Clearwater
Underground Water Conservation District
Every drop counts!

Annual Report
Fiscal Year 2006

Bell County
2006 Rainfall

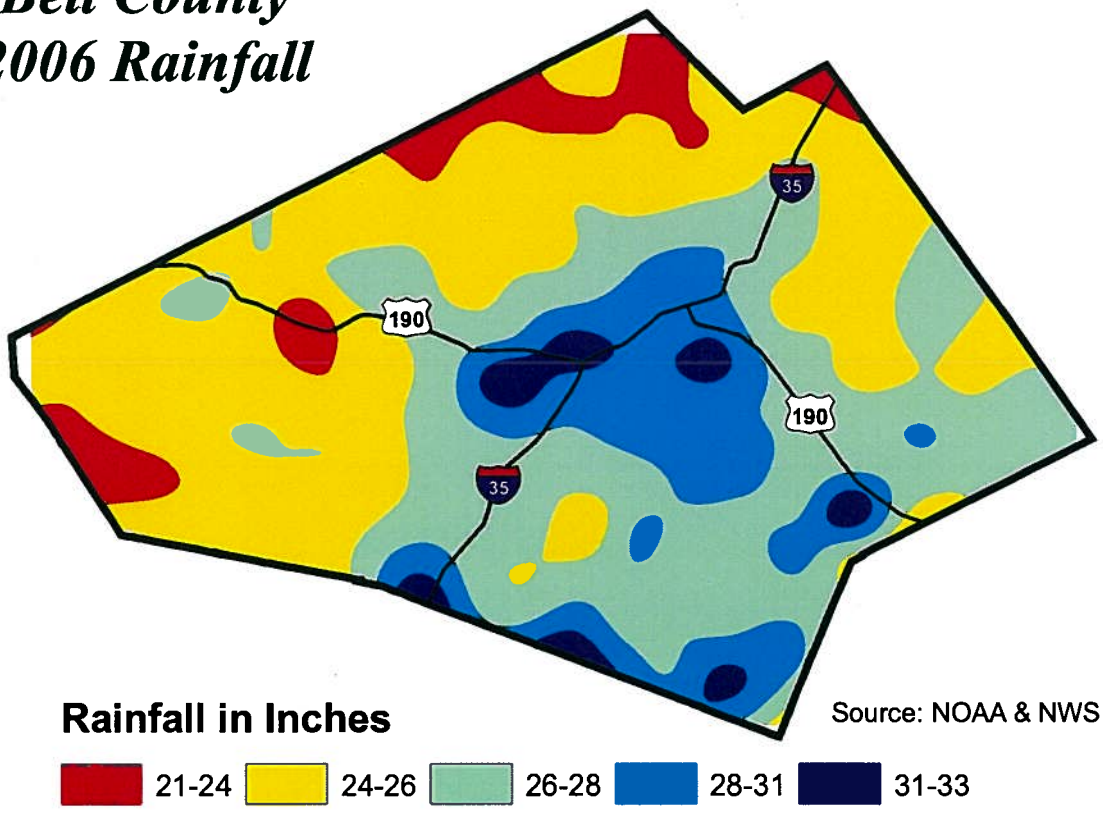

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TABLE OF CONTENTS

7. Appendix

Clearwater Underground Water Conservation District
Annual Report—Fiscal Year 2006

The Annual Report for Fiscal Year 2006 (FY06) was approved by the Directors of the Clearwater Underground Water Conservation District (CUWCD or District) on April 25, 2007.

This report summarizes the activities and accomplishments of the District during FY06, 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 2006 calendar year. In previous years, most information presented was based on the calendar year due to the way the Management Plan requirements were stated. This has changed with our revised Management Plan. As a result, activities occurring during the fall of 2005 and reported in the FY05 Annual Report may reappear in the FY06 Annual Report. Hereafter, there should be no overlap.

Ricky Preston	Leland Gersbach	Judy Parker	Wallace Biskup	Horace Grace
At-Large	Precinct 1	Precinct 4	Precinct 3	Precinct 2

John Mayer	Leland Gersbach	Judy Parker	Wallace Biskup	Horace Grace
At-Large	Precinct 1	Precinct 4	Precinct 3	Precinct 2

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. The District's mission is to develop and implement an efficient, economical and environmentally sound groundwater management program to protect and enhance the water resources of the District.

The District's fiscal year runs from October 1st through September 30th. This report summarizes the accomplishments and activities of the District during FY06. However, registration, permitting, and production figures are provided for the calendar year 2006.

During FY06, the District made minor changes to its rules, primarily to comply with State requirements resulting from the 2005 legislative session. The District's Management Plan underwent substantial revisions and was readopted by the Board and approved by the Texas Water Development Board. Joint planning efforts with other groundwater conservation districts within Groundwater Management Area 8 continued during FY06, and the Trinity Study for Southern Bell County was completed. 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

Administrative tasks include the activities necessary for a groundwater district to function effectively. Management Plan requirements include the required tasks and activities identified in the District's Revised 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.

2. *ADMINISTRATIVE TASKS*

Major administrative tasks and activities during FY06 include the following:

A. Contracts:
- Central Texas Council of Governments for Administrative & Planning Services
- TCB, Inc. for Technical Support
- Legal Services
  - (1) Naman, Howell, Smith & Lee
  - (2) Lloyd, Gosselink, Blevins, Rochelle & Townsend, P.C.

B. Financial Items:
- Budget and Tax Rate for FY06
- Financial Audit

C. Miscellaneous Policies:
- Compliance and Enforcement Policy
- Civil Penalty Schedule
- Open Records/Open Meetings Training

D. Board of Directors:
- District Officers
- Election of Directors
- Meetings

E. District Rules—Amendments
- Definition of Terms
- Pumping Allowance for Maintenance of Inactive Wells
- Combination Drilling and Operating Permit
- Timing of Hydrogeologic Report Pumping Test
- Permit Hearings and Contested Case Hearings Procedures
- Notice and Scheduling of Hearings
- Rule Enforcement and Civil Penalty Schedule

F. Management Plan

A detailed discussion of each of these activities follows below.

A. CONTRACTS

1. Central Texas Council of Governments

The District renewed its contract with the Central Texas Council of Governments (CTCOG) for administrative and planning services for a two year period from October 1, 2005 through September 30, 2007. Although the contract is for a two year

term, consideration for renewal occurs on an annual basis. This contract includes the use of CTCOG staff, equipment, and facilities. The District originally contracted with CTCOG for administrative and planning services in March 2000. This contract has proven to be beneficial for both parties and has allowed the District to operate with minimal expenses.

During 2005, CTCOG purchased and began renovating a vacant Walmart building to enable the consolidation of its various divisions under one roof. Renovations were completed mid-2006. As a result, the District relocated to these new facilities during the later part of FY06.

2. Turner Collie & Braden, Inc.

The District initiated a contract with TCB, Inc. in March 2001 for technical consulting services and has continued a contractual relationship over the years. Services for FY06 included the following:

- Technical review of rule amendments;
- Technical review of drilling permits, operating permits, and permit amendments;
- Technical review of groundwater availability reports for proposed subdivisions relying on groundwater;
- Designation of aquifers for exempt wells;
- Estimate of production for exempt wells;
- Final report of groundwater availability in the Edwards (BFZ) and Trinity aquifers based upon TWDB GAM;
- Completion of Trinity aquifer study in southern Bell County;
- Preparation of Management Plan revisions; and
- Technical assistance in selecting stream flow gauge equipment and suitable locations to install equipment.

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 utilized two law firms during FY06: Naman, Howell, Smith & Lee for general consultation, and Lloyd, Gosselink, Blevins, Rochelle & Townsend, P.C. (LGBRT) for consultation regarding water-related issues. LGBRT was the District's primary advisor during the processing of various rule amendments and the Management Plan revisions. Other issues addressed by LGBRT included the following:

- GMA 8 requirements;
- May 2006 election and cancellation;
- Subdivision plat issues to include designation of easement to comprise minimum tract size and designation of easement for sharing a water well;
- Stream flow gauge project access agreements;
- Historic and existing use permits to include status regarding hydrogeologic report requirement and requests after deadline;

- Conflict of interest and disclosure requirements;
- Procedures for processing spacing exception requests;
- Enforcement policy and civil penalty schedule; and
- Well log deposit.

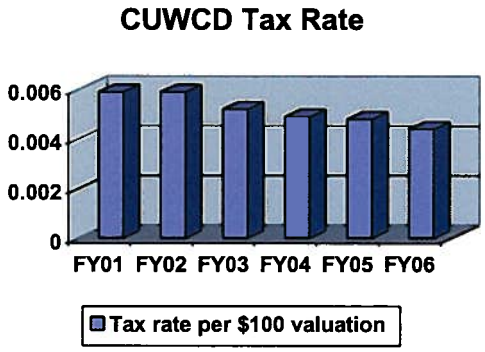
B. FINANCIAL ITEMS

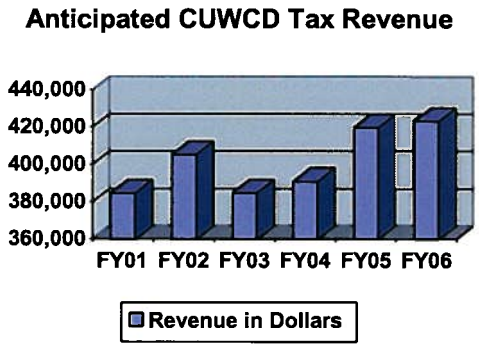
1. Budget and Tax Rate

The District held several workshops to develop an operating budget for the upcoming fiscal year 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 FY06 was $0.0044/$100 valuation, down from $0.0048/$100 valuation assessed during FY05. The approved budget for FY06 totaled $440,778 with $423,278 anticipated revenue from taxes.

Total revenue (including interest and collected fees) collected during FY06 was higher than anticipated at $443,685, resulting in an additional $2,907. Expenditures for FY06 totaled $373,130--$67,648 under budget. The excess funds are placed in the District's reserve account, which now totals $428,590.

The approved budget for FY06, along with the ending schedule of revenues and expenditures for FY06, is attached as Appendix A. Also, Appendix A includes a pie-chart that breaks down expenditures by category. The figures shown in the final report include a $358,034 reserve balance or carry over from years prior to FY06.





2. Financial Audit

An annual audit of the District's finances is required by Chapter 36.153 of the Texas Water Code. CUWCD's audit occurs in conjunction with CTCOG's audit. The fiscal year for CTCOG runs from July 1st through June 30th. The audit for FY05 began in February 2006. Patillo, Brown & Hill, LLP conducted the audit which was successful--there were no findings to report. The audit for FY06 is underway.

C. MISCELLANEOUS POLICIES

1. Compliance and Enforcement Policy

On February 21, 2006, the Board approved a resolution to adopt an enforcement policy. This policy provides staff with steps or guidelines for enforcing the District rules and includes referral to outside counsel for resolution.

2. Civil Penalty Schedule

Chapter 36 of the Texas Water Code allows the District to charge up to $10,000 per day per violation. On March 21, 2006, the Board approved a resolution to adopt a Civil Penalty Schedule to establish civil penalty amounts for violation of the District rules. Penalties range from $100 to $1,000 per day per violation.

3. Open Records/Open Meetings Training

In 2005, the 79th Texas Legislature passed legislation requiring public officials to receive training to understand the requirements of the open meetings and public information laws. The Attorney General's Office provided the training videos that the District Board members and staff viewed on July 12, 2006.

D. BOARD OF DIRECTORS

1. District Officers

District Officers for FY06 were designated at the last meeting of FY05. The FY06 officers are identified below, along with the office they held and precinct they represent.

Horace Grace, President (Precinct 2)

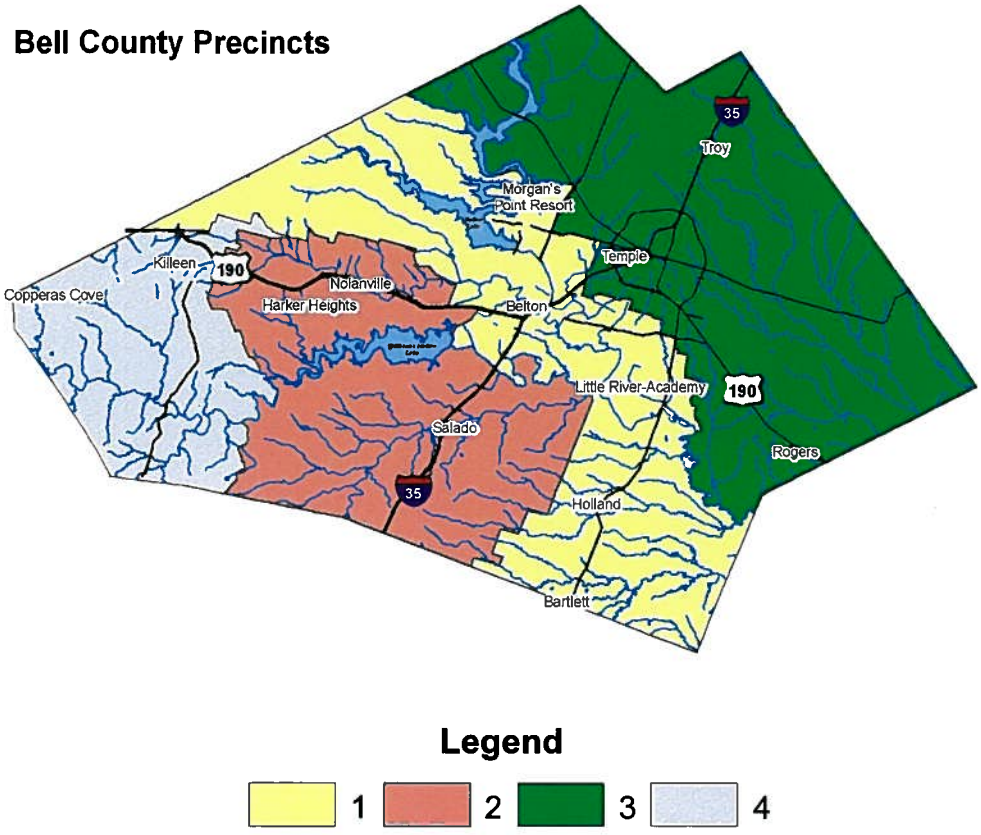
Wallace Biskup, Vice President (Precinct 3)

Leland Gersbach, Secretary (Precinct 1)

Judy Parker, Director (Precinct 4)

Ricky Preston, Director (At-Large)

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



2. Election of Directors

The District's five directors serve a four year term that is staggered with elections held every two years. Elections are held in May in even numbered years. Precincts 2, 4, and the At-Large position were due for election in May 2006. Incumbent Directors Horace Grace and Judy Parker ran unopposed. Ricky Preston did not seek re-election for the At-Large position. Public Advisory Committee member John Mayer ran unopposed for the At-Large position. As a result, the Board issued an order canceling the election and declared Directors Grace, Parker, and Mayer as elected. These Directors will serve until May 2010.

3. Meetings

The Board of Directors held twelve meetings during FY06 and four workshops. The workshops included discussion of the following: Proposed Management Plan and District Rule revisions; proposed budget; open records and open meetings training; Trinity study results; and Texas Commission on Environmental Quality Priority Groundwater Management Area studies for the Trinity aquifer in the Central Texas and North Central Texas area. Board meetings are typically held on the third Tuesday of each month.

E. DISTRICT RULES—Amendments

The District adopted several minor revisions to the rules at the December 13, 2005 Board meeting. Several of these resulted from legislation passed by the 79th Texas Legislature. These amendments are summarized below:

1. Definition of Terms

Definitions were added to the District Rule 1.1 to clarify the following terms: Affected Person; Mediation; Public Information Act; and Substantially Alter.

2. Pumping Allowance for Maintenance of Inactive Wells

Rule 8.1.1 (Permit Requirements) was revised to allow inactive wells that are non-exempt to pump a small amount—less than 0.1 acre-feet per year—to maintain the well or pump, without having to obtain an operating permit.

3. Combination Drilling and Operating Permit

Rule 8.6.3 was added to provide an option for a consolidated drilling and operating permit to streamline the permitting process. Wells that are non-exempt and are not required to include a hydrogeologic report are eligible to apply for the combination permit. Two combination permits were processed during FY06.

4. Timing of Hydrogeologic Report Pumping Test

Rule 8.9.2.g. was added to allow a non-exempt well that is required to provide a hydrogeologic report, to defer the pumping test until after the operating permit is issued. To qualify for this deferral, the applicant must demonstrate certain conditions. This rule would be applicable in a situation where the water produced from a pumping test would be substantial. Rather than having this water wasted, it would be put to beneficial use. The Board reserves the right to reconsider this permit if the pumping test reveals adverse conditions are created as a result of the pumping.

5. Permit Hearings and Contested Case Hearings Procedures

Rule 8.10 regarding permit hearings was revised to clarify the permit hearing process. Sections were added dealing specifically with alternative dispute resolution and contested case hearings.

6. Notice and Scheduling of Hearings

Rule 13.2 was revised to reflect legislative changes regarding procedures for the notification and scheduling of public hearings. This included a twenty day notice for rule making hearings which was previously a five day notice.

7. Rule Enforcement and Civil Penalty Schedule

Rule 14.3 was revised to allow the District to assess the maximum fine allowed by the Texas Water Code Chapter 36 and to adopt a civil penalty schedule by resolution.

F. MANAGEMENT PLAN

During FY06, the District consulted legal and technical staff to revise its management plan. The District Management Plan is reviewed annually and is to be updated and readopted at least every five years. Since the initial Management Plan was adopted by the Board in 2000 and certified by the Texas Water Development Board (TWDB) in 2001, the five year review was due. Revisions were substantial and incorporated new legislative requirements that had gone into effect as a result of the past three legislative sessions since the Plan's initial approval in 2001. A revised Management Plan was approved by the District Board on December 13, 2005 and was approved by the TWDB on March 6, 2006.

The 2001 Management Plan reflected availability figures provided by the TWDB. Useable groundwater in the Edwards BFZ aquifer was estimated at 1,315 acre-feet/year with effective recharge of the same amount. For the Trinity aquifer, useable groundwater was estimated at 3,318 with effective recharge at 2,645 acre-feet/year. The revised Management Plan included updated groundwater availability figures that resulted from conducting the TWDB GAM (groundwater availability model) simulations for both the Edwards BFZ and Trinity aquifers.

Changes to the Texas Water Code Chapter 36 require District Management Plans to use the term Managed Available Groundwater (MAG) which is based on the Desired Future Condition (DFC) of the aquifer. The MAG is the amount of water that is available for permitting. These are to be determined through joint planning of the groundwater districts in the same Groundwater Management Area (GMA). At the time the District was updating its Management Plan, GMA 8 was just getting organized so the MAGs and DFCs would not be available to include in the District's revised Management Plan. As a result, the District used the GAM to determine the MAG and DFC figures for the Edwards BFZ and Trinity aquifers in Bell County but was required to call these by a different name. Therefore, in the District's revised Management Plan, the DFCs are referred to as Selected Management Conditions and the MAGs are referred to as Groundwater Availability. Selected Management Conditions for the Edwards BFZ is reflected in the Management Plan as 7,500 acre-feet/year with Groundwater Availability as 7,000 acre-feet/year. Selected Management Conditions for the Trinity aquifer is reflected as 7,092 acre-feet/year with Groundwater Availability as 5,592 acre-feet/year.

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. A detailed discussion of the District's Management Plan activities based on the 2006 approved Plan is included in the following section.

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 these goals within their district by establishing their own objectives and performance standards. The District goals are shown below:

- 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.

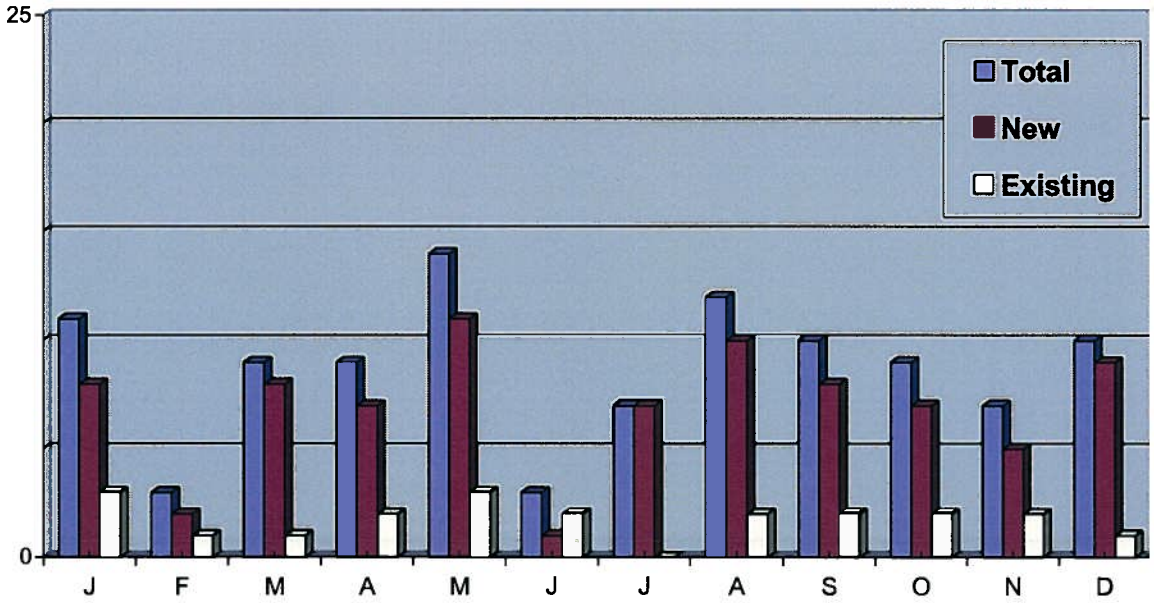
The following is a summary of the District's activities related to these goals.

A. PROVIDING THE MOST EFFICIENT USE OF GROUNDWATER

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

The registration and permitting of wells is an ongoing process. During calendar year 2006, 104 wells were registered. Of these, 8 wells were non-exempt. The tables below summarize the well registration and permitting activity through December 31, 2006.

Well Registration by Month--2006



Well Registration Summary
2002 through 2006

Period	Exempt Wells		Non-Exempt Wells*				Total
	Grandfathered	New	Grandfathered	New	New I	New II	
2002	3520	76	50	0	0	0	**3646**
2003	379	80	4	2	0	0	**465**
2004[1]	18	82	15	1	1	1	**118**
2005	22	91	13	-	1	3	**130**
Jan 2006	1	8	2	-	0	0	**11**
Feb	1	2	0	-	0	0	**3**
Mar	1	8	0	-	0	0	**9**
Apr	0	6	2	-	0	1	**9**
May	3	11	0	-	0	0	**14**
Jun	2	1	0	-	0	0	**3**
Jul	0	7	0	-	0	0	**7**
Aug	1	9	1	-	0	1	**12**
Sep	2	8	0	-	0	0	**10**
Oct	2	6	0	-	0	1	**9**
Nov	2	5	0	-	0	0	**7**
Dec	1	9	0	-	0	0	**10**
2006 Total	**16**	**80**	**5**	**0**	**0**	**3**	**104**
Grand Total	**3955**	**409**	**87**	**3**	**2**	**7**	**4463**

[1] Correction made: E-04-043G (Jimenez) originally registered as new when in fact it was existing.

*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. drilled, equipped or completed so it is incapable of producing more than 25,000 gpd (17 gpm); and

c. 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; or
b. a well drilled, equipped or completed so it is capable of producing more than 25,000 gpd (17 gpm), regardless of the use.

Well registration totals overtime 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. To more accurately reflect the number of wells on the ground, the table below shows these adjustments.

Well Registration Adjustment Table

Type of Adjustment	Exempt Wells		Non-Exempt Wells				
	Grandfathered	New	Grandfathered	New	New I	New II	Year Total
2006 Total	3955	409	87	3	2	7	4463
Exempt to Non-Exempt Status[1]	-2	-2	+3	0	0	+1	0
Never Drilled[2]	0	-4	0	0	0	-1	-5
Plugged[3]	-53	0	-4	0	0	0	-57
Total	**3900**	**403**	**86**	**3**	**2**	**7**	**4401**

Adjustments made in 2006

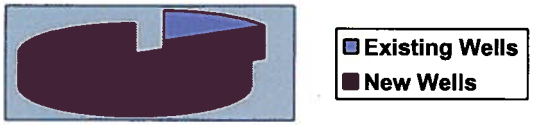
[1] E-02-1628G to N2-06-009G

[2] N2-05-001P; E-04-089P

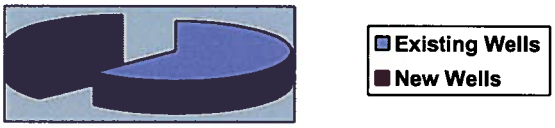
[3] N-02-012G; E-06-012G; E-06-013G; E-05-037P; E-06-046P; E-02-2255G; E-02-955G; E-06-040G; N2-06-004G; E-02-2420G; E-02-3552G; E-02-1927G. (plugged in 2002 but not previously considered: E-02-631G; E-02-1805G; E-02-1806G; E-02-1988G)

As was the case in 2005, registration figures for 2006 show that with regard to exempt wells, more new wells were registered than existing wells; however, with regard to non-exempt wells, more existing wells were registered than new wells.

Exempt Well Registration-2006



Non-Exempt Well Registration-2006



The Table below summarizes the non-exempt wells that were registered during 2006 and the corresponding permits that were issued where applicable.

Non-Exempt Wells Registered/Permitted During Calendar Year 2006

File No.	Well Owner/ Land Owner	Ac-ft/Year	Aquifer	Use	Permit Type
N2-06-001G & N2-06-002G	Darren Chick	2.29	Edwards BFZ	Irrigation—Nursery	Operating Permit
N2-06-003P	Sonny Warrick	22.0	Edwards BFZ	Construction of two TxDOT rest stops	Drilling & Operating Permit
N2-06-004G	City of Morgan's Point Resort	n/a	n/a	Well Plugged	n/a
N2-06-005G	City of Morgan's Point Resort	n/a	n/a	Well Plugged	n/a
N2-06-006P	JD Abrams/ Northwest Homebuilders	30.69	Edwards BFZ	IH 35 Construction—Concrete Batch Plant	Drilling & Operating Permit
N2-06-007G	Misty Creek HOA	6.45	Other	Landscape Irrigation & Aesthetic Water Feature	Operating Permit
N2-06-008P	Thomas Ling/ Stephen Nash	3.0	Trinity (Hensell)	Human Consumption (Condominiums)	Drilling & Operating Permit
N2-06-009G*	Kirk Michaux	34.47	Edwards BFZ	IH 35 Construction	Operating Permit

*Application was received in 2006 but permit was not granted until January 2007.

During 2006, five entities in Bell County transported groundwater outside the District. A total of 13.49 ac-ft from the Edwards BFZ aquifer was transported and 63.62 ac-ft from the Trinity aquifer was transported. The District is allowed by State law to charge a transport fee of $0.025/$1,000 gallons transported. This generated a total revenue of $628.16 for 2006. A summary of transport activity for 2006 is shown in the following chart.

Summary of Groundwater Transport for 2006

Entity (Water Supply Corp.)	Well Number	Aquifer	Destination (County)	Gallons	Transport Fee
Jarrell Schwertner	N-02-042G	Edwards BFZ	Williamson	4,394,500	$109.86
Bell-Milam-Falls	N-02-038G & N-02-046G	Trinity (Hosston)	Milam, Falls Williamson	18,997,200	$474.93
Little Elm Valley	N-02-039G	Trinity (Hosston)	Falls	620,700	$15.52
East Bell	N-02-034G	Trinity (Hosston)	Falls	592,470	$14.81
Oenaville & Belfalls	N-02-017G	Trinity (Hosston)	Falls	521,760	$13.04
Total				**25,126,630**	**$628.16**

Objective A.3: Maintain a Groundwater Database.

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

1. Groundwater Production:

During 2006, the District continued collecting data from non-exempt wells. Monthly production reports are required by the 10th day of the following month for all wells with operating permits. The total volume of water permitted for the non-exempt wells is shown below as well as the total production from those wells. In 2006, 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 amount, regardless of whether the permittee will be using this amount during the year.

Volume Permitted for Non-Exempt Wells in 2006

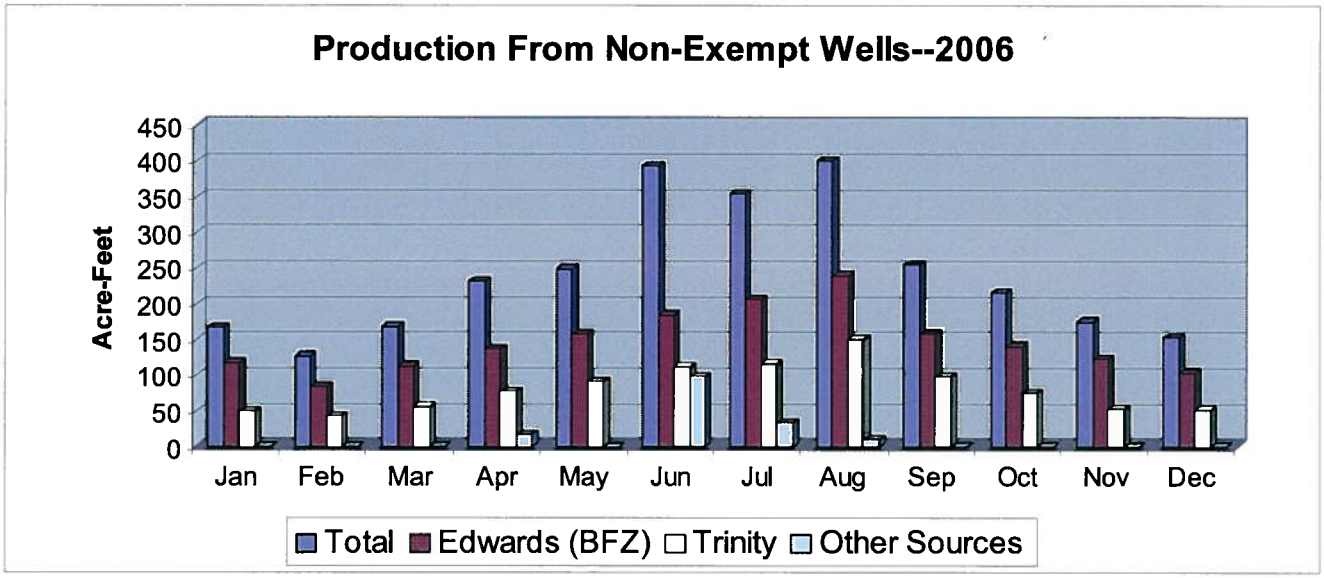
Edwards BFZ:	2,365.87 ac-ft (31 wells)
Trinity:	1,813.33 ac-ft (26 wells)
Other:	307.01 ac-ft (10 wells)
TOTAL:	4,486.21 ac-ft (67 wells)

2006 Annual Production (Non-Exempt Wells)

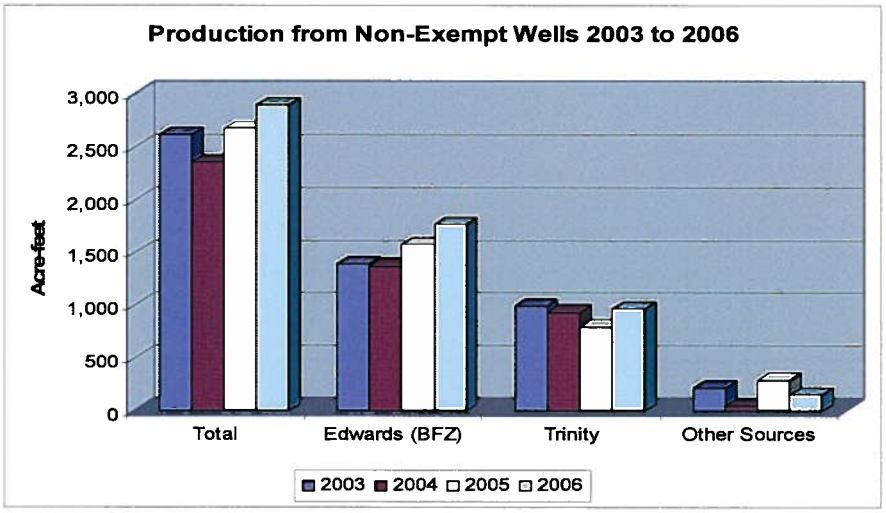
Edwards BFZ:	1,767.24 ac-ft (31 wells)
Trinity:	967.46 ac-ft (22 wells)
Other:	157.31 ac-ft (3 wells)
TOTAL:	2,892.01 ac-ft (56 wells)

The following chart shows that total production in 2006 was at its highest level during the months of June, July and August, with August the highest month showing a total

withdrawal of 400.3 ac-ft. This is down slightly from the 2005 production peak of 404 ac-ft that occurred during the month of June. Throughout the year, withdrawals from the Edwards BFZ were consistently higher than from the Trinity aquifer. Production from Other source aquifers only occurred during the months of April, June, July and August with production close to matching the Trinity aquifer in the months of June.

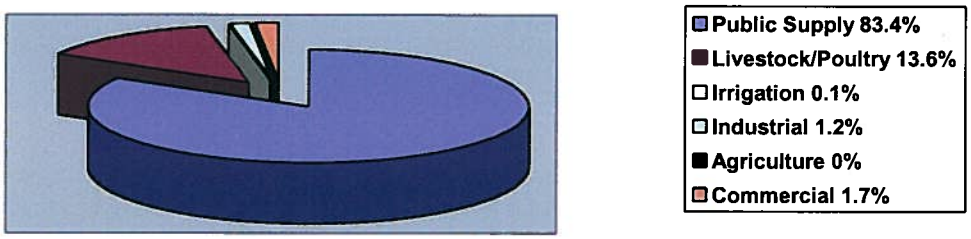


In the graph below, production from 2006 (56 wells) is shown compared to production in 2003, 2004, and 2005. The year 2006 saw the highest total groundwater production and the highest amount produced from the Edwards BFZ during the past four years. Also, production out of the Trinity aquifer increased to nearly the amount produced in 2003. The increased production might be explained by the low rainfall amounts or the addition of customers for water suppliers relying on wells. Additionally, four new Edwards BFZ wells were permitted and at least one Trinity aquifer water supply well was repaired after not being used in 2005.

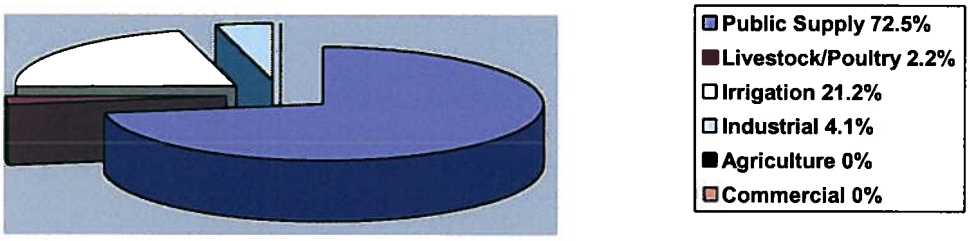


The following pie charts show how the groundwater from the different aquifers is used. In the Edwards BFZ and Trinity aquifers, water produced from non-exempt wells is used primarily for public supply purposes (83.4% and 72.5% respectively), while water produced from non-exempt wells in other formations is used exclusively for irrigating agricultural crops.

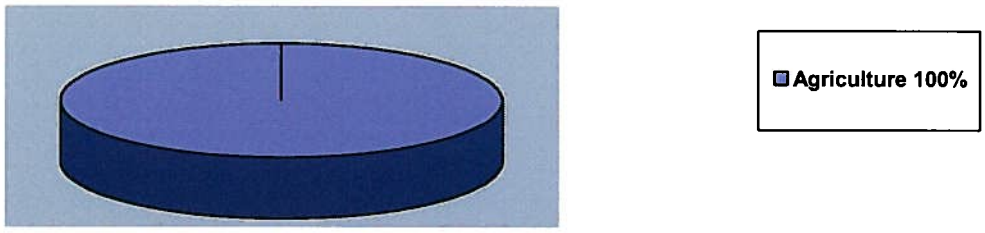
Use of Groundwater
By Non-Exempt Wells—Edwards (BFZ) Aquifer



Use of Groundwater
By Non-Exempt Wells –Trinity Aquifer



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



Each year, TCB, Inc. evaluates the exempt wells that have been registered and determines the aquifer from which they are producing and provides an estimate of their total annual production. The results are shown below for exempt wells registered through December 31, 2006.

***Summary of Exempt Well Production**

Aquifer	No. of Wells	Estimated Use Acre-feet/Year
Edwards BFZ	626	304
Trinity	1,781	864
Other	1,878	912
TOTAL	**4,285**	**2,080**

**Calculations for exempt well production excluded 53 wells that were plugged, 4 wells that were never drilled, 4 wells that were reclassified from exempt to non-exempt, and 18 wells that were capped.*

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)
Edwards (BFZ)	1,767	85%	304	15%	**2,071**
Trinity	967	53%	864	47%	**1,831**
Other	157	15%	912	85%	**1,069**
TOTAL	**2,891**	**58%**	**2,080**	**42%**	**4,971**

The chart above shows that overall, exempt wells account for 42% of all the groundwater produced in Bell County. In 2005, the exempt well figure was 44%. In the Trinity aquifer slightly less than half, 47% of production, is attributed to exempt wells; however, in the Edwards BFZ, exempt wells only account for 15% of groundwater production, with the vast majority coming from non-exempt wells

(85%). Wells producing from other groundwater sources attribute 85% of the production to exempt wells.

2. Aquifer Monitoring:
The Texas Water Development Board (TWDB) measures water levels in 9 wells in Bell County in January each year. The District measures water levels in selected wells twice annually (January and July), and supplements the TWDB well data by taking July water level measurements for 7 of the 9 TWDB wells. However, it is difficult to compare the water level measurements taken by the District with those taken by the TWDB due to differences in measurement procedures and equipment. The District primarily uses an e-line; an airline is used if the well is equipped with one. Due to drought conditions, during the latter part of 2006 the District increased the frequency of measurements.

The tables below provide a summary of the monitoring data. Numbers in red were taken by the TWDB, whereas numbers in blue were taken by the District. Refer to Appendix B 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.**

Edwards BFZ Aquifer
Water Level Measurements
Depth Below Land Surface in Feet

Well Number	Date of Measurement								
	Jan-Feb 1995	Jan-Mar 2003	July 2003	Jan-Feb 2004	July 2004	Jan 2005	July 2005	Jan-Feb 2006	Jul 2006
58-04-627 (Salado ISD)		39.8	42.6	41.4	39.5	39.1	43.4	43.3	43.6
58-04-502 (Salado ISD)	--	48.7	56.1	49.2	48.6	47.2	51.8	51.8	52.1
58-04-602 (Salado WSC)	--	63.2	38.2*	29.5*	32.7*	27.2*	36.0*	36.5*	41.8*
58-13-502 (City of Bartlett)	--	--	--	--	--	42.6	40.1	50.3	52.3*
58-04-623 (Foster Stagecoach)	78.3	84	89.58*	89.69	82.79*	86.3	87.2*	83.0*	95.25*
58-04-702 (TxDOT)	72.4	78.25	71.96	72.72	71.84	72.2	72.2	72.8	72.7**
58-04-801 (Norwood)	147.4	144.15	137.42	141.34	141.25	134.1	137.6	140.25	140.5

*Pump turned off 1-2 hours prior to measurement
**Average reading from continuous monitor site on date of water level measurements

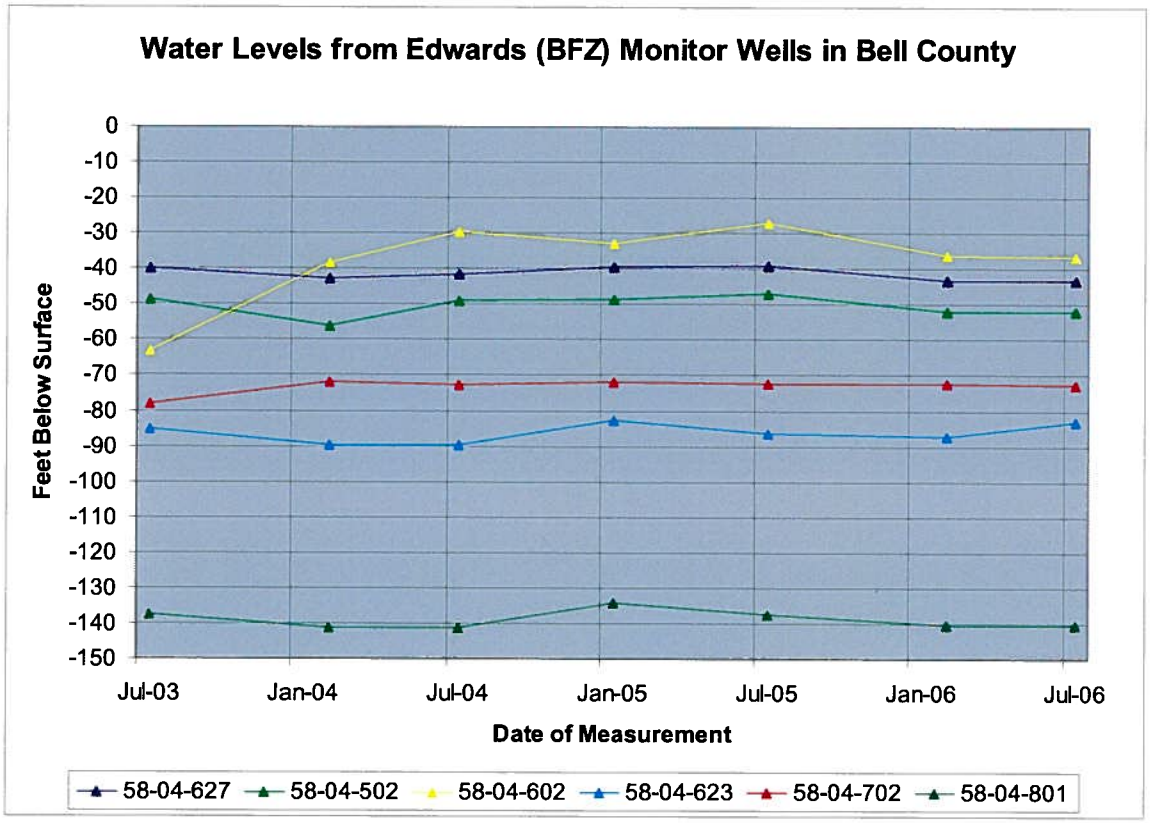
Trinity Aquifer
Water Level Measurements
Depth Below Land Surface in Feet

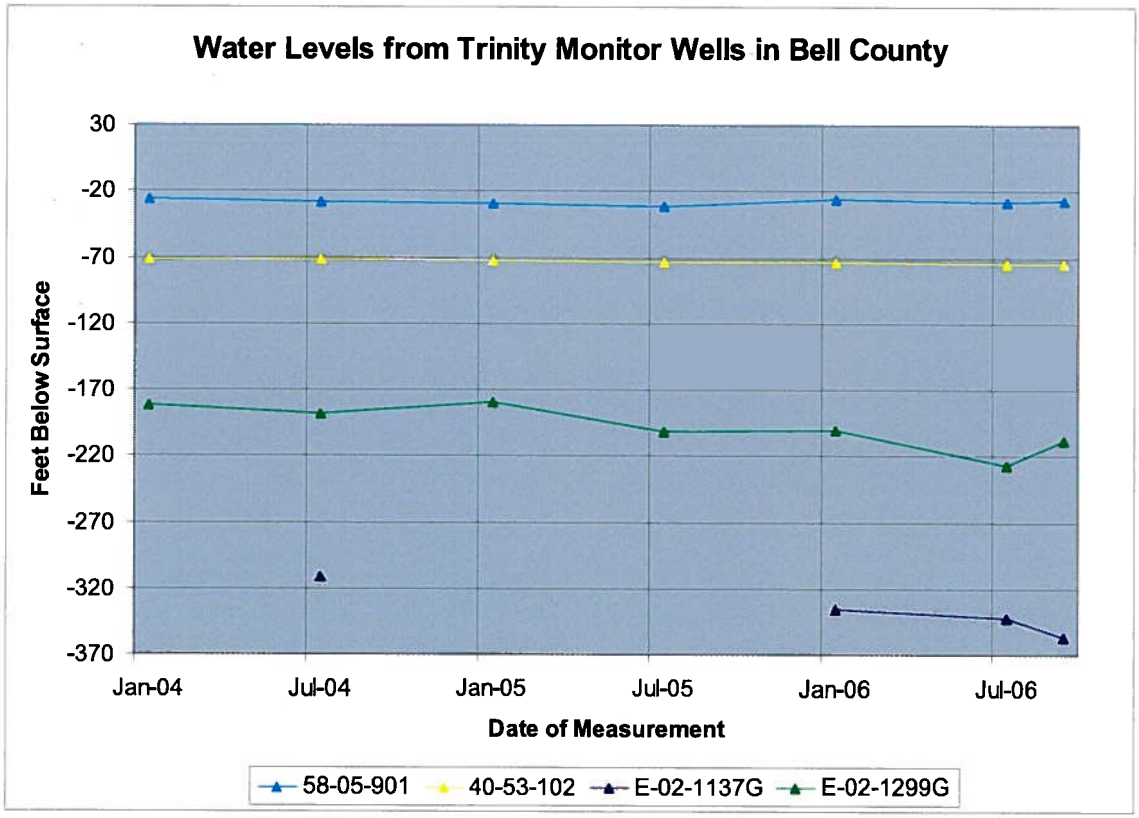
Well Number	Date of Measurement								
	Jan-Feb 1995	Jan-Mar 2003	July 2003	Jan-Mar 2004	July 2004	Jan 2005	July 2005	Jan-Feb 2006	Jul 2006
E-02-1137G (Stephenson #1)	--	--	--	--	311.42	--	--	335.7**	342.7**
E-02-1299G (Mayer)	--	--	--	182.1	189	180.4	--	200.6**	227.2**
40-45-701 (USCOE—Winkler Pk)	646.08	646	--	669	--	671	--	333.3	335.5
40-53-102 (USCOE—Leona Pk)	57.4	68.35	70.42	71.28	71.92	72.6	73.3	74.2	74.5
40-53-505 (Moffat WSC)	331	335	417.83*	336	416.06*	340	--	--	--
58-05-901 (City of Holland)	+1.2	23.7	25.3	26.19	28.21	29.9	31.8	26.0	28.3

*Pump turned off 1-2 hours prior to measurement
**Method of measurement--airline

The wells in the Edwards BFZ seem to fluctuate from year to year, with no defined pattern. This supports the premise that the Edwards BFZ recharges quickly with rainfall events. With regard to the Trinity, there continues to be concern that the aquifer levels are declining. Although many of the wells do not have historic data to use for comparison, the measurements shown in the chart above do generally show a pattern of decline over the past 10 years. Because some of the wells that are measured are pumped, the decline may not be shown clearly because a cone of depression may have been present when the measurement was taken. As more measurements are taken during the coming years, the results should be more conclusive regarding the status of the aquifers.

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


Water Levels from Edwards (BFZ) Monitor Wells in Bell County
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
-110
-120
-130
-140
-150
Feet Below Surface
Jul-03
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Date of Measurement
58-04-627
58-04-502
58-04-602
58-04-623
58-04-702
58-04-801


Water Levels from Trinity Monitor Wells in Bell County
30
-20
-70
-120
-170
-220
-270
-320
-370
Feet Below Surface
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Date of Measurement
58-05-901
40-53-102
E-02-1137G
E-02-1299G

The District is searching for additional well sites to expand its monitoring system. Many of the older wells with historic data are not suitable for current measurements due to problems with the casing and/or well equipment. Newer wells that are selected are more suitable for monitoring but do not have historic data available for comparison purposes. The District has been working with the TWDB and the Texas Department of Transportation to install a continuous monitoring system in a selected Edwards BFZ well to monitor aquifer conditions. The initial site that was selected did not produce useable data so another site was chosen and equipped during 2006. This well, 58-04-702, was previously used by TWDB as a manual monitoring well but is now equipped with continuous monitoring equipment and appears to be working well. A graph of measurements taken from this site is provided under Objective E.2.

Staff is looking for a suitable well for a second continuous monitoring site in the Edwards BFZ and is also working with TCB, Inc. to identify a suitable well for continuous monitoring of the Trinity aquifer. Both the Hensell and Hosston formations of the Trinity are under consideration for continuous monitoring.

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

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. During FY06, the District satisfied this requirement as follows:

Water Cycle:

1) On April 4 & 5, 2006, the District participated in local Earth Day events held at the Mayborn Center in Temple by giving presentations to area students from kindergarten to eighth grade. Over 700 students attended during the two day period. A total of eight 45 minutes presentations were given which included a segment on the water cycle and how surface and groundwater interact.

2) Groundwater Foundation bookmarks featuring the water cycle were distributed to several classes attending the Earth Day events on April 4 & 5, 2006. A total of 398 water cycle bookmarks were distributed. Refer to Appendix C for the Activity Report that lists the items distributed during the Earth Day events.

The District was a presenter at the Earth Day event at the Mayborn Center. Staff talked about the water cycle, basic groundwater concepts, and potential sources of water pollution.

Aquifer Status:

1) The District publishes information on the status of Bell County's aquifers on the District's website. This information includes water level measurements for seven Edwards BFZ wells and seven Trinity wells. This information is continually updated as new measurements and wells are added.

2) The District published a newspaper article in the Fall of 2005 that included a table summarizing the change in aquifer levels at five well sites—three in the Edwards BFZ and two in the Trinity. This article was published as follows:

Killeen Daily Herald:	November 13, 2005
Temple Daily Telegram:	November 13, 2005
Salado Village Voice:	November 17, 2005

B. CONTROLLING AND PREVENTING WASTE OF GROUNDWATER

Objective: Water Quality Protection.

The District's Management Plan requires the dissemination of educational information on eliminating and reducing the wasteful use of groundwater focusing on water quality protection through at least two outreach methods/activities. During FY06, the District satisfied this requirement as follows:

1) Well Plugging Demonstration

The District sponsored a well plugging demonstration on April 19, 2006. The Texas Cooperative Extension and the local county extension office were partners with the District in this event. The demonstration well was a small diameter drilled well located in northwest Killeen at 901 Duncan Avenue. The demonstration showed the proper way to plug a bored well and emphasized the importance of plugging abandoned wells to prevent groundwater contamination. Approximately 15 people attended this event.

Well plugging demonstration 4-19-06

2) Classroom Presentations

District staff conducted classroom presentations to approximately 145 Nolanville Elementary School 5th Grade students on February 1, 2006. The presentations included a powerpoint presentation with a segment on non-point source pollution. A groundwater model to demonstrate groundwater basics and the impact of non-point source pollution on both groundwater and surface water was part of the presentations. Refer to Appendix for the Activity Report that lists the items distributed during this event.

C. ADDRESSING CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES

Objective: Participate in Regional Water Planning Process.

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 FY06, the District satisfied this requirement as follows:

Four regular Region G meetings were held during FY06 on November 16, 2005, January 25, 2006, May 3, 2006, and August 9, 2006. Board President Horace Grace is a voting member of the Region G Group representing Small Business and attended all four of the regular meetings during FY06. In addition, District staff attending the meetings in November, January, and May. Agendas for these meetings are shown in Appendix D.

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.

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 FY06, the District satisfied this requirement as follows:

Wells Tested	Date	Wells Tested	Date
E-04-001P	10/25/05	E-03-273P	06-27-06
E-02-2136G	11/08/05	E-05-092P	06-27-06
E-02-1299G	11/22/05	E-05-092P	07-06-06 (2 samples)
E-03-444P	01/17/06	E-02-144G	08-01-06
E-02-144G	01-31-06	E-05-092P	08-11-06 (2 samples)
N-02-037G	02-06-06	E-02-313G	09-12-06
N-02-090G	02-06-06		

Staff conducted fifteen testing events that included ten different wells. A summary of the testing results and a location map of the well sites are shown in Appendix E.

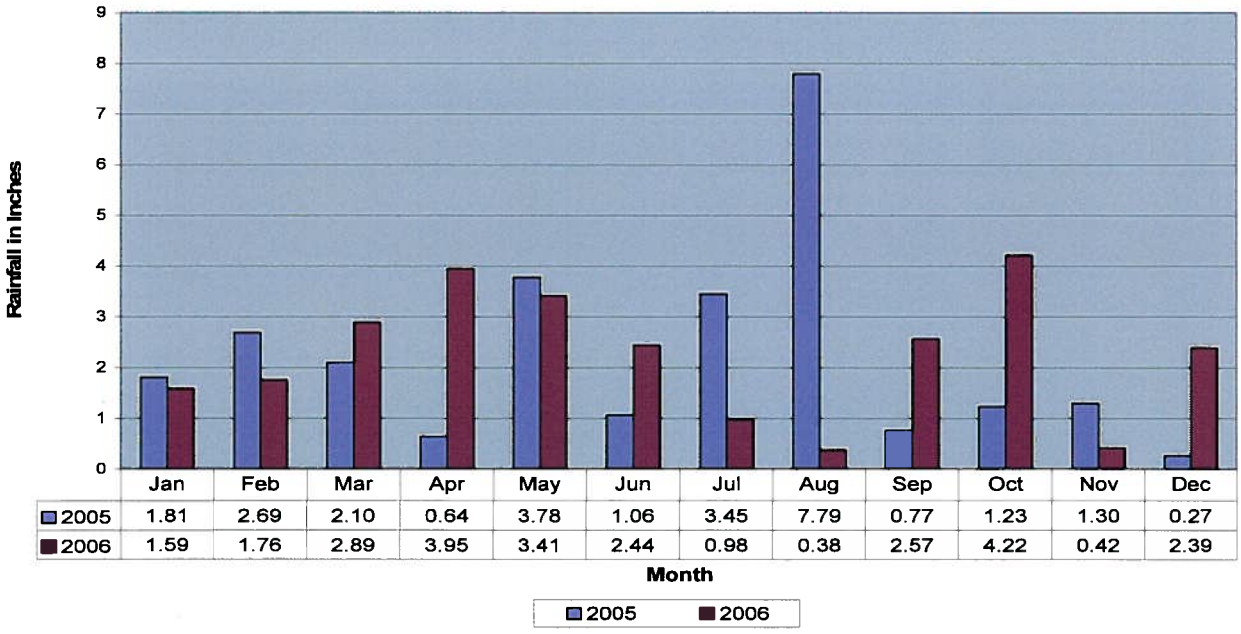
E. ADDRESSING DROUGHT CONDITIONS

Objective E.1: Palmer Drought Severity Index Map and Drought Preparedness Council Situation Report.

As required by the District's Management Plan, each month staff downloads updated data from the Palmer Drought Severity Index (PDSI) map and checks for updates to the Drought Preparedness Council Situation Report (Situation Report) that is posted on the Texas Water Information Network website. This information is presented to the Board on a monthly basis and is included in Appendix F. During FY06 the Palmer Drought index ranged from Moderate to Extreme Drought. By June 2006, Drought conditions were severe and by July the index had reached the worst drought condition, extreme. Conditions continued at the extreme level through September 2006.

During FY 2006, the District continued to monitor rainfall that was recorded or observed by Doppler radar by the National Weather Service (NWS) and the National Oceanic and Atmospheric Administration. Each month, the District downloaded the GIS files that contain the rainfall data. The data is mapped and provided for the public over the District's website and at Board meetings. This information will be used in conjunction with Salado Spring flow data for implementation of a Drought Contingency Plan. The chart below shows the average total rainfall in Bell County by month. The average is generated from the 198 data points that are spaced approximately 2.5 miles apart.

Bell County Average Rainfall in 2005 and 2006

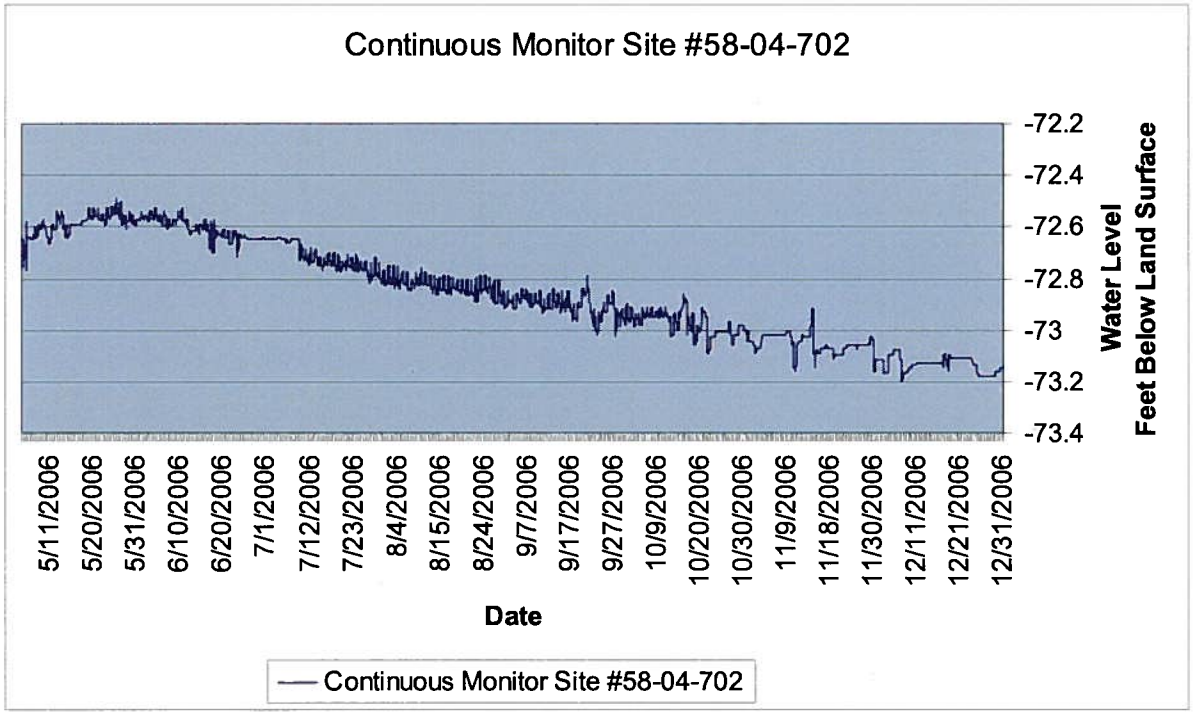


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2005	1.81	2.69	2.10	0.64	3.78	1.06	3.45	7.79	0.77	1.23	1.30	0.27
2006	1.59	1.76	2.89	3.95	3.41	2.44	0.98	0.38	2.57	4.22	0.42	2.39

The total average rainfall in Bell County for 2006 was 27.01. This compared very closely to the total amount received in 2005 at 26.89 inches. Rainfall was more evenly distributed among the months of the year in 2006. However, Bell County was still considered in a drought during all of 2006 according to the Palmer Drought index. Appendix G contains a map of the yearly rainfall totals for the 198 data points.

Objective E.2: TWDB Continuous Monitoring Wells.

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. During FY06, TWDB installed continuous monitoring equipment in State Well No. 58-04-702 drilled in the Edwards BFZ aquifer on FM 2484 near the Hidden Springs Subdivision. Monitoring of this well began on May 4, 2006.



The graph above shows the data collected by the continuous monitor site. Collection of measurements began on May 4, 2006 at 13:00 and has continued every hour since that time. The readings for 2006 show a fairly constant water level with readings ranging from -72.49 on May 25, 2006 to -73.2 on December 7, 2006. The average reading during this time was -72.86. The general trend of the data shows a decline in the water level from the end of May through December. Drought conditions were moderate to extreme drought during this same time period.

District staff is working with TWDB to identify other wells that may be suitable for installing continuous monitoring equipment.

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

Objective F1: Promote Conservation.

The District's Management Plan requires promotion of conservation by one outreach method/activity. During FY06, the District satisfied this requirement by conducting a poster and essay contest on water conservation. This contest was conducted during the fall of 2005 and was open to all 5th grade students in Bell County. The theme of the contest was *Ways to Conserve Water in Bell County*. Winners received savings bonds in the amount of $100 (3rd place) $250 (2nd place) and $500 (1st place). A total of 52 entries were received. A copy of the flyer announcing this contest is located in Appendix H

FY06 Essay and Poster Contest Winners (Left to Right): Mia Ecker, Daniel Wurster, Cortney Beechem, Matthew Pajestka, Makaylea Harr (Not Pictured: Hunter Robinson-Sisneroz).

Objective F2: Promote Rainwater Harvesting.

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. A link to the Texas Cooperative Extension website is also provided for additional information on rainwater harvesting. A copy of the posted information is included under Appendix I.

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

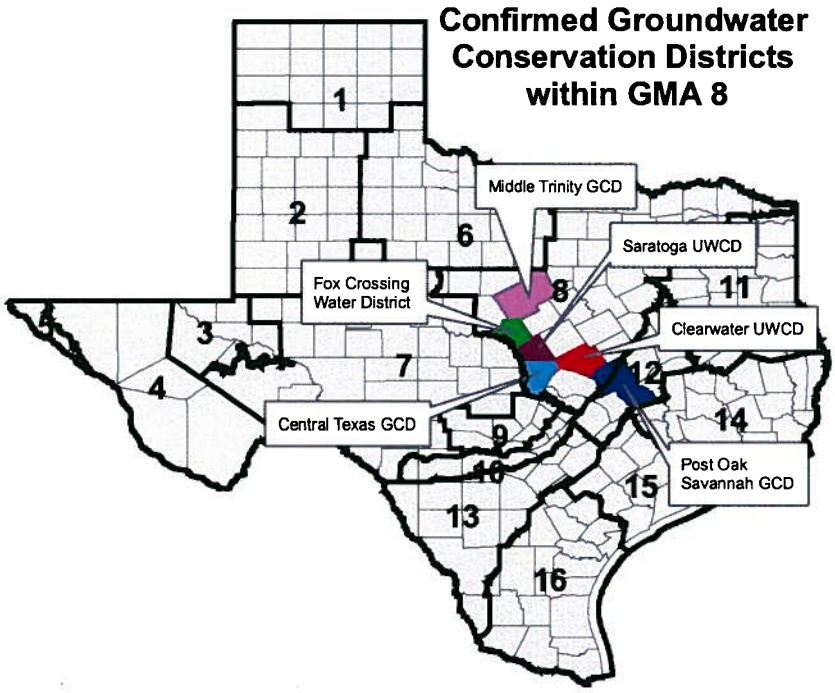
The District's Management Plan requires promotion of conservation by providing information relating to recharge enhancement and brush control on the District website. The District satisfied this requirement by including a segment on recharge enhancement and brush control on its website under the Education 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 Cooperative Extension website are provided. A copy of the posted information is included under Appendix J.

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

This management goal is not applicable to the District because the desired future conditions (DFC) of the groundwater resources in Groundwater Management Area 8 (GMA 8) have not yet been defined.

The District is currently coordinating with the other five groundwater districts within GMA 8 to define the DFCs of the aquifers. GMA 8 began meeting during FY06. GMA 8 includes 45 counties extending from Travis County northward to the Oklahoma border. As required by HB 1763 passed by the 79th Texas Legislature, the GCDs of each GMA are responsible for determining the DFCs of the major and minor aquifers within its area by the year 2010. The TWDB will then determine the managed available groundwater (MAG) figure for the GMA. This figure will be included in the Regional Water Plans and the State Water Plan.

During FY06, GMA 8 held five meetings as follows: November 15, 2005; February 21, 2006; May 23, 2006; June 20, 2006; and September 20, 2006. At the September 2006 meeting, the GMA Committee approved a Scope of Work to contract with TCB, Inc. to enlist their assistance in developing the desired future conditions for the major and minor aquifers of GMA 8. This process is underway and the goal is to provide the DFCs to the TWDB during the fall of 2007 so the MAGs may be included in the 2011 Regional Water Plans and the 2012 State Water Plan. A map of GMA 8 is shown below.



4. MISCELLANEOUS ACTIVITIES

In addition to the administrative tasks and Management Plan requirements, the CUWCD has been involved in several miscellaneous activities during FY06. These activities include the following:

A. Trinity Aquifer Study in Southern Bell County
B. Trinity GAM
C. Salado Creek Stream Flow Gauging Program
D. Subdivision Groundwater Availability Report Review
E. Non-Exempt Well Meter Program
F. Water Quality Protection Grant Program
G. Abandoned Wells
H. Bell County Water Symposium
I. Newsletter
J. Major Rivers Water Education Program
K. Book Cover Distribution
L. Literature Packet Distribution
M. Water Conservation Kits
N. Presentations and Outreach
O. Public Advisory Committee
P. Internet Site
Q. Resource Library

These activities are discussed in more detail below.

A. TRINITY AQUIFER STUDY IN SOUTHERN BELL COUNTY

In 2003, the District contracted with Turner Collie and Braden Inc. to conduct a study of the Trinity aquifer in southern Bell County due to the increase in residential development and the use of individual wells for water service. The study determined the hydrogeologic properties of the aquifer in this area and the volume of water in storage. The study evolved from its original scope to include calculation of the volume of groundwater stored in the three aquifer subdivisions (upper, middle, and lower) within the study area as well as outside the study area to include the entire county. The results of the Trinity study were presented to the Board during the latter part of FY06. Some discrepancies were noted and revisions are underway.

B. TRINITY GAM

During 2005, the District contracted with TCB to conduct the TWDB GAM (groundwater availability model) for the Trinity aquifer in Bell County. The GAM figures were finalized during FY06 and were included in the District's revised Management Plan. The District's

management goal for the unconfined portions of the aquifer (upper layer--Paluxy and Glen Rose) is to maintain 95% of the saturated thickness after 50 years. The management goal for the confined portions of the aquifer (middle layer—Hensell; and lower layer—Hosston) is to maintain 50% of the available artesian drawdown after 50 years. Based upon these goals, the following availability figures have been established:

Upper Layer:	992 ac-ft/year
Middle Layer:	1,100 ac-ft/year
Lower Layer:	5,000 ac-ft/year
TOTAL:	7,092 ac-ft/year

C. SALADO CREEK STREAM FLOW GAUGING PROGRAM

During 2005, the District approved the expenditure of funds to install stream flow gauges in Salado Creek to monitor the input of water from the springs in the Salado area. One gauge will be placed upstream of the springs and one placed downstream. Preferred locations for the equipment were initially identified but have had to be revised due to access issues. During FY06, staff continued to work with involved parties to secure access. Installation of equipment is anticipated in the Spring of 2007. Data from this program will be used to support the District's Management Plan availability figures for the Edwards BFZ aquifer and will be used in the development of the District's Drought Management Plan.

D. SUBDIVISION GROUNDWATER AVAILABILITY REPORT REVIEW

During FY06, the District continued coordinating with the county commissioners and staff to ensure new subdivisions have an adequate source of water supply. The District's goal is to inform developers and potential purchasers of the groundwater resources in Bell County. No new subdivisions requiring a groundwater availability report were presented to the District during FY06.

E. NON-EXEMPT WELL METER PROGRAM

As part of the FY06 budget, the Board approved $1,000 toward purchasing meters for those non-exempt wells that were "grandfathered" and do not have a meter. Many of these well owners are estimating production, whereas a meter would ensure accurate reporting. Under this program, the District notified all non-exempt wells existing prior to February 1, 2002 of the opportunity to apply for participation in this program. In December 2005, the District approved the purchase of four meters at an estimated cost of $1,400. A budget amendment was approved for the additional funds.

One meter was installed on a three well system in January 2006. Comparing the 2006 metered production figures from this wells system to the estimated figures provided in 2005,

shows that the figures estimated were likely lower than the actual production In fact, the total estimated production in 2005 for this system was 44.16 ac-ft, while the metered production in 2006 was 81.03 ac-ft.

The other three meters were installed in June 2006. The figures provided to the District prior to the installation of the meters appear to have been considerably over estimated. The estimated production for these three wells from June 2005 to December 2005 was 28.26 ac-ft, while the metered production from June 2006 to December 2006 was 4.17 ac-ft.

F. WATER QUALITY PROTECTION GRANT PROGRAM

The District's Water Quality Protection Grant Program provides financial assistance to local governmental entities and other non-profit entities that provide public drinking water. The funds are to be used to implement measures or recommendations that protect water quality. The District did not receive any grant applications during FY06.

G. ABANDONED WELLS

1) Abandoned Well Cost Sharing Program:
The District approved funds for this program with the FY06 budget. The District agreed to pay 50% of the plugging costs for an abandoned well, not to exceed $1,000 per well. Wells registered prior to December 31, 2005 were eligible for consideration. The District did not receive any applications for this program.

2) Abandoned Well Investigations:

The District coordinates with the Texas Department of Licensing and Regulation to identify and investigate reports of abandoned wells. During FY06, the District investigated 5 complaints of abandoned wells which were referred to TDLR for further investigation, determination of corrective action, and enforcement. Of these 5 wells, one was determined to not be a well, and one was plugged. Three wells remain under investigation.

In addition, staff investigated two wells reported as being plugged to determine if they were correctly plugged. These were also referred to TDLR for further investigation. It was later determined that one was correctly plugged and the other was not but is undergoing corrective action.

Three abandoned wells reported during FY05 were still under investigation at the time of the FY05 annual report. During FY06, one of the wells was capped, one was plugged, and one is still under investigation.

During 2003, the City of Rogers well was identified as abandoned. The District worked with them to resolve this issue and in December 2005 the well was properly plugged. In addition, plugging reports were received for 6 other wells during FY06.

District staff investigated several abandoned well complaints during FY06.

The District is continuing 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. According to records from the Texas Department of Licensing and Regulation, during FY06 a total of 21 wells were plugged in Bell County—5 water wells and 16 monitor wells.

H. BELL COUNTY WATER SYMPOSIUM

During FY06, the CUWCD sponsored its fifth annual water symposium on November 3, 2005 at the Bell County Expo Center. The District partnered with the Texas Cooperative Extension/Bell County Extension Office and was able to provide Continuing Education Units for Private and Commercial Pesticide Applicators. The Texas Cooperative Extension also provided free water quality screening for nitrate, bacteria, and salinity. Other topics presented at the symposium included information about the District; update on groundwater availability in the District; update on water legislation passed by the 79th State legislature; clean water through public involvement; update on surface water projects; septic system regulations and water quality protection; plugging abandoned wells.

Michael Jahns, Bell County Health District, gave a presentation of the septic system regulations at the Bell County Water Symposium.

The CUWCD set up a display and distributed water conservation kits as well as other information on water conservation and the status of the aquifers. Approximately 70 people attended the symposium. Refer to Appendix K for an agenda of the meeting. Appendix C contains the Activity Report that lists the items distributed during this event.

I. NEWSLETTER

The District published its third annual newsletter—The Clearwater Source—during the latter part of FY06. The newsletter was mailed in September to all registered well owners. Newsletter articles included the May 2006 election results; GMA planning process update; update on well registration and production; District steps for drought planning; search for monitoring wells; conservation message; and District office relocation.

J. MAJOR RIVERS WATER EDUCATION PROGRAM

During FY06, the District sponsored the Major Rivers Water Education Program. In previous years, the District partnered with the Brazos River Authority to promote this program. FY06 was the first year the District sponsored this program on its own. During the spring of 2006, orders were taken for 1,122 students and 29 teachers in the Belton, Temple, Killeen, and Rogers school districts. The Major Rivers Program material was delivered to the schools in October 2006.

K. BOOK COVER DISTRIBUTION

During FY06, the District purchased book covers for all middle and high school students in Bell County for distribution during the 06/07 school year. The book covers provide information on water conservation and a brief overview of the District, including its goals and objectives. A total of 27,000 book covers were distributed to the students at the start of the school year during August and September 2006.

L. 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. Distribution during FY06 occurred in September 2006 and is shown below. Refer to Appendix C for the Activity Report that provides an inventory of information contained in the packets. A total of 105 packets were distributed to the schools.

School	No. Distributed
Academy ISD	3
Bartlett ISD	3
Belton ISD	11
Holland ISD	3
Killeen ISD	45
Rogers ISD	3
Salado ISD	3
Temple ISD	15
Troy ISD	4
Private Schools	15
TOTAL	**105**

M. 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; shorter shower timer; 5 spray water saving hose nozzle; moisture meter; shower flow meter bag; CUWCD brochure; and TWDB brochure on water conservation. Fifty kits were distributed at the District's annual water symposium held on November 3, 2005 and 40 kits were distributed at the Annual Crops Clinic held on January 24, 2006.

N. PRESENTATIONS AND OUTREACH

CUWCD continues to promote public awareness of the District, our water resources, and water conservation. Board members and staff have spoken to various 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 C for the Activity Report that lists the material distributed.)

Presentations	Date	# Distributed
5th Grade—Western Hills Elementary, Temple	10-19-05	510
Bell County Home Buyers Educational Seminar, Bell Co. Expo	10-25-05	174
After School Focus Group—Raye Allen Elementary, Temple	10-28-05	77
5th Grade—Troy Elementary, Troy	11-09-05	510
5th Grade—Nolanville Elementary, Nolanville	02-01-06	1,015
CTCOG Earth Day Events, Mayborn Center, Temple	04-04-06 & 04-05-06	4,813
Total		7,099

Other Events	Date	# Distributed
[1]Bell County Water Symposium, Bell Co. Expo	11-03-05	1,103
Temple Recycles Day, Temple Public Library	11-15-05	200
Essay/Poster Contest Participants	12-02-05	300
[2]Annual Crops Clinic, Bell Co. Expo	01-24-06	595
Lakeside Hills HOA Meeting	01-27-06	65
East Bell WSC Office	05-23-06	70
TOTAL		2,333

[1]Includes distribution of 50 Water Conservation Kits; [2]Includes distribution of 40 Water Conservation Kits

District staff provided a booth for the second year in a row at the Fort Hood Earth Day held on April 22, 2006.

O. PUBLIC ADVISORY COMMITTEE

The Public Advisory Committee (PAC) meets on an as-needed basis. The PAC did not meet during FY06; however the Board discussed on several occasions the need to appoint new members to the committee, since a vacancy existed in Precinct 2. In May of 2006, PAC member John Mayer representing Precinct 4 was elected to the District Board as the At-Large representative and therefore created another vacancy on the advisory committee. In September 2006, the Board appointed Rosann Feagin and Henry Bunke to the PAC. The PAC members are as follows:

Vince Cortese	-	Precinct 1
Rosann Feagin	-	Precinct 2
Marvin Green, PAC Chair	-	Precinct 3
Henry Bunke	-	Precinct 4
David Cole	-	At-Large

Throughout FY06, PAC members have regularly attended the CUWCD Board meetings, providing representation at 7 of the 12 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.

P. INTERNET SITE

The District's web site (www.clearwaterdistrict.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; educational information including data on water use and water conservation tips.

Records indicate that the top pages that were accessed during 2006 were the District's office location; District's Board members; well registration and permitting summary; overview of Bell County aquifers; District FY06 Budget; and District Rules. Information will be added to the web site during the next year as needed.

Q. RESOURCE LIBRARY

The District maintains a resource library to help promote public education and conservation of our water resources. The resource library consists of videotapes and literature focusing on the water cycle, groundwater, water conservation, and other water-related issues. This information is designed for age groups from pre-K to college level. The information in the CUWCD library is available for use by the public. A listing of the library material is shown in Appendix L.

5. SUMMARY

During FY06, the District continued to acquire data to effectively manage Bell County's groundwater resources. Data acquisition includes 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. The Trinity GAM figures were finalized during FY06 resulting in revised groundwater availability figures for the Trinity as a whole, as well as availability figures for the three aquifer subdivisions. The Trinity study was completed and identified hydrogeologic properties of the Trinity aquifer and determined the volume of water in storage. However, additional data has indicated some discrepancies and additional data is being collected for review and possible revisions. Stream flow gauge sites have been finalized for Salado Creek to monitor spring flow from the Edwards BFZ aquifer in the Salado area. All of this information will assist the District in understanding how much water is available in the aquifers, how much water is being withdrawn from the aquifers, and what impact the withdrawal is having on our groundwater resources so that management decisions can be made.

The District is required to review and readopt its management plan every five years. A readopted Management Plan was due to the TWDB for approval by February 2006. The revised Plan was approved by the District in December 2005 and presented to the TWDB in January 2006. Approval was given on March 6, 2006. Substantial changes to the Plan were made as a result of legislative changes approved during the 2005 legislative session. Revised groundwater availability figures for both the Edwards BFZ and the Trinity aquifers were incorporated in the revised Management Plan. Legislative changes also required participation in GMA 8. A total of five GMA 8 meetings were held during FY06 and resulted in approval of a scope of work to contract with TCB, Inc. to develop the desired future conditions of the major and minor aquifers within GMA 8.

Minor rule amendments were adopted in December 2005 and included new definitions; pumping allowance for maintenance of inactive wells; combination drilling and operating permits; timing of hydrogeologic report pumping tests; permit hearings and contested case hearings procedures; notice and scheduling of hearings; and rule enforcement and civil penalty schedule. The revisions relating to hearings resulted from legislative changes approved during the 2005 session.

During FY06, the District approved a compliance and enforcement policy to provide staff with guidelines for enforcing the district rules. The District continued to coordinate with TDLR in investigating abandoned wells. District staff investigated seven potentially abandoned wells during FY06 and referred these to TDLR for investigation and enforcement action.

Three director positions were up for election in May 2006—Precincts 2, 4 and At-Large. Only one candidate filed for each position, therefore, the election was cancelled and the candidates were declared elected. Two of the candidates were incumbent directors representing Precincts 2 and 4. Ricky Preston, the incumbent Director representing the At-large position, did not seek re-election. PAC member John Mayer filled the At-Large position. The Board welcomed new Board member John Mayer and thanked outgoing director Ricky Preston for his years of service to the District.

Public education and service continue to be a major focus of the District during FY06. District staff visited four different schools and gave a total of 15 presentations involving three school districts. In addition, 10 presentations were given to various schools attending the Earth Day events held at the Mayborn Center in Temple. The District's Earth Day participation and annual water symposium continue to be major outreach opportunities. New programs implemented during FY06 include the Non-Exempt Well Meter Program and the Abandoned Well Cost Sharing Program.

During the next fiscal year, the District will continue to acquire data on the aquifers and will implement the Salado Creek Stream Flow Gauging Program to monitor Salado Springs. Rainfall data will continue to be collected throughout the County. Results of the Trinity study for southern Bell County will be reviewed and possibly revised. Geophysical logs of selected wells in the lower Trinity will be conducted to confirm the Trinity Study results. The District will continue to pursue additional monitoring sites for both the Edwards BFZ and the Trinity aquifers. In addition, the District will look for well sites for use as index wells to be equipped with a continuous monitoring system. The District will determine whether management of the Trinity aquifer by layer is the appropriate course to follow. The District will also begin developing a Drought Management Plan for the Edwards BFZ aquifer.

Appendix A

Clearwater Underground Water Conservation District

Approved Budget FY2006

Bell County Tax Appraisal District	**$**	**423,278**
*Tax rate per $100 valuation is $0.0044		
Application Fees	**$**	**1,000**
Transport Fees	**$**	**1,500**
Interest	**$**	**15,000**
	$	**440,778**

Contracts		
Administrative	$	184,000
Legal	$	40,000
Appraisal District	$	5,000
Election Expenses	$	10,000
Professional/Technical Consulting	$	40,000
Studies	$	40,000
Special Programs		
Education	$	15,350
Education Supplies	$	9,000
Other	$	5,650
Water Quality Grant	$	1,000
Director's Compensation	$	8,000
Director Expenses	$	6,000
Conference Room Furniture	$	10,000
Equipment	$	3,000
Supplies	$	1,000
Insurance	$	2,000
Printing	$	5,000
Communications	$	5,000
**Contingency Fund	$	40,778
Reserves for Uncollected Taxes	$	10,000
Total	**$**	**440,778**

*THIS TAX RATE WILL RAISE MORE TAXES FOR MAINTENANCE AND OPERATIONS THAN LAST YEAR'S TAX RATE.

**Includes $17,500 anticipated revenue from fees and interest.

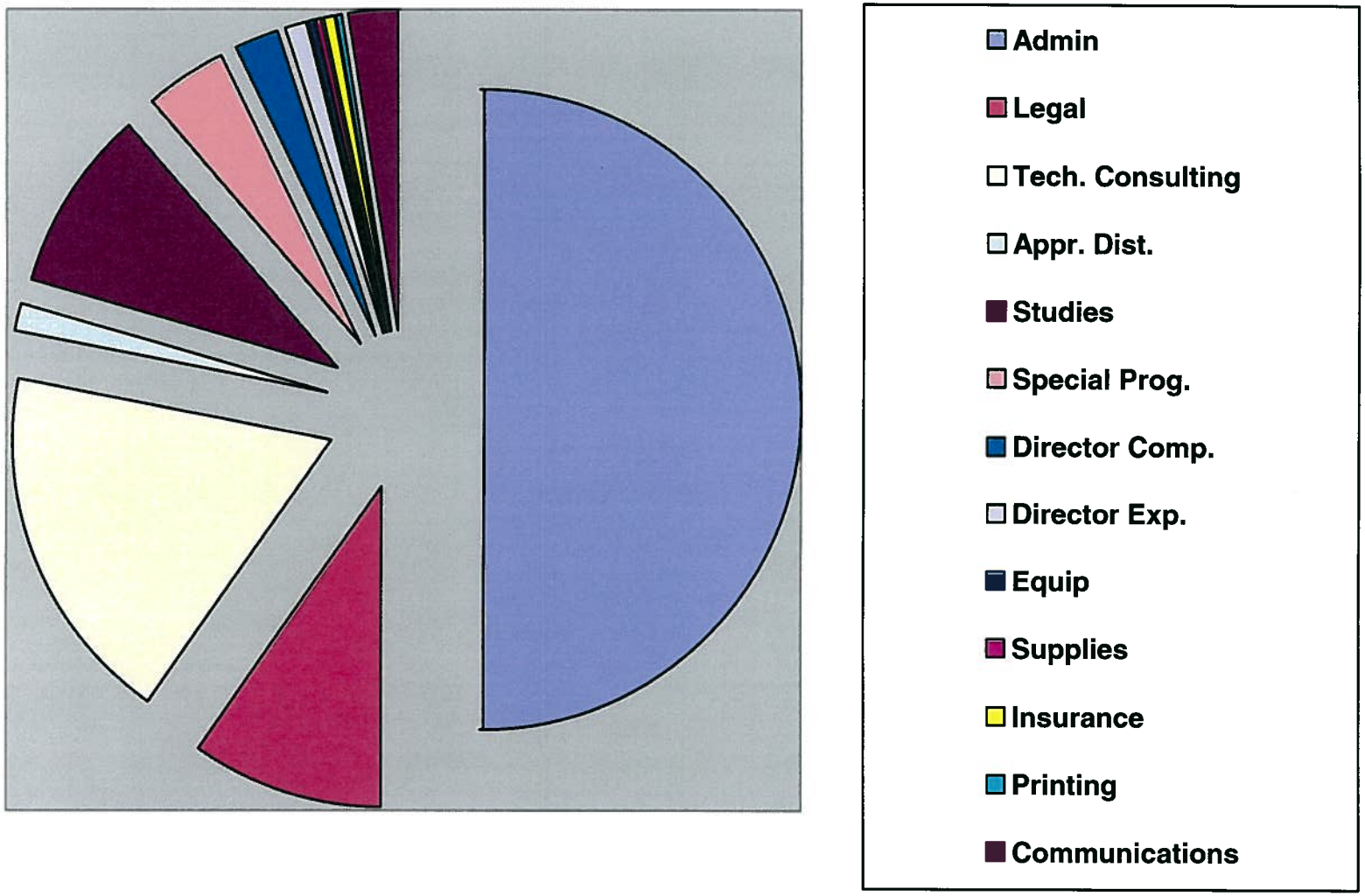
8/29/2005

CLEARWATER UNDERGROUND WATER CONSERVATION PROJECT
OCTOBER 2005 THROUGH SEPTEMBER 2006

SCHEDULE OF REVENUES AND EXPENDITURES

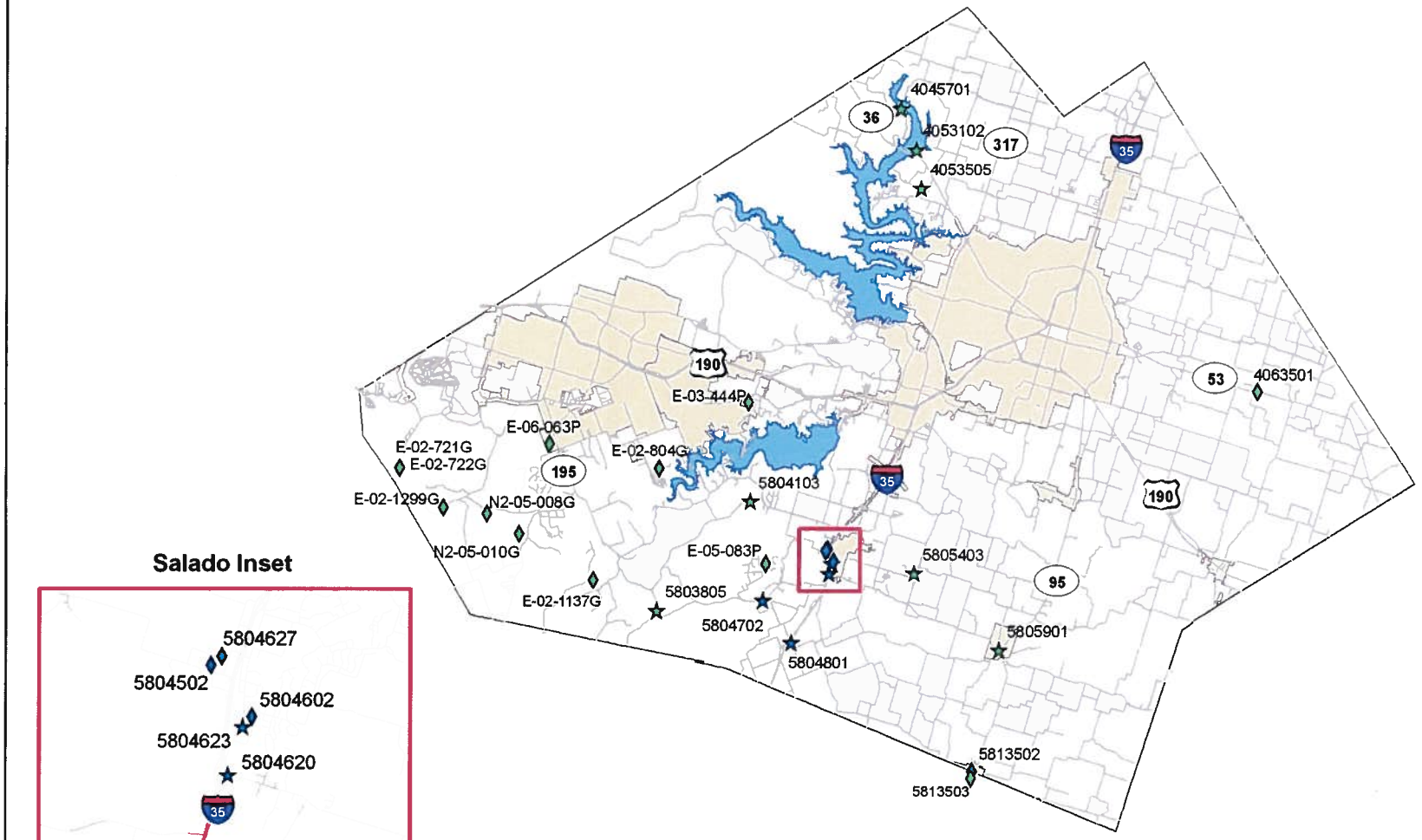
		Total
REVENUES:		
October 1, 2005 through January 31, 2007		
Bell County Tax Appraisal District		$ 414,547.10
Application Fees		1,017.28
Transport Fees		459.56
Interest		27,661.34
Revenues (October 1, 2005 thru September 30, 2006)		$ 443,685.28
Carry forward (Program Year Ending September 30, 2005)		$ 358,034.03
TOTAL Revenues		$ 801,719.31
EXPENDITURES:		
October 1, 2005 through January 31, 2007		
Administrative Services	$ 186,340.74	
Board Expenditures	136,598.01	
Educational Special Programs	7,257.76	
Educational Supplies	4,465.47	
Speical Programs Other	3,246.76	
Water Quality Project	-	
Clearwater Studies	34,173.28	
Total Expenditures		$ 372,082.02
REVENUES OVER EXPENDITURES		$ 429,637.29

Expenditures for FY06



Appendix B

Aquifer Monitor Sites



Salado Inset

Clearwater Underground Water Conservation District
2180 N. Main St., PO Box 729
Belton, TX 76513
February 16, 2007

3 1.5 0 3 6 9 12 Miles

File Name
K:\clearwater_mapping\Monitor Wells

Data Type

Legend

- Clearwater_Trinity
- Clearwater_Edwards
- TWDB_Trinity
- TWDB_Edwards

Appendix C

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Classroom presentations

Date(s)/Location: 10/19/05 Western Hills Elementary School, Temple, 5th grade students

Information Distributed and Quantity: 85 of the following: TWDB Shower Flow bags; CUWCD Water Wheel; CUWCD info cards; CUWCD rulers; CUWCD pencils; and CUWCD Frisbees.

Notes: Presentation included powerpoint, water model, and wheel of water.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Judy Parker

Activity: Bell County Home Buyers Educational Seminar sponsored by the Texas Cooperative Extension

Date(s)/Location: 10/25/05 Bell County Expo Center, Belton, TX

Information Distributed and Quantity: Approximately 25 people attended. See attached list for item distribution.

Notes: Director Parker gave a powerpoint presentation and staff setup a display

Item	Quantity
CUWCD	
CUWCD Brochure folder	6
CUWCD Newsletter	5
Brochure—Your GCD (TAGD/CUWCD)	4
Use Water Wisely Wheels	11
Rulers	10
Ink Pens	21
2006 Calendars	11
Spray Bottles—Indoor Use	6
Spray Bottles—Outdoor Use	6
TWDB	
Brochure—Being WaterWise Outdoors	8
Brochure—Being Water Smart Indoors	7
Texas Lawn Watering Guide	9
Shower Flow Meter Bag	6
WaterWise Council of Texas	
Irrigation Best Management Practices Brochure	7
Landscape Improvements Best Management Practices Brochure	12
Lawn Maintenance Best Management Practices Brochure	8
Texas Groundwater Protection Committee	
Plugging Abandoned Water Wells Brochure	7
Groundwater Foundation	
Groundwater Basics brochure	10
Bookmark—The Water Cycle	9
Bookmark—10 Ways to Protect & Conserve Groundwater	6
Miscellaneous	
Water Conservation Sticker Sheets	5

8:15 p.m. - 8:45 p.m.
Michael Jahns & Kent Stephens, Bell County Public Health Department

Michael J. Jahns: *Environmental Health Food Protection Division Director*

EDUCATION: 1983 Graduate of Texas A & M

♦Registered Sanitarian and Designated Representative for the Bell County Public Health District.

♦A Central Texas native with 16-years at the Health District.

Kent Stephens: *Environmental Health Supervisor*

EDUCATION: 1993 Graduate of Texas Tech

♦Registered Sanitarian, Site Evaluator and Designated Representative for the Bell County Public Health District.

♦A Pan Handle native with 8-years at the Health District.

Bell County Extension Office
1605 North Main, Room 102
Belton, TX 76513
254-933-5305
254-933-5312 - fax
1-800-460-2355, ext 5305
http://bell-co.tamu.edu

Texas Cooperative EXTENSION
The Texas A&M University System

Bell County Home Buyers Educational Seminar

Bell County Extension Program Council
And
Texas Cooperative Extension – Bell County

Tuesday, October 25, 2005 - 6:00 p.m. until 9:00 p.m.
Bell County Expo Center Special Events Room (upstairs)

Registration will begin at 5:30 p.m.

Realizing the American Dream – Owning Your Own Home

"What You Need to Know Before You Build or Buy Your New Home"

Program Agenda
Speakers

6:00 p.m.
Janie L. Harris, M.Ed
Extension Housing and Environment Specialist
Texas Cooperative Extension Texas A&M University System

EDUCATION: M.Ed, Texas A&M University,
B.S., Home Economics Education, Texas Tech University

Special Certifications and License

- Texas Real Estate Broker's license
- Graduate of Realtors Institute
- Certified Residential Specialist
- Certified Homebuyer Education Provider

Professional Accomplishments

*Cooperative State Research Extension Education System
- ♦Texas Program Manager for Healthy Indoor Air for America's Homes Project
- ♦Texas Contact for Healthy Home Project
- ♦Extension Disaster Education Network (EDEN, Texas Delegate
- ♦Energy Conservation—Joint Project—Department of Energy and Land Grant University

7:00 p.m. - 7:15 p.m.
Break and View the Educational Exhibits

7:15 p.m. - 7:45 p.m.
Roger Chesser, Deputy Chief Appraiser
Bell County Appraisal District

EDUCATION: Degree in Computer Aided Design
Central Texas College

- ♦**Captain—U.S. Army Retired**
- ♦Instructor for 4 years at Central Texas College
- ♦Current Member of Curriculum Advisory Committee for Central Texas College
- ♦Has worked for the Tax Appraisal District office for the past 18 years.

7:45 p.m. - 8:15 p.m.
Judy Parker, Member of the Board of Directors for the Clearwater Underground Water Conservation District

- ♦Public Advisory Committee Member January 2002 - May 2002
- ♦Elected to CUWCD May 2002
- ♦Elected Team, 2002-2006
- ♦Occupation Retired Army wife, former realtor

Other

- ♦Current treasurer of Killeen Area America's Promise Board of Directors
- ♦Current member of the Beautify Killeen Board
- ♦Former President of the Greater Fort Hood Area Military Dependent Scholarship Committee
- ♦Former Vice President of the Fort Hood Thrift Shop Board of Directors
- ♦Former Member of local board, Military Child Education Coalition
- ♦Certified Disaster Services Response Technician for the American Red Cross

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: After School Focus Group presentation

Date(s)/Location: 10/28/05 Raye Allen Elementary School, Temple, 5th grade students

Information Distributed and Quantity: 11 of the following: TWDB Shower Flow bags; Groundwater Foundation bookmark—The Water Cycle; Groundwater Foundation bookmark—Top 10 Ways to Protect and Conserve Groundwater; CUWCD info cards; CUWCD rulers; CUWCD pencils; and CUWCD cups.

Notes: Presentation focused on the water cycle and soil erosion.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff & Directors

Activity: Bell County Water Symposium

Date(s): 11-03-05

Location: Bell County Expo Center

Information Distributed and Quantity: See attached.

Notes:

Item	Quantity
CUWCD	
*Water Conservation Kit	50
CUWCD Brochure folder	20
CUWCD 2005 Newsletter	49
Use Water Wisely Wheels	34
Cups	33
Rulers	60
Pencils	30
Ink Pens	80
Frisbees	48
Spray Bottles—Indoor Use	75
Spray Bottles—Outdoor Use	60
Balloons	20
Calendars	70
Your Groundwater Conservation District (Local Control) Brochure	7
Groundwater Foundation	
Groundwater Basics brochure	15
Bookmark—The Water Cycle	72
Bookmark—Top 10 Ways to Protect and Conserve Groundwater	80
Office of Community Rural Affairs	
Water Resource—Guide for Texas	28
Utilizing Technology for Small Water Systems (Book)	14
Managing the Water Well (Book)	4
Texas Cooperative Extension	
Questions About GCD's in Texas (Book)	14
Texas Groundwater Protection Committee	
Plugging Abandoned Water Wells Brochure	19
TWDB	
Being Water Wise Outdoors Brochure	6
Being Water Smart Indoors Brochure	44
Water Conservation Activity Book	10
Shower Flow Meter Bag	12
Texas Lawn Watering Guide	3
Dillos Demonstrate Wordless Conservation Brochure	16
Dillo Dollar—Water Conservation in Your Home	8
Dillo Dollar—Water Conservation in Your Yard	8
Water Smart Bill Stuffer—Paying for more water than you need?	20
Water Smart Bill Stuffer—Watering your lawn efficiently?	13
WaterWise Council of Texas	
Irrigation Best Management Practices Brochure	8
Landscape Improvements Best Management Practices Brochure	20
Lawn Maintenance Best Management Practices Brochure	8

Miscellaneous	
Auto Not Pollute Slide Card	5
Water Conservation Sticker Sheets	40
TOTAL	**1,103**

*Each Water Conservation Kit also contains a CUWCD general brochure and TWDB 49 Water Saving Tips brochure.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Classroom presentations

Date(s)/Location: 11/9/05 Troy Elementary School, 5th grade students

Information Distributed and Quantity: 85 of the following: TWDB Shower Flow bags; CUWCD Water Wheel; CUWCD info cards; CUWCD rulers; CUWCD pencils; and CUWCD Frisbees.

Notes: Presentation included powerpoint, water model, and wheel of water.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Texas Recycles Day

Date(s)/Location: 11/15/05 Temple Public Library

Information Distributed and Quantity: 50 CUWCD 2005 Newsletters; 50 CUWCD cups; 25 TWDB brochures—Dillos Demonstrate Wordless Water Conservation; 25 water conservation sticker sheets; 25 CUWCD pencils; 25 CUWCD balloons.

Notes: Information above was available for the public to pick up during the children's story time that focused on recycling and environmental protection.

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Complimentary packets to all participants in Essay & Poster Contest

Date(s): 12-02-05

Location: Information was mailed or distributed to the schools

Information Distributed and Quantity: See attached

Notes:

CUWCD Essay & Poster Contest
Inventory—December 2005

The following information was sent to all contest participants—30 total.

CUWCD Info Card
CUWCD Pencil
CUWCD Frisbee
CUWCD Balloon

TWDB Shower Flow Bag
TWDB Brochure—Being Water Smart Indoors
TWDB Brochure—Being Water Wise Outdoors

The Groundwater Foundation Bookmarks—The Water Cycle; Top Ten Ways to Protect and Conserve Groundwater

5 Minute Shower Timer

Fall 2005 CUWCD Essay and Poster Contest Participants

School	Poster	Essay	Total Students
Troy Elementary	20	20	20
Southwest Elemetary (BISD)	1	1	1
Academy Elementary	6	2	8
Home School (Belton)	1	1	1
TOTAL	**28**	**24**	**30**

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Annual Crops Clinic

Date(s): 1-24-06

Location: Bell County Expo Center

Information Distributed and Quantity: See attached.

Notes:

Item	Quantity
CUWCD	
CUWCD Brochure folder	21
CUWCD Newsletter	11
Use Water Wisely Wheels	33
Cups	16
Rulers	100
Pencils	89
Ink Pens	100
Calendars	48
Water Testing Bottles & Form	13
Certified Labs	9
Water Conservation Kits (see attached inventory)	40
Groundwater Foundation	
Groundwater Basics brochure	11
Bookmark—Top 10 Ways	8
Bookmark—Water Cycle	15
Texas Groundwater Protection Committee	
Plugging Abandoned Water Wells Brochure	24
Water Wise	
Best Management Practices—Lawn Maintenance	2
Best Management Practices—Landscape Improvements	2
Best Management Practices—Irrigation	8
TWDB	
Being Water Smart Indoors	8
Being Water Smart Outdoors	10
Lawn Watering Guide	4
Shower Flow Bags	23

Water Conservation Kits

Each water conservation kit contains the following items:

Faucet Aerator

One Touch On/Off Tap Saver

Shorter Shower Timer

7 Spray Water Saving Hose Nozzle

Moisture Meter

Shower Flow Meter Bag

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Lakeside Hills HOA meeting

Date(s)/Location: 1-27-06

Information Distributed and Quantity: 10 CUWCD 2005 Newsletters; 10 CUWCD Brochures; 20 Ink Pens; 25 Calendars.

Notes:

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: Classroom presentations

Date(s)/Location: 2-1-06 Nolanville Elementary School, 5th grade students

Information Distributed and Quantity: 145 of the following: TWDB Shower Flow bags; Groundwater Foundation Bookmarks (2)—Top 10 Ways and Water Cycle; CUWCD info cards; CUWCD rulers; CUWCD pencils; and CUWCD cups.

Notes: Presentation included powerpoint, water model, and wheel of water.

February 1, 2006
Nolanville Elementary
5th Grade
Cam Baker
760-8106

130 students (6 classes)

5 presentations as follows:

7:45 – 8:30
8:45 – 9:30
9:45 – 10:30
11:15 – 12:00 (2 classes)
12:50 – 1:35

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: CTCOG Earth Day Events

Date(s): 4-4-06 & 4-5-06

Location: Mayborn Center, Temple

Information Distributed and Quantity: 795 of the following: TWDB Shower Flow Meter Bags; CUWCD Rulers; CUWCD Pencils; CUWCD Cups; CUWCD info cards; and The Groundwater Foundation Bookmarks (398 Water Cycle; 397 Ways to Conserve Groundwater). 43 CUWCD Brochure folders.

Notes: Staff also gave eight 45 minute presentations to school children from kindergarten to eighth grade focusing on the District, groundwater basics, water conservation and water quality protection.

EARTH DAY--TUESDAY—APRIL 4, 2006

Group Number	School	Teacher	Grade Level	Students	Total
[redacted]	Immanuel Lutheran School	Kyle Knox	7^{th}-8^{th}	18	**57**
	Immanuel Lutheran School	Mrs. Buser	1^{st}-2^{nd}	14	**101**
	Immanuel Lutheran School	Alicia Knippa	3^{rd}-4^{th}	12	
	Immanuel Lutheran School	Jodi Loa	5^{th}-6^{th}	12	
	Home School	Diana Rodriguez	4th	1	
[redacted]	Leon Heights	Wendy Munz	2^{nd}	22	**44**
	Leon Heights	Dianna Spradley	2nd	22	**101**
Group 3	Scott Elementary	Carolyn Van Winkle	1^{st}	20	**60**
	Scott Elementary	Rachel Nation	1^{st}	20	
	Scott Elementary	Gwendolyn Reese	1st	20	**96**
Group 6	Hollie Parsons Elementary	Liz Medart	2^{nd}	18	**36**
	Hollie Parsons Elementary	Sheila Wright	2nd	18	**96**
[redacted]	Hollie Parsons Elementary	Jill Stickler	2^{nd}	18	**36**
	Hollie Parsons Elementary	Joyce Nichols	2nd	18	**95**
[redacted]	Scott Elemetnary	Stephanie Schels	2^{nd}	19	**59**
	Scott Elementary	Abbey Jarrell	2^{nd}	19	**95**
	Scott Elementary	Amanda Sharpe	2nd	21	
[redacted]	Scott Elementary	Ginger Kleypas	K	21	**62**
	Scott Elementary	Jamie Kallus	K	21	**62**
	Scott Elementary	Tiffany Krueger	K	20	

EARTH DAY--WEDNESDAY—APRIL 5, 2006

Group Number	School	Teacher	Grade Level	Students	Total
Group 5	West Ward Elementary	Julie Mount	2nd	14	**70**
	West Ward Elementary	Teacher X	2nd	14	
	West Ward Elementary	Teacher X	2nd	14	
	West Ward Elementary	Teacher X	2nd	14	
	West Ward Elementary	Teacher X	2nd	14	
Group 6	Miller Heights Elementary	Janell Winkler	1st	14	**42**
	Miller Heights Elementary	Nancy McClure	1st	14	
	Miller Heights Elementary	Mary Graham	1st	14	
		+ 2 teachers			
Group 7	Rogers Elementary	Linda McClure	5th	17	**64**
	Rogers Elementary	Jayne Rose	5th	15	**144**
	Rogers Elementary	Sara Fuchs	5th	15	
	Rogers Elementary	Connie Hicks	5th	17	
Group 2	Central Texas Christian	Janet Schimank	5th	15	**38**
	Central Texas Christian	Teacher X	5th	15	**144**
	St. Joseph Catholic	Robin DeVito	4th	8	
Group 3	Miller Heights Elementary	Sherry Burnett	5th	14	**42**
	Miller Heights Elementary	Teacher X	5th	14	**144**
	Miller Heights Elementary	Teacher X	5th	14.	
Group 1	Maxdale Elementary	Bonnie Holland	2nd-5th	28	**56**
	Maxdale Elementary	Teacher X	2nd-5th	28	**101**
Group 6b	Miller Heights Elementary	Jennifer Marquis	4th	15	**45**
	Miller Heights Elementary	Teacher X	4th	15	**101**
	Miller Heights Elementary	Teacher X	4th	15	

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff and PAC Member Marvin Green

Activity: Information for Distribution at East Bell WSC

Date(s): 5-23-2006

Location: Clearwater Office

Information Distributed and Quantity: See attached.

Notes: Brenda Price, East Bell WSC, called to request material to have available at their office. Marvin Green picked up the material.

Item	Quantity
CUWCD	
Literature Packets October 2004 (See attached sheet for contents)	10
CUWCD small Brochure folder	10
Slim Jim Calendars	25
CUWCD Newsletter: September 2005	10
Ink Pens	4
Annual Report: FY 05	1
Texas Cooperative Extension	
Plugging Abandoned Water Wells Brochure	10

Clearwater Underground Water Conservation District
Literature Packet
Inventory—October 2004

CUWCD

Cover letter and resource library
Bell County Aquifers
Groundwater Production
Water Use Information

American Water Works Association: 25 Facts About Water

Groundwater Foundation:

What is Groundwater?
Wells and How They Work
Contamination and Concerns
Sources of Contamination
On-Site Wastewater Treatment

H2ouse: Save Water, Money, Energy Now! Top 5 Actions

Texas Agricultural Extension Service (Aggie Horticulture):

Landscape Maintenance Practices Save Water
Lawns Don't Waste Water, People Do!
What is Xeriscape?
All Plants Have a Place in Xeriscape Landscapes

Texas Water Development Board

Major Aquifers of Texas
Minor Aquifers of Texas
Groundwater Conservation Districts: Confirmed and Pending Confirmation
Major River Basins in Texas
Regional Water Planning Groups

US Department of Agriculture/Natural Resources Conservation Service:

What on Earth Do You Know About Water?
How on Earth Do You Save Water?
How on Earth Do You Water Your Lawn?

US Environmental Protection Agency:

What Do I Need to Know to Protect My Private Drinking Water Supply?
How Can I Help to Protect My Drinking Water Supply?
What Can I Do If There is a Problem with My Drinking Water?
Water Recycling and Reuse: The Environmental Benefits

US Geological Survey: A Primer on Water Quality

WaterWise Council of Texas:

Understanding Our Water Supply
Water Demand in Texas
Supplemental Water Sources: Rainwater Harvesting & Greywater
List of Rainwater Harvesting Providers

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT

Activity Report

CUWCD Representative: Staff

Activity: September 2006 water conservation literature packet mailout

Date(s): 9-13-2006

Location: 105 school campuses in Bell County (15 private schools and 90 public schools)

Information Distributed and Quantity: 105 literature packets--See attached

Notes:

Clearwater Underground Water Conservation District
Literature Packet
Inventory—September 2006

Aggie Horticulture:

Watering Landscapes
Irrigation Systems for Xeriscape Landscapes
Mulches for Enhance, Low-Cost, Low-Maintenance Landscapes

CUWCD:

Bell County Aquifers
Clearwater District.... Who We Are
Cover Letter, Packet Inventory, and Library Resource List
Groundwater Production
Water Use Information
Water Consumption Worksheet

Groundwater Foundation:

Kids Corner—Groundwater Word Search
Kids Corner—Water Cycle Crossword
The Groundwater Gazette, Issue 2, Groundwater Contamination
Bookmark—Top 10 Ways to Protect and Conserve Groundwater
Bookmark—The Water Cycle

Kidzone:

The Water Cycle

National Drought Mitigation Center:

What is Drought?

Texas Water Development Board:

"Being Water Smart Indoors"
"Being Water-Wise Outdoors"
Map—Major Aquifers of Texas
Map—Minor Aquifers of Texas
Map—Groundwater Conservation Districts
Map—Major River Basins in Texas
Map—Regional Water Planning Groups

US Environmental Protection Agency:

Region 9 Water Programs—Water Recycling and Reuse: The Environmental Benefits
Activities: 1) Aquifer in a Cup; 2) Role of Plants in Water Filtration; 3) Water Filtration; 4) Non-Point Source Pollution
Kids Page—Nonpoint Source Pollution Word Search

USGS Water Science for Schools:

Where is Earth's Water Located?
Estimate of Global Water Distribution
Earth's Water: Rivers and Streams
Groundwater Flow

WaterWise Council of Texas:

Supplemental Water Sources—Rainwater Harvesting & Greywater

Private School Distribution

Sheila Sharp, Director
Temple Christian Center
P.O. Box 3220
Temple, TX 76505

Janet Blacklock, Principal (Elementary)
Central Texas Christian Academy
4141 W. FM 93
Temple, TX 76504

Ray Davis, Principal
Temple Christian School
3401 N. 3rd
Temple, TX 76501

Jheri Lynn Smith, Principal
Temple Montessori School
P.O. Box 2969
Harker Heights, TX 76548

Colleen McGlauphlin
Memorial Baptist Christian School
4001 Trimmier Road
Killeen, TX 76542

Rose Thompson, Principal
Richard Milburn Academy
1001 E. Veterans Memorial Blvd.
Killeen, TX 76541

Naomi Matthys, Principal
Grace Lutheran School
1007 Bacon Ranch Road
Killeen, TX 76542

Richard Worden, Principal (MS/HS)
Central Texas Christian Academy
4141 W. FM 93
Temple, TX 76504

Ardelle Hamilton, Principal
St. Mary's School
1019 South 7th Street
Temple, TX 76504

Susan Terry, Principal
Holy Trinity Catholic School
418 North 11th Street
Temple, TX 76501

David Manning, Principal
Immanuel Lutheran School
2109 W. Avenue H
Temple, TX 76504

Becky Adams, Director
Cornerstone Christian Academy
502 N. 38th Street
Killeen, TX 76541

Colvin Davis
American Preparatory Institute
P.O. Box 1800
Killeen, TX 76540

Gary Hammonds, Principal
Tabernacle Baptist School
6601 South Fort Hood Street
Killeen, TX 76542

Diane Waite, Principal
St. Joseph Catholic School
2901 E. Rancier Ave.
Killeen, TX 76543

Public School Distribution

Randy Hendricks, Superintendent (3)
Academy Independent School District
704 E. Main Street
Little River, TX 76554-9801

Dr. Vivian Baker, Superintendent (11)
Belton Independent School District
P.O. Box 269
Belton, TX 76513

Dr. Jim Hawkins, Superintendent (45)
Killeen Independent School District
P.O. Box 967
Killeen, TX 76540

Dr. Robin Battershell, Superintendent (3)
Salado Independent School District
P.O. Box 98
Salado, TX 76571-0098

Kerry Hansen, Superintendent (4)
Troy Independent School District
P.O. Box 409
Troy, TX 76579-0409

Michael Mayfield, Superintendent (3)
Bartlett Independent School District
P.O. Box 170
Bartlett, TX 76511-0170

Cindy Gunn, Superintendent (3)
Holland Independent School District
P.O. Box 217
Holland, TX 76534-0217

Katie Ryan, Superintendent (3)
Rogers Independent School District
P.O. Drawer A
Rogers, TX 76569-9998

Dr. Pam Harrison, Superintendent (15)
Temple Independent School District
P.O. Box 788
Temple, TX 76503-0788

Appendix D

NOTICE OF OPEN MEETING

BRAZOS G REGIONAL WATER PLANNING GROUP
10:00 a.m., Wednesday, November 16, 2005
Brazos River Authority Central Office
4600 Cobbs Drive, Waco, Texas

AGENDA

1. **CALL MEETING TO ORDER**

2. **INVOCATION**

3. **NOTICE OF MEETING**

4. **ATTENDANCE AND ANNOUNCEMENTS**

5. **PUBLIC INPUT - Public questions and comments on agenda items or water planning issues (limited to 5 minutes each; public must fill out a 'Request to Speak' form prior to the discussion of the agenda item).**

6. **PROGRAM**

   6.1 **Report from Texas Parks and Wildlife Department staff regarding TPWD activities (5 minutes)**

   6.2 **Report from Texas Water Development Board staff on water planning issues (5 minutes)**

   6.3 **Consider request from the Lambshead Ranch to amend the irrigation demands in Shackelford County and/or Throckmorton County (20 Minutes);**
   Possible action on foregoing

   6.4 **Review and consider changes to the 2006 Brazos G Regional Water Plan based upon the comments received regarding the Initially Prepared Plan (2 Hours);**
   Possible action on foregoing

   6.5 **Adopt the final plan and authorize the Brazos G Chair, HDR and BRA to submit the final plan to the Texas Water Development Board pending completion of the foregoing changes to the Initially Prepared Plan (5 Minutes);**
   Possible action on foregoing

7. **CONFIRMATION OF NEXT MEETING DATE;**
   Possible action on foregoing

8. **NEW BUSINESS TO BE CONSIDERED AT NEXT MEETING**

9. **ADJOURN**

"Lunch will be served during the course of the meeting for members only"

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above.

Meeting agendas and materials are available online at www.brazosgwater.org
For additional information, please contact
Teresa Clark at 254-761-3177 or via e-mail **info@brazosgwater.org**
Brazos River Authority, Administrative Agent

NOTICE OF OPEN MEETING

BRAZOS G REGIONAL WATER PLANNING GROUP

10:00 a.m., Wednesday, January 25, 2006
Brazos River Authority Central Office
4600 Cobbs Drive, Waco, Texas

AGENDA

1. **CALL MEETING TO ORDER**

2. **INVOCATION**

3. **NOTICE OF MEETING**

4. **ATTENDANCE AND ANNOUNCEMENTS**

5. **PUBLIC INPUT - Public questions and comments on agenda items or water planning issues (limited to 5 minutes each; public must fill out a 'Request to Speak' form prior to the discussion of the agenda item).**

6. **PROGRAM**

   6.1 Consider resignation of voting member Mike Morrison representing Municipalities;
   Possible action on foregoing

   6.2 Consider Executive Committee recommendations on the replacement Officer for the position of Chair; and, any other subsequent Officer and / or Executive Committee positions;
   Possible action on foregoing

   6.3 Discuss solicitation for voting member vacancy representing Municipalities;
   Possible action on foregoing

   6.4 Recognize and accept non-voting member replacement for Melissa Mullins with the Texas Parks and Wildlife;
   Possible action on foregoing

   6.5 Consider Executive Committee recommendations for revisions to the bylaws;
   Possible action on foregoing

   6.6 Consider Water Policy Workgroup recommendations:

   (a) Streamline amendments to regional water plans;
   Possible action on foregoing

   (b) Discuss responses from the Regional Water Planning Process Survey regarding the current planning process and potential new issues for future planning cycles for feedback to the TWDB;
   Possible action on foregoing

6.7 Report from Texas Parks and Wildlife Department staff regarding department activities

6.8 Report from Texas Water Development Board staff on water planning issues

7. CONFIRMATION OF 2006 MEETING CALENDAR;
Possible action on foregoing

8. NEW BUSINESS TO BE CONSIDERED AT NEXT MEETING

9. ADJOURN

"Lunch will be served during the course of the meeting for members only"

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above.

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www.brazosgwater.org
For additional information, please contact
Teresa Clark at 254-761-3177 or vía e-mail **info@brazosgwater.org**
Brazos River Authority, Administrative Agent

NOTICE OF OPEN MEETING

BRAZOS G REGIONAL WATER PLANNING GROUP

10:00 a.m., Wednesday, May 3, 2006
Brazos River Authority Central Office
4600 Cobbs Drive, Waco, Texas 76710

AGENDA

1. **CALL MEETING TO ORDER**

2. **INVOCATION**

3. **NOTICE OF MEETING**

4. **ATTENDANCE AND ANNOUNCEMENTS**

5. **PUBLIC INPUT - Public questions and comments on agenda items or water planning issues** ***(limited to 5 minutes each; public must fill out a 'Request to Speak' form prior to the discussion of the agenda item)***

6. **PROGRAM**

   6.1 Presentation for Mike Morrison, past Brazos G Chair

   6.2 Consider the Nominating Workgroup recommendation for the replacement Officer position of Vice-Chair;
   Possible action on foregoing

   6.3 Consider the Executive Committee recommendation for the voting member vacancy representing Municipalities;
   Possible action on foregoing

   6.4 Report from Texas Parks and Wildlife Department staff regarding department activities

   6.5 Report from Texas Water Development Board staff on water planning issues

   6.6 FEATURED EDUCATIONAL BRIEFING:

   "Groundwater Management Areas (GMA's)"
   Presented by
   Robert Bradley,
   TWDB Groundwater Management Area Liaison

6.7 Presentation on the TWDB Financial Assistance Programs by Bruce Crawford, Financial-Assistance Specialist

7. CONFIRMATION OF 2006 MEETING CALENDAR;
Possible action on foregoing

8. NEW BUSINESS TO BE CONSIDERED AT NEXT MEETING

9. ADJOURN

"Lunch will be served during the course of the meeting for members only"

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above.

Meeting agendas and materials are available online at
www.brazosgwater.org
For additional information, please contact
Teresa Clark at 254-761-3177 or vía e-mail **info@brazosgwater.org**
Brazos River Authority, Administrative Agent

NOTICE OF OPEN MEETING

BRAZOS G REGIONAL WATER PLANNING GROUP

10:00 a.m., Wednesday, August 9, 2006
Brazos River Authority Central Office
4600 Cobbs Drive, Waco, Texas 76710

AGENDA

1. **CALL MEETING TO ORDER**

2. **INVOCATION**

3. **NOTICE OF MEETING**

4. **ATTENDANCE AND ANNOUNCEMENTS**

5. **PRESENT INDEPENDENT FINANCIAL REPORT AND CONSIDER APPROVAL**

6. **PUBLIC INPUT - Public questions and comments on agenda items or water planning issues *(limited to 5 minutes each; public must fill out a 'Request to Speak' form prior to the discussion of the agenda item)***

7. **PROGRAM**

   7.1 FEATURED EDUCATIONAL BRIEFING:

   "Texas Instream Flow Program"
   Presented by
   Kevin Mayes, Texas Parks and Wildlife Department
   and
   Wendy Gordon, Texas Commission on Environmental Quality

   7.1 Report from Texas Parks and Wildlife Department staff regarding department activities

   7.2 Report from Texas Water Development Board staff on water planning issues

   7.3 Status report from HDR on the approved 2006 Regional Water Plan

   7.4 Consider and approve the continuation of the current HDR consulting team to prepare the 2011 regional water plan;
   Possible action on foregoing

   7.5 Consider and approve recommendation from the Scope of Work Committee for scope of work items for which TWDB funding is to be requested during the 2007-2008 biennium for development of the 2011 Brazos G regional water plan;
   Possible action on foregoing

7.6 **Consider and approve recommendation from the Scope of Work Committee to request that the TWDB consider revising water demand and supplies for institutional water user groups:**

(a) Identify as specific and separate WUGs those large institutional water users that have their own water supplies, such as TAMU; and,
Possible action on foregoing

(b) Refine Fort Hood water demands using a methodology that is not completely population-based
Possible action on foregoing

8. **CONFIRMATION OF NEXT MEETING DATE;**
Possible action on foregoing

9. **NEW BUSINESS TO BE CONSIDERED AT NEXT MEETING**

10. **ADJOURN**

"Lunch will be served during the course of the meeting for members only"

Agenda items may be considered, deliberated and/or acted upon in a different order than set forth above.

Meeting agendas and materials are available online at www.brazosgwater.org
For additional information, please contact
Teresa Clark at 254-761-3177 or vía e-mail **info@brazosgwater.org**
Brazos River Authority, Administrative Agent

Appendix E

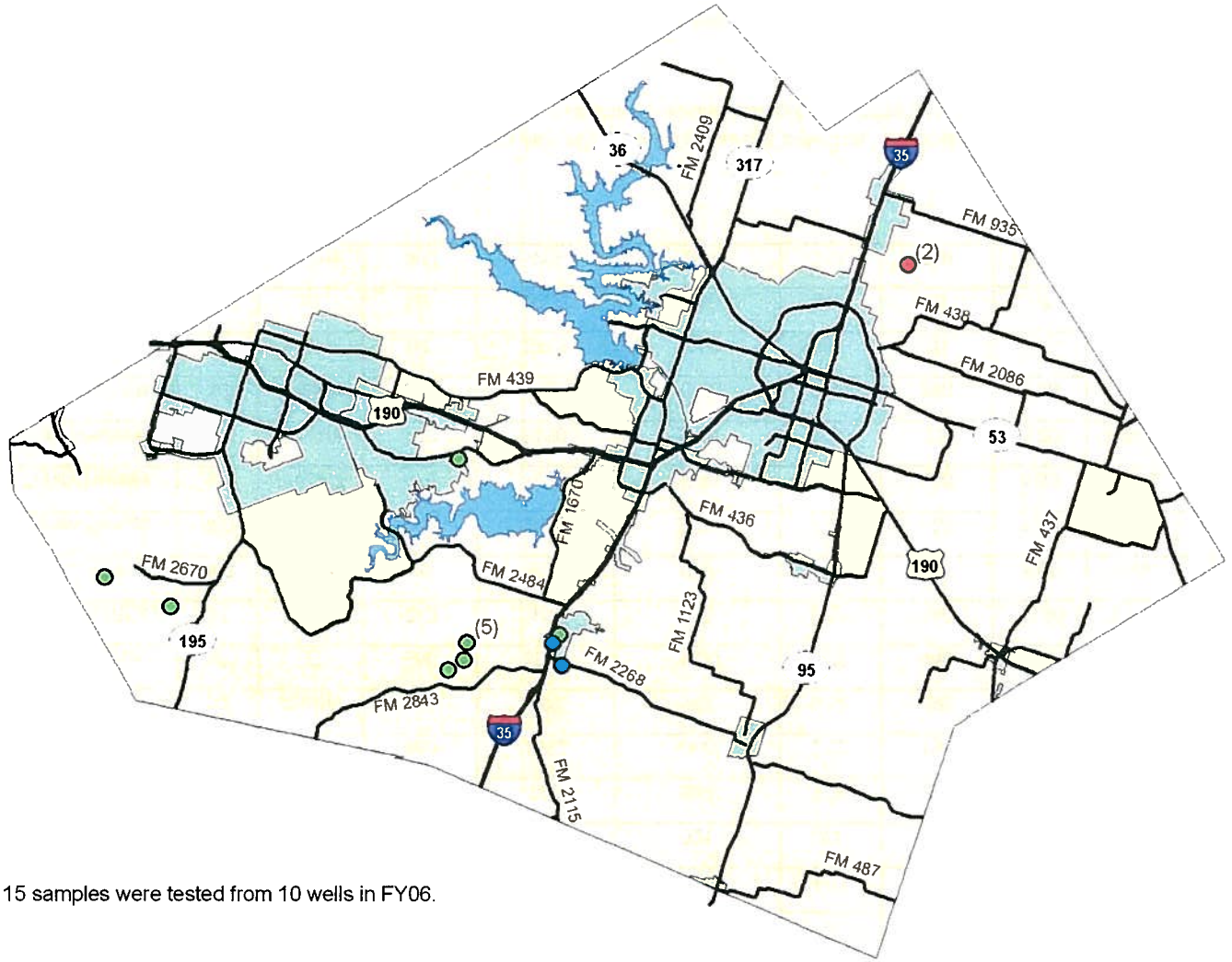
Results of Groundwater Samples Tested During FY2006[1]

Test Date	Aquifer[2]	Depth (ft)	Coliform Bacteria[3]	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)
10/25/2005	Trinity-Hensell	880	Present	340	759	625	NT[5]	100	3.20	0.050	7.7	NT	80
11/8/2005	Trinity-Hensell	450	Absent	NT	1396	921	NT	NT	NT	NT	NT	NT	NT
11/22/2005	Trinity-Hensell	600	NT	400	789	590	2.30	60	2.30	0.002	7.6	0.30	80
1/17/2006	Trinity-Hensell	780	Absent	460	1692	1442	2.30	160	3.80	0.003	7.7	0.13	80
1/31/2006	Other-Austin Chalk	30	Absent	300	368	287	0.60	290	3.70	0.003	7.2	0.22	22
2/6/2006	Trinity-Upper	277	NT	560	3980	3100	2.30	440	6.83	0.001	7.6	0.00	80
2/6/2006	Edwards (BFZ)	57	NT	270	410	270	0.30	340	12.90	0.009	7.5	0.25	15
6/27/2006	Trinity-Hensell	880	Absent	380	920	686	2.00	80	3.60	0.004	7.9	0.37	80
6/27/2006	Trinity-Hensell	880	NT	480	2850	2190	2.10	320	1.90	0.005	7.8	0.14	80
7/6/2006	Trinity-Hensell	880	Present	470	3080	2040	1.97	310	4.00	0.003	7.8	0.15	80
7/6/2006	Trinity-Hensell	880	Absent	470	3150	2130	2.00	20	5.60	0.005	7.9	0.18	80
8/1/2006	Other-Austin Chalk	30	Present	320	421	306	0.60	380	2.10	0.007	7.8	0.44	20
8/11/2006	Trinity-Hensell	880	NT	NT	2710	1316	NT	NT	NT	NT	NT	NT	NT
8/11/2006	Trinity-Hensell	880	NT	NT	2060	1086	NT	NT	NT	NT	NT	NT	NT
9/12/2006	Edwards (BFZ)	200	Absent	300	413	287	2.30	320	0.00	0.005	7.5	0.13	17

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 Turner Collie & Braden, 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.

Groundwater Samples Tested in FY2006



A total of 15 samples were tested from 10 wells in FY06.

Clearwater Underground Water Conservation District
2180 N. Main St., PO Box 729
Belton, TX 76513
March 5, 2007

3 1.5 0 3 6 9 12 Miles

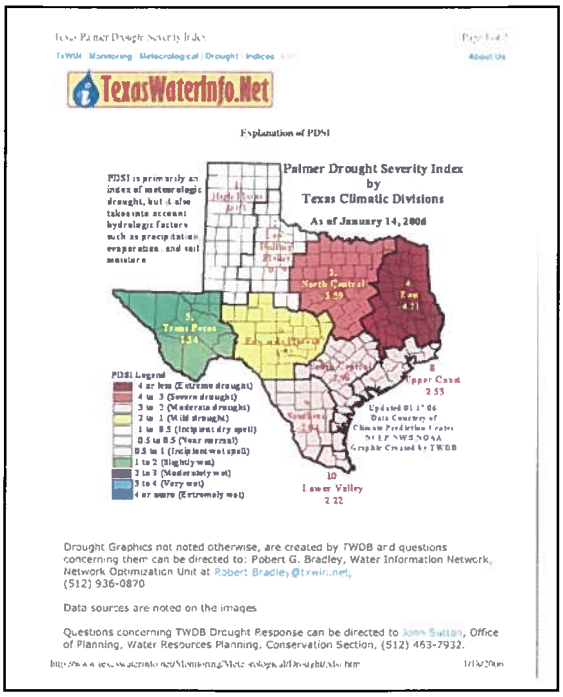
File Name | Data Type

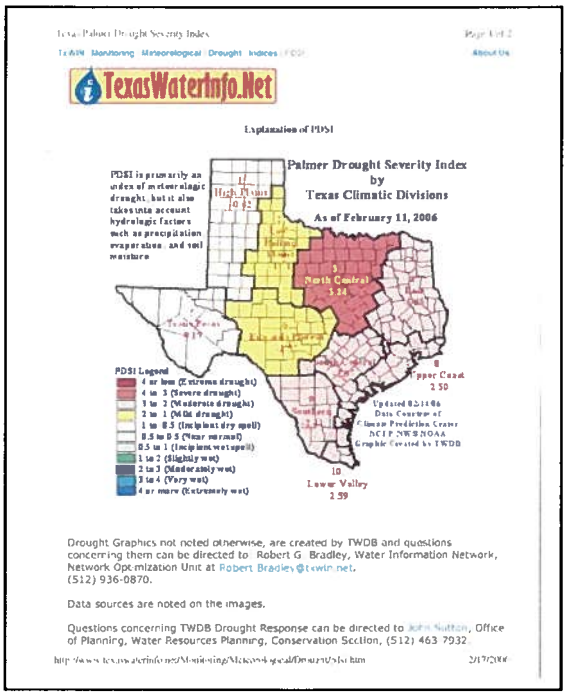
Legend

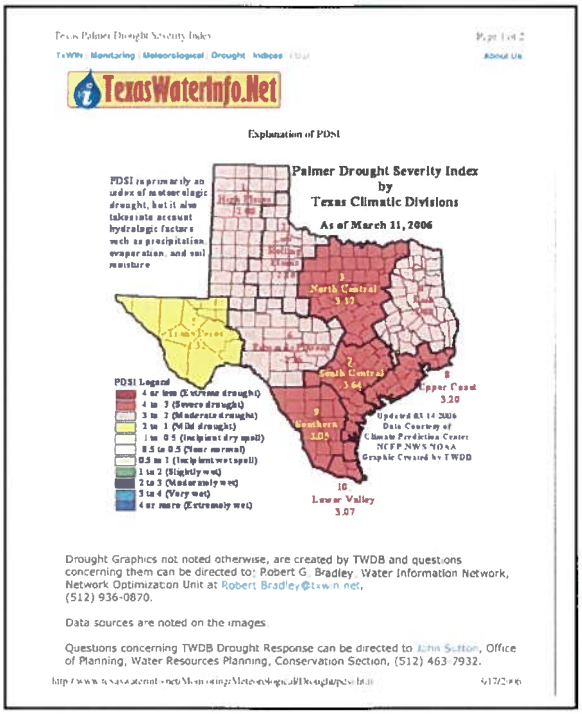
- Edwards
- Other Sources
- Trinity
- bell_city_limits

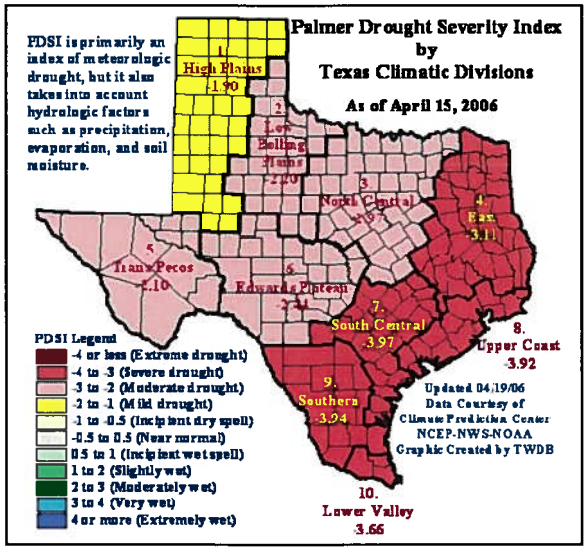
Appendix F

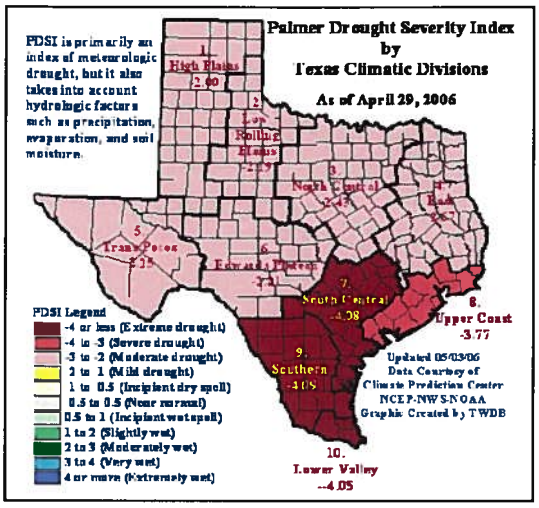
Palmer Drought Severity Index
January – September 2006

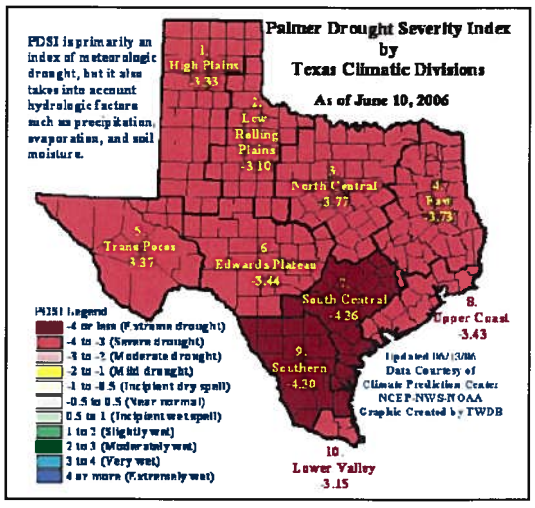


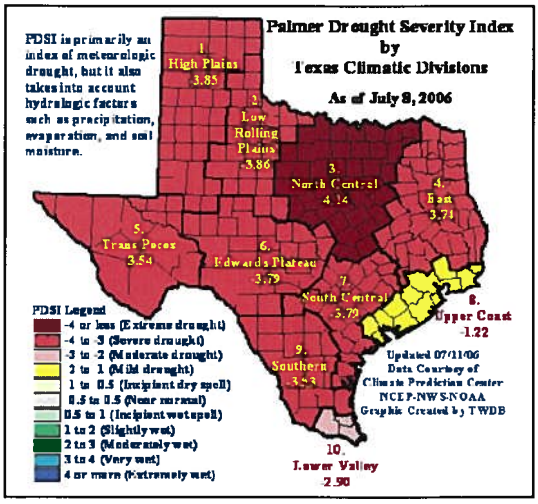


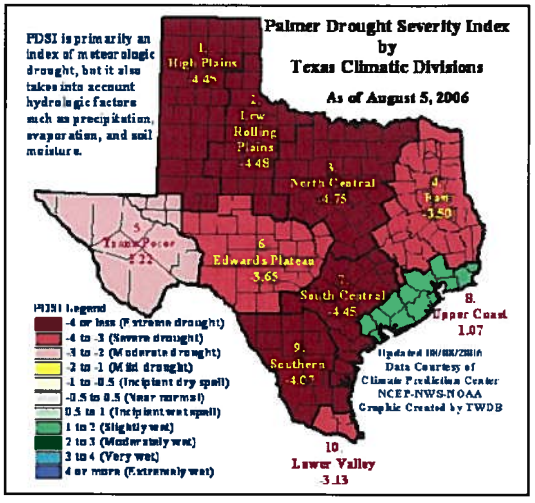


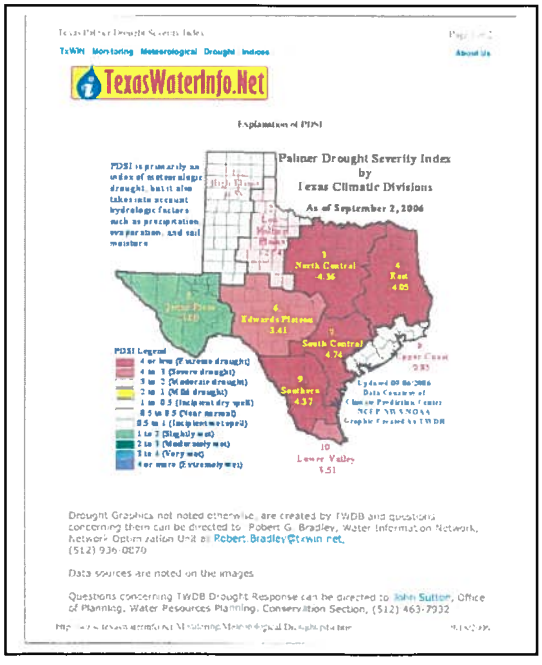



Palmer Drought Severity Index
by
Texas Climatic Divisions
As of April 29, 2006
PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture.
1. High Plains -2.90
2. Low Rolling Plains -2.29
3. North Central -2.43
4. East -2.67
5. Trans Pecos -2.25
6. Edwards Plateau -3.21
7. South Central -4.08
8. Upper Coast -3.77
9. Southern -4.05
10. Lower Valley -4.05
PDSI Legend
-4 or less (Extreme drought)
-4 to -3 (Severe drought)
-3 to -2 (Moderate drought)
-2 to -1 (Mild drought)
-1 to -0.5 (Incipient dry spell)
-0.5 to 0.5 (Near normal)
0.5 to 1 (Incipient wet spell)
1 to 2 (Slightly wet)
2 to 3 (Moderately wet)
3 to 4 (Very wet)
4 or more (Extremely wet)
Updated 05/03/06
Data Courtesy of
Climate Prediction Center
NCEP-NWS-NOAA
Graphic Created by TWDB


Palmer Drought Severity Index
by
Texas Climatic Divisions
As of June 10, 2006
PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture.
1. High Plains -3.33
2. Low Rolling Plains -3.10
3. North Central -3.77
4. East -3.73
5. Trans Pecos -4.37
6. Edwards Plateau -3.44
7. South Central -4.36
8. Upper Coast -3.43
9. Southern -4.30
10. Lower Valley -3.15
PDSI Legend
-4 or less (Extreme drought)
-4 to -3 (Severe drought)
-3 to -2 (Moderate drought)
-2 to -1 (Mild drought)
-1 to -0.5 (Incipient dry spell)
-0.5 to 0.5 (Near normal)
0.5 to 1 (Incipient wet spell)
1 to 2 (Slightly wet)
2 to 3 (Moderately wet)
3 to 4 (Very wet)
4 or more (Extremely wet)
Data Courtesy of
Climate Prediction Center
NCEP-NWS-NOAA
Graphic Created by TWDB


Palmer Drought Severity Index
by
Texas Climatic Divisions
As of July 8, 2006
PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture.
1. High Plains -3.85
2. Low Rolling Plains -3.86
3. North Central -4.14
4. East -3.71
5. Trans Pecos -3.54
6. Edwards Plateau -3.79
7. South Central -5.79
8. Upper Coast -1.22
9. Southern -3.93
10. Lower Valley -2.90
PDSI Legend
-4 or less (Extreme drought)
-4 to -3 (Severe drought)
-3 to -2 (Moderate drought)
-2 to -1 (Mild drought)
-1 to -0.5 (Incipient dry spell)
-0.5 to 0.5 (Near normal)
0.5 to 1 (Incipient wet spell)
1 to 2 (Slightly wet)
2 to 3 (Moderately wet)
3 to 4 (Very wet)
4 or more (Extremely wet)
Updated 07/11/06
Data Courtesy of
Climate Prediction Center
NCEP-NWS-NOAA
Graphic Created by TWDB


Palmer Drought Severity Index
by
Texas Climatic Divisions
As of August 5, 2006
PDSI is primarily an index of meteorologic drought, but it also takes into account hydrologic factors such as precipitation, evaporation, and soil moisture.
1. High Plains -4.48
2. Low Rolling Plains -4.48
3. North Central -4.75
4. East -3.50
5. Trans Pecos -4.22
6. Edwards Plateau -3.65
7. South Central -4.45
8. Upper Coast 1.07
9. Southern -4.07
10. Lower Valley -3.13
PDSI Legend
-4 or less (Extreme drought)
-4 to -3 (Severe drought)
-3 to -2 (Moderate drought)
-2 to -1 (Mild drought)
-1 to -0.5 (Incipient dry spell)
-0.5 to 0.5 (Near normal)
0.5 to 1 (Incipient wet spell)
1 to 2 (Slightly wet)
2 to 3 (Moderately wet)
3 to 4 (Very wet)
4 or more (Extremely wet)
Data Courtesy of
Climate Prediction Center
NCEP-NWS-NOAA
Graphic Created by TWDB


TexasWaterInfo.Net
Explanation of PDSI
Palmer Drought Severity Index
by
Texas Climatic Divisions
As of September 2, 2006
Drought Graphics not noted otherwise, are created by TWDB and questions concerning them can be directed to Robert G. Bradley, Water Information Network, Network Optimization Unit at Robert.Bradley@twdb.net, (512) 936-0870
Data sources are noted on the images
Questions concerning TWDB Drought Response can be directed to John Sutton, Office of Planning, Water Resources Planning, Conservation Section, (512) 463-7932

DROUGHT PREPAREDNESS COUNCIL

RICK PERRY
Governor

5805 N. Lamar Blvd.
P.O. Box 4087
Austin, Texas 78773-0220
Phone: (512) 424-2138
Fax: (512) 424-2444

JACK COLLEY
Council Chairman

March 9, 2006

TO: Governor Rick Perry
Lieutenant Governor David Dewhurst
Secretary of State Roger Williams
Senator Jeff Wentworth, President Pro Tempore of the Senate
Speaker Tom Craddick, Speaker of the House, State of Texas
Senator Steve Ogden, Chairman, Senate Finance Committee
Senator Kenneth Armbrister, Chairman, Senate Natural Resources Committee
Senator Todd Staples, Chairman, Senate Infrastructure Development & Security Committee
Representative Jim Pitts, Chairman, House Appropriations Committee
Representative Robert Puente, Chairman, House Natural Resources Committee
Representative Rick Hardcastle, Chairman, House Agriculture & Livestock Committee
Representative Terry Keel, Chairman, House Criminal Jurisprudence Committee
Deidre Delisi, Governor's Chief of Staff
Steven McCraw, Director of Homeland Security

FROM: Jack Colley, Chairman, Drought Preparedness Council

SUBJECT: Statewide Drought Situation Report

1. Next Council Meeting

March 23, 2006 at 2:00 p.m. at the Texas Department of Public Safety Headquarters in the Commissioners' Conference Room, 5805 N. Lamar Blvd., Austin, Texas.

Jack Colley, Chairman
Governor's Division of Emergency Mgmt

John Sutton, Member
Texas Water Development Board

Richard Egg, Member
State Soil & Water Conservation Board

Palmer Scully, Member
Texas Department of Agriculture

Dr. Travis Miller, Member
Texas Cooperative Extension

Cindy Loeffler, Member
Texas Parks & Wildlife Department

Scott Alley, Member
Texas Department of Transportation

Harvey R. Everheart, Member
Texas Alliance of Groundwater Districts

Paul Tabor, Member
Texas Department of State Health Services

Bill Billingsley, Member
Texas Commission on Environmental Quality

Thomas Walker, Member
Office of the Governor
Economic Development & Tourism

Judith Jenness, Member
Texas Department of Housing and Community Affairs

Bobby Young, Member
Texas Forest Service

Gus Garcia, Member
Office of Rural Community Affairs

Dr. John W. Nielsen-Gammon, Member
Office of the State Climatologist

2. General Conditions

The past thirty days were again drier than normal for most parts of Texas. The only areas receiving significant above-normal rainfall were near Midland, Dallas-Fort Worth, and Lufkin. Elsewhere, conditions continued to deteriorate.

The most rapid deterioration is taking place in South Texas. Rainfall for the past month was less than a quarter of normal, and some areas between San Antonio and Corpus Christi received less than a third of their normal rainfall over the past six months. The Texas Panhandle has been seriously dry over the past few months as well. Rainfall has been spotty in both South Texas and the Panhandle, with drought conditions varying considerably from county to county.

Based on preliminary data, the past twelve months, March 2005 through February 2006, were the fourth-driest March-February period on record for the state as a whole, and the driest since 1963-1964.

The ten driest such periods were:

Year	Precipitation (in.)
1917-1918	14.90
1956-1957	15.69
1924-1925	19.60
2005-2006	19.88
1901-1902	19.91
1954-1955	20.12
1910-1911	20.32
1951-1952	20.93
1963-1964	21.27
1939-1940	21.52

Weak La Nina conditions in the Pacific continue and so imply a higher than normal chance for a dry spring. The summer outlook is uncertain, due to the low predictability of summertime precipitation in Texas, however, even normal summertime conditions seem likely to exacerbate drought stress across most of the state.

The CPC predicts the western half of Texas will experience below normal precipitation and above normal temperatures for all of the state from March 2006 to May 2006.

The CPC predicts that the northern half of the state will experience below normal precipitation and above normal temperatures for all of the state from April 2006 to June 2006.

National Oceanic and Atmospheric Administration (NOAA) Seasonal U.S. Drought Outlook indicates drought conditions to intensify or persist in the western two-thirds of the state, while conditions improve in the eastern one-third of Texas.

3. Overall Statewide Drought Conditions

The South Central region is experiencing "Severe Drought" conditions and the North Central, East, Upper Coast, Southern, and Lower Valley are under "Moderate Drought Conditions. In addition, the High Plains, Low Rolling Plains, and Edwards Plateau

regions are under "Mild Drought" conditions, according to the Palmer Drought Severity Index (PDSI). The PDSI varies from moderately wet, to slightly wet, incipient wet spell, near normal, incipient dry spell, mild drought, moderate drought, severe drought, and extreme drought in order of increasing severity.

The Crop Moisture Index (CMI) indicates "Abnormally Dry" conditions in the Southern and Lower Valley regions. The High Plains, Rolling Plains, Trans-Pecos, Edwards Plateau, and Southern regions are experiencing "Mildly Dry" Conditions. The CMI varies from flooding, to standing water, moisture adequate, mildly dry, abnormally dry, excessively dry, severely dry, and extremely dry in order of increasing severity.

The Six-Month Standardized Precipitation Index (SPI) indicates that at the end of January the North Central region is under "Extremely Dry" conditions, and the High Plains, Low Rolling Plains, East, Edwards Plateau, South Central, and Lower Valley regions were experiencing "Severely Dry" conditions. In addition, the Upper Coast and Southern regions are under "Moderately Dry" conditions.

Statewide storage in major reservoirs was at 27.1 million acre-feet (AF) (78.6% of conservation storage capacity) below normal for this time of year. During February, storage increased 0.41 million AF (+1.2% of conservation storage capacity). Compared to February of 2005, storage was down 4.4 million AF (-12.6%) statewide. The Trans-Pecos Region was the only region with percentage increase (+2.0%) in storage over the year. The rest of the regions had decreases in storage over the year with the South Central Region having the largest percentage decline (-19.9%), followed by the North Central Region (-15.5%), the East Texas Region (-14.1%), the Upper Coast Region (-10.0%), the Edwards Plateau Region (-7.3%), the High Plains Region (-6.8%), the Southern Region (-1.6%), and the Low Rolling Plains Region (-1.0%). Storage is at 100 percent of capacity in three reservoirs, the same as in last month.

Amistad Reservoir held 86.1% of conservation storage capacity. Storage went down (-1.3%) during February. Falcon Reservoir held 58.2% of conservation storage capacity. Its total storage contents went down (-1.0%) during February.

There is only one reservoir with less than ten percent of conservation storage capacity, which is Palo Duro Reservoir in the High Plains Region (2.8%).

In February of 2006, the twenty-eight day mean flows at index stations were high at two stations, near normal at nineteen stations, and low at two stations. In comparison to January of 2006, flows increased at nineteen and decreased at ten index stations. Flows were below normal in the North Central and the Upper Coast Regions, and near normal in all other regions.

Water level measurements were available for six of the seven key monitoring wells. Water levels rose in four of the monitoring wells since the beginning of February, ranging from 0.58 feet in the El Paso Co. (Bolson Deposits) well to 3.14 feet in the Harris Co. Evangeline well. Water levels declined in the remaining two monitoring wells, ranging from 0.42 feet in the Atascosa Co. Carrizo well to 3.05 feet in the Bexar Co. J-17 well. The J-17 well recorded a water level of 57.52 feet below land surface. This water level is approximately 22 feet above the Stage 1 critical management level.

4. Water Utility Status

March 2006 began with 108 public water systems requesting their customers to reduce outside water usage by following restrictions. Of the 108 systems, 44 are asking their customers to follow mandatory watering restrictions based on address, day of the week, and time of day. Also, 64 systems are asking for voluntary reductions. The recent light rain in areas of the state has helped temporarily, but significant rainfall is needed to recharge well supplies and increase lake levels. If the general lack of rainfall continues, it is expected that additional systems will see a significant increase in usage resulting in reaching the triggers of their Drought Contingency Plans and restricting customer usage.

5. Water Rights – Statewide

Surface water conditions have worsened in most of the State during the month of February 2006, approaching severe drought conditions in some parts of the State. An increasing number of drought complaint calls were received by the TCEQ. Stream flows in the major river basins were sufficient to meet requirements of the water right owners of record and no imposed restrictions were necessary. Applications for new water use permits and amendments to existing permits remained near-normal for the month, as did applications for the reuse of return flows (treated effluent). In all of the State, available water for new appropriations is decreasing, and the search for long-term, dependable alternate sources of water remains a priority issue.

6. Water Rights – Lower Rio Grande / Rio Grande Watermaster (RGWM)

As of February 18, 2006, the U.S. combined ownership at Amistad/Falcon stands at 94.52% of conservation capacity (3,143,933) AF, down from 95.37% (3,172,308 AF) a year ago at this time. Overall the system is holding 73.33% (4,257,036 AF) of conservation capacity with Amistad at 86.08% (2,712,630 AF) and Falcon at 58.20% (1,544,399 AF). Mexico has 44.90% (1,113,102 AF) of the water it could store at Amistad/Falcon.

Recent U.S. shares in the Amistad/Falcon reservoir systems are as follows:

YEAR	U.S. SHARE (%)	TOTAL (ACRE-FEET)
1994	65.7	2,271,609
1995	47.7	1,587,370
1996	35.6	1,183,637
1998	39.8	1,324,700
1999	40.8	1,357,939
2000	41.7	1,387,125
1997	36.5	1,215,254
2001	32.49	1,080,676
2002	34.76	1,156,072
2003	51.60	1,716,273
2004	95.37	3,172,308
2005	94.52	3,143,933

(Note: Numbers for previous years are the levels at the end of the year.)

7. South Texas Watermaster – Guadalupe / Lavaca / San Antonio / Nueces Region

The South Central area of Texas continues to be under severe drought conditions. Rivers in this area continue a slow decline and surface water conditions are not favorable as spring irrigation season is nearing. Some scattered showers have fallen and much more is needed. Curtailments of diversions will most likely be necessary soon if conditions do not improve.

Very small amounts of rainfall, ranging 0.0 to 0.50 inches, in the areas of Bee, Goliad, Victoria, Calhoun, Jackson, Refugio, Aransas, San Patricio, Nueces, Kleberg, Jim Wells, Duval, Live Oak, Kenedy, Willacy, Brooks, and Jim Hogg counties, were received during the month of February. The coastal bend area received some much-needed rainfall during the weekend of February 25, 2006. Most of the surface water diversions in the South Central were for municipal and industrial uses with very little diversions for irrigation.

Most of the stream flows of the major and intermittent streams of the area, except the Guadalupe River near Victoria continue to drop and are currently flowing below the average for this time of the year.

Little inflows have occurred into the Corpus Christi Reservoir System. Choke Canyon is at 87.4% capacity compared to 100 percent capacity during this same time last year. Lake Corpus Christi is at 67.4% capacity compared to 100 percent capacity during this same time last year. The combined percent of capacity for both reservoirs is 79.2% compared to 100 percent this same time last year. Approximately half of the current water use by the City of Corpus Christi is being supplied by Lake Texana.

Dimmit, Zavala , Edwards, Real, and La Salle counties received 0.4 to 0.75 inches of rainfall for the month of February. The Lavaca area has received slightly more rain but not a significant amount. Lake Texana is at 84 percent capacity. Most streamflows throughout this area have decreased with exceptions of Guadalupe River near Cuero and Atascosa River near Whittset showing no change in streamflows.

The Hill Country area, counties of Bandera, Blanco, Comal, Kendall, Kerr, and Real, measured one-half inch of rainfall for the month of February. Small creeks have ceased to flow while the major streams are flowing below their monthly means. Most surface water used was for municipal use with low to moderate irrigation.

Bastrop, Bexar, Blanco, Caldwell, Comal, Fayette, Frio, Guadalupe, Hays, and Medina counties experienced poor rainfall and conditions. No measurable rainfall fell in the San Antonio Regional Area during the month of February. Month to date rainfall measured at the San Antonio International Airport was 0.19 inches, average for February is 1.75 inches. Small creeks and streams have dried up. Ground moisture is poor. Stream flows continue to drop well below average for the month of February.

8. Upper Colorado and Concho Rivers

The upper Colorado River and Concho River area received less than normal precipitation during the month of February. The National Weather Service in San Angelo reported monthly precipitation to be 0.64 inches in February. The monthly precipitation was 0.54 inches below normal. Many area tributaries in the Concho and upper Colorado watersheds are flowing near the normal USGS averages. The pool levels of the major area reservoirs, such as O.C. Fisher (eleven percent), Twin Buttes (32 percent), Lake Nasworthy (83 percent), EV Spence (seventeen percent), OH Ivie (51percent), have

declined slightly, except for Twin Buttes Reservoir increasing slightly.

9. Texas Panhandle and Southern High Plains

Very little measurable precipitation was reported for the Amarillo area. The National Weather Service in Amarillo reported 0.05 inches of rain for February. Rain is badly needed. All of the lakes are at low levels, Lake Greenbelt is at 58 feet; up 0.28 feet from February 1, 2006, and Lake MacKenzie is down 0.6 feet, to 80.88 feet since the first of February. Lake Meredith is down 0.68 feet to 60.08 feet since the first of February.

Lubbock received only a small amount of precipitation for the month of February (0.18 inches) bringing the total for the calendar year of 2006 is 0.18 inches. This is 1.03 inches below the normal annual amount of precipitation expected by the end of February in the Lubbock area.

10. Agricultural Concerns

Many areas that received moisture the previous week were now beginning the see the benefits. Along with the full sun and warm temperatures, the increased rain brought some grasses out of dormancy and greened-up the countryside. The most improvement was realized in central and eastern regions where summer crop planting gained momentum. The rest of the state remained extremely dry and was still in great need of moisture. Pre-planting and pasture irrigation increased in western areas. Supplemental feeding was still necessary in all areas but decreased in locations that saw pasture improvement. The scarcity and expense of hay forced many cattle producers to continue herd reductions. Cattle body conditions continued to show signs of poor forage availability.

A comparison of reported cattle auction receipts discloses a seven percent increase through March 3, 2006, a total of 218,1506 head, compared to March 4 2005, 202,574 head. The main reason of this difference the rain in some areas limiting receipts for one week and then gave some hope that they can hold on for a while.

Range conditions are 83 percent in poor to very poor condition and seventeen percent in fair condition. Native range and pastures were recovering and coming out of dormancy in areas due to the recent rainfall last weekend. Any improvement would be temporary unless a lot more additional precipitation is realized. Small grain pastures were grazed to the ground in dry land areas and so only irrigated grazing remained.

Shrimp producers were trying to predict market conditions before filling ponds in the Trans-Pecos region.

Wheat pastures displayed only short to very short progress with just the irrigated wheat showing much growth. Many irrigated wheat producers on the Plains were deciding whether or not to apply top dressing fertilizer to marginal fields. In Central and North Central Texas, fields began to break dormancy and green-up. In South Texas, some fields have begun to head out while others were baled for hay. Statewide, wheat condition was rated mostly poor to very poor and oat condition was rated mostly very poor.

Cotton producers on the Plains were busy listing fields and some were applying yellow fertilizer. Many growers were still awaiting rain before beginning any fieldwork. Planting was ongoing in the Rio Grande Valley and was expected to begin a gaining momentum on the Coastal Bend. Corn planting began on the Blacklands and continued throughout

all southern regions. Producers took advantage of rain that fell last weekend. It remained to be seen if enough moisture would be available over the growing season. All areas still suffer from long-term drought. On the Plains, land preparation continued. Sorghum planting continued in the Rio Grande Valley and Coastal Bend. Some earlier planted fields were emerging. Land preparation was ongoing in other areas. Planting began on a limited basis on the Upper Coast and was expected to start in Central Texas shortly.

The fruit, vegetable, and specialty crop report in the Rio Grande Valley reflects the harvest of grapefruit and naval oranges has continued. In the San Antonio-Winter Garden, the cabbage and spinach harvest carried on. All crops remained under heavy irrigation. In the Trans-Pecos Region, good stands of winter onions were reported. Grapes were being watered for the first time this season. In East Texas, onion planting was ongoing. The preparations continued for the spring vegetables while sweet potato growers were plowing fields.

11. Drought Impacts to Wildlife

While many Central Texas reservoirs are feeling the effects of the drought, most of them are doing reasonably well as far as fishing is concerned. However there are a few lakes that are experiencing some problems with access. They are Lake Benbrook due to no boat access; Lake Grapevine has several boat ramps closed as does Lake Lewisville, and Eagle Mountain Lake. Lake Belton has one boat ramp closed on the very upper end of the lake.

12. Wildfire Concerns

The Keetch-Byram Drought Index (KBDI) is used to help determine potential for fire risk. It is a numerical index where each number is an estimate of the amount of precipitation (in 100ths of an inch) needed to bring the soil back to saturation. The index ranges from 0 to 800, with 0 representing a saturated soil, and 800 a completely dry soil. The KBDI's relationship to fire danger is that as the index increases, the vegetation is subjected to increased moisture stress. KBDI levels and its relationship to expected fire potential are reflected in the following:

KBDI = 0 – 200: Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. This is typical of spring dormant season following winter precipitation.

KBDI = 200 – 400: Typical of late spring; early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity.

KBDI = 400 – 600: Typical of late summer, early fall. Lower litter and duff layers contribute to fire intensity and will burn actively.

KBDI = 600 – 800: Often associated with more severe drought and increased wildfire occurrence. Intense, deep-burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels.

There are currently 170 counties, illustrated in Attachment 2, with KBDI values in excess of 400, indicating that areas within these counties are beginning to experience dry conditions, which could result in an increased fire risk potential.

The Council, which is chaired by Jack Colley of the Governor's Division of Emergency Management, is composed of state agencies concerned with the effects of drought and fire on the citizens of the State of Texas. The attached information was compiled and provided by representatives listed below. Points of contact, telephone numbers, and web site addresses are also provided.

Jack Colley, Governor's Division of Emergency Management, (512) 424-2443, fax (512) 424-2444, web site: http://www.txdps.state.tx.us/dem

John Sutton, Texas Water Development Board, (512) 463-7988, fax (512) 463-9893, web site: http://www.twdb.state.tx.us

Bill Billingsley, Texas Commission on Environmental Quality, (512) 239-1697, fax (512) 239-4770, web site: http://www.tceq.state.tx.us

Richard Egg, Texas State Soil & Water Conservation Board, (254) 773-2250, fax (254) 773-3311, web site: http://www.tsswcb.state.tx.us

Palmer Scully, Texas Department of Agriculture, (512) 475-1611, fax (512) 463-5837, web site: http://agr.state.tx.us

Dr. Travis Miller, Texas Cooperative Extension, (979) 845-4008, fax (979) 845-0604, web site: http://soilcrop.tamu.edu

Cindy Loeffler, Texas Parks & Wildlife Department, (512) 912-7015, fax (512) 707-1358, web site: http://www.tpwd.state.tx.us

Judith Jenness, Department of Housing and Community Affairs, (512) 475-2135, Fax (512) 475-7498, web site: http://www.tdhca.state.tx.us

Bobby Young, Texas Forest Service, (936) 639-8100, fax: (936) 639-8118, web site: http://txforestservice.tamu.edu

Scott Alley, Texas Department of Transportation, (512) 416-3187, fax (512) 416-2941, web site: http://www.dot.state.tx.us/

Paul Tabor, Texas Department of State Health Services, (512) 458-7126, fax (512) 458- 7472, web site: http://www.dshs.state.tx.us/

Thomas Walker, Office of the Governor, Economic Development & Tourism, (512) 936-0169, fax (512) 936-0141, web site: http://www.governor.state.tx.us/divisions/ecodev

Harvey Everheart, Texas Alliance of Groundwater Districts, (806) 872-9205, fax (806) 872-2838, web site: http://www.texasgroundwater.org/

Dr. John W. Nielsen-Gammon, Office of the State Climatologist, (979) 862-2248, fax (979) 862-4466, web site: http://www.met.tamu.edu/osc/

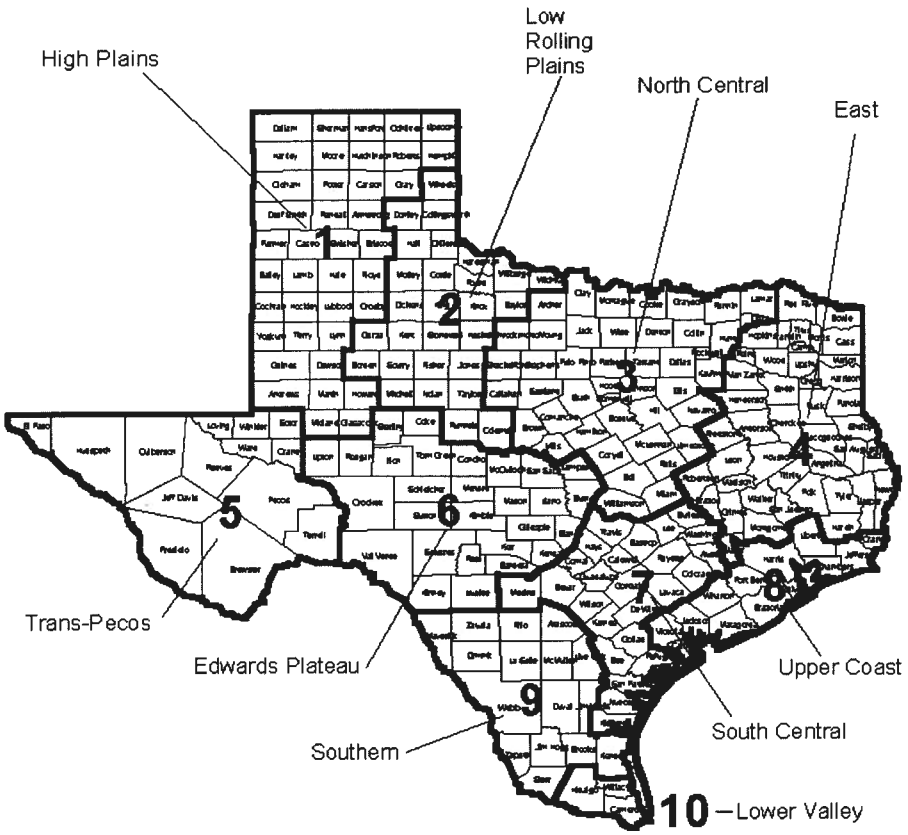
Gus Garcia, Office of Rural Community Affairs, (512) 936-7876, fax (512) 936-6776, web site: http://www.orca.state.tx.us

cc:

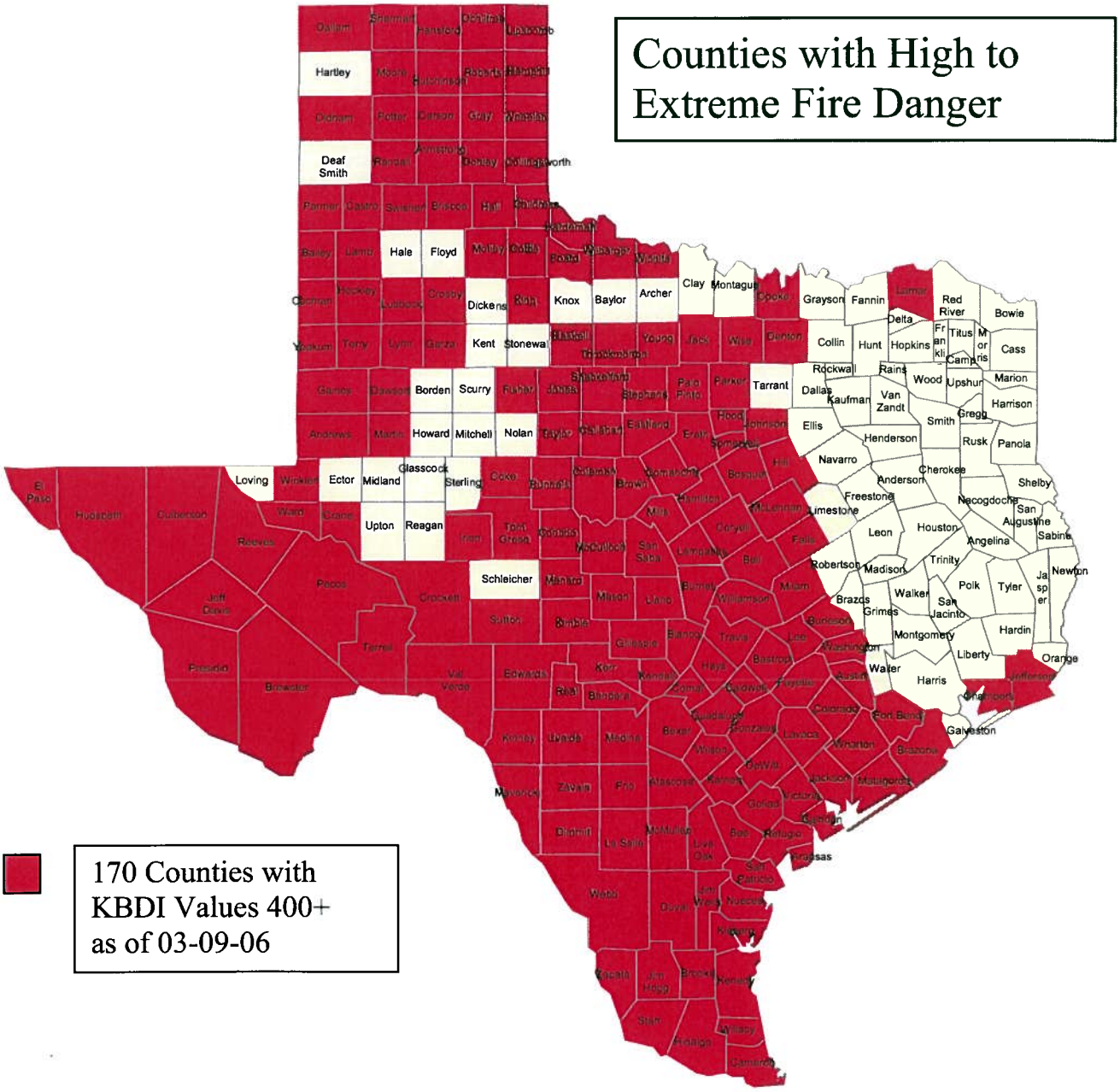
Stephen McCraw, Office of the Governor
Jim Harrison, Office of the Governor
Amy Jeter, Committee Clerk, Senate Finance Committee
Kelly Gilbert, Committee Clerk, Senate Natural Resources Committee
Matt Ogden, General Counsel, Senate Infrastructure Development & Security
Cristina Self, Committee Clerk, House Appropriations Committee
Hope Wells, Committee Clerk, House Natural Resources Committee
Shannon Sneary, Committee Clerk, House Agriculture and Livestock Committee
Damian Duarte, Committee Clerk, House Criminal Jurisprudence Committee
Zak Covar, Governor's Policy Office
Logan Spence, Governor's Policy Office
Bruce Gibson, Lt. Governor's Chief of Staff
Carmen Cernosek, Lt. Governor's Natural Resources Policy Analyst
Roger Williams, Secretary of State's Office
Greg Abbott, Attorney General's Office
Ernest Angelo, Jr., Chairman, Public Safety Commission
Carlos H. Cascos, Member, Public Safety Commission
Colonel Thomas Davis, Director, Department of Public Safety
Lieutanant Colonel David McEathron, Assistant Director, Department of Public Safety
Burton Christian, Chief, Administration, Department of Public Safety
Shaniqua Johnson, Legislative Budget Board, Department of Public Safety
Tom Lambert, Legislative Budget Board, Department of Public Safety
Ed Perez, Texas Office of State-Federal Relations, Washington, DC

Attachment 1

CLIMATIC REGIONS



Attachment 2



DROUGHT PREPAREDNESS COUNCIL

RICK PERRY
Governor

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P.O. Box 4087
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JACK COLLEY
Council Chairman

July 6, 2006

TO: Governor Rick Perry
Lieutenant Governor David Dewhurst
Secretary of State Roger Williams
Senator Jeff Wentworth, President Pro Tempore of the Senate
Speaker Tom Craddick, Speaker of the House, State of Texas
Senator Steve Ogden, Chairman, Senate Finance Committee
Senator Kip Averitt, Chairman, Senate Natural Resources Committee
Senator John Corona, Chairman, Senate Transportation and Homeland Security Committee
Representative Jim Pitts, Chairman, House Appropriations Committee
Representative Robert Puente, Chairman, House Natural Resources Committee
Representative Rick Hardcastle, Chairman, House Agriculture & Livestock Committee
Representative Terry Keel, Chairman, House Criminal Jurisprudence Committee
Deidre Delisi, Governor's Chief of Staff
Steven McCraw, Director of Homeland Security

FROM: Jack Colley, Chairman, Drought Preparedness Council

SUBJECT: Statewide Drought Situation Report

1. Next Council Meeting

August 10, 2006, at 2:00 p.m. at the Texas Department of Public Safety Headquarters in the Governor's Conference Room, 5805 N. Lamar Blvd., Austin, Texas.

Jack Colley, Chairman
Governor's Division of Emergency Mgmt

John Sutton, Member
Texas Water Development Board

Richard Egg, Member
State Soil & Water Conservation Board

Palmer Scully, Member
Texas Department of Agriculture

Dr. Travis Miller, Member
Texas Cooperative Extension

Cindy Loeffler, Member
Texas Parks & Wildlife Department

Scott Alley, Member
Texas Department of Transportation

Harvey R. Everheart, Member
Texas Alliance of Groundwater Districts

Paul Tabor, Member
Texas Department of State Health Services

Bill Billingsley, Member
Texas Commission on Environmental Quality

Thomas Walker, Member
Office of the Governor
Economic Development & Tourism

Judith Jenness, Member
Texas Department of Housing and Community Affairs

Bobby Young, Member
Texas Forest Service

Gus Garcia, Member
Office of Rural Community Affairs

Dr. John W. Nielsen-Gammon, Member
Office of the State Climatologist

2. General Conditions

With an upper-level low parked over Texas, the drought situation is changing daily. According to the most recent National Weather Service's Drought Information Statement, though, the last week has brought more beneficial rainfall across most sections of the Hill Country and South Central Texas. However, very dry conditions continue across all of the western and southern sections of South Central Texas. June rainfall amounts were higher than most months so far in 2006 but still were below the 30-year normals. The last week has provided several opportunities for rainfall. Due to the long-term lack of rainfall and warmer than normal temperatures, severe to exceptional drought conditions remain across the region according to the National Drought Monitor. Temperatures continue to run above normal as well.

3. Overall Statewide Drought Conditions

The Climate Prediction Center (CPC) predicts the western half of Texas will experience below normal precipitation from July 2006 to September 2006 with equal changes of above normal, normal, or below normal precipitation. During the same period, the CPC predicts above normal temperatures for all of the state. The National Oceanic and Atmospheric Administration (NOAA) Seasonal U.S. Drought Outlook indicates drought conditions are likely to improve and impacts will ease along the Texas Gulf Coast. The conditions in most of the state will be continued drought or with some improvement toward the Gulf Coast.

The Crop Moisture Index (CMI) indicates "Extremely Dry" conditions in the Low Rolling Plains and Edwards Plateau. The High Plains, North Central, and South Centrals are experiencing "Severely Dry" conditions. The remainder of the state is under "Abnormally Dry" to "Moisture Adequate" conditions. The CMI varies from flooding, to standing water, moisture adequate, mildly dry, abnormally dry, excessively dry, severely dry, and extremely dry in order of increasing severity. The North Central, South Central, Southern, and Lower Valley regions are also experiencing "Extreme Drought" conditions.

The High Plains, Low Rolling Plains, East, Trans Pecos, and Edwards Plateau regions are under "Severe Drought" Drought Conditions, according to the Palmer Drought Severity Index (PDSI). The PDSI varies from moderately wet, to slightly wet, incipient wet spell, near normal, incipient dry spell, mild drought, moderate drought, severe drought, and extreme drought in order of increasing severity.

Ninety-eight water supply systems are under mandatory water use restrictions according to the Texas Commission on Environmental Quality's (TCEQ) list of Public Water Supplies Effected by Drought. Another sixty-two community water supply systems are under voluntary water use restrictions.

The Keetch-Byram Drought Index (KBDI) indicates areas with high fire danger include High Plains, East Texas, Trans Pecos, Southern, and Lower Valley regions. The KBDI is a drought index specifically used to describe potential or expected fire behavior. The index is classified as Low, Moderate, High or Extreme fire danger, in order of increasing severity. Additionally, the Texas Forest Service reports Outdoor Burning Bans for 137 Counties.

4. Water Utility Status

The increased temperatures and lack of rain in areas of the state have resulted in numerous public water supplies reaching the triggers of their Drought Contingency Plan. July 2006 began with 160 systems on outside water use restrictions. Of these 160 systems, 98 are requiring customers to adhere to mandatory restrictions based on address and day of the week and 62 are asking that customers voluntarily reduce usage. As the summer progresses and rain events continue to decrease, additional public water suppliers will mandate restrictions.

5. Water Rights – Statewide

Rains during the month of June provided little relief of the dry conditions in the state. Stream flow in most of the major river basins was, however, sufficient to meet requirements of the water right owners of record, and few imposed restrictions were necessary in a large part of the state. Water rights owners in the Waco, Highbank, Hempstead, and Richmond areas were required to curtail diversion from the Brazos River for irrigation purposes for all of the month. Diversion restrictions for owners of Term Water Use Permits above Lake Proctor have not yet been necessary. Applications for new water use permits and amendments to existing permits remained near normal for the month, as did applications for the reuse of return flows (treated effluent). The availability of unappropriated water for new water use permits is decreasing rapidly in the State and the search for long-term, dependable alternate sources of water remains a high priority issue.

6. Water Rights – Lower Rio Grande / Rio Grande Watermaster (RGWM)

As of June 24, 2006, the U.S. combined ownership at Amistad/Falcon stands at 79.04 percent of conservation capacity [2,629,133 AF (acre feet)], down from 95.52 percent (3,177,172 AF) a year ago at this time. Overall, the system is holding 59.45 percent (3,451,191 AF) of conservation capacity with Amistad at 77.13 percent (2,430,503 AF) and Falcon at 38.46 percent (1,020,682 AF). Mexico has 33.16 percent (822,058 AF) of the water it could store at Amistad/Falcon.

Except for welcomed tropical moisture in the extreme lower Rio Grande (Cameron County) in late June and early July (1st & 2nd), the basin has remained very dry and hot. Flows in the upper Rio Grande between Fort Quitman and the confluence with the Concho have been extremely low. Three apparently unauthorized on-channel earthen dams have been reported in the "forgotten river" portion of the Rio Grande (Fort Quitman to the Concho), which has contributed to the reduced flows. The Rio Grande Watermaster program is coordinating a response with the International Boundary and Water Commission to investigate and remove these obstructions.

Due to prolonged drought, reduced flows, and evaporative losses, releases of U.S. water from Amistad to Falcon have been reduced. Yearly evaporative loss comparisons of Amistad versus Falcon continue to indicate a two-fold increase in evaporative loss ratio at Falcon as compared to Amistad when compared to total water in storage. Consequently, it is in Texas' best interest to continue to store the bulk of our Rio Grande water at Amistad. This will result in a continued decline in elevation at Falcon, which may impact tourism activities as occurred during the height of Mexico's water debt in 2000 to 2002.

The dry conditions in the basin have also contributed to a reduction in inflows from Mexico in the current water year. A government-to-government meeting has been scheduled for July 7th between U.S. and Mexican water officials to review overall basin conditions and discuss ways to mitigate the establishment of a new water debt.

Recent U.S. shares in the Amistad/Falcon reservoir systems are as follows:

YEAR	U.S. SHARE (percent)	TOTAL (ACRE-FEET)
1994	65.7	2,271,609
1995	47.7	1,587,370
1996	35.6	1,183,637
1998	39.8	1,324,700
1999	40.8	1,357,939
2000	41.7	1,387,125
1997	36.5	1,215,254
2001	32.49	1,080,676
2002	34.76	1,156,072
2003	51.60	1,716,273
2004	95.37	3,172,308
2005	94.52	3,143,933

(Note: Numbers for previous years are the levels at the end of the year.)

7. South Texas Watermaster – Guadalupe / Lavaca / San Antonio / Nueces Region

The month of June continued to be very dry in South Central Texas. Little rain has been recorded and the drought continues to worsen. Area rivers are all flowing at rates much lower than median flows for this time of year. Several areas have had suspensions of junior and temporary water rights. Most areas have restrictions even for senior water right holders. The following includes the summaries of the various locations in the South Texas Watermaster program.

Area Counties: Bandera, Blanco, Comal, Kendall, Kerr, and Real Counties.

Rainfall and Area Conditions: This area received amounts of rainfall, ranging from 1.0 to 3.0 inches for the month of June. The scattered showers during the month were not enough to provide the much needed soil moisture. Soil moisture conditions continue to be very poor due to the lack of rainfall. More increased diversions of surface water for irrigation of hay production have been noted; most of the surface water diversions in this area are for municipal and industrial use. The Palmer Drought Severity Index indicates that this area is in the severe drought condition at this time.

Streamflow conditions: Most of the streamflows of the major streams of the area continue to drop and are below the average for this time of the year. The Guadalupe River near Kerrville has current streamflows of approximately 37 cubic-feet-per-second (cfs) compared to 41 cfs last month, with the historical mean being 194 cfs. This equates to a 19.1 percent flow of the Guadalupe River flowing past Kerrville. The Medina River near Bandera has current streamflows of approximately 4.9 cfs compared to 19 cfs last month, with the historical mean being 219 cfs. This equates to a 2.24 percent flow of the Medina River flowing past Bandera.

Most of the streamflows of the intermittent streams in the area are currently flowing below the average for this time of the year or have ceased flowing.

Drought Restrictions: On June 16, 2006, restrictions of surface water diversions by permit holders were implemented. All temporary permits were suspended along with permits from 1995 through 2006. The 1980 through 1994 permit holders are allowed to pump two days a week for eight hours each day. The 1950 through 1979 permit holders are allowed to pump for two days a week for ten hours each day. Permit holders from 1898 through 1949 are allowed to pump three days a week for ten hours each day on a staggered rotation.

Lake Medina: Lake Medina has received little to no inflows for the month of June. The conservation pool level for Lake Medina at the end of June is currently at 55 percent (140,100 AF), compared to last month's 64 percent (157,100 AF).

Area Counties: Edwards, Real, Kinney, Uvalde, Zavala, Dimmit, La Salle, and Webb.

Rainfall and Area Conditions: The Southwest Texas area continued to receive minimal amounts of rainfall for the month of June. The beginning of the month started out with relatively no rain for the Southwest Texas region. From there, toward the middle of the month, some much needed rain showers were received from Edwards County south to Zavala County. The counties below Zavala have seen little to no rainfall for the month. The range of rainfall in the area is 0.02 to 1.50 inches for the month. Due to the lack of rainfall, junior water rights in the lower Nueces River, in particular, the Zavala-Dimmit Water District, have reached streamflow restrictions and therefore, diversions have been suspended until streamflow conditions improve. Water rights on the lower Leona River have also reached streamflow restrictions and have also been suspended. The Palmer Drought Severity Index indicates that this area is experiencing exceptional drought conditions at this time.

Streamflow Conditions: Most of the streamflows for the major streams in this area continue to drop and are extremely below the average for this time of year. The Nueces River at Laguna has current streamflows of 37 cfs compared to 42 cfs for last month, with the mean being 158 cfs. The Nueces River near Brackettville has current streamflows of 0.01 cfs compared to 0.0 cfs for last month, with the mean being 105 cfs. The Nueces River below Uvalde has current streamflows of 9.3 cfs compared to 15 cfs for last month, with the mean being 165 cfs. The Frio River at Concan has current streamflows of 24 cfs compared to 37 cfs for last month, with the mean being 122 cfs. The Sabinal River at Sabinal has current streamflows of 0.06 cfs compared to 0.02 cfs for last month, with the mean being 57 cfs. The Leona River near Uvalde has current streamflows of 11 cfs compared to 21 cfs for last month, with the mean being 47 cfs.

Area of Coverage: Bastrop, Bexar, Blanco, Caldwell, Comal, Fayette, Frio, Guadalupe, Hays, and Medina Counties.

Rainfall and Area Conditions: Minimal amounts of rainfall fell across the San Antonio Regional Area during the month of June. Bastrop and Hays counties received approximately two inches of rainfall; Comal, Caldwell, Fayette, and Guadalupe counties received between half to one inch of rainfall over the month. The southwest and southern areas (Frio and Medina Counties) of the San Antonio Regional Area received less than one-quarter inch of rainfall. Month-to-date rainfall measured at the San Antonio International Airport was 0.83 inches with the average for June is 4.30 inches. Total annual rainfall to date is 9.18 inches and normal year-to-date is 14.17 inches with departure from normal at -4.99 inches. The Palmer Drought Report, Texas Water Development Board, dated June 25, 2006, reads as follows: "South Central -4.27 Extreme Drought, Southern -4.52 Extreme Drought."

Small creeks have dried up and ground moisture is minimal to none across the entire San Antonio Regional Area. All Temporary Permits on the Blanco, Medina, and the Guadalupe River above Canyon Lake have been suspended. Permits with streamflow restrictions below the Special Conditions on specific water rights on the San Marcos, Medina, and Blanco Rivers have been suspended, as well. Streamflows continue to drop well below average for the month of June. The Guadalupe River at Spring Branch is currently 57 cfs with mean flow for June at 563 cfs. The San Marcos River at Luling is 105 cfs with mean flow for June at 600 cfs. Lastly, the Blanco River at Wimberley is 15 cfs with mean flow for June at 227 cfs.

Currently, Canyon Lake Reservoir is at 901.00 feet with maximum capacity at 943 feet. Lake Medina is impounding 140,800 AF of surface water with maximum capacity of 194,000 AF, approximately 60 percent capacity and down approximately 22 feet. The Edwards Aquifer level at the J17 well in Bexar County is 651.7 feet with the historical average for June at 663.3 feet reflecting 11.6 feet below the historical monthly average. The San Marcos Springs are flowing at 121 cfs with the historical monthly average for June at 194.0 feet. This is 73.0 feet below the monthly historical average. Lastly, Comal Springs are flowing at 247 cfs with the monthly historical flow for June at 290.1 cfs; this is 43.1 cfs below the historical monthly average.

Area of Coverage: Bee, Goliad, Victoria, Calhoun, Jackson, Refugio, Aransas, San Patricio, Nueces, Kleberg, Jim Wells, Duval, Live Oak, Kenedy, Willacy, Brooks, and Jim Hogg Counties.

Rainfall and Area Conditions: This area has received some significant amount of rainfall during the first days of June and again during the middle of the month. Rainfall for the month varied from a trace to ten inches of rain in some areas. The rainfall has provided for some soil moisture to area farmlands. The rainfall, though, has come a little too late. Because of the drought conditions, some farmers did not plant any crops and those that did, did not produce much of a crop. Some increase in diversions of surface water for irrigation has been noted; most of the surface water diversions in this area are for municipal and industrial uses. The Palmer Drought Severity Index indicates that this area is experiencing an extreme drought condition at this time.

Streamflow Conditions: The Guadalupe River near Victoria has current streamflows of approximately 471 cfs compared to 858 cfs last month, with the historical mean being 2,270 cfs. The San Antonio River near Goliad has current streamflows of approximately 148 cfs compared to 150 cfs last month, with the historical mean being 1,210 cfs. Permit restrictions of water rights on the San Antonio River in the Goliad County area have been reached, and therefore, those water rights can not divert at this time until streamflow conditions improve. The Guadalupe River near Tivoli (below the confluence of the San Antonio River and Guadalupe River) currently has streamflows of 682 cfs compared to 1,120 cfs last month, with the historical mean being 1,110 cfs. The Nueces River near Tilden is not flowing at this time, compared to 50 cfs last month, with the historical mean being 615 cfs. The Frio River near Tilden currently has streamflows of 0.19 cfs compared to 3.0 cfs last month, with the historical means being 857 cfs. Streamflows over the Calallen Dam, near Corpus Christi, were estimated at approximately 2.4 cfs toward the end of the month.

Most of the streams in the area reflected an increase of streamflows with the rainfall that was received during the month, but the streamflows quickly diminished. Most of the streamflows are depicting a decrease toward the end of the month compared to last month.

Corpus Christi Reservoir System: Some inflows have occurred into the Corpus Christi Reservoir System. The level of Choke Canyon has dropped to 81.5 percent capacity (last month was 83 percent) compared to 98.4 percent capacity during this same time last year. The level of Lake Corpus Christi has dropped to 38.4 percent capacity (last month was 43 percent) compared to 92.8 percent capacity during this same time last year. The combined percent of capacity for both reservoirs is 69.8 percent (last month was 72.2 percent) compared to 96.9 percent this same time last year. The City of Corpus Christi continues to divert approximately half of its monthly supply of water from Lake Texana. The lake level of Lake Texana has increased from significant amounts of rainfall experienced in that area and is reported to be at approximately 43.7 msl (mean sea level) with full capacity being at 44.0 msl.

Area of Coverage: Atascosa, Karnes, Gonzales, Wilson, McMullen, Dewitt, Guadalupe, Lavaca, Fayette, Colorado, Wharton, and Jackson Counties.

Rainfall and Area Conditions: This area has received one to five inches of rainfall for the month of June. The Lavaca area has received the majority of the rain this month. Lake Texana is at 98 percent capacity (last month was 79 percent), which is 43.66 feet above msl. This is a significant increase over the last few months. Soil moisture conditions in the majority of this area are fair to poor at this time.

Some Junior Water Right Holders on the San Antonio River in the areas of Wilson and Karnes Counties have been restricted from pumping due to low flows in the San Antonio River near Falls City. According to the Palmer Drought Severity Index the majority of this area is experiencing severe to extreme drought conditions at this time.

Streamflow Conditions: The San Antonio River near Falls City is currently at 135 cfs with the historical mean flow for June at 270 cfs and last month ending flow at 370 cfs. Cibolo Creek near Falls City is currently at 19 cfs with last month ending flow at 130 cfs and the historical mean flow for June at 31 cfs. The Guadalupe River near Cuero is currently at 506 cfs with last month ending flow at 1,090 cfs and a historical mean flow for June of 1,330 cfs. Lavaca River near Edna is currently at 6 cfs with last month ending flow at 594 cfs and a historical mean flow for June at 58 cfs. Navidad River near Hallettsville is currently at 0.5 cfs with last month ending flow at 196 cfs and a historical mean flow for June of 20 cfs. Atascosa River near Whitsett is currently at 2.0 cfs with last month ending flow at 0 cfs and a historical mean flow for June of 9.8 cfs. Frio River near Tilden is currently at 0.1 cfs with last month ending flow at 3.6 cfs and a historical mean flow for June of 44 cfs.

Concho River Basin:

The Concho River Basin is also suffering from the continued drought conditions. Flow of the Concho River is steadily declining and restrictions and some suspensions are in place. Downstream senior water right holders are having difficulty receiving needed flows passed through Lake Nasworthy. The situation is being monitored to insure flows continue to pass as needed.

The Concho River valley has received diminished amounts of rainfall through June of 2006. The monthly rainfall measured in San Angelo was 0.30 inches and 6.26 inches for the year-to-date. This number compares with 10.83 inches for the same period in 2005. The area is reflecting severe drought conditions. At present, flow conditions in the rivers are diminishing and the forecast for rain is not favorable.

Area of Coverage: Sterling, Irion, Tom Green, Concho, Coke, Runnels, Reagan, and Schleicher Counties.

Rainfall and Area Conditions: June saw less than average rainfall amounts and consecutive days with temperatures over 100 degrees. This combined with normal dry wind patterns has created abnormally dry conditions. Soil moisture conditions are poor. Increased diversions of surface water have been recorded. The restriction of diversions in the area has been implemented on some of the segments of some rivers to meet the needs of senior water right holders. All temporary permits have been suspended in the area until further notice. The Palmer Drought Severity Index indicates the area is experiencing severe drought conditions.

Streamflow conditions: The City of San Angelo continues to make releases from Lake Nasworthy to meet the requirements of senior downstream water right holders on the main stem of the Concho River; however, the delivery of this water has been intermittent. The North Concho River near Carlsbad is below its 81-year median flow record. The South Concho River near Christoval is below its median flows based on a 69-year period of record. No accurate data for Spring Creek or Dove Creek is available at this time, as U.S.G.S. gauges do not record streamflow discharge data. The lake levels are as follows: Nasworthy Lake is at 82 percent (8360 AF), O.C. Fisher is at 10 percent (11,035 AF), and Twin Buttes Lake is at 30 percent (51,276 AF) of capacity.

8. Upper Colorado River / Upper Llano / Upper San Saba River

The upper Colorado River, upper Llano, and upper San Saba area received less than normal precipitation during the month of June. The National Weather Service in San Angelo reported monthly precipitation to be 0.30 inches in June. The monthly precipitation was 2.10 inches below normal. Many of the tributaries in the upper Colorado, upper Llano, and upper San Saba watersheds have diminished flow below the normal U.S.G.S. averages. The pool levels of the major area reservoirs such as EV Spence (17 percent) and OH Ivie (48 percent) have declined slightly.

9. Texas Panhandle and Southern High Plains

Amarillo Area: The National Weather Service in Amarillo recorded a total of 1.02 inches for June and 4.15 since January 1, 2006. This is a departure of -5.17 inches for the year.

Lake Meredith will produce 45,000 AF this year, which is the amount that will be pumped out of the lake and delivered to the cities. When the lake is up and conditions are good, the firm yield is 69,000 AF. Fifty percent of water being delivered to the Amarillo cities is from Lake Meredith. The remaining 45,000 AF will come from groundwater. Current AF in the lake is 40,657. This is considered usable storage. The actual number that could be used is 75,657 AF. Once the lake level was below the 37-foot mark, pumps could be used to pump water into the intake tower. This would not be much, but water could still be pumped.

Greenbelt reached their first drought contingency trigger point in early June. The trigger points come in 3-foot increments. The Board met on June 22nd and initiated conservation measures tied to the first "Trigger" point after the lake level reached 2,637 feet. This initial step calls for a 10 percent voluntary decrease in usage by the member

cities. The second "Trigger" point (2,634 feet) will result in a 20 percent voluntary decrease in usage by the member cities.

Lake MacKenzie has risen slightly over the month and is now at 67 feet. They have received 5.6 inches of rain for the year, 2.24 inches of which has come this month.

Lubbock Area: The Lubbock area continues to be hot and dry. The entire South Plains area of the panhandle is in moderate to severe drought condition. Lubbock received a small amount of precipitation during the month of June (0.77 inches), which is 2.03 inches below the normal June precipitation amount for this area. The total in Lubbock for calendar year 2006 is 5.49 inches, which is 2.88 inches below normal. During the month of June, the City of Amherst elevated their drought contingency status to Stage Two, and may go to Stage Three depending upon whether they can obtain TCEQ approval to utilize an existing irrigation well. Also, the City Council of the City of Lubbock has proposed a new water use ordinance, which will be voted on in July for adoption. This new ordinance sets water use and amount restrictions, and increases water costs with high water use. This is being considered due to potential water shortages from their main water source, Lake Meredith. The City of Crosbyton is also considering water restrictions due to the extremely low level of White River Lake, the main water source for Crosbyton. White River Lake is currently down 25.45 feet from normal.

10. Agricultural Concerns

Drought continues to have a substantial impact on Texas agriculture, although scattered showers over the last two weeks have brought some relief to parts of the state. High temperatures coupled with strong winds and prolonged dry weather have dealt a devastating blow to the South Plains cotton crop. Approximately one million acres of cotton in the South Plains, primarily in the region south of Lubbock, have been zeroed out by crop insurance agents due to drought. The crop north of Lubbock is in better shape, and scattered showers reaching up to three inches have provided much needed moisture to some of this crop. Extremely high winds and high temperatures have also been a factor in degrading the crop condition. Moisture conditions in the North Plains have been critically dry, and above average temperatures have been prevalent. Rainfall ranging up to two inches over the last week has provided some relief and dryland sorghum planting continues where moisture is available. Pastures are in poor condition and fire danger is still a big concern.

The Rolling Plains also benefited from scattered rainfall, improving crop conditions in areas that received these rains with dry pastures beginning to green up. Drought is still the major concern in this region, and cattle are being fed supplemental feed. The future of the cotton crop in this region hangs in the balance, with most of the crop under severe stress.

North Texas continues under a severe drought. Much of the corn crop died from stress or was harvested early for silage over the last month. Hay crops are short or nonexistent. Grasshoppers are becoming a significant problem.

East Texas received some welcome rains with amounts to three inches, but soil moisture is low, and little hay is being produced. Ranchers are continuing to sell off cattle in the face of drought.

Far West Texas has a range of moisture conditions ranging from adequate to extreme drought. Cotton and sorghum are in poor condition.

In West Central Texas, moisture conditions vary somewhat, with some counties receiving significant rainfall, while others are severely dry. Ranchers continue to cull herds. Some hay is being cut in counties that received rainfall.

Moisture conditions dramatically improved along the Gulf Coast as moisture and unstable air conditions produced flooding rainfall over most of the region between Corpus Christi and Beaumont. Central Texas benefited by some of this Gulf moisture, but it was too late to save the drought stressed corn crop. Sorghum, cotton, and pasture conditions will improve due to these rains.

Southwest Texas received up to three inches over the last week, but this will not be adequate to relieve the exceptional drought conditions. Most dryland crops have failed and forage is extremely short. These rains will be of some benefit to the cotton crop and may provide a temporary green up to pastures.

11. Drought Impacts to Wildlife

No information available at this time.

12. Wildfire Concerns

The Keetch-Byram Drought Index (KBDI) is used to help determine potential for fire risk. It is a numerical index where each number is an estimate of the amount of precipitation (in 100ths of an inch) needed to bring the soil back to saturation. The index ranges from 0 to 800, with 0 representing a saturated soil, and 800 a completely dry soil. The KBDI's relationship to fire danger is that as the index increases, the vegetation is subjected to increased moisture stress. KBDI levels and its relationship to expected fire potential are reflected in the following:

KBDI = 0 – 200: Soil moisture and large class fuel moistures are high and do not contribute much to fire intensity. This is typical of spring dormant season following winter precipitation.

KBDI = 200 – 400: Typical of late spring; early growing season. Lower litter and duff layers are drying and beginning to contribute to fire intensity.

KBDI = 400 – 600: Typical of late summer, early fall. Lower litter and duff layers contribute to fire intensity and will burn actively.

KBDI = 600 – 800: Often associated with more severe drought and increased wildfire occurrence. Intense, deep-burning fires with significant downwind spotting can be expected. Live fuels can also be expected to burn actively at these levels.

There are currently 226 counties, illustrated in Attachment 2, with KBDI values in excess of 400, indicating that areas within these counties are beginning to experience dry conditions, which could result in an increased fire risk potential.

The Council, which is chaired by Jack Colley of the Governor's Division of Emergency Management, is composed of state agencies concerned with the effects of drought and fire on the citizens of the State of Texas. The attached information was compiled and provided by representatives listed below. Points of contact, telephone numbers, and web site addresses are also provided.

Jack Colley, Governor's Division of Emergency Management, (512) 424-2443, fax (512) 424-2444, web site: http://www.txdps.state.tx.us/dem

John Sutton, Texas Water Development Board, (512) 463-7988, fax (512) 463-9893, web site: http://www.twdb.state.tx.us

Bill Billingsley, Texas Commission on Environmental Quality, (512) 239-1697, fax (512) 239-4770, web site: http://www.tceq.state.tx.us

Richard Egg, Texas State Soil & Water Conservation Board, (254) 773-2250, fax (254) 773-3311, web site: http://www.tsswcb.state.tx.us

Palmer Scully, Texas Department of Agriculture, (512) 475-1611, fax (512) 463-5837, web site: http://agr.state.tx.us

Dr. Travis Miller, Texas Cooperative Extension, (979) 845-4008, fax (979) 845-0604, web site: http://soilcrop.tamu.edu

Cindy Loeffler, Texas Parks & Wildlife Department, (512) 912-7015, fax (512) 707-1358, web site: http://www.tpwd.state.tx.us

Judith Jenness, Department of Housing and Community Affairs, (512) 475-2135, Fax (512) 475-7498, web site: http://www.tdhca.state.tx.us

Bobby Young, Texas Forest Service, (936) 639-8100, fax: (936) 639-8118, web site: http://txforestservice.tamu.edu

Scott Alley, Texas Department of Transportation, (512) 416-3187, fax (512) 416-2941, web site: http://www.dot.state.tx.us/

Paul Tabor, Texas Department of State Health Services, (512) 458-7126, fax (512) 458- 7472, web site: http://www.dshs.state.tx.us/

Thomas Walker, Office of the Governor, Economic Development & Tourism, (512) 936-0169, fax (512) 936-0141, web site: http://www.governor.state.tx.us/divisions/ecodev

Harvey Everheart, Texas Alliance of Groundwater Districts, (806) 872-9205, fax (806) 872-2838, web site: http://www.texasgroundwater.org/

Dr. John W. Nielsen-Gammon, Office of the State Climatologist, (979) 862-2248, fax (979) 862-4466, web site: http://www.met.tamu.edu/osc/

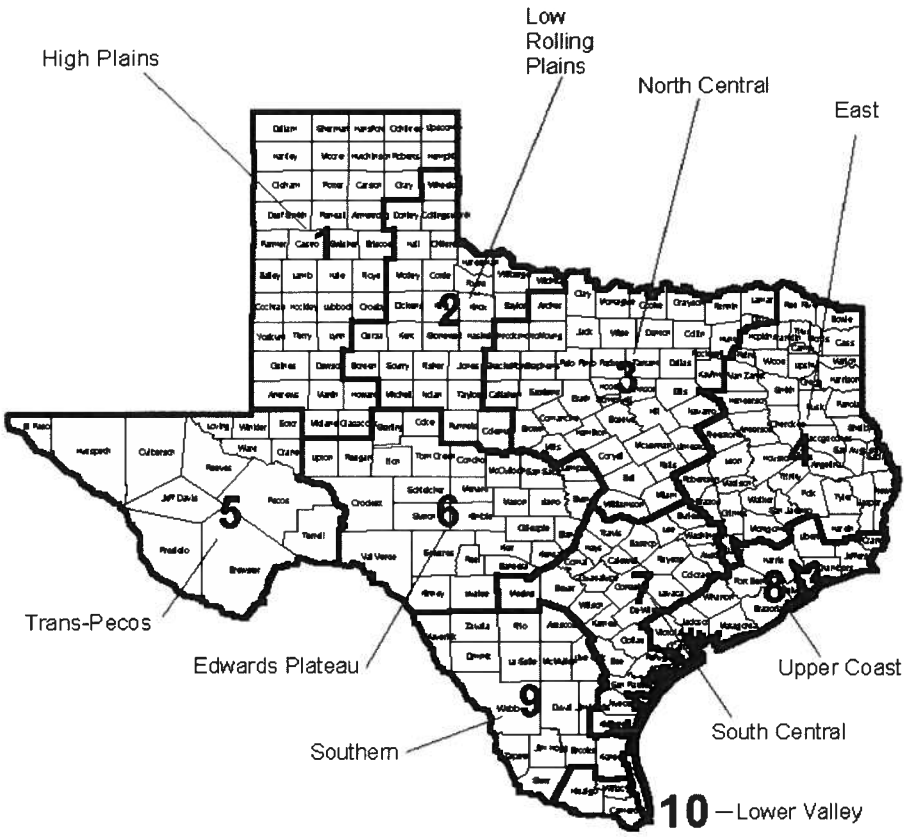
Gus Garcia, Office of Rural Community Affairs, (512) 936-7876, fax (512) 936-6776, web site: http://www.orca.state.tx.us

cc:

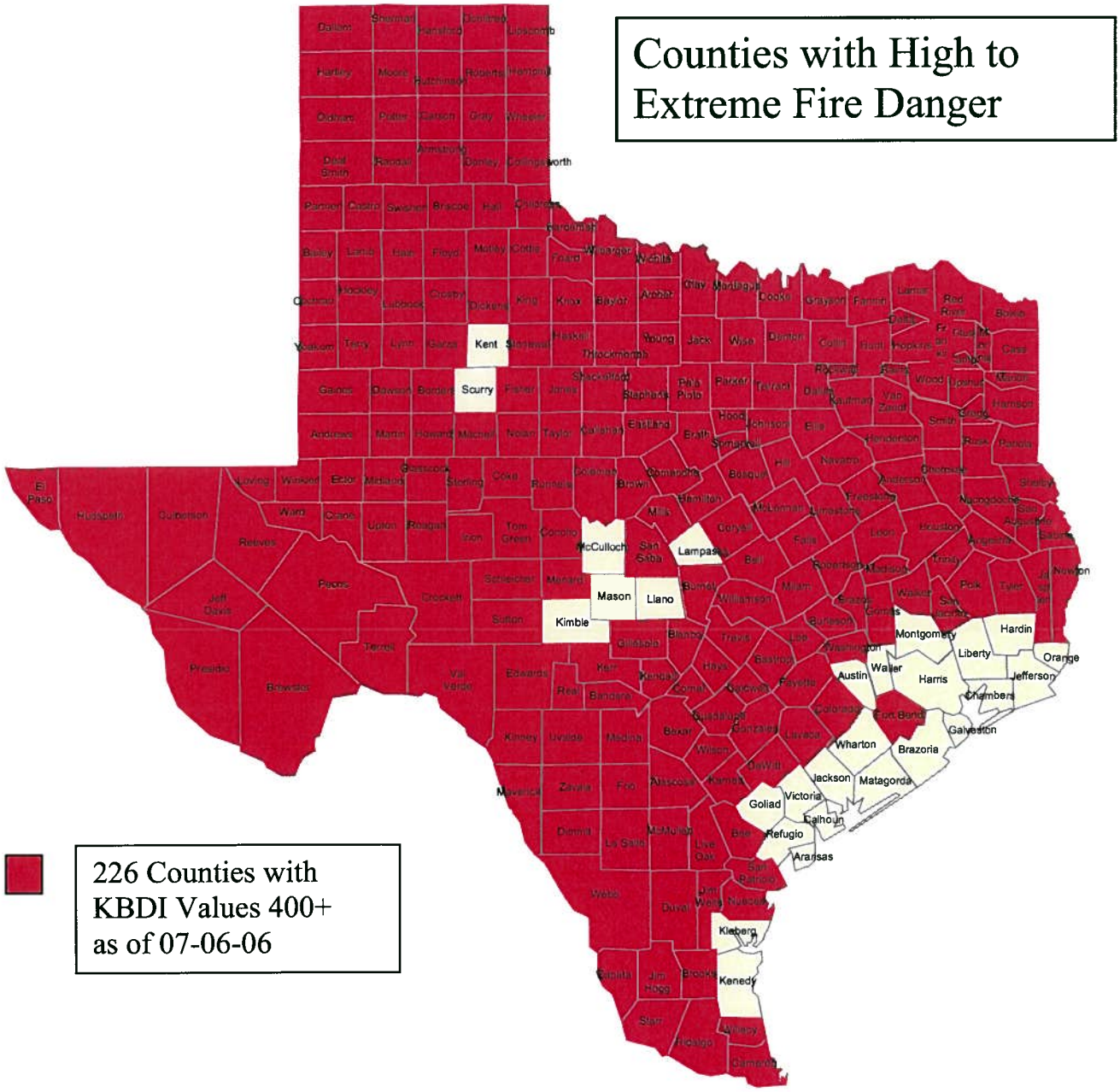
Stephen McCraw, Office of the Governor
Jim Harrison, Office of the Governor
Amy Jeter, Committee Clerk, Senate Finance Committee
Kelly Gilbert, Committee Clerk, Senate Natural Resources Committee
Matt Ogden, General Counsel, Senate Infrastructure Development & Security
Cristina Self, Committee Clerk, House Appropriations Committee
Hope Wells, Committee Clerk, House Natural Resources Committee
Shannon Sneary, Committee Clerk, House Agriculture and Livestock Committee
Damian Duarte, Committee Clerk, House Criminal Jurisprudence Committee
Zak Covar, Governor's Policy Office
Logan Spence, Governor's Policy Office
Bruce Gibson, Lt. Governor's Chief of Staff
Carmen Cernosek, Lt. Governor's Natural Resources Policy Analyst
Roger Williams, Secretary of State's Office
Greg Abbott, Attorney General's Office
Ernest Angelo, Jr., Chairman, Public Safety Commission
Carlos H. Cascos, Member, Public Safety Commission
Colonel Thomas Davis, Director, Department of Public Safety
Lieutanant Colonel David McEathron, Assistant Director, Department of Public Safety
Burton Christian, Chief, Administration, Department of Public Safety
Shaniqua Johnson, Legislative Budget Board, Department of Public Safety
Tom Lambert, Legislative Budget Board, Department of Public Safety
Ed Perez, Texas Office of State-Federal Relations, Washington, DC

Attachment 1

CLIMATIC REGIONS

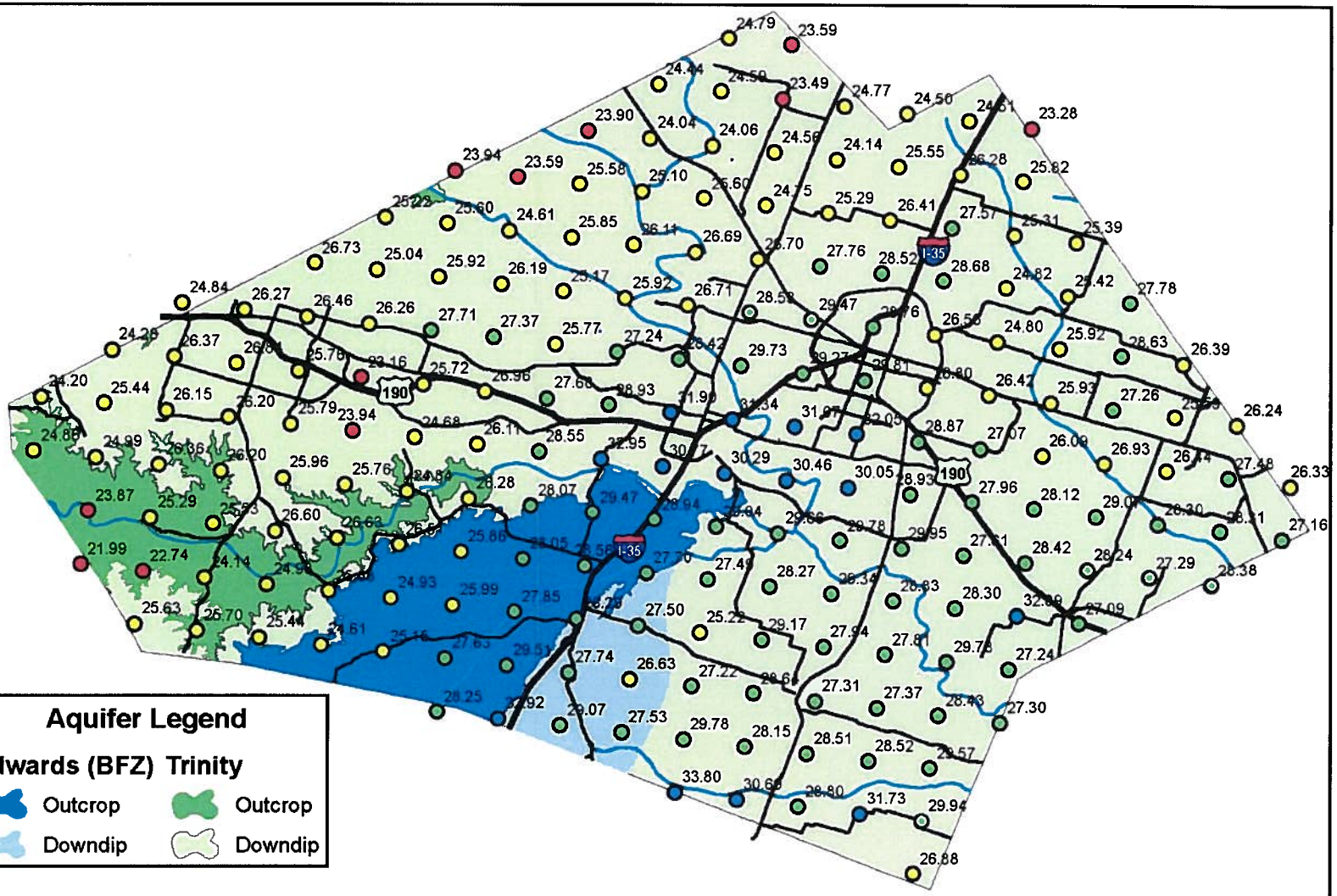


Attachment 2



Appendix G

Rainfall Totals for 2006



Clearwater Underground Water Conservation District
2180 N. Main St., PO Box 729
Belton, TX 76504
January 3, 2007

File Name
K:\NOAA Rainfall\Monthly Reports\

Data Source
National Weather Service
Precipitation Analysis

Appendix H

ATTENTION 5th Graders:

Win a $500, $250 or $100 U.S. Savings Bond

By Participating and Winning:

The Clearwater Underground Water Conservation District's ESSAY and POSTER CONTEST

Contest Theme:

Ways to Conserve Water in Bell County

The Clearwater Underground Water Conservation District (CUWCD) is sponsoring an essay and poster contest for all 5th grade students in Bell County. The entries should address ways that residents in Bell County can conserve and protect our water resources, both surface water and groundwater. Entries should include existing conservation practices as well as new and innovative ideas. (See judging criteria on back.)

All participants will receive a CUWCD complimentary packet. Prizes will be awarded to the top three essays and top 3 posters.

1st place -- $500 Savings Bond
2nd place -- $250 Savings Bond ***3rd place --$100 Savings Bond***

Entries become property of CUWCD upon submittal and may be reproduced by the District. Please contact the CUWCD office at 254-933-0120 for additional information.

Essays may be typed or handwritten (please make sure handwriting is legible). Posters must be at least 8 ½" x 11" in size. All entries must be postmarked no later than ***November 21st*** *and submitted to the following:*

Clearwater UWCD
P.O. Box 729
Belton, TX 76513

or

Essays may be faxed to:
254-939-0885
Attn: Cheryl Maxwell

Entries may also be hand delivered to 550 E. 2nd Avenue, Bldg. A of the Bell County Annex in Belton by 5:00 p.m. on November 21st. Fill out the form located below and attach it to the entry.

Judging Criteria for Essay & Poster Contest

Content	***70%***	
	Knowledge of Existing Conservation Methods	*35%*
*	*New Ideas for Conserving Water*	*25%*
	Reference to Bell County	*10%*
Presentation	***30%***	
	Creativity	*20%*
	Grammar/Spelling	*5%*
	Neatness	*5%*

* *Be sure your entry (essay and/or poster) clearly identifies which methods are your original ideas and suggestions for conserving water in Bell County.*

Research Aid

Several web sites have water conservation tips--search using the key words "water conservation". The CUWCD office also has a list of web sites, brochures and literature with information on water conservation--call 254-933-0120.

Clearwater
Underground Water Conservation District
Every drop counts!

Please complete the information below and attach to the front of your entry.

Name:_____ Telephone No:_____

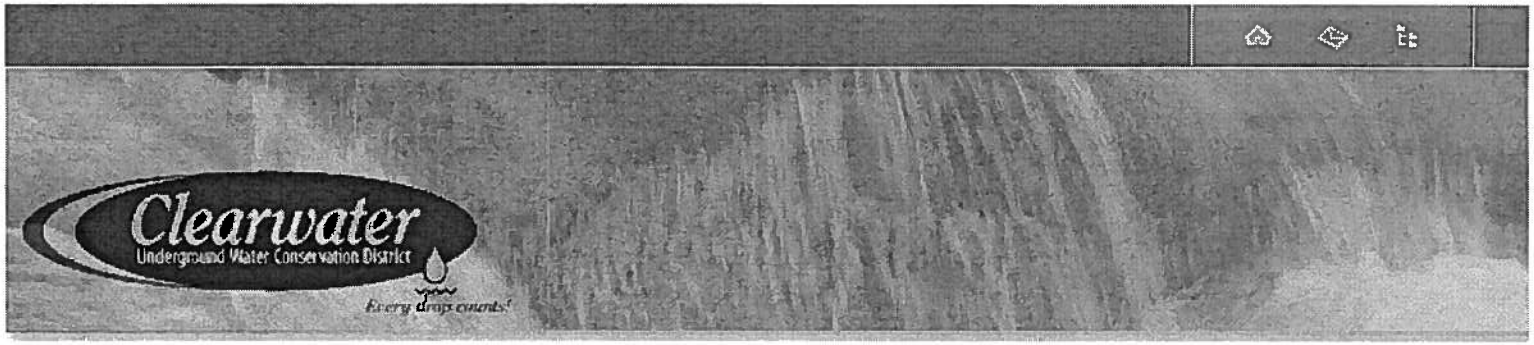
Address:_____

_____

School Name:_____ Teacher:_____

School District:_____ Grade:_____

Appendix I



Clearwater District
2180 North Main
Belton, TX 76513
ph 254-933-0120
alt ph 254-770-2370
fax 254-770-2360

Rainwater Harvesting

Rainwater Harvesting

Collecting rainwater from roofs and storing it for future use is a practical way to maximize the benefits of precipitation in Central Texas. In fact, cisterns that captured rainwater were a common way for early settlers to store water for everyday use. This old practice has now become modernized in Central Texas as several builders are installing rainwater harvesting systems to supply most or all of the water demands for homes and businesses. One famous example is the Lady Bird Johnson Wildflower Research Center in Austin.

Typical rainwater harvesting systems include a large catchments area such as the roof of a home, gutters to transport rainfall, and screens which filter leaves and debris. A roof washer (with a 30 micron filter) is installed just before storage in large tanks (50 to 15,000 gallon fiberglass). The storage tank may be buried underground or hidden among landscape.

One estimate by the Texas Cooperative Extension said that 0.6 gallons of water can be harvested for each square foot of roof per inch of rain received, depending on collection efficiency. For example, if an inch of rain falls on a 2,000 square foot roof surface, then 1,200 gallons of water can be harvested. An average rainfall year of 35 inches in Bell County would result in as much as 42,000 gallons of water harvested from rain. With appropriate conservation measures, this may be sufficient to supply household needs.

Rainwater harvesting can also be done by simply placing barrels or buckets outside prior to a rain event. Harvested water could be used for watering plants, however, this water

Event

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4	5	6
11	**12**	**13**
18	19	20
25	26	27

would not be suitable for human consumption unless it is filtered and kept in a closed container.

To best determine whether rainwater harvesting would be a practical way for your family to supply all or some of your water demands, we recommend calculating a water budget using the online calculator found on the Texas Cooperative Extension's website. This website includes a detailed description of rainwater harvesting systems.

Also, check out the extensive rainwater harvesting manual developed by the Texas Water Development Board. It includes everything from rainwater harvesting system components, water treatment, design guidelines, water demand calculations, and cost estimates. Click the item below for the manual.

Filter

Item Title
Rainwater Harvesting Manual

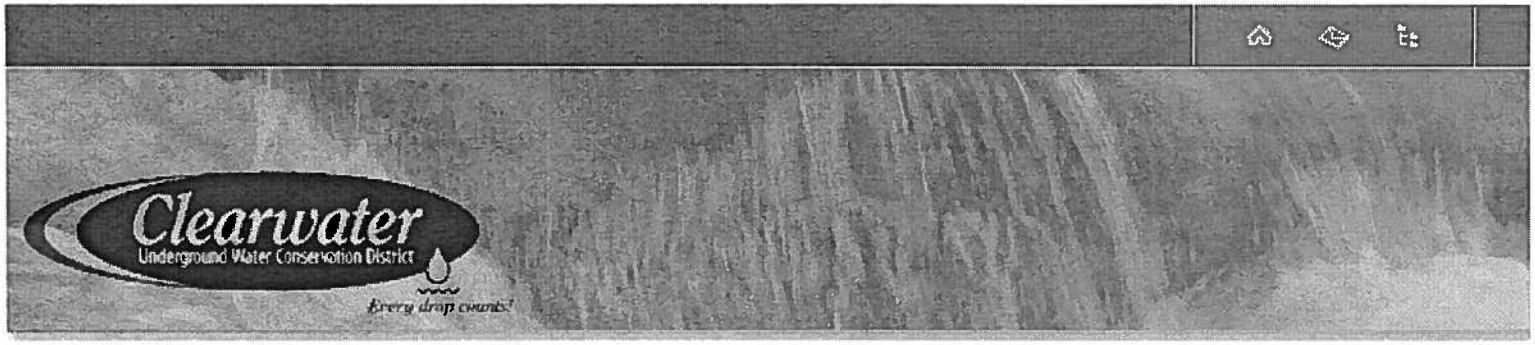
<< Start < Prev 1 Next > End >>

Results 1 - 1 of 1

- **Recharge Enhancement and Brush Control**
- **Groundwater and the Hydrologic Cycle**
- **Water Conservation and Water Quality**
- **New Well Owner Information**
- **Groundwater Conservation Districts**

[Back]

Appendix J



Clearwater District
2180 North Main
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Recharge Enhancement and Brush Control

Recharge Enhancement and Brush Control

The Clearwater District's motto is "Every drop counts!" This statement becomes even more poignant as water supplies shrink because of drought and water demand increases with the predicted doubling of our State's population by 2050. As water planners and landowners grapple with lower flows in streams and the potential for declining water levels in aquifers, solutions such as enhancing recharge of groundwater and educating the public to conserve water must be realized.

Brush control has been studied to quantify the amount of water that can be saved through the elimination of unwanted brush such as mesquite, juniper, and saltcedars. These studies have generally shown that elimination and control of regrowth can enhance the recharge of groundwater and conserve water resources. The Texas State Soil and Water Conservation Board has implemented several brush control programs in watersheds across the State. More about these programs can be found by clicking here.

In our area, the Leon River Restoration Project is attempting to quantify the effects of removal of ashejuniper on water yield in Hamilton and Coryell counties. The project is currently in phase one, however, updates can be found by clicking here.

According to the Texas Cooperative Extension (TCE), unwanted brush can have negative effects on land resources such as "depleting groundwater, reducing stream flow, drying up lakes and reservoirs, increasing the salinity of the soil surface, competing with forage grasses and native plants, and degrading wildlife habitat."[1] As a result, private landowners may wish to learn more about the methods to control and manage brush.

Event

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These may include mechanical, chemical, prescribed burning or biological methods. These are described in detail in the TCE publication, Brush Management Methods. It can also be downloaded by clicking on the item below.

As always, a landowner should weigh the positives and negatives before implementing brush control measures. There are some desirable uses for brush such as food and cover for wildlife, atheistic appeal, and harvesting for wood burning and crafting.

To learn more about brush control measures, visit the TCE bookstore, http://tcebookstore.org/pubsearch.cfm, which has many publications viewable in .pdf form or available for purchase.

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[1] Source: Texas Cooperative Extension, *Biological Control of Saltcedar*, October 21, 2006, Publication number L-5444.

Filter

Item Title
Brush Control Manual

<< Start < Prev 1 Next > End >>

Results 1 - 1 of 1

- **Rainwater Harvesting**
- **Groundwater and the Hydrologic Cycle**
- **Water Conservation and Water Quality**
- **New Well Owner Information**
- **Groundwater Conservation Districts**

[Back]

Appendix K

5th ANNUAL

BELL COUNTY WATER SYMPOSIUM

November 3, 2005
BELL COUNTY EXPO CENTER
BELTON, TEXAS
8:30 A.M – 3:00 P.M.

AGENDA

8:30 a.m.	**Registration**
9:00 a.m.	**Welcome & Overview of the Clearwater Underground Water Conservation District** ***Horace Grace/Judy Parker*** *– Clearwater District* **How Much Water Is Available in the Edwards (BFZ) and Trinity Aquifers? Results of Groundwater Availability Model** ***Randy Williams*** *– Turner Collie & Braden, Inc.*
9:45 a.m.	**Legislative Update on Water Issues** ***Brian Sledge*** *– Lloyd, Gosselink, Blevins, Rochelle & Townsend, P.C.*
10:30 a.m.	**Break**
10:45 a.m.	**Clean Water Through Public Involvement** ***Martha Underwood****—Lake Stillhouse Hollow Clean Water Steering Committee* **Update on Surface Water Projects** ***David Cole****-- Central Texas Water Supply Corporation*
11:30 a.m.	**Septic System Regulations and Water Quality Protection** ***Michael Jahns/Kent Stephens*** *-- Bell County Public Health District*
12:15 p.m.	**Lunch**
1:00 p.m.	**Results of Water Quality Testing** ***Dr. Monty Dozier*** *– Texas Cooperative Extension/TAMU*
2:00 p.m.	**Plugging Abandoned Water Wells** ***David Gunn*** *– Texas Department of Licensing & Regulation*
2:45 p.m.	**Closing Comments** ***Horace Grace*** *– Clearwater District*

"Water is the best of all things."
PINDAR, Olympian Odes (C. 522 – C. 438 B.C.)

Symposium Sponsors
Clearwater Underground Water Conservation District
Texas Cooperative Extension—Bell County
Turner Collie & Braden, Inc.
Lloyd, Gosselink, Blevins, Rochelle & Townsend, P.C.

Clearwater Underground Water Conservation District
Every drop counts!

Appendix L

CLEARWATER UNDERGROUND WATER CONSERVATION DISTRICT
RESOURCE LIBRARY
September 2005

Videotapes/DVDs

1. ***WATER***
   Backyard Safari
   Pre-K – 2nd Grade

   Why is water so important to life? Youngsters learn why animals and plants have different ways of getting the water they need. They'll also see that water can be liquid, hard ice, or foggy steam. Teacher guide included. (30 minutes)

2. ***WATER CYCLE—GO WITH THE FLOW***
   3-2-1 Classroom Contact
   Grades 4 – 6

   Water on Earth is cleaned in a cycle of evaporation, condensation, and precipitation. Follow the flow from ocean to clouds to rain, discover how dirty water becomes clean, and learn how people fit into the water cycle. Teacher guide included. (15 minutes)

3. ***WATER: FROM THE EARTH FOR YOU***
   Enviro-Tacklebox
   Grades 5 – 9

   Demonstrates how a growing population has put increasing demands upon the world's finite resources. Teacher guide included. (20 minutes)

4. ***GROUNDWATER***
   Earth Revealed—High School Edition
   Grades 9 – College

   Explains how groundwater is distributed and measures its importance to human life. Teacher guide included. (15 minutes)

5. ***MAJOR RIVERS***
   Brazos River Authority
   4th Grade

   Follow along with "Major Rivers" and his horse "Aquifer" as they provide an overview of water in Texas, to include groundwater, surface water, water treatment, wastewater treatment and conservation. (15 minutes)

6. ***GROUNDWATER QUALITY: MANAGING THE RESOURCE***
   The Water Education Foundation (California)

   Since groundwater basins are out of sight under the earth, groundwater resources are easily overlooked and mismanaged. This program provides valuable information about how to better use and protect our precious groundwater supplies. (15 minutes)

7. ***CONJUNCTIVE USE: A COMPREHENSIVE APPROACH TO WATER PLANNING***
   The Water Education Foundation (California)

   This program simplifies an often misunderstood concept: conjunctive use—coordinating surface water and groundwater supplies, which are often managed as separate resources. (11 minutes)

8. ***WATER WELL BASICS***
   American Ground Water Trust
   Grade 6 and above

   An educational video that shows step by step, the processes of well drilling, well construction and equipment installation needed to provide a safe home water supply. (15 minutes)

9. ***DIVINING THE FUTURE: GROUNDWATER CONSERVATION DISTRICTS***
   Texas Alliance of Groundwater Districts; TCEQ; Texas Cooperative Extension; and Texas Groundwater Protection Committee.

   Video provides a general overview of groundwater conservation districts including their role and responsibilities as well as services they provide. (20 minutes)

10. ***FOUNDATIONS: AQUIFERS OF TEXAS***
    Texas Alliance of Groundwater Districts; TCEQ; Texas Cooperative Extension; and Texas Water Development Board.

    Video provides general information on types of aquifers, recharge areas, water movement in aquifers, and water removal from aquifers. (10 minutes)

11. ***CROSSROADS: TEXAS WATER LAW***
    Texas Alliance of Groundwater Districts; TCEQ; Texas Cooperative Extension; and Texas Groundwater Protection Committee.

    Video provides general overview of water law in Texas as it relates to diffused surface water, surface water, and groundwater. (10 minutes)

12. ***TEX*A*SYST: WELL PLUGGING—PLUGGING WATER WELLS IN TEXAS***
    Texas Agricultural Extension Service; Texas Groundwater Protection Committee.

    Video focuses on landowners plugging large diameter water wells. Other videos in the TEX*A*SYST series include Introduction to TEX*A*SYST; Pesticides and Fertilizer Storage; Petroleum Product Storage; Household Hazardous Waste and Septic System; and Livestock Waste Management. (Approx. 10 – 15 minutes each)

13. ***UNDERSTANDING TEXAS WATER ISSUES***
    Real Estate Center, Mays Business School, College Station, TX; Texas Cooperative Extension; Texas Water Resources Institute

    Real estate professionals are caught in the middle of an economy that may soon be more dependent on water than oil. This video discusses the State's basic water dilemmas and solutions. CD also available. (45 minutes)

Videotapes/DVDs—continued

14. BELL COUNTY WATER SYMPOSIUM—FALL 2002, 2003 & 2004
Clearwater Underground Water Conservation District

Set of videotapes documenting the November 7, 2002, November 19, 2003 and October 27, 2004 water symposiums. Topics include the following: 1) Legislative update on water issues; 2) Overview of Bell County aquifers; 3) Brazos G Regional Water Planning Group and the Brazos River Authority; 4) Role of water supply corporations and CCN's; 5) Water quality protection and water conservation; 6) and Rainwater harvesting. (Each tape approximately 2 hours)

15. TEXAS: THE STATE OF WATER Vol. 1 & 2
Texas Parks and Wildlife Department

Texas The State of Water- Finding a Balance is an in-depth, hour long documentary presented and produced by the Texas Parks and Wildlife Department. The program explores how the demand for water will grow dramatically in years to come, and weighs the impact that growth will have on the state. The documentary shows how the steps we take – or do not take – will impact Texas and its people, wildlife and economic vitality for future generations. (Each video 1 hour)

Books

1. THE WATER SOURCEBOOKS
Partnership of EPA, Region 4; Alabama Department of Environmental Regulation; LEGACY—Partners in Environmental Education; and Water Environment Federation

Series consists of a set of 4 volumes appropriate for Grades K-2, Grades 3-5, Grades 6-8, and Grades 9-12. The series explains the water management cycle using a balanced approach and how it affects every aspect of the environment. The curriculum provides strong science and math content, but also links these subject areas to social studies and language arts. Each Sourcebook contains hands-on activities and investigations, fact sheets, reference materials, and a glossary of terms.

2. PROJECT WET CURRICULUM AND ACTIVITY GUIDE
Project WET—Water Education for Teachers
Montana State University
Texas Sponsor: Caddo Lake Institute

A collection of over 90 innovative, interdisciplinary activities that are hands-on, easy to use, and fun for Grades K-12. The Guide is divided into seven concept areas: chemistry and physics of water; life science; earth systems; natural resources; water resource management; society; and culture. Multidisciplinary activities are included, integrating language arts, mathematics, science, geography, history, government, and health.

3. MAKING DISCOVERIES
The Groundwater Foundation

Groundwater activities for the classroom and community. What is an aquifer? How does groundwater get contaminated? Find the answers to these questions and more in this activity book. Through interactive water education experiences, students learn concepts in science, math, language arts, social science, fine arts, and physical education. Hands-on activities focus on groundwater, surface water, wetlands, and pollution prevention.

4. MAKING A BIGGER SPLASH
The Groundwater Foundation

This guide features best-loved water education and festival activities. All the activities in this collection are hands-on, brains-on fun and teach important water concepts to participants.

5. HANDBOOK OF WATER USE AND CONSERVATION
Amy Vickers
WaterPlow Press

A comprehensive and authoritative handbook on water use and efficiency measures for those concerned about efficient water use. Includes ten key steps to a successful conservation program, water use characteristics of major customer sectors, water audit procedures, and hundreds of fact-filled tables, illustrations, and case studies.

Miscellaneous

1. DRIPIAL PURSUIT
The Groundwater Foundation

A card game with interesting water trivia. Just how many gallons of water does it take to produce a hamburger, fries, and soft drink? The answer will surprise you! Dripial Pursuit questions relate to water, natural resources, and geography. The answers are interesting and intriguing and help everyone understand important water concepts.

2. PUDDLE PICTURES
The Groundwater Foundation

Reinforce water lessons by playing this game based on the popular game *Pictionary*. Draw a water-related word and help teammates come up with the word on the card. Example: Can you draw the word "recharge"?

3. THE JUG: A COMPLETE AQUIFER SCIENCE KIT
The Groundwater Foundation

The JUG contains all the supplies needed to construct a groundwater flow model to help students "Just Understand Groundwater." The plastic 8 ½" tall JUG comes with all the needed accessories and detailed instructions for experiments which enable the user to understand important concepts about groundwater including aquifer geology, water movement, water pumping, contamination and cleanup.

4. WATER CONSERVATION LITERATURE PACKETS
Clearwater Underground Water Conservation District

Assembly of water conservation literature from various sources to include the Texas Water Development Board, US Geological Survey, WaterSmart, US Department of Agriculture and US Environmental Protection Agency.