

Mr. Kevin Ward
Executive Administrator
Texas Water Development Board
1700 N. Congress
PO Box 13231
Austin, Texas 78711-3231

Dear Mr. Ward,

The Live Oak Underground Water Conservation District (LOUWCD) is pleased to submit to the Texas Water Development Board (TWDB) a copy of our amended and adopted Management Plan in accordance with chapter 36.1073. The Live Oak Underground Water Conservation District Management Plan (LOUWCDMP) was adopted by the LOUWCD Board of Directors at their quarterly meeting on June 11, 1998, by unanimous consent. In addition, a certified copy of the LOUWCD Board of Directors resolution adopting the plan is also attached. This plan was revised at the regular meeting of the LOUWCD September 27, 2010, by unanimous vote of all directors.

The LOUWCD, established in 1991, has historically had an excellent working relationship with the TWDB and it is our hope that we can count on your support as we implement the enclosed plan, it is the intent of our Board of Directors that we will begin implementation of this plan immediately to facilitate the success of our efforts.

The LOUWCDMP was developed during open meetings of the Board of Directors in accordance with all notice and hearing requirements stated in the District's procedures. Documentation that notice and hearing requirements were followed is presented in a separate attachment.

During preparation of the LOUWCD Management Plan, (LOUWCD MP) all planning efforts were coordinated with the Nueces River Authority, as mandated by 36.1071 (a) and TAC 356.6(a)(4). Documentation of this coordinated effort is included in the packet for your review.

The rules of LOUWCD are available at our website which is lowcd.org. The LOUWCDMP will be in force for 5 years from the date of approval. If there is any other documentation we can provide to the TWDB that will ensure the prompt approval of the Live Oak Underground Water Conservation District Management Plan, please do not hesitate to call me or my staff. I look forward to working with you and your staff throughout the process.
Sincerely,

Scott Bledsoe III, President

DISTRICT MISSION

The Live Oak Underground Water Conservation District will strive to develop, promote, and implement water conservation, augmentation, and management strategies to protect water resources for the benefit of the citizens, economy, and environment of the district.

TIME PERIOD FOR THIS PLAN

This plan becomes effective upon approval by the Texas Water Development Board and remains in effect until a revised plan is approved or five years, whichever is earlier.

STATEMENT OF GUIDING PRINCIPLES

The district recognizes that the groundwater resources of the region are of vital importance. The preservation of this most valuable resource can be managed in a prudent and cost effective manner through regulation and permitting. This management document is intended as a tool to focus the thoughts and actions of those given the responsibility for the execution of district activities.

General Description

The District was created by the citizens of Live Oak County through election, November, 1989. The current Board of Directors are Scott Bledsoe III - Chairman, Mark Katzfey - Vice-Chairman, Bobby Hinnant, Edward Pawlik, and C.F. Horton, Live Oak Underground Water Conservation District (LOUWCD) has the same areal extent as that of Live Oak County. The county has a vibrant economy dominated by agriculture and petroleum. The agriculture income is derived primarily from beef cattle production, wheat, corn, sorghum, and cotton, with some sheep and goat ranching.

Location and Extent

Live Oak County, consisting of 1,072 square miles, is located in South Texas. The county is bounded on the east by Bee, San Patricio, and Karnes counties, on the north by Atascosa county, on the west by McMullen County, and on the south by Jim Wells and Duval County. George West, which is centrally located in the county, is the county seat. Three Rivers, the only other municipality in the county, is located in the northern portion of the county.

Topography , Drainage and Groundwater Resources of Live Oak County

Live Oak County is on the Gulf Coastal Plain in southern Texas. Most the 1,072 square miles of the county are devoted to farming and ranching which provide the principal income for the 9,000 inhabitants. The production of oil is also an important industry.

The principal water-bearing formations underlying the county are the Carrizo sand, Oakville sandstone, Lagarto clay, and Goliad sand, and range in age from Eocene to Pliocene. The formations dip toward the coast at rates ranging from less than 20 to about 140 feet to the mile.

About 2,150,000 gallons per day of ground water was withdrawn in 1957 from approximately 1,000 wells in the county. Some irrigation, municipal, and stock supplies were obtained from surface-water sources. In Live Oak County the water-bearing sands above a depth of 2,000 feet contain approximately 20 million acre-feet of fresh and slightly saline water. Even though it may be impractical to recover much of the stored water, the rate of withdrawal could be increased several times more than the 1957 rate without appreciably depleting the water available from storage for many decades. A large but unestimated amount of fresh to slightly saline water occurs in the Carrizo sand in the northern and northwestern parts of the county at depths as much as 6,000 feet. Most of the water in the Carrizo sand in Live Oak County is more than 4,000 feet below land surface and therefore is too deeply buried to be economically developed for most uses.

Most of the ground water in Live Oak County is substandard in quality for municipal, industrial, and irrigation uses. However, because better water is not available in most areas in the county, substandard water has been used successfully by users of all three categories. Generally the Goliad sand contains water of better quality than that in any formation except the Carrizo sand. In favorable areas properly constructed wells in the Carrizo, Oakville, Lagarto, and Goliad may yield 1,000 gallons per minute or more. Yields from wells tapping the other water-bearing formations generally are small and the water commonly is suitable only for stock.

Most of Live Oak County is rolling to moderately hilly, although some areas are nearly flat. The altitude ranges from about 460 feet in the southwestern part of the county to about 90 feet near Lake Corpus Christi. The county is drained by the Nueces River and its tributaries, the Frio and Atascosa Rivers, with the exception of a small, elongated area near the Bee County line which is drained by tributaries of the Aransas River.

The water-bearing formations in Live Oak County are continually recharged by the infiltration of a small part of the precipitation, which falls on the more permeable strata. However, most of the precipitation that falls in the county runs off in streams, evaporates, or is transpired by plants. The remaining water, probably less than five percent, may reach the zone of saturation where it moves slowly toward an area of discharge such as a well, natural outlet, or, under artesian pressure, it may seep or percolate slowly upward into overlying beds. Recharge could be enhanced by several methods: brush control, additional precipitation, and additional tanks to catch runoff from excessive precipitation.

Surface Water Resource of Live Oak County

There are two surface impoundments used to supply water other than for livestock consumption, Choke Canyon and Lake Corpus Christi. The average annual supply from these impoundments is 241,000 acre-feet, however, the calculated firm yield is 206,000 acre-feet. For planning calculations the impoundments will be assumed to supply 162,500 acre-feet per year by the year 2050. These figures came from the City of Corpus Christi. The owners and operators are the Nueces River Authority and the City of Corpus Christi within all reaches of the Nueces River in Live Oak County. The City of Corpus Christi is the major user of surface water in Live Oak County along with the City of Three Rivers and the petrochemical plant, Valero.

**2007 State Water Plan
Projected Surface Water Supplies
Live Oak County**

RWPG	Water User Group	County	River Basin	Source Name	2010	2020	2030	2040	2050	2060
N	Choke Canyon WS	Live Oak	Nueces	Corpus Christi - Choke Canyon Lake / Reservoir System	227	256	266	254	221	187
N	Irrigation	Live Oak	Nueces	Nueces River Combined Run-of-River Irrigation	200	200	200	200	200	200
N	Livestock	Live Oak	Nueces	Livestock Local Supply	416	416	416	416	416	416
N	Manufacturing	Live Oak	Nueces	Nueces River Run-of-River	800	800	800	800	800	800
N	Three Rivers	Live Oak	Nueces	Corpus Christi - Choke Canyon Lake / Reservoir System	3,118	3,087	3,076	3,089	3,125	3,162
N	Three Rivers	Live Oak	Nueces	Nueces River Run-of-River	700	700	700	700	700	700
Total Projected Surface Water Supplies (acre-feet per year) =					5,461	5,459	5,458	5,459	5,462	5,465

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

5/15/2009

Groundwater Use in Live Oak County

**Historical Groundwater Pumpage Summary
TWDB - Water Use Survey
Live Oak County
Unit: Acre Feet (ACFT)**

Year	Aquifer	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1980	GULF COAST	1,147	1,097	0	450	1,428	404	4,526
1984	GULF COAST	914	993	0	1,100	250	545	3,802
1985	GULF COAST	626	1,049	0	2,550	1,260	450	5,935
1986	GULF COAST	766	965	0	1,110	1,019	535	4,395

1987	GULF COAST	755	198	0	1,049	1,713	577	4,292
1988	GULF COAST	792	28	0	1,419	2,422	603	5,264
1989	GULF COAST	978	57	0	841	2,385	594	4,855
1990	GULF COAST	968	203	0	1,500	2,385	585	5,641
1991	GULF COAST	758	455	0	2,123	4,207	597	8,140
1992	GULF COAST	819	809	0	1,796	4,626	662	8,712
1993	GULF COAST	993	769	0	486	4,632	611	7,491
1994	GULF COAST	1,012	769	0	193	4,684	496	7,154
1995	GULF COAST	929	729	0	518	4,684	527	7,387
1996	GULF COAST	1,299	753	0	486	4,684	863	8,085
1997	GULF COAST	880	857	0	486	3,779	501	6,503
1998	GULF COAST	1,238	857	0	486	3,105	396	6,082
1999	GULF COAST	1,201	857	0	486	3,105	415	6,064
2000	GULF COAST	1,132	809	0	2,649	3,105	416	8,111
2001	GULF COAST	1,003	820	0	1,757	3,102	315	6,997
2002	GULF COAST	998	891	0	2,164	3,102	386	7,541
2003	GULF COAST	789	869	0	709	3,102	621	6,090

NOTE: All Pumpage reported in acre-feet

5/15/2009

Source: TWDB Water Use Survey Database (<http://www.twdb.state.tx.us/wushistorical/DesktopDefault.aspx?PageID=2>)

Historical Water Use Estimate Summary

TWDB - Water Use Survey

Live Oak County

Unit: Acre Feet (ACFT)

GW = groundwater; SW = surface water

Year	Source	Municipal	Manufacturing	Steam			Livestock	Total
				Electric	Irrigation	Mining		
1974	GW	541	0	0	1,724	61	961	3,287
	SW	328	728	0	433	0	104	1,593

	Total	869	728	0	2,157	61	1,065	4,880
198	GW	1,147	1,097	0	450	1,428	404	4,526
0	SW	658	39	0	55	0	399	1,151
	Total	1,805	1,136	0	505	1,428	803	5,677
198	GW	979	993	0	1,100	250	545	3,867
4	SW	399	504	0	433	0	545	1,881
	Total	1,378	1,497	0	1,533	250	1,090	5,748
198	GW	923	1,049	0	2,550	1,260	450	6,232
5	SW	393	1	0	991	0	450	1,835
	Total	1,316	1,050	0	3,541	1,260	900	8,067
198	GW	1,076	965	0	1,110	0	535	3,686
6	SW	422	69	0	390	0	535	1,416
	Total	1,498	1,034	0	1,500	0	1,070	5,102
198	GW	1,079	198	0	1,049	1,713	577	4,616
7	SW	418	709	0	368	0	577	2,072
	Total	1,497	907	0	1,417	1,713	1,154	6,688
198	GW	985	28	0	1,419	2,422	603	5,457
8	SW	397	840	0	498	0	603	2,338
	Total	1,382	868	0	1,917	2,422	1,206	7,795
198	GW	1,290	57	0	841	2,385	594	5,167
9	SW	511	822	0	1,018	0	594	2,945
	Total	1,801	879	0	1,859	2,385	1,188	8,112
199	GW	1,324	203	0	1,500	2,385	585	5,997
0	SW	472	740	0	1,833	0	585	3,630
	Total	1,796	943	0	3,333	2,385	1,170	9,627
199	GW	1,307	455	0	2,123	4,207	597	8,689
1	SW	520	731	0	210	0	597	2,058
	Total	1,827	1,186	0	2,333	4,207	1,194	10,747
199	GW	1,067	809	0	1,796	4,626	662	8,960
2	SW	473	528	0	537	0	662	2,200
	Total	1,540	1,337	0	2,333	4,626	1,324	11,160
199	GW	1,271	769	0	486	4,632	611	7,769
3	SW	529	652	0	548	0	611	2,340
	Total	1,800	1,421	0	1,034	4,632	1,222	10,109
199	GW	1,337	769	0	193	4,684	496	7,479
4	SW	653	652	0	890	0	496	2,691
	Total	1,990	1,421	0	1,083	4,684	992	10,170
199	GW	1,233	729	0	518	4,684	527	7,691
5	SW	515	780	0	585	0	527	2,407
	Total	1,748	1,509	0	1,103	4,684	1,054	10,098
199	GW	1,841	753	0	486	4,684	863	8,627
6	SW	480	821	0	548	0	863	2,712
	Total	2,321	1,574	0	1,034	4,684	1,726	11,339
199	GW	1,222	857	0	486	3,779	501	6,845
7	SW	320	913	0	548	0	501	2,282
	Total	1,542	1,770	0	1,034	3,779	1,002	9,127
199	GW	1,719	352	0	486	3,105	396	6,058
8	SW	377	852	0	548	0	396	2,173

	Total	2,096	1,204	0	1,034	3,105	792	8,231
199	GW	1,634	351	0	486	3,105	415	5,991
9	SW	369	852	0	548	0	415	2,184
	Total	2,003	1,203	0	1,034	3,105	830	8,175
200	GW	1,540	809	0	2,649	3,105	416	8,519
0	SW	496	958	0	890	0	416	2,760
	Total	2,036	1,767	0	3,539	3,105	832	11,279
200	GW	1,604	861	0	1,757	3,102	315	7,639
1	SW	420	918	0	586	0	315	2,239
	Total	2,024	1,779	0	2,343	3,102	630	9,878
200	GW	1,718	883	0	2,164	3,102	386	8,253
2	SW	450	941	0	721	0	386	2,498
	Total	2,168	1,824	0	2,885	3,102	772	10,751
200	GW	1,782	893	0	709	3,102	444	6,930
3	SW	467	952	0	1,326	0	444	3,189
	Total	2,249	1,845	0	2,035	3,102	888	10,119
200	GW	1,726	960	0	921	3,102	452	7,161
4	SW	452	1,022	0	0	0	452	1,926
	Total	2,178	1,982	0	921	3,102	904	9,087

Source: TWDB Water Use Survey Database

**2007 State Water Plan
Projected Water Management Strategies
Live Oak County**

R W P G	WUG	WUG County/ Source County	River Basin	Water Management Strategy	Source Name	2010	2020	2030	2040	2050	2060
N	County-Other	Live Oak/ Live Oak	Nueces	Gulf Coast Aquifer Supplies	Gulf Coast Aquifer	0	80	80	80	80	80
N	Irrigation	Live Oak/ Live Oak	Nueces	Gulf Coast Aquifer Supplies	Gulf Coast Aquifer	1,210	1,210	1,210	1,210	1,210	1,210
N	Irrigation	Live Oak/ Live Oak	Nueces	Irrigation Water Conservation	Conservation	17	52	103	169	248	342
N	Mining	Live Oak/ Live Oak	Nueces	Mining Water Conservation	Conservation	97	216	344	485	639	801
N	George West	Live Oak/ Live Oak	Nueces	Municipal Water Conservation	Conservation	5	14	25	33	45	57
N	Three Rivers	Live Oak/ Live Oak	Nueces	Municipal Water Conservation	Conservation	3	8	14	18	27	34
N	Manufact- uring	Live Oak/ Live Oak	Nueces	Voluntary Redistributio	Corpus Christi - Choke	337	483	559	615	657	764

				n	Canyon Lake/Reservoir System						
Total Projected Water Management Strategies (acre-feet per year) =						1,669	2,063	2,335	2,610	2,906	3,288

**2007 State Water Plan
Projected Water Needs
Live Oak County**

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

RWPG	WUG	County	River Basin	2010	2020	2030	2040	2050	2060
N	Choke Canyon WS	Live Oak	Nueces	9	5	2	1	2	4
N	County Other	Live Oak	Nueces	0	-32	-44	-14	0	0
N	El Oso WSC	Live Oak	Nueces	0	0	0	0	0	0
N	George West	Live Oak	Nueces	0	0	0	0	0	0
N	Irrigation	Live Oak	Nueces	-627	-569	-514	-464	-416	-373
N	Livestock	Live Oak	Nueces	0	0	0	0	0	0
N	Manufacturing	Live Oak	Nueces	-337	-483	-559	-615	-657	-764
N	McCoy WSC	Live Oak	Nueces	6	3	2	4	9	14
N	Mining	Live Oak	Nueces	-64	-478	-928	-1,234	-1,504	-1,755
N	Three Rivers	Live Oak	Nueces	3,353	3,289	3,271	3,304	3,381	3,463
Total Projected Water Needs (acre-feet per year) =				-1,028	-1,562	-2,045	-2,327	-2,577	-2,892
Source: Volume 3, 2007 State Water Planning Database									5/14/2009

Projected Demands for Water in Live Oak County

2007 State Water Plan
 Projected Water Demands
 Live Oak County

RWPG	Water User Group	County	River Basin	2010	2020	2030	2040	2050	2060
N	Choke Canyon WS	Live Oak	Nueces	397	425	435	421	384	346
N	County Other	Live Oak	Nueces	748	796	808	778	709	638
N	El Oso WSC	Live Oak	Nueces	206	220	223	215	196	176
N	George West	Live Oak	Nueces	703	754	767	738	675	608
N	Irrigation	Live Oak	Nueces	3,289	3,056	2,840	2,639	2,451	2,277
N	Livestock	Live Oak	Nueces	833	833	833	833	833	833
N	Manufacturing	Live Oak	Nueces	1,946	1,998	2,032	2,063	2,088	2,194
N	McCoy WSC	Live Oak	Nueces	54	57	58	56	51	46
N	Mining	Live Oak	Nueces	3,894	4,319	4,583	4,845	5,108	5,341
N	Three Rivers	Live Oak	Nueces	465	498	505	485	444	399
Total Projected Water Demands (acre-feet per year) =				12,535	12,956	13,084	13,073	12,939	12,858

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

5/15/2009

This management planning document is based upon the estimates provided by the Texas Water Development Board and will be used until alternatives are generated.

Groundwater Availability Modeling Information

This information came from the TWDB GAM run 10-010.

Carrizo-Wilcox Aquifer's summarized information required for the Live Oak Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year. All numbers are rounded to the nearest 1 acre-foot. Reported flow estimates include both fresh and brackish waters present in the aquifers.

Management Plan requirement	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Carrizo-Wilcox Aquifer	0
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Carrizo-Wilcox Aquifer	0
Estimated annual volume of flow into the district within each aquifer in the district	Carrizo-Wilcox Aquifer	1,609
Estimated annual volume of flow out of the district within each aquifer in the district	Carrizo-Wilcox Aquifer	1,554
Estimated net annual volume of flow between each aquifer in the district	Carrizo-Wilcox Aquifer to overlying Reklaw Confining Unit	70

Gulf Coast Aquifer's summarized information required for the Live Oak Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year. All numbers are rounded to the nearest 1 acre-foot. Reported flow estimates include both fresh and brackish waters present in the aquifers.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Gulf Coast Aquifer	5,490
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Gulf Coast Aquifer	10,383
Estimated annual volume of flow into the district within each aquifer in the district	Gulf Coast Aquifer	4,127
Estimated annual volume of flow out of the district within each aquifer in the district	Gulf Coast Aquifer	1,573
Estimated net annual volume of flow between each aquifer in the district	Not applicable	Not Applicable

Yegua-Jackson Aquifer's summarized information required for the Live Oak Underground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year. All numbers are rounded to the nearest 1 acre-foot. Reported flow estimates include both fresh and brackish waters present in the aquifers.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Yegua-Jackson Aquifer	618
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Yegua-Jackson Aquifer	859
Estimated annual volume of flow into the district within each aquifer in the district	Yegua-Jackson Aquifer	1,029
Estimated annual volume of flow out of the district within each aquifer in the district	Yegua-Jackson Aquifer	814
Estimated net annual volume of flow between each aquifer in the district	Not applicable	Not applicable

Projected Population from the RWPG N.

RWPG	WUG	2000	2010	2020	2030	2040	2050	2060
N	George West	2,524	2,816	3,061	3,155	3,079	2,831	2,548
N	Three Rivers	1,878	2,096	2,278	2,347	2,291	2,107	1,896
N	Choke Canyon WS	2,250	2,511	2,729	2,812	2,745	2,524	2,271
N	El Oso WSC	1,000	1,116	1,213	1,250	1,220	1,122	1,009
N	McCoy WSC	443	494	537	554	540	497	447
N	County-Other	4,214	4,702	5,111	5,268	5,143	4,727	4,253
Total Projected Population =		12,309	13,735	14,929	15,386	15,018	13,808	12,424

RWPG	WUG	River Basin	2000	2010	2020	2030	2040	2050
N	George West	Nueces	2,872	3,066	3,204	3,304	3,400	3,499
N	Three Rivers	Nueces	1,978	2,078	2,163	2,224	2,287	2,341
N	County-Other	Nueces	5,169	5,382	5,587	5,738	5,896	6,017
Total Projected Population =			10,019	10,526	10,954	11,266	11,583	11,857

Actions, Procedures, Performance and Avoidance for Plan Implementation

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

The District will adopt rules relating to the permitting of wells and the production of groundwater. The rules adopted by the District shall be pursuant to TWC Chapter 36 and the provisions of this plan. All rules will be adhered to and enforced. The promulgation and enforcement of the rules will be based on the best technical evidence available. The rules can be downloaded at lowcd.org under the tab "District Rules".

Methodology for Tracking the District's Progress in Achieving Management Goals

The District manager will prepare and present an annual report to the Board of Directors on District performance in regards to achieving management goals and objectives. The presentation of the report will occur during the last monthly Board meeting each fiscal year, beginning December 31, 2005. The report will include the number of instances in which each of the activities specified in the District's management objectives was engaged in during the fiscal year. The Board will maintain the report on file, for public inspection at the District's offices upon adoption. This methodology will apply to all management goals contained within this plan.

Management of Groundwater Supplies

The District will manage the supply of groundwater within the District in order to conserve the resource while seeking to maintain the economic viability of all resource user groups, public and private. In consideration of the economic and cultural activities occurring within the District, the District will identify and engage in such activities and practices that, if implemented, would result in a reduction of groundwater use. A monitor well observation network shall be established and maintained in order to evaluate changing conditions of groundwater supplies (water in storage) within the District. The District will make a regular assessment of water supply and groundwater storage conditions and will report those conditions to the Board and to the public. The District will undertake, as necessary and cooperate with investigations of the groundwater resources within the District and will make the results of investigations available to the public upon adoption by the Board.

The District will adopt rules to regulate groundwater withdrawals by means of well spacing and production limits. The District may deny a well construction permit or limit groundwater withdrawals in accordance with the guidelines stated in the rules of the District. In making a determination to deny a permit or limit groundwater withdrawals, the District will consider the public benefit against individual hardship after considering all appropriate testimony.

In pursuit of the Districts mission of protecting the resource, the District may require reduction of groundwater withdrawals to amounts, which will not cause harm to the aquifer. To achieve this purpose, the District may, at the Boards discretion, amend or revoke any permits after notice and hearing. The determination to seek the amendment or revocation of a permit by the District will be based on aquifer conditions observed by the District. The District will enforce the terms and conditions of permits and the rules of the District by enjoining the permit holder in a court of competent jurisdiction as provided for in Texas Water Code (TWC) 36.102.

Desired Future Condition and Managed Available Groundwater

GMA 16 adopted a desired future condition for the Gulf Coast Aquifer on August 30, 2010, and declared all of the other aquifers non-relevant. The desired future condition is 94 feet of drawdown as an average for the entire GMA 16. The desired future condition for Live Oak UWCD is 25 feet of drawdown within the district. The managed available groundwater is not currently available and the management plan will be reviewed or revised whenever the managed available groundwater is available.

LIVE OAK UNDERGROUND WATER CONSERVATION DISTRICT MANAGEMENT PLAN

MISSION STATEMENT

The mission of the Live Oak Underground Water Conservation District is to protect and assure a sufficient quantity and quality of groundwater for our constituents use.

We value:

- *Collection and maintenance of data on water quantity and quality
- *Efficient use of groundwater
- *Conjunctive water management issues
- *Development and enforcement of water district rules concerning conservation of ground water.

Management Goals, Objectives, and Performance Standards

Resource Goals

Goal 1.0: Providing the most efficient use of groundwater

Management Objective:

Each year the District will provide education materials concerning the efficient use of groundwater.

Performance standard:

Provide educational materials to at least one school annually.

Goal 2.0: Controlling and preventing waste of groundwater

Management Objective:

Measure water levels from the land surface on strategic wells on an annual basis and report waste to the District Board.

Performance standard:

- (a) Report to the District Board annually the water level measurements for three wells.
- (b) The District will investigate all reports of waste within 7 working days. The number of reports of waste as well as the investigation findings will be reported to the District Board annually.

Goal 3.0: Controlling and preventing subsidence

The geologic framework of the District Area precludes any significant subsidence from occurring. This management goal is not applicable to the operations of the District.

Goal 4.0: Conjunctive surface water management issues

Except as provided in Chapter 36 of the Texas Water Code, the District has no jurisdiction over surface water. The District shall consider the effects of surface water resources as required by Section 36.113 and other state law. This goal is not applicable at this time.

Goal 5.0: Natural Resource Issues

Management Objective:

The District will cooperate with other interested parties and appropriate agencies to develop additional information on natural resource issues.

Performance Standard:

A representative of the District will attend a meeting annually with interested parties and appropriate agencies.

Goal 6.0: Drought Conditions

Management Objective:

The District will monitor the Palmer Drought Severity Index (PDSI).

Performance Standard:

A report of the Palmer Drought Severity Index will be presented to the District board on an annual basis.

Goal 7.0: Conservation

Management Objective:

Each year the District will provide educational material to the public promoting conservation methods and concepts.

Performance Standard:

The District will make at least one educational brochure available per year through service organizations, and on a continuing basis at the District office.

Goal 8.0: Precipitation Enhancement

Management Objective:

The District will participate in the South Texas Weather Modification Program.

Performance Standard:

A district representative will attend a meeting of the South Texas Weather Modification Assn. annually.

Goal 9.0: Recharge Enhancement

This goal is not applicable to the District because, at the current time, it is cost prohibitive.

Goal 10.0: Rainwater Harvesting

This goal is not applicable to the District because, at the current time, it is cost prohibitive.

Goal 11.0: Brush Control

This goal is not applicable to the District because, at the current time, it is cost prohibitive.

Goal 12.0: Addressing in a quantitative manner the desired future conditions of the groundwater resource in the District.

Management Objective:

The District will review and calculate its permit and well registration totals in light of the Desired Future Conditions of the groundwater resources within the boundaries of the District to assess whether the District is on target to meet the Desired Future Conditions estimates submitted to the TWDB.

Performance Standard:

The District's Annual Report will include a discussion of the District's permit and well registration totals and will evaluate the District's progress in achieving the Desired Future Conditions of the groundwater resources within the boundaries of the District and whether the District is on track to maintain the Desired Future Conditions estimates over the 50-year planning period.

Management Objective:

The District will annually sample the water levels in at least three monitoring wells within the District and will determine the five-year water level averages based on the samples taken.

The District will compare the five-year water level averages to the corresponding five-year increment of its Desired Future Conditions in order to track its progress in achieving the Desired Future Conditions.

Performance Standard:

The District's Annual Report will include the water level samples taken each year for the purpose of measuring water levels to assess the District's progress towards achieving its Desired Future Conditions. Once the District has obtained water level samples for five consecutive years and is able to calculate water level averages over five-year periods thereafter, the District will include a discussion of its comparison of water level averages to the corresponding five-year increment of its Desired Future Conditions in order to track its progress in achieving its Desired Future Conditions.

RESOLUTION NO. 001-2010

Whereas, the Live Oak Underground Water Conservation District has held the appropriate public hearings, and;

Whereas, the District has presented the management plan to the county officials and the Nueces River Authority.

Whereas, the District has followed the rules set forth by SB 1 and the TWDB.

Now, Therefore be it Resolved, that the Live Oak Underground Water Conservation District voted to pass the District management plan.

In favor_____ Against_____

Passed and Approved this_27th_day of September, 2010.

Scott Bledsoe III, President

Attest by:_____
Lonnie Stewart, Secretary