

Northern Trinity Groundwater Conservation District

Groundwater Management Plan

Adopted on May 13, 2010
Texas Water Development Board approval on _____

May 13, 2010

Table of Contents

I.	District’s Mission	1
II.	Purpose Of The Management Plan.....	1
III.	District Information	2
IV.	Statement of Guiding Principles	4
V.	Criteria for Plan Approval	4
VI.	Estimates of Technical Information as Required by § 36.1071 of the Tex. Water Code and 31 Tex. Admin. Code § 356.5.....	5
VII.	Management of Groundwater Supplies—31 TAC § 356.5(a)(6)-(7) and TWC §36.1071(e)(4)	15
VIII.	Methodology to Track District Progress in Achieving Management Goals—31 TAC § 356.5(a)(6)	24
IX.	Actions, Procedures, Performance, and Avoidance for District Implementation of Management Plan – 31 TAC § 356.5(a)(3); 31 TAC § 356.5 (a)(4) / 36.1071(e)(2)	24
X.	Management Goals.....	24
XI.	Management Goals Determined Not to be Applicable to the District.....	27

Table of Contents

List of Tables

Table		Page
Table 1.	Desired Future Conditions Submitted To TWDB.....	6
Table 2.	Managed Available Groundwater Estimates From TWDB Gam Run 08-84mag and Run 08-14mag	6
Table 3.	Historical Groundwater Pumpage Summary (In Acre-Feet)	7
Table 4.	Estimated Annual Amount Of Recharge From Precipitation	8
Table 5.	Water Supply Needs From 2007 State Water Plan	9
Table 6.	Projected Surface Water Supplies	11
Table 7.	Projected Water Demands	13
Table 8.	Demands Estimated Annual Volume of Water That Discharges from The Aquifer	14
Table 9.	Annual Volume Of Flow Into The District, Out Of The District Within Each Aquifer, And Between Each Aquifer In The District.....	15
Table 10.	Water Management Strategies From 2007 State Water Plan	17

Table of Contents

List of Appendices

Appendix	Page
Appendix A - Map of District Location & Boundaries	29
Appendix B - Map of Trinity Aquifer	30
Appendix C - Map of Woodbine Aquifer	31
Appendix D - Aquifer Within Tarrant County.....	32
Appendix E - District Resolution Adopting the Plan	33
Appendix F - Notice of Meeting to Adopt The Plan.....	34
Appendix G - Letter to Surface Water Management Entities	35
Appendix H - Adopted Rules of District	36

NORTHERN TRINITY GROUNDWATER CONSERVATION DISTRICT GROUNDWATER MANAGEMENT PLAN

I. District's Mission

The mission of the Northern Trinity Groundwater Conservation District ("District") is to manage, preserve, and protect the groundwater resources of Tarrant County, Texas. The District will work to minimize the draw-down of the water table, prevent the waste of groundwater, prevent interference between wells, protect the existing and historic use of groundwater, prevent the degradation of the quality of groundwater, use public education to promote water conservation, give consideration to the needs of municipal water utilities and the agricultural community, and carry out the powers and duties conferred under Chapter 36 of the Texas Water Code ("TWC"). This management plan outlines the goals and objectives of the District and how they will be implemented.

II. Purpose Of The Management Plan

The 75th Texas Legislature in 1997 enacted Senate Bill 1 ("SB 1") to establish a comprehensive statewide water planning process. In particular, SB 1 contained provisions that required groundwater conservation districts to prepare management plans to identify the water supply resources and water demands that will shape the decisions of each district. SB 1 designed the management plans to include management goals for each district to manage and conserve the groundwater resources within their boundaries. In 2001, the Texas Legislature enacted Senate Bill 2 ("SB 2") to build on the planning requirements of SB 1 and to further clarify the actions necessary for districts to manage and conserve the groundwater resources of the state of Texas.

The Texas Legislature enacted significant changes to the management of groundwater resources in Texas with the passage of House Bill 1763 ("HB 1763") in 2005. HB 1763 created a long-term planning process in which groundwater conservation districts ("GCD") in each Groundwater Management Area ("GMA") are required to meet and determine the Desired Future Conditions ("DFC") for the groundwater resources within their boundaries by September 1, 2010. In addition, HB 1763 required GCDs, like the District, to provide each GCDs' management plans with the other GCDs in the GMA for review by the other GCDs.

This Management Plan satisfies the requirements of SB 1, SB 2, HB 1763, the statutory requirements of Chapter 36 of the TWC, and the administrative requirements of the Texas Water Development Board's (TWDB) rules.

III. District Information

A. Creation

The District was created in 2007 by the 80th Texas Legislature¹ in order to conserve, preserve, protect, and prevent waste of the groundwater resources of Tarrant County, Texas, and to promote recharge of the aquifers within Tarrant County.

B. Authority

The District has the rights and responsibilities provided for in TWC Chapter 36 and 31 Texas Administrative Code (TAC) Chapter 356. The District is charged with conducting hydrogeological studies, adopting a management plan, providing for the permitting of certain water wells and implementing programs to achieve statutory mandates. The District has rule-making authority to implement the policies and procedures needed to manage the groundwater resources of Tarrant County

C. Location and Extent

The District's boundaries are coextensive with the boundaries of Tarrant County, and all lands and other property within these boundaries will benefit from the works and projects that will be accomplished by the District. The District covers an area of approximately 863.42 square miles.² A map of the District is included in Appendix A

D. Groundwater Resources of Tarrant County

Tarrant County is located primarily over the Trinity aquifer. The TWDB has identified the Trinity aquifer as the only major aquifer within the District's boundaries. TWDB defines major aquifers as aquifers that are capable of producing large yields to wells or that produce groundwater over a large area. A TWDB diagram of the Trinity Aquifer can be found at Appendix B. The only minor aquifer recognized within the District is the Woodbine aquifer. TWDB indicates that minor aquifers tend to be smaller in size and produce less water than major aquifers. A TWDB diagram of the Woodbine Aquifer can be found at Appendix C. TWDB describes the groundwater resources of the Trinity Aquifer as follows:

The Trinity aquifer consists of early Cretaceous age formations of the Trinity Group where they occur in a band extending through the central part of the state in all or parts of 55 counties, from the Red River in North Texas to the Hill Country of South-Central Texas. Trinity Group deposits also occur in the Panhandle and Edwards Plateau regions where they are included as part of the Edwards-Trinity (High Plains and Plateau) aquifers.

¹ Act of May 28, 2007, 80th Leg., R.S., ch. 1126, 2007 Tex. Gen. Laws 3794, codified at TEX. SPEC. DIST. LOC. LAWS CODE ANN. ch. 8820.

² Texas Almanac 2008-2009, The Dallas Morning News, Inc.

Formations comprising the Trinity Group are (from youngest to oldest) the Paluxy, Glen Rose, and Twin Mountains-Travis Peak. Updip, where the Glen Rose thins or is missing, the Paluxy and Twin Mountains coalesce to form the Antlers Formation. The Antlers consists of up to 900 feet of sand and gravel, with clay beds in the middle section. Water from the Antlers is mainly used for irrigation in the outcrop area of North and Central Texas.

Forming the upper unit of the Trinity Group, the Paluxy Formation consists of up to 400 feet of predominantly fine-to-coarse-grained sand interbedded with clay and shale. The formation pinches out downdip and does not occur south of the Colorado River.

Underlying the Paluxy, the Glen Rose Formation forms a gulfward-thickening wedge of marine carbonates consisting primarily of limestone. South of the Colorado River, the Glen Rose is the upper unit of the Trinity Group and is divisible into an upper and lower member. In the north, the downdip portion of the aquifer becomes highly mineralized and is a source of contamination to wells that are drilled into the underlying Twin Mountains.

The basal unit of the Trinity Group consists of the Twin Mountains and Travis Peak formations, which are laterally separated by a facies change. To the north, the Twin Mountains formation consists mainly of medium- to coarse-grained sands, silty clays, and conglomerates. The Twin Mountains is the most prolific of the Trinity aquifers in North-Central Texas; however, the quality of the water is generally not as good as that from the Paluxy or Antlers Formations. To the south, the Travis Peak Formation contains calcareous sands and silts, conglomerates, and limestones. The formation is subdivided into the following members in descending order: Hensell, Pearsall, Cow Creek, Hammett, Sligo, Hosston, and Sycamore.

Extensive development of the Trinity aquifer has occurred in the Fort Worth-Dallas region where water levels have historically dropped as much as 550 feet. Since the mid-1970s, many public supply wells have been abandoned in favor of a surface-water supply, and water levels have responded with slight rises. Water-level declines of as much as 100 feet are still occurring in Denton and Johnson counties. The Trinity aquifer is most extensively developed from the Hensell and Hosston members in the Waco area, where the water level has declined by as much as 400 feet.³

The TWDB defines the groundwater resources of the Woodbine aquifer as follows:

The Woodbine aquifer extends from McLennan County in North-Central Texas northward to Cooke County and eastward to Red River County, paralleling the Red River. Water produced from the aquifer furnishes municipal, industrial, domestic, livestock, and small irrigation supplies throughout its North Texas extent.

³ Aquifers of Texas, Texas Water Development Board, Report 345, by Ashworth and Hopkins, November 1995.

The Woodbine Formation of Cretaceous age is composed of water-bearing sandstone beds interbedded with shale and clay. The aquifer dips eastward into the subsurface where it reaches a maximum depth of 2,500 feet below land surface and a maximum thickness of approximately 700 feet. The Woodbine aquifer is divided into three water-bearing zones that differ considerably in productivity and quality. Only the lower two zones of the aquifer are developed to supply water for domestic and municipal uses. Chemical quality deteriorates rapidly in well depths below 1,500 feet. In areas between the outcrop and this depth, quality is considered good overall as long as ground water from the upper Woodbine is sealed off. The upper Woodbine contains water of extremely poor quality in downdip locales and contains excessive iron concentrations along the outcrop.⁴ A map showing the location of wells in the TWDB groundwater database and extent of the aquifers in Tarrant County is shown in Appendix D.

IV. Statement of Guiding Principles

The District recognizes that the groundwater resources of Tarrant County and the local region are of vital importance. The District will strive to manage and conserve this most valuable resource in a prudent and cost effective manner through education, cooperation, and development of a comprehensive understanding of the aquifers. The District's management plan is intended to serve as a tool to focus the objectives and of those given the responsibility for the execution of the District's activities.

V. Criteria for Plan Approval

A. Planning Horizon

The effective time period for this plan is 5 years from the date of approval by the Executive Administrator or, if appealed, on approval by the TWDB. This management plan will become effective upon adoption by the Northern Trinity Groundwater Conservation District Board of Directors and approved as administratively complete by the TWDB. The original management plan was approved by the TWDB in June 2010. The plan will remain in effect for five (5) years after the date of approval or until a revised plan is readopted and reapproved. The Plan shall be reviewed and updated and readopted in accordance with the requirements of the Texas Water Code as part of the five-year review and re-adoption process as required by TWC 36.1072(e).

⁴ Aquifers of Texas, Texas Water Development Board, Report 345, by Ashworth and Hopkins, November 1995.

B. Board Resolution

A certified copy of the District Board of Directors' resolution adopting the plan is located in Appendix E - District Resolution.

C. Plan Adoption

Public notice documenting that the plan was adopted following appropriate public meetings and hearings are located in Appendix F – Notice of Meeting.

D. Coordination with Surface Water Management Entities

Letters transmitting copies of this plan to the Trinity River Authority and North Texas Municipal Water District are located in Appendix G – Letter to Surface Water Management Entities.

VI. Estimates of Technical Information as Required by § 36.1071 of the Tex. Water Code and 31 Tex. Admin. Code § 356.5

A. Managed available groundwater in the district based on the desired future condition established under 31 TAC §356.5(a)(5)(A) and TWC §36.1071(e)(3)(A).

Managed available groundwater is defined in TWC §36.001 as:

“the amount of water that may be permitted by a district for beneficial use in accordance with the desired future condition of the aquifer.”

The desired future condition of the aquifer may only be determined through joint planning with other GCDs in the same groundwater management area (“GMA”) as required by the 79th Legislature with the passage of HB 1763 into law. The District is located in GMA 8. GMA 8 adopted DFCs for the northern segment of the Trinity Aquifer on September 17, 2008. The adopted DFCs were then forwarded to the TWDB for development of the MAG calculations. The District received the MAG calculations from the Texas Water Development Board and the MAGs for the Trinity aquifer were approved by resolution by the GMA 8 members on March 16, 2009. Both the District's DFC and MAG information was generated by TWDB GAM Run 08-84mag for the Trinity and GAM Run 08.14mag for the Woodbine. Under the jurisdiction of the Northern Trinity Groundwater Conservation District, Tarrant County has 632 acrefeet per year of managed available groundwater in the Woodbine Aquifer. The remaining counties in Regional Planning Area C have 30,591 acre-feet per year of managed available groundwater.

The DFCs adopted by the District and GMA 8 represent the quantified, measurable conditions of the groundwater resources of the District in 50 years. The District's DFCs are comprehensive tools that indicate how the District intends to monitor and manage its groundwater resources. Overall, the District's DFCs give the amount of water level

declines that the District does not want to exceed over a 50 year planning period. The DFCs presented in Table 1 below were established by GMA 8 early in the District's organizational phase and before the District was fully operational. As such, the DFCs established for the District were developed primarily by other parties involved in the joint planning process. The District will gather the best technical and hydrogeological data available for the groundwater resources within the District's boundaries over the course of the next planning period to evaluate and enhance the District's DFCs for the next phase of DFC adoption. As additional technical and hydrogeological information is gathered by the District, the District will revise and update its management plan and the information contained therein to include the most up-to-date data available.

Table 1. Desired Future Conditions Submitted To TWDB

Average Water Level Decrease (feet)				
Paluxy	Glen Rose	Hensell	Hosston	Woodbine
33	75	160	173	2

Table 2. Managed Available Groundwater Estimates From TWDB Gam Run 08-84mag and Run 08-14mag

Aquifer	MAG (Acre-feet per year)
N. Trinity - Paluxy	10,544
N. Trinity - Glen Rose	112
N. Trinity - Hensell	2,535
N. Trinity - Hosston	5,556
N. Trinity - Woodbine	632

**B. Amount of Groundwater Being Used within the District on an Annual Basis—
31 TAC §356.5(a)(5)(B) and TWC § 36.1071(e)(3)(B)**

Table 3. Historical Groundwater Pumpage Summary (In Acre-Feet)

Year	Aquifer	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1980	Trinity	17,765	870	0	50	0	386	19,071
	Woodbine	36	0	0	0	0	0	36
1984	Trinity	14,782	632	0	0	0	461	15,875
	Woodbine	1	0	0	0	0	0	1
1985	Trinity	16,581	730	0	0	0	502	17,813
	Woodbine	9	0	0	0	0	0	9
1986	Trinity	13,145	650	0	0	0	320	14,115
	Woodbine	1	0	0	0	0	0	1
1987	Trinity	14,340	483	0	0	0	319	15,142
	Woodbine	6	0	0	0	0	0	6
1988	Trinity	15,899	772	0	0	0	534	17,205
	Woodbine	3	0	0	0	0	0	3
1989	Trinity	15,026	1,240	0	0	0	355	16,621
	Woodbine	10	0	0	0	0	0	10
1990	Trinity	13,832	699	0	0	0	418	14,949
	Woodbine	3	0	0	0	0	0	3
1991	Trinity	11,587	702	0	0	0	417	12,706
	Woodbine	5	0	0	0	0	0	5
1992	Trinity	11,314	846	0	0	0	426	12,586
	Woodbine	5	0	0	0	0	0	5
1993	Trinity	11,210	932	1	21	0	438	12,602
	Woodbine	2	0	0	0	0	0	2
1994	Trinity	12,748	803	1	50	0	424	14,026
	Woodbine	4	0	0	0	0	0	4
1995	Trinity	12,113	790	1	21	0	403	13,328
	Woodbine	1	0	0	0	0	0	1
1996	Trinity	13,589	643	3	21	0	360	14,616
	Woodbine	1	0	0	0	0	0	1
1997	Trinity	13,213	759	3	21	0	423	14,419
1998	Trinity	15,178	861	3	21	0	306	16,369
1999	Trinity	12,459	759	3	21	0	400	13,642
2000	Trinity	13,709	983	1	0	0	401	15,094
2001	Trinity	12,425	948	0	0	0	423	13,796
2002	Trinity	13,844	971	0	0	0	333	15,148
2003	Trinity	12,625	953	0	0	0	110	13,688

Table 3 – Amount of Groundwater Used in Each Category of Use in the Annual Texas Water Development Board (TWDB) Water User Survey Database

C. Annual Amount of Recharge From Precipitation to the Groundwater Resources within the District—31 TAC § 356.5(a)(5)(C) and TWC 36.1071(e)(3)(C)

The estimated total amount of annual recharge from precipitation within the District is 55,591 acre-feet, as shown in Table 4. The estimated amount of recharge was derived from GAM RUN 08-65 and is the spatially distributed recharge sourced from precipitation falling on the outcrop areas of the aquifers (where the aquifer is exposed at land surface) within the district. As additional technical and hydrogeological information is gathered by the District, the District will revise and update its management plan and the information contained therein to include the most up-to-date data available.

Table 4. Estimated Annual Amount Of Recharge From Precipitation

Aquifer or confining unit	Acre-feet per year
Woodbine Aquifer	19,528
Washita and Fredericksburg series	32,167
Paluxy Aquifer	3,896
Glen Rose Formation	0
Hensell Aquifer	0
Pearsall/Cow Creek/Hammett/Sligo formations	0
Hosston Aquifer	0
Total Estimated Annual Recharge from Precipitation	55,591

D. Water Supply Needs—31 TAC § 356.5(a)(7) and TWC § 36.1071(e)(4)

Table 5. Water Supply Needs From 2007 State Water Plan

A positive value indicates a water surplus; a **negative** value indicates a water **need** or shortage

WUG	2010	2020	2030	2040	2050	2060
Arlington	5,270	-10,598	-22,947	-32,819	-42,224	-50,199
Azle	-224	-794	-1,638	-2,623	-3,664	-4,568
Bedford	487	-1,284	-2,671	-3,791	-4,897	-5,880
Benbrook	292	-607	-1,506	-2,568	-3,948	-5,599
Blue Mound	8	-15	-29	-38	-46	-54
Burleson	59	-127	-310	-510	-764	-1,069
Colleyville	-92	-1,140	-2,397	-3,395	-4,311	-5,080
Crowley	89	-187	-488	-931	-1,430	-1,834
Dalworthington Gardens	43	-80	-172	-246	-317	-378
Edgecliff	34	-58	-116	-158	-198	-233
Eules	-24	-1,260	-2,668	-3,789	-4,829	-5,715
Everman	29	-57	-129	-196	-275	-329
Forest Hill	132	-242	-521	-775	-1,056	-1,304
Fort Worth	10,744	-20,642	-48,789	-82,533	-131,111	-194,136
Grand Prairie	-1,621	-2,656	-3,322	-3,931	-4,618	-5,312
Grapevine	-1,497	-3,720	-4,909	-5,757	-6,690	-8,097
Haltom City	528	-1,004	-2,124	-3,005	-3,824	-4,523
Haslet	19	-84	-328	-457	-578	-680
Hurst	477	-868	-1,809	-2,552	-3,271	-3,894
Keller	678	-1,388	-2,811	-3,895	-4,931	-5,797
Kennedale	-541	-789	-951	-1,062	-1,132	-1,187
Lake Worth	43	-85	-197	-309	-437	-543
Mansfield	-2,358	-8,276	-13,568	-18,907	-22,224	-22,368
North Richland Hills	-2,010	-3,754	-5,022	-5,926	-7,249	-8,699
Pantego	-180	-172	-165	-157	-152	-152
Pelican Bay	-77	-122	-173	-194	-222	-259
Richland Hills	87	-157	-336	-496	-650	-775
River Oaks	75	-126	-249	-340	-427	-502
Saginaw	214	-454	-1,028	-1,548	-2,056	-2,509
Sansom Park Village	13	-24	-49	-67	-86	-105
Southlake	852	-1,765	-3,891	-5,651	-7,300	-8,670
Watauga	254	-453	-935	-1,316	-1,691	-2,023
Westworth Village	18	-37	-77	-112	-152	-197
White Settlement	126	-233	-519	-731	-1,018	-1,317
County-Other	612	-82	-519	-839	-1,144	-1,407
Manufacturing	1,278	-2,620	-6,165	-9,831	-13,832	-17,638

Water Supply Needs From 2007 State Water Plan - Continued

WUG	2010	2020	2030	2040	2050	2060
Steam Electric Power	290	-414	-1,030	-1,761	-2,723	-3,906
Mining	-91	-142	-177	-212	-247	-274
Irrigation	-2,465	-2,017	-1,501	-1,221	-985	-768
Livestock	0	0	0	0	0	0
Lakeside	-180	-245	-313	-385	-473	-579
Westover Hills	20	-35	-71	-99	-124	-146
Bethesda WSC	111	-233	-560	-915	-1,357	-1,883
Community WSC	32	-54	-109	-148	-190	-228
Johnson County Rural SUD	-208	-322	-446	-589	-765	-943
Total Projected Water Needs (acre-feet per year) =	-11,568	-69,422	-137,735	-206,785	-289,618	-381,759

**E. Projected Surface Water Supply within the District—31 TAC § 356.5(a)(5)(F)
and TWC § 36.1071(e)(3)(F)**

Table 6. Projected Surface Water Supplies

Water User Group	Source Name	2010	2020	2030	2040	2050	2060
Arlington	Arlington Lake/Reservoir	8,333	8,267	8,200	8,133	8,067	8,000
Arlington	TRWD System	76,445	72,096	65,012	57,061	49,111	42,177
Azle	TRWD System	1,376	1,401	1,431	1,460	1,477	1,481
Bedford	TRWD System	10,200	8,738	7,569	6,592	5,695	4,941
Benbrook	TRWD System	4,235	4,128	4,265	4,466	4,591	4,705
Blue Mound	TRWD System	122	102	82	65	54	46
Burleson	TRWD System	858	862	880	887	889	898
Colleyville	TRWD System	8,015	7,757	6,791	5,904	5,013	4,268
Crowley	TRWD System	1,297	1,274	1,382	1,619	1,663	1,541
Dalworthington Gardens	TRWD System	625	547	486	427	368	317
Edgecliff	TRWD System	494	393	327	276	230	195
Euless	TRWD System	8,743	8,569	7,559	6,588	5,617	4,802
Everman	TRWD System	425	390	365	340	320	277
Forest Hill	TRWD System	1,915	1,650	1,476	1,347	1,229	1,095
Fort Worth	TRWD System	155,849	140,347	138,184	143,469	152,464	163,088
Grand Prairie	Ray Roberts-Lewisville-Grapevine Lake / Reservoir System	1,269	1,453	1,567	1,581	1,472	1,322
Grand Prairie	TRWD System	1,203	976	828	711	602	511
Grand Prairie	Ray Hubbard Lake/Reservoir	473	549	599	613	578	526
Grand Prairie	Tawakoni Lake/Reservoir	1,170	1,347	1,461	1,482	1,387	1,253
Grapevine	Ray Roberts-Lewisville-Grapevine Lake / Reservoir System	1,470	1,315	1,203	1,100	967	832
Grapevine	TRWD System	6,894	6,894	6,894	6,894	6,667	5,872
Grapevine	Grapevine Lake / Reservoir Non-System Portion	1,833	1,767	1,700	1,633	1,567	1,500
Haltom City	TRWD System	7,663	6,831	6,018	5,226	4,448	3,801
Haslet	TRWD System	278	574	930	794	673	571
Hurst	TRWD System	6,920	5,901	5,124	4,437	3,804	3,272
Keller	TRWD System	9,838	9,441	7,964	6,772	5,736	4,870
Lake Worth	TRWD System	628	580	560	536	508	456

Projected Surface Water Supplies - Continued

Water User Group	Source Name	2010	2020	2030	2040	2050	2060
Mansfield	TRWD System	10,860	10,856	10,829	10,788	10,710	10,566
North Richland Hills	TRWD System	10,472	10,064	9,717	9,360	8,430	7,309
Richland Hills	TRWD System	1,261	1,071	952	862	755	652
River Oaks	TRWD System	1,085	860	705	591	496	421
Saginaw	TRWD System	3,099	3,086	2,914	2,692	2,392	2,109
Sansom Park Village	TRWD System	194	163	138	116	100	88
Southlake	TRWD System	12,356	12,009	11,025	9,825	8,491	7,284
Watauga	TRWD System	3,691	3,079	2,649	2,287	1,966	1,700
Westworth Village	TRWD System	262	250	220	196	176	165
White Settlement	TRWD System	1,828	1,585	1,470	1,271	1,184	1,107
County-Other	TRWD System	3,740	2,966	2,475	2,075	1,743	1,480
Manufacturing	TRWD System	18,536	17,824	17,465	17,093	16,087	14,819
Steam Electric Power	Arlington Lake/Reservoir	0	0	0	0	0	0
Steam Electric Power	TRWD System	4,213	2,818	2,919	3,063	3,167	3,282
Steam Electric Power	Trinity River Combined Run-of-River Industrial	235	187	219	257	304	362
Mining	Other Local Supply	342	342	342	342	342	342
Mining	TRWD System	0	0	0	0	0	0
Irrigation	Trinity River Combined Run-of-River Irrigation	549	549	549	549	549	549
Irrigation	TRWD System	2,187	2,187	2,187	1,941	1,644	1,396
Livestock	Livestock Local Supply	442	442	442	442	442	442
Westover Hills	TRWD System	296	239	201	171	144	122
Bethesda WSC	TRWD System	1,606	1,582	1,587	1,592	1,578	1,583
Community WSC	TRWD System	458	367	307	258	220	191
Johnson County Rural SUD	Brazos River Authority Main Stem System	210	210	210	210	210	210
Total Projected Surface Water Supplies (acre-feet per year) =		396,493	366,885	348,379	336,394	326,327	318,796

The source of the data presented in Table 6 was taken from the 2007 State Water Plan.

F. Projected Water Demand within the District—31 TAC § 356.5(a)(5)(G) and TWC § 36.1071(e)(3)(G)

Table 7. Projected Water Demands

Water User Group	2010	2020	2030	2040	2050	2060
Arlington	79,508	90,961	96,159	98,013	99,402	100,376
Azle	1,600	2,195	3,069	4,083	5,141	6,049
Bedford	10,138	10,447	10,665	10,808	11,017	11,246
Benbrook	4,893	5,685	6,721	7,984	9,489	11,254
Bethesda WSC	1,530	1,850	2,182	2,542	2,970	3,501
Blue Mound	297	300	294	286	283	283
Burleson	799	989	1,190	1,397	1,653	1,967
Colleyville	8,681	9,471	9,762	9,873	9,898	9,922
Community WSC	426	421	416	406	410	419
County-Other	3,482	3,402	3,348	3,268	3,241	3,241
Crowley	1,361	1,614	2,023	2,703	3,246	3,528
Dalworthington Gardens	771	816	847	862	874	884
Edgecliff	460	451	443	434	428	428
Eules	9,698	10,760	11,158	11,308	11,377	11,448
Everman	808	859	906	948	1,007	1,018
Forest Hill	1,783	1,892	1,997	2,122	2,285	2,399
Fort Worth	145,105	160,989	186,973	226,002	283,575	357,224
Grand Prairie	6,077	7,328	8,108	8,620	8,927	9,165
Grapevine	13,518	15,729	16,886	17,662	18,243	18,713
Haltom City	7,135	7,835	8,142	8,231	8,272	8,324
Haslet	412	811	1,411	1,404	1,404	1,404
Hurst	7,524	7,850	8,014	8,070	8,156	8,247
Irrigation	8,417	8,417	8,417	8,417	8,417	8,417
Johnson County Rural SUD	419	532	656	799	976	1,154
Keller	9,160	10,829	10,775	10,667	10,667	10,667
Kennedale	1,346	1,594	1,756	1,867	1,937	1,992
Lake Worth	930	1,010	1,102	1,190	1,290	1,344
Lakeside	447	512	580	652	740	846
Livestock	803	803	803	803	803	803
Mansfield	13,218	19,132	24,397	29,695	32,934	32,934
Manufacturing	17,258	20,444	23,630	26,924	29,919	32,457
Mining	433	484	519	554	589	616
North Richland Hills	12,496	13,832	14,753	15,300	15,693	16,022
Pantego	649	641	634	626	621	621
Pelican Bay	157	202	253	274	302	339
Richland Hills	1,327	1,381	1,441	1,511	1,558	1,580
River Oaks	1,010	986	954	931	923	923

Projected Water Demands - Continued

Water User Group	2010	2020	2030	2040	2050	2060
Saginaw	2,885	3,540	3,942	4,240	4,448	4,618
Sansom Park Village	603	609	609	605	608	615
Southlake	11,504	13,774	14,916	15,476	15,791	15,954
Steam Electric Power	4,158	3,419	4,168	5,081	6,194	7,550
Watauga	3,437	3,532	3,584	3,603	3,657	3,723
Westover Hills	276	274	272	270	268	268
Westworth Village	244	287	297	308	328	362
White Settlement	2,531	2,647	2,818	2,831	3,031	3,253
Total Projected Water Demands (acre-feet per year) =	399,714	451,536	501,990	559,650	632,992	718,098

The source of the data presented in Table 7 was taken from the 2007 State Water Plan.

G. Annual Volume of Water that Discharges from the Aquifer to Springs and Surface Water Bodies—31 TAC § 356.5(a)(5)(D) and TWC § 36.1071(e)(3)(D)

The estimated total annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers is 18,758 acre-feet per year.

Table 8. Demands Estimated Annual Volume of Water That Discharges from The Aquifer

Aquifer or confining unit	Acre-feet per year
Woodbine Aquifer	4,917
Washita and Fredericksburg series	11,546
Paluxy Aquifer	2,295
Glen Rose Formation	0
Hensell Aquifer	0
Pearsall / Cow Creek / Hammett / Sligo formations	0
Hosston Aquifer	0
*Total Volume of Discharge from Aquifers	18,758

The source of the data presented in Table 8 was taken from GAM Run 08-65.

**The evapotranspiration package of the groundwater availability model includes evaporation, transpiration, springs, seeps, and discharge to streams not modeled by the streamflow-routing package as described in Bené and others (2004). The surface water outflow estimate in Table 1 includes the results from the evapotranspiration package for model grid cells containing springs and streams not modeled by the streamflow-routing package.*

H. Estimate of the Annual Volume of Flow into the District, out of the District, and Between Aquifers in the District—31 TAC § 356.5(a)(5)(E) and TWC § 36.1071(e)(3)(E)

Table 9. Annual Volume Of Flow Into The District, Out Of The District Within Each Aquifer, And Between Each Aquifer In The District

Management Plan Requirement	Aquifer or confining unit	Acre-feet per year
Estimated annual volume of flow into the district within each aquifer in the district	Woodbine Aquifer	399
	Washita and Fredericksburg series	593
	Paluxy Aquifer	2,295
	Glen Rose Formation	617
	Hensell Aquifer	4,912
	Pearsall/Cow Creek/Hammett/Sligo formations	14
	Hosston Aquifer	4,304
Estimated annual volume of flow out of the district within each aquifer in the district	Woodbine Aquifer	2,389
	Washita and Fredericksburg series	473
	Paluxy Aquifer	1,500
	Glen Rose Formation	93
	Hensell Aquifer	1,615
	Pearsall / Cow Creek / Hammett / Sligo formations	4
	Hosston Aquifer	995
Estimated net annual volume of flow between each aquifer in the district	Woodbine Aquifer to Washita and Fredericksburg series	17
	Washita and Fredericksburg series to Paluxy Aquifer	355
	Paluxy Aquifer to Glen Rose Formation	626
	Glen Rose Formation to Hensell Aquifer	1,119
	Hensell Aquifer to Pearsall / Cow Creek / Hammett / Sligo formations	2,021
	Pearsall / Cow Creek / Hammett / Sligo formations to Hosston Aquifer	1,983

The source of the data presented in Table 9 was taken from GAM Run 08-65.

VII. Management of Groundwater Supplies—31 TAC § 356.5(a)(6)-(7) and TWC §36.1071(e)(4)

The Texas Legislature has established that GCDs are the state’s preferred method of groundwater management. The Texas Legislature codified this policy decision in Section 36.0015 of the Texas Water Code, which establishes that districts will manage groundwater resources through rules developed and implemented in accordance with Chapter 36 of the Texas Water Code (“Chapter 36”). Chapter 36 gives districts the tools to protect and manage the groundwater resources within their boundaries. The

District will use the regulatory tools provided by Chapter 36 and the Texas Legislature to manage the groundwater resources within its boundaries.

The District places a major priority on prevention of the contamination of its groundwater resources through abandoned and deteriorated water wells. Wells that have been abandoned or not properly maintained provide direct conduits or pathways that allow contamination from the surface to quickly reach the groundwater resources of the District. To address the threats to the water quality of its groundwater resources, the District intends to develop rules which require the capping and plugging of wells that are abandoned or deteriorated. The District plans to require that all abandoned, deteriorated, or replaced wells be plugged in compliance with the Water Well Drillers and Pump Installers Rules of the Texas Department of Licensing and Regulation.

The District will manage the supply of groundwater within the District in order to conserve the groundwater resources while seeking to maintain the economic viability of all groundwater user groups. In consideration of the economic and cultural activities occurring within the District, the District will identify and engage in such activities and practices which, if implemented, would result in a reduction of groundwater use. If determined to be necessary and beneficial by the Board, the District may create a monitoring well network.

The District also has the authority to use the regulatory tools granted to districts by Chapter 36 to protect the existing and historic users of groundwater in the District. The District specifically has the authority to protect existing users of groundwater, which are those individuals or entities currently invested in and using groundwater or the groundwater resources within the District for a beneficial purpose, and preserve historic use by historic users, which are those individuals or entities who used groundwater beneficially in the past. The District will strive to protect such use to the extent practicable under the goals and objectives of this Management Plan. One way the District can protect existing and historic use is to create a permitting process for groundwater use that preserves and protects the existing and historic use of groundwater in the District. Pursuant to legislative authority, including Section 36.113(e) of the Texas Water Code, the District can protect existing use by imposing more restrictive permit conditions on new permit applications and increased use by historic users. In protecting existing users, the District may establish limitations that apply to all subsequent new permit applications and increased use by historic users, regardless of type or location of use, which bear a reasonable relationship to this plan, and are reasonably necessary to protect existing use.

In order to better manage groundwater resources within its boundaries, the District may establish management zones and adopt different rules for: (1) each aquifer, subdivision of an aquifer, or geologic strata located in whole or in part within the boundaries of the District; or (2) each geographic area overlying an aquifer or subdivision of an aquifer located in whole or in part within the boundaries of the district.

In the District's planning efforts, the District has taken into account the water management strategies contained in the 2007 State Water Plan. The 2007 State Water Plan had 261 recommended strategies for Tarrant County.

Table 10. Water Management Strategies From 2007 State Water Plan

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Arlington	Municipal Conservation-Basic	Conservation	Tarrant	2,252	4,627	5,714	6,662	7,596	8,507
Arlington	Municipal Conservation-Expanded	Conservation	Tarrant	53	369	1,083	1,401	1,429	1,448
Arlington	Purchase from Water Provider (1)	Oklahoma Lake/ Reservoir	Reservoir - Oklahoma	0	0	0	0	0	10,000
Arlington	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	11,426	9,245
Arlington	Purchase from Water Provider (2)	Indirect Reuse	Henderson	0	23,390	15,850	12,470	2,630	100
Arlington	Purchase from Water Provider (2)	Indirect Reuse	Navarro	11,721	1,095	9,370	10,707	18,153	16,713
Arlington	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	19,746	17,699	32,468	26,623
Arlington	Water Treatment Plant Expansion - Reuse Sources	Indirect Reuse	Henderson	0	0	0	0	0	0
Arlington	Water Treatment Plant Expansion - Reuse Sources	Indirect Reuse	Navarro	0	0	0	0	0	0
Azle	Municipal Conservation-Basic	Conservation	Tarrant	79	80	124	182	245	309
Azle	Municipal Conservation-Expanded	Conservation	Tarrant	2	1	0	0	0	0
Azle	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	855	945
Azle	Purchase from Water Provider (1)	TRWD Lake/ Reservoir System	Reservoir	246	208	170	130	88	0
Azle	Purchase from Water Provider (2)	Indirect Reuse	Navarro	360	955	1,253	1,620	1,591	1,785
Azle	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	982	1,238	2,394	2,648
Azle	Water Treatment Plant - Expansion	TRWD Lake/ Reservoir System	Reservoir	0	0	0	0	0	0
Azle	Water Treatment Plant Expansion - Reuse Sources	Indirect Reuse	Navarro	0	0	0	0	0	0
Azle	Water Treatment Plant - New - Reuse Sources	Indirect Reuse	Navarro	0	0	0	0	0	0
Bedford	Conveyance and Treatment Project (2)	Indirect Reuse	Navarro	1,600	2,968	2,936	2,677	2,465	2,433
Bedford	Municipal Conservation-Basic	Conservation	Tarrant	283	529	632	734	841	953
Bedford	Municipal Conservation-Expanded	Conservation	Tarrant	11	57	72	73	74	75
Bedford	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	1,325	1,289
Bedford	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	2,299	2,045	3,710	3,609
Bedford	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Benbrook	Municipal Conservation-Basic	Conservation	Tarrant	119	287	398	540	722	950
Benbrook	Municipal Conservation-Expanded	Conservation	Tarrant	5	47	86	107	131	157
Benbrook	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	1,068	1,227
Benbrook	Purchase from Water Provider (2)	Indirect Reuse	Navarro	649	1,402	1,655	1,814	1,988	2,317
Benbrook	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	1,295	1,385	2,991	3,437
Benbrook	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Bethesda WSC	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	367	413
Bethesda WSC	Conveyance Project (2)	Indirect Reuse	Navarro	246	538	615	647	683	779
Bethesda WSC	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	482	494	1,028	1,156

Water Management Strategies From 2007 State Water Plan - Continued

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Bethesda WSC	Municipal Conservation-Basic	Conservation	Tarrant	21	82	106	132	165	207
Bethesda WSC	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Blue Mound	Municipal Conservation-Basic	Conservation	Tarrant	4	15	16	17	18	19
Blue Mound	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	13	12
Blue Mound	Purchase from Water Provider (2)	Indirect Reuse	Navarro	19	35	32	27	23	22
Blue Mound	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	25	20	35	33
Blue Mound	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Burleson	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	207	234
Burleson	Conveyance Project (2)	Indirect Reuse	Navarro	132	292	340	359	385	442
Burleson	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	267	275	579	656
Colleyville	Municipal Conservation-Basic	Conservation	Tarrant	243	454	550	639	724	808
Colleyville	Municipal Conservation- Expanded	Conservation	Tarrant	65	142	148	150	150	151
Colleyville	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	1,167	1,113
Colleyville	Purchase from Water Provider (2)	Indirect Reuse	Navarro	1,335	2,635	2,635	2,398	2,170	2,102
Colleyville	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	2,063	1,831	3,266	3,118
Colleyville	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Community WSC	Municipal Conservation-Basic	Conservation	Tarrant	6	21	23	24	26	28
Community WSC	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	51	50
Community WSC	Purchase from Water Provider (2)	Indirect Reuse	Navarro	70	125	119	105	95	94
Community WSC	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	93	80	143	140
Community WSC	Water Treatment Plant Expansion - Reuse Sources	Indirect Reuse	Navarro	0	0	0	0	0	0
County Other	Municipal Conservation-Basic	Conservation	Tarrant	41	150	161	171	182	192
County Other	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	405	386
County Other	Purchase from Water Provider (2)	Indirect Reuse	Navarro	573	1,007	960	843	754	728
County Other	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	752	643	1,135	1,081
County Other	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Crowley	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	387	402
Crowley	Conveyance Project (2)	Indirect Reuse	Navarro	199	432	536	657	720	759
Crowley	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	420	502	1,083	1,125
Crowley	Municipal Conservation-Basic	Conservation	Tarrant	17	66	90	131	169	195
Crowley	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Dalworthington Gardens	Municipal Conservation-Basic	Conservation	Tarrant	21	40	49	57	65	73
Dalworthington Gardens	Municipal Conservation- Expanded	Conservation	Tarrant	1	5	7	7	7	7
Dalworthington Gardens	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	86	83
Dalworthington Gardens	Purchase from Water Provider (2)	Indirect Reuse	Navarro	96	185	189	174	159	156
Dalworthington Gardens	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	148	132	240	232
Dalworthington Gardens	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Edgecliff	Municipal Conservation-Basic	Conservation	Tarrant	14	28	31	35	38	41
Edgecliff	Municipal Conservation- Expanded	Conservation	Tarrant	0	2	3	4	4	4
Edgecliff	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	54	51

Water Management Strategies from 2007 State Water Plan - Continued

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Edgecliff	Purchase from Water Provider (2)	Indirect Reuse	Navarro	76	134	127	112	100	96
Edgecliff	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	100	85	150	143
Eules	Municipal Conservation-Basic	Conservation	Tarrant	272	539	655	761	862	963
Eules	Municipal Conservation-Expanded	Conservation	Tarrant	82	236	323	346	349	351
Eules	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	1,307	1,253
Eules	Purchase from Water Provider (2)	Indirect Reuse	Navarro	1,444	2,910	2,933	2,676	2,431	2,365
Eules	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	2,296	2,044	3,659	3,508
Eules	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Everman	Municipal Conservation-Basic	Conservation	Tarrant	11	41	47	53	60	65
Everman	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	74	72
Everman	Purchase from Water Provider (2)	Indirect Reuse	Navarro	66	132	142	138	138	136
Everman	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	111	106	208	202
Everman	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Forest Hill	Municipal Conservation-Basic	Conservation	Tarrant	23	84	98	113	130	144
Forest Hill	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	286	286
Forest Hill	Purchase from Water Provider (2)	Indirect Reuse	Navarro	294	561	573	547	532	539
Forest Hill	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	448	418	800	800
Fort Worth	Municipal Conservation-Basic	Conservation	Tarrant	4,067	7,988	10,869	15,061	21,286	29,792
Fort Worth	Municipal Conservation-Expanded	Conservation	Tarrant	75	551	2,182	3,328	4,101	5,170
Fort Worth	Purchase from Water Provider (1)	Oklahoma Lake/ Reservoir	Reservoir-Oklahoma	0	0	0	0	0	34,158
Fort Worth	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	31,986	31,950
Fort Worth	Purchase from Water Provider (1)	TRWD Lake/ Reservoir System	Reservoir	2,854	3,665	768	3,238	0	0
Fort Worth	Purchase from Water Provider (2)	Indirect Reuse	Henderson	0	43,924	46,457	47,896	55,858	55,031
Fort Worth	Purchase from Water Provider (2)	Indirect Reuse	Navarro	20,978	0	0	0	0	700
Fort Worth	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	48,513	52,489	117,204	125,204
Fort Worth	Redistribution of Supplies	TRWD Lake/ Reservoir System	Reservoir	0	0	-245	-1,532	-5,814	-6,960
Grand Prairie	Conveyance Project (2)	Indirect Reuse	Navarro	289	554	318	255	151	124
Grand Prairie	Municipal Conservation-Basic	Conservation	Tarrant	187	422	538	645	744	841
Grand Prairie	Municipal Conservation-Expanded	Conservation	Tarrant	4	44	88	99	106	111
Grand Prairie	Purchase from Water Provider (1)	Fork Lake/ Reservoir	Reservoir	1,034	1,037	1,120	1,112	1,029	922
Grand Prairie	Purchase from Water Provider (1)	Palestine Lake/ Reservoir	Reservoir	0	994	1,081	1,081	1,008	910
Grand Prairie	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	169	144
Grand Prairie	Purchase from Water Provider (1)	Wright Patman Lake/ Reservoir	Reservoir	0	0	0	1,060	988	892
Grand Prairie	Purchase from Water Provider (2)	Indirect Reuse	Dallas	316	829	1,618	1,685	1,653	1,569
Grand Prairie	Purchase from Water Provider (2)	Indirect Reuse	Henderson	0	0	199	179	183	163
Grand Prairie	Purchase from Water Provider (2)	Indirect Reuse	Navarro	271	545	319	287	164	147
Grand Prairie	Purchase from Water Provider (3)	Fastrill Lake/ Reservoir	Reservoir	0	0	0	0	988	892
Grand Prairie	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	300	236	292	239
Grapevine	Municipal Conservation-Basic	Conservation	Tarrant	375	747	944	1,137	1,328	1,518

Water Management Strategies from 2007 State Water Plan - Continued

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Grapevine	Municipal Conservation-Expanded	Conservation	Tarrant	112	343	520	598	622	640
Grapevine	Purchase from Water Provider (1)	Ray Roberts-Lewisville-Grapevine Lake/Reservoir System	Reservoir	410	648	621	570	747	647
Grapevine	Purchase from Water Provider (1)	Toledo Bend Lake/Reservoir	Reservoir	0	0	0	0	1,551	1,532
Grapevine	Purchase from Water Provider (1)	TRWD Lake/Reservoir System	Reservoir	200	200	0	0	0	0
Grapevine	Purchase from Water Provider (1)	Wright Patman Lake/ Reservoir	Reservoir	0	0	0	275	244	212
Grapevine	Purchase from Water Provider (2)	Indirect Reuse	Denton	120	264	456	438	408	373
Grapevine	Purchase from Water Provider (2)	Indirect Reuse	Navarro	1,343	3,002	3,198	3,055	2,886	2,891
Grapevine	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	2,503	2,333	4,343	4,289
Haltom City	Municipal Conservation-Basic	Conservation	Tarrant	216	265	306	340	371	401
Haltom City	Municipal Conservation-Expanded	Conservation	Tarrant	57	3	16	30	30	30
Haltom City	Purchase from Water Provider (1)	Toledo Bend Lake/Reservoir	Reservoir	0	0	0	0	1,035	991
Haltom City	Purchase from Water Provider (2)	Indirect Reuse	Navarro	1,175	2,320	2,335	2,122	1,925	1,872
Haltom City	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	1,828	1,621	2,898	2,776
Haslet	Municipal Conservation-Basic	Conservation	Tarrant	13	47	94	105	117	128
Haslet	Purchase from Water Provider (1)	Toledo Bend Lake/Reservoir	Reservoir	0	0	0	0	156	149
Haslet	Purchase from Water Provider (2)	Indirect Reuse	Navarro	43	194	361	323	291	281
Haslet	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	282	246	438	417
Haslet	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Hurst	Municipal Conservation-Basic	Conservation	Tarrant	214	416	494	568	643	719
Hurst	Municipal Conservation-Expanded	Conservation	Tarrant	63	161	235	268	271	273
Hurst	Purchase from Water Provider (1)	Toledo Bend Lake/Reservoir	Reservoir	0	0	0	0	885	853
Hurst	Purchase from Water Provider (2)	Indirect Reuse	Navarro	1,061	2,004	1,988	1,802	1,647	1,611
Hurst	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	1,556	1,376	2,478	2,390
Hurst	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Irrigation	Direct Reuse	Direct Reuse	Tarrant	0	4,600	7,170	8,290	8,290	8,290
Irrigation	Golf Course Conservation	Conservation	Tarrant	17	274	527	660	785	910
Irrigation	Purchase from Water Provider (1)	Toledo Bend Lake/Reservoir	Reservoir	0	0	0	0	405	384
Irrigation	Purchase from Water Provider (1)	TRWD Lake/Reservoir System	Reservoir	1,000	479	73	0	0	0
Irrigation	Purchase from Water Provider (2)	InDirect Reuse	Navarro	628	1,022	947	851	753	725
Irrigation	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	741	649	1,133	1,076
Irrigation	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Irrigation	TRA Denton Creek WWTP Reuse	Direct Reuse	Tarrant	3,750	3,750	3,750	3,750	3,750	3,750
Johnson County Rural SUD	Municipal Conservation-Basic	Conservation	Tarrant	5	18	24	32	41	52
Johnson County Rural SUD	Purchase from Water Provider (1)	Fork Lake/Reservoir	Reservoir	1,250	589	476	365	295	289
Johnson County Rural SUD	Purchase from Water Provider (1)	Palestine Lake/Reservoir	Reservoir	0	565	460	355	288	285
Johnson County Rural SUD	Purchase from Water Provider (1)	Wright Patman Lake/ Reservoir	Reservoir	0	0	0	348	283	279
Johnson County Rural SUD	Purchase from Water Provider (2)	Indirect Reuse	Dallas	381	471	688	553	473	491

Water Management Strategies from 2007 State Water Plan - Continued

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Johnson County Rural SUD	Purchase from Water Provider (3)	Fastrill Lake/ Reservoir	Reservoir	0	0	0	0	283	279
Johnson County Rural SUD	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Keller	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	1,335	1,270
Keller	Conveyance Project (2)	Indirect Reuse	Navarro	1,509	3,206	3,090	2,751	2,483	2,398
Keller	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	2,419	2,100	3,737	3,557
Keller	Municipal Conservation-Basic	Conservation	Tarrant	279	597	685	770	859	948
Keller	Municipal Conservation-Expanded	Conservation	Tarrant	9	52	85	98	98	98
Kennedale	Conveyance Project (2)	InDirect Reuse	Navarro	670	921	667	656	463	447
Kennedale	Municipal Conservation-Basic	Conservation	Tarrant	57	151	181	209	233	256
Kennedale	Municipal Conservation-Expanded	Conservation	Tarrant	1	6	18	26	28	29
Kennedale	Overdraft Trinity Aquifer - Existing Wells	Trinity Aquifer	Tarrant	483	0	0	0	0	0
Kennedale	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	249	237
Kennedale	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	522	501	697	663
Kennedale	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Lake Worth	Municipal Conservation-Basic	Conservation	Tarrant	28	59	75	91	110	125
Lake Worth	Municipal Conservation-Expanded	Conservation	Tarrant	1	4	11	17	18	19
Lake Worth	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	118	119
Lake Worth	Purchase from Water Provider (2)	InDirect Reuse	Navarro	97	197	217	218	220	225
Lake Worth	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	170	167	331	333
Lake Worth	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Lakeside	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	104	116
Lakeside	Conveyance Project (2)	InDirect Reuse	Navarro	223	286	219	238	194	218
Lakeside	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	172	181	291	323
Lakeside	Municipal Conservation-Basic	Conservation	Tarrant	20	49	61	74	90	110
Lakeside	Municipal Conservation-Expanded	Conservation	Tarrant	3	11	16	18	20	24
Lakeside	Overdraft Trinity Aquifer - Existing Wells	Trinity Aquifer	Tarrant	161	0	0	0	0	0
Lakeside	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Livestock	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Mansfield	Municipal Conservation-Basic	Conservation	Tarrant	396	975	1,451	2,016	2,510	2,784
Mansfield	Municipal Conservation-Expanded	Conservation	Tarrant	111	381	634	847	961	986
Mansfield	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	5,413	4,760
Mansfield	Purchase from Water Provider (2)	InDirect Reuse	Navarro	5,475	11,526	11,103	12,338	10,071	8,984
Mansfield	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	8,692	9,422	15,156	13,326
Manufacturing	Manufacturing Conservation	Conservation	Tarrant	0	35	413	630	711	784
Manufacturing	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	3,743	3,866
Manufacturing	Purchase from Water Provider (2)	InDirect Reuse	Navarro	2,842	6,053	6,775	6,942	6,964	7,298
Manufacturing	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	5,305	5,302	10,480	10,825
Mining	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	66	60

Water Management Strategies from 2007 State Water Plan - Continued

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Mining	Conveyance Project (2)	InDirect Reuse	Navarro	124	175	140	154	123	113
Mining	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	110	118	185	167
North Richland Hills	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	589	573
North Richland Hills	Conveyance Project (2)	InDirect Reuse	Navarro	618	1,228	1,269	1,183	1,096	1,081
North Richland Hills	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	994	904	1,649	1,603
North Richland Hills	Municipal Conservation-Basic	Conservation	Tarrant	366	758	936	1,102	1,264	1,424
North Richland Hills	Municipal Conservation-Expanded	Conservation	Tarrant	109	312	407	440	455	466
North Richland Hills	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	981	954
North Richland Hills	Purchase from Water Provider (1)	TRWD Lake/ Reservoir System	Reservoir	2,000	1,500	1,000	0	0	0
North Richland Hills	Purchase from Water Provider (2)	InDirect Reuse	Navarro	1,057	2,106	2,234	2,093	2,037	2,020
North Richland Hills	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	1,655	1,505	2,746	2,670
North Richland Hills	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Pantego	Conveyance Project (2)	InDirect Reuse	Navarro	223	201	116	97	62	57
Pantego	Municipal Conservation-Basic	Conservation	Tarrant	18	32	37	42	47	52
Pantego	Municipal Conservation-Expanded	Conservation	Tarrant	1	4	5	5	5	5
Pantego	Overdraft Trinity Aquifer - Existing Wells	Trinity Aquifer	Tarrant	149	0	0	0	0	0
Pantego	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	33	30
Pantego	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	90	74	93	85
Pantego	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Pelican Bay	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	49	52
Pelican Bay	Conveyance Project (2)	InDirect Reuse	Navarro	95	142	121	120	91	98
Pelican Bay	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	95	91	137	145
Pelican Bay	Municipal Conservation-Basic	Conservation	Tarrant	3	12	14	16	19	22
Pelican Bay	Overdraft Trinity Aquifer - New Wells	Trinity Aquifer	Tarrant	72	0	0	0	0	0
Pelican Bay	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Richland Hills	Municipal Conservation-Basic	Conservation	Tarrant	40	49	57	65	73	79
Richland Hills	Municipal Conservation-Expanded	Conservation	Tarrant	0	0	2	3	3	3
Richland Hills	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	176	170
Richland Hills	Purchase from Water Provider (2)	InDirect Reuse	Navarro	193	363	369	350	327	321
Richland Hills	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	289	268	492	476
Richland Hills	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
River Oaks	Municipal Conservation-Basic	Conservation	Tarrant	12	43	46	49	52	55
River Oaks	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	116	110
River Oaks	Purchase from Water Provider (2)	InDirect Reuse	Navarro	166	292	274	240	215	208
River Oaks	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	214	183	324	308
Saginaw	Municipal Conservation-Basic	Conservation	Tarrant	90	207	265	321	375	428
Saginaw	Municipal Conservation-Expanded	Conservation	Tarrant	2	15	24	28	30	30
Saginaw	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	556	550

Water Management Strategies from 2007 State Water Plan - Continued

WUG	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
Saginaw	Purchase from Water Provider (2)	InDirect Reuse	Navarro	475	1,048	1,131	1,093	1,035	1,038
Saginaw	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	885	835	1,558	1,540
Sansom Park Village	Municipal Conservation-Basic	Conservation	Tarrant	8	28	30	33	35	38
Sansom Park Village	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	23	23
Sansom Park Village	Purchase from Water Provider (2)	InDirect Reuse	Navarro	30	55	54	47	43	43
Sansom Park Village	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	42	36	65	64
Sansom Park Village	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Southlake	Conveyance Project (2)	InDirect Reuse	Navarro	1,450	3,775	4,061	3,831	3,620	3,531
Southlake	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	3,071	2,807	6,201	5,979
Southlake	Municipal Conservation-Basic	Conservation	Tarrant	328	658	838	1,000	1,152	1,296
Southlake	Municipal Conservation-Expanded	Conservation	Tarrant	0	0	4	4	4	4
Steam Electric Power	Direct Reuse	Direct Reuse	Tarrant	500	500	1,100	2,000	2,600	2,600
Steam Electric Power	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	737	856
Steam Electric Power	Purchase from Water Provider (2)	InDirect Reuse	Navarro	647	957	1,132	1,244	1,371	1,616
Steam Electric Power	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	886	950	2,063	2,397
Watauga	Conveyance Project (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	458	443
Watauga	Conveyance Project (2)	InDirect Reuse	Navarro	567	1,046	1,028	929	851	837
Watauga	Conveyance Project (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	804	710	1,281	1,242
Watauga	Municipal Conservation-Basic	Conservation	Tarrant	42	154	171	187	203	220
Westover Hills	Municipal Conservation-Basic	Conservation	Tarrant	7	12	14	17	19	21
Westover Hills	Municipal Conservation-Expanded	Conservation	Tarrant	2	4	4	4	4	4
Westover Hills	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	34	32
Westover Hills	Purchase from Water Provider (2)	InDirect Reuse	Navarro	46	81	78	70	62	60
Westover Hills	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	61	53	94	90
Westworth Village	Municipal Conservation-Basic	Conservation	Tarrant	4	15	17	19	21	24
Westworth Village	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	41	43
Westworth Village	Purchase from Water Provider (2)	InDirect Reuse	Navarro	40	85	85	79	77	82
Westworth Village	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	66	61	115	121
White Settlement	Municipal Conservation-Basic	Conservation	Tarrant	142	87	103	115	134	154
White Settlement	Municipal Conservation-Expanded	Conservation	Tarrant	2	1	0	0	0	0
White Settlement	Purchase from Water Provider (1)	Toledo Bend Lake/ Reservoir	Reservoir	0	0	0	0	275	289
White Settlement	Purchase from Water Provider (2)	InDirect Reuse	Navarro	280	538	570	516	512	545
White Settlement	Purchase from Water Provider (3)	Marvin Nichols Lake/ Reservoir	Reservoir	0	0	447	394	771	808
White Settlement	Supplemental Wells	Trinity Aquifer	Tarrant	0	0	0	0	0	0
Total Projected Water Management Strategies (acre-feet per year) =				87,532	170,833	299,522	311,713	503,860	552,170

VIII. Methodology to Track District Progress in Achieving Management Goals—31 TAC § 356.5(a)(6)

The District's General Manager and staff will prepare an annual report ("Annual Report") and will submit the Annual Report members of the Board of the District. The Annual Report covers the activities of the District including information on the District's performance in regards to achieving the District's management goals and objectives. The Annual Report will be delivered to the Board within 120 days following the completion of the District's fiscal year, beginning with the fiscal year 2011. A copy of the Annual Report will be kept on file and available for public inspection at the District's offices upon approval by the Board.

IX. Actions, Procedures, Performance, and Avoidance for District Implementation of Management Plan – 31 TAC § 356.5(a)(3); 31 TAC § 356.5 (a)(4) / 36.1071(e)(2)

The District will implement this plan and will use the provisions of this plan as a means to determine the direction or priority for all District activities. All operations of the District and any additional planning efforts in which the District may participate will be consistent with the provisions of this plan. Rules adopted by the District for the permitting of wells and the production of groundwater shall comply with Chapter 36, including §36.113, and the provisions of this plan. All rules developed by the District will be adhered to and enforced in accordance with Chapter 36. The promulgation and enforcement of the rules will be based on the best scientific evidence available to the District. A copy of the proposed District rules can be found in Appendix H.

The District will work to encourage public cooperation and coordination in the implementation of this plan, as it is amended. All operations and activities of the District have been and will be performed in a manner that best encourages cooperation with the appropriate state, regional or local water entity. The meetings of the Board of the District are noticed and conducted at all times in accordance with the Texas Open Meetings Act. The District also makes available for public inspection all official documents, reports, records and minutes of the District pursuant with the Texas Public Information Act and will continue to do so in the future.

X. Management Goals

A. Providing the Most Efficient Use of Groundwater—31 TAC § 356.5(a)(1)(A) and TWC § 36.1071(a)(1)

1. Objective – The District will annually require 100 percent of water wells subject to the District's permitting requirements to be permitted in accordance with the District Rules.

Performance Standard – The number of water wells permitted by the District for each year will be included in the Annual Report submitted to the Board of Directors of the District.

2. Objective – The District will regulate the production of groundwater by maintaining a system of permitting which authorizes the use and production of groundwater within the boundaries of the District pursuant to the District Rules.

Performance Standard – The District will annually accept and process applications for the use of groundwater in the District in accordance with the permitting system established by the District Rules. The number and type of applications made for the permitted use of groundwater in the District, and the number and type of permits issued by the District, will be included in the Annual Report.

B. Controlling and Preventing Waste of Groundwater—31 TAC § 356.5(a)(1)(B) and TWC § 36.1071(a)(2)

1. Objective – The District will annually provide information to the public on eliminating and reducing wasteful practices in the use of groundwater by one of the following methods:
 - a. Provide newspaper articles for publication;
 - c. Publish a newsletter;
 - d. Conduct public presentations;
 - e. Set up displays at public events;
 - f. Distribute brochures/literature.

Performance Standard – The District’s Annual Report will include information about the method and type of information supplied to the public.

2. Objective – The District will submit at least one request annually to the Texas Railroad Commission asking for the location of existing salt water and/or waste disposal injection wells which have been permitted by the Texas Railroad Commission within the District within the most recent fiscal year.

Performance Standard – A copy of each request letter that was submitted to the Texas Railroad Commission asking for the location of existing salt water or waste disposal wells permitted to operate within the District will be included in the Annual Report submitted to the Board of Directors of the District for each fiscal year and the Annual Report will also include the information supplied by the Texas Railroad Commission, if any.

C. Conjunctive Surface Water Management Issues—31 TAC § 356.5(a)(1)(D) and TWC § 36.1071(a)(4)

1. Objective – Each year, the District will participate in the regional planning process by attending at least one Region C Regional Water Planning Group meeting.

Performance Standard – The attendance of a District representative at the Region C Regional Water Planning Group meeting(s) will be noted in the Annual Report presented to the Board and will provide the total number of meetings conducted by the Region C Regional Water Planning Group for that year.

D. Drought Conditions—31 TAC § 356.5(a)(1)(F) and TWC § 36.1071(a)(6)

1. Objective – Quarterly, the District will download the updated Palmer Drought Severity Index (PDSI) map and check for the periodic updates to the Drought Preparedness Council Situation Report (Situation Report). The PDSI map can be accessed from the National Weather Service - Climate Prediction Center website: http://www.cpc.ncep.noaa.gov/products/monitoring_and_data/drought.shtml and the Situation Report is available and can be accessed from the Texas Department of Public Safety website: <http://www.txdps.state.tx.us/dem/sitreindex.htm>.

Performance Standard – The District will make an assessment of the status of drought conditions in the District and will prepare a quarterly briefing to the Board of Directors. The downloaded PDSI maps and Situation Reports will be included with copies of the quarterly briefing in the District Annual Report that is provided to the Board of Directors.

E. Conservation, Recharge Enhancement, Rainwater Harvesting, and Brush Control—31 TAC § 356.5(a)(1)(G) and TWC § 36.1071(a)(7)

1. Objective – The District will submit at least one article regarding water conservation for publication each year to at least one newspaper of general circulation in Tarrant County.

Performance Standard – A copy of the article submitted by the District for publication to regarding water conservation will be included in the Annual Report submitted to the Board.

2. Objective – The District will provide information relating to recharge enhancement at least once each year.

Performance Standard – The Annual Report will include a copy of the information provided by the District related to recharge enhancement.

3. Objective – The District will provide information on rainwater harvesting by offering new information about rainwater harvesting.

Performance Standard – The Annual Report will provide a copy of the information on rainwater harvesting that was posted by the District in the previous year.

4. Objective – The District will evaluate the State Brush Control Plan on an annual basis to determine the necessity of projects within the District and whether projects within the District would increase the groundwater resources of the District.

Performance Standard –The Annual Report will include a copy of the most recent brush control information pertaining to the District and the District’s conclusions regarding necessity of projects and whether certain projects would increase the District’s groundwater resources.

F. Addressing in a Quantitative Manner the Desired Future Conditions—31 TAC § 356.5(a)(1)(H) and TWC § 36.1071(a)(8)

1. Objective – After October 2010, the District will on an annual basis review and calculate its well registration and permit totals in light of the Desired Future Conditions of the groundwater resources within the boundaries of the District to assess whether the District is on target to meet the Desired Future Conditions submitted to the TWDB.

Performance Standard – The District’s Annual Report will include a discussion of the District’s well registration and permit totals and will evaluate the District’s progress in achieving the Desired Future Conditions of the groundwater resources within the District and whether the District is on track to meet the Desired Future Conditions submitted to the TWDB.

2. Objective – Annually, the District will measure the water levels in at least five monitoring wells within the District and will determine the five-year water level averages based on the measurements taken. The District will compare the five-year water level averages to the corresponding five-year increment of its Desired Future Conditions. At least four of the monitoring wells will be located within the Trinity aquifer and one will be monitoring the Woodbine aquifer.

Performance Standard – The District’s Annual Report will include the water level measurement data from the monitoring wells. The report will also include an assessment and discussion of the progress towards achieving its Desired Future Conditions. Once five consecutive years’ worth of data has been collected, the District will calculate water level averages over five-year periods, and compare these values to the corresponding five-year increment of its Desired Future Conditions for drawdowns.

XI. Management Goals Determined Not to be Applicable to the District

A. Controlling and Preventing Subsidence – 31 TAC § 356.5(a)(1)(C) / TWC § 36.1071(a)(3)

The District has not been advised as to any issues with subsidence occurring within the District.

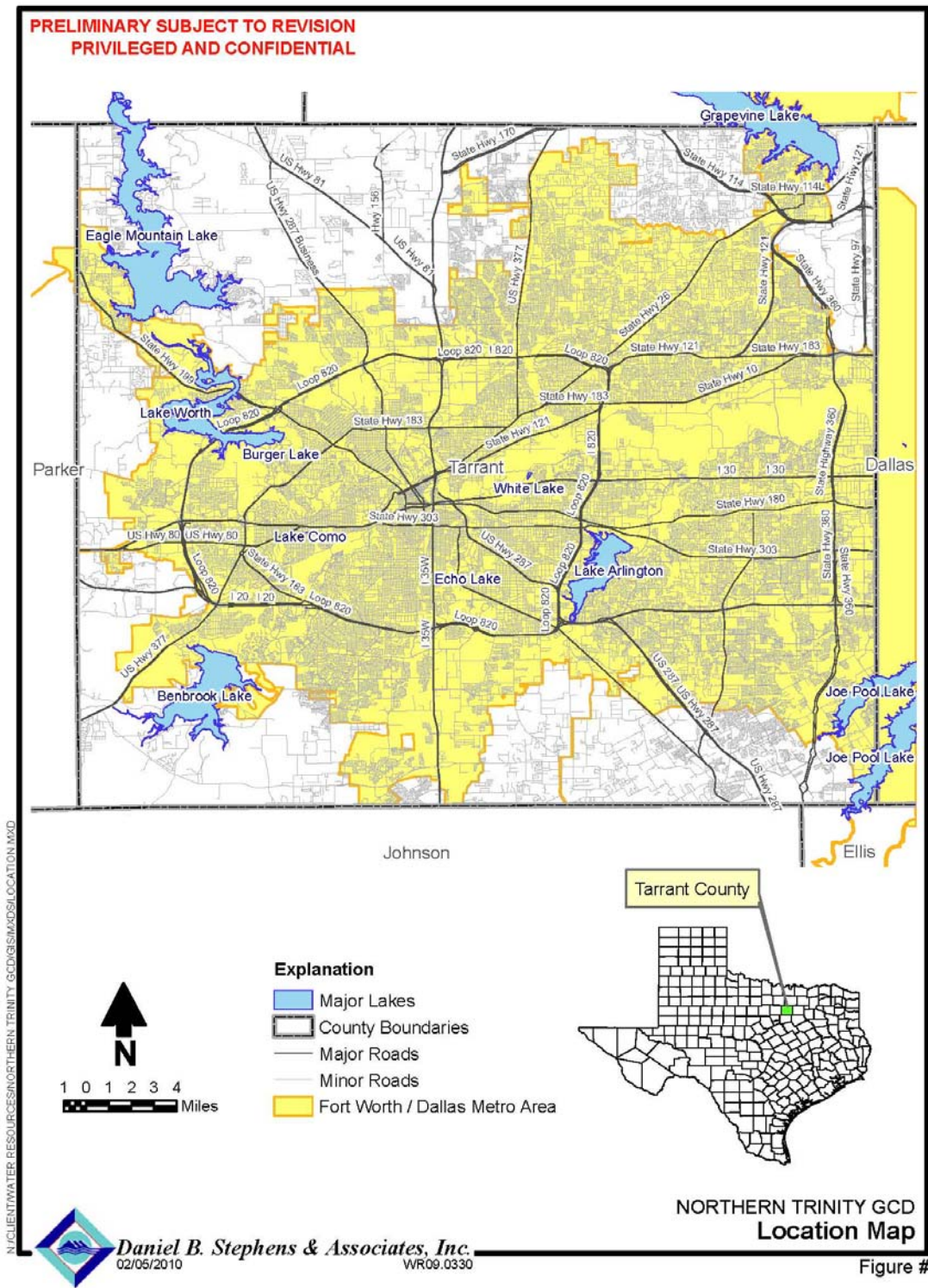
B. Natural Resource Issues – 31 TAC § 356.5(a)(1)(E) and TWC § 36.1071(a)(5)

The District has not been advised as to any threatened or endangered species that exist within the boundaries of the District and are significantly impacted by groundwater usage.

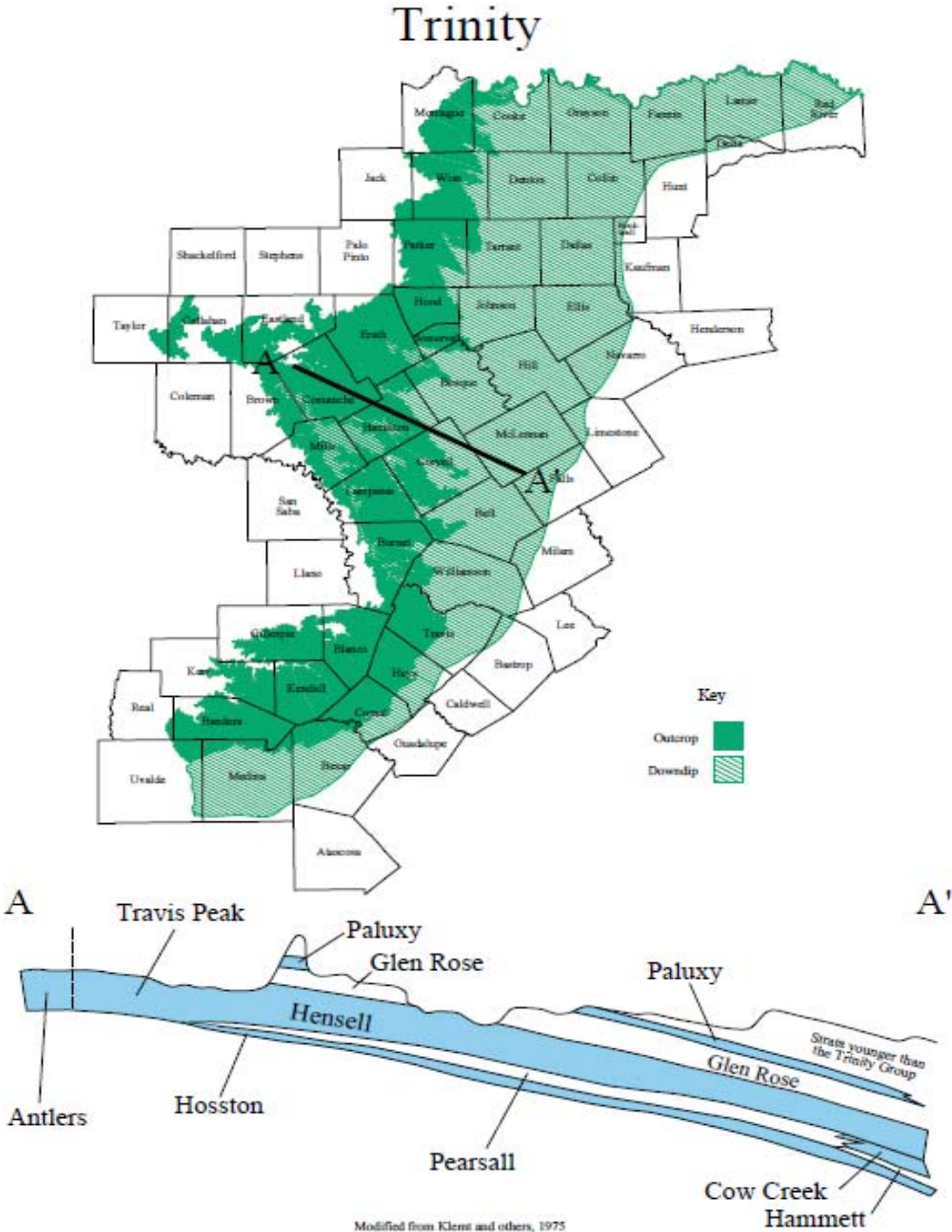
C. Addressing Precipitation Enhancement—31 TAC § 356.5(a)(1)(G) and TWC § 36.1071(a)(7)

Precipitation enhancement is not a cost effective or appropriate program for the District at this time since there are not precipitation enhancement programs in nearby counties or groundwater conservation districts that the District could participate with and allocate expenses for precipitation enhancement projects.

Appendix A - Map of District Location & Boundaries



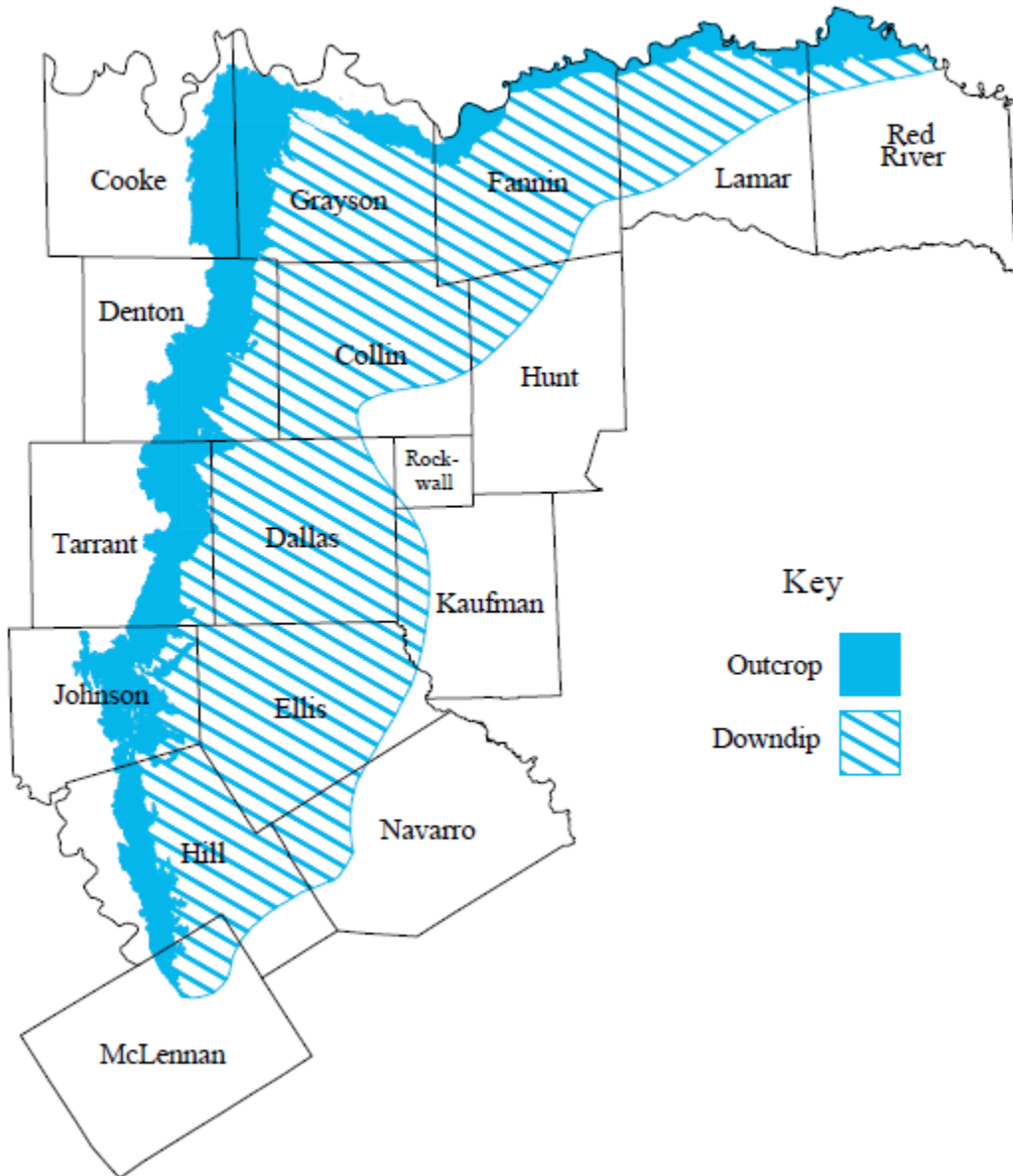
Appendix B - Map of Trinity Aquifer



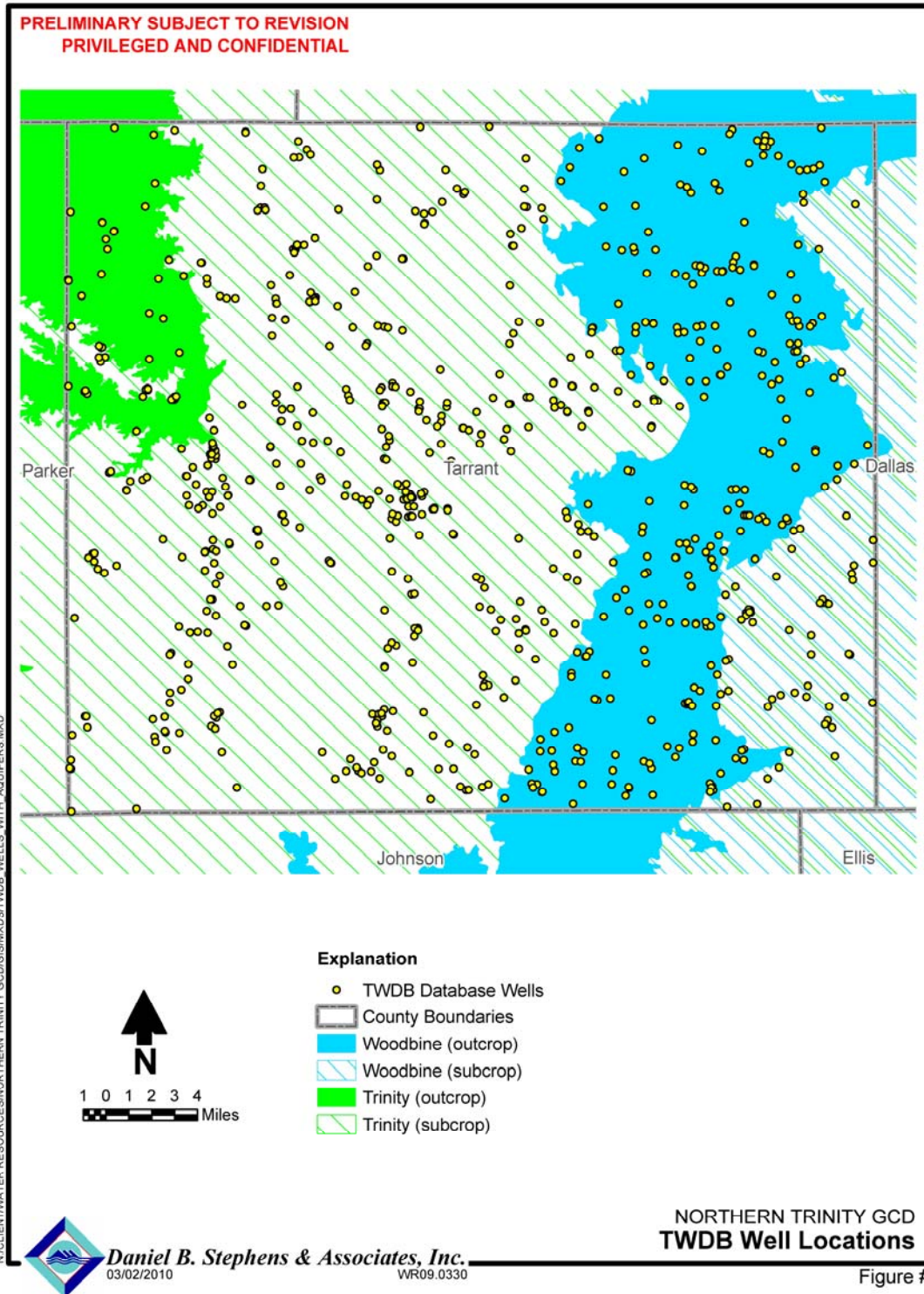
Modified from Klett and others, 1975

Appendix C - Map of Woodbine Aquifer

Woodbine



Appendix D - Aquifer Within Tarrant County



Appendix E - District Resolution Adopting the Plan

**RESOLUTION OF THE BOARD OF DIRECTORS OF THE NORTHERN TRINITY
GROUNDWATER CONSERVATION DISTRICT ADOPTING DISTRICT
GROUNDWATER MANAGEMENT PLAN**

THE STATE OF TEXAS

§
§
§

NORTHERN TRINITY GROUNDWATER CONSERVATION DISTRICT

WHEREAS, the Northern Trinity Groundwater Conservation District (“District”) was created by the Texas Legislature, pursuant to the authority of Article XVI, § 59 of the Texas Constitution, through Act of May 28, 2007, 80th Leg., R.S., ch. 1126, 2007 Tex. Gen. Laws 3794, as a groundwater conservation district operating under Chapter 36, Texas Water Code, Section 59, Article XVI of the Texas Constitution, and the Act;

WHEREAS, the Board of Directors of the District (“Board”) is required to adopt a Management Plan in accordance with Sections 36.1071 and 36.1072 of the Texas Water Code and 31 Texas Administrative Code Chapter 356, and must thereafter submit the plan for TWDB approval pursuant to 31 Texas Administrative Code Sections 356.5 and 356.6;

WHEREAS, as part of the process of adopting its Management Plan, the District requested and received the assistance of the TWDB and worked with the TWDB staff to obtain the staff’s recommendations and comments on the revisions to its Management Plan;

WHEREAS, the Board and the consultants of the District reviewed and analyzed the District’s best available data, groundwater availability modeling, desired future conditions, and managed available groundwater information, and other information and data required by the TWDB;

WHEREAS, the District issued notice in the manner required by state law and held at least one public hearing to receive public and written comments on the Management Plan;

WHEREAS, the District will coordinate with the appropriate surface water management entities after the public hearing and adoption of its Management Plan to afford surface water management entities within the boundaries of the District the opportunity to review and provide comments to the District on its Management Plan;

WHEREAS, the Board finds that the Management Plan meets all of the requirements of Chapter 36, Texas Water Code, and 31 Texas Administrative Code Chapter 356; and

WHEREAS, the Board of Directors met in a public meeting on May 13, 2010, properly noticed in accordance with appropriate law, after holding a public hearing on the attached revised Management Plan, considered the adoption of the Management Plan, and considered approval of this resolution.

**NOW, THEREFORE, BE IT ORDERED BY THE BOARD OF DIRECTORS OF
NORTHERN TRINITY GROUNDWATER CONSERVATION DISTRICT THAT:**

1. The above recitals are true and correct.
2. The Board of Directors hereby adopts the attached Management Plan as the Management Plan of the District;
3. The Board of Directors, the District's Board President and Secretary, and the District's consultants are further authorized to take all steps necessary to implement this resolution and submit the revised Management Plan to the TWDB for its approval; and
4. The Board of Directors, the District's Board President and Secretary, and the District's consultants are further authorized to take any and all action necessary to coordinate with the TWDB as may be required in furtherance of TWDB's approval pursuant to the provisions of Section 36.1072 of the Texas Water Code.

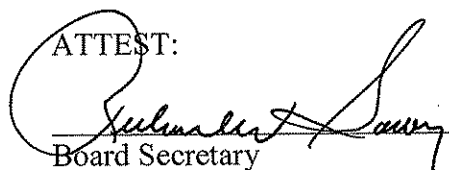
AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 13th day of May, 2010.

NORTHERN TRINITY GROUNDWATER CONSERVATION DISTRICT

By: 
Board President

ATTEST:


Board Secretary

Appendix F - Notice of Meeting to Adopt The Plan

FILED
TARRANT COUNTY TEXAS

2010 MAY -6 AM 8: 55

SUZANNE HENDERSON
COUNTY CLERK

Agenda
Meeting of the Board of Directors
Northern Trinity Groundwater Conservation District
City of Arlington Municipal Building – Council Briefing Room
101 W. Abram, Arlington, Texas 76010

BY _____

TIME: 2:30 PM

DATE: Thursday, May 13, 2010

- I. Call to Order and Establishment of Quorum
- II. Welcome and introductions
- III. Approval of Minutes of April 22, 2010 meeting (Action)
- IV. Appointment of District Officers (Action)
- V. Designation of Financial Depository for NTGCD and Authorization for Board President to negotiate and enter into any related agreement (Action)
- VI. Designation of temporary NTGCD Administrative office location and related operational and administrative issues (Discussion and Possible Action)
- VII. Approval and Adoption of various District Forms (Action)
- VIII. Confidentiality of Personal Information of Board Members (Action)
- IX. Errors and Omissions Insurance for Board Members (Action)
- X. Publication of Notification to Well Owners regarding Rules Requirements (Discussion)
- XI. Public Hearing: Adoption of NTGCD Groundwater Management Plan - Stefan Schuster/Daniel B. Stephens & Associates Inc. (Action)
- XII. Other Business:
 1. Data Base needs and possible RFP/RFQ (Discussion)
 2. District Bylaws and Policies (Discussion)
- XIII. Setting of Next Meeting(s)
- XIV. Adjourn

Agenda -- Northern Trinity Groundwater Conservation District

DATE: 05/13/10, Time: 2:30 PM

Page 2 of 2

The Northern Trinity Groundwater Conservation District is committed to public access. To request an accommodation for a person with a disability who wishes to attend the meeting, contact Mark Mendez at 817-884-2729 at least one business day prior to the posted meeting.

FILED
TARRANT COUNTY TEXAS
2010 MAY -6 AM 8:55
SUZANNE HENDERSON
COUNTY CLERK
BY _____

Appendix G - Letter to Surface Water Management Entities



June 4, 2010

Ms. Julie Hunt
Director of Water Utilities
City of Arlington
PO Box 90231
Arlington, Texas 76004-3231

Dear Ms. Hunt,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the City of Arlington to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks
Ms. Diane Edwards, Community Water Supply Corporation

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Mr. Frank Crumb, P.E.
Water Department Director
City of Fort Worth
1000 Throckmorton St
Fort Worth, TX 76102

Dear Mr. Crumb,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the City of Fort Worth to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks
Ms. Diane Edwards, Community Water Supply Corporation

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

Austin, TX 78759-5336

512-821-2765

FAX 512-821-2724



June 4, 2010

Mr. Joe Smolinski
Director of Utilities
City of Mansfield
1305 E Broad
Mansfield, Texas 76063

Dear Mr. Smolinski,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the City of Mansfield to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks
Ms. Diane Edwards, Community Water Supply Corporation

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Mr. Don Propst
Water Superintendent
City of Azle
613 S.E. Parkway
Azle, Texas 76020

Dear Mr. Propst,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the City of Azle to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks
Ms. Diane Edwards, Community Water Supply Corporation

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Mr. David Wasson
General Manager
Benbrook Water Authority
1121 Mercedes Street
Benbrook, TX 76126

Dear Mr. Wasson,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the Benbrook Water Authority to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. Marvin Gregory, City Administrator, City of River Oaks
Ms. Diane Edwards, Community Water Supply Corporation

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Mr. Marvin Gregory
City Administrator
City of River Oaks
4900 River Oaks Blvd
River Oaks, TX 76114

Dear Mr. Gregory,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the City of River Oaks to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Ms. Diane Edwards, Community Water Supply Corporation

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Ms. Diane Edwards
Community Water Supply Corporation
12190 Liberty School Rd
Azle, Texas 76020

Dear Ms. Edwards,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the Community Water Supply Corporation to manage and preserve the groundwater resources within the District.

Sincerely,

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Mr. Jim Oliver
Tarrant Regional Water District
800 East Northside Drive
Fort Worth, TX 76102

Dear Mr. Oliver,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the Tarrant Regional Water District to manage and preserve the groundwater resources within the District.

Sincerely,

RUSSELL LAUGHAN

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks
Mr. Danny Vance, Trinity River Authority

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724



June 4, 2010

Mr. Danny Vance
Trinity River Authority
P.O. Box 60
Arlington, TX 76004

Dear Mr. Vance,

Enclosed please find a copy of the Northern Trinity Groundwater Conservation District's (the "District") adopted Management Plan. The District provided notice and conducted a public hearing on the Management Plan on May 13, 2010. The District's Board of Directors subsequently adopted the Management Plan at a separate meeting on May 13, 2010.

The District submits the enclosed plan pursuant to Section 36.1071(a) of the Texas Water Code and the Texas Water Development Board's ("TWDB") rules, codified at Title 31 Texas Administrative Code, Section 356.6(a), to coordinate in establishing its comprehensive management goals.

Please contact me if you have any questions regarding the District's Management Plan. The District is committed to working with the Trinity River Authority to manage and preserve the groundwater resources within the District.

Sincerely,

RUSSEL LAUGHLIN

Northern Trinity Groundwater Conservation District

cc: Ms. Julie Hunt, Director of Water Utilities, City of Arlington
Mr. Frank Crumb, P.E., Water Department Director, City of Fort Worth
Mr. Joe Smolinski, Director of Utilities, City of Mansfield
Mr. Don Propst, Water Superintendent, City of Azle
Mr. David Wasson, General Manager, Benbrook Water Authority
Mr. Marvin Gregory, City Administrator, City of River Oaks
Mr. Jim Oliver, Tarrant Regional Water District

Enclosure

Daniel B. Stephens & Associates, Inc.

4030 W. Braker Lane, Suite 325

512-821-2765

Austin, TX 78759-5336

FAX 512-821-2724

Appendix H - Adopted Rules of District

Northern Trinity Groundwater Conservation District

Temporary Rules for Water Wells in Tarrant County, Texas

Adopted March 11, 2010

Northern Trinity

Groundwater Conservation District

Table of Contents

	Page
SECTION 1.	
DEFINITION, CONCEPTS, AND GENERAL PROVISIONS	
Rule 1.1	1
Rule 1.2	7
Rule 1.3	7
Rule 1.4	7
Rule 1.5	7
Rule 1.6	7
Rule 1.7	7
Rule 1.8	8
Rule 1.9	8
Rule 1.10	8
Rule 1.11	8
Rule 1.12	8
Rule 1.13	8
SECTION 2.	
APPLICABILITY OF REGULATORY REQUIREMENTS; EXEMPTIONS	
Rule 2.1	9
Rule 2.2	10
Rule 2.4	10
SECTION 3.	
REGISTRATIONS, RECORDS, REPORTS, AND LOGS; PERMIT NOT REQUIRED	
Rule 3.1	10
Rule 3.2	11
Rule 3.3	11
Rule 3.4	12
Rule 3.5	12
Rule 3.6	13
Rule 3.7	15
Rule 3.8	16
Rule 3.9	17
Rule 3.10	18
Rule 3.11	19

SECTION 4.	
SPACING AND LOCATION OF WELLS; WELL COMPLETION	
Rule 4.1	Spacing and Location of Existing Wells..... 20
Rule 4.2	Spacing and Location of New Wells. 20
Rule 4.3	Standards of Completion for All Wells 21
SECTION 5.	
REGULATION OF PRODUCTION; WASTE PROHIBITED	
Rule 5.1	Temporary Production Limitations..... 21
Rule 5.2	Regular Production Limitations..... 21
Rule 5.3	Waste Prohibited..... 22
SECTION 6.	
FEES AND PAYMENT OF FEES	
Rule 6.1	Water Use Fees. 22
Rule 6.2	Payment of Water Use Fees; Deadlines..... 22
Rule 6.3	Early Fee Payment Incentive. 22
Rule 6.5	Failure to Make Fee Payments..... 24
Rule 6.6	Returned Check Fee..... 24
Rule 6.7	Well Report Deposit. 24
Rule 6.8	Enforcement..... 25
SECTION 7.	
METERING	
Rule 7.1	Water Meter Required. 25
Rule 7.2	Water Meter Exemption..... 26
Rule 7.3	Metering Aggregate Withdrawal. 26
Rule 7.4	Accuracy Verification. 26
Rule 7.5	Removal of Meter for Repairs. 27
Rule 7.6	Water Meter Readings. 27
Rule 7.7	Installation of Meters. 27
Rule 7.8	Enforcement..... 28
SECTION 8.	
INSPECTION AND ENFORCEMENT OF RULES	
Rule 8.1	Purpose and Policy..... 28
Rule 8.2	Rules Enforcement..... 28
Rule 8.3	Failure to Report Pumpage 29
Rule 8.4	District Inspections. 29
Rule 8.5	Notices of Violation..... 29
Rule 8.6	Show Cause Hearing..... 30
Rule 8.7	Enforcement Policy and Civil Penalty Schedule. 31
SECTION 9.	
OTHER DISTRICT MANAGEMENT ACTIONS AND DUTIES	
Rule 9.1	District Management Plan. 33
SECTION 10.	
EFFECTIVE DATE	
Rule 10.1.	Effective Date. 33

Northern Trinity Groundwater Conservation District

District Rules

PREAMBLE

The Northern Trinity Groundwater Conservation District ("District") was created in 2007 by the 80th Texas Legislature in order to conserve, preserve, protect, and prevent waste of the groundwater resources of Tarrant County, Texas, and to promote recharge of the aquifers within Tarrant County. The District's boundaries are coextensive with the boundaries of Tarrant County, and all lands and other property within these boundaries will benefit from the works and projects that will be accomplished by the District. These Temporary District Rules are adopted as the District's first step towards accomplishing those purposes.

The District is committed to manage and protect the groundwater resources within its jurisdiction and to work with others to ensure a sustainable, adequate, high quality and cost effective supply of water, now and in the future. Any action taken by the District shall only be after full consideration and respect has been afforded to the individual property rights of all citizens of the District.

SECTION 1. DEFINITION, CONCEPTS, AND GENERAL PROVISIONS

Rule 1.1 Definition of Terms.

In the administration of its duties, the District follows the definitions of terms set forth in Chapter 36, Texas Water Code, and other definitions as follows:

- (1) "Agricultural irrigation" means the application of produced groundwater to soil for beneficial purposes as part of any of the following activities:
 1. cultivating the soil to produce crops for human food, animal feed, or planting seed or for the production of fibers;
 2. the practice of floriculture, viticulture, silviculture, and horticulture, including the cultivation of plants in containers or nonsoil media, by a nursery grower;

3. raising, feeding, or keeping animals for breeding purposes or for the production of food or fiber, leather, pelts, or other tangible products having a commercial value;
4. planting cover crops, including cover crops cultivated for transplantation, or leaving land idle for the purpose of participating in any governmental program or normal crop or livestock rotation procedure;
5. wildlife management; and
6. raising or keeping equine animals.

(2) "Aquifer" means a water bearing geologic formation in the District.

(3) "As equipped" for purposes of determining the capacity of a well means visible pipes, plumbing, and equipment attached to the wellhead or adjacent plumbing that controls the maximum rate of flow of groundwater and that is permanently affixed to the well or adjacent plumbing by welding, glue or cement, bolts or related hardware, or other reasonably permanent means.

(4) "Beneficial use" or "beneficial purpose" means use of groundwater for:

1. agricultural, gardening, domestic, stock raising, municipal, mining, manufacturing, industrial, commercial, or recreational purposes;
2. exploring for, producing, handling, or treating oil, gas, sulfur, lignite, or other minerals; or
3. any other purpose that is useful and beneficial to the user that does not constitute waste.

(5) "Board" means the Board of Directors of the District.

(6) "Connection" means a single family residential unit or each commercial or industrial establishment to which drinking water is supplied from the system. As an example, the number of service connections in an apartment complex would be equal to the number of individual apartment units. When enough data is not available to accurately determine the number of connections to be served or being served, the population served divided by three will be used as the number of connections for calculating system capacity requirements. Conversely, if only the number of connections is known, the connection total multiplied by three will be the number used for population served.

(7) "District" means the Northern Trinity Groundwater Conservation District created in accordance with Section 59, Article XVI, Texas Constitution, Chapter 36, Texas Water Code, and the District Act.

- (8) “District Act” means the Act of May 28, 2007, 80th Leg., R.S., ch. 1126, 2007 Tex. Gen. Laws 3794, codified at TEX. SPEC. DIST. LOC. LAWS CODE ANN. ch. 8820 (“the District Act”), as may be amended from time to time.
- (9) “Domestic use” means the use of groundwater by an individual or a household to support domestic activity. Such use may include water for drinking, washing, or culinary purposes; for irrigation of lawns, or of a family garden and/or family orchard; for watering of domestic animals. Domestic use does not include water used to support activities for which consideration is given or received or for which the product of the activity is sold. Domestic use does not include use by or for a public water system. Domestic use does not include irrigation of crops in fields or pastures. Domestic use does not include water used for open-loop residential geothermal heating and cooling systems, but does include water used for closed-loop residential geothermal systems.
- (10) “Existing Groundwater Regulatory Authority” means a conservation and reclamation district described by Section 8820.151 of the District Act.
- (11) “Effective date” means March 11, 2010, which was the original date of adoption of these Temporary Rules.
- (12) “General Manager” as used herein is the appointed chief administrative officer of the District, , or the District staff or a third party acting at the direction of the General Manager or Board. Additionally, the Board President may perform the functions set forth herein to be performed by the General Manager.
- (13) “Groundwater” means water percolating below the surface of the earth.
- (14) “Groundwater reservoir” means a specific subsurface water-bearing stratum.
- (15) “Landowner” means the person who holds possessory rights to the land surface or to the withdrawal of groundwater from wells located on the land surface.
- (16) “Livestock” means, in the singular or plural, grass- or plant-eating, single- or cloven-hooved mammals raised in an agricultural setting for subsistence, profit or for its labor, or to make produce such as food or fiber, including cattle, horses, mules, asses, sheep, goats, llamas, alpacas, and hogs, as well as species known as ungulates that are not indigenous to this state from the swine, horse, tapir, rhinoceros, elephant, deer, and antelope families, but does not mean a mammal defined as a game animal in section 63.001, Parks and Wildlife Code, or as a fur-bearing animal in section 71.001, Parks and Wildlife Code, or any other indigenous mammal regulated by the Texas Department of Parks and Wildlife as an endangered or threatened species. The term does not include any animal that is stabled, confined, or fed at a facility that is defined by Texas Commission on Environmental Quality rules as an Animal Feeding Operation or a Concentrated Animal Feeding Operation.

- (17) “Meter” or “measurement device” means a water flow measuring device that can measure within +/- 5% of accuracy the instantaneous rate of flow and record the amount of groundwater produced from a well or well system during a measure of time, except as provided under Rule 7.1.
- (18) “Nursery grower” means a person who grows more than 50 percent of the products that the person either sells or leases, regardless of the variety sold, leased, or grown. For the purpose of this definition, “grow” means the actual cultivation or propagation of the product beyond the mere holding or maintaining of the item prior to sale or lease and typically includes activities associated with the production or multiplying of stock such as the development of new plants from cuttings, grafts, plugs, or seedlings.
- (19) “Penalty” means a reasonable civil penalty set by rule under the express authority delegated to the District through Section 36.102(b) of the Texas Water Code.
- (20) “Person” means an individual, corporation, limited liability company, organization, government, governmental subdivision, agency, business trust, estate, trust, partnership, association, or other legal entity.
- (21) “Poultry” means chickens, turkeys, nonmigratory game birds, and other domestic nonmigratory fowl, but does not include any other bird regulated by the Parks and Wildlife as an endangered or threatened species. The term does not include any animal that is stabled, confined, or fed at a facility that is defined by Texas Commission on Environmental Quality rules as an Animal Feeding Operation or a Concentrated Animal Feeding Operation.
- (22) “Production” or “producing” means the act of extracting groundwater from an aquifer by a pump or other method.
- (23) “Public Water System” or “PWS” means a system for the provision to the public of water for human consumption through pipes or other constructed conveyances, which includes all uses described under the definition for “drinking water” in 30 Texas Administrative Code, Section 290.38. Such a system must have at least 15 service connections or serve at least 25 individuals at least 60 days out of the year. This term includes any collection, treatment, storage, and distribution facilities under the control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Two or more systems with each having a potential to serve less than 15 connections or less than 25 individuals but owned by the same person, firm, or corporation and located on adjacent land will be considered a public water system when the total potential service connections in the combined systems are 15 or greater or if the total number of individuals served by the combined systems total 25 or greater at least 60 days out of the year. Without excluding other meanings of the terms “individual” or “served,” an individual shall be deemed to be served by a water

- (24) “Pump” means any facility, device, equipment, materials, or method used to obtain water from a well.
- (25) “Registrant” means a person required to submit a registration.
- (26) “Registration” means a well owner providing certain information about a well to the District, as more particularly described under Section 3.
- (27) “Rule” or “Rules” or “Temporary Rules” means these Temporary Rules of the District regulating water wells, which shall continue to be effective until amended or repealed.
- (28) “Substantially alter” with respect to the size or capacity of a well means to increase the inside diameter of the pump discharge column pipe size of the well in any way or to increase the size of the pump on the well.
- (29) “Transfer” means a change in a registration as follows, except that the term “transfer” shall have its ordinary meaning as read in context when used in other contexts:
- (a) ownership; or
 - (b) the person authorized to exercise the right to make withdrawals and place the groundwater to beneficial use.
- (30) Types of wells:
- (a) “Exempt well” means a new or an existing well that is exempt under Rule 2.1 from certain regulatory requirements in these rules.
 - (b) “Existing well” means a well that was in existence or for which drilling commenced prior to October 1, 2010.
 - (c) “Leachate well” means a well used to remove contamination from soil or groundwater.
 - (d) “Monitoring well” means a well installed to measure some property of the groundwater or the aquifer that it penetrates, and does not produce more than 5,000 gallons per year.
 - (e) “New well” means a well for which drilling commenced on or after October 1, 2010 .
 - (f) “Public water supply well” means a well that supplies water to a public water system.

(31) “Waste” means one or more of the following:

- (a) withdrawal of groundwater from the aquifer at a rate and in an amount that causes or threatens to cause an intrusion into the aquifer unsuitable for agriculture, gardening, domestic, stock raising, or other beneficial purposes;
- (b) the flowing or producing of water from the aquifer by artificial means if the water produced is not used for a beneficial purpose;
- (c) the escape of groundwater from the aquifer to any other underground reservoir or geologic stratum that does not contain groundwater;
- (d) pollution or harmful alteration of groundwater in the aquifer by saltwater or by other deleterious matter admitted from another stratum or from the surface of the ground;
- (e) willfully or negligently causing, suffering, or allowing groundwater to escape into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or other order issued by the Texas Commission on Environmental Quality under Chapters 11 or 26 of the Texas Water Code;
- (f) groundwater pumped for irrigation that escapes as irrigation tailwater onto land other than that of the owner of the well unless permission has been granted by the occupant of the land receiving the discharge;
- (g) for water produced from an artesian well, “waste” has the meaning assigned by Section 11.205, Texas Water Code;
- (h) operating a deteriorated well; or
- (i) producing groundwater in violation of any District rule governing the withdrawal of groundwater through production limits on wells, managed depletion, or both.

(32) “Well” means any artificial excavation located within the boundaries of the District dug or drilled for the purpose of exploring for or withdrawing groundwater from the aquifer.

(33) “Well owner” means the person who owns a possessory interest in: (1) the land upon which a well or well system is located or to be located; (2) the well or well system; or (3) the groundwater withdrawn from a well or well system.

(34) “Well system” means a well or group of wells tied to the same distribution system.

(35) “Withdraw” means the act of extracting or producing groundwater by pumping or other method.

(36) “Year” means a calendar year (January 1 through December 31), except where the usage of the term clearly suggests otherwise.

Rule 1.2 Authority of District.

The Northern Trinity Groundwater Conservation District is a political subdivision of the State of Texas organized and existing under Section 59, Article XVI, Texas Constitution, Chapter 36, Texas Water Code, and the District Act. The District is a governmental agency and a body politic and corporate. The District was created to serve a public use and benefit.

Rule 1.3 Purpose of Rules.

These Temporary Rules are adopted under the authority of Sections 36.101, Texas Water Code, and the District Act for the purpose of conserving, preserving, protecting, and recharging groundwater in the District in order to prevent subsidence, prevent degradation of water quality, prevent waste of groundwater, and to carry out the powers and duties of Chapter 36, Texas Water Code, and the District Act.

Rule 1.4 Use and Effect of Rules.

These rules are used by the District in the exercise of the powers conferred on the District by law and in the accomplishment of the purposes of the law creating the District. These rules may be used as guides in the exercise of discretion, where discretion is vested. However, under no circumstances and in no particular case will they, or any part therein, be construed as a limitation or restriction upon the District to exercise powers, duties and jurisdiction conferred by law. These rules create no rights or privileges in any person or water well, and shall not be construed to bind the Board in any manner in its promulgation of the District Management Plan, amendments to these Temporary Rules, or promulgation of permanent rules.

Rule 1.5 Purpose of District.

The purpose of the District is to provide for the conservation, preservation, protection, recharging, and prevention of waste of groundwater, and of groundwater reservoirs or their subdivisions, consistent with the objectives of Section 59, Article XVI, Texas Constitution.

Rule 1.6 Construction.

A reference to a title or chapter without further identification is a reference to a title or chapter of the Texas Water Code. A reference to a section or rule without further identification is a reference to a section or rule in these Rules. Construction of words and phrases is governed by the Code Construction Act, Subchapter B, Chapter 311, Texas Government Code. The singular includes the plural, and the plural includes the singular. The masculine includes the feminine, and the feminine includes the masculine.

Rule 1.7 Methods of Service Under the Rules.

Except as provided in these rules, any notice or document required by these rules to be served or delivered may be delivered to the recipient or the recipient’s authorized representative in person, by agent, by courier receipted delivery, by certified or registered mail sent to the recipient's last known

address, or by fax transfer to the recipient's current fax number and shall be accomplished by 5:00 p.m. on the date which it is due. Service by mail is complete upon deposit in a post office depository box or other official depository of the United States Postal Service. Service by fax transfer is complete upon transfer, except that any transfer completed after 5:00 p.m. shall be deemed complete the following business day. If service or delivery is by mail and the recipient has the right or is required to do some act within a prescribed period of time after service, three days will be added to the prescribed period. If service by other methods has proved unsuccessful, service will be deemed complete upon publication of the notice or document in a newspaper of general circulation in the District.

Rule 1.8 Severability.

If a provision contained in these Temporary Rules is for any reason held to be invalid, illegal, or unenforceable in any respect, the invalidity, illegality, or unenforceability does not affect any other rules or provisions of these Temporary Rules, and these Temporary Rules shall be construed as if the invalid, illegal, or unenforceable provision had never been contained in these rules.

Rule 1.9 Regulatory Compliance; Other Governmental Entities.

All registrants of the District shall comply with all applicable rules and regulations of the District and of all other governmental entities. If the District Rules and regulations are more stringent than those of other governmental entities, the District Rules and regulations are applicable.

Rule 1.10 Computing Time.

In computing any period of time prescribed or allowed by these Rules, order of the Board, or any applicable statute, the day of the act, event, or default from which the designated period of time begins to run is not included, but the last day of the period so computed is included, unless it is a Saturday, Sunday, or legal holiday, in which event the period runs until the end of the next day which is neither a Saturday, Sunday, or legal holiday.

Rule 1.11 Time Limits.

Applications, requests, or other papers or documents required or allowed to be filed under these Rules or by law must be received for filing by the District within the time limit for filing, if any. The date of receipt, not the date of posting, is determinative of the time of filing. Time periods set forth in these rules shall be measured by calendar days, unless otherwise specified.

Rule 1.12 Notification to Well Owners.

As soon as practicable after the effective date, the District shall publish notice to inform the well owners of the management authority of the District and the well owners' duties and responsibilities under these Rules. This provision does not apply to the adoption of amendments to these Rules.

Rule 1.13 Amending of Rules.

The Board may, following notice and hearing, amend or repeal these rules or adopt new rules from time to time.

SECTION 2.
APPLICABILITY OF REGULATORY REQUIREMENTS; EXEMPTIONS

Rule 2.1 Wells Exempt from Fee Payment, Metering, and Reporting Requirements of These Temporary Rules.

- (a) The requirements of these Temporary Rules relating to the payment of fees under Section 6, the requirement to install and maintain a meter under Section 7, and the requirement to report to the District the amount of water produced from a well under Section 3 do not apply to the following types of wells:
1. All wells, existing or new, of any size or capacity that are used solely for domestic use, livestock use, poultry use, or agricultural irrigation use;
 2. An existing well or new well that is not a public water supply well and:
 - (A) does not have the capacity, as equipped, to produce more than 40 gallons per minute, except as provided by Subsection (b) of this rule; and
 - (B) is used in whole or in part for any purpose of use other than solely for domestic, livestock, poultry, or agricultural irrigation use; or
 3. Leachate wells and monitoring wells.
- (b) For purposes of determining whether the exemption set forth under Subsection (a)(2) applies, the capacity of a well that is part of a well system shall be determined by taking the sum of the capacities of each of the individual wells, as equipped, in the system. If the total sum of the capacities is greater than 40 gallons per minute, the well system and the individual wells that are part of it are not exempt from the fee payment, metering, and reporting requirements of these rules.
- (c) A well exempted under Subsection (a) will lose its exempt status if the well is subsequently used for a purpose or in a manner that is not exempt under Subsection (a).
- (d) A well exempted under Subsection (a)(2) will lose its exempt status if, while the well was registered as an exempt well, the District determines that the well had the capacity, as equipped, to produce more than 40 gallons per minute. Such wells are subject to the fee payment, metering, reporting, and other requirements of these Temporary Rules, and may be subject to enforcement under Section 8.
- (e) The owner of a new well that is exempt under this Rule shall nonetheless register the well with the District, as required under Section 3.

Rule 2.2 Wells Subject to Fee Payment, Metering, and Reporting Requirements of These Temporary Rules

All wells not described as exempt under Rule 2.1 are subject to the fee payment, metering, reporting, and other requirements of these Temporary Rules, except as provided under Rule 2.3. Such wells include all public water supply wells and all wells or well systems with a capacity, as equipped, to produce more than 40 gallons per minute that are used in whole or in part for any purpose of use other than solely for domestic use, livestock use, poultry use, or agricultural irrigation use.

Rule 2.3 Limited Exemption for Certain Hydrocarbon-Related Water Wells

The requirements of these Temporary Rules relating to production limitations under Section 5 and to the payment of water use fees under Section 6 do not apply to a well exempt from permitting under Section 36.117(b)(2) or (b)(3), Water Code, which relate to water wells used in certain oil and gas drilling or exploration operations and surface coal mining. However, such a well shall be subject to the other requirements of these rules, including without limitation the well registration, drilling records, metering, water production reporting, and new well registration fee and deposit provisions of these rules, unless such a well is exempted from certain of those requirements because its limited production capacity qualifies for an exemption under Rule 2.1.

Rule 2.4 Applicability of Rules in Existing Groundwater Regulatory Authority

The District may not regulate the drilling or equipping of, or the completion, operation, or production of, a well located within the District and within the boundaries of an Existing Groundwater Regulatory Authority, as defined under Rule 1.1. However, such a well located within the District and within the boundaries of an Existing Groundwater Regulatory Authority that is not exempt under Rule 2.1 shall be subject to the Water Use Fee payment requirements of these Rules. The District and an Existing Groundwater Regulatory Authority shall cooperate to provide for the sharing of information and the registration of such wells and payment of Water Use Fees to the District in a manner that accomplishes the intent and purposes of these Rules and the District Act but is not unduly burdensome on the owners of such wells, who may have already drilled, registered, or permitted their wells in accordance with the water well rules of the Existing Groundwater Regulatory Authority or who may do so in the future.

SECTION 3.

REGISTRATIONS, RECORDS, REPORTS, AND LOGS; PERMIT NOT REQUIRED

Rule 3.1 Purpose and Policy

The accurate and timely reporting to the District of activities governed by these Rules is a critical component to the District's ability to effectively and prudently manage the groundwater resources that it has been charged by law with regulating. The purpose of Section 3 is to require the submission, by the appropriate person or persons, of complete, accurate, and timely registrations, records, reports, and logs as required throughout the District Rules. Because of the important role that accurate and timely reporting plays in the District's understanding of past,

current and anticipated groundwater conditions within the District, the failure to comply with these rules may result in the assessment of additional fees, civil penalties, or other enforcement action by the District, as specifically set forth under Section 8.

Rule 3.2 Permit Not Required Under Temporary Rules.

No permit of any kind is required under these Temporary Rules. Notwithstanding Chapter 36, Water Code, a permit is not required under these Temporary Rules to drill, equip, operate, or complete a well, produce water from a well, or to substantially alter the size or capacity of a well. Permitting requirements will be developed and adopted by the District in the future after it has had a sufficient opportunity to develop a management plan and carefully consider various regulatory approaches and how such approaches may impact landowners and other water users in the District while achieving proper management of the groundwater resources. Permitting rules will be adopted only after ample opportunity has been afforded the public to participate in the development of such rules.

Rule 3.3 Well Registration.

- (a) The following wells must be registered with the District:
 - 1. all new wells drilled on or after October 1, 2010, including new wells exempt under Rules 2.1 or 2.3;
 - 2. all existing wells that are not exempt under Rule 2.1.

- (b) A person seeking to register a well shall provide the District with the following information in the registration application on a form provided by the District:
 - 1. the name and mailing address of the registrant and the owner of the property, if different from the registrant, on which the well is or will be located;
 - 2. if the registrant is other than the owner of the property, documentation establishing the applicable authority to file the application for well registration, to serve as the registrant in lieu of the property owner, and to construct and operate a well for the proposed use;
 - 3. a statement of the nature and purpose of the existing or proposed use of water from the well;
 - 4. the location or proposed location of the well, identified as a specific point measured by latitudinal and longitudinal coordinates;
 - 5. the location or proposed location of the use of water from the well, if used or proposed to be used at a location other than the location of the well;

6. the production capacity or proposed production capacity of the well, as equipped, in gallons per minute;
 7. a water well closure plan or a declaration that the applicant will comply with well plugging guidelines and report closure to the District;
 8. a statement that the water withdrawn from the well will be put to beneficial use at all times; and
 9. any other information deemed necessary by the Board.
- (c) The timely filing of an application for registration shall provide the owner of a well described under Subsection (a)(2) with evidence that a well existed before October 1, 2010, for purposes of grandfathering the well from the requirement to comply with any well location or spacing requirements of the District and any other entitlements that existing wells may receive under these Temporary Rules or under permanent rules adopted by the District. A well that is required to be registered under this Rule and that is not exempt under Rule 2.1 shall not be operated after October 1, 2010, without first complying with the metering provisions set forth under Section 7.
- (d) Once a registration is complete, which for new wells also includes receipt by the District of the well report required by Rule 3.7 and the well registration fee, the registration shall be perpetual in nature, subject to being amended or transferred and subject to enforcement for violations of these Rules.

Rule 3.4 Registration of Existing Non-Exempt Wells Required By October 1, 2010.

- (a) The owner of an existing well that is not exempt under Rule 2.1 must register the well with the District between the Effective Date, and October 1, 2010, and must install a meter on the well as set forth under Section 7 of these rules by October 1, 2010. Failure of the owner of such a well to timely register or install a meter on the well under this Rule shall subject the well owner to enforcement under these Rules.
- (b) Although not required under these Temporary Rules, the owner of an existing well exempt under Rule 2.1 may elect to register the well with the District to provide the owner with evidence that the well existed before October 1, 2010, for purposes of grandfathering the well from the requirement to comply with any well location or spacing requirements of the District and any other entitlements that existing wells may receive under these Temporary Rules or under permanent rules adopted by the District.

Rule 3.5 Registration of New Wells or Alterations to Existing Wells Required Prior to Drilling or Alteration.

- (a) An owner or well driller, or any other person legally authorized to act on their behalf, must submit and obtain approval of a registration application and submit a well registration fee under Rule 6.4 and a well report deposit under Rule 6.7 with the District before any new well, except leachate wells or monitoring wells, may be drilled, equipped, or completed, or before an existing well may be substantially altered with respect to size or capacity, beginning on or after October 1, 2010.
- (b) A registrant for a new well has 120 days from the date of approval of its application for well registration to drill and complete the new well, and must file the well report with the District within 60 days of completion. However, if the well is for a public water system, the registrant shall have 240 days to drill and complete the new well from the date of approval of its application for well registration, in order to allow time for Texas Commission on Environmental Quality (TCEQ) approval(s), and must file the well report within 60 days of well completion. Such a public water system registrant may apply for one extension of an additional 240 days or may resubmit an identical well registration without the need to pay an additional well registration fee.
- (c) If the well report is timely submitted to the District, the District shall return the well report deposit to the owner or well driller. In the event that the well report required under this rule and Rule 3.7 is not filed within the deadlines set forth under Subsection (b) of this rule, the driller or owner shall forfeit the well report deposit and shall be subject to enforcement by the District for violation of this rule.
- (d) Notwithstanding any other rule to the contrary, the owner and driller of a new well are jointly responsible for ensuring that a well registration required by this section is timely filed with the District and contains only information that is true and accurate. Each will be subject to enforcement action if a registration required by this section is not timely filed by either, or by any other person legally authorized to act on the behalf of either.

Rule 3.6 General Provisions Applicable to Registrations.

- (a) Registration applications may be submitted to the District in person, by mail, or by fax transfer, using the registration form provided by the District.
- (b) A determination of administrative completeness of a registration application shall be made by the General Manager within five business days after the date of receipt of an application for registration and receipt of the well registration fee. If an application is not administratively complete, the District shall request the applicant to complete the application. The application will expire if the applicant does not complete the application within 120 days of the date of the District's request. An application will be considered administratively complete and may be approved by the General Manager without notice or hearing if:

(1) it substantially complies with the requirements set forth under Rule 3.3(b), including providing all information required to be included in the application that may be obtained through reasonable diligence; and

(2) if it is a registration for a new well:

(A) includes the well report deposit and well registration fee; and

(B) proposes a well that complies with the location and well completion requirements of Section 4.

A person may appeal the General Manager's ruling by filing a written request for a hearing before the Board. The Board will hear the applicant's appeal at the next regular Board meeting. The General Manager may set the application for consideration by the Board at the next available Board meeting or hearing in lieu of approving or denying an application.

- (c) Upon approval or denial of an application, the General Manager shall inform the registrant in writing by regular mail of the approval or denial, as well as whether the well meets an exemption provided in Rule 2.1 or Rule 2.3 and whether it is subject to the metering, fee payment, or reporting requirements of these Rules.
- (d) An application pursuant to which a registration has been issued is incorporated in the registration, and the registration is valid contingent upon the accuracy of the information supplied in the registration application. A finding that false information has been supplied in the application may be grounds to refuse to approve the registration or to revoke or suspend the registration.
- (e) Submission of a registration application constitutes an acknowledgment by the registrant of receipt of the rules and regulations of the District and agreement that the registrant will comply with all rules and regulations of the District.
- (f) The District may amend any registration, in accordance with these Rules, to accomplish the purposes of the District Rules, management plan, the District Act, or Chapter 36, Texas Water Code.
- (g) If multiple wells have been aggregated under one registration and one or more wells under the registration will be transferred, the District will require separate registration applications from each new owner for the wells retained or obtained by that person.
- (h) No person shall operate or otherwise produce groundwater from a well required under this Section to be registered with the District before:
 - (1) timely submitting an accurate application for registration for new wells or existing wells not exempt under Rule 2.1 by October 1, 2010, or submitting an accurate

application to amend an existing registration as applicable, of the well to the District; and

- (2) obtaining approval from the District of the application for registration or amendment application, if such approval is required under these Rules.

Rule 3.7 Records of Drilling, Pump Installation and Alteration Activity, and Plugging

- (a) Each person who drills, deepens, completes or otherwise alters a well shall make, at the time of drilling, deepening, completing or otherwise altering the well, a legible and accurate well report recorded on forms prescribed by the District or by the Texas Department of Licensing and Regulation.
- (b) Each well report required by subsection (a) of this Rule shall contain:
 - (1) the name and physical address of the well owner;
 - (2) the well driller's state license number, business address and phone number;
 - (3) the location of the drilled, deepened, completed or otherwise altered well, including the physical address of the property on which the well will be located, as well as the coordinates of the wellhead location, as determined by a properly functioning and calibrated global positioning system (GPS) unit;
 - (4) the type of work being undertaken on the well;
 - (5) the type of use or proposed use of water from the well;
 - (6) the diameter of the well bore;
 - (7) the date that drilling was commenced and completed, along with a description of the depth, thickness, and character of each strata penetrated;
 - (8) the drilling method used;
 - (9) the borehole completion method performed on the well, including the depth, size and character of the casing installed;
 - (10) a description of the annular seals installed in the well;
 - (11) the surface completion method performed on the well;
 - (12) the location of water bearing strata, including the static level and the date the level was encountered, as well as the measured rate of any artesian flow encountered;

- (13) the type and depth of any packers installed;
 - (14) a description of the plugging methods used, if plugging a well;
 - (15) the type of pump installed on the well, including the horsepower rating of the pump, as assigned by the pump manufacturer;
 - (16) the type and results of any water test conducted on the well, including the yield, in gallons per minute, of the pump operated under optimal conditions in a pump test of the well; and
 - (17) a description of the water quality encountered in the well.
- (c) The person who drilled, deepened, completed or otherwise altered a well pursuant to this rule shall, within 60 days after the date the well is completed, file a well report described in Subsections (a) and (b) of this Rule with the District.
 - (d) Not later than the 30th day after the date a well is plugged, a driller, licensed pump installer, or well owner who plugs the well shall submit a plugging report to the District.
 - (e) The plugging report described in Subsection (d) must be in substantially similar form to the Texas Department of Licensing and Regulation Form a004WWD (Plugging Report) and shall include all information required therein.

Rule 3.8 Transfer of Well Ownership

- (a) Within 90 days after the date of a change in ownership of a new well exempt under Rule 2.1, the new well owner (transferee) shall notify the District in writing of the effective date of the change in ownership, the name, daytime telephone number, and mailing address of the transferee, along with any other contact or well-related information reasonably requested by the General Manager. The transferee may, in addition, be required to submit an application for registration of an existing well if a registration does not yet exist for the well.
- (b) Within 90 days after the date of a change in ownership of a well that is not exempt under District Rule 2.1 from the fee payment, metering, and reporting requirements of these rules, the new well owner (transferee) shall submit to the District, on a form provided by the District staff, a signed and sworn-to application for transfer of ownership.
- (c) If a registrant conveys by any lawful and legally enforceable means to another person the real property interests in one or more wells or a well system that is recognized in the registration so that the transferring party (the transferor) is no longer the “well owner” as defined herein, and if an application for change of ownership under subsection (b) has been approved by the District, the District shall recognize the person to whom such

interests were conveyed (the transferee) as the legal holder of the registration, subject to the conditions and limitations of these District Rules.

- (d) The burden of proof in any proceeding related to a question of well ownership or status as the legal holder of a registration issued by the District and the rights thereunder shall be on the person claiming such ownership or status. Notwithstanding anything to the contrary herein, any question of well ownership shall be determined pursuant to the laws of the State of Texas, regarding common law for real property rights in groundwater. Taking into consideration the very limited rights legislated to groundwater conservation districts, and nothing shall be construed in these Rules to effectively remove the real property right in water beneath the landowner, as well, ownership shall not be confused with water ownership under this provision, recognizing the two may be different.
- (e) Notwithstanding any provision of this Rule to the contrary, no application made pursuant to Subsection (b) of this Rule shall be granted by the District unless all outstanding fees, penalties, and compliance matters have first been fully and finally paid or otherwise resolved by the transferring party (transferor) for all wells included in the application or existing registration, and each well and registration made the subject of the application is otherwise in good standing with the District.
- (f) The new owner of a well that is the subject of a transfer described in this rule (transferee) may not operate or otherwise produce groundwater from the well after 90 days from the date of the change in ownership until the new owner has:
 - (1) submitted written notice to the District of the change in ownership, for wells described in subsection (a); or
 - (2) submitted to the District a completed application for transfer of ownership, for wells described in subsection (b).

A new owner of a well that intends to alter or use the well in a manner that would constitute a substantial change from the information in the existing registration or that would trigger the requirement to register the well under these Rules must also submit and obtain District approval of a registration application or registration amendment application, as applicable, prior to altering or operating the well in the new manner.

Rule 3.9 Amendment of Registration

A registrant shall file an application to amend an existing registration and obtain approval by the District of the application prior to engaging in any activity that would constitute a substantial change from the information in the existing registration. For purposes of this rule, a substantial change includes a change that would substantially alter the size or capacity of a pump or well, a change in the type of use of the water produced, the addition of a new well to be included in an already registered aggregate system, a change in location of a well or proposed well, a change of the location of use of the groundwater, or a change in ownership of a well. A registration

amendment is not required for maintenance or repair of a well if the maintenance or repair does not increase the designed production capabilities of the pump or pump systems in place as October 1, 2010.

Rule 3.10 Water Production Reports

- (a) Not later than March 1 and September 1 of each calendar year beginning in 2011, the owner of any well within the District that is not exempt under Rule 2.1 must submit, on a form provided by the District, a report containing the following:
 - (1) the name of the registrant;
 - (2) the well numbers of each registered well within the District owned or operated by the registrant;
 - (3) the total amount of groundwater produced by each well or well system during the immediately preceding reporting period;
 - (4) the total amount of groundwater produced by each well or well system during each month of the immediately preceding reporting period; and
 - (5) the purposes for which the water was used.
- (b) The report due March 1, 2011, shall report groundwater produced during the period of the immediately preceding October 1, 2010, to December 31, 2010. The report due September 1, 2011, shall report groundwater produced during the period of the immediately preceding January 1, 2011, to June 30, 2011. Beginning in 2012 and thereafter, the report due March 1 shall report groundwater produced during the period of the immediately preceding July 1 to December 31, and. the report due September 1 shall report groundwater produced during the period of the immediately preceding January 1 to June 30. To comply with this rule, the registrant of a well shall read each water meter associated with a well within 15 days before or after June 30th and within 15 days before or after December 31st each year and report the readings to the District on the form described in Subsection (a). Additionally, to comply with this rule, all applicable information required under Subsection (a) must be contained in the water production report filed with the District.
- (c) The report required by Subsection (a) must also include a true and correct copy of the meter log required by District Rule 7.6.
- (d) The first deadline to submit a report to the District under this Rule is:
 - (1) March 1, 2011, for existing wells not exempt under Rule 2.1 and for all new wells drilled on or after October 1, 2010, and prior to January 1, 2011; and

- (2) no later than the first September 1 or March 1 following the expiration of 65 days from the date the well was completed for new wells drilled after January 1, 2011.
- (e) Persons participating in the early fee payment incentive program under Rule 6.3 shall submit reports according to the timelines set forth under Rule 6.3 to the extent that the timelines under Rule 6.3 are in conflict with this rule.

Rule 3.11 Replacement Wells.

- (a) No person may replace an existing well without first having obtained authorization for such work from the District first and, if required, by TCEQ. Authorization for the construction of a replacement well may only be granted following the submission to the District of an application for registration of a replacement well, subject to the TCEQ exclusion herein.
- (b) Each application described in Subsection (a) shall include the information required under Rule 3.3(b), as well as any other information, fees, and deposits required by these rules for the registration of a new well. In addition, information submitted in the application must demonstrate to the satisfaction of the General Manager each of the following:
 - (1) the proposed location of the replacement well is within 50 feet of the location of the well being replaced;
 - (2) the replacement well and pump will not be larger in designed production capacity than the well and pump being replaced, unless the maximum designed production capacity is 40 gpm or less; and
 - (3) immediately upon commencing operation of the replacement well, the well owner will cease all production from the well being replaced and will begin efforts to plug the well being replaced, which plugging shall be completed within 90 days of commencing operation of the replacement well.
- (c) Except as required under Subsection (d), applications for registration of replacement wells submitted under this rule may be granted by the General Manager without notice or hearing. A person may appeal the General Manager's ruling by filing a written request for a hearing before the Board. The Board will hear the applicant's appeal at the next available regular Board meeting or hearing called for that purpose, as determined by the General Manager in his discretion
- (d) Notwithstanding Subsection (b)(1) of this Rule, the General Manager may authorize the drilling of a replacement well at a location that is beyond 50 feet of the location of the well being replaced if the applicant demonstrates to the satisfaction of the General Manager that water quality, sanitation, or other issues prevent the replacement well from

being located within 50 feet of the location of the well being replaced. Requests to locate a replacement well beyond 100 feet of the location of the well being replaced may be granted only by the Board.

SECTION 4.
SPACING AND LOCATION OF WELLS; WELL COMPLETION

Rule 4.1 Spacing and Location of Existing Wells.

Wells drilled prior to October 1, 2010, shall be drilled in accordance with state law in effect, if any, on the date such drilling commenced and are exempt from the spacing and location requirements of these rules to the extent that they were drilled lawfully.

Rule 4.2 Spacing and Location of New Wells.

- (a) All new wells must comply with the spacing and location requirements set forth under the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Part 4, Chapter 76, Texas Administrative Code, unless a written variance is granted by the Texas Department of Licensing and Regulation and a copy of the variance is forwarded to the District by the applicant or registrant, and must be drilled and located in compliance with applicable rules and regulations of other political subdivisions.
- (b) After authorization to drill a new well has been granted by the District, the well may only be drilled at a location that is within ten (10) yards (30 feet) of the location specified in the registration.
- (c) Replacement wells must be actually drilled and completed so that they are located no more than 50 feet from the well being replaced, unless otherwise authorized by Rule 3.11(d).
- (d) Compliance with the spacing and location requirements of these rules does not necessarily authorize a person to drill a well at a specified location in the District. Agencies or other political subdivisions of the State of Texas that are located in whole or in part within the boundaries of the District may impose additional requirements related to the drilling or completion of water wells.
- (e) The owner and driller of a well are jointly responsible for ensuring that the well is drilled at a location that strictly complies with the location requirements of Subsection (b). If the board determines that a well is drilled at a location that does not strictly comply with the location requirements of Subsection (b), the Board may, in addition to taking all other appropriate enforcement action, require the well to be permanently closed or authorize the institution of legal action to enjoin any continued drilling activity or the operation of the well.

Rule 4.3 Standards of Completion for All Wells

- (a) All wells must be completed in accordance with the well completion standards set forth under the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Part 4, Chapter 76, Texas Administrative Code, and under these Rules, and must be completed in compliance with applicable rules and regulations of other political subdivisions.
- (b) Water well drillers shall indicate the method of completion performed on the well report.
- (c) To prevent the commingling of water between the aquifers which can result in a loss of artesian (or static) head pressure or the degradation of water quality, each well penetrating more than one aquifer or subdivision thereof must be completed in a manner so as to prevent the commingling of groundwater between aquifers or between subdivisions of an aquifer if required by the Texas Water Well Drillers and Pump Installers Administrative Rules, Title 16, Part 4, Chapter 76, Texas Administrative Code. The driller shall indicate the method of completion used to prevent the commingling of water on the well report. The well driller may use any lawful method of completion calculated to prevent the commingling of groundwater.
- (d) In order to protect water quality, the integrity of the well, or loss of groundwater from the well, the District may impose additional well completion requirements on any well as determined necessary or appropriate by the Board.

SECTION 5.
REGULATION OF PRODUCTION; WASTE PROHIBITED

Rule 5.1 Temporary Production Limitations.

The maximum quantity of water that a person may withdraw after October 1, 2010, from a well that is not exempt under Rule 2.1 or Rule 2.3 is the amount of water the person produces and timely:

- (1) submits payment to the District for in accordance with the fee rate adopted by the District under Section 6; and
- (2) reports pumpage volumes to the District under Rule 3.10.

Rule 5.2 Regular Production Limitations.

In order to accomplish the purposes of Chapter 36, Texas Water Code, and the District Act, and to achieve the goals of the District Management Plan, the District may, after notice and hearing,

establish groundwater production limitations for all wells when it adopts permanent rules for the District.

Rule 5.3 Waste Prohibited.

No person shall engage in any conduct subject to the District's regulatory jurisdiction that constitutes waste, as that term is defined herein.

SECTION 6.
FEES AND PAYMENT OF FEES

Rule 6.1 Water Use Fees.

- (a) Beginning on October 1, 2010, a water use fee of three (3) cents per 1,000 gallons of groundwater produced shall be applied to the groundwater production of each well not exempt under Rule 2.1 or Rule 2.3.
- (b) Wells exempt under Rule 2.1 or Rule 2.3 shall be exempt from payment of water use fees. However, if exempt well status is withdrawn, the District may assess fees and penalties in accordance with the District Rules.
- (c) No later than 60 days prior to the end of the calendar year, beginning with calendar year 2010, the District shall send by regular mail to the owner or operator of each registered well that is required to pay the water use fee a reminder statement setting forth the water use fee rate applicable to the water produced in the ensuing year, setting forth deadlines for submission of fee payments and production reports of meter readings, and other information deemed appropriate by the District.

Rule 6.2 Payment of Water Use Fees; Deadlines

Fees for water produced between January 1st and June 30th each year are due to the District by September 1 of the same calendar year; fees for water produced between July 1st and December 31st each year are due to the District by March 1 of the following calendar year. On March 1, 2011, fees will only be due for water produced between October 1, 2010 and December 31, 2010. Fee payments shall be submitted in conjunction with the Water Production Reports and monthly logs.

Rule 6.3 Early Fee Payment Incentive.

- (a) A person required to pay the Water Use Fee may elect to make early payments in accordance with the provisions of this rule and receive a reduction in the payment amount due.

(b) Annual Pre-payment Option. A person who complies with the provisions of this subsection will be entitled to a discount of 10 percent off the total fees due for groundwater production in a calendar year, as specifically set forth herein.

(1) Calendar Year 2010: A well owner or operator may estimate their water use fee payment for estimated groundwater production for the October 1 to December 31, 2010, water use fee payment period and submit such estimate and water use fee payment to the District no later than October 1, 2010.

(2) Calendar Year 2011: A well owner or operator may estimate their water use fee payment for estimated groundwater production for all of calendar year 2011 and submit such estimate and water use fee payment to the District no later than March 1, 2011.

The water use fee rate applicable to the early payment under this Rule shall be a rate of 90% of the regular water use fee rate established by the Board for that calendar year. Within 15 days before or after the end of the period for which payment is submitted under this Rule, the person shall be required to take final water meter readings for the period and compare the difference in the estimated amount of water for which an early payment was submitted to the District and the actual amount of water produced during the period. If the person actually produced less water than the estimated amount and corresponding early payment submitted, the District shall provide a refund to the person within 60 days or credit the person's account with the District for the ensuing water use payment period, as set forth under Subsection (d) of this rule. If the person actually produced more water than the estimated amount and corresponding early payment submitted, the person shall submit payment for the difference to the District by March 1 of the ensuing calendar year at 100 percent of the regular water use fee rate only for that amount of water produced in excess of the early estimate submitted to the District. A person who participates in the annual pre-pay option under this subsection shall submit water production reports and monthly production records not later than March 1 of the ensuing calendar year.

(c) Notwithstanding Rule 3.4, a person who desires to participate in an early fee payment incentive must register the well with the District in accordance with Section 3 of these rules no later than the deadline under Subsection (b) for submission of the estimate and early fee payment.

(d) A person that participates in the Annual Pre-Pay Option under Subsection (b), actually produces less water than the estimate and payment submitted early, and that desires to have a refund issued rather than have the credit applied to the person's account for the following year must submit a written request for a refund no later than March 1 of the year following the year in which the groundwater was produced. The amount of the refund due from the District to the person must be equal to or greater than \$50.00, or the refund will not be granted and will instead be applied to the person's account for the ensuing year. The General Manager may rule on requests for water use fee refunds

without notice, hearing, or further action by the Board. An applicant may appeal the General Manager's ruling by filing a written request for a hearing before the Board. The Board will hear the applicant's appeal at the next available Board meeting.

Rule 6.4 Well Registration Fees

The owner of any new well for which drilling commences on or after October 1, 2010, shall submit payment to the District of a \$500 non-refundable well registration fee per well, which is due by the same deadline established under these rules for registration of the well. The well registration fee must be received by the District in order for the District to find a registration application administratively complete. The purpose of the well registration fee is to cover the administrative costs to the District associated with registering the well and administering the rules of the District related to the well. The amount of the well registration fee has been determined by the District to be less than the actual administrative costs to the District of registering the well and administering the rules of the District with respect to the well, even in light of anticipated revenues to be received from the Water Use Fee.

Rule 6.5 Failure to Make Fee Payments.

- (a) Payments not received within 30 days following the date that Water Use Fees are due and owing to the District will be subject to a late payment fee of the greater of the following:
 - (1) \$25.00; or
 - (2) ten percent (10 %) of the total amount of water use fees due and owing to the District.
- (b) Persons failing to remit all water use fees due and owing to the District within 60 days of the date such fees are due shall be subject to a civil penalty not to exceed three times the amount of the outstanding water use fees due and owing, in addition to the late fee penalty prescribed in Subsection (a) of this Rule, and may be subject to additional enforcement measures provided for by these Rules or by order of the Board.

Rule 6.6 Returned Check Fee.

The District may assess a fee not to exceed \$25 for checks returned to the District for insufficient funds, account closed, signature missing, or any other reason causing a check to be returned by the District's depository.

Rule 6.7 Well Report Deposit.

For all new wells and certain alterations of existing wells, as specifically described under Rule 3.5(a), the District shall assess a \$200 well report deposit per well to be held by the District as

part of the well registration procedures. The District shall return the deposit to the depositor if the completed well report is timely submitted to the District in accordance with these Rules. In the event the District does not timely receive the completed well report, or if rights granted within the registration are not timely used, the deposit shall become the property of the District.

Rule 6.8 Enforcement.

After a well is determined to be in violation of these rules for failure to make payment of water use fees on or before the 60th day following the date such fees are due pursuant to Rule 6.2, all enforcement mechanisms provided by law and these Rules shall be available to prevent unauthorized use of the well and may be initiated by the General Manager without further authorization from the Board.

SECTION 7.
METERING

Rule 7.1 Water Meter Required.

- (a) Except as provided in Rule 7.2, the owner of a well located in the District and not exempt under Rule 2.1 shall equip the well with a flow measurement device meeting the specifications of these Rules and shall operate the meter on the well to measure the flow rate and cumulative amount of groundwater withdrawn from the well. All meters that are existing at the time of the Effective Date of these rules, and at a minimum have the ability to measure the cumulative amount of groundwater withdrawn from the well, shall be considered existing and will not have to be replaced with meters that can also measure the flow rate, provided that the meter meets all other requirements herein. Except as provided in Rule 7.2, the owner of a new or existing well not exempt under Rule 2.1 that is located in the District shall install a meter on the well prior to producing groundwater from the well after October 1, 2010.
- (b) A mechanically driven, totalizing water meter is the only type of meter that may be installed on a well registered with the District unless an approval for another type of meter is applied for and granted by the District. The totalizer must not be resettable by the registrant and must be capable of a maximum reading greater than the maximum expected annual pumpage. Battery operated registers must have a minimum five-year life expectancy and must be permanently hermetically sealed. Battery operated registers must visibly display the expiration date of the battery. All meters must meet the requirements for registration accuracy set forth in the American Water Works Association standards for cold-water meters as those standards existed on the date of adoption of these Rules.
- (c) The water meter must be installed according to the manufacturer's published specifications in effect at the time of the meter installation, or the meter's accuracy must

be verified by the registrant in accordance with Rule 7.4. If no specifications are published, there must be a minimum length of five pipe diameters of straight pipe upstream of the water meter and one pipe diameter of straight pipe downstream of the water meter. These lengths of straight pipe must contain no check valves, tees, gate valves, back flow preventers, blow-off valves, or any other fixture other than those flanges or welds necessary to connect the straight pipe to the meter. In addition, the pipe must be completely full of water throughout the region. All installed meters must measure only groundwater.

- (d) Each meter shall be installed, operated, maintained, and repaired in accordance with the manufacturer's standards, instructions, or recommendations, and shall be calibrated to ensure an accuracy reading range of 95% to 105% of actual flow.
- (e) The owner of a well is responsible for the purchase, installation, operation, maintenance, and repair of the meter associated with the well.
- (f) Bypasses are prohibited unless they are also metered.

Rule 7.2 Water Meter Exemption.

Wells exempt under Rule 2.1 shall be exempt from the requirement to obtain a water meter under Rule 7.1.

Rule 7.3 Metering Aggregate Withdrawal.

Where wells are part of an aggregate system, one or more water meters may be used for the aggregate well system if the water meter or meters are installed so as to measure the groundwater production from all wells included in the system. The provisions of Rule 7.1 apply to meters measuring aggregate pumpage.

Rule 7.4 Accuracy Verification.

- (a) **Meter Accuracy to be Tested:** The General Manager may require the registrant, at the registrant's expense, to test the accuracy of a water meter and submit a certificate of the test results. The certificate shall be on a form provided by the District. The General Manager may further require that such test be performed by a third party qualified to perform such tests. The third party must be approved by the General Manager prior to the test. Except as otherwise provided herein, certification tests will be required no more than once every three years for the same meter. If the test results indicate that the water meter is registering an accuracy reading outside the range of 95% to 105% of the actual flow, then appropriate steps shall be taken by the registrant to repair or replace the water meter within 90 calendar days from the date of the test. The District, at its own expense, may undertake random tests and other investigations at any time for the purpose of verifying water meter readings. If the District's tests or investigations reveal that a water

meter is not registering within the accuracy range of 95% to 105% of the actual flow, or is not properly recording the total flow of groundwater withdrawn from the well or wells, the registrant shall reimburse the District for the cost of those tests and investigations within 90 calendar days from the date of the tests or investigations, and the registrant shall take appropriate steps to bring the meter or meters into compliance with these Rules within 90 calendar days from the date of the tests or investigations. If a water meter or related piping or equipment is tampered with or damaged so that the measurement of accuracy is impaired, the District may require the registrant, at the registrant's expense, to take appropriate steps to remedy the problem and to retest the water meter within 90 calendar days from the date the problem is discovered and reported to the registrant.

- (b) **Meter Testing and Calibration Equipment:** Only equipment capable of accuracy results of plus or minus two percent of actual flow may be used to calibrate or test meters.
- (c) **Calibration of Testing Equipment:** All approved testing equipment must be calibrated every two years by an independent testing laboratory or company capable of accuracy verification. A copy of the accuracy verification must be presented to the District before any further tests may be performed using that equipment.

Rule 7.5 Removal of Meter for Repairs.

A water meter may be removed for repairs and the well remain operational provided that the District is notified prior to removal and the repairs are completed in a timely manner. The readings on the meter must be recorded immediately prior to removal and at the time of reinstallation. The record of pumpage must include an estimate of the amount of groundwater withdrawn during the period the meter was not installed and operating.

Rule 7.6 Water Meter Readings.

The registrant of a well not exempt under Rule 2.1 must read each water meter associated with the well and record the meter readings and the actual amount of pumpage in a log at least monthly. The logs containing the recordings shall be available for inspection by the District at reasonable business hours. Copies of the logs must be included with the Water Production Report required by District Rule 3.10, along with fee payments as set forth under Section 6. Except as otherwise provided under Rule 6.3 for early payment incentive participants, the registrant of a well shall read each water meter associated with a well within 15 days before or after June 30th and within 15 days before or after December 31st each year, as applicable to the respective immediately preceding semi-annual reporting period, and report the readings to the District on a form provided by the District along with copies of the monthly logs and payment of all Water Use Fees by the deadlines set forth for fee payment under Rule 6.2.

Rule 7.7 Installation of Meters.

A meter required to be installed under these Rules shall be installed before producing water from the well on or after October 1, 2010.

Rule 7.8 Enforcement.

It is a major violation of these Rules to fail to meter a well and report meter readings in accordance with this Section. After a well is determined to be in violation of these rules for failure to meter or maintain and report meter readings, all enforcement mechanisms provided by law and these Rules shall be available to prevent unauthorized use of the well and may be initiated by the General Manager without further authorization from the Board.

SECTION 8.
INSPECTION AND ENFORCEMENT OF RULES

Rule 8.1 Purpose and Policy.

The District's ability to effectively and efficiently manage the limited groundwater resources within its boundaries depends entirely upon the adherence to the rules promulgated by the Board to carry out the District's purposes. Those purposes include providing for the conservation, preservation, protection and recharge of the groundwater resources within the District, to protect against subsidence, degradation of water quality, and to prevent waste of those resources. Without the ability to enforce these rules in a fair, effective manner, it would not be possible to accomplish the District's express groundwater management purposes. The enforcement rules and procedures that follow are consistent with the responsibilities delegated to it by the Texas Legislature through the District Act, and through Chapter 36 of the Texas Water Code.

Rule 8.2 Rules Enforcement.

- (a) If it appears that a person or entity has violated, is violating, or is threatening to violate any provision of the District Rules, the Board may institute and conduct a suit in a court of competent jurisdiction in the name of the District for injunctive relief, recovery of a civil penalty in an amount set by District Rule per violation, both injunctive relief and a civil penalty, or any other appropriate remedy. Each day of a continuing violation constitutes a separate violation.
- (b) Unless otherwise provided in these rules, the penalty for a violation of any District rule shall be either:
 - (1) \$10,000.00 per violation; or
 - (2) a lesser amount, based on the severity of the violation, as set forth in the Enforcement Policy and Civil Penalty Schedule under Rule 8.7.

- (c) A penalty under this section is in addition to any other penalty provided by law and may be enforced by filing a complaint in a court of competent jurisdiction in the county in which the District's principal office or meeting place is located.
- (d) If the District prevails in a suit to enforce its Rules, the District may seek, in the same action, recovery of attorney's fees, costs for expert witnesses, and other costs incurred by the District before the court. The amount of attorney's fees awarded by a court under this Rule shall be fixed by the court.

Rule 8.3 Failure to Report Pumpage

The accurate reporting and timely submission of pumpage volumes is necessary for the proper management of water resources in the District. Failure of a well owner required by these Temporary Rules to submit complete, accurate, and timely pumpage reports may result in:

- (a) the assessment of any fees or penalties adopted under Rule 8.2 for meter reading and inspection as a result of District inspections to obtain current and accurate pumpage volumes; and
- (b) additional enforcement measures provided by these Rules or by order of the Board.

Rule 8.4 District Inspections.

No person shall unreasonably interfere with the District's efforts to conduct inspections or otherwise comply with the requirements, obligations, and authority provided in Section 36.123 of the Texas Water Code.

Rule 8.5 Notices of Violation.

Whenever the District determines that any person has violated or is violating any provision of the District's Rules, including the terms of any rule or order issued by the District, it may use any of the following means of notifying the person or persons of the violation:

- (a) **Informal Notice:** The officers, staff or agents of the District acting on behalf of the District or the Board may inform the person of the violation by telephone by speaking or attempting to speak to the appropriate person to explain the violation and the Enforcement Policy and Civil Penalty Schedule referenced in Rule 8.7 herein and the steps necessary to satisfactorily remedy the violation. The information received by the District through this informal notice concerning the violation will be documented, along with the date and time of the call, and will be kept on file with the District. Nothing in this subsection shall limit the authority of the District to take action, including emergency actions or any other enforcement action, without first providing notice under this subsection.

- (b) Notice of Violation: The District may inform the person of the violation through a written notice of violation issued pursuant to this rule. Each notice of violation issued hereunder shall explain the basis of the violation, identify the rule or order that has been violated or is being violated, and list specific required actions that must be satisfactorily completed—which may include the payment of applicable civil penalties—to address each violation raised in the notice as well as the timetable to complete any remedial work or enforce the penalty. Notices of violation issued hereunder shall be tendered by a delivery method that complies with District Rule 1.7. Nothing in this rule subsection shall limit the authority of the District to take action, including emergency actions or any other enforcement action, without first issuing a notice of violation.
- (c) Compliance Meeting: The District may hold a meeting with any person whom the District believes to have violated, or to be violating, a District Rule or District order to discuss each such violation and the steps necessary to satisfactorily remedy each such violation. The information received in any meeting conducted pursuant to this rule subsection concerning the violation will be documented, along with the date and time of the meeting, and will be kept on file with the District. Nothing in this rule subsection shall limit the authority of the District to take action, including emergency actions or any other enforcement action, without first conducting a meeting under this subsection.

Rule 8.6 Show Cause Hearing.

- (a) Upon recommendation of the General Manager to the Board or upon the Board's own motion, the Board may order any person that it believes has violated or is violating any provision of the District's Rules a District order to appear before the Board at a public meeting called for such purpose and show cause why an enforcement action, including the initiation of a suit in a court of competent jurisdiction, should not be pursued by the District against the person or persons made the subject of the show cause hearing.
- (b) No show cause hearing under subsection (a) of this Rule may be held unless the District first serves, on each person to be made the subject of the hearing, written notice not less than 20 days prior to the date of the hearing. Such notice shall include the following:
 - 1. the time and place for the hearing;
 - 2. the basis of each asserted violation; and
 - 3. the rule or order that the District believes has been violated or is being violated; and
 - 4. a request that the person cited duly appear and show cause why enforcement action should not be pursued.

- (c) The District may pursue immediate enforcement action against the person cited to appear in any show cause order issued by the District where the person so cited fails to appear and show cause why an enforcement action should not be pursued.
- (d) Nothing in this rule shall limit the authority of the District to take action, including emergency actions or any other enforcement action, against a person at any time regardless of whether the District holds a hearing under this Rule.

Rule 8.7 Enforcement Policy and Civil Penalty Schedule.

(a) General Guidelines.

When the General Manager discovers a violation of the District Rules that either (1) constitutes a Major Violation, or (2) constitutes a Minor Violation that the General Manager is unable to resolve within 60 days of discovering the Minor Violation, the General Manager shall bring the Major Violation or the unresolved Minor Violation and the pertinent facts surrounding it to the attention of the Board. Violations related to water well construction and completion requirements shall also be brought to the attention of the Board.

The General Manager shall recommend to the Board of Directors an appropriate settlement offer to settle the violation in lieu of litigation based upon the Civil Penalty Schedule set forth below. The Board may instruct the General Manager to tender an offer to settle the violation or to institute a civil suit in the appropriate court to seek civil penalties, injunctive relief, and costs of court and expert witnesses, damages, and attorneys' fees.

(b) Minor Violations.

The following acts each constitute a minor violation:

1. Failure to timely file a registration on a new well that qualifies for an exemption under Rule 2.1.
2. Failure to conduct a meter reading within the required period.
3. Failure to timely notify District regarding change of ownership.
4. Failure to timely file a Well Report.
5. Failure to timely submit required documentation reflecting alterations or increased production.
6. Operating a meter that is not accurately calibrated.

CIVIL PENALTY SCHEDULE FOR MINOR VIOLATIONS

First Violation:	\$50.00
Second Violation:	\$100.00
Third Violation:	Major Violation

A second violation shall be any minor violation within 3 years of the first minor violation. A third violation shall be any minor violation following the second minor violation within 5 years of the first minor violation. Each day of a continuing violation constitutes a separate violation.

(c) Major Violations.

The following acts each constitute a major violation:

1. Failure to register a well where mandated by rules, including drilling, equipping, completing, altering, or operating a well without a compliant and approved registration.
2. Failure to timely meter a well when required.
3. Drilling a well in violation of spacing or location requirements.*
4. Failure to close or cap an open or uncovered well.
5. Failure to submit Water Use Fees within 60 days of the date the fees are due.**
6. Committing waste.

CIVIL PENALTY SCHEDULE FOR MAJOR VIOLATIONS

First Violation: \$250.00

Second Violation: \$500.00

Third Violation: Civil Suit for injunction and damages

A second violation shall be any major violation within 3 years of the first major violation of the same level. A third violation shall be any major violation following the second major violation within 5 years of the first major violation. Each day of a continuing violation constitutes a separate violation.

* In addition to the applicable penalty provided for in the Civil Penalty Schedule for Major Violations, persons who drill a well in violation of applicable spacing requirements may be required to plug the well.

** In addition to the applicable penalty provided for in the Civil Penalty Schedule for Major Violations, persons who do not submit all Water Use Fees due and owing within 60 days of the date the fees are due will be assessed a civil penalty equal to three times the total amount of outstanding Water Use Fees that are due and owing.

(d) Water Well Construction and Completion Requirements.

Failure to use approved construction materials: \$250 + total costs of remediation

Failure to properly cement annular space: \$500 + total costs of remediation

In addition to the civil penalties provided for in this schedule, persons who drill a well in violation of applicable completion requirements may be required to recomplete or reconstruct the well in accordance with the District's rules, or may be ordered to plug the well.

(e) Other Violations of District Rules Not Specifically Listed Herein.

Any violation of a District Rule not specifically set forth herein shall be presented to the Board of Directors for a determination of whether the violation is Minor or Major, based upon the

severity of the violation and the particular facts and issues involved, whereupon the procedures and the appropriate civil penalty amount set forth herein for Minor and Major Violations shall apply to the violation.

SECTION 9.
OTHER DISTRICT MANAGEMENT ACTIONS AND DUTIES

Rule 9.1 District Management Plan.

Following notice and hearing, the District shall adopt a comprehensive Management Plan. The District Management Plan shall specify the acts and procedures and performance and avoidance measures necessary to prevent waste, the reduction of artesian pressure, or draw-down of the water table. The District shall use the Rules to implement the Management Plan. The Board must review the Management Plan at least every five years. If the Board considers a new Management Plan necessary or desirable based on evidence presented at a hearing, a new Management Plan will be developed and adopted. A Management Plan, once adopted, remains in effect until the subsequent adoption of another Management Plan.

SECTION 10.
EFFECTIVE DATE

Rule 10.1. Effective Date.

These Rules take effect on March 11, 2010, which was the date of their original adoption. An amendment to these Rules takes effect on the date of its original adoption. It is the District's intention that the rules and amendments thereto be applied retroactively to activities involving the production and use of groundwater resources located in the District, as specifically set forth in these Rules.