Precipitation Deficit Index

Gauge System Operation History

The gauge system began operation in 2007 and was in operation during the rainfall deficit period of 2008 through 2009. Operation of the gauge system CUWCD collected critical data during this period. The rainfall deficit period ended in September 2009 with a flood event from approximately 14-inches of rain in the Salado Creek basin in less than 24-hours. The upper-gauge was damaged during the high-flow event and it was apparent that the channel profile at the lower gauge had been altered by the high-flow event. CUWCD repaired, re-surveyed and re-rated the gauge system. In September 2010, a flood event of greater magnitude than in 2009 was experienced. The 2010 event damaged the gauge system and appeared to alter the stream channel at both sites. Again, CUWCD repaired the gauge system, re-surveyed and re-rated the stream channel profile at the gauge sites. During the 2010 event, extreme scouring of the channel banks was experienced at the lower gauge at the Inn on the Creek. The 2010 bank scouring destroyed the buried transducer cable and conduit of the lower gauge. CUWCD implemented an improvement of the method of sensing gauge height with the transducer by installing a stilling well buried to a greater depth than in previous construction. (Figure 17)

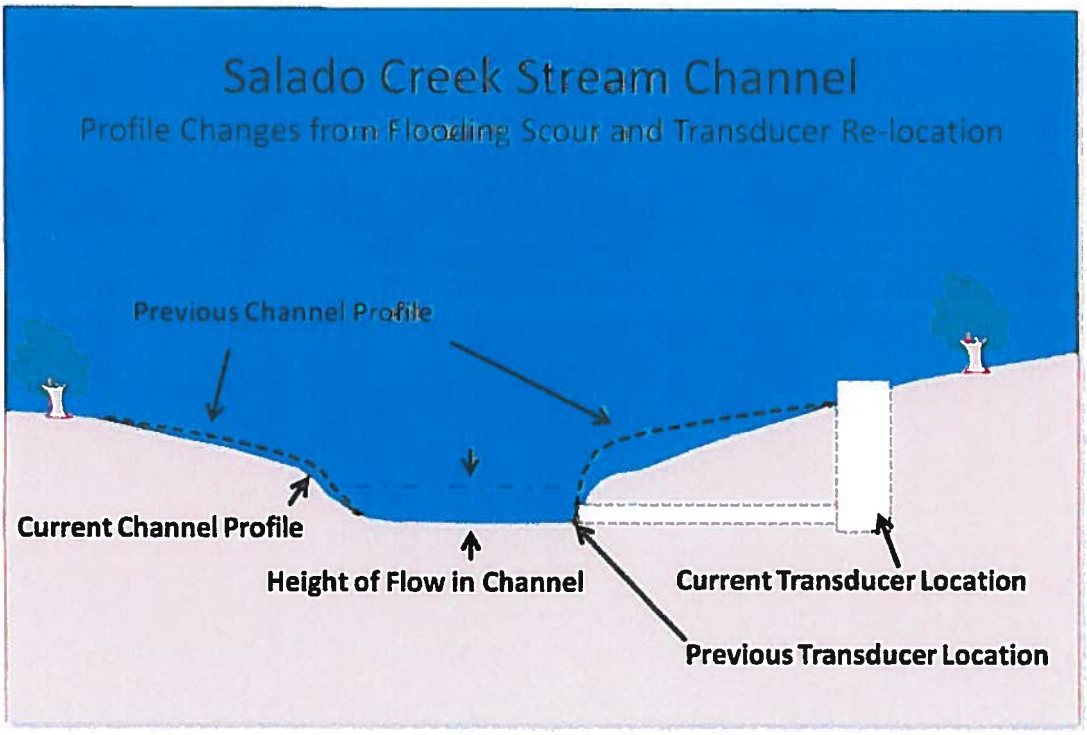


Figure 17, Changes Implemented by CUWCD to Transducer Location at the Inn on the Creek Gauge Site to Improve Survivability during Flood Events

CUWCD completed the repairs and the gauge system was returned to service in time to provide critical data on Salado Spring discharge during the height of the 2011 rainfall deficit period. On occasion, CUWCD has made comparisons of the Salado Springs discharge estimates (and estimated Salado Creek flow values) produced by the gauge system to manual gauging results. The comparison approach assumes that the limit of resolution for any flow measurement (or estimate) may be approximately + or – 10 percent. Using the assumed limit of resolution, the comparative flow and discharge estimates produced by the Salado Creek gauge-system were found to be reasonably comparable to the manual measurements on each occasion for comparison.

Recognizing the importance of the Salado Springs discharge estimates to Edwards (BFZ) aquifer management in Bell County, CUWCD recently initiated a rigorous review of the gauge-system flow and discharge values. CUWCD contracted the USGS to install and maintain an additional gauge on Salado Creek. The new gauge is sited below the Salado Spring locations and above the existing Inn on the Creek gauge site. (Figure 18)

Figure 18, Location of the New Salado Creek Gauge to be operated by USGS

The new gauge will begin operating in early 2013. Maintenance of the new gauge will include quarterly manual flow measurements. CUWCD anticipates that the comparative

gauging process will run for at least 2 years and provide valuable additional information to improve the resolution and accuracy of Salado Springs discharge estimates.

Appendix O

Clearwater

Every drop counts!

Thank you for allowing us to use your well to monitor water levels in Bell County's aquifers. The District has continued to examine additional wells in order to increase the number of monitor well sites. **Historically, we have measured the wells semi-annually, but staff began to measure wells quarterly in order to closely monitor the aquifer levels as we enter this high use and evaporation period of our year.** The Texas Water Development Board conducted some of the measurements, shown in red. The measurements in blue were taken by the Clearwater staff. The water levels taken in both the Edwards (BFZ) and Trinity wells show that they have improved somewhat do to beneficial rains overall since our previous measurements in July 2011. The Texas Water Development Board provided information through publication of continuous monitoring data on the measurements of the TxDOT wells and an additional well in Salado, shown in red. The measurements in blue were taken by the Clearwater staff in May 2012.

Edwards (BFZ) Aquifer

Water Level- Depth Below Land Surface in Feet

State Well #	CUWCD Well #	Date of Measurement																											
		Other	03	Jul-03	Jan-Feb 04	Jul-04	Jan-05	Jul-05	Jan-Feb 06	Jul-06	Sep-06	Oct-06	Nov-06	Jan-Feb 07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Jan-10	Jul-10	Jan-11	Jul-11	Sep-11	Nov-11	Jan-12	May-12	Jan-13
58-04-627 (Salado ISD)	N-03-004G	--	39.8	42.6	41.42	39.54	39.05	43.42	43.34	43.58	43.09	44.55	43.75	40.84	36.17	41.92	43.59	43.42	51.5	39.62	42.12	43.00	44.46	45.82	44.42	42.62	41.82	42.22
58-04-502 (Salado ISD)	N-02-050G	(1985) 50.5	48.7	56.14	49.17	48.58	47.16	51.83	51.79	52.08	53.08	52.96	52.33	49.5	44.83	49.83	52.16	51.58	53.66	48.38	50.73	49.35	53.49	54.03	52.83	50.23	50.83	49.83
58-04-602 (Salado WSC)*	N-02-003G	(1981) 29.27	63.2	38.17	29.5	32.71	27.17	36.00	36.5	41.84	34.09	33.21	30.09	27.55	21.50	31.42	40.17	38.92	34.92	27.12	31.53	31.43	35.52	37.83	32.53	30.73	31.20	32.40
58-13-502 (City of Bartlett)*		--	--	--	--	--	42.62	40.13	50.29	52.29	55.92	60.37	65.12	60.79	49.45	46.62	46.46	61.04	63.33	NA	58.04	58.80	61.21	68.59	76.79	75.99	67.39	68.90
58-04-623 (Foster Stgch)*	N-02-002G	(1993) 85.39	85	89.58	89.69	82.79	86.3	87.17	83	95.25	82.75	85.75	81	80.30	72.34	86.51	72.34	88.75	85.67	67.67	81.67	82.64	87.21	89.22	83.62	79.72	81.92	85.40
58-04-628 (Cemetery)***	N2-08-008G		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	71.91	83.61	39.81	72.83	64.63	81.51	89.10	80.97	64.78	79.17	71.54
58-04-702 (TxDOT)***	N2-04-005G	(1980) 71	78.25	71.96	72.72	71.84	72.2	72.17	72.83	72.73	72.87	72.95	73.05	72.08	69.87	72.07	69.82	72.88	73.19	70.43	NA	72.05	71.05	71.15	72.08	74.2	73.83	71.20
58-04-816 (TxDOT)***	N2-05-002G		--	--	--	--	--	--	--	--	--	--	--	--	--	--	124.80	125.47	128.15	118.18	120.46	121.76	125.39	126.41	126.09	125.18	123.57	125.18
58-04-801 (Norwood)	E-02-019G	(1966) 134.93	144.15	137.42	141.34	141.25	134.1	137.58	140.25	140.5	141.75	141.75	141.58	137.7	133.08	135.70	138.91	150.75	143.25	133.43	135.58	139.00	139.91	140.32	140.78	**N/A	N/A	N/A

*Pump turned off at least 1-2 hours prior to measurement TWDB measurement CUWCD measurement

**Continuous monitor equipment installed (data available: http://hyper20.twdb.state.tx.us/twdbwells/twdbwells.html)

***Daily trend from continuous monitor site on date of water level measurements (November 2011)

Pump in use less than one hour prior to measurement

**** Well is no longer available

Trinity Aquifer

Water Level- Depth Below Land Surface in Feet

Well Number	CUWCD Well #	Date of Measurement																											
		Other	03	Jul-03	Jan-Mar 04	Jul-04	Jan-05	Jul-05	Jan-Feb 06	Jul-06	Sep-06	Oct-06	Nov-06	Jan-Feb 07	Jul-07	Jan-08	Jul-08	Jan-09	Jul-09	Jan-10	Jul-10	Jan-11	Jul-11	Sep-11	Nov-11	Jan-12	May-12	Jan-13
	E-02-721G (McCallum #1)	--	--	--	--	--	--	--	--	--	--	--	143.33	145.5	132.42	135.67	153.00	146.59	160.84	153.27	151.83	150.9	168.03	171.334	165.03	157.73	157.63	156.23
	E-02-722G (McCallum #2)	--	--	--	--	--	--	--	--	--	--	--	143.25	145.00	131.92	135.17	152.25	145.83	160.25	152.83	152.07	150.8	166.5	171.67	165.1	158.07	158.37	158.07
	E-02-804G (Dobson)	--	--	--	--	--	--	--	--	--	--	--	--	335.75	324.50	328.71	338.92	356.42	359.83	381.65	NA	382.4	375.31	385.35	381.65	378.05	376.65	374.4
40-58-201 (Central TX College)***	N2-09-006P	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	87.59	77.83	79.64	80.53	81.01	80.28	79.72	78.99	81.66
	E-08-005P (Stephenson)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	369.54	378.46	372.54	378.38	381.225	405.56	412.08	413.38	403.38	399.68	401.58
58-02-103 (Mayer)	E-02-1299G (Mayer)	--	--	--	182.1	189	180.38	201.72	200.82	227.18	208.7	209.86	187.91	183.29	217.94	204.08	229.49	266.45	201.77	241.04	192.53	185.6	197.15	204.06	204.8	199.46	201.77	204.28
	E-06-063P (Texas Vet. Land Board)	--	--	--	--	--	--	--	--	--	--	--	399.41	375.25	379.58	382.50	442.33	389.58	370.17	362.93	378.53	380.933	362.353	362.18	364.7	362.73	362.33	361.4
	E-03-444P (Purnell)	--	--	--	--	--	--	--	--	--	--	--	418.58	411.92	400.58	411.58	434.42	429.67	446.58	430.58	437.38	437.7	469.16	NA	471.4	457.93	457.93	455.34
	E-05-063P (Murphy)	--	--	--	--	--	--	--	--	--	--	--	313.83	282.63	288.42	291.92	334.42	323.76	368.58	326.54	345.24	335	403.38	404.7	386.04	357.34	376.8	370.6
	N2-07-003G (Killeen Crushed Stone)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	344.42	376.17	377.92	377.25	383.5	375.55	381.225	414.48	424.33	416.48	409.97	404.97	406.98
40-53-102 (USCOE- Leona Park)	N2-04-002G	(1993) 55.14	68.35	70.42	71.28	71.92	72.6	73.33	74.16	74.5	74.66	75.00	75.25	75.35	--	76.55	77.66	78.98	78.71	79.28	79.98	80.56	81.12	85.21	81.98	79.9	78.2	81.68
58-05-901 (City of Holland)	N-02-013G	(1995) +1.2 (flowing)	23.7	25.3	26.19	28.21	29.9	31.84	25.96	28.3	27.96	21.46	27.13	26.1	27.04	28.80	30.79	34.04	36.63	36.63	36.825	39.9	41.13	41.73	42.13	43.125	44.125	42.1
40-45-701 (USCOE-Winkler Park)	N2-04-003G	--	bad reading	--	bad reading	326.09	bad rding	--	333.29	335.54	337.04	339.13	339.63	bad reading	--	--	344.63	349.46	352.86	356.76	358.26	360.61	368.54	400.86	406.16	372.26	372.3	373.06
40-57-601 (Copperas Cove)***	N2-09-007P	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	306.94	295.47	308.1	313.4	319.94	316.55	311.9	309.74	312.56
	N2-05-010G (River Ridge Ranch Common Park)	--	--	--	--	--	--	--	--	--	--	--	219.33	286.88	256.25	261.92	280.17	284.25	293.58	281.46	287.33	286.783	312.02	325.18	319.4	308.38	304.18	303.08
40-53-406 (Moffat WSC)	N-02-022G	(1967) 243.55	335	417.83	336	416.06	340	not avail.	not avail.	not avail.	not avail.	not avail.	not avail.	333	361.26	332.00	358.16	436.70	358.16	399.74	408.98	362.78	346.82	459.36*	457.05	455.49	458.8	471.09
	N-04-010P (East Bell WSC Well #2) **																									378	289	191
40-63-501 (East Bell WSC Well #1) **	N-02-034G	(1962) +13.5 (flowing)	--	--	--	--	--	--	--																	378.00	278.00	280.00
40-57-602 (Copperas Cove)***	N-02-008P	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	291.16	292.71	290.13	290.25	291.93	292.44	293.85	293.47	294.22

*Pumps turned off at least 1-2 hours prior to measurement TWDB measurement CUWCD measurement

Method of measurement: 1-Steel Tape, 2-E-Line, 3-Air Line, 4-Sonic Water Meter, 5-TWDB Continuous Moni

**Measurement was reported by East Bell WSC

Upper Trinity (Glen Rose) Middle Trinity (Hensell) Lower Trinity (Hosston)

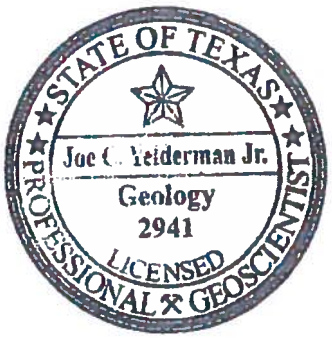
*** Daily trend from continuous monitor site on date of water level measurements (November 2011)

Appendix P

2/15/2013

JOE C. YELDERMAN JR.
HYDROGEOLOGIST,
PH. D.
BAYLOR UNIVERSITY

Hydrogeology of the Northern Segment of the Edwards Balcones Fault Zone Aquifer in the Salado Creek Basin and Environs



a current understanding

Hydrogeology of the Northern Segment of the Edwards Balcones Fault Zone Aquifer in the Salado Creek Basin and Environs; a current understanding

Introduction

Purpose

The Northern Segment of the Edwards Balcones Fault Zone aquifer is the least studied and therefore probably the least understood portion of the Edwards Balcones Fault Zone aquifer. Even though it is less prolific than the San Antonio segment, it is the primary water supply to much of the population in and around the Salado Creek basin in Bell County. In addition, the aquifer is connected to important springs in the area that are an attraction to visitors in Salado Village and the aquifer and its springs provide habitat to organisms such as the Salado Salamander which is proposed to be listed as an endangered species. In order to provide an adequate quantity and quality of water to satisfy human consumption, maintain creek aesthetics, and provide suitable habitat for organisms such as the Salado Salamander, it is critical to understand the hydrogeology, especially the recharge, in the this portion of the aquifer. It is important for man to strive to live "in harmony" with karst rather than just live "on karst" (Brinkman and Parize, 2012). This study summarizes our current understanding of the karst hydrogeology in the Northern Segment of the Edwards Balcones Fault Zone aquifer and recommends where more data and research are preferred.

Methods

The methods used in this study included a literature review, data collection, interviews, and field observations. The literature review included references in three major categories.

1. General karst hydrogeology literature that was deemed directly relevant to the study area.
2. Literature regarding recharge processes applicable to the study area.
3. Hydrogeology literature specific to the study area.
    a. Published in refereed journals
    b. Unpublished but in reports, theses, and retrievable documents

Data that were gathered by other entities such as the Texas Water Development Board, Texas Commission on Environmental Quality, and the Clearwater Underground Water Conservation District were also included in the assessment.

Interviews with local inhabitants that live in the area provided information on important locations to investigate and historical context.

Field observations were made in as many areas as practical to view potential recharge features and understand the local hydrogeology.

Location

The study area is defined as the Salado Creek basin and surrounding areas (figure 1). This area encompasses most of Bell County and portions of Williamson County, central Texas.

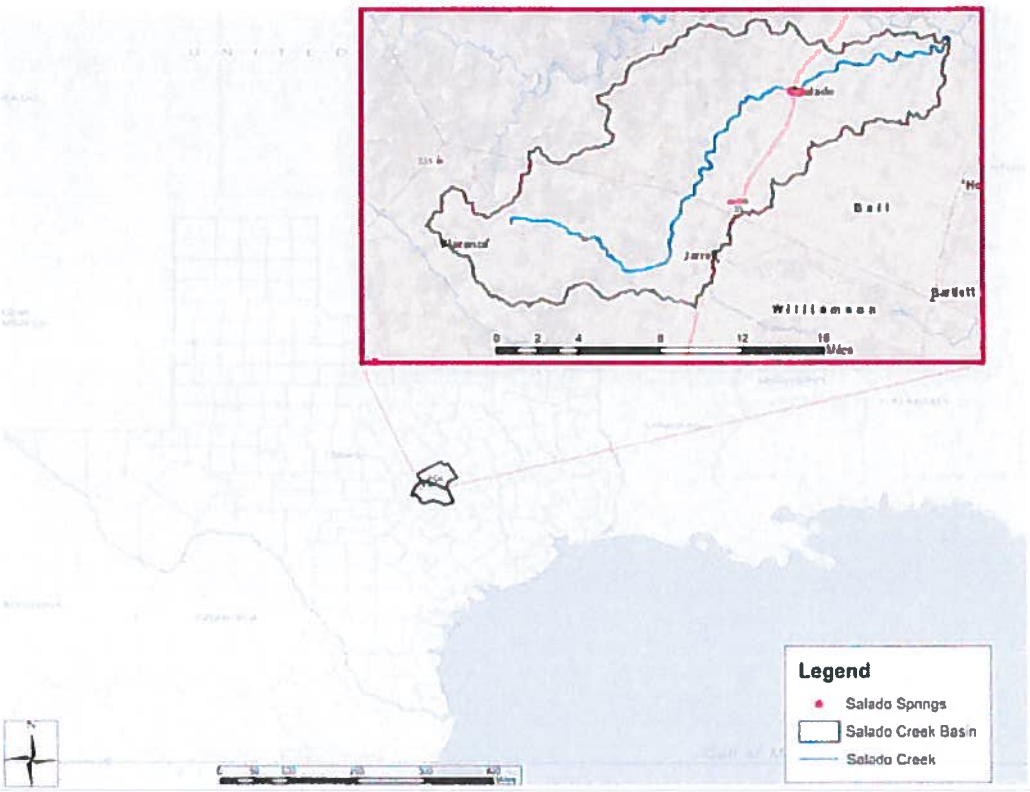


Figure 1. Location of Salado Creek basin and environs.

Acknowledgements

I would like to thank all those who helped in this effort. Particularly those who accompanied me in the field; Tim Brown, Dirk Aaron, Toby Hibbits, Andrew Worsley, Stephanie Wong, and students in several of my classes. Most of all I would like to thank the land owners who allowed me to access their property to make many of the important observations.

Geologic Framework

There are three formations that comprise the Northern Segment of the Edwards Balcones Fault Zone aquifer. They are in ascending order; the Comanche Peak Formation, the Edwards Formation and the Georgetown Formation. All of these units are sedimentary rocks, Cretaceous in age, and comprised mainly of carbonate (limestones). The Edwards and Comanche Peak formations are part of the Fredricksburg Group and the Georgetown is part of the Washita Group. They are fairly well connected hydraulically and considered as one hydrostratigraphic unit referred to as the Edwards aquifer; specifically the Northern Segment of the Edwards Balcones Fault Zone aquifer. The underlying confining unit is the uppermost member of the Walnut Formation, the Keys Valley member. It is comprised of carbonaceous clay material and referred to as a marl. The overlying confining unit is the Del Rio Formation (sometimes referred to as the Grayson Formation). The Del Rio is a carbonaceous clay-rich unit and often referred to as the Del Rio Clay. Upper Cretaceous units overlying the Del Rio Formation that crop out in the Salado Creek basin include the Buda Formation, Eagle Ford Group and the Austin Chalk. None of these are considered aquifers in this area. Figure 2 shows a map of the geologic units in the Salado Creek basin and environs.

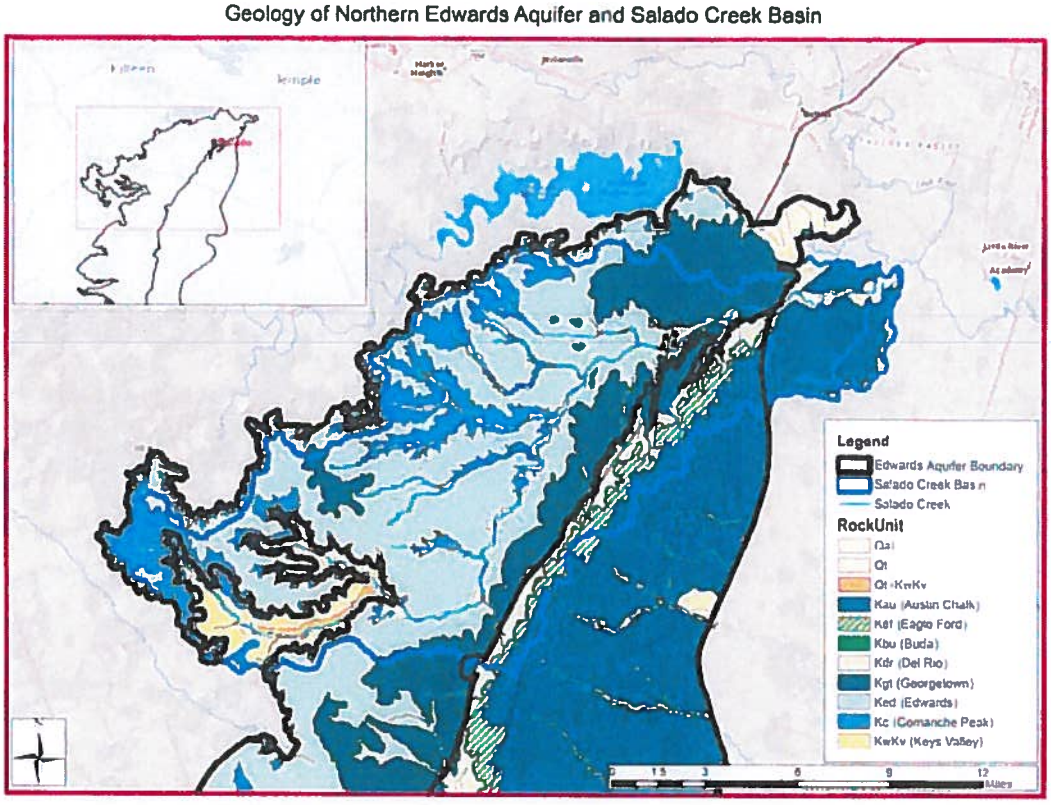


Figure 2. Geologic map of the Northern Segment of the Edwards Balcones Fault Zone aquifer in the Salado Creek basin and environs. Modified from Bureau of Economic Geology, 2007. Geologic Database of Texas. Texas Water Development Board, U.S. Geological Survey. Original Projection: Albers Conical Equal Area

A short description of each of the units is included in the text that follows.

The Austin Chalk (Kau) is an interbedded chalk and marl formation approximately 300-400 feet thick that caps the hills to the east of Interstate Highway-35 (Barnes, 1974). It is an overlying unit that could be considered a confining bed and may contribute runoff to losing streams that flow onto the Northern Segment of the Edwards Balcones Fault Zone aquifer.

The Eagle Ford Group (Kef) is an upper Cretaceous shale unit that contains flaggy siltstones and limestones in the middle section. This unit crops out in a N.E.-S.W. trending linear band on slopes below the Kau (Barnes, 1974). This unit is also a confining unit and only contributes runoff to the Salado Creek basin.

The Buda Formation (Kbu) is a fine-grained, hard limestone that is poorly bedded to nodular in nature and up to 45 feet thick but locally absent to the north (Barnes, 1974).

The Del Rio Formation (Kdr) is a calcareous, fossiliferous, clay approximately 60-70 feet thick (Barnes, 1974).

The Georgetown Formation (Kgt) is a bedded, fine-grained, nodular limestone with marl beds and it is approximately 80-100 feet thick. It occurs as a few outliers in the western portion of Salado Creek basin (Figure 2) and as a N.E.-S.W. trending linear outcrop along Interstate Highway-35 (I-35) on the eastern edge of the basin (Barnes, 1974).

Figure 3. The Georgetown Formation exposed in an outcrop within Salado Creek basin showing the nodular characteristics of the limestone and the fine grained beds between the limestones.

The Edwards Formation (Ked) is sometimes divided into the Kainer and Pearson members but in the northernmost portion of the Northern Segment of the Edwards Balcones

Fault Zone aquifer the upper Pearson unit grades into the Georgetown Formation. For purposes of this report the Edwards Formation will be considered one unit without subdivision into members and the Georgetown will be distinguished as the overlying formation. The lower part of the Edwards Formation in the Northern Segment of the Edwards Balcones Fault Zone aquifer is a porous dolostone and nodular limestone that has experienced significant dissolutioning (Rose, 1972; Woodruff and others, 1985). The Edwards Formation is about 100 feet thick in the Salado Creek basin area (Dahl, 1990).

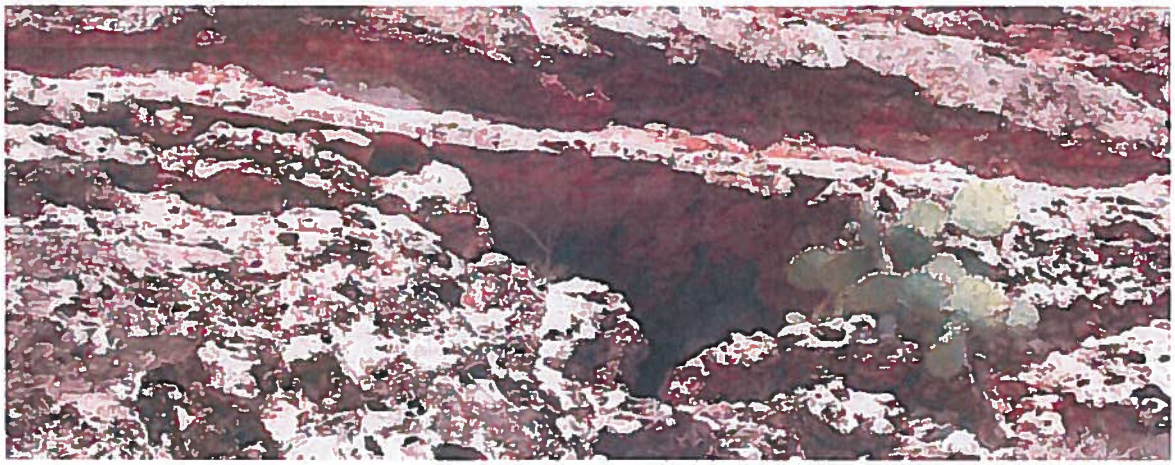


Figure 4. The Edwards Formation with a typical karst dissolution feature.

The Comanche Peak Formation (Kcp) is a fine-grained, hard, marly limestone. It is about 50-60 feet thick in the study area and thins to the south. The Kcp is exposed in the Salado Creek basin primarily along stream scarps beneath the Edwards Formation (Barnes, 1974; Dahl, 1990).

Figure 5. The Comanche Peak Formation with fractures.

The Keys Valley member (Kkv) of the Walnut Formation (Kwa) is a soft fossiliferous marl approximately 30 feet thick (Barnes, 1974). Its clay content contributes to its function as a confining unit to the Northern Segment of the Edwards Balcones Fault Zone aquifer.

Hydrogeology

Porosity

Limestone is the dominant lithology that makes up the Northern Segment of the Edwards Balcones Fault Zone aquifer and although it contains a certain amount of matrix porosity, the important porosity is the secondary porosity that has developed as a result of fracturing and dissolutioning (Abbot, 1975; Kreitler and others, 1987). Generally the fracture openings in the Comanche Peak and Georgetown formations are narrower than the openings in the Edwards because the Edwards has experienced more dissolutioning (Abbott, 1975; Collins, 1987). Dahl (1990) measured fracture porosity following the methods suggested by Kovacs (1983) in outcrops of the Georgetown, Edwards, and Comanche Peak formations both near faults and away from faults. Dahl (1990) found that the effective porosity was greater near faults in all three of the formations and that the Comanche Peak had the highest porosity range while the Georgetown had the lowest porosity range. The Edwards Formation porosity did not include the cavernous porosity but only fracture porosity in Dahl (1990). Table 1 shows the porosity values Dahl (1990) observed.

Table 1. Percent porosity ranges in outcrops near faulting and away from faulting in the Northern Segment of the Edwards Balcones Fault Zone aquifer near the Salado Creek basin (from Dahl, 1990).

	Georgetown	Edwards	Comanche Peak
Near faults			
high	2.89	3.25	4.25
low	1.50	2.46	3.45
away from faults			
high	1.35	2.12	2.40
low	1.17	0.41	0.64

Hydraulic Conductivity

The hydraulic conductivity is primarily controlled by the fracturing; either near-vertical fractures associated with faulting or horizontal fractures associated with bedding plane separations. Many of the fractures have been widened or enhanced by dissolutioning. Hydraulic conductivity values calculated from pumping tests conducted on 4 wells August 26 and 27, 2012, by Bar W Groundwater Exploration and Clearwater Underground Water

Conservation District ranged over almost two orders of magnitude from .87 feet per day to 83.2 feet per day. This heterogeneity is the result of fractures and dissolutioning.

Transmissivity

The transmissivity is a product of the hydraulic conductivity times the saturated thickness. It is greatest in the thicker sections of the aquifer near the confined portion of the aquifer and near densely fractured zones associated with faults. Transmissivity values calculated from pumping tests conducted on 4 wells August 26 and 27, 2012, by Bar W Groundwater Exploration and Clearwater Underground Water Conservation District in Bell County ranged over almost two orders of magnitude from 34.6 feet squared per day to 3300 feet squared per day. This heterogeneity is the result of fractures and dissolutioning. Dahl (1990) reported transmissivity values that ranged from 1 feet squared per day to over 30,000 feet squared per day in the Salado Creek basin area. Dahl (1990) also noticed that the highest values occurred where the highest fracture densities occurred. Dahl (1990) obtained data from Slade (1987) where he used specific capacity data to estimate transmissivity values because in 1987 there were no pumping test data for the Northern Segment of the Edwards Balcones Fault Zone aquifer. Slade studied the entire Northern Segment of the Edwards Balcones Fault Zone aquifer and did not focus on the Salado Creek basin area. When one selects the data from Slade (1987) for the Salado Creek basin area the range remains the same (1feet squared per day – 32,165 feet squared per day) but the mean value is 1258 feet squared per day and the median value is 40 feet squared per day. De La Garza and Slade (1987) also looked at transmissivity in relation to lineation density and did not see any obvious trends. De La Garza and Slade (1987) included the entire Northern Segment of the Edwards Balcones fault Zone aquifer and this may have blurred local trends. Dahl (1990) observed the highest transmissivity values occurred where the highest lineation densities occurred in the Salado Creek basin area and that extremely high transmissivities were not found in areas with low lineation densities.

Flow

Flow in the Northern Segment of the Edwards Balcones Fault Zone aquifer is affected naturally by geomorphology and structure. Pumping also affects the aquifer. With respect to geomorphology the groundwater flows to springs, local streams, or to regional streams. Another effect of the geomorphology is that perennial streams act as groundwater divides under normal flow conditions. The perennial stream section that includes the major springs in downtown Salado is an example of a groundwater divide. Groundwater flow is from the south to the major springs and Salado Creek and also from the north to Salado Creek but flow from the north does not appear to cross the creek and become part of the springs on the south side (Figure 6).

Structure affects the flow in two ways. Structural dip aligns horizontal fractures (bedding plane separations) toward the southeast and near vertical fractures can align and enhance flow in the directions parallel or subparallel to the fracture lineations.

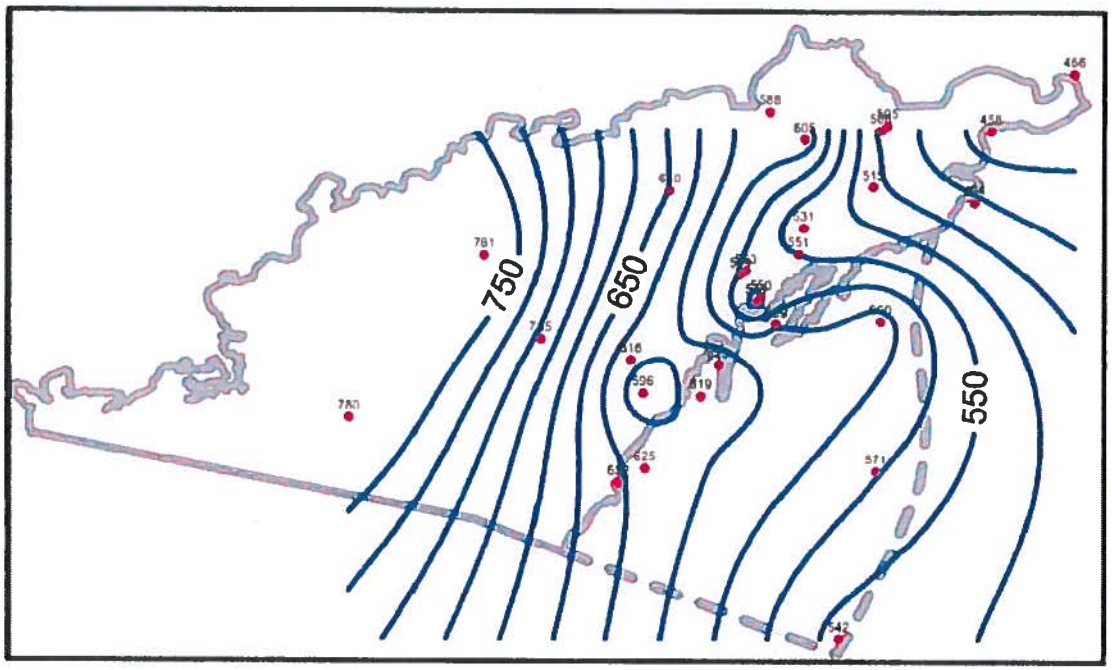


Figure 6. Groundwater contours drawn by Bar W Groundwater Exploration from water levels measured July 6 and 7, 2010. Notice the general flow direction to the east-southeast, the diversion northward toward the major springs in downtown Salado Village and the localized effects of pumping. Also notice that the flow does not appear to cross the creek valley in the northern portion of the basin.

Springsheds

Springsheds are the areas where the groundwater flows to the spring discharge point similar to that of a watershed for a stream. These may include areas that do not receive precipitation recharge and may include areas beyond the outcrop. Springsheds also may be only subsets of the aquifer recharge area (Figure7). Finally, springsheds may encompass different areas under different flow conditions. The springshed drawn in figure 7 is a preliminary interpretation based on the water level data from July 2010. More detailed water level data may move the boundaries. Different flow conditions may move the boundaries but the general flow pattern should be useful in identifying the area for most of the spring recharge. The springshed in figure 7 is also affected by pumping in 2010 as seen in figure 6.

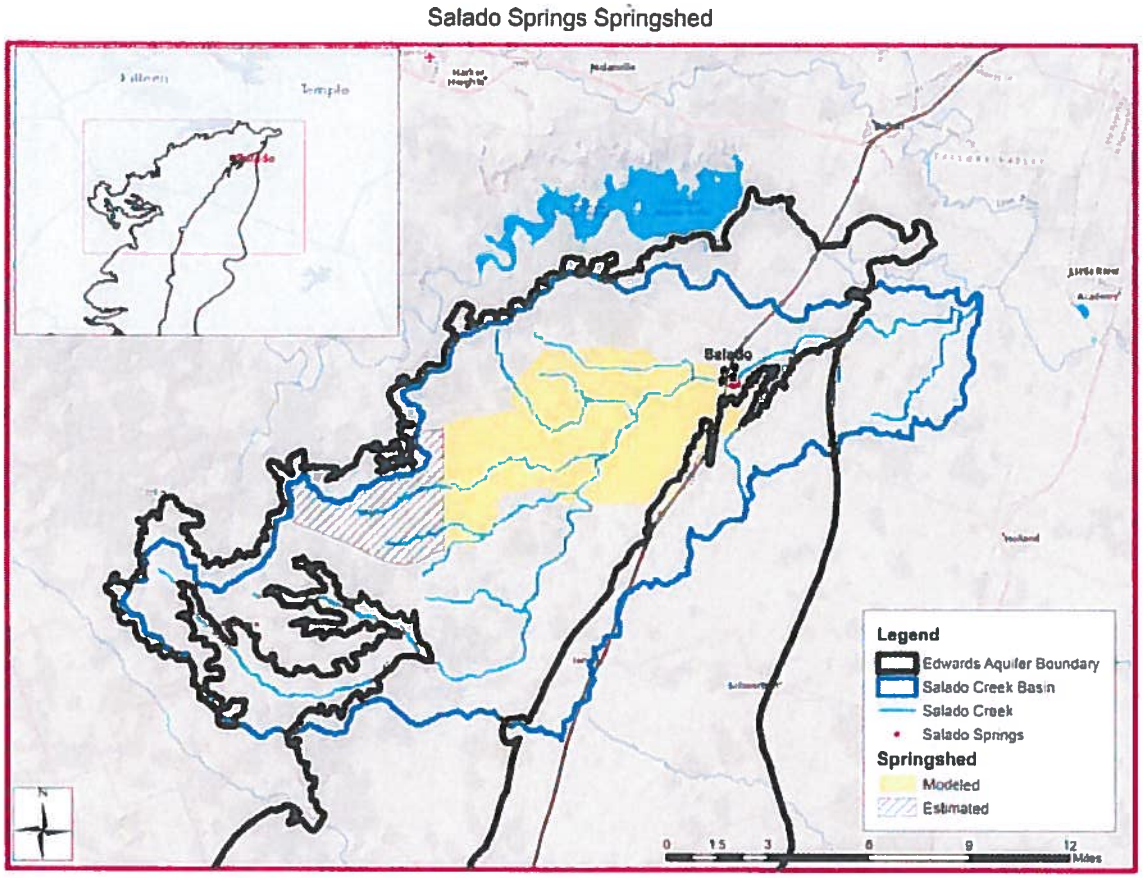


Figure 7. A preliminary springshed drawn from the groundwater contours shown in Figure 6. The general idea is that water recharging the aquifer within the springshed should flow to the springs and water outside the springshed would not flow to the springs. The accuracy of the springshed boundaries is directly related to the density and quality of the groundwater level data available.

Recharge

Recharge to the Northern Segment of the Edwards Balcones Fault Zone aquifer in the Salado Creek basin has been described fairly simply as direct precipitation recharge on the aquifer outcrop supplemented by a "transition zone" where runoff from overlying units flows across the outcrop and may infiltrate through losing streams. However, my investigation has revealed a much more complex recharge system that includes the following observations.

1. Although precipitation on the outcrop can infiltrate into the bedrock and recharge the Northern Segment of the Edwards Balcones Fault Zone aquifer, it is not uniform over the outcrop.
    a. Soils vary in texture, thickness and permeability (figures 8 and 9).
    b. Outcrops are not all connected directly to the portion of the aquifer that supplies groundwater to the springs in the downtown area of Salado Village (Figure 6).
    c. Recharge features such as sinkholes and losing stream sections are common and allow recharge to be concentrated in certain areas (figures 10 and 11).

2. All recharge does not originate on the outcrop within the Salado Creek basin.
    a. Runoff from other units can become stream flow that is lost into the aquifer in losing stream segments.
    b. Because some of the outcrops in the upper Salado Creek basin are not directly connected to the rest of the aquifer units, recharge from precipitation on aquifer outcrops in the upper Salado Creek basin may discharge to streams flowing over the underlying confining bed (Kkv) and some of this stream flow may be recharged back into the aquifer when flowing through losing stream segments.
    c. Recharge to the Northern Segment of the Edwards Balcones Fault Zone aquifer can occur outside the Salado Creek basin and become part of a regional flow system that may contribute to the spring flow in the major springs in the downtown area of Salado Village.
3. Some recharge that occurs on the outcrop may become part of the flow system to the confined portion of the Northern Segment of the Edwards Balcones Fault Zone aquifer and not contribute to the major springs in the downtown area of Salado Village (figures 6 and 7).

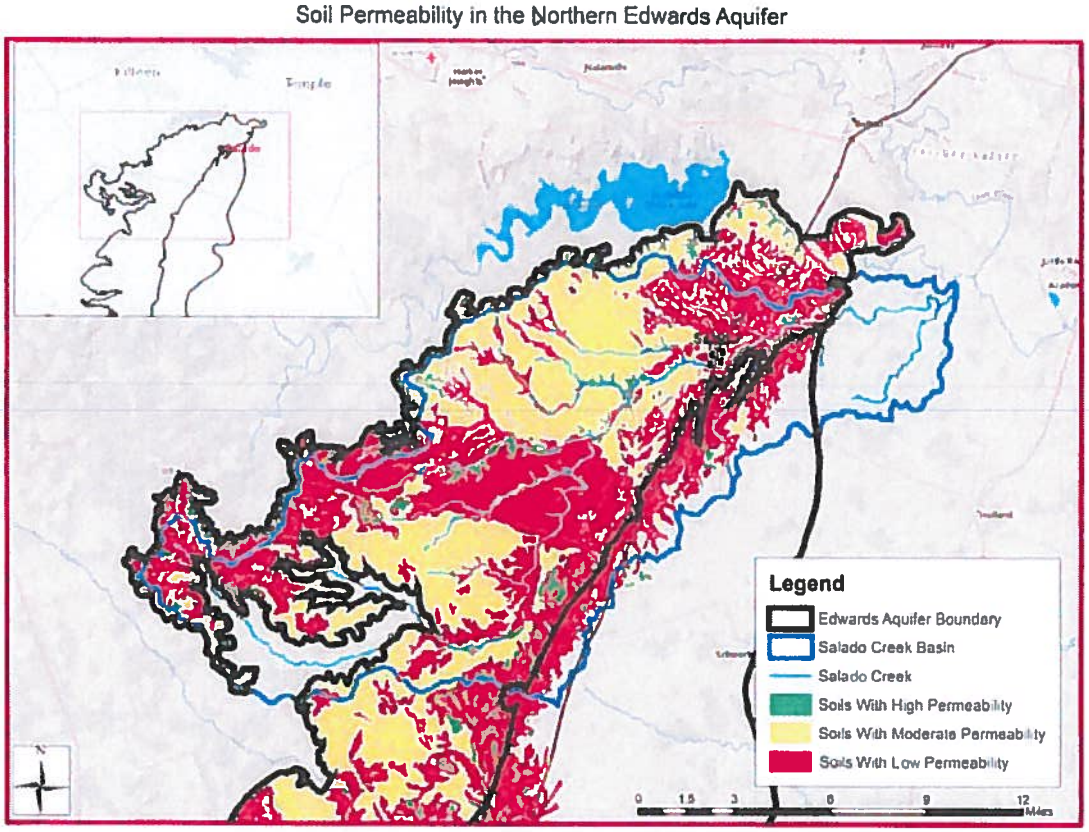


Figure 8. Soil associations based on soil thickness, clay content and permeability. Areal recharge on the aquifer outcrop should be greatest on the soils with the highest permeability and lowest on the soils with the lowest permeability. From U.S. Department of Agriculture, Natural Resources Conservation Service, 2012. Soil Survey Geographic (SSURGO) database for Bell and Williamson counties, Texas. Fort Worth, Texas. http://soildatamart.nrcs.usda.gov . Original Projection: UTM Zone 14, Northern Hemisphere (NAD 83).

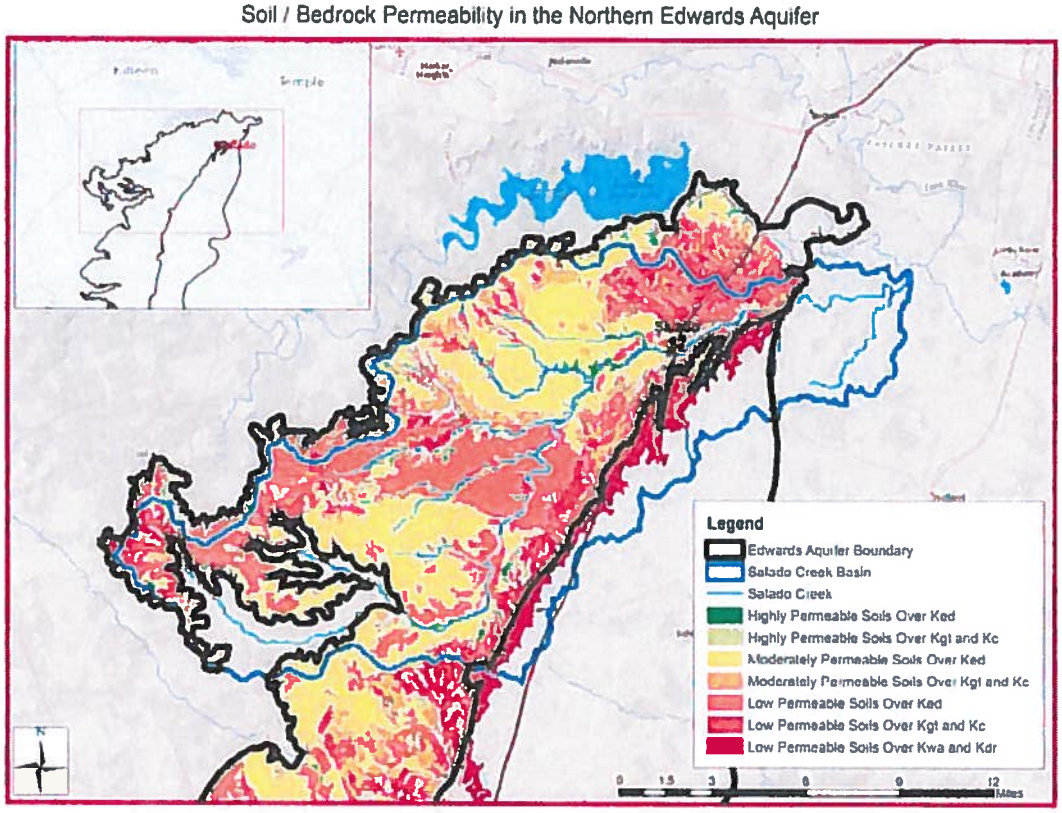


Figure 9. Soil associations coupled with the underlying bedrock formations to show areas with greater and lesser recharge capability. From U.S. Department of Agriculture, Natural Resources Conservation Service, 2012. Soil Survey Geographic (SSURGO) database for Bell and Williamson counties, Texas. Fort Worth, Texas. http://soildatamart.nrcs.usda.gov . Original Projection: UTM Zone 14, Northern Hemisphere (NAD 83).

Figure 10. Losing stream segment in Salado Creek basin.

Figure 11. Sinkhole on hillside in the Salado Creek basin.

Groundwater/Surface Water Interaction

Salado Creek and its tributaries act as gaining and losing streams in different sections throughout the outcrop area. There are many small springs throughout the basin and spring discharge from one spring may become recharge to another spring lower in the basin. Although all springs probably receive recharge from local flow paths near their discharge orifices, the recharge to the major springs in the downtown area of Salado Village is primarily regional in nature, especially during low-flow conditions.

Summary and Conclusions

Research on the Northern Segment of the Edwards Balcones Fault Zone Aquifer needs to continue in order to allow the best decisions to be made regarding groundwater management in the future. This study has confirmed earlier work by Slade (1987) and Dahl (1990) but has also identified a more extensive set of recharge features that need to be investigated with tracers and other quantitative studies. The results of this investigation definitely show there is

an incomplete understanding of the location and quantity of recharge that contributes to spring flow throughout the Salado Creek basin area of the Northern Segment of the Edwards Balcones Fault Zone aquifer. What is known about the hydrogeology at this time indicates that the current designated critical habitat appears randomly shaped and is not fully supported by hydrogeological theory or data. The most apparent deficiencies in hydrogeological data for the Northern Segment of the Edwards Balcones Fault Zone aquifer include frequent and extensive water level data and groundwater chemistry data.

Recommendations

Research on the Northern Segment of the Edwards Balcones Fault Zone aquifer needs to continue in order to allow the best decisions to be made regarding groundwater management in the future. This study has summarized the current understanding and identified a number of specific data needs. The needs apparent to me are listed below. This list is not complete, or even exhaustive, but contains some important data voids.

1. Water level data need to be collected more frequently, with greater areal coverage and with greater density.
    a. These data would refine the ability to develop more accurate springsheds and see how springsheds may change under different flow conditions.
    b. These data would allow the development of seasonal and event related hydrographs.
    c. These data would help us understand recharge.
    d. These data would complement chemical data.
2. Tracer tests should be conducted to confirm the interpretations from water level data. This would be especially helpful in regard to recharge features and their relationships to specific springs.
3. Recharge features should be mapped in more detail using field data to calibrate and confirm computer generated data from remote sensing techniques. A combination of LIDAR and Multispectral satellite data appear potentially useful.
4. Modeling of stream flow and groundwater flow may be helpful.
5. Chemical data need to be collected with broad areal coverage and with respect to seasonal and recharge event fluctuations.

Definitions

Aquifer: material that can store and transmit water easily.
Bedding plane: a thin space between two layers of rock.
Carbonaceous: containing calcite ($CaCO_3$).
Chalk: soft, fine-grained limestone.
Confining bed: geological material that confines the flow of water. Usually a clay or shale geologic unit. Also referred to as a "confining unit".
Dissolution: the process of dissolving rock such as limestone.
Dolostone: a carbonaceous sedimentary rock comprised of the mineral dolomite ($CaMgCO_3$) rather than the mineral calcite ($CaCO_3$).

Fossiliferous: containing fossils
Gaining stream: a stream where groundwater flows into the stream and the stream gains flow from seeps and springs.
Heterogeneity: Spatial variation in characteristics.
Hydraulic conductivity: The ability of a geologic material to conduct water.
Hydrogeology: the study of groundwater
Hydrostratigraphic unit: one or more geologic units with similar hydrologic characteristics and distinct from surrounding geologic units. Examples include aquifers and confining beds.
Karst: material and surface expressions associated with dissolution features and characterized by caves and sinkholes.
Limestone: a sedimentary rock comprised of calcite ($CaCO_3$).
Lithology: the rock type, description or study of rock types.
Losing Stream: a stream where water is "lost" from the stream to the groundwater below.
Marl: a rock comprised of clay and limestone. A clay-rich limestone.
Matrix porosity: the percent of pores or void spaces in a rock where no fractures or dissolution has occurred.
Nodular: having the shape or appearance of nodules.
Outcrop: where the bedrock occurs on the surface (soil is not considered).
Specific Capacity: The quantity of water produced from a well per unit of drawdown. This is usually expressed as gallons per minute per foot of drawdown. It is often the result of a short duration pumping test with only a few measurements. Transmissivity values can be calculated from specific capacity tests but the results are not as accurate as a constant rate pumping test.
Transmissivity: The ability of an aquifer to transmit water. The product of the Hydraulic Conductivity and the thickness of the saturated portion of the aquifer.
Outlier: a surface expression of a geologic unit that is not connected to the main part of the geologic unit outcrop.
Porosity: The volume of voids in a volume of rock expressed as a percentage.
Recharge: the water or processes associated with additions to the aquifer water volume.
Runoff: overland flow or stream flow that resulted from precipitation rate exceeding infiltration rate and causing water to run off.
Scarp: a line of hills or cliffs formed by faulting or erosion.
Secondary porosity; porosity that has developed after a rock formed; usually as a result of dissolution or fractures.
Shale: a sedimentary rock comprised of clay that has been compacted.
Siltstone: a sedimentary rock comprised predominantly of silt sized particles.

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Appendix Q

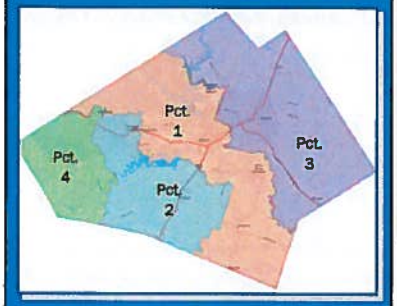
Clearwater Underground Water Conservation District www.clearwaterdistrict.org

Clearwater Source

2012 Annual Newsletter | Volume 8, Issue 1 | October, 2012

In This Issue >>>

Clearwater Precincts >>>



DIRECTORS & TERMS:

Leland Gersbach—Precinct 1

Bill Bartlett—Precinct 2
2010-2014 (Director)

Wallace Biskup—Precinct 3

Judy Parker—Precinct 4
2010-2014 (Secretary)

David Cole—At large
2011-2012 (Director)

BELL COUNTY WATER SYMPOSIUM

November 15, 2012
CTCOG Building,
2180 N. Main St
Belton, Texas

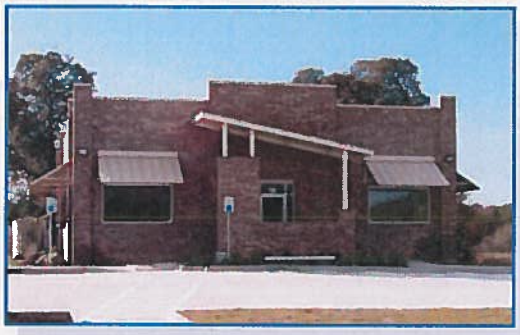
Preregistration requested, please call the office now to reserve a seat!

Call 254-933-0120

A Message From The President

The last six months have been a very exciting and challenging time in our District. We have moved into our new location which has allowed us to become more centralized and efficient. If you have not been to our public access website, you will find that we now have the Spring flow Gauges for the Salado Creek and monitor well information in real time. In addition, we now have all registered wells layered over land parcels in cooperation with the Bell County Tax Appraisal District so an individual can see all wells located near them. There is an abundance of helpful information, rainfall charts, and additional sites relating to water that can be easily located and informative. The staff has been very proactive in using and updating technology to help our efficiency and to provide you, the taxpayers with additional information. The Website will continue to improve monthly until January 2013. What used to take hours is now done in minutes or in real time. This increased use in technology has been one of my main goals and the staff has been very busy in this implementation along with working on the entire revamp of our current website. In the next few months we plan to launch the new site with easier access to all the useful . . . *(continued on page 4)*

Election Information



The Clearwater Underground Water Conservation District (CUWCD) has accepted applications from individuals seeking the director positions in Precincts 1, 3 and At Large. The CUWCD precincts mirror the County Commissioner precincts in Bell County. The filing period began on July 21 and ended on August 20th, for the two director positions representing Precinct 1, and Precinct 3. The incumbents, Leland Gersbach (Precinct 1), and Wallace Biskup, (Precinct 3) will be unopposed in the November 6, 2012 General Election. Mr. Gersbach is the current Board President and Mr. Biskup is the current Board Vice-President.

The Special Election for the At-Large position's filing period ended on August 23rd at 5:00 p.m. This extended deadline was due to provisions established for Special Elections in the State of Texas for political subdivisions such as Clearwater UWCD. The At-Large position is a special election for the final two years of the unexpired four year term won by former board member, John Mayer, on November 2, 2010. John Mayer resigned from the board in August of 2011 for personal reasons. The Clearwater UWCD Board appointed David Cole to the At-Large Director position in September 2011, as interim until the next Election Date (November 6th, 2012).

Those filing for the At-Large Position are David Cole, Bradley B. Ware, Steven Lee Hoskins, and Joe Frank Torralva. Mr. Cole resides in Killeen and currently is the General Manager of the Moffat Water Supply Corporation. Mr. Ware resides in the Maxdale Community, located in the . . . *(continued on page 5)*

Well Registration Report

State Law requires that all wells within a groundwater district be registered with the district.

Well Registration: Since the District's opening in 2002, a total of 4,925 wells have been registered through October 2012. 156 of these wells were non-exempt and 4,763 exempt. Well registration for 2012 through October is reported at 63.

Well Registration Summary '02 through '12

Period	Exempts Wells		Non-Exempt Wells		Total
	Existing	New	Existing	New	
2002-2011	4,027	547	96	37	4,856
2012	33	35	1	0	69
Total	4,060	709	111	45	4,925

Well Production Report

Non-exempt wells are capable of producing a large volume of groundwater (over 17 gallons per minute), located on less than 10 acres, or are used for purposes other than Domestic, Livestock, or Poultry. All other wells are "exempt".

What is an acre-foot of water? The amount of *water* needed to cover an acre, one foot deep in *water*. (**325,851.43 gallons**)

2011 NON-EXEMPT & EXEMPT WELL PRODUCTION

Aquifer	Non-Exempt Production (ac-ft/yr)	Number of Non-Exempt Wells	Estimated Exempt Well Production (ac-ft/yr)	Number of Exempt Wells	Total Production (ac-ft/yr)
Edwards BFZ	2,070	39	468	697	2,538
Trinity	1,221	42	1,271	1,892	2,492
Other Aquifers	365	18	1,303	1,938	1,668
Total	3,656	90	3,042	4,446	6,698

Clearwater Education Outreach Program

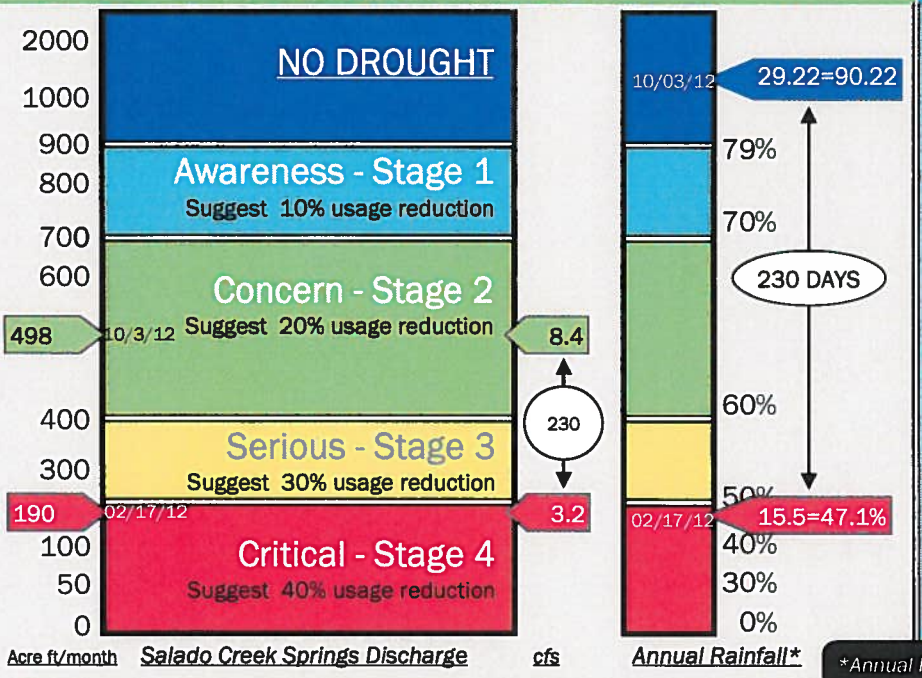
Each year Clearwater UWCD sponsors the Major Rivers Water Education Program. This program is geared toward 4th and 5th grade students and is the perfect program to assist the district in our outreach efforts throughout the county.

Major Rivers and his horse Aquifer will make learning all about water in Texas irresistibly fun. Major Rivers is a water education curriculum designed to teach students about Texas' major water resources, how water is treated and delivered to their homes and schools, how to care for their water resources, and how to use them wisely. The program's host, Major Rivers (named for the major rivers of Texas), and his horse Aquifer cover these topics in eight lessons that include a variety of activities in science, math, language arts, social studies and other subjects.

If you would like to know more about this program, or are interested in scheduling a presentation regarding water conservation please give us a call. Todd Strait, our Education Coordinator would be happy to visit with you about the many presentation options our organization can offer!

DROUGHT STATUS REPORTS FOR THE EDWARDS AND TRINITY

EDWARDS BFZ: CONCERN - STAGE 2

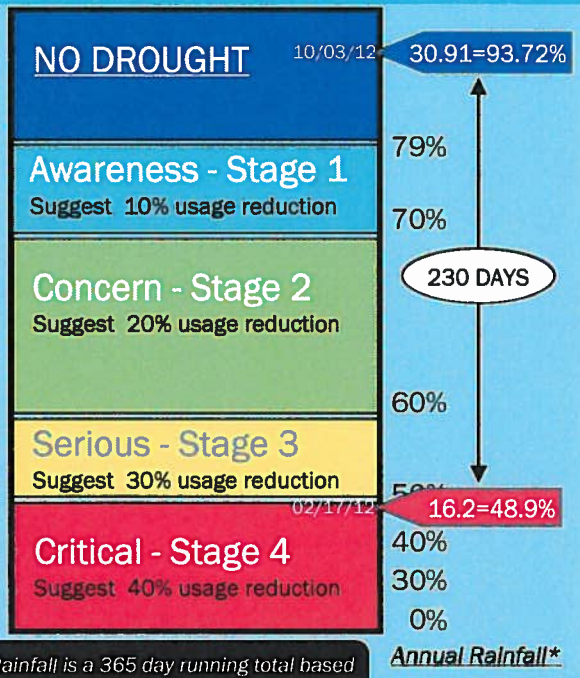


"Clearwater Underground Water Conservation District has continued their very cautious position on remaining at the current Stage 2 Drought Declaration." says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities that have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of the wells in the Edwards Aquifer are encouraged to remain actively conserving under the "Concern" Stage 2 Declaration Level.

Aaron stressed, "The Edwards aquifer has responded due to the recent rains and the District's system of watching and recording rainfall averages over the Edwards Aquifer. The Data shows that we are still –4.11 inches behind in the Edwards Recharge Zone based on the 33.33 inches of annual rainfall expected over the previous 365 day running total. We are cautiously optimistic that as the rainfall measurements increase, we will see growth as well from the Salado Creek Springs.

Aaron states, "The need for continuing to ask well owners (both permitted and exempt well users) not to utilize this precious resource inappropriately and excessively for landscape purposes is the best way to conserve for a possible repeat of last year's drought. We realize businesses and homeowners have a significant investment in their landscape, and feel a need to protect that investment". "Our position," states Aaron "is to properly protect the Aquifers in accordance with the District's Management Plan and available groundwater data pursuant with Chapter 36 Texas Water Code. We have a job to do and that is to protect water quantity for the future."

TRINITY AQUIFER: AWARENESS - STAGE 1



*Annual Rainfall is a 365 day running total based on the 33.33" normal yearly average.

"Clearwater Underground Water Conservation District has taken a very cautious position on remaining at the current Stage 1 Drought Declaration," says Dirk Aaron, General Manager. Aaron stressed, "The District wants those businesses and utilities who have permitted wells to be supportive of this very conservative position". The permit holders and exempt well owners of wells in the Trinity Aquifer are encouraged to conserve under the "Concern" Stage 2 Declaration Level. Permit holders and well owners with wells in the Trinity Aquifer are still encouraged to remain actively conserving even under the "Awareness" Stage 1 Declaration Level.

The Trinity Aquifer's ability to respond to rainfall is a much more complex and slow process. But the District's drought trigger is only the rainfall deficit measurement based on the very specific rainfall over the identified recharge region of the Trinity Aquifer. The recorded rainfall data and average deficit over the Trinity Aquifer region is currently –2.42 inches. This simply means we expect 33.33 inches of rain over a running 12 month period, but the District's data measurement system says that only 30.91 inches of rain has fallen in the Trinity Recharge Region. "Going into the driest season," states Aaron, "It is prudent to declare Stage 1 at this time. Trinity well owners in west Bell County should support this after experiencing severe drawdown in their wells last summer and fall."

WATER TIPS THAT SAVE $$$

** If your shower fills a one-gallon bucket in less than 20 seconds, replace the showerhead with a water-efficient model.*

** When you are washing your hands, don't let the water run while you lather.*

PRESIDENT'S MESSAGE (CONT.)

information provided. The board members and I encourage all Civic Organizations to contact staff to arrange for Staff and a Board Member to speak and give presentations on the new access site as well as a district update.

Some of our challenges this year have been the proposed listing of the Salado salamander that could have an effect on the southern part of our county, our ongoing drought, and the continued decline of many of our Trinity aquifer wells located in the southwest part of our District. The District has spent countless hours educating and providing information to minimize the potential impact of this proposed listing. While the drought this year has not been as severe as last year, we are still below our average rainfall which is not allowing our groundwater to be recharged sufficiently. We have initiated a study with USGS to provide us water quality and additional information regarding the Edwards aquifer.

While much is still not known about what is happening in our aquifers, the continued decrease in the Trinity aquifer is causing us concern. One of the ways we monitor the aquifer and its changes is the use of monitor wells. The more monitor wells we can measure, the better information we can gather to help us determine the areas of drawdown. If you have a Trinity or Edwards well that you would allow us to use as a monitor well, please call Dirk Aaron at our office to determine if it can be used as a viable monitor location. It does not make any difference if it is or is not being used. We currently have technology that enables us to utilize noninvasive procedures to measure water depth in monitor wells. The volunteering of a well would benefit all of us that use and want to protect our underground water resources.

I would also like to take this opportunity to encourage all well owners to come to our free upcoming water symposium and to utilize resources our office makes available like free water testing. These services and other water related resources are free to all registered well owners. Call or contact our office for additional information.

Leland Gersbach
President
Clearwater UWCD

Join the District for the 12th Annual

Bell County Water Symposium

Central Texas Council of Governments Building
2180 N. Main Street (old Walmart)
Belton, Texas
November 15, 2012 8:30 A.M. — 4:00P.M.

Farmers and Ranchers can receive 3 Hrs CEU's. These are fee based and can be purchased at the event from
Texas A&M AgriLife Extension Service

Key Topics and Speakers

The Weather Forecast (2011 vs 2012?)
Dr. John Nielson-Gammon, State Climatologist at Texas A&M

300 Years of Groundwater Management in Texas (Viceroys to GCD's)
Dr. Charles Porter, Assistant Professor, School of Behavioral and Social Sciences, St. Edwards University, Austin Texas

Status of Surface Water Supply in Central Texas and Future Water Plans
David Collinsworth, Brazos River Authority
Central Basin Business Development Manager

Old PGMA vs New PGMA Process
Kelly Mills, Groundwater Planning & Assessment Team Leader Water Availability Division, TCEQ

Clearwater Public Information and Access System Overview
Dirk Aaron, Clearwater General Manager
Todd Strait, Clearwater Education Coordinator

Ground Water Issues Across Texas
Kristen Fancher, Lloyd Gosselink Attorneys at Law

New Understanding of the Northern Segment of the Edwards BFZ
Dr. Joe Yelderman, Hydrogeologist, Baylor University

Understanding the Geochemistry of the Edwards BFZ
Dr. MaryLynn Musgrove, Research Hydrologist, U.S. Geological Survey

Water Conservation Opportunities and Resources in Texas
Mr. Lyle Zoeller, County Extension Agent Agriculture
Texas A&M AgriLife Extension Service, Bell County

Event is free but requires RSVP

call by November 7th 5:00 p.m.

- - - - - - - - Event Sponsors - - - - - - - -

Clearwater Underground Water Conservation District
Texas A&M AgriLife Extension—Bell County
HALFF Associates
BarW Groundwater Exploration, LLC
Lloyd-Gosselink Attorneys at Law
Bell County

WHERE DO YOU GET YOUR WATER?

There are two types of water sources: **groundwater** (water that is found below ground level) and **surface water** (water that appears above the ground). Bell County has two main surface water reservoirs—Lakes Belton and Stillhouse Hollow, and two main groundwater resources—Edwards BFZ and Trinity aquifers. The source of water supply is shown below for local cities and water supply corporations (WSC).

Belton Lake—Cities: Belton, Copperas Cove, Ft. Hood, Harker Heights, Killeen, Moffat, Morgan's Point Resort, Nolanville, Temple, and Troy*; WSC: Bell County WCID #2*, Pendleton**

Lake Stillhouse Hollow—Cities: Buckholts, Holland, Kempner, Lampasas, Lott, Rogers, and Rosebud; WSCs: Armstrong, Bell-Milam-Falls*, Bell County WCID #5*, Dog Ridge, East Bell*, Jarrell-Schwertner*, Little Elm Valley*, Oenaville & Belfalls*, Salem-Elm Ridge, West Bell, and Westphalia.*

Edwards BFZ Aquifer—WSCs: Salado and Jarrell-Schwertner*.*

Trinity Aquifer—Cities: Moffat and Troy*: WSCs: Armstrong*, Bell County WCID #2* & #5*, Bell-Milam-Falls*, East Bell*, Little Elm Valley*, Oenaville & Belfalls*, and Pendleton*.*

**Indicates a mixture of groundwater and surface water.*

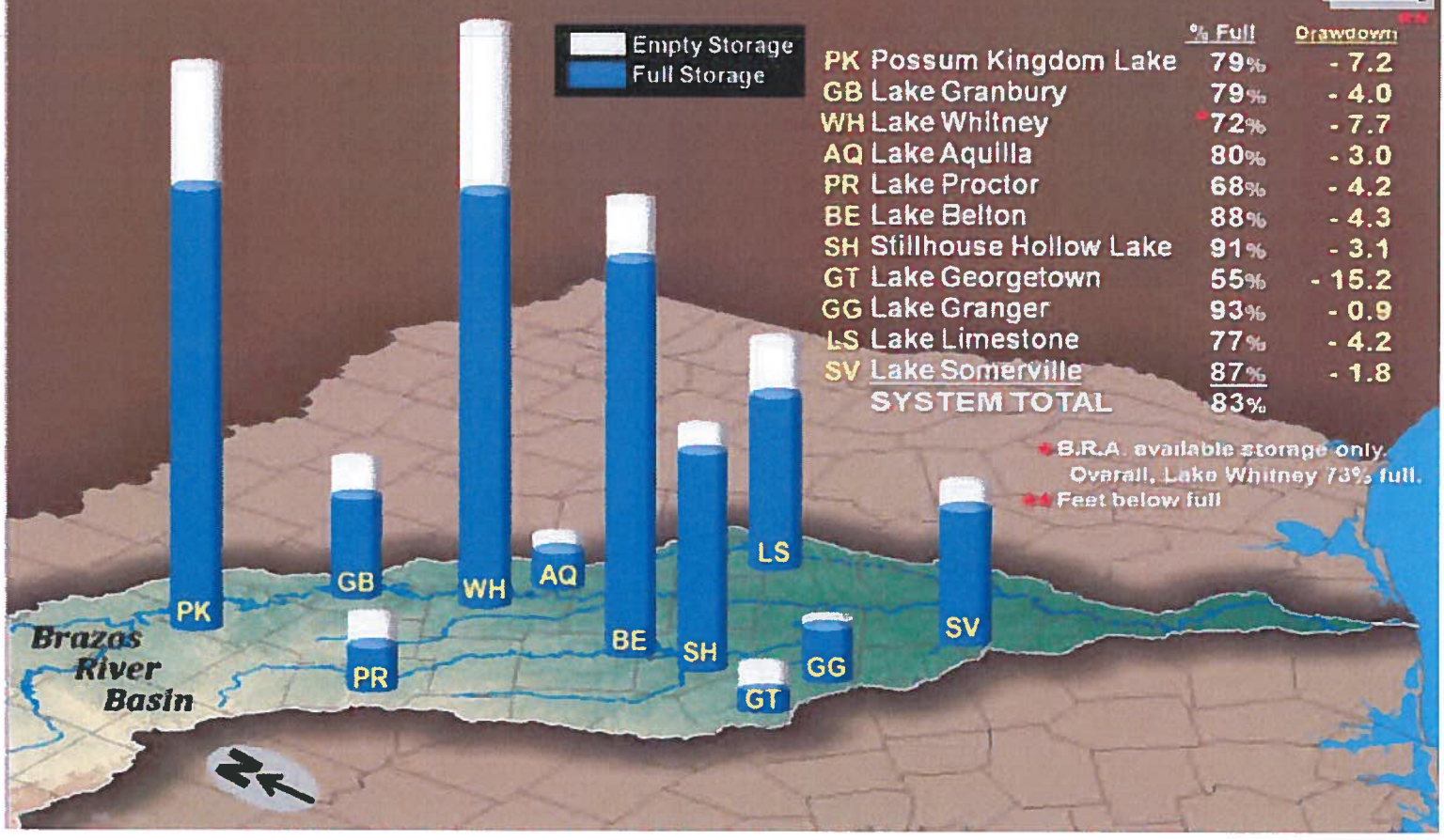
NOTE: Use of groundwater for areas outside of Bell Co. was not determined.

(Election Information: continued from page 1) southwest portion of Bell County, and is a self-employed Farmer. Mr. Hoskins resides in Harker Heights and is a retired Police Officer. Mr. Torralva is a resident of Temple and the Utility Design & Construction Manager for SouthWest Water Company.

The Clearwater UWCD Board of Directors issued the Orders for the elections at their August 14th board meeting and instructed the General Manager to contract with the Bell County Clerk's Office to hold the election as a part of the general election on November 6, 2012. The five Clearwater UWCD Directors serve a four year term. The terms are staggered with positions in Precincts 1 and 3 up for election this year, and Precincts 2, 4 and At-Large will be up for election in 2014.

The Clearwater UWCD main office is located in Belton, Texas at 700 Kennedy Court in the Belton Business Park. For additional information call 254 -933-0120.

BRA WATER SUPPLY RESERVOIRS "PERCENT FULL" 9/26/2012



		% Full	Drawdown
PK	Possum Kingdom Lake	79%	- 7.2
GB	Lake Granbury	79%	- 4.0
WH	Lake Whitney	72%*	- 7.7
AQ	Lake Aquilla	80%	- 3.0
PR	Lake Proctor	68%	- 4.2
BE	Lake Belton	88%	- 4.3
SH	Stillhouse Hollow Lake	91%	- 3.1
GT	Lake Georgetown	55%	- 15.2
GG	Lake Granger	93%	- 0.9
LS	Lake Limestone	77%	- 4.2
SV	Lake Somerville	87%	- 1.8
	SYSTEM TOTAL	83%	

* B.R.A. available storage only. Overall, Lake Whitney 73% full.
** Feet below full

Mission Statement >>>

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

PUBLIC ADVISORY

Tom Madden—Precinct 1

Henry Bunke—Precinct 2

Marvin Green—Precinct 3 (Committee chair)

Bradley Ware—Precinct 4

Bill Schumann —At Large

WATER QUALITY TEST

The District's in house lab offers registered well owners free testing for common constituents and bacteria. Testing bottles are available in our office. Annual testing is recommended.

join our **facebook** fan page

E-MAIL CONTACT LIST

Contact the District office if you would like to be included in our e-mail list for agendas and press releases.

Clearwater Underground Water Conservation District
Every drop counts!

Clearwater District
P.O. Box 1989
700 Kennedy Court
Belton TX 76513

Ph: 254-933-0120/254-770-2370
Fax: 254-770-2360
dirk.aaron@clearwaterdistrict.org
www.clearwaterdistrict.org

THE MANAGER'S COMMENTS

The Clearwater Underground Water Conservation District has moved into the new fiscal year (October 1, 2012—September 30, 2013) with a renewed emphasis on the original expectations of the citizens of Bell County. Our District was created under Article XVI, § 59 of the Texas Constitution and operates pursuant to its enabling legislation and Chapters 36 and 49 of the "Texas Water Code". The District was created to manage and protect the groundwater resources of Bell County, Texas.

The guiding principles of the District are stated and confirmed by the Board of Directors in the District's Management Plan as well as the District Rules. This puts me (General Manager) on a defendable course to implement a staffing effort that meets the goals, objectives, and performance standards described in the management plan. The current board directives and decisions are conservative in nature yet accomplish the day to day responsibilities with a staff of three, which includes the GM, Administrative Assistant and the Education Coordinator/Field Technician.

Clearwater, in the early months of 2012, on -boarded to the new facility in the Belton Business Park. We are now a stand-alone entity who was fostered and prepared in a positive way by the 10 year affiliation with the Central Texas Council of Governments. Because the affiliation was temporary with an ultimate goal of decoupling from the CTCOG with in ten years, the new staff in 2011 was challenged to steer the district towards independence by the end of March 2012. This goal was met with success and the doors opened at 700 Kennedy Court, Belton on April 1, 2012.

I have added to our team, Mr. Todd Strait, the Education Coordinator. This is an exciting time for Clearwater as we will be able to have more of an impact than ever on the youth and residents of Bell County. Being education and outreach orientated, the District has an obligation to help well owners and tax payers find ways to conserve our groundwater.

Todd Strait comes to us with a very diverse background. He holds a teaching certificate in elementary education, but also has extensive experience in the technology realm to include many years as a web developer. Todd recently stated "I am honored to be able to use my background in both education and technology to help create awareness throughout the county on such an important issue as water conservation." He brings to the district an understanding of water conservation and the importance of educating young people to help conserve such a limited resource.

Because of his mindset, we at Clearwater UWCD are ecstatic to see such enthusiasm and belief in the educational future of Clearwater. "I feel this is such a great opportunity to take my passion for teaching beyond just one school, and work to make a difference throughout Bell County," said Todd. This is a major component of our legislative mandate, thus we will be better able to serve the residents of the county by reaching out and expanding water knowledge along with methods in conservation strategies.

My decision to hire Todd, from a pool of incredible applicants, is based on his unique skills and personality to on-board to our team smoothly and effectively. He has that special dynamic understanding of education and communication strategies and creativity we need as we move forward in 2013.

Dirk Aaron
General Manager
Clearwater UWCD

(POSTAGE STAMP)

(NAME)
(STREET)
(CITY)