

MENARD COUNTY

UNDERGROUND WATER DISTRICT

Management Plan

Adopted June 2001

MENARD COUNTY UNDERGROUND WATER DISTRICT

MANAGEMENT PLAN

TABLE OF CONTENTS

District Mission.....	1
Time Period for this Plan.....	1
Statement of Guiding Principles.....	1
General Description of the District.....	1
Location and Extent.....	2
Topography.....	2
Regional Cooperation and Coordination.....	3
Groundwater Resources.....	3
Surface Water Resources.....	5
Historical and Current Groundwater Use.....	5
Projected Groundwater Supplies.....	6
Annual Amount of Additional Natural or Artificial Recharge that Could Result from Implementation of A Feasible Method for Recharge.....	7
Projected Demands for Groundwater in Menard County.....	8
Management of Groundwater Supplies.....	9
Actions, Procedures, Performance and Avoidance for Plan Implementation.....	10
Coordination with Surface Water Entities.....	10
Methodology for Tracking Progress.....	10
Goals, Management Objectives and Performance Standards.....	11
Goal 1.0 - Providing the Most Efficient Use of Groundwater.....	11
Goal 2.0 - Controlling and Preventing the Waste of Groundwater.....	11
Goal 3.0 - Addressing Natural Resource Issues Which Impact the Use and Availability of Groundwater, and Which are Impacted by the Use of Groundwater.....	12
Goal 4.0 - To Provide for Addressing Conjunctive Surface Water management Issues.....	13
Goals Not Applicable to Menard County UWD.....	13
Definitions and Concepts.....	13
Resolution of Board of Directors Adopting the Plan.....	16

District Mission

The mission of the Menard County Underground Water District is to develop, promote and implement water conservation and management strategies to conserve, preserve, and protect the groundwater supplies of the District, to protect and enhance recharge, prevent waste and pollution, and to effect efficient use of groundwater within the District. The District seeks to protect the owners of water rights within the District from impairment of their groundwater quality and quantity within the District, pursuant to the powers and duties granted under Chapter 36, Subchapter D of the Texas Water Code.

Time Period for this Plan

This plan becomes effective upon adoption by the Board of Directors and certification by the Texas Water Development Board. The plan remains in effect for ten years after the date of Board approval and TWDB certification, or until such time as a revised or amended plan is approved and certified.

Statement of Guiding Principles

The District recognizes that its groundwater resources are of utmost importance to the economy and environment, first to the citizens of Menard County and then to the region.

The District is created for the purpose of conserving, preserving and protecting groundwater supply quantity and quality in the District by:

- Acquiring, understanding and beneficially employing scientific data on the District's aquifers and their hydrogeologic qualities and identifying the extent and location of water supply within the District, for the purpose of developing sound management procedures;
- Preventing depletion of the aquifers underlying the District;
- Protecting the private property rights of landowners in groundwater by ensuring that such landowners continue to have the opportunity to use the groundwater underlying their land;
- Promulgating rules for permitting and regulation of spacing, production and transportation of groundwater resources in the District to protect the quantity and quality of the resource;
- Educating the public and regulating for conservation and beneficial use of the water;
- Educating the public and regulating to prevent pollution of groundwater resources;
- Cooperating and coordinating with other groundwater conservation districts with which the District shares aquifer resources.

GENERAL DESCRIPTION OF THE DISTRICT

History

The citizens of Menard County, recognizing the importance of protecting and maximizing beneficial use of the scarce water resources of the county and the necessity for protecting

integrity of the county's groundwater quality, introduced legislation in the 71st Regular Legislative Session (1991) for creation of the District. A confirmation election was held on August 14, 1999 with 119 (94%) of the votes cast in favor of confirming the creation of the District and 7 (6%) against.

The District is governed by a five member locally elected Board of Directors. The directors serve staggered two year terms, with the three directors who get the largest number of votes at the first election following the confirmation election to serve four-year terms, and thereafter two year terms, and the other two directors to serve two-year terms. With elections of directors taking place every two years, the District is very responsive to voters' approval or disapproval of the local management of their groundwater and/or the services provided by the District.

Location and Extent

The Menard County Underground Water District comprises the entire area of Menard County which is not included within the boundaries of the Hickory Underground water District No. 1, and covers an area of approximately 502,703 acres (785.5 square miles) in the west-central part of Texas. Menard County ranges in elevation from approximately 2,000 to 2,700 feet above mean sea level. Total population is 2336 including the County Seat, the City of Menard (population 1606).

Topography

The District lies within the Colorado River Basin and is bisected by the San Saba River, the headwaters of which are located in Menard County near Ft. McKavett. There are numerous creeks which are tributaries of the San Saba. Drainage of the river is in a generally eastward direction.

The Edwards-Trinity formation is made up of lower Cretaceous age Trinity Group formations and overlying limestones and dolomites of the Comanche Peak, Edwards, and the Georgetown formations. It ranges in thickness from 0 to 250 feet. Springs issuing from the aquifer form the headwaters for the San Saba River, which flows eastward, and for several creeks which are tributary to the San Saba.

The Edwards-Trinity formation outcrops over the majority of the area in the District with exception of the alluvial areas along the San Saba River and its tributaries and a small portion of the southeastern corner of the county. Underlying the Edwards-Trinity (Plateau) aquifer in the eastern half of the district is a down-dip portion of the Hickory aquifer. There is also Ellenburger-San Saba formation has a few small outcrops eastern part of the county .

The Hickory formation is comprised of Cambrian-age sands and gravels eroded from the granites of the Llano uplift in central Texas. There is no outcrop area of the Hickory formation in Menard County, but the formation down-dips fairly uniformly to the west, underlying the Edwards-Trinity formation in the eastern half of the county.

REGIONAL COOPERATION AND COORDINATION



West Texas Regional Groundwater Alliance

In 1988, four groundwater conservation districts; Coke County UWCD, Glasscock County UWCD, Irion County WCD, and Sterling County UWCD signed an original Cooperative Agreement. As new districts were created, they too signed the Cooperative Agreement. In the fall of 1996, the original Cooperative Agreement was redrafted and the West Texas Regional Groundwater Alliance was created.

The regional alliance presently has a membership of eleven locally created and locally funded groundwater conservation districts that encompass almost 9.34 million acres or 14,594 square miles of West Texas. This West Texas region is as diverse as the State of Texas. Due to the diversity of this region, each member district provides its own unique management programs to best serve its constituents.

The current member districts are:

Coke County UWCD	Emerald UWCD
Glasscock County UWCD	Hickory UWCD # 1
Irion County WCD	Lipan-Kickapoo WCD
Plateau UWC & SD	Santa Rita UWCD
Sterling County UWCD	Sutton County UWCD
Menard County UWD	

This Alliance was created because the local districts have a common objective of facilitating the conservation, preservation, and beneficial use of water and related resources. Local districts monitor water-related activities which include but are not limited to the industries of farming, ranching, and oil and gas production. The alliance provides coordination of management activities of the member districts primarily through exchange of information and policy discussions.

GROUNDWATER RESOURCES¹

Edwards-Trinity(Plateau) aquifer

The Edwards-Trinity is the principle aquifer in the District. According to the TWDB,

¹All estimates of groundwater availability, usage, supplies, recharge, storage, and future demands are from data supplied by the Texas Water Development Board, unless otherwise noted. Data sources include "Groundwater Conditions in Menard County, Texas" Texas Water Commission Bulletin 6519, August 1965; "Water for Texas, Today and Tomorrow, August 1997", and from data included in the Region F Regional Water Plan completed in September of 2000. These estimates will be used until other data are available from ongoing studies of the regions aquifers.

total groundwater use in Menard County in 1997 was 896 acre-feet. Of this amount 851 acre-feet came from the Edwards-Trinity.²

The saturated thickness of the formation is from 100–300 feet throughout most of the county, except an area in the northwestern corner of the county where it is only 50-100 feet. The water levels have generally remained constant or have fluctuated only with seasonal use. The formation is very fractured, with the water supply lying in the joints and fractures of the limestone. The limestone is porous, and recharge to the aquifer is rapid because of the formation of horizontal and vertical dissolution channels in the limestone.

The Edwards -Trinity formation overlies 578,196 acres of the county and the Texas Water Development Board estimates total retrievable storage in the District to be 299,750 acre-feet. However, this area of the aquifer has received minimal study, and that figure may be over-estimated. There are very few high-production wells in this formation in the District, but supplies are presently believed to be sufficient for domestic and livestock use in the sparsely populated county where wells are drilled into the fractures and joints. Most Edwards-trinity wells in the District pump less than 15gpm.

Water quality is good, though generally very hard, with 98.5% of the water supply in the District from this formation having Total Dissolved Solids (TDS) concentrations below 3000 mg/l.³

Hickory aquifer

The Hickory aquifer has an average saturated thickness of 400-600 feet in the northeast corner of the county and 200-400 feet in the southeast quarter. There is no recharge to the aquifer within the District, but recoverable storage in the District is estimated to be about 4,500,000 acre-feet.

The water quality varies, with only about 56%% of the supply in the District having TDS <1000 mg/l.⁴ The extent within the District supply of radioactivity, which is known to exist in other parts of the aquifer, is not yet known in Menard County. However, all of the formation within the District is downdip from the outcrop area, so it is possible that the Hickory water supply within the District will contain these radioactive decay products in some areas.

Ellenburger-San Saba aquifer

The Ellenberger-San Saba formation consists of upper Cambrian limestone and sandstone San Saba Formation overlain by the Ordovician limestone and dolomite Ellenberger formation. The latter is highly porous and outcrops in several small areas along the San Saba River in the eastern part of the county. Retrievable storage is estimated by the TWDB to be 51,000 acre-feet

² Table 1-15, 1997 Ground Water Pumping by County and Aquifer, Draft Regional Water Plan, Region F, July 2000

³ Table 3-2, Edwards Trinity (Plateau) Aquifer, Draft Regional Water Plan, Region F, July 2000

⁴ Table 3-5, Hickory Aquifer, Region F Regional Water Plan, January 2001

in the county, but total effective recharge is 159 acre-feet,⁵ which is the estimated available water supply. The quality of the water pumped in the District is good, with TDS less than 1000mg/l.

SURFACE WATER RESOURCES

The San Saba River is perennial in the western half of the county due to the presence of aquifer-fed springs that maintain flows. However, east of the City of Menard the number of springs is insufficient to maintain flow in the river during times of drought.

There are 9,954 acre-feet of water rights permitted by the TNRCC in the San Saba River and its tributaries in Menard County. 1,016 acre-feet are permitted for municipal use by the City of Menard and the remaining 8,935 acre-feet are permitted for irrigation purposes.⁶ Primarily due to insufficient flows of the river during dry years, historic use of surface water over the years 1989-1997 has ranged from a high of approximately 6,680 acre-feet in 1994 to a low of approximately 1,235 acre-feet in 1990.⁷

HISTORICAL AND CURRENT GROUNDWATER USE THE MENARD COUNTY UNDERGROUND WATER DISTRICT

In the last twenty years, Menard County has seen total combined annual surface and groundwater use as high as 7,080 acre-feet in 1994 and as low as 1635 acre-feet in 1990.

Menard County Historical Water Use⁸ (Surface and Groundwater Combined)

<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>
4,670	2,751	1,635	5,780	5,048	4,642

Historical Groundwater Use in Menard County⁹ (in acre-feet)

Total combined pumping from all aquifers within the District for 1990-1997 was:

⁵ Table 3-9, Ellenburger-San Saba Aquifer, Region F Regional Water Plan, January 2001

⁶ Table 1-12, Surface Water Rights by County (Data from 1999 TNRCC water rights list), Draft Regional Water Plan, Region F, July 2000, p. 1-34

⁷ Estimated from Table 1-6, Historical Total Water Use by County in Region F, Draft Regional Water Plan, Region F, July 2000. Data on historical groundwater pumping obtained from the Water Resources Planning Division of the Texas Water Development Board (see footnote 6 below) was subtracted from Table 1-6 to obtain surface water use.

⁸ Table 1-6, Draft Regional Water Plan Region F, July 2000

⁹ TWDB, Water Resources Planning Division

1990	767	1994	1076
1991	878	1995	1015
1992	1141	1996	913
1993	1062	1997	896

Source of Supply by Category in 1997¹⁰

<u>Source of Water</u>	<u>Municipal</u>	<u>Manufac- Facturing</u>	<u>Irrigation</u>	<u>Steam Electric</u>	<u>Mining</u>	<u>Livestock</u>	<u>Total</u>
Ground	73	0	454	0	0	369	896
Surface	327	0	3,327	0	0	92	3,746
Total	400	0	3,781	0	0	461	4,642

PROJECTED GROUNDWATER SUPPLIES

In order to maintain dependable and sufficient groundwater supplies for future generations, the District follows the principle that demand should not exceed recharge to the aquifers. The total projected groundwater supply is the estimated sustainable annual yield, or effective recharge for those aquifers that have recharge within the District boundaries.

Since there is no recharge to the Hickory aquifer in Menard County but there is substantial recoverable storage of Hickory groundwater, the District has consulted with the Hickory UWCD No. 1 and has adopted, for a period of ten years or until the two Districts develop better information on recoverable storage, the Hickory District's policy of limiting depletion to 75% of recoverable storage over a hundred-year period.

Total annual available groundwater supply in the District is estimated to be 53,452 acre-feet annually, as follows:

A) Groundwater availability from the Edwards-Trinity aquifer formation in the District is limited to annual recharge, which is estimated at 19,133 acre-feet.¹¹

B) Recoverable storage in the District's portion of the Hickory aquifer formation is approximately 4,581,349 acre-feet,¹² thus available supply of Hickory water is 34,360 acre-feet annually, based on 75% depletion of recoverable storage over a 100-year period..

C) Effective recharge to the Ellenburger-San Saba aquifer in the District is 159 acre-feet/year. This is considered to be the annual available groundwater supply from the formation.

¹⁰ Table 1-11, Draft Regional Water Plan, Region F, July 31, 2000

¹¹ Table 3-2, Edwards-Trinity Plateau Aquifer, Draft Regional Water Plan, Region F, July 2000

¹² Table 3-5, Hickory Aquifer, Draft Regional Water Plan, Region F, July 2000. (Estimated for that area of the Hickory Aquifer formation which lies outside the boundaries of the Hickory Underground Water Conservation District No. 1 in Menard County.)

ANNUAL AMOUNT OF ADDITIONAL NATURAL OR ARTIFICIAL RECHARGE THAT COULD RESULT FROM IMPLEMENTATION OF A FEASIBLE METHOD FOR RECHARGE

Brush control

Historical accounts of Menard County and historical photographs in the possession of the District make it apparent that during the period from 1850 through 1885, when Menard County was experiencing the beginning of European settlement, the country was mostly open grassland with little brush and few trees, and there was considerably greater flow of water in the San Saba River and its creeks and tributaries than occurs at present. Now there is extensive invasion of brush, particularly mesquite and juniper, over large areas of the district.

District personnel have observed that in the late Spring when brush and trees come out of dormancy creeks (including those from which there are no irrigation withdrawals at any time) and sections of the San Saba River dry up and remain in that condition throughout the summer during droughts. In the Fall, when brush and trees become dormant, creeks begin to flow again, regardless of whether or not there has been rainfall.

A current study demonstrates that for the entire watershed of the North Concho river, which extends to the northwestern corner of Menard County, average annual water yield level increases by 81%, or about 48,523 acre feet with removal of all growths of mesquite and juniper in areas with heavy and moderate brush coverage (leaving areas with light brush growth intact)¹³. The average annual water yield increase in subbasin 8 of the study, being the subbasin that includes a portion of Menard County, is 89,889 gallons per acre, or .27 acre-foot, annually.¹⁴

Average annual rainfall for the Main Concho River basin averages 23.6 inches annually, compared with Menard County's 22.3 inches. The study finds that the average annual evapotranspiration for land in the Main Concho River basin with heavy to moderate brush on it is 22.04 inches (93% of precipitation) while it is 20.89 inches (89% of precipitation) for the no-brush condition.¹⁵

The Edwards-Trinity aquifer outcrops at the surface of subbasin 8 of the Main Concho basin and over all of Menard County. The authors of the study believe that the re-evaporation coefficient of such shallow aquifers is higher for brush than other types of cover than it is in deeper aquifers because brush is deeper rooted. They base their assumptions on a re-evaporation coefficient for brush-covered units of 0.4, while non-brush units were estimated at a

¹³ "Main Concho River Watershed" in Brush Management/Water Yield Feasibility Studies of Eight Watersheds in Texas, TWRI Study 182, p. 3

¹⁴ Ibid., p. 3

¹⁵ Ibid., p. 3

coefficient of 0.1.¹⁶

Applying those coefficients to areas of Menard County heavily infested with brush, about 40% of the county, and assuming removal of only half the brush from those areas and that Menard County would, overall, only increase yield by the same average as the entire North Concho basin, (as opposed to the higher yield found in subbasin 8) surface water yield could be increased by 40%, and re-evaporation from the aquifer reduced by approximately 14,000 acre-feet, equivalent to a 70% increase in total annual recharge.

PROJECTED DEMANDS FOR GROUNDWATER IN MENARD COUNTY

The Texas Water Development Board has based its combined surface and groundwater projections for Menard County on the premise that there will be little or no population increase in Menard County over the next 50 years.

Total Water Demand Projections¹⁷ (in acre-feet per year)

<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>	<u>2040</u>	<u>2050</u>
7,088	7,051	7,018	6,985	6955	6,934

Projected Water Demand by Category¹⁸ (In acre-feet per year)

	<u>2000</u>	<u>2010</u>	<u>2020</u>	<u>2030</u>	<u>2040</u>	<u>2050</u>
Municipal	422	404	391	378	367	366
Irrigation	4,173	6,080	6,061	6,041	6,002	5,982
Livestock	586	586	586	586	586	586

Obviously, then, since the TWDB projects no increase in over-all demand for water within the District, groundwater use is projected to remain at historical levels of 900-1000 acre-feet/year.

However, the experience of the District in the last two years suggests that population numbers may be on the verge of a significant increase and the character of water use in the county may be changing to the extent that there will be some substantial reason for concern. The

¹⁶ Ibid. p. 2

¹⁷ Table 2-4, Draft Regional Water Plan, Region F, July 31, 2000

¹⁸ Tables 2-5 through 2-10, Draft Regional Water Plan, Region F, July 31, 2000

District has observed that:

a) There were three new subdivision plats submitted for approval to the Menard County Commissioners' Court between March and September of 2000, resulting in more homesites per acre than before. Water use on some of these lands is going from a few widely-scattered low-impact livestock wells to a much greater number of higher-impact domestic, and in some cases irrigation, wells.

b) Newcomers appear to be coming from areas where they are accustomed to higher levels of water use than the long-time residents. The District has experienced a dramatic increase in numbers of inquiries about irrigation wells from new county residents for properties that have not previously had irrigation. In 2000, in the months of August-September alone, four new irrigation wells have been drilled on previously unirrigated land.

c) New residents have impounded riparian waters for domestic and livestock use, pursuant to the 200 acre-foot statutory exemption, on creeks and streams where water was formerly withdrawn for those purposes on a daily-need basis, but not impounded.

d) Municipalities in nearby surrounding areas are experiencing acute municipal water shortages and are looking outside of their areas for additional water supplies.

e) Even though studies indicate that Menard County has plentiful water supplies, in the most recent five months of 2000 the District has received a number of reports of wells going dry during this prolonged. There is increased drilling in the county, but the driller's logs submitted to the District have indicated as many dry holes as successful wells.

It is apparent, then, that there is need for management of the groundwater resource, and, above all, for better information on the characteristics, recoverable supplies, and recharge of the aquifers.

MANAGEMENT OF GROUNDWATER SUPPLIES

A primary function of the District is to obtain data about aquifer supplies and conditions in order to develop more effective management of the resource. The District will establish monitor wells to gather baseline data in order to monitor changing storage conditions of groundwater supplies within the District. The District will obtain data from the monitor wells on a regular basis, make reports thereon to the Board of Directors, and maintain cumulative records of the water levels in the wells.

The District has adopted rules to regulate groundwater withdrawal by means of spacing regulation and production limits. If regular monitoring indicates that aquifer levels are declining, the District will amend those rules, within the limitations imposed by Chapter 36 of the Texas Water Code, to protect the aquifer resources.

The District may deny a well permit or limit a high production permit in accordance with the provisions of the District Rules and this Management Plan. The relevant factors to be considered in denying or limiting a permit shall be:

- 1) the purpose of the District Rules, including but not limited to preserving and protecting the quality and quantity of the aquifer resources, and protecting existing uses
- 2) the equitable distribution of resources
- 3) The economic hardship resulting from denial or limitation of a permit.

The District will enforce the terms and conditions of permits and the Rules of the District.

The District recognizes the importance of public education to encourage efficient use, implement conservation practices, prevent waste, and preserve the integrity of groundwater, and will seek opportunities to educate the public on water conservation issues and other matters relevant to the protection of the aquifer resources through public meetings, newspaper articles, and other means which may become available.

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 guide for determining the direction and/or priority for all District activities. All operations of the District and all agreements entered into by the District will be consistent with the provisions of this plan.

The District will adopt rules for the management of groundwater resources through permitting of wells and production of groundwater, pursuant to Chapter 36 of the Texas Water Code and the provisions of this Plan, and will amend those rules as necessary. All rules will be adhered to and enforced. The promulgation and enforcement of the rules will be based on the best scientific and technical evidence available.

For good cause shown the District, in its discretion, and after notice and hearing, may grant an exception to the District Rules. In doing so, the Board shall consider the potential for adverse effect on adjacent landowners. The exercise of said discretion by the Board shall not be construed as limiting the power of the Board.

The District will seek cooperation in the implementation of this plan and the management of groundwater supplies within the District. The District will co-operate and co-ordinate with other water districts managing water resources from the same aquifers, and with other local water management entities.

Coordination With Surface Water Entities

The Board of Directors and Manager of the District will meet at least twice yearly with the Menard County Water Control and Improvement District No. 1 to discuss conjunctive use issues and joint water management goals.

Methodology for Tracking Progress

The District will hold a regular monthly Board Meeting for the purpose of conducting District business. Each month, the Manager's Report will reflect the number of meetings attended; number of water levels monitored; articles published concerning water issues; number of water analysis samples collected and analyzed; resulting action regarding potential contamination, or remediation of actual contamination; reports on any school or civic group

8

15, 19

27, 31

programs; meetings with the surface water management district; and other matters of district importance.

During the last monthly Board of Directors' meeting each fiscal year, beginning with October 1, 2001, 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 annual report will be maintained on file at the District Office.

Goals, Management Objectives and Performance Standards

Goal 1.0 -Providing the Most Efficient Use of Groundwater

1.1. Management Objective

At least once each year the District will provide, in a public meeting or forum, available information on water conservation practices for the efficient use of water. These will include but are not limited to publications from the Texas Water Development Board, Texas Natural Resource Conservation Commission, Texas Agricultural Extension Service, and other sources.

1.1 Performance Standard

One distribution of informational materials in a public meeting or forum each year.

1.2 Management Objective

At least once each year the District will publish in a newspaper with local circulation an article on efficient water use and availability of information materials.

1.2 Performance Standard

One article published each year.

1.3. Management Objective

Each year the District will present a program in a local school, to a class or other school group, on water conservation practices, water quality analysis, or other water issues.

1.3. Performance Standard

One program on water conservation practices, water quality analysis or other water issues presented each year in a local school.

Goal 2.0 - Controlling and Preventing the Waste of Groundwater

2.1. Management Objective

To collect data for the purpose of managing for prevention of waste of groundwater, The District will, over the next five years, develop a network of monitor wells, at the rate of at least two additional wells per year until the network includes a total of twenty wells distributed as evenly as practicable around the county.

20

21

2.1 Performance Standard

The addition of two monitor wells each year to the district well-monitoring network.

2.2 Management Objective

To measure, record and accumulate a historic record of static water levels in monitor wells on a regular periodic basis.

2.2 Performance Standard

The static water levels in two monitor wells will be measured and recorded every quarter until the district has four monitor wells in its network. Thereafter four monitor wells will be measured and recorded every quarter.

2.3 Management Objective

At least twice each year the District will publish the availability of water analysis services in the local newspaper.

2.3 Performance Standard

Two advertisements for water testing services published each year.

2.4 Management Objective

To monitor water quality in the district, the District will sample and conduct water quality tests on selected monitor wells at least once each year for possible contamination which would jeopardize the integrity of the groundwater supply.

2.4 Performance Standard

Four water quality analysis tests performed each year on selected monitor wells.

30

Goal 3.0 - Addressing Natural Resource Issues Which Impact the Use and Availability of Groundwater, and Which are Impacted by the Use of Groundwater

3.1. Management Objective

Although there is very little oil production in Menard County the District will monitor one or more selected wells within areas of the District where there is oil production, for possible contamination problems which would jeopardize the integrity of

32

the groundwater resource.

3.1 Performance Standard

Twice each year two well samples will be collected and analyzed for petroleum-related contamination in areas of the district where there is oil production.

Goal 4.0 - To Provide for Addressing Conjunctive Surface Water Management Issues

4.1 Management Objective

Each year the District shall conduct joint planning and/or policy meetings with the Menard County Water Control and Improvement District No. 1 to discuss conjunctive use issues.

4.1 Performance standards

One joint planning and/or policy meeting conducted jointly with the Menard County Water Control and Improvement District No. 1, or another surface water entity, each year.

4.2 Management Objective

The District shall conduct one joint public hearing or make one joint public educational presentation with the Menard County Water Control and Improvement District No. 1 concerning conjunctive water use issues.

4.2 Performance Standard

One public meetings or educational presentations conducted jointly with the MCWCID No. 1 each year.

Goals not applicable to the Menard County Underground Water District.

1.0 Management Objective

Controlling and preventing subsidence.

There is no history of subsidence of aquifer formations within the district upon water level depletion and available scientific information is that the formations are of sufficient rigidity that subsidence will not occur.

Definitions and Concepts

“Board” - the Board of Directors of the Menard County Underground Water Conservation District.

“District” - the Menard County Underground Water District.

“Effective recharge” - the amount of water that enters the aquifer and is available for development

“Groundwater” - means water percolating below the surface of the earth.

“Integrity” - means the preservation of groundwater quality.

“Natural Recourse Issues” - includes groundwater integrity preservation

“Ownership” - pursuant to TWC Chapter 36, §36.002, means the recognition of the rights of the owners of the land pertaining to groundwater.

“Recharge” - the addition of water to an aquifer.

“Surface Water Entity” - TWC Chapter 15 Entities with authority to store, take divert, or supply surface water for use within the boundaries of a district.

“TNRCC” - Texas Natural Resource Conservation Commission.

“TWDB” - Texas Water Development Board.

“Waste” - pursuant to TWC Chapter 36, §36.001(8), means any one or more of the following:

- (1) withdrawal of groundwater from a groundwater reservoir at a rate and in an amount that causes or threatens to cause intrusion into the reservoir of water unsuitable for agricultural, gardening, domestic, or stock raising purposes;
- (2) the flowing or producing of wells from a groundwater reservoir if the water produced is not used for a beneficial purpose;
- (3) escape of groundwater from a groundwater reservoir to any other reservoir or geologic strata that does not contain groundwater;
- (4) pollution or harmful alteration of groundwater in a groundwater reservoir by saltwater or by other deleterious matter admitted from another stratum or from the surface of the ground;
- (5) willfully or negligently causing, suffering, or allowing groundwater to escape into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or order issued by the commission under Chapter 26;

- (6) groundwater pumped for irrigation that escapes as irrigation tailwater onto land other than that of the owner of the well unless permission has been granted by the occupant of the land receiving the discharge; or
- (7) for water produced from an artesian well, “waste” has the meaning assigned by Section 11.205.

“Well” - means an artificial excavation that is dug or drilled for the purpose of producing groundwater.

PUBLISHER'S AFFIDAVIT

THE STATE OF TEXAS
COUNTY OF MENARD

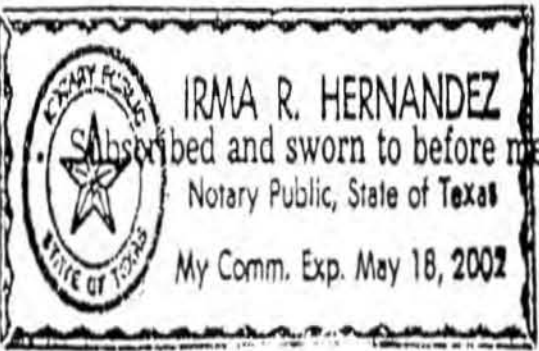
On this day personally appeared Alan Feather
who, after being duly sworn by me deposes and says that he is the publisher of THE MENARD NEWS, a
newspaper of general circulation which has been continuously and regularly published for a period of not
less than one year in the County of Menard, Texas, preceding the date of the attached notice,

Notice of Public Hearing

and that the said notice was published in said paper on the following dates:

Sept. 28, Oct. 19, Oct 26, 2000

[Signature]
Publisher



this the 17th day of November A. D. 2000

[Signature]
Notary Public, Menard County, Texas

Previous Miss Texas representatives have included Reagan Hughes in 1997, Tatum Hubbard in 1998 and Yanci Yarbrough in 1999.

As Miss Texas 2000, Ms. Wilson travels daily on a statewide speaking tour promoting the Texas Cares For Children Program, as well as her platform on AIDS Awareness and Educa-

**Senior Citizen
Luncheon Menus
Community Center**

Monday, October 30 - Baked ham, green beans, yams, hot roll, juice and peanut butter cookies.

Tuesday, October 31 - Baked chicken, fried rice, zucchini with tomatoes, hot roll, orange juice and peach cobbler.

Wednesday, November 1 - Salisbury steak with gravy, black-eyed peas, broccoli with cheese, hot roll and fruited gelatin.

Thursday, November 2 - King Ranch chicken, broccoli, crackers, carrot salad and cookies.

Friday, November 3 - Roast beef, mashed potatoes, Brussels sprouts, wheat rolls, carrot sticks and apple-sauce.

NOTICE OF PUBLIC HEARING

**The Menard County
Underground Water District**

will conduct a public hearing
to accept oral and written comments on the District's

Management Plan and Rules

October 31, 2000 at 5:30 PM

**The Commissioners' Courtroom
Menard County Courthouse**

Written comments on the Management Plan and Rules will also be accepted from now until October 31 at the District office and should be submitted to:

**Caroline Runge, Manager, MCUWD
P. O. Box 1225 Menard, Texas 76859**

The Rules include: Registration and permitting requirements; groundwater well spacing and production limitations; factors to be considered in granting an export permit; rules to prevent groundwater pollution.

Please note that except for rules concerning prevention of pollution, all presently existing water uses will be 'grandfathered'; these Rules will apply only to new wells to be drilled within the District boundaries.

Copies of the Management Plan and Rules will be available to the Public by September 30 at the County Clerk's office and the Menard County Underground Water District Office in the Courthouse, and the Menard Public Library. For additional information call Caroline Runge at 915-396-3670.

...turner is talking with people in every county in his district about the issues and concerns now facing the rural districts of Texas.

Turner will be in Menard on Wednesday, October 4th, from 1:15 to 2:00 p.m. in the Community Room at Menard National Bank.

"I look forward to talking with folks about water, rural health care, tax relief, education, prescription drugs, and anything else they want to talk about," Representative Turner said. "These are open meetings and everyone is welcome."

Texas Mesquite Art Festival Set In Fredericksburg

The 8th Annual Mesquite Art Festival will be held in downtown Fredericksburg on Friday through Sunday, October 13-15, at Marketplatz.

The festival presents the most exclusive selection of products made from mesquite wood in the nation.

Over fifty Texas artists display their works which range from fine writing instruments, cabinets, furniture, mantels, turnings, sculptures functional art, musical instruments, gun stocks and one-of-a-kind art treasures.

For more information, call 830-997-8515.

NOTICE OF PUBLIC HEARING

The Menard County Underground Water District

will conduct a public hearing to accept oral and written comments on the District's

Management Plan and Rules

October 31, 2000 at 5:30 PM

The Commissioners' Courtroom
Menard County Courthouse

Written comments on the Management Plan and Rules will also be accepted from now until October 31 at the District office and should be submitted to:

Caroline Runge, Manager, MCUWD
P. O. Box 1225 Menard, Texas 76859

The Rules include: Registration and permitting requirements; groundwater well spacing and production limitations; factors to be considered in granting an export permit; rules to prevent groundwater pollution.

Please note that except for rules concerning prevention of pollution, all presently existing water uses will be 'grandfathered'; these Rules will apply only to new wells to be drilled within the District boundaries.

Copies of the Management Plan and Rules will be available to the Public by September 30 at the County Clerk's office and the Menard County Underground Water District Office in the Courthouse, and the Menard Public Library. For additional information call Caroline Runge at 915-396-3670.

COMPUTER, INTERNET PEOPLE wanted to work online. @125-\$175 an hour. Full training. Vacations, bonuses and incentives. Bilinguals also needed. 47 countries. Free e-book. www.ProfitPC.net. S & C Marketing.

DRIVERS-OWNER/OPERATORS: Run re- SRT toll free: 1-877-BIG-PAYDAY (1-877-244-7293). \$1,000 sign-on bonus. *Student graduates welcome. all the bells and whistles. *Paid weekly. *Great pay.

DRIVERS WANTED
1-800-306-0873. www.capitalpublications.com.
and check software. Send \$7.95 to Capital Publications, 1025 Connecticut Ave., Washington, DC 20036.



Community Center.
There will be a catered lunch.

Texas Folklife Festival Planned

The Institute of Texan Cultures is proud to its 30th anniversary on June 10 at the Institute of Texan Cultures San Antonio.
For more information, see the website at www.texancultures.utsa.edu.

own-beer house. There were 50 different recipes, shiny copper kettles, tubing and all the ingredients to brew our choice. Unfortunately, we had to leave Oregon before the batch was ready to sample.

The scientific name of Little barley is *Hordeum pusillum*, and for Cultivated barley it's *Hordeum vulgare*. Some important differences are the greater number and larger size of seeds at each joint in Cultivated barley, and its seed head doesn't break up at maturity.

Fort McKavett Offers

Nero was used in five in-county K-9 searches with arrests or citations issued in each case, including 3 citations for possession of paraphernalia, one arrest for possession of cocaine and one for possession of marijuana. and disabled residents. Comm. Care for Aged and Disabled - \$188,498 for Medicaid-related vices and \$27,745 for non-Medicaid related services." Ms. Evans included.

The Menard County Underground Water District will conduct a public hearing to accept oral and written comment on revisions to the District Management Plan June 11, 2001 at 5:45 p.m. The Commissioner's Courtroom The Menard County Courthouse

The revisions include changes in wording recommended by the Texas Water Development Board and a new section on feasible methods for increasing natural or artificial recharge to the aquifer. Copies of the revisions will be available on June 1 at the District Office in the Courthouse, the County Clerk's office and the Public Library. Written comments may be submitted until June 11 to MCUWD, P.O. Box 1225, Menard, TX 76859. For additional information, call Caroline Runge at 915-396-3

Classic Cars and Live Band Saturday!

OLD MILL

TRADE DAYS

• 500 Vendors • 5th & Hwy 207, Post, Texas
June 1, 2 & 3
www.omtd.com (806) 495-3529

Where the Fun Begins!

May 31, 2001

I want to thank Mrs. Kritten and the Administration.

**RESOLUTION
OF THE
MENARD COUNTY UNDERGROUND WATER DISTRICT**

WHEREAS, the Management Plan of the Menard County Underground Water District was completed, reviewed and accepted by the undersigned Board of Directors; and

WHEREAS, Notice of a Public Meeting to be held on October 31, 2000 to accept comments on the Plan was published in the Menard News on September 28, October 19, and October 26; and

WHEREAS said Public Meeting was held on October 31, 2000 to accept public comments on the District Management Plan; and

WHEREAS, no public comments were submitted;

NOW, THEREFORE, BE IT RESOLVED:

That the Board of Directors of the Menard County Underground Water District, pursuant to Texas Water Code Section 36.1071, approves and adopts the above and foregoing Management Plan to which this Resolution is attached as the Management Plan for the Menard County Underground Water District for a period of ten years following the certification of said Plan by the Texas Water Development Board.

APPROVED AND PASSED this the 14th day of November, 2000.

James A. Davis

Mark W. Jones
Mark W. Jones

Jay Kothmann
Jay Kothmann

Richard R. McTaggart
Richard R. McTaggart

James C. Collins
James C. Collins

James A. Davis
James A. Davis
Board Chairman

Attest:

Mark W. Jones
Mark W. Jones
Board Secretary

**RESOLUTION OF THE
MENARD COUNTY WATER CONTROL
AND IMPROVEMENT DISTRICT NO. 1**

WHEREAS, for the past year the Menard County Underground Water District has consulted and worked with this Board in the development of its Management Plan, and

WHEREAS, the Menard County Underground Water District provided this Board with draft copies of the Management Plan for review and comment prior to final approval and adoption by the MCUWD Board; and

WHEREAS the undersigned members of this Board have reviewed the final version of the Management Plan and revisions thereto as adopted by the MCUWD Board; and

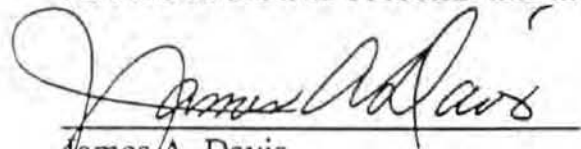
WHEREAS, a Public Meeting was held on October 31, 2000 to accept comments on the District Management Plan; and

WHEREAS, a Public Meeting was held on June 11, 2001 to accept comments on revisions to the District Management Plan;

NOW, THEREFORE, BE IT RESOLVED:

That the Board of Directors of the Menard County Water Control and Improvement District No. 1 approves of the Management Plan of the Menard County Underground Water District and supports its certification by the Texas Water Development Board.

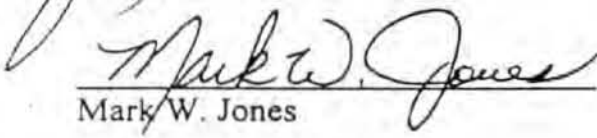
APPROVED AND PASSED this the 11th day of June, 2001.



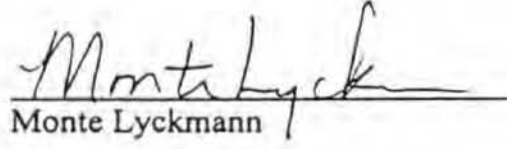
James A. Davis



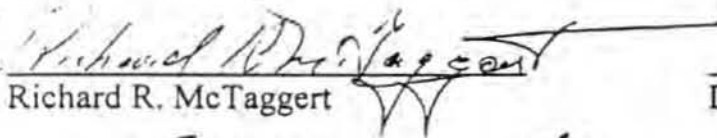
Susan P. Henke



Mark W. Jones



Monte Lyckmann

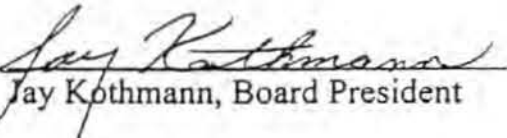


Richard R. McTaggart

Danny Pennington



Buster Terrell



Jay Kothmann, Board President

Attest:

Board Secretary

**RESOLUTION OF THE
MENARD COUNTY WATER CONTROL
AND IMPROVEMENT DISTRICT NO. 1**

WHEREAS, for the past year the Menard County Underground Water District has consulted and worked with this Board in the development of its Management Plan, and

WHEREAS, the Menard County Underground Water District provided this Board with draft copies of the Management Plan for review and comment prior to final approval and adoption by the MCUWD Board; and

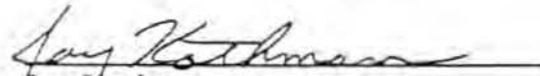
WHEREAS the undersigned members of this Board have reviewed the final version of the Management Plan as adopted by the MCUWD Board; and

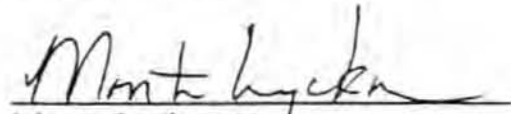
WHEREAS, a Public Meeting was held on October 31, 2000 to accept comments on the District Management Plan; and

NOW, THEREFORE, BE IT RESOLVED:

That the Board of Directors of the Menard County Water Control and Improvement District No. 1 approves of the Management Plan of the Menard County Underground Water District and supports its certification by the Texas Water Development Board.

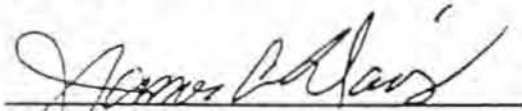
APPROVED AND PASSED this the 13th day of December, 2000.

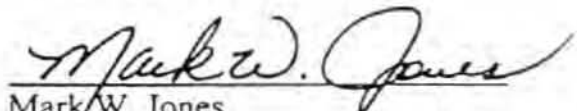

Jay Kothmann

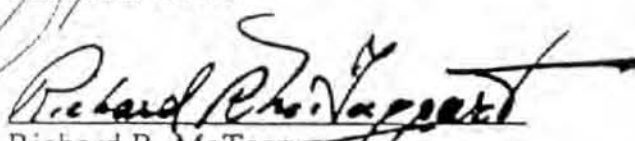

Monte Lyckmann

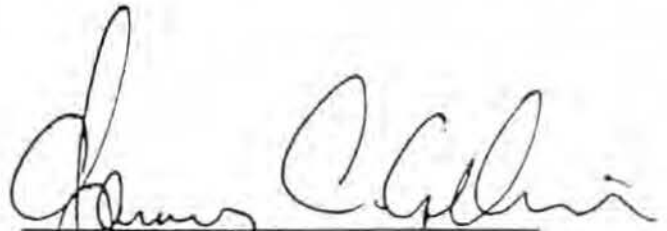
Danny Pennington

Susan P. Henke


James A. Davis


Mark W. Jones


Richard R. McTaggart


James C. Collins
Board Chairman

Attest:

Board Secretary

MENARD COUNTY
UNDERGROUND WATER DISTRICT
P. O. BOX 1225
MENARD, TEXAS 76859

Telephone: 915-396-3670
Fax: 915-396-3921
e-mail:mcuwd@wcc.net

10 August 2001

Mr. John Grant, Chairman
Region F Regional Water Planning Group
c/o Colorado River Municipal Water District
P. O. Box 869
Big Spring, TX 79721-0869

BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED

Re: Menard County Underground Water District Management Plan

Dear John:

Pursuant to §356.6 TAC pertaining to the TWDB certification process for district management plans, I am sending you a copy of the revised Menard County Underground Water District Management Plan adopted by our board on May 15 and requesting that you review it for "consistency with the regional water plan" and further requesting that you "specify any areas of conflict between the management plan and the regional water plan."

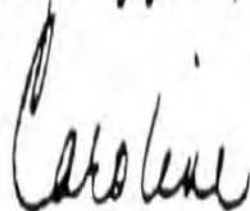
The plan is being simultaneously submitted to the TWDB for certification, so if you find any such inconsistencies I would very much appreciate having your comments by September 10 so that I may forward them to the Board.

Allow me to direct your attention to the section on "Projected Groundwater Supplies" (p. 6) which conforms the District's water production policy for each of the aquifers within the district to the aquifer depletion policies adopted by the RWPG board.

I sincerely regret adding yet another burden to your already over-loaded boat, and assure that I would not do so if the choice were mine. Thank you in advance for your attention to it.

We Region F groundwater folk look forward to seeing you again in November.

Sincerely yours,

A handwritten signature in cursive script that reads "Caroline".

Caroline R. Runge

Manager

cc: Mr. Craig Pedersen