November 10, 2008

Mr. Richard Bowers, General Manager
Central Texas Groundwater Conservation District
P.O. Box 870
Burnet, Texas 78611

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Bowers:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

As noted in your letter dated December 26, 2007, the submitted desired future condition for the Woodbine Aquifer in Groundwater Management Area 8 was as follows:

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 154 feet after 50 years in Collin County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 0 feet after 50 years in Cooke County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 112 feet after 50 years in Dallas County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 16 feet after 50 years in Denton County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 102 feet after 50 years in Ellis County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 186 feet after 50 years in Fannin County.

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 28 feet after 50 years in Grayson County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 87 feet after 50 years in Hill County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 353 feet after 50 years in Hunt County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 4 feet after 50 years in Johnson County.
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- From estimated year 2000 conditions, the average drawdown should not exceed approximately 297 feet after 50 years in Lamar County.
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- From estimated year 2000 conditions, the average drawdown should not exceed approximately 202 feet after 50 years in Red River County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 241 feet after 50 years in Rockwall County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 2 feet after 50 years in Tarrant County.

Managed available groundwater is defined in the Texas Water Code as the amount of water that may be permitted by a district for beneficial use in accordance with the desired future condition of the aquifer as determined under Texas Water Code, Section 36.108. For various planning purposes, the managed available groundwater estimates have been reported at the combined aquifer, county, river basin, regional water planning area, groundwater management area, groundwater conservation district (if applicable), and geographic area/subdivision (if designated) level.

We understand that groundwater conservation districts have options on how to distribute managed available groundwater in a groundwater management area; therefore, we encourage open communication and coordination between groundwater conservation districts, regional water planning groups, and the TWDB to ensure that managed available groundwater reported in regional water plans and groundwater management plans are not in conflict. In addition, please note that estimates of managed available groundwater are based on the best available scientific tools that can be used to evaluate managed available groundwater and that these estimates may be based on assumptions made on the magnitude and distribution of pumping in the aquifer.

Therefore, it is important for groundwater conservation districts to monitor whether or not their management of pumping is achieving their desired future conditions. Districts are encouraged to work with the TWDB to better define available groundwater as better data becomes available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

Sincerely,

J. Kevin Ward
Executive Administrator

Attachment: GAM Run 08-14mag

c: Cary Betz, Texas Commission of Environmental Quality, Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality, Groundwater Planning and Assessment Division

Carolyn Brittin, Deputy Executive Administrator, TWDB, Water Resources Planning and Information

David Meesey, Manager, TWDB, Regional Water Planning Section

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David Dunn, HDR Engineering

November 10, 2008

Ms. Cheryl Maxwell, General Manager
Clearwater Underground Water Conservation District
P.O. Box 729
Belton, Texas 76513

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Ms. Maxwell:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

As noted in your letter dated December 26, 2007, the submitted desired future condition for the Woodbine Aquifer in Groundwater Management Area 8 was as follows:

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 154 feet after 50 years in Collin County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 0 feet after 50 years in Cooke County.
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Sincerely,

J. Kevin Ward
Executive Administrator

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Kelly Mills, Texas Commission of Environmental Quality, Groundwater Planning and Assessment Division

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Ray Flemons, Bucher, Willis & Ratliff

David Dunn, HDR Engineering

November 10, 2008

Mr. Rodney Carlisle, Board President
Fox Crossing Water District
P.O. Box 926
Goldthwaite, Texas 76844

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Carlisle:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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Sincerely,

J. Kevin Ward
Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

Ms. Tricia Law
McLennan County Groundwater Conservation District
3015 Bellmead Drive
Waco, Texas 76705

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Ms. Law:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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J. Kevin Ward
Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

Mr. Joe Cooper, General Manager
Middle Trinity Groundwater Conservation District
150 North Harbin Drive, Suite 434
Stephenville, Texas 76401

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Cooper:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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J. Kevin Ward
Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

Mr. Russell Laughlin, Board President
Northern Trinity Groundwater Conservation District
13600 Heritage Parkway
Suite 200
Fort Worth, Texas 76177

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Laughlin:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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Executive Administrator

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November 10, 2008

Mr. Gary Westbrook, General Manager
Post Oak Savannah Groundwater Conservation District
P.O. Box 92
Milano, Texas 76556

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Westbrook:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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- From estimated year 2000 conditions, the average drawdown should not exceed approximately 241 feet after 50 years in Rockwall County.
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Managed available groundwater is defined in the Texas Water Code as the amount of water that may be permitted by a district for beneficial use in accordance with the desired future condition of the aquifer as determined under Texas Water Code, Section 36.108. For various planning purposes, the managed available groundwater estimates have been reported at the combined aquifer, county, river basin, regional water planning area, groundwater management area, groundwater conservation district (if applicable), and geographic area/subdivision (if designated) level.

We understand that groundwater conservation districts have options on how to distribute managed available groundwater in a groundwater management area; therefore, we encourage open communication and coordination between groundwater conservation districts, regional water planning groups, and the TWDB to ensure that managed available groundwater reported in regional water plans and groundwater management plans are not in conflict. In addition, please note that estimates of managed available groundwater are based on the best available scientific tools that can be used to evaluate managed available groundwater and that these estimates may be based on assumptions made on the magnitude and distribution of pumping in the aquifer.

Therefore, it is important for groundwater conservation districts to monitor whether or not their management of pumping is achieving their desired future conditions. Districts are encouraged to work with the TWDB to better define available groundwater as better data becomes available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

Sincerely,

J. Kevin Ward
Executive Administrator

Attachment: GAM Run 08-14mag

c: Cary Betz, Texas Commission of Environmental Quality, Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality, Groundwater Planning and Assessment Division

Carolyn Brittin, Deputy Executive Administrator, TWDB, Water Resources Planning and Information

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David Dunn, HDR Engineering

November 10, 2008

Mr. Randy McGuire, Board Member/Manager
Saratoga Underground Water Conservation District
P.O. Box 231
Lampasas, Texas 76550

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. McGuire:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

As noted in your letter dated December 26, 2007, the submitted desired future condition for the Woodbine Aquifer in Groundwater Management Area 8 was as follows:

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 154 feet after 50 years in Collin County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 0 feet after 50 years in Cooke County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 112 feet after 50 years in Dallas County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 16 feet after 50 years in Denton County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 102 feet after 50 years in Ellis County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 186 feet after 50 years in Fannin County.

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 28 feet after 50 years in Grayson County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 87 feet after 50 years in Hill County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 353 feet after 50 years in Hunt County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 4 feet after 50 years in Johnson County.
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Therefore, it is important for groundwater conservation districts to monitor whether or not their management of pumping is achieving their desired future conditions. Districts are encouraged to work with the TWDB to better define available groundwater as better data becomes available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

Sincerely,

J. Kevin Ward
Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

The Honorable John Firth, Coryell County Judge
Tablerock Groundwater Conservation District
620 East Main
Gatesville, Texas 76528

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Judge Firth:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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J. Kevin Ward
Executive Administrator

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Ray Flemons, Bucher, Willis & Ratliff

David Dunn, HDR Engineering

November 10, 2008

Mr. Mike Massey, Board President
Upper Trinity Groundwater Conservation District
P.O. Box 1786
Granbury, Texas 76048

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Massey:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

Mr. Scott Mack
Region G
108 N. Cranbrook Court
Ingram, Texas 78025

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Mack:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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J. Kevin Ward
Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

Mr. Jim Thompson
Region D
P.O. Box 1107
Atlanta, Texas 75551

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Thompson:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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Sincerely,

J. Kevin Ward
Executive Administrator

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David Dunn, HDR Engineering

November 10, 2008

Mr. James Parks
North Texas Municipal Water District
P.O. Box 2408
Wylie, Texas 75098

Re: Managed available groundwater estimates for the Woodbine Aquifer in Groundwater Management Area 8

Dear Mr. Parks:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's (TWDB) Executive Administrator shall provide each district and regional water planning group, located wholly or partly within a groundwater management area, with the managed available groundwater in the management area based upon the desired future condition of the groundwater resource. This letter and the attached report (GAM Run 08-14mag) are in response to this directive.

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J. Kevin Ward
Executive Administrator

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Robert Mace, Ph.D., P.G., Director, TWDB, Groundwater Resources

Rima Petrossian, P.G., Manager, TWDB, Groundwater Technical Assistance

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GAM Run 08-14mag

by Shirley C. Wade, P.G.
Texas Water Development Board
Groundwater Availability Modeling Section
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May 6, 2008

REQUESTOR:

Ms. Cheryl Maxwell of the Clearwater Underground Water Conservation District acting on behalf of Groundwater Management Area 8.

DESCRIPTION OF REQUEST:

In a letter dated December 26, 2007, Ms. Cheryl Maxwell provided the Texas Water Development Board (TWDB) with the desired future conditions for the Edwards (Balcones Fault Zone), Blossom, Brazos River Alluvium, Nacatoch, and Woodbine aquifers in Groundwater Management Area 8 and requested that TWDB estimate managed available groundwater values. This groundwater availability modeling run presents the managed available groundwater for the Woodbine Aquifer in Groundwater Management Area 8.

DESIRED FUTURE CONDITIONS:

Desired future conditions for the Woodbine Aquifer submitted to TWDB by the groundwater conservation districts in Groundwater Management Area 8:

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 154 feet after 50 years in Collin County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 0 feet after 50 years in Cooke County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 112 feet after 50 years in Dallas County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 16 feet after 50 years in Denton County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 102 feet after 50 years in Ellis County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 186 feet after 50 years in Fannin County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 28 feet after 50 years in Grayson County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 87 feet after 50 years in Hill County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 353 feet after 50 years in Hunt County.

- From estimated year 2000 conditions, the average drawdown should not exceed approximately 4 feet after 50 years in Johnson County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 211 feet after 50 years in Kaufman County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 297 feet after 50 years in Lamar County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 61 feet after 50 years in McLennan County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 177 feet after 50 years in Navarro County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 202 feet after 50 years in Red River County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 241 feet after 50 years in Rockwall County.
- From estimated year 2000 conditions, the average drawdown should not exceed approximately 2 feet after 50 years in Tarrant County.

This information is summarized in Table 1.

Table 1. Summary of requested desired future conditions for the Woodbine Aquifer in Groundwater Management Area 8.

County	Average water level decrease (feet)
Collin	154
Cooke	0
Dallas	112
Denton	16
Ellis	102
Fannin	186
Grayson	28
Hill	87
Hunt	353
Johnson	4
Kaufman	211
Lamar	297
McLennan	61
Navarro	177
Red River	202
Rockwall	241
Tarrant	2

EXECUTIVE SUMMARY:

TWDB staff ran the groundwater availability model for the northern part of the Trinity Aquifer and the Woodbine Aquifer to determine the managed available groundwater based on the desired future conditions for the Woodbine Aquifer adopted by the groundwater conservation districts in Groundwater Management Area 8. The results are listed in Table 2:

METHODS:

This request is based on previous GAM run 07-30 (Wade, 2007). In that simulation, average streamflows and evapotranspiration rates were used for each year of the predictive simulation. Average recharge was used for the first forty-seven years of the simulation, followed by a three-year drought-of-record.

PARAMETERS AND ASSUMPTIONS:

The groundwater availability model for the northern part of the Trinity Aquifer was used for this model run. The parameters and assumptions for this model are described below:

- We used version 1.01 of the groundwater availability model for the northern part of the Trinity Aquifer for this run. See Bené and others (2004) for assumptions and limitations of the model.

- The model includes seven layers, representing the Woodbine Aquifer (Layer 1), the Washita and Fredericksburg Series (Layer 2), the Paluxy Formation (Layer 3), the Glen Rose Formation (Layer 4), the Hensell Formation (Layer 5), the Pearsall/Cow Creek/Hammett/Sligo formations (Layer 6), and the Hosston Formation (Layer 7). The Woodbine, Paluxy, Hensell, and Hosston layers are the main aquifers used in the region.

- The mean absolute error (a measure of the difference between simulated and actual water levels during model calibration) for the four main aquifers in the model (Woodbine, Paluxy, Hensell, and Hosston) for the calibration and verification time periods (1980 to 2000) ranged from approximately 37 to 75 feet. The root mean squared error was less than ten percent of the maximum change in water levels across the model (Bené and others, 2004).

- We used average annual recharge conditions based on climate data from 1980 to 1999 for the simulation. The last three years of the simulation used drought-of-record recharge conditions, which were defined as the years 1954 to 1956.

- The model uses the MODFLOW stream-routing package to simulate the interaction between the aquifer(s) and major intermittent streams flowing in the region. Flow both from the stream to the aquifer and from the aquifer to the stream is allowed, and the direction of flow is determined by the water levels in the aquifer and stream during each stress period in the simulation.

- Spatial and vertical pumpage distribution is described in GAM run 07-30 (Wade, 2007).

Table 2. Estimates of managed available groundwater for the Woodbine Aquifer by geographic subdivisions (See Figure 1).

Aquifer	Map Key	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
Woodbine	39	Collin	C	Sabine	None	8	Collin	n/a	40
Woodbine	40	Collin	C	Trinity	None	8	Collin	n/a	2,469
Woodbine	47	Cooke	C	Red	None	8	Cooke	n/a	18
Woodbine	48	Cooke	C	Trinity	None	8	Cooke	n/a	136
Woodbine	50	Dallas	C	Trinity	None	8	Dallas	n/a	2,313
Woodbine	51	Delta	C	Sulphur	None	8	Delta	n/a	20
Woodbine	52	Denton	C	Trinity	None	8	Denton	n/a	4,126
Woodbine	55	Ellis	C	Trinity	None	8	Ellis	n/a	5,441
Woodbine	59	Fannin	C	Red	None	8	Fannin	n/a	2,676
Woodbine	60	Fannin	C	Sulphur	None	8	Fannin	n/a	21
Woodbine	61	Fannin	C	Trinity	None	8	Fannin	n/a	600
Woodbine	69	Grayson	C	Red	None	8	Grayson	n/a	6,590
Woodbine	70	Grayson	C	Trinity	None	8	Grayson	n/a	5,497
Woodbine	83	Hill	G	Brazos	None	8	Hill	n/a	1,249
Woodbine	82	Hill	G	Trinity	None	8	Hill	n/a	1,012
Woodbine	92	Hunt	D	Sabine	None	8	Hunt	n/a	1,867
Woodbine	91	Hunt	D	Sulphur	None	8	Hunt	n/a	849
Woodbine	93	Hunt	D	Trinity	None	8	Hunt	n/a	124
Woodbine	97	Johnson	G	Brazos	None	8	Johnson	n/a	141
Woodbine	96	Johnson	G	Trinity	None	8	Johnson	n/a	4,591
Woodbine	99	Kaufman	C	Sabine	None	8	Kaufman	n/a	0
Woodbine	100	Kaufman	C	Trinity	None	8	Kaufman	n/a	200
Woodbine	102	Lamar	D	Red	None	8	Lamar	n/a	1,910
Woodbine	103	Lamar	D	Sulphur	None	8	Lamar	n/a	1,734
Woodbine	111	Limestone	G	Brazos	None	8	Limestone	n/a	34

Aquifer	Map Key	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
Woodbine	114	McLennan	G	Brazos	McLennan C.	8	McLennan	n/a	5
Woodbine	130	Navarro	C	Trinity	None	8	Navarro	n/a	300
Woodbine	137	Red River	D	Red	None	8	Red River	n/a	162
Woodbine	138	Red River	D	Sulphur	None	8	Red River	n/a	4
Woodbine	140	Rockwall	C	Sabine	None	8	Rockwall	n/a	0
Woodbine	141	Rockwall	C	Trinity	None	8	Rockwall	n/a	144
Woodbine	152	Tarrant	C	Trinity	N. Trinity	8	Tarrant	n/a	632

GCD = Groundwater conservation district.

GeoArea = Geographic areas defined by unique desired future conditions as specified by a groundwater management area.

GMA = Groundwater management area.

MAG = Managed available groundwater in units of acre-feet per year.

McLennan C. = McLennan County Groundwater Conservation District

N. Trinity = Northern Trinity Groundwater Conservation District

RWPA = Regional water planning area.

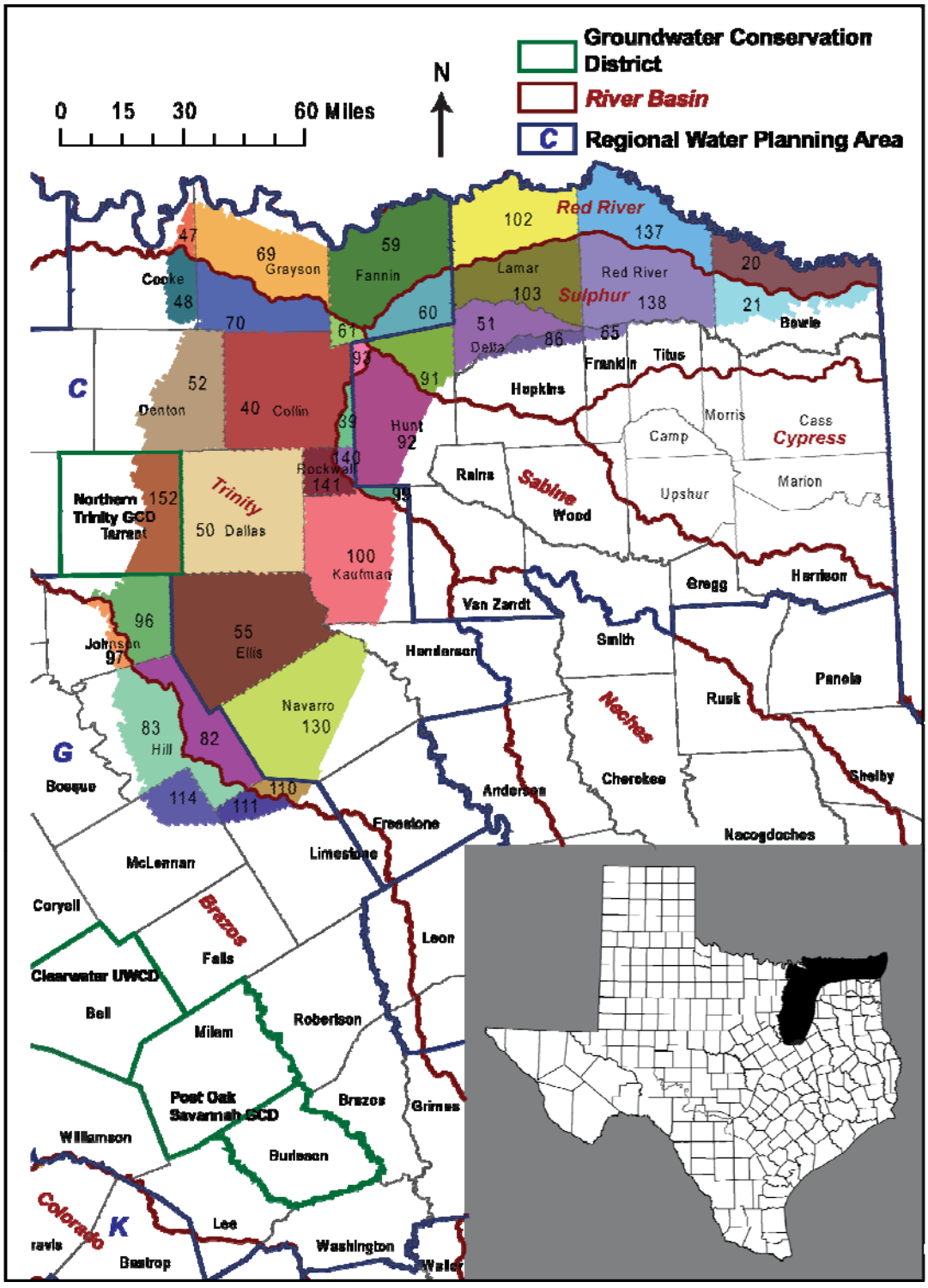


Figure 1. Geographic subdivisions of managed available groundwater for the Woodbine Aquifer. See Table 2 for descriptions of the geographic subdivisions.

RESULTS:

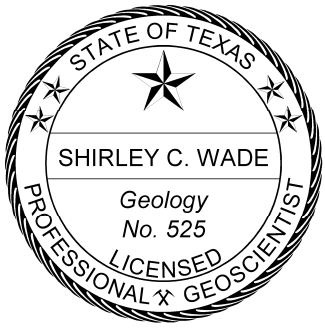
Water level declines in the Woodbine Aquifer for the counties in Groundwater Management Area 8 were verified to meet the desired future conditions developed by groundwater conservation districts in Groundwater Management Area 8. The results (Figure 1 and Table 2) show 44,905 acre-feet per year of managed available groundwater for the Woodbine Aquifer in Groundwater Management Area 8. Under the jurisdiction of the Northern Trinity Groundwater Conservation District, Tarrant County has 632 acre-feet per year of managed available groundwater in the Woodbine Aquifer. The remaining counties in Regional Planning Area C have 30,591 acre-feet per year of managed available groundwater. McLennan County Groundwater Conservation District has 5 acre-feet per year. The remaining counties in Regional Planning Area G have 7,027 acre-feet per year of managed available groundwater. The counties in Regional Planning Area D have 6,650 acre-feet per year of managed available groundwater.

Note that estimates of managed available groundwater are based on the best available scientific tools that can be used to evaluate managed available groundwater and that these estimates can be a function of assumptions made on the magnitude and distribution of pumping in the aquifer. Therefore, it is important for groundwater conservation districts to monitor whether or not they are achieving their desired future conditions and to work with the TWDB to refine managed available groundwater given the reality of how the aquifer responds to the actual magnitude and distribution of pumping now and in the future. In addition, any changes to the assumptions for the volume and distribution of pumpage in the Trinity Aquifer in the counties located within and surrounding the Woodbine Aquifer have the potential of affecting the managed available groundwater estimates described in this report.

REFERENCES:

Bené, J., Harden, B., O'Rourke, D., Donnelly, A., and Yelderman, J., 2004, Northern Trinity/Woodbine Groundwater Availability Model: contract report to the Texas Water Development Board by R.W. Harden and Associates, 391 p.

Wade, S.C., 2007, GAM07-30 Final Report, Texas Water Development Board GAM Run Report, October 26, 2007, 25 p.



The seal appearing on this document was authorized by Shirley Wade, P.G., on May 6, 2008.