September 10, 2003

Executive Director
Texas Water Development Board
ATTN: Rima Petrossian
Manager, Groundwater Technical Assistance
Box 13231
Austin, Texas 78711-3231

Subject: Panhandle Groundwater Conservation District Management Plan


Attached are:

1. A copy of the adopted Management Plan
2. A certified copy of the District's resolution adopting the plan
3. Copies of notice and hearing documents
4. Copy of minutes of hearing
5. Copies of post-hearing comments received from a surface water entity (Canadian River Municipal Water Authority (CRMWA)) located within the District. No other comments were submitted by surface water entities.
7. Copy of a letter from the regional water plan administrator indicating that there are no conflicts with the Regional Water Plan.

Ray Brady
Geologist
Enclosures
PANHANDLE GROUNDWATER
CONSERVATION DISTRICT
MANAGEMENT PLAN

July 2003
PANHANDLE GROUNDWATER
CONSERVATION DISTRICT

BOARD OF DIRECTORS

Charles Bowers, President Precinct 4
Phillip Smith, Vice-President Precinct 1
Jason C. Green, Secretary Precinct 5
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Robert A. Clark, Director Precinct 7
Danny Hardcastle, Director Precinct 8
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John McKissack, Director Precinct 9
Billy Van Crawford, Director Precinct 2

DISTRICT STAFF
C. E. Williams, General Manager
Ray Brady, Asst. Manager/Geologist/Engineer
Yvonne Thomas, Administrative Assistant
Bart Wyatt, Education/Field/Lab
Amy D. Crowell, Hydrologist
Kari K. Wilson, Secretary
Alvin G. Stamps, Field Tech.
Orlando Nunez, Meteorologist

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DISTRICT MISSION

The Panhandle Groundwater Conservation District will strive to develop, promote, and implement water conservation, augmentation, and management strategies to protect water resources for the benefit of the citizens, economy, and environment of the District.

TIME PERIOD FOR THIS PLAN

This plan, which uses a ten-year planning horizon, becomes effective upon adoption by the Board of Directors, and remains in effect until a revised plan is certified, or October 1, 2013, whichever is earlier.

STATEMENT OF GUIDING PRINCIPLES

The District recognizes that the groundwater resources of the region are of vital importance. The Ogallala aquifer, the main aquifer within the District, is a limited groundwater resource and must be conserved and preserved for future generations. The preservation of this most valuable resource can be managed in a prudent and cost effective manner through conservation, education, regulation, and permitting. The District’s overall management standard is to have 50% of current supplies, or saturated thickness, still available fifty (50) years after the first certification of this plan. The Texas Water Development Board originally certified this plan in 1998. Therefore the District’s management standard is to have 50% of the 1998 saturated thickness remaining in 2048. Maintaining the 50% standard will be accomplished using the District’s depletion rules and procedures. This management document is the tool to focus the thoughts and actions of those given the responsibility for the execution of District activities.
General Description

Panhandle Groundwater Conservation District (PGCD) consists of Carson, Donley, Gray, Roberts, and Wheeler counties, along with parts of Armstrong, Hutchinson, Hemphill, and Potter counties. The District was created by legislature in 1955 and it began operating in portions of Gray, Carson, Potter, and Armstrong counties. Elections were held in 1988, 1991, 1994, 1997, and 2000 to annex the remaining portions of the District within the present boundaries. The current Board of Directors is: Charles Bowers, President; Phillip Smith, Vice President; Jason Green, Secretary; and Directors Jim Thompson, Robert A. Clark, Danny Hardcastle, John R. Spearman Jr., John McKissack, and Billy Van Crawford. General Manager of the District is C.E. Williams.

Panhandle Groundwater Conservation District’s areal extent is 6,309 square miles. The District’s economy is dominated by agricultural and petrochemical production. The agricultural income sources include beef cattle production, wheat, corn, milo, peanuts, soybeans, sunflowers, hay crops, and cotton. Petroleum production also contributes significantly to the income of the District. There are also chemical, manufacturing, and nuclear weapons industries located in the District.

Within the District boundaries, there are over 4,400 irrigation wells capable of producing water to meet the needs of the agricultural community. The District has 189 municipal or public supply wells, 207 wells for industrial use, and oil and gas secondary recovery (water flood) operations. The remaining wells are registered, non-permitted water supplies for household and livestock consumption.
Location and Extent

The Panhandle Groundwater Conservation District has an area of approximately four million acres located in the Panhandle region of Texas, extending from west of Amarillo to the Oklahoma border. The Canadian River to the north and Salt Fork of the Red River to the south generally border it.

Topography and Drainage

The area contains rolling plains that are used for cattle production, cultivation, and oil and gas activities. There is a substantial area of flat plains that contain numerous playa basins. This area is used primarily for crop production. The altitude of the land surface ranges from 2,005 feet to 3,800 feet above mean sea level. The District lies within, and between, the drainage systems of both the Canadian River Basin and the Red River Basin.

Groundwater Resources

The primary aquifer within the District is found in sediments of the Ogallala Formation of Miocene age. The High Plains aquifer, the primary source of groundwater, yields water from the unconsolidated sands, clay, and silt of the Ogallala Formation. Groundwater movement is generally to the northeast, away from groundwater and topographic highs and towards the surface drainage system. There are areas where flow is toward groundwater lows that have developed as a result of production in large well fields. Areas where irrigation wells are co-located with municipal well fields have experienced significant water table declines. Other irrigated areas have demonstrated varying water level declines.

The Seymour aquifer, classified as a major aquifer by the State of Texas, provides some water in the southeast corner of Wheeler County. The Seymour aquifer consists of isolated areas of alluvium, composed of poorly sorted gravel, conglomerate, sand, and silty
clay. The Seymour aquifer is found in the sediment of the Seymour Formation, which was deposited in the Quaternary Period. There have been no significant declines in the Seymour aquifer within the District, but the water quality may have been degraded due to past oilfield activities.

There are three minor aquifers within the District. The Blaine aquifer is a minor aquifer located in the southern portion of Wheeler County. The aquifer is contained in the Permian age Blaine Formation. Water is found in solution channels formed by dissolving deposits of anhydrite and halite within the formation and associated with the Dog Creek Shale. The dissolving salts raise the Total Dissolved Solids (TDS) to levels above drinking water standards, so the Blaine aquifer is used mainly for agricultural purposes.

The Dockum Group, which contains the Santa Rosa Formation, furnishes limited amounts of household, livestock and irrigation water within the District. The Dockum Group contains Triassic age shales, sandstones, and siltstones where it is found within the District. Water production from the Dockum Group aquifers occurs in Armstrong, Potter and southwest Carson counties.

In 2002, the portion of the Ogallala aquifer within the District had an estimated 77,000,000 acre-feet of water in storage (PRWP, 2001; PGCD calculations, 2002). Estimated recoverable water in the Dockum aquifer is 168,000 acre-feet (Appendix L, PRWP, 2001; PGCD calculations, 2002). The estimated recoverable water in storage for the Seymour and Blaine aquifers are 159,000 acre-feet and 140,000 acre-feet, respectively (PRWP, 2001; PGCD calculations, 2002). The Whitehorse Group furnishes small amounts of water where no other sources are available. The recoverable water was therefore estimated to be equal to ten times average historical pumpage as outlined in the Regional
Water Plan (Appendix L, PRWP, 2001; PGCD calculations, 2002). Total estimated groundwater resources within the District are summarized in Table 1.

<table>
<thead>
<tr>
<th>AQUIFER</th>
<th>ESTIMATED STORED WATER, acre-feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ogallala</td>
<td>77,000,000</td>
</tr>
<tr>
<td>Dockum</td>
<td>168,000</td>
</tr>
<tr>
<td>Blaine</td>
<td>140,000</td>
</tr>
<tr>
<td>Seymour</td>
<td>159,000</td>
</tr>
<tr>
<td>Whitehorse</td>
<td>75,000</td>
</tr>
</tbody>
</table>

**DISTRICT TOTAL** | **77,542,000**

Table 1. Estimated stored water in the District aquifers

**Groundwater Recharge**

Primary sources of recharge to the Ogallala aquifer are infiltration of water from playa lakes and infiltration of precipitation. Localized infiltration of water from playa lakes is the main recharge mechanism in the part of the District located “above the caprock”, which generally includes the southern two-thirds of Carson county, northwest Armstrong county, the eastern one-fourth of Gray county, a small area in southern Roberts county and the eastern third of Potter county. The surface soils in this area are known as the Blackwater Draw formation. The recharge rates of the aquifer in this area are low, due to high evaporation rates and a low infiltration rate. The recharge of the Ogallala aquifer is not sufficient to meet the water needs in this area, and the saturated thickness of the aquifer is declining. Infiltration of precipitation over a general area is the main recharge mechanism.
in the remainder of the District. There is less published information available for these areas. Additional data and analysis will be required before accurate recharge estimates are available for use in groundwater supply calculations. Current analysis of groundwater resources is based on historical data and available data sets to generate digital descriptions of the aquifers, (i.e. Groundwater Modeling) as well as the available published estimates of recharge. Recharge as a source of supply has been considered an unreliable source in the District’s water supply estimates.

Published recharge rates for the aquifers are found in the Groundwater Availability Study (TWDB Report # 341, 1993), the Panhandle Region Groundwater Availability Model (GAM, 2001) and in the Regional Water Plan (PRWP, 2001). Additional information on the Ogallala was obtained from TWDB Report 288, 1984. The Ogallala was subdivided into 3 regions, based on the maps in TWDB Report 288 and in the GAM. Recharge values for each of the areas were then assigned, using the GAM values as a guide. There are many published recharge rates for the Ogallala Aquifer that vary significantly. The values listed in the table were determined to be the most representative of the conditions found in this District. No recharge data for the Whitehorse aquifers were located. The District estimated recharge to the Whitehorse formation aquifers based on soil types and infiltration data from the USDA-NRCS soil surveys (Estimates of Recharge to the Whitehorse Aquifer, PGCD, 2001). The recharge rates for the Dockum, Seymour, and Blaine aquifers are extracted from the Regional Water Plan (Appendix L, PRWP, 2001). The Dockum Group aquifers are under confined conditions in Carson county and the southeastern part of Potter County. Recharge in that area is insignificant (BEG Report of Investigation # 161, 1986). The Dockum Group is exposed on the surface in the northwest
two-thirds of Potter County. Recharge in that area is based on recharge data from the Regional Water Plan. Estimated recharge to the aquifers is summarized in Table 2.

<table>
<thead>
<tr>
<th>AQUIFER NAME</th>
<th>RATE, ac-ft /acre/year</th>
<th>AREA, acres</th>
<th>RECHARGE, ac-ft /year</th>
<th>REFERENCES &amp; DATA SOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLAINE</td>
<td>0.096</td>
<td>148,576</td>
<td>14,241</td>
<td>Table 3-3 &amp; Appx. L, PRWP; (Duffin, 1992)</td>
</tr>
<tr>
<td>DOCKUM</td>
<td>0.0017</td>
<td>176,000</td>
<td>300</td>
<td>Table 3-4 &amp; Appx. L, PRWP, 2001; PGCD calculations, 2002</td>
</tr>
<tr>
<td>OGALLALA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwater Draw</td>
<td>0.02</td>
<td>878,996</td>
<td></td>
<td>BEG Report of Investigation #288, 1984; Appx. K, PRWP, 2001; PGCD calculations, 2002</td>
</tr>
<tr>
<td>Upper Ogallala</td>
<td>0.04</td>
<td>1,444,064</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Ogallala</td>
<td>0.13</td>
<td>816,210</td>
<td>181,450</td>
<td></td>
</tr>
<tr>
<td>Total Ogallala</td>
<td></td>
<td>3,139,270</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEYMOUR</td>
<td>0.096</td>
<td>41,602</td>
<td>3,987</td>
<td>Table 3-2 &amp; Appx. L, PRWP; (Duffin, 1992)</td>
</tr>
<tr>
<td>WHITEHORSE</td>
<td>0.02</td>
<td>491,800</td>
<td>9,000</td>
<td>PRWP, 2001; PGCD, 2002</td>
</tr>
<tr>
<td>DISTRICT TOTAL</td>
<td></td>
<td></td>
<td>208,978</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Recharge estimates

The District has determined that the most feasible method of increasing natural recharge is to increase rainfall by initiating a rainfall enhancement program. This will decrease irrigation demand and increase recharge in those areas where recharge takes place. Cloud seeding operations began in May 2000. The purpose of the cloud seeding program is to add additional rainfall over an extended period (PGCD, 2000). One additional inch of rainfall could provide 2300 acre-feet of additional recharge within the District each year (PGCD, 2001).
Surface Water Resources of Panhandle Groundwater Conservation District

There are two major surface impoundments, Lake Meredith and Lake Greenbelt, used to supply water to cities inside and outside of the District. There are also numerous other small reservoirs used for agricultural purposes and environmental needs.

Lake Meredith is located in parts of Hutchinson, Moore, and Potter counties, and is operated by the Canadian River Municipal Water Authority (CRMWA) as a municipal and industrial water supply for eleven member cities of the Authority. The lake is owned by the United States Bureau of Reclamation and is operated as a National Recreation Area by the National Park Service. Water rights to impound water in the lake (up to 500,000 acre-feet may be held in conservation storage), and to divert water from it for municipal and industrial uses, are held by the Authority under certificates of adjudication issued by the State of Texas. Lake Meredith provides a primary supply for most of the cities that receive its water. Supplemental water is obtained from the High Plains Aquifer to complete the cities' needs. Water from the lake is blended with local groundwater by several cities. Other cities use the Lake water to supply their base demand, and rely upon their groundwater supplies to meet their peak demands. Pampa and Amarillo, which are within the boundaries of the District, follow the latter procedure. Calculated annual firm yield of Lake Meredith is 76,000 acre-feet, although permits originally granted to the Authority were for greater amounts. Therefore, for planning calculations, it is assumed to supply an average of 76,000 acre-feet per year (CRMWA, 1997), including during drought conditions, throughout the planning period to the year 2050. The Authority has a contract to provide 7.163 percent of the normal water supply from Lake Meredith to Pampa and 37 percent to Amarillo. CRMWA allocated 7,378 and 38,110 acre-feet of the Lake Meredith supply to
Pampa and Amarillo respectively, for calendar year 2000. Data was obtained from the Canadian River Municipal Water Authority.

The second surface impoundment is Greenbelt Lake, located in Donley County. Greenbelt Municipal & Industrial Water Authority (Greenbelt) is the proprietor and operator. The possible annual supply from this impoundment is 9,400 acre-feet; however, the 1996 yield was 4,525 acre-feet (Greenbelt, 1997). Therefore, it will be assumed to supply an average of 4,525 acre-feet per year, including during drought conditions, throughout the planning period to the year 2050. The Authority provided 488 acre-feet to Clarendon and 91 acre-feet to Hedley in calendar year 1996.

**Current Groundwater Supplies of Panhandle Groundwater Conservation District**

Table 3 shows the current available groundwater supplies within the District. The values in the table were extracted from Appendix L, PRWP, 2001. The District management standard is to have at least 50% of the 1998 benchmarked available groundwater, measured as saturated thickness, to be remaining in the year 2048. This will be accomplished by managing the groundwater usage within the District. The district rules mandate that the rate of decline within any monitoring sub-region (defined by rule and mapped as at least a 3-mile by 3-mile area) should not exceed a linear projection of the maximum allowable decline for any two consecutive years. The Board reserves the right to adjust the allowable withdrawals or percentage of the aquifer remaining, if the need arises.
<table>
<thead>
<tr>
<th>Aquifer</th>
<th>Supply for Year 2000 (acre-feet) (in storage)</th>
<th>50% of Year 2000 Supply (acre-feet) (available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater from the Dockum aquifer</td>
<td>168,000</td>
<td>84,000</td>
</tr>
<tr>
<td>Groundwater from the Ogallala aquifer</td>
<td>77,000,000</td>
<td>38,500,000</td>
</tr>
<tr>
<td>Groundwater from the Seymour aquifer</td>
<td>140,000</td>
<td>70,000</td>
</tr>
<tr>
<td>Groundwater from the Blaine aquifer</td>
<td>159,000</td>
<td>79,500</td>
</tr>
<tr>
<td>Groundwater from the Whitehorse aquifer</td>
<td>75,000</td>
<td>37,500</td>
</tr>
<tr>
<td>TOTAL</td>
<td>77,542,000</td>
<td>38,771,000</td>
</tr>
</tbody>
</table>

Table 3. Current Supply for 2000 and 50% of Current Supply

Projected Total Demands for Water Within the District From All Sources

The PWPG has projected that the total water demands for the District will be 347,261 acre-feet, by the year 2050. Table 4 below has the projections for each county in the District, as published in the Regional Water Plan – Panhandle Water Planning Area, January 2001. The Roberts County figures have been adjusted to include the 40,000 acre-feet per year permitted to the Canadian River Municipal Water Authority by the District. Each projection takes into account population growth, rainfall, conservation measures, and water use from all sources. Hutchinson county values are adjusted to District boundaries.
<table>
<thead>
<tr>
<th>County</th>
<th>Currently Developed Supply</th>
<th>Demand</th>
<th>Planned Developed Supply</th>
<th>Estimated Demand</th>
<th>Planned Developed Supply</th>
<th>Estimated Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armstrong</td>
<td>18,558</td>
<td>7,725</td>
<td>18,559</td>
<td>7,807</td>
<td>18,292</td>
<td>7,959</td>
</tr>
<tr>
<td>Donley</td>
<td>19,992</td>
<td>18,916</td>
<td>19,922</td>
<td>18,973</td>
<td>19,827</td>
<td>19,041</td>
</tr>
<tr>
<td>Gray</td>
<td>48,328</td>
<td>34,631</td>
<td>48,363</td>
<td>35,358</td>
<td>48,312</td>
<td>36,004</td>
</tr>
<tr>
<td>Hutchinson</td>
<td>4,755</td>
<td>3,361</td>
<td>4,892</td>
<td>3,518</td>
<td>4,985</td>
<td>3,776</td>
</tr>
<tr>
<td>Potter</td>
<td>76,639</td>
<td>74,730</td>
<td>85,069</td>
<td>83,822</td>
<td>47,428</td>
<td>93,975</td>
</tr>
<tr>
<td>Roberts</td>
<td>12,796</td>
<td>6,539</td>
<td>52,857</td>
<td>46,615</td>
<td>53,000</td>
<td>46,727</td>
</tr>
<tr>
<td>Wheeler</td>
<td>9,667</td>
<td>8,295</td>
<td>9,332</td>
<td>8,383</td>
<td>8,993</td>
<td>8,573</td>
</tr>
<tr>
<td>TOTAL</td>
<td>306,966</td>
<td>252,896</td>
<td>355,537</td>
<td>303,189</td>
<td>316,868</td>
<td>315,517</td>
</tr>
</tbody>
</table>

Table 4. Supply and Demand comparison by County (includes surface water) in years indicated.

**Potential Demand and Supply Issues and Solutions**

The current supply and demand balances within the District are as follows:

<table>
<thead>
<tr>
<th>County</th>
<th>Total Water</th>
<th>Supply</th>
<th>Demand</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARMSTRONG</td>
<td></td>
<td>18,558</td>
<td>7,725</td>
<td>0</td>
</tr>
<tr>
<td>CARSON</td>
<td></td>
<td>116,231</td>
<td>98,699</td>
<td>0</td>
</tr>
<tr>
<td>DONLEY</td>
<td></td>
<td>19,992</td>
<td>18,916</td>
<td>0</td>
</tr>
<tr>
<td>GRAY</td>
<td></td>
<td>48,327</td>
<td>34,631</td>
<td>0</td>
</tr>
<tr>
<td>HUTCHINSON</td>
<td></td>
<td>3,464</td>
<td>3,361</td>
<td>0</td>
</tr>
<tr>
<td>POTTER</td>
<td></td>
<td>76,637</td>
<td>74,730</td>
<td>0</td>
</tr>
<tr>
<td>ROBERTS</td>
<td></td>
<td>12,796</td>
<td>6,539</td>
<td>0</td>
</tr>
<tr>
<td>WHEELER</td>
<td></td>
<td>9,667</td>
<td>8,295</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>305,672</td>
<td>252,896</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5. Year 2000 Supply and Demand by County (acre-feet/year).

Table 6 shows the District’s estimated needs in 2050. A need is determined if the projected demands exceed the supply. The total need for a county is based on the difference of the total supply and total demands for the county. While there may be a need for one or more counties, there may be sufficient supply for the District.
<table>
<thead>
<tr>
<th>County</th>
<th>Supply</th>
<th>Demand</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARMSTRONG</td>
<td>18,292</td>
<td>7,959</td>
<td>0</td>
</tr>
<tr>
<td>CARSON</td>
<td>116,031</td>
<td>99,462</td>
<td>0</td>
</tr>
<tr>
<td>DONLEY</td>
<td>19,827</td>
<td>19,041</td>
<td>0</td>
</tr>
<tr>
<td>GRAY</td>
<td>48,312</td>
<td>36,004</td>
<td>0</td>
</tr>
<tr>
<td>HUTCHINSON</td>
<td>3,923</td>
<td>3,776</td>
<td>0</td>
</tr>
<tr>
<td>POTTER</td>
<td>48,046</td>
<td>93,975</td>
<td>-31,747</td>
</tr>
<tr>
<td>ROBERTS</td>
<td>53,000</td>
<td>46,727</td>
<td>0</td>
</tr>
<tr>
<td>WHEELER</td>
<td>8,993</td>
<td>8,573</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>316,424</strong></td>
<td><strong>315,517</strong></td>
<td><strong>-31,747</strong></td>
</tr>
</tbody>
</table>

Table 6: Year 2050 Needs by County (acre-feet/year).

The supply, demand and need values came from Table 4-1, PWPG, 2001, which determined the most likely set of conditions for each county. Hutchinson county values are adjusted to District boundaries. The values for Roberts County were adjusted to include the currently permitted CRMWA well field, which has a permit for 40,000 acre-feet per year. However, the District believes that these numbers are designed for regional planning. The methodology is not accurate on a local basis. The shortage in Potter County is municipal and agricultural. Much of the irrigated agricultural land in Potter County is being subdivided into housing tracts, thus reducing the demand for irrigation water. The City of Amarillo, the basis of the 2050 Potter County demand, has additional undeveloped groundwater rights that should enable the overall Potter County demand to be met. Other shortages will most likely be in localized agricultural areas of Armstrong and Carson counties. Some agricultural areas have already experienced shortages, and in places where the economics of pumping groundwater are not feasible, have ceased pumping. The supplies available from surface and groundwater seem to be sufficient to meet the needs of most of the agricultural communities during this planning period. One District goal is to gather more accurate irrigation use information and incorporate additional information.
into revised plans. Large-scale water exporting projects will significantly alter the water balances within the District, if implemented. Several such projects have been proposed.

**Municipal Water Supplies**

The District has provided individual water assessments for the cities of Claude, Groom, Lefors, McLean, Miami, Mobeetie, Panhandle, Shamrock, Skellytown, Wheeler, and White Deer. These assessments analyzed the needs of each city, and encourage those cities that have shortfalls to develop either additional surface water supplies or purchase additional groundwater rights. Lefors, McLean, Shamrock, Skellytown, and Wheeler may experience a shortage of drinking water within the next 30 years. Discussions of individual city needs follow.

**Claude**

The city of Claude currently receives all of its municipal supply from the Ogallala Aquifer and has sufficient supply to meet its needs through 2030. A new well field site southeast of the City has a saturated thickness between 80 and 100 feet, and could be developed to meet long-term needs. New wells could produce 100 to 150 gpm. Two new wells would be required to meet the 2050 peak demands. The reliability of the water is moderate depending on the other users of the aquifer.

**Groom**

The city of Groom derives all of its municipal water supply from the Ogallala Aquifer and has approximately 7,461 acre-feet of supply that should meet its needs until 2045. An additional well may be needed then.
Panhandle

The city of Panhandle derives all of its municipal supply from the Ogallala Aquifer. The City has sufficient supply to meet its needs through 2036. Two additional wells will be needed to meet the peak demands of the city in 2050. The quantity of water is available near the city is adequate, the reliability is moderate, depending on other aquifer users.

Skellytown

The city of Skellytown in Carson County relies solely on the Ogallala for its municipal water supply. Four production wells are currently used by the City and will provide enough supply to meet the needs until 2014. Additional new wells in the southeastern portion of the City could provide up to 200 gpm each. One additional well could supply the City's needs until 2050. If drawdown is excessive, an additional well may be needed.

White Deer

The city of White Deer derives its municipal supply from the Ogallala Aquifer. The City has adequate supply from its existing well fields to reach the year 2037. Two new wells in the southeastern portion of the city would be sufficient to supply the City's peak demand through 2050.

Lefors

The city of Lefors obtains its water supply from the Ogallala Aquifer wells. The City recently installed a new well with a production rate of 275 gpm. Based on the supply of this well and two other active wells, City should be able to provide the City's anticipated need through 2050 (approximately 90 acre-feet/year). However, the City is experiencing some problems with elevated chloride concentrations in some of its wells. These water quality concerns could require the City to seek additional alternative groundwater supply locations.
McLean

The city of McLean obtains its municipal supply from the Ogallala Aquifer. Five production wells are used by the City and will supply the City's needs through 2020. Two additional wells drilled northeast of the city could provide enough supply to meet the City's needs through 2050. There appears to be sufficient groundwater in the area to provide the City's needs until 2050. The reliability is moderate, depending on other Ogallala users and well production rates.

Shamrock

The city of Shamrock uses the Ogallala Aquifer to supply all of the City's municipal water. The eleven production wells currently used by the City can supply the City through 2032. The City could seek new groundwater rights for additional wells in the Ogallala west and northwest of the City. Also, it may be possible for the City to utilize two minor aquifers, the Seymour and the Blaine, to blend with water from the Ogallala to extend the supply. The City needs an additional total of approximately 2,900 acre-feet of water rights to meet its needs through 2050.

Wheeler

The City of Wheeler currently derives its municipal potable water supply from the Ogallala Aquifer from two (2) production wells. It is estimated that these could supply enough water to meet the City's needs through 2009; however, the current lease on groundwater rights for these two wells expires in 2003. The City purchased additional water rights in 2002.

The quality of the available (leased rights) water is an issue. To meet primary drinking water standards for nitrate concentrations, the City is blending water from the two production wells since the nitrate concentration in one of the wells exceeds the MCL of 10
mg/l. The practice of blending water from the two wells limits the amount of water taken from the larger of the two production wells, in effect reducing the production capacity of the well. Nitrate levels in the two existing water wells have been steadily increasing since 1983. These levels are expected to continue to rise, eventually rendering the water in the two existing wells non-potable. Should this occur an alternate source of water will have to be found, or the current well water would require treatment to reduce the levels of nitrate to below the drinking water standards. Recent exploration for water has revealed a potential source of acceptable groundwater located to the north of the City.

Short term needs in Wheeler can be met with additional groundwater supplies. The quantity of the groundwater currently available or to be purchased is apparently adequate to supply the City until 2050. Reliability is moderate to poor depending on nitrate concentration levels and potential movement or expansion of the nitrate contamination in the aquifer.

**Miami**

The City of Miami has approximately 40,000 acre-feet of recoverable groundwater reserves. These reserves appear to meet the needs of the city for at least the next 100 years (City of Miami, Texas Water Assessment, March, 1998).

**Pampa**

Pampa has sufficient water resources to meet projected demands. No needs were identified or predicted for Pampa's municipal use (Table 6, PRWP).

**Amarillo**

Amarillo currently has sufficient reserves of groundwater and surface water rights to meet their anticipated needs through 2050. Infrastructure for the groundwater reserves will need to be constructed to utilize part of the groundwater reserves.
County-Other, Potter County

The county-other demands in Potter County are approximately 2,100 acre-feet per year by 2050. Small water supply corporations supply a portion of these demands. The majority of the county-other supply in the county is from rural house wells. It is anticipated that this pattern will continue over the planning period. As a result, it is difficult to project a single strategy to meet the projected county-other needs (12,560 acre-feet by 2050). It is assumed that as demands increase, additional rural municipal wells will be installed.

Current and Projected Groundwater Demands

The current and projected groundwater demands within the District are summarized in Table 7. The units are acre-feet.

<table>
<thead>
<tr>
<th>PRODUCTION LOCATION</th>
<th>YEAR PRODUCED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2000</td>
</tr>
<tr>
<td>Armstrong</td>
<td>5,699</td>
</tr>
<tr>
<td>Carson</td>
<td>121,105</td>
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<tr>
<td>Donley</td>
<td>18,364</td>
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<tr>
<td>Gray</td>
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<tr>
<td>Hutchinson</td>
<td>17</td>
</tr>
<tr>
<td>Potter</td>
<td>13,054</td>
</tr>
<tr>
<td>Roberts</td>
<td>6,539</td>
</tr>
<tr>
<td>Wheeler</td>
<td>8,295</td>
</tr>
<tr>
<td><strong>DISTRICT TOTALS</strong></td>
<td><strong>204,262</strong></td>
</tr>
</tbody>
</table>

Table 7. Current and projected groundwater use within the Panhandle Groundwater Conservation District, measured in acre-feet

The year 2000 water use estimates are based on the Regional Water Plan Tables 4-2 and Water Transportation Reports submitted to the District by water users. Each county was examined to determine the source of the water demand. Armstrong, Carson, Donley, Roberts, and Wheeler counties were considered to use 100% Groundwater. In Armstrong County, irrigation demand was reduced in order to account for the portion of the
county outside the District. The Donley County total water demand was adjusted for municipal use since the cities of Clarendon and Hedley use surface water from Greenbelt Water System. The Gray County total water demand was reduced by the Pampa municipal demand, since the city obtains the majority of its water from Lake Meredith. Part of the municipal water demand for Randall County was included in the groundwater totals in order to account for the groundwater pumped from the Carson County well field by the City of Amarillo and furnished to municipal users in Randall County. The city of Amarillo lies partially in Randall County and also sells water to the City of Canyon, located entirely in Randall County. The Potter County groundwater demand was calculated by adjusting for (a.) the municipal demand to account for municipal water obtained from Lake Meredith and the Carson County well field; (b.) part of the irrigation demand to account for that portion of the county outside the Panhandle Groundwater Conservation District; (c.) the manufacturing demand to account for Carson County well field water furnished to manufacturers; (d) steam generation requirement which includes recycled wastewater, Lake Meredith water and Carson County well field water. The part of Hutchinson County that is within the District uses groundwater for livestock and domestic rural housing. Part of the current manufacturing demand in Hutchinson County is met by water pumped in Carson County. The estimated 2000 Groundwater withdrawal within the District was 204,262 acre-feet.

Year 2050 water use estimates are based on the Regional Water Plan Table 4-4, District Water Use Estimates, existing and pending District use permits, and known organized water supply projects. Each county was examined to determine the source of the water demand. Adjustments similar to the 2000 adjustments were made for Armstrong, Carson, Donley, Gray and Wheeler counties. Part of the municipal water demand for
Randall County was included in the groundwater total in order to account for the groundwater pumped by the City of Amarillo from the Proposed Roberts County well field and furnished to municipal users in Randall County. The City of Amarillo lies partially in Randall County and also sells water to the City of Canyon, located entirely in Randall County. The Potter County groundwater demand was calculated by taking the total water demand less (a.) the municipal demand to account for municipal water obtained from Lake Meredith and the CRMWA Roberts County well field; (b.) part of the Irrigation demand to account for that portion of the county outside the District (c.) part of the manufacturing demand to account for the water from Carson County well field furnished to manufacturing; and part of the livestock demand to account for feedlots in Potter County but outside the District boundary. After these deductions, 4050 acre-feet from a proposed well field in Northeastern Potter County was added. The total Hutchinson County water considers only livestock use on the rangeland that is located in the District. The Roberts County demand includes the county base use from Table 4-4, 40,000 acre feet for the CRMWA groundwater project, estimates for two proposed groundwater projects, and 20,000 acre feet for the city of Amarillo groundwater projects. The estimated 2050 groundwater demand is 389,985 acre–feet, including 193,200 acre-feet to be exported outside of the District.

**Drought Conditions**

The District will insure that each High-Impact Permit issued contains a drought contingency plan. The plans will be reviewed periodically and compared to published drought indices.

A drought contingency plan to cope with the effects of water supply deficits, due to climatic or other conditions, will be developed by the District and will be adopted by the Board, after notice and hearing. In developing the contingency plan, the District will
consider the economic effect of conservation measures upon all water resource user
groups, the local implications of the degree and effect of changes in water storage
conditions, the unique hydrogeologic conditions of the aquifers within the District, and the
appropriate conditions under which to implement the drought contingency plan.

GOALS, MANAGEMENT OBJECTIVES, AND PERFORMANCE STANDARDS

Management of Groundwater Supplies

For almost fifty years, the District has managed and will continue to manage the
supply of groundwater within the District, in order to conserve and preserve the limited
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 its
boundaries, the District will continue to identify and engage in such activities and practices
that, if implemented, would result in a reduction of groundwater use. The observation
network will continue to be reviewed and maintained in order to monitor changing storage
conditions of groundwater supplies within the District. The District will make a periodic
assessment of water supply and groundwater storage conditions and will report those
conditions to the Board and to the public. The District will continue to 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 by
the Board.

The District has, or will amend as necessary, rules to regulate groundwater
withdrawals by means of spacing, depletion, and production limits. The relevant factors to
be considered in making the determination to grant a permit or limit groundwater
withdrawals will include:
1. The purpose of the District and its rules;

2. The equitable conservation and preservation of the resource; and

3. The economic hardship resulting from granting or denying a permit or the terms prescribed by the rules.

In pursuit of the District’s mission of preserving and protecting the resource, the District may require reduction of groundwater withdrawals to amounts that would lessen adverse affects to the aquifer. To achieve this purpose, the District may, at the Board’s discretion, amend any permits after notice and hearing. The District’s determination to seek a permit amendment will be based on current and projected aquifer conditions observed by the District. The District will enforce the permit terms and conditions and the District rules by enjoining the permit holder in a court of competent jurisdiction, as provided for in TWC 36.102, if required, after exhausting other remedies.

The District will utilize all technical resources at its disposal to evaluate the resources available within the District and to determine the effectiveness of regulatory or conservation measures. A public or private user may appeal to the Board for discretion in enforcement of the provisions of the water supply deficit contingency plan on grounds of adverse economic hardship or unique local conditions. The exercise of this discretion by the Board shall not be construed as limiting the power of the Board.

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 has adopted, and will amend as necessary, rules relating to the permitting of wells, depletion, and the production of groundwater. The rules adopted by the District shall be pursuant to Texas Water Code, Chapter 36, and the provisions of this plan. All rules will be adhered to and enforced. The promulgation and enforcement of the rules will be based on the best technical evidence available.

The District shall treat all citizens equally. Citizens may apply to the District for discretion in enforcement of the rules on grounds of adverse economic effect or unique local characteristics. In granting of discretion to any rule, the Board shall consider the potential for adverse effect on adjacent owners and aquifer conditions. 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. All activities of the District will be undertaken in cooperation and coordination with local owners and the appropriate state, regional, or local water management entities.

Methodology for tracking progress in achieving goals and management objectives.

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

The planned tasks and activities related to each Goal and its management objectives will be recorded. The accomplishment of each task will be recorded. The reports and records will be used to provide information for an annual status report. The
status of each management objective will be reported in the annual report to the Board. Implementation of this system is included in Goal 6, Management Objective 6.1.

The District manager will prepare and present an annual report to the Board of Directors during the last monthly Board of Directors meeting each calendar year, beginning December 1999. The manager’s report will cover the District’s performance in achieving the management goals and objectives. Included will be 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. Copies of the annual report will be maintained on file at the District office.

Goal 1.0 Retain 50% of current supplies, in 50 years (in 2048).

Management Objective 1.1

The District will develop a system for measurement and evaluation of groundwater supplies.

Actions and Procedures

1. Develop a tracking system to review changes in water supplies.

Performance Standards

1. A baseline volume and saturated thickness, for the District, will be determined by January 1, 2004.

2. A tracking mechanism will be developed by January 1, 2004.

3. Update volume and saturated thickness values at least every 5 years.
Management Objective 1.2

Develop a groundwater modeling capability for the District.

Actions and Procedures

1. Implement a district groundwater model based on the Region A GAM.

2. Evaluate aquifer decline in permitted well field projects located within the District.

Performance Standards

1. Implement system by August 31, 2005

2. Produce well field evaluation maps of the permitted projects by August 31, 2005.

Goal 2.0 Implement strategies that will provide most efficient groundwater use.

Management Objective 2.1

Encourage efficient groundwater use by continuing a program of annual groundwater static level measurements and reporting.

Actions and Procedures

1. Measure water levels of the wells in the District’s water level network.

2. Generate annual depletion maps from the water level measurements.

3. Install additional monitoring wells in locations designed to evaluate the effects of high-impact pumping operations.

Performance Standard

1. Measure 90% of the wells in the water level network annually by March 1.

2. Record the water level measurement data annually by March 30.
3. Publish an annual depletion map by July 1.

4. Obtain IRS approval of the annual depletion map by December 30.


**Management Objective 2.2**

Encourage efficient groundwater use by increasing the use of LEPA, low pressure, and other efficient sprinkler systems, which will decrease the use of less efficient row irrigation. This will be accomplished by increasing the use of the District’s Agricultural Water Conservation Equipment Loan Program, with funds obtained from the Texas Water Development Board.

**Actions and Procedures**

1. Increase awareness of the loan program by publicity releases in local newspapers and the District’s newsletter, the *Panhandle Water News* (*PWN*).

2. Provide timely response to loan applicants.

**Performance Standard**

1. Include a reminder about the loan program in each quarterly issue of *PWN*, as long as funds are available at competitive rates.

2. Provide an article about the loan program to all local newspapers, annually.

3. Process all loan applications within thirty (30) days.

**Management Objective 2.3**

Encourage efficient groundwater use by disseminating educational information regarding the current conservation practices for efficient use of water resources.
Actions and Procedures

1. Publish a newsletter

2. Distribute irrigation efficiency information

3. Sponsor irrigation efficiency demonstrations

Performance Standard

1. Publish *Panhandle Water News (PWN)* quarterly.

2. Establish a section on the District’s website encouraging efficient irrigation practices within the District by January 1, 2004.

3. Co-sponsor an annual field demonstration of efficient irrigation practices, starting in calendar year 2004.

Management Objective 2.4

Encourage efficient groundwater use by maintaining local control and the private ownership of groundwater rights.

Actions and Procedures

1. Maintain active membership and participation in the Texas Alliance of Groundwater Districts (TAGD), Texas Water Conservation Association (TWCA), and Groundwater Management Districts Association (GMDA).

2. Monitor the Texas Register, Federal Register, Texas Legislative Notices, TAGD, TWCA, and GMDA, via Internet and publications, for groundwater proposals affecting private property rights each week.
3. Attend legislative hearings and give testimony on groundwater issues that might potentially affect private property rights of groundwater users.

4. Monitor, review, and make comments, as appropriate, on rules, regulations, and programs initiated by TCEQ and TWDB, which concern groundwater use.

Performance Standard

1. Annually, attend and participate in 80% of TAGD, TWCA, and GMDA meetings and functions.

2. Review each source weekly.

3. Annually attend, at least 75% of scheduled legislative hearings concerning groundwater usage and private ownership of groundwater.

4. Annually attend, monitor, and make comment, as appropriate, on rules, regulations, programs, and orders issued by TCEQ and TWDB.

Management Objective 2.5

Encourage efficient groundwater use by continuing a program of flow meter installation, monitoring, and water use by crop and irrigation type.

Actions and Procedures

1. Read and record flow meter data from approximately 190 meters in the District.

2. Maintain and replace meters.

3. Provide annual reports to cooperating landowners.

4. Provide the previous year’s crop water use information to TWDB.
Performance Standard

1. Read meters bi-monthly during primary irrigation season (May – October) and end of the year (December) annually.

2. Report replaced/repaired meters to the board at the next board meeting.

3. Prepare summary reports for cooperating operators by March 1 annually.

4. Prepare an analysis of crop use information by June 1 annually.

5. Provide previous year’s water use data to TWDB by April 1 annually.

Goal 3.0 Implement strategies that will control and prevent groundwater waste or contamination.

Management Objective 3.1

Each year, take positive and prompt action to identify all reported wasteful practices within the District.

Actions and Procedures

1. Record each complaint or notice received or discovered.

2. Report each complaint to the landowner and/or operator.

3. Resolve the complaint and note the corrective action taken.

4. Report resolution of each complaint to the landowner/operator and to the Board.

Performance Standard

1. All notices or complaints will be recorded, investigated, and reported to the landowner/operator, within two (2) working days.
2. Resolve the complaint within seven (7) working days and record the results of the resolution.

3. Report status of complaints and resolution to the Board at each regular meeting.

**Management Objective 3.2**

Prevent waste by implementing PGCD Rule 15 - “Depletion”.

**Actions and Procedures**

1. Adopt a District acceptable decline rate.

2. Review the acceptable decline rate each five (5) years.

3. Review the acceptable decline rate when requested by Landowner Petition, if petitioned.

4. Establish Depletion Study Areas and Strategic Conservation Depletion Areas, as needed.

5. Determine current water pumping volume.

6. Adopt production limits, drilling moratoriums, and install flow meters, as required.

**Performance Standard**

1. The Board will establish an acceptable decline rate upon adoption of the next revision of the District’s Rules.

2. Complete five-year review within 5 years of the rule adoption date.

3. Review all public comments to petition or rule within sixty (60) days of receipt of petition, and report the event to the Board, if a petition is received.
4. Review the acceptable decline rate annually, and revise as needed to implement DSA and SCDA.

5. Determine permitted water pumping volume within sixty (60) days of establishing SCDA.

6. Adopt production limits, drilling moratoriums, and verify installation of required flow meters, within sixty (60) days of establishing SCDA.

**Management Objective 3.3**

Control and prevent the contamination of groundwater, by continuing our program of groundwater quality monitoring.

**Actions and Procedures**

1. Annually collect samples from the District’s established water quality well network.

**Performance Standards**

1. Sample 80% of the wells scheduled for sampling by October 15 each year.

2. Record all water quality data within thirty (30) days of analysis.

3. Provide the water quality data to the Texas Water Development Board, the Regional Planning Group, and the public by December 31 each year.

**Management Objective 3.4**

Continue and expand, if necessary, the groundwater conservation educational programs within the District.
Actions and Procedures

1. Annually, make public elementary school presentations at 80% of the schools within the District.

2. Sponsor student attendance at water educational programs.

3. Establish a District Internet information page.

Performance Standards

1. Annually make a minimum of ten (10) civic educational presentations.

2. Annually make thirty seven (37) elementary school presentations.


4. Annually, provide up to 3 scholarships to students residing within the District.


Goal 4.0 Implement strategies to address drought conditions.

Management Objective 4.1

Conduct emergency response/drought contingency planning.

Actions and Procedures

1. Insure drought contingency plans are required in all High Impact Production Permits issued by the District.
2. Review all drought contingency plans submitted as a result of Permit requirements when the Palmer Drought Severity Index for any county in the District is less than −1.9.

3. Develop a District drought contingency plan.

Performance Standard

1. High Impact Productions Permits have drought contingency plan requirements.

2. Reviews are conducted each time the index is less than −1.9.


Goal 5.0 Implement strategies to address conjunctive surface water management issues.

Management Objective 5.1

Evaluate the impact of surface-water use on groundwater resources within the District.

Actions and Procedures

1. Provide comments on surface-water rights requests affecting the groundwater resources of the District.

2. Establish coordination with the two (2) surface-water entities currently operating within the District on conjunctive use issues, in regards to regional planning efforts and then every five (5) years thereafter.
Performance Standard

1. Provide comments to the surface water entities within sixty (60) days of receipt of their request.

2. The initial coordination was completed by January 1, 2001; additional coordination will be completed by January 2006 and every five years afterward.

Goal 6.0 Implement strategies that will address natural resource issues which impact the use and availability of groundwater, and which are impacted by the use of groundwater.

Management objective 6.1

Monitor and report on the impacts of U.S. Fish and Wildlife listing of endangered species, such as the Arkansas River Shiner, on local groundwater resources.

Actions and Procedures

1. Prepare an annual assessment statement.

Performance Standard

1. Report activities to the Board in the manager's report.

2. An assessment report statement will be included in the District's Annual Report.

Management Objective 6.2

Monitor the possible impacts of groundwater pumping on White Deer Creek.

Actions and Procedures

1. Record reports of flow from White Deer Creek.
2. Check annual decline maps for water level declines near White Deer Creek headwaters.

3. Compare flow reports to decline maps.

4. Prepare an annual assessment statement.

**Performance Standard**

1. Record stream flow data measurements bimonthly.

2. Prepare and include an assessment of impacts on White Deer creek in the District’s Annual report that includes flow reports and water level data.

**Goal 7.0 Improve operating efficiency and customer service.**

**Management Objective 7.1**

Each year, strive to stabilize water measurement and sampling costs per well.

**Actions and Procedures**

1. Determine total cost of the water level measurement program.

2. Determine average costs, per well, of the water level measurement program.

3. Determine total cost of the water quality-testing program.

4. Document individual well water quality testing results.

5. Establish a project management and scheduling system.

**Performance Standard**

1. Establish the total water level measurement program cost by May 1, 2004.
2. Annually, maintain the average measurement cost increase to less than 1%.

3. Establish the water quality testing program total cost by December 31, 2003.

4. Annually maintain water quality sample costs under $50 per sample.

5. Establish and implement the project management and scheduling program by December 1, 2003.

Management Objective 7.2

Continue to provide timely response to customer assistance requests.

Actions and Procedures

1. Provide pump flow tests.

2. Process well drilling permits.

3. Provide efficiency evaluations of pumping plants and sprinkler systems.

Performance Standard

1. Perform at least 10 pump flow tests annually.

2. Managers action on well drilling permits taken and permit returned to customer, within five (5) working days of receipt.

3. Efficiency evaluations returned to customer within three (3) working days of the efficiency test.

Goal 8.0 Operate a rainfall enhancement program.

Management Objective 8.1

Operate the rainfall enhancement program
Actions and Procedures

1. Operate the program within budget.

2. Operate a rain gauge network.

3. Maintain flight records, rainfall plots, and rain gauge network and rainfall records.

4. Complete required testing, monitoring, and reporting according to the conditions of the permit.

Performance Standard

1. Operate the program annually at least during the period May 1 to September 30. Calculate the program costs by December 1 annually. Report results to the Board.

2. Collect and record rain gage readings at least bi-monthly, starting one month prior to seeding operations and continuing one month after the end of seeding operations.

3. Repair, replace, move rain gages. Report the results to the Board.

4. Maintain flight and aircraft maintenance records. Report results to the Board.

5. Provide all required reports to the appropriate state agencies in accordance with the terms of the permit. Report the results to the Board.

Management Objective 8.2

Plan future rainfall enhancement activities

Actions and Procedures

1. Purchase selected equipment as needed to continue the program.
2. Provide notification to TDLR of intent to continue program; submit budget request.

3. Evaluate additional radar data sources and purchase or lease as necessary.

Performance Standard

1. New equipment is purchased within program budget or with available matching funds.

2. TDLR notified of intent to continue program by January 15 annually.

3. Complete radar data feed evaluation by January 1 annually.

SB-1 MANAGEMENT GOALS DETERMINED NOT-APPLICABLE

Goal 9.0 Control and prevention of subsidence.

The rigid geologic framework of the region precludes significant subsidence from occurring due to groundwater pumping.

SUMMARY DEFINITIONS

"Annually" - Shall mean the fiscal year, October 1 through September 30.

"Waste" - as defined by Chapter 36 of Texas Water Code, 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 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 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 36 of the Texas Water Code;

6. Groundwater pumped for irrigation that escapes as irrigation tailwater onto lands other than that of the owner of the well, unless the occupant of the land receiving the discharge has granted permission.

"Abandoned Well" - shall mean a well or borehole the condition of which is causing, or is likely to cause, pollution of groundwater in the District and includes a well which is not in use or which contains no pumping equipment (open or uncovered well). A well or borehole which is not in compliance with applicable law, including the Rules and Regulations of the District, the Texas Water Well Drillers Act, Texas Commission on Environmental Quality, or any other state or federal agency or political subdivision having jurisdiction, if presumed to be an abandoned or deteriorated well.

"Board" - the Board of Directors of the Panhandle Groundwater Conservation District.

"District" or "PGCD" - the Panhandle Groundwater Conservation District.

"DSA" -- Depletion Study Area

"GMDA" - Groundwater Management Districts Association

"Optimal" - Shall be derived from the minimum number of observations determined by spatial, temporal, and District resource constraints, to adequately describe the aquifer system and responses to external influences.

"Owner" - shall mean and include any person that has the right to produce water from the land either by ownership, contract, lease, easement, or any other estate in the land.

"PRWP" – Regional Water Plan – Panhandle Water Planning Area, January 2001
“PWPA” – Panhandle Water Planning Area

“PWPG” – Panhandle Water Planning Group

“PWPA” – Panhandle Water Planning Area, Region A

“SB-1” – Senate Bill 1, passed in 1997 by the 75th Texas Legislature, signed by Gov. Bush.

“SB-2” – Senate Bill 2, passed in 2001 by the 77th Texas Legislature, signed by Gov. Perry.

“SCDA” – Strategic Conservation Depletion Area

“TAGD” – Texas Alliance of Groundwater Districts

“TCEQ” – Texas Commission on Environmental Quality

“TDA” – Texas Department of Agriculture

“TDLR” – Texas Department of Licensing and Regulation

“TWDB” – Texas Water Development Board.

“TWCA” – Texas Water Conservation Association
October 15, 2003

Executive Director
Texas Water Development Board
ATTN: Rima Petrossian
Manager, Groundwater Technical Assistance
Box 13231
Austin, Texas 78711-3231

Subject: Panhandle Groundwater Conservation District Management Plan

The Management Plan was previously submitted for Certification.

Attached are copies of the letters sending approved copies of the plan to the surface water entities.

Copies of post-hearing comments received from surface water entities were previously submitted.

Ray Brady
Geologist

Enclosures
October 15, 2003

Greenbelt Municipal & Industrial Water Authority
P O Box 665
Clarendon, Texas 79226

Subject: Panhandle Groundwater Conservation District Management Plan


A copy of the plan is attached.

Ray Brady
Geologist

Enclosures
October 15, 2003

Canadian River Municipal Water Authority
P O Box 9
Sanford, Texas 79078

Subject: Panhandle Groundwater Conservation District Management Plan


A copy of the plan is attached.

Ray Brady
Geologist

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

<table>
<thead>
<tr>
<th>Review of the Groundwater Conservation District Management Plan for Conflict With TWDB Approved Regional Water Plan(s)</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>13(a). Did the District provide a letter by certified mail, return receipt requested to all Regional Water Planning Groups formed under authority of TWC §16.053 (c)) in which any part of the District is located, asking the Regional Water Planning Group to review the groundwater management plan and specify any areas of conflict with the Texas Water Development Board approved regional water plan? 31TAC §356.6 (a)(5)</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>13(b). Did any Regional Water Planning Group formed under authority of TWC §16.053 (c)) indicate any potential conflict between the groundwater conservation district management plan and a Texas Water Development Board approved regional water plan? 31TAC §356.6 (a)(5)</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>13(c). Did reviewer identify any potential conflicts between the management plan and the Texas Water Development Board approved regional water plan? TWC §36.1071 (e)(4), 31TAC §356.6 (a)(5) [If answering Yes, please provide a written explanation]</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

Signify an affirmative response with YES
Signify a negative response with NO
Signify that a checklist item is not applicable with (N/A)

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

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

Panhandle Groundwater Conservation District

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

Temple McKinnon, Project Manager for Region___

(Please Print Project Manager’s Name)

[Signature]

(Project Manager’s Signature)

Date 10/8/03
District Resolution
Panhandle Groundwater Conservation District
P.O. Box 637
White Deer, TX 79097

Management Plan
2003 – 2013

WHEREAS, the Panhandle Groundwater Conservation District (District) was created by Acts of the 51st Legislature (Texas Civil Statutes, Chapter 3A, Title 128, Article 7880-3c, and currently operates under Chapter 36 of the Texas Water Code); and

WHEREAS, the District is required by SB1, through Chapter 36.1071 of the Texas Water Code, to develop and adopt a new Management Plan each 10 years; and

WHEREAS, the District is required by SB1 to submit the adopted Management Plan to the Executive Administrator of the Texas Water Development Board for review and certification; and

WHEREAS, the District Board of Directors, after reviewing the existing Management Plan, has determined that this plan should be replaced with a new 10-year Management Plan; and

WHEREAS, the District’s new Management Plan shall be certified by the Executive Administrator, if the plan is administratively complete; and

WHEREAS, the District Board of Directors has determined that the new 10-year Management Plan addresses the requirements of Texas Water Code, Chapter 36.1071,

NOW, THEREFORE, be it resolved, that the Board of Directors of the Panhandle Groundwater Conservation District, following notice and hearing, hereby adopts this new 10-year Management Plan to replace the existing Management Plan; and

FURTHER, be it resolved, that this new Management Plan shall become effective immediately upon adoption.

Adopted this 3rd day of Sept., 2003, by the Board of Directors of the Panhandle Groundwater Conservation District.

[Signatures]

Jason Green, Board Secretary
Charles Bowers, Board President
STATE OF TEXAS

COUNTY OF CARSON

Before me, a notary public, on this day personally appeared

Mr. Charles Bowers and Mr. Jason Green

known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same for the specific purposes therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this
3rd day of September, 2003.

Yvonne Thomas, Notary Public

My commission expires January 24, 2006
Legal Notice
and
Hearing Documents
Publisher's Affidavit

THE STATE OF TEXAS
COUNTY OF DONLEY

Before me, the undersigned authority, on this day personally appeared Roger Estlack, known to me, who being by me duly sworn on oath deposes and says that he is editor/publisher of The Clarendon Enterprise, a newspaper published in Clarendon, County of Donley, Texas, and that the attached is a true and correct copy of advertisement which was published in said newspaper in the issue(s) of therefore on the following date(s):

Feb. 6, 2003

And the rate charged does not exceed the lowest rate charged by this publication for classified advertising or that rate charged commercial customers for similar advertising.

Roger A. Estlack

Subscribed and sworn before me this the 6th day of February, 2003

Janet D. Grattan
Notary Public, Donley County, Texas
LEGAL NOTICE

bill increasing no more than $34.26 for 30 mcf of consumption depending upon a commercial customer's current rate and locale. Information on the change in any specific area can be obtained from GreenLight Gas. The proposed rate changes will affect about 3,035 residential and about 431 commercial customers. The rates for unincorporated areas will not become effective until similar changes have become effective within the nearest incorporated city. A statement of intent to change rates for natural gas distribution service to be charged to all residential and commercial customers in the City of Clarendon was filed with that city on December 12, 2002. In addition GreenLight is requesting that the Railroad Commission establish a city gate rate for purposes of calculating utility tax liability. The establishment of a city gate rate will have no impact on GreenLight's customers.

A complete copy of the application, which was filed with the Railroad Commission of Texas on December 27, 2002, is available for inspection in GreenLight's business office located at 116 South 6th Street, Memphis, Texas 79245. Persons with questions or who want information about this filing may contact GreenLight at 1-806-295-1444. No later than February 14, 2003, any affected person may file written comments or a request to intervene in this matter with Docket Services Section of the Office of General Counsel, Railroad Commission of Texas, P.O. Box 12947, Austin, Texas 78711:2967. 5-4c

THE STATE OF TEXAS

TO: The unknown heirs under the Last Will and Testament of Calvin W. Isacs, Deceased; the unknown heirs of David Quenlin Isacs, Jr.; the unknown heirs of William Calvin Isacs; the unknown heirs of John C. Isacs, III; and the unknown heirs of Samuel Burton Isacs; and to all persons claiming any title or interest in land under the Last Will and Testament of Calvin W. Isacs, Deceased.

NOTICE: YOU HAVE BEEN SUED. YOU MAY EMPLOY AN ATTORNEY. IF YOU OR YOUR ATTORNEY DO NOT FILE A WRITTEN ANSWER WITH THE CLERK WHO ISSUED THIS CITATION, YOU MAY BE JUDGED IN YOUR ABSENCE AND JUDGMENT MAY BE ENTERED AGAINST YOU.

Page 752, Page 1011, Official Public Records of Real Estate of Gray County, Texas.
The Attorney for the Plaintiff is Ronald D. Nickum, PO Box 1889, Amarillo, Texas 79109. Telephone (806) 371-8888.


Charles Cole, District Clerk
Brenda Perrin, Deputy
7-1c

AUCTION

Mack's Garage will hold an auction on February 8, 2003, at 11:00 a.m. at 200 S. Carhart in Clarendon for a 1991 Ford Mustang convertible, VIN 1FACP45E8MF149284, to satisfy a mechanic's lien. 7-1p

NOTICE TO CREDITORS

Notice is hereby given that original Letters Testamentary for the Estate of Helena Catoe, deceased, were issued on January 14, 2003, in Cause No. 2854, pending in the County Court of Donley County, Texas, to Joe T. Lovell, Attorney at Law.

Claims may be presented in care of the attorney for the Estate addressed as follows:

Estate of Helena Catoe

C/O James T. Shelton
Attorney at Law
PO Box 1370
Clarendon, Texas 79226

All persons having claims against this Estate which are currently being administered are required to present them within the time and in the manner prescribed by law.

Dated the 28th day of January 2003.

By James T. Shelton
Attorney for the Estate
7-1c

NOTICE TO CONTRACTORS OF PROPOSED TEXAS HIGHWAY IMPROVEMENT CONTRACTS

Sealed proposals for highway improvement contracts will be received by the Texas Department of Transportation (TxDOT) until the date(s) shown below.

PUBLIC HEARING HELD ON PROPOSED RULES AND MANAGEMENT PLAN

A public hearing was held on Tuesday, January 21, 2003, at the Panhandle Groundwater Conservation District office, to receive public comment on the proposed changes to the District's Management Plan and Rules. According to general manager C.E. Williams, "The Board periodically revises the rules and the Management Plan, to better serve the people in the District. Also, during the last Legislative Session, changes were made to Chapter 36 of the Texas Water Code that the Board wishes to implement into the District's Rules."

Proposed revisions include:

1. The District will require a permit for new domestic and livestock wells on 10 acres or less, with existing wells exempt.
2. Procedural changes for acquiring permits, especially high-impact production permits.
3. The addition of certain requirements for high-impact production permits.
4. An additional application required for transportation of groundwater out of the District.
5. Addition of smaller and larger pump sizes to the spacing rules.
7. The addition of an alternative dispute resolution procedure for hearings.
8. The addition of a rule regarding a water transport fee.
9. Addition to the aquifer depletion rule establishing an acceptable decline rate as a percentage, removal of lower limit on production limitations, and changes allowing Board discretion in decreasing the time period for limiting production under the depletion rule.

The Board will receive written comment until February 17, 2003. Comments should be mailed to PO Box 637, White Deer, Texas 79097. The final hearing on the Rules is scheduled for March 3, 2003. Complete copies of the proposed District Rules and Management Plan may be obtained by calling 883-2501.

7-1c
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4. An additional application required for transportation of groundwater out of the District.
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AFFIDAVIT OF PUBLICATION

The State of Texas, County of Hemphill:

Before me, the undersigned authority, on this day personally appeared Mary L. Smithee, the Office Manager of The Canadian Record, a newspaper having general circulation in Hemphill County, Texas, who being by me duly sworn, deposes and says that the foregoing attached notice was published in said newspaper on the following date(s), to wit: February 16, 2003.

Subscribed and sworn to before me this the 28 day of February, 2003, to certify which witness my hand and seal of office.

Sharon Smith
Notary Public in and for Hemphill County, Texas
Put a plug in it ...
Landowners urged to cap abandoned wells

WHITE DEER - Officials with the Panhandle Ground Water Conservation District (PGWCD) want people to put a plug in it.

Amy Crowell with the PGWCD said abandoned water wells can pose a threat to personal safety as well as to the aquifer below ground.

If they are not plugged or capped, she said, they provide a direct conduit for contaminated water to get into the aquifer. Children or animals can also fall into the open holes.

“We urge all landowners to identify abandoned wells on their property and report them to the district,” Crowell said.

State law requires any well be closed or capped.

“When plugging an abandoned well,” Crowell said, “owners must meet the requirements of the Texas Water Well Driller’s Rule and fill out a state plugging report.”

All pumps, piping and other materials must be removed from an abandoned well, and the well must be disinfected before it is sealed.

If the well isn’t plugged, it should have a cap on it capable of supporting at least 400 pounds.

The cap should either be permanently attached to the casing or have a permanently attached pipe extending at least three feet into the well casing.

“The weighted pipe should be no more than two inches smaller than the diameter of the well casing,” Crowell said, “and the cap should be of sufficient size that no opening shows if it is shifted.”

The Panhandle Ground Water Conservation District provides an abandoned water well capping service for $50 per well, she said.

Public hearing on water district’s revisions set for Tuesday, Jan. 21

WHITE DEER - Panhandle Ground Water Conservation District (PGWCD) will hold a special meeting at 10:30 a.m., Tuesday, Jan. 21, at the White Deer office, 201 W. Third. The district seeks public comment on revised rules.

Under the revisions, PGWCD will require a permit for new domestic and livestock wells on 10 acres of land or less. Existing wells will be exempt from this change.

There are also procedural changes for acquiring permits, according to C.E. Williams, general manager of the district, especially with high-impact production permits and there are additional requirements for high-impact production permits.

There has been a comprehensive revision of the notice and hearing process for high-impact production permits.

An alternative dispute resolution procedure for hearings has been added to the district’s rules.

Agent tells of call setting terms to end shootings

FAIRFAX, Va. (AP) - An FBI agent testified Wednesday that she monitored a phone call from someone claiming to be a sniper who laid out terms for ending the October shooting spree that killed 10 people and wounded three in the Washington area.

Speaking at a juvenile court hearing for sniper suspect John Lee Malvo.

‘All of this was an attempt to intimidate the government to pay in excess of $10 million for these defendants and this defendant in particular to stop the shooting.’

- Robert F. Horan

Fairfax County, Va., Commonwealth Attorney

notes to police and phone calls from Malvo link him to at least four of the October sniper shootings.

“All of this was an attempt to intimidate the government to pay in excess of $10 million for these defendants and this defendant in particular to stop the shooting,” Horan said.

The extortion allegation is a key part of a new Virginia anti-terror
December 31, 2002

Honorable Jim Forrester
800 W. Ave., Rm 1 Fl. 2
Wellington, Texas 79095

Dear Judge Forrester:

Enclosed is a complementary draft copy of Panhandle Groundwater District’s proposed revisions to the Rules and Management Plan. The District will conduct a hearing on the proposed Rules and Management Plan on Tuesday, January 21, 2003 at 10:00 AM, in the District office. The District office is located at 201 W. Third Street, White Deer, Texas.

Your comments on these documents are valuable to District and we welcome them at any time. However, if you have suggested changes it would be very helpful if we had them prior to the hearing.

If you have questions on any rule, please don’t hesitate to give me a call and I will be happy to discuss them with you. Thank you for your interest and involvement in the process. Together we can insure water for future generations.

Sincerely,

C. E. Williams
General Manager

Enclosures
Honorable Hugh Reed  
Armstrong County Judge  
P.O. Box 189  
Claude, Texas 79019

Honorable Jack Hall  
Clarendon County Judge  
P.O. Box 909  
Clarendon, Texas 79226

Honorable Jack Hall  
P.O. Box 909  
Clarendon, Texas 79226

Groom City Clerk  
203 Broadway  
Groom, Texas 79039

Honorable Janie Hill  
P.O. Box 232  
Hedley, Texas 79237

Honorable Joe Davis  
Memphis County Judge  
721 Robertson Street  
Memphis, Texas 79245

McLean City Secretary  
220 N. Main  
McLean, Texas 79057

Honorable Richard Peet  
Gray County Judge  
315 N. Ballard  
Pampa, Texas 79066

Miami City Secretary  
112 S. Main  
Miami, Texas 79059

Mobeetie City Secretary  
P.O. Box 56  
Mobeetie, Texas 79061

Pampa City Manager  
P.O. Box 2499  
Pampa, Texas 79066

Panhandle City Secretary  
1 Main  
Panhandle, Texas 79068

Honorables Arthur Ware  
Potter County Judge  
500 S. Fillmore  
Amarillo, Texas 79101

Honorable Vernon Cook  
Roberts County Judge  
P.O. Box 478  
Miami, Texas 79059

Shamrock City Manager  
116 W 2nd  
Shamrock, Texas 79079

Skellytown City Secretary  
P.O. Box 129  
Skellytown, Texas 79080

Wheeler City Secretary  
505 Alan L. Bean Blvd  
Wheeler, Texas 79096

Honorable Jerry Dan Hefley  
Wheeler County Judge  
P.O. Box 486  
Wheeler, Texas 79096

White Deer City Secretary  
317 S. Main  
White Deer, Texas 79097

Brad Jones  
TCEQ  
3918 Canyon Drive  
Amarillo, Texas 79109

Scott Meyers  
Armstrong County Extension Agent  
Drawer 528  
Claude, Texas 79019

Jody Bradford  
Carson County Extension Agent  
P.O. Box 279  
Panhandle, Texas 79068

Gary Rudolph  
Donley County Extension Agent  
P.O. Box 682  
Clarendon, Texas 79226

Danny Nusser  
Gray County Extension Agent  
HCR 2 Box 33  
Pampa, Texas 79065

Honorable Lewis Powers  
Carson County Judge  
P.O. Box 369  
Panhandle, Texas 79068

Honorable Jim Forrester  
800 W. Ave., Rm 1 Fl. 2  
Wellington, Texas 79095

Lefors City Clerk  
103 N. Court  
Lefors, Texas 79054
Leon Church  
Potter County Extension Agent  
3301 E 10th  
Amarillo, Texas 79104

Brandon Dukes  
Roberts County Extension Agent  
P.O. Box 456  
Miami, Texas 79059

Kenny Bredecko  
Wheeler County Extension Agent  
P.O. Box 448  
Wheeler, Texas 79096

Richard Bowers  
North Plains UWCD  
P.O. Box 795  
Dumas, Texas 79029

Kent Satterwhite  
CRMWA  
P.O. Box 909  
Sanford, Texas 79078

Janet Guthrie  
Hemphill County UWCD  
P.O. Box 1142  
Canadian, Texas 79014

General Manager  
Greenbelt Municipal and Industrial Water Authority  
P.O. Box 665  
Clarendon, Texas 79226

Dan Coffee  
City Of Amarillo  
P.O. Box 1971  
Amarillo, Texas 1971
Minutes of Hearing
PANhandle groundwater conservation district

public hearing on proposed district rules & proposed management plan

district office
201 west 3rd st., white deer, texas
Tuesday, January 21, 2003
10:30 a.m.

 AGENDA

1. CALL TO ORDER
2. INTRODUCTIONS
3. OVERVIEW OF PROPOSED MANAGEMENT PLAN
4. PUBLIC COMMENT
5. OVERVIEW OF PROPOSED RULES
6. PUBLIC COMMENT
7. ADJOURN

PUBLIC NOTICE

This notice complies with Section 551.043, Open Meetings Law, requiring posting of the items to be considered at least 72 hours prior to the meeting. Notice has been filed with the Secretary of State's office in Austin, Section 551.053, and with the county clerk's offices in Carson, Gray, Armstrong, Donley, Potter, Roberts, and Wheeler counties, Section 551.053.

Posted this 16th day of January, 2003, at 201 W. 3rd St., White Deer, Texas, at 1:00 p.m.

Yvonne Thomas, Panhandle G.W.C.D.
PANHANDLE GROUNDWATER
CONSERVATION DISTRICT

BOARD OF DIRECTORS PUBLIC HEARING ON
PROPOSED DISTRICT RULES AND MANAGEMENT PLAN

District Office - Windmill Room
201 W. Third Street

Tuesday, January 21, 2003
10:30 a.m.

Those present were:

Charles Bowers
Phillip Smith
Jason C. Green
Jim Thompson
Robert A. Clark
Danny Hardcastle
John R. Spearman, Jr.
Billy Van Crawford
C. E. Williams
Ray Brady
Mike Booth
Ross Richard-Crow
Yvonne Thomas

President
Vice-President
Secretary
Director
Director
Director
Director
Director
General Manager
Asst. Mgr./Geologist
District’s Attorney
District’s Attorney
Administrative Assistant

and guests:
Wilbur Killebrew, Pampa; Doris Berg Smith, Panhandle; Penni Clark, Roberts County;
Willis Watson, Pampa; Johnny Micou, Amarillo; Mike Jackson, Amarillo; and Kent Satterwhite,
C.R.M.W.A. general manager.

President Charles Bowers called the meeting to order at 10:40 a.m. Following introductions,
Mr. Bowers turned the meeting over to the general manager, C. E. Williams, to give an overview of
the proposed changes to the District Rules. Mr. Williams pointed out that the Board periodically
revises the rules and the Management Plan, to better serve the people in the District, and also, during
the last Legislative Session, changes were made to Chapter 36 of the Texas Water Code that the
Board wishes to implement into the District’s Rules. The brief overview follows:

1. The District will require a permit for new domestic and livestock wells on 10 acres or less
with existing wells exempt.
2. Procedural changes for acquiring permits, especially a high-impact production permit.
3. The addition of certain requirements for high-impact production permits.
5. Addition of smaller and larger pump sizes to the spacing rules;
7. The addition of an alternative dispute resolution procedure for hearings.
8. The addition of a rule regarding a water transport fee.
9. Addition to the aquifer depletion rule establishing an acceptable decline rate as a percentage, removal of lower limit on production limitations and changes allowing Board discretion in decreasing the time period for limiting production under the depletion rule.

Mr. Bowers then asked for public comment, regarding the proposed Management Plan. Mr. Johnny Micou, a Potter County rancher, asked the Board whether there had been any recommendations, by the Board, to stop the Rainfall Enhancement Program. Mr. Bowers told him there had not. He then spent some time comparing the effects of silver iodide to arsenic, as health hazards.

Mr. Wilbur Killebrew told the Board that, in looking over the Management Plan, he didn’t see anything about managing the Canadian River. He said the aquifer is a major source of water for the Canadian River and he has a vested interest in it. His concern was that the decreasing flow of the river will increase the salinity of the water, and it will certainly decrease the amount of grass. He said he would like to see something in the Plan for managing the river. Mr. Williams told him that we are monitoring White Deer Creek, which flows into the Canadian, but as far as managing it, it is very difficult under Texas groundwater law, and from practical purposes, also. Mr. Williams told Mr. Killebrew that we struggle with those kinds of things, and we intend to minimize the impact on the river, but he couldn’t, in good conscious, tell him that he won’t be impacted to some degree.

Addressing the proposed Rules, Willis Watson had some questions for the Board concerning permits for wells on less than ten acres of land. Mr. Williams told him, “There are some areas around the urban areas where people on small tracts of land are starting to have problems. The reason for the permits is that we want them to understand that there’s not much water (saturated thickness) out there. We’re not saying they can’t have a permit, we just want them to be aware that the water might not last very long. It’s our duty to try to protect these peoples’ water.” Also, Mr. Watson did not agree with the permit fees and paperwork. C. E. also told him that replacement wells, drilled within 150' of the original well, will not require an additional permit, only a registration.

Kent Satterwhite shared some of his concerns on the proposed rules.
1. He said the acceptable decline rate (Depletion Study Area) was not clear. How will it be delineated?
2. He questioned using groundwater models and projections to determine an acceptable decline rate.
3. He also felt that adjacent water rights holders should be notified of public hearings on high-impact production permits.
4. Mr. Satterwhite requested that the Board delay taking action on the proposed Rules and Management Plan, for at least 60 days, to allow time for technical and legal reviews.

A copy of Mr. Boone Pickens comments on the proposed Rules was handed out to each member of the Board. Mr. Pickens’ concerns included:
1. The vagueness of the concept of “beneficial use.”
2. Separate provisions for export permits.
3. It should be made clear that existing permits are not subject to new permitting requirements adopted from time-to-time.
4. It must also be made clear that if new rules can properly be applied to old permits under which sales are made to Lubbock, Lamesa or Dallas, they must also apply to old permits under which sales are made to Pampa.
5. There should be no requirement that any potential water purchaser or user rely on other water sources or supplies available or potentially available.
6. The Board cannot now adopt rules which are designed to, or which would permit, the current or any future Board of Directors to prohibit, hinder or limit export sales indirectly.

There was no other public comment.

After discussion, the Board set February 17, 2003 as the cut-off date for all written comment. A Board meeting was set for 10:30 a.m., March 3, 2003. At this meeting, the Board of Directors will take action on the proposed District Rules and proposed Management Plan.

President Bowers adjourned the Public Hearing at 12:15 p.m.

The Hearing was audio-taped and is on file in the District Office.

Jason C. Green, Secretary
Charles Bowers, President
Post Hearing Comments
February 17, 2003

Via Electronic Mail and Certified Mail

Mr. C.E. Williams, General Manager
Mr. Charles Bowers, President of the Board
Panhandle Groundwater Conservation District
201 W. 3rd Street
P.O. Box 637
White Deer, Texas 79097


Dear Mr. Williams and Mr. Bowers:

Please accept the following comments on the December 31, 2002 Draft Rules ("Draft Rules") and Draft Management Plan of the Panhandle Groundwater Conservation District ("PGCD" or "District") on behalf of Canadian River Municipal Water Authority ("CRMWA").

In many respects the Draft Rules represent significant improvements over the District’s existing rules. Addition of alternative dispute resolution requirements, clarification of procedural rules and application processing, as well as revisions to implement legislative changes in Chapter 36 of the Texas Water Code all appear to be appropriate and clear improvements over the District’s existing rules.

Other changes, however, are extremely problematic in CRMWA’s view. Revisions of the District’s Depletion Rule endanger both the $83,000,000.00 investment and future water supply of the approximately 500,000 Panhandle and West Texas residents served by CRMWA’s Roberts County Conjunctive Use Groundwater Project. We believe that if the directors of the District were to implement the Depletion Rule changes as currently drafted, the District would not only far exceed the legislature’s intended role for groundwater conservation districts, the Depletion Rule would result in an unconstitutional taking of property without compensation. For this reason we urge that you reconsider the changes proposed in the draft Depletion Rule.
Background

On behalf of its eleven member cities and the approximately 500,000 citizens that depend upon CRMWA for their drinking water supply, CRMWA developed its Roberts County Conjunctive Use Groundwater Project at a cost of over $83 million. The project supplies groundwater to blend with CRMWA’s surface water supply from Lake Meredith. Water from the Project is important not only to augment the quantity of water available from Lake Meredith, but also because it is blended with Lake Meredith water in order to meet state drinking water standards.

The District has been aware of CRMWA’s Roberts County Project since its inception. Prior to acquiring the 42,765 acres of groundwater rights required for the Project, CRMWA and the seller of those water rights (QUIXX) obtained a perpetual permit from the District authorizing production of up to 40,000 acre-feet per year ("af/yr"), or 50,000 af/yr under emergency conditions. The District directors understood at the time this permit was issued that CRMWA would not have acquired the water rights or gone forward with the $83 million investment without a permit authorizing production of the amount of water needed to meet the Project’s water quantity and water quality goals. It was only after receiving its permit, and in reliance upon that permit, that CRMWA invested $83 million to acquire 42,765 acres of groundwater rights and develop the Roberts County Conjunctive Use Groundwater Project.

Depletion Rule

In 1998, the District established its management goal of preserving 50% of the District’s water supply for the next 50 years ("50-50 goal"). As implemented by its current Depletion Rule, PGCD can monitor and regulate production of water to achieve that goal. At the same time, the current rule protects the rights of landowners by guaranteeing that the District will not limit production of water to less than 1 acre-foot per acre ("af/acre"). Because of this limitation the District’s current Depletion Rule cannot result in a limitation that prevents CRMWA from producing almost 40,000 af of water per year. For this reason the existing Depletion rule does not adversely impact CRMWA’s groundwater Project or its substantial investment.

The proposed revision of the Depletion Rule, however, eliminates the 1 af/acre minimum production guarantee. Without this protection CRMWA will not be able to pump the amount of water authorized by its permit and also comply with the Depletion Rule. Therefore, we urge you to include the 1 af/acre guarantee in any revision of the Depletion Rule you adopt. Without this protection the Rule impairs the $83 million investment and threatens the water supply of 500,000 people. We know it was not the legislature’s intent that groundwater districts frustrate the legitimate expectations and expenditure of public funds for needed water supplies, and we know

---

1 CRMWA’s permit allows additional production of up to 50,000 af/yr under emergency conditions. Even though 50,000 af/yr exceeds the 1 af/acre production limit, we assume the District would not attempt to impose the 1 af/acre limitation in situations where emergency conditions necessitate the additional production.
that it is not the District's intent to do so. Nevertheless, that is the consequence of the District's draft Depletion Rule.

Because of uncertainties concerning the timing of development of nearby properties, as well as the imprecision of current hydrogeologic information, it is impossible to predict the precise rate of depletion of groundwater reserves under CRMWA's property. Nevertheless, under either best or worst case assumptions, without the protection of the 1 af/ac production guarantee CRMWA will not be able to produce at permitted levels for the next 50 years. Dr. Lee Wilson, CRMWA's groundwater expert, advises that under "best case" assumptions (lack of development of adjacent property, 18% specific yield, and .04 af/ac/yr recharge), CRMWA could only produce 32,550 af/yr and meet the 50-50 goal. Under "worst case" assumptions (immediate development of adjacent property, 14% specific yield, and no recharge), CRMWA could only produce 18,750 af/yr and meet the District's 50-50 goal. In Dr. Wilson's opinion, "it is absolutely certain that deletion of the 1 acre-foot per acre of water rights 'floor' will limit CRMWA's ability to fully utilize the water rights it has paid for, and on which its member cities will increasingly depend."

Even if the Board has concluded that application of the 1 af/ac "floor" to all property in the District would frustrate the 50-50 management goal, it should nevertheless be retained. Such action would effectively "grandfather" this protection for owners of permits who have made the investment and actually produced water in reliance upon having the ability to produce at least 1 af/ac. Should the District in the future decide to impose the Depletion Rule on agricultural pumping, the 1 af/ac production floor should not seriously interfere, as it will operate to require ownership of tracts significantly larger than the irrigated area in order to support sufficient production for irrigated crops.²

Besides deletion of the 1 af/ac minimum production guarantee, the draft Depletion Rule seriously impairs CRMWA's production capability by failing to provide that depletion will be determined upon the basis of all property under common contiguous ownership or under a single permit. Instead, the Draft Rules presume that depletion will be determined upon the basis of 9 square mile tracts, unless otherwise determined by the directors. Obviously, a 9 square mile tract, centered upon those portions of CRMWA's 42,765 acres from which production is occurring, will indicate a much higher depletion rate than the overall rate for the entire 42,765 acre tract.

² In this regard, it is noteworthy that the S.B. 2 amendment to Texas Water Code §§ 36.113 and 36.116 expressly contemplate that Districts may impose less stringent limitations on existing pumping. Thus, "grandfathering" existing production is authorized. Certainly, to use the possibility that the 1 af/ac production guarantee might prevent the District from effectively limiting irrigation production as a basis for refusing to "grandfather" existing production makes little sense before the District has made any effort to apply the Depletion Rule to agricultural operations.
While it might be argued that the use of smaller tracts helps prevent depletion of neighboring tracts, this argument is incorrect—both generally and as applied to CRMWA. It is incorrect generally because the Amarillo Court of Appeals has held that a groundwater conservation district’s rules do not displace the rule of capture. *South Plains Lamesa R. R., Ltd. v. High Plains Underground Water Conservation Dist. No. 1*, 52 S.W.3d 770, 779 (Tex. App. – Amarillo, 2001, no pet.). Thus, preventing any depletion of water from beneath adjacent property is not only a physical impossibility, it is not a legitimate management goal of a district. As applied to CRMWA’s water rights particularly, this goal makes even less sense. CRMWA’s pumping will primarily impact QUIXX, the adjacent property owner to the east and south, and the entity from which CRMWA purchased its water rights. CRMWA’s purchase price from QUIXX included the anticipated depletion of water from beneath QUIXX’s adjacent property. This is demonstrated from the joint permit amendment application filed by QUIXX and CRMWA with PGCD on December 12, 1995. Draw down maps filed with the application clearly show that most of the anticipated drawdown off CRMWA’s water rights property occurs on QUIXX’s water rights property—yet QUIXX is a co-applicant for the amendment. Obviously, QUIXX considered the water rights it sold CRMWA to include the ability to pump water in a fashion that would deplete some of the reserves on QUIXX’s unsold property. Similarly, in negotiating its recent purchase of water rights adjacent to CRMWA, Amarillo took into account the anticipated depletion of water reserves by CRMWA production that would occur prior to the time Amarillo began its production. This is confirmed by the fact that Amarillo’s permit from the District does not contemplate initiation of production for 25 years following issuance of Permit No. R-99-104.

Simply stated, the parties buying and selling Roberts County water rights are sophisticated and informed purchasers and sellers. Their transactions take into account the anticipated effects of production on nearby property—particularly production that has already been authorized by the District. Not only is there no need for the District to attempt to protect adjacent property owners through its Depletion Rule, such actions would be contrary to the expectations of the parties which were necessarily considered as part of the free market transactions that have recently taken place.

Another aspect of the Depletion Rule that should be revised is the discretion granted to the District’s Board of Directors. As currently proposed, the Draft Rules give the Board discretion to modify virtually every parameter involved in implementation of the Depletion Rule—including definition of the size of the depletion area, determination of the nominal rate of decline, determination of whether or not to use three-year averages in designation of a Depletion Study Area (“DSA”), determination of the size of a DSA, determination of how frequently to review designation of DSAs, and determination of the allotment of pumpage within a DSA. In each case, the Draft Rules provide no guidance as to the standards the Board will or should use.
in exercising its discretion.\textsuperscript{3} Without such guidance this wide discretion invites inconsistent and arbitrary action. CRMWA urges that the Depletion Rule be revised to provide either limitations on, or standards for, the exercise of discretion by the Board of Directors.

Finally, CRMWA objects to section 15.1(e) of the Depletion Rule. CRMWA was assured during settlement negotiations of the Mesa Water permit applications that implementation of the Depletion Rule would be based upon actual water level declines and not modeled results which might include pumpage such as Mesa’s that is permitted but not actually occurring. Yet, Draft Rule 15.1(e) expressly allows the District to set acceptable rates of decline of groundwater levels based upon groundwater projections and groundwater models. CRMWA believes that actual groundwater level declines should be the basis for any regulations imposed by the District. However, if the Draft Rule is retained, it should be clarified to state that groundwater projections and models must be based upon pumpage that has actually been initiated, and not simply pumpage that has been permitted or is anticipated to begin in the future.

\textbf{Transportation Permits}

In its Draft Rules, the District for the first time imposes the requirement of obtaining transportation permits. Two serious problems are presented by the draft transportation permit rule. First, it appears that the District may attempt to apply the provision to CRMWA at some point in the future if CRMWA seeks an amendment of its existing permit. Imposition of this requirement is impermissible under Texas Water Code section 36.122(b), which limits the transportation permit requirement to those transfers of groundwater from the district which are from new groundwater export projects or those which increase, on or after March 2, 1997, the amount of groundwater to be transferred under a continuing arrangement in effect before that date. CRMWA’s Roberts County Project pre-dates March 2, 1997, and is, therefore, not subject to a transportation permit requirement.

Second, the transportation permit Draft Rule provides no standard to be utilized by the Board in determining whether or not to grant an application for a transport permit. Detailed requirements are provided for the application, but no standard whatsoever is provided to guide the Board’s action. At a minimum, the requirements of Water Code section 36.122 should be incorporated by reference.

\textbf{Water Transportation Fees}

Pursuant to the terms of H.B. 3024, adopted last session, the water transportation fees proposed by the Draft Rules cannot be applied to CRMWA. That legislation establishes a

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\textsuperscript{3} It is well established that the legislature, in delegating powers to agencies established to implement legislative programs, must provide reasonable standards to guide those agencies in the exercise of that power. \textit{F.M. Properties v. City of Austin}, 22 S.W.3d 868, 873 (Tex. 2000); \textit{Texas Boll Weevil Eradication Found. v. Lewellen}, 952 S.W.2d 454, 466 (Tex. 1997).
different fee to be applied to CRMWA. In CRMWA’s opinion, the H.B. 3024 fee applies, whether or not it is reflected by the District’s rules. For clarity, however, it should be understood that fees established by Draft Rule 14 cannot be applied to CRMWA.

Revisions to the high-impact production permits ("HIPPs")

In general, the proposed revisions of HIPP rules is beneficial in CRMWA’s opinion – reflecting many of the lessons learned from the Mesa Water permit hearings. Like the Depletion Rule, however, these rules provide wide discretion to the General Manager and Board without providing adequate standards to direct how that discretion will be exercised. When discretion is provided to depart from the established rules, some standard for the exercise of this discretion must be provided – otherwise it is simply an invitation for arbitrary action.

The proposed notice provisions for future HIPP applications have very short time frames: adjacent landowners are to receive notice of a public meeting by mail, newspaper or posting at county courthouses at least ten business days in advance. CRMWA suggests that additional time would be beneficial.

Additionally, the notice requirement for this and other permits should be clarified to include not only nearby property owners, but also owners of water rights. We assume it is the District’s intent to notify water right owners, but this is not clear from the Draft Rules.

Changes to the hearings process

It is unclear whether the deadline for requesting a contested hearing is 30 days, although that appears to be the District’s intent. If the 30-day deadline in Draft Rule 10.3(e) is intended to apply to requests for contested case hearings, the Rule should state that.

Draft Rule 10.3(g)(5) states that technical review continues until: (a) all information is received; (b) complete initial review is done; (c) a draft permit is complete; or (d) the application is returned. Nowhere does this Draft Rule mention the 90 to 150 day limit established in 10.3(g)(1). The District’s approach of requiring technical review of an application by the staff prior to a determination that the application is administratively complete is questionable. This appears to be an attempt to gain more time for staff review of the application – an apparent circumvention of Texas Water Code § 36.114’s requirement that a hearing be set or that the application be acted on within 30 days following the date upon which the application is declared administratively complete. It is difficult to see how, at least in theory, the district can have much confidence in a technical review of an application that is not administratively complete. Also, it is unclear what is meant by the term “technical review” as it is not defined in Section 1.

Under Draft Rule 10.3(j) the Board is given very broad discretion to determine whether to grant a request for a contested case hearing. As noted before, some standard should be provided for the exercise of this discretion. Additionally, the rule includes a requirement that the
hearing request be “supported by competent evidence.” This requirement appears to be unworkable – there has been, at this point in the District’s permit review process, no opportunity for the party requesting a hearing to introduce evidence.

Section-by-section comments

RULE 1 - Definitions

- The definition of “administratively complete application” refers to Rule 5.2 - Rule 5.2 has been deleted from the Draft Rules.
- There are two letters (b) and (c) - “District” and “well” – they should be re-lettered (d) and (e), and the remaining terms should be re-lettered accordingly.
- In the definition of “District,” clarification is needed to indicate whether the District Headquarters is the same place as the “principal office.”
- The definition of “transported groundwater” appears to be missing a comma or a word: “produced by pipeline artificial facilities.” Also, “produced” seems to be the wrong term, should it be “transported?”

RULE 3 - General Rules

- The “date of receipt” in the District’s office requirement places an unusual and potentially improper burden on parties. In normal judicial proceedings filings are considered timely if they are timely deposited in U.S. Mail. Also, three days are normally allowed for mailing. (See, Texas Rules of Civil Procedure, Rule 21a). It is difficult to understand why the District feels that it must impose more burdensome requirements than those imposed by state district courts.

RULE 4 - Permit Requirements

- 4.1(a) Suggest deleting the phrase “made out.”
- 4.2(d) Use of the phrase “by agreement” in (6), (7) and (8) is unclear.
- 4.2(d) Sections (8) and (14) relating to well plugging appear to be duplicative.

RULE 6 - Reporting Requirements

- 6.2 Fifth line down, “Permittee’s” should be “Permittees.”

RULE 8 - Spacing of Permitted Wells

- 8.4 The first sentence might be simplified to read: Once an application for a well permit has been granted, the permitted well must be drilled within 10 yards of the location specified in the permit – unless the Board grants an exception.
RULE 10 - Hearings and Public Meetings

- 10.1(c) "Insufficient defect" – it is unclear what qualifies as an insubstantial defect. Without more, this Draft Rule seems arbitrary and provides no measure by which to determine the severity of a notice defect.

- 10.3(j)(2) The intent of this Draft Rule is unclear. Is the Board going to deny hearing requests because they appear to be difficult and complex? As a matter of policy, if not law, the Board’s evaluation should probably be based upon the interest asserted by the affected party and the potential impact upon that party, rather than the difficulty of holding the hearing.

- 10.3(j)(3) The intent of this provision (encouraging agreed settlements) is laudable; however, as drafted the rule seems to allow the Board to deny a contested hearing in order to encourage settlement. If that is the intent of the Draft Rule, we would suggest that it is inappropriate – if a party is entitled to a contested case hearing, it cannot be denied in order to encourage settlement.

Comments on Draft Management Plan

CRMWA suggests that the District needs to clarify its Management Plan Goal 1.0. The goal, as currently stated is to “retain 50% of current supplies, in 50 years (in 2048).” As stated in Rule 15, that goal is “to ensure that at least 50% of the current supplies or saturated thickness of the aquifer remains after 50 years.”

In CRMWA’s view, the management goal as currently defined is not what the District is implementing with Rule 15. Goal 1.0 addresses retaining 50% of the current supplies of the aquifer – apparently as applied to the aquifer as a whole within the District. Rule 15 goes much further. Rule 15 would prevent greater that a 50% loss of aquifer supplies in any 9 square mile area (or smaller if the Board so ruled).

If the Board’s true intent is reflected by Rule 15, the management goal should be restated to clarify that the Board’s goal is to prevent depletion of any portion of the aquifer by more than 50% during the next 50 years. If, on the other hand, Goal 1.0 reflects the Board’s true intent, Rule 15 should be modified to consider the depletion of much larger areas (e.g., counties) of the aquifer than 9 square mile tracts.

The inconsistency between the management goal and the rule implementing the management goal is a serious matter. It is the authority to implement the management goal that authorized the rule. If the rule is not actually implementing the management goal, its legal validity is questionable.
Thank you for your attention to these matters. CRMWA would welcome the opportunity to work further with your staff to resolve these issues prior to the Board’s consideration of the Draft Rules.

Sincerely,

Douglas G. Caroom
Attorney for CRMWA

cc: Kent Satterwhite, General Manager
    Lee Wilson, Lee Wilson & Associates
Certified Mail Receipt
and letter to
Regional Water Planning Group
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Sent To: Jarrett Atkinson, P.L.C.  
P.O. Box 9257  
Amarillo, TX 79105
Ray Brady
Panhandle C O
P.O. Box 632
White Deer, TX 79077
Letter from
Regional Water Planning
Group Administrator
August 27, 2003

C.E. Williams, General Manager
Panhandle Groundwater Conservation District
PO Box 637
White Deer, TX 79097

RE: Panhandle Groundwater Conservation District Management Plan

Dear Mr. Williams:

Thank you for submitting your revised District Management Plan to the Panhandle Water Planning Group (PWPG) for review. The PWPG appreciates the opportunity to review this plan. Staff of the Panhandle Water Planning Group has completed review of the plan and would offer the following comment:

"The revised Panhandle Groundwater Conservation District Management Plan dated July, 2003 has been reviewed by the PWPG staff and no areas of conflict with the Panhandle Regional Water Plan have been identified."

Thank you again for the opportunity to review this plan. If you have any questions or require additional comments, please do not hesitate to call.

Sincerely,

Jarrett Atkinson
LGS Director