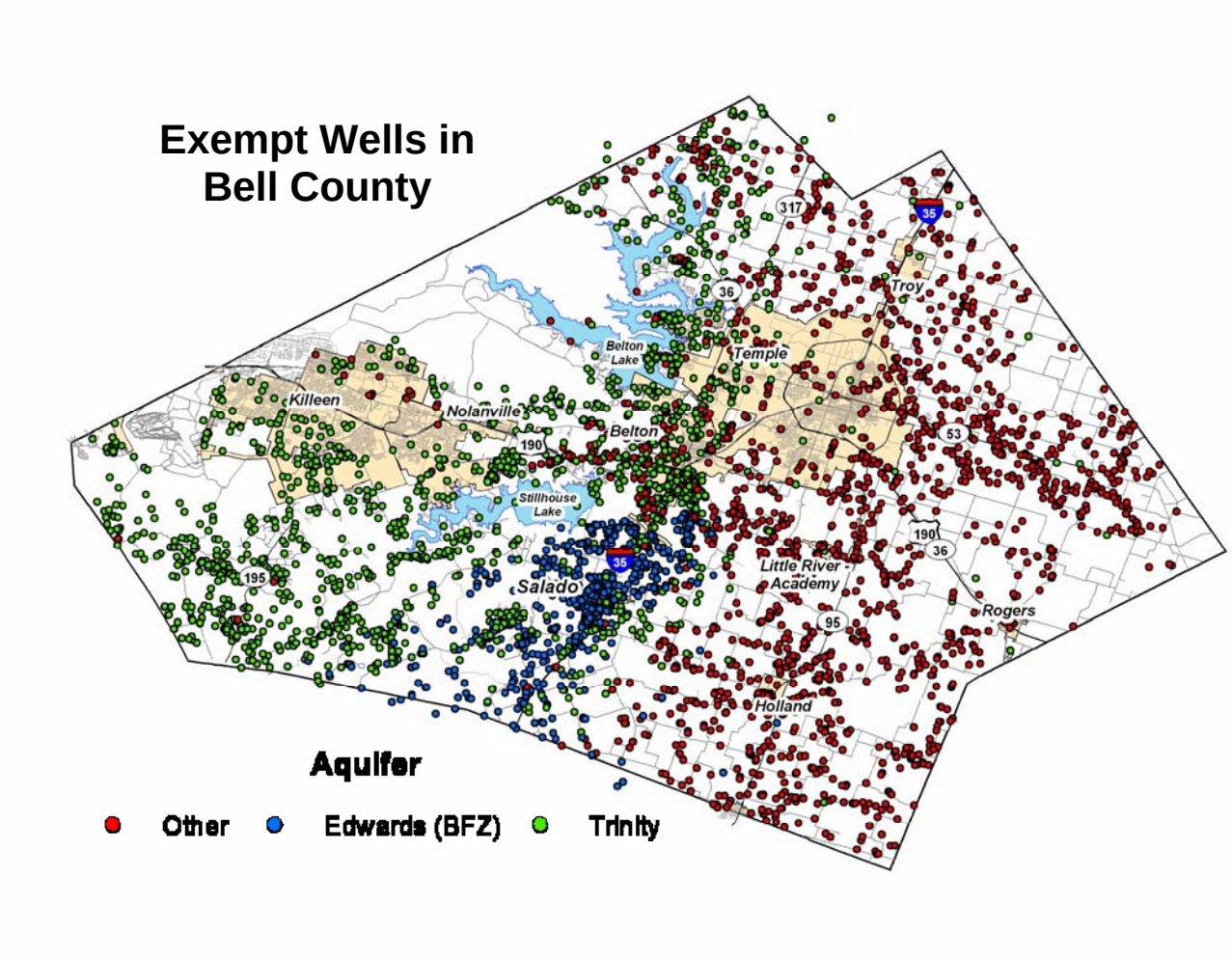
Clearwater
Underground Water Conservation District
Every drop counts!

Annual Report
Fiscal Year 2004



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1. INTRODUCTION

The Clearwater Underground Water Conservation District (CUWCD or District) was created by the State legislature in 1989 and approved by the voters of Bell County in August 1999. 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 opened its doors for business in February 2002. The District's fiscal year runs from October 1st through September 30th. This report summarizes the accomplishments and activities of the District during FY2004 (FY04).

During FY04, the District made significant changes to its rules to include implementation of Historic and Existing Use Permits; provisions to establish management zones; and revisions to permit exemptions and spacing requirements. Significant progress was also made in obtaining data to effectively manage groundwater in Bell County through the implementation of the Texas Water Development Board (TWDB) Groundwater Availability Model (GAM). These programs and others are discussed in this report.

The information in this report is presented in three categories as follows:

- Administrative Activities
- Management Plan Activities
- Miscellaneous Activities

Administrative activities include the basic tasks and requirements necessary for a groundwater district to function effectively. Management Plan activities include the required tasks and activities identified in the District's Management Plan. Miscellaneous activities include tasks and programs that do not fall within the other two categories.

2. ADMINISTRATIVE ACTIVITIES

A large portion of the District activities during FY04 was related to administrative needs. A review of the District's rules was a top priority during this period. Major administrative activities during FY04 include the following:

A. Contracts:
- Central Texas Council of Governments for administrative & planning services
- Turner Collie & Braden Inc. for technical support
- Legal counsel
  (1) Naman, Howell, Smith & Lee
  (2) Lloyd, Gosselink, Blevins, Rochelle & Townsend, P.C.

B. Financial Items:
- Budget and tax rate for FY04
- Financial audit

C. Miscellaneous Policies:
- Ethics Policy
- Investment Policy
- Capitalization Policy

D. Board of Directors:
- Bylaws Amendment Regarding Terms of Officers
- District Officers
- Election of Directors

E. District Rules—Major Revisions Effective March 1, 2004
- Historic and Existing Use Permits
- Permit Exemptions
- Spacing Requirements
- Management Zones
- Water Quality Rules
- Hydrogeologic Report

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 FY04. The FY04 contract is

for a two year term with consideration for renewal occurring 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. (The District has renewed the two year contract with CTCOG for FY05.)

2. Turner Collie & Braden, Inc.

The District initiated a contract with Turner Collie & Braden, Inc. (TCB) in March 2001 for technical consulting services and has continued a contractual relationship over the years. Services for FY04 included the following:

- Technical review of rules 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 from exempt wells;
- Establishment of parameters for hydrogeological studies (completed December 2004);
- Estimate of groundwater availability in the Edwards (BFZ) based upon TWDB GAM; and
- Continuation of Trinity aquifer study in southern Bell County.

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 FY04: 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 rules revision process and continues to provide counsel for rule-related issues. LGBRT attended various hearings held by the Senate Select Committee on Water Policy and provided the District with a summary of the hearings.

B. FINANCIAL ITEMS

1. Budget and Tax Rate

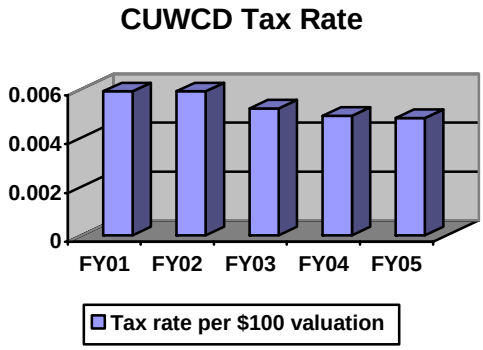
Several months prior to FY04, the District held worksessions to develop an operating budget for the upcoming fiscal year and to set the corresponding ad valorem tax rate. The District has consistently lowered or kept the same tax rate since it began assessing taxes. The adopted tax rate for FY04 was $0.0049/$100 valuation, down from $0.0052/$100 valuation assessed during FY03. The approved budget for FY04

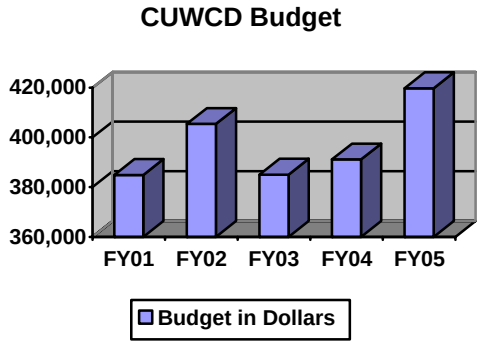
totaled $391,078. (For FY05, the District adopted a tax rate of $.0048/$100 valuation with an approved budget of $419,800.) The District has been able to maintain or increase its budget even with a tax reduction due to increased property values.

Total revenue (including interest) for CUWCD for FY04 was $394,728, resulting in a revenue surplus of $3,650 over the approved FY04 budget. However, expenditures for FY04 totaled $415,793, resulting in over-expenditures of $24,715. Applying the surplus revenue to the FY04 budget, the adjusted balance resulted in over-expenditures of $21,065. Funds were transferred from the District's reserves to cover this deficit, leaving a balance in the reserve account of $272,663.

FY04 was the first year the District's expenditures exceeded the approved budget. The over-expenditures resulted primarily from legal expenses associated with the rules review, as well as technical consulting services associated with permit reviews, subdivision plat reviews, and additional GAM simulations.

The approved budget for FY04, along with the ending schedule of revenues and expenditures for FY04, is attached as Appendix A. The figure shown in the final report includes a $293,729 reserve balance or carry over from years prior to FY04.





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 FY03 began in February 2004. Patillo, Brown & Hill, LLP conducted the audit which was successful--there were no findings to report. However, the auditors did recommend the District adopt an Investment Policy and a Capitalization Policy. These are discussed in the following section. The audit for FY04 will begin early in 2005.

C. MISCELLANEOUS POLICIES

1. Ethics Policy

The Board adopted an Ethics Policy on February 24, 2004. The adopted policy included a Code of Ethics, Professional Services and Management Policies and addressed conflicts of interest; standards of conduct; nepotism; lobbying; accounting records; audit requirements; and budget requirements.

2. Investment Policy

The Board adopted an Investment Policy on July 21, 2004. The Investment Policy addresses the methods, procedures and practices which must be exercised to ensure effective and judicious fiscal management of the District's funds.

3. Capitalization Policy

The Board adopted a Capitalization Policy on July 21, 2004. This policy states the capitalization criteria in recording expendable equipment purchased or acquired by the District.

D. BOARD OF DIRECTORS

1. Bylaws Amendment Regarding Terms of Officers

On August 17, 2004, the Board adopted an amendment to the District Bylaws clarifying the terms of office for Board officers. The amendment stated that time spent in service filling an unexpired term does not count toward the three consecutive year limit that is placed on a director holding a particular office.

2. District Officers

Board members for FY04 are identified below, along with the office they held. (The same officers were elected for FY05.)

Horace Grace, President
Wallace Biskup, Vice President
Leland Gersbach, Secretary
Ricky Preston, Director
Judy Parker, Director

3. 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 1

and 3 were due for election in May 2004. The incumbent directors Leland Gersbach and Wallace Biskup ran unopposed. As a result, the Board issued an order canceling the election and declared Directors Gersbach and Biskup as elected. Gersbach and Biskup will serve until May 2008.

A map of the Bell County precincts is provided in Appendix B.

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

E. DISTRICT RULES—Major Revisions Effective March 1, 2004

The District began reviewing the rules during FY03. This process continued into FY04 and resulted in major revisions being adopted by the Board on February 24, 2004, effective March 1, 2004. The key changes are summarized below:

1. Historic and Existing Use Permits

Due to concerns with limited groundwater availability in Bell County, the District felt the best way to protect existing users was to implement historic and existing use permits. Owners of existing non-exempt wells may convert their grandfathered use to a historic and existing use permit. This protects their right to withdraw an annual volume of water equal to the maximum volume withdrawn in any one year since 1972. The deadline for completing an application for conversion was June 30, 2004. Twenty-three of the twenty-six eligible well owners completed a conversion application. Hearings were held during the first quarter of FY05 and are still on-going.

2. Permit Exemptions

The District was concerned with an increase in groundwater use for residential developments. These developments rely on an individual well per lot to meet water needs. To address this concern, the District revised its exemptions from permitting to more closely follow exemptions identified in the Texas Water Code Chapter 36.

Wells are exempt from permitting if they:

a) cannot produce more than 25,000 gallons per day; and
b) are used for domestic, livestock or poultry purposes; and
c) are located on a tract of land larger than 10 acres.

Wells located on smaller tracts may still be exempt if the tract existed in this size prior to March 1, 2004 and no subdivision occurs prior to drilling the well.
(Early in FY05 additional exemptions were added to include dewatering wells, leachate wells, monitoring wells, and test wells.)

3. Spacing Requirements

To minimize interference between wells, the District adopted minimum tract sizes and spacing requirements between wells and from property lines. New wells must be located at least 50' from the property line and 100' from other wells. A minimum tract size of 2 acres is required to drill a new permitted well. For permitted wells, the minimum tract size and setbacks increase as the column pipe size increases.

4. Management Zones

The District adopted provisions to allow for the creation of management zones, if necessary, to allow different management strategies for the two aquifers and/or different areas within the same aquifer. Management zones may be established to allow different policies in various areas of the county. The District may impose well production limits on permitted wells if aquifer levels fall. Historic and existing use permits have priority over new operating permits.

5. Water Quality Rules

To protect the quality of the groundwater, the District added rules regarding water quality. A check valve must be installed on all wells that have a chemical injection or foreign substance unit in the water delivery system.

6. Hydrogeologic Report

The District revised its requirements regarding hydrogeologic reports. The new rules require this report for new wells capable of producing more than 1 million gallons per month. (During the first quarter of FY05, the District further revised this requirement to clarify the conditions under which this report is required.)

F. MANAGEMENT PLAN

During FY04, the District continued to meet the goals and objectives outlined in its Management Plan. The District Management Plan is reviewed annually and is to be updated and readopted at least every five years. During FY04 the District began conducting GAM simulations to develop revised groundwater availability figures to update the Management Plan. During FY05 the District will continue to work to revise the Management Plan.

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 is included in the following section.

3. MANAGEMENT PLAN ACTIVITIES

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. A large portion of the District's activities during FY04 has been related to the Management Plan requirements. Several of the Plan's goals and objectives are referenced to the calendar year rather than the fiscal year; therefore, this report will include Management Plan activities through December 2004. The District goals are shown below:

- Efficient use of groundwater
- Minimize waste of groundwater
- Conjunctive surface water management issues
- Develop public/private partnerships

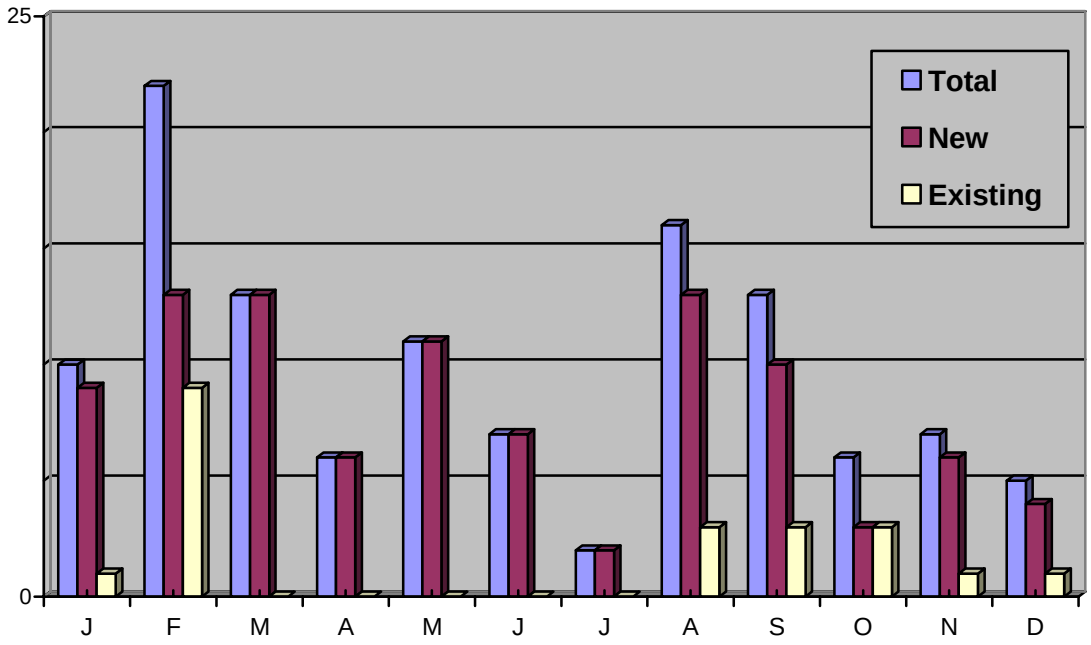
The following is a summary of the District's activities related to these goals. Appendix C provides a summary of the estimated staff time and expenses necessary to achieve them.

A. 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 2004, 118 wells were registered. Of these, 18 wells were non-exempt. The tables below summarize the well registration and permitting activity through December 31, 2004.

Well Registration by Month--2004



Well Registration Summary
2002 through 2004

Period	Exempt Wells		Non-Exempt Wells*				Total
	Grandfathered	New	Grandfathered	New	New I	New II	
2002	3516	80	50	-	-	-	**3646**
2003	377	81	4	2	-	-	**464**
Jan 2004	1	9	0	0	-	-	**10**
Feb	2	10	9	1	-	-	**22**
Mar	2	11	0	-	0	0	**13**
Apr	0	5	0	-	0	1	**6**
May	0	11	0	-	0	0	**11**
Jun	2	4	0	-	1	0	**7**
Jul	0	2	0	-	0	0	**2**
Aug	4	10	2	-	0	0	**16**
Sep	0	10	3	-	0	0	**13**
Oct	2	3	1	-	0	0	**6**
Nov	1	6	0	-	0	0	**7**
Dec	1	4	0	-	0	0	**5**
2004 Total	**15**	**85**	**15**	**1**	**1**	**1**	**118**
Grand Total	**3908**	**246**	**69**	**3**	**1**	**1**	**4228**

*When the revised rules were adopted in February 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 10 acres or less in size, created after March 1, 2004.

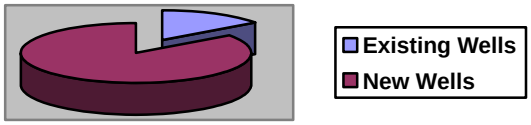
Classification 2:

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.

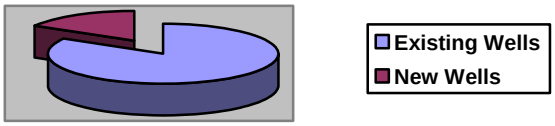
These classifications did not go into effect until March 1, 2004. Therefore, the table above does not distinguish between Classification 1 and Classification 2 wells until the month of March 2004.

Registration figures for 2004 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-2004



Non-Exempt Well Registration-2004



Objective A.3: Establish a Groundwater Database.

The District's database is continually updated as new information is acquired. Data is entered within 45 days of receipt, as required by the Management Plan. The Management Plan also requires the District to evaluate methods for estimating current annual aquifer recharge, discharge, movement and storage values by January 1, 2005**.** During 2004, the District used the TWDB Groundwater Availability Model (GAM) to assess availability of groundwater in the Edwards (BFZ). Through the GAM, aquifer dynamics such as recharge, discharge, movement and storage were considered, with discharge at Salado Springs being the primary factor in assessing availability. The District has authorized TCB to conduct GAM simulations for the Trinity aquifer. The simulations should begin during the first quarter of 2005. At this point in time, the TWDB GAM appears to be the best method for estimating groundwater availability and associated parameters.

1. Groundwater Production:

During 2004, the District continued collecting data from non-exempt wells. Monthly production reports are required by the 15th 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 2004, actual water production figures were significantly lower than the amount permitted.

Volume Permitted for Non-Exempt Wells in 2004

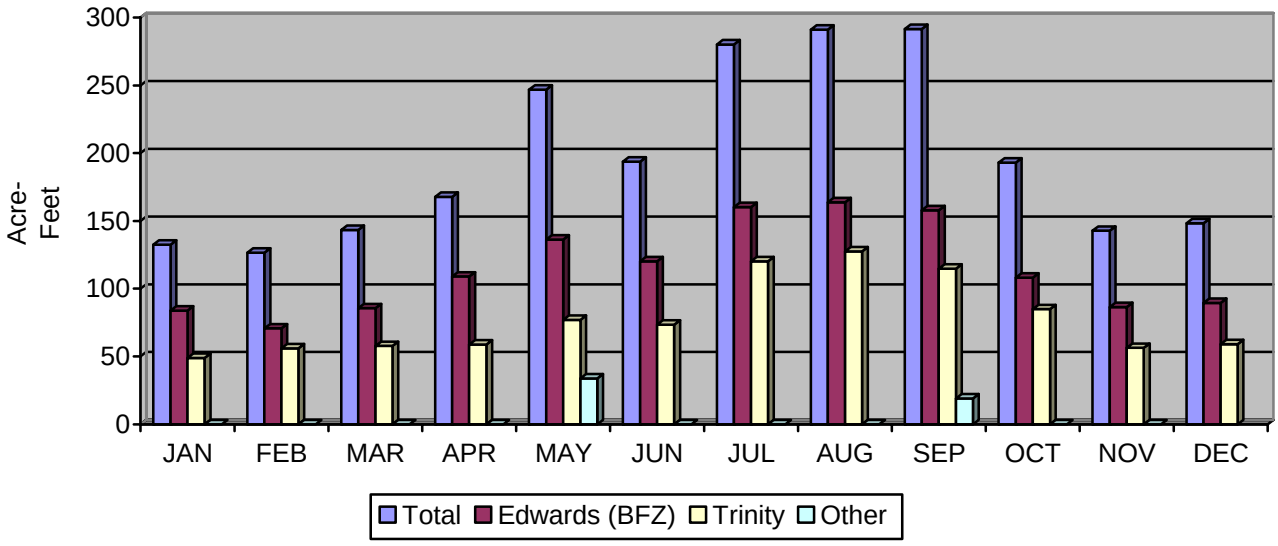
Edwards (BFZ):	2,315.06 ac-ft (25 wells)
Trinity:	1,372.67 ac-ft (20 wells)
Other:	267.35 (9 wells)
TOTAL:	3,955.08 (54 wells)

2004 Annual Production (Non-Exempt Wells)

Edwards (BFZ):	1,371.27 ac-ft
Trinity:	934.17 ac-ft
Other:	52.85 ac-ft
TOTAL:	2,358.29 ac-ft

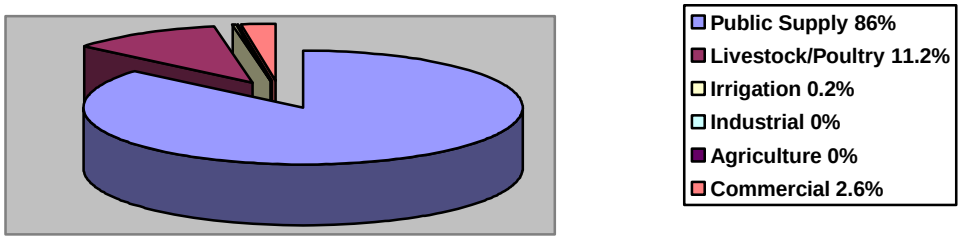
The chart below shows that production peaked in August with a total withdrawal of 299 ac-ft. This is down from 2003 when production peaked at 350 ac-ft. Throughout the year, withdrawals from the Edwards (BFZ) were consistently higher than from the Trinity aquifer.

Production From Non-Exempt Wells--2004

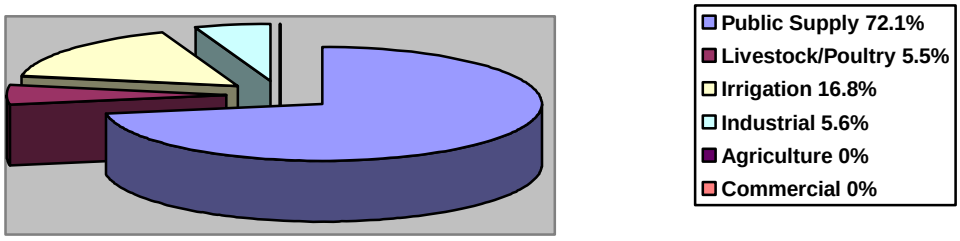


The following pie charts show how the groundwater from the different aquifers is used. In the Edwards (BFZ) and Trinity aquifers, water produced from non-exempt wells is used primarily for public supply purposes (86% and 72.1% respectively), while water produced from non-exempt wells in other formations is used exclusively for irrigating agricultural crops.

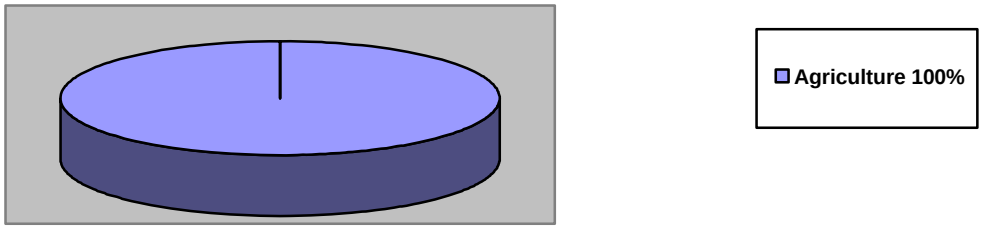
Use of Groundwater
By Non-Exempt Wells—Edwards (BFZ) Aquifer



Use of Groundwater
By Non-Exempt Wells –Trinity Aquifer



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



During 2004, the Board directed TCB to evaluate the exempt wells that had been registered and determine the aquifer from which they are producing and provide an estimate of their total annual production. The results are shown below for exempt wells registered through December 31, 2004:

Summary of Exempt Well Production

Aquifer	*No. of Wells	Estimated Use Acre-feet/Year
Edwards (BFZ)	588	285
Trinity	1,672	811
Other	1,860	902
TOTAL	**4,120**	**1,998**

*Calculations for exempt well production excluded 32 wells that were plugged and two wells that were reclassified as non-exempt.

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)	1,371	83%	285	17%	**1,656**
Trinity	934	54%	811	46%	**1,745**
Other	53	6%	902	94%	**955**
TOTAL	**2,358**	**54%**	**1,998**	**46%**	**4,356**

The chart above shows that overall, exempt wells account for nearly half (46%) of all the groundwater produced in Bell County. This is true in the Trinity aquifer with 46% of production coming from exempt wells; however, in the Edwards (BFZ), exempt wells only account for 17% of groundwater production, with the vast majority coming from non-exempt wells (83%). Wells producing from other groundwater sources attribute 94% of the production to exempt wells.

2. Aquifer Monitoring:

The Texas Water Development Board (TWDB) measures water levels in 10 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 10 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 tables below provide a summary of the monitoring data. Refer to Appendix D 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
58-04-000 (Salado ISD)		39.8	42.6	41.4	39.5
58-04-502 (Salado ISD)	--	48.7	56.1	49.2	48.6
58-04-602 (Salado WSC)	--	63.2	38.2*	29.5*	32.7*
58-04-623 (Foster Stagecoach)	78.3	84	89.58*	89.69	82.79*
58-04-702 (TxDOT)	72.4	78.25	71.96	72.72	71.84
58-04-801 (Norwood)	147.4	144.15	137.42	141.34	141.25

*Pump turned off 1-2 hours prior to measurement

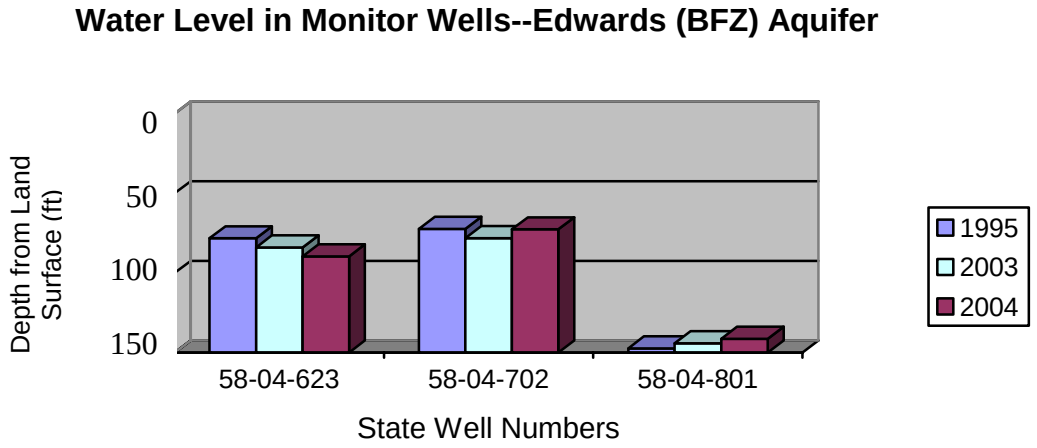
Trinity Aquifer
Water Level Measurements
Depth Below Land Surface in Feet

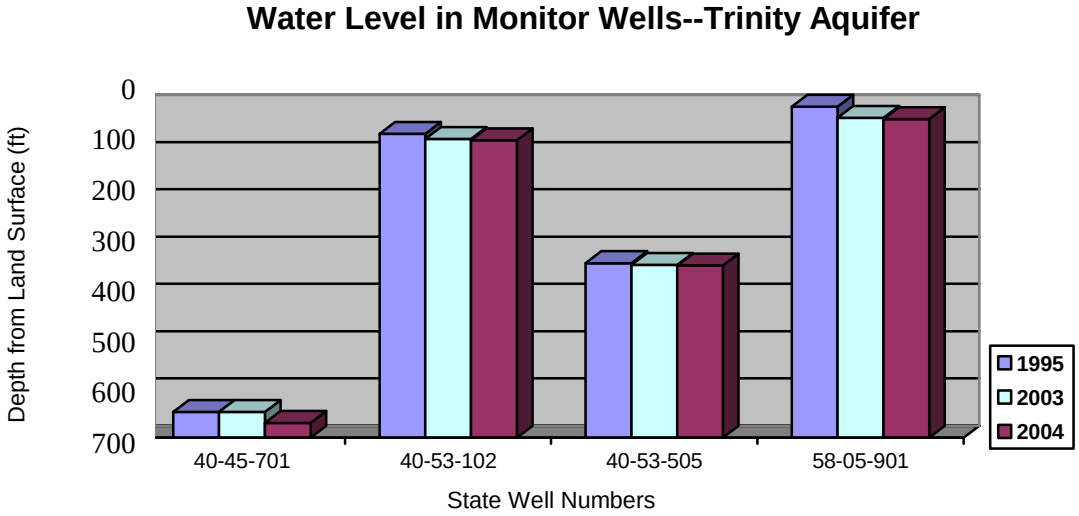
Well Number	Date of Measurement				
	Jan-Feb 1995	Jan-Mar 2003	July 2003	Jan-Mar 2004	July 2004
E-02-1137G (Stephenson #1)	--	--	--	--	311.42
E-02-1138G (Stephenson #2)	--	--	--	--	290.18
E-02-1299G (Mayer)	--	--	--	182.1	189
58-13-503 (City of Bartlett)	--	--	--	108.0*	101.83*
40-45-701 (USCOE—Winkler Pk)	646.08	646	--	669	326.09**
40-53-102 (USCOE—Leona Pk)	57.4	68.35	70.42	71.28	71.92
40-53-505 (Moffat WSC)	331	335	417.83*	336	416.06*
58-05-901 (City of Holland)	+1.2	23.7	25.3	26.19	28.21

*Pump turned off 1-2 hours prior to measurement
**Well no longer in production

The Edwards wells seem to fluctuate from year to year, with no defined pattern apparent. This tends to support the premise that the Edwards (BFZ) recharges

quickly with a rainfall event. With regard to the Trinity, there has been concern that the aquifer levels are declining. Many of the wells do not have historic data to use for comparison. TWDB measurements shown in the chart above do generally show a pattern of decline over the past 10 years. The most notable is the City of Holland well that shows a consistent decline of approximately 29.4 feet since 1995. This is an artesian well that was reported as flowing in 1995. Based on past TWDB records, this well stopped flowing in 1997 and the water table has been steadily declining since then. As more measurements are taken during the coming years, the results should be more conclusive regarding the status of the aquifers. The data above is also shown in the chart below for the TWDB water level measurements in the Edwards (BFZ) and Trinity aquifers in 1995, 2003 and 2004.





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 equipment has not yet been installed. The District is also working with TCB to identify a suitable well for continuous monitoring of the Trinity aquifer.

Objective A.4: Provide Public Education Opportunities.

The District's Management Plan requires the dissemination of educational information regarding the hydro-geologic cycle and status of aquifers through at least two newspaper articles, two field day/open house events, and responses to public inquiries as needed. This objective was met as follows:

(1) Field Day/Open House.

- Earth Day Event

The District supported local Earth Day events held on April 14, 15 & 17, 2004. The events held on April 14 & 15 were for local schools and were held at the Mayborn Center in Temple. The April 17th event was held at the Temple Colonial Mall and was for the general public. The CUWCD contributed funds and displayed information regarding the aquifers and the District. Refer to Appendix E for a complete list of items distributed during the Earth Day events.

- Bell County Water Symposium

The CUWCD sponsored its fourth water symposium on October 27, 2004 at the Bell County Expo Center. Presentations included information about the District; the rule of capture and other legislative issues; rainwater harvesting; brush control; Source Water Assessment and Protection Program (SWAPP); Conservation Effects Assessment Project (CEAP); groundwater availability; water demand; and water supply corporations. A workshop was held after the symposium on how to prepare a groundwater availability report for subdivision plat approval.

The CUWCD set up a display and distributed literature packets and water conservation kits as well as other information on water conservation and the status of the aquifers. Approximately 55 people attended the symposium. Refer to Appendix F for an agenda of the meeting. Appendix E contains a complete list of items distributed during this event.

(2) Newspaper Articles.

- <u>The Clearwater UWCD Spring 2004 Report</u>

  The District published an article in the Temple Daily Telegram and the Killeen Daily Herald on Sunday, April 11, 2004, and in the Salado Village Voice on Wednesday, April 14, 2004. The article provided data from 10 sites in the Edwards (BFZ) and Trinity aquifers monitored by the TWDB, as well as information on the water cycle, well production and District activities. The article is included in Appendix G.

- <u>The Clearwater UWCD Fall 2004 Report</u>

  The District published an article in the Killeen Daily Herald on Sunday, October 17, 2004, the Salado Village Voice on Thursday, October 21, 2004, and in the Temple Daily Telegram on Sunday, October 24, 2004. The article provided a summary of District activities, information on the hydrogeologic cycle, updated well production figures, District news, and changes in aquifer levels. The article is included in Appendix G.

(3) Responses to Public Inquiries.

- The District received various inquiries throughout the year, primarily via telephone calls. The majority of inquiries were related to well registration. Approximately 15 registration forms were mailed in response to these inquiries. Many others accessed this information from the District's web site.

- Other requests for information included the list of local well drillers; well plugging information; water quality testing; well depth data; District rules; meeting minutes; groundwater availability; well production; spacing requirements; and referrals to TCEQ consumer hotline for issues regarding quarries and water supply corporations. Approximately 15 such requests resulted in information being sent via mail.

B. MINIMIZE WASTE OF GROUNDWATER

Objective B.1: Public Education.

The District's Management Plan requires the distribution of conservation material, an annual school contest on water conservation practices, and the annual distribution of two water conservation literature packets. This objective was met as follows:

(1) Distribution of educational information regarding the current conservation practices for efficient use of water resources.

- The District distributed various material on water conservation as identified below. The information below does not include conservation material contained in literature packets or the water conservation kits. (See Appendix E for a list of material distributed.)

Event	Date	# Distributed
Killeen Rotary Club	01-30-04	75
Complimentary Packet to Contest Participants	03-08-04	798
Keep Temple Beautiful Clean-Up Day	04-03-04	1,200
Earth Day 2004 (School Event)	04-14-04	4,320
Earth Day 2004 (Public Event)	04-17-04	271
Killeen Rotary Club	05-12-04	45
CTCOG Household Hazardous Waste Collection Day (Temple)	09-11-04	1,760
CTCOG Household Hazardous Waste Collection Day (Killeen)	09-25-04	2,160
CTCOG Household Hazardous Waste Collection Day (Lometa)	10-09-04	640
Bell County Water Symposium	10-27-04	246
TOTAL		**11,515**

(2) Conduct secondary school and/or college contest focused on the demonstration of conservation practices applicable to the District.

- The District conducted an essay and poster contest on water conservation during the month of January/February 2004 (Appendix H). All 5th grade students in Bell County were eligible to participate. The District received 21 essays and 98 posters. The top three entries in each category were selected and awards (savings bonds) were presented on April 17, 2004 during the public Earth Day Event at the Temple Mall. CUWCD complimentary packets were provided to all participants and their classroom teachers (133) and included information on water conservation as well as CUWCD promotional material.

(3) Compile appropriate water conservation literature into a handout packet made available to District patrons and educational institutions (minimum two per year).

- The District compiled literature packets containing a variety of information on water conservation, the water cycle, and water quality. The packets are distributed to Bell County schools and are available for distribution at water conferences and other water-related events. Distribution of these packets is listed below. Refer to Appendix I for an inventory of information contained in the packets. A total of 338 packets were distributed during the year.

Packet ID	Event/Entity	Date	Number Distributed
Nov 01& 02; Apr, Jul & Dec 03	Earth Day 2004	04-14-04	64
Jul 04	National Auto Works Appreciation Lunch	07-28-04	50
Aug 04	*School Distribution	08-12-04	101
Oct 04	Bell Co. Water Symposium	10-27-04	20
Dec 04	*School Distribution	12-17-04	103
TOTAL			**338**

*For the school distributions, one packet was provided to each campus within each Bell County school district. Packets were also provided to several private schools within Bell County. The distribution of the Aug 04 Packet to schools is summarized below. The Dec 04 packet was distributed to two additional entities: one to a new elementary school in Killeen and the other to a non-profit entity that contributed information to the packet.

Academy ISD (3)	Rogers ISD (3)
Bartlett ISD (3)	Salado ISD (3)
Belton ISD (11)	Temple ISD (14)
Holland ISD (3)	Troy ISD (4)
Killeen ISD (43)	Private Schools (14)

Objective B.2: Identify Wasteful Practices.

The District's Management Plan identifies several performance standards to monitor the District's effectiveness in meeting this objective. Some of the performance standards were addressed in previous years. The remaining ones and those that are ongoing are discussed below.

(1) Track Water Quality Issues.

District directors and staff are able to track water quality issues through a variety of ways as follows: 1) attend various seminars and conferences that address water quality issues; 2) receive various water related articles through TAGD (Texas Alliance of Groundwater Districts) and US Waternews Online; 3) follow local water quality issues identified in the area news media; and 4) membership on the TAGD Groundwater Protection Committee.

Water quality issues were discussed at the Bell County Water Symposium on October 27, 2004. These included the following: Lake Stillhouse Hollow and the Source Water Assessment and Protection Program; and the Conservation Effects Assessment Project (CEAP) Monitoring Activities in the Upper Leon River Watershed.

The District continues to monitor events associated with the pollution of the North Bosque River watershed and the impact on Lake Waco. Although this area is not in Bell County, many believe similar problems may exist in the Leon River watershed. Perchlorate and MTBE are also issues the District continues to monitor.

During 2004, the District opened its in-house laboratory for testing of basic drinking water parameters. This testing is available to registered well owners at no cost.

(2) Perchlorate Discharges from the US Naval Weapons Industrial Reserve Plant (NWIRP) at McGregor, Texas.

The CUWCD continues to follow the perchlorate issue and its impact to Bell County.

The US Army Corps of Engineers and the Brazos River Authority received funding in 2001 to conduct a study of the Bosque River and Leon River watersheds to determine if there is any impact resulting from the perchlorate at the NWIRP site. Recent studies focused on an environmental assessment of perchlorate in samples such as soil, water, sediments, and vegetation, and a toxicological evaluation of perchlorate in fish, amphibians, birds, and mammals. The study involved a cooperative effort between US Army Corps of Engineers, Brazos River Authority, the Institute of Environmental and Human Health at Texas Tech University, and MWH Inc.

A total of 15 monitoring stations were established along tributaries in the two watersheds. Samples taken during 2003 showed perchlorate levels less than 4 ppb (parts per billion) at the nearest stations north of Lake Belton. In addition, six intake stations were monitored around the two lakes, with 5 of these around Lake Belton. These stations all reported less than 4 ppb during 2003. Surface water and sediment samples were taken from Lake Belton, and again, these reported less than 4 ppb.

A final report was prepared in February 2004 and concluded that the remediation activities conducted by the US Navy are having a significant and positive effect and that the public water supply users in the communities surrounding Lake Belton and Lake Waco are at no risk of exposure to perchlorate from this source. However, certain NWIRP vicinity residents and recreational users of the area could potentially be exposed to perchlorate if consuming produce from gardens irrigated with impacted stream water, gathering and consuming wild edible vegetation near impacted streams, or drinking water from impacted wells or streams. People who consume fish caught in these watersheds could also potentially be exposed to perchlorate in fish fillets, although the risk of exposure is thought to be low. The study also demonstrated that animals in affected areas could be exposed to perchlorate either directly from drinking contaminated stream water or indirectly by consuming plants or animals that have been exposed to perchlorate.

Groundwater in Bell County has not been tested for perchlorate. Contamination of groundwater is not considered an issue since information available indicates the perchlorate outside of Bell County is located in shallow groundwater that disperses to surface water where it becomes diluted.

The CUWCD will continue to monitor this issue.

(3) MTBE—Methyl Tertiary-Butyl Ether.

The CUWCD continues to collect information on MTBE and coordinates with Texas Commission on Environmental Quality (TCEQ) to keep an updated list of leaking petroleum storage tanks in Bell County. As of January 2005, TCEQ identified 11 leaking petroleum storage tank sites in Bell County that are undergoing investigation or remediation. Last year 28 sites were listed. Therefore, TCEQ has completed their investigation of 17 of these sites. Appendix J contains a listing of the 11 sites that are currently under investigation. CUWCD will continue to monitor this issue.

(4) Initiate Program to Identify Abandoned Wells by January 2003.

In 2003, the District implemented an Abandoned Well Program in which the District would pay for the inspection of a well to determine its condition. Due to limited participation, this program was not continued in 2004. During 2004, the District responded to various calls regarding abandoned wells. In most cases, the wells were not registered and were open at the surface. Staff routinely advised the well owner of the requirement to 1) register the well; 2) cap the well if it is in good condition; and 3) repair or plug the well if it is in a deteriorated condition.

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. According to records from the Texas Department of Licensing and Regulation, during 2004 eight wells were plugged in Bell County.

(5) Reporting Unplugged Abandoned Water Wells.

The District staff reports unplugged abandoned water wells to the well owners and the District Board within 30 days of discovery and provides TCEQ and TWDB an annual report on unplugged abandoned water wells.

C. CONJUNCTIVE SURFACE WATER MANAGEMENT ISSUES

Objective C.1: Coordinate Emergency Response/Drought Contingency Planning With Surface-Water Entities.

During 2004, the District continued progress toward developing a drought management plan. In 2002, the District collected existing drought management plans from municipalities, water supply corporations, and other entities in Bell County, and solicited input from these entities regarding the development of the District's drought management plan. During 2003, the District implemented its well monitoring program which provides useful data on changes occurring in the aquifers.

The District continued its well monitoring program in 2004 and implemented the groundwater availability model (GAM) for the northern segment of the Edwards (BFZ). As a result of the GAM, the District revised its availability figures from 1,315 ac-ft/year to 7,500 ac-ft/year. The District is in the process of conducting the GAM for the northern Trinity and should have results regarding availability in Bell County during the Spring of 2005. TCB's study of the Trinity aquifer in southern Bell County will provide valuable data on the availability of groundwater in this area as well. This study is anticipated to be completed during the Spring of 2005. All of this data will be taken into consideration as the District works to develop its drought management plan.

D. DEVELOP PUBLIC/PRIVATE PARTNERSHIPS

Objective D.1: Encourage Public Participation.

Following the results of the May 2004 election, the Board confirmed appointments to the Public Advisory Committee (PAC or Committee), retaining the existing members as shown below:

Marvin Green, Chair	-	Precinct 3
Vince Cortese	-	Precinct 1
Sara Mackie	-	Precinct 2
John Mayer	-	Precinct 4
David Cole	-	At-Large

These members will serve on the PAC through April 2005, at which point the Board may retain these members or appoint new ones.

The role of the PAC was discussed during 2004 and the Board determined that the PAC would meet on an as-needed basis. Two meetings were held during 2004. The focus of the meetings was on public education and outreach programs and involved review and discussion of the District's brochure, newsletter, annual water symposium, and ideas for additional outreach programs.

Throughout the year, PAC members have regularly attended the CUWCD Board meetings, providing representation at 13 of the 14 Board meetings that were held. 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.

4. MISCELLANEOUS ACTIVITIES

In addition to the administrative tasks and Management Plan requirements, the CUWCD has been involved in several miscellaneous activities during FY04. Many of these activities are related to the Management Plan goals; therefore, this report includes activities through December 2004. These activities include the following:

- Trinity Aquifer Study in Southern Bell County
- GAMs
- Coordination with County in Plat Review Process
- Water Conservation Kits
- WaterWise Program
- Water Quality Testing
- Water Quality Protection Grant Program
- New Brochure
- Newsletter
- Book Cover Distribution
- Internet Site
- Resource Library
- Promotional Material/Activities

These activities are discussed in more detail below.

A. TRINITY AQUIFER STUDY IN SOUTHERN BELL COUNTY

In recent years, the District has seen an increase in the number of residential subdivisions relying on individual wells being developed in southern Bell County. With limited information available, the impact of these wells on the Trinity aquifer is hard to determine. To address concerns regarding the decline in both the quantity and quality of the Trinity aquifer, the District contracted with Turner Collie and Braden Inc. in 2003 to conduct a study of the Trinity. The study will determine the hydrogeologic properties of the aquifer in this area and the volume of water in storage. Due to unexpected delays, the study has not been completed. TCB anticipates completion of the study during the Spring of 2005.

B. GAMs

During 2004, the District contracted with TCB to conduct the TWDB GAM (groundwater availability model) for the portion of the Edwards (BFZ) aquifer in Bell County. The District's goal was to determine how much water could be produced from the aquifer during a drought similar to the drought of record in the 1950's, and still maintain a minimum spring flow of 100 to 200 acre-feet/month (approximately 1,000,000 to 2,000,000 gallons per day). This is equivalent to a stream flow of approximately 1.5 to 3.0 cfs (cubic feet per second).

Based upon these criteria, it was determined that approximately 7,500 acre-feet/year could be produced.

The District has authorized TCB to conduct GAM simulations for the Trinity aquifer. Results should be available during the Spring of 2005.

C. COORDINATION WITH COUNTY IN PLAT REVIEW PROCESS

During 2004 the District continued coordinating with the county commissioners and staff to review groundwater availability reports for subdivisions relying on groundwater. The District's goal is to ensure that developers and potential purchasers are knowledgeable about the groundwater resources in this area. In 2004, the District reviewed reports for two subdivisions.

D. 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. Forty kits were distributed at the District's annual water symposium held on October 27, 2004.

E. WATERWISE PROGRAM

For FY04, the District continued funding of the WaterWise program in selected schools. The 5th grade students in the Holland and Salado Independent School Districts (ISD), and the Maxdale and Clear Creek campuses in the Killeen ISD were selected. This included 444 students and 8 teachers. As part of this program, each student received a water conservation kit with water saving devices for installation in the home. An activity book and CD rom was included, along with a teacher guide.

For FY05, the District decided to partner with the Brazos River Authority and implement the Major Rivers Program instead. This program is less costly and enables the District to reach more students. During 2004, orders were taken for 2,157 students and 59 teachers in the Belton, Temple, Killeen and Bartlett ISDs. The Major Rivers Program material was delivered to the schools in September 2004.

F. WATER QUALITY TESTING

During 2004, the District opened its in-house laboratory for water quality testing. Testing is available for registered well owners at no cost and includes testing for coliform bacteria, alkalinity, conductivity/total dissolved solids, fluoride, hardness, nitrate, nitrite, pH, phosphate, and sulfate. Samples from seventeen wells were tested during 2004. The District is not a certified lab and refers those wishing testing by a certified lab to the Waco-McLennan County Health Department for coliform bacteria testing and the Environmental Laboratory Services in Austin for coliform bacteria and chemical contaminants testing.

G. 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. In November 2003, the District approved a grant application from the City of Rogers to conduct a video survey to determine the condition of their well. The District did not receive any additional grant applications during 2004.

H. NEW BROCHURE

During 2004 the District developed a new brochure consisting of a folder with 10 information cards. The cards cover a variety of information to include general information about the District; District programs and activities; aquifers in Bell County; water conservation and water quality protection; new well owner information; groundwater and the hydrologic cycle; groundwater conservation districts and state water policy; water use information; District rules and regulations; and District directors/contact information. The information cards may be distributed individually or as a set in the packet folder. The District developed a new logo as well during 2004.

I. NEWSLETTER

The District developed its first annual newsletter during 2004—The Clearwater Source. The newsletter was mailed in September to all registered well owners. Newsletter articles included the May 2004 election results; summary of revised rules; update on well registration and production; water quality testing lab; aquifer information; legislative issues; water conservation tips; and District programs and activities.

J. BOOK COVER DISTRIBUTION

In 2004, the District purchased book covers for all middle and high school students in Bell County for distribution during the 04/05 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 will be distributed.

K. INTERNET SITE

The Districts web site (www.clearwaterdistrict.org) has continued to expand 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 definition of terms, data on water use, and water conservation tips.

During 2004, the web site was reformatted and a link was added to enable visitors to email the District office. Records indicate that the top four sites that were accessed were the District rules; well registration and permitting summary; annual water symposium; and driving directions. Information will be added to the web site during the next year as needed.

L. RESOURCE LIBRARY

The District continues to add items to its resource library to help promote public education and conservation. 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 K.

M. PROMOTIONAL MATERIAL/ACTIVITIES

CUWCD continues to distribute various items to promote public awareness of the District and water conservation. These items have been distributed at various events. In addition, Board members have spoken to various groups throughout the year. Refer to Appendix E for a summary of activities and items distributed during 2004.

5. SUMMARY

During the past year, the District continued acquiring data to enable the effective management of groundwater in Bell County. The District evaluated its monitoring wells and pursued new sites where needed to obtain reliable data on the levels of the aquifers—this is an ongoing project. The District continued collecting production reports from the non-exempt wells and obtained an estimated production figure for the exempt wells. The GAM was used to obtain a revised availability figure for the Edwards (BFZ) aquifer. The Trinity study is ongoing and will identify the hydrogeologic properties of the Trinity and determine the volume of water in storage. Additional sites suitable for aquifer monitoring will also be identified as part of the study. All of this information helps the District to understand 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 so that management decisions can be made.

During the past year, the District adopted revised rules to address specific issues in Bell County. These revisions included historic & existing use permits; revised permit exemptions; additional spacing requirements; management zones; water quality rules; and hydrogeologic report requirement. These revisions will help the district to better manage limited groundwater resources; protect the quantity and quality of the aquifers; and prevent interference between wells.

Public education and service continue to be a major focus of the District. Programs and activities during the past year include the annual water symposium, WaterWise program, book cover distribution, conservation literature packet distribution, essay/poster contest, Earth Day events, water quality testing lab, District newsletter, District brochure, newspaper articles, resource library, and the web site.

During the next year, the District will continue to acquire data on the aquifers and will focus on the Trinity GAM and the Trinity study for southern Bell County. The District will pursue continuous monitoring sites for both the Edwards (BFZ) and the Trinity aquifers. Installation of stream gauges in Salado Creek will be considered. The District's Management Plan will be updated and revised. Educational efforts during the next year will include presentations to classrooms and the development of a District activity book.