Starr County Groundwater Conservation District

Management Plan

Adopted October 10, 2013

Re-Adopted 6-12-14

Chairman

Table of Contents

I. Starr County Groundwater Conservation District Mission-

Starr County Groundwater Conservation District (Starr County GCD) was formed on January 6, 2007. The mission of the district is to provide administrative guidance for, and oversight of, groundwater use and development within the district so as to conserve and utilize the underlying groundwater resources for the general public's greatest benefit now, and for the future.

II. Starr County GCD Information-

A. Geographic Location and Desired Future Conditions(DFC)-

Starr County GCD consists wholly of Starr County. The District is bounded by Zapata, Jim Hogg, Brooks, Hidalgo County, and the Rio Grande River. Starr GCD lies within Water User Group Region "M" and Groundwater Management Area (GMA) 16. Desired Future Conditions (DFC) were adopted by GMA on August 30, 2010. The DFC were consistent with scenario 10 of GAM Run 9-008. The submittal packages for the DFC can be found at :

http://www.twdb.state.tx.us/groundwater/docs/DFC/GMA16_DFC_Adopted_2010-0830.pdf
(see Appendix "F")

B. Board of Directors-

Starr County GCD is governed by a 5-member Board of Directors. The current Board was appointed at the inception of the District and were unopposed at the last County Elections held November 6, 2012. The next Board elections are scheduled be held to coincide with the next County elections. Members serve 2-year terms.

The current membership of the Board is as follows:

Baldemar Garza, Chairman
Humberto Vasquez, Vice-Chairman
Reyna Guerra, Secretary
Aurora Garza, Treasurer
Rose Benavidez, Member
(see Appendix "B")

C. Demographics-

1. Land Use-
   Starr County is made up of mostly rural agrarian areas dedicated to cattle ranching. Some areas along the river are farmed for row crops and are irrigated with pumped river water.
2. Incorporated Areas-

There are four incorporated cities in Starr County. They are Roma, Escobares, Rio Grande City, and La Grulla. The rest of the County is made up of small rural communities such as Falcon Heights, Salineno, Ramireno, Fronton, Rosita, El Garceno, El Sauz, San Isidro, La Gloria, Delmita, La Casita, Garciasville, Alto Bonito, and La Victoria. The large majority of the population of Starr County resides in the communities located along the US HWY 83 corridor, mainly in the areas bounded by Roma on the West, and by Alto Bonito on the East. The 2011 Regional Water Plan (Fig. II C-1). projects that the population of Starr County will slightly more than double by the year 2060, an increase of about 105%.

2011 Regional Water Plan
County Population Projections for 2010 – 2060

County	2010	2020	2030	2040	2050	2060
Starr	69,379	83,583	98,262	113,102	127,802	141,961

Fig. II C-1

3. Water Service and Historical Water Use-
With the exception of La Gloria and San Isidro, most Starr County residents are provided water service by various city-owned utilities and water supply corporations that deliver treated surface water pumped from the Rio Grande River. San Isidro and La Gloria are provided water service by private well water. Some rural households in the northwest areas of the county may also be using well water for their potable water needs. The 2012 TWDB State Water Plan lists an estimate of historical water use for Starr GCD as 23,184 ac-ft of surface water and 2,574 ac-ft of groundwater in 2010. More current data was not available for the Plan. (see Appendix "G")

4. Starr County GCD Water Demand –
Water demand for Starr County, according to the 2012 State Water Plan is currently about 47,110 ac-ft. The plan projects an increase in demand of about 21% between the years 2010 and 2060. These numbers represent an increased demand for municipal water of about 90% and a decrease in the demand for irrigation water due to conversion of irrigable lands to residential use. The smaller relative increase in demand represents the expectation of the adoption and implementation of water conservation measures during this time period. (see Appendix "G")

III. Starr County GCD Water Supplies-

A. Surface Water Supplies-

Currently, water demand is met by drawing water from the Rio Grande River and treating it by conventional methods. This has been the most efficient and

economically feasible method of providing potable water for the population of the Starr County GCD area. The 2012 Water Plan projects that existing surface water available for Starr County will decrease from a level of about 22,727 ac-ft which were available in 2010 to a level of about 21,996 ac-ft in 2060, a decrease of about 3%. (see Appendix "G")

B. Groundwater-

1. Gulf Coast Aquifer-

The Gulf Coast Aquifer is a major aquifer that extends North and South along the Texas Gulf Coast from the Louisiana border to the Rio Grande River and inland for a distance of 90 to 100 miles. This aquifer covers approximately 41,879 square miles of Texas Gulf Coast. About 80% of Starr County GCD, the northeastern portion, is underlain by this aquifer.
(see Appendix D, GAM Run 10-011)

2. Yegua-Jackson Aquifer-

The Yegua-Jackson Aquifer is a minor aquifer that also runs North and South from the Texas/Louisiana border to the Rio Grande. The Yegua-Jackson runs along the inside edge of the Gulf Coast Aquifer but is only about 35 miles wide and covers only about 10,904 square miles. The remaining southwestern 20% of the Starr County GCD is underlain by this aquifer.
(see Appendix D, GAM Run 10-011)

IV. Starr County GCD Groundwater Availability and TWDB Modeled Available Groundwater-

A. Gulf Coast Aquifer-

Starr County GCD lies at the extreme southwest boundary of the Gulf Coast Aquifer. In this portion of the aquifer water availability is low. The Texas Water Development Board's Report 380 states that water quality at the southern reaches of the aquifer are not the best, with levels of total dissolved solids ranging from 1000 to more than 10,000 milligrams per liter, compared to levels of less than 500 milligrams per liter in the northern reaches of the aquifer.. The sand thickness of the aquifer ranges from 700 feet at the southern end to about 1,300 feet at the northern reaches of the aquifer. Well yields range from 300 to 3000 gallons per minute. The northern range of the aquifer has the better yield and water quality. Both characteristics diminish greatly towards the southern reaches of the aquifer where the Starr County GCD is located. TWDB GAM Run 10-047 MAG indicate that available groundwater will remain steady in both the Nueces-Rio Grande and Rio Grande basins thru 2060, with levels of 3,079 and 4,447 ac-ft respectively.
(see Appendix "H", Gam Run 10-047 MAG)

B. Yegua-Jackson Aquifer-

The southwestern 20% of the area encompassed by the Starr County GCD is underlain by the Yegua-Jackson Aquifer. This aquifer is characterized by low yielding sands with saturated thickness averaging 170 feet. Well yields range from 30 to 300 gallons per minute and the water quality ranges from 50 to 10,000 milligrams per liter. The quality and of the water, like the Gulf Coast Aquifer, is better at the northern end of the aquifer and diminishes as you travel towards the southern end where the Starr County GCD is located.
(see Appendix "D")

V. Starr County GCD Projected Water Supply Needs -

The 2012 TWDB State Water Plan indicates that in 2010 there existed a 14,617 ac-ft need in Starr County GCD. The plan indicates an increasing need that projects to 25,396 ac-ft in 2060, an increase of approximately 74%
(see Appendix "G")

VI. Starr County GCD Goals, Objectives, and Implementation-

The goals, objectives, and plan of implementation of Starr County GCD are as follows:

1. **Providing the Most Efficient Use of Groundwater-**
Provide guidance for the most efficient use, conservation, and long term sustainability of the groundwater resources within the GCD. The Starr GCD will establish a schedule of regular Board meetings and notification for the general public in order to invite comment and participation by the stakeholders of the GCD by the end of calendar year 2013. The GCD will also establish an annual training program for the Board members and any interested stakeholders within the GCD. The GCD Board will develop and establish a protocol for the development of groundwater resources within the GCD by the end of calendar year 2013. An annual meeting will be established for review and discussion of programs, policies and procedures in order to ensure compliance with those rules and procedures adopted by the GMA, Regional Water Planning Group (RWPG), and the State.

2. **Controlling and Preventing Waste of Groundwater-**
Provide control for the use, and prevent the waste, of groundwater resources within the GCD. The GCD has adopted a set of rules (Appendix I.) which outline permit fees, requirements, procedures, enforcement, and penalties pertaining to well drilling and use of the underlying water resources. The rules are available for viewing at *http://www.co.starr.tx.us*

3. **Controlling and Preventing Subsidence-**

Subsidence, while a major problem in other areas overlying the Gulf Coast Aquifer, is not a problem within the Starr County GCD and is not an issue that needs to be addressed at this time.

4. **Addressing Conjunctive Surface Water Management Issues-**
The District will participate in the regional planning process by attending meetings of the RWPG. The attendance at any RWPG meeting will be noted in the annual report. The District will provide oversight, guidance for groundwater users and enforcement of the Desired Future Conditions(DFC) as adopted by Groundwater Management Area (GMA) 16 . The Starr GCD Board will be an active Member of the GMA and attend all scheduled meetings in order to stay abreast of current developments and pertinent discussions within the GMA, the RWPG, and the State. A report will be made to the GMA, the RWPG, and the State, within 30 days of adoption, of any new rules and/or procedures relating to groundwater conservation, development, enforcement, or changes to the Management Plan. Time will be allowed on the agenda for public comment and input regarding the GCD Board's actions, policies, and procedures.

5. **Addressing Natural Resource Issues-**
Starr GCD will monitor water levels in the district boundaries on an annual basis by measuring the level of ten(10) water wells dispersed throughout the district on an annual basis. Well location, description, and measured water levels will be included in the Annual Report. The GCD will also track the location of any saltwater disposal wells permitted in the District and provide location, depth, and disposal rates for each well in the Annual Report. These activities will serve to help the GCD address natural resource issues that may impact the use and availability of groundwater within the GCD.

6. **Addressing Drought Conditions-**
Identify and address the effects of drought conditions on groundwater resources within the GCD. The GCD will publish monthly update reports of the Palmer Drought Severity Index(PDSI) map and a rainfall map indicating year-to-date rainfall within the GCD that will include water conservation tips and recommendations. These updates will be posted for public review and comment, and a report will be made to the GCD Board at the annual meeting. Statewide drought information and coping suggestions and tips are provided by the Texas Water Development Board on their web site. The link is *http://www.twdb.texas.gov./data/drought/*

VII. Starr County GCD Conservation, Recharge Enhancement, Rainwater Harvesting, and Brush Control-

1. Conservation- The GCD Board will publish a monthly water conservation tip or recommendation along with the monthly update to the PDSI update. These

articles will be presented to the GCD Board at the annual meeting.

2. Recharge enhancement- Aquifer recharge in the Starr GCD is mostly accomplished by normal rainfall infiltration. No specific surface recharge formations have been identified in Starr County for either of the two affected aquifers. Starr GCD will publish a monthly tip or watch guide for possible surface sources of groundwater contamination, and recommendations for the prevention and remediation of surface contamination which may affect our groundwater resources.
3. Rainwater Harvesting- The Starr GCD will publish, with the monthly conservation tip/recommendations and PDSI update, a current article regarding rainwater harvesting for garden watering and non-potable use. These articles will be presented to the GCD Board at the annual meeting.

4. Brush Control- The Starr GCD will be presented with and will publish at the annual meeting the NRCS recommendations for brush control within the Starr GCD.

5. Precipitation enhancement is not a goal applicable to Starr GCD

More information and suggestions are available in the Texas Water Development Board's Best Management Guide, viewable at *http://www.savetaxaswater.org/bmp/*

VIII. Desired Future Conditions:

The Starr GCD will, by the end of the year 2014 establish and adopt a well monitoring plan that will serve to indicate whether or not the District is adhering to the FDC adopted by the GMA. The well registration program proposed to be adopted by end of the year 2013 will serve as the basis for the monitoring program. Well level measurements and water quality tests will be made on a randomly selected number of non-exempt wells with broad distribution throughout the GCD on an annual basis. A report of the findings will be published and made available to the GCD Board and the stakeholders at the annual meeting. Any deviation from the adopted FDC will be reported to the GMA and the TWDB within thirty(30) days of the report.

IX. Appendices:

A. Notice of Starr County GCD Board of Trustees Election

B. Order Declaring Unopposed Candidates Elected

C. Notice of Public Hearing , February 19, 2013

D. GAM Run 10-011, Mohammad Masud Hassan, P.E.

E. Notice of the Adoption of Desired Future Conditions(DFC) by GMA 16

F. Resolution by GMA 16 adopting DFC

G. Estimated Historical Water Use and 2012 State Water Plan Data Sets

H. GAM Run 10-047 MAG, Cynthia K. Ridgeway, P.G.

I. Rules for Starr GCD

AW1-7
Prescribed by Secretary of State
Sections 4.004, 83.010, 85.004, 85.007, Texas Election Code
9/2009 \

Appendix "A"

NOTICE OF STARR COUNTY GROUNDWATER DISTRICT BOARD OF TRUSTEES ELECTION
(AVISO DE AGUAS SUBTERRÁNEAS DE DISTRITO DEL CONDADO DE STARR JUNTA DIRECTIVA DE LA ELECCIÓN)

To the registered voters of the County of STARR, Texas:

(A los votantes registrados del Condado de STARR, Texas)

Notice is hereby given that the polling places listed below will be open from 7:00 a.m. to 7:00 p.m., November 6, 20 12, for voting in a general election to elect(presidential electors, if applicable), Members of Congress, Members of the Legislature, and state, district, county and precinct officers.
(Notifíquese por la presente, que las casillas electorales citadas abajo se abrirán desde las 7:00 a.m. hasta las 7:00 p.m. el 6 de noviembre de 20 12 para votar en la Elección General para elegir(electores presidenciales, si es aplicable), Miembros del Congreso, Miembros de la Legislatura, y oficiales del estado, distrito, condado y del precinto.)

On Election Day, voters must vote in their precinct where registered to vote.
(El Día de Elección, los votantes deberán votar en su precinto donde están inscritos para votar.)

Location of Election Day Polling Places Include Name of Building and Address *(Ubicación de las casillas electorales el Día de Elección)* *(Incluir Nombre del Edificio y Dirección)*	Precinct Number(s) *(Número de precinto)*
Roque Guerra School Bldg., 1600 W. Main St., Rio Grande City	1
North Grammar School Bldg., 1400 N Lopez St., Rio Grande City	2
JP Office, 5095 Old Hwy 83 Escobares, Roma	3
San Isidro School Bldg., 5 School Dr., San Isidro	4
Catholic Church Parish Hall, 1155 N FM 649, El Sauz	5
Roma Community Center, 502 Sixth St., Roma	6
Salineno Community Center, 68 Salineno Rd., Salineno	7
(Old) La Union School Bldg., 6667 FM 1430, Garciasville	8
(Old) La Grulla Elementary Bldg., 337 Pvt. Leopoldo Longoria St., La Grulla	9
Alvarez Community Center, Food Pantry, 4192 W. US Hwy 83, La Rosita	10

For early voting, a voter may vote at any of the locations listed below:
(Para Votación Adelantada, los votantes podrán votar en cualquiera de las ubicaciones nombradas abajo.)

Locations for Early Voting Polling Places Include Name of Building and Address *(Ubicación de las casillas electorales de votación adelantada)* *(Incluir Nombre del Edificio y Dirección)*	Days and Hours of Operation *Días y Horas Hábiles*
Starr County Courthouse, Commissioner's Court, 401 N. Britton Ave., Rio Grande City	OCT. 22 – NOV. 2, 2012 8:00AM – 5:00 PM
Roma Community Center, 502 Sixth St., Roma	OCT. 22 – NOV. 2, 2012 8:00AM – 5:00 PM
Alvarez Community Center, Food Pantry, 4192 W. US Hwy 83, La Rosita	OCT. 22 – NOV. 2, 2012 8:00AM – 5:00 PM
Cenizo PK. Building, 70 Old Casita Rd., La Casita	OCT. 22 – NOV. 2, 2012 8:00AM – 5:00 PM
(Old) La Grulla Elementary Bldg., 337 Pvt. Leopoldo Longoria St., La Grulla	OCT. 22 – NOV. 2, 2012 8:00AM – 5:00 PM
Ringgold Elem. Bldg. 1, Fort Ringgold, Rio Grande City , Tx. 78582	OCT. 22 – NOV. 2, 2012 8:00AM – 5:00 PM
*ALL EARLY VOTING SITES WILL BE OPEN FOR ADDITIONAL DAYS.	*OCT. 27, 2012 – SAT. 7:00AM – 7:00PM *OCT. 28, 2012 – SUN. 12:00PM – 4:00PM

Applications for ballot by mail shall be mailed to:
(Las solicitudes para boletas de votación adelantada por correo deberán enviarse a:)

REYNA GUERRA
(Name of Early Voting Clerk)
(Nombre del Secretario de la Votación Adelantada)

100 N. 3167 , SUITE 202
(Address) *(Dirección)*

RIO GRANDE CITY, TX. 78582
(City) *(Ciudad)* (Zip Code) *(Código Postal)*

Applications for ballots by mail must be received no later than the close of business on: OCT. 30 2012
(Las solicitudes para boletas de votación adelantada por correo deberán recibirse para el fin de las horas de negocio el: 30TH DE OCT DEL ANO 2012)

Issued this the 13th day of August, 20 12.
(Emitida este día _____ de _____, 20 ____.)

Signature of Chair (Firma del Presidente)

Appendix "B"

POSTED AT 1:10 O'CLOCK 9 M

AUG 13 2012

DENNIS D. GONZALEZ, COUNTY CLERK STARR CO. TX

BY: Gloria De La Garza DEPUTY

Starr County Groundwater District

Order Declaring Unopposed Candidates Elected

Whereas, the board of the Starr County Groundwater District has received a pursuant to Texas Election Code 20052, certifying that Starr County Groundwater District has unopposed candidates on the ballot for the Tuesday November 06, 2012 election to be held for the position of Starr County Groundwater District board trustee were unopposed candidates on the ballot for the Tuesday November 06, 2012 election to be held for the positions of the Board of Trustee Members:

- Baldemar Garza, Chair
- Humberto Vasquez, Vice Chair
- Reyna Guerra, Secretary
- Aurora Garza, Treasurer
- Rose Benavidez, Member

Whereas, no at-large proposition or opposed at-large race is to appear on the ballot of the November 06, 2012 election to be held for the positions of Starr County Groundwater District board trustee.

Whereas, no at-large proposition or opposed at-large race is to appear on the ballot of the November 06, 2012 election to be held for the position of Starr County Groundwater District board trustee.

- Baldemar Garza, Chair
- Humberto Vasquez, Vice Chair
- Reyna Guerra, Secretary
- Aurora Garza, Treasurer
- Rose Benavidez, Member

NOW, THEREFORE, IT IS ORDERED BY THE BOARD OF TRUSTEES OF THE STARR COUNTY GROUND WATER DISTRICT:

Section 1: That, pursuant to Texas Election Code 2.053, Board Members Below shall hereby be declared elected to the position of Members of the Starr County Groundwater District.

- Baldemar Garza, Chair
- Humberto Vasquez, Vice Chair
- Reyna Guerra, Secretary
- Aurora Garza, Treasurer
- Rose Benavidez, Member

Section 2: That by virtue of the declaration of election herein made in Section 1, the election which had previously been ordered by the Starr County Groundwater District to be held on Tuesday November 06, 2012.

Section 3: That a copy of this signed order shall be posted on Election Day, at each polling place that would have been used in the Tuesday November 06, 2012.

ADOPTED this 13th day of August, 2012

Starr County Groundwater District

Baldemar Garza

Chairman, Starr County Groundwater District

ATTEST:

Reyna Guerra

Secretary, Starr County Groundwater District

Appendix "C"

POSTED
AT 2:53 O'CLOCK P M
FEB 15 2013
DENNIS D. GONZALEZ, COUNTY CLERK STARR CO. TX
BY: _____ DEPUTY

February 15, 2013

Public Hearing

A Public Hearing will be held on Tuesday February 19, 2013 at 10:00 a.m. at the Starr County Courthouse Annex. This Public Hearing is to discuss outline for the proposed Water Management Plan for the Starr County Groundwater Conservation District.

Reyna G. Guerra, Board Secretary

Public Hearing

MEETING SIGN-IN SHEET

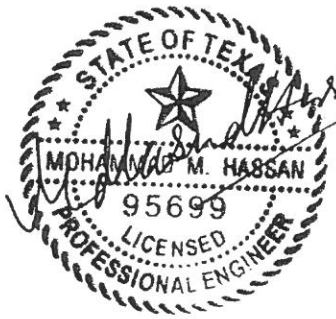
Project: Starr County Groundwater Conservation District **Meeting Date:** February 19, 2013

Facilitator: **Place/Room:**

Name	Title	Company	Phone	Fax	E-Mail
Reyna Guerra	Board Secretary	Starr	716-4800		rguerra@co.starr.tx.us
Anna Mary	Board Treasure	Starr	849-3260		
Rose Benavidez	President	Starr County Industrial	487-2709		rbenavidez@starrcounty.org
Nilda Elizondo	Mrktng.	" "	"		nilda.elizondo@starrcounty.org
Gilbert Guerra	Eng.	Rio Delta Eng ~~Starr~~	380-5152		riodelta2004@yahoo.com
JULIO A. GONZALEZ	HEAD. ENG.	RIO DELTA ENG	380-5152		riodelta2004@yahoo
Sandra Urbano		Judge's Office			

GAM Run 10-011

by Mohammad Masud Hassan P.E.
Texas Water Development Board
Groundwater Availability Modeling Section
(512) 463-3337
June 2, 2010



6/16/10

Mohammad Masud Hassan is a Hydrologist in the Groundwater Availability Modeling Section and is responsible for the work performed. The seal appearing on this document was authorized by Mohammad Masud Hassan, P.E.95699 on June 2, 2010.

EXECUTIVE SUMMARY:

Texas State Water Code, Section 36.1071, Subsection (h), states that, in developing its groundwater management plan, a groundwater conservation district shall use groundwater availability modeling information provided by the Executive Administrator of the Texas Water Development Board in conjunction with any available site-specific information provided by the district for review and comment to the Executive Administrator. Information derived from groundwater availability models that shall be included in the groundwater management plan includes:

(1) the annual amount of recharge from precipitation to the groundwater resources within the district, if any;
(2) for each aquifer within the district, the annual volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers; and
(3) the annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

The purpose of this model run is to provide information to the Starr County Ground Water Conservation District for its groundwater management plan based on the district boundaries. The groundwater management plan for Starr County Ground Water Conservation District is due for approval by the Executive Administrator of the Texas Water Development Board before November 6, 2010. Starr County Ground Water Conservation District falls within one existing major aquifer , the south section of the Gulf Coast Aquifer, and another minor aquifer , Yegua-Jackson Aquifer.

This report discusses the method, assumptions, and results from model runs using the groundwater availability models for the southern portion of the Gulf Coast Aquifer and the Yegua-Jackson Aquifer. Tables 1 through 2 summarize the groundwater availability model data required by statute for Starr County Ground Water Conservation District's groundwater management plan. Figures 1 through 2 show the areas of the model from which the values in tables were extracted.

METHODS:

We ran the groundwater availability model for the southern portion of the Gulf Coast Aquifer and (1) extracted the water budget for each year of the transient calibration period, 1981 through 1999, and (2) averaged the annual water budget values for recharge, surface water outflow, inflow to the district, outflow from the district, net inter-aquifer flow (upper), and net inter-aquifer flow (lower) for the portions of the southern section of the Gulf Coast Aquifer located within the district.

We ran the groundwater availability model for Yegua-Jackson Aquifer and (1) extracted water budgets for each year of the 1980 through 1997 transient calibration period and (2) averaged the annual water budget values for recharge, surface water outflow, inflow to the district, outflow from the district for the portions of the western section of the Yegua-Jackson Aquifer located within the district.

PARAMETERS AND ASSUMPTIONS:

Gulf Coast Aquifer

- We used version 2.01 of the groundwater availability model for the southern portion of the Gulf Coast Aquifer. See Chowdhury and others (2003) for assumptions and limitations of the model.
- The southern section of the Gulf Coast Aquifer model includes four layers representing:
    1. the Chicot Aquifer (Layer 1),

2. the Evangeline Aquife (Layer 2),
3. the Burkeville Confining System (Layer 3), and
4. the Jasper Aquifer (Layer 4),

- Information was extracted and summarized for layers 1 to 4 and reported for the Gulf Coast Aquifer located within the district.
- The mean absolute error (a measure of the difference between simulated and actual water levels during model calibration) for the aquifers in the model for the calibration and verification time period of 1980 through 1990 is 14 feet. It is 15 feet for the calibration and verification time period of 1990 through 2000. The root mean squared error (RMS) is 17 feet for 1980-1990 and 18 feet for 1990-2000 (Ali and others, 2003).
- We used Processing MODFLOW for Windows (PMWIN) (Version 5.3.0, W. H. Chiang & W. Kinzelbach 1991-2001) as the interface to process model output.

Yegua-Jackson Aquifer

- We used version 1.01 of the groundwater availability model for the Yegua-Jackson Aquifer. See Kelley and others (2010) for assumptions and limitations of the model.
- The Yegua-Jackson Aquifer model includes five layers representing:
    1. outcrop section for the Yegua-Jackson Aquifer and younger overlying units,
    2. the upper portion of the Jackson Group,
    3. the lower portion of the Jackson Group,
    4. the upper portion of the Yegua Group, and
    5. the lower portion of the Yegua Group.
- Information was extracted and summarized for portions of layer 1 that represent the Yegua-Jackson as well as layers 2 to 5 for the portions of the aquifer located within the district.
- The mean absolute error (a measure of the difference between simulated and actual water levels during model calibration) for the aquifers in the model (Jackson Group and Yegua Group) for the transient calibration period (1980 through 1997) ranged from approximately 31 to 23 feet. The root mean squared error was about ten percent (or less) of the maximum change in water levels across the model (Deeds and others, 2010).
- The recharge used for the model run represents average recharge as described in Deeds and others (2010).
- We used Groundwater Vistas Version 5 (Environmental Simulations, Inc. 2007) as the interface to process model output.
- The model results presented in this report were extracted from all areas of the model representing the units comprising the Yegua-Jackson Aquifer. For this reason, the reported values may reflect water of quality ranging from fresh to brackish and saline. This is especially true for the subcrop portions of the aquifer in the western section of the district.

RESULTS:

A groundwater budget summarizes the amount of water entering and leaving the aquifers according to the groundwater availability models. Selected components were extracted from the groundwater budget for the aquifers located within the district and averaged over the duration of the calibration and verification portion of each model run: 1981 through 1999 for the southern section of the Gulf Coast Aquifer and 1980 through 1997 for the Yegua-Jackson Aquifer. The components of the modified budget shown in Tables 1 through 2 include:

- Precipitation recharge—This is the distributed recharge sourced from precipitation falling on the outcrop areas of the aquifers (where the aquifer is exposed at land surface) within the district.
- Surface water outflow—This is the total water exiting the aquifer (outflow) to surface water features such as streams, reservoirs, and drains (springs).
- Flow into and out of district—This component describes lateral flow within the aquifer between the district and adjacent counties.
- Flow between aquifers (Only Trinity Aquifer)—This describes the vertical flow, or leakage, between aquifers or confining units. This flow is controlled by the relative water levels in each aquifer or confining unit and aquifer properties of each aquifer or confining unit that define the amount of leakage that occurs. "Inflow" to an aquifer from an overlying or underlying aquifer will always equal the "Outflow" from the other aquifer.

The information needed for the district's management plan is summarized in tables 1 through 2. It is important to note that sub-regional water budgets are not exact. This is due to the size of the model cells and the approach used to extract data from the model. To avoid double accounting, a model cell that straddles a political boundary, such as district or county boundaries, is assigned to one side of the boundary based on the location of the centroid of the model cell. For example, if a cell contains two counties, the cell is assigned to the county where the centroid of the cell is located (see figures 1 to 2).

Table 1: Gulf Coast Aquifer's summarized information required for the Starr County Ground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year. All numbers are rounded to the nearest 1 acre-foot. Reported flow estimates include both fresh and brackish waters present in the aquifers.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Gulf Coast Aquifer	4,132
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Gulf Coast Aquifer	168
Estimated annual volume of flow into the district within each aquifer in the district	Gulf Coast Aquifer	1,301
Estimated annual volume of flow out of the district within each aquifer in the district	Gulf Coast Aquifer	5,241
Estimated net annual volume of flow between each aquifer in the district	Not Applicable	Not Applicable

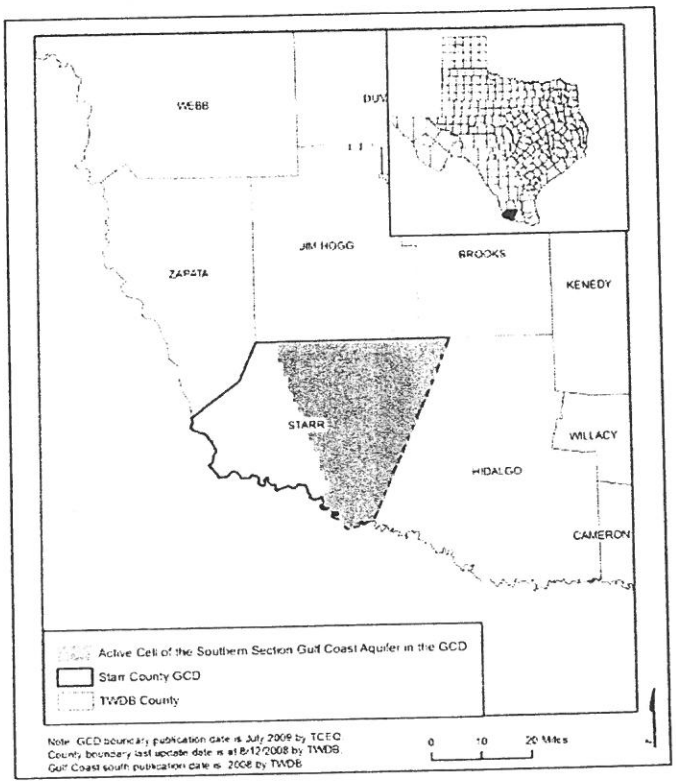


Figure 1: Area of the groundwater availability model for the Gulf Coast Aquifer from which the information in Table 1 was extracted (the aquifer extent within the Starr County Ground Water Conservation District boundary).

Table 2: Yegua-Jackson Aquifer's summarized information required for the Starr County Ground Water Conservation District's groundwater management plan. All values are reported in acre-feet per year. All numbers are rounded to the nearest 1 acre-foot. Reported flow estimates include both fresh and brackish waters present in the aquifers.

Management Plan requirement	Aquifer	Results
Estimated annual amount of recharge from precipitation to the district	Yegua-Jackson Aquifer	0
Estimated annual volume of water that discharges from the aquifer to springs and any surface water body including lakes, streams, and rivers	Yegua-Jackson Aquifer	705
Estimated annual volume of flow into the district within each aquifer in the district	Yegua-Jackson Aquifer	2,076
Estimated annual volume of flow out of the district within each aquifer in the district	Yegua-Jackson Aquifer	657
Estimated net annual volume of flow between each aquifer in the district	Not Applicable	Not Applicable

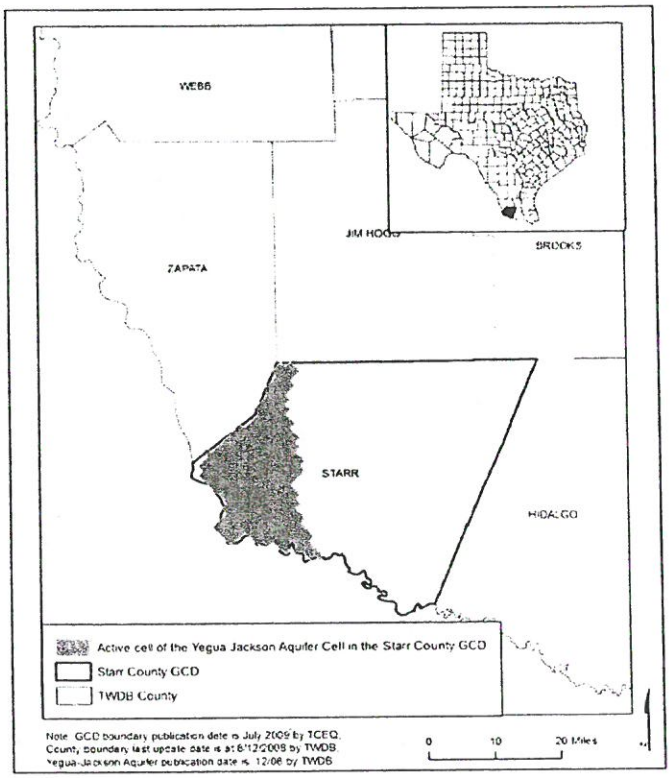


Figure 2: Area of the groundwater availability model for the Yegua-Jackson Aquifer from which the information in Table 2 was extracted (the aquifer extent within the Starr County Ground Water Conservation District boundary).

REFERENCES:

Chowdhury, Ali H. and Mace Robert, 2003, A Groundwater Availability Model of the Gulf Coast Aquifer in the Lower Rio Grande Valley, Texas: Numerical Simulations through 2050: a report by the Texas Water Development Board,176 p., http://www.twdb.state.tx.us/gam/glfc_s/Glfc_s_Oct2003Report.pdf

Deeds, N.E., Yan, T., Singh, A., Jones, T.L., Kelley, V.A., Knox, P.R., Young, S.C., 2010, Groundwater availability model for the Yegua-Jackson Aquifer: Final report prepared for the Texas Water Development Board by INTERA, Inc., 582p., http://www.twdb.state.tx.us/gam/ygjk/ygjk.htm

Environmental Simulations, Inc., 2007, Guide to Using Groundwater Vistas Version 5, 381 p.

Chiang, W., and Kinzelbach, W., 2001, Groundwater Modeling with PMWIN, 346 p.

LBG-Guyton Associates, 2003, Brackish Groundwater Manual for Texas Regional Water Planning Groups: contract report to the Texas Water Development Board, 188 p., http://www.twdb.state.tx.us/RWPG/rpgm_rpts/2001483395.pdf.

Appendix "E"

RECEIVED

SEP 02 2010

TWDB

May 30, 2010

Mr. J. Kevin Ward, Executive Administrator
Texas Water Development Board
PO Box 13231
Austin, TX 78711-3231

Dear Mr. Ward,

As Administrator Groundwater Management Area 16, I am pleased to inform you that the District Committee Members of GMA 16 have formally adopted a Desired Future Condition for the Gulf Coast Aquifer.

After evaluating numerous Groundwater Availability Modeling scenarios, the Committee Members of GMA 16 present voted unanimously to adopt GAM Run 09-008, scenario 10, which predicts an average drawdown of 94 feet for the Gulf Coast Aquifer within the boundaries of GMA 16.

Please find enclosed a record of the meeting notice postings, minutes of the meetings, and Resolution R 2010-001 with signatures of the District Committee Members present, and record of their vote.

If there is any additional information required, I can be contacted at: Live Oak UWCD, 3450A HWY 281, George West, TX, 78022.

Respectfully,

Scott Bledsoe III
President, Live Oak UWCD
Coordinator of GMA 16

Appendix "F"

RESOLUTION R2010-001 TO ADOPT DESIRED FUTURE CONDITIONS

FOR AQUIFER(S) IN GROUNDWATER MANAGEMENT AREA 16

THE STATE OF TEXAS

GROUNDWATER MANAGEMENT AREA 16

GROUNDWATER CONSERVATION DISTRICTS

WHEREAS, Texas Water Code 36.108 requires the groundwater conservation districts located in whole or in part in a groundwater management area ("GMA") designated by the Texas Water Development Board to adopt desired future conditions for the relevant aquifers located within the management area;

WHEREAS, the groundwater conservation districts located wholly or partially within Groundwater Management Area 16 ("GMA 16"), as designated by the Texas Water Development Board, as of the date of this resolution are as follows: Bee GCD, Brush County GCD, Live Oak UWCD, McMullen GCD, Kenedy County GCD, Corpus Christi Aquifer Storage and Recovery Conservation District, San Patricio County GCD, Starr County GCD, Duval County GCD, and Red Sands GCD (collectively hereinafter "the GMA 16 Districts");

WHEREAS, the GMA 16 Districts are each governmental agencies and bodies politic operating under Chapter 36, Water Code;

WHEREAS, the GMA 16 Districts desire to fulfill the requirements of Texas Water Code 36.108 through mutual cooperation and joint planning efforts;

WHEREAS, the GMA 16 Districts have held numerous public meetings at which they have engaged in joint planning efforts to promote more comprehensive management of the aquifers located in whole or in part in Groundwater Management Area 16;

WHEREAS, the GMA 16 Districts recognize that GMA 16 includes a geographically and hydrologically diverse area with a variety of land uses and a diverse mix of water users;

WHEREAS, the GMA 16 Districts have considered the relevant aquifers, subdivisions thereof, and geologic strata located in whole or in part within the boundaries of GMA 16, and have further considered the hydrogeologic characteristics of the same, as well as the various uses and users of groundwater produced from such aquifers, subdivisions, and strata;

WHEREAS, the GMA 16 Districts held a meeting, which was open to the public and public comment was received, on August 30, 2010 at 1:00 PM in the Blue Room of Sam Fore Hall at Texas A&M University- Kingsville located at 700 University Blvd., Kingsville, TX 78363;

WHEREAS, notice of said August 30, 2010, meeting was properly given by each and all of the GMA 16 Districts in accordance with Chapter 36, Water Code, and Chapter 551, Government Code, and a true and correct copy of each of the notices has been attached hereto in Appendix A and is incorporated herein for all purposes;

WHEREAS, it is the intent and purpose of the GMA 16 Districts by adoption of this resolution to fulfill the requirements of Texas Water Code 36.108, including establishing "desired future conditions for the relevant aquifers" within GMA 16 for the specific aquifer(s) and desired future conditions described below;

WHEREAS, Texas Water Code 36.108 requires adoption of desired future conditions for only the "relevant aquifers" located within the management area and because the Carrizo-Wilcox, and the Yegua-Jackson aquifer slivers are not used for non-exempt wells and are not anticipated to be used for non-exempt wells during the planning horizon, GMA 16 considers the aquifers to not be relevant for purposes of GMA 16 joint planning at this time;

WHEREAS, GMA 16 Districts agree to continue to work on the desired future conditions for the aquifer(s) set forth below and the Groundwater Availability Model ("GAM") created by the Texas Water Development Board for GMA 16 in the near future after the adoption of the desired future conditions for the aquifer(s) below and the September 1, 2010 statutory deadline;

WHEREAS, in establishing these desired future conditions for the aquifer(s) set forth below, the GMA 16 Districts have considered all of the criteria required by Chapter 36 of the Texas Water Code and other information including groundwater availability model runs prepared by the TWDB;

WHEREAS, in establishing these desired future conditions for the aquifer(s) set forth below, the GMA 16 Districts have considered the uses and conditions of the aquifer(s) in different geographic areas within GMA 16 and what the effects and impacts of adopting such desired future conditions will have upon the condition of the aquifer(s) and the uses and users of groundwater from the aquifer(s) both now and in the future;

WHEREAS, after considering such anticipated effects and impacts these desired future conditions will have on the aquifer(s), uses, and users of groundwater, and considering all of the other criteria required by Chapter 36 of the Texas Water Code, including without limitation the groundwater resource management duties and responsibilities of the GMA Districts individually and collectively, the GMA 16 Districts have adopted the desired future conditions for the aquifers) set forth below;

WHEREAS; In reference to GAM run 09-008, the committee has considered several scenarios during deliberation; and

WHEREAS, at said August 30, 2010, meeting, after a motion was duly made and seconded that the GMA 16 Districts adopt this resolution establishing desired future conditions for the Gulf Coast aquifer and declining to adopt a desired future condition for the aquifer slivers, the motion prevailed by the following vote:

9 Ayes, 0 Nays, 1 Absent, and 0 present not voting

A List of the votes by District is enclosed in Appendix B.

NOW, THEREFORE, BE IT RESOLVED BY THE AUTHORIZED VOTING REPRESENTATIVES OF THE GMA 16 DISTRICTS AS FOLLOWS:

1 The above recitals are true and correct.

2 The authorized voting representatives of the GMA 16 Districts hereby establish a desired future condition of the Gulf Coast aquifer of a GMA-wide average drawdown of approximately 94 feet through 2060 consistent with scenario 10 of GAM run 09-008 by the vote reflected in the above recitals.

3 The authorized voting representatives of the GMA 16 Districts hereby decline to establish a desired future condition of the Carrizo-Wilcox, and the Yegua-Jackson aquifer slivers, finding them to not be relevant for purposes of GMA 16 joint planning at this time by the vote reflected in the above recitals.

4 The GMA 16 Districts and their agents and representatives, individually and collectively, are further authorized to take any and all actions necessary to implement this resolution.

5 The desired future conditions of the aquifer adopted by the GMA 16 Districts and attached hereto shall be effective immediately and shall continue in effect until amended, superseded, or repealed.

AND IT IS SO ORDERED.

PASSED AND ADOPTED on this 30th day of August, 2010.

Lonnie Stewart
Bee GCD

George E. Jam
Brush Country GCD

Corpus Christi Aquifer Storage & Recovery Conservation District

Duval GCD

Weldon Cooksey, General Manager
Kenedy County GCD

Lonnie Stewart
McMullen GCD

Live Oak UWCD

Armando Vela
Red Sands GCD

San Patricio County GCD

Starr GCD

Estimated Historical Water Use And 2012 State Water Plan Datasets:

Starr County Groundwater Conservation District

by Stephen Allen
Texas Water Development Board
Groundwater Resources Division
Groundwater Technical Assistance Section
stephen.allen@twdb.texas.gov
(512) 463-7317
March 11, 2013

GROUNDWATER MANAGEMENT PLAN DATA:

This package of water data reports (part 1 of a 2-part package of information) is being provided to groundwater conservation districts to help them meet the requirements for approval of their five-year groundwater management plan. Each report in the package addresses a specific numbered requirement in the Texas Water Development Board's groundwater management plan checklist. The checklist can be viewed and downloaded from this web address:

http://www.twdb.state.tx.us/groundwater/doc/GCD/GMPchecklist0113.pdf

The five reports included in part 1 are:

1. Estimated Historical Water Use (checklist Item 2)
   from the TWDB Historical Water Use Survey (WUS)
2. Projected Surface Water Supplies (checklist Item 6)
3. Projected Water Demands (checklist Item 7)
4. Projected Water Supply Needs (checklist Item 8)
5. Projected Water Management Strategies (checklist Item 9)
   reports 2-5 are from the 2012 State Water Plan (SWP)

Part 2 of the 2-part package is the groundwater availability model (GAM) report. The District should have received, or will receive, this report from the Groundwater Availability Modeling Section. Questions about the GAM can be directed to Dr. Shirley Wade, shirley.wade@twdb.texas.gov, (512) 936-0883.

DISCLAIMER:

The data presented in this report represents the most updated Historical Water Use and 2012 State Water Planning data available as of 3/11/2013. Although it does not happen frequently, neither of these datasets are static and are subject to change pending the availability of more accurate data (Historical Water Use data) or an amendment to the 2012 State Water Plan (2012 State Water Planning data). District personnel must review these datasets and correct any discrepancies in order to ensure approval of their groundwater management plan.

The Historical Water Use dataset can be verified at this web address:

http://www.twdb.texas.gov/waterplanning/waterusesurvey/estimates/

The 2012 State Water Planning dataset can be verified by contacting Wendy Barron (wendy.barron@twdb.texas.gov or 512-936-0886).

For additional questions regarding this data, please contact Stephen Allen (stephen.allen@twdb.texas.gov or 512-463-7317) or Rima Petrossian (rima.petrossian@twdb.texas.gov or 512-936-2420).

Estimated Historical Water Use
TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar years 2005, 2011 and 2012. TWDB staff anticipates the calculation and posting of these estimates at a later date.

STARR COUNTY

All values are in acre-feet/year

Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1974	GW	782	4	0	0	39	1,290	2,115
	SW	2,171	0	0	26,155	0	142	28,468
1980	GW	163	0	0	0	368	146	677
	SW	4,147	0	0	30,855	0	1,322	36,324
1984	GW	819	0	0	500	291	148	1,758
	SW	5,152	0	0	27,968	24	1,338	34,482
1985	GW	705	0	0	597	282	151	1,735
	SW	5,306	0	0	22,221	550	1,367	29,444
1986	GW	1,130	0	0	0	0	136	1,266
	SW	5,271	0	0	33,222	0	1,232	39,725
1987	GW	1,123	0	0	0	392	121	1,636
	SW	4,781	0	0	34,944	487	1,095	41,307
1988	GW	1,023	0	0	0	382	126	1,531
	SW	4,953	0	0	50,596	444	1,144	57,137
1989	GW	681	0	0	500	125	131	1,437
	SW	5,414	0	0	44,961	414	1,188	51,977
1990	GW	827	0	0	434	125	129	1,515
	SW	5,299	0	0	45,000	414	1,171	51,884
1991	GW	855	0	0	6,597	234	133	7,819
	SW	5,586	0	0	36,456	744	1,195	43,981
1992	GW	686	0	0	2,850	234	122	3,892
	SW	5,827	0	0	27,000	744	1,098	34,669
1993	GW	502	0	0	362	234	125	1,223
	SW	6,539	0	0	37,755	744	1,129	46,167
1994	GW	711	0	0	300	235	106	1,352
	SW	7,132	0	0	45,054	744	947	53,877
1995	GW	698	0	0	473	235	127	1,533
	SW	7,042	0	0	49,253	744	1,143	58,182
1996	GW	721	0	0	434	239	173	1,567
	SW	7,261	0	0	45,240	744	1,552	54,797
1997	GW	603	0	0	456	239	95	1,393

Estimated Historical Water Use
TWDB Historical Water Use Survey (WUS) Data

Groundwater and surface water historical use estimates are currently unavailable for calendar years 2005, 2011 and 2012. TWDB staff anticipates the calculation and posting of these estimates at a later date.

Year	Source	Municipal	Manufacturing	Steam Electric	Irrigation	Mining	Livestock	Total
1997	SW	8,423	0	0	47,534	744	857	57,558
1998	GW	466	0	0	873	239	104	1,682
	SW	8,806	0	0	45,046	744	939	55,535
1999	GW	605	0	0	628	239	119	1,591
	SW	8,632	0	0	32,379	744	1,067	42,822
2000	GW	625	0	0	285	459	112	1,481
	SW	8,464	0	0	10,081	744	1,005	20,294
2001	GW	377	0	0	372	291	67	1,107
	SW	5,919	0	0	12,664	1,198	964	20,745
2002	GW	413	0	0	471	291	64	1,239
	SW	6,965	0	0	15,216	1,198	907	24,286
2003	GW	390	0	0	278	0	75	743
	SW	6,225	0	0	6,611	0	1,066	13,902
2004	GW	423	0	0	417	33	76	949
	SW	7,212	0	0	6,308	135	1,081	14,736
2006	GW	1,413	0	0	0	86	794	2,293
	SW	7,449	10	0	9,756	0	265	17,480
2007	GW	398	3	0	0	86	818	1,305
	SW	6,979	9	0	14,060	0	273	21,321
2008	GW	1,025	12	0	0	86	793	1,916
	SW	6,759	9	0	17,387	0	265	24,420
2009	GW	1,124	12	0	0	307	655	2,098
	SW	7,645	9	0	17,504	223	218	25,599
2010	GW	1,235	12	0	0	295	1,032	2,574
	SW	7,620	9	0	15,000	211	344	23,184

Projected Surface Water Supplies
TWDB 2012 State Water Plan Data

STARR COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	Source Name	2010	2020	2030	2040	2050	2060
M	COUNTY-OTHER	NUECES-RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	30	30	30	30	30	30
M	COUNTY-OTHER	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	751	751	751	751	751	751
M	IRRIGATION	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	15,773	15,616	15,470	15,324	15,178	15,043
M	LA GRULLA	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	522	522	522	522	522	522
M	LIVESTOCK	NUECES-RIO GRANDE	LIVESTOCK LOCAL SUPPLY	0	0	0	0	0	0
M	LIVESTOCK	RIO GRANDE	LIVESTOCK LOCAL SUPPLY	0	0	0	0	0	0
M	MINING	NUECES-RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	11	11	11	11	11	11
M	MINING	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	9	9	9	9	9	8
M	RIO GRANDE CITY	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	2,479	2,479	2,479	2,479	2,479	2,479
M	RIO WSC	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	310	310	310	310	310	310
M	ROMA CITY	RIO GRANDE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM	2,842	2,842	2,842	2,842	2,842	2,842
	Sum of Projected Surface Water Supplies (acre-feet/year)			**22,727**	**22,570**	**22,424**	**22,278**	**22,132**	**21,996**

Projected Water Demands
TWDB 2012 State Water Plan Data

Please note that the demand numbers presented here include the plumbing code savings found in the Regional and State Water Plans.

STARR COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
M	COUNTY-OTHER	NUECES-RIO GRANDE	242	298	355	414	472	530
M	MINING	NUECES-RIO GRANDE	770	793	803	813	823	835
M	LIVESTOCK	NUECES-RIO GRANDE	246	246	246	246	246	246
M	LA GRULLA	RIO GRANDE	867	919	976	1,038	1,104	1,175
M	RIO GRANDE CITY	RIO GRANDE	2,962	3,234	3,545	3,840	4,171	4,513
M	ROMA CITY	RIO GRANDE	2,946	3,333	3,737	4,156	4,585	5,017
M	COUNTY-OTHER	RIO GRANDE	5,986	7,365	8,786	10,249	11,669	13,101
M	MINING	RIO GRANDE	545	562	570	577	584	591
M	IRRIGATION	RIO GRANDE	31,191	30,108	29,070	29,070	29,070	29,070
M	LIVESTOCK	RIO GRANDE	871	871	871	871	871	871
M	RIO WSC	RIO GRANDE	484	624	772	913	1,063	1,206
	Sum of Projected Water Demands (acre-feet/year)		**47,110**	**48,353**	**49,731**	**52,187**	**54,658**	**57,155**

Projected Water Supply Needs
TWDB 2012 State Water Plan Data

Negative values (in red) reflect a projected water supply need, positive values a surplus.

STARR COUNTY

All values are in acre-feet/year

RWPG	WUG	WUG Basin	2010	2020	2030	2040	2050	2060
M	COUNTY-OTHER	NUECES-RIO GRANDE	66	138	211	275	309	251
M	COUNTY-OTHER	RIO GRANDE	-4,688	-6,120	-7,634	-9,177	-10,698	-12,206
M	IRRIGATION	RIO GRANDE	-8,823	-7,897	-7,005	-7,151	-7,297	-7,432
M	LA GRULLA	RIO GRANDE	-345	-397	-454	-516	-582	-653
M	LIVESTOCK	NUECES-RIO GRANDE	0	0	0	0	0	0
M	LIVESTOCK	RIO GRANDE	0	0	0	0	0	0
M	MINING	NUECES-RIO GRANDE	11	11	11	11	11	11
M	MINING	RIO GRANDE	9	9	9	9	9	8
M	RIO GRANDE CITY	RIO GRANDE	-483	-755	-1,066	-1,361	-1,692	-2,034
M	RIO WSC	RIO GRANDE	-174	-314	-462	-603	-753	-896
M	ROMA CITY	RIO GRANDE	-104	-491	-895	-1,314	-1,743	-2,175
	Sum of Projected Water Supply Needs (acre-feet/year)		**-14,617**	**-15,974**	**-17,516**	**-20,122**	**-22,765**	**-25,396**

Projected Water Management Strategies
TWDB 2012 State Water Plan Data

STARR COUNTY

WUG, Basin (RWPG) — All values are in acre-feet/year

Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
COUNTY-OTHER, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	3,041	2,786	4,553	5,334	6,512	7,886
ADVANCED WATER CONSERVATION	CONSERVATION [STARR]	67	139	212	286	360	430
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [STARR]	1,580	2,521	2,436	2,387	2,340	2,281
EXPAND EXISTING GROUNDWATER WELLS	YEGUA-JACKSON AQUIFER [STARR]	0	674	433	1,170	1,486	1,609
IRRIGATION, RIO GRANDE (M)							
ON- FARM WATER CONSERVATION	CONSERVATION [STARR]	46	313	797	1,493	2,396	3,505
LA GRULLA, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	32	45	54	56	88	102
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	243	252	259	270	279	304
ADVANCED WATER CONSERVATION	CONSERVATION [STARR]	20	25	30	35	56	64
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [STARR]	50	75	112	155	159	183
RIO GRANDE CITY, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	5	14	24	50	84	141
ADVANCED WATER CONSERVATION	CONSERVATION [STARR]	23	35	48	78	120	155
BRACKISH WATER DESALINATION	OTHER AQUIFER [STARR]	560	1,120	1,120	1,123	1,314	1,498
EXPAND EXISTING GROUNDWATER WELLS	GULF COAST AQUIFER [STARR]	0	10	50	50	87	115
NON-POTABLE REUSE	DIRECT REUSE [STARR]	0	10	50	60	87	125
RIO WSC, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	9	16	23	30	38	45
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	166	298	439	573	715	851

Projected Water Management Strategies
TWDB 2012 State Water Plan Data

WUG, Basin (RWPG) All values are in acre-feet/year

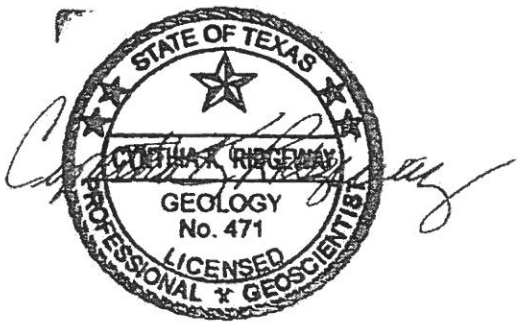
Water Management Strategy	Source Name [Origin]	2010	2020	2030	2040	2050	2060
ADVANCED WATER CONSERVATION	CONSERVATION [STARR]	6	13	20	27	34	41
ROMA CITY, RIO GRANDE (M)							
ACQUISITION OF WATER RIGHTS THROUGH CONTRACT	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	0	20	36	51	75	88
ACQUISITION OF WATER RIGHTS THROUGH PURCHASE	AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR]	65	410	784	1,183	1,564	1,967
ADVANCED WATER CONSERVATION	CONSERVATION [STARR]	39	61	75	80	104	120
Sum of Projected Water Management Strategies (acre-feet/year)		**5,952**	**8,837**	**11,555**	**14,491**	**17,898**	**21,510**

GAM Run 10-047 MAG: Groundwater Management Area 16 Model Runs to Estimate Drawdowns under Assumed Future Pumping for The Gulf Coast Aquifer

by Mohammad Masud Hassan, P.E.
Texas Water Development Board
Groundwater Availability Modeling Section

Edited and finalized by Marius Jigmond to reflect statutory changes effective September 1, 2011
(512) 463-8499

December 8, 2011



Cynthia K. Ridgeway, the Manager of the Groundwater Availability Modeling Section and Interim Director of the Groundwater Resources Division, is responsible for oversight of work performed by employees under her direct supervision. The seal appearing on this document was authorized by Cynthia K. Ridgeway, P.G. 471 on December 8, 2011.

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GAM Run 10-047 MAG: Groundwater Management Area 16 Model Runs to Estimate Drawdowns under Assumed Future Pumping for The Gulf Coast Aquifer

by Mohammad Masud Hassan, P.E.
Texas Water Development Board
Groundwater Availability Modeling Section

Edited and finalized by Marius Jigmond to reflect statutory changes effective September 1, 2011
(512) 463-8499

December 8, 2011

EXECUTIVE SUMMARY:

The modeled available groundwater for the Gulf Coast Aquifer as a result of the desired future condition adopted by the members of Groundwater Management Area 16 is approximately 358,100 acre-feet per year. This is summarized by county, regional water planning area, and river basin as shown in Table 1 for use in the regional water planning process. Modeled available groundwater is summarized by county, regional water planning area, river basin, and groundwater conservation district in tables 2 through 5. The estimates were extracted from Groundwater Availability Modeling (GAM) Run 09-008, Scenario 10, which Groundwater Management Area 16 used as the basis for developing their desired future condition for the Gulf Coast Aquifer.

REQUESTOR:

Mr. Scott Bledsoe III of Live Oak Underground Water Conservation District on behalf of Groundwater Management Area 1

DESCRIPTION OF REQUEST:

In a letter dated May 30, 2010 and received September 2, 2010, Mr. Scott Bledsoe provided the Texas Water Development Board (TWDB) with the desired future condition of the Gulf Coast Aquifer adopted by the members of Groundwater Management Area (GMA) 16. The desired future condition for the

Gulf Coast Aquifer in Groundwater Management Area 16, as shown in Resolution No. R2010-001, is as follows:

> *"[...]*
>
> *The authorized voting representatives of the [Groundwater Management Area] 16 Districts hereby establish a desired future condition of the Gulf Coast [Aquifer] of a [Groundwater Management Area]-wide average drawdown of approximately 94 feet through 2060 consistent with scenario 10 of GAM [Run] 09-008 by the vote reflected in the above recitals.*
>
> *The authorized voting representatives of the [Groundwater Management Area] 16 Districts hereby decline to establish a desired future condition of the Carrizo-Wilcox, and the Yegua-Jackson aquifer slivers, finding them to not be relevant for purposes of [Groundwater Management Area] 16 joint planning at this time by the vote reflected in the above recitals.*
>
> *[...]"*

In response to receiving the adopted desired future condition, the Texas Water Development Board has estimated the modeled available groundwater for the Gulf Coast Aquifer within Groundwater Management Area 16.

METHODS:

The Texas Water Development Board previously completed several predictive groundwater availability model simulations of the Gulf Coast Aquifer to assist the members of Groundwater Management Area 16 in developing a desired future condition. The location of Groundwater Management Area 16, the Gulf Coast Aquifer, and the groundwater availability model cells that represent the aquifer are shown in Figure 1. As described in Resolution No. R2010-001, the management area considered Scenario 10 of Groundwater Availability Modeling (GAM) Run 09-008 when developing a desired future condition for the Gulf Coast Aquifer (Hutchison, 2010). Since the above desired future condition is met in Scenario 10 of GAM Run 09-008, the modeled available groundwater for Groundwater Management Area 16 presented here was taken directly from this simulation. This was then divided by county, regional water planning area, river basin, and groundwater conservation district (Figure 2).

PARAMETERS AND ASSUMPTIONS:

The parameters and assumptions for the model run using the groundwater availability model for the Gulf Coast Aquifer are described below:

- We used the Groundwater Management Area 16 numerical groundwater flow model, version 1.0 for these predictive simulations (Hutchison and others, 2011).

- The groundwater flow model encompasses the footprint of Groundwater Management Area 16 and its underlying aquifer systems. The Groundwater Management Area 16 model includes portions of the Gulf Coast, Yegua-Jackson, Queen City, Sparta, and Carrizo-Wilcox aquifer systems. Layers 1 through 4 represent the Gulf Coast Aquifer System which is comprised of the Chicot Aquifer, Evangeline Aquifer, Burkeville Confining System, and Jasper Aquifer in descending order. Layer 5 is a bulk representation of the Yegua-Jackson Aquifer System, and Layer 6 is a bulk representation of the Queen-City, Sparta, and Carrizo-Wilcox aquifers (Hutchison and others, 2011).

- Please refer to GAM Run 09-008 (Hutchison, 2011) for the model parameters, assumptions, and methods used for the predictive simulation.

Modeled Available Groundwater and Permitting

As defined in Chapter 36 of the Texas Water Code, "modeled available groundwater" is the estimated average amount of water that may be produced annually to achieve a desired future condition. This is distinct from "managed available groundwater," shown in the draft version of this report dated June 7, 2011, which was a permitting value and accounted for the estimated use of the aquifer exempt from permitting. This change was made to reflect changes in statute by the 82nd Texas Legislature, effective September 1, 2011.

Groundwater conservation districts are required to consider modeled available groundwater, along with several other factors, when issuing permits in order to manage groundwater production to achieve the desired future condition(s). The other factors districts must consider include annual precipitation and production patterns, the estimated amount of pumping exempt from permitting, existing permits, and a reasonable estimate of actual groundwater production under existing permits. The estimated amount of pumping exempt from permitting, which the Texas Water Development Board is now required to develop after soliciting input from applicable groundwater conservation districts, will be provided in a separate report.

RESULTS:

The modeled available groundwater for the Gulf Coast Aquifer in Groundwater Management Area 16 consistent with the above desired future condition is approximately 358,100 acre-feet per year. This has been divided by county, regional water planning area, and river basin for each decade between 2010 and 2060 for use in the regional water planning process (Table 1). The modeled available groundwater for the Gulf Coast Aquifer is also summarized by county, regional water planning area, river basin, and groundwater conservation district as shown in tables 2 through 5. In Table 5, the modeled

available groundwater both excluding and including areas outside of a groundwater conservation district is shown.

LIMITATIONS:

The groundwater model used in completing this analysis is the best available scientific tool that can be used to meet the stated objective(s). To the extent that this analysis will be used for planning purposes and/or regulatory purposes related to pumping in the past and into the future, it is important to recognize the assumptions and limitations associated with the use of the results. In reviewing the use of models in environmental regulatory decision making, the National Research Council (2007) noted:

> *"Models will always be constrained by computational limitations, assumptions, and knowledge gaps. They can best be viewed as tools to help inform decisions rather than as machines to generate truth or make decisions. Scientific advances will never make it possible to build a perfect model that accounts for every aspect of reality or to prove that a given model is correct in all respects for a particular regulatory application. These characteristics make evaluation of a regulatory model more complex than solely a comparison of measurement data with model results."*

A key aspect of using the groundwater model to evaluate the impacts of future pumping is the need to make assumptions about the location in the aquifer where future pumping will occur. In this case, as noted, pumping in each county is evenly distributed. This assumption was necessary, in part, due to the generally large increases in pumping as compared to historic pumping. There is a fair degree of uncertainty in many of these estimates due to the large increases in pumping in areas that had not historically been stressed. As actual pumping changes in the future, it will be necessary to evaluate the amount of that pumping as well as its location in the context of the assumptions associated with this analysis. Evaluating the amount and location of future pumping is as important as evaluating the changes in groundwater levels, spring flows, and other metrics that describe the impacts of that pumping. This analysis does not assess the possible impacts of pumping such as reduced water quality or land surface subsidence.

In addition, certain assumptions have been made regarding future precipitation, recharge, and streamflow in evaluating the impacts of future pumping. Those assumptions also need to be considered and compared to actual future data.

Given these limitations, users of this information are cautioned that the results should not be considered a definitive, permanent prediction of the changes in groundwater storage, streamflow and spring flow. Because the application of the groundwater model was designed to address regional scale questions, the

results are most effective on a regional scale. The TWDB makes no warranties or representations relating to the actual conditions of any aquifer at a particular location or at a particular time.

It is important for groundwater conservation districts to monitor future groundwater pumping and overall conditions of the aquifer. Because of the limitations of the groundwater model and the assumptions in this analysis, it is important that the groundwater conservation districts work with the TWDB to refine this analysis in the future given the reality of how the aquifer responds to the actual amount and location of pumping now and in the future.

REFERENCES:

Harbaugh, A.W., Banta, E.R., Hill, M.C., and McDonald, M.G., 2000, MODFLOW-2000, The U.S. Geological Survey modular ground-water model-user guide to modularization concepts and the ground-water flow process: U.S. Geological Survey Open-File Report 00-92, 121 p.

Hutchison, W.R., Hill, M.E., Anaya, R., Hasan, M.M., Oliver, W., Jigmond, M., Wade, S., and Aschenbach, E., 2011. Groundwater Management Area 16 Groundwater Flow Model: Texas Water Development Board.

Hutchison, W.R., 2011. Draft GAM Run 09-08: Groundwater Management Area 16 Model Runs to Estimate Drawdowns under Assumed Future Pumping for the Gulf Coast Aquifer, June 10, 2011, 45p.

National Research Council, 2007. Models in Environmental Regulatory Decision Making. Committee on Models in the Regulatory Decision Process, National Academies Press, Washington D.C., 287 p.

Wilson, J.D. and Naff, R.L., 2004, The U.S. Geological Survey modular ground-water model-GMG linear equation solver package documentation: U.S. Geological Survey Open-File Report 2004-1261, 47 p.

TABLE 1: MODELED AVAILABLE GROUNDWATER FOR THE GULF COAST AQUIFER IN GROUNDWATER MANAGEMENT AREA 16. RESULTS ARE IN ACRE-FEET PER YEAR AND ARE DIVIDED BY COUNTY, REGIONAL WATER PLANNING AREA, AND RIVER BASIN.

County	Regional Water Planning Area	River Basin	Year					
			2010	2020	2030	2040	2050	2060
Bee	N	Nueces	762	762	762	762	762	762
		San Antonio-Nueces	9,898	9,898	9,898	9,898	9,898	9,898
Brooks	N	Nueces-Rio Grande	15,595	15,595	15,595	15,595	15,595	15,595
Cameron	M	Nueces-Rio Grande	48,576	48,576	48,576	48,576	48,576	48,576
		Rio Grande	1,984	1,984	1,984	1,984	1,984	1,984
Duval	N	Nueces	364	364	364	364	364	364
		Nueces-Rio Grande	13,699	13,699	13,699	13,699	13,699	13,699
Hidalgo	M	Nueces-Rio Grande	38,941	38,941	38,941	38,941	38,941	38,941
		Rio Grande	2,985	2,985	2,985	2,985	2,985	2,985
Jim Hogg	M	Nueces-Rio Grande	20,836	20,836	20,836	20,836	20,836	20,836
		Rio Grande	3,578	3,578	3,578	3,578	3,578	3,578
Jim Wells	N	Nueces	3,962	3,962	3,962	3,962	3,962	3,962
		Nueces-Rio Grande	23,924	23,924	23,924	23,924	23,924	23,924
Kenedy	N	Nueces-Rio Grande	51,778	51,778	51,778	51,778	51,778	51,778
Kleberg	N	Nueces-Rio Grande	50,701	50,701	50,701	50,701	50,701	50,701
Live Oak	N	Nueces	11,377	11,377	11,377	11,377	11,377	11,377
		San Antonio-Nueces	57	57	57	57	57	57
McMullen	N	Nueces	510	510	510	510	510	510
Nueces	N	Nueces	946	946	946	946	946	946
		Nueces-Rio Grande	7,884	7,884	7,884	7,884	7,884	7,884

County	Regional Water Planning Area	River Basin	Year					
			2010	2020	2030	2040	2050	2060
		San Antonio-Nueces	179	179	179	179	179	179
San Patricio	N	Nueces	3,868	3,868	3,868	3,868	3,868	3,868
		San Antonio-Nueces	15,145	15,145	15,145	15,145	15,145	15,145
Starr	M	Nueces-Rio Grande	3,079	3,079	3,079	3,079	3,079	3,079
		Rio Grande	4,447	4,447	4,447	4,447	4,447	4,447
Webb	M	Nueces	82	82	82	82	82	82
		Nueces-Rio Grande	2,445	2,445	2,445	2,445	2,445	2,445
		Rio Grande	475	475	475	475	475	475
Willacy	M	Nueces-Rio Grande	20,013	20,013	20,013	20,013	20,013	20,013
Total			**358,090**	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**

TABLE 2: MODELED AVAILABLE GROUNDWATER FOR THE GULF COAST AQUIFER SUMMARIZED BY COUNTY IN GROUNDWATER MANAGEMENT AREA 16 FOR EACH DECADE BETWEEN 2010 AND 2060. RESULTS ARE IN ACRE-FEET PER YEAR. NOTE THAT THE PUMPING AMOUNT SHOWN IN THE TABLE BELOW FOR BEE COUNTY REPRESENTS ONLY THE PORTION OF THE COUNTY WITHIN GROUNDWATER MANAGEMENT AREA 16.

County	Year					
	2010	2020	2030	2040	2050	2060
Bee	10,660	10,660	10,660	10,660	10,660	10,660
Brooks	15,595	15,595	15,595	15,595	15,595	15,595
Cameron	50,560	50,560	50,560	50,560	50,560	50,560
Duval	14,063	14,063	14,063	14,063	14,063	14,063
Hidalgo	41,926	41,926	41,926	41,926	41,926	41,926
Jim Hogg	24,414	24,414	24,414	24,414	24,414	24,414
Jim Wells	27,886	27,886	27,886	27,886	27,886	27,886
Kenedy	51,778	51,778	51,778	51,778	51,778	51,778
Kleberg	50,701	50,701	50,701	50,701	50,701	50,701
Live Oak	11,434	11,434	11,434	11,434	11,434	11,434
McMullen	510	510	510	510	510	510
Nueces	9,009	9,009	9,009	9,009	9,009	9,009
San Patricio	19,013	19,013	19,013	19,013	19,013	19,013
Starr	7,526	7,526	7,526	7,526	7,526	7,526
Webb	3,002	3,002	3,002	3,002	3,002	3,002
Willacy	20,013	20,013	20,013	20,013	20,013	20,013
Total	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**

TABLE 3: MODELED AVAILABLE GROUNDWATER FOR THE GULF COAST AQUIFER SUMMARIZED BY REGIONAL WATER PLANNING AREA IN GROUNDWATER MANAGEMENT AREA 16 FOR EACH DECADE BETWEEN 2010 AND 2060. RESULTS ARE IN ACRE-FEET PER YEAR.

Regional Water Planning Area	Year					
	2010	2020	2030	2040	2050	2060
M	147,441	147,441	147,441	147,441	147,441	147,441
N	210,649	210,649	210,649	210,649	210,649	210,649
Total	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**

TABLE 4: MODELED AVAILABLE GROUNDWATER FOR THE GULF COAST AQUIFER SUMMARIZED BY RIVER BASIN IN GROUNDWATER MANAGEMENT AREA 16 FOR EACH DECADE BETWEEN 2010 AND 2060. RESULTS ARE IN ACRE-FEET PER YEAR.

River Basin	Year					
	2010	2020	2030	2040	2050	2060
Nueces	21,871	21,871	21,871	21,871	21,871	21,871
Nueces-Rio Grande	297,471	297,471	297,471	297,471	297,471	297,471
Rio Grande	13,469	13,469	13,469	13,469	13,469	13,469
San Antonio-Nueces	25,279	25,279	25,279	25,279	25,279	25,279
Grand Total	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**

TABLE 5: MODELED AVAILABLE GROUNDWATER FOR THE GULF COAST AQUIFER SUMMARIZED BY GROUNDWATER CONSERVATION DISTRICT (GCD) IN GROUNDWATER MANAGEMENT AREA 16 FOR EACH DECADE BETWEEN 2010 AND 2060. RESULTS ARE IN ACRE-FEET PER YEAR. UWCD REFERS TO UNDERGROUND WATER CONSERVATION DISTRICT. ASRCD REFERS TO AQUIFER STORAGE & RECOVERY CONSERVATION DISTRICT.

Groundwater Conservation District	Year					
	2010	2020	2030	2040	2050	2060
Bee GCD	10,600	10,600	10,600	10,600	10,600	10,600
Brush Country GCD	68,846	68,846	68,846	68,846	68,846	68,846
Corpus Christi ASRCD	2,526	2,526	2,526	2,526	2,526	2,526
Duval County GCD	14,063	14,063	14,063	14,063	14,063	14,063
Kenedy County GCD	97,335	97,335	97,335	97,335	97,335	97,335
Live Oak UGCD	11,434	11,434	11,434	11,434	11,434	11,434
Mcmullen GCD	510	510	510	510	510	510
Red Sands GCD	584	584	584	584	584	584
San Patricio GCD	18,367	18,367	18,367	18,367	18,367	18,367
Starr County GCD	7,526	7,526	7,526	7,526	7,526	7,526
Total (excluding non-district areas)	**231,791**	**231,791**	**231,791**	**231,791**	**231,791**	**231,791**
No District	126,299	126,299	126,299	126,299	126,299	126,299
Total (including non-district areas)	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**	**358,090**

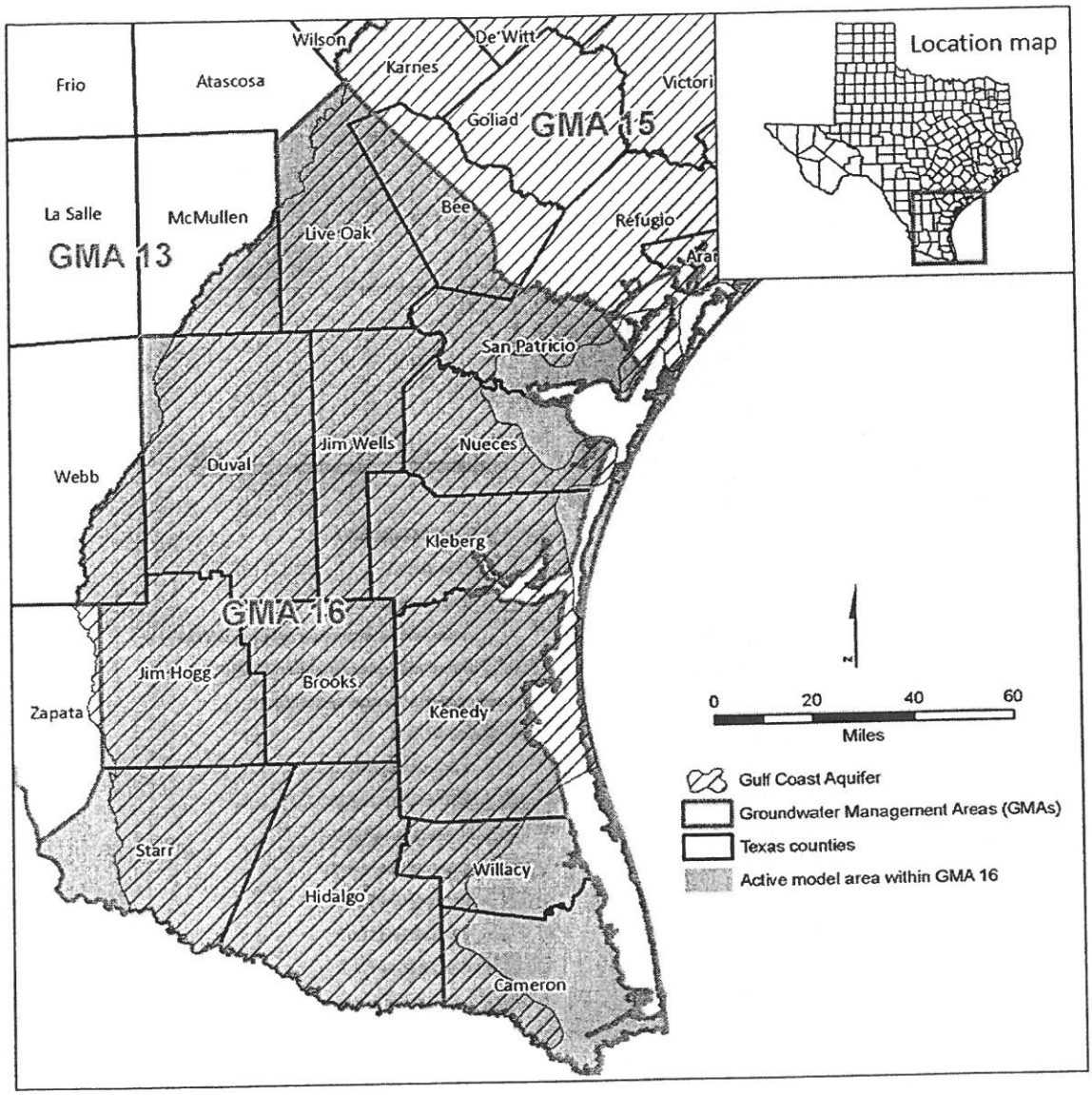

FIGURE 1: MAP SHOWING THE AREAS COVERED BY THE GROUNDWATER MODEL FOR GROUNDWATER MANAGEMENT AREA 16 WHICH INCLUDES THE GULF COAST AQUIFER.

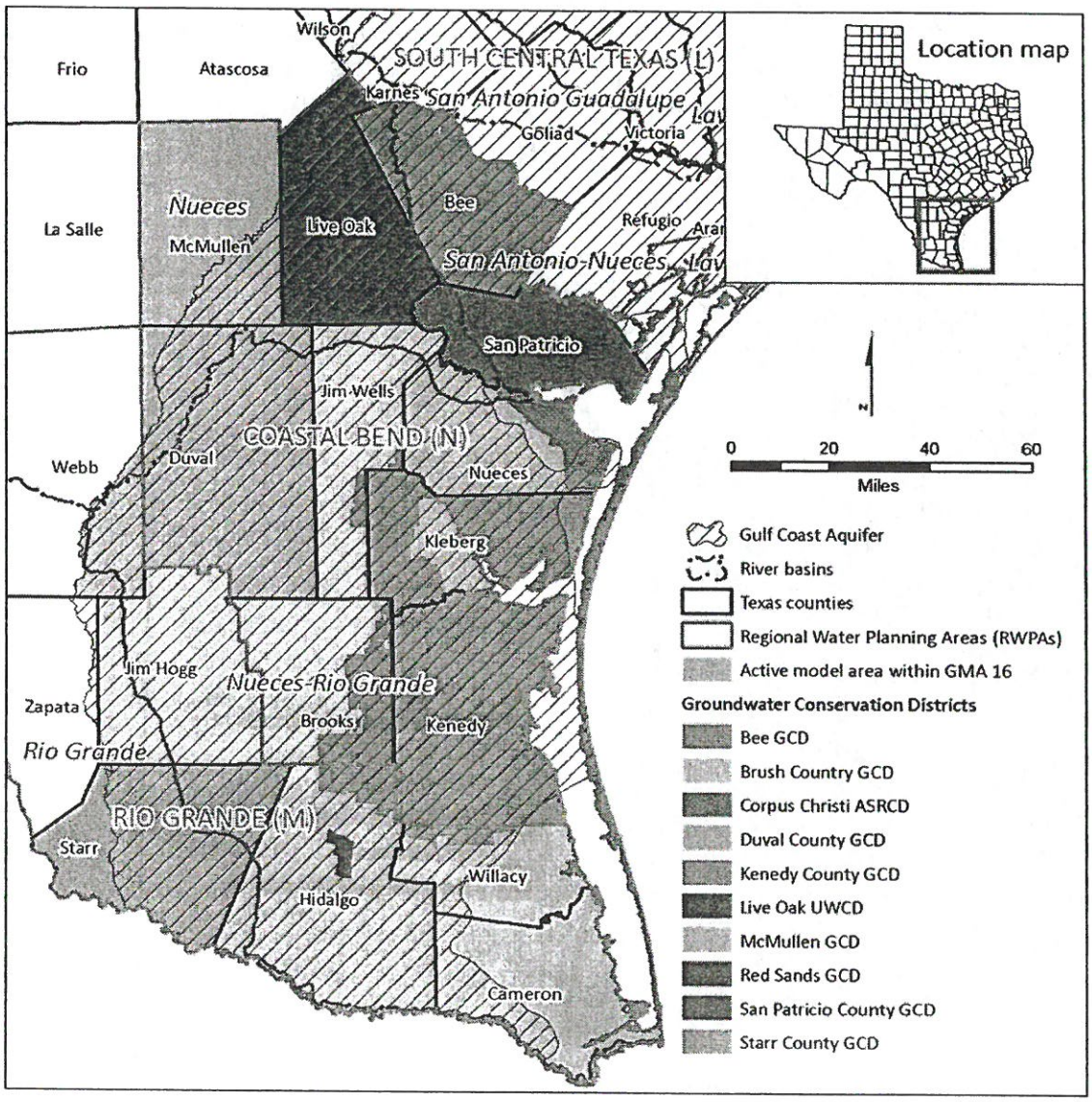

FIGURE 2: MAP SHOWING REGIONAL WATER PLANNING AREAS (RWPAS), GROUNDWATER CONSERVATION DISTRICTS (GCDS), COUNTIES, AND RIVER BASINS IN GROUNDWATER MANAGEMENT AREA 16.

Appendix "I"

STARR COUNTY GROUNDWATER CONSERVATION DISTRICT RULES

Table of Contents

8.3Application

Starr CountyGroundwater
ConservationDistrict

RULES OF STARR COUNTY GROUNDWATER CONSERVATION DISTRICT IN TEXAS ARE HEREBY PUBLISHED, AS OF September

In accordance with Section 59 of Article XVI of the Texas Constitution, H.B. No. 3651 effective September 01,2001, and Chapter 36 of the Texas Water Code, as amended, the following rules are hereby ratified and adopted as the rules of the Starr County Groundwater Conservation District, in Texas, by its Board.

The rules, regulations, and modes of procedure herein contained are and have been adopted for the purpose of simplifying procedure, avoiding delays, saving expense, and facilitating the administration of the groundwater laws of the State and the rules of this district. To the end that these objectives be attained, these rules shall be so construed.

These rules may be used as guides in the exercise of discretion, where discretion is vested. However, under no circumstances, and in no particular case shall they, or any of them, be construed as a limitation or restriction upon the exercise of any discretion, where such exists; nor shall they in any event be construed to deprive the Board of an exercise of powers, duties, and jurisdiction conferred by law, nor to limit or restrict the amount and character of data or information which may be required for the proper administration of the law.

RULE1DEFINITIONS

A. The "Board" shall mean the Board of Directors of the Starr County Groundwater Conservation District, in Texas, consisting of duly appointed and henceforth elected members, as provided in Chapter 36, Texas Water Code, as amended and HB 3651.

B. "District" shall mean the Starr County Groundwater Conservation District in Texas, created under Section 59, Article XVI Texas Constitution, maintaining its principal office in Starr County, Texas. Where applications, reports and other papers are required to be filed with or sent to "the District," this means the District office in Starr County, Texas.

C. "Permitted well" shall mean a well subject to the District's drilling permit requirements, which includes any artificial excavation constructed to produce, or which produces, more than 25,000 gallons of water per day.

D. "Registered well" shall mean and include any artificial excavation to produce, or that is producing, water for any purpose that is not subject to the District's drilling permit requirements.

E. "Monitoring well" shall mean a well installed to measure some property, usually water levels, and quality, of the groundwater or aquifer, which it enters that does not produce groundwater for the purpose of water supply.

F. "Director" means a member of the Board. To be eligible to serve as a temporary, initial, or regular director of the district, a person must be a resident of Starr County and must be at least 18 years of age. Each director must qualify to serve as director in the manner provided by Section 36.055 of the Texas Water Code.

G. "Exploratory hole" shall mean any hole drilled to a depth greater than the top of any stratum containing groundwater, as "groundwater" as is defined in Chapter 36, Texas Water Code, as amended, for the purpose of securing geological or other information, which may be obtained by penetrating the earth with a drill bit, and includes what is commonly referred to in the industry as "water well test holes", "slim hole test" or "seismograph test holes" and the like.

H. "Water" for the purposes of these rules is synonymous with groundwater or underground water.

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

J. "Person" shall mean any individual, partnership, firm, state agency, political subdivision, corporation, or other legal entity.

K. The word "waste" as used herein shall include, but is not limited to; those defined by the Legislature in Chapter 36, Texas Water Code, latest amendment. Waste includes:

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; or, that threatens to deplete the historic supply.

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 that does not contain groundwater;

4. Pollution or harmful alteration of groundwater in a groundwater reservoir by salt water, other deleterious matter admitted from another stratum, or from the surface of the ground; or, release of deleterious material into a drinking water supply aquifer.

5. Willfully or negligently causing, suffering, or permitting 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; or unless such discharge is authorized by permit, rule or order by the Commission under Chapter 26; or

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

L. An "authorized well site" shall be:

1. The location of a proposed well identified by GPS coordinates on an application duly filed, until such application is denied, or

2. The location of a proposed well identified by GPS coordinates on a valid permit. (An authorized well site is not a permit to drill.)

M. "General Manager" is the General Manager of the Starr County Groundwater Conservation District. The General Manager may be a member of the board.

N. "Acre-foot" means the amount of water necessary to cover one acre of land one foot deep, or 325,851 gallons of water.

O. "Agricultural crop" means food or fiber commodities grown for resale or commercial purposes that provide food, clothing, or animal feed.

P. "Drilling Permit" means a permit for water well issued or to be issued by the District allowing a water well to be drilled.

Q. "Groundwater" means water percolating beneath the earth's surface within the District but does not include water produced with oil in the production of oil and gas.

R. "Landowner" means the person who bears ownership of the land surface.

S. "New Well Application" means an application for a permit or registration for a water well that has not yet been drilled.

T. "Open Meeting Law" means Chapter 551, Texas Government Code.

U. "Operating Permit" means a permit issued by the District for a water well that is capable of pumping more than 25,000 gallons per day, allowing groundwater to be withdrawn from a water well for a designated period and at a maximum rate.

V. "Public Information Act" means Chapter 552, Texas Government Code.

W. "Rules" means the rules of the District compiled in this document and as may be supplemented or amended from time to time.

X. "Water meter" means a water flow-measuring device that can accurately record the amount of groundwater produced during a measured time.

Y. "Well" means any facility, device, or method used to withdraw groundwater from the groundwater supply within the District.

Z. "District act" means an act relating to the creation, administration, powers, duties, operation and financing of the Starr County Groundwater Conservation District (H.B. 3651 effective September 1, 2001).

AA. "Existing well" means any well in the district that was drilled or properly completed on or before the adoption of the Starr County Groundwater Conversation District Management Plan, September 17, 2013.

RULE2PURPOSEOFRULES

These rules are adopted to achieve the provisions of the District Act and accomplish its purposes.

These rules are intended to provide for the conservation, preservation, protection, and recharge of groundwater and aquifers within Starr County.

RULE2.1USEANDEFFECTOFRULES

The District uses these rules as guides in the exercise of the powers conferred by law and in the accomplishment of the purposes of the District Act. They may not be construed as a limitation or restriction on the exercise of any discretion nor be construed to deprive the District or Board of the exercise of any powers, duties or jurisdiction conferred by law, nor be construed to limit or restrict the amount and character of data or information that may be required to be collected for the proper administration of the District Act.

RULE2.2AMENDINGOFRULES

The Board may, following notice and hearing, amend these rules or adopt new rules from time to time.

RULE2.3HEADINGSANDCAPTIONS

The section and other headings and captions contained in these rules are for reference purposes only. They do not affect the meaning or interpretation of these rules in any way.

RULE2.4SEVERABILITY

If any one or more of the provisions contained in these rules are for any reason held to be invalid, illegal, or unenforceable in any respect, the invalidity, illegality, or unenforceability may not affect any other rules or provisions of these rules, and these rules must be construed as if such invalid, illegal or unenforceable rules or provision had never been contained in these rules.

RULE2.5GENERALRULES

A. Computing Time: In computing any period of time prescribed or allowed by these rules, by order of the Board, or by any applicable statute, the day of the act, event or default from which the designated period of time begins to run, is not to be included, but the last day of the period so computed is to be included, unless it be a Saturday, Sunday, or legal holiday, in which event the period runs until the end of the next day which is neither a Saturday, Sunday, nor legal holiday.

B. Time Limit: Applications, requests, or other papers or documents required or permitted to be filed under these rules, or by law, must be received for filing at the Board's office at Starr County, Texas, within the time limits, if any, for such filing The date of receipt and not the date of posting is determinative.

C. Show Cause Orders and Complaints: The Board, either on its own motion, or upon receipt of sufficient written protest or complaint, may at any time, after due notice to all interested parties, cite any person operating within the District to appear before it in a public hearing and require him to show cause why a suit should not be initiated against him in a district court, for failure to comply with the orders or rules of the Board or the relevant statutes of the State or for failure to abide by the terms and provisions of the permit of operating authority itself. The matter of evidence, and all other matters of procedure at any such hearing, will be conducted in accordance with these rules of procedure and practice.

D. All Starr County wells and well owners shall comply with all applicable rules, orders, regulations, requirements, resolutions, policies, directives, standards, guidelines, or any other regulatory measures implemented by the District.

RULE2.6CHANGEOFOWNERSHIPORUSE

A. A Permittee may apply for a transfer of ownership of any permit or registration granted by the District, and such transfer may be approved as a ministerial act upon filing the required information. However, a transfer of ownership shall be approved as a ministerial act only if the transfer is to change the ownership of the permit and no other changes to the permit are requested.

B. Any permittee requesting a change from the purpose or place of use stated in a permit or registration shall apply to the Board for continuation of the permit for the proposed changed use at the same or reduced rate of production. The application for change of use shall be in the same form, and governed by the same standards, as the original water permit application. The Board may request any additional relevant information the District considers necessary, to analyze the request for the amendment.

SECTION3BOARD

RULE3.1PURPOSEOFBOARD

The Board was created to determine policy and regulate the withdrawal of groundwater within the boundaries of the District for conserving, preserving, protecting, and recharging the groundwater within the district, and to exercise its rights, powers, and duties in a way that will accomplish the purposes of the District Act effectively and expeditiously. The Board's responsibilities include, but are not limited to adoption and enforcement of reasonable rules and other orders.

RULE3.2BOARDSTRUCTURE,OFFICERS

The Board consists of seven members qualified as required by the District Act. The Board will elect one of its members to serve as President, to preside over Board meetings and proceedings; one to serve as Vice President to preside in the absence of the President; and one to serve as Secretary/Treasurer to keep a true and complete account of all meetings and proceedings of the Board. The Board may elect officers annually, but must elect officers at the first meeting following the November election for directors of each even numbered year. Except for temporary or initial director of the District, a director serves a four-year term. Beginning in the second year following the confirmation election, an election shall be held on the first uniform election date in November every two years to select the appropriate number of directors to the board. At the first election, directors for places 2, 4, and 6 shall be elected, and at the next election, directors for places 1, 3, 5, and 7 shall be elected.

RULE3.3MEETINGS

The Board will hold regular meetings as the Board may establish from time to time. At the request of the President, or by written request of at least three members, the Board may hold special meetings. All Board meetings will be held according to the Texas Open Meetings Law.

RULE3.4COMMITTEES

The President may establish committees for formulation of policy recommendations to the Board, and appoint the chair and membership of the committees. Committee members serve at the pleasure of the President.

RULE4

Reserved for future use

RULE5DISTRICTSTAFF RULE5.1

GENERALMANAGER

The Board may employ a person to manage the District, and title this person General Manager. The General Manager will have no power, duty, or responsibility other than gathering information and performing Water District functions as determined by the Board. The Board will determine the compensation and review the position of General Manager each year during the preparation of the budget for the next fiscal year or at the time of the change of General Manager is appropriate. The General Manager, with approval of the Board, may employ all persons necessary for the proper handling of business and operation of the District and their compensation will be set by the Board. The General Manager will be responsible for performing District functions as determined by the Board.

RULE6DISTRICT

RULE6.1MINUTESANDRECORDSOFTHEDISTRICT

All documents, reports, records, and minutes of the District are available for public inspection, and copying. Upon written application by any person, the District will furnish copies of its public records. A copying charge will be established by the District.

RULE7OTHERDISTRICTACTIONSANDDUTIES

RULE7.1DISTRICTMANAGEMENTPLAN

The District Management Plan specifies the acts, procedures, performance, and avoidance necessary to prevent waste of groundwater, provide for the protection, preservation and conservation of groundwater and prevent the adverse drawdown of the water table of the Gulf Coast Aquifer. The District shall use the Rules of the District to implement the Management Plan. The Board will review the Management Plan at least every tenth year. If the Board considers a new plan necessary or desirable, based on evidence presented at hearing, a new plan will be adopted. A plan, once adopted, remains in effect until the adoption of a new plan.

RULE8TRANSFEROFGROUNDWATEROUTOFTHEDISTRICT

RULE8.1PERMITREQUIRED

Groundwater produced from within the District may not be transported outside the District's boundaries unless the board has issued the well owner a transport permit.

RULE8.2APPLICABILITY

A groundwater transport permit is not required for transportation if the groundwater is to be used on property that straddles the district boundary line.
All in County utilities meeting the following requirements may be exempt from the requirement for a groundwater transport permit:

1. 95% of the total monthly volume of the water utility must be supplied within the district boundaries;

2. The monthly volume of water transported out of the district shall not exceed 5% of the utility's corresponding monthly demand.

RULE8.3APPLICATION

An application for a transport permit must be filed in the District office and must include the following information:

1. The name and mailing address of the owner and/or operator of the transportation facility.

2. A statement of the nature and purpose of the proposed use and the amount of water to be used for each purpose.

3. A water-conservation plan and a drought contingency plan.

4. The legal description of the location of the well(s) and transportation facilities.

5. Proof of notification of all landowners adjacent to the property where the well or wells are located and all well owners within one-half mile of any of the proposed production wells.

6. A technical description of the transport facilities.

7. The permit number of the well or wells used to produce water to be transported.

8. The name and address of the water right owners(s).

9. The time schedule for construction and/or operation of the facility.

10. Any additional information required by the Board to process the permit.

RULE8.4HEARINGANDPERMITISSUANCE

A. Applications for transport permits are subject to the hearing procedures provided by these rules.

B. In determining whether to issue a permit to transfer groundwater out of the District, the Board shall consider;

1. Availability of water in the District and in the proposed receiving area; during the period for which the water supply is requested;

2. Availability of feasible and practicable alternative supplies to the applicant;

3. The amount and purposes of use for which water is needed in the proposed receiving area;

4. The projected effect of the proposed transfer on aquifer conditions, depletion, subsidence, or effects on existing permit holders or other groundwater users within the District;

5. The indirect costs and economic and social impacts associated with the proposed transfer of water from the District;

6. The establishing of an export fee;

7. The approved regional and state water plan, and the certified District Management Plan;

8. Other facts and considerations considered necessary by the District's Board for protection of the public health and welfare and conservation and management of natural resources in the District.

9. The amount of groundwater required for future economic development within the boundaries of Starr County Groundwater Conservation District.

C. Under no circumstances shall a transport permit be issued for an amount of groundwater that jeopardizes future economic development within the boundaries of Starr County Groundwater Conservation District.

D. The transport permit shall specify the amount of water that may be transferred out of the District and the period for which the water may be transferred, in accordance with Section 36.122 of the Texas Water Code.

E. Permit conditions. The transport permit, in addition to the application information and considerations, shall include the following terms and conditions:

1. The date that the permit is to expire if no transportation facility is constructed;

2. A requirement that the water will be put to a beneficial use at all times;

3. Conditions and restrictions, if any, placed on the rate and amount of water transported;

4. The period for which the groundwater production is permitted;

5. The export fee negotiated between the District and the producer/transporter.

F. The District shall impose a reasonable application fee and export fee for transport permits. Such fees shall comply with the requirements in Section 36.122(e).

G. The term for a transport permit shall be three years if construction of a conveyance system has not been initiated prior to permit issuance. If construction of a conveyance system is begun before the expiration of the permit, the term will be extended to a 30 year term from initial permit issuance. If construction of a conveyance system has been initiated prior to permit issuance, the term of the transport permit shall be 30 years.

H. The District may, every three years, review the amount of water that may be transferred out of the District under a permit and may limit the amount of water that may be transferred out of the District under permit and may limit the amount of water which may be transferred, after a consideration of the factors set forth in Rule 8 B & C and all relevant current data for conservation of groundwater resources in the District. At any time during the term of a transport permit, the District may revise or amend the permit if the use of water unreasonably affects existing groundwater and surface water resources or existing Permit Holders.

RULE9–TRANSPORTATIONOFWATER A.

Registration required.

1. Every person who produces water from permitted wells located, within the District, when all or any part of such water is transported for use, or for intended use, off the property from which the water is produced, but within District, must register the production under this Rule, unless the production is covered by a permit under Section 8. The term "property from which water is produced," as used in this subsection, shall be construed to mean water rights owned by an entity within a continuous perimeter boundary situated within the District. Transportation of water requiring registration under this Rule includes transportation by pipeline, vehicle, channel, ditch, watercourse or other natural or artificial facilities, or any combination of such facilities.

B. Registration application:

1. The registration provided for herein must be filed with the District, in the form or forms promulgated by the District hereunder, and such registration must be obtained from the District, prior to the proposed transporting of water, all in accordance with the provisions of this Rule.

2. An application for the transportation of water for which a registration is required under this Rule must:

a. be in writing;

b. contain the name, post-office address and place of residence or principal office of the applicant;

c. identify the actual or anticipated number, location, pump size and production capacity of the wells from which the water to be transported is produced or to be produced;

d. describe as specifically as feasible the anticipated proposed transportation facilities;

e. state the nature and purposes of the proposed use and the anticipated amount of water to be used for each purpose;

f. state the anticipated time within which any proposed construction or alteration is to begin;

g. state the presently anticipated duration required for the proposed use of the water;

h. provide information showing the anticipated effect of the proposed transportation on the quantity and quality of water available for future use, both inside and outside the District;

i. identify any other presently-owned sources of water, the availability of which is both technically feasible and economically reasonable for the entity, that could be reasonably used for the stated purposes, including quality and quantity of such alternate sources;

j. identify any other liquids, the availability of which is both technically feasible and economically reasonable for the entity, that could be reasonably substituted for the fresh ground water and possible sources of such liquid, including quantity and quality;

k. provide information showing what water conservation measures the entity has adopted, what water conservation goals the entity has established, and what measures and time frames are necessary to achieve the entity's established water conservation goals; and

l. if the water is to be resold to others, provide a description of the entity's service area, entity's metering and leak detection and repair program for its water storage, delivery and distribution system, entity's drought or emergency water management plan, and information on each customer's water demands, including population and customer data, water use data, water supply system data, wastewater data, water conservation measures and goals, and the means for implementation and enforcement.

3. The application must be accompanied by a map or plat drawn on a scale that adequately details the proposed project, showing substantially:

a. the location of the existing or proposed well(s);

b. the location of the existing or proposed meter(s) for compliance to section (k) of this Rule;

c. the location of the existing proposed water transporting facilities; and

d. the location of the proposed or increased use or uses.

4. The General Manager shall determine whether the application, maps, and other materials comply with the requirements of this rule and may require amendment of the application, maps, other.

5. Official Fire Departments in the district are exempt from this rule. An annual report of estimated groundwater usage is beneficial to assist the District in water management.

RULE10ENFORCEMENTOFRULES

A. All Rules duly adopted, promulgated, and published by this District shall be enforced as provided for under Chapter 36, Texas Water Code and subsequent changes thereto.

B. If it appears that, a person has violated, is violating; or is threatening to violate any provision of the District Rules the Board of Directors may institute and conduct a suit in the name of the District for enforcement of Rules through the provisions of Chapter 36.102 Texas Water Code.

C. Violation of any District Rule shall be subject to a civil penalty not to exceed $10,000 per day per violation and each day of a continuing violation constitutes a separate violation. SCGCD will use the following guidelines in implementing official action concerning violations of SCGCD Rules and operating permits:

1. Official letter from SCGCD
2. Hearing at regular Board meeting
3. Revocation of permit or ability to use well
4. Apply Rule 10 civil penalties as decided by Board

D. The District may enforce this chapter, and its Rules, by injunction, mandatory injunction, or other appropriate remedy, in a court of competent jurisdiction.

E. The Board may set reasonable civil penalties for breach of any Rule of the District which penalty shall not exceed the jurisdiction of a justice court, as provided by Section 27.031, Government Code.

F. A penalty under this section is in addition to any other penalty provided by the law of this state and may be enforced by complaints filed in a court of competent jurisdiction in Starr County, Texas.

G. If the District prevails in any suit to enforce its Rules, it may, in the same action, recover reasonable fees for attorneys, expert witnesses, and other costs incurred by the District before the court. The amount of the attorney's fees shall be fixed by the court.

H. In the event that the violator of a District Rule refuses to pay a monetary fine or comply with other provisions of the fine imposed by the District, the District may deny the violator of future privileges provided by the District Rules until the conditions of the fine have been remedied.

RULE11REGISTRATION/PERMITS RULE

11.1REGISTRATIONOFNEWWELLS

A. It is a violation of these Rules for a well owner, well operator, or water well driller to drill any well without the water well registration form being filed with and approved by the District. This includes the GPS location determined by a representative of the District.

B. All new wells must be registered by the well owner, well operator, or water well driller prior to being drilled. The District staff will review the registration and make a preliminary determination on whether the well meets the exclusions or exemptions provided in Rule 12.8. Providing the preliminary determination is ruled the well is excluded or exempt, the registrant may begin drilling immediately upon receiving the approved registration. After an exempt well is completed and in operation, information required under Rule 11.2 must be provided to the District within 30 calendar days.

RULE11.2REQUIREMENTOFDRILLER'SLOG,CASING,ANDPUMPDATA

Complete records shall be kept, and reports thereof made to the District, concerning the drilling, equipping and completion of all wells drilled. Such records shall include an accurate driller's log, any electric logs that have been made, and any additional data concerning the description of the well, its discharge, and its equipment as may be required by the Board. Such reports shall be filed with the District Board at its office in Goliad, Texas, within 30 days after completion of the well.

RULE11.3TIMEDURINGWHICHADRILLINGPERMITORREGISTRATIONSHALLREMAINVALID

Except as provided in the Rules, any drilling permit or registration granted shall expire if the work is not completed within 60 days from the date of approval by the Board. It shall thereafter be void. The Board, for good cause, may extend the life of such permit for an additional 60 days if an application for such extension shall have been made to the Board during the first 60-day period. When it is made known to the Board that a proposed project will take more time to complete, the Board, upon receiving written application, may grant such time, as is reasonably necessary to complete such project. Well locating fees are not refundable.

RULE11.4REGISTRATIONOFGRANDFATHEREDWELLS

A. Registration of wells that are grandfathered under Rule 12.8(g) is voluntary. The Board recommends that all Grandfathered wells be registered so that these wells can be protected and that their Grandfathered status can be guaranteed.

B. If a well that qualifies to be grandfathered is not registered by Feb. 6, 2004, the owner must show proof of ownership of a well or wells, prior to this date, to receive Grandfathered status after that date for the purpose of establishing historical use. Proof can be well drillers logs, a drilling receipt, third party confirmation of existence of wells, or dated document showing ownership and existence of wells prior to February 6, 2003.

C. All Grandfathered wells are subject to verification by the Board.

RULE12.1HISTORICGROUNDWATERUSE

A. A historic use well is a well that is "grandfathered" under the provisions of Rule 12.8(g), is registered under the provisions of Rule 11.4, and continues to be used for the same purpose(s) and quantity for which it was used prior to receiving grandfathered status. A historic use well applies only to wells that are producing groundwater for use within the District. A historic use well maintains an exempt status as long as it meets these requirements.

B. The District will review all registered grandfathered wells that exist on the date that this rule is adopted to identify those wells that are capable of producing more than 25,000 gallons per day. The District will verify the well data with the owner and after verification will issue a Historic Use Allocation Certificate (HUAC). The purpose of a HUAC is to assist the District in accurately determining the amount of groundwater being used (allocated) in the District. In determining the amount of groundwater used, drought conditions need to be considered. Allocation of available groundwater is most critical during drought conditions.

C. The HUAC shall include the number of the grandfathered well registration, the name of the landowner, and the description of the tract of land on which the well or well system is located.

D. The HUAC shall include the following information to the extent that the information is available to the user through the exercise of reasonable and diligent efforts:

1. The use(s) of the water for which the well was drilled.

2. Annual average estimated groundwater production history of the well.

3. The maximum annual production of the well or well system, and in what year(s).

E. The HUAC is issued to the property owner and heirs for the use(s) designated. The HUAC is transferable to a new property owner only if the use(s) is (are) the same as that of the previous owner.

F. There is no known historic long term export of groundwater from the District. A HUAC is intended for in District use of groundwater only and is not applicable to any export of groundwater from the District. Any identification in the future of historic use of groundwater that is not covered under this rule will be addressed by the Board in a fair and equitable manner.

G. Historic use wells that have not been registered at the time of adoption of this rule must follow the procedure outlined in Rule 11.4(b) to establish grandfathered status before being eligible to receive a HUAC.

H. Registration for a HUAC is voluntary. The sign up period to issue a HUAC for wells that are registered at the time this rule is adopted is until December 31, 2007. The sign up period for a HUAC for additional grandfathered wells established under Rule 12.1(g) is six (6) months or December 31. 2007.

I. Change in use of a HUAC well and/or increased use over its production history invalidates the HUAC and subjects this groundwater use to permitting.

HISTORIC USE GROUNDWATER ALLOCATION CERTIFICATE #_____
STARR COUNTY GROUNDWATER CONSERVATION DISTRICT
100 N. FM 3167, Rio Grande City, TX 78582
(956) 716-4800 FAX: (956) 487-8709

INSTRUCTIONS:
Complete one form for each grandfathered well covered by a SCGCD Water Well Registration which is capable of pumping more than 25,000 gallons per day.

1. **Well no.** _____
2. **Name and Address of Well Owner:**

   _____
   _____
3. **Description of the Tract of Land:**

   _____
   _____
4. **Historic Use of Water was for:**
   ( ) Domestic/Public ( ) Industrial ( ) Irrigation ( ) Other (Explain)

   _____
   Irrigation Users: Type of Crop _____
   Acres Irrigated _____
5. **Groundwater Withdrawal: (Historic)**
   a. Annual Average Estimated Groundwater Use _____
   b. Maximum Annual Production of Well or Well System _____
   Year(s) _____
6. **How did you determine the amount of water used?**
   ( ) Meter ( ) Acres Irrigated ( ) Storage Tank
   ( ) Number of Livestock Watered
   ( ) Other

   _____
   Additional comments may be attached.

THE ABOVE INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY ABILITY.

Date: _____

Signature_____

Printed Name: _____

Telephone No. _____

SCGCD Approval _____ **Date:**_____

RULE 12.2 GENERAL PERMITTING POLICIES AND PROCEDURES

A. Drilling Permit Requirement - The well owner, well operator, or any other person acting on behalf of the well owner, must file a completed well registration for a water well drilling permit before a well may be drilled. No person shall hereafter begin to drill a well, or perforate an existing well, or increase the size of a well, or a pump therein, so that the well could reasonably be expected to produce in excess of 25,000 gallons of water per day, without having first applied to the District and received a permit to do so, unless the drilling and operation of the well is exempt by law or by these Rules. An applicant may commence the drilling of a well when his application has been approved and a permit issued by the District Board of Directors. A permit issued by the District Board of Directors shall not be a guaranty of the availability of water.

1. An application for a well drilling permit is subject to spacing and production limitations.

2. Even though exempt by law from permitting under Chapter 36.117 of the Texas Water Code and amendments thereto all new wells must be registered with the District on a form provided by the District prior to the drilling of the well. See Appendix. All such wells shall be equipped and maintained in accordance with these Rules as to drilling, installation of casing, completion, pipe and fittings to prevent the escape of groundwater from a groundwater reservoir to any reservoir not containing groundwater and to prevent the pollution or harmful alteration of the character of the water in any groundwater reservoir. The District will designate the registration number for each exempt well located within the District Boundaries.

B. Operating Permit Requirement - Within 30 days after a well is drilled, the well owner or well operator must file a completed operating permit application, if not previously issued, prior to operating the well. The operating permit must be approved by the Board of Directors and remain permitted until an operating permit is no longer required for the well/well system. See Appendix.

C. Permit Applications - Each Original application for a water well drilling permit, operating permit, and permit renewal requires a separate application. Application forms will be provided by the District and furnished to the applicant upon request. The application for a permit must be in writing and sworn. See Appendix.

D. Notice of Permit Hearing - Once the District has received a completed original application for a water well drilling permit and/or operating permit, the General Manager, or Board will issue written notice indicating a date and time for a hearing on the application in accordance with these rules. The District may schedule as many applications at one hearing as deemed necessary.

E. Decision and Issuance of Permit. In deciding whether or not to issue a permit, and in setting the terms of the permit, the Board must consider the District Rules and whether:

1. The application conforms to the requirements prescribed by Chapter 36 and is accompanied by the prescribed fee;

2. The proposed use of water unreasonably affects existing groundwater and surface water resources or existing permit holders;

3. The proposed use of water is dedicated to any beneficial use;

4. The proposed use of water is consistent with the District's certified Water Management Plan;

5. The applicant has agreed to avoid waste and achieve water conservation; and

6. The applicant has agreed that reasonable diligence will be used to protect groundwater quality and that the applicant will follow well plugging guidelines at the time of well closure.

F. Operating Permits. On approval of an application, the District shall issue an Operating Permit to the applicant. The permittee's right to produce shall be limited to the extent and purposes stated in the permit. The permit shall be valid for a period of 3 years, at which time the permit may be renewed. Operating permits are site specific, and a permitted groundwater production allowance is restricted to production from the permitted well. A permit shall not be transferable except as provide in Rule 12.4.

G. Effect of Acceptance of Permit. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment of an agreement to comply with all of the terms, provisions, conditions, limitations, and restrictions contained in the permit.

H. An operating permit shall be considered for renewal if the permittee has been in compliance with the conditions of the permit and the District rules. After review of the permit and any public input related to the permitted well, the Board, at a regularly scheduled meeting may grant a three year permit renewal. A permit renewal can be granted only for the original or reduced pumping allocation. After review of public input, the Board may choose to subject the operating permit renewal to a public hearing. A new operating permit fee would not be applicable.

I. The Board may issue a drilling permit and operating permit at the same hearing. The Board reserves the right to defer a decision on the operating permit until after the well has been drilled and well data has been provided. The operating permit fee is payable at the time the operating permit application is filed. If the well is not drilled and the operating fee was paid prior to drilling, the operating fee will be refunded. If the well is drilled and the operating fee was paid prior to drilling, the operating fee will be refunded only if the drilling operation was unsuccessful and the hole is properly plugged.

RULE12.3OPERATINGPERMITREQUIRED

Within 30 days of completion of drilling a new non-exempt well, the owner or operator of the well shall file with the District, on forms provided by the District, an application for a Water Well Operating Permit. The application shall reference the drilling permit number assigned to that well by the District. The operating permit must be approved by the Board of Directors after public hearing and remain permitted until an operating permit is no longer required for the well/well system. See Appendix 20C.

RULE12.4OPERATINGPERMITPROVISIONS

All permits are granted subject to these rules, orders of the Board, and the laws of the State of Texas. In addition to any special provisions or other requirements incorporated into the permit, each permit issued must contain the following standard permit provision:

A. This permit is granted in accordance with the provisions of the Rules of the District, and acceptance of this permit constitutes an acknowledgment and agreement that the permittee will comply with the Rules of the District.

B. This permit confers only the right to operate the permit under the provisions of Rule 12.6. To protect the permit holder from the illegal use by a new landowner, within 10 days after the date of sale, the operating permit holder must notify the District in writing the name and contact information of the new owner. Any person who becomes the owner of a currently permitted well must, within 20 calendar days from the date of the change in ownership, file a transfer of ownership application to affect a transfer of the permit.

C. Production from non-exempt wells except those covered under Rule 12.4 (E) shall be reported annually by the operator on a form provided by the District. If reports are not returned on time, penalties as described in Rule 10 of the GCGCD Rules will be applied and renewal of permit may be denied.

D. The operation of the well for the authorized withdrawal must be conducted in a non-wasteful manner.

E. Production from all non-exempt wells for water sales in or outside of the District must be metered by the owner or operator using a device or method that is within plus or minus 2% of accuracy. Measured or estimated water use shall be reported to the District monthly. Water use may be verified by District. Water sales may be verified by the District.

F. The well site must be accessible to District representatives for inspection, and the permittee agrees to cooperate fully in any reasonable inspection of the well and well site by the District representatives.

G. The application pursuant to which this permit has been issued is incorporated in this permit, and this permit is granted based on and contingent upon the accuracy of the information supplied in that application. A finding that false information has been supplied is grounds for immediate revocation of the permit.

H. Violation of this permit's terms, conditions, requirements, or special provisions, including pumping amounts in excess of authorized withdrawal, is punishable by civil penalties as provided by the District Rules.

RULE12.5OPERATINGPERMITLIMITATIONS

A. Maximum Authorized Withdrawal. It is a violation of these rules to pump any amount of water over the authorized permit amount.

B. Operating Permit Required. It is a violation of these rules to pump a well while awaiting approval by the Board of Directors.

RULE12.6PRODUCTIONLIMITATIONS

A. To fulfill its obligation for conservation and protection of groundwater for all in County users, Starr County Groundwater Conservation District shall maintain rules to manage the Gulf Coast Aquifer on a sustainable basis, such that groundwater available for use equals the estimated recharge to the aquifer: To that end Starr County Groundwater Conservation District shall work with other Groundwater Conservation Districts in the management area to achieve that common goal.

B. Individual permits shall specify allowable pumping rates subject to curtailed rates in the event that monitored water levels drop below levels designated in the permit. The maximum allowable drawdown is 10 feet at the permit boundary.

C. Subject to pumping limits imposed due to water level decline, in no event may a well or well system be operated such that the total annual production exceeds ½ (one half) acre foot of water per acre, per year, owned or operated, within the same section.

D. A well or well system may only be permitted to be drilled and equipped for the production of a cumulative total of ten (10) gallons per minute (GPM) per contiguous acre owned or operated.

E. Due to the complexity and variable nature of the Gulf Coast Aquifer in Starr County, the maximum allowable well size is based on the location in the county. Refer to the section map in the appendix dividing the county into 3 sections: the north zone, the central zone (San Antonio River Basin), and the south zone.

Pumping limits for each zone:

North zone (Evangeline Aquifer) – 400 gallons per minute and the well is a minimum of 300' deep
Central zone (Evangeline Aquifer) – 600 gallons per minute and the well is a minimum of 500' deep
South zone (Evangeline Aquifer) – 800 gallons per minute and the well is a minimum of 700' deep
South zone (Chicot Aquifer) – 400 gallons per minute

These values are for single well systems and may be reduced for multiple well applications based on water quality and drawdown data. Wells screened in multiple aquifers can be permitted for greater capacities as determined by the Board at the operating permit hearing and approval.

F. In-County utilities that supply water to the public may use part of the acreage within their service area to meet the production acreage requirement if the well is located or to be located within their service area.

RULE12.7WELLSPACINGREQUIREMENTS

A. For exempt domestic wells incapable of producing more than 25,000 GPD, a new well may not be drilled within 135 feet from the property line or water rights line of any adjoining landowner or the boundary line of a water rights owner. The minimum distance from the property line shall always be a minimum of 50 feet for those whose applications do not meet the 135 foot rule.

B. Minimum distance from any existing or proposed septic system whether on owner's property or adjacent property, must meet county standards.

C. The spacing for permitted wells is established by the permitted flow in GPM and the cumulative rate established in Rule 12.6. The minimum distance from the property line of any non-participating adjoining landowners is one-half the minimum well spacing distance. Example: Multiple wells producing 500 GPM, 500 GPM = 807 acre feet per year = 1,614 acres owned, leased per well; 500 GPM divided by 10 GPM per contiguous acre = 50 acres per well spacing = 1,476 feet between wells.

D. All subdivisions platted after Jan. 1, 2003 shall meet district well spacing rules.

E. In determining the minimum distance from the property line for a new well, the District may grant a variance to the standard rules provided that the minimum water rights acreage requirement is met. The District shall apply reasonable judgment in applying this rule when the shape of the property or other obstacles would create a hardship to the well owner to meet the standard rules. The minimum distance of 50' from the property line referred to in 12.7(A) shall apply.

RULE12.8EXCLUSIONSANDEXEMPTIONS

The permit requirements in Rule 12.2 do not apply to:

A. A well drilled or equipped such that it is incapable of producing more than 25,000 gallons of groundwater per day for domestic use such as for drinking water, cooking, and washing; provided that the minimum acreage is 1.7 acres.

B. A well used for providing water for livestock or poultry on a tract of land larger than ten (10) acres that is either drilled, completed, or equipped so that it is incapable of producing more than 25,000 gallons of groundwater a day;

C. A well used solely for domestic use on a tract of land less than 1.7 acres provided that the maximum pumping capability is adjusted on the basis of 10 gallons per minute per acre, i.e. a tract of 1.1 acres has a maximum pumping capacity of 11 gallons per minute and the minimum spacing requirements are met.

D. Irrigating a garden or orchard, if the produce of the garden or orchard is to be consumed by the individual, family or household;

E. The drilling of the water well used solely to supply water for a rig that is actively engaged in drilling or exploration operations for an oil or gas well permitted by the Railroad Commission of Texas provided that the person holding the permit is responsible for drilling and operation the water well and the well is located on the same lease of field associated with the drilling rig. (See Appendix 20.F) This exemption does not apply to the use of groundwater for the purpose of fracturing an oil or gas well or for the use of groundwater in any application during the production of an oil or gas well. Groundwater use for fracturing an oil or gas well or groundwater used in any way for the production of an oil or gas well is subject to the permitting rules of the District.

F. The drilling of a water well authorized under a permit issued by the Railroad Commission of Texas under Chapter 134, Natural Resources Code, or for production from such a well to the extent the withdrawal is required for mining activities regardless of any subsequent use of the water;

G. All wells drilled prior to adoption of the management plan approved September 11, 2013 shall be "grandfathered", provid that the use of water is within the District.

H. Water produced by an exempt well may not be sold.

I. Rule 12.8 shall be in compliance with Chapter 36, State Water Code 36.117

RULE12.9MITIGATION

In order to ensure no significant effects on existing groundwater and/or surface water resources, the District shall require the completion of an evaluation sheet for potential mitigation. The purpose of this evaluation is to determine the possible effects of the application upon the registered or permitted well owners that could be potentially affected by the application. This evaluation must address the eight issues listed below.

This evaluation sheet is to accompany and be part of the drilling permit application hearing by the Board. Based on the provided data such as location of the well(s) in the District, proposed depth and completion zones, permitted acreage, proximity to adjacent landowners and natural features such as springs, the Board will determine for each application any applicable mitigation requirements. The evaluation shall include, but not be limited to the following:

1. The actions and procedures to be taken by the holder of the drilling and production permit in the event that pumping causes the water level in a registered or permitted well to drop to an unacceptable level as defined in the permit.
2. The actions and procedures to be taken by the holder of the drilling and production permit in the event that the pumping from the permitted well causes the water to become objectionable or renders the water unusable to the registered or permitted well owner as defined in the permit.
3. The actions and procedures to be taken by the holder of the drilling and production permit in the event that pumping causes the well casing or equipment to be damaged so that the recorded quality or quantity of water cannot be produced by the registered or permitted well owner.
4. The actions and procedures to be taken by the holder of the drilling and production permit in the event that pumping causes springs or artesian wells used for beneficial purpose to stop flowing.
5. The plan shall also include measures to be taken in cases where the reduction of artesian pressure causes an emergency to arise, which may threaten human or animal health, safety, or welfare.
6. The plan shall also contain a specifically enumerated time schedule for the execution of the mitigation plan as agreed to by the producer and the Board.
7. In the issuance of an operating permit, the Board may require of the operating permit holder the establishment of an escrow fund to protect existing users as required by Texas Water Code Chapter 36.113 and Chapter 36.1131. This escrow fund is to be deposited with the District. The administration and disbursement of this escrow fund is at the sole discretion of the Board.
8. The actions and procedures to be taken in the event that groundwater engagement contaminates a user's drinking water supply.

RULE12.10GEOTHERMALLOOPS

A. Definition: Closed Loop Geothermal Well, TDLR Chapter 76.10 (10), "A vertical closed system well used to circulate water, and other fluids or gases through the earth as a heat source or heat sink".

1. Application and fee must be submitted to the Starr County Groundwater Conservation District (SCGCD) office before drilling may begin. The District will charge a one-time administrative fee of $200 for the drilling application for the borehole and /or a series of boreholes. A drilling log shall be filed with the State of Texas and SCGCD. A file will be maintained in the SCGCD district offices of the drilling and equipping.
2. The closed loop geothermal system shall be designed and installed by an accredited installer. The design shall be submitted to SCGCD prior to approving the application. The installer shall notify the district prior to installation.
3. A licenses water well driller shall drill the boreholes. The driller shall notify the district prior to drilling.
4. A SCGCD representative shall be allowed on the property to inspect the drilling of the borehole, installation and sealing of the closed loop piping.
5. Construction of the borehole will follow TDLR regulation described in Technical Standards Chapter 76.1000 (b) (5) of the TDLR rules. "The annular space of a closed loop geothermal well used to circulate water or other fluids shall be backfilled to the total depth with impervious Bentonite or similar material…"
6. Spacing: Any borehole shall be located a minimum horizontal distance of fifty (50) feet from any watertight sewage and liquid-waste collection facility, and a minimum horizontal distance of 100 feet from the nearest property line.

B. Definition: Open Loop Geothermal Well – Groundwater drawn from an aquifer through one well, passed through the heat pump's heat exchanger, and discharged to the same aquifer through a second well at a distance from the first.

1. An open loop geothermal heat sink system into the Chicot or Evangeline Aquifers is prohibited.

2. Groundwater is not to be used to pump into a surface pond for the purpose of serving as a cooling pond. There are limited groundwater supplies and evaporation from a surface cooling water application is categorized as a waste of groundwater.

RULE13REWORKINGANDREPLACINGAWELL

RULE13.1PROCEDURES

A. An existing well may be reworked, re-drilled, or re-equipped in a manner that will not change the existing well status.

B. A permit must be applied for and the Board will consider approving the permit, if a party wishes to increase the rate of production of an existing well to the point of increasing the size of the column pipe and gpm by reworking, re-equipping such well.

C. A permit must be applied for and granted by the Board if a party wishes to replace an existing permitted well with a replacement well.

D. A replacement well, in order to be considered such, must be drilled within 30 feet of the existing well and shall not be drilled nearer the property line than 50 feet provided the original well was "grandfathered" by registration prior to February 6, 2004. The District may allow a greater distance of 30 feet from the existing well if there is good cause such as providing better safety or providing a greater distance from a potential pollution source. A well drill after February 6, 2004 cannot be considered as a replacement well if the well to be replaced was not registered prior to February 6, 2004. In this case, the newly drilled well will be classified as a new well. For a well to be considered a replacement well, the well that is replaced must be plugged or capped and not be used. . A replacement well must be registered whether it is permitted or not.

RULE14WELLLOCATIONANDCOMPLETION

RULE14.1RESPONSIBILITY

After an application for a well permit has been granted, the well, if drilled, must be drilled within 30 feet of the location specified in the permit, meet other spacing requirements and not elsewhere. If the well should be commenced or drilled at a different location, the drilling or operation of such well may be enjoined by the Board pursuant to Chapter 36, Texas Water Code. As described in the Texas Water Well Drillers' Rules, all well drillers, and persons having a well drilled, deepened, or otherwise altered shall adhere to the provisions of the rule prescribing the location of wells and proper completion.

RULE14.2LOCATIONOFDOMESTICWELLS

A. A well must be located the minimum horizontal distance from any sewage facility or waste collection facility in compliance with regulations specified by Starr County, SCGCD and Texas Department of Licensing and Regulation rules. S CGCD uses TDLR distance of 50' from a watertight sewage facility and liquid waste collection facility. The minimum distance required from the septic system drain field or spray area will be 100'.

B. A well must be located a minimum horizontal distance of 150 feet from any contamination, such as existing or proposed livestock or poultry yards, privies.

C. A well must be located at a site not generally subject to flooding; provided, however, that if a well must be placed in a flood prone area, it must be completed with a watertight sanitary well seal and steel casing extending a minimum of 24 inches above the know flood level.

D. No well may be located within five-hundred (500) feet of a sewage treatment plant, solid waste disposal site, or land irrigated by sewage plant effluent, or within three-hundred (300) feet of a sewage wet well, sewage pumping station, or a drainage ditch that contains industrial waste discharges or wastes from sewage treatment systems.

RULE14.3STANDARDSFORWATERWELLDRILLERSANDWATERWELLPUMPINSTALERS

All water wells drilled or re-completed for others in the District must be performed by a licensed driller in accordance with Chapter 340 TCEQ. All water wells drilled and water well pumps installed must be in accordance with Chapter 238 TCEQ.

RULE15WASTEANDBENEFICIALUSE

RULE15.1WASTE

A. Underground water shall not be produced within, or used within or outside the District in such a manner as to constitute waste as defined in Rule 1K.

B. Pumping groundwater into a surface earthen tank that does not hold water is considered waste.

C. The use of groundwater when alternative water supplies are available may be considered waste.

D. The use of groundwater for cooling when alternative methods are available may be considered waste.

E. Any person producing or using groundwater shall use every possible precaution in accordance with reasonable methods to stop and prevent waste of such water.

RULE15.2USEFORABENEFICIALPURPOSE

A. Agricultural, gardening, domestic, stock raising, municipal, mining, manufacturing, industrial, commercial, recreational, or pleasure purposes. The use of groundwater to pump into a surface pond is allowed for a beneficial use but is limited to maximum ½ acre pool. The pond can be of larger dimension.

B. Exploring for, producing, handling, or treating oil, gas, sulfur, or other minerals.

C. Any other purpose that is useful and beneficial to the user.

D. Beneficial use of groundwater is subject to meeting conditions defined in Rule 1 "Waste".

E. Beneficial use is subject to the provisions of Rule 12.9 "Mitigation".

F. Beneficial use is limited to the provisions of Rule 12.6 "Production Limitations".

G. When groundwater is considered for a beneficial purpose other than for drinking water, alternative water supplies should be utilized first.

H. When groundwater is used for a beneficial purpose, recovery and reuse in the area of withdrawal should be implemented when feasible.

RULE16FEES

Registration of Grandfathered Wells, Replacement Wells and Wells existing prior to 01-01-2014.		No charge
Registration of New Exempt Wells and Wells for Oil and Gas Exploration-Drilling permit for nonexempt well (applied to operating permit if applicable). Registration fees for "after the fact" registrations are double the regular registration fee.		As set by Board
Operating Permit of a Non Exempt Well with a capacity up to:	100 gpm	$ 100.00
	200 gpm	$ 200.00
	300 gpm	$ 300.00
	400 gpm	$ 400.00
	500 gpm	$ 500.00
	600 gpm	$ 600.00
	700 gpm	$ 700.00
	800 gpm	$ 800.00

RULE17 -reservedforfutureuse

RULE18HEARINGS

RULE18.1TYPESOFHEARINGS

The District conducts two general types of hearing: **hearings involving permit matters**, in which the rights, duties, or privileges of a party are determined after an opportunity for an adjudicative hearing, and **rulemaking hearings** involving matters of general applicability that implement, interpret, or prescribe the law or District policy, or that describe the procedure or practice requirements of the District.

RULE18.2NOTICEOFHEARINGS

A. Rule Making Hearings shall be noticed and conducted according to Chapter 36.101 of the Texas Water Code and any future revisions to Code.

B. Permit Hearings: Permit Applications, Amendments, and Revocations: The District may hold hearings on original permit applications, applications for permit renewals or amendments and permit revocations or suspensions. Notice of permit hearings will be given in accordance with Chapter 36.401 – 419 of the Texas Water Code and any future revisions to Code.

RULE18.3GENERALPROCEDURES

Presiding Officer: In hearings before the Board, the President of the Board or a Board member selected by the President of the Board shall be the presiding officer.

A. Authority of Presiding Officer: The presiding officer may conduct the hearing or other proceeding in the manner the presiding officer deems most appropriate for that particular proceeding. The presiding officer has the authority to:

1. Set hearing dates, other than the initial hearing date for permit matters set in accordance with Rule 18.1;

2. Convene the hearing at the time and place specified in the notice for public hearing;

3. Establish the jurisdiction of the District concerning the subject matter under consideration;

4. Rule on motions and on the admissibility of evidence and amendments to pleadings;

5. Designate and align parties and establish the order for presentation of evidence;

6. Administer oaths to all persons presenting testimony;

7. Examine witnesses;

8. Issue subpoenas when required to compel the attendance of witnesses or the production of papers and documents;

9. Compel discovery under these Rules;

10. Ensure that information and testimony are introduced as conveniently and expeditiously as possible, without prejudicing the rights of any party to the proceeding;

11. Conduct public hearings in an orderly manner, in accordance with these Rules;

12. Recess any hearing from time to time and place to place;

13. Reopen the record of a hearing for additional evidence, when necessary to make the record more complete; and

14. Exercise any other appropriate powers necessary or convenient, to effectively carry out the responsibilities of presiding officer.

B. Registration Forms: Each individual, attending a hearing or other proceeding of the District, must submit a form providing the person's name and address, whether the person plans to testify; and any other information becomes relevant to the hearing or other proceeding.

C. Appearance: Representative Capacity: Any interested person may appear in person, or may be represented by counsel, engineer, or other representative, provided the representative is fully authorized to speak and act for the principal. Such person or representative may present evidence, exhibits, or testimony, or make an oral presentation in accordance with the procedures applicable to the particular proceeding. A person appearing in a representative capacity may be required to prove proper authority.

D. Alignment of Parties: Number of Representatives Heard: Participants in a proceeding may be aligned according to the nature of the proceeding and their relationship to it. The presiding officer may require the participants of an aligned class to select one or more persons to represent them in the proceeding, or on any particular matter or ruling, and may limit the number of representatives heard, but must allow at least one representative of an aligned class to be heard in the proceeding, or on any particular matter or ruling.

E. Appearance by Applicant or Movant: The applicant, movant or party requesting the hearing, or a representative, should be present at the hearing. Failure to appear may be grounds for withholding consideration of a matter and dismissal without prejudice, or may require the rescheduling or continuance of the hearing, if the presiding officer deems it necessary in order to fully develop the record.

F. Reporting: Hearings and other proceedings will be recorded on audiocassette tape or, at the discretion of the presiding officer, may be recorded by a certified shorthand reporter. The District does not prepare transcriptions of hearings recorded on audiocassette tape on District equipment for the public, but will arrange for a party at interest to have access to the recording. Subject to availability of space, any party at interest may, at its own expense, arrange for a reporter to transcribe or record the hearing. The cost of reporting or transcribing a permit hearing may be assessed in accordance with Rule 18.5(b). If a proceeding, other than a permit hearing, is recorded by a reporter and a copy of the transcript of testimony is ordered by any person, the testimony will be transcribed and the original transcript filed with the papers of the proceeding at the expense of the person requesting the transcript of testimony. Copies of the transcript of testimony of any hearing, or other proceeding thus reported, may be purchased from the reporter.

G. Continuance: The presiding officer may continue hearings from time to time and from place to place without the necessity of publishing, serving, mailing or otherwise issuing a new notice. If a hearing or other proceeding is continued and a time and place for the hearing to reconvene are not publicly announced at the hearing by the presiding officer before it is recessed, a notice of any further setting of the hearing or other proceeding must be delivered, at a reasonable time, to all parties and any other person the presiding officer deems appropriate, but it is not necessary to post at the county courthouses or publish a newspaper notice of the new setting.

H. Filing of Documents; Time Limit: Applications, motions, exceptions, communications, requests, briefs, or other papers and documents required to be filed under these Rules, or by law, must be received in hand at the District's office within the time limit, if any, set by these Rules, or by the presiding officer for filing. Mailing within the time period is insufficient, if the submissions are not actually received by the District within the time limit.

I. Affidavit: Whenever the making of an affidavit by a party to a hearing or other proceeding is necessary, it may be made by the party or the party's representative or counsel. This Rule does not dispense with the necessity of an affidavit being made by a party, when expressly required by statute.

J. Broadening the Issues: No person will be allowed to appear in any hearing or other proceeding that, in the opinion of the presiding officer, is for the sole purpose of unduly broadening the issues to be considered in the hearing or other proceeding.

K. Conduct and Decorum: Every person, party, representative, witness, and other participant in a proceeding must conform to ethical standards of conduct and will exhibit courtesy and respect for all other participants. No person may engage in any activity during a proceeding that interferes with the orderly conduct of District business. If, in the judgment of the presiding officer, a person is acting in violation of this provision, the presiding officer will first warn the person to refrain from engaging in such conduct. Upon further violation by the same person, the presiding officer may exclude that person from the proceeding for such time and under such conditions, as the presiding officer deems necessary.

18.4UNCONTESTEDPERMITHEARINGSPROCEDURES

A. Informal Hearings: Permit hearings may be conducted informally when, in the judgment of the presiding officer, the conduct of a proceeding under informal procedures will result in a savings of time or cost to the parties, lead to a negotiated or agreed settlement of facts or issues in controversy, not prejudice the rights of any party, and is not objected to by any party.

B. Agreement of Parties: If all parties reach a negotiated or agreed settlement, that settles the facts or issues in controversy, the proceeding will be considered an uncontested case and the presiding officer will summarize the evidence, including findings of fact and conclusions of law based on the existing record and any other evidence submitted by the parties at the hearing.

C. Decision to Proceed as Uncontested or Contested Case: If the parties do not reach a negotiated or agreed settlement of the facts and issues in controversy, or if any party contests a staff recommendation, and the presiding officer determines these issues will require extensive discovery proceedings or hearings, the presiding officer may declare the case to be contested and convene a pre-hearing conference as set forth in Rule 18.5. The presiding officer may also recommend issuance of a temporary permit, for a period not to exceed 4 months, with any special provisions the presiding officer deems necessary, for the purpose of completing the contested case process. Any case not declared a contested case under this provision would be an uncontested case.

18.5CONTESTEDPERMITHEARINGSPROCEDURES

A. Pre-hearing Conference: A pre-hearing conference may be held to consider any matter that may expedite the hearing or otherwise facilitate the hearing process.

1. Matters that may be considered at a prehearing conference include, but are not limited to:

   a. designation of parties;

   b. formulation and simplification of issues;

   c. necessity or desirability of amending applications or other pleadings;

   d. possibility of making admissions or stipulations;

   e. scheduling discovery;

   f. identification of and specification of the number of witnesses;

   g. filing and exchange of prepared testimony and exhibits; and

   h. procedure at the hearing

2. Notice: A pre-hearing conference may be held at a date, time and place stated in the notice given in accordance with Rule 18.2 or at the date, time, and place for hearing stated in the notice of public hearing, and may be continued from time to time and place to place, at the discretion of the presiding officer.

3. Conference Action: Action taken at a pre-hearing conference may be reduced to writing and made a part of the record, or may be stated on the record at the close of the conference.

B. Assessing Reporting and Transcription Costs: Upon the timely request of any party, or at the discretion of the presiding officer, the presiding officer may assess reporting and transcription costs to one or more of the parties. The presiding officer will consider the following factors in assessing reporting and transcription costs:

1. The party who requested the transcript;

2. The financial ability of the party to pay the costs;

3. The extent to which the party participated in the hearing;

4. The relative benefits to the various parties of having a transcript;

5. The budgetary constraints of a governmental entity participating in the proceedings;

6. Any other factor that is relevant to a just and reasonable assessment of costs.

In any proceeding where the assessment of reporting or transcription costs is an issue, the presiding officer will provide the parties an opportunity to present evidence and argument on the issue. A recommendation regarding the assessment of costs will be included in the presiding officer's report to the Board.

C. Designation of Parties: Parties to a hearing may be designated on the first day of hearing, or at such other time as the presiding officer determines. The General Manager and any person specifically named in a matter are automatically designated parties. Persons other than the General Manager or a person specifically named must, in order to be admitted as a party, appear at the proceeding in person or by representative, and seek to be designated by demonstrating a justiciable interest in the matter. After parties are designated, no other person may be admitted as a party unless, in the judgment of the presiding officer, there is good cause and the hearing will not be unreasonably delayed.

D. Rights of Designated Parties: Subject to the direction and orders of the presiding officer, parties have the right to conduct discovery, present a direct case, cross-examine witnesses, make oral and written arguments, obtain copies of all documents filed in the proceeding, receive copies of all notices issued by the District concerning the proceeding, and otherwise fully participate in the proceeding.

E. Persons Not Designated Parties: At the discretion of the presiding officer, persons not designated as parties to a proceeding may submit comments or statements, orally or in writing. Comments or statements submitted by non-parties may be included in the record, but may not be considered by the presiding officer as evidence.

F. Furnishing Copies of Pleadings: after parties have been designated, the author must provide a copy of every pleading, request, motion, or reply filed in the proceeding to every other party or the party's representative. A certification of this fact must accompany the original instrument when filed with the District. Failure to provide copies may be grounds for withholding consideration of the pleading or the matters set forth therein.

G. Agreements to be in Writing: No agreement between parties or their representatives affecting any pending matter will be considered by the presiding officer unless it is in writing, signed, and filed as part of the record, or unless it is announced at the hearing and entered of record.

H. Discovery: Discovery will be conducted upon such terms and conditions, and at such times and places, as directed by the presiding officer. Unless specifically modified by these Rules or by order of the presiding officer, discovery will be governed by, and subject to the limitations set forth in, the Texas Rules of Civil Procedure. In addition to the forms of discovery authorized under the Texas Rules of Civil Procedure, the parties may exchange informal requests for information, either by agreement or by order of the presiding officer.

I. Ex Parte Communications: Neither the Presiding Officer nor the Board may communicate, directly or indirectly, in connection with any issue of fact or law with any agency, person, party, or their representatives, except on notice and opportunity for all parties to participate. This provision does not prevent communications with District staff not directly involved in the hearing in order to utilize the special skills and knowledge of the District in evaluating the evidence and does not apply to proceedings other than a contested permit hearing.

J. Compelling Testimony; and Swearing Witnesses: The presiding officer may compel any person to testify who is necessary, helpful, or appropriate to the hearing. The presiding officer shall administer the oath in a manner calculated to impress the witness with the importance and solemnity of the promise to adhere to the truth.

K. Evidence: Except as modified by these Rules, the Texas Rules of Civil Evidence govern the admissibility and introduction of evidence; however, evidence not admissible under the Texas Rules of Civil Evidence may be admitted if it is of the type commonly relied upon by reasonably prudent persons in the conduct of their affairs. In addition, evidence may be stipulated by agreement of all parties.

L. Written Testimony: When a proceeding will be expedited and the interests of the parties not substantially prejudiced, testimony may be received in written form. The written testimony of a witness, in either narrative or question and answer

form, may be admitted into evidence upon the witness being sworn and identifying the testimony as a true and accurate record of what the testimony would be if given orally. The witness will be subject to clarifying questions and to cross-examination, and the prepared testimony will be subject to objection.

M. Requirements for Exhibits: Exhibits of a documentary character must be of a size that will not unduly encumber the files and records of the District. All exhibits must be numbered and, except for maps and drawings, may not exceed 8-1/2 by 11 inches in size.

N. Abstracts of Documents: When documents are numerous, the presiding officer may receive in evidence only those that are representative and may require the abstracting of relevant data from the documents and the presentation of the abstracts in the form of an exhibit. Parties have the right to examine the documents from which the abstracts are made.

O. Introduction and Copies of Exhibits: Each exhibit offered shall be tendered for identification and placed in the record. Copies must be furnished to the presiding officer and to each of the parties, unless the presiding officer rules otherwise.

P. Excluding Exhibits: In the event an exhibit has been identified, objected to, and excluded, it may be withdrawn by the offering party. If withdrawn, the exhibit will be returned and the offering party waives all objections to the exclusion of the exhibit. If not withdrawn, the exhibit shall be included in the record for the purpose of preserving the objection to excluding the exhibit.

Q. Official Notice: The presiding officer may take official notice of all facts judicially cognizable. In addition, official notice may be taken of generally recognized facts within the area of the District's specialized knowledge.

R. Documents in District Files: Extrinsic evidence of authenticity is not required as a condition precedent to admissibility of documents maintained in the files and records of the District.

S. Oral Argument: At the discretion of the presiding officer, oral arguments may be heard at the conclusion of the presentation of evidence. Reasonable time limits may be prescribed. The presiding officer may require or accept written briefs in lieu of, or in addition to, oral arguments. When the matter is presented to the Board for final decision, the Board may hear further oral arguments.

18.6CONCLUSIONOFTHEPERMITHEARING A.

Hearings before the Board

1. Closing the Record: At the conclusion of the presentation of evidence and any oral argument the presiding officer may either close the record or keep it open and allow the submission of additional evidence, exhibits, briefs, or proposed findings and conclusions from one or more of the parties. No additional evidence, exhibits, briefs, or proposed findings and conclusions may be filed unless permitted or requested by the presiding officer.

2. Time for Board Action on Certain Permit Matters: In the case of hearings before the Board involving original permit applications, or applications for permit renewals or amendments, the Board must act by issuing a written order, within 35 calendar days after the close of the hearing record.

B. Hearings before a Hearing Examiner:

The board may refer contested case hearings to a hearing examiner. If a hearing examiner conducts the hearing, a brief written summary of the hearing and recommendation of the action shall be prepared by the hearing examiner and provided to the Board for its consideration and decision. A copy of the hearing examiner's report shall be provided to all parties. The hearing shall be considered to have concluded when the parties have had an opportunity to present their written or oral comments on the hearing officer's report to the Board and upon the close of the hearing record.

18.7RULE-MAKINGHEARINGSPROCEDURES

A. General Procedures: The presiding officer will conduct the rulemaking hearing in the manner the presiding officer deems most appropriate to obtain all relevant information pertaining to the subject of the hearing as conveniently, inexpensively, and expeditiously as possible.

B. Submission of Documents: Any interested person may submit written statements, protests or comments, briefs, affidavits, exhibits, technical reports, or other documents relating to the subject of the hearing. Such documents must be submitted no later than the time of the hearing, as stated in the notice of hearing given in accordance with Rule 18.2; provided, however, that the presiding officer may grant additional time for the submission of documents.

C. Oral Presentations: Any person desiring to testify on the subject of the hearing must so indicate on the registration form provided at the hearing. The presiding officer will establish the order of testimony and may limit the number of times a person may speak, the time for oral presentations, and the time for raising questions. In addition, the presiding officer may limit or exclude cumulative, irrelevant, or unduly repetitious presentations.

D. Conclusion of the Hearing; Closing the Record; Presiding Officer's Report: At the conclusion of the testimony, and after the receipt of all documents, the presiding officer may either close the record, or keep it open to allow the submission of additional information. If the hearing is before the Board, the Board shall adopt the rule, reject the rule, or reopen the matter for further consideration.

18.8FINALDECISION;APPEAL

A. Board Action: After the record is closed and the matter is submitted to the Board, the Board may then take the matter under advisement, continue it from day to day, reopen or rest the matter, refuse the action sought or grant the same in whole or part, or take any other appropriate action. The Board action takes effect at the conclusion of the meeting and is not affected by a motion for rehearing.

B. Requests for Rehearing: Any decision of the Board on a matter may be appealed by requesting a rehearing before the Board within 20 calendar days of the Board's decision. Such a rehearing request must be filed at the District Office, in writing, and must state clear and concise grounds for the request. Such a rehearing request is mandatory, with respect to any decision or action of the Board, before any appeal to State District Court. The Board's decision is final, if no request for rehearing is made within the specified time, or upon the Board's denial of the request for rehearing, or upon rendering a decision after rehearing. If the rehearing request is granted by the Board, the date of the rehearing will be within 45 calendar days thereafter, unless otherwise agreed to by the parties to the proceeding. The failure of the Board to grant or deny the request for rehearing, within 90 calendar days of submission, will be deemed to be a denial of the request by operation of law.

RULE19INVESTIGATIONSANDENFORCEMENT

RULE19.1NOTICESANDACCESSTOPROPERTY

Board members and District agents and employees are entitled to access to all property within the District to carry out technical and other investigations necessary to the implementation of the District Rules. Prior to entering upon property for the purpose of conducting an investigation, the person seeking access must give notice in writing or in person or by telephone to the owner, lessee, or operator, agent, or employee of the well owner or lessee, as determined by information contained in the application or other information on file with the District. Notice is not required if prior permission is granted to enter without notice. Inhibiting or prohibiting access to any Board Member or District agents or employees who are attempting to conduct an investigation under the District Rules constitutes a violation and subjects the person who is inhibiting or prohibiting access, as well as any other person who authorizes or allows such action, to the penalties set forth in the Texas Water Code Chapter 36.102.

RULE19.2CONDUCTOFINVESTIGATION

Investigations or inspections that require entrance upon property must be conducted at reasonable times, and must be consistent with the establishment's rules and regulations concerning safety, internal security, and fire protection. The persons conducting such investigations must identify themselves and present credentials upon request of the owners, lessee, operator, or person in charge of the well.

RULE19.3SEALINGOFWELLS

Following due process, the District may, upon orders from the judge of the courts, seal wells that are prohibited from withdrawing groundwater within the District by the District Rules to ensure that a well is not operated in violation of the District Rules. A well may be sealed when:

1. No application has been made for a permit to drill a new water well which is not excluded or exempted; or

2. No application has been made for an operating permit to withdraw groundwater from an existing well that is not excluded or exempted from the requirement that a permit be obtained in order to lawfully withdraw groundwater; or

3. The Board has denied, canceled or revoked a drilling permit or an operating permit.

The well may be sealed by physical means, and tagged to indicate that the well has been sealed by the District, and other appropriate action may be taken as necessary to preclude operation of the well or to identify unauthorized operation of the well. Tampering with, altering, damaging, or removing the seal of a sealed well, or in any other way violating the integrity of the seal, or pumping of groundwater from a well that has been sealed constitutes a violation of these rules and subjects the person performing that action, as well as any well owner or primary operator who authorizes or allows that action, to such penalties as provided by the District Rules.

Appendix A

STARR COUNTY GROUNDWATER CONSERVATION DISTRICT
(SCGCD)
100 N FM 3167
Rio Grande City, Texas 78582
956-716-4800
FAX: 956-487-8709

EXISTING AND NEW WATER WELL REGISTRATION

Instructions: Complete all questions to the best of your knowledge.
After January 1, 2014, all new wells are to have a copy of the Drillers well report attached to this registration upon completion and returned to office.

OWNER_____PHONE_____

ADDRESS_____DATE_____

This well is located on the property of:_____

Number of contiguous acres of water rights owned at well site_____

This well is _____miles_____of Goliad on road number_____

Use of well_____Domestic, _____Livestock,_____Irrigation, _____Public Supply,

_____Industrial,_____Monitor, _____Oil & Gas Exploration
_____ Oil & Gas Production (Requires Permit) _____API# _____Other (specify)

Name of Driller _____Grid#____Date Drilled_____
Registration Expiration Date: _____
Casing Size _____in.: Type of Pump_____ GPM_____HP _____
Remarks_____

****************************DISTRICT USE ONLY***************************

Well Registration no. _____ Exempt _____ Non-exempt _____
Water Well Drilling Permit# _____Water Well Operating Permit #_____
Latitude _____North Longitude _____West
Static Water Level _____ft. Date measured _____Tester _____
Total Dissolved Solids _____PPM: Date Tested _____Tester _____
_____Date _____
Signature of person inspecting this well.

SCGCD WELL REGISTRATION GUIDELINES

General Note: All wells drilled for others must be by licensed drillers.

GRANDFATHERED WELL

- A well drilled prior to January 1, 2014 provided that the use of water is within the District.
- Registration is voluntary and is to be done by January 1, 2014. After January 1, 2014, proof of ownership prior to January, 2014 is required to receive grandfathered status.

REPLACEMENT WELL

- Cannot change the existing well use or capacity.
- A replacement well for an existing well must be drilled within 30 feet of the existing well but not nearer than the property line than 50 feet provided that the original well was grandfathered.
- Replacement of an existing permitted well requires a new permit.

EXEMPT WELL

- Must be registered prior to drilling of the new well.
- A well for domestic use incapable of producing more than 25,000 gallons per day.
- A well on 10 acres or more used to water livestock or poultry and incapable of producing more than 25,000 gallons per day.
- A well to be used solely to supply water for a rig that is actively engaged in oil or gas exploration.
- A new exempt well must be 135 feet from the property line.
- See Rule 14.2 for well location in relation to sewage systems and other contamination.

NON-EXEMPT WELL

- Must have a drilling permit followed by an operating permit.
- Well spacing is based on permitted flow.
- Maximum well production is dependent on zone location of well within County.

Oil and Gas Transfer of Well To Landowner

This form to be filled out by Oil Company when well is transferred to landowner and returned to SCGCD within 30 days of transfer.

Oil Company Name: _____

Address : _____

_____

Telephone Number: _____

Date of Transfer: _____

Landowners Name: _____

Address of Landowner: _____

_____

Telephone Number of Landowner: _____

Physical Location of Well:

Company/Person Contacting SCGCD for Original Well Registration:

_____

Road Name where well is located _____

SCGCD Well Registration Number: _____

API# _____

Signature: _____

Date: _____

Application for Amended Waterwell Permit or Registration (Transfer of Ownership)

Starr County Groundwater Conservation District
100 N. FM 3167
Rio Grande City, Texas 78582
956-716-4800
956-487-8709– fax

Instructions: Submit this form for each individual well. Send an application for each well to be permitted or registered to the above address as soon as possible to stay within the 10 or 20 day deadline allotted to transfer ownership.

Rule 2.6 of the SCGCD Rules allows for the transfer of ownership a ministerial act upon filing the required information. But if a change of usage is requested, the request may require Board action.
Rule 12.4.B states the time allowed to affect a transfer of a permitted well after you buy or sell property in Starr County.

SCGCD Well # or Permit #
Current Permitee or Owner(print)
New Owner (print)
Mailing Address
Physical Address if Different
Telephone #: State: Zip Code:
Date of Ownership Change:
I CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY ABILITY.
Applicant/Agent Name: (print)
Please enter your email address:
Date application filed with District:
Applicants Signature:
Comments:

STARR COUNTY GROUNDWATER CONSERVATION DISTRICT
100 N. FM 3167
Rio Grande City, TX 78582
NOTICE TO PURCHASER

TO PURCHASER SHOWN BELOW:

The real property described below, which you are about to purchase, is located in the STARR COUNTY GROUNDWATER CONSERVATION DISTRICT, STARR County, Texas. The District has taxing authority separate from any other taxing authority, and may, subject to voter approval, issue an unlimited amount of bonds. As of this date, the most recent rate of taxes levied by the district on real property located in the District is _____on each $100 assessed valuation. The total amount of bonds that has been approved by the voters and which have been or may, at this date, be issued is___. The purpose of the Starr County Groundwater Conservation District, as required by the Texas Water Code, Chapter 36, is to provide for conserving, preserving, and protecting the groundwater and prevention of waste of the groundwater resources, over which it has jurisdictional authority, for the benefit of the people that the District serves. The legal description of the property("A") which you are acquiring is as follows:

See Exhibit "A" attached hereto and made a part hereof for all purposes pertinent.

Seller's Printed Name_____
Seller's Signature_____
Seller's Printed Name_____
Seller's Signature_____
Seller's Mailing Address_____
Seller'sPhysicalAddressinGoliadCounty,ifdifferentfromMailingaddress
_____

The undersigned purchaser hereby acknowledges receipt of the forgoing notice prior to closing of the purchase of the real property described in such notice. The purchaser is to contact the Starr County Groundwater Conservation District at 956-716-4800 or 100 N. FM 3167, Rio Grande City, TX 78582 within 30 days after closing to transfer or register the water wells on this property.

Purchaser's Printed Name_____
Purchaser's Signature_____
Purchaser's Printed Name_____
Purchaser's Signature_____
Purchaser's Mailing Address _____

Date: _____

After execution of this document please return a copy to SCGCD, 100 N. FM 3167, Rio Grande City, Texas or fax to 956-487-8709.

Appendix B
Starr County Groundwater Conservation District Application for
Water Well Drilling Permit

Date of Application: _____
nstructions: Complete all questions. Please print or type. An incomplete application is grounds for refusal. Read Rule 12 of SCGCD Rules before completing.
Place an "X" in the appropriate space.
☐ Drill New ☐ Equip New ☐Rework ☐Re-equip ☐ Alter

. Owner _____ Phone _____

Address _____

Operator _____ Phone _____

Address _____

Well Location: Latitude _____North Longitude _____West

Use Non-Parallel Lines) this well is located _____ feet from the__(direction) property line, and _____

feet from the _(direction) property line, and _____ feet __(direction) from road number

_____

I. Name of Driller _____ Texas Water Well Drillers License No. _____

Proposed Depth of Well_____ Aquifer _____

Date Drilling Scheduled to Begin_____ Proposed Pump size to be installed in HP _____

Maximum Rate of Production in GPM _____
Number of contiguous acres owned by landowner or water right holder upon which the well is to be located _____
List other wells producing from same strata located on such property as to well number and distance from proposed well location_____
_____

List all surrounding landowners whose property adjoins your property with addresses and telephone numbers_____

_____

_____

Comments : _____

_____

_____

I agree that this well will be drilled within thirty (30) feet of the location specified,
and that I will furnish the District the complete Well Registration form and Driller's Log (well report provided by driller), and any mechanical log that might be made, within 60 days of completion of this well. I agree to abide by the rules of the Starr County Groundwater Conservation District, The District Management Plan, and orders of the Board of Directors. Furthermore, I agree not to produce this well without a valid operating permit, and not to exceed the production allowance of the Operating Permit. All the information provided in and with this application is true and correct to the best of my knowledge.
Failure to comply with the rules, management plan and orders of the Board of Directors is subject to penalties established by the Board of Directors of the SCGCD and rule 10 of the Starr County Groundwater Conservation District Rules and Chapter 36 of the Texas Water Code.

Signature of Water Rights Holder

_____Date:_____

Percentage of water rights owned:_____

Signature of Landowner, if different

_____Date:_____

**********District Use Only**********

Deposit Received _____ Check _____ Check No. _____ Cash _____

Permit Number _____ Valid Until _____ Field Inspection ____ Mapped _____

S.C.G.C.D. Well No. _____

Confirmation of contact with adjoining landowners:

_____

_____

_____

This permit is approved, subject to the rules of the Starr County Groundwater Conservation District

_____ Signature of SCGCD personnel and Title

Appendix C
Starr Groundwater Conservation District Water
(SCGCD)
100 N FM 3167
Well Operating Permit

INSTRUCTIONS: Complete all questions. Please type or print. An incomplete permit is grounds for denial of permit.

I. Date of Application: _____

Owner _____ Phone _____

Address _____

Operator _____ Phone _____

Address _____

Aquifer _____ Total Depth _____ ft. Screened or Perforated Interval _____ ft.

Pump will be set at _____ depth

Head pressure (if known) _____ lbs.

Well Location: Latitude _____ North Longitude _____ West

Total GPM Capable of Being Produced by this Pump _____

Normal Rate of Production _____ GPM

Make and Model of Pump _____

Horse Power _____

Percent of efficiency of pump _____

Proposed Well Use: _____ Domestic _____ Irrigation _____ Public supply _____ Livestock
_____ Industrial _____ Injection _____ Oil and Gas Production _____ Other (Please Specify Below)

Comments and special provisions of permit:

_____

_____

_____

Names, addresses and telephone numbers of adjoining landowners:

_____

_____

_____

II. ANNUAL PRODUCTION (Subject to Pumping limits due to water level decline)

a. Number of contiguous acres owned or leased on which water is to be produced: _____ acres

b. Volume of water per acre, per year requested: _____ acre-feet or _____ gallons

c. Total annual production (a x b): _____ acre-feet or _____ gallons

III. The permitting process will include a review of the permit as defined in Adopted Rules of SCGCD

I have read and agree to abide by these rules.

Landowner Signature:_____Date:_____

Water Rights Holder Signature_____(___)Date:_____

IV. I have received and understand the SCGCD Drought Contingency Plan and how it applies to nonexempt wells in Starr County.
Landowner Signature:_____Date:_____

Water Rights Holder Signature: _____Date:_____

Percentage of water rights held: _____

V. The above information is true to the best of my knowledge and I understand that signing this application does not mean approval of this operating permit.

Landowner Signature:_____Date:_____

VI. PRODUCTION TERMS AND AGREEMENT: I agree to abide by the terms of the District Rules, the District Management Plan, and orders of the Board of Directors. I agree to report to the District, on or before the 31st day of January of each year, the total volume of water produced in the prior year, and not to exceed the stated annual rate of production. Furthermore, I agree to abide by the terms of this permit, and understand that failure to do so will result in civil penalties and/or revocation of this permit. I understand that if this property is sold, I have 10 days to notify the District of the sale and name and contact information for the new owner (Rule 12.4 B).
I also understand that it is my responsibility to notify the District of any change of address from the one on the application. If the District tries to contact me by mail and is unsuccessful because of change, it will be as though contac has been made and any action the District takes may proceed.
Failure to comply with the rules, management plan and orders of the Board of Directors is subject to penalties established by the Board of Directors of the SCGCD and rule 10 of the Starr County Groundwater Conservation District Rules and Chapter 36 of the Texas Water Code.

Landowner Signature:_____Date:_____

Water Rights Holder Signature: _____ Date: _____

VII. MITIGATION: If your permit qualifies for implementation of Rule 12.9 of the GCGCD Rules, a mitigation plan will be submitted that addresses all the issues outlined in that rule (current adoption).

**********DISTRICT USE ONLY**********

Deposit Received Date:_____ Check # _____ Cash _____ Amount _____
This permit is Approved For: _____ acre-feet or _____ gallons of water per year
Subject to Pumping limits due to water level decline)

Field Inspection _____ Mapped _____

Date Received _____

This permit is accepted, subject to the rules of the Goliad County Groundwater Conservation District

Permit Number _____ This permit shall remain valid until _____

S.C.G.C.D. Well No. _____ Date : _____

Additional comments or provisions:

_____

_____

Confirmation of contact with adjoining landowners:

_____

_____

_____

Signature of Director - Title_____

MITIGATIONRULE12.9WORKSHEET
TOBEATTACHEDANDMADEAPARTOFTHEPERMIT
DRILLING PERMIT NUMBER_____
OPERATING PERMIT NUMBER_____

Permit applicant _____
Groundwater Use _____
Permit pumping request _____gpm
Permit pumping request _____acre feet per year
Permit acreage _____
Well location minimum distance from property line _____
Minimum depth of well _____
Proposed location gps _____N___ _____W (Rule 11.1)
Further evaluation required, Yes __; No _____

1. Affect on water level on adjoining properties. Rule 12.6B provides for a maximum drawdown at the permit boundary line of 10 feet. For export of water out of county Rule 8 is applicable.

List known wells and approximate location on adjoining properties

_____
_____
_____
_____
_____

Applicant lists any wells on applicant property that can be used to monitor water level

_____
_____

List wells on adjacent properties that can be used to monitor water level

_____
_____
_____

Applicant/SCGCD Board action

_____
_____
_____
_____

2. Affect of water quality on adjoining properties wells listed in item 1.

Applicant/SCGCD Board action _____
_____
_____

3. Mechanical damage to adjoining properties wells.

SCGCD Board to use data from items 1 and 2 to determine requirements_____
_____
_____

4. Effect on springs or artesian wells.

List all known springs and artesian wells on adjoining properties and applicant property

_____
_____

5. Reduction of artesian pressure effects.
Applicant/SCGCD Board action _____

_____

_____

6. Time schedule for implementation of requirements in items 1-5

_____

_____

_____

_____

7. Establishment of an escrow fund.
SCGCD Board action _____

_____

_____

8. Contamination of groundwater by applicant.
SCGCD Board action _____

_____

_____

_____

Signatures:
Applicant _____ Date: _____
SCGCD _____ Date: _____

STARR COUNTY GROUNDWATER CONSERVATION DISTRICT
100 N. FM 3167,
RIO GRANDE CITY, TEXAS 78582

September 17, 2013

To:	Certified water well drillers
Subject:	Compliance with County Groundwater Conservation District (SCGCD) Rules

In order for SCGCD to achieve its mission and to strive to assure long-term availability of adequate good quality groundwater for and surrounding Counties, in compliance with SCGCD rules by water well drillers is imperative.

The rules of SCGCD became effective September 17, 2013. SCGCD has received excellent cooperation from most water well drillers. The first rule is that all water wells must be registered prior to drilling. This includes water wells for oil & gas exploration (drilling). This gives the District an opportunity to check location and to get the necessary data to manage groundwater in Starr County.

Rule 10 covers the enforcement of rules and sets a civil penalty not to exceed $10,000 per violation.

At the September 17, 2013 meeting, the Board approved specific penalties for water well drillers that are out of compliance as follows:

First offense- $1,000 fine and notification to State.
Second offense- $5,000 fine and notification to State.
Third offense- $10,000 fine, notification to State and loss of privilege to drill water wells in Starr County.

This penalty schedule goes in affect with receipt of this notice by certified mail, return receipt requested, to the water well drillers.

Sincerely,
Reyna G. Guerra, Secretary
SCGCD

APPENDIX E

STARR COUNTY GROUNDWATER CONSERVATION DISTRICT

100 N. FM 3167 Rio Grande City, TEXAS 78582
Phone -956-716-4800 fax - 956-487-8709

DATE _____

TRANSPORT PERMIT APPLICATION

Instructions: Please type or print legibly. This application is to be used for authorization to transport water produced from a non-exempt well off the property from which the water is produced, for use within the District. Rule 9 of the District Rules govern the issuance of transportation permits. Rule 12.2 – 12.9 of the District Rules governs the issuance of permits for wells. In addition to this permit, the well or wells producing water to be transported under this permit must have valid operating permits issued in accordance with the provisions of Rules 9&12 of the District Rules.

1. **Applicant**

The applicant for this authorization is the well: (check all that are applicable)

_____ Owner _____Operator _____Property Owner

2. **Application Purpose**

Application is hereby made to the Starr County Groundwater Conservation District for authorization to transport a quantity of water produced from a groundwater well located with the District for use outside of the District. Rule 9 (a) (1) of the SCGCD Rules states "Every person who produces water from permitted wells located, within the District, when all or any part of such water is transported for use, or for intended use, off the property from which the water is produced, but within the District, must register the production under this Rule, unless the production is covered by a permit under Rule 8. The term 'property from which water is produced', as used in this subsection, shall be construed to mean water rights owned by an entity within a continuous perimeter boundary situated within the district. Transportation of water requiring registration under this Rule includes transportation by pipeline, vehicle, channel, ditch, watercourse or other natural or artificial facilities, or any combination of such facilities."

3. **Applicant information**

Applicant: _____
Contact Address: _____
City: _____ State: _____ Zip: _____
Telephone Number: _____
Fax Number: _____
E-mail address: _____
Contact Person: _____
(If different from applicant or if applicant is a business, corporation, governmental entity, estate, trust, etc.)
Contact Telephone Number: _____
Contact Fax Number: _____
Contact E-mail Address: _____

Water Rights Owner Information if different from applicant:

Name: _____
Mailing Address: _____
City: _____ State: _____ Zip: _____
Telephone Number: _____

Fax Number: _____
E-Mail address: _____

4. **Proposed Use of Water Produced**

_____
_____
_____
_____
_____

Attach a statement of the nature and the purpose of the proposed use or uses and the amount of the transported water to be used for each purpose if more space is required.

5. **Well Information**

Submit this information for each well to be used to produce water to be transported under this permit to a destination outside the District for use outside the boundaries of the District.

Starr County Groundwater Conservation District well number; _____
Location of Well: Address: _____
City: _____ State: _____ Zip: _____
Latitude: _____North Longitude: _____West
Status of well as of application date:

_____ Operating Well (Date drilled _____)
_____ Well Completed but not operating (Date Drilled _____)
_____ Well Drilling permit and Well Operating Permit awaiting approval

Annual permitted production of well is _____gallons.
Time schedule for completion of construction and/or operation of facility:

_____
_____
_____

Pump Size and Capacity: _____
Make and Model of Pump: _____
Anticipated duration required for he proposed use of the water: _____
_____ If water is to be used for injection water within Goliad County, Please attach quality testing results as per District policy.
This information for additional wells is to be submitted, in the above format, as an attachment to this application.

6. **Quantity transported**

Authorization to transport the following quantity of water annually for use outside the District is requested:
_____Gallons
A transportation permit is issued for a period of time in accordance with Texas Water Code, Section 36.122(h) (2) and (i). A technical description of the facilities to be used for transportation of water and a time schedule for any construction thereof must be attached so that the district may determine the transportation permit term. A log provided by the District of all water sales must be filed monthly with the District.

7. **Receiving location**

Describe the location or locations that will receive water transported out of the District under this permit. Please include a description of the entity's service area, metering and leak detection and repair program for its water storage, delivery and distribution system, drought or emergency water management plan and information on each customer's water demand, water conservation measure and goals, and the means for implementation and enforcement.

_____
_____
_____

If additional space is needed, please attach additional sheets as necessary to fully document the recipient location for water transported out of the district under this permit.

8. **Water Availability**

Discuss the availability of feasible and practicable alternative water supplies for the use given above. Attach a separate sheet if more space is required.

_____
_____
_____
_____
_____

Could any other liquids which are both technically feasible and economically reasonable for you to substitute for the fresh groundwater be used for this purpose? _____ If yes, describe the possible sources of such liquid, including quantity and
quality._____
_____

9. **Projected Aquifer Effects**

Discuss the projected effect of the proposed transfer on aquifer conditions, depletion, subsidence, or existing permit holder or other groundwater users within the District. Attach a separate sheet if more space is required.

_____
_____
_____
_____
_____

10. **Documentation, Attachments and Fees**

The following documentation, attachments and fee payments must accompany this application when it is submitted for consideration by the District.

a. Plat or map showing location of the property and location on property of well(s) for which application is submitted showing location of existing or proposed well(s), location of the existing or proposed meter(s) for compliance to section d. of this item, the location of the existing proposed water transporting facilities and the location of the proposed or increased use or uses.
b. If the owner and /or the operator of well(s) are different from the property owner, provide written documentation from the property owner authorizing construction and operation of well(s).
c. The applicant's water conservation plan and if any subsequent user of the water is a municipality or entity providing retail water services, the water conservation plan of that municipality or entity shall also be provided. In lieu of a water conservation plan, a declaration that the applicant and/or a subsequent user if any subsequent user is a municipality or entity providing retail water services will comply with the District Management Plan as stated below.
d. The applicant's Drought Contingency Plan and a copy of any subsequent user's Drought Contingency Plan or a declaration that the applicant or a subsequent user will comply with District rules, policies and Board actions in drought conditions as stated below.
e. Copies of any contracts between the applicant and any users if they are someone other than the applicant.

11. **Certification**

I, the undersigned applicant, hereby agree and certify that:

a. in using the well(s), I will avoid waste, achieve water conservation, protect groundwater quality and the water produced from the well(s) will be for a beneficial use;

b. I will comply with all District and State well plugging and capping Guidelines in effect at the time of well closure;

c. I agree to abide by the terms of the District Rules, the District Management Plan and orders of the District board of Directors currently in effect and as they may be modified, changed and amended from time to time;

c. I hereby certify that the information contained herein is true and correct to the best of my knowledge and belief.

Signature*: _____ Date: _____

Printed Name: _____ Title: _____

STATE OF TEXAS COUNTY OF _____

*If the applicant is an individual, the application may be signed by that individual or his duly appointed agent. If signed by an agent, the agent must include or attach evidence documenting his or her authority to represent the applicant.
If the applicant is a partnership, the applicant's name should be followed by the words "a Partnership", the application must be signed by at least one of the general partners who are authorized to bind all of the partners, and a copy of the partnership agreement shall be attached to this application.
If the applicant is a corporation or governmental entity, the application must be signed by a duly authorized official of the applicant. A copy of the resolution or other documentation evidencing authorization to make the application shall be attached to this application.
If the application is made of an a\estate, trust or guardianship the application shall be signed by the duly appointed guardian, trustee, or representative, and a copy of an instrument evidencing the existence of the entity must be attached to the application.

For District Use Only

Date of hearing: _____ Date approved: _____

Conditions:

Expiration Date of Permit for construction:_____

Explanation of beneficial use: _____

Rate and amount of water transported:_____

Expiration date of production permit: _____

General Manager shall determine whether the application, maps, and other materials comply with the requirements of the District rules and may require amendment of the application, maps, etc.

Signature of District Representative and Title: _____

Date: _____

APPENDIX F
STARR COUNTY GROUNDWATER
CONSERVATION DISTRICT
DROUGHT CONTINGENCY PLAN
Adopted September 17, 2013

In order to conserve, preserve and protect the groundwater resources of Starr County during drought conditions, the Board of Directors of the Starr County Groundwater Conservation District has established the following Drought contingency Plan.

SECTION I: DEFINITION OF TERMS

For the purposes of this Plan, the following definitions shall apply in the use of groundwater:

Aesthetic water use: water use for ornamental or decorative purposes such as fountains, reflecting pools, and water gardens.

Agricultural water use: as defined under Chapter 36.001(20), (21), Texas Water Code, latest amendment.

Commercial and institutional water use: water use which is integral to the operations of commercial and non-profit establishments and governmental entities including but not limited to retail establishments, hotels and motels, restaurants, and office buildings.

Conservation: those practices, techniques, and technologies that reduce the consumption of water, reduce the loss or waste of water, improve the efficiency in the use of water or increase the recycling and reuse of water so that a supply is conserved and made available for future or alternative uses.

Domestic water use: water use for personal needs or for household or sanitary purposes such as drinking, bathing, heating, cooking, sanitation, cleaning a residence, business, industry, or institution.

Drought: A meteorological period of serious moisture (precipitation) deficiency and a resultant reduction in spring flow, stream flow, and groundwater level drop generally accompanied by an increase in demand.

Drought Indices: those indicators selected for the purposes of this plan to initiate (trigger) drought stages.

Exempt well: A domestic or livestock well equipped to produce less than 25,000 gallons of groundwater per day.

Industrial water use: the use of water in processes designed to convert materials of lower value into forms having greater usability and value.

Landscape irrigation use: water used for the irrigation and maintenance of landscaped area whether publicly or privately owned, including residential and commercial lawns, gardens, athletic fields, golf courses, parks, cemeteries, rights-of-way and medians

Non-essential water use: water uses that are non-essential, nor required for the protection of public health, safety, and welfare, including:

1. irrigation of landscape areas, including parks, athletic fields, cemeteries and golf courses, except as otherwise provided by this Plan;
2. use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle;
3. use of water to wash down any sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas except for the protection of public health, safety and welfare;
4. use of water to wash down buildings or structures for purposes other than immediate fire protection or for the protection of public health, safety and welfare;
5. use of water to fill, refill, or add to any indoor or outdoor swimming pools or Jacuzzi-type pools;
6. failure to repair a controllable leak(s) within a reasonable period after having been given notice directing the repair of such a leak(s); and
7. use of water from hydrants for construction purposes or any other purposes other than fighting fires.

Non-Exempt well: a well capable of producing greater than 25,000 gallons of groundwater per day,

Permitted well: see Non-exempt well as defined herein.

Public Water System: as defined under 30 TAC Subchapter D Paragraph 290.38(41), latest revision.

Registered Well: See Exempt well as defined herein.

Trigger Conditions: Conditions that occur that will determine if a drought condition exists, such as lack of rainfall for a certain period of time, The Palmer Drought Index indicates that the area is suffering from drought conditions, SCGCD monitor wells regarding static levels, etc.

Waste of Water: the use of groundwater for non-essential purposes as defined herein when Drought Stages 2-4 are in effect except as specifically allowed by this Plan.

SECTION II: PLANNING ACTIONS

The General Manager of the District will meet with county personnel in Starr County and the Water Supply Corporations to review those entities drought contingency plans to insure compatibility with the District Plan. This review should be conducted on an annual basis, or the time period may be extended to no more than three years. The District will work with the above entities in revising drought contingency plans as the need occurs. The District's Plan will be reviewed on an annual basis to insure that it meets the needs of the District. Additions, deletions and/or corrections will be presented to the Board by the General Manager and will be acted upon at the following General Meeting of the Board.

SECTION III: TRIGGERING CITERIA FOR INITIATION AND TERMINATION OF DROUGHT STAGES

The District Board or the Board's designee shall monitor the defined drought trigger indices and shall determine when conditions warrant initiation or termination of each stage of the Plan. The Plan consists of four levels of drought and groundwater production restrictions as defined herein. The palmer Drought Severity Index, http://www.txwin.net/monitoring/meteorological/Drought/pdsi.htm, which is an index based on regional meteorological and hydrological data such as rainfall, temperature and soil moisture content along with the District's water level monitoring program will be used as the primary triggering criteria for the initiation and termination of this plan.

SECTION IV: EVENT ACTIONS

After review by the Board of Directors of presented materials, and upon determining such drought conditions exist, the General Manager of the District will be charged with the following:

A. Within 48 hours of the Board decision that a drought condition exist, the General Manager will notify each community within the District that the Board has declared a drought condition and that each water supply entity should initiate its drought contingency plan.

B. The General Manager will contact the local media within the district and advise them that a drought condition exist and that they (the media) should expect to receive educational notices and articles concerning the need to conserve the groundwater supply within the District.

C. The General Manager will provide articles to the newspapers within the District regarding the need to conserve groundwater and/or tips for groundwater conservation until such time as the Board declares that the drought period has ended.

D. The General Manager and Board will investigate any wasted or unauthorized use of groundwater and will report back to the Board to determine if action is needed to prevent the continuation of the waste or unauthorized use of said water.

SECTION V: DROUGHT STAGE RESPONSE

The President of the Board, or his/her designee, shall monitor the defined drought trigger indices and shall determine when conditions warrant initiation or termination of each stage of the Plan. Public notification by the District of the initiation or termination of drought stages shall be by means of notice posted in a newspaper of general circulation and by direct mailing and/or emails to owners/ operators of non-exempt wells.

(a) Restrictions on Exempt Wells – The Plan may place production restrictions on Exempt (Registered) wells. The district encourages voluntary compliance during each drought stage through compliance with the restrictions defined within the various stages as outlined in this Plan. Such voluntary compliance will contribute to the achievement of the desired level of conservation and reduce the impact of drought conditions and restrictions. However, nothing in this section excludes the district from exercising authority under District Rules Waste of Water.

(b) Restriction on Non-exempt Wells – The District has the authority to monitor and manage the production from all Non-exempt (Permitted) wells. These include non-exempt wells used as Public

Water Supply (PWS) wells to provide for domestic use and all such wells used to support agricultural, industrial, commercial, institutional and other non-domestic uses. This Plan may place restrictions on the production from such wells as a function of drought stage.

DROUGHT SEVERITY LEVELS

PALMER DROUGHT SEVERITY INDEX (PDSI)
Mild Drought: -1 or less
Moderate Drought: -2 or less
Severe Drought: -3 or less
Extreme Drought: -4 or less
DROUGHT STAGES:
Stage 1 Mild Drought
Stage 2 Moderate Drought
Stage 3 Severe Drought
Stage 4 Extreme Drought

Stage 1 – Mild Drought Conditions
All Exempt and non-exempt well owners/operators and users of groundwater will be encouraged to voluntarily restrict the use of water. In the case of public water supply wells, owner/operators will be asked to initiate their drought management plans. News articles will be submitted as outlined in Section V of this document to inform the general public and exempt well owners that the district has declared a Stage 1 Drought for the County and asking for voluntary conservation.

Stage 2 – Moderate Drought conditions
All Non-exempt well owner/operators and public supply users of groundwater shall be notified through news articles that the District has gone to Stage 2 of the District's plan and are asked to reduce total monthly pumpage by ten percent (10%) and practice conservation measures. News articles will be submitted as outlined in Section V of this document to inform the general public, public supply entities, and exempt well owners that the district has gone to Stage 2 of the plan and ask people to restrict unnecessary pumping and practice conservation measures.

Stage 3 – Severe Drought conditions
All non-exempt well owners/ operators and users of groundwater shall be notified in writing that the District has gone to Stage 3 of the District's plan and are asked to reduce total monthly pumpage by twenty percent (20%) and practice conservation measures. News articles will be submitted as outlined in Section V of this document to inform the general public, public supply entities and exempt well owners that the District has gone to Stage 3 of the plan and ask people to restrict unnecessary pumping and practice conservation measures.

Stage 4 – Extreme Drought Conditions
All non-exempt well owner/operators and public supply users of groundwater shall be notified in writing that the District has gone to Stage 4 of the District's plan and will be asked to reduce total monthly pumpage by thirty percent (30%) and practice conservation measures. News articles will be submitted as outlined in Section V of this document to inform the general public, public supply entities and exempt well owners that the District has gone to Stage 4 of the plan and ask people to restrict unnecessary pumping and practice conservation measures. The District will advise that the District has the authority under its rules to seek administrative penalties against individuals for wasting water.

SECTION VI: TERMINATION NOTIFICATION

Termination of the drought measures when the Board determines that the trigger conditions which initiated the drought conditions have subsided. The public will be notified of the termination in the same manner they were informed of the initiation.