

2008 Regional Specific Studies

**Further Evaluation of Sub-Regional
Water Supply Master Plans**

Prepared For

**Region D – North East Texas
Regional Water Planning Group**

”

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Prepared By

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Appendix A

Further Evaluation of Sub-Regional Water Supply Master Plans

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EXECUTIVE SUMMARY

This study was undertaken by the North East Texas Regional Water Planning Group (NETRWPG) with the financial assistance of the Texas Water Development Board (TWDB). NETRWPG is one of sixteen regional water planning groups established by Senate Bill I in 1997 to assist in the development of the State Water Plan. NETRWPG (Region D) is made up of 19 counties in the northeast corner of Texas.

In the 2006 Regional Water Plan the NETRWPG identified 255 public water systems in the region. Many of these systems are small – less than 300 connections. Because of the dispersed rural population of North East Texas many of the systems are in close proximity. Many of the systems continue to use volunteer labor and equipment in maintaining their systems. Part-time staff is not uncommon. The TCEQ has adopted a term “Financial, Managerial or Technical Capability” to encompass the areas of competence that the entities should exhibit to remain viable over the long term. NETRWPG proposed this study to determine the interest among smaller systems in consolidating with neighboring systems to improve operations and financial viability.

A total of 144 small systems were thought to exist in the 19 county region based upon work from the second round of regional planning. As the study progressed it became apparent that many of these systems had already merged or otherwise consolidated and that 95 systems remained within the size constraints established by the planning group. The NETRWPG consultants developed methodology for contacting the various entities, including public meetings with the planning group and informational letters which were mailed to all systems within the appropriate size range. Response to the mail out and the public meetings indicated that 49 of the 144 systems had merged or otherwise consolidated with larger systems and were no longer operating independently. Of the remaining 95 systems 32 systems requested further information. 14 of the systems that returned the survey form, and an additional 5 systems that did not return survey forms, indicated a possible further interest in merging, and 3 systems were willing to carry this interest as far as meeting with the planning group consultants.

Based upon the results of the responses and public meetings, and follow up contact attempts by the planning group consultants, the planning group has concluded that, in general, the smaller systems remaining independent desire to remain completely autonomous. These systems do recognize that there are advantage in working together and are occasionally willing to do so, for example, shared management or operating staff, or specific programs. In most of these cases, however, each Board desires to maintain full autonomy. The responses, in addition, show a need for regionalization in northern Van Zandt County. Adequate ground water resources are becoming increasingly difficult to develop and a contracted or surface water supply alternative will be too expensive for the smaller entities to pursue individually. The NETRWPG may be of assistance in encouraging regional partnerships in this geographic area.

PURPOSE OF STUDY

The purpose of this study is to evaluate interest in and the feasibility of combining smaller water supply systems to create larger surviving systems, which may then have the financial, managerial, and technical resources to operate more efficiently and economically. The study supports regional water planning by providing an alternative to that of each smaller system obtaining its own individual supply. Since individual supplies are generally developed within the service area of the utility itself, the spacing of ground water wells may be problematic. In addition, some geographic areas may have ample ground water supply while others are deficient. A regional surface water supply is not an option which a small water system can develop on its own. By consolidating however, the combined entity may have the financial resources to develop a surface reservoir, or to import water from a relatively long distance.

METHODOLOGY

The study consisted of Phase I and Phase II entities. A different methodology was used for each group of entities. Phase I entities were systems that were identified in Round II of planning. An initial evaluation was made at that time and the purpose of this report was to expand on that initial methodology. These systems had been identified on the basis of their size and their geographic proximity to one another, and were tentatively clustered into 10 groups of systems

which could be viable candidates for consolidation based upon their geographic proximity. The methodology for these groups was:

1. Presentation of the study availability at Regional Planning Group public meetings.
2. Letter of explanation sent to all entities.
3. Analysis of responses to invitation letters.
4. Meetings scheduled with interested entities.
5. Follow up telephone calls to entities who did not respond.
6. Summary and preparation of report.

The number of entities which could be identified in Phase I was limited by the scope of the Round II planning. The Phase II entities in this report, consisted of the remaining entities with less than 300 meters in Region D which were not contacted during Phase I. For these entities the methodology was:

1. Presentation of the study availability at a public regional planning group meeting.
2. Letter of invitation mailed to all entities.
3. Follow up telephone calls to determine the level of interest.
4. Arrange meeting with interested entities.
5. Develop and preparation of a final report.

I. INTRODUCTION

The North East Texas Regional Water Planning Group (NETRWPG) is one of 16 regional water planning groups established by the 75th Texas Legislature in 1997, to participate with the Texas Water Development Board (TWDB) in development and maintenance of a State Water Plan. The NETRWPG (Region D) is made up of all or part of 19 counties in North East Texas (see Figures 1.1 and 1.2) including Bowie, Camp, Cass, Delta, Franklin, Gregg, Harrison, Hopkins, Hunt, Lamar, Marion, Morris, Rains, Red River, Smith, Titus, Upshur, Van Zandt, and Wood.

Texas is projected to more than double in population in the next 50 years. This growth will increase the vulnerability of our water supplies and lead to a significant decline in quality of life if adequate planning is not undertaken. The regional planning process is designed to provide a broad base of support by initiating the planning at a regional level.

The NETRWPG published its first Regional Water Plan in 2001, and a second in 2006. Five-year cycles are mandated by Senate Bill 1 (SB1), the enacting legislation. This current study is a portion of the 2011 Regional Water Plan.

The 2006 plan identified 255 public water systems in the region. As the plan developed, it became apparent that many of these were quite small, and that in several cases, a number of small systems were located in close proximity to each other. The planning group expressed that very small systems may lack the financial, managerial, or technical capacity to continue as separate, viable entities over the long term. In 2004, the NETRWPG requested funding from the TWDB to study the possibility of combining identified clusters of small public supply systems, and, in 2005, the TWDB approved the request.

A total of 51 existing public water supply systems were selected for inclusion in the study and they were combined into 10 clusters based upon proximity. These clusters were in six of the most southerly counties in the region – Hopkins County, Rains County, Van Zandt County, Harrison County, Upshur County and Smith County. The final clusters varied in size from 1,252

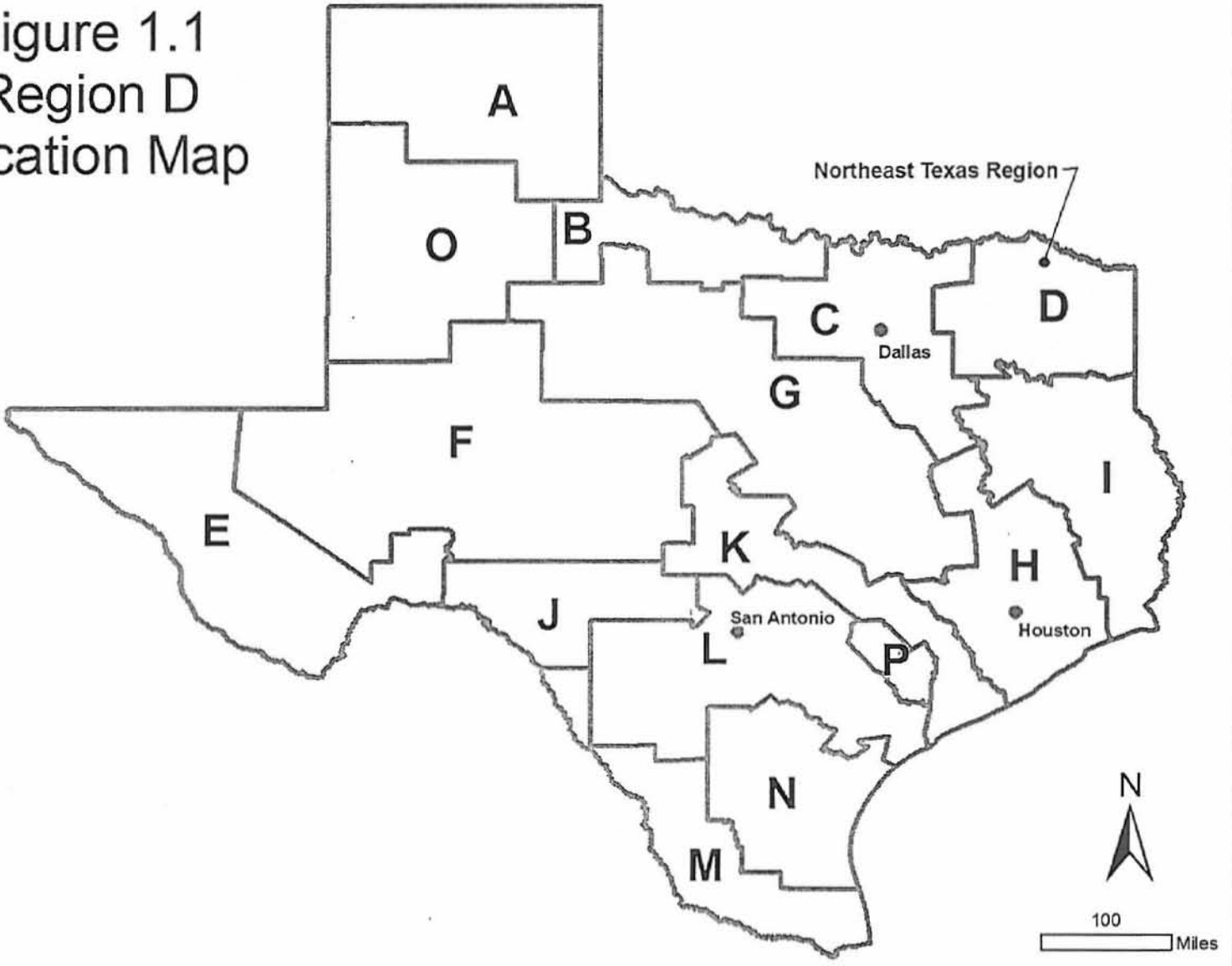
connections to 4,167 connections with the goal being to have 2,000 or more connections. A total of 25,544 connections were included.

This initial work was presented in a volume entitled “Supplemental Tasks” as a part of the 2006 Regional Plan. Physical data on the systems was tabulated, discussion of financial/managerial/technical and political/legal aspects were presented, and rough cost estimates for physical consolidation were presented. The conclusion of the 2006 work was that:

“ultimately, for very small systems, consolidation will become essential to survival. Increasing regulatory compliance pressures, increasing costs, and limits on water supply are all growing influences which will compel consolidation.”

As a portion of the 2011 planning, the NETRWPG elected to pursue further discussions with the entities identified as potential clusters in the 2006 plan. A second emphasis would expand the scope to include additional very small systems not included in 2006. The 2006 selection was limited to small systems which, by virtue of geographic proximity, might combine with neighboring small systems to create a larger, more viable entity. In the 2011 scope, an additional 93 systems with less than 300 meters were identified which were not positioned geographically so as to suggest consolidation with other small systems. In general, these small entities are adjacent to, or surrounded by, a much larger system which would be the most logical partner.

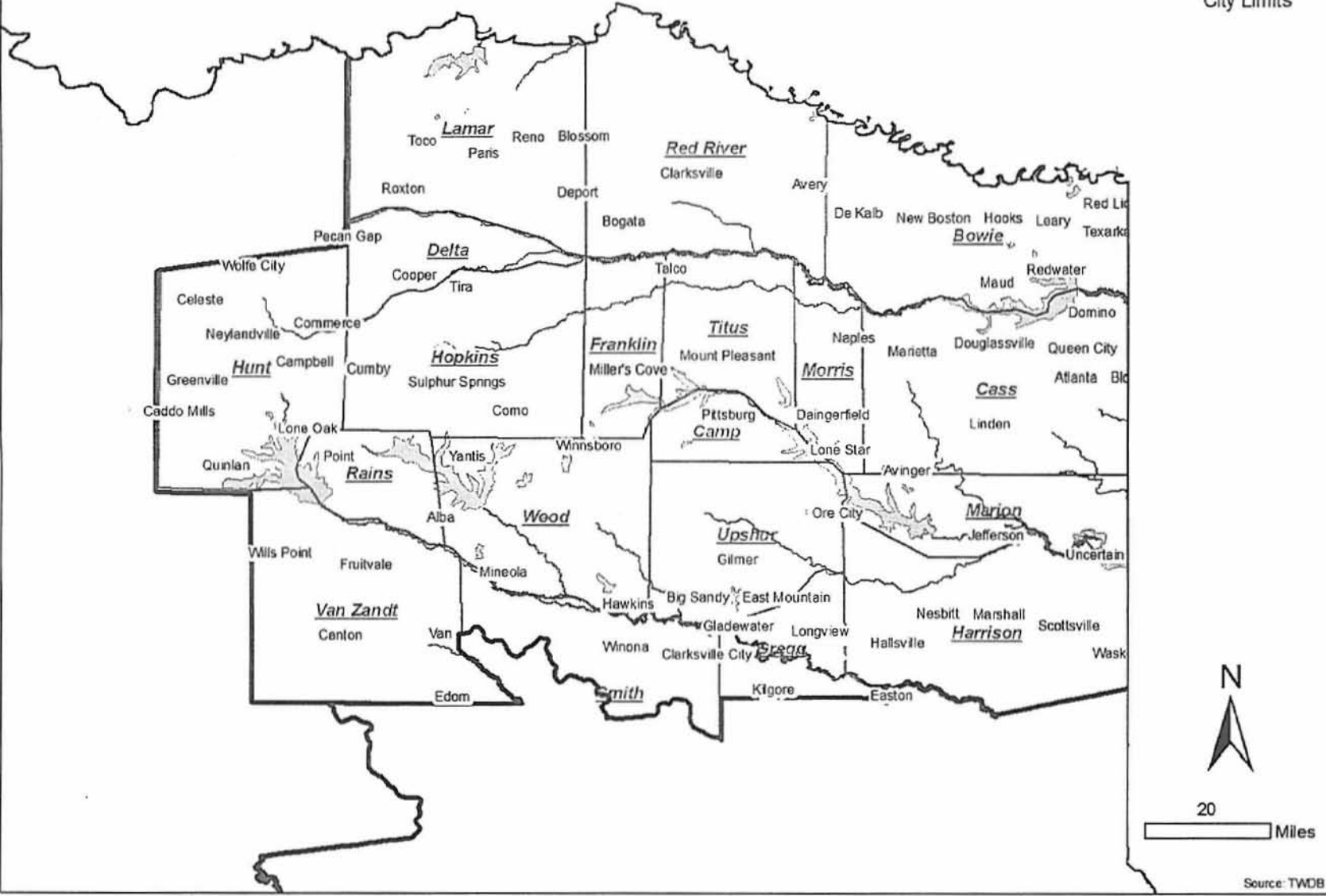
Figure 1.1 Region D Location Map



Source: TWDB

Figure 1.2 - Planning Area Base Map

- Major River
- Major Stream
- Lakes
- City Limits



II. SCOPE

The NETRWPG adopted the following scope of services to be completed in this study:

A. Phase I

1. Refinement of the original 10 plans including investigation of additional cluster potentials based on size, proximity, and identified problems (TCEQ violations). Meet with the 51 WUG's and discuss the findings from the study and educate individual board directors on the benefits of regional type systems. Present the results from the master planning process to each entity to fully examine the regionalization alternative.
2. Develop informational presentation on regionalization and review with RWPG and TWDB staff. Schedule regional meetings with the 10 clusters. Attend the regional meetings, present the advantages of regionalization, and evaluate the level of interest within each entity.
3. Refine the map products developed in round two planning to include CCN boundaries, existing and proposed supply lines and deliver to the RWPG and TWDB in ESRI ArcGIS format.
4. Make recommendations and provide guidance to interested clusters on additional steps necessary to complete the regionalization process.

B. Phase II

1. Survey and evaluate the approximately 93 smaller systems which are considered candidates for consolidation with neighboring systems. Contact each of the smaller systems, attend two meetings with each entity (46 assuming 50% participation) to educate board members on the benefits of consolidation, determine what current FMT problems they are currently experiencing, and determine what their level of interest would be towards consolidation. Obtain facility and financial information from

participating entities to assist in developing the regional system alternative. Evaluate each systems current situation (non-regional alternative) and make a determination of who would be the most likely candidate entity to complete a consolidation or merger. Data will be developed on a county/basin basis for future incorporation into the regional water planning process.

2. Review list of interested candidates with RWPG and TWDB staff from survey results. Schedule and attend two meetings with candidate merger entities (23 assuming 25% participation) involved and facilitate communication regarding consolidation.
3. Prepare a draft written report summarizing the findings of the additional study, submit the draft to the TWDB and NETRWPG, make any revisions, and make a presentation to the NETRWPG. Draft report will include data tables and maps of the areas studied. Data tables will include population projections, supply sources, demand projections, and water management strategies for the consolidated systems as well as a comparison to the current strategies identified in the 2006 RWP.
4. Finalize final written report and submit to TWDB and NETRWPG. Additional copies will be provided to the entities participating in the study.

III. PHASE I - REFINEMENT OF 10 CLUSTERS

The 51 entities selected as potential systems to consolidate in the 2006 plan are shown grouped in Table 3.1 Sub-Regional Water Supply Clusters and located on Figure 3.1. To continue efforts with these entities, the following steps were undertaken:

1. At the conclusion of the 2006 planning process, the Initially Prepared Plan, including the supplemental task dealing with sub-regional clusters, was presented in a public hearing which was held in Gilmer on December 2, 2005.
2. To begin the 2011 planning task, a letter explaining the availability of NETRWPG assistance was mailed to each of the entities, including a brief summary of the Water User Group's WUG proposed in each cluster. The consultants included a response form which each WUG could return if interested in further participation. These letters were sent in March, 2008.
3. By the end of August, 2008 slightly over one-fourth of the systems had responded. Only 5 were interested in further information.
4. In September, 2008 efforts began to contact the entities that had not responded. Telephone calls were made to each entity and, where requested, the initial correspondence was re-sent. Including this follow-up, a total of 47% of the entities responded, and 9 indicated further interest. We anticipated getting a response from just about all the entities with around a 50% positive response (25 entities).

TABLE 3.1 SUB-REGIONAL WATER SUPPLY CLUSTERS

CLUSTER	COUNTY	SYSTEM NAMES
1	Hopkins	Cornersville WSC, Como, Martin Springs WSC, Pickton WSC
2	Hopkins	Brashear WSC, Miller Grove WSC, Pleasant Hill WSC #2, Shady Grove WSC #2, Shirley WSC
3	Rains	Bright Star-Salem, East Tawakoni, Emory, South Rains WSC
4	Van Zandt	Canton North Estates, Corinth WSC, Crooked Creek WSC, Fruitvale WSC, Little Hope-Moore WSC, Myrtle Springs WSC, Pruitt-Sandflat WSC
5	Van Zandt	Ben Wheeler WSC, Edom WSC, Martins Mill WSC, R-P-M WSC, Texas Water Services Inc. Callender Lake Subdivison
6	Harrison	Blocker-Crossroads WSC, Elysian Fields WSC, Gill WSC, Old Town WSC, City of Scottsville, Waskom Rural WSC #1
7	Harrison	Caddo Lake WSC, Cypress Valley WSC, Karnack WSC, Leigh WSC, North Harrison WSC, Shadowood Water Co., Talley WSC, Cypress Village
8	Upshur	City of Clarksville, City of East Mountain, Glenwood WSC, Union Grove WSC, City of Warren City
9	Smith	Star Mountain WSC, Starrville-Friendship WSC, Starrville WSC
10	Smith	Duck Creek WSC, Enchanted Lakes Water Co., Lindale Rural WSC, Pine Ridge WSC

FIGURE 3.1 SUB-REGIONAL WATER SUPPLY CLUSTERS

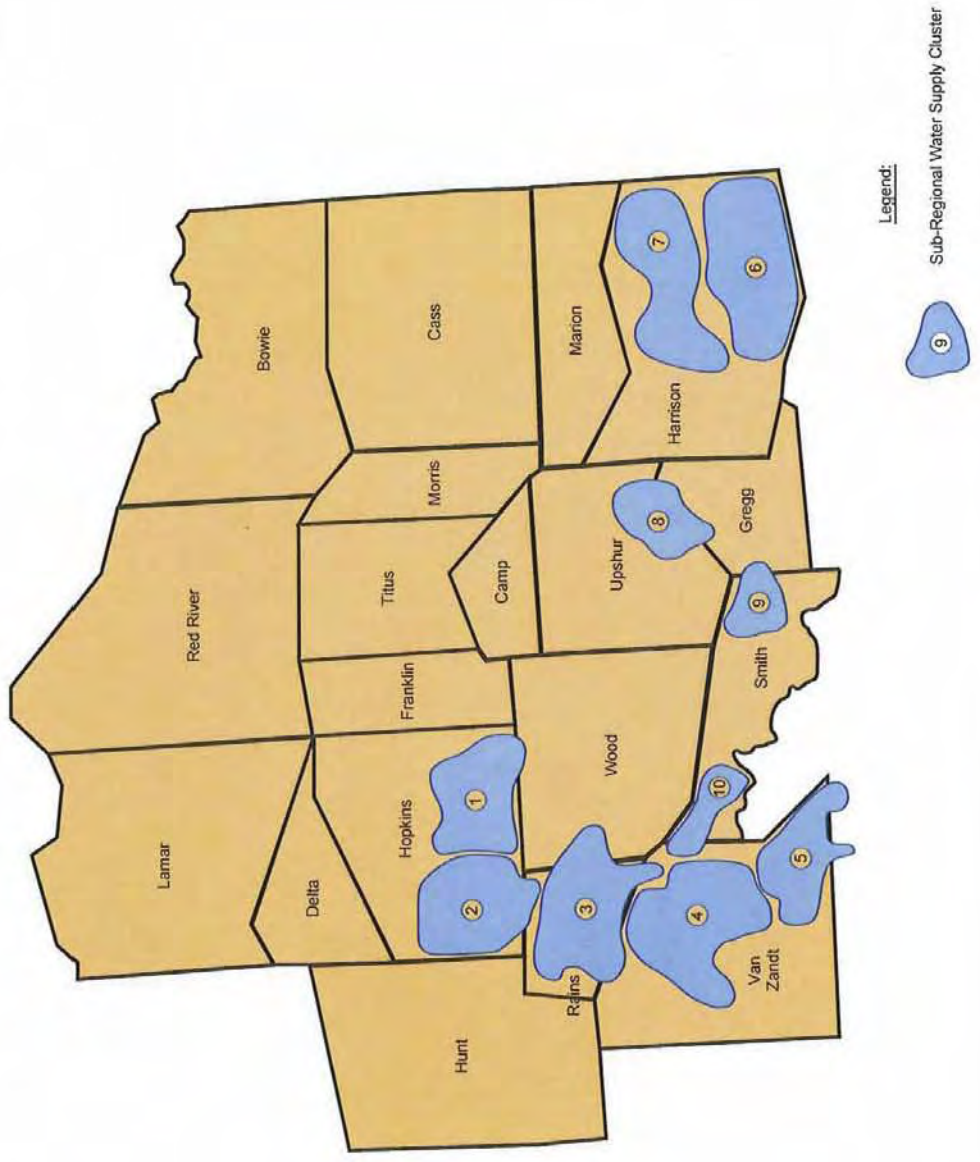


Table 3.2
(Contact Worksheet - 10 Clusters)

WUG Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
Cluster #1 - Hopkins County												
Comersville WSC	343	Hopkins	12401	3/14/08	-	-	Clyde	Brewer	(903) 488-3835	P.O. Box 9	Como, TX 75431	Gary Johnson - manager
Como, City of	280	Hopkins	P0601	3/14/08	-	-	James	Carroll	(903) 488-3434	P.O. Box 208	Como, TX 75431	Kris Skidmore - City Secretary
Martin Springs WSC	1037	Hopkins	12302	3/14/08	-	-	Bill	Ashby	(903) 488-3835	P.O. Box 9	Canton, TX 75103	Gary Johnson - manager
Pickton WSC	223	Hopkins	11001	3/14/08	-	-	Michael	Minter	(903) 488-3835	P.O. Box 9	Como, TX 75431	Gary Johnson - manager
Cluster #2 - Hopkins County												
Brashear WSC	352	Hopkins	10498	3/14/08	10/2/08	No	Ricky	Bunch	(903) 582-2278	P.O. Box 36	Brashear, TX 75420	Gene George - manager
Miller Grove WSC	503	Hopkins/Rains /Hunt	11279	3/14/08	-	-	Lewis	Russell	(903) 459-3383	14966 Farm Road 1567 W	Cumby, TX 75433	Mac Garrett - manager
Pleasant Hill WSC #2	87	Hopkins	10512	3/14/2008	10/2/08	No	Cleatus	Johnson	(903) 485-6181	1668 County Road 1178	Sulphur Springs, TX 75482	Ken Ritz
Shady Grove WSC #2	125	Hopkins	10507	3/14/08	-	-	Pat	Chase	(903) 885-7339	1701 Arbala Road	Sulphur Springs, TX 75482	
Shirley WSC	650	Hopkins/Rains	11229	3/14/08	-	-	Brad	Holland	(903) 485-5811	6684 FM 1567 W	Sulphur Springs, TX 75482	James Birchfield
Cluster #3 - Rains County												
Bright Star-Salem SUD	1724	Rains/Wood	10404	3/14/08	4/15/08	Yes	Jack	Bell	(800) 637-9407	P.O. Box 620	Alba, TX 75410	
East Tawakoni, City of	560	Rains	P0513	3/14/08	-	-	Mark	Himelright	(903) 447-2444	288 Briggs Blvd	East Tawakoni, TX 75472	
Emory, City of	899	Rains	10495	3/14/08	4/15/08	Yes	Cay	House	(903) 473-2465	P.O. Box 100	Emory, TX 75440	
South Rains WSC	984	Rains	10487	3/14/08	4/15/08	No	Gus	Metz	(903) 473-2122	P.O. Box 95	Emory, TX 75440	
Cluster #4 - Van Zandt County												
Canton North Estates (Part of Myrtle Springs WSC)	34	Van Zandt	12481	3/14/08	10/22/08	Yes	Richard	Butcher	(903) 865-8402	701 E Highway 243	Canton, TX 75103	Consolidated with Myrtle Springs WSC. Elizabeth Day - Manager
Corinth WSC	310	Van Zandt	10769	3/14/08	-	-	Sandra	Currey	(903) 962-5689	P.O. Box 299	Grand Saline, TX 75140	
Crooked Creek WSC	265	Van Zandt	11618	3/14/08	10/22/08	Yes	Nolan	Black	(903) 865-1000	P.O. Box 328	Canton, TX 75103	Elizabeth Day - manager
Fruitvale WSC	1059	Van Zandt	10806	3/18/08	4/14/08	No	Dale	Smith	(903) 896-1224	P.O. Box 75	Fruitvale, TX 75127-0075	

Table 3.2
(Contact Worksheet - 10 Clusters)

WUG Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
Little Hope Moore WSC	550	Van Zandt	11263	3/14/08	-	-	Mike	Jordan	(903) 829-8789	2391 FM 16	Canton, TX 75103	
Myrtle Springs WSC	438	Van Zandt	11200	3/14/08	10/22/08	Yes	John	Kimbrew	(903) 865-8402	P.O. Box 265	Wills Point, TX 75169	Elizabeth Day - manager
Pruitt-Sandflat WSC	442	Van Zandt	10746	3/14/08	10/3/08	No	Frank	Stuart	(903) 962-3102	P.O. Box 310	Grand Saline, TX 75140	
Cluster #5 - Van Zandt County												
Ben Wheeler WSC	725	Van Zandt/ Smith	10749	3/14/08	10/3/08	No	James	McGehee	(903) 833-5206	P.O. Box 104	Ben Wheeler, TX 75754	Mary Stone - manager
Edom WSC	453	Van Zandt/ Henderson	10747	3/17/08	-	-	James	Hutchins	(903) 852-5055	P.O. Box 245	Brownsboro, TX 75756	
Martins Mill WSC	68	Van Zandt	12583	3/20/08	10/3/08	No	Amy	Becker	(903) 479-4130	13002 FM 858	Ben Wheeler, TX 75754	
R-P-M WSC	735	Van Zandt	10787	3/14/08	8/19/08	Yes/No	Elliot	Owen	(903) 852-3115	200 VZ County Road 4913	Ben Wheeler, TX 75754	Response received at R-P-M WSC board meeting
Monarch Utilities 1 LP Callender Lake Subdivision	646	Van Zandt	12983	3/14/08	10/27/08	No	Mike	Quinn	(512) 219-2272	9511 Ranch Road 620 N	Austin, TX 78726	Formerly Texas Water Services, Inc. Callender Lake Subdivision
Cluster #6 - Harrison County												
Blocker-Crossroads	362	Harrison	12687	3/21/08	5/11/08	No	Henry	Sanders	(903) 927-2705	2323 FM 2625 W	Marshall, TX 75672	
Elysian Fields WSC	271	Harrison	10366	3/21/08			Collier	Ruse	(903) 663-2421	P.O. Box 23	Elysian Fields, TX 75642	
Gill WSC	835	Harrison	10365	3/21/08	5/2/08	No	Gene	Parker	(903) 938-5130	2323 FM 2625 W	Marshall, TX 75672	
Old Town WSC	30	Harrison	12119	3/21/08	5/29/08	Yes	Bob	Morgan	(903) 663-8225	P.O. Box 1951	Elysian Fields, TX 75642	
City of Scottsville	308	Harrison	10363	3/21/08			Walter	Johnson	(903) 935-0697	P.O. Box 463	Scottsville, TX 75688	
Waskom Rural WSC	284	Harrison	11628	3/21/08	4/2/08	No	John	Kelley	(903) 729-3286	P.O. Box 552	Waskom, TX 75692	
Cluster #7 - Harrison County												
Caddo Lake WSC	282	Harrison	10367	3/21/08			Gary	Kempf	(903) 789-3286	P.O. Box 136	Kamack, TX 75671	
Cypress Valley WSC	377	Harrison	10364	3/21/08	4/16/08	No	Bob	Hydrick	(903) 938-4426	P.O. Box 373	Marshall, TX 75672	
Kamack WSC	210	Harrison	10428	3/21/08			Nigel	Shibers	(903) 679-3264	P.O. Box 307	Kamack, TX 75671	
Leigh WSC	404	Harrison	10413	3/21/08			Carl	Shelton	(903) 926-4264	2121 FM 1999	Kamack, TX 75671	

Table 3.2
(Contact Worksheet - 10 Clusters)

WUG Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
North Harrison WSC	415	Harrison	10415	3/21/08			John	Scasta	(903) 938-6915	P.O Box 130	Woodlawn, TX 75694	
Shadowood Water Co.	90	Harrison	11568	3/21/08	6/17/08	No	Gerald	Ready	(903) 935-9932	808 Shadowood Dr.	Marshall, TX 75672	
Talley WSC	550	Harrison	10414	3/21/08			Johnny	Taylor	(903) 938-4372	P.O.Box 1837	Marshall, TX 75672	
Cypress Village	115	Harrison	11763	3/21/08	4/29/08	No	Don	Smith	(903) 935-7103	3664 FM 1793	Marshall, TX 75672	
Cluster #8- Upshur County												
City of Clarksville	318	Upshur	11048	3/21/08			Ann	Rushing	(903) 427-3834	800 W. Main St.	Clarksville, TX 75426	
City of East Mountain	600	Upshur	12972	3/21/08			Ronnie	Hill	(903) 297-6041	103 Municipal Dr.	Gilmer, TX 75645	
Glenwood WSC	857	Upshur	10515	3/21/08	4/8/08	Yes	Keith	Bonds	(903) 734-7191	P.O. Box 716	Gilmer, TX 75645	
Union Grove WSC	830	Upshur	10514	3/21/08	4/3/08	No	John	Tuttle	(903) 845-2834	11015 Union Grove	Gladewater, TX 75647	
City of Warren City	126	Upshur		3/21/08								
Cluster #9- Smith County												
Star Mountain WSC	504	Smith	11720	3/21/08			Charlie	Martin	(903) 877-3096	P.O. Box 528	Winona, TX 75792	
Starrville Friendship WSC	509	Smith	10360	3/21/08			James	Johnston	(903) 845-5181	P.O. Box 1482	Gladewater, TX 75647	
Starrville WSC	239	Smith	12897	3/21/08			Johnnie	Blake	(903) 877-9181	11620 County Road 3100	Winona, TX 75792	
Cluster #10- Smith County												
Duck Creek WSC	697	Smith	10775	3/21/08			Tony	Zamora	(903) 882-8504	P.O. Box 115	Lindale, TX 75771	
Enchanted Lakes Water Co.	161	Smith	11516	3/21/08								
Lindale Rural WSC	2300	Smith	10758	3/21/08	4/2/08	Yes	Sam	Beeler	(903) 882-3335	P.O. Box 756	Lindale, TX 75771	
Pine Ridge WSC	493	Smith	10778	3/21/08			Janella	Garrett	(903) 569-5622	21240 FM 1253	Mineola, TX 75773	

5. The WUG's that responded affirmatively were: 1) Bright Star-Salem SUD, 2) City of Emory, 3) R-P-M WSC, 4) Myrtle Springs WSC, 5) Crooked Creek WSD, 6) Canton North Estates, 7) Glenwood WSC, 8) Lindale Rural WSC, and 9) Old Town Water Company. Of the 9 entities responding affirmatively, only 3 entities agreed to have the consultants visit and perform a presentation to the board of directors and the members. Please see Appendix A for the presentation provided at these meetings.

(a) Bright Star-Salem SUD (Cluster 3) – Bright Star is a Special Utility District located in Rains and Wood Counties. Much of the service area is in close proximity to Lake Fork Reservoir. As of the 2006 plan, Bright Star utilized Carrizo-Wilcox groundwater. The service area lies on the outcrop of the formation, and thus the system has not had sufficient supply to be a significant wholesaler of water. Bright Star now has an allocation of Lake Fork surface water from the Sabine River Authority. The SUD is developing a surface water treatment plant, and is seeking an amendment to the regional plan to allow use of both surface and groundwater. After development of this supply the SUD may be seeking wholesale treated water customers.

(b) City of Emory (Cluster 3) – The City of Emory is a regional supplier at present. Emory sells treated water to the City of East Tawakoni and the South Rains WSC. East Tawakoni, in turn, supplies Community WSC. Emory desires to continue as a wholesale treated water supplier, and would be interested in serving additional WUG's.

(c) R-P-M WSC (Cluster 5) – R-P-M WSC is a Van Zandt County system which had about 735 meters during the 2006 planning period. The consultants met with R-P-M's Board of Directors on August 19th, 2008. Since the 2006 plan, R-P-M has grown to around 818 meters, and has drilled one additional well. At least one additional well will be required during the planning period. The directors expressed a willingness to consider consolidation if there were advantages to

their members, but, in general, felt that consolidation with surrounding systems would not be advantageous to R-P-M.

- (d) Myrtle Springs WSC and Crooked Creek WSD (Cluster 4) – These systems are Van Zandt County systems. Myrtle Springs served about 438 connections for the 2006 plan, and Crooked Creek served 265. The consultants met with the combined boards of these systems, and NETRWPG Van Zandt County representative Darwin Douthit, in November 11th, 2008. Since the 2006 plan, Myrtle Springs has absorbed Canton North Estates, and now serves about 550 meters. Crooked Creek now serves about 290 meters.

- (e) Canton North Estates (Cluster 4) – Canton North was identified in the 2006 regional plan. This system has now merged with Myrtle Springs WSC.

- (f) Glenwood WSC (Cluster 8) – Glenwood WSC is an Upshur County system with 5% in Gregg County. The system reported 857 meters during the 2006 planning period. The Glenwood WSC is in an area targeted for future growth on the north side of the City of Longview. Glenwood WSC has been planning for their growth by merging with a group of entities to purchase surface water from Northeast Texas Municipal Water District. The system has expressed an interest in considering consolidation but no other systems in their area responded positively.

- (g) Lindale Rural WSC (Cluster 10) – Lindale Rural WSC is a Smith County system which reported 2,365 meters during the 2006 planning period. Over 50% of the Lindale Rural WSC service area is in Region I. The Lindale Rural WSC is in an area targeted for future growth on the north side of the City of Tyler. The system has expressed an interest in considering consolidation but no other systems in their area responded positively.

- (h) Old Town Water Company (Cluster 6) – Old Town Water Company is a Harrison County system with approximately 44 connections. The system is in non-compliance with TCEQ Rules and Regulations for Public Water Systems and cannot find any neighboring systems that will consider a merger or takeover.

IV. PHASE II – 93 SMALLER SYSTEMS

In addition to the 51 potential cluster systems, 93 additional systems were identified for the 2011 cycle, which served less than 300 meters. Letters were sent to each of these 93 entities, explaining the availability of a presentation from the consultants about the benefits of cooperative action.

In July, 2008, a presentation was made to Region D discussing the project background, the feasibility of regionalizing systems, TCEQ policies, and the goals and types of regionalization. A copy of the presentation is included as Appendix A in this report.

In September, 2008 efforts were made to contact the entities which had not responded. One or more follow-up calls were made to each entity, and repeat correspondence where requested. Table 4.1 Contact Worksheet summarizes the contact information for the 93 smaller systems. Of the 93 systems, only 45 were found to continue to exist as independent systems for consideration. The remaining systems had either been purchased by a larger system, had ceased to exist, or were a proposed system with a CCN which had not been developed. No new systems were identified with less than 300 meters.

The 45 smaller systems were then evaluated to determine the most logical plan for future regionalization/consolidation. Recommendations for each WUG were developed to provide guidance to these systems with the expectation that the survival of smaller systems will become almost impossible in the current regulatory environment. These smaller systems were placed into 28 groups based on their proximity to neighboring large systems.

Each group's water supply infrastructure was then analyzed to determine their adequacy to meet TCEQ's requirements for: supply, total storage, pumping, pressure tank and elevated storage capacity. Existing and projected conditions for the individual system and combined systems, and the resulting infrastructure capacity surpluses and deficiencies are shown in tables prepared for each respective group. Where required, cost analysis was performed for infrastructure

development needed to merge the groups together. Also, maps showing location of each individual group have been prepared and included herein.

The supporting documentation for these recommendations is included as Appendix B – Smaller Water System Groups. The supporting documentation consists of a worksheet for each smaller water system and each host water system. Then there is a worksheet that shows the combined capacity between the smaller water systems and the host water system. The purpose of these worksheets is to show how the smaller water systems could benefit from combining with the host water system.

TABLE 4.1 SMALLER WATER SYSTEM GROUPS

<u>CLUSTER</u>	<u>COUNTY</u>	<u>SMALLER SYSTEMS</u>	<u>LARGER SYSTEMS</u>
	Bowie County Group	Woodland Estates Texarkana Mobile Home Park El Chaparral Mobile Home Park	City of Texarkana
	Camp-Upshur County Group	Newsome WSC HAB WSC, Thunderbird Point WSC Woodland Harbor WSC Camp Joy Water Company	Bi County WSC
	Cass County Group 1	City of Marietta City of Douglasville City of Domino	Western Cass WSC
	Cass County Group 2	Haggard Water Bloomberg WSC	Eastern Cass WSC
	Franklin County Group	Lake County Development, Inc. (Alpha Utility Company of Franklin County)	Cypress Springs SUD
	Gregg County Group 1	EJ Water Company Sun Acres Mobile Home Park	West Gregg WSC
	Gregg County Group 2	Liberty Danville FWSD	Elderville WSC
	Harrison County Group 1	Clear Water Distribution	Gum Springs WSC
	Harrison County Group 2	Holiday Spring Mobile Home Park	Gill WSC
	Harrison County Group 3	Pinehill Mobile Home Park	City of Scottsville
	Harrison County Group 4	Rolling Acres Water Service	Leigh WSC
	Harrison County Group 5	Caddo Lake State Park	Caddo Lake WSC
	Hunt County Group 1	Maloy WSC Campbell WSC	City of Commerce
	Hunt County Group 2	Jacobia WSC	City of Greenville
	Hunt County Group 3	Little Creek Acres Whispering Oaks Water Coop West Oaks Phoenix Corp	Cash SUD
	Lamar County Group 1	MJC WSC	City of Paris
	Lamar County Group 2	Petty WSC Pattonville WSC	Lamar County WSD

TABLE 4.1 SMALLER WATER SYSTEM GROUPS

<u>CLUSTER</u>	<u>COUNTY</u>	<u>SMALLER SYSTEMS</u>	<u>LARGER SYSTEMS</u>
Marion County Group 1		Shady Shores Water System	Diana SUD
Marion County Group 2		C&C Water Works Tejas Village	Harleton WSC
Marion County Group 3		Holiday Harbor WSC	Mims WSC
Red River Bowie County		Oak Grove WSC	Red River County WSC
Smith County Group 1		Tyler State Park	Sand Flat WSC
Smith County Group 2		City of Winona	Star Mountain WSC
Titus County Group		City of Talco City of Winfield	Tri SUD
Upshur County Group		International Alert Academy Harmony ISD	Pritchett WSC
Van Zandt County Group		Tall Oaks Estate Water Company	Macbee WSC
Wood County Group 1		Big Wood Springs Water System	Sharon WSC
Wood County Group 2		Jarvis Christian College	Fouke WSC

FIGURE 4.1 SMALLER WATER SYSTEM GROUPS

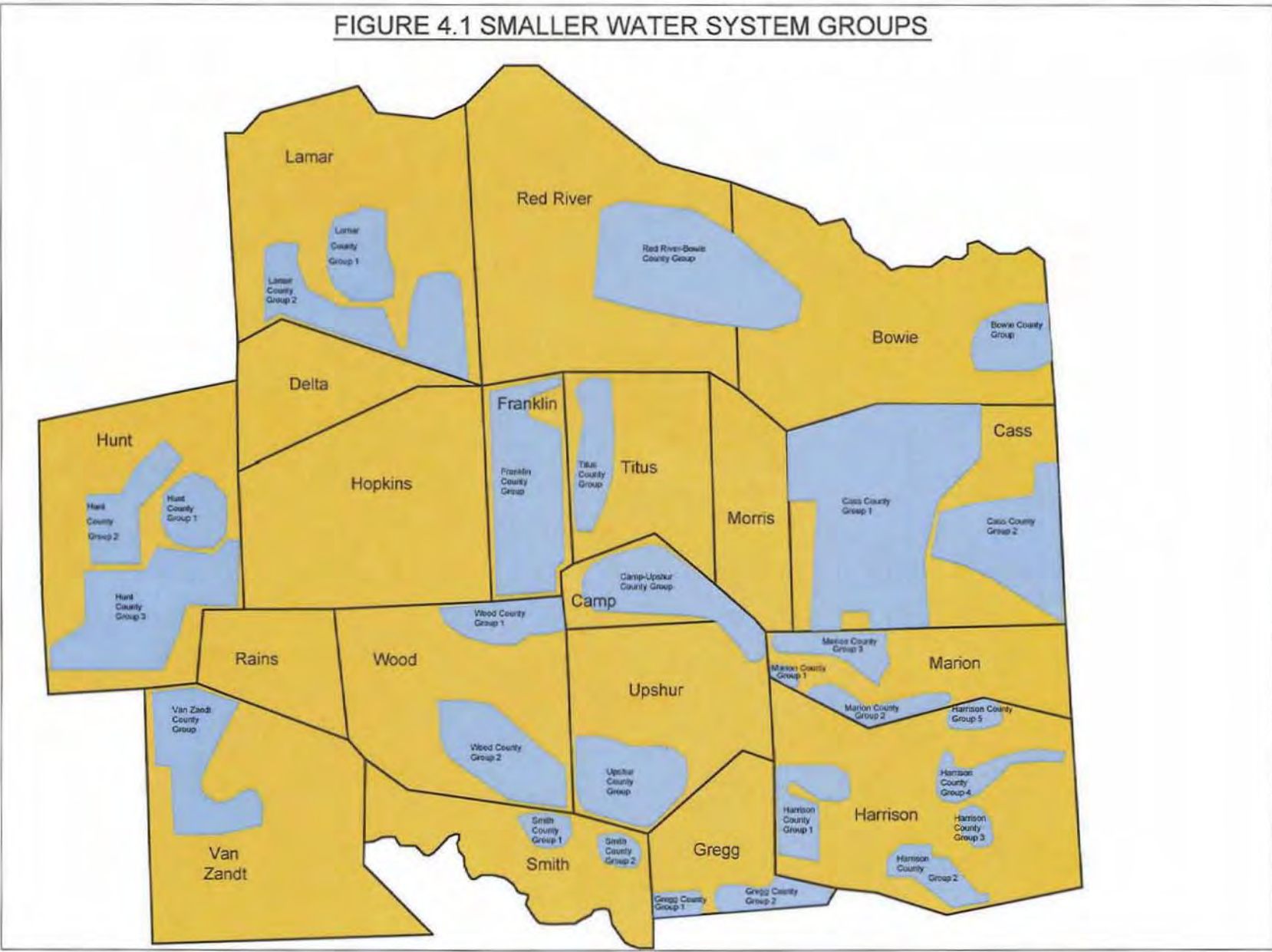


Table 4.2
(Contact Worksheet - Smaller Water Systems)

Water System Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
Cody's Mobile Home Park	30	Bowie	Inactive	5/7/08	-	-	Ray	Cody	(903)-674-2669	2693 FM 991E	Texarkana, TX 75501-1980	TCEQ states that water system is inactive. Region D Round II survey show that Cody's Mobile Home Park would stop using wells and buy water from City of Red Water.
El Chaparral Mobile Home Park	61	Bowie	019007	5/7/08	6/10/2008	Yes	Jerry	Chapman	(903) 838-2657	2810 Jonathan Street	Texarkana, TX 75503-0060	
Park Terrace Mobile Home Park (Texarkana Mobile Home Park)	4	Bowie	S3556	5/7/08	9/11/2008	Yes	Alan	Curreli	(903) 223-7921	c/o Texarkana Mobile Home Park, LLLP 117 Parkway Drive	Texarkana, TX 75501-9550	Response letter from George Lott - dated 9/11/08
Plattners Mobile Home Park	97	Bowie	12186	5/7/08	5/1/2008	No	Herman	Plattner		781 Pine Street	Hooks, TX 75561-6562	Has merged with City of Leary
Woodland Estates	25	Bowie	12324	5/7/08	-	-	Vince	Clepper	(903) 838-4044	c/o Ranger Utility Company 3601 S Kings Highway	Texarkana, TX 75501-8785	
Oak Grove WSC	243	Bowie, Red River	10482	5/7/08	5/14/2008	No	Ricky	Wilson	(903) 684-3327	18742 US Highway 82W	Avery, TX 75554-7203	
Cherokee Point Water Company	30	Camp	11157	5/9/2008	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
HAB WSC	39	Camp	0320016	5/8/2008	-	-	Alice	Vaughn	(903) 856-0117	P.O. Box 248	Leesburg, TX 75451-0248	
Newsome WSC	125	Camp	10493	5/8/2008	-	-	John	Webb	(903) 856-6802	P.O. Box 848	Pittsburg, TX 75686-0348	
Thunderbird Bay Water Service, Inc.	201	Camp	11243	5/8/2008	-	-	Charles	Schram	(972) 407-1530	P.O. Box 795399	Dallas, TX 75379-5399	
Woodland Harbor	203	Camp	12696	5/8/2008	-	-	Frank	Duncan	(903) 856-6981	c/o Aqua Utility P.O. Box 818	Pittsburg, TX 75686-0818	Frank Duncan, deceased
City of Douglassville	75	Cass	11069	6/11/2008	-	-	Douglas	Heath	903-846-2906	P.O. Box 36	Douglassville, TX 75660	Ownership: Municipality Sent Letter on 6/11/08
City of Domino	86	Cass	10527	6/11/2008	-	-	Marvin	Campbell	903-796-2843	P.O. Box 298	Queen City, TX 75572	Ownership: Municipality Sent Letter on 6/11/08
City of Marietta	126	Cass	P0719	6/11/2008	-	-	G.	Wellborn	903-835-5596	P.O. Box 247	Marietta, TX 75566	Ownership: Municipality Sent letter on 6/11/08
Bloomberg WSC	230	Cass	10518	9/30/2008	-	-	Jerrell	Ritchie	903-728-5554	P.O. Box 262	Bloomberg, TX 75556	Ownership: Water Supply Corporation Sent letter on 9/30/08
City of Avinger	285	Cass	P0550	9/30/2008	10/13/2008	yes	Pam	Downs	903-562-1000	P.O. Box 356	Avinger, TX 75630	Ownership: Municipality sent Letter on 9/30/08
Whispering Pines Subdivision	21	Cass	12723	9/30/2008	-	-	Dale	Haggard	903-796-7084	P.O. Box 817	Atlanta, TX 75551	Ownership: Investor Haggard Water took over Sping Valley Subdivision sent letter on 9/30/08
Spring Valley Subdivision	19	Cass	12723	9/30/2008	-	-	Dale	Haggard	903-796-7084	P.O. Box 817	Atlanta, TX 75551	Ownership: Investor Haggard Water took over Sping Valley Subdivision sent letter on 9/30/08
Whispering Pines MHP	35	Cass	-	Consolidated	-	-	Robbert	Moore	903-756-8789	P.O. Box 150	Lidden, TX 75563	Merged with Western Cass WSC
Atlant State Recreation Area	14	Cass	-	Consolidated	-	-	Robbert	Moore	903-756-8789	P.O. Box 150	Lidden, TX 75563	Ownership: Water Supply Corporation Western Cass WSC took over Atlanta State Recreation Area Western Cass WSC has 998 connections

Table 4.2
(Contact Worksheet - Smaller Water Systems)

Water System Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
Sherwood Addition	15	Cass	-	Consolidated	-	-	Don	Blackwell	903-796-2393	P.O. Box 26	Blivins, TX 75555	Ownership: Water Supply Corporation Sherwood Addition merged with Eastern Cass County (count 709)
Linden-Kildare High School	27	Cass	-	Consolidated	-	-	Don	Blackwell	903-796-2393	P.O. Box 26	Blivins, TX 75555	Ownership: Water Supply Corporation Linden-Kildare High School merged with Eastern Cass County (count 709)
Linden-Kildare Junior High	27	Cass	-	Consolidated	-	-	Robbert	Moore	903-756-8789	P.O. Box 150	Lidden, TX 75563	Ownership: Water Supply Corporation Western Cass WSC took over Linden-Kildare Junior High Western Cass WSC has 998 connections
Green Hills Subdivison	32	Cass	-	Consolidated	-	-	Don	Blackwell	903-796-2393	P.O. Box 26	Blivins, TX 75555	Ownership: Water Supply Corporation Green Hills Subdivison merged with Eastern Cass County (count 709)
McLeod Independent School District	37	Cass	-	Consolidated	-	-	Don	Blackwell	903-796-2393	P.O. Box 26	Blivins, TX 75555	Ownership: Water Supply Corporation Western Cass WSC took over Whispering Pines MHP Western Cass WSC has 998 connections
McLeod WSC	90	Cass	-	Consolidated	-	-	Don	Blackwell	903-796-2393	P.O. Box 26	Blivins, TX 75555	Ownership: Water Supply Corporation McLeod ISD merged with Eastern Cass County (count 709)
Ben Franklin WSC	92	Delta	12411	5/8/2008	-	-	Benny	Lovell	(903) 785-6617	P.O. Box 513	Ben Franklin, TX 75415-0513	
Erloe-Lake Creek WSC	175	Delta	10505	consolidated w/DCMUD	-	-	Robert	Douglas	(903) 395-4471	P.O. Box 177	Erloe, TX 75441-0177	Consolidated wity Delta County MUD
Pecan Gap, City of	109	Delta	10505	consolidated w/DCMUD	-	-	Robert	Douglas	(903) 395-4471	P.O. Box 37	Pecan Gap, TX 75469	Consolidated wity Delta County MUD
Lone Star WSC	86	Delta, Hunt	10505	consolidated w/DCMUD	-	-	Robert	Douglas	(903) 395-4471	P.O. Box 172	Pecan Gap, TX 75469	Consolidated wity Delta County MUD
Deer Cove POA WS	13	Franklin	0800015	5/8/2008	10/9/2008	No	Jerry	Stark	(214) 549-9181	5551 Yale Boulevard Suite 200	Dallas, TX 75206	
Lake Country Development, Inc. (Alpha Utility Company of Franklin County)	145	Franklin	12158	5/8/2008; 5/16/08	-	-	Shirley	Peterson	(903) 629-7299	88 Albatross Drive	Winnsboro, TX 75494-5487	Formerly Pelican Bay
Sun Acres MHP	48	Gregg	-	6/11/2008	-	-	-	-	-	-	-	-
E J Water Company	150	Gregg	-	6/11/2008	-	-	Bruce	Vanhasslen	-	P.O. Box 1669	Kilgore, TX 75662	Ownership: Investor sent letter on 6/11/08
Liberty-Danville FWSD	190	Gregg	P0327	9/30/2008	-	-	Alan	Reese	903-522-0578	157 McKinnon Dr.	Kilgore, TX 75662	Ownership: District/Authority sent letter on 9/30/08
C&C Mobile Home Park	33	Gregg	-	Consolidated	-	-	Rick	Evans	903-237-1320	P.O. Box 1952	Longview, TX 75606	Ownership: Municipality C&C Mobile Home park was taken over by Longview Utilities March 2001
Garden Acres Subdivision	52	Gregg	-	Consolidated	-	-	Glen	Trimble	903-595-2128	7891 Hwy. 271	Tyler, TX 75708	Ownership: Investor Garden Acres Subdivision was taken over by Texas Water Systems Inc. (count 629)
Forest Lake Estates	112	Gregg	-	Consolidated	-	-	Steve	Blackhurst	-	1106 Clayton Ln, Ste. 400W	Austin, TX 78723	Owner: Investor Forest Lake Estates was taken over by Aqua Texas Inc. in August 2003. Aqua Texas Inc. is a very large investor group
Sabine ISD	106	Gregg	-	Consolidated	-	-	James	Cox	-	1644 Gateway CTR, Ste. 349	Kilgore, TX 75662	Ownership: Water Supply Corporation Sabine ISD merged with Liberty City WSC (county 1650)
Holiday Springs MHP	32	Harrison	-	6/11/2008	-	-	James	Allen	-	8285 Hwy. 59 South	Marshall, TX 75672	sent letter on 6/11/08

Table 4.2
(Contact Worksheet - Smaller Water Systems)

Water System Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
Pinehill MHP		Harrison	-	6/11/2008	-	-	-	-	-	3684 Misty Lane	Aptos, CA 95003	sent letter on 6/11/08
Caddo Lake State Park	74	Harrison	-	9/30/2008	-	-	-	-	-	P.O. Box 136	Karnack, TX 75661	sent letter
Clearwater Distribution	101	Harrison	12819	10/17/2008	10/27/2008	yes	Andy	French	972-788-0811	14850 Quorum Dr. Ste. 300	Dallas, TX 75254	Ownership: Investor Sent letter
Rolling Acres/ Leigh WSC	33	Harrison	10413	9/30/2008	-	-	Carl	Shelton	-	2121 FM 1999	Karnack, TX 75661	sent letter
City of Waskom	195	Harrison	-	6/11/2008	-	-	Jesse	Moore	903-687-3374	P.O. Box 730	Waskom, TX 75692	Ownership: Municipality Sent Letter on 6/11/08 The City of Waskom has too many connections (count 1514)
Big Oaks MHP	225	Harrison	-	Consolidated	-	-	Jay	Nelson	903-668-2450	P.O. Box 1027	Hallsville, TX 75650	Ownership: Water Supply Corporation Big Oaks Mobile Home Park was taken over by West Harrison WSC in March 2005 (count 643)
Aquasource Co. - Crazy Horse Rancheros	101	Hunt	11157	5/9/2008	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
Aquasource Co. - Quinlan North Subdivision	50	Hunt	11157	5/9/2008	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
Aquasource Co. - Quinlan South Subdivision	37	Hunt	11157	5/9/2008	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
Aquasource Co. (FLH)	18	Hunt	11157	-	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
Aquasource Co. - Barrow Subdivision	90	Hunt	11157	5/9/2008	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
Aquasource Co. - County Wood Estates	45	Hunt	11157	5/9/2008	-	-	Gary	Douglas	(903) 849-2050	c/o Aqua Utilities, Inc. dba Aqua Texas, Inc. 20341 Hollyhills Drive	LaRue, TX 75770	Steve Blackhurst - environmental compliance manager (512) 844-6475
Campbell WSC	175	Hunt	10810	5/9/2008	10/20/2008	No	Carolyn	Huie	(903) 862-3760	P.O. Box 94	Campbell, TX 75422	
Combined Consumers WSC	280	Hunt	10855	5/9/2008	5/27/2008	No	Heath	McGee	(903) 356-3321	P.O. Box 2829	Quinlan, TX 75474	
Hasco Water Systems Co. Inc. - Coastal Acres	11	Hunt	6000430	-	-	-	-	-	-	-	-	Proposed system
Hasco Water Systems Co. Inc. - MGM Estates	34	Hunt	6000430	-	-	-	-	-	-	-	-	Proposed system
Hasco Water Systems Co. Inc. - Oakridge Estates	19	Hunt	6000430	-	-	-	-	-	-	-	-	Proposed system
Hasco Water Systems Co. Inc. - Rockwall E-Mini Ranches	28	Hunt	6000430	-	-	-	-	-	-	-	-	Proposed system
Jacobia WSC	316	Hunt	11417	5/12/2008	6/9/2008	Yes	Jerry	Mainord	(903) 454-3046	P.O. Box 411	Greenville, TX 75403	Hope Moore is also contact person
Little Creek Acres	78	Hunt	11167	5/9/2008	10/21/2008	No	George	Stebens, Jr.	(903) 883-2416	7243 CR 3512	Quinlan, TX 75474	

Table 4.2
(Contact Worksheet - Smaller Water Systems)

Water System Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
Maloy WSC	141	Hunt	10811	5/9/2008	-	-	Mike	Keith	(903) 217 3957	P.O. Box 394	Commerce, TX 75428	
West Oaks Phoenix Corp. Water System	35	Hunt	12353	5/14/2008	10/10/2008	Yes	Lonzo	Gale	(713) 542-8405	P.O. Box 314	Magnolia, TX 77353-0314	
Whispering Oaks Water Co-op 1&2	36	Hunt	11680	5/9/2008	5/15/2008	No	Hazel	Stewart	(903) 356-4103	P.O. Box 113	Quinlan, TX 75474	
Community Water Co. Rolling Hills	345	Hunt, Rains	-	5/9/2008	10/14/2008	No	Steve	Stroube	(903) 874-8244	P.O. Box 730	Corsicana, TX 75151-0730	Sold to City of East Tawakoni
M-J-C WSC	240	Lamar	10497	5/12/2008	5/21/2008	Yes	Bobby	Harrell	(903) 784-3576	P.O. Box 6008	Paris, TX 75461-6008	
Pattonville WSC	145	Lamar	10501	5/12/2008	10/14/2008	No	Tim	Davis	(903) 652-3668	P.O. Box 1	Pattonville, TX 75468	
Petty WSC	53	Lamar	11733	5/12/2008	-	-	Jim	Boykin	(903) 378 2498	P.O. Box 88	Petty, TX 75470	
Tejas Village	22	Marion	-	6/11/2008	-	-	Dave	Durden	-	509 Tejas Road	Jefferson, TX 75657	Ownership: Investor letter sent on 6/11/08
C & C Waterworks	55	Marion	11028	6/11/2008	10/22/2008	yes	Clifford	Scott	903-295-1013	508 W. Whatley Rd.	White Oak, TX 75693	letter sent on 6/11/08
Holiday Harbor	72	Marion	11335	6/11/2008	-	-	-	-	-	P.O. Box 49	Jefferson, TX 75657	Ownership: Water Supply Corporation letter sent on 6/11/08
Shady Shores	168	Marion	11173	6/11/2008	-	-	Michael	Meazell	903-968-4561	109 Rambler	Ore City, TX 75683	Ownership: Investor letter sent on 6/11/08
Indian Harbor	104	Marion	-	Consolidated	-	-	Bob	Higgins	903-665-1405	P.O. Box 49	Jefferson, TX 75657	Ownership: Investor Monarch is a large utilities company
Crestwood Water Co.	70	Marion	-	Consolidated	-	-	Steve	Blackhurst	-	1106 Clayton Ln, Ste. 400W	Austin, TX 78723	Owner: Investor Crestwood Water Co. was taken over by Aqua Texas Inc. in August 2003. Aqua Texas Inc. is a very large investor group
Cedar Cove Landing	29	Rains	?	5/12/2008	-	-	Sara	Fuller	(903) 477-2169	565 Rains County Road 1502	Point, TX 75472	
City of Talco	46	Red River, Titus	13036	5/12/2008	-	-	K.M. (Mike)	Sloan	(903) 379-3731	P.O. Box 365	Talco, TX 75487	
City of Winona	271	Smith	P0861	9/30/2008	-	-			903-877-3381	P.O. Box 97	Winona, TX 75792	Ownership: Municipality sent letter on 8/30/08
Garden Valley Golf Resort	13	Smith	-	Consolidated	-	-	Rob	Shields	-	22049 FM Rd. 1995	Lindale, TX 75771	Ownership: Investor No letter was sent because Texas Water Systmes Inc. has a total of 612 connections
Twin Oaks Ranch Water Supply	46	Smith	-	6/11/2008, Consolidated	-	-	Herb	Haines	-	P.O. Box 3000	Garden Valley, TX 75771	letter sent on 6/11/08 to Herb Hains, PO Box 3000 Garden Valley, TX 75771 Taken over by Aqua Texas Inc. in August 2003 (Large Private investor)
Tyler State Park	2	Smith	-	9/30/200	-	-	-	-	903-597-5338	789 Park Road	Tyler, TX 75706	
Jackson WSC	1369	Smith	-	Too many Connections	-	-	Leila	Henry	903-566-1320	17764 County Road 26	Tyler, TX 75707	Jackson WSC has too many connections

Table 4.2
(Contact Worksheet - Smaller Water Systems)

Water System Name	Number of Connections	County	CCN / PWS ID	Date Invitation Mailed	Date of Response	Interested	First Name	Last Name	Telephone	Address1	Address2	Remarks
City of Winfield	206	Titus	10506	5/12/2008	-	-	John	Walton	(903) 524-2020	P.O. Box 98	Winfield, TX 75493-0098	
Lake Bob Sandlin State Park	2	Titus	854326	5/12/2008	-	-	Paul	Harris	(903) 572-5531	341 State Park Road 2117	Pittsburg, TX 75686	
Camp Joy Water Company	82	Upshur	12960	6/12/2008	7/24/2008	yes	Henry	Brookshire	(903) 968-6581	P.O. Box 397	Ore City, TX 75683	Ownership: Investor letter sent on 6/11/08
International Alert Academy	24	Upshur	-	9/30/2008	10/6/2008	yes	Russell	Moulton	903-636-2000	One Academy Blvd.	Big Sandy, TX 75755	Ownership: Investor Owner changed from Ambassador College to Alert Academy. Lette sent on 8/30/08
Harmony ISD	90	Upshur	-	6/12/2008	-	no	Ray	Miller	-	9788 Hwy. 154 West	Big Sandy, TX 75755	letter sent on 6/11/08
Fouke WSC	2087	Upshur	-	Too many Connections	-	-	Frank	Crawley	903-967-3304	156 FM 1254	Mineola, TX 75773	Fouke WSC has too many connections
Country Club Estate	33	Upshur	-	Consolidated	-	-	Glen	Trimble	903-595-2128	7891 Highway 271	Tyler, TX 75708	Ownership: Investor No letter was sent because Texas Water Systmes Inc. has a total of 612 connections
Friendship Water System	59	Upshur	-	Consolidated	-	-	Glen	Trimble	903-595-2128	7891 Highway 271	Tyler, TX 75708	Ownership: Investor No letter was sent because Texas Water Systmes Inc. has a total of 612 connections
Rosewood Water System	123	Upshur	-	Consolidated	-	-	Glen	Trimble	903-595-2128	7891 Highway 271	Tyler, TX 75708	Ownership: Investor No letter was sent because Texas Water Systmes Inc. has a total of 612 connections
Tall Oaks Estates Water Supply	24	Van Zandt	12746	5/12/2008	-	-	Helen	Strebeck	(903) 848-7204	1812 VZ County Road 2403	Canton, TX 75103-4361	
Big Wood Springs Water System	96	Wood	12367	6/11/2008	-	-	Pat	McCoy	-	Rt. 9 Box 90848	Winnsboro, TX 75494	letter sent on 6/11/08
Jarvis Christian Community College	301	Wood	-	9/30/2008	-	-	Dwayne	Perry	-	P.O. Box 1470	Hawkins, TX 75765	sent letter on 8/30/08
Clear Lakes Subdivision	337	Wood	-	Consolidated	-	-	Steve	Blackhurst	-	1106 Clayton Ln, Ste. 400W	Austin, TX 78723	Owner: Investor Crestwood Water Co. was taken over by Aqua Texas Inc. in August 2003. Aqua Texas Inc. is a very large investor group

V. RESULTS AND RECOMMENDATIONS

The results of the study were mixed. 144 systems were identified as possible candidates. The study determined that 49 of these systems had already merged or otherwise consolidated between the end of Round II planning and the time of this study. This is a positive result showing that mergers and consolidation do occur with some regularity. Mergers and consolidation of other political entities, such as school districts, are rare and the extent to which combinations have been achieved for these small water entities is significant. On the other hand, in the remaining 95 systems there was little to no interest indicated in consolidation. Of these 95 systems only 3 were interested enough to pursue a meeting with the planning consultants.

Based upon the information gathered to date, the following observations are appropriate:

1. At the end of the 2006 planning period, 144 systems (93 small and 51 clusters) were identified. By the end of 2008, only 95 of these are still independent, stand-alone systems. The remaining systems have either merged with another small system, have been purchased by a larger for profit or governmental system, or were a proposed system which had not developed. No new systems have been identified in these cluster areas.
2. In general, systems desire to remain completely autonomous. Smaller systems do recognize, however, that there are some advantages in working together, and are occasionally willing to do so – for example, shared management or operating staff, or specific programs – provided that each Board retains final approval authority. A merger or consolidation which results in loss of autonomy is the least preferred option.
3. There is a need for regionalization in northern Van Zandt County. It appears that adequate groundwater resources are becoming increasingly difficult to develop, and a contracted or surface water supply alternative will be too expensive for the smaller entities to pursue individually. The City of Canton has conducted some work in this

regard, but the NETRWPG may be of assistance in encouraging regional partnerships among the various local entities.

4. For the entities providing information to the consultants, the primary financial constraint is lack of access to capital required for system improvements within the limits of a rate structure which the customers are willing to accept. The systems participating in this study range from as few as 290 to a little over 800 meters. These systems can borrow money at the present time from USDA or the TWDB, as well as private financial institutions. However, the construction cost of water system improvements appears to be growing more rapidly than the median household income in rural northeast Texas. An accepted rule of thumb is that monthly water bills for an average household should not exceed 1 percent of median household income. In reality, even 1 percent is more than many customers are willing to accept.
5. The managerial problems are also related to unit costs. Qualified managerial personnel are available in the workforce. However, the salary per customer necessary to support a full-time manager are burdensome when divided by a relatively small customer base. The management of a 250 meter system for example, is not a full-time position. On the other hand, it is often not possible to find a qualified person willing to accept this on a part-time basis. The obvious conclusion is to merge the systems until the size becomes such that the managerial position is a full-time occupation.
6. Probably the most prevalent technical problem facing these systems is a lack of water supply which relates directly to regional planning. Many of the smaller systems were initially developed around a central, single well, and were intended to serve a few hundred meters at most. Now that these systems have grown beyond the capacity of that single well, ground water supplies in the areas may not be adequate. Much of the region lies on the outcrop of the Carrizo-Wilcox or other aquifers, where ground water supplies are spotty in both quality and quantity. The net result is that these systems are increasingly unable to secure adequate supply from the underlying aquifers and must implement projects which include long transmission mains and/or surface water supplies.

The small customer base available for distribution of these capital costs results in an excessive cost per customer.

7. There are several recommendations given to each of the smaller water system groups. First the smaller water system can combine with a larger system in order to leverage the financial capabilities of the larger system. Second the smaller system can combine managerial capabilities with the larger system. This would allow the smaller system to save money to apply towards the development of its own infrastructure. Third the smaller water systems could combine technical capabilities with a larger system, which in turn could save the smaller system money and have a more technically capable staff solving their problems. Finally the smaller water system could choose to combine water supply with a larger system. If the smaller system does not have an adequate supply of water or water storage it might be more financially feasible for the smaller system to connect to a larger systems water supply than for the smaller system to drill their own wells or construct pumping and water storage facilities.

8. It appears that a consolidation is most likely to occur when the merging entities sees no other viable option. For example, if financing is simply not available or if a water supply cannot be obtained. As long as financing can be obtained, systems appear to be willing to initiate relatively large rate increases in order to maintain autonomy.

Appendix A

Presentation

Regional Water Planning *Region D*

Consultant Report

Bucher, Willis & Ratliff Corporation
Hayter Engineering, Inc.
Hayes Engineering, Inc.
LBG-Guyton Associates
Bob Bowman Associates

July 23, 2008

Background – Sub-Regional Water Supply Master Plans, Round II Water Plan

- 51 systems selected, 10 logical clusters.
- Individual Systems / Combined System Analysis:
 - Existing/projected demand analyzed.
 - Existing supply analyzed.
 - Existing infrastructure capacity analyzed.
 - Surplus/deficiencies computed.

Regionalization Invitation, Round III Water Plan

- 51 systems in 10 clusters invited.
- Additional 93 small systems invited.
- 21 systems responded to invitation
 - 7 systems expressed interest.
 - 14 systems not interested.
- Follow up calls to systems that have not responded.
- Presentations to interested entities.

Feasibility of Regionalizing Public Water Systems

- Resources Needed.
- TCEQ Policy.
- Goals of Regionalization.
- Types of Regionalization.
- Costs of Regionalization.
- Affordability of Rates.
- Capabilities of Regional System.

Resources Needed

- Adequate and reliable source of water.
- Financial resources and technical ability.
- Ability to operate and maintain safely.
- Ability to understand state and federal regulations.
- Management skills to operate a business.

TCEQ Policy Statement on Regionalization

Regionalization is feasible unless one of the following three exceptions apply:

1. No other systems are reasonably close to the system.
2. Requested service from adjacent systems and service is denied.
3. System demonstrates that an exception based on costs, affordable rates, and financial and technical capabilities is warranted.

Purpose of TCEQ Policy Statement

To encourage the regionalization of water systems to protect the health, safety, and welfare of Texans by ensuring a long term supply of safe water at affordable rates and by maintaining the quality of water in the state.

Goal of Regionalization

- Provide timely and cost-effective solutions for achieving quality service. Systems are facing an increasing demand on their resources to stay in compliance with the federal Safe Drinking Water Act.
- Proposed Rules:
 - Ground Water Rule – achieve high level of virus removal and/or inactivation.
 - Radon Rule – minimize regulated radon levels.

Goal of Regionalization, cont.

- Proposed Rules, cont.
 - Stage 2 Disinfectants Byproducts Rule – reduce levels of disinfection chemicals and their byproducts. System evaluation required to determine where monitoring sites will be located.
 - Long Term 2 Enhanced Surface Water Treatment Rule – provide improved treatment based on source monitoring prior to any treatment. Requires new treatment technologies.

Types of Regionalization

- One owner/one system.
- One owner/several systems.
- Multiple owners/multiple systems with common operations.
- Multiple owners/multiple systems with common wholesale water provider.
- Permanent Emergency Interconnections.

What Regional Systems Must Do

- Provide prompt responses to request for service.
- Treat all applicants equitably.
- Charge reasonable application fees.
- Charge cost-based fees for services provided.

Determining Costs of Regionalization

Up-front costs associated with service:

- Tap fees.
- Deposits.
- System development charges.
- Extension fees.

Primary Methods of Determining Costs

- System buy-in method
Fee is related to the existing equity and the basis is that new customers are entitled to water at the same rates as existing customers.
- Incremental cost pricing method
Fee is related to the total cost resulting from change in capacity.

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Affordability of Rates

- Rates should be within 1% of "household cost factor" as set forth in TWDB rule 31 TAC 371.24(b) to be considered affordable.
- Rule considers annual water cost and median household income in determining affordability.

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Affordability of Rates, Cont.

Example - Lamar County

- $(\text{AMHI for 2000} \times \text{last year's Texas CPI}) / \text{Texas CPI for 2000} = \text{Current AMHI}$
 $(\$31,609 \times 188.542) / 159.450 = \$37,376$
- $(\text{Average yearly water bill} + \text{average other fees}) < (\text{Current AMHI} \times \text{House Hold Cost Factor, 1\%}) = \$37,376 \times 1\% = \$373.38$

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Capabilities of Regionalized System

- Financial Capabilities.
- Managerial Capabilities.
- Technical Capabilities.

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Entities Expressing Interest to Combine - Where Do We Go From Here?

- Individual Systems
 - Contact with other area systems to establish participation.
 - Update population and demand projections.
 - Analyze existing sources of supply.
 - Determine surpluses/deficiencies.
 - Analyze existing infrastructure - treatment, distribution.

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Entities Expressing Interest to Combine - Where Do We Go From Here? – cont.

- Combined Systems
 - Establish total demand.
 - Establish total supply.
 - Determine surpluses/deficiencies.
 - Determine existing combined infrastructure capacity.
 - Determine required combined infrastructure capacity.
 - Perform infrastructure development cost analysis.

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Appendix B

Smaller Water System Groups

Bowie County Group

Bowie County Group is located around City of Texarkana and consists of three water systems identified for merger with City of Texarkana — Woodland Estates, Texarkana Mobile Home Park and El Chaparral Mobile Home Park. Woodland Estates water supply is from Groundwater. The other two systems utilize surface water from the City of Texarkana. The consolidated system would have 16,534 current connections, growing to 17,092 by 2030. The average median household income for the City of Texarkana is \$29,727, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$24.77.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. The capacity of the combined system is adequate to meet projected demand.

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Woodland Estates

Number of Connections: 47

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	0	0	1,880	0
2	100				
3	60				
<hr/>					
TOTALS	240	0	0	1,880	0
REQUIRED CAPACITY	28	0	0	940	0
<hr/>					
SURPLUS	212	0	0	940	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Woodland Estates

Number of Connections: 47

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	0	0	1,880	0
2	100				
3	60				
<hr/>					
TOTALS	240	0	0	1,880	0
REQUIRED CAPACITY	28	0	0	940	0
<hr/>					
SURPLUS	212	0	0	940	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Texarkana Mobile Home Park

Number of Connections: 79

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	0	0	0	0
<hr/>					
TOTALS	0	0	0	0	0
REQUIRED CAPACITY	0	0	0	0	0
<hr/>					
SURPLUS	0	0	0	0	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Texarkana Mobile Home Park

Number of Connections: 79

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	0	0	0	0	0
<hr/>					
TOTALS	0	0	0	0	0
REQUIRED CAPACITY	0	0	0	0	0
<hr/>					
SURPLUS	0	0	0	0	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: El Chaparral Mobile Home Park

Number of Connections: 79

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	0	0	3,380	0
<hr/>					
TOTALS	0	0	0	3,380	0
REQUIRED CAPACITY	0	0	0	1,580	0
<hr/>					
SURPLUS	0	0	0	1,800	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: El Chaparral Mobile Home Park

Number of Connections: 79

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	0	0	0	3,380	0
<hr/>					
TOTALS	0	0	0	3,380	0
REQUIRED CAPACITY	0	0	0	1,580	0
<hr/>					
SURPLUS	0	0	0	1,800	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Texarkana

Number of Connections: 16,329

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	17,300,000	42,000	0	4,800,000
<hr/>					
TOTALS	0	17,300,000	42,000	0	4,800,000
REQUIRED CAPACITY	0	3,265,800	9,797	0	1,632,900
<hr/>					
SURPLUS	0	14,034,200	32,203	0	3,167,100
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Texarkana

Number of Connections: 16,887

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	17,300,000	42,000	0	4,800,000
<hr/>					
TOTALS	0	17,300,000	42,000	0	4,800,000
REQUIRED CAPACITY	0	3,377,400	10,132	0	1,688,700
<hr/>					
SURPLUS	0	13,922,600	31,868	0	3,111,300
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: City of Texarkana, El Chaparral MHP, Texarkana MHP, Woodland Estates

Number of Connections: 16,534

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Texarkana	0	17,300,000	42,000	0	4,800,000
El Chaparral MHP	0	0	0	3,380	0
Texarkana MHP	0	0	0	0	0
Woodland Estates	240	0	0	1,880	0
TOTALS	240	17,300,000	42,000	5,260	4,800,000
REQUIRED CAPACITY	0	3,306,800	9,920	0	1,653,400
SURPLUS	240	13,993,200	32,080	5,260	3,146,600
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
BOWIE COUNTY GROUP

COMBINED CAPACITY

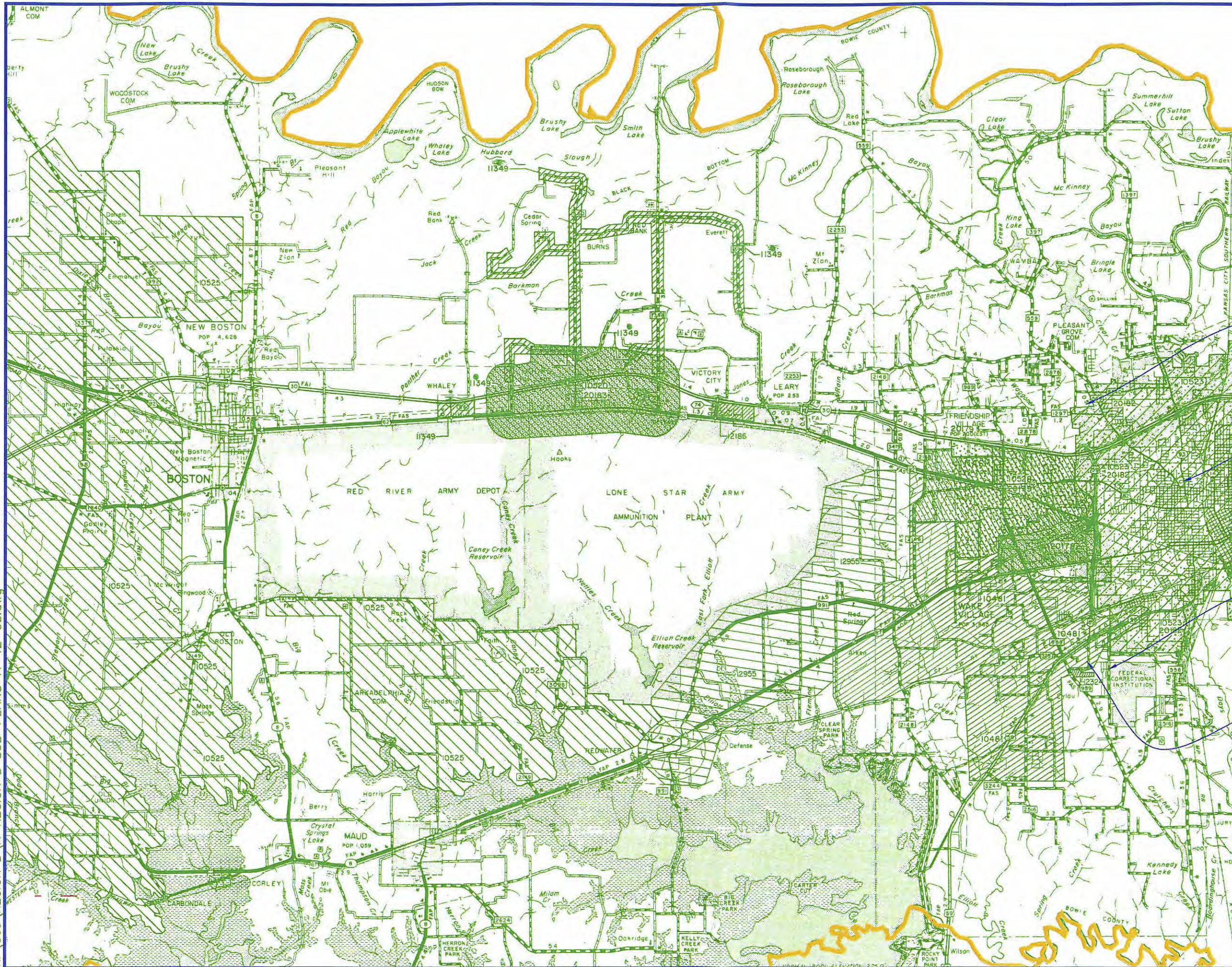
PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Texarkana, El Chaparral MHP, Texarkana MHP, Woodland Estates

Number of Connections: 17,092

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Texarkana	0	17,300,000	42,000	0	4,800,000
El Chaparral MHP	0	0	0	3,380	0
Texarkana MHP	0	0	0	0	0
Woodland Estates	240	0	0	1,880	0
TOTALS	240	17,300,000	42,000	5,260	4,800,000
REQUIRED CAPACITY	0	3,418,400	10,255	0	1,709,200
SURPLUS	240	13,881,600	31,745	5,260	3,090,800
DEFICIENCY	0	0	0	0	0

X:\Geo\REGION D\A-REGION D SUB-PLANS 11-12-08.dwg



SCALE: 1"=2 MILES

EL CHAPARRAL MOBILE HOME PARK
0190070

CITY OF TEXARKANA
10523

TEXARKANA MOBILE HOME PARK
S3556

WOODLAND ESTATES
12324

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
BOWIE COUNTY
GROUP
LOCATION MAP

Camp-Upshur County Group

This group is located in the northwest of Camp County and northeast of Upshur County and consists of five water systems identified for merger with Bi County WSC — Newsome WSC, HAB WSC, Thunderbird Point WSC, Woodland Harbor, and Camp Joy Water Supply. Groundwater from Carrizo-Wilcox is the main source of water for this group. The consolidated system would have 4,156 current connections, growing to 5,743 by 2030. The average median household income for this group is \$31,164, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$25.97.

These six water systems have the option of merging together and continuing to use ground water from the Carrizo-Wilcox as their source of supply. By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. An alternative option would be for the systems to use groundwater, and surface water purchase from Northeast Texas Municipal Water District to meet their projected deficit. A cost estimate performed for this water purchase option resulted in \$5.36 increased monthly water cost per connection (which does not include operation and maintenance costs).

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Newsome WSC

Number of Connections: 141

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	45	30,000	300	4,000	0
2	70				
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TOTALS	115	30,000	300	4,000	0
REQUIRED CAPACITY	85	28,200	282	2,820	0
<hr/>					
SURPLUS	30	1,800	18	1,180	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Newsome WSC

Number of Connections: 198

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	45	30,000	300	4,000	—
2	70				
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TOTALS	115	30,000	300	4,000	0
REQUIRED CAPACITY	119	39,600	396	3,960	0
<hr/>					
SURPLUS	0	0	0	40	0
DEFICIENCY	4	9,600	96	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: H A B WSC

Number of Connections: 47

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	50	10,000	200	1,500	0
<hr/>					
TOTALS	50	10,000	200	1,500	0
REQUIRED CAPACITY	28	9,400	94	940	0
<hr/>					
SURPLUS	22	600	106	560	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: H A B WSC

Number of Connections: 54

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	50	10,000	200	1,500	0
<hr/>					
TOTALS	50	10,000	200	1,500	0
REQUIRED CAPACITY	28	10,800	108	1,080	0
<hr/>					
SURPLUS	22	0	92	420	0
DEFICIENCY	0	800	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Thunderbird Point Water System

Number of Connections: 214

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	157	67,000	0	0	9,000
<hr/>					
TOTALS	157	67,000	0	0	9,000
REQUIRED CAPACITY	128	42,800	0	0	21,400
<hr/>					
SURPLUS	29	24,200	0	0	0
DEFICIENCY	0	0	0	0	12,400

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Thunderbird Point Water System

Number of Connections: 245

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	157	67,000	0	0	9,000
<hr/>					
TOTALS	157	67,000	0	0	9,000
REQUIRED CAPACITY	147	49,000	0	0	24,500
<hr/>					
SURPLUS	10	18,000	0	0	0
DEFICIENCY	0	0	0	0	15,500

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Woodland Harbor

Number of Connections: 175

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	32	39,000	400	5,000	0
<hr/>					
TOTALS	32	39,000	400	5,000	0
REQUIRED CAPACITY	105	35,000	350	3,500	0
<hr/>					
SURPLUS	0	4,000	50	1,500	0
DEFICIENCY	73	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Woodland Harbor

Number of Connections: 224

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	32	39,000	400	5,000	0
<hr/>					
TOTALS	32	39,000	400	5,000	0
REQUIRED CAPACITY	134	44,800	448	4,480	0
<hr/>					
SURPLUS	0	0	0	520	0
DEFICIENCY	102	5,800	48	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Camp Joy Water Company

Number of Connections: 102

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	22	23,000	360	2,000	0
2	40				
<hr/>					
TOTALS	62	23,000	360	2,000	0
REQUIRED CAPACITY	61	20,400	204	2,040	0
<hr/>					
SURPLUS	1	2,600	156	0	0
DEFICIENCY	0	0	0	40	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Camp Joy Water Company

Number of Connections: 102

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	22	23,000	360	2,000	0
2	40				
<hr/>					
TOTALS	62	23,000	360	2,000	0
REQUIRED CAPACITY	61	20,400	204	2,040	0
<hr/>					
SURPLUS	1	2,600	156	0	0
DEFICIENCY	0	0	0	40	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Bi County WSC

Number of Connections: 3,477

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1 to 23	2,252	1,054,000	5,870	64,900	211,000
<hr/>					
TOTALS	2,252	1,054,000	5,870	64,900	211,000
REQUIRED CAPACITY	2,086	695,400	6,954	69,540	347,700
<hr/>					
SURPLUS	165	358,600	0	0	0
DEFICIENCY	0	0	1,084	4,640	136,700

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Bi County WSC

Number of Connections: 4,920

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1 to 23	2,252	1,054,000	5,870	64,900	211,000
<hr/>					
TOTALS	2,252	1,054,000	5,870	64,900	211,000
REQUIRED CAPACITY	2,952	984,000	9,840	98,400	492,000
<hr/>					
SURPLUS	0	70,000	0	0	0
DEFICIENCY	700	0	3,970	33,500	281,000

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Bi County WSC, HAB WSC, Newsome WSC, Thunderbird Point Water System, Woodland Harbor

Number of Connections: 4,054

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Bi County WSC	2,252	1,054,000	5,870	64,900	211,000
HAB WSC	50	10,000	200	1,500	0
Newsome WSC	115	30,000	300	4,000	0
Thunderbird Point Water System	157	67,000	0	0	9,000
Woodland Harbor	32	39,000	400	5,000	0
TOTALS	2,606	1,200,000	6,770	75,400	220,000
REQUIRED CAPACITY	2,432	810,800	8,108	81,080	405,400
SURPLUS	174	389,200	0	0	0
DEFICIENCY	0	0	1,338	5,680	185,400

**NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
CAMP-UPSHUR COUNTY GROUP**

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Bi County WSC, HAB WSC, Newsome WSC, Thunderbird Point Water System, Woodland Harbor

Number of Connections: 5,641

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Bi County WSC	2,252	1,054,000	5,870	64,900	211,000
HAB WSC	50	10,000	200	1,500	0
Newsome WSC	115	30,000	300	4,000	0
Thunderbird Point Water System	157	67,000	0	0	9,000
Woodland Harbor	32	39,000	400	5,000	0
TOTALS	2,606	1,200,000	6,770	75,400	220,000
REQUIRED CAPACITY	3,385	1,128,200	11,282	112,820	564,100
SURPLUS	0	71,800	0	0	0
DEFICIENCY	779	0	4,512	37,420	344,100

Camp-Upshur County Group

Water Purchase Contract With Northeast Texas Municipal Water District:

Avg. yield (GPD)	Total Yield (ac-ft/yr)	Unit Cost (\$ / 1000GAL)
636,525	713.0	\$ 2.00

Pump Station

Number (ea)	Unit Cost (\$ / ea)	Total Cost	Land & Easements (1%)	Subtotal
0	\$ 176,000.00	\$ -	\$ -	\$ -

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
1,000	10	\$ 1.67	\$ 16,700.00	\$ 584.50	\$ 17,284.50
11,000	4	\$ 1.67	\$ 73,480.00	\$ 2,571.80	\$ 76,051.80

Storage Tank

Number (ea)	Gallons (gal)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (1%)	Subtotal
-	0	\$ 0.56	\$ -	\$ -	\$ -

Total Construction Cost

\$ 93,336.30

Construction Duration (\$0 to \$3M =1YR, \$3M to \$5M = 1.5YRS, >5M=2YRS)

1.0

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%)

\$ 28,000.89

ENVIRONMENTAL (LUMP SUM)

\$ 20,000.00

Total Borrowed Funds

\$ 141,337.19

INTEREST DURING CONSTRUCTION(IDC): 6% Annual Interest on Total Borrowed Funds

\$ 8,480.23

4% Rate of Return on Investment of Unspent Funds

\$ 2,826.74

Net Interest

\$ 5,653.49

TOTAL CAPITAL COST

\$ 146,990.68

	2010	2020	2030	2040	2050	2060	Average
WATER PURCHASED (ac-ft/yr)	0	188	359	494	599	713	392
ANNUAL WATER PURCHASE COST (Yield (ac-ft/yr) * 325,851 * \$ / 1,000)	\$ -	\$ 122,519.98	\$ 233,961.02	\$ 321,940.79	\$ 390,369.50	\$ 464,663.53	\$ 255,575.80

TOTAL ANNUALIZED COST

\$ 10,671.52 | \$ 133,191.50 | \$ 244,632.54 | \$ 321,940.79 | \$ 390,369.50 | \$ 464,663.53 | \$ 260,911.56

(Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%))

UNIT COST

(\$ / ac-ft / yr)

\$ 665.31

NUMBER OF CONNECTIONS

4,054

TOTAL PERSONS SERVED (3 x Number of Connections)

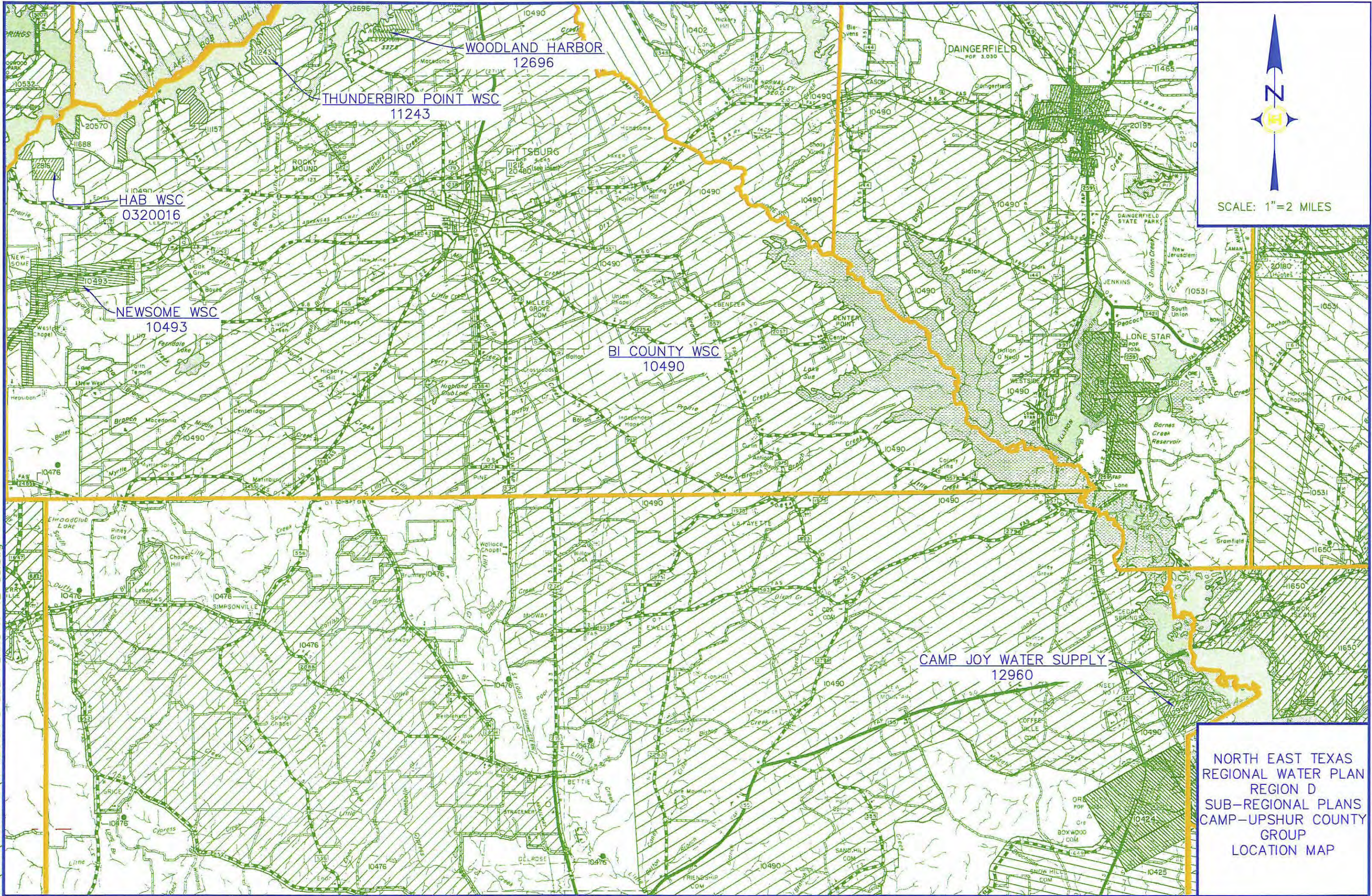
12,162

**COST PER CONNECTION (Annual Average Water Purchase Cost / Connections / 12)
(Does not include maintenance and operation costs)**

5.36

MONTHLY AVERAGE WATER BILL @1.0% MEDIAN HOUSEHOLD INCOME

25.97



WOODLAND HARBOR
12696

THUNDERBIRD POINT WSC
11243

HAB WSC
0320016

NEWSOME WSC
10493

BI COUNTY WSC
10490

CAMP JOY WATER SUPPLY
12960

N
SCALE: 1"=2 MILES

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
CAMP-UPSHUR COUNTY
GROUP
LOCATION MAP

Cass County Group 1

Cass County Group 1 consists of four systems, the City of Marietta (117), the City of Douglassville (71), the City of Domino (131), and Western Cass Water Supply Corporation (998). The City of Marietta, the City of Douglassville, and City of Domino would join with Western Cass WSC to have a total number of connections of 1317, with combined projected growth to 1347 connections in Year 2030.

The City of Marietta currently has an adequate amount of water supplied by a single well in the Carrizo-Wilcox Aquifer. The City of Douglassville has an adequate amount of water supplied by a single well in the Cypress Aquifer. The City of Domino has an adequate amount of water supplied from Texarkana which receives water from Lake Wright Patman.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the four systems. The systems do not need to be physically connected to Eastern Cass WSC because they each have enough supply to meet their current and future demands.

The combined systems have a median household income (MHI) of \$28,441. Utilizing 1% of MHI the average monthly bill would be \$23.70.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Marietta, City of

Number of Connections: 117

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	135	50,000	260	3,000	0
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TOTALS	135	50,000	260	3,000	0
REQUIRED CAPACITY	70	23,400	234	2,340	0
<hr/>					
SURPLUS	65	26,600	26	660	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Marietta, City of

Number of Connections: 140

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	135	50,000	260	3,000	0
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TOTALS	135	50,000	260	3,000	0
REQUIRED CAPACITY	84	28,000	280	2,800	0
<hr/>					
SURPLUS	51	22,000	0	200	0
DEFICIENCY	0	0	20	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Douglassville, City of

Number of Connections: 71

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	22,000	300	1,760	0
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TOTALS	80	22,000	300	1,760	0
REQUIRED CAPACITY	43	14,200	142	1,420	0
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SURPLUS	37	7,800	158	340	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Douglassville, City of

Number of Connections: 78

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	22,000	300	1,760	0
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TOTALS	80	22,000	300	1,760	0
REQUIRED CAPACITY	47	15,600	156	1,560	0
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SURPLUS	33	6,400	144	200	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Domino, City of

Number of Connections: 131

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	225	75,000	0	0	75,000
TOTALS	225	75,000	0	0	75,000
REQUIRED CAPACITY	79	26,200	0	0	13,100
SURPLUS	146	48,800	0	0	61,900
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Domino, City of

Number of Connections: 131

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	225	75,000	0	0	75,000
TOTALS	225	75,000	0	0	75,000
REQUIRED CAPACITY	79	26,200	0	0	13,100
SURPLUS	146	48,800	0	0	61,900
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Western Cass WSC

Number of Connections: 998

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,862	674,000	1,003	10,000	574,000
TOTALS	1,862	674,000	1,003	10,000	574,000
REQUIRED CAPACITY	599	199,600	1,996	19,960	99,800
SURPLUS	1,263	474,400	0	0	474,200
DEFICIENCY	0	0	993	9,960	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Western Cass WSC

Number of Connections: 998

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,862	674,000	1,003	10,000	574,000
TOTALS	1,862	674,000	1,003	10,000	574,000
REQUIRED CAPACITY	599	199,600	1,996	19,960	99,800
SURPLUS	1,263	474,400	0	0	474,200
DEFICIENCY	0	0	993	9,960	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: City of Marietta, City of Douglassville, City of Domino,
Western Cass WSC
Number of Connections: 1317

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Western Cass	1,862	674,000	1,003	10,000	574,000
City of Marietta	135	50,000	260	3,000	0
City of Douglassville	80	22,000	300	1,760	0
City of Domino	225	75,000	0	0	75,000
TOTALS	2,302	821,000	1,563	14,760	649,000
REQUIRED CAPACITY	790	263,400	2,634	26,340	131,700
SURPLUS	1,512	557,600	0	0	517,300
DEFICIENCY	0	0	1,071	11,580	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 1**

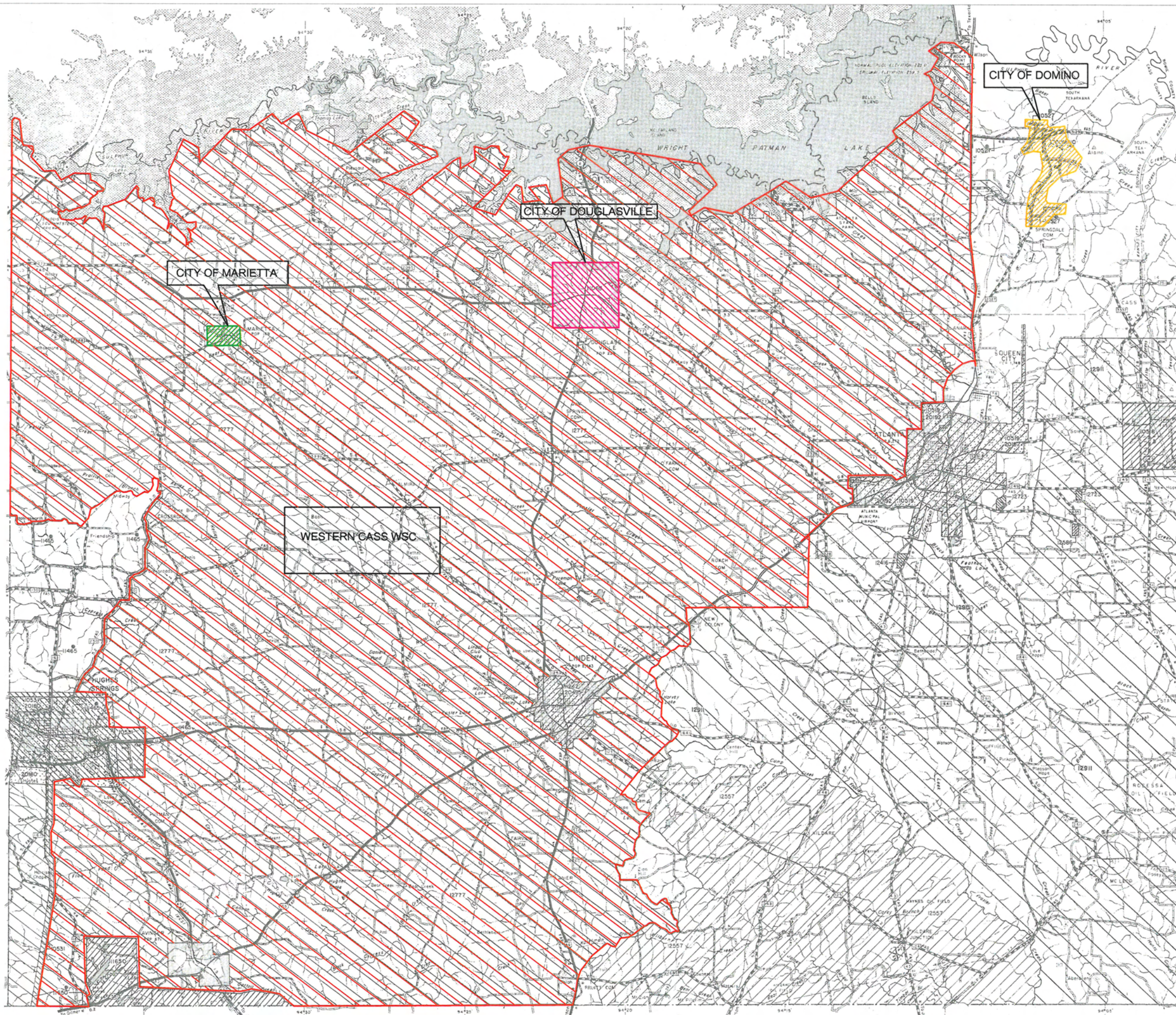
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Marietta, City of Douglassville, City of Domino,

Number of Connections: 1347

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Western Cass	1,862	674,000	1,003	10,000	574,000
City of Marietta	135	50,000	260	3,000	0
City of Douglassville	80	22,000	300	1,760	0
City of Domino	225	75,000	0	0	75,000
TOTALS	2,302	821,000	1,563	14,760	649,000
REQUIRED CAPACITY	808	269,400	2,694	26,940	134,700
SURPLUS	1,494	551,600	0	0	514,300
DEFICIENCY	0	0	1,131	12,180	0



CITY OF DOMINO

CITY OF DOUGLASVILLE

CITY OF MARIETTA

WESTERN CASS WSC



SCALE: 1" = 3 MILES

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
CASS COUNTY
GROUP 1

Cass County Group 2

Cass County Group 2 consists of three systems, Haggard Water (40), Bloomberg Water Supply Corporation (221), and Eastern Cass Water Supply Corporation (709). Haggard Water, City of Douglassville, and City of Domino would join with Western Cass WSC to have a total number of connections of 970, with combined projected growth to 994 connections in Year 2030.

Haggard Water currently has an adequate amount of water supplied by two wells in the Cypress Aquifer. Bloomberg WSC has an adequate amount of water supplied by two wells in the Carrizo-Wilcox Aquifer.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the three systems. The systems do not need to be physically connected to Eastern Cass WSC because they each have enough supply to meet their current and future demands.

The combined systems have a median household income (MHI) of \$28,441. Utilizing 1% of MHI the average monthly bill would be \$23.70.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Haggard Water (Spring Valley Subdivision)

Number of Connections: 19

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	50	0	0	1,050	0
<hr/>					
TOTALS	50	0	0	1,050	0
REQUIRED CAPACITY	11	0	0	380	0
<hr/>					
SURPLUS	39	0	0	670	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Graoup 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Haggard Water (Spring Valley Subdivision)

Number of Connections: 19

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	50	0	0	1,050	0
<hr/>					
TOTALS	50	0	0	1,050	0
REQUIRED CAPACITY	11	0	0	380	0
<hr/>					
SURPLUS	39	0	0	670	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2

CAPACITY BY
SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Haggard Water (Whispering Pines Subdivision)

Number of Connections: 21

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	50	0	0	1,050	0
<hr/>					
TOTALS	50	0	0	1,050	0
REQUIRED CAPACITY	13	0	0	420	0
<hr/>					
SURPLUS	37	0	0	630	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Haggard Water (Whispering Pines Subdivision)

Number of Connections: 21

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	50	0	0	1,050	0
<hr/>					
TOTALS	50	0	0	1,050	0
REQUIRED CAPACITY	13	0	0	420	0
<hr/>					
SURPLUS	37	0	0	630	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Bloomberg WSC

Number of Connections: 221

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	90	100,000	620	3,000	16,000
2	160				
TOTALS	250	100,000	620	3,000	16,000
REQUIRED CAPACITY	133	44,200	442	4,420	22,100
SURPLUS	117	55,800	178	0	0
DEFICIENCY	0	0	0	1,420	6,100

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Bloomberg WSC

Number of Connections: 245

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	90	100,000	620	3,000	16,000
2	160				
TOTALS	250	100,000	620	3,000	16,000
REQUIRED CAPACITY	147	49,000	490	4,900	24,500
SURPLUS	103	51,000	130	0	0
DEFICIENCY	0	0	0	1,900	8,500

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Eastern Cass WSC

Number of Connections: 709

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	654	237,000	2,050	24,500	0
TOTALS	654	237,000	2,050	24,500	0
REQUIRED CAPACITY	425	141,800	1,418	14,180	0
SURPLUS	229	95,200	632	10,320	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Eastern Cass WSC

Number of Connections: 709

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	654	237,000	2,050	24,500	0
TOTALS	654	237,000	2,050	24,500	0
REQUIRED CAPACITY	425	141,800	1,418	14,180	0
SURPLUS	229	95,200	632	10,320	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Haggard Water, Bloomer WSC, Eastern Cass WSC

Number of Connections: 970

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Eastern Cass	654	237,000	2,050	24,500	0
Haggard Water	100	0	0	2,100	0
Bloomberg	250	100,000	620	3,000	16,000
TOTALS	1,004	337,000	2,670	29,600	16,000
REQUIRED CAPACITY	582	194,000	1,940	19,400	97,000
SURPLUS	422	143,000	730	10,200	0
DEFICIENCY	0	0	0	0	81,000

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Cass County Group 2

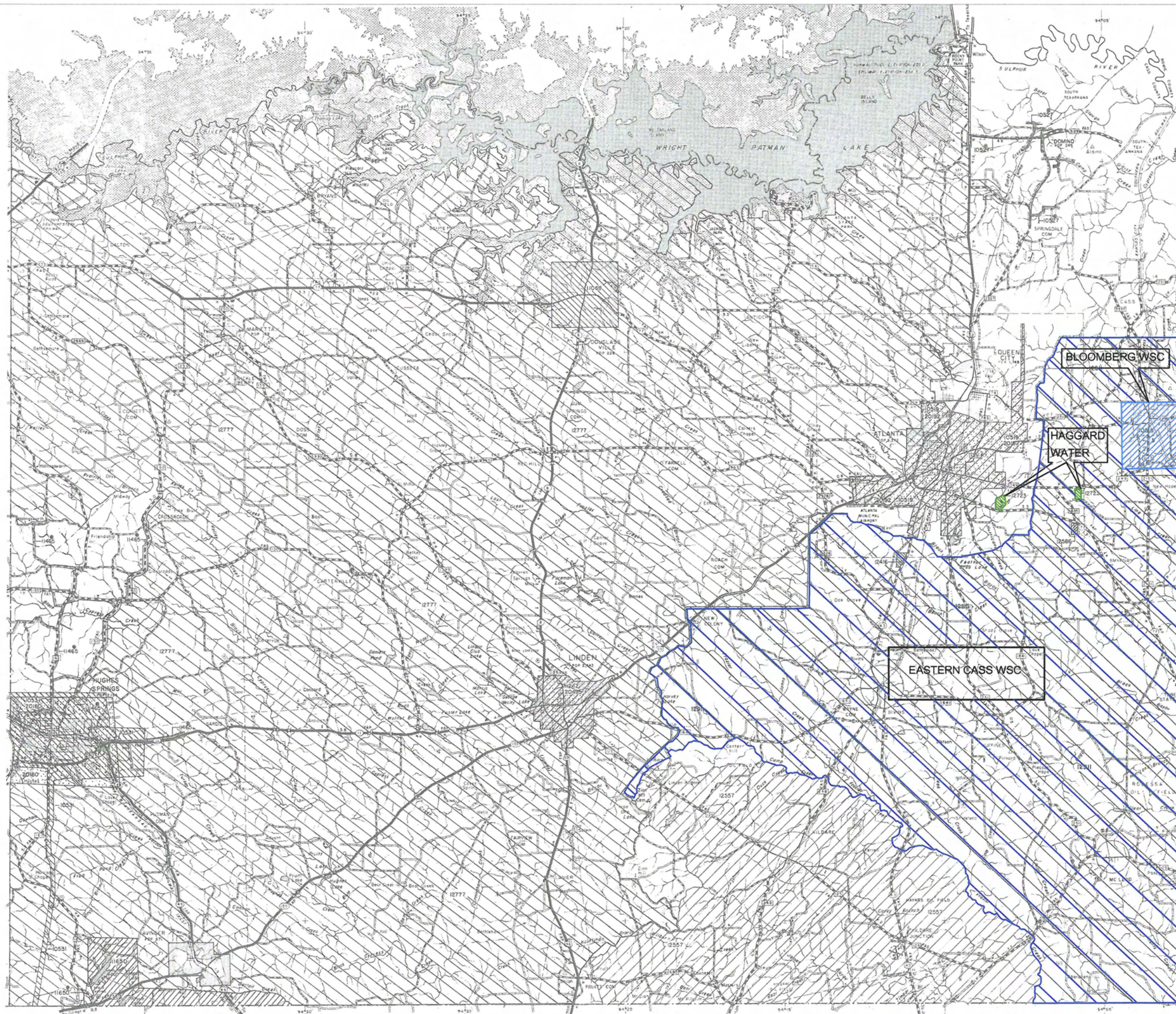
CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Haggard Water, Bloomer WSC, Eastern Cass WSC

Number of Connections: 994

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Eastern Cass	654	237,000	2,050	24,500	0
Haggard Water	100	0	0	2,100	0
Bloomberg	250	100,000	620	3,000	16,000
TOTALS	1,004	337,000	2,670	29,600	16,000
REQUIRED CAPACITY	596	198,800	1,988	19,880	99,400
SURPLUS	408	138,200	682	9,720	0
DEFICIENCY	0	0	0	0	83,400



SCALE: 1" = 3 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
CASS COUNTY
GROUP 2**

Franklin County Group

This group is located in the south of Franklin County and consists of one water system, Lake Country Development, INC. (Alpha Utility Company of Franklin County), identified for merger with Cypress Springs SUD. Both systems' current source of water is surface water from Lake Cypress Springs. The consolidated system would have 4,438 current connections, growing to 5,369 by 2030. The average median household income for this group is \$31,955, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$26.63.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity.

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
FRANKLIN COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Lake County Development, Inc. (Alpha Utility Company of Franklin County)

Number of Connections: 143

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	0	0	3,000	0
<hr/>					
TOTALS	30	0	0	3,000	0
REQUIRED CAPACITY	86	28,600	0	2,860	0
<hr/>					
SURPLUS	0	0	0	140	0
DEFICIENCY	56	28,600	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
FRANKLIN COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Lake County Development, Inc. (Alpha Utility Company of Franklin County)

Number of Connections: 173

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	0	0	3,000	0
<hr/>					
TOTALS	30	0	0	3,000	0
REQUIRED CAPACITY	104	34,600	0	3,460	0
<hr/>					
SURPLUS	0	0	0	0	0
DEFICIENCY	74	34,600	0	460	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
FRANKLIN COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Cypress Springs SUD

Number of Connections: 4,295

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	105	1,945,000	5,000	0	619,000
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TOTALS	105	1,945,000	5,000	0	619,000
REQUIRED CAPACITY	0	859,000	8,590	0	429,500
<hr/>					
SURPLUS	105	1,086,000	0	0	189,500
DEFICIENCY	0	0	3,590	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
FRANKLIN COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Cypress Springs SUD

Number of Connections: 5,196

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	105	1,945,000	5,000	0	619,000
<hr/>					
TOTALS	105	1,945,000	5,000	0	619,000
REQUIRED CAPACITY	0	1,039,200	10,392	0	519,600
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SURPLUS	105	905,800	0	0	99,400
DEFICIENCY	0	0	5,392	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
FRANKLIN COUNTY GROUP

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Cypress Springs SUD, Lake County Development, Inc. (Alpha Utility Company of Franklin County)

Number of Connections: 4,438

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Cypress Springs SUD	105	1,945,000	5,000	0	619,000
Alpha Utility Company of Franklin County	30	0	0	3,000	0
TOTALS	135	1,945,000	5,000	3,000	619,000
REQUIRED CAPACITY	0	887,600	8,876	0	443,800
SURPLUS	135	1,057,400	0	3,000	175,200
DEFICIENCY	0	0	3,876	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
FRANKLIN COUNTY GROUP

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Cypress Springs SUD, Lake County Development, Inc. (Alpha Utility Company of Franklin County)

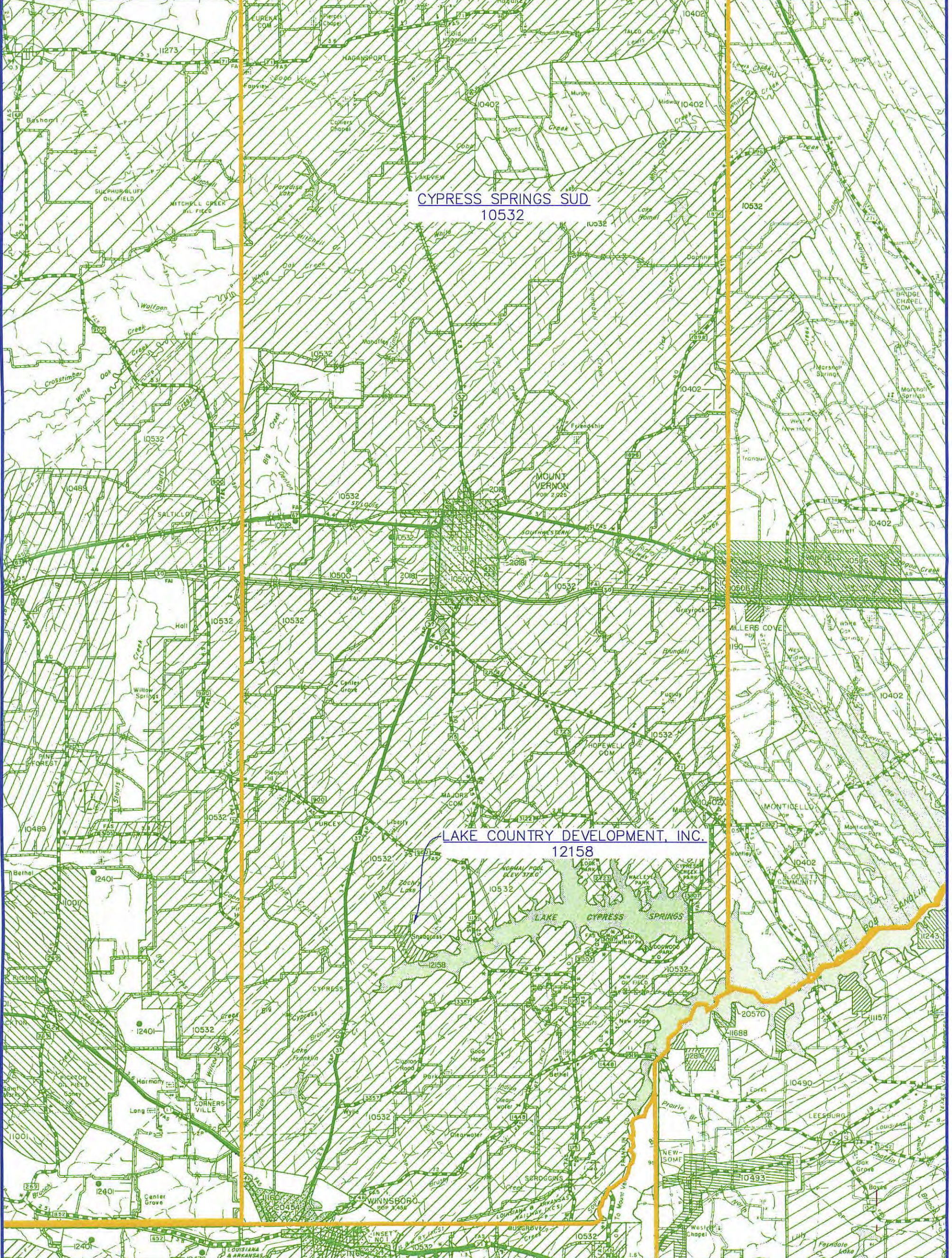
Number of Connections: 5,369

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Cypress Springs SUD	105	1,945,000	5,000	0	619,000
Lake County Development, Inc.	30	0	0	3,000	0
TOTALS	135	1,945,000	5,000	3,000	619,000
REQUIRED CAPACITY	0	1,073,800	10,792	0	536,900
SURPLUS	135	871,200	0	3,000	82,100
DEFICIENCY	0	0	5,792	0	0



SCALE: 1"=2 MILES

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
FRANKLIN COUNTY
GROUP
LOCATION MAP



CYPRESS SPRINGS SUD
10532

LAKE COUNTRY DEVELOPMENT, INC.
12158

Gregg County Group 1

Gregg County Group 1 consists of E J Water Company (138), Sun Acres Mobile Home Park (48), and West Gregg Water Supply Corporation (1,427). Both E J Water Company and Sun Acres Mobile Home Park would join with West Gregg WSC to have a total number of connections of 1,613, with combined projected growth to 1,847 connections in Year 2030.

E J Water Company has two wells that currently supply an adequate amount of water from the Carrizo-Wilcox Aquifer. Sun Acres Mobile Home Park has an adequate amount of water supplied from a single well in the Carrizo-Wilcox Aquifer.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the three systems. Since the two smaller systems all ready have an adequate water supply, there is no need to physically connect the systems.

The combined systems have a median household income (MHI) of \$39,263. Utilizing 1% of MHI the average monthly bill would be \$32.72.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: E J Water Company

Number of Connections: 138

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	105	96,000	1,020	3,000	0
2	45				
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TOTALS	150	96,000	1,020	3,000	0
REQUIRED CAPACITY	83	27,600	276	2,760	0
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SURPLUS	67	68,400	744	240	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: E J Water Company

Number of Connections: 150

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	105	96,000	1,020	3,000	0
2	45				
<hr/>					
TOTALS	150	96,000	1,020	3,000	0
REQUIRED CAPACITY	90	30,000	300	3,000	0
<hr/>					
SURPLUS	60	66,000	720	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Sun Acres MHP

Number of Connections: 48

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	50	27,000	0	0	0
TOTALS	50	27,000	0	0	0
REQUIRED CAPACITY	29	9,600	0	0	0
SURPLUS	21	17,400	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Sun Acres MHP

Number of Connections: 48

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	50	27,000	0	0	0
TOTALS	50	27,000	0	0	0
REQUIRED CAPACITY	29	9,600	0	0	0
SURPLUS	21	17,400	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: West Gregg WSC

Number of Connections: 1427

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	814	475,000	2,620	23,000	150,000
TOTALS	814	475,000	2,620	23,000	150,000
REQUIRED CAPACITY	856	285,400	2,854	28,540	142,700
SURPLUS	0	189,600	0	0	7,300
DEFICIENCY	42	0	234	5,540	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: West Gregg WSC

Number of Connections: 1649

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	814	475,000	2,620	23,000	150,000
TOTALS	814	475,000	2,620	23,000	150,000
REQUIRED CAPACITY	989	329,800	3,298	32,980	164,900
SURPLUS	0	145,200	0	0	0
DEFICIENCY	175	0	678	9,980	14,900

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: E J Water Company, Sun Acres MHP, West Gregg WSC

Number of Connections: 1613

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
West Gregg WSC	814	475,000	2,620	23,000	150,000
E J Water Company	150	96,000	1,020	3,000	0
Sun Acres MHP	50	27,000	0	0	0
TOTALS	1,014	598,000	3,640	26,000	150,000
REQUIRED CAPACITY	968	322,600	3,226	32,260	161,300
SURPLUS	46	275,400	414	0	0
DEFICIENCY	0	0	0	6,260	11,300

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 1

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

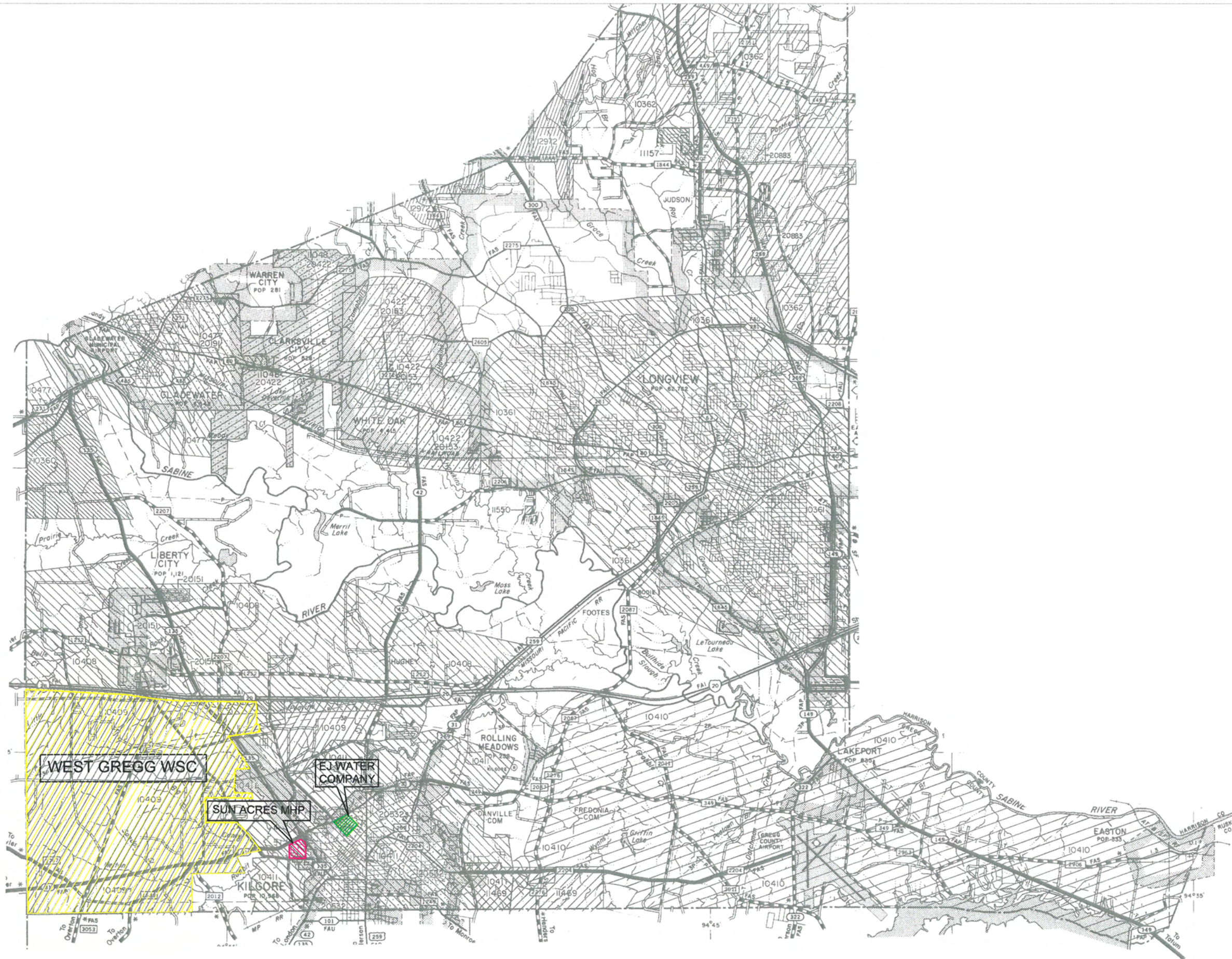
SYSTEM Name: E J Water Company, Sun Acres MHP, West Gregg WSC

Number of Connections: 1847

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
West Gregg WSC	814	475,000	2,620	23,000	150,000
E J Water Company	150	96,000	1,020	3,000	0
Sun Acres MHP	50	27,000	0	0	0
TOTALS	1,014	475,000	2,620	23,000	150,000
REQUIRED CAPACITY	1,108	369,400	3,694	36,940	184,700
SURPLUS	0	105,600	0	0	0
DEFICIENCY	94	0	1,074	13,940	34,700



SCALE: 1" = 2 MILES



NORTH EAST TEXAS
REGIONAL WATER PLANS
REGION D
SUB-REGIONAL PLANS
GREGG COUNTY
GROUP 1

Gregg County Group 2

Gregg County Group 2 consists of two water systems, Liberty Danville Fresh Water Supply District (251) and Elderville Water Supply Corporation (2,704). Liberty Danville FWSD would join with Elderville WSC to have a total number of connections of 2,955, with projected growth to 3,022 connections in Year 2030.

Liberty Danville FWSD currently has an adequate amount of water supplied by the city of Kilgore which receives its water from the Carrizo-Wilcox Aquifer and the Sabine River Run-Of-River.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Liberty Danville FWSD does not need to be physically connected to Elderville WSC because it is all ready connected to and receives water from the City of Kilgore.

The combined systems have a median household income (MHI) of \$39,263. Utilizing 1% of MHI the average monthly bill would be \$32.72.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Liberty Danville FWSD 2

Number of Connections: 251

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	134	0	0	0	0
TOTALS	134	0	0	0	0
REQUIRED CAPACITY	151	0	0	0	0
SURPLUS	0	0	0	0	0
DEFICIENCY	17	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Liberty Danville FWSD 2

Number of Connections: 301

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	134	0	0	0	0
TOTALS	134	0	0	0	0
REQUIRED CAPACITY	181	0	0	0	0
SURPLUS	0	0	0	0	0
DEFICIENCY	47	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 2**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM

Name: Elderville WSC

Number of Connections: 2704

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,880	1,837,000	3,700	40,200	737,000
TOTALS	1,880	1,837,000	3,700	40,200	737,000
REQUIRED CAPACITY	1,622	540,800	5,408	54,080	270,400
SURPLUS	258	1,296,200	0	0	466,600
DEFICIENCY	0	0	1,708	13,880	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Elderville WSC

Number of Connections: 2721

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,880	1,837,000	3,700	40,200	737,000
TOTALS	1,880	1,837,000	3,700	40,200	737,000
REQUIRED CAPACITY	1,633	544,200	5,442	54,420	272,100
SURPLUS	247	1,292,800	0	0	464,900
DEFICIENCY	0	0	1,742	14,220	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Liberty Danville FWSD, Elderville WSC

Number of Connections: 2955

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Elderville WSC	1,880	1,837,000	3,700	40,200	737,000
Liberty Danville	0	0	0	0	0
TOTALS	1,880	1,837,000	3,700	40,200	737,000
REQUIRED CAPACITY	1,773	591,000	5,910	59,100	295,500
SURPLUS	107	1,246,000	0	0	441,500
DEFICIENCY	0	0	2,210	18,900	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Gregg County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

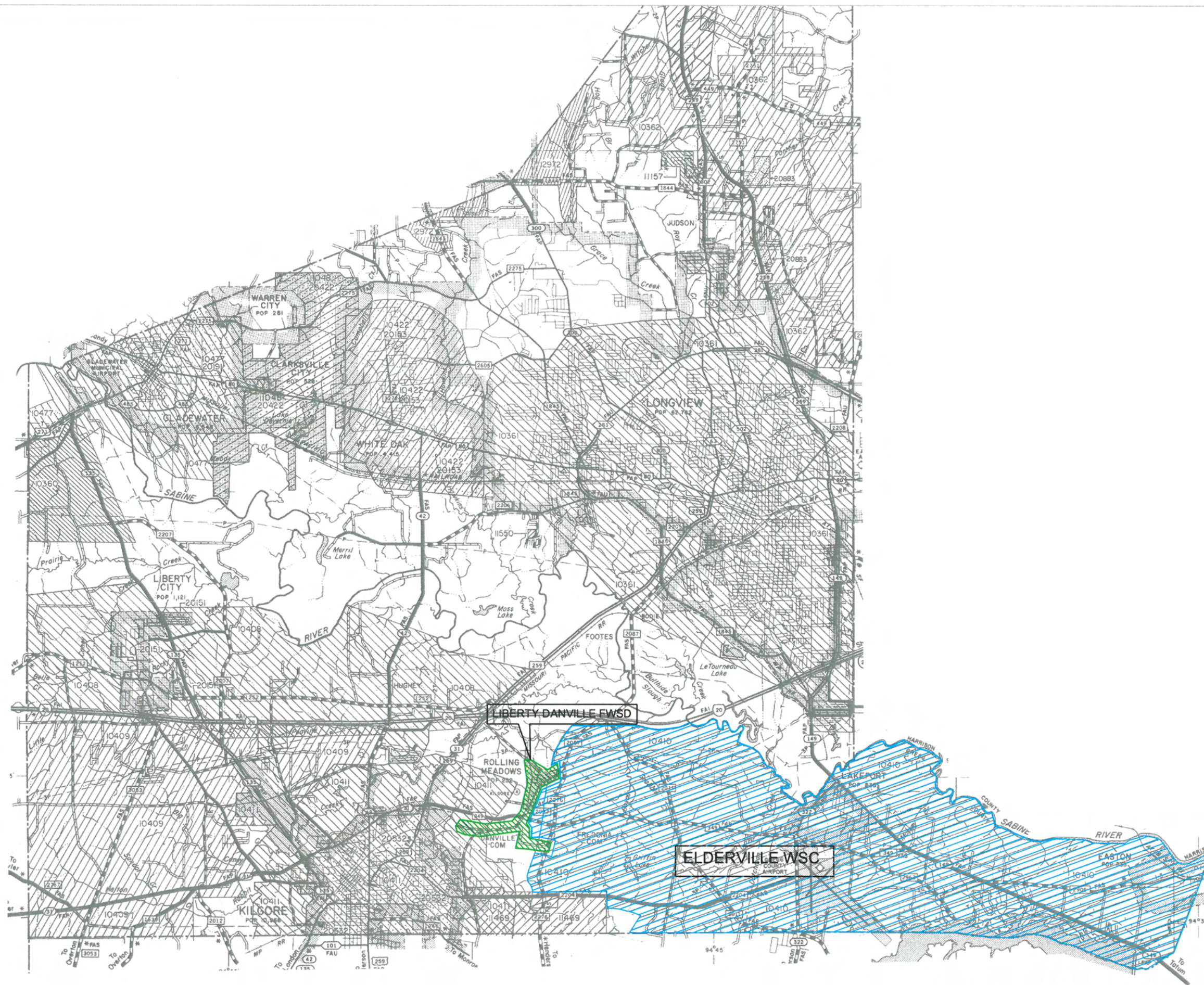
SYSTEM Name: Liberty Danville FWSD, Elderville WSC

Number of Connections: 3022

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Elderville WSC	1,880	1,837,000	3,700	40,200	737,000
Liberty Danville	0	0	0	0	0
TOTALS	1,880	1,837,000	3,700	40,200	737,000
REQUIRED CAPACITY	1,813	604,400	6,044	60,440	302,200
SURPLUS	67	1,232,600	0	0	434,800
DEFICIENCY	0	0	2,344	20,240	0



SCALE: 1" = 2 MILES



NORTH EAST TEXAS
REGIONAL WATER PLANS
REGION D
SUB-REGIONAL PLANS
GREGG COUNTY
GROUP 2

Harrison County Group 1

Harrison County Group 1 consists of two water systems, Clearwater Distribution (101) and Gum Springs Water Supply Corporation (2,282). Clearwater Distribution would join with Gum Springs WSC to have a total number of connections of 2,383, with combined projected growth to 2,862 connections in Year 2030.

Clearwater Distribution has two wells that currently supply an adequate amount of water from the Carrizo-Wilcox Aquifer. This will continue to be an adequate supply for their projected number of connections in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Clearwater Distribution does not need to be physically connected to Gum Springs WSC because it has enough supply to meet its current and future demands.

The combined systems have a median household income (MHI) of \$33,520. Utilizing 1% of MHI the average monthly bill would be \$27.93.

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Goup 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Clear Water Distribution

Number of Connections: 101

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	37	24,000	418	3,000	0
2	32				
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TOTALS	69	24,000	418	3,000	0
REQUIRED CAPACITY	61	20,200	202	2,020	0
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SURPLUS	8	3,800	216	980	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Gourp 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Clear Water Distribution

Number of Connections: 101

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	37	24,000	418	3,000	0
2	32				
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TOTALS	69	24,000	418	3,000	0
REQUIRED CAPACITY	61	20,200	202	2,020	0
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SURPLUS	8	3,800	216	980	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Gum Springs WSC

Number of Connections: 2282

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	2,338	587,000	4,500	60,000	0
TOTALS	2,338	587,000	4,500	60,000	0
REQUIRED CAPACITY	1,369	456,400	4,564	45,640	0
SURPLUS	969	130,600	0	14,360	0
DEFICIENCY	0	0	64	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Gum Springs WSC

Number of Connections: 2761

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	2,338	587,000	4,500	60,000	0
TOTALS	2,338	587,000	4,500	60,000	0
REQUIRED CAPACITY	1,657	552,200	5,522	55,220	0
SURPLUS	681	34,800	0	4,780	0
DEFICIENCY	0	0	1,022	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 1

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Clearwater Distribution, Gum Springs WSC

Number of Connections: 2383

WUG	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Clearwater	69	24,000	418	3,000	0
Gum Spring	2,338	587,000	4,500	60,000	0
TOTALS	2,407	611,000	4,918	63,000	0
REQUIRED CAPACITY	1,430	476,600	4,766	47,660	0
SURPLUS	977	134,400	152	15,340	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 1

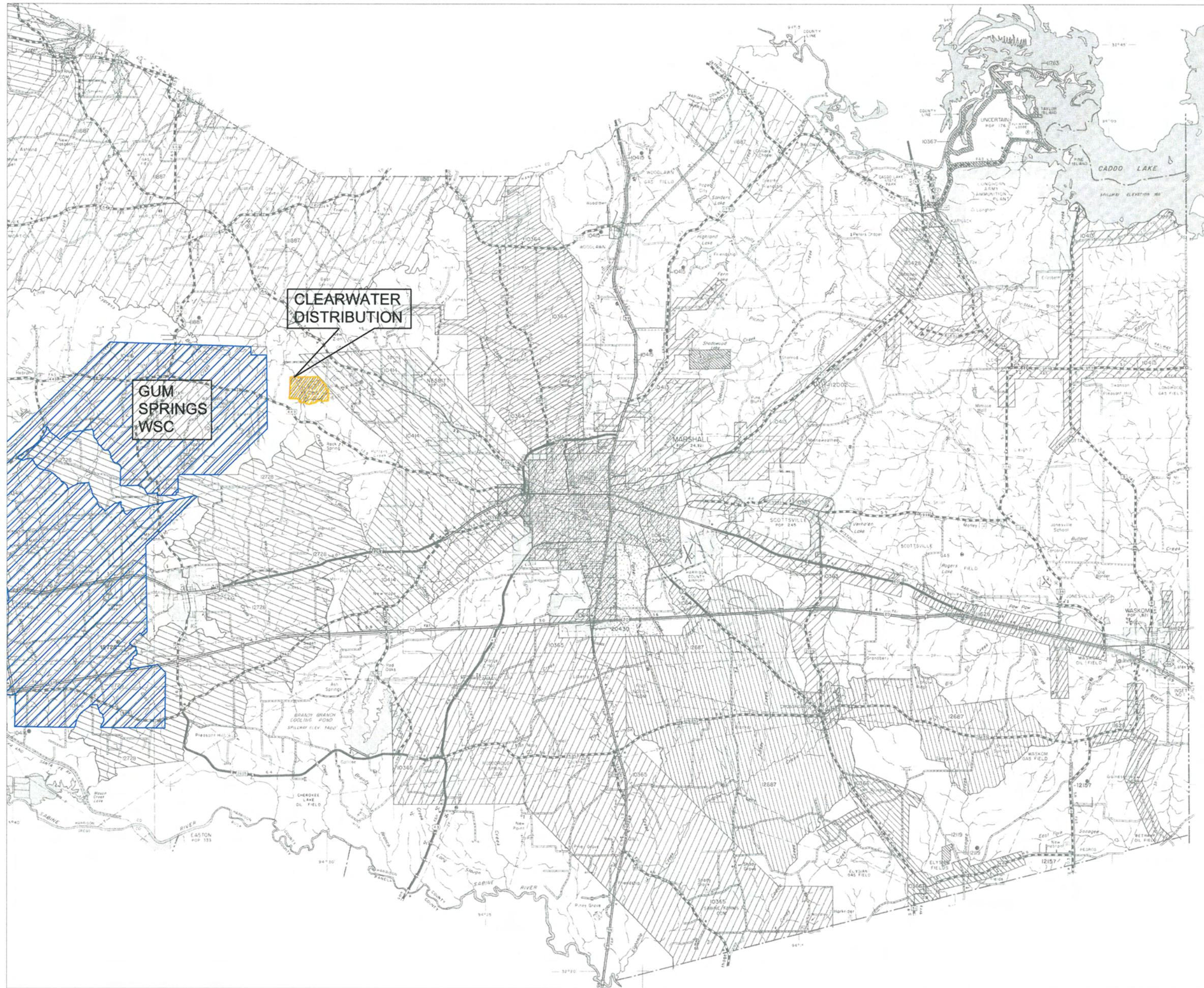
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Clearwater Distribution, Gum Springs WSC

Number of Connections: 2862

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Clearwater	69	24,000	418	3,000	0
Gum Springs	2,338	587,000	4,500	60,000	
TOTALS	2,407	611,000	4,918	63,000	0
REQUIRED CAPACITY	1,717	572,400	5,724	57,240	0
SURPLUS	690	38,600	0	5,760	0
DEFICIENCY	0	0	806	0	0



SCALE: 1" = 3 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
HARRISON COUNTY
GROUP 1**

Harrison County Group 2

Harrison County Group 2 consists of two systems, Holiday Spring Mobile Home Park (32) and Gill Water Supply Corporation (851). Holiday Spring Mobile Home Park would join with Gill WSC to have a total number of connections of 883, with combined project growth to 1,014 connections in Year 2030.

Holiday Spring Mobile Home Park has one well that currently supplies an adequate amount of water from the Carrizo-Wilcox Aquifer. This will continue to an adequate supply for their projected number of connections in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Holiday Springs Mobile Home Park does not need to be physically connected to Gill WSC because it has enough supply to meet its current and future demands.

The combined systems have a median household income (MHI) of \$33,520. Utilizing 1% of MHI the average monthly bill would be \$27.93.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Holiday Springs MHP

Number of Connections: 32

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	90	10,000	0	0	0
TOTALS	90	10,000	0	0	0
REQUIRED CAPACITY	19	6,400	0	0	0
SURPLUS	71	3,600	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Holiday Springs MHP

Number of Connections: 32

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	90	10,000	0	0	0
<hr/>					
TOTALS	90	10,000	0	0	0
REQUIRED CAPACITY	19	6,400	0	0	0
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SURPLUS	71	3,600	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Gill WSC

Number of Connections: 851

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	569	200,000	0	0	200,000
TOTALS	569	200,000	0	0	200,000
REQUIRED CAPACITY	511	170,200	0	0	85,100
SURPLUS	58	29,800	0	0	114,900
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Gill WSC

Number of Connections: 982

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	569	200,000	0	0	200,000
TOTALS	569	200,000	0	0	200,000
REQUIRED CAPACITY	589	196,400	0	0	98,200
SURPLUS	0	3,600	0	0	101,800
DEFICIENCY	20	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Holiday Springs, Gill WSC

Number of Connections: 883

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Holiday Springs	90	10,000	0	0	0
Gill WSC	569	200,000	0	0	200,000
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TOTALS	659	210,000	0	0	200,000
REQUIRED CAPACITY	530	176,600	0	0	88,300
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SURPLUS	129	33,400	0	0	111,700
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 2

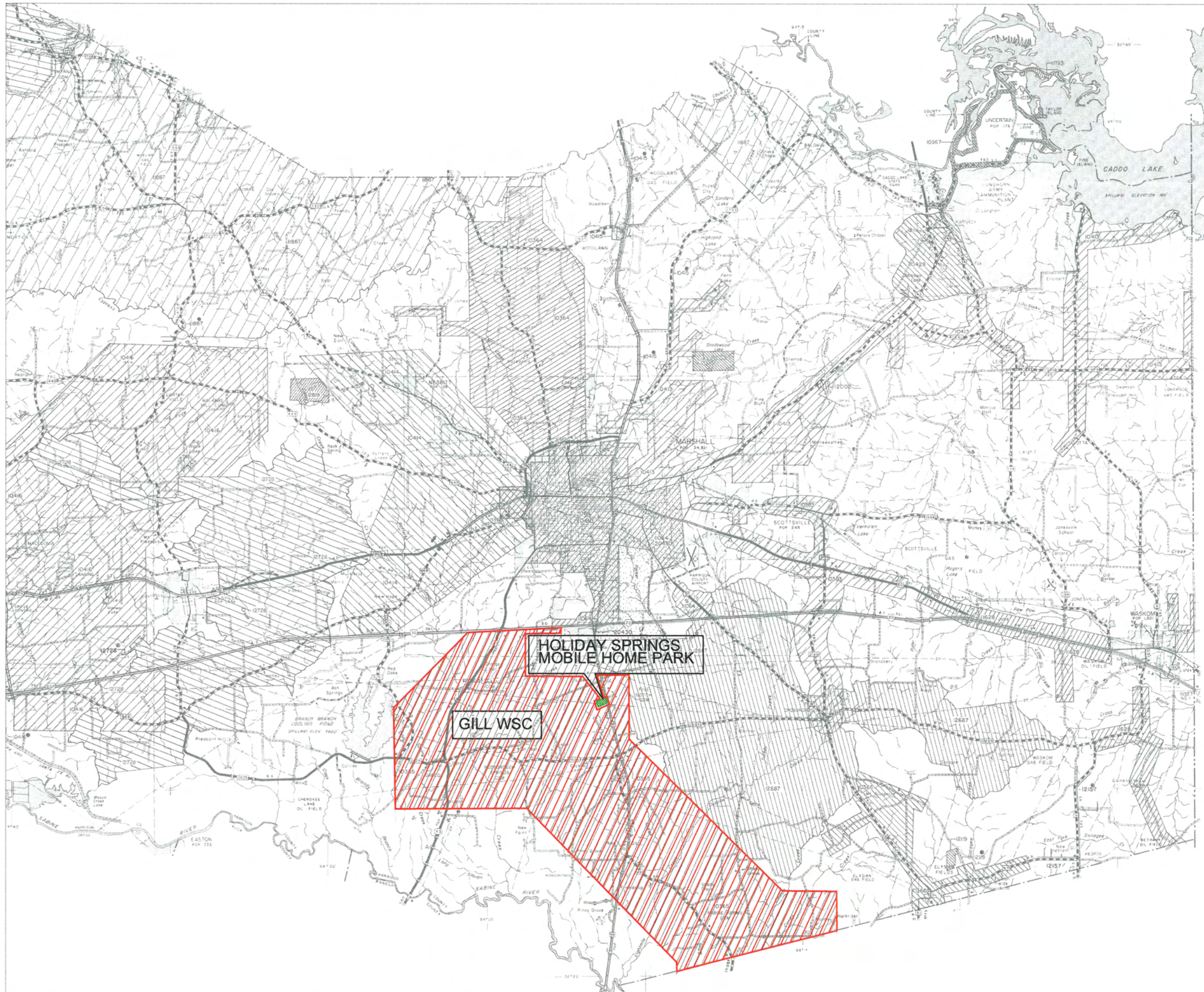
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Holiday Springs, Gill WSC

Number of Connections: 1014

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Holiday Springs	90	200,000	0	0	200,000
Gill WSC	569	200,000	0	0	200,000
TOTALS	659	200,000	0	0	200,000
REQUIRED CAPACITY	608	202,800	0	0	101,400
SURPLUS	51	0	0	0	98,600
DEFICIENCY	0	2,800	0	0	0



SCALE: 1" = 3 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLANS
REGION D
SUB-REGIONAL PLANS
HARRISON COUNTY
GROUP 2**

Harrison County Group 3

Harrison County Group 3 consists of two systems, Pinehill Mobile Home Park (70) and the City of Scottsville (349). Pinehill Mobile Home Park would join with the City of Scottsville to have a total number of connections of 419 which will remain the total number to connections in Year 2030.

Pinehill Mobile Home Park purchases its water from the City of Marshall which receives its water from Cypress River Run-of-River and the Lake O' The Pines Reservoir. Pinehill Mobile Home Park has a reliable source of water that will supply enough water for their projected number of connections in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Pinehill Mobile Home Park does not need to be physically connected to the City of Scottsville because it has a reliable source of water provided by the City of Marshall to meet its current and future demands.

The combined systems have a median household income (MHI) of \$33,520. Utilizing 1% of MHI the average monthly bill would be \$27.93.

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 3**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Pinehill Mobile Home Park

Number of Connections: 70

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	50	0	0	0	0
TOTALS	50	0	0	0	0
REQUIRED CAPACITY	42	0	0	0	0
SURPLUS	8	0	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 3**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Pinehill Mobile Home Park

Number of Connections: 70

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	50	0	0	0	0
TOTALS	50	0	0	0	0
REQUIRED CAPACITY	42	0	0	0	0
SURPLUS	8	0	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 3

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Scottsville

Number of Connections: 349

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	260	160,000	800	10,600	0
TOTALS	260	160,000	800	10,600	0
REQUIRED CAPACITY	209	69,800	698	6,980	0
SURPLUS	51	90,200	102	3,620	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Scottsville

Number of Connections: 349

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	260	160,000	800	10,600	0
TOTALS	260	160,000	800	10,600	0
REQUIRED CAPACITY	209	69,800	698	6,980	0
SURPLUS	51	90,200	102	3,620	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 3**

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: City of Scottsville, Pinehill
MHP

Number of Connections: 419

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Scottsville	260	160,000	800	10,600	0
Pinehill HMP	50	0	0	0	0
TOTALS	310	160,000	800	10,600	0
REQUIRED CAPACITY	251	83,800	838	8,380	0
SURPLUS	59	76,200	0	2,220	0
DEFICIENCY	0	0	38	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 3

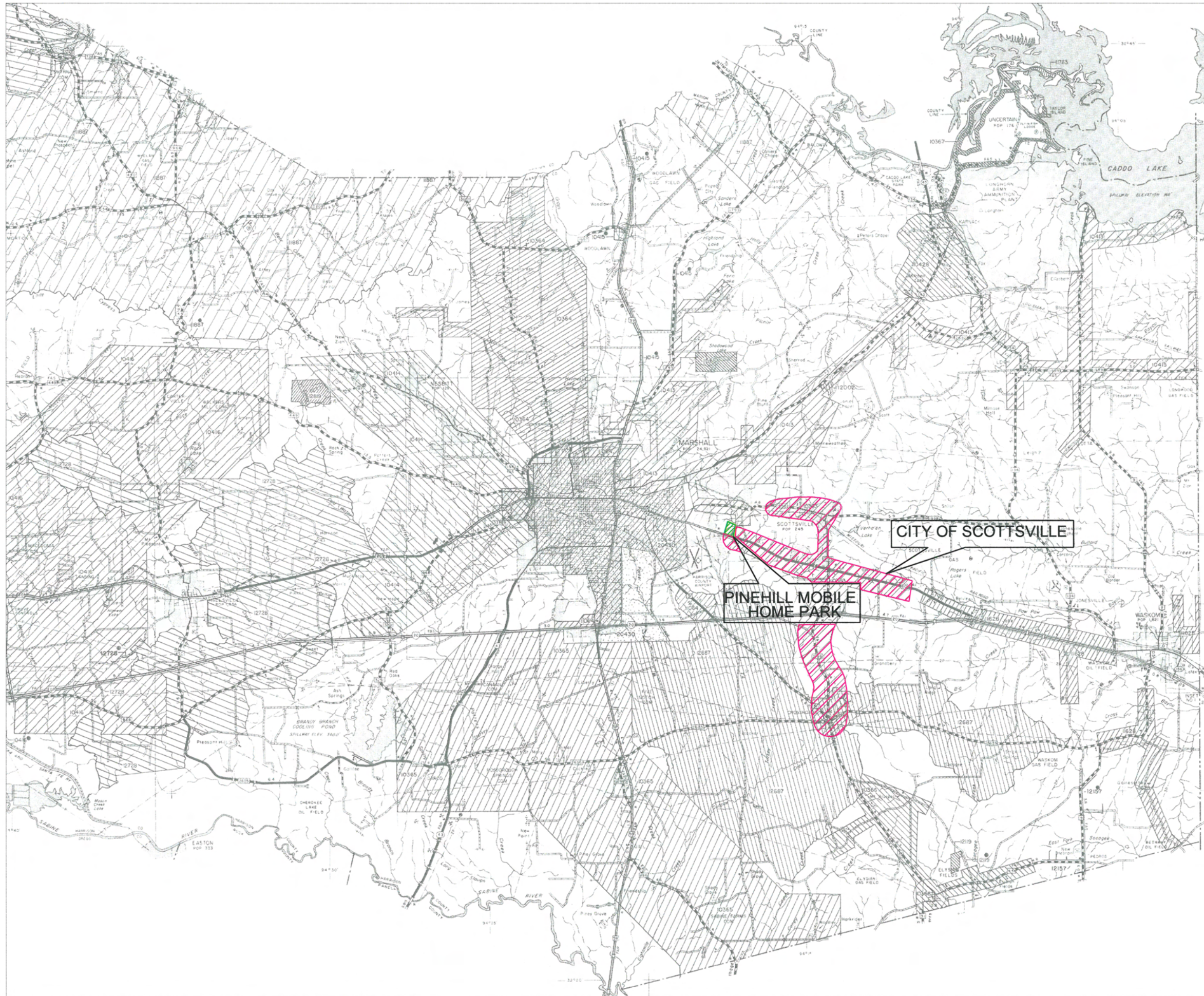
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Scottsville, Pinehill MHP

Number of Connections: 419

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Clearwater	260	160,000	800	10,600	0
Pinehill MHP	50	0	0	0	0
TOTALS	310	160,000	800	10,600	0
REQUIRED CAPACITY	251	83,800	838	8,380	0
SURPLUS	59	76,200	0	2,220	0
DEFICIENCY	0	0	38	0	0



SCALE: 1" = 3 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
HARRISON COUNTY
GROUP 3**

Harrison County Group 4

Harrison County Group 4 consists of two water systems, Rolling Acres Water Service (26) and Leigh Water Supply Corporation (424). Rolling Acres Water Service would join with Leigh WSC to have a total number of connections of 450 now, with combined projected growth to 589 connections in Year 2030.

Rolling Acres Water Service currently has a single well in the Cypress Aquifer. This well supplies an adequate amount of water to meet the future demands of the mobile home park.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Rolling Acres Water Service does not need to be physically connected with Leigh WSC because it has enough supply to meet its current and future demands.

The combined systems have a median household income (MHI) of \$33,520. Utilizing 1% of MHI the average monthly bill would be \$27.93.

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 4**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Rolling Acres Water Service

Number of Connections: 26

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	160	31,000	400	2,000	0
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TOTALS	160	31,000	400	2,000	0
REQUIRED CAPACITY	16	5,200	52	520	0
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SURPLUS	144	25,800	348	1,480	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 4**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Rolling Acres Water Service

Number of Connections: 33

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	160	31,000	400	2,000	0
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TOTALS	160	31,000	400	2,000	0
REQUIRED CAPACITY	20	6,600	66	660	0
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SURPLUS	140	24,400	334	1,340	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 4**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Leigh WSC

Number of Connections: 424

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	218	159,000	468	5,570	25,000
TOTALS	218	159,000	468	5,570	25,000
REQUIRED CAPACITY	254	84,800	848	8,480	42,400
SURPLUS	0	74,200	0	0	0
DEFICIENCY	36	0	380	2,910	17,400

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 4**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Leigh WSC

Number of Connections: 556

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	218	159,000	468	5,570	25,000
TOTALS	218	159,000	468	5,570	25,000
REQUIRED CAPACITY	334	111,200	1,112	11,120	55,600
SURPLUS	0	47,800	0	0	0
DEFICIENCY	116	0	644	5,550	30,600

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 4**

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Rolling Acres Water Service, Leigh WSC

Number of Connections: 450

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Rolling Acres	160	31,000	400	2,000	0
Leigh WSC	218	159,000	468	5,570	25,000
TOTALS	378	190,000	868	7,570	25,000
REQUIRED CAPACITY	270	90,000	900	9,000	45,000
SURPLUS	108	100,000	0	0	0
DEFICIENCY	0	0	32	1,430	20,000

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 4**

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Rolling Acres Water Service, Leigh WSC

Number of Connections: 589

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Rolling Aces	160	31,000	400	2,000	0
Leigh WSC	218	159,000	468	5,570	25,000
TOTALS	378	190,000	868	7,570	25,000
REQUIRED CAPACITY	353	117,800	1,178	11,780	58,900
SURPLUS	25	72,200	0	0	0
DEFICIENCY	0	0	310	4,210	33,900



SCALE: 1" = 3 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLANS
REGION D
SUB-REGIONAL PLANS
HARRISON COUNTY
GROUP 4**

Harrison County Group 5

Harrison County Group 5 consists of two systems, Caddo Lake State Park (74) and Caddo Lake Water Supply Corporation (286). Caddo Lake State Park would join with Caddo Lake WSC to have a total number of connections of 360, with combined projected growth to 534 connections in Year 2030.

Caddo Lake State Park has a single well in the Cypress Aquifer. Caddo Lake State Park has a reliable source of water that will supply enough water for their projected number of connections in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Caddo Lake State Park does not need to be physically connected to Caddo Lake WSC because it has enough supply to meet the current and future demands.

The combined systems have a median household income (MHI) of \$33,520. Utilizing 1% of MHI the average monthly bill would be \$27.93.

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Region 5**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Caddo Lake State Park

Number of Connections: 74

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	70	23,000	0	0	23,000
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TOTALS	70	23,000	0	0	23,000
REQUIRED CAPACITY	44	14,800	0	0	7,400
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SURPLUS	26	8,200	0	0	15,600
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 5**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Caddo Lake State Park

Number of Connections: 74

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	70	23,000	0	0	23,000
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TOTALS	70	23,000	0	0	23,000
REQUIRED CAPACITY	44	14,800	0	0	7,400
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SURPLUS	26	8,200	0	0	15,600
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 5**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Caddo Lake WSC

Number of Connections: 286

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	197	100,000	600	7,200	0
TOTALS	197	100,000	600	7,200	0
REQUIRED CAPACITY	172	57,200	572	5,720	0
SURPLUS	25	42,800	28	1,480	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 5**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Caddo Lake WSC

Number of Connections: 460

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	197	100,000	600	7,200	0
TOTALS	197	100,000	600	7,200	0
REQUIRED CAPACITY	276	92,000	920	9,200	0
SURPLUS	0	8,000	0	0	0
DEFICIENCY	79	0	320	2,000	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 5

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Caddo Lake State Park, Caddo Lake WSC

Number of Connections: 360

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Caddo Lake State Park	70	23,000	0	0	23,000
Caddo Lake WSC	197	100,000	600	7,200	25,000
TOTALS	267	123,000	600	7,200	48,000
REQUIRED CAPACITY	216	72,000	720	7,200	36,000
SURPLUS	51	51,000	0	0	12,000
DEFICIENCY	0	0	120	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Harrison County Group 5**

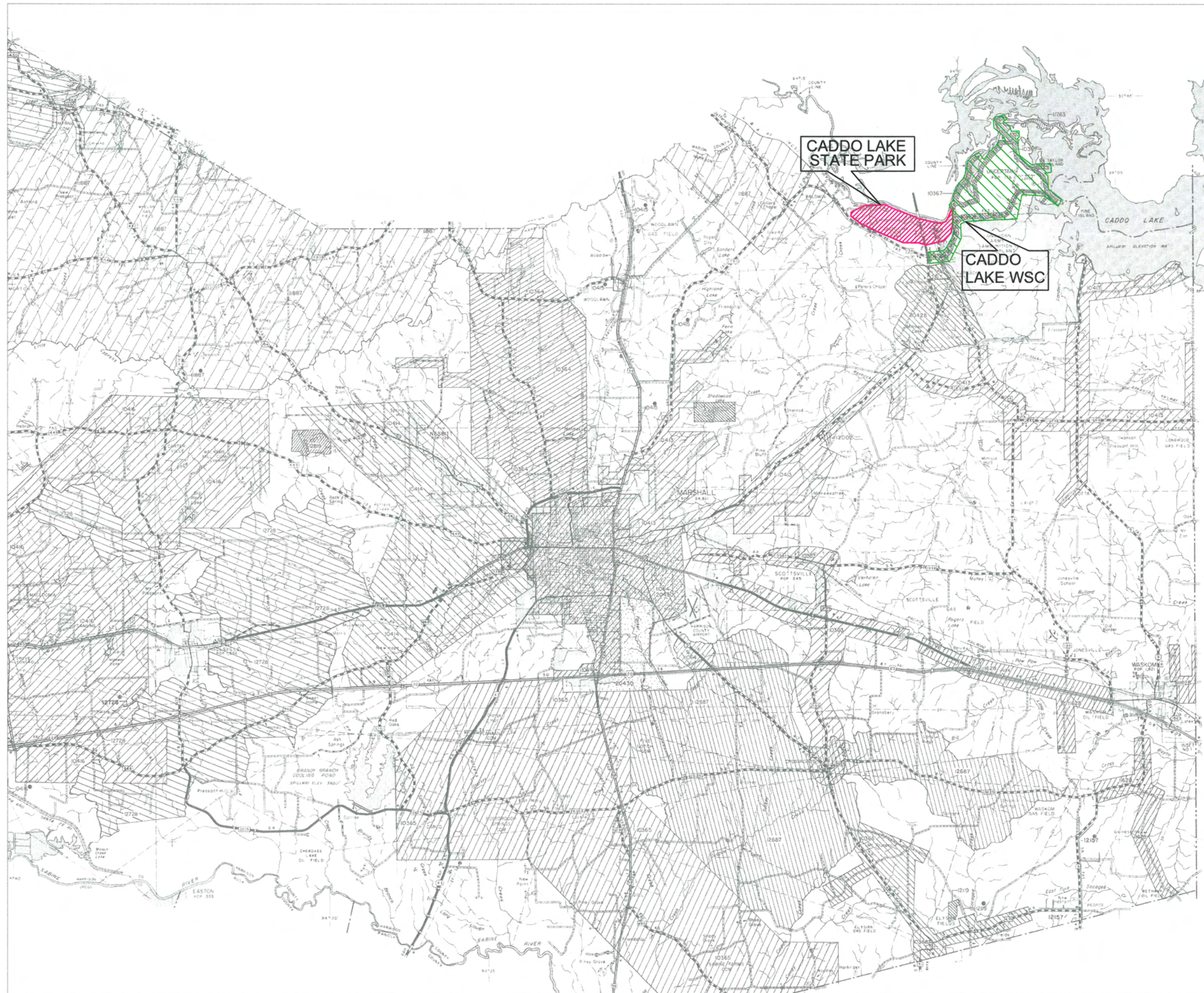
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Caddo Lake State Park, Caddo Lake WSC

Number of Connections: 534

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Caddo Lake State Park	70	23,000	0	0	23,000
Caddo Lake WSC	197	100,000	600	7,200	25,000
TOTALS	267	123,000	600	7,200	48,000
REQUIRED CAPACITY	320	106,800	1,068	10,680	53,400
SURPLUS	0	16,200	0	0	0
DEFICIENCY	53	0	468	3,480	5,400



SCALE: 1" = 3 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
HARRISON COUNTY
GROUP 5**

Hunt County Group 1

This group is located in the northeast Hunt County and consists of two water systems identified for merger with City of Commerce — i.e. Maloy WSC and Campbell WSC. Maloy WSC's source of water is City of Commerce (Lake Tawakoni). Campbell WSC uses groundwater from the Nacatoch aquifer. The consolidated system would have 4,893 current connections, growing to 5,118 by 2030. The average median household income for this group is \$36,461, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$30.38.

These three water user groups have the option of merging together and continuing to use surface water from Lake Tawakoni along with ground water from the Nacatoch as their source of supply. By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. A cost estimate performed for this merger resulted in \$6.20 increased monthly water cost per connection (which does not include operation and maintenance costs).

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Maloy WSC

Number of Connections: 178

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	40,000	800	7,500	0
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TOTALS	80	40,000	800	7,500	0
REQUIRED CAPACITY	107	35,600	356	3,560	0
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SURPLUS	0	4,400	444	3,940	0
DEFICIENCY	27	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Maloy WSC

Number of Connections: 259

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	40,000	800	7,500	0
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TOTALS	80	40,000	800	7,500	0
REQUIRED CAPACITY	155	51,800	518	5,180	0
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SURPLUS	0	0	0	0	0
DEFICIENCY	75	11,800	282	2,320	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Campbell WSC

Number of Connections: 476

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	110	250,000	900	0	150,000
2	90				
3	46				
4	60				
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TOTALS	306	250,000	900	0	150,000
REQUIRED CAPACITY	286	95,200	952	0	47,600
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SURPLUS	20	154,800	0	0	102,400
DEFICIENCY	0	0	52	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Campbell WSC

Number of Connections: 549

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	110	250,000	900	0	150,000
2	90				
3	46				
4	60				
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TOTALS	306	250,000	900	0	150,000
REQUIRED CAPACITY	329	109,800	1,098	0	54,900
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SURPLUS	0	140,200	0	0	95,100
DEFICIENCY	23	0	198	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Commerce

Number of Connections: 3,239

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	92	2,390,000	7,900	0	1,000,000
2	130				
3	105				
4	70				
5	90				
6	120				
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TOTALS	607	2,390,000	7,900	0	1,000,000
REQUIRED CAPACITY	0	647,800	1,943	0	323,900
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SURPLUS	607	1,742,200	5,957	0	676,100
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Commerce

Number of Connections: 4,310

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	92	2,390,000	7,900	0	1,000,000
2	130				
3	105				
4	70				
5	90				
6	120				
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TOTALS	607	2,390,000	7,900	0	1,000,000
REQUIRED CAPACITY	0	862,000	2,586	0	431,000
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SURPLUS	607	1,528,000	5,314	0	569,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: City of Commerce, Campbell WSC, Maloy WSC

Number of Connections: 4,893

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Commerce	607	2,390,000	7,900	0	1,000,000
Campbell WSC	306	250,000	900	0	150,000
Maloy WSC	80	40,000	800	7,500	0
TOTALS	993	2,680,000	9,600	7,500	1,150,000
REQUIRED CAPACITY	0	978,600	2,936	0	489,300
SURPLUS	993	1,701,400	6,664	7,500	660,700
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 1

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Commerce, Campbell WSC, Maloy WSC

Number of Connections: 5,118

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Commerce	607	2,390,000	7,900	0	1,000,000
Campbell WSC	306	250,000	900	0	150,000
Maloy WSC	80	40,000	800	7,500	0
TOTALS	993	2,680,000	9,600	7,500	1,150,000
REQUIRED CAPACITY	0	1,023,600	3,071	0	511,800
SURPLUS	993	1,656,400	6,529	7,500	638,200
DEFICIENCY	0	0	0	0	0

Hunt County Group 1

Connect to City of Commerce:

Avg. yield (GPD)	Total Yield (ac-ft/yr)	Unit Cost (\$ / 1000GAL)
924,881	1036.0	\$ 3.00

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
13,000	8	\$ 1.67	\$ 173,680.00	\$ 6,078.80	\$ 179,758.80

Total Construction Cost **\$ 179,758.80**
 Construction Duration (\$0 to \$3M =1YR, \$3M to \$5M = 1.5YRS, >5M=2YRS) **1.0**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%) \$ 53,927.64
 ENVIRONMENTAL (LUMP SUM) \$ 20,000.00

Total Borrowed Funds **\$ 253,686.44**

INTEREST DURING CONSTRUCTION(IDC): 6% Annual Interest on Total Borrowed Funds \$ 15,221.19
 4% Rate of Return on Investment of Unspent Funds \$ 5,073.73
 Net Interest **\$ 10,147.46**

TOTAL CAPITAL COST **\$ 263,833.90**

	2010	2020	2030	2040	2050	2060	Average
WATER PURCHASED (ac-ft/yr)	35	85	158	285	578	1036	363
ANNUAL WATER PURCHASE COST (Yield (ac-ft/yr) * 325,851 * \$ / 1,000)	\$ 34,214.36	\$ 83,092.01	\$ 154,453.37	\$ 278,602.61	\$ 565,025.63	\$ 1,012,744.91	\$ 354,688.81

TOTAL ANNUALIZED COST **\$ 53,368.70** | **\$ 102,246.35** | **\$ 173,607.71** | **\$ 278,602.61** | **\$ 565,025.63** | **\$ 1,012,744.91** | **\$ 364,265.98**

(Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%))

UNIT COST **\$ 1,003.95**
 (\$ / ac-ft / yr)

NUMBER OF CONNECTIONS **4,893**

TOTAL PERSONS SERVED (3 x Number of Connections) **14,679**

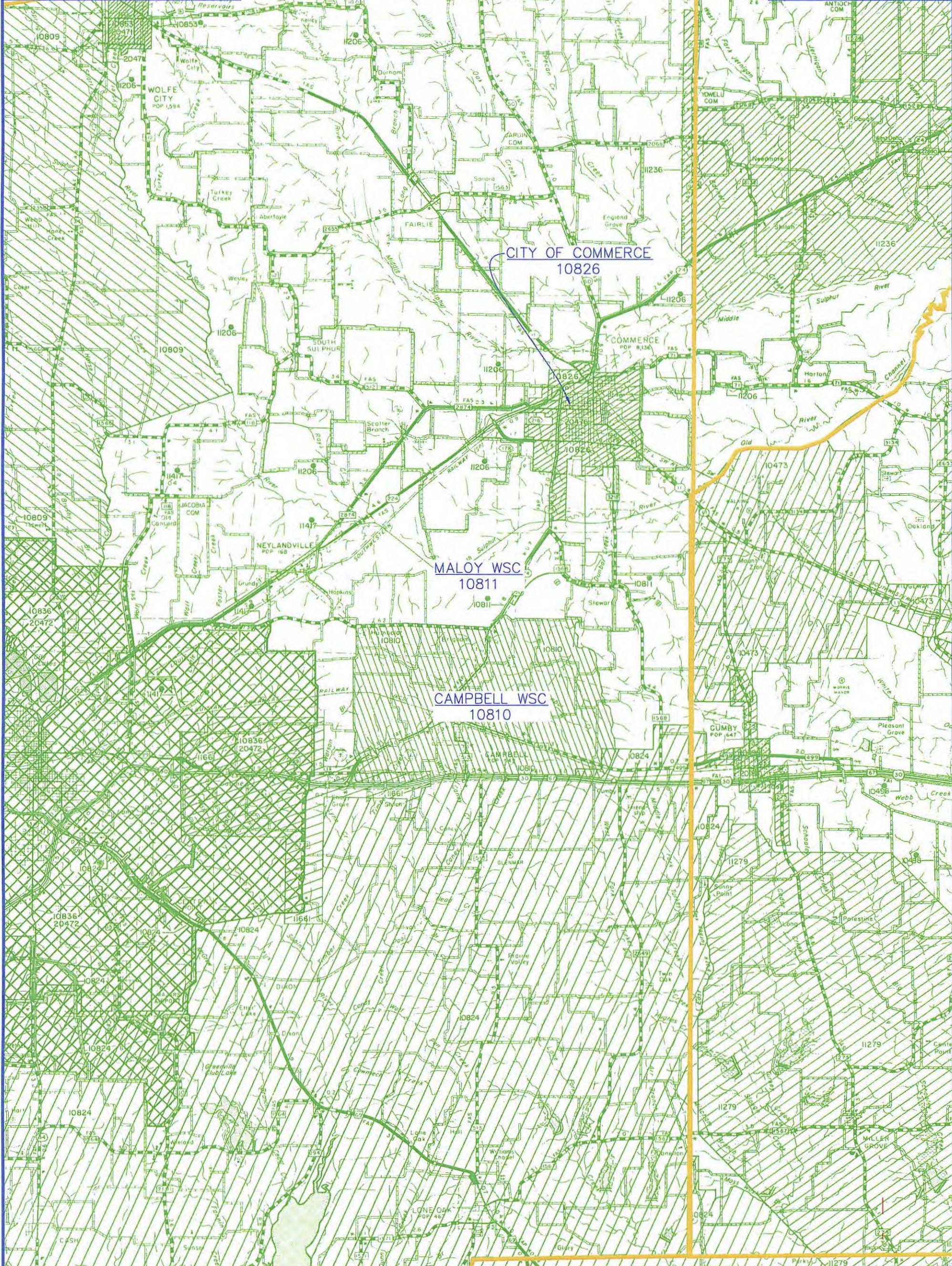
COST PER CONNECTION (Annual Average Water Purchase Cost / Connections / 12) **6.20**
 (Does not include maintenance and operation costs)

MONTHLY AVERAGE WATER BILL @1.0% MEDIAN HOUSEHOLD INCOME **30.38**



SCALE: 1"=2 MILES

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
HUNT COUNTY
GROUP 1
LOCATION MAP



Hunt County Group 2

This group is located in the central Hunt County and consists of one water system identified for merger with City of Greenville — i.e. Jacobia WSC. Jacobia WSC's source of supply is surface water from the City of Greenville. City of Greenville's source of water is Lake Tawakoni and local city lakes. The consolidated system would have 13,633 current connections, growing to 13,877 by 2030. The average median household income for this group is \$34,606, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$28.84.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity.

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Jacobia WSC

Number of Connections: 337

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	125,000	1,200	8,000	0
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TOTALS	0	125,000	1,200	8,000	0
REQUIRED CAPACITY	0	67,400	674	6,740	0
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SURPLUS	0	57,600	526	1,260	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Jacobia WSC

Number of Connections: 581

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	125,000	1,200	8,000	0
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TOTALS	0	125,000	1,200	8,000	0
REQUIRED CAPACITY	0	116,200	1,162	11,620	0
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SURPLUS	0	8,800	38	0	0
DEFICIENCY	0	0	0	3,620	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Greenville

Number of Connections: 13,296

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	6,000,000	15,000	0	2,500,000
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TOTALS	0	6,000,000	15,000	0	2,500,000
REQUIRED CAPACITY	0	2,659,200	26,592	0	1,329,600
<hr/>					
SURPLUS	0	3,340,800	0	0	1,170,400
DEFICIENCY	0	0	11,592	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Greenville

Number of Connections: 13,296

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	6,000,000	15,000	0	2,500,000
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TOTALS	0	6,000,000	15,000	0	2,500,000
REQUIRED CAPACITY	0	2,659,200	26,592	0	1,329,600
<hr/>					
SURPLUS	0	3,340,800	0	0	1,170,400
DEFICIENCY	0	0	11,592	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 2

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: City of Greenville, Jacobia WSC

Number of Connections: 13,633

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Greenville	0	6,000,000	15,000	0	2,500,000
Jacobia WSC	0	125,000	1,200	8,000	0
TOTALS	0	6,125,000	16,200	8,000	2,500,000
REQUIRED CAPACITY	0	2,726,600	27,266	0	1,363,300
SURPLUS	0	3,398,400	0	8,000	1,136,700
DEFICIENCY	0	0	11,066	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 2

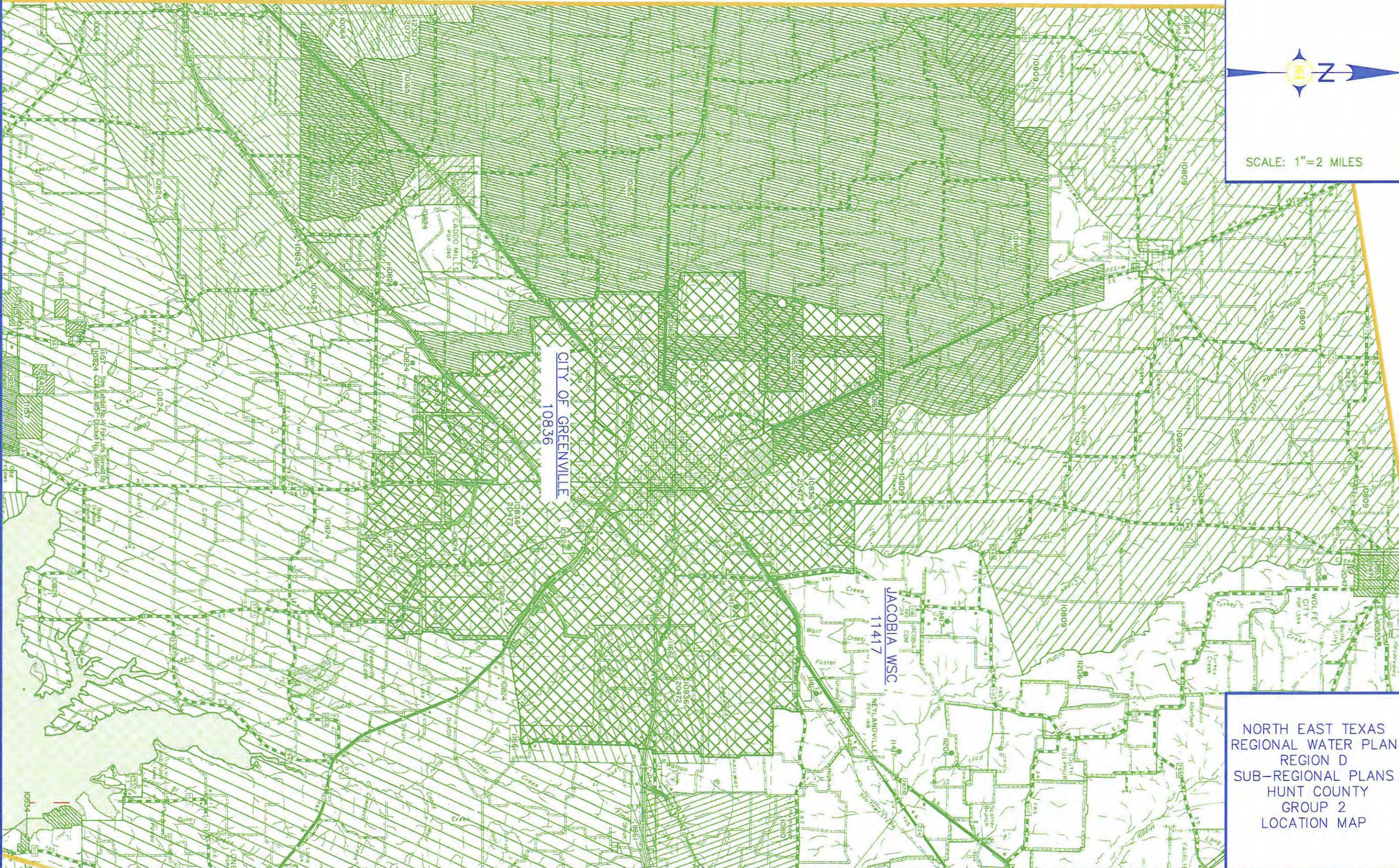
COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Greenville, Jacobia WSC

Number of Connections: 13,877

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Greenville	0	6,000,000	15,000	0	2,500,000
Jacobia WSC	0	125,000	1,200	8,000	0
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TOTALS	0	6,125,000	16,200	8,000	2,500,000
REQUIRED CAPACITY	0	2,775,400	27,754	0	1,387,700
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SURPLUS	0	3,349,600	0	8,000	1,112,300
DEFICIENCY	0	0	11,554	0	0



SCALE: 1"=2 MILES

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
HUNT COUNTY
GROUP 2
LOCATION MAP

Hunt County Group 3

This group is located in south Hunt County and consists of three water systems identified for merger with Cash SUD — i.e. Little Creek Acres, Whispering Oaks Water Coop and West Oaks Phoenix Corp. Little Creek Acres and West Oaks Phoenix Corp utilize groundwater from the Nacatoch aquifer, while Whispering Oaks Water Coop's source is the Woodbine aquifer. The consolidated system would have 6,199 current connections, growing to 9,260 by 2030. The average median household income for this group is \$36,461, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$30.38.

These four water user groups have the option of merging together and using Cash SUD's surface water from Lake Tawakoni Lake Fork and Lake Lavon as their source of supply. By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. A cost estimate performed for this merger resulted in \$2.01 increased monthly water cost per connection (which does not include operation and maintenance costs).

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Little Creek Acres

Number of Connections: 28

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	20	9,000	120	700	0
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TOTALS	20	9,000	120	700	0
REQUIRED CAPACITY	17	5,600	56	560	0
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SURPLUS	3	3,400	64	140	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Little Creek Acres

Number of Connections: 143

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	20	9,000	120	700	0
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TOTALS	20	9,000	120	700	0
REQUIRED CAPACITY	86	28,600	286	2,860	0
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SURPLUS	0	0	0	0	0
DEFICIENCY	66	19,600	166	2,160	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: W Oaks Phoenix Corp

Number of Connections: 28

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	28	22,000	100	1,500	0
2	0				
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TOTALS	28	22,000	100	1,500	0
REQUIRED CAPACITY	17	5,600	56	560	0
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SURPLUS	11	16,400	44	940	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: W Oaks Phoenix Corp

Number of Connections: 35

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	28	22,000	100	1,500	0
2	0				
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TOTALS	28	22,000	100	1,500	0
REQUIRED CAPACITY	21	7,000	70	700	0
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SURPLUS	7	15,000	30	800	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Whispering Oaks Water Coop

Number of Connections: 33

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	25	15,000	120	1,050	0
2	27				
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TOTALS	52	15,000	120	1,050	0
REQUIRED CAPACITY	20	6,600	66	660	0
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SURPLUS	32	8,400	54	390	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Whispering Oaks Water Coop

Number of Connections: 37

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	25	15,000	120	1,050	0
2	27				
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TOTALS	52	15,000	120	1,050	0
REQUIRED CAPACITY	22	7,400	74	740	0
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SURPLUS	30	7,600	46	310	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Cash SUD

Number of Connections: 6,110

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	3,275,000	16,806	0	1,550,000
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TOTALS	0	3,275,000	16,806	0	1,550,000
REQUIRED CAPACITY	0	1,222,000	3,666	0	611,000
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SURPLUS	0	2,053,000	13,140	0	939,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Cash SUD

Number of Connections: 9,045

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	3,275,000	16,806	0	1,550,000
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TOTALS	0	3,275,000	16,806	0	1,550,000
REQUIRED CAPACITY	0	1,809,000	18,909	0	904,500
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SURPLUS	0	1,466,000	0	0	645,500
DEFICIENCY	0	0	1,284	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Cash SUD, Little Creek Acres, W Oaks Phoenix Corp, Whispering Oaks Water Coop

Number of Connections: 6,199

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Cash SUD	0	3,275,000	16,806	0	1,550,000
Little Creek Acres	20	9,000	120	700	0
W Oaks Phoenix Corp	28	22,000	100	1,500	0
Whispering Oaks Water Coop	52	15,000	120	1,050	0
TOTALS	100	3,321,000	17,146	3,250	1,550,000
REQUIRED CAPACITY	0	1,239,800	3,719	0	619,900
SURPLUS	100	2,081,200	13,427	3,250	930,100
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
HUNT COUNTY GROUP 3

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Cash SUD, Little Creek Acres, W Oaks Phoenix Corp, Whispering Oaks Water Coop

Number of Connections: 9,260

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Cash SUD	0	3,275,000	16,806	0	1,550,000
Little Creek Acres	20	9,000	120	700	0
W Oaks Phoenix Corp	28	22,000	100	1,500	0
Whispering Oaks Water Coop	52	15,000	120	1,050	0
TOTALS	100	3,321,000	17,146	3,250	1,550,000
REQUIRED CAPACITY	0	1,852,000	12,398	0	926,000
SURPLUS	100	1,469,000	4,748	3,250	624,000
DEFICIENCY	0	0	0	0	0

Hunt County Group 3

Connect to Cash SUD:

Avg. yield (GPD)	Total Yield (ac-ft/yr)	Unit Cost (\$ / 1000GAL)
168,728	189.0	\$ 4.00

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
39,000	6	\$ 1.67	\$ 390,780.00	\$ 13,677.30	\$ 404,457.30

Total Construction Cost **\$ 404,457.30**
 Construction Duration (\$0 to \$3M =1YR, \$3M to \$5M = 1.5YRS, >5M=2YRS) **1.0**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%) \$ 121,337.19
 ENVIRONMENTAL (LUMP SUM) \$ 20,000.00
Total Borrowed Funds **\$ 545,794.49**

INTEREST DURING CONSTRUCTION(IDC): 6% Annual Interest on Total Borrowed Funds \$ 32,747.67
 4% Rate of Return on Investment of Unspent Funds \$ 10,915.89
 Net Interest **\$ 21,831.78**

TOTAL CAPITAL COST **\$ 567,626.27**

	2010	2020	2030	2040	2050	2060	Average
WATER PURCHASED (ac-ft/yr)	55	62	72	89	128	189	99
ANNUAL WATER PURCHASE COST (Yield (ac-ft/yr) * 325,851 * \$ / 1,000)	\$ 71,687.22	\$ 80,811.05	\$ 93,845.09	\$ 116,002.96	\$ 166,835.71	\$ 246,343.36	\$ 129,254.23

TOTAL ANNUALIZED COST **\$ 112,896.89** **\$ 122,020.72** **\$ 135,054.76** **\$ 116,002.96** **\$ 166,835.71** **\$ 246,343.36** **\$ 149,859.06**
 (Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%))

UNIT COST **\$ 1,511.18**
 (\$ / ac-ft / yr)

NUMBER OF CONNECTIONS **6,199**

TOTAL PERSONS SERVED (3 x Number of Connections) **18,597**

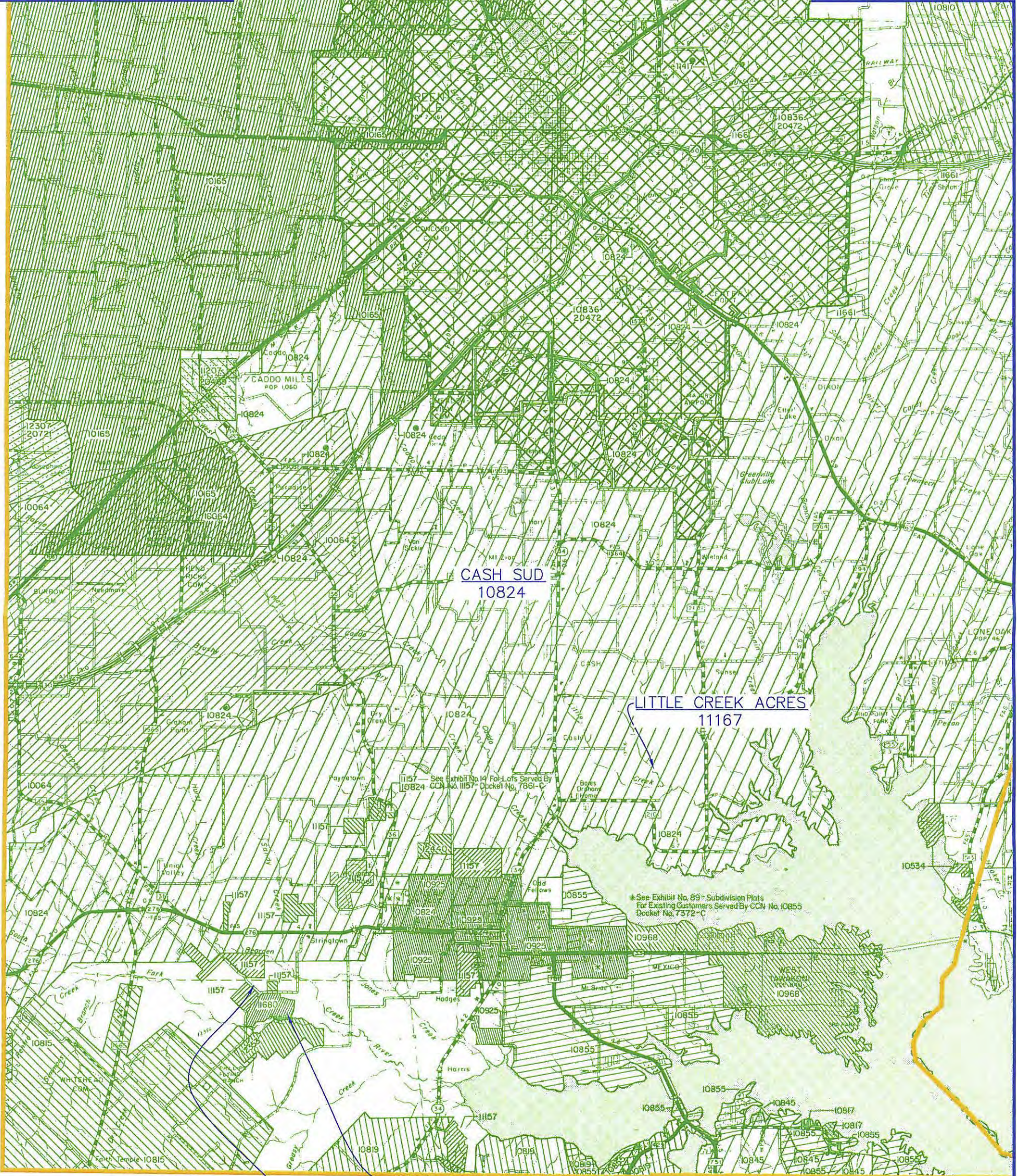
COST PER CONNECTION (Annual Average Water Purchase Cost / Connections / 12) **2.01**
 (Does not include maintenance and operation costs)

MONTHLY AVERAGE WATER BILL @1.0% MEDIAN HOUSEHOLD INCOME **30.38**



SCALE: 1"=2 MILES

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
HUNT COUNTY
GROUP 3
LOCATION MAP



WHISPERING OAKS WATER COOP.
11680

WEST OAKS PHOENIX CORP.
12353

Lamar County Group 1

This group is located in central Lamar County and consists of one water system identified for merger with City of Paris — i.e. MJC WSC. City of Paris's Pat Mayse Lake is the source of water for MJC WSC. The consolidated system would have 10,603 current connections, growing to 13,302 by 2030. The average median household income for this group is \$31,609, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$26.34.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity.

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: M J C WSC

Number of Connections: 278

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	150	80,000	840	8,000	0
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TOTALS	150	80,000	840	8,000	0
REQUIRED CAPACITY	167	55,600	556	5,560	0
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SURPLUS	0	24,400	284	2,440	0
DEFICIENCY	17	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: M J C WSC

Number of Connections: 336

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	150	80,000	840	8,000	0
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TOTALS	150	80,000	840	8,000	0
REQUIRED CAPACITY	202	67,200	672	6,720	0
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SURPLUS	0	12,800	168	1,280	0
DEFICIENCY	52	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Paris

Number of Connections: 10,325

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	14,500,000	52,000	0	4,000,000
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TOTALS	0	14,500,000	52,000	0	4,000,000
REQUIRED CAPACITY	0	2,065,000	6,195	0	1,032,500
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SURPLUS	0	12,435,000	45,805	0	2,967,500
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Paris

Number of Connections: 12,966

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	14,500,000	52,000	0	4,000,000
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TOTALS	0	14,500,000	52,000	0	4,000,000
REQUIRED CAPACITY	0	2,593,200	7,780	0	1,296,600
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SURPLUS	0	11,906,800	44,220	0	2,703,400
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 1

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: City of Paris, MJC WSC

Number of Connections: 10,603

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Paris	0	14,500,000	52,000	0	4,000,000
MJC WSC	150	80,000	840	8,000	0
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TOTALS	150	14,580,000	52,840	8,000	4,000,000
REQUIRED CAPACITY	0	2,120,600	6,362	0	1,060,300
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SURPLUS	150	12,459,400	46,478	8,000	2,939,700
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 1

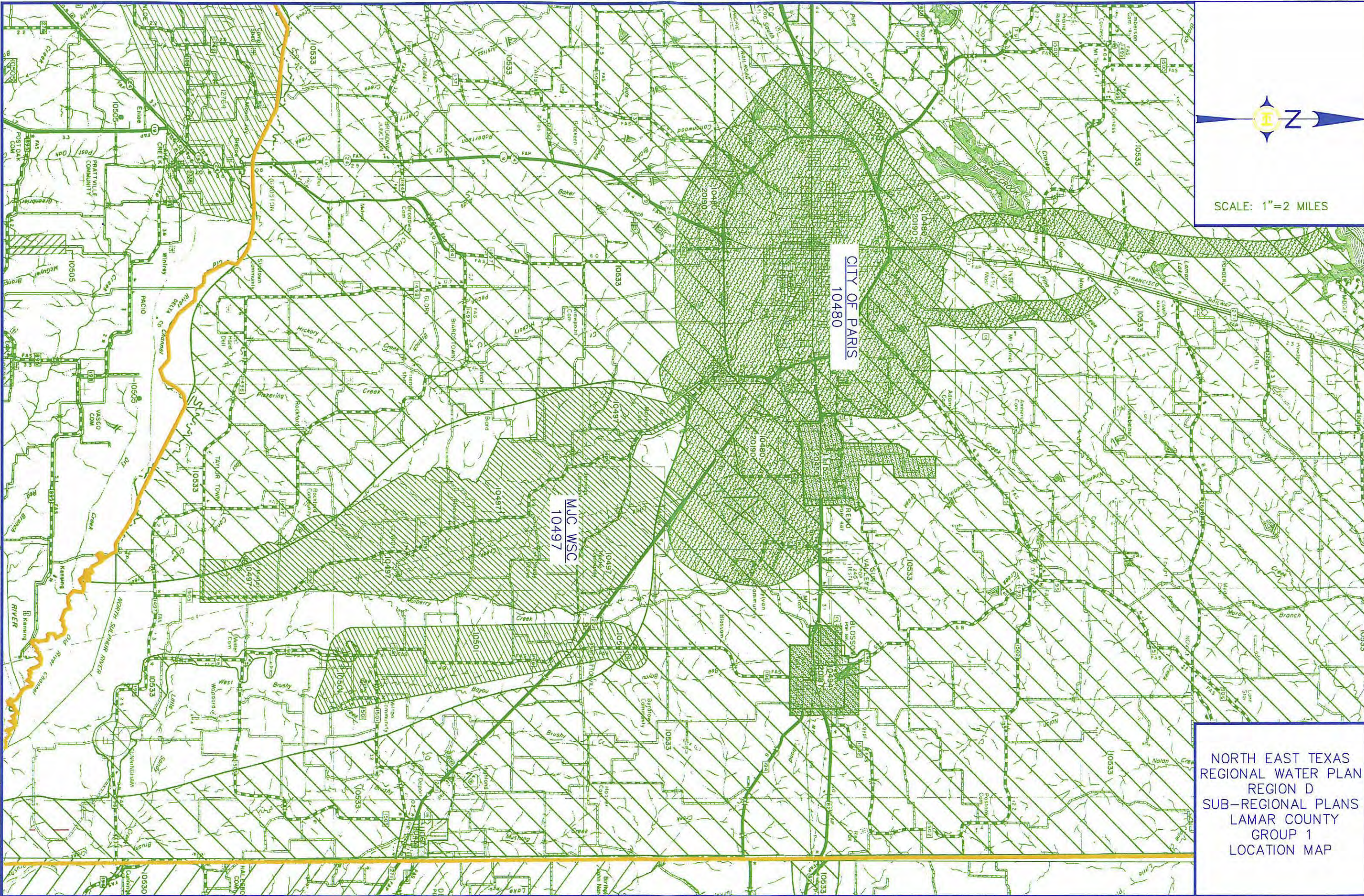
COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Paris, MJC WSC

Number of Connections: 13,302

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
City of Paris	0	14,500,000	52,000	0	4,000,000
MJC WSC	150	80,000	840	8,000	0
<hr/>					
TOTALS	150	14,580,000	52,840	8,000	4,000,000
REQUIRED CAPACITY	0	2,660,400	7,981	0	1,330,200
<hr/>					
SURPLUS	150	11,919,600	44,859	8,000	2,669,800
DEFICIENCY	0	0	0	0	0



SCALE: 1"=2 MILES

CITY OF PARIS
10480

MJC WSC
10497

BLOSSOM
10481

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
LAMAR COUNTY
GROUP 1
LOCATION MAP

Lamar County Group 2

This group consists of two water systems identified for merger with Lamar County WSD — i.e. Petty WSC and Pattonville WSC. Petty WSC utilizes groundwater from the Woodbine aquifer, and Pattonville WSC's source is surface water from Lamar County WSD (Pat Mayse Lake). The consolidated system would have 7,301 current connections, growing to 8,843 by 2030. The average median household income for this group is \$31,609, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$26.34.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. A cost estimate performed for this merger resulted in \$.20 increased monthly water cost per connection (which does not include operation and maintenance costs).

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Petty WSC

Number of Connections: 42

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	42,000	190	1,000	0
<hr/>					
TOTALS	30	42,000	190	1,000	0
REQUIRED CAPACITY	25	8,400	84	840	0
<hr/>					
SURPLUS	5	33,600	106	160	0
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Petty WSC

Number of Connections: 62

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	42,000	190	1,000	0
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TOTALS	30	42,000	190	1,000	0
REQUIRED CAPACITY	37	12,400	124	1,240	0
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SURPLUS	0	29,600	66	0	0
DEFICIENCY	7	0	0	240	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Pattonville WSC

Number of Connections: 177

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	0	0	0	0
<hr/>					
TOTALS	0	0	0	0	0
REQUIRED CAPACITY	0	35,400	0	3,540	0
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SURPLUS	0	0	0	0	0
DEFICIENCY	0	35,400	0	3,540	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Pattonville WSC

Number of Connections: 214

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	0	0	0	0
<hr/>					
TOTALS	0	0	0	0	0
REQUIRED CAPACITY	0	42,800	0	4,280	0
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SURPLUS	0	0	0	0	0
DEFICIENCY	0	42,800	0	4,280	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Lamar County WSD

Number of Connections: 7,082

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	7,524,000	17,958	0	1,648,000
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TOTALS	0	7,524,000	17,958	0	1,648,000
REQUIRED CAPACITY	0	1,416,400	4,249	0	708,200
<hr/>					
SURPLUS	0	6,107,600	13,709	0	939,800
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Lamar County WSD

Number of Connections: 8,567

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	7,524,000	17,958	0	1,648,000
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TOTALS	0	7,524,000	17,958	0	1,648,000
REQUIRED CAPACITY	0	1,713,400	17,134	0	856,700
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SURPLUS	0	5,810,600	824	0	791,300
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Lamar County WSD, Pattonville WSC, Petty WSC

Number of Connections: 7,301

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Lamar County WSD	0	7,524,000	17,958	0	1,648,000
Pattonville WSC	0	0	0	0	0
Petty WSC	30	42,000	190	1,000	0
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TOTALS	30	7,566,000	18,148	1,000	1,648,000
REQUIRED CAPACITY	0	1,460,200	4,381	0	730,100
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SURPLUS	30	6,105,800	13,767	1,000	917,900
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
LAMAR COUNTY GROUP 2

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Lamar County WSD, Pattonville WSC, Petty WSC

Number of Connections: 8,843

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Lamar County WSD	0	7,524,000	17,958	0	1,648,000
Pattonville WSC	0	0	0	0	0
Petty WSC	30	42,000	190	1,000	0
<hr/>					
TOTALS	30	7,566,000	18,148	1,000	1,648,000
REQUIRED CAPACITY	0	1,768,600	17,686	0	884,300
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SURPLUS	30	5,797,400	462	1,000	763,700
DEFICIENCY	0	0	0	0	0

Lamar County Group 2

Connect to Lamar County WSD:

Avg. yield (GPD)	Total Yield (ac-ft/yr)	Unit Cost (\$ / 1000GAL)
17,855	20.0	\$ 2.50

Pump Station

Number (ea)	Unit Cost (\$ / ea)	Total Cost	Land & Easements (1%)	Subtotal
Rework Existing	1	\$ 28,000.00	\$ 280.00	\$ 28,280.00

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
5,300	6	\$ 1.67	\$ 53,106.00	\$ 1,858.71	\$ 54,964.71

Total Construction Cost **\$ 83,244.71**
 Construction Duration (\$0 to \$3M =1YR, \$3M to \$5M = 1.5YRS, >5M=2YRS) **1.0**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%) \$ 24,973.41
 ENVIRONMENTAL (LUMP SUM) \$ 20,000.00

Total Borrowed Funds **\$ 128,218.12**

INTEREST DURING CONSTRUCTION(IDC): 6% Annual Interest on Total Borrowed Funds \$ 7,693.09
 4% Rate of Return on Investment of Unspent Funds \$ 2,564.36
 Net Interest **\$ 5,128.72**

TOTAL CAPITAL COST **\$ 133,346.85**

	2010	2020	2030	2040	2050	2060	Average
WATER PURCHASED (ac-ft/yr)	18	19	20	21	20	20	20
ANNUAL WATER PURCHASE COST (Yield (ac-ft/yr) * 325,851 * \$ / 1,000)	\$ 14,663.30	\$ 15,477.92	\$ 16,292.55	\$ 17,107.18	\$ 16,292.55	\$ 16,292.55	\$ 16,021.01

TOTAL ANNUALIZED COST **\$ 24,344.28** **\$ 25,158.90** **\$ 25,973.53** **\$ 17,107.18** **\$ 16,292.55** **\$ 16,292.55** **\$ 20,861.50**
 (Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%))

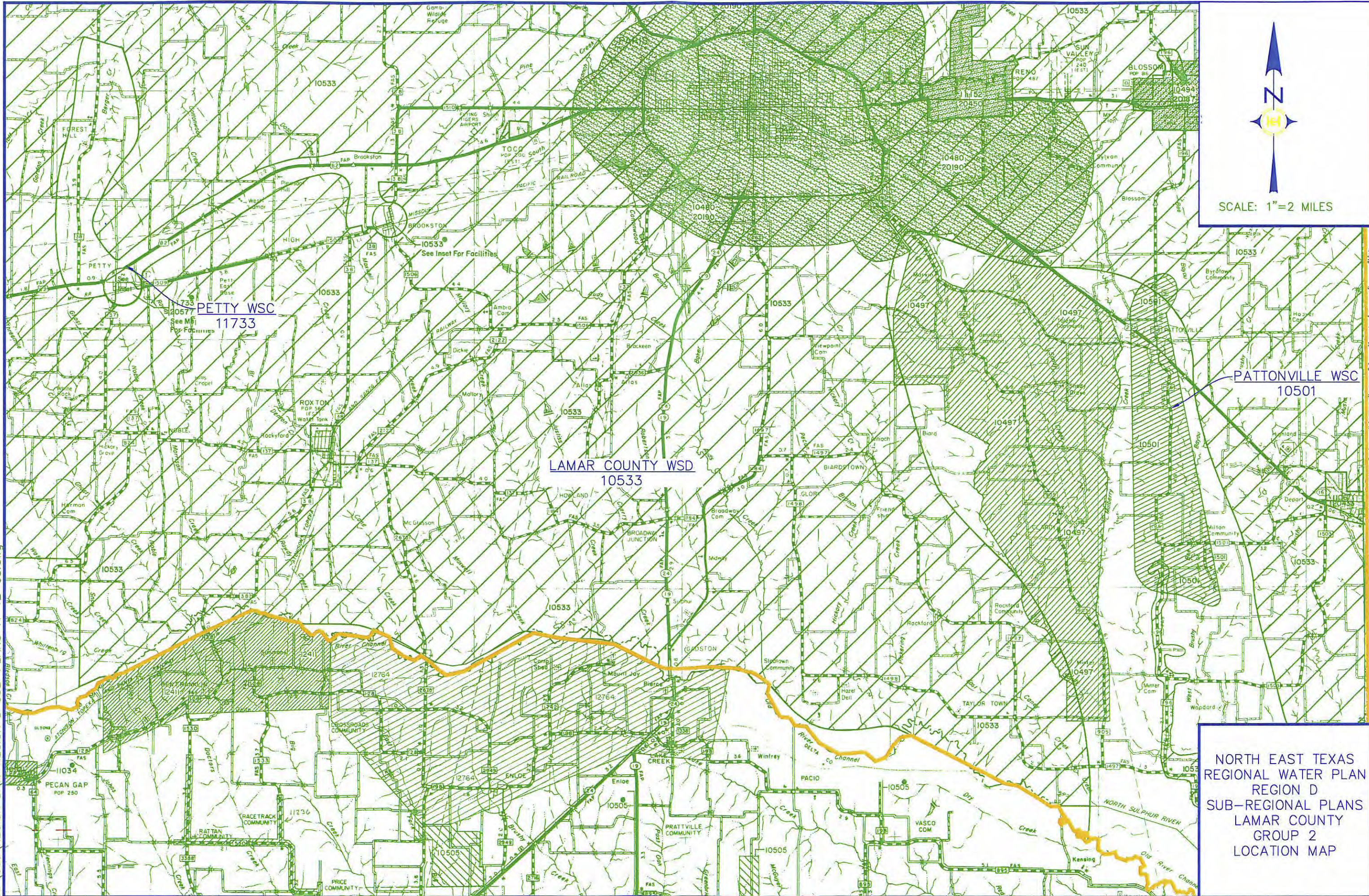
UNIT COST **\$ 1,060.75**
 (\$ / ac-ft / yr)

NUMBER OF CONNECTIONS **8,843**

TOTAL PERSONS SERVED (3 x Number of Connections) **26,529**

COST PER CONNECTION (Annual Average Water Purchase Cost / Connections / 12) **0.20**
 (Does not include maintenance and operation costs)

MONTHLY AVERAGE WATER BILL @1.0% MEDIAN HOUSEHOLD INCOME **26.34**



SCALE: 1"=2 MILES

PETTY WSC
11733
See Inset For Facilities

LAMAR COUNTY WSD
10533

PATTONVILLE WSC
10501

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
LAMAR COUNTY
GROUP 2
LOCATION MAP

Marion County Group 1

Marion County Group 1 consists of two water systems, Shady Shores Water System (168) and Diana Special Utility District (1,433). Shady Shores Water System would join with Diana SUD to have a total number of connections of 1,601 now, with combined projected growth to 1,889 connections in Year 2030.

Shady Shores Water System receives water from two different sources. One source is a well in the Carrizo-Wilcox Aquifer. The other source is Diana SUD which receives water from Lake O' The Pines Reservoir and the Carrizo-Wilcox Aquifer. Between these two sources of water Shady Shores Water System will have enough water for their projected number of connections in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. The two systems are all ready physically connected, since Shady Shores Water System receives water from Diana SUD. As part of consolidation Diana SUD would help with the management of Shady Shores Water System.

The combined systems have a median household income (MHI) of \$25,347. Utilizing 1% of MHI the average monthly bill would be \$21.12.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Shady Shores Water

Number of Connections: 168

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	107	15,000	340	1,500	0
TOTALS	107	15,000	340	1,500	0
REQUIRED CAPACITY	101	33,600	336	3,360	0
SURPLUS	6	0	4	0	0
DEFICIENCY	0	18,600	0	1,860	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Shady Shores Water

Number of Connections: 168

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	107	15,000	340	1,500	0
TOTALS	107	15,000	340	1,500	0
REQUIRED CAPACITY	101	33,600	336	3,360	0
SURPLUS	6	0	4	0	0
DEFICIENCY	0	18,600	0	1,860	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
MARION COUNTY GROUP 1**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Diana SUD

Number of Connections: 1433

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,270	557,000	4,340	50,000	40,000
TOTALS	1,270	557,000	4,340	50,000	40,000
REQUIRED CAPACITY	860	286,600	2,866	28,660	143,300
SURPLUS	410	270,400	1,474	21,340	0
DEFICIENCY	0	0	0	0	103,300

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
MARION COUNTY GROUP 1**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Diana SUD

Number of Connections: 1721

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,270	557,000	4,340	50,000	40,000
TOTALS	1,270	557,000	4,340	50,000	40,000
REQUIRED CAPACITY	1,033	344,200	3,442	34,420	172,100
SURPLUS	237	212,800	898	15,580	0
DEFICIENCY	0	0	0	0	132,100

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
MARION COUNTY GROUP 1**

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Shady Shores Water System, Diana SUD

Number of Connections: 1601

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Shady Shores	107	15,000	340	1,500	0
Diana SUD	1,270	557,000	4,340	50,000	40,000
TOTALS	1,377	572,000	4,680	51,500	40,000
REQUIRED CAPACITY	961	320,200	3,202	32,020	160,100
SURPLUS	416	251,800	1,478	19,480	0
DEFICIENCY	0	0	0	0	120,100

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
MARION COUNTY GROUP 1**

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Shady Shores Water System, Diana SUD

Number of Connections: 1889

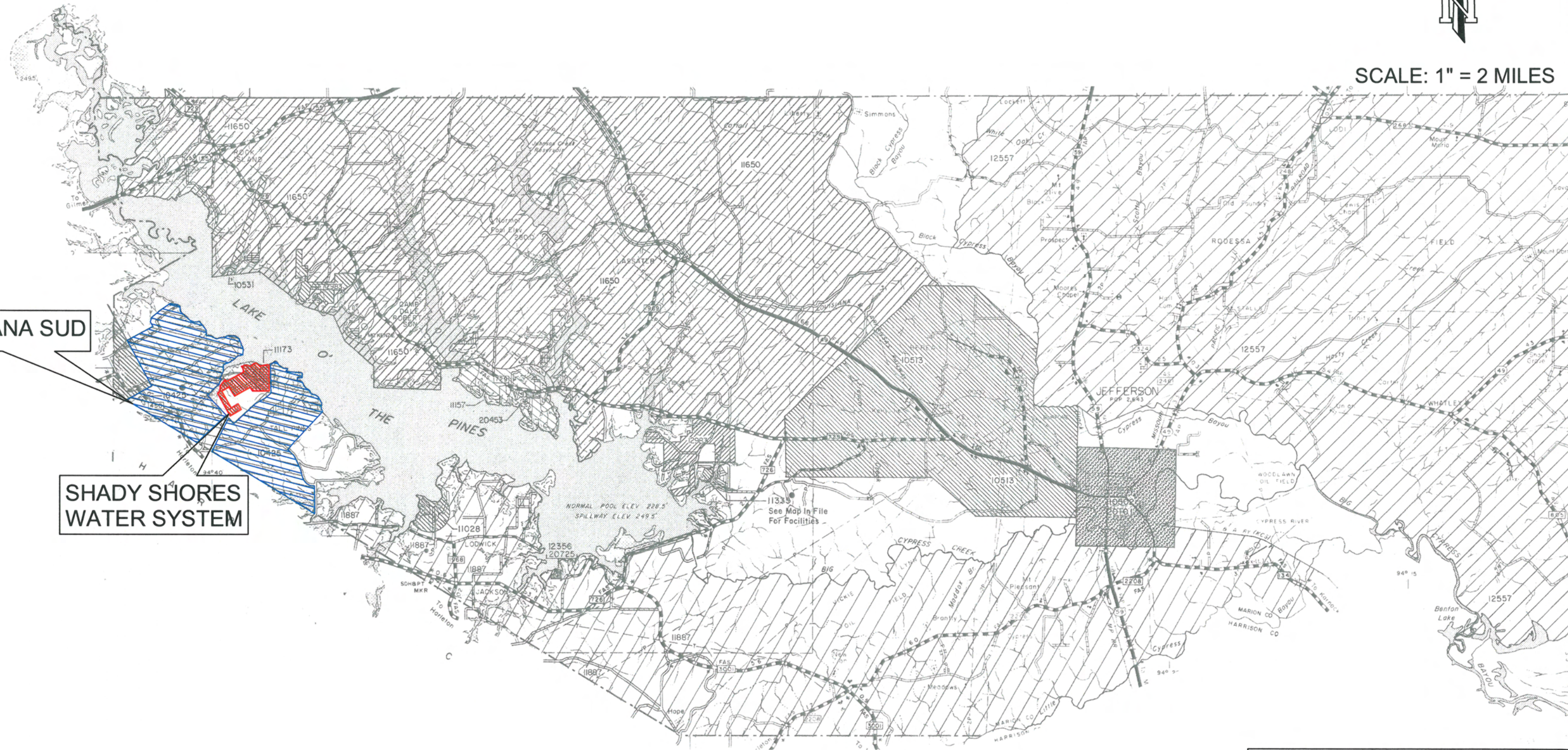
SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Shady Shores	107	15,000	340	1,500	0
Diana SUD	1,270	557,000	4,340	50,000	40,000
TOTALS	1,377	572,000	4,680	51,500	40,000
REQUIRED CAPACITY	1,133	377,800	3,778	37,780	188,900
SURPLUS	244	194,200	902	13,720	0
DEFICIENCY	0	0	0	0	148,900



SCALE: 1" = 2 MILES

DIANA SUD

SHADY SHORES
WATER SYSTEM



NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
MARION COUNTY
GROUP 1

Marion County Group 2

Marion County Group 2 consists of three water systems, C & C Waterworks, Inc (60), Tejas Village (66), and Harleton Water Supply Corporation (872). C & C Waterworks Inc and Tejas Village would join with Harleton WSC to have a total number of connections of 998, with the combined projected growth to 1,196 connections in Year 2030.

C & C Waterworks Inc receives water from two Wells in the Cypress Aquifer. Tejas Village receives water from a single well in the Carrizo-Wilcox Aquifer. Both C & C Waterworks, Inc and Tejas Village have an adequate water supply for the number of connections they will have in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the three systems. C & C Waterworks, Inc. and Tejas Village do not need to be physically connected to Harleton WSC because they each have enough supply to meet their current and future demands.

The combined systems have a median household income (MHI) of \$25,347. Utilizing 1% of MHI the average monthly bill would \$21.12.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: C & C Waterworks Inc

Number of Connections: 60

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	22	30,000	150	1,520	0
2	20				
TOTALS	42	30,000	150	1,520	0
REQUIRED CAPACITY	36	12,000	120	1,200	0
SURPLUS	6	18,000	30	320	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: C & C Waterworks Inc

Number of Connections: 60

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	22	30,000	150	1,520	0
2	20				
<hr/>					
TOTALS	42	30,000	150	1,520	0
REQUIRED CAPACITY	36	12,000	120	1,200	0
<hr/>					
SURPLUS	6	18,000	30	320	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Tejas Village

Number of Connections: 66

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	68	5,000	158	750	0
TOTALS	68	5,000	158	750	0
REQUIRED CAPACITY	40	13,200	132	1,320	0
SURPLUS	28	0	26	0	0
DEFICIENCY	0	8,200	0	570	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Tejas Village

Number of Connections: 66

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	68	5,000	158	750	0
TOTALS	68	5,000	158	750	0
REQUIRED CAPACITY	40	13,200	132	1,320	0
SURPLUS	28	0	26	0	0
DEFICIENCY	0	8,200	0	570	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Harleton WSC

Number of Connections: 872

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	624	541,000	400	0	126,000
TOTALS	624	541,000	400	0	126,000
REQUIRED CAPACITY	523	174,400	1,744	0	87,200
SURPLUS	101	366,600	0	0	38,800
DEFICIENCY	0	0	1,344	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Harleton WSC

Number of Connections: 1070

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	624	541,000	400	0	126,000
TOTALS	624	541,000	400	0	126,000
REQUIRED CAPACITY	642	214,000	2,140	0	107,000
SURPLUS	0	327,000	0	0	19,000
DEFICIENCY	18	0	1,740	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: C & C Water Works, Tejas Village, Harleton WSC

Number of Connections: 998

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Harleton WSC	624	541,000	400	0	126,000
C&C Water Works	44	30,000	150	1,520	0
Tejas Village	68	5,000	158	750	0
TOTALS	736	576,000	708	2,270	126,000
REQUIRED CAPACITY	599	199,600	1,996	19,960	99,800
SURPLUS	137	376,400	0	0	26,200
DEFICIENCY	0	0	1,288	17,690	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

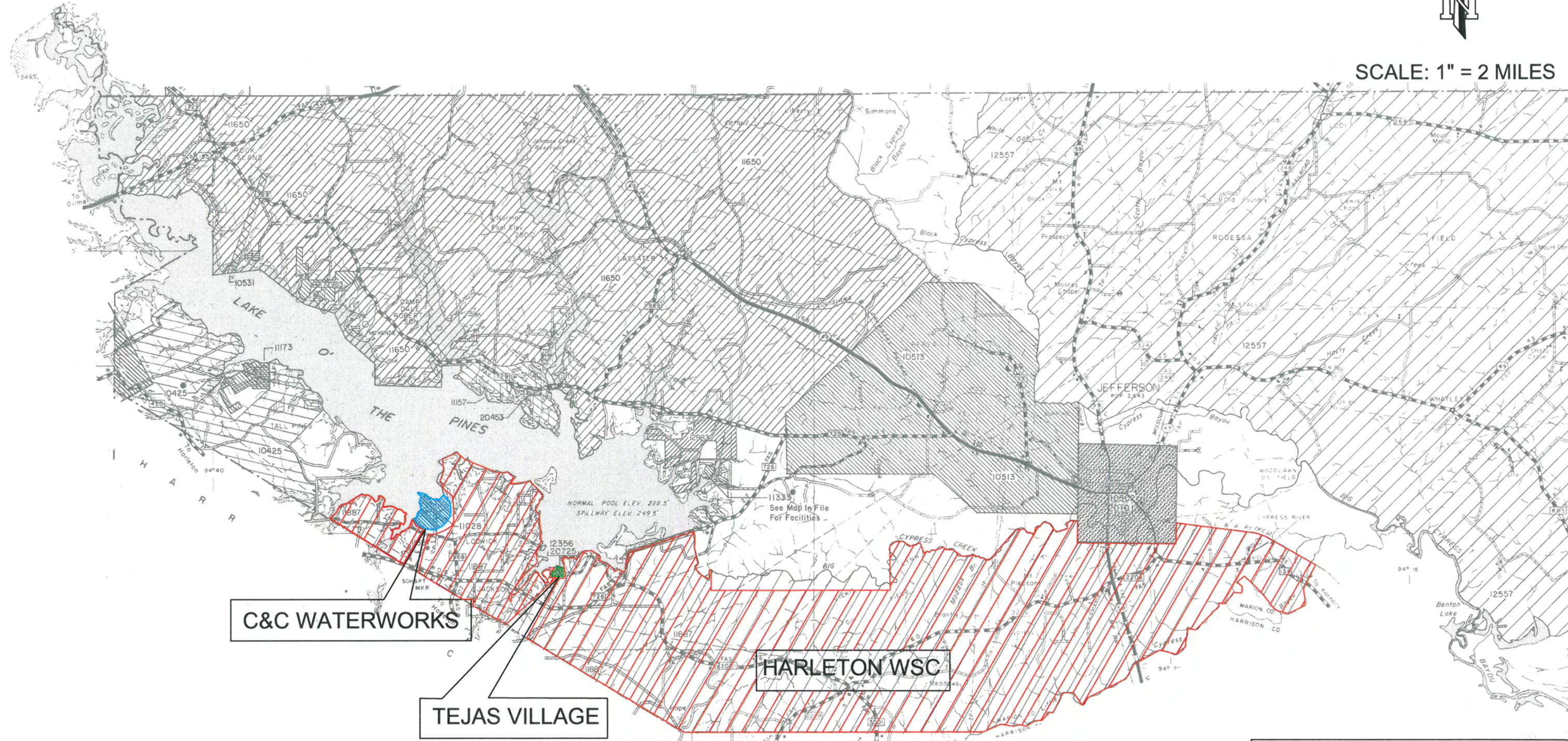
SYSTEM Name: C & C Water Works, Tejas Village, Harleton WSC

Number of Connections: 1196

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Harleton WSC	624	541,000	400	0	126,000
C & C Water Works	44	30,000	150	1,520	0
Tejas Village	68	5,000	158	750	0
TOTALS	736	576,000	708	2,270	126,000
REQUIRED CAPACITY	718	239,200	2,392	23,920	119,600
SURPLUS	18	336,800	0	0	6,400
DEFICIENCY	0	0	1,684	21,650	0



SCALE: 1" = 2 MILES



C&C WATERWORKS

TEJAS VILLAGE

HARLETON WSC

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
MARION COUNTY
GROUP 2

Marion County Group 3

Marion County Group 3 consists of two water systems, Holiday Harbor Gold Coast Community Water Supply Corporation (78) and Mims Water Supply Corporation (693). Holiday Harbor Gold Coast Community would join with Mims WSC to have a total number of connections of 771, with combined projected growth to 805 connections in Year 2030.

Holiday Harbor Gold Coast Community WSC receives water from a single well in the Cypress Aquifer. Holiday Harbor Gold Coast Community WSC has an adequate water supply for the number of connections they will have in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Holiday Harbor Gold Coast Community WSC does not need to be physically connected to Mims WSC because it has enough supply to meet its current and future demands.

The combined systems have a median household income (MHI) of \$25,347. Utilizing 1% of MHI the average monthly bill would be \$21.12.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 3

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Holiday Harbor Gold Coast Community WSC

Number of Connections: 78

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	100	25,000	320	2,500	0
TOTALS	100	25,000	320	2,500	0
REQUIRED CAPACITY	47	15,600	156	1,560	0
SURPLUS	53	9,400	164	940	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Holiday Harbor Gold Coast Community WSC

Number of Connections: 78

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	100	25,000	320	2,500	0
TOTALS	100	25,000	320	2,500	0
REQUIRED CAPACITY	47	15,600	156	1,560	0
SURPLUS	53	9,400	164	940	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 3**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Mims WSC

Number of Connections: 693

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	556	400,000	0	0	153,000
TOTALS	556	400,000	0	0	153,000
REQUIRED CAPACITY	416	138,600	0	0	69,300
SURPLUS	140	261,400	0	0	83,700
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 3

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Mims WSC

Number of Connections: 727

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	556	400,000	0	0	153,000
TOTALS	556	400,000	0	0	153,000
REQUIRED CAPACITY	436	145,400	0	0	72,700
SURPLUS	120	254,600	0	0	80,300
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 3

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Holiday Harbor WSC, Mims WSC

Number of Connections: 771

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Mims WSC	556	400,000	0	0	153,000
Holiday Harbor	100	25,000	320	2,500	0
TOTALS	656	425,000	320	2,500	153,000
REQUIRED CAPACITY	463	154,200	1,542	15,420	77,100
SURPLUS	193	270,800	0	0	75,900
DEFICIENCY	0	0	1,222	12,920	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Marion County Group 3**

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

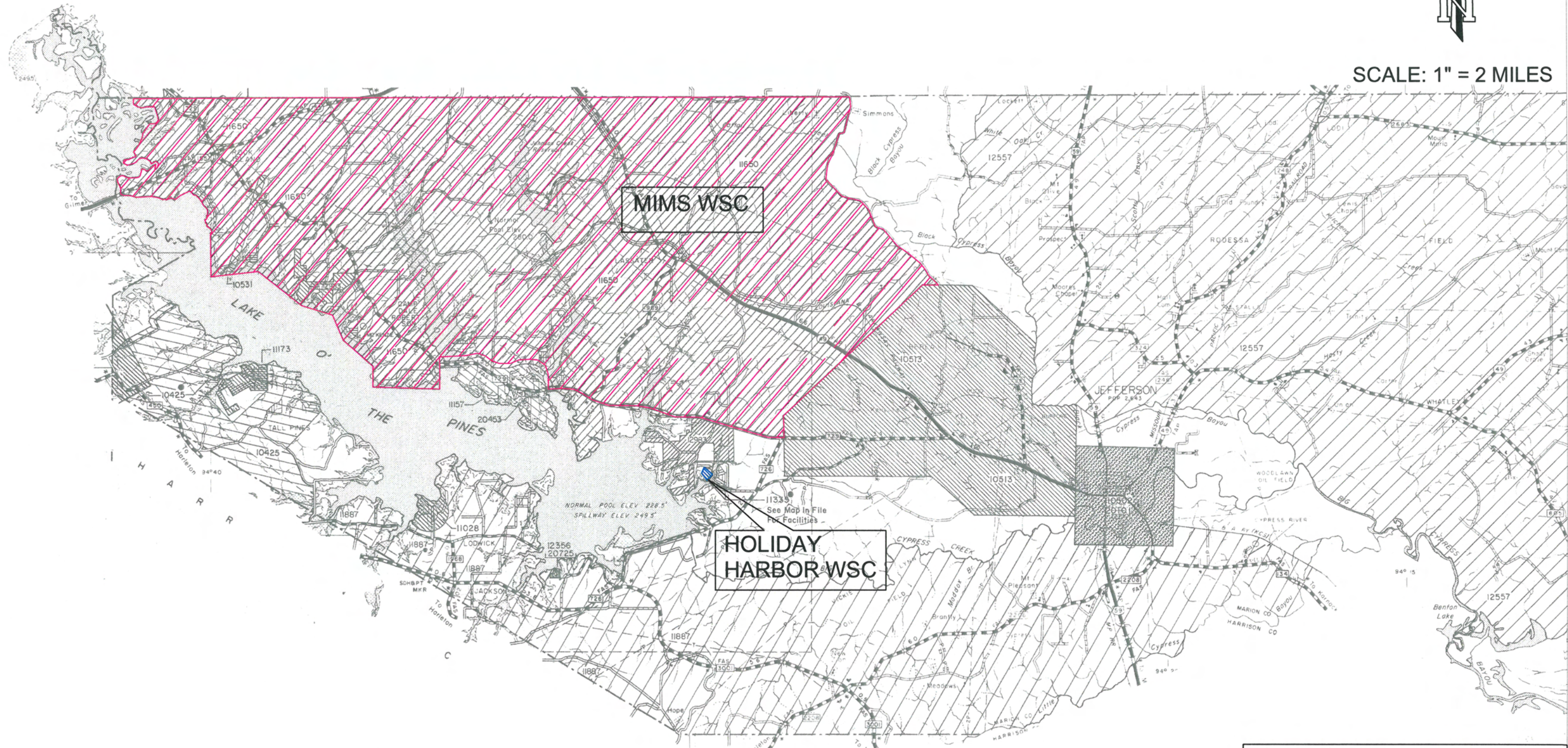
SYSTEM Name: Holiday Harbor WSC, Mims WSC

Number of Connections: 805

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Mims WSC	556	400,000	0	0	153,000
Holiday Harbor	100	25,000	320	2,500	0
TOTALS	656	425,000	320	2,500	153,000
REQUIRED CAPACITY	483	161,000	1,610	16,100	80,500
SURPLUS	173	264,000	0	0	72,500
DEFICIENCY	0	0	1,290	13,600	0



SCALE: 1" = 2 MILES



**NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
MARION COUNTY
GROUP 3**

Red River - Bowie County Group

This group is located in Red River County and Bowie County and consists of one water system, Oak Grove WSC, identified for merger with Red River County WSC. Oak Grove WSC utilizes surface water from the City of Texarkana. Red River County WSC supply is both from the City of Texarkana and ground water in the Blossom and Nacatoch aquifers. The consolidated system would have 2,185 current connections, growing to 3,040 by 2030. The average median household income for the system is \$33,494, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$27.91.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity.

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
RED RIVER / BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Oak Grove WSC

Number of Connections: 275

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	186,000	700	2,500	34,000
<hr/>					
TOTALS	0	186,000	700	2,500	34,000
REQUIRED CAPACITY	0	55,000	550	0	27,500
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SURPLUS	0	131,000	150	2,500	6,500
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
RED RIVER / BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Oak Grove WSC

Number of Connections: 330

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	186,000	700	2,500	34,000
<hr/>					
TOTALS	0	186,000	700	2,500	34,000
REQUIRED CAPACITY	0	66,000	660	0	33,000
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SURPLUS	0	120,000	40	2,500	1,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
RED RIVER / BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Red River County WSC

Number of Connections: 1,910

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	150	745,000	4,180	28,500	400,000
2	140				
3	130				
4	350				
<hr/>					
TOTALS	770	745,000	4,180	28,500	400,000
REQUIRED CAPACITY	0	382,000	1,146	0	191,000
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SURPLUS	770	363,000	3,034	28,500	209,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
RED RIVER / BOWIE COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Red River County WSC

Number of Connections: 2,710

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	150	745,000	4,180	28,500	400,000
2	140				
3	130				
4	350				
<hr/>					
TOTALS	770	745,000	4,180	28,500	400,000
REQUIRED CAPACITY	0	542,000	5,420	0	271,000
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SURPLUS	770	203,000	0	28,500	129,000
DEFICIENCY	0	0	1,240	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
RED RIVER / BOWIE COUNTY GROUP

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Red River County WSC, Oak Grove WSC

Number of Connections: 2,185

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Red River County WSC	770	745,000	4,180	28,500	400,000
Oak Grove WSC	0	186,000	700	2,500	34,000
TOTALS	770	931,000	4,880	31,000	434,000
REQUIRED CAPACITY	0	437,000	4,370	0	285,500
SURPLUS	770	494,000	510	31,000	215,500
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
RED RIVER / BOWIE COUNTY GROUP

COMBINED CAPACITY

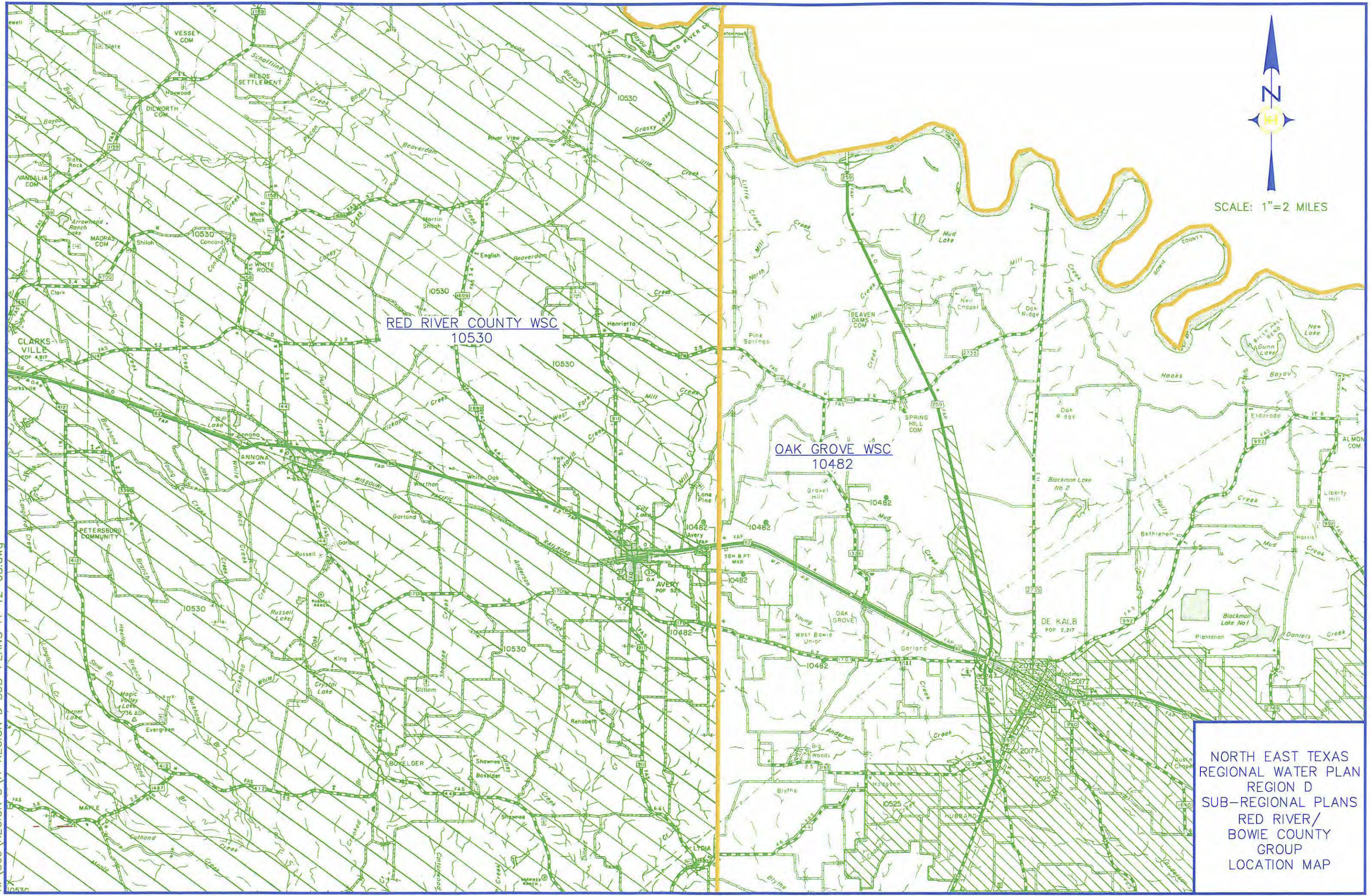
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Red River County WSC, Oak Grove WSC

Number of Connections: 3,040

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Red River County WSC	770	745,000	4,180	28,500	400,000
Oak Grove WSC	0	186,000	700	2,500	34,000
TOTALS	770	931,000	4,880	31,000	434,000
REQUIRED CAPACITY	0	608,000	6,080	0	304,000
SURPLUS	770	323,000	0	31,000	130,000
DEFICIENCY	0	0	1,200	0	0

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SCALE: 1"=2 MILES

RED RIVER COUNTY WSC
10530

OAK GROVE WSC
10482

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
RED RIVER/
BOWIE COUNTY
GROUP
LOCATION MAP

Smith County Group 1

Smith County Group 1 consists of two water systems, Tyler State Park (2) and Sand Flat Water Supply Corporation (1,078). Tyler State Park would join with Sand Flat WSC to have a total number of connections of 1,080 and continue to have the same number of connections in Year 2030.

The management of Tyler State Park Water System would be taken over by Sand Flat WSC.

The combined systems have a median household income (MHI) of \$41,010. Utilizing 1% of MHI the average monthly bill would be \$34.18.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Tyler State Park

Number of Connections: 2

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	0	0	0	0	0
TOTALS	0	0	0	0	0
REQUIRED CAPACITY	0	0	0	0	0
SURPLUS	0	0	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Tyler State Park

Number of Connections: 2

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	0	0	0	0	0
TOTALS	0	0	0	0	0
REQUIRED CAPACITY	0	0	0	0	0
SURPLUS	0	0	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Sand Flat WSC

Number of Connections: 1078

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	688	317,000	1,650	37,600	0
TOTALS	688	317,000	1,650	37,600	0
REQUIRED CAPACITY	647	215,600	2,156	21,560	0
SURPLUS	41	101,400	0	16,040	0
DEFICIENCY	0	0	506	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Sand Flat WSC

Number of Connections: 1078

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	688	317,000	1,650	37,600	0
TOTALS	688	317,000	1,650	37,600	0
REQUIRED CAPACITY	647	215,600	2,156	21,560	0
SURPLUS	41	101,400	0	16,040	0
DEFICIENCY	0	0	506	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 1

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Tyler State Park, Sand Flat WSC

Number of Connections: 1080

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Sand Flat WSC	688	317,000	1,650	37,600	0
Tyler State Park	0	0	0	0	0
TOTALS	688	317,000	1,650	37,600	0
REQUIRED CAPACITY	648	216,000	2,160	21,600	0
SURPLUS	40	101,000	0	16,000	0
DEFICIENCY	0	0	510	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 1**

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

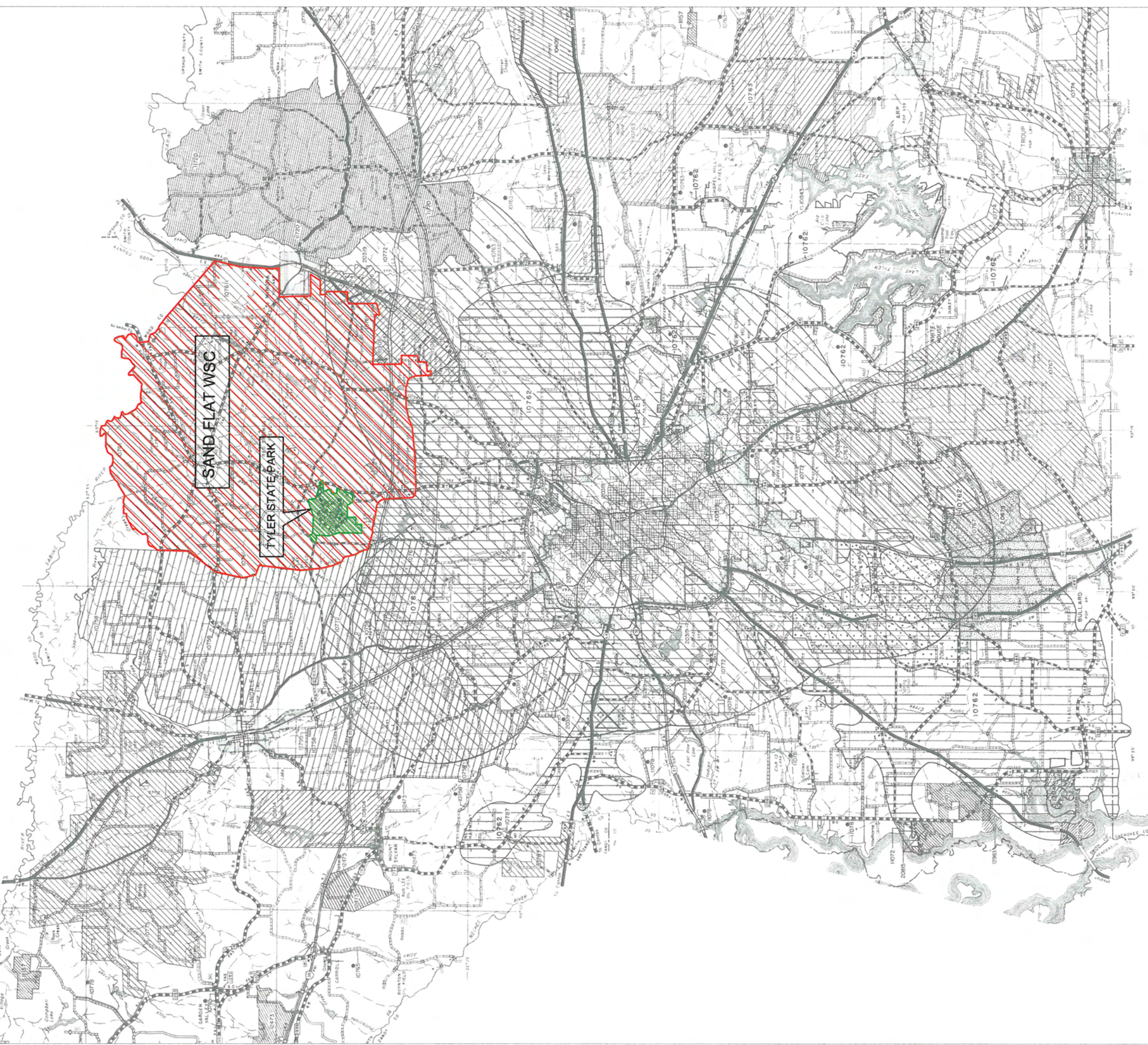
SYSTEM Name: Tyler State Park, Sand Flat WSC

Number of Connections: 1080

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Sand Flat WSC	688	317,000	1,650	37,600	0
Tyler State Park	0	0	0	0	0
TOTALS	688	317,000	1,650	37,600	0
REQUIRED CAPACITY	648	216,000	2,160	21,600	0
SURPLUS	40	101,000	0	16,000	0
DEFICIENCY	0	0	510	0	0



SCALE: 1" = 3 MILES



NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
SMITH COUNTY
GROUP 1

Smith County Group 2

Smith County Group 2 consists of two water systems, the City of Winona (271) and Star Mountain Water Supply Corporation (535). The city of Winona would join Star Mountain WSC to have a total number of connections of 771, with combined projected growth to 805 connections in Year 2030.

The City of Winona currently receives an adequate amount of water from 2 wells in the Carrizo-Wilcox Aquifer. The City of Winona will not have an adequate amount of water for the number of connections they will have in Year 2030.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Since the City of Winona does not have an adequate supply of water it should be physically connected to Star Mountain WSC's system in order to meet its future demands.

The combined systems have a median household income (MHI) of \$41,090. Utilizing 1.5 %of MHI the average monthly bill would be \$34.18. The cost to combine the two systems would be \$2,318,800.

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 2**

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Winona, City of

Number of Connections: 271

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	48	134,000	810	7,900	0
2	135				
TOTALS	183	134,000	810	7,900	0
REQUIRED CAPACITY	163	54,200	542	5,420	0
SURPLUS	20	79,800	268	2,480	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 2**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Winona, City of

Number of Connections: 348

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	48	134,000	810	7,900	0
2	135				
TOTALS	183	134,000	810	7,900	0
REQUIRED CAPACITY	209	69,600	696	6,960	0
SURPLUS	0	64,400	114	940	0
DEFICIENCY	26	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Star Mountain WSC

Number of Connections: 535

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	451	270,000	890	5,000	160,000
TOTALS	451	270,000	890	5,000	160,000
REQUIRED CAPACITY	321	107,000	1,070	10,700	53,500
SURPLUS	130	163,000	0	0	106,500
DEFICIENCY	0	0	180	5,700	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Star Mountain WSC

Number of Connections: 581

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	451	270,000	890	5,000	160,000
TOTALS	451	270,000	890	5,000	160,000
REQUIRED CAPACITY	349	116,200	1,162	11,620	58,100
SURPLUS	102	153,800	0	0	101,900
DEFICIENCY	0	0	272	6,620	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 2**

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: City of Winona, Star Mountain WSC

Number of Connections: 806

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Star Mountain	451	270,000	890	5,000	160,000
City of Winona	183	134,000	810	7,900	0
TOTALS	634	404,000	1,700	12,900	160,000
REQUIRED CAPACITY	484	161,200	1,612	16,120	80,600
SURPLUS	150	242,800	88	0	79,400
DEFICIENCY	0	0	0	3,220	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Smith County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Winona, Star Mountain WSC

Number of Connections: 929

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Star Mountain	451	270,000	890	5,000	160,000
City of Winona	183	134,000	810	7,900	0
TOTALS	634	404,000	1,700	12,900	160,000
REQUIRED CAPACITY	557	185,800	1,858	18,580	92,900
SURPLUS	77	218,200	0	0	67,100
DEFICIENCY	0	0	158	5,680	0

Pipe Cost Worksheet - Smith County Group 2

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
125,000	8	\$ 1.67	\$ 1,670,000.00	\$ 58,450.00	\$ 1,728,450.00

Total Construction Cost **\$ 1,728,450.00**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%)	\$ 518,535.00
INTEREST DURING CONSTRUCTION (3%)	\$ 51,853.50
ENVIRONMENTAL (LUMP SUM)	\$ 20,000.00
TOTAL CAPITAL COST	\$ 2,318,838.50

TOTAL ANNUALIZED COST **\$ 168,347.68**

(O & M Cost + Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%))

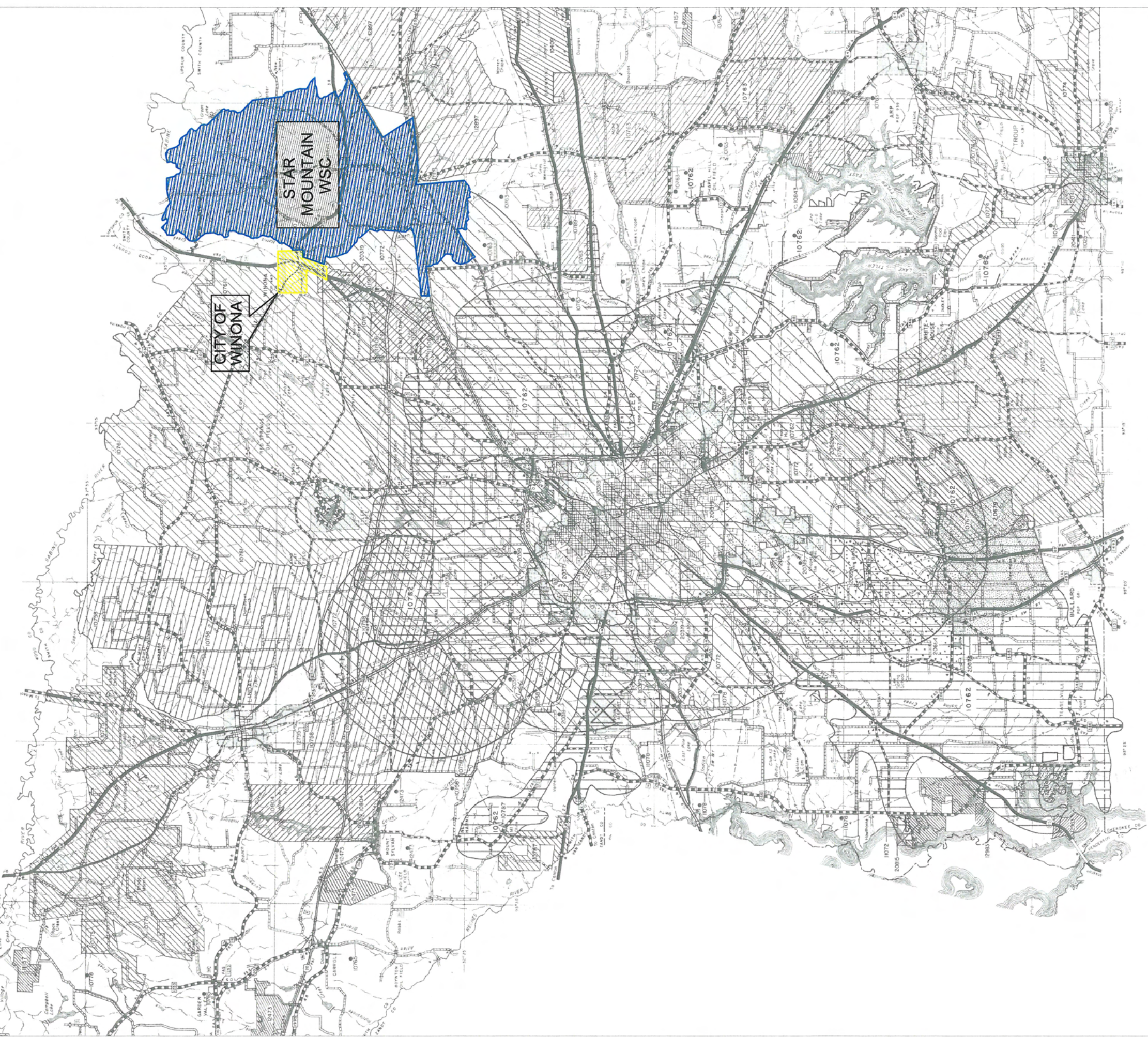
NUMBER OF CONNECTIONS **806**

COST PER CONNECTION (Total Annualized Cost / Connections / 12) **\$ 17.41**
 (Does not include maintenance and operation costs)

MONTHLY AVERAGE WATER BILL @ 1% MEDIAN HOUSEHOLD INCOME **\$ 27.79**



SCALE: 1" = 3 MILES



NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
SMITH COUNTY
GROUP 2

Titus County Group

This group consists of two water systems identified for merger with Tri SUD — i.e. City of Talco and City of Winfield. City of Talco utilizes groundwater from the Nacatoch aquifer, while City of Winfield and Tri SUD source is surface water from City of Mt. Pleasant (Lake Bob Sandlin). The consolidated system would have 5,563 current connections, growing to 5,847 by 2030. The average median household income for this group is \$32,452, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$27.01.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. A cost estimate performed for this merger resulted in \$1.64 increased monthly water cost per connection (which does not include operation and maintenance costs).

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Talco

Number of Connections: 300

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	300	100,000	0	0	100,000
2	350				
3	250				
<hr/>					
TOTALS	900	100,000	0	0	100,000
REQUIRED CAPACITY	180	60,000	0	0	30,000
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SURPLUS	720	40,000	0	0	70,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Talco

Number of Connections: 300

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	300	100,000	0	0	100,000
2	350				
3	250				
<hr/>					
TOTALS	900	100,000	0	0	100,000
REQUIRED CAPACITY	180	60,000	0	0	30,000
<hr/>					
SURPLUS	720	40,000	0	0	70,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: City of Winfield

Number of Connections: 298

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	209,000	750	0	50,000
<hr/>					
TOTALS	0	209,000	750	0	50,000
REQUIRED CAPACITY	0	59,600	596	0	29,800
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SURPLUS	0	149,400	154	0	20,200
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: City of Winfield

Number of Connections: 303

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	209,000	750	0	50,000
<hr/>					
TOTALS	0	209,000	750	0	50,000
REQUIRED CAPACITY	0	60,600	606	0	30,300
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SURPLUS	0	148,400	144	0	19,700
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: TRI SUD

Number of Connections: 4,965

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	2,397,000	15,460	125,500	90,000
<hr/>					
TOTALS	0	2,397,000	15,460	125,500	90,000
REQUIRED CAPACITY	0	993,000	9,930	99,300	0
<hr/>					
SURPLUS	0	1,404,000	5,530	26,200	90,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: TRI SUD

Number of Connections: 5,244

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	2,397,000	15,460	125,500	90,000
<hr/>					
TOTALS	0	2,397,000	15,460	125,500	90,000
REQUIRED CAPACITY	0	1,048,800	10,488	104,880	0
<hr/>					
SURPLUS	0	1,348,200	4,972	20,620	90,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Tri SUD, City of Talco, City of Winfield

Number of Connections: 5,563

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Tri SUD	0	2,397,000	15,460	125,500	90,000
City of Talco	900	100,000	0	0	100,000
City of Winfield	0	209,000	750	0	50,000
<hr/>					
TOTALS	900	2,706,000	16,210	125,500	240,000
REQUIRED CAPACITY	0	1,112,600	11,126	111,260	0
<hr/>					
SURPLUS	900	1,593,400	5,084	14,240	240,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
TITUS COUNTY GROUP

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Tri SUD, City of Talco, City of Winfield

Number of Connections: 5,847

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Tri SUD	0	2,397,000	15,460	125,500	90,000
City of Talco	900	100,000	0	0	100,000
City of Winfield	0	209,000	750	0	50,000
<hr/>					
TOTALS	900	2,706,000	16,210	125,500	240,000
REQUIRED CAPACITY	0	1,169,400	11,694	116,940	0
<hr/>					
SURPLUS	900	1,536,600	4,516	8,560	240,000
DEFICIENCY	0	0	0	0	0

Titus County Group

Connect to Tri SUD:

Avg. yield (GPD)	Total Yield (ac-ft/yr)	Unit Cost (\$ / 1000GAL)
98,202	110.0	\$ 2.78

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
13,000	8	\$ 1.67	\$ 173,680.00	\$ 6,078.80	\$ 179,758.80

Total Construction Cost **\$ 179,758.80**
 Construction Duration (\$0 to \$3M =1YR, \$3M to \$5M = 1.5YRS, >5M=2YRS) **1.0**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%) \$ 53,927.64
 ENVIRONMENTAL (LUMP SUM) \$ 20,000.00

Total Borrowed Funds **\$ 253,686.44**

INTEREST DURING CONSTRUCTION(IDC): 6% Annual Interest on Total Borrowed Funds \$ 15,221.19
 4% Rate of Return on Investment of Unspent Funds \$ 5,073.73
 Net Interest **\$ 10,147.46**

TOTAL CAPITAL COST **\$ 263,833.90**

	2010	2020	2030	2040	2050	2060	Average
WATER PURCHASED (ac-ft/yr)	110	110	110	110	110	110	110
ANNUAL WATER PURCHASE COST (Yield (ac-ft/yr) * 325,851 * \$ / 1,000)	\$ 99,681.08	\$ 99,681.08	\$ 99,681.08	\$ 99,681.08	\$ 99,681.08	\$ 99,681.08	\$ 99,681.08

TOTAL ANNUALIZED COST **\$ 118,835.42** **\$ 118,835.42** **\$ 118,835.42** **\$ 99,681.08** **\$ 99,681.08** **\$ 99,681.08** **\$ 109,258.25**
 (Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%) Average

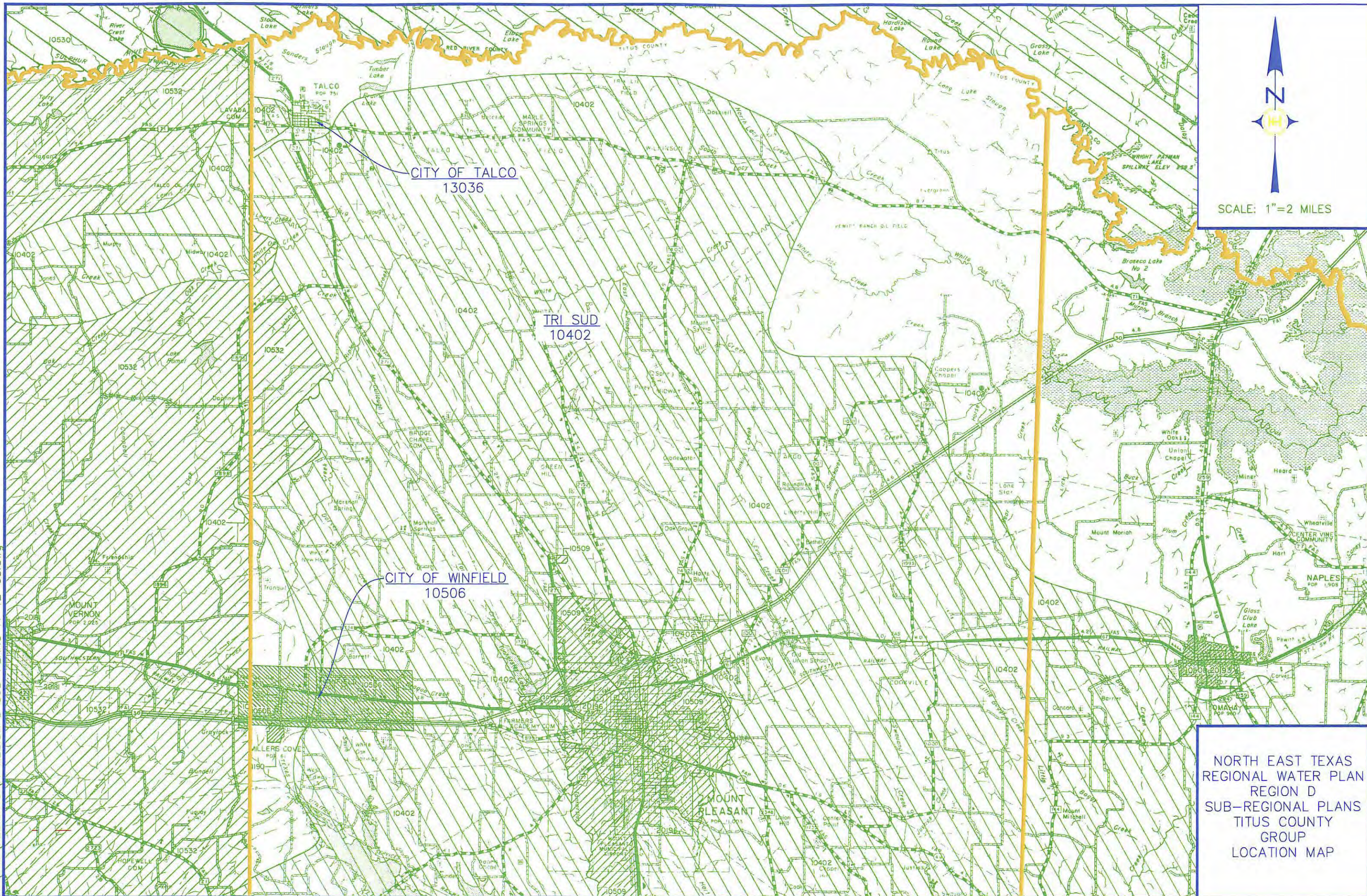
UNIT COST **\$ 993.26**
 (\$ / ac-ft / yr)

NUMBER OF CONNECTIONS **5,563**

TOTAL PERSONS SERVED (3 x Number of Connections) **16,689**

COST PER CONNECTION (Annual Average Water Purchase Cost / Connections / 12) **1.64**
 (Does not include maintenance and operation costs)

MONTHLY AVERAGE WATER BILL @1.0% MEDIAN HOUSEHOLD INCOME **27.01**



CITY OF TALCO
13036

TRI SUD
10402

CITY OF WINFIELD
10506

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
TITUS COUNTY
GROUP
LOCATION MAP

Upshur County Group

Upshur County Group 1 consists of three water systems, the International Alert Academy (100), Harmony ISD (90), and Pritchett Water Supply Corporation (2,390). The International Alert Academy and Harmony ISD would join with Pritchett WSC to have a total number of connections of 2,580, with combined projected growth to 2,612 connections in Year 2030.

The International Alert Academy receives its water from Lake Loma and has an adequate supply of water to meet its future water demands. Harmony ISD has a single well located in the Carrizo-Wilcox Aquifer. The supply of water for Harmony ISD is not adequate to meet its future demands.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the three systems. The International Alert Academy does not need to be physically connected to Pritchett WSC but Harmony ISD will need another source of water and should be connected with Pritchett WSC's system.

The combined systems have a median household income (MHI) of \$33,347. Utilizing 1% of MHI the average monthly bill would be \$27.79. The cost to combine Pritchett WSC with Harmony ISD would be \$225,056.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: International Alert Academy

Number of Connections: 100

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	350	0	0	0	0
TOTALS	350	0	0	0	0
REQUIRED CAPACITY	60	0	0	0	0
SURPLUS	290	0	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: International Alert Academy

Number of Connections: 100

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	350	0	0	0	0
<hr/>					
TOTALS	350	0	0	0	0
REQUIRED CAPACITY	60	0	0	0	0
<hr/>					
SURPLUS	290	0	0	0	0
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Harmony ISD

Number of Connections: 90

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	20,000	0	0	0
<hr/>					
TOTALS	30	20,000	0	0	0
REQUIRED CAPACITY	54	18,000	0	0	0
<hr/>					
SURPLUS	0	2,000	0	0	0
DEFICIENCY	24	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Harmony ISD

Number of Connections: 104

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	20,000	0	0	0
<hr/>					
TOTALS	30	20,000	0	0	0
REQUIRED CAPACITY	62	20,800	0	0	0
<hr/>					
SURPLUS	0	0	0	0	0
DEFICIENCY	32	800	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Pritchett WSC

Number of Connections: 2390

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,667	706,000	4,535	41,100	150,000
TOTALS	1,667	706,000	4,535	41,100	150,000
REQUIRED CAPACITY	1,434	478,000	4,780	47,800	239,000
SURPLUS	233	228,000	0	0	0
DEFICIENCY	0	0	245	6,700	89,000

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Pritchett WSC

Number of Connections: 2408

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,667	706,000	4,535	41,100	150,000
TOTALS	1,667	706,000	4,535	41,100	150,000
REQUIRED CAPACITY	1,445	481,600	4,816	48,160	240,800
SURPLUS	222	224,400	0	0	0
DEFICIENCY	0	0	281	7,060	90,800

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur Conty Group

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: International Alert Academy, Harmony ISD, Pritchett WSC

Number of Connections: 2580

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Pritchett WSC	1,667	706,000	4,535	41,100	150,000
Alert Academy	350	0	0	0	0
Harmony ISD	30	20,000	0	0	0
TOTALS	2,047	726,000	4,535	41,100	150,000
REQUIRED CAPACITY	1,548	516,000	5,160	51,600	258,000
SURPLUS	499	210,000	0	0	0
DEFICIENCY	0	0	625	10,500	108,000

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Upshur County Group

CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: International Alert Academy, Harmony ISD, Pritchett WSC

Number of Connections: 2612

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Pritchett WSC	1,667	706,000	4,535	41,100	150,000
Alert Academy	350	0	0	0	0
Harmony ISD	30	20,000	0	0	0
TOTALS	2,047	726,000	4,535	41,100	150,000
REQUIRED CAPACITY	1,567	522,400	5,224	52,240	261,200
SURPLUS	480	203,600	0	0	0
DEFICIENCY	0	0	689	11,140	111,200

Pipe Cost Worksheet - Upshur County Group

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
22,300	4	\$ 1.67	\$ 148,964.00	\$ 5,213.74	\$ 154,177.74

Total Construction Cost **\$ 154,177.74**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%)	\$ 46,253.32
INTEREST DURING CONSTRUCTION (3%)	\$ 4,625.33
ENVIRONMENTAL (LUMP SUM)	\$ 20,000.00
TOTAL CAPITAL COST	\$ 225,056.39

TOTAL ANNUALIZED COST

(O & M Cost + Water Purchase Cost+Total Capital Cost * debt service factor (30 yrs @ 6%))

\$ 16,339.09

NUMBER OF CONNECTIONS

2580

COST PER CONNECTION (Total Annualized Cost / Connections / 12)
(Does not include maintenance and operation costs)

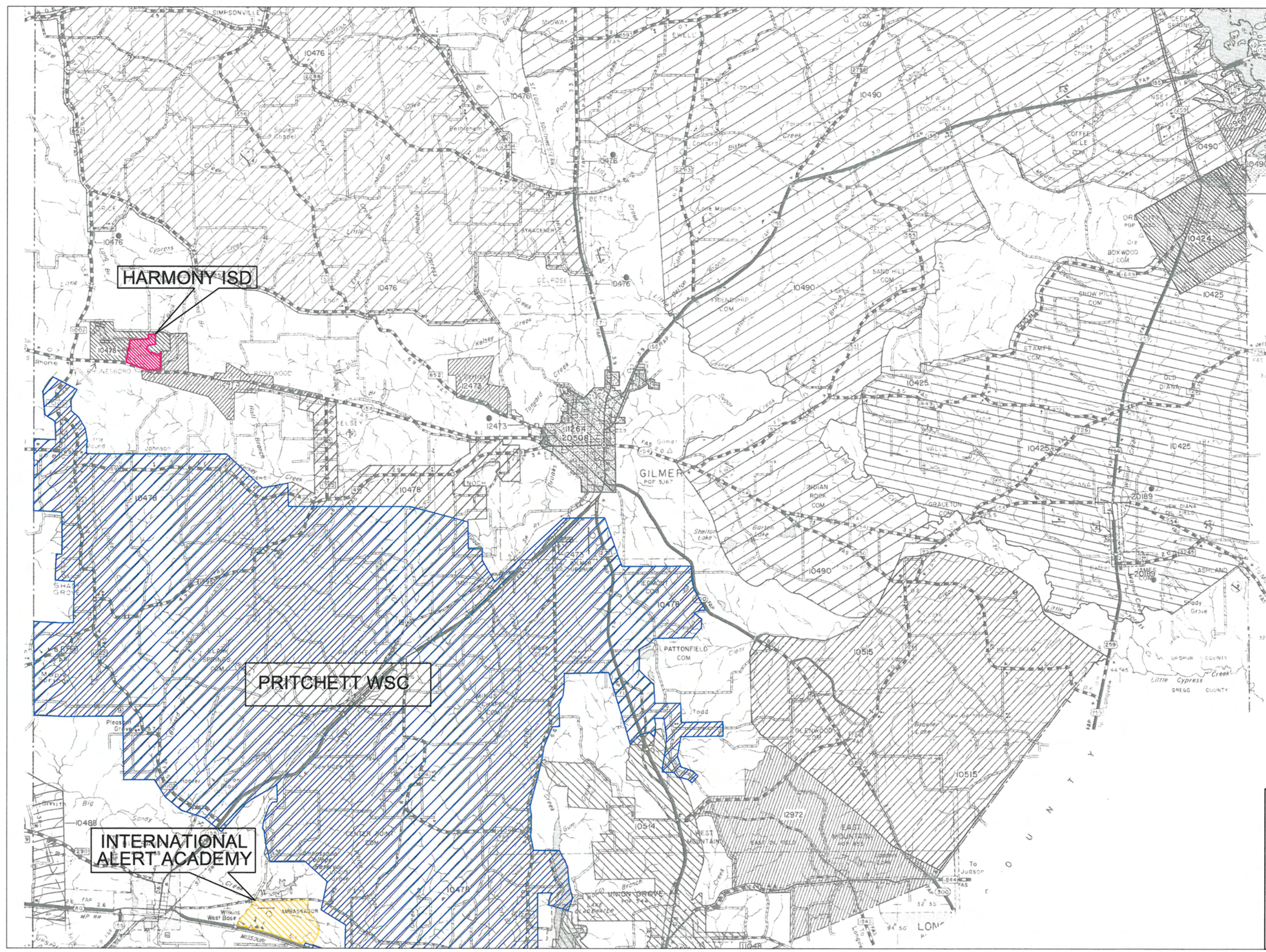
\$ 0.53

MONTHLY AVERAGE WATER BILL @ 1% MEDIAN HOUSEHOLD INCOME

\$ 27.79



SCALE: 1" = 2 MILES



**NORTH EAST TEXAS
REGIONAL WATER
REGION D
SUB-REGION PLANS
UPSHUR COUNTY
GROUP**

Van Zandt County Group

This group consists of one water system identified for merger with Macbee SUD — i.e. Tall Oaks Estate Water System. Current source of water for Tall Oaks Estate Water System is groundwater from the Carrizo-Wilcox aquifer. Macbee SUD's source is surface water from Sabine River Authority (Lake Tawakoni) and groundwater from Carrizo-Wilcox aquifer. The consolidated system would have 2,231 current connections, growing to 4,411 by 2030. The average median household income for this group is \$35,029, and the corresponding monthly average water bill at 1.0% of the median household income was estimated as \$29.19.

By merging together, the systems would enjoy the benefits of improved technical, financial and managerial capacity. A cost estimate performed for this merger resulted in \$0.84 increased monthly water cost per connection (which does not include operation and maintenance costs).

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
VAN ZANDT COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Tall Oaks Estates Water System

Number of Connections: 71

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	0	0	1,450	0
2	30				
<hr/>					
TOTALS	60	0	0	1,450	0
REQUIRED CAPACITY	43	14,200	0	1,420	0
<hr/>					
SURPLUS	17	0	0	30	0
DEFICIENCY	0	14,200	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
VAN ZANDT COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Tall Oaks Estates Water System

Number of Connections: 82

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	30	0	0	1,450	0
2	30				
<hr/>					
TOTALS	60	0	0	1,450	0
REQUIRED CAPACITY	49	16,400	0	1,640	0
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SURPLUS	11	0	0	0	0
DEFICIENCY	0	16,400	0	190	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
VAN ZANDT COUNTY GROUP

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Macbee SUD

Number of Connections: 2,160

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	2,144,000	6,450	26,000	450,000
<hr/>					
TOTALS	0	2,144,000	6,450	26,000	450,000
REQUIRED CAPACITY	0	432,000	1,296	0	216,000
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SURPLUS	0	1,712,000	5,154	26,000	234,000
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
VAN ZANDT COUNTY GROUP

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Macbee SUD

Number of Connections: 4,329

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
0	0	2,144,000	6,450	26,000	450,000
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TOTALS	0	2,144,000	6,450	26,000	450,000
REQUIRED CAPACITY	0	865,800	8,658	0	432,900
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SURPLUS	0	1,278,200	0	26,000	17,100
DEFICIENCY	0	0	2,208	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
VAN ZANDT COUNTY GROUP

COMBINED CAPACITY

EXISTING CONDITIONS

SYSTEM Name: Macbee SUD, Tall Oaks Estates Water System

Number of Connections: 2,231

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Macbee SUD	0	2,144,000	6,450	26,000	450,000
Tall Oaks Estates Water System	60	0	0	1,450	0
<hr/>					
TOTALS	60	2,144,000	6,450	27,450	450,000
REQUIRED CAPACITY	0	446,200	1,339	0	223,100
<hr/>					
SURPLUS	60	1,697,800	5,111	27,450	226,900
DEFICIENCY	0	0	0	0	0

NORTH EAST TEXAS 2008 REGIONAL WATER PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLANS
VAN ZANDT COUNTY GROUP

COMBINED CAPACITY

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Macbee SUD, Tall Oaks Estates Water System

Number of Connections: 4,411

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Macbee SUD	0	2,144,000	6,450	26,000	450,000
Tall Oaks Estates Water System	60	0	0	1,450	0
<hr/>					
TOTALS	60	2,144,000	6,450	27,450	450,000
REQUIRED CAPACITY	0	882,200	8,822	0	441,100
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SURPLUS	60	1,261,800	0	27,450	8,900
DEFICIENCY	0	0	2,372	0	0

Van Zandt County Group

Connect to Macbee SUD:

Avg. yield (GPD)	Total Yield (ac-ft/yr)	Unit Cost (\$ / 1000GAL)
7,142	8.0	\$ 5.80

Treated Water Main

Length (ft)	Diam (in)	Unit Cost (\$ / in / ft)	Total Cost	Land & Easements (3.5%)	Subtotal
13,000	6	\$ 1.67	\$ 130,260.00	\$ 4,559.10	\$ 134,819.10

Total Construction Cost **\$ 134,819.10**
 Construction Duration (\$0 to \$3M =1YR, \$3M to \$5M = 1.5YRS, >5M=2YRS) **1.0**

Other Capital Costs

ADMINISTRATION, ENGINEERING, LEGAL, CONTINGENCIES (30%) \$ 40,445.73
 ENVIRONMENTAL (LUMP SUM) \$ 20,000.00

Total Borrowed Funds **\$ 195,264.83**

INTEREST DURING CONSTRUCTION(IDC): 6% Annual Interest on Total Borrowed Funds \$ 11,715.89
 4% Rate of Return on Investment of Unspent Funds \$ 3,905.30
 Net Interest **\$ 7,810.59**

TOTAL CAPITAL COST **\$ 203,075.42**

	2010	2020	2030	2040	2050	2060	Average
WATER PURCHASED (ac-ft/yr)	8	8	8	8	8	8	8
ANNUAL WATER PURCHASE COST (Yield (ac-ft/yr) * 325,851 * \$ / 1,000)	\$ 15,119.49	\$ 15,119.49	\$ 15,119.49	\$ 15,119.49	\$ 15,119.49	\$ 15,119.49	\$ 15,119.49
TOTAL ANNUALIZED COST	\$ 29,862.76	\$ 29,862.76	\$ 29,862.76	\$ 15,119.49	\$ 15,119.49	\$ 15,119.49	\$ 22,491.12

(Water Purchase Cost + Total Capital Cost * debt service factor (30 yrs @ 6%))

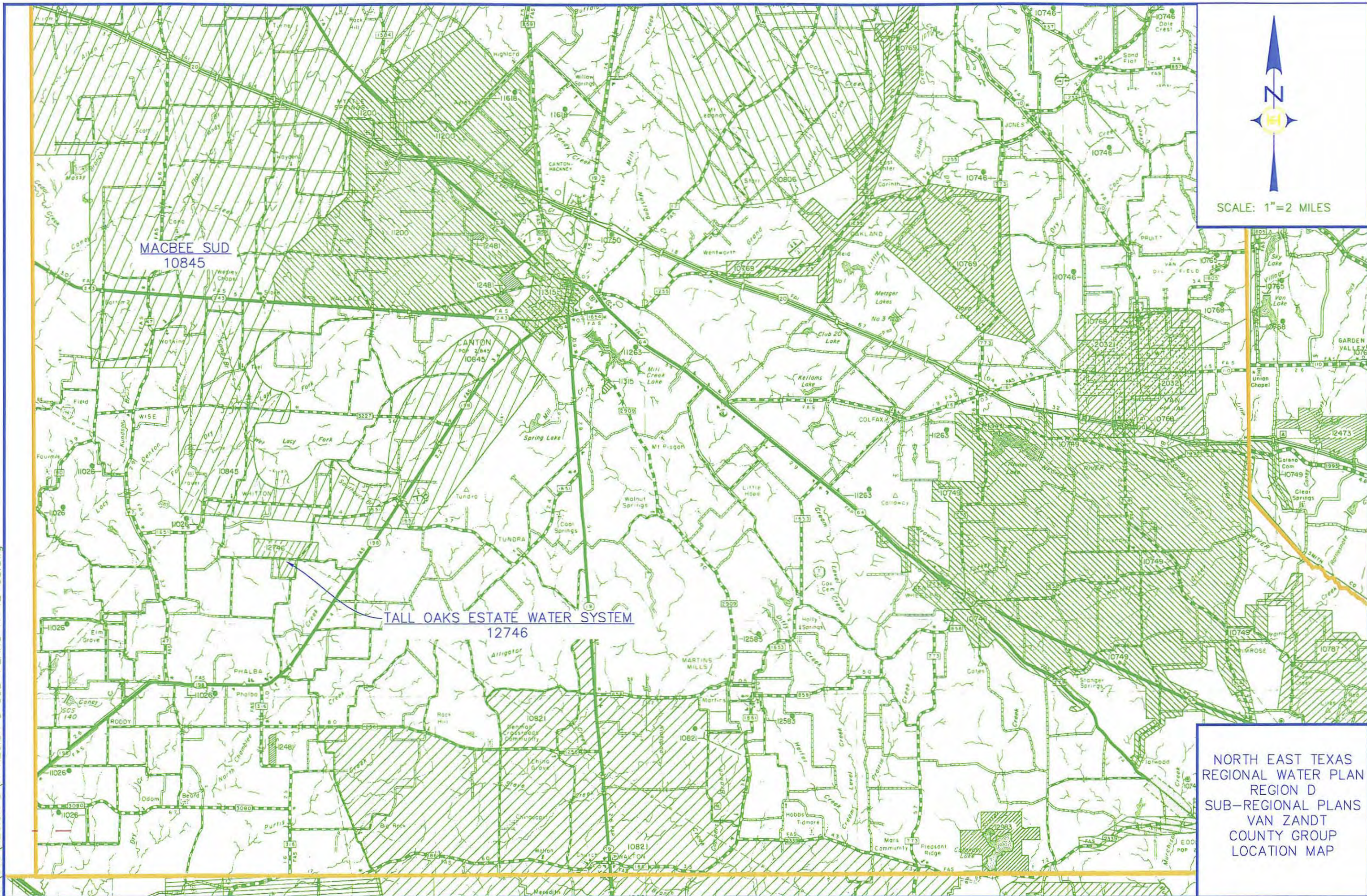
UNIT COST **\$ 2,811.39**
 (\$ / ac-ft / yr)

NUMBER OF CONNECTIONS **2,231**

TOTAL PERSONS SERVED (3 x Number of Connections) **6,693**

COST PER CONNECTION (Annual Average Water Purchase Cost / Connections / 12) **0.84**
 (Does not include maintenance and operation costs)

MONTHLY AVERAGE WATER BILL @1.0% MEDIAN HOUSEHOLD INCOME **29.19**



SCALE: 1"=2 MILES

MACBEE SUD
10845

TALL OAKS ESTATE WATER SYSTEM
12746

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
VAN ZANDT
COUNTY GROUP
LOCATION MAP

Wood County Group 1

Wood County Group 1 consists of two system, Big Wood Springs Water System (96) and Sharon WSC (2034). Big Wood Springs Water System would join with Sharon WSC to have a total number of connections of 2,130, with combined projected growth to 2,450 connections in Year 2030.

Big Wood Springs Water System has two wells in the Carrizo-Wilcox Aquifer. These wells supply an adequate amount of water to meet the future water demands of Big Wood Springs Water System.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Big Wood Springs Water System does not need to be physically connected to Sharon WSC because it has enough supply to meet its current and future demands.

The combined systems have a median household income (MHI) of \$32,885. Utilizing 1% of MHI the average monthly would be \$27.40.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Woods County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Big Wood Springs Water System

Number of Connections: 96

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	22,000	55	240	22,000
2	30				
TOTALS	110	22,000	55	240	22,000
REQUIRED CAPACITY	58	19,200	192	1,920	9,600
SURPLUS	52	2,800	0	0	12,400
DEFICIENCY	0	0	137	1,680	0

**NORTH EAST TEXAS 2008 REGIONAL WAER
PLAN
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 1**

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Big Wood Springs Water System

Number of Connections: 96

WELL #	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
1	80	22,000	55	240	22,000
2	30				
TOTALS	110	22,000	55	240	22,000
REQUIRED CAPACITY	58	19,200	192	1,920	9,600
SURPLUS	52	2,800	0	0	12,400
DEFICIENCY	0	0	137	1,680	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 1

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Sharon WSC

Number of Connections: 2034

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,543	785,000	2,305	35,500	450,000
TOTALS	1,543	785,000	2,305	35,500	450,000
REQUIRED CAPACITY	1,220	406,800	4,068	40,680	203,400
SURPLUS	323	378,200	0	0	246,600
DEFICIENCY	0	0	1,763	5,180	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 1

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Sharon WSC

Number of Connections: 2354

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,680	785,000	2,305	35,500	450,000
TOTALS	1,680	785,000	2,305	35,500	450,000
REQUIRED CAPACITY	1,412	470,800	4,708	47,080	235,400
SURPLUS	268	314,200	0	0	214,600
DEFICIENCY	0	0	2,403	11,580	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 1

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Big Wood Springs, Sharon WSC

Number of Connections: 2130

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Sharon WSC	1,543	785,000	2,305	35,500	450,000
Big Wood Springs	110	22,000	55	240	22,000
TOTALS	1,653	807,000	2,360	35,740	472,000
REQUIRED CAPACITY	1,278	426,000	4,260	42,600	213,000
SURPLUS	375	381,000	0	0	259,000
DEFICIENCY	0	0	1,900	6,860	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 1

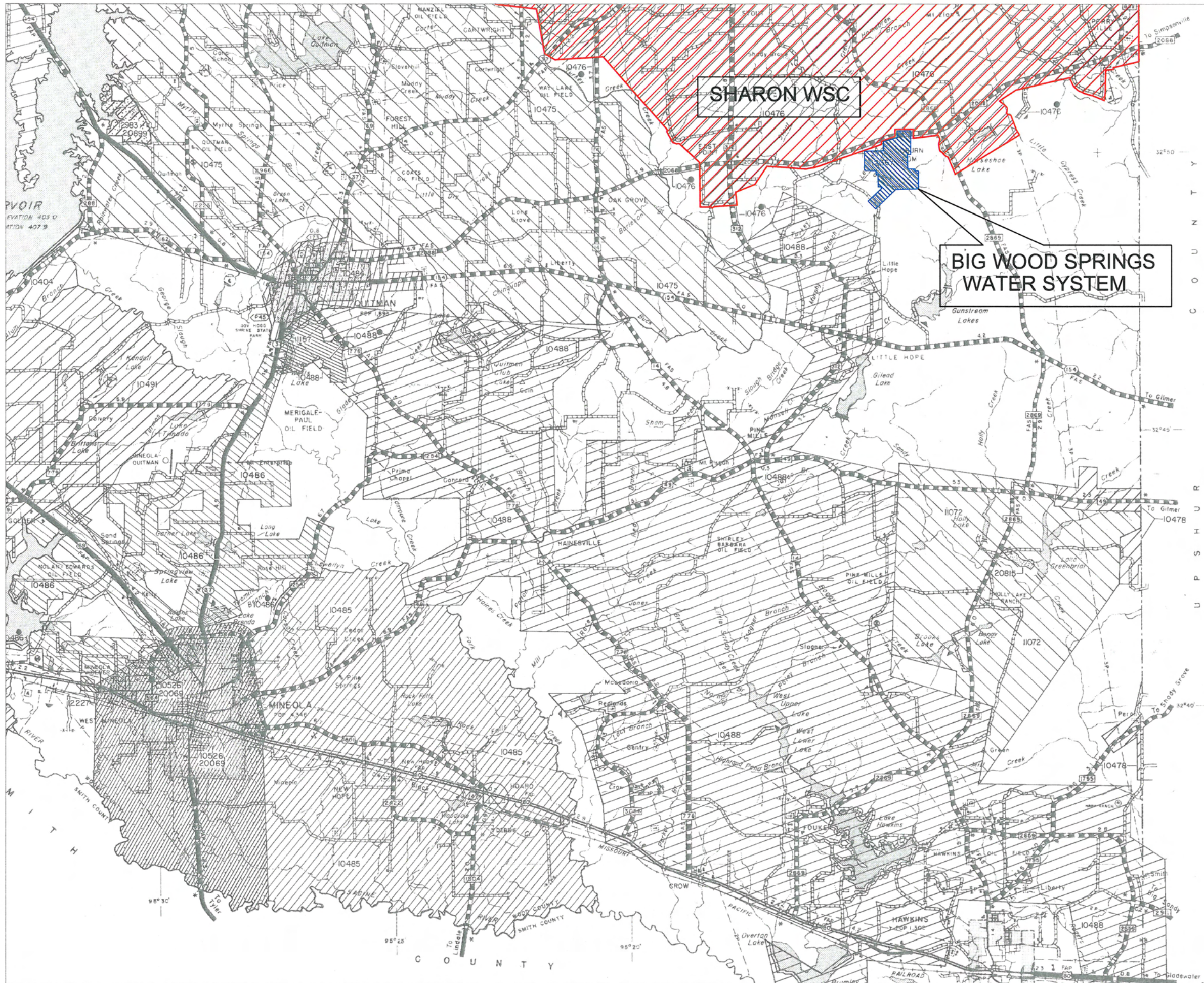
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Big Wood Springs, Sharon WSC

Number of Connections: 2450

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Sharon WSC	1,680	785,000	2,305	35,500	450,000
Big Wood Springs	110	22,000	55	240	22,000
TOTALS	1,790	807,000	2,360	35,740	472,000
REQUIRED CAPACITY	1,470	490,000	4,900	49,000	245,000
SURPLUS	320	317,000	0	0	227,000
DEFICIENCY	0	0	2,540	13,260	0



SCALE: 1" = 2 MILES

**NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
WOOD COUNTY
GROUP 1**

Wood County Group 2

Wood County Group 2 consists of two systems which include: Jarvis Christian College (301) and Fouke WSC (1,704). Jarvis Christian College would join with Fouke WSC to have a total number of connections of 2,029, with combined projected growth to 2,170 connections in Year 2030.

Jarvis Christian College currently has a single well in the Carrizo-Wilcox Aquifer. This well supplies an adequate amount of water to meet the future water demands of Jarvis Christian College.

The consolidation plan would entail combining the financial, managerial and technical capabilities of the two systems. Jarvis Christian College does not need to be physically connected with Fouke WSC because it has enough supply to meet its current and future demands.

The combined systems have a median household income (MHI) of \$32,885. Utilizing 1% of MHI the average monthly would be \$27.40.

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Jarvis Christian Community College

Number of Connections: 301

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	325	84,000	0	0	30,000
TOTALS	325	84,000	0	0	30,000
REQUIRED CAPACITY	181	60,200	0	0	30,100
SURPLUS	144	23,800	0	0	0
DEFICIENCY	0	0	0	0	100

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Jarvis Christian Community College

Number of Connections: 325

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	325	84,000	0	0	30,000
TOTALS	325	84,000	0	0	30,000
REQUIRED CAPACITY	195	65,000	0	0	32,500
SURPLUS	130	19,000	0	0	0
DEFICIENCY	0	0	0	0	2,500

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 2

CAPACITY BY SYSTEM

EXISTING CONDITIONS

SYSTEM Name: Fouke WSC

Number of Connections: 1704

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,291	1,023,000	4,694	41,000	200,000
TOTALS	1,291	1,023,000	4,694	41,000	200,000
REQUIRED CAPACITY	1,022	340,800	3,408	34,080	170,400
SURPLUS	269	682,200	1,286	6,920	29,600
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 2

CAPACITY BY SYSTEM

PROJECTED CONDITIONS TO 2030

SYSTEM Name: Fouke WSC

Number of Connections: 1845

	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
	1,291	1,023,000	4,694	41,000	200,000
TOTALS	1,291	1,023,000	4,694	41,000	200,000
REQUIRED CAPACITY	1,107	369,000	3,690	36,900	184,500
SURPLUS	184	654,000	1,004	4,100	15,500
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 2

CAPACITY BY SYSTEM

COMBINED CAPACITY
EXISTING CONDITIONS

SYSTEM Name: Jarvis Christian Community College, Fouke WSC

Number of Connections: 2029

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Fouke WSC	1,291	1,023,000	4,694	41,000	200,000
Jarvis Christian College	325	84,000	0	0	30,000
TOTALS	1,616	1,107,000	4,694	41,000	230,000
REQUIRED CAPACITY	1,217	405,800	4,058	40,580	202,900
SURPLUS	399	701,200	636	420	27,100
DEFICIENCY	0	0	0	0	0

**NORTH EAST TEXAS 2008 REGIONAL WATER
PLAN**
SUB-REGIONAL WATER SUPPLY MASTER PLAN
Wood County Group 2

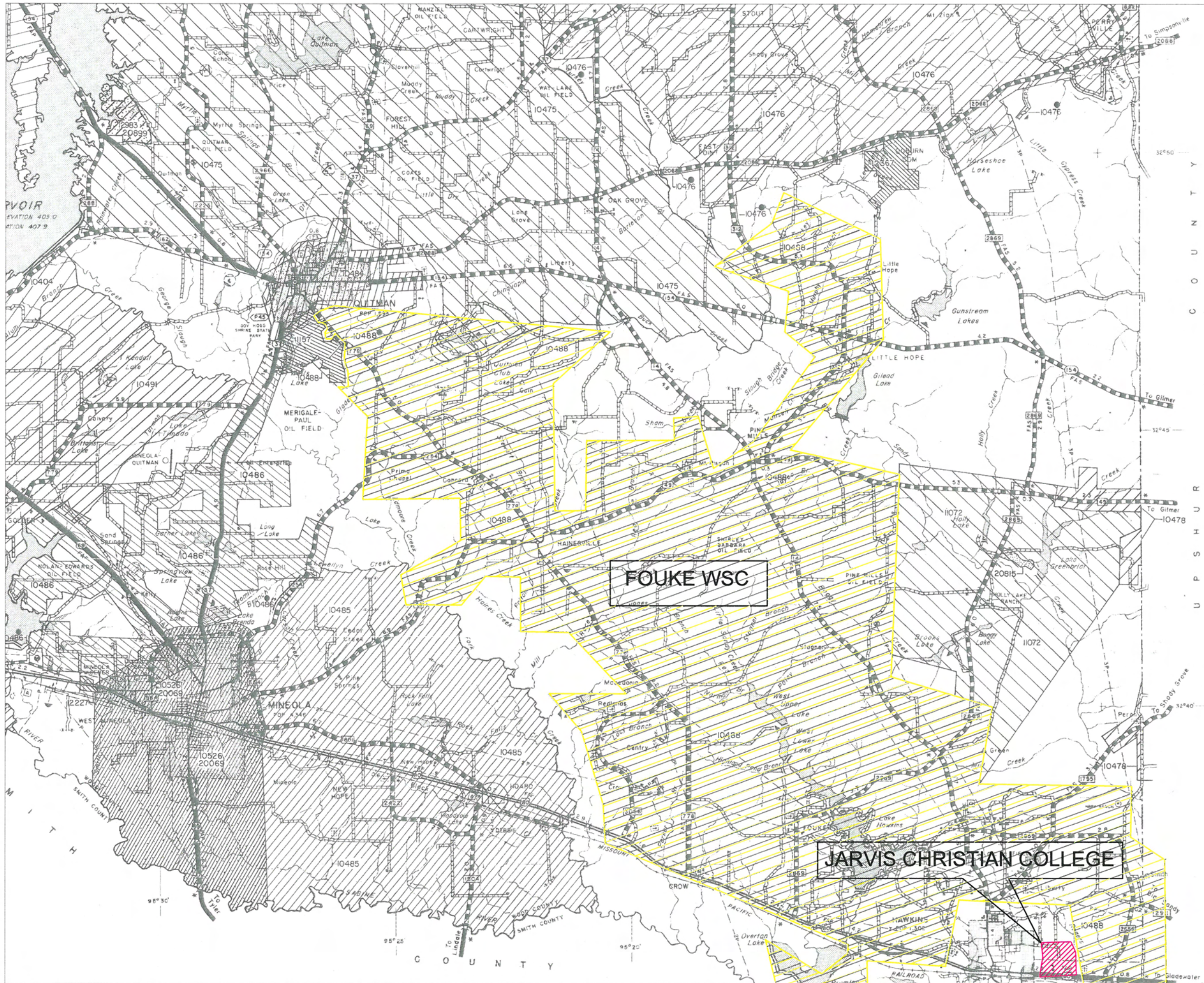
CAPACITY BY SYSTEM

COMBINED CAPACITY
PROJECTED CONDITIONS TO 2030

SYSTEM Name: Jarvis Christian Community College, Fouke WSC

Number of Connections: 2170

SYSTEM	SUPPLY (GPM)	TOTAL STORAGE (GALS)	PUMPING (GPM)	PRESSURE TANK (GALS)	ELEVATED STORAGE (GALS)
Fouke WSC	1,291	1,023,000	4,694	41,000	200,000
Jarvis Christian College	325	84,000	0	0	30,000
TOTALS	1,616	1,107,000	4,694	41,000	230,000
REQUIRED CAPACITY	1,302	434,000	4,340	43,400	217,000
SURPLUS	314	673,000	354	0	13,000
DEFICIENCY	0	0	0	2,400	0



SCALE: 1" = 2 MILES

TOWNSHIP

UPPER

LOWER

COUNTY

FOUKE WSC

JARVIS CHRISTIAN COLLEGE

NORTH EAST TEXAS
REGIONAL WATER PLAN
REGION D
SUB-REGIONAL PLANS
WOOD COUNTY
GROUP 2

Attachment 1

Invitational Response Letters

March 21, 2008

Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Gill WSC is _____ is not X (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____, at 903-_____.

Sincerely, *Ruby Hawthorne*
Sec. - Pres.
Gill WSC

March 21, 2008

Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Talley WSC. is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,



March 21, 2008


Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Lindale Rural WSC is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact ANN,
at 903- 887-3335

Sincerely,

A handwritten signature in cursive script, appearing to read "B. S. III", written over a horizontal line.

March 21, 2008

Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

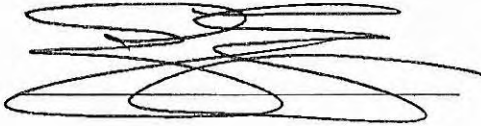
In response to recent correspondence from the Region D Planning Group (NETRWPG), the Waskom WSC #1 is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact

Brian Breeding

at 903-687.2747.

Sincerely,

A large, stylized handwritten signature in black ink, consisting of several overlapping loops and horizontal strokes.

March 21, 2008

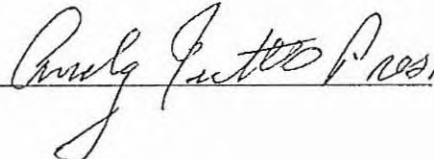
Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Union Grove WSC is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,


_____ Pres.

March 21, 2008

Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Cypress Valley WSC is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,

Bob Hydrick

March 21, 2008

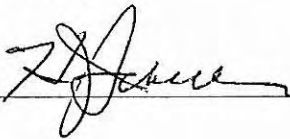
Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Glenwood WSC is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,



March 21, 2008

Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Old Town Water System (is) is not _____ (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Bob Morgan,
at 903-263 9841.

Sincerely,

Jodi Morgan

March 21, 2008

Mr. Stan Hayes, P.E.
Hayes Engineering
2126 Alpine St.
Longview, Texas 75602

Dear Mr. Hayes,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Blocker-Crossroads WSC is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,



Date: 11-14-08

Mr. Walt Sears
Northeast Texas Municipal Water District
P.O. Box 955
Hughes Springs, Texas 75656

Dear Mr. Sears,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Fruitvale WSC is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,





**SOUTH RAINS
WATER SUPPLY CORPORATION**

P.O. Box 95 • Emory, Texas 75440
(903) 473-2122

April 15, 2008

Mr. Walt Sears
Northeast Texas Municipal Water District
P.O. Box 955
Hughes Springs, TX 75656

Dear Mr. Sears,

In response to recent correspondence from the Region D Planning Group, the Board of Directors decided not to participate in the studies relating to the possible consolidation of various systems in our area.

Sincerely,



Gus Metz
General Manager

Date: 4/17/08

Mr. Walt Sears
Northeast Texas Municipal Water District
P.O. Box 955
Hughes Springs, Texas 75656

Dear Mr. Sears,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Bright Star-Salem SUD is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Wanda Gaby,
at 903- 765-2701 .

Sincerely,

Jack Bell
President
Board of Directors

Date: 6-17-68

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Shadowood Water Company is _____ is not X (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,

Dorothy D. Reed

Date: 10-27-08

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Monarch Utilities 1 LP Callender Lake Subdivision is _____ is not X (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact David Lake
at ~~903-~~ 215-2272.

512
Sincerely,

David Lake

Date: 5-14-08


Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Oak Grove WSC is _____ is not X (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,



Date: 5-15-08

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Whispering Oaks Water Co-op 1&2 is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Cindy Young,
at 903-356-5266

Sincerely,

Shelby Sartain

MEMO

TO: Region D Round 3
Moses

FROM: RRH

DATE: May 2008

JOB: HEI# 272006-201

I received a call from Herman Plattner at Plattner's Mobile Home Park in Bowie County regarding our letter about the merger planning. The City of Leary has already reached an agreement with him to take over his part. They have arranged financing and hope to have construction of the necessary transmission line completed by November. Therefore the merger has already taken place.

RRH/mmd

Date: 5-21-08

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), M-J-C WSC is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Bobby Harrell,
at 903-739-2927

Sincerely,

Bobby Harrell

Date: May 27, 2008

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Combined Consumers WSC is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Heath McGehee,
at 903-356-3321.

Sincerely,

Heath McGehee

(b)

Date: 6-9-08

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Jacobia Water Supply Corporation is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Hope Moore,
at 903-454-3046

Sincerely,

Hope Moore

RECEIVED

JUN 13 2008

Date: 6-10-08

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), El Chaparral Mobile Home Park is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact JERRY CHAPMAN,
at 903- 838-2657

Sincerely,

Jerry Chapman

El CHAPARRAL MHP, INC
5100 N Kings Hwy — location
2810 Jonathan — mailing
TEXARKANA, TX 75503

903-278-6852

TCEQ # 0190070

Yes

Date: 7-24-08

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

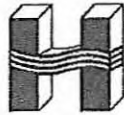
Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Brookshire's Camp Joy is not _____ (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Henry A. Brookshire
at 903- 968 651.8

Sincerely,

Henry A. Brookshire



HAYES ENGINEERING

2126 Alpine St. Longview, TX 75601-3401

Date: 10-6-08

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

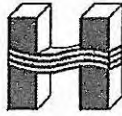
Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Bloomberg WSC is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,

Suzanne Braslow



HAYES ENGINEERING

2126 Alpine St. Longview, TX 75601-3401

Date: 10/6/08

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

Dear Mr. Rutkowski,

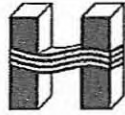
In response to recent correspondence from the Region D Planning Group (NETRWPG), the Ambassador College is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Russell Moulton,
at 903-636-9247.

Sincerely,

Russell Moulton

Now owned + operated by/as the International ALERT Academy



HAYES ENGINEERING

2126 Alpine St. Longview, TX 75601-3401

Date: 13 Oct 08

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the City of Avenger is is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact PAUL FLOWERS,
at 903-567-1000

Sincerely,

Date: 10-14-08

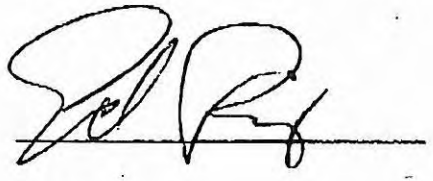
Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Pattonville WSC is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____ at 903-_____.

Sincerely,



A handwritten signature in black ink, appearing to be 'R. R.', is written over a horizontal line.

Date: 10-21-08

Mr. Reeves Hayter
Consultant Region D Planning Group
4445 S.E. Loop 286
Paris, TX 75460

Dear Mr. Hayter,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Little Creek Acres is _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____ at 903-_____.

Sincerely,

George Steyer

*Little Creek Acres water system
Little Creek Acres - Sub Dues
Quinta TX 903-883-2414*

10/22/08

Date: _____

Elizabeth said that they would prefer to "join forces" and not "Combine". Would like presentation and discussion on how "joining forces" would benefit them in areas such as - State sales tax exemption for regional supplies.

Mr. Walt Sears
Northeast Texas Municipal Water District
P.O. Box 955
Hughes Springs, Texas 75656

Dear Mr. Sears,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Myrtle Springs WSC is is not _____ (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact Elizabeth Day,
at 903- 903 8.65-8402

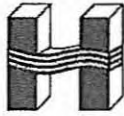
Sincerely,

Telephone Conversation 8:30am

Elizabeth Day said that they are interested in having us go do a presentation. They are willing to facilitate the meeting and will invite other water systems mentioned in the regionalization invitation letter (cluster #4).

Days available are NOV 11th or 13th, Dec 9th or 11th.
Board meeting starts at 7pm.

MAO



HAYES ENGINEERING

2126 Alpine St. Longview, TX 75601-3401

Date: 10-22-08

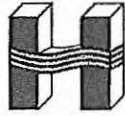
Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), C & C Waterworks, Inc. is ✓ is not _____ (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-295-1013.

Sincerely,



HAYES ENGINEERING

2126 Alpine St. Longview, TX 75601-3401

Date: 10/27/08

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), Clearwater Distribution is X is not _____ (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact ANDY FRENCH,
at ~~903-214~~ 972-788-0886

Sincerely,

Andy French

TEXARKANA MOBILE HOME PARK, LLLP
117 PARKWAY DRIVE
TEXARKANA, TX 75501

September 11, 2008

Mr. Reeves Hayter
Consultant Region D Planning Group
444 S.E. Loop 286
Paris, Texas 75460

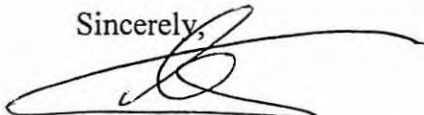
RE: Texarkana Mobile Home Park
117 Parkway Drive, Texarkana, TX 75501 (Bowie County)

Dear Mr. Hayter:

In response to recent correspondence from the Region D Planning Group (NETRWPG), Texarkana Mobile Home Park is interested in participating in studies relating to the possible consolidation of various systems in our geographic area. We understand that there will be no cost for our participation.

For further information, or to arrange a meeting please contact the Park Managers, Annette or Kenny, either in person at the Park, or by calling them at 903-223-7921.

Sincerely,



GEORGE J. LOTT

GJL:amj

Date: _____

Mr. Justin Rutkowski
Consultant Region D Planning Group
2126 Alpine St.
Longview, Texas 75601

Dear Mr. Rutkowski,

In response to recent correspondence from the Region D Planning Group (NETRWPG), the Harmony ISD _____ is not (select one) interested in further participation in studies relating to the possible consolidation of various systems in our geographic area. We understand that there is no cost to our system.

For further information, or to arrange a meeting please contact _____,
at 903-_____.

Sincerely,



Attachment 2

Responses to TWDB Comments

Responses to TWDB Comments

2008 Regional Specific Studies

Further Evaluation of Sub-Regional Water Supply Master Plans

1. Please double-side the text for the final report as required in Section II, Article III of the contract.

Response: All Pages are now double-sided except for fold out maps.

2. Please include page numbers on tables and figures.

Response: All tables and figures now have page numbers.

3. Work products in the contract scope of work (Exhibit C, Page 2) state that the following sections will be included in the draft and final report: "... executive summary, purpose of study including how the study supports regional water planning, methodology, results, and recommendations, if applicable." These sections are not present in the draft report. Please reformat to include these sections in the final report.

Response: Executive summary, purpose of study including how the study supports regional water planning, methodology, results and recommendations have been included in the final report.

4. Please submit the large tables included in the report (such as Table 4.1) in MS Excel format.

Response: Table 4.1 is now on a disk.

5. Task A1: The contract scope of work states that meetings would be held with 51 WUGs and the findings from the study and benefits of regionalization would be discussed with individual board directors. Instead, the draft report indicates that letters/response surveys were mailed to the 51 entities. Please include a copy of the survey responses received and document the dates, locations, and content of the meetings with the 51 entities.

Response: The survey responses are included as Attachment 1. We received survey responses back from 47% of the entities and only 9 of the entities expressed interest in receiving additional information regarding regionalization. Out of the 9 entities, 3 entities agreed to have the consultants visit and perform a presentation to the board and members. The presentation discussed at these meetings is shown in Appendix A. The three entities that agreed to meet with the consultants are: R-P-M WSC, Myrtle Springs WSC, and Crooked Creek WSD. During the study we tried to contact the entities that we did not receive a response from, but they were not interested in participating. Please see Table 3.2, Contact Worksheet – 10 Clusters.

6. Task A2: The contract scope of work states that regional meetings with the 10 identified clusters would be scheduled. Please document the dates and locations of these meetings and the informational presentation that was provided in the final report.

Response: As mentioned in 5 above, R-P-M WSC, Myrtle Springs WSC, and Crooked Creek WSD (which has merged with Myrtle Springs WSC) agreed to meet with the consultants. The informational presentation that was provided is shown in Appendix A. Participation by water systems in the regional study is voluntary, consequently we could not force entities that were not interested to meet with us to go over the presentation we put together.

7. Task A3: The contract scope of work states that recommendations and guidance would be provided to interested clusters on how to complete the regionalization process. Please include documentation of the guidance provided to interested systems in the final report.

Response: None of the clusters were interested in merging at this stage. The presentation in Appendix A outlines the process that individual and combined systems would have to follow in order to proceed with regionalization.

8. Task B1: The contract scope of work states that two meetings with each of the estimated 46 smaller entities considered candidates for consolidation would be scheduled. Please document the dates, locations, and content of these meetings in the final report.

Response: Before we could set up the meeting with the smaller entities we sent out invitation letters to see if water systems were interested in meeting to discuss regionalization. Only 10 entities expressed interest in receiving additional information regarding regionalization. We found in the process of contacting the smaller entities that many of the entities that had expressed interest already had merged.

9. Task B2: The contract scope of work states that two meetings with each of the estimated 23 candidate merger entities would be scheduled. Please document the dates, locations, and content of these meetings in the final report.

Response: Please see 8. above.

10. Task B2: The contract scope of work states that the study would "...determine what current financial, managerial, and technical problems..." the entities are experiencing. This specific information could not be located within the report; rather a generic statement is repeated that "consolidation plans would entail combining the financial, managerial, and technical capabilities of the systems." Please summarize the financial, managerial, and technical problems assessed by meeting with the entities, and present in the final report.

Response: Please see "Results and Recommendations"

11. Page 2, line 1: Please clarify the statement "...with the goal being to have 2,000 more connections" and elaborate on whether that goal was met by the study.

Response: The sentence should have read "...2000 or more connections". The final clusters varied in size from 1,252 connections to 4,167 connections with the goal being to have 2,000 or more connections per cluster. Due to the regional proximity of the water supply systems the 2,000 or more connections goal could not be met for each cluster. A total of 25,544 connections were included.

12. Page 5: The scope of work included in the report differs from the scope of work in the executed contract with the political subdivision on behalf of the regional water planning

Response: Changed the scope of work in the plan to more accurately reflect the scope of work executed with the political subdivision on behalf of the regional water planning group.

13. Page 8, Table 3.1: The third column is entitled WUG NAMES. WUG is an acronym for Water User Group, which is a defined term in the regional water planning process (see Exhibit B Guidelines For Regional Water Plan Development, page 25 at <http://www.twdb.state.tx.us/RWPG/twdb-docs/Data%20Guidance%20072302-modified.pdf>). Not all of the systems listed in Table 3.1 qualify as Water User Groups. Please consider renaming the column to SYSTEM NAMES or PUBLIC WATER SYSTEM NAMES.

Response: Table 3.1, on page 8, the column entitled WUG NAMES is now changed to SYSTEM NAMES.

14. Page 13, line 3: Please elaborate on the contents and significance of the supporting documentation items in Appendix B.

Response: Additional content has been added in order to elaborate on the contents and significance of the supporting documentation in Appendix B.

15. Page 13, line 3: The text references “recommendations” that are not presented in the report text. It appears that the recommendations for each “group” are also in Appendix B. Please include a complete summary of the report’s recommendations in the text of the report.

Response: A summary of the report’s recommendations are now included in the text of the report.

16. Page 14: WUG “Whispering Pines Subdivision” Remarks – Please confirm that the information presented for this system is a unique response and not a repeat of the information for “Spring Valley Subdivision”.

Response: The information presented for both Whispering Pines Subdivision and Spring Valley Subdivision is correct.

17. Page 19: Please include recommendations developed during the study in the report's "Conclusion and Recommendations" section.

Response: The recommendations developed during the study are now in the report's "Results and Recommendations" section.

18. Appendix B, Smaller Water System Groups: Please include the county-based list of proposed Groups with the entities make-up (similar to Table 3.1) within the main report text under Section IV (pages 12-13).

Response: A list of the Smaller Water System Groups is included in the main report text under section IV, Table 4.1.

19. Appendix B, Smaller Water System Groups: In the single-page Sub-Regional Water Supply Master Plans by county, information is presented as "CAPACITY BY WUG" and "WUG Name:". Similar to the comment for Page 8, Table 3.1, please consider replacing the term WUG with the more accurate term SYSTEM.

Response: In Appendix B all of the places where the term WUG was used have been changed to System.

20. Page 5, #A.1., line 5: Please verify if text should say "examine the **regionalization** alternative..." instead of the '**non-regionalization**' alternative.

Response: On page 5, #A1, line 5 **non-regionalization** alternative was changed to **regionalization** alternative.

21. Page 7, #4: Please consider stating how response results compare to the percentages anticipated in the contract scope of work.

Response: Additional wording was added to indicate how the responses that we received compared to the responses that we initially planned to receive in the scope of work.

22. Page 10, #5: Please consider relating the interested entities to the makeup/organization of the original 10 clusters identified.

Response: The interested entities have been related to the original 10 clusters.

23. Page 10, #5: Please consider a discussion on the possible rearrangement of new cluster scenarios based upon interested entities or stating why this cannot occur.

Response: The 9 entities that are interested in regionalization come from 6 of the 10 original clusters. Cluster number 3 has 2 entities that are interested in regionalization. The problem is that each entity that is interested in regionalization wants to be a wholesale provider of water. Since each entity wants to be a wholesale provider of water we cannot combine these two entities alone to become a cluster. Cluster number 4 has 3 of the entities that are interested in regionalization; however two of the entities have already merged to become one. The other 4 entities are located in clusters 5, 6, 8, and 10. Since these entities are not close to each other they cannot be combined into another sub-regional cluster.

24. Page 13: Please consider adding a figure similar to that for Phase 1 (Figure 3.1) showing the geographical service area boundary and dispersment of the phase 2 groups to provide a reference for the newly recommended mergers/consolidations.

Response: Figure 4.1 added with boundaries of smaller water systems.