

BRAZOS G

WATER PLANNING GROUP

VOTING MEMBERS

Scott Mack, Chair
Dale Spurgin, Vice-Chair
Phillip J. Ford,
Secretary/Treasurer
Jon H. Burrows
Tom Clark
Alva Cox
Scott Diermann
Tim Fambrough
Terry Kelley
Mike McGuire
Tommy O. O'Brien
Gail Peck
Sheril Smith
Wiley Stiem III
Mike Sutherland
Randy Waclawczyk
Kent Watson
Kathleen J. Webster
Wayne Wilson

COUNTIES

Bell
Bosque
Brazos
Burleson
Callahan
Comanche
Coryell
Eastland
Erath
Falls
Fisher
Grimes
Hamilton
Haskell
Hill
Hood
Johnson
Jones
Kent
Knox
Lampasas
Lee
Limestone
McLennan
Milam
Nolan
Palo Pinto
Robertson
Shackelford
Somervell
Stephens
Stonewall
Taylor
Throckmorton
Washington
Williamson
Young

BRAZOS RIVER AUTHORITY, Administrative Agent
Trey Buzbee, Project Manager
P.O. Box 7555 o Waco, Texas 76714-7555
(254) 761-3100 o Fax (254) 761-3204

June 26, 2008

Mr. Kevin Ward
Executive Administrator
Texas Water Development Board
P.O. Box 13231
1700 North Congress Avenue
Austin, TX 78711-3231

RE: Amendment to the 2006 Brazos G Regional Water Plan related to the Somervell County Water Supply Project

Dear Mr. Ward:

The Brazos G Regional Water Planning Group appreciates your timely response to our request regarding the Somervell County Water District's (District) request for a minor amendment to the 2006 Brazos G Regional Water Plan. As requested in your May 27, 2008 letter, I have prepared the following responses to the points you raised and have attached supporting materials for your review:

1. Provide Texas Water Development Board (TWDB) with documentation of the planning group action adopting this water management strategy as a minor amendment.

On June 4, 2008, the Brazos G Regional Water Planning Group (Group) voted to approve the minor amendment to the 2006 Brazos G Regional Water Plan requested by the Somervell County Water District. This amendment consists of the Somervell County Water Supply Project that will meet future water supply needs for various entities in Somervell County. The meeting minutes and resolution adopted by Brazos G regarding the minor amendment are attached.

2. Issue and distribute an addendum to the 2006 Brazos G Regional Water Plan updating the plan accordingly. *Addendum materials are attached to this letter. These materials will be posted on the Brazos G website alongside the documents for the 2006 Brazos G Regional Water Plan.*

3. Provide TWDB with corrected DB07 data to reflect all of the associated changes in the 2006 Brazos G Regional Water Plan and State Water Plan.

Brazos G will provide corrected DB07 data that reflect the associated changes in the 2006 Brazos G Regional Water Plan and State Water Plan to the TWDB by the end of July 2008.

4. Modify the final costs of the project in the Brazos G Regional Water Plan so that they are similar to the other capital costs in the plan. Split out and present wholesale/transmission costs (roughly half of the total costs) separately from the retail/distribution costs that should not be included in the regional and state water plan capital cost totals.

The Group will make the District aware of this requirement. The aforementioned resolution adopted by the Group is also conditioned on the District meeting this requirement.

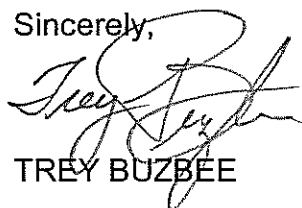
5. Request that the Somervell County Water District obtain a web link from TWDB staff in order to fill out an associated online Infrastructure Financing Survey regarding how the entity plans to finance the project associated with the substitution.

Brazos G will make the District aware of this requirement.

In addition, Brazos G does not anticipate making any substantive changes to the project components or configuration (with the exception of removing retail distribution costs noted above), but will make the TWDB aware if such changes occur.

If you have any questions with regard to the aforementioned responses, please feel free to contact me at (254) 761-3168. The Brazos G Regional Water Planning Group appreciates your assistance in this matter.

Sincerely,



TREY BUZBEE

Enc.



MEETING MINUTES SUMMARY

The primary purpose of this summary is to record the results of action agenda items. Audio of the entire meeting is available on the website at www.brazosqwater.org including meeting materials.

BRAZOS G REGIONAL WATER PLANNING GROUP

June 4, 2008

In accordance with notice sent to each member of the Brazos G Regional Water Planning Group and posted in accordance with the Texas Open Meetings Act, a meeting of the Brazos G Regional Water Planning Group convened at 10:02 a.m., Wednesday, June 4, 2008, in the central office of the Brazos River Authority, 4600 Cobbs Drive, Waco, Texas.

Agenda Item 4:

Attendance and Announcements – Chair Mack called for a roll call recognizing voting members present and noted the presence of a quorum.

| | |
|---|--|
| <p><u>VOTING MEMBERS PRESENT</u> Scott Mack, Chair Dale Spurgin, Vice-Chair Tom Clark Richard Cortese (alternate for Jon Burrows) Alva Cox Scott Diermann Tim Fambrough Ricky Garrett (alternate for Wiley Stem) Terry Kelley Mike McGuire Tommy O'Brien Gail Peek Sheril Smith Kent Watson Kathleen Webster David Wheelock (alternate for Phil Ford) Wayne Wilson</p> <p><u>VOTING MEMBERS ABSENT</u> Mike Sutherland Randy Waclawczyk</p> | <p><u>NON-VOTING MEMBERS PRESENT</u> Jerry Johnson Terry Lopas Matt Nelson Dan Opdyke E.W. Wesley</p> <p><u>OTHERS PARTICIPATING</u> Julie Andress, Brazos River Authority Trey Buzbee, Brazos River Authority David Dunn, HDR Engineering Jason Frizzell, Brazos River Authority</p> <p><u>PUBLIC PRESENT</u> See attached sign-in sheet</p> |
|---|--|

Chair Mack noted the availability of a hard copy of the meeting materials for public review. He said that the public can also view and download the meeting materials from the Brazos G website at www.brazosqwater.org.

Agenda Item 6.7:

MOTION made by Terry Kelley, second by Tim Fambrough to adopt the resolution for Somervell County Water District in their efforts to build a water management strategy to meet the county and municipal needs.

MOTION CARRIED WITH NO DISSENTING VOTES.

Agenda Item 6.8:

MOTION made by Mike McGuire, second by Wayne Wilson to approve the resolution as

presented.

MOTION CARRIED WITH NO DISSENTING VOTES.

Agenda Item 6.9:

MOTION made by Scott Diermann, second by Dale Spurgin to approve the resolution as presented.

MOTION CARRIED WITH NO DISSENTING VOTES.

Agenda Item 6.10:

MOTION made by Dale Spurgin, second by Tom Clark to initiate the process to fill the two voting member positions.

MOTION CARRIED WITH NO DISSENTING VOTES.

Agenda Item 6.11:

MOTION made by Scott Diermann, second by Tim Fambrough to direct Chair Mack to write a letter to TWDB outlining the concerns of the Group with the methodology developed in the steam-electric projections and requesting an extension in the comment period so that Brazos G can review more detailed comments at the next scheduled meeting.

MOTION CARRIED WITH NO DISSENTING VOTES.

Agenda Item 9:

Adjournment – There being no further business before the Group, Chair Mack adjourned the Brazos G Regional Water Planning Group Meeting at 12:27 p.m.

BRAZOS G
WATER PLANNING GROUP

BE IT HEREBY RESOLVED that the Brazos G Regional Water Planning Group hereby amends the 2006 Brazos G Regional Water Plan as follows:

1. Recommend the Somervell County Water Supply Project to Meet Future Water Supply Needs for Various Entities in Somervell County, as presented in the materials provided to the Brazos G Regional Water Planning Group by the Somervell County Water District, pending removal of costs associated with retail distribution, which the Texas Water Development Board has indicated should not be included in a regional water plan.

BE IT FURTHER RESOLVED that the Brazos G Regional Water Planning Group directs the Brazos River Authority to coordinate with the Texas Water Development Board to ensure that the recommended water management strategy is included in the 2007 State Water Plan.

BRAZOS G

WATER PLANNING GROUP

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Mike McGuire
Tommy O. O'Brien
Gail Peek
Sheril Smith
Wiley Stem III
Mike Sutherland
Randy Waelawczyk
Kent Watson
Kathleen J. Webster
Wayne Wilson

COUNTIES

Bell
Bosque
Brazos
Burleson
Callahan
Comanche
Coryell
Eastland
Erath
Falls
Fisher
Grimes
Hamilton
Haskell
Hill
Hood
Johnson
Jones
Kent
Knox
Lampasas
Lee
Limestone
McLennan
Milam
Nolan
Palo Pinto
Robertson
Shackelford
Somervell
Stephens
Stonewall
Taylor
Throckmorton
Washington
Williamson
Young

BRAZOS RIVER AUTHORITY, Administrative Agent
Trey Buzbee, Project Manager
P.O. Box 7555 o Waco, Texas 76714-7555
(254) 761-3100 o Fax (254) 761-3204

June 4, 2008

To: Interested Parties

Re: Amendment to the 2006 Brazos G Regional Water Plan related to the Somervell County Water Supply Projects

The Brazos G Regional Water Planning Group hereby amends the 2006 Brazos G Regional Water Plan as follows:

1. Recommend the Somervell County Water Supply Project to Meet Future Water Supply Needs for Various Entities in Somervell County.

The Somervell County Water District has recently completed the Wheeler Branch Off-Channel Reservoir Project, which is a recommended water management strategy to meet County-Other municipal needs in Somervell County. The Somervell County Water Supply Project will treat raw water from the Wheeler Branch Reservoir and transmit the treated supply to various customers of the Somervell County Water District, specifically the City of Glen Rose, various customers included in County-Other, and Steam-Electric demands (process water and potable supply at the Comanche Peak Station), as shown in Attachment A, which is the revised plan for Somervell County. A detailed technical evaluation of the water management strategy is included in Attachment B.

4C.30 Somervell County Water Supply Plan

Table 4C.30-1 lists each water user group in Somervell County and their corresponding surplus or shortage in years 2030 and 2060. For each water user group with a projected shortage, a water supply plan has been developed and is presented in the following subsections.

**Table 4C.30-1.
Somervell County Surplus/(Shortage)**

| Water User Group | Surplus/(Shortage) ¹ | | Comment |
|-------------------|---------------------------------|-------------------|-------------------------------------|
| | 2030 (acft/yr) | 2060 (acft/yr) | |
| City of Glen Rose | 38 | 37 | Projected surplus |
| County-Other | (231) | (260) | Projected shortage – see plan below |
| Manufacturing | (4) | (7) | Projected shortage – see plan below |
| Steam-Electric | 25,570 | 25,510 | Projected surplus |
| Mining | (94) | (85) | Projected shortage – see plan below |
| Irrigation | 945 | 953 | Projected surplus |
| Livestock | 0 | 0 | Supply equals demand |

¹ From Tables C-59 and C-60, Appendix C – Comparison of Water Demands with Water Supplies to Determine Needs.

4C.30.1 The City of Glen Rose

4C.30.1.1 Description of Supply

The City of Glen Rose obtains groundwater from the Trinity Aquifer. No shortage is projected for the City of Glen Rose. However, Glen Rose may obtain supplemental surface water supplies from the Somervell County Water Supply Project.

4C.30.1.2 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to supplement existing supplies for the City of Glen Rose:

- Somervell County Water Supply Project – the project will treat raw water from Wheeler Branch Off-Channel Reservoir and transmit the treated water to customers of the Somervell County Water District.

4C.30.1.3 Costs

Costs of the Somervell County Water Supply Project are discussed in Section 4C.30.2.3 below.

**Table 4C.30-1.
Recommended Plan Costs by Decade for the City of Glen Rose**

| <i>Plan Element</i> | <i>2010</i> | <i>2020</i> | <i>2030</i> | <i>2040</i> | <i>2050</i> | <i>2060</i> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Projected Surplus/(Shortage) (acft/yr) | 57 | 46 | 38 | 36 | 36 | 37 |
| Somervell County Water Supply Project (Phases 1 – 4) | | | | | | |
| Supply From Plan Element (acft/yr) | 340 | 340 | 340 | 340 | 340 | 340 |
| Annual Cost (\$/yr) | \$896,240 | \$896,240 | \$896,240 | \$159,800 | \$159,800 | \$159,800 |
| Unit Cost (\$/acft) | \$2,636 | \$2,636 | \$2,636 | \$470 | \$470 | \$470 |
| Somervell County Water Supply Project (Phases 5 – 13) | | | | | | |
| Supply From Plan Element (acft/yr) | – | – | 260 | 260 | 260 | 260 |
| Annual Cost (\$/yr) | – | – | \$1,471,340 | \$1,471,340 | \$1,471,340 | \$128,180 |
| Unit Cost (\$/acft) | – | – | \$5,659 | \$5,659 | \$5,659 | \$493 |

* Note: This supply is from the Wheeler Branch Reservoir, which has been implemented. The project is for development of treatment and transmission facilities.

4C.30.2 County-Other**4C.30.2.1 Description of Supply**

Somervell County-Other obtains its water supply from groundwater from the Trinity Aquifer. Based on the available groundwater supply, Somervell County-Other is projected to have a shortage of 231 acft/yr in the year 2030 and 260 acft/yr in the year 2060.

4C.30.2.2 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected shortage of Somervell County-Other:

- Wheeler Branch Off-Channel Reservoir – the project has obtained a water rights permit from the TCEQ and is projected to be completed by 2010
- Somervell County Water Supply Project – the project will treat raw water from Wheeler Branch Off-Channel Reservoir and transmit the treated water to customers of the Somervell County Water District.

- Conservation was also considered; however, the County-Other's per capita use rate is below the selected target rate of 140 gpcd.

4C.30.2.3 Costs

Costs of the Recommended Plan for Somervell County-Other.

- Wheeler Branch Off-Channel Reservoir:
 - Cost Source: Volume II, Section 4B.13.3
 - Date to be Implemented: before 2010
 - Total Project Cost: \$27,195,000
 - Annual Cost: \$2,117,000
- Somervell County Water Supply Project:
 - Cost Source: Somervell County Water District
 - Date to be Implemented: before 2010, with future phases
 - Total Project Cost: \$87,084,700 (Phases 1 – 13)
 - Annual Cost: \$7,647,300 (Phases 1 – 13)

**Table 4C.30-2.
Recommended Plan Costs by Decade for Somervell County-Other**

| <i>Plan Element</i> | <i>2010</i> | <i>2020</i> | <i>2030</i> | <i>2040</i> | <i>2050</i> | <i>2060</i> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Projected Surplus/(Shortage) (acft/yr) | (133) | (189) | (231) | (251) | (257) | (260) |
| Wheeler Branch Off-Channel Reservoir | | | | | | |
| Supply From Plan Element (acft/yr) | 1,800 | 1,800 | 1,800 | 1,800 | 1,800 | 1,800 |
| Annual Cost (\$/yr) | \$2,117,000 | \$2,117,000 | \$2,117,000 | \$2,117,000 | \$2,117,000 | \$2,117,000 |
| Unit Cost (\$/acft) | \$1,176 | \$1,176 | \$1,176 | \$1,176 | \$1,176 | \$1,176 |
| Somervell County Water Supply Project (Phases 1 – 4) | | | | | | |
| Supply From Plan Element (acft/yr) | 200 | 200 | 200 | 200 | 200 | 200 |
| Annual Cost (\$/yr) | \$527,200 | \$527,200 | \$527,200 | \$94,000 | \$94,000 | \$94,000 |
| Unit Cost (\$/acft) | \$2,636 | \$2,636 | \$2,636 | \$470 | \$470 | \$470 |
| Somervell County Water Supply Project (Phases 5 – 13) | | | | | | |
| Supply From Plan Element (acft/yr) | – | – | 516 | 516 | 516 | 516 |
| Annual Cost (\$/yr) | – | – | \$2,920,044 | \$2,920,044 | \$2,920,044 | \$781,588 |
| Unit Cost (\$/acft) | – | – | \$5,659 | \$5,659 | \$5,659 | \$493 |

* Note: This supply is from the Wheeler Branch Reservoir, which has been implemented. The project is for development of treatment and transmission facilities.

4C.30.3 Manufacturing

4C.30.3.1 Description of Supply

Somervell County Manufacturing obtains its water supply from groundwater from the Trinity Aquifer. Based on the available groundwater supply, Somervell County Manufacturing is projected to have a shortage of 4 acft/yr in the year 2030 and 7 acft/yr in the year 2060.

4C.30.3.2 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected shortage of Somervell County Manufacturing:

- Conservation, and
- Purchase water from the City of Glen Rose.

4C.30.3.3 Costs

Costs of the Recommended Plan for Somervell County Manufacturing.

- a. Conservation:
 - Date to be Implemented: before 2010
 - Annual Cost: Not determined
- b. Water Supply from City of Glen Rose:
 - Cost Source: estimated wholesale treated water rate
 - Date to be Implemented: By year 2010
 - Annual Cost: \$16,161 in 2060

The annual cost was calculated by multiplying the Manufacturing projected supply from this strategy by an estimated wholesale water rate of \$162/acft.

**Table 4C.30-3.
Recommended Plan Costs by Decade for Somervell County Manufacturing**

| <i>Plan Element</i> | <i>2010</i> | <i>2020</i> | <i>2030</i> | <i>2040</i> | <i>2050</i> | <i>2060</i> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Projected Surplus/(Shortage) (acft/yr) | (2) | (3) | (4) | (5) | (6) | (7) |
| Conservation | | | | | | |
| Supply From Plan Element (acft/yr) | 0 | 0 | 1 | 1 | 1 | 1 |
| Annual Cost (\$/yr) | — | — | — | — | — | — |
| Unit Cost (\$/acft) | — | — | — | — | — | — |
| Water Supply from City of Glen Rose | | | | | | |
| Supply From Plan Element (acft/yr) | 10 | 10 | 10 | 10 | 10 | 10 |
| Annual Cost (\$/yr) | \$16,161 | \$16,161 | \$16,161 | \$16,161 | \$16,161 | \$16,161 |
| Unit Cost (\$/acft) | \$162 | \$162 | \$162 | \$162 | \$162 | \$162 |

4C.30.4 Steam-Electric

4C.30.4.1 Description of Supply

Somervell County Steam-Electric is projected to have a surplus of water through 2060. Potable water for plant staff and high-quality process water for boiler feed at the Comanche Peak Steam Electric Station is currently provided from local groundwater. When the Somervell County Water Supply Project is developed, some potable water and process water for the plant will be obtained from the project.

4C.30.4.2 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to supplement existing supplies for Somervell County Steam-Electric:

- Somervell County Water Supply Project – the project will treat raw water from Wheeler Branch Off-Channel Reservoir and transmit the treated water to customers of the Somervell County Water District.
- Conservation was also considered; however, the Somervell County Steam-Electric is already exercising substantial conservation.

4C.30.4.3 Costs

Costs of the Somervell County Water Supply Project are discussed in Section 4C.30.2.3 above.

**Table 4C.30-4.
Recommended Plan Costs by Decade for Somervell County Steam-Electric**

| <i>Plan Element</i> | <i>2010</i> | <i>2020</i> | <i>2030</i> | <i>2040</i> | <i>2050</i> | <i>2060</i> |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Projected Surplus/(Shortage) (acft/yr) | | | | | | |
| Somervell County Water Supply Project (Phases 1 – 4) | | | | | | |
| Supply From Plan Element (acft/yr) | 300 | 300 | 300 | 300 | 300 | 300 |
| Annual Cost (\$/yr) | \$790,800 | \$790,800 | \$790,800 | \$141,000 | \$141,000 | \$141,000 |
| Unit Cost (\$/acft) | \$2,636 | \$2,636 | \$2,636 | \$470 | \$470 | \$470 |
| Somervell County Water Supply Project (Phases 5 – 13) | | | | | | |
| Supply From Plan Element (acft/yr) | – | – | 184 | 184 | 184 | 184 |
| Annual Cost (\$/yr) | – | – | \$1,041,256 | \$1,041,256 | \$1,041,256 | \$90,712 |
| Unit Cost (\$/acft) | – | – | \$5,659 | \$5,659 | \$5,659 | \$493 |

* Note: This supply is from the Wheeler Branch Reservoir, which has been implemented. The project is for development of treatment and transmission facilities.

4C.30.5 Mining**4C.30.5.1 Description of Supply**

Somervell County Mining obtains its water supply from groundwater from the Trinity Aquifer. Based on the available groundwater supply, Somervell County Mining is projected to have a shortage of 94 acft/yr in the year 2030 and 85 acft/yr in the year 2060.

4C.30.5.2 Water Supply Plan

Working within the planning criteria established by the Brazos G RWPG and TWDB, the following water supply plan is recommended to meet the projected shortage of Somervell County Mining:

- Conservation, and
- Voluntary Redistribution from Steam-Electric.

4C.30.5.3 Costs

Costs of the Recommended Plan for Somervell County Mining.

- a. Conservation:
 - Date to be Implemented: before 2010
 - Annual Cost: Not determined
- b. Voluntary Redistribution from Steam-Electric:
 - Cost Source: assumed unit cost for raw water transfer between entities
 - Date to be Implemented: before 2010
 - Unit Cost: \$75/acft
 - Annual Cost: \$11,250

**Table 4C.30-4.
Recommended Plan Costs by Decade for Somervell County Mining**

| <i>Plan Element</i> | <i>2010</i> | <i>2020</i> | <i>2030</i> | <i>2040</i> | <i>2050</i> | <i>2060</i> |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Projected Surplus/(Shortage) (acft/yr) | (106) | (98) | (94) | (91) | (88) | (85) |
| Conservation | | | | | | |
| Supply From Plan Element (acft/yr) | 9 | 14 | 19 | 19 | 18 | 18 |
| Annual Cost (\$/yr) | — | — | — | — | — | — |
| Unit Cost (\$/acft) | — | — | — | — | — | — |
| Voluntary Redistribution from Steam-Electric | | | | | | |
| Supply From Plan Element (acft/yr) | 150 | 150 | 150 | 150 | 150 | 150 |
| Annual Cost (\$/yr) | \$11,250 | \$11,250 | \$11,250 | \$11,250 | \$11,250 | \$11,250 |
| Unit Cost (\$/acft) | \$75 | \$75 | \$75 | \$75 | \$75 | \$75 |

4C.30.6 Irrigation

Somervell County Irrigation is projected to have a surplus of water through 2060 and no changes in water supply are recommended.

4C.30.7 Livestock

No shortages are projected for Somervell County Livestock and no changes in water supply are recommended.

Request for Amendment to the Region G Water Plan to Add Development of the Somervell County Water Supply Project

1. Background

The *2006 Brazos G Regional Water Plan* included the Wheeler Branch Off-Channel Reservoir as a water management strategy to address water supply needs in Somervell County. The Somervell County Water District has now constructed the reservoir and the associated raw water supply facilities. To make a potable water supply available for use in Glen Rose and Somervell County, the District now wishes to develop a water treatment plant and a transmission system to deliver water to wholesale and retail customers.

Luminant Power owns and operates the Comanche Peak Steam Electric Generating Station in Somervell County. Luminant would like to purchase water from the Somervell County Water District to provide potable water for the plant and high quality process water.

The Texas Water Development Board has determined that the treatment plant and transmission system needed to implement the Somervell County Water Project are not consistent with the *2006 Brazos G Regional Water Plan*. On March 24, 2008, Kevin Taylor, general manager of the Somervell County Water District, wrote to Scott Mack, Chair of the Brazos G Water Planning Group, requesting an amendment to the *2006 Brazos G Regional Water Plan* to add the development of the Somervell County Water Supply Project.

2. Amendment Request

The Somervell County Water District asks that the *2006 Brazos G Regional Water Plan* be amended to add the Somervell County Water Project, which includes:

- Development of a water treatment plant and high service pump station and later expansion.
- Development of transmission facilities to deliver water to wholesale and retail customers.
- Use of the water to meet municipal, manufacturing, steam electric generation, mining, irrigation, and livestock needs in Somervell County.

The District believes that this amendment meets the Texas Water Development Board criteria for a minor amendment to the *2006 Brazos G Regional Water Plan*, as laid out in Texas Administrative Code Rule 357.16:

- It does not result in over allocation of an existing or planned source of water. The amendment does not change the allocation of any source of supply.
- It does not relate to a new reservoir. The amendment only relates to the development of treatment and transmission facilities.
- It does not have a significant impact on instream flows, environmental flows, or freshwater flows to bays and estuaries.
- It does not have a significant impact on water planning or previously adopted management strategies.
- It does not delete or change any legal requirements of the plan.

If the Brazos G Regional Planning Group or the Texas Water Development Board determines that the requested amendment cannot be processed as a minor amendment, the District requests that it be processed as a major amendment.

3. Description of Strategy

Somervell County currently obtains all of its water supply from the Trinity Aquifer. As indicated in the U.S. Corps of Engineers "Department of the Army Evaluation and Decision Document" for the Section 404 permit obtained for Wheeler Branch Reservoir [Corps of Engineers, 2005]:

"The Trinity aquifer is heavily used and is currently being over-drafted in Somervell County.... Measurements by the Texas Water Development Board (TWDB) show that water levels of the Glen Rose municipal well No. 2 have declined by over 130 feet since 1974. The current need for municipal water in Somervell County is approximately 1,000 acre-feet per year and is projected to increase to approximately 2,500 acre-feet per year by 2050. According to Senate Bill One evaluations, the current available municipal supply in the county is 773 acre-feet per year. To meet future demands, the county would need to develop approximately 2,000 acre-feet of additional supply by 2050. This amount would enable the District to meet all anticipated needs of Glen Rose through 2050 and about 70 percent of the expected requirements for the remainder of the county."

The development of the proposed treatment and transmission facilities is necessary to allow use of this surface water supply and relieve overuse of groundwater in this growing county.

Figure 1.1 is a map showing Phases 1 through 4 of the proposed Somervell County Water Supply Project. This part of the project is planned for development in the near future (completion shortly after 2010). Figure 1.2 shows the entire proposed project, including Phases 5 through 13, which are planned for future development. Figures 1.1 and 1.2 are at the end of this memorandum.

Phases 1 through 4 include development of a 1.5 mgd water treatment plant below the Wheeler Branch Dam, along with a transmission system to deliver the treated water to wholesale customers and some retail customers. Phases 5 through 13 include expansion of the plant to 5 mgd and development of the remaining transmission facilities needed to serve the entire county.

4. Available Supply

The Somervell County Water District has a water right for 2,000 acre-feet per year from the Wheeler Branch Reservoir. The District has a subordination agreement with the Brazos River Authority that makes the 2,000 acre-feet per year available on a reliable basis. The proposed Somervell County Water Project which is the subject of this amendment will make 2,000 acre-feet per year available as potable water (840 acre-feet per year from Phases 1 through 4 and 1,160 acre-feet per year from Phases 5 through 13).

5. Environmental

Environmental impacts could include:

- Possible minor impacts on riparian corridors, depending on location of pipelines.
- Other possible minor impacts from pipeline development.

The impacts of pipeline development will be minimized to the extent possible by following existing roadway corridors and by avoiding environmentally sensitive areas where feasible. A summary of environmental issues is presented in Table 1.

Table 1
Environmental Issues:
Somervell County Water Supply Project

| Water Management Option | Somervell County Water Supply Project |
|--|--|
| Implementation Measures | Construction of a 5.0 mgd water treatment plant, pump stations, ground and elevated storage tanks, and pipelines (156.2 miles) |
| Environmental Water Needs/Instream Flows | Negligible impact. |
| Bays and Estuaries | Negligible impact. |
| Fish and Wildlife Habitat | Possible minor impacts on riparian corridors, depending on specific location of pipelines. |
| Cultural Resources | Possible low impact. |
| Threatened and Endangered Species | Possible low impact. |

6. *Engineering and Costing*

Figures 1 and 2 show the facilities required to develop the Somervell County Water Project. Water from Wheeler Branch Reservoir will be treated at the water treatment plant below the dam and distributed to the county by a system of pump stations, ground and elevated storage tanks, and pipelines. Phases 1 through 4 will include a 1.5 mgd water treatment plant and high service pump station, 1 booster pump station, 2 ground storage tanks, 1 elevated tank, and 30.5 miles of pipeline ranging from 6 inches to 18 inches in diameter. Phases 5 through 13 will include expanding the water treatment plant and high service pump station to 5.0 mgd, 5 booster pump stations, 4 ground storage tanks, 4 elevated tanks, and 125.7 miles of pipeline ranging from 6 inches to 12 inches in diameter.

Table 2 summarizes the capital costs for Phases 1 through 4, which total \$17,099,300 using the 2002 costs assumed in the *2006 Brazos G Regional Water Plan*.

Table 2
Cost Estimate Summary for
Somervell County Water Supply Project Phases 1 through 4
(Second Quarter 2002 Prices and 2008 Prices)

| Item | Estimated Cost for Facilities (2002 \$) | Estimated Cost for Facilities (2008 \$) |
|--|--|---|
| Capital Costs | | |
| 6" WL and Appurtenances | \$ 315,100 | \$ 376,200 |
| 8" WL and Appurtenances | \$ 851,200 | \$ 1,016,400 |
| 10" WL and Appurtenances | \$ 488,300 | \$ 583,000 |
| 12" WL and Appurtenances | \$ 4,145,600 | \$ 4,950,000 |
| 16" WL and Appurtenances | \$ 2,726,900 | \$ 3,256,000 |
| 18" WL and Appurtenances | \$ 323,400 | \$ 386,100 |
| Boring and Casing | \$ 544,400 | \$ 650,000 |
| Installation through Rock | \$ 581,400 | \$ 694,200 |
| Pavement Repair | \$ 234,500 | \$ 280,000 |
| New 1.5 MGD Water Treatment Plant | \$ 4,187,500 | \$ 5,000,000 |
| 1.5 MGD HSPS | \$ 418,800 | \$ 500,000 |
| Ground Storage Tanks | \$ 837,500 | \$ 1,000,000 |
| Elevated Storage Tanks | \$ 1,046,900 | \$ 1,250,000 |
| Booster Pump Station | \$ 397,800 | \$ 475,000 |
| Total Capital Costs | \$ 17,099,300 | \$ 20,416,900 |
| Contingencies | \$ 3,419,800 | \$ 4,083,380 |
| Engineering, Permitting, Survey, and Geotech | \$ 3,077,800 | \$ 3,675,042 |
| Land Costs | \$ 284,800 | \$ 340,000 |
| Power Supply Costs | \$ 128,100 | \$ 152,919 |
| Interest During Construction (1 year) | \$ 1,025,900 | \$ 1,225,014 |
| Total Project Costs | \$ 25,035,700 | \$ 29,893,300 |
| Annual Costs | | |
| Debt Service (6 percent for 30 years) | \$ 1,820,000 | \$ 2,173,000 |
| Operation and Maintenance | \$ 375,200 | \$ 448,000 |
| Energy Costs (319,800 kWh @ \$0.06/kWh) | \$ 19,200 | \$ 25,584 |
| Total Annual Costs | \$ 2,214,400 | \$ 2,646,600 |
| Available Project Yield (ac-ft/yr) | 840 | 840 |
| Annual Cost of Water (\$ per ac-ft) | \$ 2,636 | \$ 3,151 |
| Annual Cost of Water (\$ per 1,000 gallons) | \$ 8.09 | \$ 9.67 |

Notes:

1. 2008 Costs were reduced to 2002 Costs using 3% Inflation per year over 6 years.
2. 2008 Power Costs are based on \$0.08/kWh. 2002 power costs are \$0.06/kWh.

Professional services, land costs, power supply costs, contingencies, and interest during construction will add \$7,936,400, for a total project cost of \$25,035,700. (At 2008 prices, the estimated cost is \$29,893,300.) With 6 percent interest and 30-year bonds, the annual debt service is \$1,820,000. Operation and maintenance costs for pumping, transmission, and treatment add \$394,400 per year, for a total annual cost of \$2,214,400 (at 2002 prices) for delivery of 840 acre-feet. The cost of treated water delivered is \$2,636 per acre-foot, or \$8.09 per thousand gallons. This relatively high cost is associated with the development of a new surface water supply system for a relatively small volume of water.

Most of the cost of Phases 1 through 4 is associated with the development of the water treatment plant and high service pump station and the delivery of water to wholesale customers (Glen Rose and the Comanche Peak Steam Electric Station). The costs break out as follows:

- Water treatment plant and high service pump station - \$6,746,800
- Delivery to wholesale customers – \$15,799,200
- Retail distribution system - \$2,489,700
- Total - \$25,035,700

Table 3 summarizes the capital costs for Phases 5 through 13, which total \$42,263,200 using the 2002 costs assumed in the *2006 Brazos G Regional Water Plan*. Professional services, land costs, power supply costs, contingencies, and interest during construction will add \$19,785,800, for a total project cost of \$62,049,000. (At 2008 prices, the estimated cost is \$74,088,100.) With 6 percent interest and 30-year bonds, the annual debt service is \$4,511,000. Operation and maintenance costs for pumping, transmission and treatment add \$921,900 per year, for a total annual cost of \$5,432,900 (at 2002 prices) for delivery of 1,160 acre-feet. The cost of treated water delivered is \$4,684 per acre-foot, or \$14.38 per thousand gallons. This cost is associated with the development of a retail distribution system in a rural environment, where a lot of pipeline is needed per customer. Almost all of the costs of Phases 5 through 13 are associated with the retail distribution system, since Glen Rose and the Comanche Peak Steam Electric Station are the only significant wholesale customers in the county. Of course, it is possible that other wholesale customers will develop before the system is actually built.

Table 3
Cost Estimate Summary for
Somervell County Water Supply Project Phases 5 through 13
(Second Quarter 2002 Prices and 2008 Prices)

| Item | Estimated Cost for Facilities (2002 \$) | Estimated Cost for Facilities (2008 \$) |
|--|--|---|
| Capital Costs | | |
| 6" WL and Appurtenances | \$ 2,846,700 | \$ 3,399,000 |
| 8" WL and Appurtenances | \$ 15,418,000 | \$ 18,409,600 |
| 10" WL and Appurtenances | \$ 2,197,200 | \$ 2,623,500 |
| 12" WL and Appurtenances | \$ 4,843,800 | \$ 5,783,600 |
| Boring and Casing | \$ 1,474,000 | \$ 1,760,000 |
| Installation through Rock | \$ 1,554,600 | \$ 1,856,200 |
| Pavement Repair | \$ 935,100 | \$ 1,116,500 |
| Water Treatment Plant Expansion to 5 MGD | \$ 5,862,500 | \$ 7,000,000 |
| HSPS Expansion to 5 MGD | \$ 963,100 | \$ 1,150,000 |
| Flow Control Valves | \$ 213,600 | \$ 255,000 |
| Ground Storage Tanks | \$ 1,549,400 | \$ 1,850,000 |
| Elevated Storage Tanks | \$ 3,643,100 | \$ 4,350,000 |
| Booster Pump Station | \$ 762,100 | \$ 910,000 |
| Total Capital Costs | \$ 42,263,200 | \$ 50,463,400 |
| Contingencies | \$ 8,452,600 | \$ 10,092,680 |
| Engineering, Permitting, Survey, and Geotech | \$ 7,607,400 | \$ 9,083,412 |
| Land Costs | \$ 1,013,400 | \$ 1,210,000 |
| Power Supply Costs | \$ 176,600 | \$ 210,850 |
| Interest During Construction (1 year) | \$ 2,535,800 | \$ 3,027,804 |
| Total Project Costs | \$ 62,049,000 | \$ 74,088,100 |
| Annual Costs | | |
| Debt Service (6 percent for 30 years) | \$ 4,511,000 | \$ 5,386,000 |
| Operation and Maintenance | \$ 870,700 | \$ 1,111,000 |
| Energy Costs (852,700 kWh @ \$0.06/kWh) | \$ 51,200 | \$ 68,216 |
| Total Annual Costs | \$ 5,432,900 | \$ 6,565,200 |
| Available Project Yield (ac-ft/yr) | 1,160 | 1,160 |
| Annual Cost of Water (\$ per ac-ft) | \$ 4,684 | \$ 5,660 |
| Annual Cost of Water (\$ per 1,000 gallons) | \$ 14.38 | \$ 17.37 |

Notes:

1. 2008 Costs were reduced to 2002 Costs using 3% Inflation per year over 6 years.
2. 2008 Power Costs are based on \$0.08/kWh. 2002 costs are based on \$0.06/kWh.

7. Implementation Issues

The Somervell County Water District will need to reach agreements with the City of Glen Rose and Comanche Peak Steam Electric Station as wholesale customers to implement this water management strategy. Other implementation issues will include financing and Section 404 permitting. As shown in Table 4, this water management strategy has been compared to the plan development criteria.

8. Potential Regulatory Requirements

Implementation of this water management strategy will require the following permits for pipeline construction:

- U.S. Army Corps of Engineers Section 404 permit for pipeline stream crossings and discharges of fill into wetlands and waters of the U.S. during construction.
- NPDES Stormwater Pollution Prevention Plans.
- Possibly TP&WD Sand, Shell, Gravel, and Marl permits for construction in state-owned stream beds.

Table 4
Comparison of Somervell County Water Supply Project
to Plan Development Criteria

| <i>Impact category</i> | <i>Comment(s)</i> |
|--|---|
| A. Water Supply 1. Quantity 2. Reliability 3. Cost | 1. Sufficient for local needs. 2. High. 3. Relatively high, but reasonable for a county-wide system. |
| B. Environmental Factors 1. Environmental Water Needs 2. Habitat 3. Cultural Resources 4. Bays and Estuaries 5. Threatened and Endangered Species 6. Wetlands | 1. Low impact. 2. Low impact. 3. Low impact. 4. Low impact. 5. Low impact. 6. Low impact. |
| C. Impact on Other State Water Resources D. Threats to Agriculture and Natural Resources E. Equitable Comparison of Strategies Deemed Feasible F. Requirements for Interbasin Transfers G. Third Party Social and Economic Impacts from Voluntary Redistribution | No apparent negative impacts on state water resources. No effect on navigation. None. Done. Not applicable. None. |

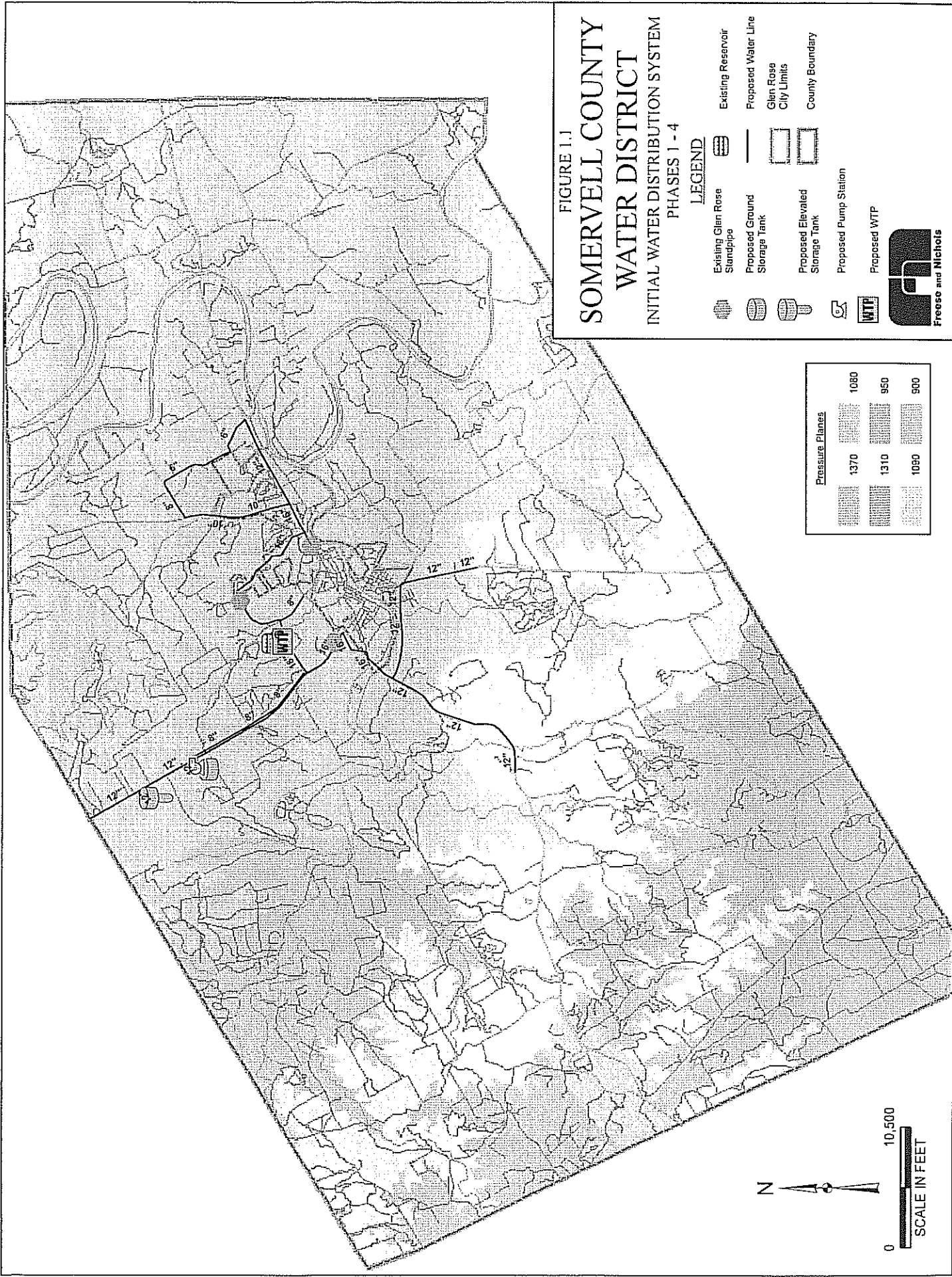


FIGURE 1.1
SOMERVELL COUNTY
WATER DISTRICT
INITIAL WATER DISTRIBUTION SYSTEM
PHASES 1 - 4

LEGEND

- Existing Glen Rose Standpipe
- Proposed Ground Storage Tank
- Proposed Elevated Storage Tank
- Proposed Pump Station
- Proposed WTP
- Existing Reservoir
- Proposed Water Line
- Glen Rose City Limits
- County Boundary

| Pressure Planes | 1370 | 1310 | 1080 | 950 | 900 |
|-----------------|------|------|------|-----|-----|
| | | | | | |

N

 0 10,500

 SCALE IN FEET



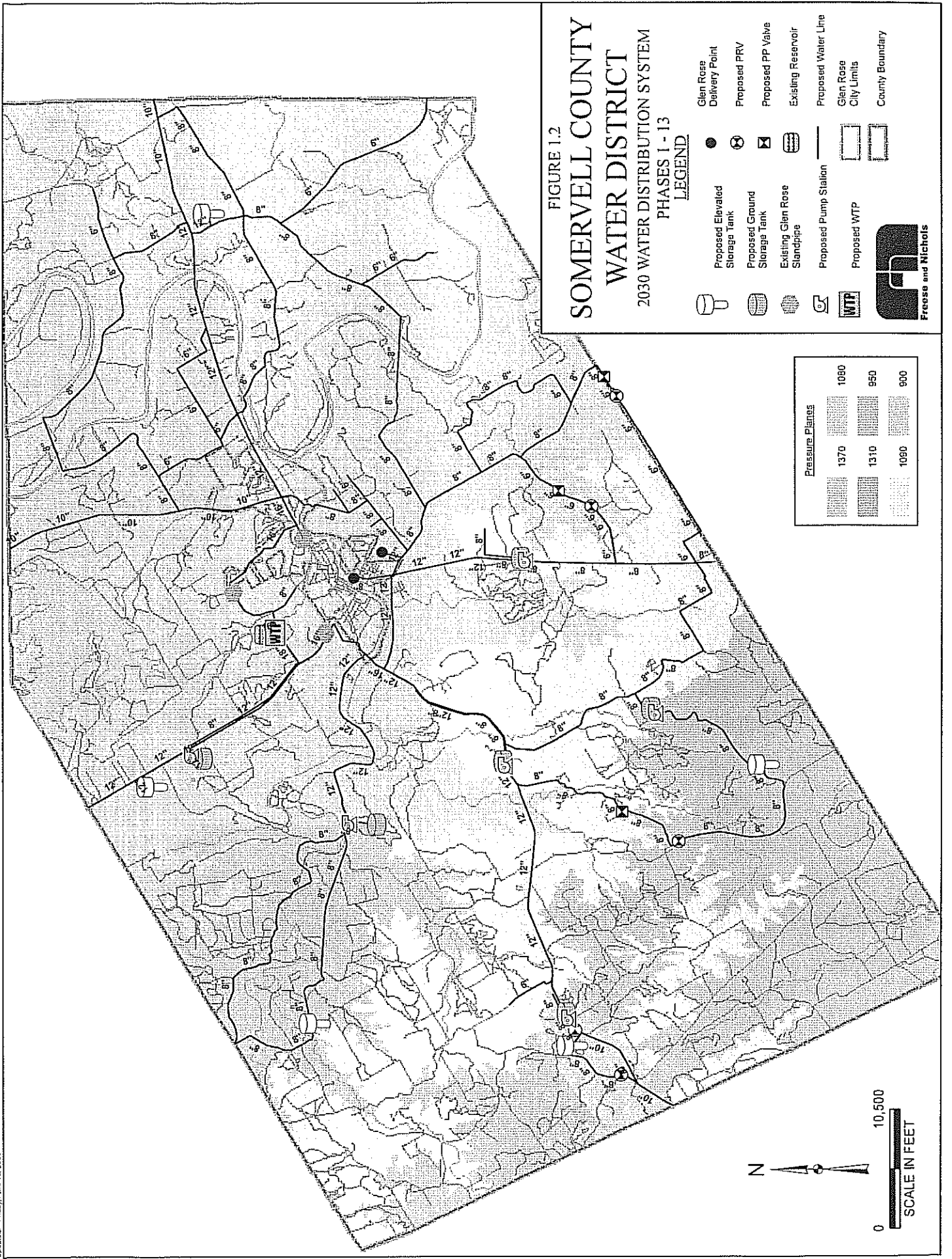


FIGURE 1.2
SOMERVELL COUNTY
WATER DISTRICT
 2030 WATER DISTRIBUTION SYSTEM
 PHASES 1 - 13

- LEGEND**
- Proposed Elevated Storage Tank
 - Proposed Ground Storage Tank
 - Existing Glen Rose Standpipe
 - Proposed Pump Station
 - Proposed WTP
 - Glen Rose Delivery Point
 - Proposed PRV
 - Proposed PP Valve
 - Existing Reservoir
 - Proposed Water Line
 - Glen Rose City Limits
 - County Boundary

Pressure Plates

| | |
|--|------|
| | 1370 |
| | 1310 |
| | 1080 |
| | 900 |

N

0 10,500

SCALE IN FEET