Groundwater Management Plan
Live Oak Underground Water Conservation District

Purpose:

To determine potential conflict of district's plan with the Regional Water Plan (RWP)

Method:

Total Groundwater Availability Identified in the RWP (2000)	= 7,149 acre-feet
Estimated Total Usable Groundwater Available Identified in the District Plan	= 19,245,000 acre-feet

Conclusion:

Since the estimated volume of usable groundwater identified in the district's plan is greater than that in the RWP, a conflict with the RWP does not exist.

SK 08/03/2005

Checklist Item 13(a)

Regional Water Planning Area Project Manager Review of Groundwater Conservation District Management Plan for Conflicts With a TWDB Approved Regional Water Plan

13(a)

Review of the Groundwater Conservation District Management Plan for Conflict With TWDB Approved Regional Water Plan(s)	Yes	No
13(a). Did the District provide a letter by certified mail, return receipt requested to all Regional Water Planning Groups formed under authority of TWC §16.053 (c)) in which any part of the District is located, asking the Regional Water Planning Group to review the groundwater management plan and specify any areas of conflict with the Texas Water Development Board approved regional water plan? 31TAC §356.6 (a)(5)	YES	[redacted]
13(b). Did any Regional Water Planning Group formed under authority of TWC §16.053 (c)) indicate any potential conflict between the groundwater conservation district management plan and a Texas Water Development Board approved regional water plan? 31TAC §356.6 (a)(5)		NO see note
13(c). Did reviewer identify any potential conflicts between the management plan and the Texas Water Development Board approved regional water plan? TWC §36.1071 (e)(4), 31TAC §356.6 (a)(5) [If answering Yes, please provide a written explanation]		NO
Signify an affirmative response with YES Signify a negative response with NO Signify that a checklist item is not applicable with (N/A)		

AFFIRMATION OF COMPLETION OF THE GROUNDWATER CONSERVATION DISTRICT MANAGEMENT PLAN REVIEW PROCESS BY TEXAS WATER DEVELOPMENT BOARD

The undersigned does affirm and attest that the management plan submitted by:

Live Oak Underground Water Conservation District

has been reviewed and the contents of which have been found to fulfill the requirements of TWC §36.1071 (e)(4) and 31TAC Ch. 356.6 (a)5, as defined by the TWDB groundwater management plan review checklist.

Ralph Boeker N

_____, Project Manager for Region_____

(Please Print Project Manager's Name)

Ralph Boeker, Date August 25, 2005

(Project Manager's Signature)

— note:
Regional Planning Group will not meet until Oct. —
so they will not have an opportunity to review this plan.

Texas Water Development Board
Groundwater Conservation District Management Plan Review and Certification Tracking

Reviewers Recommending the Plan for Certification

1) _____ Date 09/06/2005
Robert Bradley, Geologist, Groundwater Technical Assistance

2) _____ Date 09/06/2005
Sanjeev Kalaswad, Geologist, Groundwater Technical Assistance

3) _____ Date 09/06/05
Brent Christian, Geologist, Groundwater Technical Assistance

4) _____ Date August 30, 2005
Ralph Boeker, Project Manager for Regional Water Planning Area N

Recommended for Certification

1) _____ Date 09/12/05
Rima Petrossian, Manager of Groundwater Technical Assistance

2) _____ Date 09/13/05
Robert E. Mace, Director of Groundwater Resources Division

3) _____ Date 9/20/05
Bill Mullican, Deputy Executive Administrator, Office of Planning

Certification

The groundwater conservation district management plan document submitted by:

Live Oak Underground Water Conservation District

for certification, as administratively complete under the requirements of 31TAC Ch. 356, has been found by me, to be in fulfillment of said requirements.

_____ Date 9/21/05
J. Kevin Ward, Executive Administrator, Texas Water Development Board

Mr. Kevin Ward
Executive Administrator
Texas Water Development Board
1700 N. Congress
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 as mandated by Senate Bill 1 of the 75th Texas Legislature. The Live Oak Underground Water Conservation District Management Plan (LOUWCD MP) 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 July 26, 2005, 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 LOUWCD MP 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. The following cross-references are

provided as a means of documenting the completeness of our Management Plan

as applicable to the statutory requirements of Senate Bill 1 and TAC Chapter 356.

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,

including the resolution acknowledging this coordination, is included in this

packet for your review. 36.1071(a)(1) is addressed in LOUWCD MP Section 2.0.

36.1071(a)(2) is addressed in LOUWCD MP Section 1.0.

36.1071(a)(3) Is addressed in LOUWCD Section titled SB-1 Management Goals
Determined Not-Applicable 1.0

36.1071(a)(4) is addressed in LOUWCD MP Section 4.0.
36.1071(a)(5) is addressed in LOUWCD MP Section titled SB-1 Management Goals

Determined Not Applicable 2.0

The requirement of 36.1071(e)(1) is met by the submission of the LOUWCD MP to the TWDB.
36.1071(e)(2) is addressed in LOUWCD Section 3.0.
36.1071(a)(6) is addressed in LOUWCD MP Section 4.0
36.1071(a)(7) is addressed in LOUWCD MP Section 5.0
36.1071(e)(3)(A) is addressed in LOUWCD MP Section titled Topography, Drainage and Groundwater Resources of Live Oak County.
36.1071(e)(3)(B) is addressed in LOUWCD MP Section titled Projected Water Supplies in Live Oak County
36.1071(e)(3)© is addressed in LOUWCD MP Section titled Projected Demands for Water in Live Oak County and in LOUWCD MP Section 3.0.
36.1071(e)(3)(D) is addressed in LOUWCD MP Section titled Projected Demands for Water in Live Oak County.
36.1071(e)(4) is addressed in LOUWCD MP Section titled Potential Demand and Supply Issues and Solutions.

Recently we provided your staff with a copy of our District Rules. In accordance with the requirements of 36.1071(f) we are attaching an additional copy of the District Rules in a separate enclosure. These District Rules were adopted by the LOUWCD Board of Directors at the regularly scheduled meeting on July 1, 1997, and will be used during the implementation of the LOUWCD MP.

36.1071(g) and TAC 356.6(a)(5) will not be applicable at this time, but will be addressed in five years in 2010 when the LOUWCD MP must be recertified.

The LOUWCD MP will be in force for 10 years from the date of certification. If there is any other documentation we can provide to the TWDB that will ensure the prompt certification 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 implementation of the various elements of Senate Bill 1 and Senate Bill 2.

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.

Checklist Item 9

TIME PERIOD FOR THIS PLAN

This plan becomes effective upon certification by the Texas Water Development Board and remains in effect until a revised plan is certified or ten years, which ever 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,1991. The current Board of Directors are Scott Bledsoe III - Chairman, Mark Katzfey - Vice-Chairman, Lonnie Stewart - Secretary and Treasurer, 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 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 formation 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.

Checklist Item 6

However, most of the precipitation that falls in the county runs off in steams, 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.

6

Checklist Item 3

GAM runs for Live Oak County
All numbers are in Acre-Feet

Aquifer	2010 X-Flow in	2010 X-Flow out	2010 Recharge	2020 X-Flow in	2020 X-Flow out	2020 Recharge
Chicot	198	-271	1355	210	-266	1355
Evangeline	2010	-1017	3586	2133	-1004	3586
Burkeville Confining System	88	-38	159	93	-38	159
Jasper	1741	-612	326	1813	-558	325
Total	4036	-1937	5425	4249	-1866	5424
Sparta	23	-16	0	23	-17	0
Weches formation	91	-47	0	97	-49	0
Queen City	16	-91	0	18	-98	0
Recklaw formation	93	-112	0	97	-119	0
Carrizo sand	1001	-578	0	980	-539	0
Upper Wilcox formation	36	-190	0	43	-171	0
Middle Wilcox formation	59	-41	0	54	-38	0
Lower Wilcox formation	797	-310	0	758	-301	0
Total	2116	-1385	0	2070	-1332	0

TWDB GAM run 5-18-2005, and TWDB GAM run 4-08-2005

3

Checklist Item 1

1

Estimated total usable groundwater available from the GAM for the central part of the Gulf Coast aquifer located in Live Oak County.

Aquifer	Specific yield[1]	Area (mile^2)	Average thickness	Volume (acre-feet)[3]
Evangeline	0.1[2]	284[4]	370	6,665,000
Burkeville	0.005	587	290	540,000
Jasper	0.05	869	433	12,040,000
Total	-	-	-	**19,245,000**

1 From GAM for the central part of the Gulf Coast aquifer.
2 Carr and Meyer (1985)

3 Rounded to the nearest 1,000 acre-feet
4 Does not include two cells that went dry in the model simulation.

Estimated total storage volume from the GAM for the southern part of the Carrizo-Wilcox aquifers located in Live Oak County.

Aquifer	Specific yield[1]	Area (mile^2)	Average thickness	Volume (acre-feet)[2]
Carrizo	0.15	366	830	28,973,000

1From GAM for the southern part of Carrizo-Wilcox aquifers. [2]Rounded to the nearest 1,000 acre-feet

Surface Water Resources 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 252,000 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 form the City of Corpus Christi. The owners and operation is 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 with the City of Three Rivers and the petrochemical plant, Diamond Shamrock.

Checklist Item 4

4

WUG	Source Type	Source Name	2000	2010	2020	2030	2040	2050
George West	Groundwater	Gulf Coast Aquifer	605	605	605	605	605	605
Three Rivers	Surface Water	Nueces River Run-Of-River	700	700	700	700	700	700
Three Rivers	Surface Water	Surface water- Lakes	3,363	3,363	3,363	3,363	3,363	3,363
County-Other	Groundwater	Gulf Coast Aquifer	672	672	672	672	672	672
Irrigation	Groundwater	Carrizo-Wilcox Aquifer	171	171	171	171	171	171
Irrigation	Groundwater	Gulf Coast Aquifer	337	337	337	337	337	337
Livestock	Surface Water	Livestock Local Supply	801	801	801	801	801	801
Livestock	Groundwater	Gulf Coast Aquifer	523	523	523	523	523	523
Manufacturing	Surface Water	Nueces River Run-Of-River	800	800	800	800	800	800
Manufacturing	Groundwater	Gulf Coast Aquifer	895	895	895	895	895	895
Mining	Groundwater	Carrizo-Wilcox Aquifer	2,228	2,228	2,228	2,228	2,228	2,228
Mining	Groundwater	Gulf Coast Aquifer	1,718	1,718	1,718	1,718	1,718	1,718
Total Projected Water Supply (acre-feet per year) =			**12,813**	**12,813**	**12,813**	**12,813**	**12,813**	**12,813**

Checklist Item 2

Source: Table 12, 2002 State Water Planning Database, Table 5, Regional water plan

Groundwater Use in Live Oak County

Historical Groundwater Pumpage (acre-feet per year)
Live Oak Underground Water Conservation District

Year	Municipal	Manufacturing	Power	Irrigation	Mining	Livestock	Total
1974	541	0	0	1,724	61	961	3,287
1977	760	344	0	900	1,401	522	3,927
1980	1,147	1,097	0	450	1,428	404	4,526
1984	979	993	0	1,100	250	545	3,867
1985	923	1,049	0	2,550	1,260	450	6,232
1986	1,076	965	0	1,110	0	535	3,686
1987	1,079	198	0	1,049	1,713	577	4,616
1988	985	28	0	1,419	2,422	603	5,457
1989	1,290	57	0	841	2,385	594	5,167
1990	1,324	203	0	1,500	2,385	585	5,997
1991	1,307	455	0	2,123	4,207	597	8,689
1992	1,067	809	0	1,796	4,626	662	8,960
1993	1,271	769	0	486	4,632	611	7,769
1994	1,337	769	0	193	4,684	496	7,479
1995	1,233	729	0	518	4,684	527	7,691
1996	1,841	753	0	486	4,684	863	8,627
1997	1,222	857	0	486	3,779	501	6,845
1998	1,719	352	0	486	3,105	396	6,058
1999	1,634	351	0	486	3,105	415	5,991
2000	1,540	809	0	2,649	3,105	416	8,519

NOTE: Pumpage data from TWDB's Water Use Survey database TWDB: 05/19/2005

Recommended Groundwater Strategies

Source Name	2000	2010	2020	2030	2040	2050
Gulf Coast Aquifer	361	346	332	332	337	350
Gulf Coast Aquifer	313	261	1,953	1,764	1,113	1,031
Gulf Coast Aquifer	213	213	213	213	213	213
Carrizo-Wilcox Aquifer	471	641	0	0	0	0
Carrizo-Wilcox Aquifer	471	641	0	0	0	0

Source: Table 12, 2002 State Water Planning Database

Checklist Item 5

5

Projected Demands for Water in Live Oak County

RWPG	WUG	River Basin	Category	2000	2010	2020	2030	2040	2050
N	George West	Nueces	Municipal	560	567	563	566	571	584
N	Three Rivers	Nueces	Municipal	439	438	434	436	441	448
N	County-Other	Nueces	Municipal	1,033	1,018	1,004	1,004	1,009	1,022
N	Irrigation	Nueces	Irrigation	3,097	2,878	2,674	2,485	2,309	2,145
N	Livestock	Nueces	Livestock	1,324	1,324	1,324	1,324	1,324	1,324
N	Manufacturing	Nueces	Manufacturing	1,021	1,088	1,137	1,171	1,261	1,345
N	Mining	Nueces	Mining	4,888	5,228	1,395	1,980	2,833	2,915
Total Projected Water Demand (acre-feet per year) =				**12,362**	**12,541**	**8,531**	**8,966**	**9,748**	**9,783**

Source: Table 12, 2002 State Water Planning Database, Table 5, Regional water plan

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

Projected Water Availability

RWPG	Source Name	Source Type	River Basin	2000	2010	2020	2030	2040	2050
N	Carrizo-Wilcox Aquifer	Groundwater	Nueces	2,399	2,399	2,399	2,399	2,399	2,399
N	Gulf Coast Aquifer	Groundwater	Nueces	4,750	4,750	4,750	4,750	4,750	4,750
N	Livestock Local Supply	Surface Water	Nueces	801	801	801	801	801	801
N	Nueces River Run-Of-River	Surface Water	Nueces	1,500	1,500	1,500	1,500	1,500	1,500
Total Projected Water Availability (acre-feet per year) =				**9,450**	**9,450**	**9,450**	**9,450**	**9,450**	**9,450**

Source: Table 12, 2002 State Water Planning Database

Projected Population

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**

Checklist Item 8

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

8

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.

Checklist Items 15,19,27

9, 27

Checklist Items 35,39

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.

35, 39

Checklist Item 7

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.

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 of quality water 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.

Checklist Items 18,20,21

18,20,21

GOALS , OBJECTIVES , AND ACTION STEPS

Goal 1.0.Collection and maintenance of data on water quantity and quality

1.1.Measurement of water quantity and quality

a. Take measurements of depth to water level below the land surface on strategic wells on an annual basis.
b. Take water samples for chemical analysis on strategic wells on an annual basis.
c. Reports annually, water quality and quantity data.

Performance standard: measure depth of water on 1 well annually

measure chemical analysis of 4 wells annually

Checklist Items 14,16,17

1.2. Measurement of pollution sources and wells

a. Identify wells that are polluted and take appropriate action.
b. Identify sources of pollution and take appropriate action.
c. Provide information to the public about wells that are polluted and the sources of pollution.

Performance standard: investigate 100% of complaints of well pollution annually.

14,16,1

Goal 2.0 Efficient use of groundwater

2.1. School education

a. Provide speakers to address water topics.
b. Distribute water resource education packets for use in the classroom

Performance standard: contact teacher or principle of 1 school annually

2.2. Farm education

a. Provide speakers to address water topics at farm meetings.

b. Distribute water resource education packets to farm leaders and farmers.

Performance standard: contact 1 farm group annually

Checklist Items 26,28,29

2.3. Home education

a. Provide speakers to address water topics.

b. Distribute water resource education packets to community people.

Performance standard: contact 1 civic group annually

26,28,29

Goal 3.0 Conjunctive water management issues

3.1 Attend meeting with surface water entities in the district, to include but not limited to; conjunctive use, emergency response, drought contingency planning.

3.2 Evaluate existing historical data and data derived from new monitoring programs to enhance understanding of aquifer/surface-water relationships.

3.3 Evaluate the impact of surface-water usage on groundwater resources within the District as needed. Provide comments regarding surface-water rights requests for those requests effecting the groundwater resources of the district.

3.4 Coordinate with other entities on regional planning efforts.

Performance standard: district representative will attend 1 meeting with surface water entities annually. district representative will attend 1 meeting concerning regional water planning annually.

Checklist Items 34,36,37

Goal 4.0 Drought Conditions

4.1 Participate in the South Texas Weather Modification Program.

4.2 Evaluate the performance of the weather modification program.

Performance standard: district representative will attend 1 meeting of the South Texas Weather Modification Assn. Annually.

Checklist Items 38,40,41

Goal 5.0 Conservation

5.1 Provide information to area residents about water conservation.

5.2 Provide information to agriculture users about water conservation.

Checklist Item 22

Performance standard: Provide water conservation pamphlet to 1 district resident annually.

22

SB-1 MANAGEMENT GOALS DETERMINED NOT -APPLICABLE

Goal

1.0 Control and prevention of subsidence.

Checklist Item 30

The rigid geologic framework of the region precludes significant subsidence from occurring.

30

Goal

2.0 Cooperative resolution of natural resource management issues.

The district has no documented occurrences of endangered or threatened species dependent upon groundwater resources.

RESOLUTION

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 4 Against 0

Passed and Approved this 25th day of July, 2005.

Scott Bledsoe III, President

Attest by: Lonnie Stewart
Lonnie Stewart, Secretary

LIVE OAK
UNDERGROUND WATER CONSERVATION DISTRICT

Checklist Item 11

NOTICE OF MEETING

Notice is hereby given that a Regular Meeting of the Board of Directors of the Live Oak Underground Water Conservation District (LOUWCD) will be held on **TUESDAY, JULY 26, 2005** at **8:00 a.m.** at the Live Oak County Farm Bureau office.

Lonnie Stewart

Lonnie Stewart - Secr. - Treas.

Agenda

1. Declaration of Quorum and Call to Order
2. Public Comments

Consider and /or Action On:

3. Minutes of previous meeting
4. Financial Report
5. Public hearing on District Management Plan
6. District Management plan
7. Interlocal agreement with STWMA
8. STWMA budget for 2006
9. Designate a person to represent us at the Joint Planning Meetings
10. Directors discussion
11. Adjourn

THE STATE OF TEXAS
COUNTY OF LIVE OAK

Received in duplicate originals, this the _20th_ day of July, 2005, and published according to laws by posting a duplicate original hereof on a bulletin board convenient to the public of the Live Oak County Courthouse 72 hours prior to scheduled meeting.

KAREN IRVING — LIVE OAK COUNTY
COUNTY CLERK

Deputy

POST OFFICE BOX 980 * GEORGE WEST, TEXAS 78022
512-449-1151

PUBLIC NOTICE

The Live Oak Underground Water Conservation District will hold a public hearing at the Farm Bureau Office on Tuesday, July 26, 2005 at 8:30 A.M. on the following items:

District Management Plan

Copies are available at the Live Oak County Farm Bureau Office from 8:00 a.m. to 4:30 p.m., Monday through Friday.

WO7-20

PUBLISHER'S AFFIDAVIT

Checklist Item 11

THE STATE OF TEXAS
COUNTY OF BEE

Before me, the undersigned authority, on this day personally appeared George G. Latcham, known to me, who, by me duly sworn, on his oath deposes and says that he is the Publisher of The Progress, a newspaper published in Live Oak County; that copy of the within and foregoing Notice was published in said newspaper for 1 issues such publication being on the following dates: July 20, 2005 A.D. and a newspaper copy of which is hereto attached.

George G. Latcham, Publisher

Sworn to and subscribed before me by George G. Latcham, this 20th day of July, 2005 A.D to certify which witness my hand and official seal.

Sandra Rice, Notary Public in and for the State of Texas

My commission expires 3/23/09.

SANDRA S. RICE
NOTARY PUBLIC
STATE OF TEXAS
My Commission Expires 03-23-2009

LIVE OAK UNDERGROUND WATER CONSERVATION DISTRICT
3460A HWY 281
GEORGE WEST, TX 78022

Region N Planning Group
C/O Rocky Freund
Natural Resource Center
6300 Ocean Drive Unit 5865
Corpus Christi, TX 78412-5865
Attn: Rocky Freund

RE: Live Oak UWCD Management Plan

Dear Sir: I am sending you a copy of the recently revised District Management Plan for your consideration.
I would appreciate your approval at your earliest convenience.
Please send me a letter of your approval or any comments that you may have.
Thank you,

Lonnie Stewart

Lonnie Stewart
Manager

LIVE OAK UNDERGROUND WATER CONSERVATION DISTRICT
3460A HWY 281
GEORGE WEST, TX 78022

Nueces River Authority
PO BOX 349
Uvalde, Tx 78802-0349
Attn: Con Mims

RE: Live Oak UWCD Management Plan

Dear Sir: I am sending you a copy of the recently revised District Management Plan for your consideration.
I would appreciate your approval at your earliest convenience.
Please send me a letter of your approval or any comments that you may have.
Thank you,

Lonnie Stewart

Lonnie Stewart
Manager

Coastal Bend Regional Water Planning Group

6300 Ocean Drive, NRC 3100, Corpus Christi, Texas 78412
Phone: 361-825-3193; Fax: 361-825-3195

Checklist Item 12

August 2, 2005

12

Mr. Lonnie Stewart
Live Oak Underground Water Conservation District
3460A Hwy. 281
George West, Texas 78022

Checklist Item 13(a)

Re: Live Oak UWCD Management Plan

13(a)

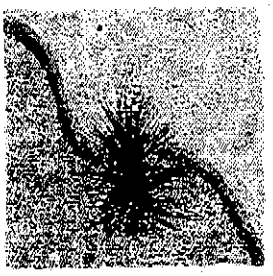
Dear Mr. Stewart:

This letter is to acknowledge receipt of the Live Oak Underground Water Conservation District Management Plan approve July 26, 2005.

Sincerely,

Rocky Freund

Rocky Freund
Director, Coastal Bend Division
Nueces River Authority



Nueces River Authority

GENERAL OFFICE
First State Bank Bldg., Suite 206
200 E. Nopal • P.O. Box 349
Uvalde, Texas 78802-0349
Tel: (830) 278-6810 • Fax: (830) 278-2025

COASTAL BEND DIVISION
Natural Resources Center, Suite 3100
6300 Ocean Drive
Corpus Christi, Texas 78412
Tel: (361) 825-3193 • Fax: (361) 825-3195

Checklist Item 12

July 29, 2005

Lonnie Stewart, Manager
Live Oak Underground Water Conservation District
3460A Hwy. 281
George West, Texas 78022

Re: Revised Groundwater Management Plan

Dear Mr. Stewart:

Texas Water Development Board rules require Management Plans to be developed by groundwater districts in conjunction with surface water entities within the district's boundaries. This is to acknowledge receipt of the Live Oak Underground Water Conservation District's Revised Groundwater Management Plan. The Nueces River Authority has no comments regarding the Plan. We look forward to working with the District in the future.

Sincerely,

Con Mims
Executive Director

Checklist Item 10

RESOLUTION

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

10

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 4 Against 0

Passed and Approved this 25th day of July, 2005.

Scott Bledsoe III, President

Attest by: Lonnie Stewart
Lonnie Stewart, Secretary

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Nueces River Authority
PO Box 349
Uvalde, Tx 78802-0349

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

Checklist Item 12

12

PLACE STICKER AT TOP OF ENVELOPE TO THE RIGHT OF THE RETURN ADDRESS, FOLD AT DOTTED LINE
CERTIFIED MAIL™

7004 1350 0001 2657 3208

U.S. Postal Service
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com

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Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: Nueces River Authority
Street, Apt. No.; or PO Box No.: PO Box 349
City, State, ZIP+4: Uvalde Tx 78802-0349

PS Form 3800, June 2002 See Reverse for Instructions

1.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Region N Planning
Natural Resource Center
6300 Ocean Drive Unit 5865
Corpus Christi, Tx 78412 - 5865

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

Checklist Item 13(a)

13(a)

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U.S. Postal Service
CERTIFIED MAIL™ RECEIPT
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For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

Sent To: Region N Planning Group
Street, Apt. No.; or PO Box No.: 6300 Ocean Drive Unit 5865
City, State, ZIP+4: Corpus Christi Tx 78412-5865

PS Form 3800, June 2002 See Reverse for Instructions