

**MEDINA COUNTY
GROUNDWATER CONSERVATION DISTRICT**

GROUNDWATER MANAGEMENT PLAN

1998-2008

Adopted July 22, 1998

DISTRICT MISSION

The Medina County Groundwater Conservation District strives to bring about conservation, preservation, and the efficient, beneficial and wise use of water for the benefit of the citizens and economy of the Medina County.

TIME PERIOD FOR THIS PLAN

This plan becomes effective upon adoption by the Board of Directors and replaces the previously adopted management plan. This plan will be implemented and will remain in effect until September 1, 2008.

STATEMENT OF GUIDING PRINCIPLES

The District recognizes that the groundwater resources of this region are of vital importance to the residents and that this resource must be managed effectively. A basic understanding of the aquifers and their hydrogeologic properties, as well as a quantification of resources is the foundation from which to build prudent planning measures. This management plan is intended as a tool to focus the programs and plans of the District.

About the District

The District was created under Section 59, Article 16, Texas Constitution and was validated by the 72nd Legislature. The District has the same boundaries as the County of Medina.

Since the creation of the Edwards Aquifer Authority, the District's jurisdiction is limited to the minor aquifers underlying Medina County. The District revised its programs and rules to reflect these changes. The Edwards Aquifer continues to be the major source of water for the citizens of Medina County and therefore information, education, and coordination between the District and the Edwards Aquifer Authority remains a priority to the District Board of Directors.

With pumping limitations now in effect for the Edwards Aquifer, the minor aquifers within Medina County have the potential of becoming a supplemental supply. The District anticipates demand increases in these aquifers. Additional interest in aquifer storage and recovery projects also exists as does the potential of transport of these groundwater resources outside the District boundaries.

Groundwater Resources of the District

The minor aquifers within the jurisdiction of the District include the Carrizo-Wilcox, Trinity, Glen Rose, Anachochoa, and Leona Gravel. Additional information on these aquifers is available from Texas Water Development Board's Report 345 Aquifers of Texas (1995).

However, specific information on pumping, availability and recharge are limited to the Carrizo-Wilcox and Trinity Aquifers. This plan, therefore, focuses on those aquifers.

Groundwater from these aquifers are used for municipal (City of Devine), irrigation, domestic and livestock purposes.

All estimates of recharge and the total amount of usable groundwater are derived from the Texas Water Development Board's data for Groundwater Availabilities. When combined with production values, these estimates can be used by the District to derive goals for future estimates of available groundwater. It is estimated that annual recharge to the Carrizo-Wilcox aquifer is 2,400 acre-feet per year. Recharge estimates are not available for the Trinity aquifer. Currently within the District, the total amount of usable groundwater from the Carrizo-Wilcox aquifer is estimated to be 6,615 acre-feet. Estimates are not available for the Trinity aquifer. Accordingly, the existing total usable amount of groundwater in the District is 6,615 acre-feet.

Based on data obtained from a study by Dr. Bill Dugas in association with the Seco Creek Water Quality Demonstration Project, recharge could be increased by an estimated 40,000 gallons per acre per year through extensive brush management followed by enhanced grazing practices. The implementation of these feasible methods on 500 acres would equate to approximately 62 acre feet per year of increased recharge.

Water Use in the District

Based on available Texas Water Development Board data combining all groundwater and surface water from Medina Lake, during the last five years ending in 1995, annual water usage in the Medina County portion of the District has varied from a high of 108,496 acre-feet in 1991 to a low of 62,606 acre-feet in 1985. The annual estimated usage (in acre feet) from the minor aquifers for the 5 year period is as follows:

1995	<u>82</u>	Trinity	<u>6752</u>	Carrizo-Wilcox
1994	<u>74</u>	Trinity	<u>6097</u>	Carrizo-Wilcox
1993	<u>121</u>	Trinity	<u>732</u>	Carrizo-Wilcox
1992	<u>106</u>	Trinity	<u>929</u>	Carrizo-Wilcox
1991	<u>84</u>	Trinity	<u>951</u>	Carrizo-Wilcox

This data was obtained from the Texas Water Development Board's annual survey of historical water use.

Projected Demands for Water the District

The TWDB published projected groundwater needs in their planning document "Water for Texas Today and Tomorrow", 1997. The estimates contained in that document and related files of the Texas Water Development Board have been used for the purpose of devising this plan. The TWDB has projected that the total water demands for the Medina County will be 68,921 acre-feet per year by 2010.

Projected Water Supplies for the District

The supply and demand totals for 2010 are as follows:

Projected Supplies

Groundwater from Carrizo-Wilcox	6,966 acre-feet per year
Groundwater from Trinity	860 acre-feet per year
Total Projected Supply	7,826 acre-feet per year
Total Projected Demand	68,921 acre-feet per year
*Balance (Shortage)	(61,095) acre-feet per year

** This balance does not include the amount of groundwater (92,962 af) proposed to be permitted by the Edwards Aquifer Authority.

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 the most efficient use of groundwater. An on-going TWDB and USGS observation network will be monitored by the District in order to gain additional information regarding changing storage conditions of groundwater supplies within the District. The District will work cooperatively 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 employ all technical resources at its disposal to evaluate the groundwater resources available within the District and to determine the effectiveness of conservation measures.

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 shall treat all citizens with equality.

The District will seek cooperation in the implementation of this plan and the management of groundwater supplies within the District. All activities of the District will be undertaken in cooperation and coordination with the appropriate state, regional, and local water management entities.

The methodology the District will use to track progress on an annual basis in achieving all management goals

The District manager will prepare an annual report on District performance in achieving the management goals. The annual report will be presented to the Board of Directors during the first quarterly Board of Directors meeting each fiscal year, beginning January, 2001. The report will include the number of instances each objective 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 and made available to the public upon adoption by the Board.

**MANAGEMENT GOALS, OBJECTIVES
and PERFORMANCE STANDARDS**

Goal 1.0 - To Control and Prevent the Waste of Groundwater

Management Objective

Each year the District provide education materials to the newspapers and to the general public on at least six occasions concerning waste which is prohibited under the District rules.

Performance Standards

- (a) The District will furnish at least six newspaper articles and/or public service announcements on an annual basis.
- (b) The District will investigate all reports of waste of groundwater within 24 hours.

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

Management Objective

Each year the District will work with all interested parties and appropriate agencies to develop additional information on aquifer storage and recovery projects and will require permits for all aquifer storage and recovery projects.

Performance Standards

- (a) Each year the District will require permits for all aquifer and storage projects
- (b) The District will make all possible information on such projects available to the general public and to permit applicants annually.

Management Objective

Each year the District will require issuance of a well construction permit prior to drilling all new wells.

Performance Standard

(a) Each year all well construction permits in compliance with the District rules will be issued within 5 working days. Well construction permits not in compliance will be considered at the next regular board meeting.

Goal 3.0 - Providing for the efficient use of groundwater within the District

Management Objective

Each year, the District will provide automatic timer devices to the public in response to all requests in an effort to increase the efficiency of irrigating lawns.

Performance Standard

(a) The District will make automatic timer devices available to the public through civic organizations, at least 1 time per year. These devices will be made continuously available, within budgetary constraints, to the public upon request at the District office each year.

Management Objective

Each year, the District will provide informative speakers to schools and civic groups to raise public awareness of practices which insure the efficient use of groundwater.

Performance Standard

(a) The District will make at least 2 public speaking appearances to promote the efficient use of groundwater per year.

SB-1 MANAGEMENT GOALS DETERMINED NOT-APPLICABLE

Goal 4.0 - The control and prevention of subsidence.

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

Goal 5.0 - Addressing conjunctive surface water management issues.

The District has no jurisdiction over surface water. This management goal is not applicable to the operations of the District.