August 12, 2003

Mr. Kevin Ward
Executive Administrator
Texas Water Development Board
P.O. Box 13231, Capitol Station
1700 N. Congress
Austin, Texas 78711-3231

Dear Mr. Ward,

Attached is a copy of the newly amended and adopted 10 year management plan of the Lipan-Kickapoo Water Conservation District (LKWCD) as required by §36.1072(e) and 36.1073 of the Texas Water Code. The LKWCD 10 year management plan was originally certified by the TWDB on September 17, 1998. At a special called meeting on July 9, 2003, following notice and hearing, the Board of Directors reviewed and adopted the newly amended management plan. A copy of the Board of Directors resolution adopting the plan is a part of the plan.

The management plan was developed during open meetings of the Board as required by the Open Meetings Act. Documentation that notice and hearing requirements were followed is presented as an attachment.

Copies of the management plan were forwarded to surface water management entities with surface water storage located within the District and also to the Region F Regional Water Planning Group for their review and comments. Documentation that the management plan was submitted to these entities is also presented as an attachment.

This amended management plan will continue in force for 10 years from the original date of certification in 1998. If the TWDB has any questions or requires additional information, please contact us.

Sincerely,

Allan J. Lange
General Manager

Attachments
LIPAN-KICKAPOO
WATER CONSERVATION DISTRICT

MANAGEMENT PLAN
1998 - 2008

Adopted April 1, 1998
Amended & Adopted July 9, 2003
LIPAN-KICKAPOO WATER
CONSERVATION DISTRICT
P.O. Box 67
Vancourt, Texas 76955
Ph: 325-469-3988 Fax: 325-469-3989

MANAGEMENT PLAN

WHEREAS, the Lipan-Kickapoo Water Conservation District (Water District) was created by Acts of the 70th Legislature (1987), p. 2010, Ch. 439, S.B. 1525, in accordance with Article 16, Section 59 of the Constitution of Texas and Chapters 51 and 52 of the Texas Water Code, as amended; and

WHEREAS, S.B. 1525 was amended by Acts of the 77th Legislature (2001), H.B. 1909, in accordance with Chapters 36 and 49 of the Texas Water Code, as amended; and

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

WHEREAS, the District is required by Chapter 36.1072 of the Texas Water Code to review and readopt the plan with or without revisions at least once every five years and to submit the adopted Management Plan to the Executive Administrator of the Texas Water Development Board for review and certification; and

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

WHEREAS, the District Board of Directors, after reviewing the existing Management Plan, has determined that this plan should be replaced with an amended Management Plan; and

WHEREAS, the District Board of Directors has determined that the Amended Management Plan addresses the requirements of Chapter 36.1071.

NOW, THEREFORE, be it resolved, that the Board of Directors of the Lipan-Kickapoo Water Conservation District, following notice and hearing, hereby adopts this amended Management Plan; and

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

Adopted this 9th day of July, 2003, by the Board of Directors of the Lipan-Kickapoo Water Conservation District.

Attest:

[Signature]
Presiding Officer

[Signature]
Board Secretary
LIPAN-KICKAPOO
WATER CONSERVATION DISTRICT

MANAGEMENT PLAN

1998-2008

Adopted: April 1, 1998
Amended: July 9, 2003

P.O. Box 67
Vancourt, Texas 76955
Ph: 915-469-3988  Fax: 915-469-3989  Email: lkwdc@airmail.net
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DISTRICT MISSION

The Lipan-Kickapoo Water Conservation District strives to develop, promote and implement water conservation and management strategies to conserve, preserve, and protect the groundwater supplies of the District, to protect and enhance recharge, prevent waste and pollution, and to effect the efficient, beneficial and wise use of water for the benefit of the citizens and economy of the District. The District seeks to protect the owners of water rights within the District from impairment of their groundwater quality and quantity within the District, pursuant to the powers and duties granted under Chapter 36, Subchapter D of the Texas Water Code.

TIME PERIOD FOR THIS PLAN

This amended plan becomes effective upon adoption by the Board of Directors and recertification by the Texas Water Development Board. This amended plan remains in effect for the remainder of the ten year period initially approved by the Board of Directors and certified by the TWDB on September 17, 1998, or until such time as a revised or amended plan is approved and certified.

STATEMENT OF GUIDING PRINCIPLES

The District recognizes that its groundwater resources are of utmost importance to the economy and environment, first to the residents of the District and then to the region and that this resource must be managed and protected from contamination. Since the District was created for the purpose of conserving, preserving, and protecting the groundwater resources within its boundaries, it fulfills this purpose by:

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

Since a basic understanding of the aquifers and their hydrogeologic properties, as well as a quantification of resources is the foundation from which to build prudent planning measures, this management plan is intended as a tool to focus the thoughts and actions of those given the responsibility for the execution of district activities.
GENERAL DESCRIPTION OF THE DISTRICT

**History**
The primary concern of the residents of this area of the State regarding groundwater is the potential contamination of the groundwater from leaking oil and gas wells. For this reason, the residents introduced legislation in the 70th Regular Legislative Session (1987) for creation of the District. In November 1987, the residents confirmed the district and also voted to fund the district operations through local property taxes. It became an active district on November 1, 1988. On January 2, 1989, the district adopted a 10-year Management Plan and in February 1989 adopted Rules and By-Laws which became effective March 6, 1989. The District rules were amended on March 6, 2000.

In May of 2000, a petition signed by landowners residing outside the district was submitted to the District board of directors. This petition requested annexation of the territory in Tom Green and Concho Counties not currently in a groundwater district and all of Runnels County. Following proper notice and hearings on the petition, the District board adopted an annexation resolution on March 7, 2001 and called for an election to be held to ratify the annexation on May 5, 2001. The annexation was ratified by a vote of 225 for and 189 against.

The District is governed by a seven member locally elected Board of Directors - two members from Concho County, two members from Runnels County, two members from Tom Green County, and one member-at-large from the District as a whole. Elections are held every two years. The directors serve staggered four year terms - the directors from Concho and Runnels Counties are elected in one election and the directors from Tom Green County and the director at-large are elected in another. By having a Local Board of Directors, the District is very responsive to voters' approval or disapproval of the local management of their groundwater and/or the services provided by the District.

**Location and Extent**
The Lipan-Kickapoo WCD has an areal extent of approximately 2,262,464 acres or 3,535 square miles and is located in the center of the State of Texas. The USGS geographic center of Texas monument is located within the District and is approximately 13 miles southeast of Vancourt, Texas.

The District's economy is based primarily on agriculture with some oil and gas production. The agricultural income is derived primarily from cotton, grain sorghum, wheat, corn, alfalfa as well as sheep, goats, and beef cattle production. Income is also obtained from cattle and sheep feedlots and dairies. Recreational hunting leases also contribute to the income of the area.

Prior to the May 5, 2001 election, the water district was located in Tom Green and Concho Counties generally southeast of San Angelo, south of the Concho river to approximately 5 miles west of Eden. It covered approximately 579,200 acres or 905 square miles (Fig. 1).

- Figure 1. Location of the Lipan-Kickapoo Water Conservation District 1987 to May 5, 2001 Special Election.
After the May 5, 2001 election, the boundaries of the water district generally include: All of Tom Green, Runnels, and Concho counties not currently within the boundaries of the Hickory Underground Water Conservation District. The cities/towns of Winters, Ballinger, Rowena, Miles, Paint Rock, San Angelo, Christoval, Grapè Creek, the Red Creek Municipal Utility District, and the area northwest of San Angelo north of the Middle Concho River and south and west of US Highway 87 north to the Coke County line (Fig. 2) are excluded from the district. Most of these towns and cities within these counties were excluded because they get their water supply from surface water that belongs to the state and is regulated by the state. Therefore, there are no major municipalities within the District boundaries.

**Tom Green County**
The total population of the county is approximately 103,079. The largest city in Tom Green county is San Angelo (also the County Seat) with a population of approximately 88,439 people. It is not a part of the District and is located northwest of the District. Other communities in Tom Green County not in the District are: Christoval, Grape Creek, Water Valley, and the Red Creek MUD with a combined population of approximately 9,886. There are 7 small communities within the District in Tom Green county: Vancourt, Wall, Veribest, Mereta, Carlsbad, Knickerbocker, and Harriett. The total estimated population within the District in Tom Green County is 4,693.

The majority of the land use in the county is for agricultural purposes with a total of 958,722 acres of which 217,069 acres is crop or farm land and the balance of 741,653 acres is range land. The crop land is located primarily in the center of the county over the Lipan aquifer while the range land is located on the north, west, and south portions of the county over the Edwards-Trinity aquifer. Irrigation covers approximately 44,296 acres of the county’s crop land. Pivot irrigation systems are the primary method of applying irrigation water.

**Concho County**
The total population of the county is approximately 3,917. The largest city in Concho county is Eden with a population of approximately 2,561. It is located within the Hickory UWCD boundaries. Paint Rock, the County Seat, has a population of approximately 320 and is not a part of the District. There are several other small communities within the District in Concho county: Eola, Vick, Lowake, Live Oak, and Millersview. The total estimated population within the District in Concho county is 973.

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1 U.S. Census Bureau, 4700 Silver Hill Road, Washington DC 20233-0001 - 2001 Population Estimate.


3 U.S. Census Bureau, 2001 Population Estimate.
The majority of the land use in the county is for agricultural purposes with a total of 635,584 acres of which 129,083 acres is crop or farm land and the balance of 506,501 acres is range land. The crop land is located primarily in the west central portion of the county over the Lipan aquifer while the range land is located on the north, east, and south portions of the county over the Edwards-Trinity and Hickory aquifers. Irrigation covers approximately 3,974 acres of the county’s crop land. The principle method of irrigation is through pivot irrigation systems with some drip irrigation.

Runnels County
The total population of the county is approximately 11,089. The largest city in Runnels county is Ballinger (also the County Seat) with a population of approximately 4,243 people. This town is not a part of the District. Other communities with larger populations not in the District are: Winters with approximately 2,880 people, Miles with approximately 850 people, and Rowena with approximately 380. Other small communities in the District include: Olfen, Norton, Hatchel, Crews, and Wingate. The total estimated population within the District in Runnels county is 2,770.

The majority of the land use in the county is for agricultural purposes with a total of 581,139 acres of which 293,074 acres is crop or farm land and the balance of 288,065 acres is range land. The crop land is located primarily in the west central and southwestern portion of the county over the Lipan aquifer while the range land is located on the north and east portions of the county. Irrigation covers approximately 2,403 acres of the county’s crop land. The principle methods of irrigation are furrow irrigation, pivot irrigation, and drip irrigation.

The total estimated population of these three counties is 118,085. However, since the District covers the area generally outside the cities and towns, the total estimated population in the District is 8,436.

Overall land use in the District is for agricultural purposes of which approximately 634,226 acres are crop or farm land and 1,249,505 acres are range land. The crop land is located primarily in the central portion of the District over the Lipan aquifer while the range land is located along the boundaries of the District over the Edwards-Trinity and Hickory aquifers. Irrigation covers approximately 50,673 acres of the District’s crop land. The principle method of irrigation has been furrow irrigation. However, within the last 4 to 5 years there has been a large scale change to more highly efficient pivot and drip irrigation. There are an estimated 200 + pivot systems currently operating within the District with new systems being installed.

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4 USDA, 1997 Census of Agriculture.
5 U.S. Census Bureau, 2001 - Population Estimate.
6 USDA, 1997 Census of Agriculture.
7 U.S. Census Bureau, 2001 - Population Estimate.
8 USDA, 1997 Census of Agriculture.
Topography and Drainage
The District lies within the Colorado River Basin with much of the area known as the Concho Valley of Texas. Two major rivers, the Colorado—with its headwaters beginning on the South Plains and the Concho—with its headwaters located in the counties to the north, west, and south of Tom Green county, traverse the District and converge at the O.H. Ivie Reservoir on the Concho-RunnelsColeman County lines. There are numerous creeks which are tributaries of these two rivers. Drainage is generally in an eastward direction. Springs flowing from the Edwards-Trinity aquifer form the headwaters for the South Concho river, Lipan Creek, and the Kickapoo Creek. Topographically, the District consists of the Lipan Flats in the center of the District southeast of the city of San Angelo to rolling plains in the remainder of the District in Concho, Runnels, and Tom Green Counties.

Regional Cooperation and Coordination

West Texas Regional Groundwater Alliance

The District is a member of the West Texas Regional Groundwater Alliance (WTRGA). This regional alliance consists of twelve (12) locally created and locally funded districts that encompass approximately eleven and one-half (11.5) million acres or seventeen thousand eight hundred (17,800) square miles of West Texas. This West Texas region is as diverse as the State of Texas. Due to the diversity of this region, each member district provides its own unique programs to best serve its constituents.

In May of 1988, four (4) groundwater districts; Coke County UWCD, Glasscock County UWCD, Irion County WCD, and Sterling County UWCD adopted the original Cooperative Agreement. As new districts were created, they too adopted the Cooperative Agreement. In the fall of 1996, the original Cooperative Agreement was redrafted and the West Texas Regional Groundwater Alliance was created. Membership in the WTRGA is open to all groundwater districts that are located in the State Water Planning Region F. The current member districts are:

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

This Alliance was created because the local districts have a common objective to facilitate the conservation, preservation, and beneficial use of water and related resources. Local districts monitor the water-related activities of the State's largest industries such as farming & ranching, oil & gas and municipalities. The Alliance provides coordination essential to the activities of these member districts to monitor these activities and to accomplish their objectives.
Lipan Aquifer

The Lipan aquifer is located in the Lipan Flats of eastern Tom Green, western Concho, and southern Runnels counties (Fig. 3). Water from the aquifer is principally used for irrigation, with limited amounts used for rural domestic and livestock needs. The typical irrigation practice in the area is to pump water held in storage in the aquifer during the growing season with the expectation of recharge of the aquifer during the winter months. Water levels in the past have generally remained unchanged, but due to the drought of the 1990's and 2000's, they have dropped drastically. In some areas, the aquifer is totally dry since there has been minimal or no recharge at all. Thus, groundwater availability for this aquifer is a function of average annual recharge, even though storage may not recover completely during dry years.

The aquifer is comprised of up to 125 feet of saturated alluvial deposits of the Leona formation of Quaternary age. Although the aquifer is located in three counties, water is found only sporadically throughout the aquifer. Also included in the Lipan aquifer are the updip portions of the underlying Chozza Formation and Bullwagon Dolomite of Permian age that are hydrologically continuous with the Leona Formation. Ground water naturally discharges from the Lipan aquifer both by seepage to the Concho River and by evapotranspiration. This evapotranspiration occurs in areas where the water table is at or near the land surface. It is common for well yields to range from 50 gal/min to more than 500 gal/min.

The average annual effective recharge of the Leona formation, a formation included in the Lipan aquifer, is 35,436 acre-feet. The water quality in the Leona Formation ranges from fresh to slightly saline and is very hard. Water in the underlying updip portions of the Chozza and Bullwagon Formations tends to be slightly saline. The overall quality of the water within the Lipan aquifer generally does not meet drinking water standards. However, in most areas it is suitable for irrigation.

9 All estimates of groundwater availability, usage, supplies, recharge, storage, and future demands are from data supplied by the Texas Water Development Board, unless otherwise noted. Data sources include Document GP-7-1, January 2002, “Water for Texas-2002”, and data included in the Region F Regional Water Plan adopted in January 2001. These estimates will be used until other data are available from ongoing studies of the region’s aquifers.

10 Table 3-7, Lipan Aquifer, Region F Regional Water Plan, January 2001.

Edwards-Trinity (Plateau) Aquifer

The Edwards-Trinity (Plateau) aquifer (Fig. 4) is a minor source of groundwater in the southern part of Concho county and the northern and southern parts of Tom Green county and is used primarily for livestock and domestic needs, with limited amounts used for irrigation. It is also a large source of recharge for the Lipan aquifer. The Edwards-Trinity aquifer consists of saturated sediments of lower Cretaceous age Trinity Group formations and overlying limestones and dolomite of the Comanche Peak, Edwards, and Georgetown formations. The Glen Rose Limestone is the primary unit of the Trinity in the in the southern part of the plateau and is replaced by the Antlers Sand north of the Glen Rose pinch out.

The average annual effective recharge of the Edwards-Trinity formation located in Concho and Tom Green counties is estimated to be 26,734 acre-feet. Chemical quality of Edwards-Trinity (Plateau) water ranges from fresh to slightly saline. The water is typically hard and may vary widely in concentrations of dissolved solids made up mostly of calcium and bicarbonate. The salinity of the groundwater tends to increase toward the west. Certain areas have unacceptable levels of fluoride.

Hickory Aquifer

Underlying the Edwards-Trinity (Plateau) aquifer in the southeastern part of Concho county is a down-dip portion of the Hickory aquifer (Fig. 5). The Hickory formation is comprised of Cambrian-age sands and gravels eroded from the granites of the Llano uplift in central Texas. There is no outcrop area of the Hickory formation in Concho County, but the formation down-dips fairly uniformly to the west, underlying the Edwards-Trinity formation in the southeastern part of the county.

The Hickory aquifer has an average saturated thickness of 400-500 feet in the southeast corner of Concho county. There is no recharge to the aquifer within the District and only a limited amount of recoverable storage in the District. Water in the Hickory in

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12 Table 3-2, Lipan Aquifer, Region F Regional Water Plan, January 2001.


14 Ibid., Aquifers of Texas, p. 37.

Concho county and within the boundaries of the Lipan-Kickapoo WCD is known to be very saline. The water quality varies and the extent of radioactivity within the Hickory aquifer within the District, which is known to exist in other parts of the aquifer, is not yet known. However, all of the formation within the District is downdip from the outcrop area, so it is possible that the Hickory water supply within the District will contain these radioactive decay products in some areas.

**Data Sources**

Currently, the District is using data from the Texas Water Development Board as a reference source for calculating and estimating groundwater resources. However, for planning purposes, the District, wherever possible, is using local data of existing conditions to provide better accuracy in determining groundwater resources. The primary reference source is the TWDB’s data for Groundwater Availabilities as well as estimates of recharge and availability rates. These data sets describe the saturated thickness and yield, which the product describes as water in storage. When combined with recharge and production values, these estimates can be used to derive goals for future estimates of available groundwater.

**SURFACE WATER RESOURCES**

Prior to the annexation of the new territory in Concho, Runnels, and Tom Green counties, all surface impoundments with the exception of five were used to supply water for livestock consumption. These five small impoundments catch flood waters and are used for irrigation purposes. They are located on Lipan creek and Dry Hollow creek. The landowners have permits from the TCEQ to pump up to a total of 526 acre feet per year if the water is available. The Lipan-Kickapoo WCD has no jurisdiction over surface water nor does the district have any obligation or the jurisdiction to supply groundwater to these surface permit holders.

There are 2,607 acre-feet of water rights permitted by the TCEQ in Concho county, 10,046 acre-feet in Runnels county, and 156,916 acre-feet in Tom Green county for a total of 169,569 acre-feet permitted in the three counties. Of this total, 110,923 acre-feet are permitted for municipal use, 8,002 acre-feet are permitted for industrial use, 50,548 acre-feet are permitted for irrigation, 70 acre-feet are permitted for mining, and 26 acre-feet are permitted for other.  

There are several lakes that are either in the District or adjacent to the District. These include: in Runnels county-Lake Winters / New Lake Winters, Lake Ballinger / Lake Moonen, and O.H. Ivie Reservoir; in Concho county-O.H. Ivie Reservoir; in Tom Green county-O.C. Fisher Lake, Twin Buttes Reservoir, and Lake Nasworthy.

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16 Table 1-11, Source of Supply by County and Category in 1997 for Region F, Texas Water Development Board - Water For Texas-2002- Region F Regional Water Plan, January 2001.
Water Rights and Diversions of Major Reservoirs

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>County</th>
<th>Water Right Numbers</th>
<th>Permitted Storage (Acre-Feet)</th>
<th>Permitted Diversion (Acre-Feet/Yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Winters/New Lake Winters</td>
<td>Runnels</td>
<td>1,095</td>
<td>8,347</td>
<td>1,755</td>
</tr>
<tr>
<td>Lake Ballinger/Lake Moonen</td>
<td>Runnels</td>
<td>1,072</td>
<td>6,850</td>
<td>1,000</td>
</tr>
<tr>
<td>O.H. Ivie Reservoir</td>
<td>Concho</td>
<td>3,866</td>
<td>554,340</td>
<td>113,000</td>
</tr>
<tr>
<td>O.C. Fisher Lake</td>
<td>Tom Green</td>
<td>1,190</td>
<td>119,000</td>
<td>80,400</td>
</tr>
<tr>
<td>Twin Buttes Reservoir</td>
<td>Tom Green</td>
<td>1,318</td>
<td>186,000</td>
<td>29,000</td>
</tr>
<tr>
<td>Lake Nasworthy</td>
<td>Tom Green</td>
<td>1,319</td>
<td>12,500</td>
<td>25,000</td>
</tr>
</tbody>
</table>

Even though there is considerable permitted storage and permitted diversions of surface water, the drought has reduced the amount of water stored in most of these lakes to a small fraction of what they are permitted to store, eg. O.H. Ivie is at 40% of storage capacity, O.C. Fisher is at 5% of storage capacity, while Twin Buttes Reservoir is at 8% of capacity. It will take several years of above average rainfall with considerable runoff to fill these reservoirs to capacity.

ANNUAL AMOUNT OF ADDITIONAL NATURAL OR ARTIFICIAL RECHARGE

West Texas landowners, range scientists and water supply professionals have long suspected that noxious brush, primarily mesquite and juniper, have had and will continue to have a tremendous influence on water resources of the region. From historical data collected by the U.S. Army Corp of Engineers from 1925 to the 1960’s, the area experienced a dramatic shift in hydrologic characteristics beginning about 1960. These changes occurred due to several factors:
1) In the 1950’s brush infestations were complete. Comparing aerial or ground based photos to current photos shows only slight differences. The most dramatic change in vegetative types occurs when comparing the same 1960 photos to 1920 photos. The “native” condition of much of the region could be characterized as a grassland prairie.
2) An historic drought occurred during the 1950’s seriously depleting surface and groundwater resources. Many historic springs stopped flowing during this period and have never recovered.
3) It is theorized that the hydrologic systems in many of the watersheds that include gaining streams and the critical relationship between the groundwater and surface water flows contained large storage volumes that were slowly being depleted with the encroachment of the brush. Following the drought of the 1950’s, the systems no longer had the capacity to recover because of the increased utilization of water by the brush.18

The evidence is overwhelming. More than 25 percent of once perennial streams in the Concho and Colorado basins stopped flowing after the drought of the 1950’s when noxious brush such as mesquite, juniper, and salt cedar began to culminate its’ dominance over what was once grassland prairie. As a result, every 10 acres of moderate to heavy brush infestations not steals one acre foot

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17 Table 1-13, Water Rights and Diversions of Major Reservoirs, Texas Water Development Board - Water For Texas-2002- Region F Regional Water Plan, January 2001.

of water annually (325,851 gallons).\textsuperscript{19}

District personnel have observed that during the period in the Fall when brush and trees become dormant to late Spring when brush and trees come out of dormancy that the water levels in monitor wells increase regardless of whether or not there has been rainfall. After the brush and trees come out of dormancy, the water levels continue to drop throughout the summer until Fall.

A study completed in 1998 concluded that brush control projects on total watersheds could restore watershed yields to near historic levels.\textsuperscript{20} Computer modeling by Blackland Research and Texas A&M and calculated by the Upper Colorado River Authority shows that the entire Colorado and Concho River basins could gain an additional 249,584 acre feet of water annually in groundwater recharge and surface flow into existing reservoirs.\textsuperscript{21}

There is no surplus surface water in the district available for artificial recharge of the aquifers. However, research performed at Texas A & M indicates that brush control would save rain water for desirable plants and increase the amount of percolation of excess water through the soil by 1 to 2%. In an average rainfall year, approximately 19,350 acre-feet of water saved through brush control could eventually percolate through the soil as part of the natural recharge of the aquifers. This additional water would be available for use by the residents of the District. Some brush control projects have already been completed within the District and are proving to be successful as some of the springs are beginning to flow again. These projects have been funded by the State. However, due to budget constraints at the State level funding will be reduced during the upcoming biennium. In addition to brush control on the watersheds, desalination of slightly saline water could help increase the amount of water available for use in the District.

**PROJECTED WATER SUPPLIES**

In order to maintain dependable groundwater supplies, the District follows the principle that the recharge rate of the aquifers is the projected water supply. Historically the aquifers are pumped each year until water is no longer available. Since the aquifers recharge rapidly after significant rainfall on the recharge area, the estimated recharge rate will be used in this plan as the projected water supply.

Since there is no recharge to the Hickory aquifer in Concho county and the water in this down ditch part of the aquifer within the District is very saline, no recoverable storage of Hickory groundwater is projected. However, the Edwards-Trinity(Plateau) aquifer does have an annual recharge and is covered by both the Hickory UWCD No.1 and the Lipan-Kickapoo WCD. The District has

\textsuperscript{19} Concho River & Upper Colorado River Basins Brush Control Feasibility Study, Upper Colorado River Authority, December 2000, p. 9.


\textsuperscript{21} Ibid., Concho River & Upper Colorado River Basins Brush Control Feasibility Study, p. 9.
consulted with the Hickory UWCD and together have determined that approximately 30% of the annual recharge occurs within the Hickory UWCD and 70% of the annual recharge occurs within the Lipan-Kickapoo WCD.

As previously stated, the aquifers are pumped each year until water is no longer available. When the aquifers are filled to capacity, the wells will supply 54,375 to 72,500 acre-feet of recoverable water. This is based on data from District pump and pivot evaluations and sales of electricity for irrigation by local electric service providers along with TWDB irrigation surveys that indicate irrigators apply from 1.5 to 2 acre-feet per acre annually. Multiplying the total estimated 36,250 irrigated acres within the District by 1.5 acre-feet indicates that approximately 54,375 acre-feet of water is pumped within the District during above average recharge years. Multiplying the irrigated acres by 2 acre-feet indicates that approximately 72,500 acre-feet of water is pumped within the District during optimal recharge years. During an average year, irrigators have enough recoverable groundwater to apply 1 acre-foot per acre. This amount of pumping approximately equals the average annual recharge of the Lipan and other undifferentiated aquifers. Therefore, the estimated recoverable volume of water in storage from these aquifers is the annual recharge. There are no wells capable of pumping large volumes of water within the District. New wells being drilled in the Lipan aquifer are reducing the amount of water being pumped by existing wells. Well owners are being forced to down-size their pumps to cope with this situation. This indicates that 72,500 acre-feet is probably the maximum storage capacity of the aquifers within the District. It also reveals that the groundwater underlies a large area and that the residents of the District effectively deplete the aquifers each year based on the amount of annual recharge, e.g. if the recharge is 25,000 acre-feet in a given year, then 25,000 acre-feet is pumped; if the recharge is 72,000 acre-feet in a given year, then 72,000 acre-feet is pumped. Groundwater within the District is not available for any other purpose other than supplemental irrigation and livestock and domestic use. This is a result of the scarcity of large pumping capacities, the annual depletion of the aquifers, and the poor quality of the water.

Total annual available groundwater supplies in the District as provided by the TWDB is estimated to be 76,342 acre-feet annually. However, local data indicates that only about 37,307 acre-feet per year is available. This annual available groundwater supply is as follows:

1) Groundwater availability from the Lipan aquifer in the District is limited to annual recharge which is estimated to be 35,436 acre-feet.

2) The Edwards-Trinity (Plateau) aquifer provides, at best, water for livestock and limited domestic use. It is estimated that the annual recharge to the Edwards-Trinity aquifer is 26,734 acre-feet per year. According to the TWDB data, 27,807 acre-feet per year are available from the Edwards-Trinity (Plateau) aquifer. However, local data indicates that of this total only about 1,871 acre-feet is being pumped. Most of the groundwater is either being discharged from the aquifer as spring flow or is the primary source of recharge for the Lipan aquifer. Therefore, until yield estimates are improved, the District will rely on its current local data to estimate the recoverable volume and annual recharge of the aquifer.

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22 Table 3-1, Annual Groundwater Availability, Texas Water Development Board - Water For Texas-2002-Region F Regional Water Plan, January 2001.

23 Ibid., Table 3-1.

24 Ibid., Table 3-1.
3) The data from the TWDB indicate no annual recharge to the Hickory aquifer in the District. It indicates that approximately 4,290 acre-feet per year is available for use. However, water analysis from wells drilled into the Hickory aquifer in the District indicate that the water is very saline and is therefore not usable.

**GROUNDWATER USE**

Based on available Texas Water Development Board data, during the seven years ending in 1997, annual groundwater usage in the District has varied from a low of 11,197 acre-feet to a high of 67,585 acre-feet.

**Concho, Runnels, Tom Green Counties**  
**Historical Water Use**\(^{26}\)  
**(Surface and Groundwater Combined)**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90,490</td>
<td>76,535</td>
<td>74,870</td>
<td>163,707</td>
<td>96,780</td>
<td>146,236</td>
</tr>
</tbody>
</table>

**Lipan-Kickapoo WCD**  
**Concho & Tom Green Counties**  
**(Prior to Annexation)**  
**Historical Water Use**\(^{27}\)  
**(Groundwater)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>16,524 acre-feet per year</td>
</tr>
<tr>
<td>1992</td>
<td>11,197 acre-feet per year</td>
</tr>
<tr>
<td>1993</td>
<td>52,191 acre-feet per year</td>
</tr>
<tr>
<td>1994</td>
<td>46,340 acre-feet per year</td>
</tr>
<tr>
<td>1995</td>
<td>58,604 acre-feet per year</td>
</tr>
<tr>
<td>1997</td>
<td>67,585 acre-feet per year</td>
</tr>
</tbody>
</table>

---


26 Table 1-6, Historical Total Water Use by County, Texas Water Development Board - *Water For Texas 2002-Region F Regional Water Plan*, January 2001.

27 Annual Survey of Estimated Irrigation Use, Texas Water Development Board.

28 Table 15, 1997 Groundwater Pumping by County, *Draft Region F Regional Water Plan*, November 1999
The historical groundwater usage within the District changed with the annexation of new territory in Concho, Runnels, and Tom Green counties.

### Lipan-Kickapoo WCD
Concho, Runnels, Tom Green Counties
**Historical Water Use**

<table>
<thead>
<tr>
<th>Year</th>
<th>Usage (acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>33,840</td>
</tr>
<tr>
<td>1989</td>
<td>34,685</td>
</tr>
<tr>
<td>1994</td>
<td>65,046</td>
</tr>
<tr>
<td>1997</td>
<td>70,745</td>
</tr>
<tr>
<td>2000</td>
<td>19,251</td>
</tr>
</tbody>
</table>

### PROJECTED DEMANDS FOR WATER

Since there are no municipalities within the boundaries of the District, projected water demands are based on the Texas Water Development Board's combined surface and groundwater demands for irrigation and livestock over the next 50 years.

### Projected Water Demands by Category

#### Irrigation and Livestock
Concho, Runnels, Tom Green Counties

<table>
<thead>
<tr>
<th>Category</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigation</td>
<td>134,434</td>
<td>134,083</td>
<td>133,732</td>
<td>133,380</td>
<td>133,030</td>
<td>132,679</td>
</tr>
<tr>
<td>Livestock</td>
<td>4,799</td>
<td>4,799</td>
<td>4,799</td>
<td>4,799</td>
<td>4,799</td>
<td>4,799</td>
</tr>
<tr>
<td>Total</td>
<td>139,233</td>
<td>138,882</td>
<td>138,531</td>
<td>138,179</td>
<td>137,829</td>
<td>137,478</td>
</tr>
</tbody>
</table>

---


30 Table 15, 1997 Groundwater Pumping by County, *Draft Region F Regional Water Plan*, November 1999

Proposed Region F 2003 Projected Water Demands by Category
Combined Surface and Groundwater
Irrigation - By County
(acre-feet per year)

<table>
<thead>
<tr>
<th>County</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concho</td>
<td>2,574</td>
<td>2,564</td>
<td>2,554</td>
<td>2,543</td>
<td>2,533</td>
<td>2,523</td>
</tr>
<tr>
<td>Runnels</td>
<td>920</td>
<td>916</td>
<td>913</td>
<td>909</td>
<td>905</td>
<td>901</td>
</tr>
<tr>
<td>Tom Green</td>
<td>30,415</td>
<td>30,341</td>
<td>30,266</td>
<td>30,192</td>
<td>30,118</td>
<td>30,043</td>
</tr>
<tr>
<td>Total</td>
<td>33,909</td>
<td>33,821</td>
<td>33,733</td>
<td>33,644</td>
<td>33,556</td>
<td>33,467</td>
</tr>
</tbody>
</table>

Proposed Region F 2003 Projected Water Demands by Category
Combined Surface and Groundwater
Livestock - By County
(acre-feet per year)

<table>
<thead>
<tr>
<th>County</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concho</td>
<td>542</td>
<td>542</td>
<td>542</td>
<td>542</td>
<td>542</td>
<td>542</td>
</tr>
<tr>
<td>Runnels</td>
<td>936</td>
<td>936</td>
<td>936</td>
<td>936</td>
<td>936</td>
<td>936</td>
</tr>
<tr>
<td>Tom Green</td>
<td>1,886</td>
<td>1,886</td>
<td>1,886</td>
<td>1,886</td>
<td>1,886</td>
<td>1,886</td>
</tr>
<tr>
<td>Total</td>
<td>3,364</td>
<td>3,364</td>
<td>3,364</td>
<td>3,364</td>
<td>3,364</td>
<td>3,364</td>
</tr>
</tbody>
</table>

Since there is such a discrepancy between the Water for Texas - 2000 Region F Regional Water Plan and the proposed Region F 2003 projected water demands, the experience of the District has been utilized in preparing another chart on projected water demands. The District’s projected water demands are based on the projected water supplies and the estimated amount of irrigated land in the District. The following table shows the demands on the aquifers when the aquifers are at or above normal storage capacity. Due to the drought, the demands have been greater than normal on the aquifers and the available groundwater has been approximately half of what the demands have been. The wells are dry. Since all available recharge is pumped each year, it is safe to assume that in the future the demands are going to have to be reduced to equal the supply unless another source of water is located.

32 Draft Table, Region F Regional Water Planning Group, Freese & Nichols, Inc., Ft. Worth, TX, June 2003.

33 Draft Table, Region F Regional Water Planning Group, Freese & Nichols, Inc., Ft. Worth, TX, June 2003.
<table>
<thead>
<tr>
<th>Year</th>
<th>Concho County</th>
<th>Runnels County</th>
<th>Tom Green County</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Irrigation</td>
<td>Livestock</td>
<td>Irrigation</td>
<td>Livestock</td>
</tr>
<tr>
<td>2000</td>
<td>5,148</td>
<td>542</td>
<td>5,376</td>
<td>936</td>
</tr>
<tr>
<td>2010</td>
<td>5,166</td>
<td>547</td>
<td>5,396</td>
<td>941</td>
</tr>
<tr>
<td>2020</td>
<td>5,160</td>
<td>551</td>
<td>5,402</td>
<td>945</td>
</tr>
<tr>
<td>2030</td>
<td>5,156</td>
<td>548</td>
<td>5,390</td>
<td>940</td>
</tr>
<tr>
<td>2040</td>
<td>5,150</td>
<td>545</td>
<td>5,380</td>
<td>938</td>
</tr>
<tr>
<td>2050</td>
<td>5,130</td>
<td>542</td>
<td>5,360</td>
<td>935</td>
</tr>
</tbody>
</table>

Based on supply and demand calculations and projections it is obvious that there will be times that demands exceed supply. In this area of the State and with the type of aquifers that serve the area, this is a normal occurrence that is recognized by most local residents. However, there is a growing trend in the District of large ranches being sold to developers who in turn are creating new subdivisions. Water use on some of these lands has gone from a few widely scattered low impact livestock wells to a much greater number of higher impact domestic, and in some cases irrigation wells. The District has observed that:

1) Some domestic wells in these subdivisions have been going dry due to the greater demand on the aquifers.

2) Municipalities in the counties covered by the District are experiencing acute municipal water shortages and are looking to the District and other surrounding areas for additional water supplies.

3) The prolonged drought in this area along with normal pumping have put a tremendous strain on all groundwater resources. Residents of the District understand that groundwater supplies are limited and have modified farming and ranching techniques to match the availability of water. There are approximately 200 highly efficient pivot irrigation systems installed within the District with only about 15% to 20% with sufficient groundwater to operate. Hundreds of acres of highly efficient drip irrigation have also been installed. Efforts are being made by the residents of the District to use the available groundwater resources with maximum efficiency, while monitoring the quality of the groundwater to protect this resource for the years to come.

It is apparent that there is a need to manage this groundwater resource. In order to better manage this resource, better information on the characteristics, recoverable supplies, and recharge of the aquifers will have to be developed.
MANAGEMENT OF GROUNDWATER SUPPLIES

Preservation and protection of groundwater quality and quantity has been the guiding principle of the District since its creation while striving to maintain the economic viability of all groundwater user groups, public and private. In consideration of the economic and cultural activities occurring within the District, the District will continue to identify and engage in such activities and practices, that if implemented, would result in preservation and protection of the groundwater. The District will continue to make a regular assessment of groundwater supply and storage conditions and make them available to the public. Additional monitor wells both water quality and water level are being added to the monitor well program along with expansion of newer programs including the rainfall monitoring program.

The District has adopted rules to regulate groundwater withdrawals by means of spacing regulations and well density (number of wells per section). These rules were amended in March 2000. The District will amend these rules, within the limitations imposed by Chapter 36 of the Texas Water Code, as necessary to regulate groundwater withdrawals by means of additional spacing and/or production limits. District rules also address permitting and registration of wells, waste, well drilling and completion of wells, as well as capping and plugging of unused or abandoned wells. These rules are meant to provide equitable conservation and preservation of the groundwater resources while protecting vested property rights and preventing confiscation of property.

The District may deny a drilling permit in accordance with the provisions of the District rules. The relevant factors to be considered in granting, denying, or limiting a permit include:

1) the purpose of the District rules, including but not limited to preserving and protecting the quality and quantity of the aquifer resources, and protecting existing uses;
2) the equitable conservation and preservation of the resource; and
3) the economic hardship resulting from denial or limitation of a permit.

In pursuit of the District’s mission of preserving and protecting the resource, the District will enforce the terms and conditions of permits and the rules of the District by injunction, mandatory injunction, or other appropriate remedies in a court of competent jurisdiction as provided by Chapter 36.102, Texas Water Code.

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

ACTIONS, PROCEDURES, PERFORMANCE AND AVOIDANCE FOR PLAN IMPLEMENTATION

The District will implement the provisions of this plan and will utilize the provisions of this plan as a guide for determining the direction and/or priority for District activities. All operations of the
District will be consistent with the provisions of this plan.

The District adopted rules in 1989 and amended those rules in 2000 and will amend those rules as necessary. Rules adopted or amended by the District shall be pursuant to TWC Chapter 36 and the provisions of this plan. The promulgation and enforcement of the rules will be based on the best scientific and technical evidence available.

The District shall treat all citizens with equality. For good cause, the District, in its discretion, and after notice and hearing, may grant an exception to the District rules. In doing so, the Board shall consider the potential for adverse effects 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.

**Coordination With Surface Water Entities**

This management plan has been forwarded to all surface water entities for comment.

**Methodology for Tracking Progress**

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

The District manager will prepare and present an annual report to the Board of Directors on District performance in regards to achieving management goals and objectives for the previous fiscal year, during the first meeting of each new fiscal year. The report will include the number of instances each activity was engaged in during the year.

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

**GOALS, MANAGEMENT OBJECTIVES AND PERFORMANCE STANDARDS**

**Goal**

1.0 **Provide for the Efficient Use of Groundwater Within the District.**

**Management Objective**

1.1 Each year the District will perform pump and pivot irrigation flow tests upon request by the well owners to determine the amount of water being pumped or applied with each irrigation application.

**Performance Standards**

1.1a - Perform pump flow tests and pivot irrigation flow tests upon request by the well or pivot owner.
1.1b - Annual report to the Board of Directors on the number of wells and pivots tested.

**Goal**

2.0 **Control and Prevent the Waste* of Groundwater.**

**Management Objective**

2.1 Each year, identify wasteful practices within the District.

**Performance Standards**

2.1a - District will investigate any identified wasteful practices and take corrective action within 2 working days of identification.

2.1b - Annual report to Board of Directors listing all of the wasteful practices identified.

**Goal**

3.0 **Conjunctive Surface Water Management Issues.**

**Management Objective**

3.1 Monitor rainfall events on the watersheds within the District that will impact surface runoff and groundwater recharge.

**Performance Standards**

3.1a - District will establish a rainfall monitoring network and provide rainfall data to surface water entities as it becomes available.

3.1b - Annual report to Board of Directors listing the number of rain gauges in the rainfall monitoring network and the number of times rainfall data was provided to surface water entities.

**Goal**

4.0 **Natural Resource Issues.**

**Management Objective**

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

4.1a - District will establish a water level monitoring network and annually measure 90 percent of the wells in the network.

4.1b - Annual report to Board of Directors listing the number of wells measured in the water level monitoring network.

---

**Goal**

5.0 **Drought Conditions.**

**Management Objective**

5.1 Each year the District will monitor the Palmer Drought Severity Index. If the index indicates that the District will experience severe drought conditions, the District will notify all public water suppliers within the District.

**Performance Standards**

5.1a - District staff will monitor the Palmer Drought Severity Index and notify all public water suppliers within the District when severe drought conditions are indicated.

5.1b - Annual report to Board of Directors listing number of times Palmer Drought Severity Index indicated severe drought conditions and the number of times public water suppliers were notified.

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**Goal**

6.0 **Conservation.**

**Management Objective**

6.1 Each year the District will provide and distribute all requested water conservation literature to promote the efficient use of water.

**Performance Standards**

6.1a - District staff will provide information to area residents about water conservation upon request.

6.1b - Annual report to Board of Directors listing number of times water conservation information was distributed.
MANAGEMENT GOALS DETERMINED NOT-APPLICABLE

Goal
7.0 Control and Prevention of Subsidence.

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

DEFINITIONS AND CONCEPTS

“Board” - the Board of Directors of the Lipan-Kickapoo Water Conservation District.

“District” - the Lipan-Kickapoo Water Conservation District.

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

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

“Integrity” - means the preservation of groundwater quality.

“Natural Recourse Issues” - includes groundwater integrity preservation

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

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

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

“TCEQ” - Texas Commission on Environmental Quality.

“TWDB” - Texas Water Development Board.

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

(1) withdrawal of groundwater from a groundwater reservoir at a rate and in an amount that causes or threatens to cause intrusion into the reservoir of water unsuitable for agricultural, gardening, domestic, or stock raising purposes;

(2) the flowing or producing of wells from a groundwater reservoir if the water produced is not used for a beneficial purpose;
(3) escape of groundwater from a groundwater reservoir to any other reservoir or geologic strata that does not contain groundwater;

(4) pollution or harmful alteration of groundwater in a groundwater reservoir by saltwater or by other deleterious matter admitted from another stratum or from the surface of the ground;

(5) willfully or negligently causing, suffering, or allowing groundwater to escape into any river, creek, natural watercourse, depression, lake, reservoir, drain, sewer, street, highway, road, or road ditch, or onto any land other than that of the owner of the well unless such discharge is authorized by permit, rule, or order issued by the commission under Chapter 26;

(6) groundwater pumped for irrigation that escapes as irrigation tailwater onto land other than that of the owner of the well unless permission has been granted by the occupant of the land receiving the discharge; or

(7) for water produced from an artesian well, “waste” has the meaning assigned by Section 11.205.

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

LIPAN-KICKAPOO WATER CONSERVATION DISTRICT

A Public Hearing is scheduled for Wednesday July 9 at 7:00 A.M. in the Lipan-Kickapoo Water Conservation District Office, Suite C, Vancourt Office Building, Vancourt, Texas. The purpose of this hearing is to take public comment on proposed amendments to the District's currently certified 10-year Management Plan and on an Application for A Water Well Drilling Permit for a well to irrigate the football and baseball fields submitted by the Wall ISD.

Copies of the Proposed Amended 10-Year Management Plan are available at the District office.

All residents of the District and any interested parties may appear and be heard.

SPECIAL MEETING OF THE BOARD OF DIRECTORS

LIPAN-KICKAPOO WATER CONSERVATION DISTRICT

The Board of Directors will meet in Special Session on Wednesday, July 9, 2003 immediately following the Public Hearing in the Lipan-Kickapoo Water Conservation District Office, Suite C, Vancourt Office Building, Vancourt, Texas.

Public Comments. Anyone wishing to address the Board may appear and be heard.

The following items are on the agenda:

(1) Review and approve the minutes of the previous meetings - May 7, 2003 and May 12, 2003.

(2) Review and possible action on the financial report and ratification of payments for May-June 2003.

(3) Review and possible action on any unpaid bills.

(4) Review and possible action on Resolution to Adopt the Proposed 10-Year Management Plan as Amended.


(6) Discussion and possible action on Permit Application to Drill irrigation well by Wall ISD.

(7) Discussion and possible action on request by John D. Porter to annex his property adjacent to the District boundary at Grape Creek into the District.

(8) Manager’s Report.

(9) Miscellaneous Business:
   a) Next regular meeting tentatively set for Wednesday, August 6 at 7:00 A.M.
   b) Suggested agenda items for the next meeting:
      (1) Budget Workshop for FY 2003-04.
      (2) Work session on rules.

(10) Adjournment.

* Pursuant to the provisions of Section 551.074 and 551.076 of the open meetings act of the Government Code, the Board reserves the right to convene in Executive Session at any time deemed necessary for consideration of personnel matters and/or district security.

Date: July 2, 2003
Time: 7:54 AM
NOTICE OF HEARING

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(4) Review and possible action on Resolution to Adopt the Proposed 10-Year Management Plan as Amended.
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FILED

The 2 Day of July 2003
at 7:54 O'clock A. M

Date: July 2, 2003
Time: 7:54 AM

By [Signature] Clerk, Concho Co. TX
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(1) Review and approve the minutes of the previous meetings - May 7, 2003 and May 12, 2003.
(2) Review and possible action on the financial report and ratification of payments for May-June 2003.
(3) Review and possible action on any unpaid bills.
(4) Review and possible action on Resolution to Adopt the Proposed 10-Year Management Plan as Amended.
(6) Discussion and possible action on Permit Application to Drill irrigation well by Wall ISD.
(7) Discussion and possible action on request by John D. Porter to annex his property adjacent to the District boundary at Grape Creek into the District.
(8) Manager’s Report.
(9) Miscellaneous Business:
   a) Next regular meeting tentatively set for Wednesday, August 6 at 7:00 A.M.
   b) Suggested agenda items for the next meeting:
      (1) Budget Workshop for FY 2003-04.
      (2) Work session on rules.
(10) Adjournment.

* Pursuant to the provisions of Section 551.074 and 551.076 of the open meetings act of the Government Code, the Board reserves the right to convene in Executive Session at any time deemed necessary for consideration of personnel matters and/or district security.

Date: July 2, 2003
Time: 7:54 AM
A public hearing was held on Wednesday, July 9, 2003. The hearing was called to order at 7:00 AM by the board president - A.H. Denis, III. The purpose of this hearing was to take public testimony on proposed amendments to the District's currently certified 10-year Management Plan and on an Application for a Water Well Drilling Permit for the Wall Independent School District.

All members were present. The District's General Manager and Wall ISD Superintendent Walter Holik, Jr were also present.

There were no other attendees at the hearing.

Mr. Denis welcomed everyone to the hearing. The Board then heard testimony from Mr. Holik concerning the application for a water well drilling permit for the Wall ISD. Mr. Holik stated that since the school's wells are either dry or going dry they need to drill another well to help irrigate the school football field, baseball field, and practice fields. They have already installed water conservation measures by setting up 20,000 gallons in storage tanks and installing drip irrigation on the football field to conserve water. The tanks are filled twice a week at night to irrigate the playing fields. The school is looking to supplement the one existing well with a new well to pump up to 50 gallons per minute. Board members questioned Mr Holik concerning the school district's conservation measures and water requirements. They also feel that another hearing should be held in Wall so the adjacent land owners can comment on this permit application.

Following the comments on the permit application, the hearing was open for comments on the amendments to the District’s 10-year Management Plan. No one attended the hearing to comment on the management plan. However, the board discussed some changes to the plan as presented.

There being no further discussion or comments, the hearing was closed at 7:40 AM.

7-21-03
Date

Attest

Presiding Officer
August 11, 2003

Subject: Lipan-Kickapoo WCD Management Plan

Under §36.1071, Texas Water Code, as amended, the Lipan-Kickapoo WCD is required to coordinate with surface water entities in preparation of its management plan. In compliance with this chapter of the water code, the District submitted a copy of the newly amended 10 year management plan for review and comments to the following surface entities and regional planning groups on July 14, 2003:

1) City of San Angelo
2) Upper Colorado River Authority
3) City of Winters
4) Colorado River Municipal Water District
5) City of Ballinger
6) Region F Regional Water Planning Group.

Comments or suggestions were requested to be submitted to the District by August 1, 2003. As of August 11, 2003, no comments or suggestions have been received by the District.

Copies of the cover letters and certified mail receipts are enclosed.

Sincerely,

[Signature]

Allan J. Lange
General Manager
July 11, 2003

Mr. Tommy New
City of Ballinger
PO Box 497
Ballinger, Texas 76821

Subject: Lipan-Kickapoo WCD Management Plan

Dear Mr. New:

The Lipan-Kickapoo WCD adopted a 10 year management plan in 1998 which was certified by the Texas Water Development Board on September 17, 2003. Under §36.1072, Texas Water Code, as amended, the District must review and readopt the plan with or without revisions at least once every 5 years. Since the District now includes Concho, Runnels, and Tom Green counties, the District has amended its 10 year plan and is submitting it to the Texas Water Development Board for recertification.

Under §36.1071, Texas Water Code, as amended, the District is required to coordinate with surface water entities in preparation of its management plan. In compliance with this chapter of the water code, the District is submitting to you a copy of the newly amended management plan for your review and comments.

Please review this management plan and submit any comments or suggestions to the District by August 1, 2003. If you have any questions or want additional information, as you review this plan, please contact me toll free at (866) 469-3988. We appreciate your attention and cooperation in reviewing this management plan.

Sincerely,

[Signature]
Allan J. Lange
General Manager

enclosures
July 11, 2003

Mr. John Grant  
President  
Region F Regional Water Planning Group  
P.O. Box 869  
Big Spring, Texas 79721-0869

Subject: Lipan-Kickapoo WCD Management Plan

Dear Mr. Grant:

The Lipan-Kickapoo WCD adopted a 10 year management plan in 1998 which was certified by the Texas Water Development Board on September 17, 2003. Under §36.1072, Texas Water Code, as amended, the District must review and readopt the plan with or without revisions at least once every 5 years. Since the District now includes Concho, Runnels, and Tom Green counties, the District has amended its 10 year plan and is submitting it to the Texas Water Development Board for recertification.

Under 31TAC§356.6(a)(5), the District is required to submit a copy of the groundwater management plan to all Regional Water Planning Groups in which any part of the District is located. In compliance with this chapter of the TAC, the District is submitting to you a copy of the newly amended management plan for your review and comments.

Please review this management plan and specify any areas of conflict with the Texas Water Development Board approved regional water plan. Please, submit your comments to the District by August 1, 2003. If you have any questions or want additional information, as you review this plan, please contact me toll free at (866) 469-3988. We appreciate your attention and cooperation in reviewing this management plan.

Sincerely,

Allan J. Lange  
General Manager

enclosures
July 11, 2003

Mr. Aref Hassan
City of Winters
310 South Main
Winters, Texas 79567

Subject: Lipan-Kickapoo WCD Management Plan

Dear Mr. Hassan:

The Lipan-Kickapoo WCD adopted a 10 year management plan in 1998 which was certified by the Texas Water Development Board on September 17, 2003. Under §36.1072, Texas Water Code, as amended, the District must review and readopt the plan with or without revisions at least once every 5 years. Since the District now includes Concho, Runnels, and Tom Green counties, the District has amended its 10 year plan and is submitting it to the Texas Water Development Board for recertification.

Under §36.1071, Texas Water Code, as amended, the District is required to coordinate with surface water entities in preparation of its management plan. In compliance with this chapter of the water code, the District is submitting to you a copy of the newly amended management plan for your review and comments.

Please review this management plan and submit any comments or suggestions to the District by August 1, 2003. If you have any questions or want additional information, as you review this plan, please contact me toll free at (866) 469-3988. We appreciate your attention and cooperation in reviewing this management plan.

Sincerely,

Allan J. Lange
General Manager

enclosures
July 11, 2003

Mr. John Grant
General Manager
Colorado River Municipal Water District
P.O. Box 869
Big Spring, Texas 79721-0869

Subject: Lipan-Kickapoo WCD Management Plan

Dear Mr. Grant:

The Lipan-Kickapoo WCD adopted a 10 year management plan in 1998 which was certified by the Texas Water Development Board on September 17, 2003. Under §36.1072, Texas Water Code, as amended, the District must review and readopt the plan with or without revisions at least once every 5 years. Since the District now includes Concho, Runnels, and Tom Green counties, the District has amended its 10 year plan and is submitting it to the Texas Water Development Board for recertification.

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Please review this management plan and submit any comments or suggestions to the District by August 1, 2003. If you have any questions or want additional information, as you review this plan, please contact me toll free at (866) 469-3988. We appreciate your attention and cooperation in reviewing this management plan.

Sincerely,

Allan J. Lange
General Manager

enclosures
July 11, 2003

Mr. W.H. Wilde
City of San Angelo
PO Box 1751
San Angelo, Texas 76902

Subject: Lipan-Kickapoo WCD Management Plan

Dear Mr. Wilde:

The Lipan-Kickapoo WCD adopted a 10 year management plan in 1998 which was certified by the Texas Water Development Board on September 17, 2003. Under §36.1072, Texas Water Code, as amended, the District must review and readopt the plan with or without revisions at least once every 5 years. Since the District now includes Concho, Runnels, and Tom Green counties, the District has amended its 10 year plan and is submitting it to the Texas Water Development Board for recertification.

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Please review this management plan and submit any comments or suggestions to the District by August 1, 2003. If you have any questions or want additional information, as you review this plan, please contact me toll free at (866) 469-3988. We appreciate your attention and cooperation in reviewing this management plan.

Sincerely,

Allan J. Lange
General Manager

enclosures
Lipan-Kickapoo Water Conservation District

P.O. Box 67
Vancourt, Texas 76955
Ph: 325-469-3988  Fax: 325-469-3989
Email: lkwdc@airmail.net

July 11, 2003

Mr. Stephen Brown
Upper Colorado River Authority
512 Orient
San Angelo, Texas 76903

Subject: Lipan-Kickapoo WCD Management Plan

Dear Mr. Brown:

The Lipan-Kickapoo WCD adopted a 10 year management plan in 1998 which was certified by the Texas Water Development Board on September 17, 2003. Under §36.1072, Texas Water Code, as amended, the District must review and readopt the plan with or without revisions at least once every 5 years. Since the District now includes Concho, Runnels, and Tom Green counties, the District has amended its 10 year plan and is submitting it to the Texas Water Development Board for recertification.

Under §36.1071, Texas Water Code, as amended, the District is required to coordinate with surface water entities in preparation of its management plan. In compliance with this chapter of the water code, the District is submitting to you a copy of the newly amended management plan for your review and comments.

Please review this management plan and submit any comments or suggestions to the District by August 1, 2003. If you have any questions or want additional information, as you review this plan, please contact me toll free at (866) 469-3988. We appreciate your attention and cooperation in reviewing this management plan.

Sincerely,

Allan J. Lange
General Manager

enclosures
LIPAN-KICKAPOO
WATER CONSERVATION DISTRICT
P.O. BOX 67
VANCOURT, TEXAS 76955

DISTRICT ACTION PLAN
2003-2008

GOALS, MANAGEMENT OBJECTIVES
and PERFORMANCE STANDARDS

Adopted July 9, 2003
District Action Plan
2003 - 2008

Goals, Management Objectives
And Performance Standards

Goal
1.0 Develop a groundwater monitoring system to improve the understanding of the aquifers and their hydrogeologic properties, as well as a quantification of resources necessary for prudent planning.

Management Objective
1.1 In order to determine the overall rate of deterioration of the water quality within the District, annually sample wells in the water quality monitoring network.

Performance Standards

1.1a - Establish a water quality monitoring network.

1.1b - Monitor 30 wells annually in the monitoring network. Wells will be sampled and water analyzed by a State approved Independent Laboratory on a 3 year rotation.

1.1c - Annual report to Board of Directors on number of wells sampled.

Goal
2.0 Gather information necessary to assist in the achievement of the District's mission.

Management Objective
2.1 Inventory and register the location of water wells in the District. Routinely locate and gather information on existing wells in the District and register any new wells drilled within the District.

Performance Standards

2.1a - Annual report to Board of Directors on the number of wells registered during the year.

Management Objective
2.2 Maintain a database of all well information.
**Performance Standards**
2.2a - Annual report to Board of Directors on the total number of registered wells in the database, the total number of driller’s logs in the database, and the total number of water analysis in the database.

**Management Objective**
2.3 Develop maps showing existing wells and any new wells drilled during the year.

**Performance Standards**
2.3a - Present maps to Board of Directors for review.

**Management Objective**
2.4 Routinely plot on Topo maps any new or existing wells that are inventoried and registered.

**Performance Standards**
2.4a - Annual review of Topo maps by Board of Directors indicating wells that have been inventoried and registered.

**Goal**

3.0 **Minimize the waste of water.**

**Management Objective**
3.1 Identify wasteful practices and take corrective action within 2 working days of identification within the District.

**Performance Standards**
3.1a - Annual report to Board of Directors listing the number of wasteful practices identified.

**Goal**

4.0 **Minimize the influence of the pumping of wells on the degradation of the aquifers by regulating the spacing of wells.**

**Management Objective**
4.1 Enforce existing rules regulating the spacing of wells.

**Performance Standards**
4.1a - Determine the percent of wells drilled annually complying with spacing requirements as set forth by District rules.

4.1b - Annual report to Board of Directors on number of wells drilled and percent of wells drilled complying with spacing requirements.

**Goal**

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

**Management Objective**
5.1 Enforce rules for the drilling, completing, and equipping of water wells to insure that new wells are completed properly to protect the groundwater.
**Performance Standards**

5.1a - Determine the percent of wells drilled annually constructed to standards set forth in District rules.

5.1b - Annual report to Board of Directors on percentage of wells completed to District standards.

**Management Objective**

5.2 Enforce rules for the capping and plugging of abandoned water wells.

**Performance Standards**

5.2a - Report unplugged abandoned oil and gas wells to the Texas Railroad Commission or any other responsible authority within thirty (30) days of discovery. Report unplugged or uncapped water wells to the well owners or other responsible parties within thirty (30) days of discovery.

**Performance Effectiveness Standards**

5.2b - Make an annual report to Board of Directors on the total number of unplugged abandoned oil and gas wells reported.

5.2c - Make an annual report to Board of Directors on the total number of abandoned unplugged or uncapped water wells reported.

**Management Objective**

5.3 Annually budget funds for abandoned well-plugging/capping. Adopt necessary changes to District Rules to allow for the enforced plugging/capping of wells belonging to non-compliant owners and the recovery, through civil action, of such funds as are expended during enforcement.

**Performance Standard**

5.3a - Annually budget funds for well-plugging/capping.

5.3b - Report the number of wells plugged annually by the district.

5.3c - Report the number of wells capped annually by District.

5.3d - Report the status of the well-plugging/capping fund budget annually to the District Board.

**Goal**

6.0 *District tracking of progress towards achievement of action plan goals.*

**Management Objective**

6.1 District Manager will prepare and present an annual report to the Board of Directors on District performance in regards to achieving the action plan goals and objectives. This report, for the preceding fiscal year, will be presented during the first quarterly Board of Directors meeting of the new fiscal year.

**Performance Standard**

6.1a - Annual Report maintained on file at the District office.
Adopted this 9th day of July, 2003 by the Board of Directors of the Lipan-Kickapoo Water Conservation District.

Michael Hoelscher, Secretary

A.H. Denis, III, President
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