

Culberson County Groundwater Conservation District

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Van Horn, Texas 79855

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APR 21 2000

April 19, 2000

Mr. Craig Pedersen
Executive Administrator
Texas Water Development Board
Austin, Texas 78711-3231

ROUTE TO _____

CC TO: *CP, TR, AM, RE, RB, gkici*
Lozano

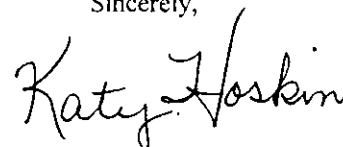
Dear Mr. Pedersen,

Attached is a copy of the adopted Management Plan of the Culberson County Groundwater Conservation District as required by 36.1072(a) of the Texas Water Code. A copy of the CCGCD Board of Directors resolution adopting this plan is also attached.

The CCGCD Management Plan was developed during open meetings of the Board as required by the Open Meetings Act. Documentation that notice and hearing requirements were followed is presented as a separate attachment. A copy of the proposed management plan was sent to the Chairman of the Region E - Far West Texas Regional Water Planning Group.

No surface water entities exist within the District, therefore no surface water issues have been addressed.

Sincerely,



Katy G. Hoskins
District Manager
Board Secretary

**Culberson County Underground Water Conservation District
P.O. Box 1295
Van Horn, Texas 79855**

**Management Plan
2000 - 2010**

Whereas, the Culberson County Groundwater Conservation District was created in accordance with Senate Bill 1942 of the 75th Legislature (1997) and confirmed in election by the citizens of the District on May 2, 1998; and

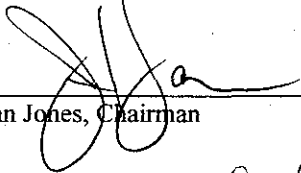
Whereas, the District is required by SB1 and through Chapter 36.1071 of the Texas Water Code to develop and adopt a new Management Plan; and

Whereas, the District Board of Directors has determined that the new 10 year Management Plan addresses the requirements of Chapter 36.1071.


Now, Therefore, be it resolved that the Board of Directors of the Culberson County Groundwater Conservation District, following notice and hearing, hereby adopts this new 10 year Management Plan; and

Further, be it resolved, that this new Management plan shall become effective immediately upon adoption.

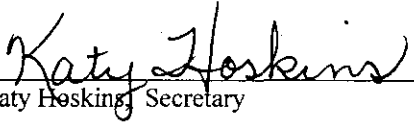
Adopted this 19th day of April, 2000 by the Board of Directors of the Culberson County Groundwater Conservation District.



John Jones, Chairman



Edwin Easley, Vice Chairman



Katy Hosking, Secretary

Burt Brownfield

Don Conoly

Culberson County Groundwater Conservation District

***Management Plan
2000 - 2010***

***P.O. Box 1295
Van Horn, Texas 79855***

Ph: 915-283-8182 Fax: 915-283-1148 e-mail: water@telstar1.com

Culberson County Groundwater Conservation District Management Plan April 19, 2000 - April 18, 2010

District Mission

The Culberson County Groundwater Conservation District will strive to develop, promote, and implement water conservation and management strategies to protect water resources for the preservation of the groundwater reservoirs over which the District has jurisdiction. The District will implement water strategies to prevent the extreme decline of water levels for the benefit of all water right owners, the economy, our citizens, and the environment of the territory inside the District.

Time Period for this Plan

This plan becomes effective upon adoption by the District Board of Directors and remains in effect until a revised plan is adopted or April 18, 2010, whichever is earlier.

Statement of Guiding Principles

The guiding principles in developing this management plan are to better understand the groundwater conditions, to encourage the most efficient use of groundwater, to preserve and improve groundwater quality, to increase public awareness and education, and to monitor legislative activities along with rules and orders of state agencies and the Regional Planning Group which may affect the private ownership of groundwater including the authority to manage at a local level.

The District acknowledges the groundwater resources of the region are of vital importance to all citizens. The District recognizes the private ownership of land, as well as the private ownership and rights of groundwater percolating below and emphasize that nothing in the Texas Water Code shall be construed as depriving or divesting the owners their ownership rights, subject to implantation and rules promulgated by the Culberson County GCD.

The District seeks to protect the private property rights of all water rights holders, whatever group they may represent. The District upholds the private property rights of the owner to capture water from that part of the aquifer which the landowner obtained at the time of purchase of the land surface. The water must be used for beneficial purposes and without waste. The aim of the District is to ensure that all water rights owners are entitled to an equal opportunity to use the groundwater beneath their land. In this pursuit, the District may require, through due process, production limitations to eliminate or reduce aquifer mining. The District asserts that all water users within the District shall be treated fairly and equally.

The District believes our most valuable natural resource water can be managed at the local level in a prudent and cost effective manner by regulating the spacing of wells and monitoring production from those wells. The administrative process of permitting and well registration are the tools necessary to facilitate the District authority and capability to manage groundwater resources.

The District is continually searching for better methods of understanding the local conditions of the West Texas Bolsons (Wild Horse, Michigan Flat, and Lobo Valley Aquifers), the Capitan Reef Complex, and the Edwards-Trinity Aquifer. An accurate understanding of the aquifers and their hydrogeologic properties, as well as a quantification of resources is the foundation from which to build sound planning measures. The District Management Plan is intended as a tool to focus on thoughts and actions of those given the responsibility for the execution and performance of the District functions and activities. This plan is the guideline for the operation of the Culberson County Groundwater District.

General Description

The District was created by the people of Culberson County on May 2, 1998 through a local election. The District boundaries cover, more or less, the southwestern half of the county. (Please refer to the map for the exact boundaries) Current board members include John Jones, chairman; Edwin Easley, vice-chairman; Katy Hoskins,

secretary/treasurer; Burt Brownfield and Don Conoly. In addition to being a board member, Katy Hoskins serves as the District's part time manager under chapter 36.056(c) of the Texas Water Code.

The county's economy is dominated by agriculture, with farming and ranching enterprises. Farming includes pecan, alfalfa, and some specialty crops such as pumpkins, dill, and potatoes. Tourism and hunting also contribute to the economy. Marble and talc mines are important to the economy as well.

Location and Extent

The District covers 1,077,638 acres or 1,673 square miles. The population of the District is approximately 2,500 citizens. Within the District is Van Horn, the county seat of Culberson County. There are no other communities within the District. Portions of the Sierra Diablo Wildlife Management Area (TPWD) are located on the western edge of the District. (Refer to the map at the end of the plan)

Irrigation areas include the Wild Horse Valley, Lobo Valley, and a small amount of irrigation in the Michigan Flat area. There are approximately 39,386.3 acres of irrigatable cropland. (According to Farm Service Agency, 1999 data, El Paso office) The remainder of the land is classified as rangeland.

Topography

Culberson County is located in the mountains of West Texas. The District has within its boundaries the Delaware, Sierra Diablo, Apache, Beach, and Wylie Mountain Ranges. Elevations range from 4,000 to 5,800 feet above mean sea level. Interspersed between mountain ranges are the farming areas, with the Wild Horse area being to the southwest of the Delaware and Apache Mountains, and the Lobo Area being to the west of the Wylie Mountains. The District is within the Rio Grande River Basin, with some alluvial drainage to the river and some drainage going northwest into the Salt Basin.

Groundwater Usage in Culberson County

There are five distinct aquifers located within the District, with an additional aquifer located outside of the District but within the county. In the past, annual groundwater usage has varied from a high of 13,427 acre/feet to a low of 8,648 acre/feet. Annual usage for 1990 through 1997 is as follows:

1990	-	12,604	acre/feet
1991	-	12,205	
1992	-	13,427	
1993	-	8,648	
1994	-	8,712	
1995	-	8,879	
1996	-	9,300	
1997	-	9,786	

This data was obtained from the Texas Water Development Board, Water Resources Planning Division. The District is concerned that the irrigation data has been underestimated. The District has received the cooperation from local farmers in sharing their pumping data. In the future, and with anticipated additional data, the Board of Directors would like to address this issue.

Surface Water Resources

There is no surface water in Culberson County.

Transfer of Water Out of the District

Currently the town of Sierra Blanca imports 351 acre/feet per year from the City of Van Horn. This contract is administered by the City of Van Horn.

Current and Projected Supplies of Groundwater in Culberson County

The following data is the projected supplies of water for the various aquifers in Culberson County in the year 2050, assuming a drought of record condition.

Edwards-Trinity:

Year 2000:

266,000 ac/ft in storage, most being Freshwater (less than 1,000 mg/l TDS)

Year 2050:

266,000 ac/ft in storage, most being Freshwater (less than 1,000 mg/l TDS)

Data obtained from LBG-Guyton & Associates
Chapter 3, Proposed Regional Water Plan

Salt Basin:

Year 2000:

3,700,000 ac/ft in storage, slightly to very saline (850 - 3,000 mg/l TDS)

Year 2050:

3,700,000 ac/ft in storage, slightly to very saline (850 - 3,000 mg/l TDS)

Data obtained from Dr. Robert I Coward, geologist
Water Works, Inc., Santa Fe, New Mexico

Capitan Reef Complex:

Year 2000:

383,000 ac/ft in storage, (fresh and saline mixed)

Year 2050:

383,000 ac/ft in storage, (fresh and saline mixed)

Data obtained from LBG-Guyton & Associates
Chapter 3, Proposed Regional Water Plan

West Texas Bolsons - Wild Horse and Michigan Flat:

Year 2000:

1,365,000 ac/ft in storage, Freshwater in Wild Horse

315,000 ac/ft in storage, Freshwater in Michigan Flat

Subtotal Freshwater : 1,680,000 acre feet in storage

1,050,000 ac/ft in storage, Slightly Saline in Wild Horse

105,000 ac/ft in storage, Slightly Saline in Michigan Flat

Subtotal Slightly Saline : 1,155,000 acre feet in storage

Year 2050:

1,365,000 ac/ft in storage, Freshwater in Wild Horse

315,000 ac/ft in storage, Freshwater in Michigan Flat

Subtotal Freshwater: 1,680,000 acre feet in storage

1,050,000 ac/ft in storage, Slightly Saline in Wild Horse

105,000 ac/ft in storage, Slightly Saline in Michigan Flat

Subtotal Slightly Saline: 1,155,000 acre feet in storage

Data obtained from Dr. Robert I. Coward, geologist
Water Works, Inc., Santa Fe, New Mexico

West Texas Bolsons - Lobo Valley:

Year 2000:

746,000 ac/ft in storage, most being Freshwater

Year 2050:

703,000 ac/ft in storage, most being Freshwater

Data obtained from LBG-Guyton & Associates
Chapter 3, Regional Water Plan

TOTAL OF ALL GROUNDWATER SUPPLIES (Year 200):

FRESHWATER - 3,075,000 ACRE / FEET
SLIGHTLY SALINE TO SALINE - 4,855,000 ACRE / FEET

Projected Demands for Groundwater within Culberson County GCD

The projected demand surplus for the Culberson County GCD are summarized in the table below. This data was obtained from the Proposed Region E - Far West Texas Plan, Chapter 4, developed by LBG-Guyton & Associates.

<u>Water User Group</u>	<u>Year 2050 Surplus</u>
1. City of Van Horn	1,074 ac/ft - no shortage
2. County - other, domestic	28 ac/ft - no shortage
3. Mining	2,073 ac/ft - no shortage
4. Irrigation	2,386 ac/ft - no shortage
5. Livestock	146 ac/ft - no shortage
Total Demands in Year 2050	5,707 ac/ft - no shortage

Natural Recharge Occurring in the District

The recharge occurring in the Culberson County GCD is estimated in the table below. This information is obtained from LBG - Guyton and Associates in their work preparing the Region E Water Plan. **There is no recharge assumed in drought years.**

Lobo Valley	750 ac/ft per year assuming average rainfall of 11 inches
Wild Horse & Michigan Flat	3,700 ac/ft per year assuming average rainfall of 11 inches
Edwards-Trinity	1,800 ac/ft per year assuming average rainfall of 10 inches
Capitan Reef Complex	12,500 ac/ft per year assuming average rainfall of 14 in.

Additional Amount of Natural / Artificial Recharge That Could Feasibly Be Achieved

The additional amount of natural or artificial recharge that could be realized from implementation of feasible weather modifications would be an 8% increase in rainfall. This could result in a 1,500 acre feet increase in recharge, assuming average or above average natural rainfall. This data was obtained from the direct gathering of evidence of the High Plains Water District of their weather modification program.

Management of Groundwater Supplies

The District will establish and maintain an observation network in order to monitor changing storage conditions of groundwater supplies within the District. By collecting and assimilating this data, the District will manage the supply of groundwater in order to conserve the resource while seeking to maintain the economic viability of all the resource user groups, public and private. In consideration of 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. The District will make regular assessments of wells within the monitoring network and will report those conditions to the Board of Directors. This District will undertake, as necessary, and co-operate with investigations of groundwater resources within the district and will make the results of those investigations available to the public upon adoption by the board.

The District has rules to regulate groundwater withdrawal by means of spacing regulations and production limitations within designated Production Use Measurement Areas (Rule 13.2) Extreme Decline Study Areas (Rule 13.1) will be used if the regular monitoring assessment indicates an extreme decline in the aquifer is occurring. Information currently available to the Board indicates that future demands will be well within the ability of the groundwater resources to supply; however, measures within the rules are in place to prevent over-mining and degradation of the aquifer.

The District may deny a well construction permit or limit a high production permit in accordance with the rules in the District. In making a determination to deny a permit or limit production withdrawals from a high production well, the district will consider public benefit against individual hardship after considering all testimony.

The relevant factors to be considered in making a determination to deny a permit or limit groundwater withdrawals include:

- 1) The purpose of the rules of the District
- 2) The equitable distribution of resources
- 3) The economic hardship resulting from grant or denial of a permit of the terms prescribed by the permit

In pursuit of the District mission to enable all water rights holders to have equal access to the groundwater under their land, the District may require reduction or limitation of groundwater withdrawal to amounts that will not cause detrimental mining of the aquifer. To achieve this purpose, the District may, at the Board's discretion, amend or revoke any permit after notice and hearing. The determination to seek the amendment or revocation of a permit by the District will be based upon aquifer conditions observed by the District through the Extreme Decline Study Area Process. 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 TWC 36.102.

Actions, Procedures, Performance and Avoidance for Plan Implementation

The District will implement the provisions of this plan and will utilize the provision 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 production of groundwater. The rules adopted by the District shall be pursuant to TWC 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 upon the best technical evidence available.

The District shall treat citizens with equality. Citizens may apply to the District for discretion in enforcement of the rules on the grounds of adverse economic effects or unique local conditions. In granting of discretion of any rule, the Board shall consider the potential for adverse affects on adjacent land owners. The exercise of said discretion by the Board shall not be construed as limiting the power of the Board.

The District will seek the cooperation in the implementation of the plan and management of groundwater supplies within the District. All activities of the District will be undertaken in co-operation and coordinated with the appropriate state, regional, or local water management entity.

The methodology that the District will use to trace its progress on an annual basis in achieving all of its management goals will be as follows:

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 (during the last monthly Board of Directors meeting each fiscal year, beginning with Nov., 2002). The report will include the number of instances each activity was engaged in during the year, referenced to the expenditure of staff time and budget so that the effectiveness and efficiency of each activity may be evaluated.

The annual report will be maintained on file at the District office.

Goals, Management Objectives, and Performance Standards

Goal 1.0 Implement a system to improve the basic understanding of groundwater conditions in the District

Management Objective:

- 1.1 Annually, obtain all the new information Water Resource agencies have on Culberson County wells.

Performance Standard:

- 1.1a - Annually, report to the Board of Directors on the number of requests made for information requested and received

Management Objective:

- 1.2 Strive to obtain 3 additional observation wells yearly

Performance Standard

- 1.2a - Report to the Board of Directors annually on all new observation wells by aquifer

Management Objective:

- 1.3 Drill or obtain one to three monitoring wells in each aquifer by the year 2005

Performance Standard

- 1.3a - Report to the board annually on monitor wells obtained either through the used of abandoned wells or drilling new wells

Management Objective:

- 1.4 Determine the location of all newly permitted wells on a district map, and establish a procedure to map 50% of all existing wells by the year 2005

Performance Standard

- 1.4a - Annually provide a list of all new wells and current well inventory of old wells that have been added

Goal 2.0 Implement management strategies that will provide for the most efficient use of groundwater

Management Objective:

- 2.1 Disperse educational information yearly regarding the current conservation practices for efficient use of water resources.

Performance Standard:

- 2.1a Each year, report to the board on the number of articles in the local newspaper pertaining to current conservation practices for efficient use of groundwater

- 2.1b Report to the board on literature packets handed out.

Management Objective:

- 2.2 Each year, enforce rules regarding the registration of new wells and the permitting of high impact production wells

Performance Standard:

- 2.2a - Report to the Board on a monthly basis the number of permits issued and wells registered
- 2.2b- Adopt a procedure to have non-exempt wells operating under high impact production permits by January 1, 2004.

Management Objective:

- 2.3 Each year, require all drillers to submit a drilling log or acceptable alternative for each new well drilled within the District

Performance Standard:

- 2.3a - Monthly, report to the Board of Director's on the number of driller's records and reports received each month.

Management Objective:

- 2.4 Each month by the year 2004, require well service personnel to provide updated static levels on all wells serviced in Culberson County GCD.

Performance Standard:

- 2.4a - Each year, provide a report to the Board indicating the number of letters sent to well service businesses by the year 2004
- 2.4b - Each year, provide a report to the Board indicating the number of new static levels recorded in the District office by the year 2004

Goal 3.0 Each year strive to prevent the waste of water

Management Objective:

- 3.1 Investigate all wasteful practices reported within the District

Performance Standard:

- 3.1a - Annual report to the Board of Directors listing the number as wasteful practices identified

Goal 4.0 Minimize the influence of pumping of wells on the degradation of the aquifers by regulating the spacing of wells and by use of a Production Use Measurement Area.

Management Objective:

- 4.1 Each year enforce all existing rules regulating the spacing of wells

Performance Standard:

- 4.1a Beginning in November, 2000, determine the percent of wells drilled annually complying with spacing requirements as set forth by the District Rules
- 4.1b Annually, report to the Board of Directors on the numbers of wells drilled and the percent of wells drilled within compliance of the spacing requirements.

Management Objective:

- 4.2 Annually, and if appropriate, designate wells that have shown an extreme decline to be placed into an Extreme Decline Study Area (Section 13 of Rules)

Performance Standard:

- 4.2a Prepare an annual report of all wells that have shown a substantial decline over a three year period
- 4.2b Maintain a current report at the District office of all EDSA studies

Management Objective:

- 4.3 If data so indicates, use the EDSA to institute a Production Use Measurement Area to limit groundwater withdrawals from a specific area

Performance Standard:

- 4.3a Quarterly, supply the Board and the PUMA committee with status reports of any PUMA in the District

Goal 5.0 Minimize the potential for contamination of groundwater by new or existing wells.

Management Objective:

- 5.1 Each year, enforce rules for the drilling, completing, and equipping of water wells to ensure that all new wells are completed properly to protect the groundwater

Performance Standard:

- 5.1a By September 31, 2003, have 100% of new wells drilled annually constructed to standards set forth by the TNRCC and District Rules and report annually to the Board

Management Objective

- 5.2 Each year budget a minimum of \$4,000 per year for capping abandoned or unusable wells as a service to landowners

Performance Standard:

- 5.2a Report the annual number of wells capped by the District

Goal 6.0 Monitor water exported out of the district

Management Objective:

- 6.1 Each year, monitor the water leaving the district through exportation for the purpose of planning and data inventory

Performance Standard:

- 6.1a Annually report to the Board the amount of water being exported out of the district

SBI MANAGEMENT GOALS DETERMINED NOT APPLICABLE

Goal 1.0 Control and Prevention of Subsidence

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

Goal 2.0 Addressing natural resource issues that impact the use and availability of groundwater or that are impacted by the use of groundwater

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

Goal 3.0 Conjunctive Surface Management Issues

There is no surface water in the Culberson County Groundwater Conservation District