

Jack Hunt, Vice Chairman
Thomas Weir Labatt III, Member

Joe M. Crutcher, Member

James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward
Executive Administrator

March 31, 2009

Mr. Danny F. Vance Trinity River Authority P.O. Box 240 Arlington, TX 76004

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Vance:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

We understand that groundwater conservation district 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.



Mr. Danny F. Vance March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

Section

Cindy Ridgeway, P.G., Manager, TWDB Groundwater Availability Modeling

Section

Shirley Wade, Ph.D., P.G., Groundwater Modeler, TWDB Groundwater

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J. Kevin Ward
Executive Administrator

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March 31, 2009

Ms. Nancy Rose Sulphur River Basin Authority 911 North Bishop St, Ste C-104 Wake Village, TX 75501

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Ms. Rose:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Ms. Nancy Rose March 31, 2009 Page 2

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 become available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

Sincerely,

. Kevin Ward

**Executive Administrator** 

Attachment A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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J. Kevin Ward
Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

Mr. Jerry Clark Sabine River Authority P.O. Box 579 Orange, TX 77631

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Clark:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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A Member of the Texas Geographic Information Council (TGIC)

Mr. Jerry Clark March 31, 2009 Page 2

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J. Kevin Ward

**Executive Administrator** 

Attachment A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

Mr. Thomas G. Mason Lower Colorado River Authority P.O. Box 220 Austin, TX 78767

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater Management Area 8

Dear Mr. Mason:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Mr. Thomas G. Mason March 31, 2009 Page 2

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 become available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

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J. Kevin Ward

**Executive Administrator** 

Attachment A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

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James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward

Executive Administrator

March 31, 2009

Mr. Phil Ford Brazos River Authority P.O. Box 7555 Waco, TX 76714

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Ford:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Mr. Phil Ford March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

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J. Kevin Ward

Executive Administrator

Jack Hunt, Vice Chairman
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Joe M. Crutcher, Member

March 31, 2009

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

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Mr. Mike Massey March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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Cary Betz, Texas Commission of Environmental Quality Water Supply Division Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

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J. Kevin Ward Executive Administrator

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March 31, 2009

The Honorable John Firth Tablerock Groundwater Conservation District 620 E. Main Gatesville, TX 76528

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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The Honorable John Firth March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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J. Kevin Ward
Executive Administrator

March 31, 2009

Mr. Randy McGuire Saratoga Underground Water Conservation District P.O. Box 231 Lampasas, TX 76550

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Mr. Randy McGuire March 31, 2009 Page 2

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J. Kevin Ward

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J. Kevin Ward Executive Administrator

Jack Hunt, Vice Chairman Thomas Weir Labatt III, Member Joe M. Crutcher, Member

March 31, 2009

Mr. Gary Westbrook Post Oak Savannah Groundwater Conservation District P.O. Box 92 310 E. Ave. C Milano, TX 76556

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Westbrook:

Jun

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Mr. Gary Westbrook March 31, 2009 Page 2

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J. Kevin Ward

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Temple McKinnon, Planner, North East Texas Region, TWDB Regional Water

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Jack Hunt, Vice Chairman Thomas Weir Labatt III, Member

Joe M. Crutcher, Member

James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward
Executive Administrator

March 31, 2009

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

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

We understand that groundwater conservation district 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.





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Ms. Cheryl Maxwell March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

Section

Cindy Ridgeway, P.G., Manager, TWDB Groundwater Availability Modeling

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Shirley Wade, Ph.D., P.G., Groundwater Modeler, TWDB Groundwater

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Carolyn Brittin, Deputy Executive Administrator, TWDB Water Resources

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Temple McKinnon, Planner, North East Texas Region, TWDB Regional Water

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David Dunn, HDR Engineering

Kerry Maroney, Biggs & Mathews





James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward

Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

Mr. Russell Laughlin Northern Trinity Groundwater Conservation District 13600 Heritage Parkway Suite 200 www.hillwood.com Fort Worth, TX 76177

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

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Mr. Russell Laughlin March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

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Kerry Maroney, Biggs & Mathews



Jack Hunt, Vice Chairman

James E. Herring, Chairman Lewis H. McMahan, Member Edward G. Vaughan, Member

J. Kevin Ward Executive Administrator Thomas Weir Labatt III, Member Joe M. Crutcher, Member

March 31, 2009

Mr. Joe Cooper Middle Trinity Groundwater Conservation District 150 North Harbin Dr., Suite 434 Stephenville, TX 76401

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

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Mr. Joe Cooper March 31, 2009 Page 2

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 become available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

1/4

Sincerely,

J. Kevin Ward

**Executive Administrator** 

Attachment A: List of Desired Future Conditions Submitted by the Groundwater Conservation

**Districts** 

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

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Jack Hunt, Vice Chairman
Thomas Weir Labatt III, Member
Joe M. Crutcher, Member

James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward

Executive Administrator

March 31, 2009

Ms. Tricia Law
McLennan County Groundwater Conservation District
3015 Bellmead Dr.
Waco, TX 76705

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

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A Member of the Texas Geographic Information Council (TGIC)

Ms. Tricia Law March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

**Districts** 

Attachment B: GAM Run 08-84mag

c w/atts.: Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

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James E. Herring, Chairman Lewis H. McMahan, Member Edward G. Vaughan, Member

J. Kevin Ward Executive Administrator

Jack Hunt, Vice Chairman Thomas Weir Labatt III, Member Joe M. Crutcher, Member

March 31, 2009

Mr. Rodney Carlisle Fox Crossing Water District P.O. Box 926 Goldthwaite, TX 76844

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Mr. Rodney Carlisle March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

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James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward

Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

Mr. Richard Bowers Central Texas Groundwater Conservation District 225 S. Pierce P.O. Box 870 Burnet, TX 78611

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

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Mr. Richard Bowers March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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J. Kevin Ward

Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

Mr. John Burke Aqua Water Supply Corporation P.O. Drawer P Bastrop, TX 78602

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Burke:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

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Our Mission



A Member of the Texas Geographic Information Council (TGIC)

Mr. John Burke March 31, 2009 Page 2

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 become 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 A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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James E. Herring, *Chairman* Lewis H. McMahan, *Member* Edward G. Vaughan, *Member* 

J. Kevin Ward

Executive Administrator

March 31, 2009

The Honorable Dale Spurgin Region G P.O. Box 148 Anson, TX 79501

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Judge Spurgin:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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The Honorable Dale Spurgin March 31, 2009 Page 2

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Sincerely

J. Kevin Ward

**Executive Administrator** 

Attachment A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

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J. Kevin Ward
Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

Mr. John Grant Colorado River Municipal Water District P.O. Box 869 Big Spring, TX 79721

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Grant:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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Mr. John Grant March 31, 2009 Page 2

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Sincerely,

J. Kevin Ward

Executive Administrator

Attachment A: List of Desired Future Conditions Submitted by the Groundwater Conservation

Districts

Attachment B: GAM Run 08-84mag

c w/atts.:

Cary Betz, Texas Commission of Environmental Quality Water Supply Division

Kelly Mills, Texas Commission of Environmental Quality Groundwater Planning

and Assessment Division

Robert Mace, Ph.D., P.G., Deputy Executive Administrator, TWDB, Water

Science and Conservation

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

Section

Cindy Ridgeway, P.G., Manager, TWDB Groundwater Availability Modeling

Section

Shirley Wade, Ph.D., P.G., Groundwater Modeler, TWDB Groundwater

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Ray Flemons, Bucher, Willis & Ratliff

David Dunn, HDR Engineering

Kerry Maroney, Biggs & Mathews



## TEXAS WATER DEVELOPMENT BOARD

Jack Hunt, Vice Chairman Thomas Weir Labatt III, Member Joe M. Crutcher, Member

James E. Herring, Chairman Lewis H. McMahan, Member Edward G. Vaughan, Member

I Kevin Ward Executive Administrator

March 31, 2009

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

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 aguifer as determined under Texas State 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 (if designated) level.

We understand that groundwater conservation district 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.

Mr. James Parks March 31, 2009 Page 2

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 become 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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J. Kevin Ward

Executive Administrator

Jack Hunt, Vice Chairman Thomas Weir Labatt III, Member Joe M. Crutcher, Member

March 31, 2009

Mr. Curtis Campbell Red River Authority of Texas P.O. Box 240 Wichita Falls, TX 76307

Re:

Managed available groundwater estimates for the Trinity Aquifer in Groundwater

Management Area 8

Dear Mr. Campbell:

The Texas State Water Code, Section 36.108, Subsection (o), states that Texas Water Development Board's 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

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We understand that groundwater conservation district 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.

Our Mission



Mr. Curtis Campbell March 31, 2009 Page 2

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 become available for how the aquifer responds to the actual magnitude and distribution of pumping now and in the future.

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J. Kevin Ward

**Executive Administrator** 

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J. Kevin Ward

Executive Administrator

Jack Hunt, *Vice Chairman* Thomas Weir Labatt III, *Member* Joe M. Crutcher, *Member* 

March 31, 2009

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

Re:

Managed available groundwater estimates for the Trinity 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 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. Attachment A lists the desired future conditions submitted by the groundwater conservation districts. This letter and Attachment B (GAM Run 08-84) are in response to this directive.

Managed available groundwater is defined in the Texas State 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 State 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 (if designated) level.

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Our Mission



Mr. Jim Thompson March 31, 2009 Page 2

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 become 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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# Attachment A Desired Future Conditions Submitted by the Groundwater Conservation Districts

As noted in your letter dated October 6, 2008, and memorandum dated December 15, 2008, the submitted desired future condition for the northern segment of the Trinity Aquifer in Groundwater Management Area 8 was as follows:

#### **Bell County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 134 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 155 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 286 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 319 feet after 50 years.

#### **Bosque County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 26 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 33 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 201 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 220 feet after 50 years.

#### **Brown County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 1 foot after 50 years.

#### **Burnet County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 11 feet after 50 years.

• From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 29 feet after 50 years.

#### Callahan County

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 2 feet after 50 years.

#### **Collin County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 298 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 247 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 224 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 236 feet after 50 years.

#### **Comanche County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 2 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 11 feet after 50 years.

#### **Cooke County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 26 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 42 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 60 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 78 feet after 50 years.

#### **Corvell County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 15 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 15 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 156 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 179 feet after 50 years.

#### **Dallas County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 240 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 224 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 263 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 290 feet after 50 years.

#### **Delta County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 175 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 162 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 162 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 159 feet after 50 years.

#### **Denton County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 98 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 134 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 180 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 214 feet after 50 years.

#### **Eastland County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 0 feet after 50 years.

#### **Ellis County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 265 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 283 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 336 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 362 feet after 50 years.

#### **Erath County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 11 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 27 feet after 50 years.

#### **Falls County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 279 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 354 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 459 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 480 feet after 50 years.

#### **Fannin County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 212 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 196 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 182 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 181 feet after 50 years.

#### **Grayson County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 175 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 161 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 160 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 165 feet after 50 years.

#### **Hamilton County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 2 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 39 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 51 feet after 50 years.

#### **Hill County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 209 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 253 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 381 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 406 feet after 50 years.

#### **Hood County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 2 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 16 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 56 feet after 50 years.

#### **Hunt County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 286 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 245 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 215 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 223 feet after 50 years.

#### **Johnson County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 37 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 83 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 208 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 234 feet after 50 years.

#### **Kaufman County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 303 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 286 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 295 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 312 feet after 50 years.

#### **Lamar County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 132 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 130 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 136 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 134 feet after 50 years.

#### **Lampasas County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 12 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 23 feet after 50 years.

#### **Limestone County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 328 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 392 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 475 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 492 feet after 50 years.

#### McLennan County

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 251 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 291 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 489 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 527 feet after 50 years.

#### **Milam County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 252 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 294 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 337 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 344 feet after 50 years.

#### **Mills County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 3 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 12 feet after 50 years.

#### **Montague County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 3 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 12 feet after 50 years.

#### **Navarro County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 344 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 353 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 399 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 413 feet after 50 years.

#### **Parker County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 5 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 6 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 16 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 40 feet after 50 years.

#### **Red River County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 82 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 77 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 78 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 78 feet after 50 years.

#### **Rockwall County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 346 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 272 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 248 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 265 feet after 50 years.

#### **Somervell County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 4 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 53 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 113 feet after 50 years.

#### **Tarrant County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 33 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 75 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 160 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 173 feet after 50 years.

#### **Taylor County**

• From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 3 feet after 50 years.

#### **Travis County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 124 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 61 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 98 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 116 feet after 50 years.

#### Williamson County

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 108 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 88 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 142 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 166 feet after 50 years.

#### Wise County

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 4 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 14 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer
- should not exceed approximately 23 feet after 50 years.

  From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 53 feet after 50 years.

# Attachment B GAM Run 08-84mag

# GAM Run 08-84mag

by Shirley C. Wade, P.G.

Texas Water Development Board Groundwater Availability Modeling Section (512) 936-0883 March 5, 2009

#### **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 October 6, 2008, Ms. Cheryl Maxwell provided the Texas Water Development Board (TWDB) with the desired future conditions for the Trinity Aquifer in Groundwater Management Area 8 and requested that TWDB estimate managed available groundwater values. A memorandum dated December 15, 2008 provided clarification to the desired future conditions outlined in the letter dated October 6, 2008. In order to match the results of GAM Run 08-06 (Donnelly, 2008) that memorandum made the following corrections:

- the average drawdown for Grayson County in the Glen Rose portion of the Trinity Aquifer was changed from 160 feet to 161 feet,
- the average drawdown for Grayson County in the Hensell portion of the Trinity Aquifer was changed from 161 feet to 160 feet,
- the average drawdown for Brown County in the Hosston portion of the Trinity Aquifer was changed from 2 feet to 1 foot, and
- the average drawdown for Somervell County in the Hosston portion of the Trinity Aquifer was changed from 114 to 113 feet.

This groundwater availability modeling run presents the managed available groundwater for the Trinity Aquifer in Groundwater Management Area 8.

#### **DESIRED FUTURE CONDITIONS:**

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

#### **Bell County**

• From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 134 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 155 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 286 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 319 feet after 50 years.

#### **Bosque County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 26 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 33 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 201 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 220 feet after 50 years.

#### **Brown County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 1 foot after 50 years.

#### **Burnet County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 11 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 29 feet after 50 years.

#### **Callahan County**

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 2 feet after 50 years.

#### **Collin County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 298 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 247 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 224 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 236 feet after 50 years.

#### **Comanche County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 2 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 11 feet after 50 years.

#### **Cooke County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 26 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 42 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 60 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 78 feet after 50 years.

#### **Coryell County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 15 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 15 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 156 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 179 feet after 50 years.

#### **Dallas County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 240 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 224 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 263 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 290 feet after 50 years.

#### **Delta County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 175 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 162 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 162 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 159 feet after 50 years.

#### **Denton County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 98 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 134 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 180 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 214 feet after 50 years.

#### **Eastland County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 0 feet after 50 years.

#### **Ellis County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 265 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 283 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 336 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 362 feet after 50 years.

#### **Erath County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 11 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 27 feet after 50 years.

#### **Falls County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 279 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 354 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 459 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 480 feet after 50 years.

#### **Fannin County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 212 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 196 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 182 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 181 feet after 50 years.

#### **Grayson County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 175 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 161 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 160 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 165 feet after 50 years.

#### **Hamilton County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 2 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 39 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 51 feet after 50 years.

#### **Hill County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 209 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 253 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 381 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 406 feet after 50 years.

#### **Hood County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 2 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 16 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 56 feet after 50 years.

#### **Hunt County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 286 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 245 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 215 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 223 feet after 50 years.

#### **Johnson County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 37 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 83 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 208 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 234 feet after 50 years.

#### **Kaufman County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 303 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 286 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 295 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 312 feet after 50 years.

#### **Lamar County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 132 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 130 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 136 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 134 feet after 50 years.

#### **Lampasas County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 12 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 23 feet after 50 years.

#### **Limestone County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 328 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 392 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 475 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 492 feet after 50 years.

#### **McLennan County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 251 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 291 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 489 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 527 feet after 50 years.

#### **Milam County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 252 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 294 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 337 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 344 feet after 50 years.

#### **Mills County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 3 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 12 feet after 50 years.

#### **Montague County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 0 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 3 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 12 feet after 50 years.

#### Navarro County

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 344 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 353 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 399 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 413 feet after 50 years.

#### **Parker County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 5 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 6 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 16 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 40 feet after 50 years.

#### **Red River County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 82 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 77 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 78 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 78 feet after 50 years.

#### **Rockwall County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 346 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 272 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 248 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 265 feet after 50 years.

#### **Somervell County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 1 foot after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 4 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 53 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 113 feet after 50 years.

#### **Tarrant County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 33 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 75 feet after 50 years.

- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 160 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 173 feet after 50 years.

#### **Taylor County**

• From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 3 feet after 50 years.

#### **Travis County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 124 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 61 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 98 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 116 feet after 50 years.

#### **Williamson County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 108 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 88 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 142 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 166 feet after 50 years.

#### **Wise County**

- From estimated year 2000 conditions, the average drawdown of the Paluxy Aquifer should not exceed approximately 4 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Glen Rose Aquifer should not exceed approximately 14 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hensell Aquifer should not exceed approximately 23 feet after 50 years.
- From estimated year 2000 conditions, the average drawdown of the Hosston Aquifer should not exceed approximately 53 feet after 50 years.

This information is summarized in Table 1.

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

Groundwater Management Area 8.									
County	Ave	rage water level decrease (feet)							
	Paluxy	Glen Rose	Hensell	Hosston					
Bell	134	155	286	319					
Bosque	26	33	201	220					
Brown	0	0	1	1					
Burnet	1	1	11	29					
Callahan	n/a	n/a	0	2					
Collin	298	247	224	236					
Comanche	0	0	2	11					
Cooke	26	42	60	78					
Coryell	15	15	156	179					
Dallas	240	224	263	290					
Delta	175	162	162	159					
Denton	98	134	180	214					
Eastland	0	0	0	0					
Ellis	265	283	336	362					
Erath	1	1	11	27					
Falls	279	354	459	480					
Fannin	212	196	182	181					
Grayson	175	161	160	165					
Hamilton	0	2	39	51					
Hill	209	253	381	406					
Hood	1	2	16	56					
Hunt	286	245	215	223					
Johnson	37	83	208	234					
Kaufman	303	286	295	312					
Lamar	132	130	136	134					
Lampasas	0	1	12	23					
Limestone	328	392	475	492					
McLennan	251	291	489	527					
Milam	252	294	337	344					
Mills	0	0	3	12					
Montague	0	1	3	12					
Navarro	344	353	399	413					
Parker	5	6	16	40					
Red River	82	77	78	78					
Rockwall	346	272	248	265					
Somervell	1	4	53	113					
Tarrant	33	75	160	173					
Taylor	n/a	n/a	n/a	3					
Travis	124	61	98	116					
Williamson	108	88	142	166					
Wise	4	14	23	53					

#### **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 Trinity Aquifer adopted by the groundwater conservation districts in Groundwater Management Area 8. The results (Tables 2, 3, 4, and 5) show 65,025 acre-feet per year of managed available groundwater for the Paluxy Aquifer (of which 89 acre-feet are outside the official aquifer boundary), 7,287 acre-feet per year of managed available groundwater for the Glen Rose Formation (of which 55 acre-feet are outside the official aquifer boundary), 46,067 acre-feet per year of managed available groundwater for the Hensell Aquifer (of which 342 acre-feet are outside the official aquifer boundary), and 130,340 acre-feet per year of managed available groundwater for the Hosston Aquifer (of which 875 acre-feet are outside the official aquifer boundary) in Groundwater Management Area 8.

#### **METHODS:**

This request is based on previous GAM Run 08-06 (Donnelly, 2008). 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 Groups (Layer 2), the Paluxy Formation (Layer 3), the Glen Rose Formation (Layer 4), the Hensell Formation (Layer 5), the Pearsall/Cow Creek/Hammett/Sligo Members (Layer 6), and the Hosston Formation (Layer 7). The Trinity Aquifer is comprised of the Paluxy, Hensell, and Hosston formations. 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 38 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-ofrecord 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 08-06 (Donnelly, 2008).

Estimates of managed available groundwater were calculated for several geographic areas created by the geographic information systems overlay analysis of counties, groundwater conservation districts, regional water planning areas, major river basins, the boundary extents of Groundwater Management Area 8, and the northern portion of the Trinity Aquifer. These geographically divided sections of managed available groundwater values provide the greatest amount of flexibility to the groundwater management districts for summarizing managed available groundwater for both desired future conditions of the groundwater management area and for district level groundwater management planning. The geographically divided sections of managed available groundwater values also assist the regional water planning areas with their planning efforts. It should be noted that the model included portions of the units that comprise the Trinity Aquifer that spatially fall outside the official aquifer boundaries. We have provided estimates for these outliers separately from areas within the official aquifer boundary. These areas may contain water with total dissolved solids greater than 3,000 part per million.

Table 2. Estimates of managed available groundwater for the Paluxy Aquifer by geographic subdivisions. See Figure 1 to locate Map Reference (MapRef).

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
43	N. Trinity-Paluxy	Bell	G	Brazos	Clearwater	8	Bell	n/a	96
45	N. Trinity-Paluxy	Bosque	G	Brazos	None	8	Bosque	n/a	1,013
50	N. Trinity-Paluxy	Brown	F	Brazos	None	8	Brown	n/a	1
52	N. Trinity-Paluxy	Brown	F	Colorado	None	8	Brown	n/a	17
54	N. Trinity-Paluxy	Burnet	K	Brazos	Central Texas	8	Burnet	n/a	141
56	N. Trinity-Paluxy	Burnet	K	Colorado	Central Texas	8	Burnet	n/a	41
59	N. Trinity-Paluxy	Collin	С	Sabine	None	8	Collin	n/a	0
00	N. Trinity-	0.117.	0	0-12	None	0	0.111	. /-	0
60	Paluxy-outside	Collin	С	Sabine	Nama	8	Collin	n/a	0
61	N. Trinity-Paluxy	Collin	С	Trinity	None	8	Collin	n/a	1,762
62	N. Trinity- Paluxy-outside	Collin	С	Trinity	None	8	Collin	n/a	0
64	N. Trinity-Paluxy	Comanche	G	Brazos	Middle Trinity	8	Comanche	n/a	18
66			G		Middle Trinity			n/a n/a	10
	N. Trinity-Paluxy	Comanche		Colorado	None	8	Comance		040
70	N. Trinity-Paluxy	Cooke	С	Red	None	8	Cooke	n/a	640
71	N. Trinity-Paluxy	Cooke	С	Trinity		8	Cooke	n/a	2,888
73	N. Trinity-Paluxy	Coryell	G	Brazos	None	8	Coryell	n/a	254
74	N. Trinity-Paluxy	Dallas	С	Trinity	None	8	Dallas	n/a	433
76	N. Trinity-Paluxy	Delta	D	Sulphur	None	8	Delta	n/a	0
	N. Trinity-	<b>5</b> "	_	0.1.1	None	•	<b>5</b> . "		0
77	Paluxy-outside	Delta	D	Sulphur	None	8	Delta	n/a	0
78	N. Trinity-Paluxy	Denton	С	Trinity		8	Denton	n/a	9,822
80	N. Trinity-Paluxy	Eastland	G	Brazos	None	8	Eastland	n/a	4
82	N. Trinity-Paluxy	Ellis	С	Trinity	None	8	Ellis	n/a	400
00	N. Trinity-	<b>-</b>	0	T2.00	None	0	Eur.	- 1-	0
83	Paluxy-outside	Ellis	С	Trinity	NA: 1 11	8	Ellis	n/a	0
85	N. Trinity-Paluxy	Erath	G	Brazos	Middle Trinity	8	Erath	n/a	4,230
87	N. Trinity-Paluxy	Falls	G	Brazos	None	8	Falls	n/a	0

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
	N. Trinity-				None				
88	Paluxy-outside	Falls	G	Brazos		8	Falls	n/a	0
90	N. Trinity-Paluxy	Fannin	С	Red	None	8	Fannin	n/a	205
91	N. Trinity-Paluxy	Fannin	С	Sulphur	None	8	Fannin	n/a	0
92	N. Trinity-Paluxy	Fannin	С	Trinity	None	8	Fannin	n/a	83
95	N. Trinity-Paluxy	Grayson	С	Red	None	8	Grayson	n/a	3,863
96	N. Trinity-Paluxy	Grayson	С	Trinity	None	8	Grayson	n/a	845
98	N. Trinity-Paluxy	Hamilton	G	Brazos	None	8	Hamilton	n/a	291
99	N. Trinity-Paluxy	Hill	G	Trinity	None	8	Hill	n/a	48
100	N. Trinity-Paluxy	Hill	G	Brazos	None	8	Hill	n/a	1,206
101	N. Trinity-Paluxy	Hood	G	Trinity	<b>Upper Trinity</b>	8	Hood	n/a	11
103	N. Trinity-Paluxy	Hood	G	Brazos	<b>Upper Trinity</b>	8	Hood	n/a	931
108	N. Trinity-Paluxy	Hunt	D	Sulphur	None	8	Hunt	n/a	0
	N. Trinity-				None				
109	Paluxy-outside	Hunt	D	Sulphur		8	Hunt	n/a	0
111	N. Trinity-Paluxy	Hunt	D	Sabine	None	8	Hunt	n/a	0
440	N. Trinity-	Llinat	<u></u>	Sabine	None		Llunt	n /o	
112	Paluxy-outside	Hunt	D		None	8	Hunt	n/a	0
113	N. Trinity-Paluxy	Hunt	D	Trinity	None	8	Hunt	n/a	551
114	N. Trinity-Paluxy	Johnson	G	Trinity	None	8	Johnson	n/a	6,791
115	N. Trinity-Paluxy N. Trinity-	Johnson	G	Brazos		8	Johnson	n/a	2,702
117	Paluxy-outside	Kaufman	С	Sabine	None	8	Kaufman	n/a	4
119	N. Trinity-Paluxy	Kaufman	C	Trinity	None	8	Kaufman	n/a	13
113	N. Trinity	Radillali	Ü	Timity	None		Radiffiali	Π/α	10
120	Paluxy-outside	Kaufman	С	Trinity		8	Kaufman	n/a	85
122	N. Trinity-Paluxy	Lamar	D	Red	None	8	Lamar	n/a	0
123	N. Trinity-Paluxy	Lamar	D	Sulphur	None	8	Lamar	n/a	0
	N. Trinity-			· ·	None				
124	Paluxy-outside	Lamar	D	Sulphur		8	Lamar	n/a	0
126	N. Trinity-Paluxy	Lampasas	G	Brazos	Saratoga	8	Lampasas	n/a	13

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
128	N. Trinity-Paluxy	Lampasas	G	Colorado	Saratoga	8	Lampasas	n/a	0
130	N. Trinity-Paluxy	Limestone	G	Trinity	None	8	Limestone	n/a	0
	N. Trinity-				None				
131	Paluxy-outside	Limestone	G	Trinity		8	Limestone	n/a	0
133	N. Trinity-Paluxy	Limestone	G	Brazos	None	8	Limestone	n/a	0
404	N. Trinity-	1.5		D	None	•	1.1	- 1-	0
134	Paluxy-outside	Limestone	G	Brazos	None	8	Limestone	n/a	0
135	N. Trinity-Paluxy	McLennan	G	Brazos	Post Oak	8	McLennan	n/a	231
137	N. Trinity-Paluxy	Milam	G	Brazos	Savannah	8	Milam	n/a	0
107	N. Trinity-	William		Біц200	Post Oak		William	Π/α	
138	Paluxy-outside	Milam	G	Brazos	Savannah	8	Milam	n/a	0
140	N. Trinity-Paluxy	Mills	K	Brazos	Fox Crossing	8	Mills	n/a	3
142	N. Trinity-Paluxy	Mills	K	Colorado	Fox Crossing	8	Mills	n/a	2
145	N. Trinity-Paluxy	Montague	В	Red	Upper Trinity	8	Montague	n/a	29
147	N. Trinity-Paluxy	Montague	В	Trinity	Upper Trinity	8	Montague	n/a	476
149	N. Trinity-Paluxy	Navarro	С	Trinity	None	8	Navarro	n/a	413
	N. Trinity-				None				
150	Paluxy-outside	Navarro	С	Trinity		8	Navarro	n/a	0
151	N. Trinity-Paluxy	Parker	С	Trinity	Upper Trinity	8	Parker	n/a	9,370
153	N. Trinity-Paluxy	Parker	С	Brazos	Upper Trinity	8	Parker	n/a	430
156	N. Trinity-Paluxy	Red River	D	Red	None	8	Red River	n/a	206
	N. Trinity-		_		None			,	
157	Paluxy-outside	Red River	D	Red	Mana	8	Red River	n/a	0
159	N. Trinity-Paluxy	Red River	D	Sulphur	None	8	Red River	n/a	267
160	N. Trinity- Paluxy-outside	Red River	D	Culphur	None	8	Red River	n/a	0
160	N. Trinity-	Red River	D	Sulphur	None	0	Keu Kivei	II/a	U
161	Paluxy-outside	Rockwall	С	Sabine	140110	8	Rockwall	n/a	0
162	N. Trinity-Paluxy	Rockwall	C	Trinity	None	8	Rockwall	n/a	958
	N. Trinity-			,	None				
163	Paluxy-outside	Rockwall	С	Trinity		8	Rockwall	n/a	0

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
165	N. Trinity-Paluxy	Somervell	G	Brazos	None	8	Somervell	n/a	120
166	N. Trinity-Paluxy	Tarrant	С	Trinity	Northern Trinity	8	Tarrant	n/a	10,544
169	N. Trinity-Paluxy	Travis	K	Brazos	None	8	Travis	n/a	0
171	N. Trinity-Paluxy	Travis	K	Colorado	None	8	Travis	n/a	3
174	N. Trinity-Paluxy	Williamson	G	Colorado	None	8	Williamson	n/a	10
	N. Trinity-				None				
175	Paluxy-outside	Williamson	G	Brazos		8	Williamson	n/a	0
176	N. Trinity-Paluxy	Williamson	K	Brazos	None	8	Williamson	n/a	0
177	N. Trinity-Paluxy	Williamson	G	Colorado	None	8	Williamson	n/a	1
178	N. Trinity-Paluxy	Williamson	K	Colorado	None	8	Williamson	n/a	0
180	N. Trinity-Paluxy	Wise	С	Trinity	<b>Upper Trinity</b>	8	Wise	n/a	2,559

Aquifer marked as outside with table row shaded denotes that the volume of water is from an area of the model outside the official aquifer boundary.

GCD = Groundwater conservation district.

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

GMA = Groundwater management area.

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

Clearwater = Clearwater Underground Water Conservation District

McLennan C. = McLennan County Groundwater Conservation District

N. Trinity = Northern Trinity Groundwater Conservation District

Fox Crossing = Fox Crossing Water District

 $Saratoga = Saratoga \ Underground \ Water \ Conservation \ District$ 

RWPA = Regional water planning area.

Table 3. Estimates of managed available groundwater for the Glen Rose Aquifer by geographic subdivisions. See Figure 2 to locate MapRef.

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet
maprici	Aquiloi	County	NIII A	14701 Buom	<b>C C D</b>	JIIIA	JOUANGE	i cai	per year)
43	N. Trinity-Glen Rose	Bell	G	Brazos	Clearwater	8	Bell	n/a	880
44	N. Trinity-Glen Rose	Bosque	G	Brazos	None	8	Bosque	n/a	258
49	N. Trinity-Glen Rose	Brown	F	Brazos	None	8	Brown	n/a	0
51	N. Trinity-Glen Rose	Brown	F	Colorado	None Central	8	Brown	n/a	0
53	N. Trinity-Glen Rose	Burnet	K	Brazos	Texas Central	8	Burnet	n/a	145
55	N. Trinity-Glen Rose	Burnet	K	Colorado	Texas	8	Burnet	n/a	60
58	N. Trinity-Glen Rose	Collin	С	Sabine	None	8	Collin	n/a	0
	N. Trinity-Glen Rose-								
59_	outside	Collin	С	Sabine	None	8	Collin	n/a	0
60	N. Trinity-Glen Rose	Collin	С	Trinity	None	8	Collin	n/a	0
	N. Trinity-Glen Rose-	0 111					O !!!	,	
61	outside	Collin	С	Trinity	None	8	Collin	n/a	0
63	N. Trinity-Glen Rose	Comanche	G	Brazos	Middle Trinity	8	Comanche	n/a	0
	•				Middle				
64	N. Trinity-Glen Rose	Comanche	G	Colorado	Trinity	8	Comanche	n/a	0
68	N. Trinity-Glen Rose	Cooke	С	Red	None	8	Cooke	n/a	0
69	N. Trinity-Glen Rose	Cooke	С	Trinity	None	8	Cooke	n/a	0
70	N. Trinity-Glen Rose	Coryell	G	Brazos	None	8	Coryell	n/a	784
71	N. Trinity-Glen Rose	Dallas	С	Trinity	None	8	Dallas	n/a	0
73	N. Trinity-Glen Rose	Delta	D	Sulphur	None	8	Delta	n/a	0
	N. Trinity-Glen Rose-								
74	outside	Delta	D	Sulphur	None	8	Delta	n/a	0
75	N. Trinity-Glen Rose	Denton	С	Trinity	None	8	Denton	n/a	0
77	N. Trinity-Glen Rose	Eastland	G	Brazos	None	8	Eastland	n/a	0
79	N. Trinity-Glen Rose	Ellis	С	Trinity	None	8	Ellis	n/a	0
	N. Trinity-Glen Rose-			·					
80	outside	Ellis	С	Trinity	None	8	Ellis	n/a	0

MapRe	ef Aquifer	County	RWPA	River Basin	<b>GCD</b> Middle	GMA	GeoArea	Year	MAG (Acre-feet per year)
8	2 N. Trinity-Glen Rose	Erath	G	Brazos	Trinity	8	Erath	n/a	1
8	4 N. Trinity-Glen Rose	Falls	G	Brazos	None	8	Falls	n/a	2
	N. Trinity-Glen Rose-								
8	5 outside	Falls	G	Brazos	None	8	Falls	n/a	0
8	7 N. Trinity-Glen Rose	Fannin	С	Red	None	8	Fannin	n/a	0
8	8 N. Trinity-Glen Rose	Fannin	С	Sulphur	None	8	Fannin	n/a	0
8	9 N. Trinity-Glen Rose	Fannin	С	Trinity	None	8	Fannin	n/a	0
9	2 N. Trinity-Glen Rose	Grayson	С	Red	None	8	Grayson	n/a	0
9	3 N. Trinity-Glen Rose	Grayson	С	Trinity	None	8	Grayson	n/a	0
9	5 N. Trinity-Glen Rose	Hamilton	G	Brazos	None	8	Hamilton	n/a	46
9	6 N. Trinity-Glen Rose	Hill	G	Trinity	None	8	Hill	n/a	0
9	7 N. Trinity-Glen Rose	Hill	G	Brazos	None Upper	8	Hill	n/a	10
9	8 N. Trinity-Glen Rose	Hood	G	Trinity	Trinity Upper	8	Hood	n/a	0
10	0 N. Trinity-Glen Rose	Hood	G	Brazos	Trinity	8	Hood	n/a	4
10		Hunt	D	Sulphur	None	8	Hunt	n/a	0
	N. Trinity-Glen Rose-		_			_			
10		Hunt	D	Sulphur	None	8	Hunt	n/a	0
10		Hunt	D	Sabine	None	8	Hunt	n/a	0
10	N. Trinity-Glen Rose- 9 outside	Hunt	D	Sabine	None	8	Hunt	n/a	0
11		Hunt	D	Trinity	None	8	Hunt	n/a	0
11	•	Johnson	G	Trinity	None	8	Johnson	n/a	4
11	•	Johnson	G	Brazos	None	8	Johnson	n/a	20
1 1	N. Trinity-Glen Rose-	301113011	<u> </u>	Diazos	None	U	301113011	11/a	20
11		Kaufman	С	Sabine	None	8	Kaufman	n/a	0
11	6 N. Trinity-Glen Rose	Kaufman	С	Trinity	None	8	Kaufman	n/a	0
	N. Trinity-Glen Rose-			·					
11	7 outside	Kaufman	С	Trinity	None	8	Kaufman	n/a	0

MapRef Aquifer County RWPA River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
119 N. Trinity-Glen Rose Lamar D Red	None	8	Lamar	n/a	0
120 N. Trinity-Glen Rose Lamar D Sulphur	None	8	Lamar	n/a	0
N. Trinity-Glen Rose-					
121 outside Lamar D Sulphur	None	8	Lamar	n/a	0
123 N. Trinity-Glen Rose Lampasas G Brazos	Saratoga	8	Lampasas	n/a	769
125 N. Trinity-Glen Rose Lampasas G Colorado	Saratoga	8	Lampasas	n/a	4
127 N. Trinity-Glen Rose Limestone G Trinity	None	8	Limestone	n/a	0
N. Trinity-Glen Rose-					
128 outside Limestone G Trinity	None	8	Limestone	n/a	0
130 N. Trinity-Glen Rose Limestone G Brazos	None	8	Limestone	n/a	4
N. Trinity-Glen Rose-				,	
131 outside Limestone G Brazos	None	8	Limestone	n/a	0
132 N. Trinity-Glen Rose McLennan G Brazos	None Post Oak	8	McLennan	n/a	265
134 N. Trinity-Glen Rose Milam G Brazos	Savannah	8	Milam	n/a	95
N. Trinity-Glen Rose-	Post Oak				
135 outside Milam G Brazos	Savannah	8	Milam	n/a	54
	Fox	_		,	
136 N. Trinity-Glen Rose Mills K Brazos	Crossing Fox	8	Mills	n/a	59
138 N. Trinity-Glen Rose Mills K Colorado	Crossing	8	Mills	n/a	7
	Upper	_			
141 N. Trinity-Glen Rose Montague B Red	Trinity	8	Montague	n/a	0
440 N T 1 1 0 D N A	Upper	•		,	
143 N. Trinity-Glen Rose Montague B Brazos	Trinity	8	Montague	n/a	0
145 N. Trinity-Glen Rose Navarro C Trinity	None	8	Navarro	n/a	0
N. Trinity-Glen Rose- 146 outside Navarro C Trinity	None	0	Novers	n/a	0
146 outside Navarro C Trinity	Upper	8	Navarro	II/a	U
147 N. Trinity-Glen Rose Parker C Trinity	Trinity	8	Parker	n/a	189
	Upper	3	. 3.1.01	.,, 🔾	.50
149 N. Trinity-Glen Rose Parker C Brazos	Trinity	8	Parker	n/a	3
152 N. Trinity-Glen Rose Red River D Red	None	8	Red River	n/a	0

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
	N. Trinity-Glen Rose-								
153	outside	Red River	D	Red	None	8	Red River	n/a	0
155	N. Trinity-Glen Rose	Red River	D	Sulphur	None	8	Red River	n/a	0
156	N. Trinity-Glen Rose- outside N. Trinity-Glen Rose-	Red River	D	Sulphur	None	8	Red River	n/a	0
157	outside	Rockwall	С	Sabine	None	8	Rockwall	n/a	0
158	N. Trinity-Glen Rose	Rockwall	С	Trinity	None	8	Rockwall	n/a	0
	N. Trinity-Glen Rose-			·					
159	outside	Rockwall	С	Trinity	None	8	Rockwall	n/a	0
160	N. Trinity-Glen Rose	Somervell	G	Brazos	None Northern	8	Somervell	n/a	134
161	N. Trinity-Glen Rose	Tarrant	С	Trinity	Trinity	8	Tarrant	n/a	112
164	N. Trinity-Glen Rose	Travis	K	Brazos	None	8	Travis	n/a	4
166	N. Trinity-Glen Rose	Travis	K	Colorado	None	8	Travis	n/a	2,608
168	N. Trinity-Glen Rose	Williamson	G	Brazos	None	8	Williamson	n/a	604
	N. Trinity-Glen Rose-								
169	outside	Williamson	G	Brazos	None	8	Williamson	n/a	1
170	N. Trinity-Glen Rose	Williamson	K	Brazos	None	8	Williamson	n/a	81
171	N. Trinity-Glen Rose	Williamson	G	Colorado	None	8	Williamson	n/a	37
172	N. Trinity-Glen Rose	Williamson	K	Colorado	None Upper	8	Williamson	n/a	37
174	N. Trinity-Glen Rose	Wise	C	Trinity	Trinity	8	Wise	n/a	5

Aquifer marked as outside with table row shaded denotes that the volume of water is from an area of the model outside the official aquifer boundary.

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.

Clearwater = Clearwater Underground Water Conservation District

McLennan C. = McLennan County Groundwater Conservation District

N. Trinity = Northern Trinity Groundwater Conservation District

Fox Crossing = Fox Crossing Water District

Saratoga = Saratoga Underground Water Conservation District

RWPA = Regional water planning area.

Table 4. Estimates of managed available groundwater for the Hensell Aquifer by geographic subdivisions. See Figure 3 for location of MapRef.

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
43	N. Trinity-Hensell	Bell	G	Brazos	Clearwater	8	Bell	n/a	1,099
44	N. Trinity-Hensell	Bosque	G	Brazos	None	8	Bosque	n/a	1,749
48	N. Trinity-Hensell	Brown	F	Brazos	None	8	Brown	n/a	2
50	N. Trinity-Hensell	Brown	F	Colorado	None	8	Brown	n/a	77
52	N. Trinity-Hensell	Burnet	K	Brazos	Central Texas	8	Burnet	n/a	590
54	N. Trinity-Hensell	Burnet	K	Colorado	Central Texas	8	Burnet	n/a	100
56	N. Trinity-Hensell	Callahan	G	Brazos	None	8	Callahan	n/a	9
58	N. Trinity-Hensell	Callahan	G	Colorado	None	8	Callahan	n/a	114
59	N. Trinity-Hensell	Collin	С	Sabine	None	8	Collin	n/a	0
	N. Trinity-	0 "		0.11			O !!!	,	
60	Hensell-outside	Collin	С	Sabine	None	8	Collin	n/a	0
61	N. Trinity-Hensell	Collin	С	Trinity	None	8	Collin	n/a	103
62	N. Trinity- Hensell-outside	Collin	С	Trinity	None	0	Collin	n/a	0
		_				8	_		0
64	N. Trinity-Hensell	Comanche	G	Brazos	Middle Trinity	8	Comanche	n/a	413
65	N. Trinity-Hensell	Comanche	G	Colorado	Middle Trinity	8	Comanche	n/a	6
69	N. Trinity-Hensell	Cooke	С	Red	None	8	Cooke	n/a	298
70	N. Trinity-Hensell	Cooke	С	Trinity	None	8	Cooke	n/a	1,313
71	N. Trinity-Hensell	Coryell	G	Brazos	None	8	Coryell	n/a	1,765
72	N. Trinity-Hensell	Dallas	С	Trinity	None	8	Dallas	n/a	1,121
74	N. Trinity-Hensell	Delta	D	Sulphur	None	8	Delta	n/a	50
	N. Trinity-								
75	Hensell-outside	Delta	D	Sulphur	None	8	Delta	n/a	131
76	N. Trinity-Hensell	Denton	C	Trinity	None	8	Denton	n/a	3,112
78	N. Trinity-Hensell	Eastland	G	Brazos	None	8	Eastland	n/a	73
80	N. Trinity-Hensell	Eastland	G	Colorado	None	8	Eastland	n/a	6

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
81	N. Trinity-Hensell	Ellis	С	Trinity	None	8	Ellis	n/a	1,142
	N. Trinity-								
82	Hensell-outside	Ellis	С	Trinity	None	8	Ellis	n/a	0
84	N. Trinity-Hensell	Erath	G	Brazos	Middle Trinity	8	Erath	n/a	9,142
86	N. Trinity-Hensell	Falls	G	Brazos	None	8	Falls	n/a	22
07	N. Trinity-	F-11-	0	D	Maria	0	<b>5</b> -11-	- 1-	•
87	Hensell-outside	Falls	G	Brazos	None	8	Falls	n/a	0
89	N. Trinity-Hensell	Fannin -	С	Red	None	8	Fannin	n/a	203
90	N. Trinity-Hensell	Fannin	С	Sulphur	None	8	Fannin	n/a	0
91	N. Trinity-Hensell	Fannin	С	Trinity	None	8	Fannin	n/a	0
94	N. Trinity-Hensell	Grayson	С	Red	None	8	Grayson	n/a	1,929
95	N. Trinity-Hensell	Grayson	С	Trinity	None	8	Grayson	n/a	416
96	N. Trinity-Hensell	Hamilton	G	Brazos	None	8	Hamilton	n/a	1,109
97	N. Trinity-Hensell	Hill	G	Trinity	None	8	Hill	n/a	9
98	N. Trinity-Hensell	Hill	G	Brazos	None	8	Hill	n/a	924
99	N. Trinity-Hensell	Hood	G	Trinity	Upper Trinity	8	Hood	n/a	16
101	N. Trinity-Hensell	Hood	G	Brazos	Upper Trinity	8	Hood	n/a	3,579
106	N. Trinity-Hensell	Hunt	D	Sulphur	None	8	Hunt	n/a	0
	N. Trinity-								
107	Hensell-outside	Hunt	D	Sulphur	None	8	Hunt	n/a	0
109	N. Trinity-Hensell	Hunt	D	Sabine	None	8	Hunt	n/a	0
4.40	N. Trinity-							,	
110	Hensell-outside	Hunt	D	Sabine	None	8	Hunt	n/a	0
111	N. Trinity-Hensell	Hunt	D	Trinity	None	8	Hunt	n/a	0
112	N. Trinity-Hensell	Johnson	G	Trinity	None	8	Johnson	n/a	349
113	N. Trinity-Hensell	Johnson	G	Brazos	None	8	Johnson	n/a	716
445	N. Trinity-	May francis	0	Cabina	None	0	l/aufman	n/a	0
115	Hensell-outside	Kaufman	С	Sabine	None	8	Kaufman	n/a	9
117	N. Trinity-Hensell N. Trinity-	Kaufman	С	Trinity	None	8	Kaufman	n/a	30
118	Hensell-outside	Kaufman	С	Trinity	None	8	Kaufman	n/a	201

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
120	N. Trinity-Hensell	Lamar	D	Red	None	8	Lamar	n/a	660
121	N. Trinity-Hensell	Lamar	D	Sulphur	None	8	Lamar	n/a	0
	N. Trinity-		_			_			
122	Hensell-outside	Lamar	D	Sulphur	None	8	Lamar	n/a	1
124	N. Trinity-Hensell	Lampasas	G	Brazos	Saratoga	8	Lampasas	n/a	878
126	N. Trinity-Hensell	Lampasas	G	Colorado	Saratoga	8	Lampasas	n/a	7
128	N. Trinity-Hensell	Limestone	G	Trinity	None	8	Limestone	n/a	0
400	N. Trinity-		•	<b>+</b> · · ·					•
129	Hensell-outside	Limestone	G	Trinity	None	8	Limestone	n/a	0
131	N. Trinity-Hensell	Limestone	G	Brazos	None	8	Limestone	n/a	15
132	N. Trinity- Hensell-outside	Limestone	G	Brazos	None	8	Limestone	n/a	0
133		McLennan	G	Brazos	None		McLennan	n/a	4,190
133	N. Trinity-Hensell	MCLennan	G	DIAZUS	Post Oak	8	MCLEIIIan	II/a	4,190
135	N. Trinity-Hensell	Milam	G	Brazos	Savannah	8	Milam	n/a	36
	N. Trinity-				Post Oak				
136	Hensell-outside	Milam	G	Brazos	Savannah	8	Milam	n/a	0
137	N. Trinity-Hensell	Mills	K	Brazos	Fox Crossing	8	Mills	n/a	832
139	N. Trinity-Hensell	Mills	K	Colorado	Fox Crossing	8	Mills	n/a	114
142	N. Trinity-Hensell	Montague	В	Red	Upper Trinity	8	Montague	n/a	20
144	N. Trinity-Hensell	Montague	В	Trinity	Upper Trinity	8	Montague	n/a	342
146	N. Trinity-Hensell	Navarro	С	Trinity	None	8	Navarro	n/a	256
	N. Trinity-								
147	Hensell-outside	Navarro	С	Trinity	None	8	Navarro	n/a	0
148	N. Trinity-Hensell	Parker	С	Trinity	Upper Trinity	8	Parker	n/a	884
150	N. Trinity-Hensell	Parker	С	Brazos	Upper Trinity	8	Parker	n/a	557
153	N. Trinity-Hensell	Red River	D	Red	None	8	Red River	n/a	19
	N. Trinity-								
154	Hensell-outside	Red River	D	Red	None	8	Red River	n/a	0
156	N. Trinity-Hensell	Red River	D	Sulphur	None	8	Red River	n/a	0
157	N. Trinity-	Red River	D	Sulphur	None	8	Red River	n/a	0

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre-feet per year)
	Hensell-outside								
	N. Trinity-								
158	Hensell-outside	Rockwall	С	Sabine	None	8	Rockwall	n/a	0
159	N. Trinity-Hensell	Rockwall	С	Trinity	None	8	Rockwall	n/a	0
	N. Trinity-								
160	Hensell-outside	Rockwall	С	Trinity	None	8	Rockwall	n/a	0
161	N. Trinity-Hensell	Somervell	G	Brazos	None	8	Somervell	n/a	741
162	N. Trinity-Hensell	Tarrant	С	Trinity	Northern Trinity	8	Tarrant	n/a	2,535
165	N. Trinity-Hensell	Travis	K	Brazos	None	8	Travis	n/a	2
167	N. Trinity-Hensell	Travis	K	Colorado	None	8	Travis	n/a	154
169	N. Trinity-Hensell	Williamson	G	Brazos	None	8	Williamson	n/a	363
	N. Trinity-								
170	Hensell-outside	Williamson	G	Brazos	None	8	Williamson	n/a	0
171	N. Trinity-Hensell	Williamson	K	Brazos	None	8	Williamson	n/a	39
172	N. Trinity-Hensell	Williamson	G	Colorado	None	8	Williamson	n/a	5
173	N. Trinity-Hensell	Williamson	K	Colorado	None	8	Williamson	n/a	8
175	N. Trinity-Hensell	Wise	С	Trinity	Upper Trinity	8	Wise	n/a	1,480

Aquifer marked as outside with table row shaded denotes that the volume of water is from an area of the model outside the official aquifer boundary.

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.

Clearwater = Clearwater Underground Water Conservation District

McLennan C. = McLennan County Groundwater Conservation District

N. Trinity = Northern Trinity Groundwater Conservation District

Fox Crossing = Fox Crossing Water District

Saratoga = Saratoga Underground Water Conservation District

RWPA = Regional water planning area.

Table 5. Estimates of managed available groundwater for the Hosston Aquifer by geographic subdivisions. See Figure 4 for location of MapRef.

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre- feet per year)
44	N. Trinity-Hosston	Bell	G	Brazos	Clearwater	8	Bell	n/a	4,993
45	N. Trinity-Hosston	Bosque	G	Brazos	None	8	Bosque	n/a	2,829
49	N. Trinity-Hosston	Brown	F	Brazos	None	8	Brown	n/a	25
51	N. Trinity-Hosston	Brown	F	Colorado	None Central	8	Brown	n/a	1,923
53	N. Trinity-Hosston	Burnet	K	Brazos	Texas Central	8	Burnet	n/a	1,847
55	N. Trinity-Hosston	Burnet	K	Colorado	Texas	8	Burnet	n/a	622
57	N. Trinity-Hosston	Callahan	G	Brazos	None	8	Callahan	n/a	1,783
59	N. Trinity-Hosston	Callahan	G	Colorado	None	8	Callahan	n/a	1,871
60	N. Trinity-Hosston	Collin	С	Sabine	None	8	Collin	n/a	0
	N. Trinity-Hosston-	<b>.</b>						,	
61	outside	Collin	С	Sabine	None	8	Collin	n/a	0
62	N. Trinity-Hosston	Collin	С	Trinity	None	8	Collin	n/a	239
63	N. Trinity-Hosston- outside	Collin	С	Trinity	None	8	Collin	n/a	0
65	N. Trinity-Hosston	Comanche	G	Brazos	Middle Trinity	8	Comanche	n/a	23,215
66	N. Trinity-Hosston	Comanche	G	Colorado	Middle Trinity	8	Comanche	n/a	68
69	N. Trinity-Hosston	Cooke	С	Red	None	8	Cooke	n/a	346
70	N. Trinity-Hosston	Cooke	С	Trinity	None	8	Cooke	n/a	1,365
71	N. Trinity-Hosston	Coryell	G	Brazos	None	8	Coryell	n/a	913
72	N. Trinity-Hosston	Dallas	С	Trinity	None	8	Dallas	n/a	3,904
74	N. Trinity-Hosston	Delta	D	Sulphur	None	8	Delta	n/a	50
	N. Trinity-Hosston-			,					
75	outside	Delta	D	Sulphur	None	8	Delta	n/a	131
76	N. Trinity-Hosston	Denton	С	Trinity	None	8	Denton	n/a	6,399
78	N. Trinity-Hosston	Eastland	G	Brazos	None	8	Eastland	n/a	4,412

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre- feet per year)
80	N. Trinity-Hosston	Eastland	G	Colorado	None		B Eastland	n/a	225
81	N. Trinity-Hosston	Ellis	С	Trinity	None		B Ellis	n/a	2,417
	N. Trinity-Hosston-							,	
82	outside	Ellis	С	Trinity	None		B Ellis	n/a	0
84	N. Trinity-Hosston	Erath	G	Brazos	Middle Trinity		B Erath	n/a	15,723
86	N. Trinity-Hosston	Falls	G	Brazos	None		B Falls	n/a	137
87	N. Trinity-Hosston- outside	Falls	G	Brazos	None		B Falls	n/a	8
89	N. Trinity-Hosston	Fannin	C	Red	None		B Fannin	n/a	209
	•								
90	N. Trinity-Hosston	Fannin	С	Sulphur	None		B Fannin	n/a	0
91	N. Trinity-Hosston	Fannin	С	Trinity	None		B Fannin	n/a	0
94	N. Trinity-Hosston	Grayson	С	Red	None		3 Grayson	n/a	1,930
95	N. Trinity-Hosston	Grayson	С	Trinity	None		3 Grayson	n/a	417
96	N. Trinity-Hosston	Hamilton	G	Brazos	None		B Hamilton	n/a	698
97	N. Trinity-Hosston	Hill	G	Trinity	None		3 Hill	n/a	4
98	N. Trinity-Hosston	Hill	G	Brazos	None		3 Hill	n/a	946
99	N. Trinity-Hosston	Hood	G	Trinity	Upper Trinity		B Hood	n/a	37
101	N. Trinity-Hosston	Hood	G	Brazos	Upper Trinity		3 Hood	n/a	6,567
106	N. Trinity-Hosston	Hunt	D	Sulphur	None		3 Hunt	n/a	0
	N. Trinity-Hosston-			0.1.1				,	
107	outside	Hunt	D	Sulphur	None		B Hunt	n/a	0
109	N. Trinity-Hosston	Hunt	D	Sabine	None		3 Hunt	n/a	0
110	N. Trinity-Hosston- outside	Hunt	D	Sabine	None		B Hunt	n/a	0
111	N. Trinity-Hosston	Hunt	D	Trinity	None		Hunt	n/a	0
112				•	None			n/a n/a	787
	N. Trinity-Hosston	Johnson	G	Trinity			3 Johnson		
113	N. Trinity-Hosston N. Trinity-Hosston-	Johnson	G	Brazos	None		3 Johnson	n/a	1,502
115	outside	Kaufman	С	Sabine	None		3 Kaufman	n/a	32
117	N. Trinity-Hosston	Kaufman	С	Trinity	None		Raufman	n/a	104
117		. wannan	•			,	· · · · · · · · · · · · · · · · · · · ·	11/ U	107

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre- feet per year)
118	N. Trinity-Hosston- outside	Kaufman	С	Trinity	None	8	Kaufman	n/a	703
120				Red	None	_			660
	N. Trinity-Hosston	Lamar	D			8	Lamar	n/a	
121	N. Trinity-Hosston N. Trinity-Hosston-	Lamar	D	Sulphur	None	8	Lamar	n/a	0
122	outside	Lamar	D	Sulphur	None	8	Lamar	n/a	1
124	N. Trinity-Hosston	Lampasas	G	Brazos	Saratoga	8	Lampasas	n/a	1,265
126	N. Trinity-Hosston	Lampasas	G	Colorado	Saratoga	8	Lampasas	n/a	181
128	N. Trinity-Hosston	Limestone	G	Trinity	None	8	Limestone	n/a	0
	N. Trinity-Hosston-		_	,					_
129	outside	Limestone	G	Trinity	None	8	Limestone	n/a	0
131	N. Trinity-Hosston	Limestone	G	Brazos	None	8	Limestone	n/a	50
	N. Trinity-Hosston-			_					
132	outside	Limestone	G	Brazos	None	8	Limestone	n/a	0
133	N. Trinity-Hosston	McLennan	G	Brazos	None	8	McLennan	n/a	16,004
135	N. Trinity-Hosston	Milam	G	Brazos	Post Oak Savannah	8	Milam	n/a	102
133	N. Trinity-Hosston-	IVIIIaiii	G	DIAZUS	Post Oak	0	IVIIIaIII	II/a	102
136	outside	Milam	G	Brazos	Savannah	8	Milam	n/a	0
137	N. Trinity-Hosston	Mills	K	Brazos	Fox Crossing	8	Mills	n/a	379
139	N. Trinity-Hosston	Mills	K	Colorado	Fox Crossing	8	Mills	n/a	1,005
142	N. Trinity-Hosston	Montague	В	Red	Upper Trinity	8	Montague	n/a	80
144	N. Trinity-Hosston	Montague	В	Trinity	Upper Trinity	8	Montague	n/a	1,727
146	N. Trinity-Hosston	Navarro	С	Trinity	None	8	Navarro	n/a	1,204
	N. Trinity-Hosston-								
147	outside	Navarro	С	Trinity	None	8	Navarro	n/a	0
148	N. Trinity-Hosston	Parker	С	Trinity	Upper Trinity	8	Parker	n/a	2,006
150	N. Trinity-Hosston	Parker	С	Brazos	Upper Trinity	8	Parker	n/a	1,809
153	N. Trinity-Hosston	Red River	D	Red	None	8	Red River	n/a	38
154	N. Trinity-Hosston-	Red River	D	Red	None	8	Red River	n/a	0

MapRef	Aquifer	County	RWPA	River Basin	GCD	GMA	GeoArea	Year	MAG (Acre- feet per year)
	outside								
156	N. Trinity-Hosston	Red River	D	Sulphur	None	8	Red River	n/a	0
157	N. Trinity-Hosston- outside N. Trinity-Hosston-	Red River	D	Sulphur	None	8	Red River	n/a	0
158	outside	Rockwall	С	Sabine	None	8	Rockwall	n/a	0
159	N. Trinity-Hosston	Rockwall	С	Trinity	None	8	Rockwall	n/a	0
160	N. Trinity-Hosston- outside	Rockwall	С	Trinity	None	8	Rockwall	n/a	0
161	N. Trinity-Hosston	Somervell	G	Brazos	None Northern	8	Somervell	n/a	1,490
162	N. Trinity-Hosston	Tarrant	С	Trinity	Trinity	8	Tarrant	n/a	5,556
164	N. Trinity-Hosston	Taylor	G	Brazos	None	8	Taylor	n/a	153
166	N. Trinity-Hosston	Taylor	G	Colorado	None	8	Taylor	n/a	278
167	N. Trinity-Hosston	Travis	K	Brazos	None	8	Travis	n/a	2
169	N. Trinity-Hosston	Travis	K	Colorado	None	8	Travis	n/a	1,117
171	N. Trinity-Hosston	Williamson	G	Brazos	None	8	Williamson	n/a	546
	N. Trinity-Hosston-								
172	outside	Williamson	G	Brazos	None	8	Williamson	n/a	0
173	N. Trinity-Hosston	Williamson	K	Brazos	None	8	Williamson	n/a	37
174	N. Trinity-Hosston	Williamson	G	Colorado	None	8	Williamson	n/a	15
175	N. Trinity-Hosston	Williamson	K	Colorado	None	8	Williamson	n/a	16
177	N. Trinity-Hosston	Wise	С	Trinity	Upper Trinity	8	Wise	n/a	5,238

Aquifer marked as outside with table row shaded denotes that the volume of water is from an area of the model outside the official aquifer boundary.

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.

Clearwater = Clearwater Underground Water Conservation District

McLennan C. = McLennan County Groundwater Conservation District

N. Trinity = Northern Trinity Groundwater Conservation District Fox Crossing = Fox Crossing Water District Saratoga = Saratoga Underground Water Conservation District RWPA = Regional water planning area.

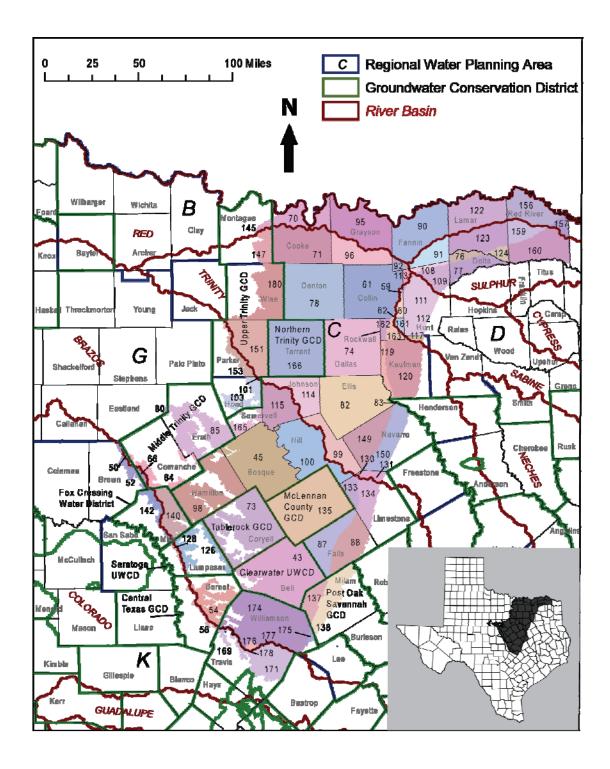


Figure 1. Geographic subdivisions of managed available groundwater for the Paluxy Aquifer. See Table 2 for descriptions of the geographic subdivisions.

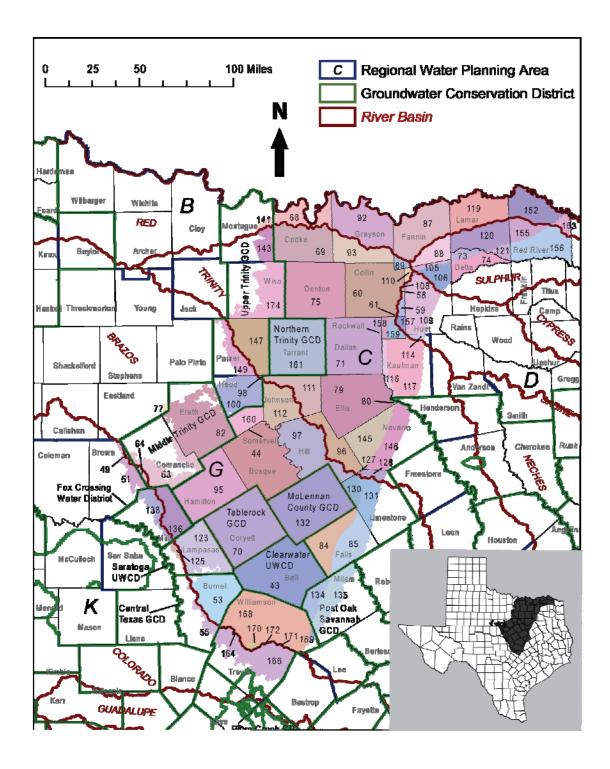


Figure 2. Geographic subdivisions of managed available groundwater for the Glen Rose Aquifer. See Table 3 for descriptions of the geographic subdivisions.

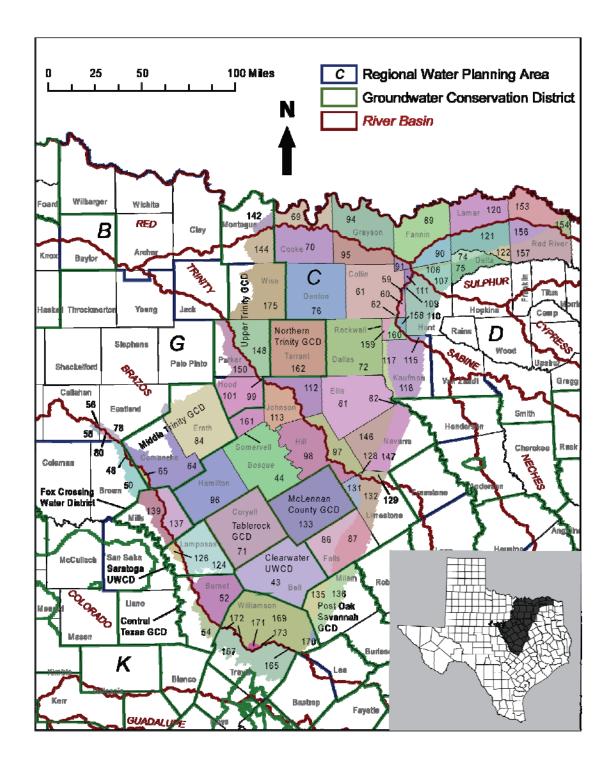


Figure 3. Geographic subdivisions of managed available groundwater for the Hensell Aquifer. See Table 4 for descriptions of the geographic subdivisions.

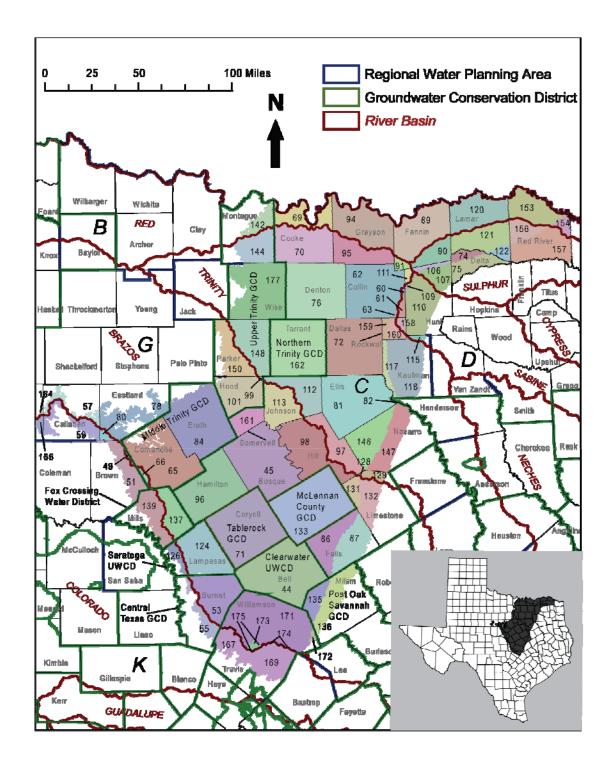


Figure 4. Geographic subdivisions of managed available groundwater for Hosston Unit of the northern part of the Trinity Aquifer. See Table 5 for descriptions of the geographic subdivisions.

## **RESULTS**:

Water level declines in the Trinity 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 65,025 acre-feet per year of managed available groundwater for the Paluxy Aquifer in Groundwater Management Area 8. Of those, 89 acre-feet per year may not be fresh water. Under the jurisdiction of the Northern Trinity Groundwater Conservation District, Tarrant County has 10,544 acre-feet per year of managed available groundwater in the Paluxy Aquifer. Under the jurisdiction of the Upper Trinity Groundwater Conservation District; Montague, Wise, Parker, and Hood counties have 13,806 acre-feet per year of managed available groundwater in the Paluxy Aquifer. The remaining counties in Regional Planning Area C have 22,413 acre-feet per year of managed available groundwater in the Paluxy Aquifer. McLennan County Groundwater Conservation District has 231 acre-feet per year, Clearwater Underground Water Conservation District (Bell County) has 96 acre-feet per year, Tablerock Groundwater Conservation District (Coryell County) has 254 acre-feet per year, Saratoga Underground Water Conservation District (Lampasas County) has 13 acre-feet per year, and the Middle Trinity Groundwater Conservation District (Erath and Comanche counties) has 4,249 acre-feet per year of managed available groundwater in the Paluxy Aquifer. The remaining counties in Regional Planning Area G have 12,187 acre-feet per year of managed available groundwater. Central Texas Groundwater Conservation District (Burnet County) has 182 acre-feet per year and Fox Crossing Water District (Mills County) has 6 acre-feet per year. The remaining counties in Regional Planning Area K have 3 acre-feet per year of managed available groundwater. The counties in Regional Planning Area D have 1,024 acre-feet per year of managed available groundwater and the counties in Regional Planning Area F have 18 acre-feet per year in the Paluxy Aquifer.

The results (Figure 2 and Table 3) show 7,387 acre-feet per year of managed available groundwater for the Glen Rose Formation in Groundwater Management Area 8. Of those, 55 acre-feet per year may not be fresh water. Under the jurisdiction of the Northern Trinity Groundwater Conservation District, Tarrant County has 112 acre-feet per year of managed available groundwater in the Glen Rose Aquifer. Under the jurisdiction of the Upper Trinity Groundwater Conservation District; Montague, Wise, Parker, and Hood counties have 201 acre-feet per year of managed available groundwater in the Glen Rose Aquifer. The remaining counties in Regional Planning Area C have 0 acre-feet per year of managed available groundwater in the Glen Rose Formation. McLennan County Groundwater Conservation District has 265 acre-feet per year, Clearwater Underground Water Conservation District (Bell County) has 880 acre-feet per year, Tablerock Groundwater Conservation District (Corvell County) has 784 acre-feet per year, Saratoga Underground Water Conservation District (Lampasas County) has 774 acre-feet per year, the Middle Trinity Groundwater Conservation District (Erath and Comanche counties) has 1 acre-foot per year of managed available groundwater in the Glen Rose Formation and the Post Oak Savannah Groundwater Conservation District has 149 acre-feet per year of managed available groundwater in the Glen Rose Aquifer. The remaining counties in Regional Planning Area G have 1,122 acre-feet per year of managed available

groundwater. Central Texas Groundwater Conservation District (Burnet County) has 205 acre-feet per year and Fox Crossing Water District (Mills County) has 66 acre-feet per year. The remaining counties in Regional Planning Area K have 2,731 acre-feet per year of managed available groundwater. The counties in Regional Water Planning Area D have 0 acre-feet per year of managed available groundwater and the counties in Regional Water Planning Area F have 0 acre-feet per year in the Glen Rose Aquifer.

The results (Figure 3 and Table 4) show 46,067 acre-feet per year of managed available groundwater for the Hensell Aquifer in Groundwater Management Area 8. Of those, 342 acre-feet per year may not be fresh water. Under the jurisdiction of the Northern Trinity Groundwater Conservation District, Tarrant County has 2,535 acre-feet per year of managed available groundwater in the Hensell Aquifer. Under the jurisdiction of the Upper Trinity Groundwater Conservation District; Montague, Wise, Parker, and Hood counties have 6,879 acre-feet per year of managed available groundwater in the Hensell Aguifer. The remaining counties in Regional Planning Area C have 10,134 acre-feet per year of managed available groundwater in the Hensell Aquifer. McLennan County Groundwater Conservation District has 4,190 acre-feet per year, Clearwater Underground Water Conservation District (Bell County) has 1,099 acre-feet per year, Tablerock Groundwater Conservation District (Coryell County) has 1,765 acre-feet per year, Saratoga Underground Water Conservation District (Lampasas County) has 885 acre-feet per year, the Middle Trinity Groundwater Conservation District (Erath and Comanche counties) has 9,562 acre-foot per year of managed available groundwater in the Hensell Aguifer and the Post Oak Savannah Groundwater Conservation District has 36 acre-feet per year of managed available groundwater in the Hensell Aquifer. The remaining counties in Regional Planning Area G have 6,204 acre-feet per year of managed available groundwater. Central Texas Groundwater Conservation District (Burnet County) has 690 acre-feet per year and Fox Crossing Water District (Mills County) has 945 acre-feet per year. The remaining counties in Regional Planning Area K have 203 acre-feet per year of managed available groundwater. The counties in Regional Planning Area D have 861 acre-feet per year of managed available groundwater and the counties in Regional Planning Area F have 79 acre-feet per year in the Hensell Aquifer.

The results (Figure 4 and Table 5) show 130,340 acre-feet per year of managed available groundwater for the Hosston Aquifer in Groundwater Management Area 8. Of those, 875 acre-feet per year may not be fresh water. Under the jurisdiction of the Northern Trinity Groundwater Conservation District, Tarrant County has 5,556 acre-feet per year of managed available groundwater in the Hosston Aquifer. Under the jurisdiction of the Upper Trinity Groundwater Conservation District; Montague, Wise, Parker, and Hood counties have 17,463 acre-feet per year of managed available groundwater in the Hosston Aquifer. The remaining counties in Regional Planning Area C have 19,269 acre-feet per year of managed available groundwater in the Hosston Aquifer. McLennan County Groundwater Conservation District has 16,004 acre-feet per year, Clearwater Underground Water Conservation District (Bell County) has 4,993 acre-feet per year, Tablerock Groundwater Conservation District (Coryell County) has 913 acre-feet per year, Saratoga Underground Water Conservation District (Lampasas County) has 1,446 acre-feet per year, the Middle Trinity Groundwater Conservation District (Erath and Comanche counties) has 39,006 acre-foot per year of managed available groundwater in

the Hosston Aquifer and Post Oak Savannah Groundwater Conservation District (Milam County) has 103 acre-feet per year of managed available groundwater. The remaining counties in Regional Planning Area G have 17,734 acre-feet per year of managed available groundwater. Central Texas Groundwater Conservation District (Burnet County) has 2,469 acre-feet per year and Fox Crossing Water District (Mills County) has 1,383 acre-feet per year. The remaining counties in Regional Planning Area K have 1,172 acre-feet per year of managed available groundwater. The counties in Regional Planning Area D have 880 acre-feet per year of managed available groundwater and the counties in Regional Planning Area F have 1,948 acre-feet per year in the Hosston Aquifer.

In addition, we have reviewed the results from this model simulation and compared the results from GAM Run 08-14mag (Wade, 2008) for the Woodbine Aquifer to verify that they are physically possible, individually and collectively.

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.

## **REFERENCES:**

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Donnelly, A., 2008, GAM08-06 Final Report, Texas Water Development Board GAM Run Report, October 26, 2007, 44 p.

Wade, S., 2008, GAM08-14mag Report, Texas Water Development Board GAM Run Report, May 6, 2008, 7 p.



The seal appearing on this document was authorized by Shirley C. Wade, P.G., on March 5, 2009.