

# **HILL COUNTRY UNDERGROUND WATER CONSERVATION DISTRICT MANAGEMENT PLAN**

**Adopted June 11, 2013**

The District was created to cover Gillespie County by the Acts of the 70<sup>th</sup> Legislative Session (1987), HB 792, Chapter 865 in accordance with Article XVI, Section 59 of the Texas Constitution, and Chapter 35 and 36 of the Texas Water Code, as amended. The citizens of Gillespie County confirmed creation of the District by an election held in August 1987. The District was formed to protect the underground water resources for the citizens of Gillespie County so that proper management techniques could be implemented at the local level to address local conditions within the county. The creation of the District was in advance of the Hill Country Area, which included Gillespie County, being declared a Priority Groundwater Management Area by the then Texas Water Commission in 1990. This declaration gave notice to the residents of the area that water availability and quality will be at risk within the next 50 years. To manage the groundwater resources under its jurisdiction the District is charged with the rights and responsibilities specified in its enabling legislation; the provisions of Chapter 36 of the Texas Water Code; this Management Plan, and the District Rules.

## **District Mission**

The Mission of the Hill Country Underground Water Conservation District (District) is to protect and enhance the groundwater resources of Gillespie County while protecting groundwater users and maintain the economic viability of the community it serves by adopting and enforcing rules consistent with State law.

## **Purpose of Management Plan**

Senate Bill 1 (SB 1), enacted by the 75th Texas Legislature in 1997, and Senate Bill 2 (SB 2), enacted by the 77th Texas Legislature in 2001, established a comprehensive statewide planning process and the actions necessary for districts to manage and conserve the groundwater resources of the State of Texas. These bills required all underground water conservation districts to develop a management plan which defines the water needs and supply within each district and the goals each district will use to manage the underground water in order to meet its needs. In addition, the 79th Texas Legislature enacted HB 1763 in 2005 that requires joint planning among districts that are in the same Groundwater Management Area (GMA). These districts must establish the Desired Future Conditions (DFCs) of the aquifers within their respective GMAs. Through this process, the districts will submit the DFCs to the executive administrator of the Texas Water Development Board (TWDB) who will provide each district with the estimates concerning the Modeled Available Groundwater (MAG) in the management area based on the DFCs of the aquifers in the area. Technical information, such as details for how the DFCs of the aquifers within the District's jurisdiction will be addressed and the amount of MAG from such

aquifers is required by statute to be included in the District's management plan and will guide the District's regulatory and management policies.

This management plan is required by the Texas Commission on Environmental Quality (TCEQ) and developed in accordance with instructions from the TWDB. The TCEQ and the TWDB requires use of certain data provided by the TWDB. The projections of future water demands, surface water availability, water management strategies, and groundwater use in Gillespie County were all provided to the District by TWDB. This document should be considered as a management plan and will be used to identify activities or programs that the District will develop. The District considers the collection and development of site-specific data on groundwater use in Gillespie County and the groundwater sources of Gillespie County to be a high priority. This management plan will be updated as the District develops the site-specific data on the local groundwater use and aquifer conditions. The District is not restricted by the TCEQ or TWDB as to the frequency with which the management plan may be updated if considered it is appropriate by the District.

The Hill Country Underground Water Conservation District's management plan satisfies the requirements of SB 1, SB 2, HB 1763, the statutory requirements of Chapter 6 of the Texas Water Code, and the administrative requirements of the Texas Water Development Board's rules.

### **Technical District Information Required by Texas Administrative Code**

#### ***Estimate of Modeled Available Groundwater in District Based on Desired Future Conditions***

Texas Water Code §36.001 defines modeled available groundwater as “the amount of water that the executive administrator determines may be produced on an average annual basis to achieve a desired future condition established under Section 36.108”.

The joint planning process set forth in Texas Water Code §36.108 must be collectively conducted by all groundwater conservation districts within the same GMA. The District is a member of GMA 7. GMA 7 adopted DFCs for Gillespie County for the Edwards-Trinity Plateau (Edwards), Trinity (Hensel) (GR10-043\_MAG v.2), Ellenburger (AA10-10\_MAG), and Hickory (AA10-11\_MAG) on June 29, 2010. The adopted DFCs were then forwarded to the TWDB for the development of the MAG calculations. The submittal package for the DFCs can be found here:

[http://www.twdb.state.tx.us/groundwater/docs/DFC/GMA7\\_DFC\\_Adopted\\_2010-0729.pdf](http://www.twdb.state.tx.us/groundwater/docs/DFC/GMA7_DFC_Adopted_2010-0729.pdf)

#### **Modeled available groundwater for the Edwards-Trinity (Plateau), Pecos Valley, and Trinity aquifers in Groundwater Management Area 7**

[http://www.twdb.state.tx.us/groundwater/docs/GAMruns/GR10-043\\_MAG\\_v2.pdf](http://www.twdb.state.tx.us/groundwater/docs/GAMruns/GR10-043_MAG_v2.pdf)

#### **Modeled available groundwater for the Ellenburger-San Saba Aquifer in Groundwater Management Area 7**

[http://www.twdb.texas.gov/groundwater/docs/AA/AA10-10\\_MAG.pdf](http://www.twdb.texas.gov/groundwater/docs/AA/AA10-10_MAG.pdf)

**Modeled available groundwater for the Hickory Aquifer in Groundwater Management Area 7**

[http://www.twdb.texas.gov/groundwater/docs/AA/AA10-11\\_MAG.pdf](http://www.twdb.texas.gov/groundwater/docs/AA/AA10-11_MAG.pdf)

A summary of the desired future conditions and the modeled available groundwater are summarized below:

**GILLESPIE COUNTY**

<b>Aquifer</b>	<b>Desired Future Conditions</b>	<b>Modeled Available Groundwater (AF/yr)</b>
Edwards-Trinity Plateau (Edwards)	7' drawdown	2514
Trinity (Hensel)	7' drawdown	2482
Ellenburger	5' drawdown	6271
Hickory	7' drawdown	1659
<b>Total</b>		<b>12926</b>

***Amount of Groundwater Being Used within the District on an Annual Basis***

Please refer to Appendix A: *Estimated Historical Water Use and 2012 State Water Plan Datasets* - pp. 11,12

***Projected Surface Water Supply within the District***

Please refer to Appendix A: *Estimated Historical Water Use and 2012 State Water Plan Datasets* - p. 13

***Projected Total Demand for Water within the District***

Please refer to Appendix A: *Estimated Historical Water Use and 2012 State Water Plan Datasets* – p. 14

***Projected Water Supply Needs within the District***

Please refer to Appendix A: *Estimated Historical Water Use and 2012 State Water Plan Datasets* – p. 15

***Project Water Management Strategies***

No strategies identified since there are no supply needs for Gillespie County.

Please refer to Appendix A: *Estimated Historical Water Use and 2012 State Water Plan Datasets* – pp. 15,16

***Annual Amount of Recharge From Precipitation to the Groundwater Resources within the District***

Please refer to Appendix B: *GAM Run 12-015*  
 Edwards-Trinity Plateau (Edwards) – p. 24  
 Trinity (Hensel) – p. 26

Please refer to Appendix C: *GTA Aquifer Assessment 08-08*  
Ellenburger-San Saba – p. 32

Please refer to Appendix D: *GTA Aquifer Assessment 08-07*  
Hickory – p. 46

***Annual Volume of Water that Discharges from the Aquifer to Springs and Surface Water Bodies***

Please refer to Appendix B: *GAM Run 12-015*  
Edwards-Trinity Plateau (Edwards) – p. 24  
Trinity (Hensel) – p. 26

The data for the Ellenburger-San Saba and Hickory aquifers are not applicable, due to the lack of a GAM being available for these aquifers at this time.

***Estimate of the Annual Volume of Flow into the District, out of the District, and Between Aquifers in the District***

Please refer to Appendix B: *GAM Run 12-015*  
Edwards-Trinity Plateau (Edwards) – p. 24  
Trinity (Hensel) – p. 26

The data for the Ellenburger-San Saba and Hickory aquifers are not applicable, due to the lack of a GAM being available for these aquifers at this time.

**Methodology to Track District Progress in Achieving Management Goals**

The District's General Manager will prepare and present an annual report to the Board of Directors on District performance in regards to achieving management goals and objectives for the calendar year. The report will be presented during the January board meeting beginning in January 2014. The report will include the number of instances each activity was engaged in during the year. The Board will maintain the report on file, for public inspections at the District's offices upon adoption in a regular noticed meeting of the Board.

**Actions, Procedures, Performance and Avoidance for District Implementation of Management Plan**

The District will implement and utilize the provisions of this plan as a guidepost for determining the direction or priority for all District activities. All operations of the District, all agreements entered into by the District, and any additional planning efforts in which the District may participate will be consistent with the provisions of this plan.

Rules adopted by the District for permitting of wells and the use of groundwater shall comply with TWC Chapter 36 and the provisions of this management plan. All rules will be adhered to and enforced. The promulgation and enforcement of the rules will be based on the best technical evidence available to the District. District Rules can be found here at:

<http://www.hcuwcd.org/RulesAdopted.pdf>

The District shall treat all citizens with equality. Citizen may apply to the District for discretion in enforcement of the rules on grounds of adverse economic effect or unique local aquifer characteristic. In granting of discretion to any rule, the Board shall consider the potential for adverse effect on adjacent landowners and aquifer conditions. The exercise of said discretion by the Board shall not be construed as limiting power of the Board.

The District will seek cooperation and coordination in the implementation of this plan, and all District activities, with appropriate state, regional or local water management entities. The meetings of the Board of the District are noticed and conducted at all times in accordance with the Texas Open Meetings Law. The District has also made available for public inspection all official documents, reports, records and minutes of the District pursuant with the Texas Public Information Act will continue to do in the future.

## **Management Goals**

### **A. Providing the most efficient use of groundwater**

- A.1 Objective** – Each year the District will assist the Gillespie County Commissioners Court in the evaluation of water availability studies submitted in accordance with Gillespie County Subdivision requirements.
- A.1 Performance Standard** – Each year the District will report the number of groundwater availability reports that the District reviewed and certified as having sufficient or insufficient water resources available.
- A.2 Objective** – Each year the District will require all new exempt wells that are constructed within the boundaries of the District to be registered with the District in accordance with the District Rules.
- A.2 Performance Standard** – The number of exempt wells registered by the District for the year will be incorporated into the Annual Report submitted to the Board of Directors.
- A.3 Objective** – Each year the District will regulate the production of groundwater by maintaining a system of permitting the use and production of groundwater within the boundaries of the District in accordance with the District Rules.
- A.3 Performance Standard** – Each year the District will accept and process applications for the permitted use of groundwater in the District in accordance with the permitting process established by the District Rules. The number and type of applications made for the permitted use of groundwater in the District, and the number and type of permits issued by the District will be included in the Annual Report given to the Board of Directors.

### **B. Controlling and preventing waste of groundwater**

**B.1 Objective** - Each year the District will provide information on eliminating and reducing the waste of groundwater and focusing on water quality protection. This may be accomplished annually by one of the following methods:

- a) When requested conduct classroom presentations;
- b) When requested sponsor an educational program/curriculum
- c) Post information on the District's web site;
- d) Submit newspaper articles for publication;
- e) Conduct public presentations
- f) Distribute brochures/literature

**B.1 Performance Standard** - The annual report will include a summary of the District activities during the year to disseminate educational information on eliminating and reducing the wasteful use of groundwater focusing on water quality protection. The number of instances for each activity utilized by the District will be included in the report.

**C. Controlling and Preventing Subsidence**

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

**D. Addressing conjunctive surface water management issues**

**D.1 Objective** - To evaluate the ground to surface water interrelationships within the District, each year the District will conduct stream flow measurements along eight (8) sites of the Pedernales River between Bear Creek and Palo Alto Creek at least six (6) times per year.

**D.1 Performance Standard** - Each year the number of stream flow measurements taken annually will be presented in the District's annual report.

**D.2 Objective** - Each year, the District will participate in the regional planning process by attending a minimum of two meetings of the Lower Colorado Regional Water Planning Group (Region K) per fiscal year.

**D.2 Performance Standard**- Each year, attendance at Region K meetings by a representative of the District will be reflected in the District's annual report and will include the number of meetings attended and the dates.

**E. Addressing natural resources issues that impact the use and availability of groundwater and which are impacted by the use of groundwater**

**E.1. Objective** – Each year the District will monitor water levels within the District by measuring the water level on selected wells representative of the various aquifers within the District. The water level monitoring network and measuring schedule is as follows:

<b>Aquifer</b>	<b># of Wells</b>	<b>Frequency</b>
Ellenburger	35 +/-	6 times per year
Hensel	40 +/-	2 times per year
Edwards, Hickory, Mid-Cambrian and Precambrian	50 +/-	2 times per year

**E.1 Performance Standard** – Each year the District’s annual report will provide a status on the number of monitor wells measured.

**F. Addressing Drought Conditions**

**F.1 Objective** - Continue to monitor aquifer conditions in response to drought conditions to improve and refine trigger conditions and update, as warranted, the District’s Drought Management Plan adopted on March 10, 2009.

**F.1 Performance Standard** - Each year the District’s annual report will provide to the Board the number of any new trigger conditions identified and changes made to the Drought Management Plan.

**F.2 Objective** - Review applicable data to determine status of drought condition, and if necessary, report to the Board on the need to implement the drought management plan.

**F.2 Performance Standard** – Each year the District’s annual report will include the number of times reported to the Board on the need to implement the drought management plan.

**F.3 Objective** - Each year the District will provide to the public on the District website information concerning the status of drought conditions and stage of drought.

**F.3 Performance Standard** – Each year the District’s annual report will include the number of drought notices or articles placed on the District’s website.

**G. Addressing Conservation, Recharge Enhancement, Rainwater Harvesting, and Brush Control**

**G.1 Objective** - Each year the District will promote conservation by one or more of the following methods:

- a) Distribute conservation literature packets to schools in Gillespie County (ie. Book covers, pencils, etc.);
- b) Upon request conduct classroom conservation presentations;
- c) Post conservation information on the District’s web site;
- d) Upon request conduct a public conservation presentation;
- e) Distribute conservation brochures/literature to the public

- G.1 Performance Standard** – Each year the District’s annual report will include a summary of the District’s activity during the year to promote conservation. The number of instances for each activity utilized by the District will be included in the report.
- G.2 Objective** – Each year the District will provide information about recharge enhancement on the District web site or by brochures/literature available at the District office.
- G.2 Performance Standard** – Each year the District annual report will include a summary of the District’s activity regarding recharge enhancement.
- G.3 Objective** – Each year, the District will promote rainwater harvesting by posting information on rainwater harvesting on the District web site or by brochures/literature available at the District office.
- G.3 Performance Standard** – Each year the District annual report will include a summary of the District’s activity regarding rainwater harvesting.
- G.4 Objective** – Each year the District will provide information about brush control on the District web site or by brochures/literature available at the District office.
- G.4 Performance Standard** – Each year the District annual report will include a summary of the District’s activity regarding brush control.

Goals related to Precipitation Enhancement are not applicable to the Hill Country Underground Water Conservation District.

**H. Addressing in a Quantitative Manner the Desired Future Conditions of the Groundwater Resources**

- H.1 Objective** – Begin evaluating the water level data obtained from the District’s water level monitoring programs to develop a method for tracking the DFCs for the aquifers within the District.
- H.1 Performance Standard** – The annual reporting of how the DFCs are being met will be included in the District’s Annual Report to the District’s Board of Directors.
- H.2 Objective** – Monitor pumpage within the District to evaluate District compliance with aquifer desired future conditions and to determine if pumpage exceeds or is under MAG numbers.
- H.2 Performance Standard** – The annual reporting of groundwater pumpage will be included in the District’s Annual Report to the District Board of Directors.