

**JEFF DAVIS COUNTY UNDERGROUND
WATER CONSERVATION DISTRICT**

MANAGEMENT PLAN

2008-2013

Adopted November 11, 2008

DISTRICT MISSION

The Jeff Davis County Underground Water Conservation District will strive to develop, promote, and implement water conservation and management strategies to protect water resources for the benefit of the citizens, economy, and environment of the District.

TIME PERIOD FOR THIS PLAN

This plan becomes effective upon adoption by the District Board of Directors and approved by the Texas Water Development Board (TWDB) affirming the plan is administratively complete. This plan replaces the existing plan adopted by the District Board of Directors on June 8, 1998. This District management plan will remain in effect until September 1, 2013, or a period of ten (10) years, which ever is later, or until a revised plan is approved by the TWDB.

STATEMENT OF GUIDING PRINCIPLES

The District recognizes that the groundwater resources of the county are of vital importance. The preservation of this most valuable resource can be managed in a prudent and cost effective manner through education, regulations, and permitting. The greatest threat to prevent the District from achieving the stated mission is inappropriate management, based in part on the lack of understanding of local conditions. 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. The goals of this plan can best be achieved through guidance from the locally elected board members who have an understanding of local conditions as well as technical support from the Texas Water Development Board and qualified consulting agencies. This management plan is intended as a tool to focus the thoughts and actions of those given the responsibility for the execution of the District activities.

General Description of the District

History

The citizens of Jeff Davis County through an election created the District, November 2, 1993. The current Board of Directors are Johnny Wofford - Chairman, W. W. McElroy - Vice-Chairman, - Secretary, Delton Daugherty, Jim Dyer and Jim Espy. The District Manager is Janet Adams. Jeff Davis County underground Water Conservation District (JDCUWCD) covers all of Jeff Davis County and portions of Presidio Counties. The agricultural community dominates the county's economy. The agricultural income is derived mainly from cattle. Tourism and hunting also contribute to the income of the county.

Location and Extent

Jeff Davis County, having areal extent of 2258 square miles, with 100 % being in the District is located in west Texas. The county is bounded on the east by Pecos County, on the north by Reeves County, on the west by Culberson County, and on the south by Brewster and Presidio Counties. The District also 11,958 acres in Presidio County. Fort Davis, which is located on the east side of the county, is the county seat. Valentine, is the only other town in the county, is located in the west portion of the county. There is also 10705.98 acres (0.44 %) of Presidio County within the District

Topography

Jeff Davis County is located in the mountains of West Texas. The county has the highest average elevation in the state of Texas with one mile or higher altitudes. The county consists of peaks, canyons, and plateaus.

Groundwater Resources of Jeff Davis County

In the Jeff Davis County Underground Water Conservation District, the Texas Water Development Board lists several aquifers, which account for the known groundwater resources of the District. These include the Edwards-Trinity (Plateau), the West Texas Bolsons, of which there are several divisions, and the Igneous areas of the District. Due to the lack of scientific study, the aquifers are not well defined geographically. The TWDB also lists a small portion of the Cenozoic Pecos Alluvium Aquifer along the northeaster boundary of the District.

The TWDB is currently conducting a groundwater hydrology study in the Fort Davis area. This study should assist the district in its effort to better understand the water resources of that part of the District. The TWDB has provided the District with countywide data to assist the District in determining the groundwater resources, usage and recharge characteristics of the aquifers in Jeff Davis County. This information will assist the District in Planning for future estimates of available groundwater and its conservation and protection.

Not included in the table below are two very minor aquifers in Jeff Davis County.

1. Capitan Reef
12,100 acres - Areal Extent
341 estimated acre feet of recharge annually

2. Rustler Aquifer
101,881 acres – Areal Extent
780 estimated acre feet of recharge

In the following table all values are reported in acre-feet per year. All numbers are rounded to the nearest 1 acre-foot. Negative values indicate water is leaving the aquifer system using the parameters or boundaries listed in the table.

	Aquifer or confining unit	Results
Estimated annual amount of recharge from precipitation to the district	Edwards-Trinity (Plateau) Aquifer	5,359
	Salt Basin Bolson Aquifer	0*
	Igneous Aquifer	26,525**
	Cretaceous and Permian units	1,371
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Edwards-Trinity (Plateau) Aquifer	0
	Salt Basin Bolson Aquifer	0
	Igneous Aquifer	-2,574
	Cretaceous and Permian units	0
Estimated annual volume of flow into the district within each aquifer in the district	Edwards-Trinity (Plateau) Aquifer	2,054
	Salt Basin Bolson Aquifer	3,806
	Igneous Aquifer	611
	Cretaceous and Permian units	1,016
Estimated annual volume of flow out of the district within each aquifer in the district	Edwards-Trinity (Plateau) Aquifer	-9,094
	Salt Basin Bolson Aquifer	-7,417
	Igneous Aquifer	-4,076
	Cretaceous and Permian units	-8,302
Estimated annual net volume of flow between each aquifer in the district	Igneous Aquifer to Salt Basin Bolson Aquifer	1,843
	Igneous Aquifer to Cretaceous and Permian units	14,552

* It is assumed that precipitation recharge directly to the Salt Basin Bolson Aquifer is zero. The recharge package suggests, on average, 155 acre-feet per year from alluvial fan/stream bed infiltration enters the Salt Basin Bolson Aquifer in the district.

** Recharge applied with the recharge package to the Igneous Aquifer (Layer 2) is both direct precipitation recharge and alluvial fan/stream bed recharge.

Source: Texas Water Development Board, Groundwater Availability Run 08-29

Additional Amount of Natural/Artificial Recharge That Would Feasible Be Achieved

The additional amount of natural or artificial recharge that would be realized from implementation of feasible weather modification would be an 8% increase in rainfall. This would result in a 703.5-acre feet increase in recharge. This data was obtained from the direct gathering of evidence of the High Plains Water District of their weather modification program.

MANAGED AVAILABLE GROUNDWATER

The managed available groundwater for Jeff Davis County UWCD has not been established. Upon establishing a Desired Future Condition for Groundwater Management Area 4, the District will amend this portion of the plan.

Historical Groundwater use in Jeff Davis County

In the past, annual groundwater usage in the District has varied from a high of 3452 acre-feet to a low of 996 acre-feet. Annual usage for 1991 through 2003 is as follows:

Jeff Davis County

Year	Aquifer	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1991	CENOZOIC PECOS ALLUVIUM	316	0	0	0	0	0	316
	EDWARDS-TRINITY PLATEAU	8	0	0	0	0	130	138
	IGNEOUS	226	0	0	268	0	78	572
	OTHER	24	0	0	0	0	234	258
	WEST TEXAS BOLSON	41	0	0	1,958	0	81	2,080
	Total	615	0	0	2,226	0	523	3,364
1992	CENOZOIC PECOS ALLUVIUM	202	0	0	0	0	0	202
	EDWARDS-TRINITY PLATEAU	13	0	0	0	0	129	142
	IGNEOUS	202	0	0	291	0	78	571
	OTHER	39	0	0	0	0	233	272
	WEST TEXAS BOLSON	56	0	0	2,128	0	81	2,265

	Total	512	0	0	2,419	0	521	3,452
1993	CENOZOIC PECOS ALLUVIUM	199	0	0	0	0	0	199
	EDWARDS- TRINITY PLATEAU	0	0	0	0	0	113	113
	IGNEOUS	212	0	0	21	0	68	301
	OTHER	0	0	0	0	0	204	204
	WEST TEXAS BOLSON	22	0	0	152	0	71	245
	Total	433	0	0	173	0	456	1,062
1994	CENOZOIC PECOS ALLUVIUM	199	0	0	0	0	0	199
	EDWARDS- TRINITY PLATEAU	0	0	0	0	0	109	109
	IGNEOUS	238	0	0	132	0	66	436
	OTHER	0	0	0	0	0	197	197
	WEST TEXAS BOLSON	24	0	0	59	0	69	152
	Total	461	0	0	191	0	441	1,093
1995	CENOZOIC PECOS ALLUVIUM	214	0	0	0	0	0	214
	EDWARDS- TRINITY PLATEAU	3	0	0	0	0	93	96
	IGNEOUS	248	0	0	120	0	56	424
	OTHER	8	0	0	0	0	168	176
	WEST TEXAS BOLSON	32	0	0	53	0	59	144
	Total	505	0	0	173	0	376	1,054
1996	CENOZOIC PECOS ALLUVIUM	274	0	0	0	0	0	274
	EDWARDS- TRINITY PLATEAU	0	0	0	0	0	93	93
	IGNEOUS	253	0	0	120	0	56	429
	OTHER	0	0	0	0	0	168	168
	WEST TEXAS BOLSON	24	0	0	53	0	59	136
	Total	551	0	0	173	0	376	1,100
1997	CENOZOIC PECOS ALLUVIUM	194	0	0	0	0	0	194
	EDWARDS- TRINITY PLATEAU	0	0	0	0	0	89	89
	IGNEOUS	245	0	0	120	0	54	419

	OTHER	0	0	0	0	0	161	161
	WEST TEXAS BOLSON	24	0	0	53	0	56	133
	Total	463	0	0	173	0	360	996
1998	CENOZOIC PECOS ALLUVIUM	164	0	0	0	0	0	164
	EDWARDS-TRINITY PLATEAU	0	0	0	0	0	130	130
	IGNEOUS	207	0	0	120	0	79	406
	OTHER	0	0	0	0	0	236	236
	WEST TEXAS BOLSON	20	0	0	53	0	82	155
	Total	391	0	0	173	0	527	1,091
1999	CENOZOIC PECOS ALLUVIUM	212	0	0	0	0	0	212
	EDWARDS-TRINITY PLATEAU	0	0	0	0	0	139	139
	IGNEOUS	267	0	0	120	0	84	471
	OTHER	0	0	0	0	0	252	252
	WEST TEXAS BOLSON	26	0	0	53	0	88	167
	Total	505	0	0	173	0	563	1,241
2000	CENOZOIC PECOS ALLUVIUM	230	0	0	0	0	0	230
	EDWARDS-TRINITY PLATEAU	0	0	0	0	0	119	119
	IGNEOUS	291	0	0	117	0	72	480
	OTHER	0	0	0	0	0	216	216
	WEST TEXAS BOLSON	28	0	0	52	0	75	155
	Total	549	0	0	169	0	482	1,200
2001	CENOZOIC PECOS ALLUVIUM	180	0	0	0	0	0	180
	EDWARDS-TRINITY PLATEAU	0	0	0	0	0	127	127
	IGNEOUS	278	0	0	155	0	77	510
	OTHER	0	0	0	0	0	230	230
	WEST TEXAS BOLSON	26	0	0	69	0	80	175
	Total	484	0	0	224	0	514	1,222
2002	CENOZOIC PECOS ALLUVIUM	94	0	0	0	0	0	94

	EDWARDS-TRINITY PLATEAU	0	0	0	0	0	121	121
	IGNEOUS	279	0	0	1,335	0	73	1,687
	OTHER	0	0	0	0	0	219	219
	WEST TEXAS BOLSON	32	0	0	589	0	76	697
	Total	405	0	0	1,924	0	489	2,818
2003	CENOZOIC PECOS ALLUVIUM	153	0	0	0	0	0	153
	EDWARDS-TRINITY PLATEAU	0	0	0	0	0	89	89
	IGNEOUS	272	0	0	1,890	0	54	2,216
	OTHER	0	0	0	0	0	161	161
	WEST TEXAS BOLSON	29	0	0	835	0	56	920
	Total	454	0	0	2,725	0	360	3,539

NOTE: All Pumpage reported in acre-feet

Source: TWDB Water Use Survey Database

(<http://www.twdb.state.tx.us/wushistorical/DesktopDefault.aspx?PageID=2>)

Presidio County

Year	Aquifer	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1991	IGNEOUS	721	0	0	31	0	103	855
	OTHER	46	0	0	0	0	188	234
	WEST TEXAS BOLSON	539	0	0	429	10	188	1,166
	Total	1,306	0	0	460	10	479	2,255
1992	IGNEOUS	707	0	0	163	0	102	972
	OTHER	58	0	0	0	0	186	244
	WEST TEXAS BOLSON	541	0	0	2,259	10	186	2,996
	Total	1,306	0	0	2,422	10	474	4,212
1993	IGNEOUS	794	0	0	130	0	102	1,026
	OTHER	62	0	0	0	0	185	247
	WEST TEXAS BOLSON	594	0	0	1,809	10	185	2,598
	Total	1,450	0	0	1,939	10	472	3,871
1994	IGNEOUS	831	0	0	575	0	123	1,529
	OTHER	69	0	0	0	0	223	292
	WEST TEXAS BOLSON	710	0	0	1,150	10	223	2,093
	Total	1,610	0	0	1,725	10	569	3,914
1995	IGNEOUS	811	0	0	656	0	102	1,569

	OTHER	45	0	0	0	0	185	230
	WEST TEXAS BOLSON	817	0	0	1,313	10	185	2,325
	Total	1,673	0	0	1,969	10	472	4,124
1996	IGNEOUS	788	0	0	672	0	78	1,538
	OTHER	42	0	0	0	0	141	183
	WEST TEXAS BOLSON	710	0	0	1,344	10	141	2,205
	Total	1,540	0	0	2,016	10	360	3,926
1997	IGNEOUS	716	0	0	1,059	0	78	1,853
	OTHER	35	0	0	0	0	141	176
	WEST TEXAS BOLSON	677	0	0	2,119	10	141	2,947
	Total	1,428	0	0	3,178	10	360	4,976
1998	IGNEOUS	784	0	0	1,065	0	128	1,977
	OTHER	39	0	0	0	0	231	270
	WEST TEXAS BOLSON	716	0	0	2,131	10	231	3,088
	Total	1,539	0	0	3,196	10	590	5,335
1999	IGNEOUS	790	0	0	704	0	140	1,634
	OTHER	40	0	0	0	0	253	293
	WEST TEXAS BOLSON	796	0	0	1,407	10	253	2,466
	Total	1,626	0	0	2,111	10	646	4,393
2000	IGNEOUS	833	0	0	854	0	128	1,815
	OTHER	42	0	0	0	0	231	273
	WEST TEXAS BOLSON	406	0	0	1,710	10	231	2,357
	Total	1,281	0	0	2,564	10	590	4,445
2001	IGNEOUS	693	0	0	808	0	128	1,629
	OTHER	43	0	0	0	0	231	274
	WEST TEXAS BOLSON	956	0	0	1,617	10	231	2,814
	Total	1,692	0	0	2,425	10	590	4,717
2002	IGNEOUS	655	0	0	1,710	0	112	2,477
	OTHER	44	0	0	0	0	202	246
	WEST TEXAS BOLSON	958	0	0	3,422	10	202	4,592
	Total	1,657	0	0	5,132	10	516	7,315
2003	IGNEOUS	658	0	0	1,370	0	70	2,098
	OTHER	46	0	0	0	0	126	172
	WEST TEXAS BOLSON	961	0	0	2,740	10	126	3,837
	Total	1,665	0	0	4,110	10	322	6,107

NOTE: All Pumpage reported in acre-feet

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

Jeff Davis County Underground Conservation District-Specific Projected Groundwater Pumpage Totals - Presidio County

Year	Aquifer	Municipal ¹	Manufacturing ¹	Steam Electric ¹	Irrigation ¹	Mining ¹	Livestock ²	Total
1999	IGNEOUS	0	0	0	0	0	0.6	0.6
	OTHER	0	0	0	0	0	1.1	1.1
	WEST TEXAS BOLSON	0	0	0	0	0	1.1	1.1
	Total	0	0	0	0	0	2.8	2.8
2000	IGNEOUS	0	0	0	0	0	0.6	0.6
	OTHER	0	0	0	0	0	1.0	1.0
	WEST TEXAS BOLSON	0	0	0	0	0	1.0	1.0
	Total	0	0	0	0	0	2.6	2.6
2001	IGNEOUS	0	0	0	0	0	0.6	0.6
	OTHER	0	0	0	0	0	1.0	1.0
	WEST TEXAS BOLSON	0	0	0	0	0	1.0	1.0
	Total	0	0	0	0	0	2.6	2.6
2002	IGNEOUS	0	0	0	0	0	0.5	0.5
	OTHER	0	0	0	0	0	0.9	0.9
	WEST TEXAS BOLSON	0	0	0	0	0	0.9	0.9
	Total	0	0	0	0	0	2.3	2.3
2003	IGNEOUS	0	0	0	0	0	0.3	0.3
	OTHER	0	0	0	0	0	0.6	0.6
	WEST TEXAS BOLSON	0	0	0	0	0	0.6	0.6
	Total	0	0	0	0	0	1.4	1.4
NOTE: All Pumpage reported in acre-feet								
Source: TWDB Water Use Survey Database (http://www.twdb.state.tx.us/wushistorical/DesktopDefault.aspx?PageID=2)								

¹ The Jeff Davis County Underground Conservation District includes only one ranch within Presidio County, and therefore, the only group for which groundwater pumped was livestock. For this reason, all other water user group categories have been removed from the District specific table.

² The Presidio County livestock estimated total groundwater pumpage was apportioned by the percent area included within the District. This percent area included within the District equals 0.44 percent (0.0044) of Presidio County as discussed in the 'Location and Extent' section.

Water exported out of Jeff Davis County Underground Conservation District is as follows from Jeff Davis County:

2007	992 acre-feet/year
2006	939 acre-feet/year
2005	983 acre-feet/year
2004	1182 acre-feet/year
2003	1232 acre-feet/year
2002	1282 acre-feet/year
2001	1184 acre-feet/year
2000	1225 acre-feet/year
1999	1073 acre-feet/year
1998	1154 acre-feet/year

This data was obtained from meters read by JDCUWCD.

No water is exported from Presidio County

Projected Water Demands

This management plan is based upon the estimates received from “Far West Texas Regional Water Plan, 2007. The FWTRWP has projected that the total water demands for Jeff Davis County will be 1689 acre-feet per year by 2060. This estimate is based on projections of the following breakdown.

Jeff Davis County

RWPG	Water User Group	County	River Basin	2000	2010	2020	2030	2040	2050	2060
E	Fort Davis	Jeff Davis	Rio Grande	251	371	410	453	453	453	453
E	County Other*	Jeff Davis	Rio Grande	157	167	169	169	169	169	169
E	Irrigation*	Jeff Davis	Rio Grande	579	576	572	569	566	563	559
E	Livestock*	Jeff Davis	Rio Grande	508	508	508	508	508	508	508
Total Projected Water Demands (acre-feet per year) =				1,495	1,622	1,659	1,699	1,696	1,693	1,689

Source: Volume 3, 2007 State Water Planning Database

* Since the District does cover all of Jeff Davis County no proportional estimate is necessary. Total county-wide data are sufficient.

Presidio County

RWPG	Water User Group	County	River Basin	2000	2010	2020	2030	2040	2050	2060
E	County Other*	Presidio	Rio Grande	0.4	0.4	0.3	0.3	0.2	0.2	0.2
E	Mining*	Presidio	Rio Grande	0.04	0.03	0.03	0.03	0.03	0.03	0.03
E	Irrigation*	Presidio	Rio Grande	90	88	87	85	83	81	80
E	Livestock*	Presidio	Rio Grande	3	3	3	3	3	3	3
Total Projected Water Demands (acre-feet per year) =				93	91	90	88	86	84	83

Source: Volume 3, 2007 State Water Planning Database

* Since the District does not cover all of Presidio County, it is recommended that all estimates presented in the management plan be based on a proportional area percentage. This percentage can be derived by dividing the amount of acres or square miles covered by the District by the total number of acres or square miles contained within Presidio County. The percentage derived by the T.W.D.B. is 0.44% (i.e. 0.0044; see the 'Area' tab), but any estimate that the District provides is preferable. It is recommended that the generic county-wide data (e.g. county other, manufacturing, steam electric power, irrigation, livestock) be converted to a percentage of the total county-wide data. These generic county-wide data have been converted to a proportional value (relative to the size of the District) by multiplying each value from the 'County Water Demands' worksheet by 0.0044.

Projected Water Management Strategies

Jeff Davis County

RWPG	WUG	WUG County	River Basin	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
E	ND	Jeff Davis	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Projected Water Management Strategies (acre-feet per year) =							ND	ND	ND	ND	ND	ND

Source: Volume 3, 2007 State Water Planning Database
 ND = no data

Presidio County

RWPG	WUG	WUG County	River Basin	Water Management Strategy	Source Name	Source County	2010	2020	2030	2040	2050	2060
E	Irrigation	Presidio	Rio Grande	Irrigation Water Use Management	Conservation	Presidio	0	0	0	0	0	0
E	Irrigation	Presidio	Rio Grande	Land Management Systems	Conservation	Presidio	0	0	0	0	0	0
E	Irrigation	Presidio	Rio Grande	On-Farm Water delivery Systems	Conservation	Presidio	0	0	0	0	0	0
E	Irrigation	Presidio	Rio Grande	Water District Delivery Systems	Conservation	Presidio	0	0	0	0	0	0
E	Irrigation	Presidio	Rio Grande	Miscellaneous Systems	Conservation	Presidio	0	0	0	0	0	0
Total Projected Water Management Strategies (acre-feet per year) =							0	0	0	0	0	0

Source: Volume 3, 2007 State Water Planning Database

Projected Water Supply Capacity

WUG	Source Name	Infrastructure Capacity Per Source	2010	2020	2030	2040	2050	2060
Fort Davis	Igneous Aquifer	912	912	912	912	912	912	912
County-Other	Edwards-Trinity-Plateau Aquifer	3						
County-Other	Igneous Aquifer	151						
County-Other	West Texas Bolson Aquifer	8						
	Total for infrastructure capacity		162	162	162	162	162	162
Irrigation	Igneous Aquifer	735						
Irrigation	West Texas Bolson Aquifer	2572						
	Total for infrastructure capacity		3307	3307	3307	3307	3307	3307
Livestock	Edwards-Trinity-Plateau Aquifer	141						
Livestock	Igneous Aquifer	84						
Livestock	Other Aquifer	253						
Livestock	West Texas Bolson Aquifer	85						
	Total for infrastructure capacity		563	563	563	563	563	563

This data was obtained from “Far West Texas Regional Water Plan”, 2007.

Projected Surface Water Supply

Jeff Davis County

RWPG	Water User Group	County	River Basin	Source Name	2000	2010	2020	2030	2040	2050	2060
E	ND	Jeff Davis	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Projected Surface Water Supplies (acre-feet per year) =					0	0	0	0	0	0	0

Source: Volume 3, 2007 State Water Planning Database
 ND = No Data

Presidio County

RWPG	Water User Group	County	River Basin	Source Name	2000	2010	2020	2030	2040	2050	2060
E	Irrigation	Presidio	Rio Grande	Lower Rio Grande River Combined Run-of-River	0	10,853	10,853	10,853	10,853	10,853	10,853
Total Projected Surface Water Supplies (acre-feet per year) =					0	10,853	10,853	10,853	10,853	10,853	10,853

Source: Volume 3, 2007 State Water Planning Database

Jeff Davis County UWCD-Specific Projected Surface Water Supplies - Presidio County

RWPG	Water User Group	County	River Basin	Source Name	2000	2010	2020	2030	2040	2050	2060
E	Irrigation	Presidio	Rio Grande	Lower Rio Grande River Combined Run-of-River	0	0	0	0	0	0	0
Total Projected Surface Water Supplies (acre-feet per year) =					0	0	0	0	0	0	0

Source: Volume 3, 2007 State Water Planning Database - District estimates

The Jeff Davis County Underground Conservation District includes only one ranch within Presidio County, which supplies all of its livestock water demands from groundwater sources. Therefore, no surface water supplies are available within the area in Presidio County that is included within the Jeff Davis County UWCD. For this reason, all surface water projections have been removed from the District-specific table.

PROJECTED WATER NEEDS

Jeff Davis County

RWPG	WUG	County	River Basin	2010	2020	2030	2040	2050	2060
E	Fort Davis	Jeff Davis	Rio Grande	0	0	0	0	0	0
E	County Other	Jeff Davis	Rio Grande	0	0	0	0	0	0
E	Irrigation	Jeff Davis	Rio Grande	0	0	0	0	0	0
E	Livestock	Jeff Davis	Rio Grande	0	0	0	0	0	0
Total Projected Water Needs (acre-feet per year) =				0	0	0	0	0	0

Source: Volume 3, 2007 State Water Planning Database

Presidio County

RWPG	WUG	County	River Basin	2010	2020	2030	2040	2050	2060
E	Marfa	Presidio	Rio Grande	0	0	0	0	0	0
E	Presidio	Presidio	Rio Grande	0	0	0	0	0	0
E	County Other	Presidio	Rio Grande	0	0	0	0	0	0
E	Mining	Presidio	Rio Grande	0	0	0	0	0	0
E	Irrigation	Presidio	Rio Grande	-3,546	-3,148	-2,757	-2,374	-1,999	-1,632
E	Livestock	Presidio	Rio Grande	0	0	0	0	0	0
Total Projected Water Needs (acre-feet per year) =				-3,546	-3,148	-2,757	-2,374	-1,999	-1,632

Source: Volume 3, 2007 State Water Planning Database

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 the 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 a reduction of groundwater use. An observation network shall be established and maintained in order to monitor changing storage conditions of groundwater supplies within the District. The District will make regular assessments 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 co-operate with investigations of the groundwater resources within the District and will make the results of investigations available to the public upon adoption of the Board.

The District has rules to regulate groundwater withdrawals by means of 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.

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

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

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 permit 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 provide 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 provision 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 36 and the provisions of this plan. All rules will be adhered to and enforced. The promulgation and enforcement of the rules will be based on the best technical evidence available.

The district shall treat all citizens with equality. Citizens may apply to the District for discretion in enforcement of the rules on grounds of adverse economic effects or unique local conditions. In granting of discretion to any rule, the Board shall consider the potential for adverse effects 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 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 last monthly Board of Directors meeting each fiscal year, beginning December 31, 2000). 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 Providing the Most Efficient Use of Groundwater.

Management Objective

1.1 Each year, require meters to be installed on all production wells.

Performance Standard

1.1a - Each year, provide a report to the Board of Directors indicating the number of meters installed on new wells in the District and the location and ownership.

Management Objective

1.2 All current existing rules and regulations will be reviewed and amended to address the needs of the District every three years.

Performance Standard

1.2a - Each year, report to the Board of Directors the number of changes required to keep District rules updated to District needs.

Goal

2.0 Controlling and Preventing Waste of Groundwater.

Management Objective

2.1 Each year, investigate all reports of wasteful practices within the District.

Performance Standards

2.1a - Each year, locate all complaint sites on a District map.

2.1b - Each year, provide a report to the Board of Directors indicating the number of complaint sites.

Management Objective

2.2 Each year, register all new wells drilled in the District.

Performance Standards

2.2a - District will maintain files including information on the drilling and completion of all new wells in the District.

2.2b - Annually report to the Board of Directors on the number of new wells registered during the year.

Goal

3.0 Implement management strategies that will address drought conditions.

Management Objective

3.1 - The District will monitor the Palmer Drought Severity Index (PDSI) by Texas Climatic Divisions. If PDSI indicates that the District will experience severe drought conditions, the District will notify all public water suppliers within the District.

Performance Standard

3.1a - The District staff will monitor the PDSI and report the number of times the PDSI is less than 1 (mild drought) to the District Board on a quarterly basis.

Goal

4.0 Implement management strategies that will promote water conservation.

Management Objective

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

Performance Standard

4.1a - Each year, report to the Board of Directors the number of water conservation literature packets handed out.

Goal

5.0 Rainwater Harvesting, Recharge Enhancement, Precipitation Enhancement, and Brush Control where appropriate.

Management Objective: Rainwater Harvesting

5.1 Provide demonstrations on the rainwater harvesting system installed at District office.

Performance Standards

5.1a - District staff will provide information about rainwater harvesting through demonstrations of the system installed at District office

5.1b – Each year, report to the Board of Directors the number of demonstrations given on rainwater harvesting.

Management Objective – Recharge Enhancement

5.2 Not Applicable – not cost effective

Management Objective – Precipitation Enhancement

5.3 Not Applicable – not cost effective

Management Objective – Brush Control

5.4 Not Applicable – not cost effective

SB - 1 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 Addressing conjunctive surface water management issues.

There is no surface water within the District.

Goal

4.0 Addressing the Desired Future Conditions.

The desired future conditions of the groundwater within the District have not yet been established in accordance with Chapter 36.108 of the Texas Water Code. The District is actively participating in the joint planning process and the development of a desired future condition for the portion of the aquifer(s) within the District. Therefore, this goal is not applicable to the District at this time

SUMMARY DEFINITIONS

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

“District” - the Jeff Davis County Underground Water Conservation District.

“TWDB” - Texas Water Development Board.

“Waste” - as defined by Chapter 36 of the Texas Water Code means any one or more of the following:

1. Withdrawal of groundwater from a groundwater reservoir at a rate and in a 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 salt water 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 a 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 of the Texas Water Code;
6. Groundwater pumped for irrigation that escapes as irrigation tail water 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.
7. For water produced from an artesian well “waste” has the meaning assigned by Section 11.205 of the Texas Water Code.