MILLS COUNTY
FOX CROSSING WATER DISTRICT

2010
AMENDED
DISTRICT MANAGEMENT PLAN

W. D. Henry, President
J. Don Barnett, Vice-president
Sam Beaumont, Secretary
J. Randall Leonard, Treasurer

Adopted 13 April 2010
Effective Date14 April 2010

HISTORY

The Fox Crossing Water District was initially formed by the Texas Legislature with passage of House Bill No. 2487 in 1985 (Chapter 779, Acts of the 69th Legislature, Regular Session, 1985), and later approved by a vote of the residents of Mills County. Following the drought in the summer of 1984, when the citizens of Mills County were forced to ration water, the legislature passed H.B. No. 2487 to conserve available water supplies. The bill included Lampasas and San Saba counties, and included authority to build a reservoir on the Colorado River. Lampasas and San Saba counties failed to confirm the District, so the boundaries now only include Mills County.

Fox Crossing Water District ("District") is a hybrid district that includes authority under Chapters 36, 49 and 54, Water Code.[1] Because the Fox Crossing Water District was reduced to covering only one county, the District has concentrated only on groundwater conservation and management. Under the terms of its formation, the District was created to "conserve, preserve, protect, recharge, and prevent waste of water from the groundwater reservoirs and subdivisions of groundwater reservoirs in the district."[2]
Chapter 36 requires all groundwater conservation districts to adopt a comprehensive management plan addressing all applicable management goals,[3] and this document meets that requirement.

The 2007 State Water Plan

Mills County is located in Regional Water Planning Group (RWPG) Region K. Region K must carry out seven tasks under the regional water planning process:

1) Describe the regional water planning area;
2) Quantify current and projected population and water demand;
3) Evaluate and quantify current water supplies;
4) Identify surpluses and needs;
5) Evaluate water management strategies and preparing plans to meet the needs;
6) Recommend regulatory, administrative, and legislative changes; and
7) Adopt the plan, including the required level of public participation.

In order to meet these tasks, the RWPG has designated certain entities such to administer the planning process. The Fox Crossing Water District is one of these designated entities in Region K. Under the State Water Plan, the Fox Crossing Water District determines the available water supply, the demands of that water supply, the needs of the users within District, and the water management strategies that successfully address those needs.

[1] The legislation references Chapter 52 and 54, Water Code; Chapter 52 was repealed and replaced with Chapter 36 while Chapter 54 was partially repealed and the repealed portions added to Chapter 49. Today the three Chapters that govern the Fox Crossing Water District include Chapter 36, 49 and 54.
[2] Section 29(a)(4), Chapter 779, Acts of the 69th Legislature, Regular Session, 1985
[3] Section 36.1071, Water Code.

DISTRICT MISSION

The Fox Crossing Water District, located in Mills County, Texas, strives to conserve, preserve, and recharge the groundwater of the Trinity Aquifer, as well as prevent the waste of these resources. Additionally, the District works to minimize the draw-down of the water table within its boundaries to the greatest degree possible.

Regional Cooperation And Coordination

The Fox Crossing Water District will continue to work with the surrounding water suppliers of Lometa (Lampasas County), Zephyr (Brown County), Brooksmith (Brown County), and Richland Springs (San Saba County) water utilities to facilitate the conservation and beneficial use of water and related resources. The City of Priddy and the City of Goldthwaite produce or may produce and supply groundwater drawn from the Trinity Aquifer for their residents, the District will work with each to help conserve and preserve the resource. Additionally, fulltime coordination and cooperation has been maintained with the Lower Colorado Regional Water Planning Group since its inception on a working basis as of March 11, 1998. Finally, the District will coordinate its efforts in conjunction with the state-mandated water plan with respect to water supply needs and demands.

General Overview for Plan Implementation

The District will implement and utilize the provisions of this plan as a guideline for determining the direction or priority for all District activities. All operations of the District, all agreements entered into by the District, and any additional planning efforts in which the District may participate will be consistent with the provisions of this plan.

The District will adopt rules relating to the permitting of wells and the production of groundwater from these wells. The rules adopted by the District will be pursuant to Chapters 36, 49 and 54, Water Code, and the provisions of this plan. All rules will be adhered to and enforced. The promulgation and enforcement of the rules will be based on the best technical evidence available.

The District will treat all citizens equally. Citizens may apply to the District for discretion in enforcement of the rules on grounds of adverse economic effect or unique local conditions. Before granting a waiver to any rule the Board will consider the potential adverse effects that adjacent landowners may experience. The exercise of such discretion by the Board may not be construed as limiting the power of the Board.

The District will seek cooperation of all applicable parties in the implementation of this plan and the management of groundwater supplies within the District. All activities of the District will be in cooperation with the coordinated efforts of the appropriate regional or local water management entity. Finally, the District will coordinate its efforts in conjunction with the state-mandated water plan with respect to water supply needs and demands.

GROUNDWATER RESOURCES

Historical Water Usage

(1) Total Water Usage

The following table represents the annual total water usage for Mills County and is taken from the Texas Water Development Board, Water Use Survey, Historical Water Use database. The water usage is expressed in acre-feet per year.

Year	Municipal	Manu-facturing	Mining	Steam Electric	Irrigation	Livestock	Total
2007	814	2	0	0	2,238	1,518	**4,572**
2006	1,028	2	0	0	3,426	1,114	**5,570**
2005	815	2	0	0	2,754	948	**4,519**
2004	1,096	1	0	0	1,553	889	**3,539**
2003	1,245	2	0	0	4,033	896	**6,176**
2002	1,395	2	0	0	3,295	912	**5,604**
2001	1,072	2	0	0	3,042	928	**5,044**
2000	993	1	0	0	3,001	918	**4,913**
1999	949	1	0	0	2,349	1,092	**4,391**
1998	981	1	0	0	2,846	878	**4,706**
1997	863	1	0	0	2,527	964	**4,355**
1996	936	1	0	0	3,613	1,936	**6,486**
1995	838	2	0	0	2,402	1,142	**4,384**
1994	861	2	0	0	2,463	1,032	**4,358**
1993	884	2	0	0	3,124	1,016	**5,026**
1992	838	4	0	0	2,096	1,048	**3,986**
1991	1,019	3	0	0	2,458	860	**4,340**
1990	1,122	0	0	0	2,470	838	**4,430**
1989	1,263	0	0	0	2,410	760	**4,433**
1988	1,043	0	0	0	2,367	714	**4,124**
1987	981	0	0	0	2,392	704	**4,077**
1986	1,045	0	0	0	2,000	714	**3,759**
1985	542	0	0	0	2,078	604	**3,224**
1984	830	0	0	0	2,468	714	**4,012**

(2) Groundwater Usage

The following table represents annual groundwater usage for Mills County and is taken from the Texas Water Development Board, Water Use Survey, Historical Water Use survey database. The water usage is expressed in acre-feet per year.

NOTE: No groundwater usage estimates for 2005-2008 were available from the Water Use Survey, Historical Water use survey database at the time of adoption of this District Management Plan. *(See dated verification memo from TWDB.)*

Year	Municipal	Manu-facturing	Steam Electric	Irrigation	Mining	Livestock	Total
2004	661	0	0	230	0	231	**1,122**
2003	628	0	0	15	0	233	**876**
2002	723	0	0	33	0	237	**993**
2001	471	0	0	31	0	241	**743**
2000	455	0	0	38	0	459	**952**
1999	424	0	0	47	0	546	**1,017**
1998	440	0	0	57	0	439	**936**
1997	424	0	0	50	0	482	**956**
1996	419	0	0	72	0	968	**1,459**
1995	413	0	0	48	0	571	**1,032**
1994	417	0	0	44	0	516	**977**
1993	429	0	0	62	0	508	**999**
1992	427	1	0	419	0	524	**1,371**
1991	485	0	0	393	0	430	**1,308**
1990	431	0	0	395	0	419	**1,245**
1989	466	0	0	18	0	380	**864**
1988	442	0	0	213	0	357	**1,012**
1987	436	0	0	239	0	352	**1,027**
1986	442	0	0	200	0	357	**999**
1985	458	0	0	41	0	302	**801**
1984	440	0	0	47	0	357	**844**

Projected Water Need

Projected water needs are estimated in the 2007 State Water Planning database**.** The primary source of groundwater in Mills County is the Trinity aquifer. Surface water supplies are available through the City of Goldthwaite Reservoir and other local supply sources. Irrigation demands in Mills County represent 60 percent of the water demand in the county with most of the remainder of the demand being livestock and municipal demand.

Positive values reflect a water surplus; **negative values** reflect a water need.

WUG	County	River Basin	2010	2020	2030	2040	2050	2060
Goldthwaite	Mills	Colorado	-351	-364	-362	-360	-352	-345
County Other	Mills	Brazos	99	93	64	67	29	32
County Other	Mills	Colorado	101	93	56	60	12	16
Irrigation	Mills	Colorado	-159	-102	-57	-3	39	90
Livestock	Mills	Brazos	71	71	71	71	71	71
Livestock	Mills	Colorado	170	170	120	120	56	56
Goldthwaite	Mills	Brazos	-6	-6	-6	-6	-5	-5
Brookesmith SUD	Mills	Colorado	3	2	-8	-8	-8	-7
Manufacturing	Mills	Colorado	-1	-1	-1	-1	-1	-1
Irrigation	Mills	Brazos	-180	-173	-184	-177	-193	-186
Total Projected Water Needs (acre-feet per year) =			**-697**	**-646**	**-618**	**-555**	**-559**	**-544**

Source:Volume 3, 2007 State Water Planning Database 1/21/2009

Projected Total Water Demands

Total water demand projected by Water User Group through 2060 (Source: Volume 3, 2007 State Water Planning Database).

Water User Group	River Basin	2010	2020	2030	2040	2050	2060
Goldthwaite	Colorado	560	573	572	570	563	556
County Other	Brazos	160	166	163	160	157	154
County Other	Colorado	235	243	239	235	230	226
Irrigation	Colorado	2,613	2,556	2,501	2,447	2,393	2,342
Livestock	Brazos	367	367	367	367	367	367
Livestock	Colorado	551	551	551	551	551	551
Goldthwaite	Brazos	9	9	9	9	8	8
Brookesmith SUD	Colorado	7	8	8	8	8	7
Manufacturing	Colorado	1	1	1	1	1	1

Irrigation	Brazos	323	316	309	302	296	289
Total Projected Water Demands (acre-feet per year) =		**4,826**	**4,790**	**4,720**	**4,650**	**4,574**	**4,501**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009
(http://www.twdb.state.tx.us/DATA/db07/defaultReadOnly.asp)

Total Projected Surface Water Supplies

Projected surface water supplies by Water User Group through 2060 (Source: Volume 3, 2007 State Water Planning Database).

Water User Group	River Basin	Source Name	2010	2020	2030	2040	2050	2060
Goldthwaite	Colorado	Goldthwaite Lake/Reservoir	142	142	143	143	143	143
Irrigation	Colorado	Colorado River Combined Run-of-River Irrigation	2,378	2,378	2,378	2,378	2,378	2,378
Livestock	Colorado	Livestock Local Supply	314	314	314	314	314	314
Goldthwaite	Brazos	Goldthwaite Lake/Reservoir	2	2	2	2	2	2
Brookesmith SUD	Colorado	Brownwood Lake/Reservoir	10	10	0	0	0	0
Total Projected Surface Water Supplies (acre-feet per year) =			**2,846**	**2,846**	**2,837**	**2,837**	**2,837**	**2,837**

Source: Volume 3, 2007 State Water Planning Database 1/21/2009
(http://www.twdb.state.tx.us/DATA/db07/defaultReadOnly.asp)

Projected Water Management Strategies

Water Management Strategies to meet the projected water demand through 2060 by Water User Group (Source: Volume 3, 2007 State Water Planning Database).

WUG	Water Management Strategy	Source Name	2010	2020	2030	2040	2050	2060
Brookesmith SUD[1]	Municipal Conservation	Conservation	1	1	1	1	1	0
Goldthwaite[2]	Municipal Conservation	Conservation	1	1	2	3	2	3
Goldthwaite[1]	Municipal Conservation	Conservation	46	92	134	170	203	235
Irrigation[2]	Expansion of the Trinity Aquifer	Trinity Aquifer	180	173	184	177	193	186
Irrigation[1]	Expansion of the Trinity Aquifer	Trinity Aquifer	159	102	57	3	0	0
Goldthwaite[2]	Expansion of the Trinity Aquifer	Trinity Aquifer	5	5	4	3	3	2
Goldthwaite[1]	Expansion of the Trinity Aquifer	Trinity Aquifer	152	209	207	190	149	110
Goldthwaite[1]	Expansion of the Trinity Aquifer	Trinity Aquifer	153	63	21	0	0	0
Goldthwaite[1]	Goldthwaite Channel Dam	Goldthwaite Lake/Reservoir	0	0	0	0	0	0
Goldthwaite[1]	Goldthwaite Off-Channel Reservoir	Goldthwaite Lake/Reservoir	0	0	0	0	0	0
Brookesmith SUD[1]	Water Allocation	Trinity Aquifer	0	0	7	7	7	7
County Other[1]	Water Allocation	Trinity Aquifer	-1	-1	-8	-8	-8	-8
Manufacturing[1]	Water Allocation	Trinity Aquifer	1	1	1	1	1	1
Total Projected Water Management Strategies (acre-feet per year) =			**697**	**646**	**610**	**547**	**551**	**536**

1 Colorado River Basin

2 Brazos River Basin

Source: Volume 3, 2007 State Water Planning Database 1/21/2009
(http://www.twdb.state.tx.us/DATA/db07/defaultReadOnly.asp)

Modeling Results

Groundwater Resource measurements and modeling were provided by the Texas Water Development Board on August 8, 2008. The table below represents the findings of Groundwater Availability Model Run 08-53, and represents the average recharge, discharge and transfers for the various strata that make up the Trinity Aquifer. Each stratum is identified separately.

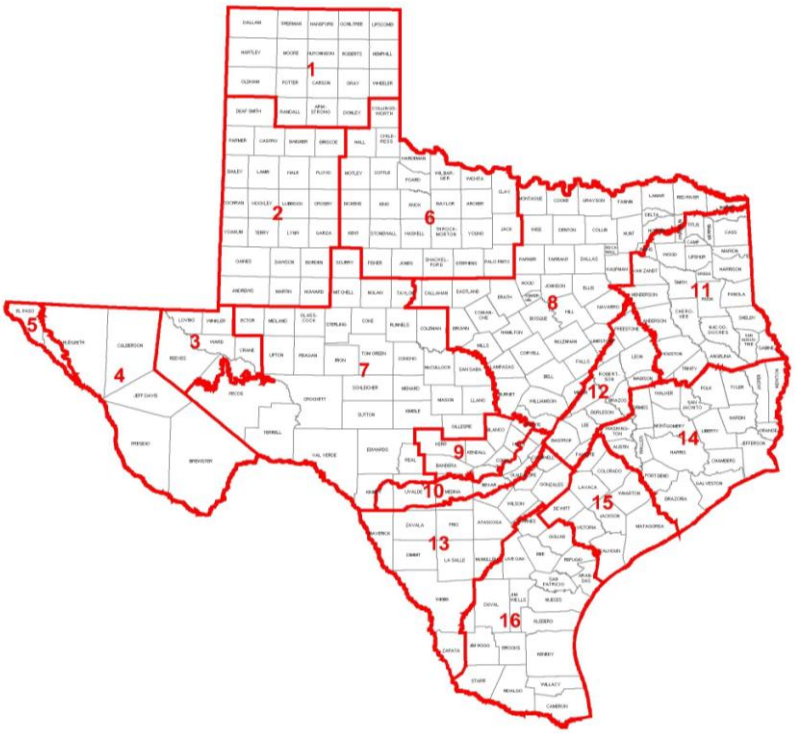
Aquifer or Confining Unit (in geologic order from upper to lower)	**Recharge from Precipitation**	**Flow into the District**	**Discharge to Springs**	**Flow out of the District**	**Net outflow to underlying aquifer or confining unit**	**Net inflow from overlying aquifer or confining unit**
Woodbine	0	0	0	0	0	0
Washita and Fredericksburg	16,984	165	1,382	365	92	0
Paluxy	8,250	33	1,144	90	266	92
Glen Rose Formation	5,999	79	1,508	291	631	266
Hensell	5,733	463	1,058	1,809	1,434	631
Pearsall/Cow Creek/Hammett/ Sligo formations	0	1	0	2	1,431	1,434
Hosston	5,497	285	1,125	1,066	0	1,431

All numbers represent GAM results as averages (1980-1999) in ac-ft/year rounded to the nearest 1 af.

NOTE: The numbers in the table above do not consider drought conditions or the drought of record. Compare these to the groundwater availability estimates from the Lower Colorado Regional Water Planning Group that utilized drought of record precipitation in their modeling.

Mills County Desired Future Conditions

Pursuant to Section 36.108, Water Code, the Texas Water Development Board divided the State into 16 groundwater management areas (GMAs) based on aquifer boundaries and management units within aquifer boundaries. Fox Crossing Water District is in GMA 8. Along with the other members of GMA 8, the District participated in joint planning to establish Desired Future Conditions for the aquifers within the area.



Groundwater Management Areas

Desired future conditions for the Trinity Aquifer submitted to TWDB by the groundwater conservation districts in Groundwater Management Area 8 (Mills County only):

From estimated year 2000 conditions the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years,

From estimated year 2000 conditions the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.

From estimated year 2000 conditions the average drawdown of the Hensell Aquifer should not exceed approximately 3 feet after 50 years.

From estimated year 2000 conditions the average drawdown of the Hosston Aquifer should not exceed approximately 12 feet after 50 years.

From estimated year 2000 conditions the Ellenberger-San Saba Aquifer should maintain 90 percent of the available draw down after 50 years.

From estimated year 2008 conditions the Hickory Aquifer should maintain 90 percent of the available draw down after 50 years.

Mills County Available Groundwater

The Managed Available Groundwater (MAG) estimates listed in the table below are from the groundwater availability model (GAM) run and aquifer assessments (AA) developed by the TWDB for the Trinity Aquifer (GAM Run 08-84mag), Ellenburger-San Saba Aquifer (AA08-03mag), and Hickory Aquifer (AA08-04mag).

Water level declines in the Trinity Aquifer for the counties in Groundwater Management Area 8 were verified to meet the desired future conditions developed by groundwater conservation districts in Groundwater Management Area 8. Note that estimates of managed available groundwater are based on the best available scientific tools that can be used to evaluate managed available groundwater and that these estimates can be a function of assumptions made on the magnitude and distribution of pumping in the aquifer. Therefore, it is important for groundwater conservation districts to monitor whether or not they are achieving their desired future conditions and to work with the TWDB to refine managed available groundwater usage given the reality of how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

The Trinity Aquifer model run (GAM Run 08-84mag) used average annual recharge conditions based on climate data from 1980 to 1999 for the simulation. The last three years of the simulation used drought-of-record recharge conditions, defined as the years 1954 to 1956. The model includes seven layers, representing the Woodbine Aquifer (Layer 1), the Washita and Fredericksburg Groups (Layer 2), the Paluxy Formation (Layer 3), the Glen Rose Formation (Layer 4), the Hensell Formation (Layer 5), the Pearsal/Cow Creek/Hammett/Sligo Members (Layer 6), and the Hosston Formation (Layer 7). The Trinity Aquifer is comprised of the Paluxy, Hensell, and Hosston formations. The Woodbine, Paluxy, Hensell, and Hosston layers are the main aquifers used in the region. TWDB staff ran the groundwater availability model for the northern part of the Trinity Aquifer and the Woodbine Aquifer to determine the managed available groundwater based on the desired future conditions for the Trinity Aquifer adopted by the groundwater conservation districts in Groundwater Management Area 8. The table below provides the MAG for each formation utilized in the Fox Crossing Water District (Mills County).

Aquifer	County	RWPA	River Basin	MAG (Acre-feet per year)
N. Trinity-Paluxy	Mills	K	Brazos	3
N. Trinity-Paluxy	Mills	K	Colorado	2
			Total Paluxy	**5**
N. Trinity-Glen Rose	Mills	K	Brazos	59
N. Trinity-Glen Rose	Mills	K	Colorado	7
			Total Glen Rose	**66**
N. Trinity-Hensell	Mills	K	Brazos	832
N. Trinity-Hensell	Mills	K	Colorado	114
			Total Hensell	**946**
N. Trinity-Hosston	Mills	K	Brazos	379
N. Trinity-Hosston	Mills	K	Colorado	1,005
			Total Hosston	**1,384**
Ellenburger-San Saba	Mills	K	Brazos	5
Ellenburger-San Saba	Mills	K	Colorado	494
			Total Ellenburger-San Saba	**499**
Hickory	Mills	K	Brazos	1
Hickory	Mills	K	Colorado	35
			Total Hickory	**36**
			Total MAG	**2,936**

TIME PERIOD OF THIS PLAN

This District Management Plan becomes effective immediately following its: (1) adoption by the District's Board of Directors, and (2) approval by the Texas Water Development Board. This plan will remain in effect for a period of five years, or until a revised or amended plan is approved; whichever comes first.

ACTIONS, PROCEDURES, PERFORMANCE AND AVOIDANCE NECESSARY TO EFFECTUATE THE GROUNDWATER MANAGEMENT PLAN

This plan will be the guidance document for policies, rules and actions by the District. The District is committed to actively pursue the groundwater management strategies identified in this plan. The District rules, policies and activities will be coordinated with the management plan to effectively manage aquifer levels and groundwater demand, and prevent waste. The District will implement the following plan of action:

1) Research
    a. Gather existing information about: aquifer levels; recharge rates from surface infiltration and from other aquifers or outside the boundaries of the district; and natural discharge to surface streams, other aquifers or outside the boundaries of the District. The District will perform additional research as needed.
    b. Determine the existing demands for groundwater, including municipal, industrial and domestic and livestock needs.
    c. Determine the projected demands for groundwater over the next 50-year period for each designated user group.
2) Planning
    a. Participate in all Groundwater Management Area 8 activities to establish desired future conditions for the aquifers within that management area.
    b. Adapt District demands for existing and future exempt usage to the managed available groundwater (MAG) provided by the Texas Water Development Board.
    c. Determine the best method to allocate the remaining managed available groundwater after taking into account total historical water usage, annual groundwater usage, and projected water needs..
3) Implementation
    a. Adopt rules to implement a permitting system that follows the selected allocation method, establish any necessary spacing limitations, and transportation regulations.
    b. Register all new wells in order to keep a record of changes in exempt demand and permitted demand.
    c. Issue permits in accordance with the adopted rules.
    d. Issue Historical Use Permits according to rules.
    e. Check permit performance to ensure permitted withdrawals do not exceed the managed available groundwater limit.
    f. Oversee groundwater usage to ensure efficient use and prevent waste.
    g. Verify water quality.
    h. Encourage water conservation and efficient water use.

i. Develop drought contingency and management plans.
j. Establish critical groundwater depletion areas as necessary.

To the greatest extent practicable, and while upholding the intent of the District's Mission, Management Plan and Rules, the District will cooperate with and coordinate its management plan and regulatory policies with adjacent groundwater conservation districts, Regional Water Planning Groups, the Texas Water Development Board, Mills County, local municipalities, and adjacent areas with aquifers that hydrogeologically connected to aquifers within the District's jurisdiction.

MANAGEMENT GOALS, OBJECTIVES AND PERFORMANCE STANDARDS

- Goal 1.0: Implementing management strategies that will protect and enhance the quantity of usable quality water by encouraging the most efficient use of groundwater.

    - Management Objective: The District will provide education to the residents of the Fox Crossing Water District on the efficient use of groundwater.

    - Performance Standard: District Water Board members will serve as speakers for local service clubs, schools, or business groups. At least one official from the District will meet on an annual basis, or more often if requested, with the County Commissioners' Court, and with the Soil and Water Conservation District Board. District officials will also offer to make presentations to the cities of Center City, Goldthwaite, Mullin, Priddy, Star, and local civic organizations, such as the Lion's Club. In addition, at each District board meeting members of the community will have the opportunity to ask questions and address concerns in relation to available groundwater supply and its efficient use. Public forums will address concerns of citizens in relation to available water supply and its efficient use prior to amendment of rules and adoption of revisions to the District Management Plan.

- Goal 2.0: Addressing natural resource issues that will impact the use and availability of groundwater.

    - Management Objective: The District will encourage the community to increase recycling efforts by implementing a program to protect the quality of groundwater. The program will consist of collecting and recycling waste oil and used oil filters.

    - Performance Standard: The District will work with the *Central Texas Council of Governments (CTOG) and Texas Commission on Environmental Quality (TCEQ)* to arrange for the recycling and collection of used motor oil and other hazardous substances by the year 2010. Additionally, the District will publish quarterly in the local print and on-line newspaper at least one article that discusses effective methods for recycling these hazardous materials and the advantages for taking such actions.

- Goal 3.0: Controlling and preventing waste of groundwater..

    - Management Objectives: Document reports of wasted groundwater. The District will collect and will document each report of possibly-wasted groundwater.

    - Performance Standard: The District will investigate 100 percent of the reports to determine if any waste is occurring, and will take action to stop real waste. The Board of Directors will receive a monthly report that includes the number of wasted groundwater reports made to the District and the number of investigations. Additionally, the report will include the District's recommendations on how to address and how to end 100 percent of the wasteful practices.

- Goal 4.0: Determining the use and availability of groundwater within the District.

    - Management Objective: Register wells within the District and determine the amount of groundwater demand for municipal, industrial, agricultural and exempt uses.

    - Performance Standard: By September 1, 2010, the District will adopt rules to establish a well registration program.

- Goal 5.0: Assessing drought conditions.

    - Management Objectives: The District will track weather data at least once a month at a minimum of 5 local official gages and will note weather trends through the National Weather Service.

    - Performance Standard: The District will download at least one updated Palmer Drought Severity Index (PDSI) map per month and check for periodic updates on the National Weather Service—Climate Protection Center website: http://www.cpc.noaa.gov/products/analysis_monitoring/regional_monitoring/palmer.g under *Current Palmer Drought Severity Index Map by Climate Division*, or raw data may be obtained at the following link: http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/cdus/palmer_drought/wpd or *The Texas Drought Preparedness Council Situation Report* is available online at the Texas Department of Public Safety web site: http://www.txdps.state.tx.us/dem/sitrepindex.htm

    - The District will issue a report to the public through a newspaper of general circulation to warn of imminent drought conditions triggered by severe lack of rainfall resulting in probable depletion of the aquifer and possible subsidence of the water table.

- Goal 6.0: Encouraging water conservation.

    - Management Objectives: The District will use available resources in order to educate the community concerning water conservation strategies and the benefits of implementing such strategies.

    - Performance Standard: At least every three (3) months, the District will publish at least one article addressing water conservation strategies and the positive environmental effects for utilizing such strategies in the *Goldthwaite Eagle*, the print and on-line publication serving Mills County. Additionally, the District may utilize local radio shows and other available media to reinforce this educational service.

- Goal 7.0: Addressing in a quantitative manner the desired future conditions.

    - Management Objective: The District will review and calculate its permit and well registration totals in light of the Desired Future Conditions of the groundwater resources within the boundaries of the District in order to assess whether or not the District will be able to meet the Desired Future Conditions estimates submitted to the Texas Water Development Board.

    - Management Objective: The District will collect data in order to keep a record of its progress toward achieving the DFC.

    - Performance Standard: The District's Quarterly Report will include a discussion of the District's permit and well registration totals and will evaluate the District's progress in achieving the Desired Future Conditions of the groundwater resources within the boundaries of the District and whether or not the District will be able to maintain the Desired Future Conditions estimates over the 50-year planning period. The District will collect data in order to keep a record of its progress toward achieving the DFCs. Data will be collected from well registration and/or permits and utilized to estimate the demand on various aquifers within the District boundaries.

GOALS NOT APPLICABLE TO THE DISTRICT

- Goal 8.0 Controlling and preventing subsidence

The District has determined that this goal is not presently appropriate or cost effective and is therefore, not applicable to the District at this time.

- Goal 9.0 Addressing Conjunctive Surface Water Management Issues

The District has determined that this goal is not presently appropriate or cost effective and is therefore, not applicable to the District at this time.

- Goal 10.0 Addressing Recharge Enhancement

The District has determined that this goal is not presently appropriate or cost effective and is therefore, not applicable to the District at this time.

- Goal 11.0 Addressing Rainwater harvesting

The District has determined that this goal is not presently appropriate or cost effective and is therefore, not applicable to the District at this time.

- Goal 12.0 Addressing Precipitation enhancement

The District has determined that this goal is not presently appropriate or cost effective and is therefore, not applicable to the District at this time.

- Goal 13.0 Addressing Brush control

The District has determined that this goal is not presently appropriate or cost effective and is therefore, not applicable to the District at this time.

MANAGEMENT OF GROUNDWATER SUPPLIES

The District will manage the supply of groundwater within the area as needed to conserve the resource, as well as maintain the economic viability of all resource user groups, both public and private. It will identify and engage in activities and practices that ensure efficient groundwater use, while at the same time, consider the economic and cultural activities occurring in the area.

In order to meet its mission, the District may adopt rules to regulate groundwater withdrawals by establishing spacing and production limits. The District will enforce the terms and conditions of permits, as well as any applicable rules, by enjoining the permit holder in a court of competent jurisdiction as provided under § 36.102, Water Code.

In conjunction with these rules and regulations, the District will employ all technical resources at its disposal to evaluate the resources available within the District, and to determine the effectiveness of regulatory or conservation measures. The District will establish and maintain an observation network that will monitor the changing storage conditions of groundwater supplies within the District. Based on the statistics gathered by the observation network, the District will assess the available water supply and groundwater storage conditions on an annual basis. In turn, the District will report its findings on an annual basis as well. The Board of Directors will make the findings of these meetings available to the public. Moreover, the Board of Directors will investigate, as well as cooperate, with any investigations of the groundwater resources within the District. The result of any such investigation will also be made available to the public following its approval by the Board of Directors.

Finally, the District is responsible for developing a contingency plan to cope with water supply deficits, and the resulting adverse effects created by climatic or other environmental conditions. In developing the contingency plan, the District will consider the following:

1) The unique hydrogeologic conditions of the aquifers within the District;
2) The historical environmental conditions of the area that have led to water supply deficits in the past;
3) The economic effect that the conservation measures of the plan will have on the entire water resource user group;
4) The plan's effect on local cultural and societal aspects due to the proposed changes in water storage conditions; and
5) The appropriate conditions under which to implement the contingency plan.

This contingency plan will be adopted by the Board of Directors after notice and hearing in a public meeting. At the hearing, the Board of Directors will consider the above listed factors in deciding whether to adopt the plan. If the proposed plan is rejected by the Board of Directors, the District has thirty days to make the appropriate revisions before returning to the Board of Directors for further consideration of the proposed contingency plan.

A public or private user may appeal to the Board of Directors in the event that the user does not agree with the District's contingency plan. Although the Board of Directors holds discretion over the enforcement of the plan, the user must base his appeal on grounds of adverse economic hardship or unique local conditions. The exercise of such discretion by the Board of Directors may not be construed as limiting the power of the District Board of Directors.

TRACKING DISTRICT PROGRESS IN ACHIEVING MANAGEMENT GOALS

The District will prepare and present a quarterly report on District performance in regards to achieving management goals and objectives. The report will enumerate the activities which have occurred during that quarter. Evidence will be provided in the form of newspaper clippings, reports, programs, photographs, charts, statistical data, dated memos and letters. Evidence will be cross-referenced to the appropriate performance standard and its management objective in order to evaluate the effectiveness and efficiency of the District's operations and to be sure all goals and objectives are being addressed.

APPENDIX A

Additional Tables and Text from the Lower Colorado Regional Water Plan (January 2006)

Table 8.2 Projected Cost for Selected Mills County Surface Water Reservoir Projects[4]

Reservoir Alternative	Reservoir Area (ac)	Average Reservoir Depth (ft)	Reservoir Conservation Pool (ac-ft)	Drainage Area (sq mi)	Reservoir Yield (mgd)	Creek Elevation at Dam (ft msl)	Dam Top Elevation (ft msl)
Pompey Creek	240	42	10,080	53	0.4 - 0.75	1,245	1,350
Bennett Creek	525	16	8,400	100	0.8 - 1	1,260	1,300
Colorado River		10 or 16	510 or 3,400			1,130	

Reservoir Alternative	Dam Height (f)	Dam Length (ft)	Estimated Cost ($)	Annual Debt Service* ($)	Annual O&M Cost ($)	Total Projected Annual Cost ($)	Unit Water Cost ($/1,000 gal)
Pompey Creek	105	1,500	3,938,000	343,333	30,000	373,333	1.78
Bennett Creek	40	5,000	5,188,333	452,343	100,000	552,343	1.68
Colorado River	20		3.5-6.9 million				

* Annual debt service is calculated at 6% for 20 years

Table 4.57 Trinity Aquifer Expansion Cost[5]

WUG Name	River Basin	Total Capital Cost	Total Project Cost	Largest Annual Cost	Unit Cost ($/ac-ft)
Goldthwaite *	Colorado	$3,944,000	$5,744,600	$612,872	$1,977.00
Goldthwaite *	Brazos (to Colorado)	(See WUG above)			
Goldthwaite *	Brazos				
Irrigation	Brazos			$5,739	$29.74
Irrigation	Colorado			$6,453	$29.74

*Note: The City of Goldthwaite is located in two river basins (Brazos and Colorado) and has needs in both. One proposed strategy to meet their needs is to pump additional Trinity aquifer groundwater. This strategy would be used for all of Goldthwaite (both river basins) and will only have one cost associated with it, but it shows as three pieces due to the river basin split and the availability limitations of the Trinity aquifer in Mills County. Refer to Appendix 4C for further discussion of this strategy. It is also noted that although the selected strategy for Goldthwaite at this time is development of groundwater, LCRA continues to evaluate the needs of Goldthwaite as a part of LSWP.

For the purposes of developing costs for this strategy, any ***Water User Group (WUG)*** generating a maximum supply, in a single decade, of less than 1/4 mgd (approximately 280 ac-ft/yr) from

[4] *LCRWPG WATER PLAN* p. 8-37 (January 2006) available online at: http://www.twdb.state.tx.us/rwpg/2006_RWP/RegionK/Chapter%208.pdf
[5] *LCRWPG WATER PLAN* pp. 4-64 and 4-65 (January 2006) available online at: http://www.twdb.state.tx.us/rwpg/2006_RWP/RegionK/Chapter%204.pdf

the strategy was assumed to acquire the additional groundwater through additional pumping of existing wells. For these WUGs, only the increased annual energy cost was factored into the unit cost for the strategy, with no capital expenditures. The above rule was utilized for all WUGs other than Livestock WUGs, whose capital costs were generated assuming one well per ac-ft/yr needed, with no transmission line costs. Each well for Livestock WUGs was estimated to cost $7500, fully installed and operational. In addition, no additional project costs were added in for Livestock WUGs and a 5-year term of debt was utilized when annualizing the capital costs. A listing of assumptions and/or methodology is provided in *Appendix 4B.*

Environmental Impact

The Trinity aquifer was modeled to allow the use of water from the aquifer until the simulated drought of record springflow with no pumpage from the aquifer was still equal to 90 percent of the observed springflow during the drought of record. In the absence of definitive studies, it is hoped that this amount of spring flow will be sufficient to maintain any threatened or endangered populations, but it is not known for sure if that is the case. The impacts of construction of wells and pipelines, if properly managed, are expected to produce low impact to the environment, and primarily during the construction period itself.