

# **BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT**

## **Groundwater Management Plan**

*Adopted – September 25, 2012*

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## **I. DISTRICT MISSION AND OBJECTIVES**

The Brush Country Groundwater Conservation District (“District”) strives to preserve and protect the groundwater resources within its boundaries. The District recognizes that groundwater conservation districts are the state’s preferred method of groundwater management and will work with local stakeholders towards achieving its objectives. The District will accomplish its objectives by working to lessen interference between water wells, minimize drawdown of groundwater levels, prevent the waste of groundwater, and reduce the degradation of groundwater quality within the District while helping the local economies maintain and improve their current condition. The District will also use the authority granted in its Enabling Act and applicable state laws to protect and maintain the groundwater resources of the District.

## **II. PURPOSE OF GROUNDWATER MANAGEMENT PLAN**

The purpose of this Management Plan is to provide a planning tool for the District as it works to manage, protect, and conserve the groundwater resources within its boundaries. This Management Plan currently contains the hydrogeological and technical information provided by the Texas Water Development Board (“TWDB”) for the groundwater resources of the District. As the District obtains more site-specific groundwater information, the District will update and amend this Management Plan as necessary.

The development of the District’s Management Plan will enable the District to comply with the requirements of state law. The Texas Legislature created a statewide water planning process with the passage of Senate Bill 1 (“SB 1”) in 1997, Senate Bill 2 (“SB 2”) in 2001, and Senate Bill 3 (“SB 3”) in 2007. The development of management plans by each groundwater conservation district in Texas is an integral part of the statewide water planning process. The District’s Management Plan satisfies all the requirements established for groundwater conservation districts by SB 1, SB 2, SB 3, the requirements Chapter 36 of the Texas Water Code, and the requirements under TWDB rules.

## **III. DISTRICT INFORMATION**

### **A. District Creation.**

The District was created by the 81st Texas Legislature, Regular Session, in 2009 with the enactment of Senate Bill 2456 (attached to this plan as “Appendix A” now codified as Chapter 8852 Texas Special District Local Laws Code). The creation of the District was confirmed by the citizens located within the District’s boundaries in Jim Hogg, Jim Wells, Brooks, and Hidalgo Counties at an election held on November 3, 2009. The District contains the authority and responsibilities specified in its Enabling Act, Chapter 36 of the Texas Water Code, the TWDB Rules, this Groundwater Management Plan, and the District Rules, as they may be amended.

### **B. District Board of Directors.**

The Board of Directors is made up of nine members. The directors for the District are appointed by the Commissioners Courts of Jim Hogg, Jim Wells, and Brooks Counties. The Commissioners Court of Brooks County must appoint one director to represent the municipal interests of the City of Falfurrias and two directors to represent the agricultural interests of the territory in Brooks County that is outside the City of Falfurrias and not within the Kenedy County Groundwater Conservation District and the portion of Hidalgo County within the District. The Commissioners Court of Jim Hogg County must appoint one director to represent the interests of Jim Hogg County within the service area of the Jim Hogg County Water Control and Improvement District No. 2 and two directors to represent the agricultural interests of the area of Jim Hogg County outside the service area of the Jim Hogg County Water Control and Improvement District No. 2. The Commissioners Court of Jim Wells County must appoint two directors to represent the agricultural interests of the area of Jim Wells County outside the City of Alice<sup>1</sup> and not within the Kenedy County Groundwater Conservation District. The Commissioners Courts of both Brooks and Jim Hogg Counties must jointly appoint one director to represent the industrial and mining interests of Jim Hogg and Brooks Counties. District directors serve staggered four-year terms that expire on June 1 of each even-numbered year.

C. Authority of District.

The District has the authority and duties given to groundwater conservation districts by Texas Water Code Chapter 36, 31 Texas Administrative Code (TAC) Chapter 356, and the District's Enabling Act. The District exercises the authority given to preserve and protect the groundwater resources of the District through the adoption and implementation of District rules.

D. Location and Extent of District Boundaries.

The District's boundaries consist of the entire territory within Jim Hogg County, the area within Jim Wells County that is not within the Kenedy County Groundwater Conservation District and outside the corporate limits of the City of Alice<sup>2</sup>, the area of Brooks County not within the Kenedy County Groundwater Conservation District, and a portion of northern Hidalgo County. A map of the District is contained in Appendix B.

E. Groundwater Resources of District.

The TWDB has identified the Gulf Coast aquifer as the only major aquifer within the District's boundaries. The TWDB defines major aquifers as aquifers that are capable of producing large yields to wells or that produce groundwater over a large area. The only minor aquifer recognized within the District is the Yegua-Jackson aquifer, which

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<sup>1,2</sup> The District does not include the corporate limits of the City of Alice existing as of January 1, 2009.

covers a small portion of southwestern Jim Hogg County. Minor aquifers tend to be smaller and produce less water than major aquifers.

A diagram of the Gulf Coast aquifer can be found at Figure 1 below. The TWDB generally describes the groundwater resources of the Gulf Coast aquifer as follows:

The Gulf Coast aquifer forms a wide belt along the Gulf of Mexico from Florida to Mexico. In Texas, the aquifer provides water to all or parts of 54 counties and extends from the Rio Grande northeastward to the Louisiana-Texas border. Municipal and irrigation uses account for 90 percent of the total pumpage from the aquifer. The Greater Houston metropolitan area is the largest municipal user, where well yields average about 1,600 gal/min.

The Gulf Coast aquifer consists of complex interbedded clays, silts, sands, and gravels of Cenozoic age, which are hydrologically connected to form a large, leaky artesian aquifer system. This system comprises four major components consisting of the following generally recognized water-producing formations. The deepest is the Catahoula, which contains ground water near the outcrop in relatively restricted sand layers. Above the Catahoula is the Jasper aquifer, primarily contained within the Oakville Sandstone. The Burkeville confining layer separates the Jasper from the overlying Evangeline aquifer, which is contained within the Fleming and Goliad sands. The Chicot aquifer, or upper component of the Gulf Coast aquifer system, consists of the Lissie, Willis, Bentley, Montgomery, and Beaumont formations, and overlying alluvial deposits. Not all formations are present throughout the system, and nomenclature often differs from one end of the system to the other. Maximum total sand thickness ranges from 700 feet in the south to 1,300 feet in the northern extent.

Water quality is generally good in the shallower portion of the aquifer. Ground water containing less than 500 mg/l dissolved solids is usually encountered to a maximum depth of 3,200 feet in the aquifer from the San Antonio River Basin northeastward to Louisiana. From the San Antonio River Basin southwestward to Mexico, quality deterioration is evident in the form of increased chloride concentration near the coast. Little of this ground water is suitable for prolonged irrigation due to either high salinity or alkalinity, or both. In several areas at or near the coast, including Galveston Island and the central and southern parts of Orange County, heavy municipal or industrial pumpage had previously caused an updip migration, or saltwater intrusion, of poor-quality water into the aquifer. Recent reductions in pumpage here have resulted in a stabilization and, in some cases, even improvement of ground-water quality.

## Brooks County

Excerpts from a TWDB report specific to Brooks County describe the groundwater resources of Brooks County as follows:

The rock formations that contain fresh to slightly saline water are sedimentary deposits of Tertiary and Quaternary age. They include, in order of decreasing age, the Oakville Sandstone, Lagarto Clay, Goliad Sand, Lissie Formation, Beaumont Clay, and recent windblown sand. All formations, except the Oakville and the Lagarto, crop out in Brooks County. The formations consist principally of interbedded sand and clay deposits; the sand constitutes the principal aquifer in the county.

All of the formations containing fresh to slightly saline water in Brooks County are considered to be part of the principal (Gulf Coast) aquifer. The formations are composed of non-marine sand and sandstone interbedded with clay. The sedimentary rocks become finer grained and some beds of sand grade into clay toward the coast. Correlation of individual sand or clay beds is difficult even over short distances because of the heterogenous character of the sedimentary rocks. Because the character of much of the sedimentary rocks comprising the Goliad Sand, Lissie Formation, Beaumont Clay, and windblown sand have similar electrical properties, the geologic sections, which are based on electrical logs, show only the Oakville Sandstone, Lagarto Clay, and Goliad Sand and rocks younger than the Goliad Sand.

The regional dip of the formations in Brooks County is to the east and southeast toward the Gulf. A major fault zone crosses the county along a line from near the southwest corner to the vicinity of Falfurrias. The fault was not observed at the surface. An examination of electric logs of oil wells along and near the fault zone indicates that the displacement decreases toward the surface, and that at shallow depths of less than 1,500 to 2,000 feet, hardly a trace of the fault exists. Consequently, this structural feature does not affect the circulation of groundwater in the county.

Rainfall in Brooks County and adjoining areas is the source of all fresh groundwater occurring in the county. Groundwater in Brooks County occurs under both water-table and artesian conditions, depending on whether the water is unconfined (under atmospheric pressure only) or confined. Water-table conditions usually prevail at shallow depths in the outcrop areas of the aquifers, whereas artesian conditions generally prevail downdip from the outcrop where the aquifers are overlain by less permeable material. Water in a well penetrating the artesian aquifers will rise to an altitude higher than the bottom of the confining layer. This rise is caused by the pressure from the weight of the water in the updip part of the aquifers and by the pressure from overlying rock formations.<sup>2</sup>

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<sup>2</sup> Groundwater Resources of Brooks County, Texas, U.S. Geological Survey, Texas Water Development Board Report 61, by B.N. Myers and O.C. Dale, October 1967.

### Southern Jim Wells County

Excerpts from a report addressing the groundwater resources of southern Jim Wells County describes the southern Jim Wells County study area as follows:

The geologic formations that contain fresh to slightly saline water are, in order of decreasing age, the Oakville Sandstone and the Lagarto Clay of Miocene age, the Goliad Sand of Pliocene age, and the Lissie Formation and Beaumont Clay (including barrier island and beach deposits) of Pleistocene age, the south Texas eolian plain deposits of Pleistocene and Holocene age, and the barrier island deposits and alluvium of Holocene age. All of these units are exposed in the report area except the Goliad Sand, Lagarto Clay, and Oakville Sandstone, which crop out in counties west of the report area.

The geologic formations, except the alluvium and south Texas eolian plain deposits, crop out in belts that are nearly parallel to the Gulf Coast. Younger formations generally crop out close to the coast and successively older ones farther inland. Because of the different ages of the formations, the outcrops are progressively eroded and dissected inland. For example, the outcrop of the Beaumont Clay and Lissie Formation, undifferentiated, which covers most of Kleberg County, is comparatively uneroded in contrast to the uneven and dissected outcrop of the Goliad Sand farther inland. The alluvium and south Texas eolian plain deposits transgress the other geologic formations and are elongated mostly normal to the Gulf Coast.

The lithology, dip, and thickness of many of the geologic formations change in the direction of the dip; and the lithology and thickness commonly change laterally along the strike. Sand beds may grade laterally into clay or silt within short distances. These sand beds and other beds containing water are interconnected with similar beds on a different level, so that a series of water-bearing beds within a formation, or even within a group of formations, function as a single aquifer. Both dips and thicknesses of the formations increase gulfward, and the clastic sediments composing the geologic formations grade from fluvial and deltaic sand, silt, and clay in inland areas to predominantly finer sediments that interfinger with brackish and marine sediments near the Gulf Coast and offshore.<sup>3</sup>

### Southwestern Jim Hogg County

A diagram of the Yegua-Jackson aquifer can be found at Figure 2 below. The Yegua-Jackson aquifer is located only in a small portion of southwestern Jim Hogg County. The TWDB generally describes the groundwater resources of the Yegua-Jackson aquifer as follows:

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<sup>3</sup> Ground-Water Resources of Kleberg, Kenedy, and Southern Jim Wells Counties, Texas, Texas Water Development Board Report 173, U.S. Geological Survey, by G. H. Shafer and E. T. Baker, Jr., July 1973.

The Yegua-Jackson aquifer extends in a narrow band from the Rio Grande and Mexico across the State to the Sabine River and Louisiana. Although the occurrence, quality, and quantity of water from this aquifer are erratic, domestic and livestock supplies are available from shallow wells over most of its extent. Locally water for municipal, industrial, and irrigation purposes is available. Yields of most wells are small, less than 50 gallons per minute, but in some areas, yields of adequately constructed wells may range to more than 500 gallons per minute. The Yegua-Jackson aquifer consists of complex associations of sand, silt, and clay deposited during the Tertiary Period. Net freshwater sands are generally less than 200 feet deep at any location within the aquifer. Water quality varies greatly within the aquifer, and shallow occurrences of poor-quality water are not uncommon. In general, however, small to moderate amounts of usable quality water can be found within shallow sands (less than 300 feet deep) over much of the Yegua-Jackson aquifer.<sup>4</sup>

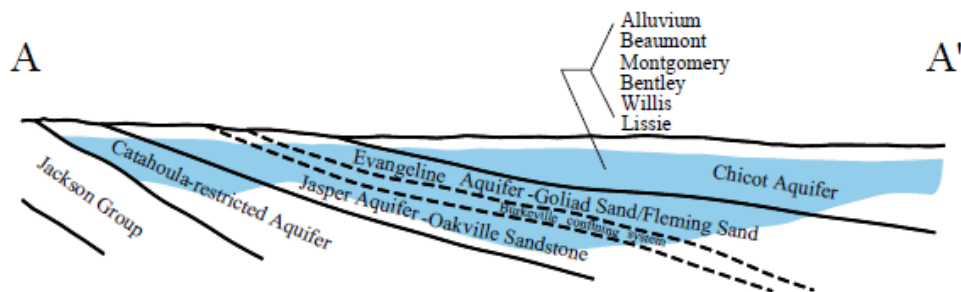
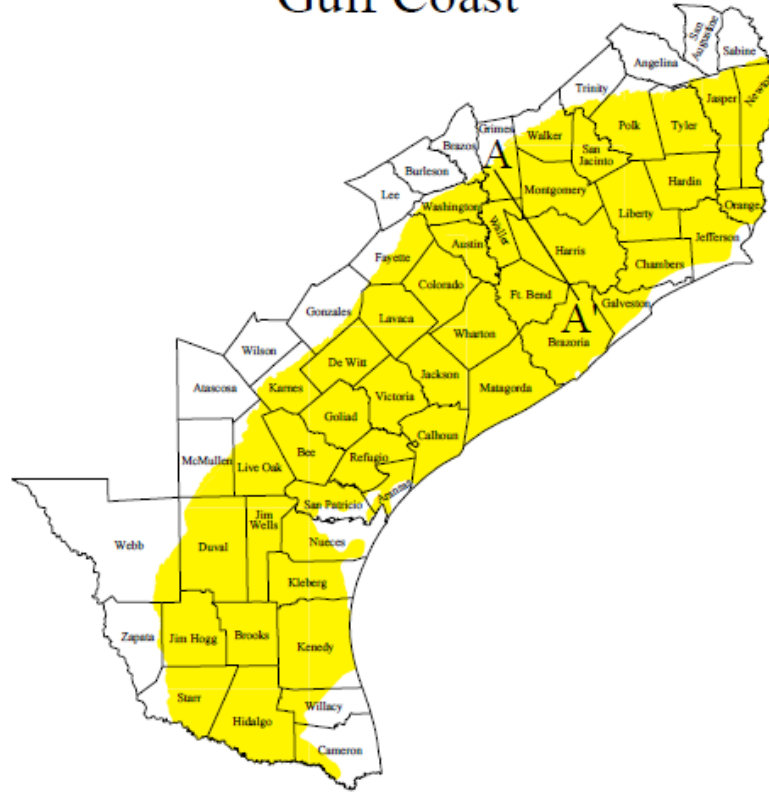
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<sup>4</sup> Aquifers of Texas, Texas Water Development Board, Report 345, by Ashworth and Hopkins, November 1995.



**FIGURE 1**

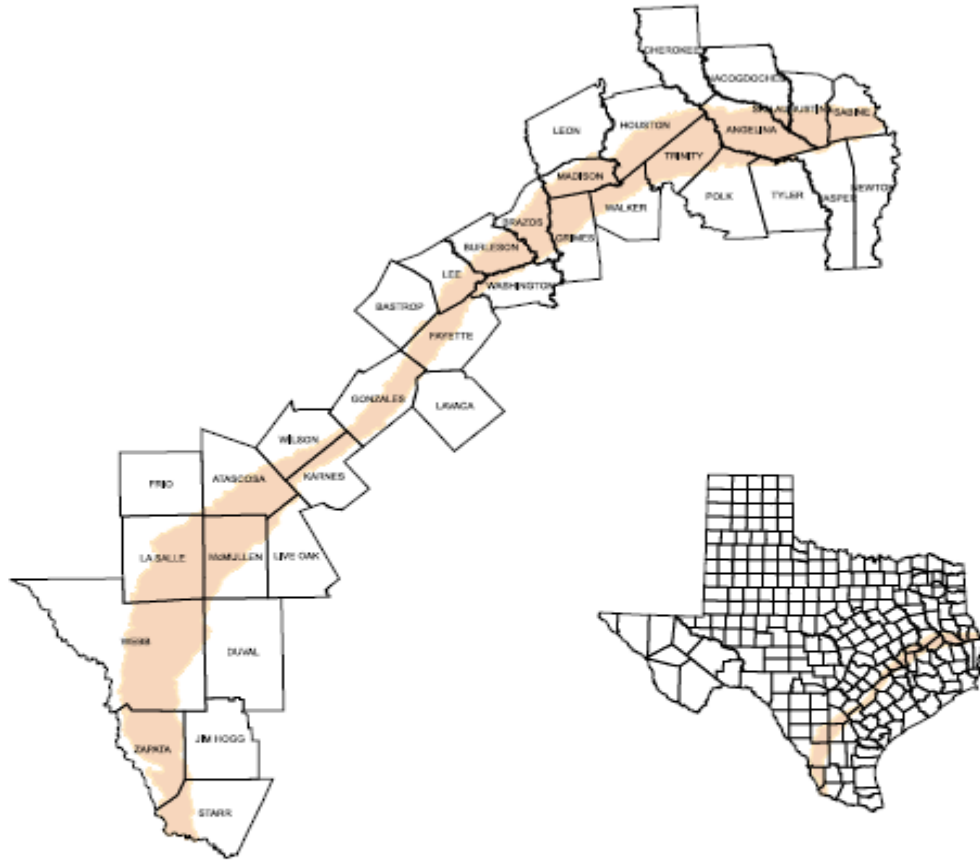
# Gulf Coast





Modified from Baker, 1979

**FIGURE 2**

# Yegua-Jackson



**Explanation**

-  County boundary
-  Yegua - Jackson



#### **IV. CRITERIA FOR PLAN APPROVAL**

##### **A. Planning Horizon.**

The Management Plan is adopted to be effective for a ten (10) year planning period, which will begin on the date TWDB approves this plan. In accordance with Section 36.1072(e) of the Texas Water Code and TWDB Rules (in 31 TAC §356.3), the District will review and re-adopt its Management Plan, with or without amendments, every five years and will re-submit its Management Plan for TWDB approval after re-adoption. This Management Plan will be effective until replaced by a revised plan that has been approved by the TWDB.

##### **B. Plan Adoption.**

Public notices demonstrating that this Management Plan was adopted after the required public hearings and Board meeting are attached to this plan as “Appendix C”.

##### **C. Board Resolution.**

A certified copy of the resolution of the Board of Directors of the District adopting this Management Plan is attached to this plan as “Appendix D”.

##### **D. Coordination with Surface Water Management Entities.**

The surface water management entities within the District include the Nueces River Authority, the City of Corpus Christi through its ownership of Lake Corpus Christi, and the Jim Wells County Fresh Water Supply District No. 1. Sample correspondence sent to these entities, as well as Region M (Rio Grande Regional Water Planning Area) and Region N (Coastal Bend Regional Water Planning Group) and a list of recipients is attached to this plan as “Appendix E”.

#### **V. ESTIMATES OF TECHNICAL INFORMATION REQUIRED BY 31 TAC 356.5 AND TEX. WATER CODE § 36.1071**

##### **A. Modeled available groundwater in the district based on the desired future condition established under Tex. Water Code 36.108 — 31 TAC 356.5 (a)(5)(A) and Texas Water Code § 36.10701(e)(3)(A).**

Modeled available groundwater is defined in Texas Water Code § 36.001(25) as the amount of water that “may be produced on an average annual basis to achieve a desired future condition established under Section 36.108.” Under Texas Water Code § 36.108(d), the desired future condition may only be determined through joint planning with other groundwater conservation districts (“GCDs”) in the same groundwater

management area (“GMA”). The District is located in GMA-16.

On August 30, 2010, the authorized voting representatives of GMA-16 established a DFC of the Gulf Coast Aquifer of a GMA-wide average of approximately 94 feet through 2060 consistent with scenario 10 of GAM Run 09-008.

The following is the GMA-16 drawdown based upon Scenario 10, GAM Run 09-008 by county and model layer.

| <b>County</b>  | <b>Layer 1</b> | <b>Layer 2</b> | <b>Layer 3</b> | <b>Layer 4</b> | <b>Gulf Coast Aquifer Average</b> |
|----------------|----------------|----------------|----------------|----------------|-----------------------------------|
| Bee            | 67             | 79             | 65             | 55             | 66                                |
| Brooks         | 84             | 157            | 130            | 130            | 131                               |
| Cameron        | 46             | 63             | 27             | 27             | 41                                |
| Duval          | 146            | 171            | 157            | 131            | 150                               |
| Hidalgo        | 55             | 91             | 57             | 56             | 66                                |
| Jim Wells      | 98             | 115            | 107            | 105            | 107                               |
| Jim Hogg       |                | 206            | 207            | 194            | 202                               |
| Kenedy         | 32             | 254            | 55             | 54             | 99                                |
| Kleburg        | 35             | 280            | 73             | 73             | 115                               |
| Live Oak       | 82             | 80             | 71             | 23             | 41                                |
| McMullen       |                |                |                | 11             | 11                                |
| Nueces         | 32             | 126            | 38             | 38             | 59                                |
| San Patricio   | 34             | 94             | 27             | 27             | 46                                |
| Starr          |                | 150            | 137            | 102            | 127                               |
| Webb           |                | 265            |                | 124            | 197                               |
| Willacy        | 37             | 178            | 39             | 39             | 73                                |
| GMA-16 Average | 46             | 158            | 77             | 77             | 94                                |

The following is the GMA-16 drawdown based upon Scenario 10, GAM Run 09-008 by GCD:

| Groundwater Conservation District | Drawdown (ft) in 2060 from Estimated 2010 Conditions |         |         |         |                            | Total Gulf Coast Aquifer Pumping (AF/yr) |
|-----------------------------------|--|---------|---------|---------|----------------------------|--|
|                                   | Layer 1  | Layer 2 | Layer 3 | Layer 4 | Gulf Coast Aquifer Average |  |
| Bee                               | 59   | 72      | 54      | 49      | 58                         | 10,653                                   |
| Brush Country                     | 97   | 164     | 151     | 154     | 150                        | 68,595                                   |
| Corpus Christi                    | 12   | 69      | 25      | 25      | 33                         | 1,794                                    |
| Duval                             | 146  | 171     | 157     | 131     | 150                        | 14,055                                   |
| Kenedy                            | 41   | 241     | 62      | 61      | 101                        | 94,804                                   |
| Live Oak                          | 82   | 80      | 71      | 23      | 41                         | 11,433                                   |
| McMullen                          |  |         |         | 10      | 10                         | 510                                      |
| Red Sands                         |  | 40      | 40      | 40      | 40                         | 584                                      |
| San Patricio                      | 34   | 94      | 27      | 27      | 46                         | 19,000                                   |
| Starr                             |  | 150     | 137     | 102     | 127                        | 7,521                                    |

The resolution adopting the DFC is included in Appendix F.

As provided under Texas Water Code § 36.108(d), at a minimum, every five years the District must revisit the adoption of its DFCs. The District, through GMA-16, is currently in the process of amending the DFC established August 30, 2010.

Following the GMA-16 submission of the DFC to the TWDB, the TWDB produced GAM Run 10-047 MAG. This GAM Run is the total amount of pumping from the aquifer including uses of water both subject to permitting and exempt from permitting. The pumping output from the groundwater availability model is the estimate of the modeled available groundwater under the Water Code definition. The modeled available groundwater for the District is 68,846 acre-feet per year.

- B. Amount of groundwater being used within the district on an annual basis — 31 TAC 356.5 (a)(5)(B) and Tex. Water Code §36.1071(e)(3)(B).

To estimate the annual groundwater being used in the District, the District relies on the April 16, 2012 TWDB report entitled “Estimated Historical Water Use and 2012 State Water Plan Datasets: Brush Country Groundwater Conservation District” (Datasets). The data for estimated historical groundwater use is represented by the TWDB to be up-to-date as of April 12, 2012, and is based upon the TWDB Historical Water Use Survey. The most recent values are shown in the table below. For a complete listing of the use survey data, including the most recently available five years, see

Appendix G.

| <b>County</b> | <b>Municipal<br/>AFY</b> | <b>Manufacturing<br/>AFY</b> | <b>Irrigation<br/>AFY</b> | <b>Mining<br/>AFY</b> | <b>Livestock<br/>AFY</b> | <b>Total AFY</b> |
|---------------|--------------------------|------------------------------|---------------------------|-----------------------|--------------------------|------------------|
| Brooks        | 1,434                    | 0                            | 471                       | 0                     | 236                      | 2,141            |
| Hidalgo       | 117                      | 7                            | 1                         | 2                     | 6                        | 133              |
| Jim Hogg      | 907                      | 0                            | 562                       | 77                    | 346                      | 1,892            |
| Jim Wells     | 1,999                    | 0                            | 1,429                     | 115                   | 553                      | 4,096            |

- C. Annual amount of recharge from precipitation to the groundwater resources within the district — 31 TAC 356.5 (a)(5)(C) and Tex. Water Code § 36.1071(e)(3)(C).

Please refer to Appendix H.

- D. For each aquifer, the annual net volume of water that discharges from the aquifer to springs and any surface water bodies, including lakes, streams, and rivers — 31 TAC 356.5 (a)(5)(D) and Tex. Water Code § 36.1071(e)(3)(D).

Please refer to Appendix H.

- E. Annual volume of flow into and out of the district within each aquifer and between aquifers in the district, if a groundwater availability model is available — 31 TAC 356.5 (a)(5)(E) and Tex. Water Code §36.1071(e)(3)(E).

Please refer to Appendix H.

- F. Projected surface water supply in the district, according to the most recently adopted state water plan — 31 TAC 356.5 (a)(5)(F) and Tex. Water Code §36.1071(e)(3)(F).

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates a projected surface water supply for each County within the District. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Projected surface water supply data from the 2012 State Water Plan Data Set is shown below except water use groups within each County that are not within the District were excluded.

**BROOKS COUNTY**

| <b>WUG</b>                                      | <b>WUG Basin</b>  | <b>Source Name</b>     | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---|-------------------|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Livestock                                       | Nueces-Rio Grande | Livestock Local Supply | 484         | 484         | 484         | 484         | 484         | 484         |
| Sum of Projected Surface Water Supplies (AFY) = |                   |                        | 484         | 484         | 484         | 484         | 484         | 484         |

**HIDALGO COUNTY**

| <b>WUG</b>                                      | <b>WUG Basin</b>  | <b>Source Name</b>     | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---|-------------------|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Livestock                                       | Nueces-Rio Grande | Livestock Local Supply | 0           | 0           | 0           | 0           | 0           | 0           |
| Livestock                                       | Rio Grande        | Livestock Local Supply | 0           | 0           | 0           | 0           | 0           | 0           |
| Sum of Projected Surface Water Supplies (AFY) = |                   |                        | 0           | 0           | 0           | 0           | 0           | 0           |

**JIM HOGG COUNTY**

| <b>WUG</b>                                      | <b>WUG Basin</b>  | <b>Source Name</b>     | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---|-------------------|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Livestock                                       | Nueces-Rio Grande | Livestock Local Supply | 0           | 0           | 0           | 0           | 0           | 0           |
| Livestock                                       | Rio Grande        | Livestock Local Supply | 0           | 0           | 0           | 0           | 0           | 0           |
| Sum of Projected Surface Water Supplies (AFY) = |                   |                        | 0           | 0           | 0           | 0           | 0           | 0           |

**JIM WELLS COUNTY**

| <b>WUG</b>                                      | <b>WUG Basin</b>  | <b>Source Name</b>     | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---|-------------------|------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Livestock                                       | Nueces            | Livestock Local Supply | 152         | 152         | 152         | 152         | 152         | 152         |
| Livestock                                       | Nueces-Rio Grande | Livestock Local Supply | 743         | 743         | 743         | 743         | 743         | 743         |
| Sum of Projected Surface Water Supplies (AFY) = |                   |                        | 895         | 895         | 895         | 895         | 895         | 895         |

- G. Projected total demand for water in the district according to the most recently adopted state water plan — 31 TAC 356.5 (a)(5)(G) and Tex. Water Code §36.1071(e)(3)(G).

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates a projected total demand for water for each County within the District.

Demand data from the 2012 State Water Plan Data Set is shown below except water use groups within each County that are not within the District were excluded. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by

JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Data from San Diego WUG is shown in the Jim Wells County Projected Demand table. The District has chosen to retain the value even though San Diego is only partially within the District. The San Diego contribution to demand is actually lower, but by an amount unknown to the District. Finally, the District notes that Hebronnville is an unincorporated area and the WUG for Hebronnville should be reported as Jim Hogg County Water Control and Improvement District No. 1.

**BROOKS COUNTY**

| <b>WUG</b>                            | <b>WUG Basin</b>  | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---------------------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| County-Other                          | Nueces-Rio Grande | 130         | 76          | 45          | 27          | 16          | 9           |
| Falfurrias                            | Nueces-Rio Grande | 2,135       | 2,515       | 2,795       | 2,957       | 3,021       | 3,032       |
| Irrigation                            | Nueces-Rio Grande | 17          | 17          | 17          | 16          | 15          | 15          |
| Livestock                             | Nueces-Rio Grande | 538         | 538         | 538         | 538         | 538         | 538         |
| Mining                                | Nueces-Rio Grande | 108         | 116         | 120         | 125         | 129         | 132         |
| Total Projected Water Demands (AFY) = |                   | 2,928       | 3,262       | 3,515       | 3,663       | 3,719       | 3,726       |

**HIDALGO COUNTY**

| <b>WUG</b>                            | <b>WUG Basin</b>  | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---------------------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Livestock                             | Nueces-Rio Grande | 10          | 10          | 10          | 10          | 10          | 10          |
| Livestock                             | Rio Grande        | 1           | 1           | 1           | 1           | 1           | 1           |
| Total Projected Water Demands (AFY) = |                   | 11          | 11          | 11          | 11          | 11          | 11          |

**JIM HOGG COUNTY**

| <b>WUG</b>                            | <b>WUG Basin</b>  | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---------------------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| County-Other                          | Nueces-Rio Grande | 137         | 143         | 147         | 150         | 148         | 142         |
| County-Other                          | Rio Grande        | 16          | 16          | 17          | 17          | 17          | 16          |
| Hebronnville                          | Nueces-Rio Grande | 731         | 759         | 780         | 792         | 778         | 748         |
| Irrigation                            | Nueces-Rio Grande | 817         | 817         | 817         | 817         | 817         | 817         |
| Livestock                             | Nueces-Rio Grande | 383         | 383         | 383         | 383         | 383         | 383         |
| Livestock                             | Rio Grande        | 135         | 135         | 135         | 135         | 135         | 135         |
| Mining                                | Nueces-Rio Grande | 33          | 36          | 37          | 38          | 39          | 40          |
| Total Projected Water Demands (AFY) = |                   | 2,252       | 2,289       | 2,316       | 2,332       | 2,317       | 2,281       |

**JIM WELLS COUNTY**



| <b>WUG</b>                            | <b>WUG Basin</b>  | <b>2010</b> | <b>2020</b> | <b>2030</b> | <b>2040</b> | <b>2050</b> | <b>2060</b> |
|---------------------------------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| County-Other                          | Nueces            | 292         | 304         | 307         | 304         | 299         | 292         |
| County-Other                          | Nueces-Rio Grande | 1695        | 1761        | 1784        | 1764        | 1735        | 1698        |
| Irrigation                            | Nueces            | 1103        | 968         | 850         | 747         | 657         | 577         |
| Irrigation                            | Nueces-Rio Grande | 1960        | 1721        | 1512        | 1329        | 1168        | 1027        |
| Livestock                             | Nueces            | 169         | 169         | 169         | 169         | 169         | 169         |
| Livestock                             | Nueces-Rio Grande | 825         | 825         | 825         | 825         | 825         | 825         |
| Mining                                | Nueces            | 187         | 204         | 214         | 224         | 234         | 243         |
| Mining                                | Nueces-Rio Grande | 208         | 227         | 238         | 249         | 262         | 271         |
| Orange Grove                          | Nueces-Rio Grande | 374         | 394         | 405         | 406         | 402         | 393         |
| Premont                               | Nueces-Rio Grande | 858         | 905         | 931         | 935         | 925         | 905         |
| San Diego                             | Nueces-Rio Grande | 103         | 105         | 106         | 105         | 103         | 101         |
| Total Projected Water Demands (AFY) = |                   | 7,781       | 7,590       | 7,348       | 7,273       | 6,786       | 6,407       |

**VI. CONSIDER THE WATER SUPPLY NEEDS AND WATER MANAGEMENT STRATEGIES INCLUDED IN THE ADOPTED STATE WATER PLAN — 31 TAC 356.5 (a)(7) and Texas Water Code § 36.1071(e)(4)**

**A. Water Supply Needs.**

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates projected water supply needs for each County within the District. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Data concerning water supply needs from the 2012 State Water Plan Data Set is contained in Appendix I.

**B. Water Management Strategies.**

The most recently adopted state water plan is the 2012 State Water Plan. The Plan indicates projected water management strategies for each County within the District. Jim Wells County Freshwater Supply District No. 1 (“JWCFWSD No. 1”) is a WUG within Jim Wells County that is not, but should be, included in the State Water Plan. JWCFWSD No. 1 has not responded to the TWDB’s water use survey data since 2002 and no historical data exists since 2003. Because annual data has not been received by JWCFWSD No. 1, it does not meet the criteria to be included as a WUG in the State Water Plan.

Projected water management strategies from the TWDB 2012 State Water Plan Data Set is contained in Appendix J.

## **VII. DETAILS ON THE DISTRICT MANAGEMENT OF GROUNDWATER**

The Texas Legislature has established that groundwater conservation districts, such as the Brush Country Groundwater Conservation District, are the state's preferred method of groundwater management. The Texas Legislature codified its groundwater management policy decision in Section 36.0015 of the Texas Water Code, which provides that districts will manage the groundwater resources within their boundaries through rules developed and implemented in accordance with Chapter 36 of the Texas Water Code. Chapter 36 provides directives for districts and the statutory authority to carry out such directives to enable districts to have the necessary tools to protect and preserve the groundwater resources with their boundaries. The District will use the regulatory tools it has been given by Chapter 36 to properly address the groundwater issues within its boundaries, including groundwater supply and groundwater quality. While using its regulatory tools to accomplish the District's statutory objectives, the District will give strong consideration to the economic and cultural activities which occur within the District and which rely upon the continued use of groundwater.

Section 36.1072 of the Water Code requires the District to adopt rules necessary to implement this management plan. The section also prohibits the District from adopting all but a handful of rules until the management plan is approved. Once this management plan is approved, the District will adopt rules, which the public will be able to download on the District's website at [www.brushcountrygcd.com](http://www.brushcountrygcd.com).

One of the District's objectives is to lessen the interference between wells. The District may establish spacing rules which require new wells to be spaced a certain distance from existing or previously permitted wells. The District will follow the statutory exemption from spacing requirements such as for wells drilled under a permit issued by the Railroad Commission or for production from wells to the extent withdrawals are required for mining activities. Another way the District can work to lessen interference between wells is to require existing and new wells not otherwise exempted from registration, to register with the District. This requirement will allow the District to have information on the location and proximity of all wells within its boundaries.

The District intends to help prevent the contamination of groundwater from abandoned and deteriorated water wells. Wells that have been abandoned or have not been properly maintained can cause surface contamination to quickly reach the groundwater resources of the District. To address this issue, the District is planning to require that all abandoned, deteriorated, or replaced wells be plugged in compliance with the Water Well Drillers and Pump Installers Rules of the Texas Department of Licensing and Regulation. The District will also require capping of water wells that well owners plan to use at a later date. This will likely help to eliminate waste, prevent pollution, and stop future deterioration of well casing.

The District also plans to use the regulatory tools granted to districts by Chapter 36 to preserve and protect existing and historic users of groundwater within its boundaries. The Texas Legislature gives the District the authority to protect existing users of groundwater, which are those individuals or entities currently invested in and using groundwater or the groundwater resources within the District for a beneficial purpose. The Texas Legislature also provides the authority to preserve historic use by historic users, which are those individuals or entities who used groundwater beneficially in the past. Some uncertainty exists in permitting based upon historic use following the Texas Supreme Court decision in the *Edwards Aquifer Authority v. Day and McDaniel*. To the extent permitted under Chapter 36 and the case law following *EAA v. Day*, the District will strive to protect existing and historic use in accordance with Chapter 36, the District's rules, and the goals and objectives of this Management Plan. One of the tools the District can use to protect existing and historic use of groundwater is to establish a permitting process through the District's rules. Pursuant to legislative authority, including Section 36.113(e) of the Texas Water Code, the District will protect existing use by possibly imposing more restrictive permit conditions on new permit applications and increased use by historic users. In protecting existing users, the District may establish limitations that apply to all subsequent new permit applications and increased use by historic users, regardless of type or location of use, which bear a reasonable relationship to this Management Plan and are reasonably necessary to protect existing use. In accordance with Section 36.116(b) of the Texas Water Code, the District may also preserve historic use when developing and implementing rules limiting groundwater production to the maximum extent practicable and consistent with this Management Plan.

The District intends to protect existing and historic users of groundwater by creating a monitoring well network for the District. The monitoring well network will enable the District to determine if new wells should be permitted based on the water levels indicated in various parts of the District's monitoring well network.

In order to better manage the groundwater resources within the District's boundaries, the District may establish management zones and adopt different rules for each subdivision of an aquifer or geologic strata located in whole or in part within the boundaries of the District or each geographic area overlying a subdivision of an aquifer located in whole or in part within the boundaries of the District. As previously stated, the District will also adopt rules to regulate groundwater withdrawals by means of spacing and/or production limits. The factors to be considered in deciding whether to grant or deny a permit or limit groundwater withdrawals should include those factors set forth in the District's Enabling Act, Chapter 36 of the Texas Water Code, and the District's rules.

Finally, the District may develop rules that address production of groundwater by:

- A. setting production limits on wells;
- B. limiting the amount of water produced based on acreage or tract size;
- C. limiting the amount of water that may be produced from a defined number of acres assigned to an authorized well site;
- D. limiting the maximum amount of water that may be produced on the basis of acre-feet per acre or gallons per minute per well site per acre;
- E. managed depletion; or
- F. any combination of the methods listed above in Paragraphs (A) through (E).

**VIII. ACTIONS, PROCEDURES, PERFORMANCE AND AVOIDANCE FOR PLAN IMPLEMENTATION — 31 TAC 356.5 (a)(4), 31 TAC 356.6 (a)(3) and Tex. Water Code §36.1071(e)(2)**

The District will use its Management Plan to direct the District's efforts to conserve and protect the groundwater resources within its jurisdiction. The District will make certain that all rules development, regulatory activities, and planning are consistent with this Management Plan.

Section 36.108 of the Texas Water Code requires the District to work and plan with other groundwater conservation districts in GMA-16. The District will use this Management Plan as part of its cooperation efforts with the neighboring groundwater conservation districts.

The rules for the District will be developed in coordination with the management goals and technical information provided in this Management Plan. The District's rules will be consistent with the provisions of this Management Plan and Chapter 36 of the Texas Water Code. The enforcement of the rules will be driven by the hydrogeological and technical information available to the District, including the information provided in this Management Plan. As stated earlier, after approval of this management plan, the District will propose and adopt its rules, which the public may view and download at [www.brushcountrygcd.com](http://www.brushcountrygcd.com).

The District intends to propose rules covering the following:

Well Registration, Drilling Permits, and Operating Permits

The District will follow the statutory exemptions from permitting and registration of wells as provided under Chapter 36 and will determine whether other categories of wells will also be exempt. The District will establish permitting requirements for non-exempt wells and whether to limit production as authorized under Chapter 36.

Fees

As authorized by Texas Water Code 36.205, the District will consider whether fees will be charged for activities associated with water wells, such as registration fees, application fees, production fees, or export fees.

### Well Construction and Completion Standards

The District will adopt well construction and completion standards, at a minimum requiring that construction of all wells and installation of all pumps located within the District shall be in accordance with the Texas Occupations Code Chapter 1901, “Water Well Drillers” and Chapter 1902, “Water Well Pump Installers.” as amended, and the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code, Chapter 76, as amended. The District will determine based on the hydrogeology of the area, whether additional standards are required.

### Reporting and Recordkeeping

The District will consider various recordkeeping and recording requirements such as submittal of well drilling and completion reports, pump reports, annual water use reports, or other reports that may be helpful to the District in fulfilling its statutory duties.

### Plugging, Sealing, and Capping of Wells

The District will adopt at a minimum the requirement that a deteriorated or abandoned well shall be plugged in accordance with Texas Department of Licensing and Regulation, 16 Texas Administrative Code, Chapter 76, as amended. The rules will also address circumstances requiring the sealing and capping of wells.

### Well Spacing

The District will adopt at a minimum the spacing requirements of the Water Well Driller’s rules, 16 Texas Administrative Code Section 76.1000, as amended. Based on District-specific conditions, the District may decide to impose additional spacing requirements.

### Enforcement

The District will adopt rules setting out its enforcement authority and policies, as authorized by Texas Water Code §§ 36.101 and 36.102. The rules will authorize entry onto property as authorized by Texas Water Code § 36.123. The rules will establish the process by which the District will undertake an enforcement action and the steps to be followed.

### Procedural Rules

The District will adopt procedural rules establishing required notice and hearing for various District activities such as approval of the management plan and budget; approval of rules, including emergency rules; actions on drilling and operating permits; permit actions requiring a contested case hearing; and enforcement matters.

### Prohibition Against Waste

The District will adopt a rule prohibiting waste of groundwater.

### Drought Management

The District may adopt rules to address drought conditions.

### Exemptions

The District will adopt rules that, at a minimum, exempt from permitting the activities described under Texas Water Code § 36.117.

## **IX. METHODOLOGY FOR TRACKING PROGRESS TO ACHIEVE THE DISTRICT'S MANAGEMENT GOALS — 31 TAC §356.5 (a)(6)**

To track its progress in achieving its management goals and objectives, the District will prepare an annual report (“Annual Report”) to be submitted to and reviewed by its Board of Directors. The Annual Report will be submitted to the Board of Directors no later than 90 days following the end of the District's fiscal year. The Annual Report will address the District's performance regarding each of the management goals and objectives in this plan for the previous fiscal year. Completion of the Annual Report will begin following the end of fiscal year 2012. The District will maintain a copy of the Annual Report for public review in its records after the Annual Report has been adopted by the Board of Directors.

## **X. DISTRICT GOALS, MANAGEMENT OBJECTIVES AND PERFORMANCE STANDARDS — 31 TAC §356.5**

Each of the District's goals, objectives, and performance standards are addressed as follows:

### **A. Providing the Most Efficient Use of Groundwater - 31 TAC § 356.5 (a)(1)(A) and Tex. Water Code § 36.1071(a)(1)**

1. *Objective:* Beginning in 2012, the District will require the registration of wells not otherwise exempt from registration within the District's boundaries each year. Each year the District will locate and register a minimum of one well.

*Performance Standard:* The number of new and existing wells registered with the District will be provided in the Annual Report for each fiscal year.

2. *Objective:* The District will require permits for all groundwater use considered non-exempt within District boundaries each year. The District will establish a permitting process in the District's rules.

*Performance Standard:* The District will accept and process permit applications for all non-exempt groundwater use pursuant to the permitting process described in the District Rules each year. The Annual

Report for each year will contain a summary of the number of applications submitted to the District requesting authorization for the permitted use of groundwater and the number and type of permits issued by the District.

B. Controlling and Preventing Waste of Groundwater - 31TAC § 356.5 (a)(1)(B) and Tex. Water Code § 36.1071(a)(2)

1. Objective: Each year the District will provide information to the public on reducing and preventing the waste of groundwater. The District will use one of the methods set forth below to provide information to the public at least once during each fiscal year:

- a. Offer public presentations on groundwater issues, including waste prevention;
- b. Sponsor an educational program or course;
- c. Distribute literature packets or brochures;
- d. Provide information on the District's web site addressing the prevention of waste; or
- e. Submit newspaper articles to the newspapers of general circulation within the District for publication;

Performance Standard: The Annual Report will include a summary of the District's efforts during the previous year to provide information to the public on the reducing and preventing the waste of groundwater.

2. Objective: The District will prohibit waste as defined by Chapter 36 of the Texas Water Code within its boundaries and will implement this prohibition through its rules.

Performance Standard: The District's Annual Report will include a summary of the number of well owners who violated the District's prohibition on waste and any action taken by the District.

C. Controlling and Preventing Subsidence – 31 TAC § 356.5 (a)(1)(C) and Tex. Water Code §36.1071(a)(3)

1. Objective: The District will monitor for any signs of subsidence within its boundaries.

Performance Standard: The District will indicate in its Annual Report that it has monitored for any signs of subsidence and, if evidence of subsidence is found, shall provide an explanation in its Annual Report.

2. Objective: The District will stay abreast of subsidence issues within the GMA-16 area.

Performance Standard: The District will indicate in its Annual Report that it has stayed abreast of subsidence issues within the GMA-16 area and will provide a list of those groundwater conservation districts or other entities that have experienced any new evidence of subsidence within the previous year.

D. Addressing Conjunctive Surface Water Management Issues – 31 TAC §356.5 (a)(1)(D) and Tex. Water Code §36.1071(a)(4)

1. Objective: The District will participate in the regional water planning process by sending a District representative to attend at least one meeting of the Rio Grande Regional Water Planning Group (“Region M”) and one meeting of the Coastal Bend Regional Water Planning Group (“Region N”) each year. The District will coordinate with the Nueces River Authority, a member of Region N, during attendance of the Region N Meeting.

Performance Standard: Attendance at the Region M meeting and the Region N meeting by a representative of the District will be included in the Annual Report and will provide the dates of attendance.

E. Addressing Natural Resource Issues which Impact the Use and Availability of Groundwater, and which are Impacted by the Use of Groundwater - 31TAC §356.5 (a)(1)(E); and Tex. Water Code §36.1071(a)(5)

1. Objective: Each year, the District will collect at least ten water level measurements from District monitor wells. The ten water level measurements will be taken from 3 wells in Brooks County, 3 wells in Jim Hogg County, 3 wells in Jim Wells County, and 1 well in Hidalgo County.

Performance Standard: Beginning in 2012, the District's Annual Report will include a description of the number of wells measured and the monitoring results of each well measured.



2. Objective: The District will monitor whether there are any significant impacts to wildlife common to the District that rely on the District's groundwater resources.

Performance Standard: The District's Annual Report will indicate that the District monitored any impacts to wildlife and, if any significant impacts are found, will describe such impacts in its Annual Report.

F. Addressing Drought Conditions - 31TAC §356.5 (a)(1)(F) and Tex. Water Code §36.1071(a)(6)

1. Objective: The District will access at least one updated Palmer Drought Severity Index ("PDSI") map each quarter and will check for updates to the Drought Preparedness Council Situation Report ("Situation Report") posted on the following website: <http://www.txdps.state.tx.us/dem/sitrepindex.htm>. The District also will access useful drought information on the TWDB website: <http://www.twdb.state.tx.us/data/drought>.

Performance Standard: The District will include the PDSI maps and Situation Reports it has reviewed in its Annual Report each year and will include a discussion of the current drought status of the District.

G. Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, Precipitation Enhancement, or Brush Control, where Appropriate and Cost Effective - 31TAC §356.5 (a)(1)(G) and TWC §36.1071(a)(7).

1. Objective: The District will provide information to the public on water conservation at least once each fiscal year by one of the following methods:
  - a. Distribute literature packets or brochures within the District;
  - b. Provide information to the public on the District's web site;
  - c. Conduct public presentations;
  - d. Submit newspaper articles to newspapers of general circulation in the District for publication; or
  - e. Present exhibits at local public events;

Performance Standard: The District's Annual Report will provide a description of the District efforts and a copy of any information provided to the public during the previous year to promote conservation.

2. Objective: The District will provide information to the public by providing literature at the District's office, once the District establishes an office.

Performance Standard: The District's Annual Report will include a copy of the information provided to the public at the District's office.

3. Objective: The District will promote rainwater harvesting by providing information on rainwater harvesting on the District's web site at least once each year, once a website is established for the District.

Performance Standard: The District's Annual Report will include a copy of the information on rainwater harvesting which has been provided on the District web site within the previous fiscal year.

4. Objective: The District will inform the public about the brush control activities within the District's boundaries and the benefits of brush control by providing literature at the District's office, once the District establishes an office.

Performance Standard: The District's Annual Report will include an update on the brush control activities within the District's boundaries and will provide a copy of the literature provided to the public at the District's office.

5. Precipitation enhancement is not an appropriate goal for the District at this time since there is not an operational precipitation enhancement program in the area or in other groundwater conservation districts in the vicinity of the District. The District recognizes the significant expense associated with precipitation enhancement programs and is currently unable to develop a precipitation enhancement program for this reason.

6. Objective: The District will begin to identify recharge areas within the District.

Performance Standard: Any recharge areas identified during the year will be discussed in the District's Annual Report.

- H. Addressing in a Quantitative Manner the Desired Future Conditions of the Groundwater Resources - 31TAC §356.5(a)(1)(H) and Tex. Water Code § 36.1071(a)(8).

1. Objective: Each year, the District will collect at least ten water level measurements from District monitor wells. The ten water level measurements will be taken from 3 wells in Brooks County, 3 wells in Jim Hogg County, 3 wells in Jim Wells County, and 1 well in Hidalgo County.

Performance Standard: Each year the District will post the water level measurement collected and identify the aquifer from which the measurement is taken in the District's Annual Report and website. The District will include a discussion of the change in water level in each aquifer as compared to previous years' water level.

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10. GAM Run 12-013: Brush Country GCD Management Plan by Shirley C. Wade, Ph.D., P.G., Texas Water Development Board, July 20, 2012.

## **APPENDIX LIST**

- Appendix A Brush Country Groundwater Conservation District Enabling Act
- Appendix B Map of Brush Country Groundwater Conservation District
- Appendix C Notices of Public Hearings and Meetings of Brush Country Groundwater Conservation District
- Appendix D Resolution of Brush Country Groundwater Conservation District Adopting Groundwater Management Plan
- Appendix E Sample Letter and Entities Notified to Evidence Coordination with Surface Water Management Entities
- Appendix F Resolution Adopting DFC
- Appendix G Estimated Historical Water Use
- Appendix H GAM Run 12-013: Brush Country GCD Management Plan
- Appendix I Projected Water Supply Needs
- Appendix J Projected Water Management Strategies

## **APPENDIX A**

### SPECIAL DISTRICT LOCAL LAWS CODE

#### TITLE 6. WATER AND WASTEWATER

##### SUBTITLE H. DISTRICTS GOVERNING GROUNDWATER

For contingent expiration of this chapter, see Section 8852.003.

#### CHAPTER 8852. BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT

##### SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8852.001. DEFINITIONS. In this chapter:

- (1) “Board” means the board of directors of the district.
- (2) “Director” means a member of the board.
- (3) “District” means the Brush Country Groundwater Conservation District.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.002. NATURE OF DISTRICT. The district is a groundwater conservation district created under and essential to accomplish the purposes of Section 59, Article XVI, Texas Constitution.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.003. CONFIRMATION ELECTION REQUIRED. If the creation of the district is not confirmed in at least one of the territories described by Section 8852.023 at a confirmation election held before September 1, 2011:

- (1) the district is dissolved on September 1, 2011, except that:
  - (A) any debts incurred shall be paid;
  - (B) any assets that remain after the payment of debts shall be transferred in equal amounts to Jim Hogg, Brooks, Hidalgo, and

- Jim Wells Counties; and
- (C) the organization of the district shall be maintained until all debts are paid and remaining assets are transferred; and
- (2) this chapter expires September 1, 2013.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.004. INITIAL DISTRICT TERRITORY.

- (a) The district is initially composed of the territory described by Section 2 of the Act creating this chapter.
- (b) The boundaries described in Section 2 of the Act creating this chapter form a closure. A mistake made in describing the district's boundaries in the legislative process does not affect the district's:
  - (1) organization, existence, or validity;
  - (2) right to issue any type of bond for the purposes for which the district is created or to pay the principal of and interest on a bond;
  - (3) right to impose an assessment or tax; or
  - (4) legality or operation.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.005. CONSTRUCTION OF CHAPTER. This chapter shall be liberally construed to achieve the legislative intent and purposes of Chapter 36, Water Code. A power granted by Chapter 36, Water Code, or this chapter shall be broadly interpreted to achieve that intent and those purposes.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

## SUBCHAPTER B. DISTRICT CREATION

### Sec. 8852.021. TEMPORARY DIRECTORS.

- (a) The temporary board consists of:
  - (1) David Grall;
  - (2) Mauro Garcia;
  - (3) Robert Scott;
  - (4) A. C. Jones IV;
  - (5) Mario Martinez;
  - (6) Israel Hinojosa;
  - (7) a person appointed by the commissioners courts of Brooks and Jim Hogg Counties within 60 days of the effective date of this Act;
  - (8) Jesse Howell;
  - (9) Pearson Knolle; and
  - (10) Lawrence Cornelius.
- (b) If there is a vacancy on the temporary board, the remaining temporary directors shall select a qualified person to fill the vacancy.
- (c) Unless the temporary director's term expires under Subsection (d), a temporary director serves until the earlier of:
  - (1) the date the temporary director becomes an initial permanent director under Section 8852.024; or
  - (2) the date this chapter expires under Section 8852.003.
- (d) The following temporary directors' terms expire on the date of the canvass of the election to confirm the creation of the district:
  - (1) David Grall and Mauro Garcia, if the voters in the territory described by Section 8852.023(a)(3) vote not to confirm the creation of the district;
  - (2) Robert Scott, if the voters in the territory described by Section 8852.023(a)(1) vote not to confirm the creation of the district;
  - (3) A. C. Jones IV and Mario Martinez, if the voters in the territory described by Section 8852.023(a)(5) vote not to confirm the creation of the district;
  - (4) Israel Hinojosa, if the voters in the territory described by Section 8852.023(a)(4) vote not to confirm the creation of the district;



- (5) a person appointed by the commissioners courts of Brooks and Jim Hogg Counties, if the creation of the district is confirmed by voters of none of the territories described by Section 8852.023;
- (6) Jesse Howell and Pearson Knolle, if the voters in the territory described by Section 8852.023(a)(6) vote not to confirm the creation of the district; and
- (7) Lawrence Cornelius, if the voters in the territory described by Section 8852.023(a)(2) vote not to confirm the creation of the district.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.022. ORGANIZATIONAL MEETING OF TEMPORARY DIRECTORS. As soon as practicable after all the temporary directors have qualified under Section 36.055, Water Code, a majority of the temporary directors shall convene the organizational meeting of the district at a location within the district agreeable to a majority of the directors. If an agreement on location cannot be reached, the organizational meeting shall be at the Brooks County Courthouse.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.023. CONFIRMATION ELECTION.

- (a) The temporary board shall hold an election in each of the following territories in the district to confirm the creation of the district and the imposition of a maintenance tax:
  - (1) the territory in the corporate limits of the city of Falfurrias as of January 1, 2009;
  - (2) the territory in the corporate limits of the city of Alice as of January 1, 2009;
  - (3) the territory:
    - (A) in Brooks County that, as of January 1, 2009, is:
      - (i) outside the corporate limits of the city of Falfurrias;
      - and

- (ii) not in the Kenedy County Groundwater Conservation District; and
    - (B) in Hidalgo County that is:
      - (i) described by a metes and bounds description in Section 2 of the Act creating this chapter; and
      - (ii) not in the Kenedy County Groundwater Conservation District as of January 1, 2009;
  - (4) the territory in the certificated retail water service area of the Jim Hogg County Water Control and Improvement District No. 2 as of January 1, 2009;
  - (5) the territory in Jim Hogg County that is outside the certificated retail water service area of the Jim Hogg County Water Control and Improvement District No. 2 as of January 1, 2009; and
  - (6) the territory in Jim Wells County that, as of January 1, 2009, is:
    - (A) outside the corporate limits of the city of Alice; and
    - (B) not in the Kenedy County Groundwater Conservation District.
- (b) Section 41.001(a), Election Code, does not apply to a confirmation election held as provided by this section.
  - (c) Except as provided by this section, an election under this section must be conducted as provided by Sections 36.017(b), (c), and (e), Water Code, and the Election Code.
  - (d) The ballot for the election must be printed to provide for voting for or against the proposition: "The creation of the Brush Country Groundwater Conservation District and the levy of an ad valorem tax in the district at a rate not to exceed three cents for each \$100 of assessed valuation."
  - (e) If the majority of voters in a territory described by Subsection (a) voting at an election held under this section vote to confirm the creation of the district, that territory is included in the district. If the majority of voters in a territory described by Subsection (a) voting at an election held under this section vote not to confirm the creation of the district, that territory is excluded from the district.
  - (f) If the majority of voters in any of the territories described by Subsection (a) voting at an election held under this section vote not to confirm the creation of the district, the temporary board or any successor board may hold a subsequent

confirmation election in that territory.

- (g) The district may not impose a maintenance tax unless the tax is confirmed under this section.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.024. INITIAL PERMANENT DIRECTORS.

- (a) If the creation of the district is confirmed at an election held under Section 8852.023 in one or more territories in the district, each temporary director who represents a territory that is included in the district becomes an initial permanent director of the district.
- (b) The initial permanent directors shall draw lots to determine which directors serve a term expiring on June 1 of the first even-numbered year after the confirmation election and which directors serve a term expiring on June 1 of the next even-numbered year.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.025. GIFTS AND GRANTS. The temporary board may solicit and accept gifts and grants, including services, on the district's behalf from any public or private source to provide revenue for the district before a confirmation election is held under Section 8852.023.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.026. RIGHT OF CERTAIN LANDOWNERS TO WITHDRAW FROM DISTRICT. A person who owns a tract of land in Brooks or Hidalgo County that adjoins the boundaries of the Kenedy County Groundwater Conservation District as of the effective date of the Act creating this chapter may petition the Kenedy County Groundwater Conservation District for annexation into that district. Notwithstanding any other law, the Kenedy County Groundwater Conservation District may annex territory described by a petition under this section. Territory annexed by the Kenedy County Groundwater Conservation District under this section not later than January 1, 2010, is disannexed at that time from the district created by this chapter.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.027. LIMITATION OF POWERS OF TEMPORARY BOARD.

- (a) The temporary board may exercise only the powers described by Sections 8852.022, 8852.023, and 8852.025.
- (b) Except as required by a law or rule relating to participation in a groundwater management area in which the district is located, the temporary board may not:
  - (1) adopt rules, including rules regarding wells; or
  - (2) develop a draft or final management plan.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

SUBCHAPTER C. BOARD OF DIRECTORS

Sec. 8852.051. APPOINTMENT OF DIRECTORS; TERMS.

- (a) Not later than June 1 of each even-numbered year, the Commissioners Courts of Brooks County, Jim Hogg County, and Jim Wells County shall appoint directors as follows:
  - (1) the Commissioners Court of Brooks County shall appoint:
    - (A) one director who represents the municipal interests of the territory described by Section 8852.023(a)(1), if the territory described by Section 8852.023(a)(1) is included in the district; and
    - (B) two directors who represent the agricultural interests of the territory described by Sections 8852.023(a)(3)(A) and (B), if the territory described by Sections 8852.023(a)(3)(A) and (B) is included in the district;
  - (2) the Commissioners Court of Jim Hogg County shall appoint:
    - (A) one director who represents the interests of Jim Hogg County in the territory described by Section 8852.023(a)(4), if the territory described by Section 8852.023(a)(4) is included in the district; and
    - (B) two directors who represent the agricultural interests of the

territory described by Section 8852.023(a)(5), if the territory described by Section 8852.023(a)(5) is included in the district;

- (3) the Commissioners Court of Jim Wells County shall appoint:
    - (A) one director who represents the municipal interests of the territory described by Section 8852.023(a)(2), if the territory described by Section 8852.023(a)(2) is included in the district; and
    - (B) two directors who represent the agricultural interests of the territory described by Section 8852.023(a)(6), if the territory described by Section 8852.023(a)(6) is included in the district; and
  - (4) the Commissioners Courts of Brooks County and Jim Hogg County jointly shall appoint one director to represent the industrial and mining interests of Jim Hogg and Brooks Counties.
- (b) Directors serve staggered four-year terms that expire on June 1 of an even-numbered year.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.052. ELIGIBILITY.

- (a) A director is not disqualified from service because the director is an employee, manager, director of the board, or officer of a groundwater producer that is or may be regulated by the district.
- (b) A temporary director whose term of office expires under Section 8852.021(d) is not eligible for appointment as a director.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.053. COMPENSATION; REIMBURSEMENT.

- (a) Notwithstanding Section 36.060, Water Code, a director is not entitled to receive compensation for performing the duties of a director.
- (b) A director is entitled to receive reimbursement for the director's reasonable

expenses incurred while engaging in activities on behalf of the district in accordance with Sections 36.060(b) and (c), Water Code.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.054. VACANCY. A vacancy in the office of director shall be filled by appointment of the board in a manner consistent with the representational requirements of Section 8852.051. The appointed director serves only for the remainder of the unexpired term to which the director was appointed.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

#### SUBCHAPTER D. POWERS AND DUTIES

Sec. 8852.101. GROUNDWATER CONSERVATION DISTRICT POWERS AND DUTIES. Except as otherwise provided by this chapter, the district has the powers and duties provided by the general law of this state, including Chapter 36, Water Code, and Section 59, Article XVI, Texas Constitution, applicable to groundwater conservation districts.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.102. CONTRACTS. The district may enter into a contract with any person, public or private, for any purpose authorized by law.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.103. EXEMPTIONS FROM PERMIT REQUIREMENTS.

- (a) Section 36.117, Water Code, applies to the district except that for the purposes of applying that section to the district, "domestic use" and "livestock use" have the meanings assigned by Subsection (b).
- (b) In this section:
  - (1) "Domestic use":
    - (A) means the use of groundwater by an individual or a household to support domestic activities, including the use

of groundwater for:

- (i) drinking, washing, or culinary purposes;
- (ii) irrigating a lawn or a family garden or orchard;
- (iii) watering domestic animals; or
- (iv) water recreation, including aquatic and wildlife enjoyment; and

(B) does not include the use of water:

- (i) to support an activity for which consideration is given or received or for which the product of the activity is sold; or
- (ii) by or for a public water system.

- (2) "Livestock use" means the use of groundwater for the open-range watering of livestock, exotic livestock, game animals, or fur-bearing animals. For purposes of this subdivision, "livestock" and "exotic livestock" have the meanings assigned by Sections 1.003 and 142.001, Agriculture Code, respectively, and "game animal" and "fur-bearing animal" have the meanings assigned by Sections 63.001 and 71.001, Parks and Wildlife Code, respectively. Livestock use does not include use by or for a public water system.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.104. EFFECTS OF TRANSFER.

- (a) In reviewing a proposed transfer of groundwater out of the district in accordance with Section 36.122(f), Water Code, the district shall determine whether the proposed transfer would have a negative effect on:
- (1) the availability of water in the district;
  - (2) the conditions of any aquifer that overlies the district;
  - (3) subsidence in the district;
  - (4) existing permit holders or other groundwater users in the district; and
  - (5) any applicable approved regional water plan or certified district management plan.
- (b) If the district determines under Subsection (a) that the transfer would have a

negative effect, the district may, in addition to the conditions authorized by Section 36.122, Water Code, impose other requirements or limitations on the permit that are designed to minimize the effect.

- (c) Sections 36.122(c), (i), and (j), Water Code, do not apply to a requirement or limitation imposed under this section.
- (d) The district may impose a fee or surcharge as an export fee. The restrictions under Section 36.122(e), Water Code, do not apply to a fee or surcharge imposed under this subsection.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.105. APPLICABILITY OF DISTRICT REGULATIONS. Groundwater regulations adopted by the district under this chapter apply to all persons except as exempted under Section 36.117, Water Code, or this chapter.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.106. NO EMINENT DOMAIN POWER. The district may not exercise the power of eminent domain.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.107. LANDOWNERS' RIGHTS. The rights of landowners and their lessees and assigns in groundwater in the district are recognized. Nothing in this chapter shall be construed to deprive or divest the owners or their lessees and assigns of their rights, subject to district rules.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.108. LIMITATION ON RULEMAKING POWER NOT APPLICABLE. Section 36.121, Water Code, does not apply to the district.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.



## SUBCHAPTER E. GENERAL FINANCIAL PROVISIONS

Sec. 8852.151. REVENUE. To pay the maintenance and operating costs of the district and to pay any bonds or notes issued by the district, the district may impose ad valorem taxes at a rate not to exceed three cents on each \$100 of assessed valuation of taxable property in the district.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.152. GRANTS, GIFTS, AND DONATIONS. The district may solicit and accept grants, gifts, and donations from any public or private source.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

## SUBCHAPTER F. DISSOLUTION

Sec. 8852.201. SUBCHAPTER CUMULATIVE. The provisions of this subchapter are cumulative of the provisions of Subchapter I, Chapter 36, Water Code.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.202. DISSOLUTION BY ELECTION.

- (a) After January 1, 2016, the board shall order an election on the question of dissolving the district if the board receives a petition requesting that an election be held for that purpose that is signed by at least 15 percent of the district's registered voters.
- (b) Not later than the 30th day after the date the board receives the petition, the directors shall:
  - (1) validate the signatures on the petition; and
  - (2) if the signatures are validated, order an election on the next uniform election date under Section 41.001, Election Code.
- (c) The order calling the election must state the nature of the election, including the proposition that is to appear on the ballot.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.203. NOTICE OF ELECTION. Notice of an election under this subchapter must be provided by posting a copy of the order calling the election in at least one conspicuous place for at least 10 days before the day of the election at the county courthouse in Brooks County, Jim Hogg County, Jim Wells County, and Hidalgo County.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.204. BALLOT. The ballot for an election under this subchapter must be printed to permit voting for or against the proposition: "The dissolution of the Brush Country Groundwater Conservation District."

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

Sec. 8852.205. ELECTION RESULTS; DISPOSITION OF ASSETS. If a majority of the votes in an election under this subchapter favor dissolution:

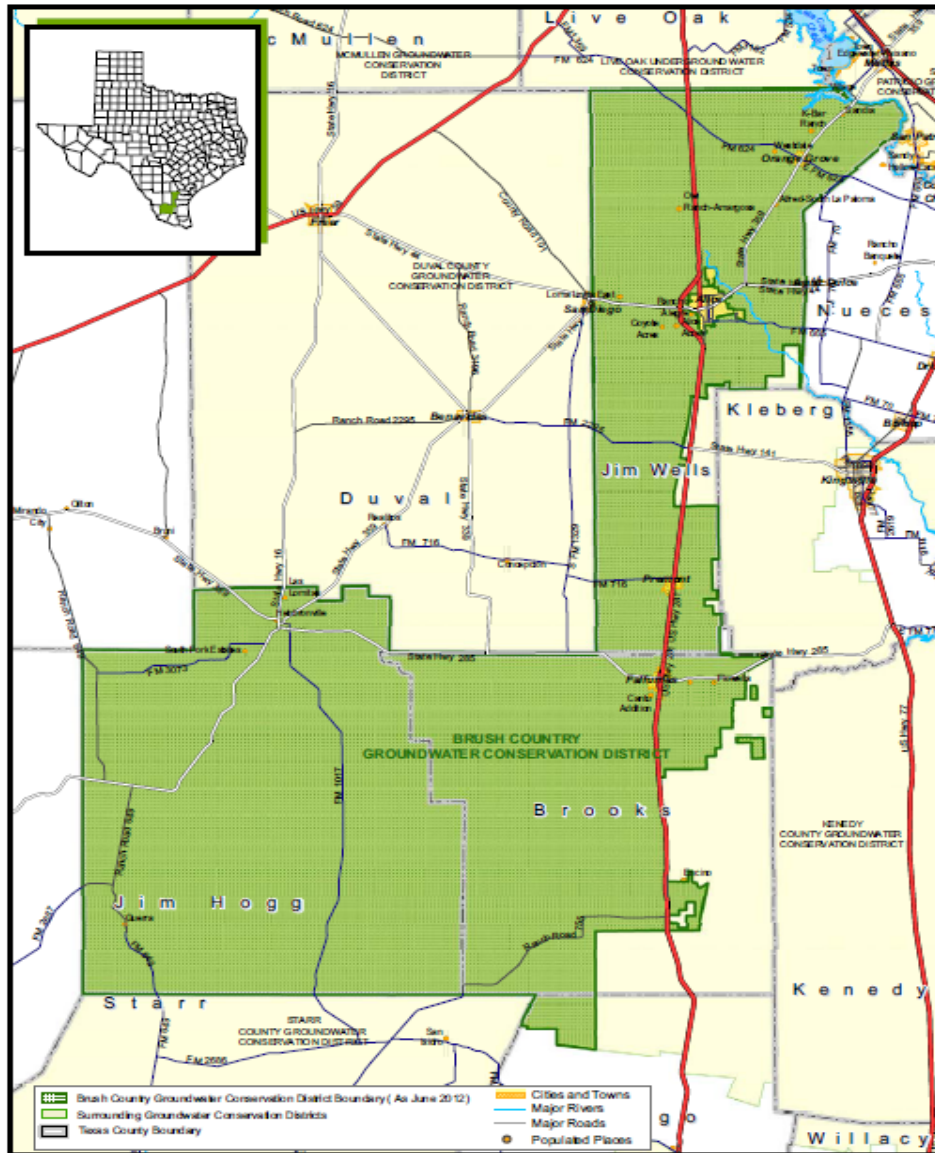
- (1) the board shall find that the district is dissolved; and
- (2) Section 36.310, Water Code, applies for the purpose of disposition of the district's assets.

Added by Acts 2009, 81st Leg., R.S., Ch. [1396](#), Sec. 1, eff. June 19, 2009.

## **APPENDIX B**

### **MAP OF BRUSH COUNTRY GCD**

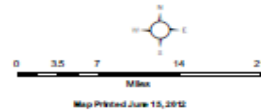
## Brush Country Groundwater Conservation District, Texas



### Texas Commission on Environmental Quality



This map was generated by the Groundwater Planning & Assessment Team of the Texas Commission on Environmental Quality (TCEQ) for informational purposes and was not prepared for and not be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. Users of this information should consult the Brush Country Groundwater Conservation District to ascertain the usability of the map. For more information about this map data sources, contact Marcia Workman, GIS Analyst TCEQ -Water Availability Division at 512 239-4510.



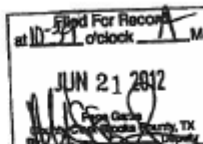
## APPENDIX C

### NOTICES OF PUBLIC HEARINGS AND MEETINGS OF BRUSH COUNTRY GCD

**NOTICE OF MEETING  
OF THE  
BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT  
at the  
Brooks County Annex Courtroom in Falfurrias  
408 West Travis Street  
Falfurrias, Texas**

**Monday June 25, 2012 at 2:00 pm**

**Public Meeting**



1. Call to order, declare meeting open to the public, and take roll.
2. Discuss, consider, and act on minutes of the May 22, 2012 Board Meeting.
3. Discuss, consider, and act on Sworn Statement, Oath of Office and Approval of Bond for New and Re-appointed Brush Country GCD Directors
4. Discuss, consider, and act on Election of Brush Country GCD Officers
5. Discuss, consider, and act on General Manager's Report.
  - a. Starr County GCD June 1st Meeting
  - b. Report on Kenedy Co GCD Meetings
  - c. Jim Wells County Crop Day Presentation on June 5, 2012
  - d. Drought Emergency Planning Workshop at Brownsville Event Center, Brownsville Tx on June 14, 2012 at 4:00 -7:00 pm
  - e. BCGCD Well Database Followup
6. Discuss, consider, and act on Developing 2013 Budget
7. Discuss, consider, and act on GMA 16 Issues
  - a. Report on GMA 16 Meeting held on June 21, 2012
8. Discuss, consider and act on development of District Rules and Management Plan, including technical information requested from Texas Water Development Board.
  - a. BCGCD Draft groundwater management plan
9. Discuss, consider, and act on Financial Statement Report
10. Discuss, consider, and act on payment of bills
11. Discuss, consider, and act on Distribution of tax revenues by collecting entities including matter of collecting taxes from portion of District within Hidalgo County and District tax assessor collector

12. Discuss, consider, and act on Hiring a Part Time Secretary
13. Review and discuss correspondence received.
  - a. Hidalgo County Appraisal District 2013 Proposed 2013 Budget
  - b. Jim Hogg County Appraisal District Proposed 2013 Budget
  - c. Brooks County Appraisal District Proposed 2013 Budget
  - d. Jim Wells County Appraisal District estimated 2012 tax values
  - e. Mestena Monthly Water Usage Report
14. Discuss, consider, and act renewal of BCGCD Office Space Lease with Brooks County
15. Discuss, consider, and act on date and time for next meeting of Board of Directors
16. Discuss, consider, and act on new business for next meeting agenda
17. Public comment
18. Adjourn.

The above agenda schedule represents an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (361) 325 5093 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Brush Country Groundwater Conservation District Board may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§ 551.071); deliberation regarding real property (§ 551.072); deliberation regarding prospective gift (§ 551.073); personnel matters (§ 551.074); and deliberation regarding security devices (§ 551.076). Any subject discussed in executive session may be subject to action during an open meeting.

**S.O.S. Acknowledgment of Receipt**

From: [laison@sos.state.tx.us](mailto:laison@sos.state.tx.us)  
Sent: Wed 6/20/12 2:37 PM  
To: [fsaenz641@hotmail.com](mailto:fsaenz641@hotmail.com)

Agency: Brush Country Groundwater Conservation District  
Liaison: Felix Saenz

Acknowledgment of Receipt

The Office of the Secretary of State has posted  
notice of the following meeting:

Meeting Information:  
Brush Country Groundwater Cons. Dist.  
Board of Directors  
06/25/2012 02:00 PM "TRD# 2012004340"  
Notice posted: 06/20/12 02:37 PM  
Proceed your current open meeting notice at:

[http://info.sos.state.tx.us/pls/pub/pubonquery#onquery.queryTRD?p\\_trd=2012004340](http://info.sos.state.tx.us/pls/pub/pubonquery#onquery.queryTRD?p_trd=2012004340)

<https://coll113.mail.live.com/mail/PrintMessages.aspx?opid=51d4eacfb0f11e1a9fd-00237de3a22a,m...> 6/20/2012

**NOTICE OF MEETING  
OF THE  
BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT**  
at the  
**Brooks County Annex Courtroom in Falfurrias  
408 West Travis Street  
Falfurrias, Texas**

**Tuesday July 24, 2012 at 9:30 am**

**Public Meeting**



1. Call to order, declare meeting open to the public, and take roll.
2. Discuss, consider, and act on minutes of the June 25, 2012 Board Meeting.
3. Discuss, consider, and act on Sworn Statement, Oath of Office and Approval of Bond for New and Re-appointed Brush Country GCD Directors
4. Discuss, consider, and act on approving CPA Byron Blair's Audit of Financial Records for 2011.
5. Discuss, consider, and act on General Manager's Report.
  - a. Report on Investment Officer Training at TAG Meeting
  - b. BCGCD Well Database Followup
  - c. Texas Workforce Commission Quarterly Report
6. Discuss, consider, and act on considering approval of 2013 draft budget recommended by Brush Country GCD Budget Committee.
7. Discuss, consider, and act on GMA 16 Issues
  - a. Next GMA 16 Meeting to be held on July 24, 2012 at Brooks Co. Annex Courtroom
  - b. Review Brush Country GCD's Realistic Pumping Rates
  - c. Review GMA 16 Groundwater Technical and Management Consulting Services' Contract with Bar W
8. Discuss, consider and act on development of District Rules and Management Plan, including technical information requested from Texas Water Development Board.
  - a. Review and act on comments by TWDB and others on BCGCD Draft groundwater management plan
  - b. Review Timeline
9. Discuss, consider, and act on Financial Statement Report
10. Discuss, consider, and act on payment of bills

1

11. Discuss, consider, and act on Distribution of tax revenues by collecting entities including matter of collecting taxes from portion of District within Hidalgo County and District tax assessor collector
12. Discuss, consider, and act on Brush Country's Committee's recommendation for Hiring one or more Part Time or Full Time Employees to conduct administrative and bookkeeping duties and to eliminate or reduce contract bookkeeping services from Martinez, Lockhart & Novasad, P.C.
13. Discuss, consider, and act on Brush Country's Committee's recommendation for leasing/purchasing new printer copier
14. Discuss, consider, and act on Ratifying Brooks County Office Space Lease Negotiated by General Manager
15. Discuss, consider, and act on approving IRS 941 Quarter Report for 2nd Quarter 2012.
16. Discuss, consider, and act on approving paying registration and travel expenses for directors wishing to attend the Water Summit Meeting to be held in Austin, Tx on Aug 28 -30, 2012.
17. Review and discuss correspondence received.
  - a. Rio Grande Regional Water Planning Group Comment Letter on Water Management Plan.
  - b. TCEQ Notice of Proposed Amendment and Renewal of General Permit Authorizing the Discharge of Wastewater in entire State of Texas
  - c. TCEQ Notice of Application of Renewal of Class III Injection Well Permit
  - d. TCEQ Notice of Septic Land Application in Jim Wells County
18. Discuss, consider, and act on date and time for next meeting of Board of Directors
19. Discuss, consider, and act on new business for next meeting agenda
20. Public comment
21. Adjourn.

The above agenda schedule represents an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (361) 325 5093 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Brush Country Groundwater Conservation District Board may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§ 551.071); deliberation regarding real property (§ 551.072); deliberation regarding prospective gift (§ 551.073); personnel matters (§ 551.074); and deliberation regarding security devices (§ 551.076). Any subject discussed in executive session may be subject to action during an open meeting.



**S.O.S. Acknowledgment of Receipt**

From: [lialson@sos.state.tx.us](mailto:lialson@sos.state.tx.us)  
Sent: Fri 7/20/12 1:39 PM  
To: [fsaenz641@hotmail.com](mailto:fsaenz641@hotmail.com)

Agency: Brush Country Groundwater Conservation District  
Liaison: Felix Saenz

Acknowledgment of Receipt

The Office of the Secretary of State has posted notice of the following meeting:

Meeting Information:  
Brush Country GCD  
Board of Directors  
07/24/2012 09:30 AM \*TRD# 2012005157"  
Notice posted: 07/20/12 01:39 PM  
Proofread your current open meeting notice at:

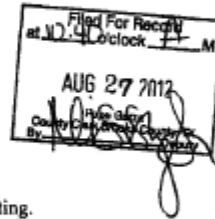
[http://info.sos.state.tx.us/pls/pub/pubomquery?omquery.queryTRD?p\\_crd=2012005157](http://info.sos.state.tx.us/pls/pub/pubomquery?omquery.queryTRD?p_crd=2012005157)

<https://coll113.mail.live.com/mail/PrintMessages.aspx?cpids=3d77e835-d29a-11e1-a743-00237de41b0...> 7/20/2012

**NOTICE OF MEETING  
OF THE  
BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT**  
at the  
**Brooks County Annex Courtroom in Falfurrias  
408 West Travis Street  
Falfurrias, Texas**

**Friday, August 31, 2012 at 9:30 am**

**Public Meeting**



1. Call to order, declare meeting open to the public, and take roll.
2. Discuss, consider, and act on minutes of the July 24, 2012 Board Meeting.
3. Discuss, consider, and act on General Manager's Report.
  - a. Worked with Hidalgo County Judge's Office on developing Intergovernmental local agreement to formally allow Brooks County Tax Collector to collect 2012 BCGCD Taxes;
  - b. Worked with Sidney Vela on developing BCGCD 2012 Effective Tax Rate and Tax Rollover Worksheets;
  - c. Worked with Sam May on amending BCGCD Website to Include Additional Pages to Locate Water Management Plan and District Rules;
  - d. Worked with Alice, Hebbronville, and Falfurrias Newspapers on publishing public notice for adopting water management plan as required by law;
  - e. Follow-up on locating college student for part time secretarial employment;
  - f. Report on Region N Water Planning Group Meeting held 8/14/12; and
  - g. BCGCD Well Database Follow-up.
4. Discuss, consider, and act on re-approval of 2013 budget that is in accordance with Water Code § 36.154.
5. Public Hearing on the Brush Country Groundwater Conservation District's Water Management Plan. The Board will conduct a public hearing at about but no earlier than 9:35 a.m on the proposed management plan. At the close of the Public Hearing, the Board may take action to adopt the management plan.
6. Discuss, consider, and act on adoption of Water Management Plan by Resolution.
7. Discuss, consider and act on developing and publishing the Effective and Rollback Tax Rates for 2012 and on a proposal to adopt the 2012 Tax Rate at a future meeting.
8. Discuss, consider, and act on GMA 16 Issues.
  - a. Next GMA 16 Meeting to be held on September 25, 2012 at Brooks Co. Annex Courtroom.

9. Discuss, consider, and act on Financial Statement Report.
10. Discuss, consider, and act on Jim Hogg County Appraisal District's request for payment of unencumbered fund fee of \$700 for 2012
11. Discuss, consider, and act on payment of bills.
12. Discuss, consider, and act, if necessary, on distribution of tax revenues by collecting entities.
13. Review and discuss correspondence received.
  - a. None
14. Discuss, consider, and act on TWDB Chapter 36 Rulemaking Changes.
15. Discuss, consider, and act on date and time for next meeting of Board of Directors.
16. Discuss, consider, and act on new business for next meeting agenda.
17. Public comment.
18. Adjourn.

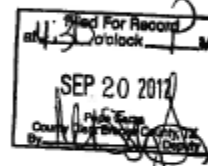
The above agenda schedule represents an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (361) 325 5093 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

At any time during the meeting and in compliance with the Texas Open Meetings Act, Chapter 551, Government Code, Vernon's Texas Codes, Annotated, the Brush Country Groundwater Conservation District Board may meet in executive session on any of the above agenda items or other lawful items for consultation concerning attorney-client matters (§ 551.071); deliberation regarding real property (§ 551.072); deliberation regarding prospective gift (§ 551.073); personnel matters (§ 551.074); and deliberation regarding security devices (§ 551.076). Any subject discussed in executive session may be subject to action during an open meeting.

**NOTICE OF MEETING  
OF THE  
BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT**  
at the  
**Brooks County Annex Courtroom in Falfurrias  
408 West Travis Street  
Falfurrias, Texas**

**Tuesday, September 25, 2012 at 9:30 am**

**Public Meeting**



1. Call to order, declare meeting open to the public, and take roll.
2. Discuss, consider, and act on minutes of the August 31, 2012 Board Meeting.
3. Discuss, consider, and act on General Manager's Report.
  - a. Effective tax and rollback rates letters to Brush Country GCD Tax Accounts located in Hidalgo County
  - b. Worked with Alice, Hebbronville, and Falfurrias Newspapers on publishing public notice on Brush Country GCD's 2012 Tax Rate and Tax Rollback rate as required by law;
  - c. Follow-up on locating college student for part time secretarial employment;
  - d. BCGCD Well Database Follow-up.
4. Discuss, consider, and act on adoption of Water Management Plan by Resolution.
5. Discuss, consider, and act on adoption of 2012 BCGCD tax rate including resolution certifying and adopting tax rate
6. Discuss, consider, and act on identifying schedule and approach for adopting proposed district rules
7. Discuss, consider, and act on GMA 16 Issues.
  - a. GMA 16 Meeting to be held on September 25, 2012 at Brooks Co. Annex Courtroom canceled. Next meeting date undeclared
8. Discuss, consider, and act on Financial Statement Report.
9. Discuss, consider, and act on payment of bills.
10. Discuss, consider, and act, on attendance to Texas Water Law Conference at Austin, Tx on Oct. 31 - Nov. 2, 2012.
11. Discuss, consider, and act, on distribution of tax revenues by collecting entities.

12. Review and discuss correspondence received.
  - a. Revision of Hidalgo County Appraisal District's Budget.
13. Discuss, consider, and act on date and time for next meeting of Board of Directors.
14. Discuss, consider, and act on new business for next meeting agenda.
15. Public comment.
16. Adjourn.

The above agenda schedule represents an estimate of the order for the indicated items and is subject to change at any time. These public meetings are available to all persons regardless of disability. If you require special assistance to attend the meeting, please call (361) 325 5093 at least 24 hours in advance of the meeting to coordinate any special physical access arrangements.

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**AFFIDAVIT OF PUBLICATION**

Before me, a Notary Public, personally appeared Carlos Vela Who, after being by me duly sworn upon oath, deposes and says:

I am the owner / Publisher (title) of the Hebbronville VIEW (newspaper name), a weekly newspaper of Texas, located at Jim Hogg County Texas.

The accompanying printed matter represents a true and correct copy of a Notice of Public Hearing and that such notice was published in the listed Texas newspaper on the date indicated:

Hebbronville VIEW

Newspaper Name

August 8, 2012

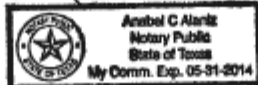
Date of Publication

I hereby swear and affirm that I have personal knowledge of all matters stated herein and that the foregoing statements are true and correct.

Signed: C. Vela

(Title) owner / Publisher

Anabel C. Alaniz



|   |   |  |
|---|---|--|
| <p>Call (361)527-4272/231-0601<br/>         Fax: (361) 527-5271<br/>         Mail: P.O. Box 310,<br/>         Hebbronville, Tx.<br/>         E-Mail: hebview@Gmail.com<br/>         hebview@yahoo.com</p> | <p><b>HEBBRONVILLE<br/>         VIEW<br/>         CLASSIFIEDS</b></p> | <p><b>AS LOW AS<br/>         \$15<br/>         A WEEK!</b></p> |
|---|---|--|

**ATTENTION LONGHORN FANS**  
 Football Season tickets will go on sale Wednesday, August 1st thru Friday, August 17th for all season ticket holders. Remaining season tickets will go on sale to the public on Monday, August 20th on a first come first serve basis. Tickets can be purchased from 8:00 a.m. - 4:00 p.m. at the High School Office. \$30 per seat

*Live Oak Livestock Auction, Inc. Weekly Market Report August 6, 2012*  
**Cattle-1184**  
**Cow & Calf Pairs**  
 Choice 1175-1300  
 Good 1025-1175  
**Bred & Stocker Cows**  
 Choice 1150-1300  
 Good 950-1150  
 Open 625-875  
**Packer Cows**  
 Utility /Boners 76-88  
 Fat Breakers 70-80  
 Canners 56-78  
**Packer Bulls**  
 High Yielding 94-98  
 Medium Yielding 88-94  
 Low Yielding 82-88  
**Steers 200-300 lbs.**  
 Choice 1.88-2.30  
 Good 1.72-1.88  
**Heifers 200-300 lbs.**  
 Choice 1.84-2.18  
 Good 1.64-1.84  
 Steers 300-400 lbs.

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**NEW LISTING**  
 712 N. Frans, 3BR 2bth, LVRM, Den, Play room, lrg kitchen, w/office in back w/bth, 2 lots, fenced w/extras

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 PLEASE GIVE US A CALL. ALL PROPERTIES WILL BE LISTED ON OUR WEBSITE TO GIVE YOUR PROPERTY MAXIMUM EXPOSURE

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 Ranch Land Sales



**Homes for Sale/Residential Properties:**  
 208 E. Carolyn, 3 BR, 3 1/2 BTH, Double kitchen, on 2 1/2 lots  
 810 W. Gruy, 3BR; 2 BTH w/San Roqjn, Furn., W/W, Gazebo

**NOTICE**  
**Jim Hogg County**  
**ISD School Board Election**  
**November 6, 2012**

First Day to file for place on General Election Ballot is Monday, July 23, 2012

Deadline to File an Application for a place on the Ballot is Monday, August 20, 2012

Positions up for election are as follows:  
 Precinct #1, Precinct #2, Two at Large

Applications can be secured at the Superintendent's Office, 210 E. Lucille, Hebbronville, Texas, 78361 361-527-3203

July 23-27, 2012  
 7 a.m.-12 p.m.  
 12:30-5:30 p.m.

July 30-August 17, 2012  
 7:45 a.m.-12 p.m.

3 BR, 2 BTH  
Rd.  
rd. (South Fork  
Flour Bluff area)

9.9 Acres (Masumi's  
E. Kohler (6 Units)  
N. Elm (4 Units)  
xme, w/w, metal bldg  
ity, House (3,000+sq.  
lls Co. w/rr. Well,  
age



**COUNTY -**  
311  
- PRICE

**UNDER CONTRACT**  
8-PRICE REDUCED  
D- ORCHARD  
**HEBRONVILLE**

DE CODORNIZ-

**COUNTY -**  
LIMITS  
OTS - TEXAS

5 - TEXAS STREET  
TMENT/COMMER-

RITO RANCH RD  
**COUNTY -**  
TS, AVE G, BRUNI  
BR/1 BATH

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**NOTICE OF PUBLIC HEARING**

Notice is given that the Brush Country Groundwater Conservation District Board of Directors will hold a public hearing on the adoption of a proposed Management Plan at its regularly scheduled meeting on Friday, August 31, 2012, at the Brooks County Annex Courtroom, 408 West Travis Street, Falfurrias TX 78748. The public meeting will begin at 9:30 a.m. and the public hearing will take place during the public meeting and will begin about but no earlier than 9:35 a.m. . A copy of the proposed Management Plan is available for inspection at the District office 408 West Travis Street, Falfurrias TX 78748 and may be downloaded and copied from the District's website at [www.brush-countrygcd.com](http://www.brush-countrygcd.com) .

**Hebronville VIEW**

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Texas except for the last Wednesday of the year.

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**Hebronville VIEW**

P.O. Box 310, E-Mail: [hebview@gmail.com](mailto:hebview@gmail.com), Call (361) 527-4272 or 231-0601 Fax (361) 527-5271

**Owner/Publisher**

**CARLOS G. VELA**

**STAFF:**

**Advertising Director:**

**Vanessa G. Saez**

**Circulation**

**Victoria Vela**

We welcome letters to the editor and will be printed if they are free of libel and gratuitous abuse. In order to be printed, all letters must be signed and include address and phone number. All letters subject to editing.



FALFURRIAS PUBLISHING CO., INC.



FALFURRIAS FACTS  
Marcelo Silva, Editor/Publisher  
San Juanita Olivarez, Advertising Manager  
mailing address: P.O. BOX 619  
physical address: 219 E. RICE  
FALFURRIAS, TX 78355  
Voice/Fax: 361.325.2200

PUBLISHER'S AFFIDAVIT

STATE OF TEXAS,  
COUNTY OF BROOKS

Before me, the undersigned authority on this day personally appeared SAN JUANITA OLIVÁREZ, known to me, who being dully sworn on his oath, deposes and says that she is the ADVERTISING MANAGER of the *Falfurrias Facts*, a newspaper of general circulation published in said county and that said newspaper has been continuously and regularly published in said county for a period for more than one year; and that a copy of the within and foregoing notice was published in said newspaper on the following day(s), to-wit;

August 9, 2012

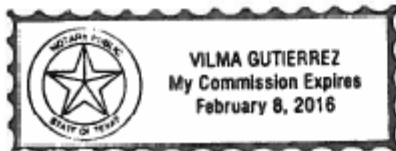
and a newspaper copy of said notice is hereto attached.

San Juanita Olivarez

Sworn and subscribed to before me this:

9<sup>TH</sup>

day of AUGUST, of 2012



Vilma Gutierrez

g screening

insurances

enter

kas

falfacts@yahoo.com 793-8593.  
14-tf

**LEGALS**

**NOTICE OF PUBLIC HEARING**

Notice is given that the Brush Country Groundwater Conservation District Board of Directors will hold a public hearing on the adoption of a proposed Management Plan at its regularly scheduled meeting on Friday, August 31, 2012, at the Brooks County Annex Courtroom, 408 West Travis Street, Falfurrias, TX 78748. The public meeting will begin at 9:30 a.m. and the public hearing will take place during the public meeting and will begin about but no earlier than 9:35 a.m.

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**SALES**

**S U M M E R  
CLEANOUT SALE:**  
Sat., Aug. 11th, 334 NE  
1st in Premont. 8 a.m.–  
2 p.m. MWC clothes,  
uniforms, school  
supplies, western decor,  
furniture, Christmas,  
scooter, menudo, baked  
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Monday at 11 a.m.**

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may occur 30 to 50 years after exposure to asbestos. Many workers were exposed from the 1940s through the 1970s. Industrial and construction workers, along with their families (second hand exposure) are among those at risk for mesothelioma, lung cancer or gastro cancer (throat, stomach, colon). Call us for professional insight.

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**AFFIDAVIT OF PUBLISHER**

**STATE OF TEXAS** §

**COUNTY OF JIM WELLS** §

**BEFORE ME, the undersigned Notary Public, on this day personally Appeared Michael Murray, who, being by me duly sworn, stated:**

- 1. Affiant is an employee of Alice Echo-News Journal and has personal knowledge of the facts stated in this affidavit.**
- 2. Michael Murray (PUBLISHER) publishes a newspaper of general Circulation in Jim Wells, Duval, Nueces, County, Texas, which is known as ALICE NEWSPAPERS INC, ALICE ECHO NEWS JOURNAL, DUVAL COUNTY PRESS, THE FREER PRESS, & NUECES COUNTY RECORD STAR.**

**3. In the newspaper dated** 8/3/12  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**A notice was published as provided by the Texas Probate Code. A true and correct copy of the notice is attached.**

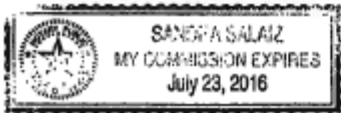
**4. For publishing the notice, the publisher has made a charge of**  
\$ 100<sup>00</sup>

**A proper charge under the laws of the State of Texas.**

Elizabeth H. H. H.  
Publisher or Representative

**SUBSCRIBED AND SWORN TO BEFORE ME by the above-named affivant on**  
8/14, 2012 to certify which witness my hand and seal of office

Sandra Salas  
Notary Public in and for  
The State of Texas



**My Commission expires:**  
7-23-16

was a member of the Catholic Daughters of America and the VFW Women's Auxiliary.

Survivors include her son, John (Maria) S. Dunne Jr.; and daughter Vicky (Antonio Jr.) Hinojosa, both of Corpus Christi; her grandchildren, Cassandra Dunne Hinojosa; Antonio (Celeste) Hinojosa III; Kathryn Dunne; and John Patrick Dunne; and four great-grandchildren, all of Corpus Christi, Texas several nieces, nephews and cousins. Visitation was held from 4 to 9 p.m. Thursday, August 2, 2012, at Mauro P. Garcia Funeral Homes in San Diego with a Rosary recited at 7 p.m. Funeral Mass was celebrated at 10 a.m. Friday, August 3, 2012, at St. Francis de Paula Catholic Church and burial will follow at the San Diego Cemetery.

Condolences for the family may be left on our

ers, Pedro (Josie) Carbal, Jr. of Mount Pleasant, Texas, Juan Manuel Flores of Kingsville, Texas and Luis (Cory) Carbal of Killeen, Texas; two sisters, Maria Lupita Almaraz and Maria Dalia Gonzalez both of Alice, Texas; 19 grandchildren; 11 great grandchildren; and numerous nieces and nephews.

The family will be receiving friends from 3 to 9 p.m. on Friday, August 3, 2012 at Ruben M. Garcia & Sons Funeral Services, Chapel A, in Alice, Texas, with a Prayer Service to be held at 7 p.m.

A Funeral Service will be held at 10 a.m. on Saturday, August 4, 2012 at Templo de Liberacion Church in Alice, Texas Interment will follow at New Collins Cemetery in Alice, Texas.

Arrangements entrusted to Ruben M. Garcia & Sons Funeral Services of Alice, Texas.

left at : [robersonfuneralhomes.net](http://robersonfuneralhomes.net)

Services entrusted to Roberson Funeral Home of Three Rivers, Texas.

#### Saenz

Our beloved father, Gilberto Saenz, 59, from Alice, Texas was called home to be with the Lord on August 1, 2012. Throughout his life, he was known for his kindness and sense of humor. He loved his work and was always planning ahead for the next season. He loved his family immensely and never stopped taking care of everyone. The amount of strength he emitted throughout his life will never bend. His handsome demeanor and charming smile will nev-



Homes, Inc entrusted with the arrangements.

-Paid Obituary

#### Snelling

Irene Snelling, a longtime resident of Alice, died Tuesday, July 31, 2012 at the age of 88.

Irene was born December 7, 1923 on the family farm on the Medio Creek near Beeville, Texas. A child of the depression, she was the third born to pioneer Bee County farmers Lawrence A. and Minnie Robinson Grover.

Her siblings, Johnnie Lorraine Wolf, Lawrence



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# Alice Echo-News Journal



FRIDAY, AUGUST 3, 2012 Your hometown newspaper serving Jim Wells County and the area for more than 114 years \$1.44

**INSIDE SPORTS**



**Volleyball Camp Serve Up!**  
 Volleyball camp takes place at the AHS gym with two dozen girls  
 PAGE 9

**INSIDE NEWS**



## Judge rules against Barrera

Julie Noel  
 jnoel@alicetx.com

Judge Don Wittig ruled Thursday that the results of the district attorney primary May 29 stand, pitting Democrat Carlos Omar Garcia against Republican Christina Z. Flores in the November elections.

In his ruling, Wittig denied current District Attorney Armando Barrera's petition that the election was conducted improperly and voter fraud had occurred. The result that Garcia beat Barrera by 19 votes will stand.

Wittig heard three days of testimony that included the questioning of the Jim Wells and Brooks County elections ad-

ministrators. In the third day of testimony, Barrera himself took the stand.

During the testimony, the D.A. said he didn't want to deprive anyone of voting, but if the election officials didn't follow the rules, their votes should be declared invalid.

"I think the law has to be followed," Barrera said.

Jon Kelly, a local lawyer, was questioned by Barrera's team to try to show that his vote was invalid.

Kelly took the stand who listed his residence as 208 N. Cameron St., which is his law practice. Kelly said he uses that address for all his mail and considers himself a resident of Alice. He testi-

(See BARRERA, Page 3)



Judge Don Wittig ruled against Armando Barrera Thursday after a three-day trial of the DA contested race.



Mailed BCGCD Water Mgt Plan Meeting Notice on 8/2/12

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CORPUS CHRISTI, TX 78412

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PO BOX 53  
HOUSTON, TX 77001

## APPENDIX D

### RESOLUTION ADOPTING MANAGEMENT PLAN

#### **CERTIFIED COPY OF BOARD RESOLUTION ADOPTING MANAGEMENT PLAN OF BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT**

The undersigned, being the Secretary of the Board of Directors of the Brush Country Groundwater Conservation District ("District") does hereby certify as follows:

1. Attached hereto as Exhibit A is a true and correct copy of the Resolution of the Board of Directors of the Brush Country Groundwater Conservation District Authorizing the Adoption of the District Management Plan ("Resolution") dated September 25, 2012; and

2. The Resolution attached hereto as Exhibit A has not been amended, modified or rescinded.

Executed as of the 25<sup>th</sup> day of September 2012.

  
\_\_\_\_\_  
David Kelly, Secretary



**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BRUSH COUNTRY  
GROUNDWATER CONSERVATION DISTRICT AUTHORIZING ADOPTION OF THE  
DISTRICT MANAGEMENT PLAN**

**WHEREAS**, the Management Plan of the Brush Country Groundwater Conservation District (“District”), attached hereto as Attachment A, has been developed for the purpose of conserving, preserving, protecting, and recharging the aquifers in the District, and this action is taken under the District’s statutory authority to prevent waste and protect rights of owners of interest in groundwater;

**WHEREAS**, the draft of the Management Plan was submitted to the Texas Water Development Board for pre-review on May 31, 2012 and again on July 26, 2012;

**WHEREAS**, on July 24, 2012, the Board of Directors (“Board”) of the District directed that a Public Hearing regarding the Management Plan be held on August 31, 2012 and that advance notice be provided by newspaper publication and individual notice;

**WHEREAS**, the Notice of Public Hearing was published in the *Hebbronville View* on August 10, 2012, the *Falfurrias Facts* on August 9, 2012, and in the *Alice Echo-News* on August 3, 2012;

**WHEREAS**, individual notice was mailed to landowners in the District within Hidalgo County on August 2, 2012;

**WHEREAS**, the Board conducted a Public Hearing on August 31, 2012;

**WHEREAS**, following the close of the Public Hearing, the Board considered and acted on the Management Plan on September 25, 2012;

**WHEREAS**, the Management Plan meets the requirements of Texas Water Code § 36.1071 and § 36.1072 and 31 TAC §§ 356.5 and 356.6 ; and

**WHEREAS**, under no circumstances, and in no particular case will this Management Plan, or any part of it, be construed as a limitation or restriction upon the exercise of any discretion where such exists; nor will it 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.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Brush Country Groundwater Conservation District that:


- 1) The “Management Plan of the Brush Country Groundwater Conservation District” contained in Attachment A is hereby adopted; and

- 2) This Management Plan will take effect upon approval by the executive administrator of the Texas Water Development Board. It will remain in effect until a revised District Management Plan is adopted and approved.

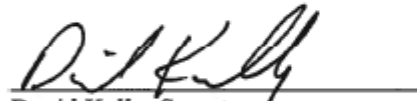
AND IT IS SO ORDERED.

In Favor 7                      Opposed 0

PASSED AND APPROVED THIS 25<sup>th</sup> DAY OF SEPTEMBER, 2012.

  
George Tanner, President

ATTEST:

  
David Kelly, Secretary

**APPENDIX E**

**SAMPLE LETTER AND ENTITIES NOTIFIED AND EVIDENCE OF  
COORDINATION WITH SURFACE WATER MANAGEMENT ENTITIES**

**Brush Country Groundwater Conservation District  
PO Box 136  
Falfurrias, TX 78355  
(361) 325-5093**

October 1, 2012

To: The Attached Mailing List

Re: Brush Country Groundwater Conservation District's Adopted Management Plan

The Brush Country Groundwater Conservation District ("District") Board of Directors adopted a final Management Plan on September 25, 2012. The Plan will now be submitted to the Texas Water Development Board for approval.

The District previously submitted the Plan to you on May 31, 2012. The approved Plan is now being submitted in accordance with Texas Water Code § 36.1071(a) and (b).

Please contact me if you require additional information.

Sincerely,



Felix Saenz  
General Manager

Enclosure

Mr. Lonnie Stewart, General Manager  
Bee Groundwater Conservation District  
PO Box 682  
Beeville, TX 78104-0682

Mr. Gustavo Gonzales, Water Director  
Corpus Christi ASR Conservation District  
PO Box 9277  
Corpus Christi, TX 78469

Mr. Alberto Garcia, Manager  
Duval County Groundwater Conservation District  
PO Box 506  
Benavides, TX 78341

Mr. Andy Garza, District Manager  
Kenedy County Groundwater Conservation District  
PO Box 1433  
Kingsville, TX 78363

Mr. Lonnie Stewart, Manager  
Live Oak Underground Water Conservation District  
3460A Highway 281  
George West, TX 78022

Mr. Lonnie Stewart, Manager  
McMullen Groundwater Conservation District  
PO Box 232  
Tilden, TX 78072

Mr. Armando Vela, Manager  
Red Sands Groundwater Conservation District  
PO Box 229  
Linn, TX 78563

Mr. Duane Campion  
San Patricio County Groundwater Conservation District  
PO Box 1400  
Sinton, TX 78387

Ms. Baldemar Garza, Manager  
Starr County Groundwater Conservation District  
200 East 2nd St.  
Rio Grande City, TX 78582

Con Mims  
Nueces River Authority  
PO Box 349  
Uvalde, TX 78802-0349

Mr. Billy Moss, Manager  
Jim Hogg County Water Control and Improvement District No. 2  
PO Box 148  
Hebbronville, TX 78361-0148

Ms. Melida K. Rangel, Manager  
Jim Wells County Freshwater Supply District No. 1  
PO Box 428  
Ben Bolt, TX 78342-0000

Mr. Gustavo Gonzales, Water Director  
City of Corpus Christi Water Development  
2726 Holly Road  
Corpus Christi, TX 78415

Mayor Carl Srp  
City of Orange Grove  
PO Box 1350  
Orange Grove, TX 78372

Mayor Dalia Gee  
City of Premont  
PO Drawer 340  
Premont, TX 78375

Mayor Ana Maria Garcia  
City of Falfurrias  
PO Drawer E  
Falfurrias, TX 78355

General Manager  
Falfurrias Utility Board  
PO Box 518  
Falfurrias, TX 78355

Mayor Ruperto Canales III  
City of San Diego  
404 S. Mier  
San Diego, TX 78384

Mr. Vic Casas, General Manager  
San Diego Municipal Utility District  
200 South Drive EE Dunlap Highway  
San Diego, TX 78384

Mr. Rey De Lo Santos, Jr., City Manager  
City of Alice  
PO Box 3229  
Alice, TX 78333

Mr. Glenn Jarvis  
Region M Water Planning Group  
Law Offices of Glenn Jarvis  
1801 S. 2<sup>nd</sup> Street, Suite 550  
McAllen, TX 78503

Carola Serrato  
Region N Water Planning Group  
South Texas Water Authority  
PO Box 1701  
Kingsville, TX 78364

Mr. Scott Bledsoe, III  
Region N Water Planning Group  
Live Oak UWCD  
PO Box 3  
Oakville, TX 78060

Judge Ramon Garcia  
Hidalgo County Judge  
1615 S. Closner  
Suite J  
Edinburg, TX 78539

Judge Raul M. Ramirez  
Brooks County Judge  
129 East Rice Street  
Falfurrias, TX 78355

Judge Guadalupe S. Canales  
Jim Hogg County Judge  
PO Box 729t  
Hebbronville, TX 78361-0719

Judge L. Arnaldo Saenz  
Jim Wells County Judge  
200 N. Almond Street  
Alice, TX 78332

## 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 aquifer(s) 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.

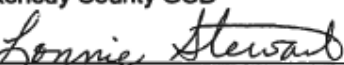
  
\_\_\_\_\_  
Bee GCD

  
\_\_\_\_\_  
Brush Country GCD

  
\_\_\_\_\_  
Corpus Christi Aquifer Storage & Recovery Conservation District

  
\_\_\_\_\_  
Duval GCD

  
\_\_\_\_\_  
Kenedy County GCD

  
\_\_\_\_\_  
McMullen GCD

  
\_\_\_\_\_  
Live Oak UWCD

  
\_\_\_\_\_  
Red Sands GCD

  
\_\_\_\_\_  
San Patricio County GCD

\_\_\_\_\_  
Starr GCD

## APPENDIX G

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

Groundwater use estimates are currently unavailable for 2005, 2009 and 2010. TWDB staff anticipates the calculation and posting of such estimates during the first half of 2012.

| <b>BROOKS COUNTY</b> |        | <i>72.01 % (multiplier)</i> |               |                |            | All values are in acre-feet/year |           |       |
|----------------------|--------|-----------------------------|---------------|----------------|------------|----------------------------------|-----------|-------|
| Year                 | Source | Municipal                   | Manufacturing | Steam Electric | Irrigation | Mining                           | Livestock | Total |
| 1974                 | GW     | 943                         | 30            | 0              | 1,175      | 27                               | 629       | 2,804 |
| 1980                 | GW     | 818                         | 6             | 0              | 216        | 133                              | 67        | 1,240 |
| 1984                 | GW     | 1,099                       | 6             | 0              | 97         | 114                              | 53        | 1,369 |
| 1985                 | GW     | 1,016                       | 6             | 0              | 180        | 114                              | 48        | 1,364 |
| 1986                 | GW     | 1,306                       | 6             | 0              | 360        | 0                                | 55        | 1,727 |
| 1987                 | GW     | 805                         | 0             | 0              | 360        | 127                              | 57        | 1,349 |
| 1988                 | GW     | 872                         | 0             | 0              | 360        | 212                              | 58        | 1,502 |
| 1989                 | GW     | 995                         | 0             | 0              | 202        | 104                              | 58        | 1,359 |
| 1990                 | GW     | 828                         | 0             | 0              | 252        | 104                              | 58        | 1,242 |
| 1991                 | GW     | 785                         | 0             | 0              | 522        | 100                              | 60        | 1,467 |
| 1992                 | GW     | 886                         | 0             | 0              | 432        | 100                              | 45        | 1,463 |
| 1993                 | GW     | 870                         | 0             | 0              | 259        | 96                               | 45        | 1,270 |
| 1994                 | GW     | 984                         | 0             | 0              | 335        | 91                               | 42        | 1,452 |
| 1995                 | GW     | 1,078                       | 0             | 0              | 335        | 91                               | 41        | 1,545 |
| 1996                 | GW     | 1,149                       | 0             | 0              | 335        | 91                               | 44        | 1,619 |
| 1997                 | GW     | 1,818                       | 0             | 0              | 335        | 91                               | 45        | 2,289 |
| 1998                 | GW     | 2,010                       | 0             | 0              | 335        | 91                               | 37        | 2,473 |
| 1999                 | GW     | 1,420                       | 0             | 0              | 335        | 91                               | 39        | 1,885 |
| 2000                 | GW     | 1,420                       | 0             | 0              | 18         | 91                               | 54        | 1,583 |
| 2001                 | GW     | 1,402                       | 0             | 0              | 18         | 91                               | 105       | 1,616 |
| 2002                 | GW     | 1,264                       | 0             | 0              | 175        | 91                               | 53        | 1,583 |
| 2003                 | GW     | 1,162                       | 0             | 0              | 513        | 366                              | 44        | 2,085 |
| 2004                 | GW     | 1,161                       | 0             | 0              | 450        | 366                              | 51        | 2,028 |
| 2006                 | GW     | 1,096                       | 1             | 0              | 406        | 0                                | 323       | 1,826 |
| 2007                 | GW     | 1,007                       | 1             | 0              | 225        | 0                                | 307       | 1,540 |
| 2008                 | GW     | 1,434                       | 0             | 0              | 471        | 0                                | 236       | 2,141 |

| <b>HIDALGO COUNTY</b> |        | <i>1.61 % (multiplier)</i> |               |                |            | All values are in acre-feet/year |           |       |
|-----------------------|--------|----------------------------|---------------|----------------|------------|----------------------------------|-----------|-------|
| Year                  | Source | Municipal                  | Manufacturing | Steam Electric | Irrigation | Mining                           | Livestock | Total |
| 1974                  | GW     | 73                         | 9             | 0              | 302        | 18                               | 21        | 423   |

| Year | Source | Municipal | Manufacturing | Steam Electric | Irrigation | Mining | Livestock | Total |
|------|--------|-----------|---------------|----------------|------------|--------|-----------|-------|
| 1980 | GW     | 53        | 3             | 0              | 145        | 4      | 3         | 208   |
| 1984 | GW     | 83        | 1             | 0              | 142        | 9      | 2         | 237   |
| 1985 | GW     | 61        | 2             | 2              | 160        | 9      | 2         | 236   |
| 1986 | GW     | 81        | 8             | 0              | 0          | 0      | 7         | 96    |
| 1987 | GW     | 72        | 7             | 0              | 0          | 10     | 1         | 90    |
| 1988 | GW     | 76        | 8             | 0              | 0          | 10     | 6         | 100   |
| 1989 | GW     | 84        | 9             | 0              | 176        | 9      | 6         | 284   |
| 1990 | GW     | 85        | 13            | 0              | 328        | 9      | 6         | 441   |
| 1991 | GW     | 90        | 7             | 0              | 319        | 10     | 7         | 433   |
| 1992 | GW     | 91        | 6             | 0              | 133        | 10     | 5         | 245   |
| 1993 | GW     | 86        | 5             | 0              | 208        | 10     | 5         | 314   |
| 1994 | GW     | 118       | 12            | 0              | 240        | 6      | 5         | 381   |
| 1995 | GW     | 124       | 13            | 0              | 213        | 4      | 6         | 360   |
| 1996 | GW     | 126       | 7             | 27             | 131        | 14     | 5         | 310   |
| 1997 | GW     | 128       | 15            | 12             | 93         | 18     | 5         | 271   |
| 1998 | GW     | 128       | 13            | 24             | 187        | 18     | 4         | 374   |
| 1999 | GW     | 102       | 7             | 21             | 193        | 18     | 5         | 346   |
| 2000 | GW     | 92        | 8             | 29             | 72         | 18     | 4         | 223   |
| 2001 | GW     | 157       | 14            | 12             | 60         | 10     | 4         | 257   |
| 2002 | GW     | 141       | 13            | 10             | 55         | 14     | 3         | 236   |
| 2003 | GW     | 147       | 8             | 15             | 32         | 8      | 4         | 214   |
| 2004 | GW     | 149       | 12            | 15             | 24         | 6      | 3         | 209   |
| 2006 | GW     | 65        | 7             | 0              | 17         | 5      | 5         | 99    |
| 2007 | GW     | 81        | 7             | 0              | 18         | 3      | 5         | 114   |
| 2008 | GW     | 117       | 7             | 0              | 1          | 2      | 6         | 133   |

**JIM HOGG COUNTY**

100.00 % (multiplier)

All values are in acre-feet/year

| Year | Source | Municipal | Manufacturing | Steam Electric | Irrigation | Mining | Livestock | Total |
|------|--------|-----------|---------------|----------------|------------|--------|-----------|-------|
| 1974 | GW     | 382       | 20            | 0              | 129        | 22     | 657       | 1,210 |
| 1980 | GW     | 991       | 0             | 0              | 0          | 0      | 74        | 1,065 |
| 1984 | GW     | 695       | 0             | 0              | 450        | 0      | 70        | 1,215 |
| 1985 | GW     | 690       | 0             | 0              | 500        | 119    | 66        | 1,375 |

| Year | Source | Municipal | Manufacturing | Steam Electric | Irrigation | Mining | Livestock | Total |
|------|--------|-----------|---------------|----------------|------------|--------|-----------|-------|
| 1986 | GW     | 571       | 0             | 0              | 500        | 0      | 55        | 1,126 |
| 1987 | GW     | 497       | 0             | 0              | 500        | 238    | 50        | 1,285 |
| 1988 | GW     | 497       | 0             | 0              | 500        | 217    | 54        | 1,268 |
| 1989 | GW     | 249       | 0             | 0              | 120        | 41     | 54        | 464   |
| 1990 | GW     | 585       | 0             | 0              | 150        | 41     | 52        | 828   |
| 1991 | GW     | 818       | 0             | 0              | 150        | 28     | 54        | 1,050 |
| 1992 | GW     | 986       | 0             | 0              | 150        | 28     | 88        | 1,252 |
| 1993 | GW     | 815       | 0             | 0              | 31         | 27     | 88        | 961   |
| 1994 | GW     | 775       | 0             | 0              | 313        | 27     | 69        | 1,184 |
| 1995 | GW     | 683       | 0             | 0              | 313        | 27     | 69        | 1,092 |
| 1996 | GW     | 896       | 0             | 0              | 313        | 27     | 76        | 1,312 |
| 1997 | GW     | 354       | 0             | 0              | 313        | 27     | 76        | 770   |
| 1998 | GW     | 836       | 0             | 0              | 313        | 27     | 58        | 1,234 |
| 1999 | GW     | 598       | 0             | 0              | 313        | 27     | 58        | 996   |
| 2000 | GW     | 854       | 0             | 0              | 817        | 27     | 51        | 1,749 |
| 2001 | GW     | 890       | 0             | 0              | 758        | 27     | 78        | 1,753 |
| 2002 | GW     | 789       | 0             | 0              | 758        | 27     | 27        | 1,601 |
| 2003 | GW     | 873       | 0             | 0              | 500        | 27     | 35        | 1,435 |
| 2004 | GW     | 802       | 0             | 0              | 500        | 28     | 34        | 1,364 |
| 2006 | GW     | 833       | 0             | 0              | 500        | 32     | 408       | 1,773 |
| 2007 | GW     | 833       | 0             | 0              | 417        | 22     | 423       | 1,695 |
| 2008 | GW     | 907       | 0             | 0              | 562        | 77     | 346       | 1,892 |

**JIM WELLS COUNTY**

93.44 % (multiplier)

All values are in acre-feet/year

| Year | Source | Municipal | Manufacturing | Steam Electric | Irrigation | Mining | Livestock | Total |
|------|--------|-----------|---------------|----------------|------------|--------|-----------|-------|
| 1974 | GW     | 1,513     | 55            | 0              | 2,723      | 561    | 1,054     | 5,906 |
| 1980 | GW     | 2,336     | 0             | 0              | 2,802      | 227    | 170       | 5,535 |
| 1984 | GW     | 2,320     | 0             | 0              | 2,474      | 364    | 88        | 5,246 |
| 1985 | GW     | 2,167     | 0             | 0              | 1,752      | 219    | 80        | 4,218 |
| 1986 | GW     | 2,191     | 0             | 0              | 2,336      | 0      | 77        | 4,604 |
| 1987 | GW     | 2,056     | 0             | 0              | 2,261      | 396    | 75        | 4,788 |
| 1988 | GW     | 2,202     | 0             | 0              | 1,997      | 378    | 75        | 4,652 |

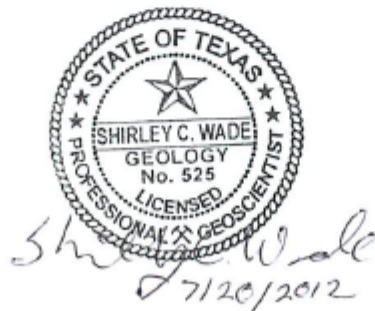
| Year | Source | Municipal | Manufacturing | Steam Electric | Irrigation | Mining | Livestock | Total |
|------|--------|-----------|---------------|----------------|------------|--------|-----------|-------|
| 1989 | GW     | 2,446     | 0             | 0              | 836        | 367    | 74        | 3,723 |
| 1990 | GW     | 2,372     | 0             | 0              | 1,111      | 367    | 84        | 3,934 |
| 1991 | GW     | 2,316     | 0             | 0              | 994        | 305    | 85        | 3,700 |
| 1992 | GW     | 2,153     | 0             | 0              | 691        | 336    | 100       | 3,280 |
| 1993 | GW     | 2,190     | 0             | 0              | 706        | 329    | 98        | 3,323 |
| 1994 | GW     | 2,332     | 0             | 0              | 838        | 329    | 99        | 3,598 |
| 1995 | GW     | 2,402     | 0             | 0              | 694        | 329    | 101       | 3,526 |
| 1996 | GW     | 2,593     | 0             | 0              | 795        | 329    | 93        | 3,810 |
| 1997 | GW     | 2,340     | 0             | 0              | 634        | 326    | 89        | 3,389 |
| 1998 | GW     | 2,418     | 0             | 0              | 1,414      | 145    | 95        | 4,072 |
| 1999 | GW     | 2,426     | 0             | 0              | 1,179      | 145    | 103       | 3,853 |
| 2000 | GW     | 2,487     | 0             | 0              | 3,406      | 324    | 99        | 6,316 |
| 2001 | GW     | 3,054     | 0             | 0              | 2,119      | 112    | 48        | 5,333 |
| 2002 | GW     | 2,438     | 0             | 0              | 2,500      | 112    | 73        | 5,123 |
| 2003 | GW     | 2,993     | 0             | 0              | 2,914      | 112    | 76        | 6,095 |
| 2004 | GW     | 3,027     | 0             | 0              | 3,209      | 120    | 73        | 6,429 |
| 2006 | GW     | 2,373     | 0             | 0              | 3,568      | 115    | 571       | 6,627 |
| 2007 | GW     | 2,224     | 0             | 0              | 1,974      | 115    | 582       | 4,895 |
| 2008 | GW     | 1,999     | 0             | 0              | 1,429      | 115    | 553       | 4,096 |

**APPENDIX H**

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**GAM RUN 12-013: BRUSH COUNTRY  
GROUNDWATER CONSERVATION DISTRICT  
MANAGEMENT PLAN**

by Shirley C. Wade, Ph.D., P.G.  
Texas Water Development Board  
Groundwater Resources Division  
Groundwater Availability Modeling Section  
(512) 936-0883  
July 20, 2012



*The seal appearing on this document was authorized by Shirley C. Wade, P.G. 525 on July 20, 2012.*

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# GAM RUN 12-013: BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT MANAGEMENT PLAN

by Shirley C. Wade, Ph.D., P.G.  
Texas Water Development Board  
Groundwater Resources Division  
Groundwater Availability Modeling Section  
(512) 936-0883  
July 20, 2012

## ***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 (TWDB) 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:

- the annual amount of recharge from precipitation to the groundwater resources within the district, if any;
- 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
- the annual volume of flow into and out of the district within each aquifer and between aquifers in the district.

The purpose of this report is to provide Part 2 of a two-part package of information to Brush Country Groundwater Conservation District for its groundwater management plan. The groundwater management plan for the Brush Country Groundwater Conservation District is due for approval by the executive administrator of the TWDB before November 3, 2012.

This report discusses the method, assumptions, and results from model runs using the groundwater availability model for the Yegua Jackson Aquifer and the model developed for Groundwater Management Area 16 (Hutchison and others, 2011) which was used to estimate the modeled available groundwater for Groundwater

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Management Area 16. This model run is an alternative for the Gulf Coast Aquifer results of GAM Run 10-005, which was based on the groundwater availability models for the southern and central portions of the Gulf Coast Aquifer. The Brush Country Groundwater Conservation District can use either GAM Run 10-005 or GAM Run 12-013 for their groundwater management plan. Tables 1 and 2 summarize the groundwater model data required by the statute and figures 1 and 2 show the area of the model from which the values in the tables were extracted. If after review of the figures, Brush Country Groundwater Conservation District determines that the district boundaries used in the assessment do not reflect current conditions, please notify the TWDB immediately.

### ***METHODS:***

The alternative numerical groundwater flow model for the Gulf Coast Aquifer (1963 through 1999; Hutchison and others, 2011) in Groundwater Management Area 16 and the groundwater availability model for the Yegua Jackson Aquifer (1980 through 1997: Deeds and others, 2010) were run for this analysis. Water budgets for each year of the transient model period were extracted using ZONEBUDGET Version 3.01 (Harbaugh, 2009) and the average 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 aquifers located within the district are summarized in this report.

### ***PARAMETERS AND ASSUMPTIONS:***

#### ***Gulf Coast Aquifer***

- The area covered by the alternative model developed by Hutchison and others (2011) includes all of Groundwater Management Area 16 with Brush Country Groundwater Conservation District approximately located at the center of the model domain. The models for the central portion of the Gulf Coast Aquifer System (Chowdhury and others, 2004) and the Gulf Coast Aquifer in the Lower Rio Grande Valley (Chowdhury and Mace, 2007) only cover parts of the Brush Country Groundwater Conservation District. The model was calibrated based on groundwater elevation data from 1963 to 1999.
- The model has six layers representing the following hydrogeologic units (from top to bottom): Chicot Aquifer (layer 1), Evangeline Aquifer (layer 2),

Burkeville Confining Unit (layer 3), Jasper Aquifer (layer 4), Yegua-Jackson Aquifer (layer 5), and Queen-City/Sparta/Carrizo-Wilcox aquifers (layer 6).

- The standard deviation of groundwater elevation residuals (a measure of the difference between simulated and actual water levels during model calibration) for the entire model domain is 41 feet and the absolute residual mean is 15 feet.
- The model was run with MODFLOW-2000 (Harbaugh and others, 2000).

### *Yegua Jackson Aquifer*

- Version 1.01 of the groundwater availability model for the Yegua Jackson Aquifer was used for this analysis. See Deeds and others (2010) for assumptions and limitations of the groundwater availability model.
  - This groundwater availability model includes five layers, which generally correspond to (from top to bottom):
    1. the outcrop section of 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.
  - An overall water budget for the district was determined for the Yegua Jackson Aquifer (Layer 1 through Layer 5 collectively for the portions that represent the Yegua Jackson Aquifer).
  - As reported in Deeds and others (2010), the mean absolute errors (a measure of the difference between simulated and measured water levels during model calibration) for the Jackson Group (combined upper and lower Jackson units), Upper Yegua, and Lower Yegua portions of the Yegua Jackson Aquifer for the historical-calibration period of the model are 31.1, 23.9, and 24.5 feet, respectively. These represent 10.3, 5.7 and 6.3 percent of the hydraulic head drop across each model area, respectively.
  - The model was run with MODFLOW-2000 (Harbaugh and others, 2000).
-

## **RESULTS:**

A groundwater budget summarizes the amount of water entering and leaving the aquifer according to the groundwater availability model. Selected groundwater budget components listed below were extracted from the model results for the aquifers located within the district and averaged over the duration of the calibration and verification portion of the model runs in the district. The components of the modified budget shown in tables 1 through 5 include:

- Precipitation recharge—The areally 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—The total water discharging from the aquifer (outflow) to surface water features such as streams, reservoirs, and drains (springs).
- Flow into and out of district—The lateral flow within the aquifer between the district and adjacent counties.
- Flow between aquifers—The vertical flow 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.

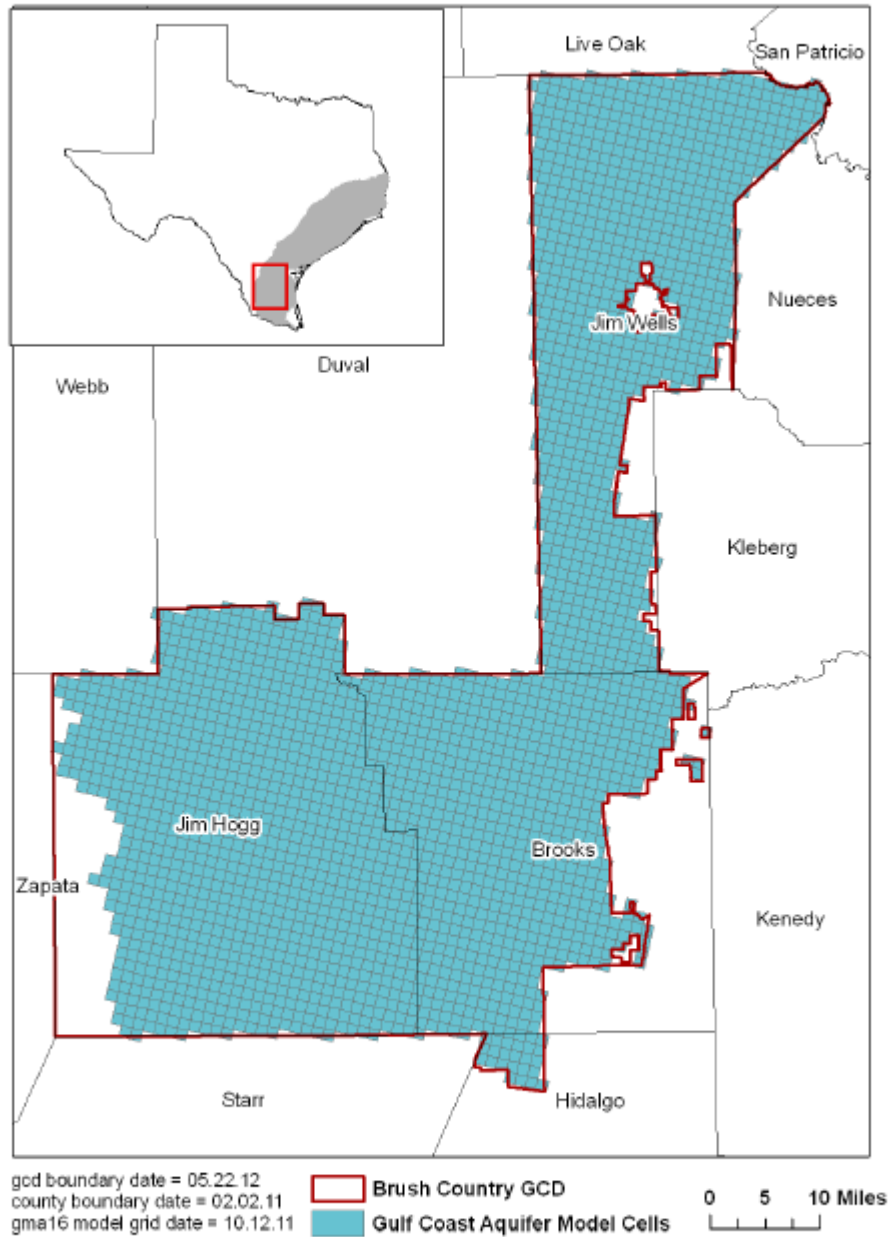
The information needed for the district’s management plan is summarized in tables 1 and 2. It is important to note that sub-regional water budgets are not exact. This is due to the size of the model cells and the approach used to extract data from the model. To avoid double accounting, a model cell that 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 and 2).

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**TABLE 1: SUMMARIZED INFORMATION FOR THE GULF COAST AQUIFER THAT IS NEEDED FOR BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.**

| <i>Management Plan requirement</i>   | <i>Aquifer or confining unit</i>                        | <i>Results</i> |
|--|---|----------------|
| Estimated annual amount of recharge from precipitation to the district   | Gulf Coast Aquifer                                      | 8,199          |
| 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                                      | 1,475          |
| Estimated annual volume of flow into the district within each aquifer in the district  | Gulf Coast Aquifer                                      | 25,390         |
| Estimated annual volume of flow out of the district within each aquifer in the district  | Gulf Coast Aquifer                                      | 40,832         |
| Estimated net annual volume of flow between each aquifer in the district   | From underlying older units into the Gulf Coast Aquifer | 7,955          |



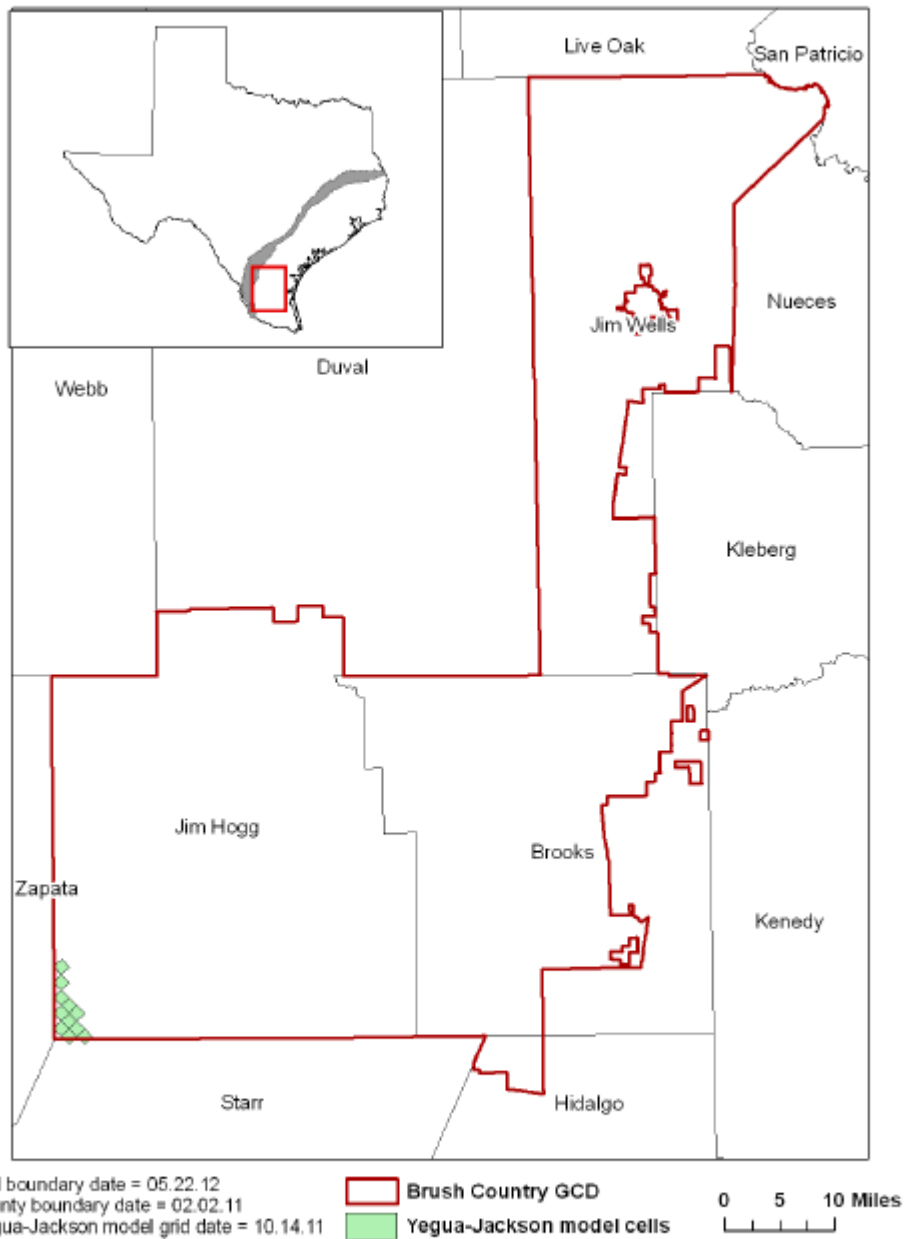


**FIGURE 1: AREA OF ACTIVE MODEL CELLS FOR THE GULF COAST AQUIFER IN BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT FROM WHICH THE INFORMATION IN TABLE 1 WAS EXTRACTED (THE AQUIFER EXTENT WITHIN THE DISTRICT BOUNDARY).**

**TABLE 2: SUMMARIZED INFORMATION FOR THE YEGUA JACKSON AQUIFER THAT IS NEEDED FOR BRUSH COUNTRY GROUNDWATER CONSERVATION DISTRICT'S GROUNDWATER MANAGEMENT PLAN. ALL VALUES ARE REPORTED IN ACRE-FEET PER YEAR AND ROUNDED TO THE NEAREST 1 ACRE-FOOT.**

| <i>Management Plan requirement</i>   | <i>Aquifer or confining unit</i> | <i>Results</i>  |
|--|----------------------------------|-----------------|
| 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            | 0               |
| Estimated annual volume of flow into the district within each aquifer in the district  | Yegua Jackson Aquifer            | 151             |
| Estimated annual volume of flow out of the district within each aquifer in the district  | Yegua Jackson Aquifer            | 156             |
| Estimated net annual volume of flow between each aquifer in the district   | Not Applicable                   | *Not applicable |

\*Groundwater availability model assumes no interaction between the Yegua Jackson and underlying units.



**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 DISTRICT BOUNDARY).**



## **LIMITATIONS**

The groundwater model(s) 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 historic groundwater flow conditions includes the assumptions about the location in the aquifer where historic pumping was placed. Understanding the amount and location of historic pumping is as important as evaluating the volume of groundwater flow into and out of the district, between aquifers within the district (as applicable), interactions with surface water (as applicable), recharge to the aquifer system (as applicable), and other metrics that describe the impacts of that pumping. In addition, assumptions regarding precipitation, recharge, and streamflow are specific to a particular historic time period.

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 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. Historic precipitation patterns also need to be placed in context as future climatic conditions, such as dry and wet year precipitation patterns, may differ and affect groundwater flow conditions.

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## APPENDIX I

### Projected Water Supply Needs TWDB 2012 State Water Plan Data

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

#### **BROOKS COUNTY**

All values are in acre-feet/year

| RWPG   | WUG          | WUG Basin         | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|--|--------------|-------------------|------|------|------|------|------|------|
| N  | COUNTY-OTHER | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |
| N  | FALFURRIAS   | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |
| N  | IRRIGATION   | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |
| N  | LIVESTOCK    | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |
| N  | MINING       | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |
| Sum of Projected Water Supply Needs (acre-feet/year) |              |                   | 0    | 0    | 0    | 0    | 0    | 0    |

#### **HIDALGO COUNTY**

All values are in acre-feet/year

| RWPG | WUG                   | WUG Basin         | 2010     | 2020     | 2030    | 2040    | 2050    | 2060    |
|------|-----------------------|-------------------|----------|----------|---------|---------|---------|---------|
| M    | ALAMO                 | NUECES-RIO GRANDE | -59      | -762     | -1,548  | -2,415  | -3,407  | -4,424  |
| M    | ALTON                 | NUECES-RIO GRANDE | 0        | 0        | -2,446  | -3,419  | -4,482  | -5,602  |
| M    | COUNTY-OTHER          | NUECES-RIO GRANDE | 1,028    | -2,179   | -5,775  | -9,722  | -14,197 | -18,779 |
| M    | COUNTY-OTHER          | RIO GRANDE        | 60       | -187     | -409    | -652    | -927    | -1,210  |
| M    | DONNA                 | NUECES-RIO GRANDE | 1,729    | 1,435    | 1,117   | 759     | 347     | -103    |
| M    | EDCOUCH               | NUECES-RIO GRANDE | -129     | -188     | -255    | -332    | -420    | -516    |
| M    | EDINBURG              | NUECES-RIO GRANDE | 6,216    | 3,826    | 1,029   | -1,805  | -5,151  | -8,580  |
| M    | ELSA                  | NUECES-RIO GRANDE | 659      | 603      | 534     | 460     | 364     | 258     |
| M    | HIDALGO               | NUECES-RIO GRANDE | 594      | 209      | -219    | -685    | -1,206  | -1,740  |
| M    | HIDALGO               | RIO GRANDE        | -2       | -18      | -20     | -27     | -49     | -71     |
| M    | HIDALGO COUNTY MUD #1 | NUECES-RIO GRANDE | -1,130   | -1,814   | -2,588  | -3,421  | -4,342  | -5,287  |
| M    | IRRIGATION            | NUECES-RIO GRANDE | -179,009 | -127,739 | -61,663 | -64,971 | -68,279 | -71,333 |
| M    | IRRIGATION            | RIO GRANDE        | -14,526  | -12,328  | -9,540  | -9,567  | -9,594  | -9,619  |
| M    | LA JOYA               | NUECES-RIO GRANDE | 46       | -5       | -59     | -120    | -189    | -265    |
| M    | LA JOYA               | RIO GRANDE        | 19       | -2       | -25     | -51     | -80     | -113    |
| M    | LA VILLA              | NUECES-RIO GRANDE | 256      | 258      | 259     | 261     | 261     | 258     |
| M    | LIVESTOCK             | NUECES-RIO GRANDE | 0        | 0        | 0       | 0       | 0       | 0       |
| M    | LIVESTOCK             | RIO GRANDE        | 0        | 0        | 0       | 0       | 0       | 0       |
| M    | MANUFACTURING         | NUECES-RIO GRANDE | 912      | 589      | 297     | 5       | -255    | -594    |
| M    | MCALLEN               | NUECES-RIO GRANDE | 2,627    | -2,501   | -8,474  | -14,830 | -21,932 | -29,453 |
| M    | MCALLEN               | RIO GRANDE        | 0        | -1       | -1      | -2      | -3      | -4      |
| M    | MERCEDES              | NUECES-RIO GRANDE | 3,231    | 3,123    | 2,988   | 2,846   | 2,652   | 2,434   |

| RWPG   | WUG                  | WUG Basin         | 2010     | 2020     | 2030     | 2040     | 2050     | 2060     |
|--|----------------------|-------------------|----------|----------|----------|----------|----------|----------|
| M  | MILITARY HIGHWAY WSC | NUECES-RIO GRANDE | -8       | -143     | -422     | -780     | -1,120   | -1,479   |
| M  | MILITARY HIGHWAY WSC | RIO GRANDE        | 0        | 0        | 0        | 0        | -4       | -9       |
| M  | MINING               | NUECES-RIO GRANDE | 183      | 182      | 181      | 179      | 177      | 175      |
| M  | MINING               | RIO GRANDE        | 23       | 22       | 21       | 21       | 21       | 20       |
| M  | MISSION              | NUECES-RIO GRANDE | -1,470   | -4,468   | -7,824   | -11,365  | -15,469  | -19,674  |
| M  | NORTH ALAMO WSC      | NUECES-RIO GRANDE | 8,983    | 5,627    | 1,853    | -2,345   | -7,180   | -12,150  |
| M  | PALMHURST            | NUECES-RIO GRANDE | 0        | 0        | 209      | -296     | -929     | -1,633   |
| M  | PALMVIEW             | NUECES-RIO GRANDE | 0        | 0        | 0        | 0        | -447     | -906     |
| M  | PENITAS              | NUECES-RIO GRANDE | 5        | 3        | 2        | -1       | -7       | -16      |
| M  | PHARR                | NUECES-RIO GRANDE | 376      | -1,754   | -4,152   | -6,799   | -9,649   | -12,695  |
| M  | PROGRESO             | NUECES-RIO GRANDE | 0        | 0        | 0        | 0        | 0        | 0        |
| M  | SAN JUAN             | NUECES-RIO GRANDE | -478     | -1,642   | -2,933   | -4,361   | -6,008   | -7,697   |
| M  | SHARYLAND WSC        | NUECES-RIO GRANDE | 1,624    | -391     | -397     | -1,331   | -2,296   | -3,335   |
| M  | STEAM ELECTRIC POWER | NUECES-RIO GRANDE | 1,816    | -1,980   | -4,374   | -7,291   | -10,847  | -15,183  |
| M  | SULLIVAN CITY        | RIO GRANDE        | 159      | 186      | 184      | 13       | -197     | -411     |
| M  | WESLACO              | NUECES-RIO GRANDE | 1,043    | 286      | -579     | -1,537   | -2,622   | -3,787   |
| Sum of Projected Water Supply Needs (acre-feet/year) |                      |                   | -196,811 | -158,102 | -113,703 | -148,125 | -191,288 | -236,668 |

### JIM HOGG COUNTY

All values are in acre-feet/year

| RWPG   | WUG          | WUG Basin         | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|--|--------------|-------------------|------|------|------|------|------|------|
| M  | COUNTY-OTHER | NUECES-RIO GRANDE | -60  | -66  | -70  | -73  | -71  | -65  |
| M  | COUNTY-OTHER | RIO GRANDE        | -7   | -7   | -8   | -8   | -8   | -7   |
| M  | HEBBRONVILLE | NUECES-RIO GRANDE | 169  | 141  | 120  | 108  | 122  | 152  |
| M  | IRRIGATION   | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |
| 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 | 8    | 5    | 4    | 3    | 2    | 1    |
| Sum of Projected Water Supply Needs (acre-feet/year) |              |                   | -67  | -73  | -78  | -81  | -79  | -72  |

### JIM WELLS COUNTY

All values are in acre-feet/year

| RWPG | WUG   | WUG Basin         | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 |
|------|-------|-------------------|------|------|------|------|------|------|
| N    | ALICE | NUECES-RIO GRANDE | 0    | 0    | 0    | 0    | 0    | 0    |

| RWPG  | WUG          | WUG Basin         | 2010        | 2020        | 2030        | 2040        | 2050        | 2060        |
|---|--------------|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| N   | COUNTY-OTHER | NUECES            | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | COUNTY-OTHER | NUECES-RIO GRANDE | -167        | -238        | -262        | -241        | -210        | -170        |
| N   | IRRIGATION   | NUECES            | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | IRRIGATION   | NUECES-RIO GRANDE | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | LIVESTOCK    | NUECES            | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | LIVESTOCK    | NUECES-RIO GRANDE | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | MINING       | NUECES            | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | MINING       | NUECES-RIO GRANDE | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | ORANGE GROVE | NUECES-RIO GRANDE | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | PREMONT      | NUECES-RIO GRANDE | 0           | 0           | 0           | 0           | 0           | 0           |
| N   | SAN DIEGO    | NUECES-RIO GRANDE | 0           | 0           | 0           | 0           | 0           | 0           |
| <b>Sum of Projected Water Supply Needs (acre-feet/year)</b> |              |                   | <b>-167</b> | <b>-238</b> | <b>-262</b> | <b>-241</b> | <b>-210</b> | <b>-170</b> |

## APPENDIX J

### Projected Water Management Strategies TWDB 2012 State Water Plan Data

#### **BROOKS COUNTY**

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy  | Source Name [Origin]  | 2010     | 2020      | 2030      | 2040       | 2050       | 2060       |
|--|-----------------------|----------|-----------|-----------|------------|------------|------------|
| <b>FALFURRIAS, NUECES-RIO GRANDE (N)</b>                             |                       |          |           |           |            |            |            |
| MUNICIPAL WATER CONSERVATION   | CONSERVATION [BROOKS] | 1        | 38        | 95        | 156        | 228        | 309        |
| <b>Sum of Projected Water Management Strategies (acre-feet/year)</b> |                       | <b>1</b> | <b>38</b> | <b>95</b> | <b>156</b> | <b>228</b> | <b>309</b> |

#### **HIDALGO COUNTY**

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy                        | Source Name [Origin]                             | 2010 | 2020  | 2030  | 2040  | 2050   | 2060   |
|--|--|------|-------|-------|-------|--------|--------|
| <b>ALAMO, NUECES-RIO GRANDE (M)</b>              |  |      |       |       |       |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 5     | 10    | 14    | 19     | 24     |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 100   | 200   | 277   | 381    | 471    |
| ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 400   | 800   | 1,330 | 1,700  | 2,100  |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 25   | 25    | 25    | 25    | 125    | 225    |
| BRACKISH WATER DESALINATION                      | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 0    | 83    | 288   | 469   | 882    | 1,304  |
| NON-POTABLE REUSE                                | DIRECT REUSE [HIDALGO]                           | 34   | 150   | 225   | 300   | 400    | 500    |
| <b>ALTON, NUECES-RIO GRANDE (M)</b>              |  |      |       |       |       |        |        |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 59   | 82    | 2,446 | 3,419 | 4,482  | 5,602  |
| <b>COUNTY-OTHER, NUECES-RIO GRANDE (M)</b>       |  |      |       |       |       |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 1,090 | 3,888 | 5,860 | 10,099 | 14,390 |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 94   | 257   | 395   | 554   | 736    | 942    |
| EXPAND EXISTING GROUNDWATER WELLS                | GULF COAST AQUIFER [HIDALGO]                     | 0    | 1,089 | 1,887 | 3,861 | 4,098  | 4,389  |



WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy   | Source Name [Origin]                             | 2010 | 2020 | 2030  | 2040  | 2050  | 2060  |
|---|--|------|------|-------|-------|-------|-------|
| <b>COUNTY-OTHER, RIO GRANDE (M)</b>   |  |      |      |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                                    | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 187  | 409   | 652   | 927   | 1,210 |
| ADVANCED WATER CONSERVATION   | CONSERVATION [HIDALGO]                           | 50   | 100  | 200   | 300   | 400   | 483   |
| <b>DONNA, NUECES-RIO GRANDE (M)</b>   |  |      |      |       |       |       |       |
| ADVANCED WATER CONSERVATION   | CONSERVATION [HIDALGO]                           | 15   | 32   | 51    | 72    | 95    | 118   |
| BRACKISH WATER DESALINATION   | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 0    | 50   | 50    | 50    | 50    | 50    |
| EXPAND EXISTING GROUNDWATER WELLS   | GULF COAST AQUIFER [HIDALGO]                     | 0    | 25   | 25    | 25    | 25    | 25    |
| <b>EDCOUCH, NUECES-RIO GRANDE (M)</b>   |  |      |      |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                                    | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 65   | 118  | 175   | 246   | 299   | 360   |
| ADVANCED WATER CONSERVATION   | CONSERVATION [HIDALGO]                           | 65   | 70   | 81    | 86    | 121   | 156   |
| <b>EDINBURG, NUECES-RIO GRANDE (M)</b>  |  |      |      |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                                    | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 0    | 1,631 | 3,114 | 4,591 | 6,619 |
| ADVANCED WATER CONSERVATION   | CONSERVATION [HIDALGO]                           | 74   | 328  | 500   | 686   | 889   | 1,097 |
| NON-POTABLE REUSE   | DIRECT REUSE [HIDALGO]                           | 0    | 0    | 500   | 1,500 | 3,000 | 4,000 |
| <b>ELSA, NUECES-RIO GRANDE (M)</b>  |  |      |      |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                                    | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 0    | 0     | 0     | 50    | 50    |
| ADVANCED WATER CONSERVATION   | CONSERVATION [HIDALGO]                           | 2    | 5    | 7     | 10    | 14    | 17    |
| BRACKISH WATER DESALINATION   | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 0    | 100  | 100   | 100   | 100   | 100   |
| PROPOSED ELEVATED STORAGE TANK AND INFRASTRUCTURE IMPROVEMENTS FOR CITY OF ELSA | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 105  | 105  | 105   | 105   | 105   | 105   |
| <b>HIDALGO, NUECES-RIO GRANDE (M)</b>   |  |      |      |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT                                    | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 0    | 0     | 8     | 29    | 51    |

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy                           | Source Name [Origin]                             | 2010  | 2020   | 2030   | 2040   | 2050   | 2060   |
|---|--|-------|--------|--------|--------|--------|--------|
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE        | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 0      | 0      | 154    | 558    | 973    |
| ADVANCED WATER CONSERVATION                         | CONSERVATION [HIDALGO]                           | 32    | 66     | 104    | 145    | 189    | 235    |
| EXPAND EXISTING GROUNDWATER WELLS                   | GULF COAST AQUIFER [HIDALGO]                     | 110   | 235    | 334    | 427    | 506    | 585    |
| <b>HIDALGO, RIO GRANDE (M)</b>                      |  |       |        |        |        |        |        |
| EXPAND EXISTING GROUNDWATER WELLS                   | GULF COAST AQUIFER [HIDALGO]                     | 2     | 18     | 20     | 27     | 49     | 71     |
| <b>HIDALGO COUNTY MUD #1, NUECES-RIO GRANDE (M)</b> |  |       |        |        |        |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT        | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 66    | 100    | 139    | 181    | 227    | 274    |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE        | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 1,051 | 1,684  | 2,401  | 3,173  | 4,026  | 4,901  |
| ADVANCED WATER CONSERVATION                         | CONSERVATION [HIDALGO]                           | 14    | 30     | 48     | 68     | 89     | 112    |
| <b>IRRIGATION, NUECES-RIO GRANDE (M)</b>            |  |       |        |        |        |        |        |
| IRRIGATION CONVEYANCE SYSTEM CONSERVATION           | CONSERVATION [HIDALGO]                           | 5,976 | 20,246 | 34,268 | 48,044 | 61,572 | 74,904 |
| ON- FARM WATER CONSERVATION                         | CONSERVATION [HIDALGO]                           | 795   | 5,385  | 13,673 | 25,560 | 40,946 | 59,773 |
| <b>IRRIGATION, RIO GRANDE (M)</b>                   |  |       |        |        |        |        |        |
| IRRIGATION CONVEYANCE SYSTEM CONSERVATION           | CONSERVATION [HIDALGO]                           | 62    | 207    | 354    | 498    | 639    | 779    |
| ON- FARM WATER CONSERVATION                         | CONSERVATION [HIDALGO]                           | 8     | 56     | 142    | 265    | 425    | 621    |
| <b>LA JOYA, NUECES-RIO GRANDE (M)</b>               |  |       |        |        |        |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION    | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 0      | 0      | 2      | 87     | 185    |
| ADVANCED WATER CONSERVATION                         | CONSERVATION [HIDALGO]                           | 7     | 14     | 21     | 49     | 62     | 73     |
| BRACKISH WATER DESALINATION                         | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 50    | 48     | 75     | 69     | 40     | 7      |
| <b>LA JOYA, RIO GRANDE (M)</b>                      |  |       |        |        |        |        |        |
| BRACKISH WATER DESALINATION                         | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 0     | 2      | 25     | 51     | 80     | 113    |



WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy                          | Source Name [Origin]                             | 2010  | 2020  | 2030  | 2040  | 2050  | 2060  |
|--|--|-------|-------|-------|-------|-------|-------|
| <b>LA VILLA, NUECES-RIO GRANDE (M)</b>             |  |       |       |       |       |       |       |
| ADVANCED WATER CONSERVATION                        | CONSERVATION [HIDALGO]                           | 0     | 1     | 1     | 1     | 1     | 1     |
| <b>MANUFACTURING, NUECES-RIO GRANDE (M)</b>        |  |       |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE       | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 0     | 0     | 0     | 55    | 194   |
| EXPAND EXISTING GROUNDWATER WELLS                  | GULF COAST AQUIFER [HIDALGO]                     | 0     | 0     | 0     | 0     | 100   | 200   |
| NON-POTABLE REUSE                                  | DIRECT REUSE [HIDALGO]                           | 0     | 0     | 0     | 0     | 100   | 200   |
| <b>MCALLEN, NUECES-RIO GRANDE (M)</b>              |  |       |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT       | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 0     | 225   | 329   | 393   | 432   |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE       | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 0     | 998   | 4,083 | 5,718 | 7,341 |
| ADVANCED WATER CONSERVATION                        | CONSERVATION [HIDALGO]                           | 191   | 382   | 925   | 1,250 | 2,177 | 3,423 |
| BRACKISH WATER DESALINATION                        | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 3,360 | 3,360 | 6,139 | 6,600 | 8,121 | 8,821 |
| EXPAND EXISTING GROUNDWATER WELLS                  | GULF COAST AQUIFER [HIDALGO]                     | 0     | 0     | 487   | 619   | 945   | 1,543 |
| NON-POTABLE REUSE                                  | DIRECT REUSE [HIDALGO]                           | 0     | 0     | 0     | 2,349 | 5,578 | 9,893 |
| <b>MCALLEN, RIO GRANDE (M)</b>                     |  |       |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE       | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 1     | 1     | 2     | 3     | 4     |
| <b>MERCEDES, NUECES-RIO GRANDE (M)</b>             |  |       |       |       |       |       |       |
| ADVANCED WATER CONSERVATION                        | CONSERVATION [HIDALGO]                           | 7     | 14    | 23    | 32    | 43    | 53    |
| BRACKISH WATER DESALINATION                        | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 560   | 560   | 560   | 560   | 560   | 560   |
| EXPAND EXISTING GROUNDWATER WELLS                  | GULF COAST AQUIFER [HIDALGO]                     | 0     | 560   | 560   | 560   | 560   | 560   |
| <b>MILITARY HIGHWAY WSC, NUECES-RIO GRANDE (M)</b> |  |       |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT       | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0     | 0     | 5     | 14    | 16    | 18    |

| WUG, Basin (RWPG)                                |  | All values are in acre-feet/year |        |        |        |        |        |
|--|--|----------------------------------|--------|--------|--------|--------|--------|
| Water Management Strategy                        | Source Name [Origin]                             | 2010                             | 2020   | 2030   | 2040   | 2050   | 2060   |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0                                | 0      | 139    | 353    | 561    | 789    |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 8                                | 18     | 28     | 38     | 43     | 47     |
| EXPAND EXISTING GROUNDWATER WELLS                | GULF COAST AQUIFER [HIDALGO]                     | 0                                | 125    | 250    | 375    | 500    | 625    |
| <b>MILITARY HIGHWAY WSC, RIO GRANDE (M)</b>      |  |                                  |        |        |        |        |        |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 0                                | 0      | 0      | 0      | 4      | 9      |
| <b>MISSION, NUECES-RIO GRANDE (M)</b>            |  |                                  |        |        |        |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 299                              | 2,633  | 4,901  | 7,236  | 10,014 | 12,118 |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 260                              | 637    | 598    | 789    | 1,394  | 2,135  |
| BRACKISH WATER DESALINATION                      | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 560                              | 560    | 560    | 560    | 560    | 560    |
| NON-POTABLE REUSE                                | DIRECT REUSE [HIDALGO]                           | 352                              | 839    | 1,765  | 2,780  | 3,909  | 5,321  |
| <b>NORTH ALAMO WSC, NUECES-RIO GRANDE (M)</b>    |  |                                  |        |        |        |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0                                | 0      | 0      | 0      | 0      | 48     |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0                                | 0      | 0      | 0      | 0      | 902    |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 248                              | 538    | 863    | 1,215  | 3,098  | 4,000  |
| BRACKISH WATER DESALINATION                      | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 11,201                           | 11,201 | 11,201 | 11,201 | 11,201 | 11,201 |
| <b>PALMHURST, NUECES-RIO GRANDE (M)</b>          |  |                                  |        |        |        |        |        |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0                                | 0      | 0      | 15     | 46     | 82     |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0                                | 0      | 0      | 281    | 883    | 1,551  |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 32                               | 68     | 110    | 155    | 203    | 254    |

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy                        | Source Name [Origin]                             | 2010 | 2020  | 2030  | 2040  | 2050  | 2060  |
|--|--|------|-------|-------|-------|-------|-------|
| <b>PALMVIEW, NUECES-RIO GRANDE (M)</b>           |  |      |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 0     | 0     | 0     | 22    | 45    |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 0     | 0     | 0     | 425   | 860   |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 16   | 34    | 55    | 78    | 102   | 128   |
| <b>PENITAS, NUECES-RIO GRANDE (M)</b>            |  |      |       |       |       |       |       |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 1    | 1     | 2     | 2     | 7     | 16    |
| <b>PHARR, NUECES-RIO GRANDE (M)</b>              |  |      |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 89    | 205   | 311   | 423   | 554   |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 698   | 2,478 | 4,721 | 7,086 | 8,895 |
| ACQUISITION OF WATER RIGHTS THROUGH URBANIZATION | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0    | 400   | 766   | 928   | 1,067 | 2,003 |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 143  | 392   | 478   | 589   | 798   | 943   |
| EXPAND EXISTING GROUNDWATER WELLS                | GULF COAST AQUIFER [HIDALGO]                     | 100  | 150   | 175   | 200   | 225   | 250   |
| NON-POTABLE REUSE                                | DIRECT REUSE [HIDALGO]                           | 50   | 50    | 50    | 50    | 50    | 50    |
| <b>PROGRESO, NUECES-RIO GRANDE (M)</b>           |  |      |       |       |       |       |       |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 11   | 24    | 38    | 54    | 71    | 89    |
| <b>SAN JUAN, NUECES-RIO GRANDE (M)</b>           |  |      |       |       |       |       |       |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 24   | 82    | 147   | 218   | 300   | 385   |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE     | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 454  | 1,560 | 2,786 | 4,143 | 5,708 | 7,312 |
| ADVANCED WATER CONSERVATION                      | CONSERVATION [HIDALGO]                           | 95   | 206   | 330   | 465   | 612   | 762   |

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy  | Source Name [Origin]                             | 2010          | 2020          | 2030           | 2040           | 2050           | 2060           |
|--|--|---------------|---------------|----------------|----------------|----------------|----------------|
| <b>SHARYLAND WSC, NUECES-RIO GRANDE (M)</b>                          |  |               |               |                |                |                |                |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 20            | 20             | 67             | 115            | 167            |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 372           | 377            | 1,264          | 2,181          | 3,168          |
| ADVANCED WATER CONSERVATION  | CONSERVATION [HIDALGO]                           | 29            | 62            | 100            | 141            | 186            | 231            |
| <b>STEAM ELECTRIC POWER, NUECES-RIO GRANDE (M)</b>                   |  |               |               |                |                |                |                |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 980           | 2,374          | 3,291          | 3,847          | 5,183          |
| NON-POTABLE REUSE  | DIRECT REUSE [HIDALGO]                           | 0             | 1,000         | 2,000          | 4,000          | 7,000          | 10,000         |
| <b>SULLIVAN CITY, RIO GRANDE (M)</b>                                 |  |               |               |                |                |                |                |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 0             | 0              | 0              | 10             | 21             |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 0             | 0              | 0              | 186            | 390            |
| ADVANCED WATER CONSERVATION  | CONSERVATION [HIDALGO]                           | 11            | 25            | 39             | 55             | 73             | 91             |
| <b>WESLACO, NUECES-RIO GRANDE (M)</b>                                |  |               |               |                |                |                |                |
| ACQUISITION OF WATER RIGHTS THROUGH CONTRACT                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 0             | 0              | 0              | 0              | 100            |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 0             | 0             | 0              | 0              | 0              | 100            |
| ADVANCED WATER CONSERVATION  | CONSERVATION [HIDALGO]                           | 44            | 82            | 124            | 217            | 793            | 1,048          |
| BRACKISH WATER DESALINATION  | GULF COAST AQUIFER-BRACKISH [HIDALGO]            | 100           | 100           | 100            | 100            | 250            | 350            |
| EXPAND EXISTING GROUNDWATER WELLS                                    | GULF COAST AQUIFER [HIDALGO]                     | 0             | 0             | 0              | 100            | 429            | 899            |
| POTABLE REUSE  | DIRECT REUSE [CAMERON]                           | 1,120         | 1,120         | 1,120          | 1,120          | 1,150          | 1,290          |
| <b>Sum of Projected Water Management Strategies (acre-feet/year)</b> |  | <b>28,037</b> | <b>61,436</b> | <b>109,705</b> | <b>165,287</b> | <b>233,014</b> | <b>306,209</b> |

## JIM HOGG COUNTY

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy  | Source Name [Origin]                             | 2010      | 2020      | 2030      | 2040      | 2050      | 2060      |
|--|--|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>COUNTY-OTHER, NUECES-RIO GRANDE (M)</b>                           |  |           |           |           |           |           |           |
| ADVANCED WATER CONSERVATION  | CONSERVATION [JIM HOGG]                          | 0         | 1         | 1         | 1         | 1         | 1         |
| EXPAND EXISTING GROUNDWATER WELLS                                    | GULF COAST AQUIFER [JIM HOGG]                    | 60        | 66        | 70        | 73        | 71        | 65        |
| <b>COUNTY-OTHER, RIO GRANDE (M)</b>                                  |  |           |           |           |           |           |           |
| ACQUISITION OF WATER RIGHTS THROUGH PURCHASE                         | AMISTAD-FALCON LAKE/RESERVOIR SYSTEM [RESERVOIR] | 7         | 7         | 8         | 8         | 8         | 7         |
| <b>HEBRONVILLE, NUECES-RIO GRANDE (M)</b>                            |  |           |           |           |           |           |           |
| ADVANCED WATER CONSERVATION  | CONSERVATION [JIM HOGG]                          | 2         | 4         | 6         | 8         | 7         | 6         |
| <b>Sum of Projected Water Management Strategies (acre-feet/year)</b> |  | <b>69</b> | <b>78</b> | <b>85</b> | <b>90</b> | <b>87</b> | <b>79</b> |

## JIM WELLS COUNTY

WUG, Basin (RWPG)

All values are in acre-feet/year

| Water Management Strategy  | Source Name [Origin]           | 2010       | 2020       | 2030       | 2040       | 2050         | 2060         |
|--|--------------------------------|------------|------------|------------|------------|--------------|--------------|
| <b>ALICE, NUECES-RIO GRANDE (N)</b>                                  |                                |            |            |            |            |              |              |
| MUNICIPAL WATER CONSERVATION   | CONSERVATION [JIM WELLS]       | 50         | 133        | 219        | 306        | 438          | 585          |
| <b>COUNTY-OTHER, NUECES-RIO GRANDE (N)</b>                           |                                |            |            |            |            |              |              |
| GULF COAST AQUIFER SUPPLIES  | GULF COAST AQUIFER [JIM WELLS] | 565        | 565        | 565        | 565        | 565          | 565          |
| <b>ORANGE GROVE, NUECES-RIO GRANDE (N)</b>                           |                                |            |            |            |            |              |              |
| MUNICIPAL WATER CONSERVATION   | CONSERVATION [JIM WELLS]       | 3          | 8          | 14         | 18         | 28           | 38           |
| <b>PREMONT, NUECES-RIO GRANDE (N)</b>                                |                                |            |            |            |            |              |              |
| MUNICIPAL WATER CONSERVATION   | CONSERVATION [JIM WELLS]       | 9          | 22         | 36         | 49         | 70           | 92           |
| <b>Sum of Projected Water Management Strategies (acre-feet/year)</b> |                                | <b>627</b> | <b>728</b> | <b>834</b> | <b>938</b> | <b>1,101</b> | <b>1,280</b> |