

CHAPTER 4 IDENTIFICATION OF WATER NEEDS

The objective of this chapter is to compare the water demands within the North East Texas Regional Water Planning Area (RWPA), as presented in Chapter 2, with currently available water supplies, as presented in Chapter 3. This chapter compares the demands and supplies of each Water User Group (WUG) within the region to determine which entities are projected to encounter demands greater than their projected supplies, or water supply shortages. Water shortages for all six user group categories (municipal, manufacturing, mining, steam electric power generation, irrigation, and livestock) are presented in three ways. First, shortages are presented at the county level. WUGs that span two or more counties are listed in each of the counties in which they are located. Second, shortages are shown by river basin. WUGs are listed in the river basin where the demands occur, rather than the basin where the supplies are located. If a WUG demand spans two or more river basins, it is divided proportionately between the appropriate basins. Finally, water shortages are presented for wholesale water providers. If an entity obtains water from more than one water provider, it is listed under each of its water sources.

Within the RWPA, three types of water shortages have been identified. The first is caused by expiration of a water supply contract or permit. Most water supply contracts and permits have expiration dates, and TWDB guidelines require that supplies based on contractual agreements should extend past the existing term of contract if the contract is renewable. In this chapter, an "E" will designate WUGs with shortages due to contract or permit expirations. In most cases, the recommended water supply strategy for these WUGs will be renewal of their existing contract/permit on or before its expiration date, and if supply is available from the seller. The second type of shortage is also contractual. These are instances where a contract expires or is for an insufficient volume to meet projected demand, and the simple renewal of that contract will not adequately compensate for increased demands. In this case, an increase in the contract amount, or additional water supply sources, would be required to meet demands. This type of shortage is designated by "EI". The final type of shortage addressed in this region is the "actual" or "physical" water shortage, designated by an "A". In this case, the entity's current water supply will not be sufficient to meet projected demands and additional water sources will be required.

The North East Texas Regional Water Planning Group (NETRWPG; Region D) has considered the variety of actions and permit applications that may come before the Texas Commission on Environmental Quality (TCEQ) and the Texas Water Development Board (TWDB) and does not want to unduly constrain projects or applications for small amounts of water that may not be specifically included in the adopted regional water plan. "Small amounts of water" is defined as involving no more than 1,000 acre feet per year, regardless of whether the action is for a temporary or long term action. The NETRWPG provides direction to TCEQ and TWDB regarding appropriations, permit amendments, and projects involving small amounts of water that will not have a significant impact on the region's water supply, such projects are consistent with the regional water plan, even though not specifically recommended in the Plan.

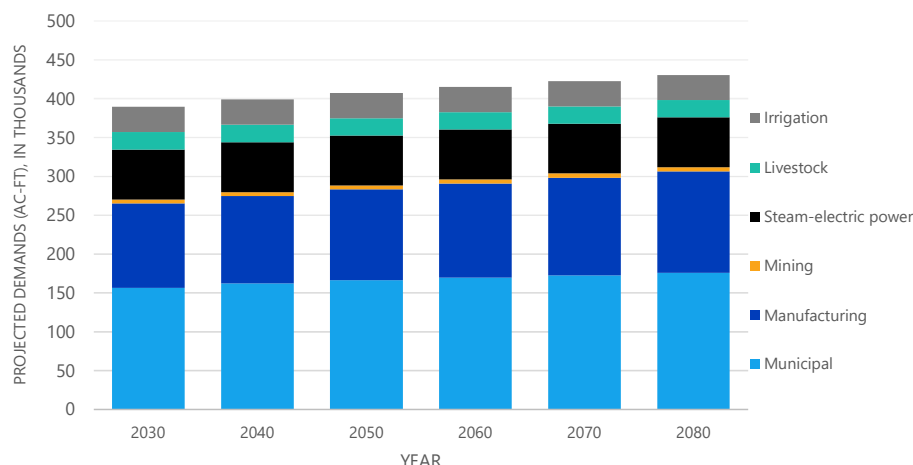


Figure 4.1 Projected Demands of the Six Water User Groups within Region D

Required reports from DB272 on WUG Needs/Surplus are presented in Appendix C4-1. A summary of needs by WUG category is presented in Appendix C4-2. Second-tier water needs identified by the NETRWPG are presented in Appendix C4-3, and a summary of these second-tier water needs by WUG category is presented in Appendix C4-4.

4.1 County Summaries of Water Needs

The following subsections, 4.1.1 through 4.1.49, identify water supply shortages in all six categories of water use within the North East Texas Region. The tables in this section list only the entities that have been determined to have projected water demands that exceed supply at some point within the planning period. Entities that are anticipated to have a surplus have been included in Table 4.76 at the end of this chapter.

4.1.1 Bowie County

The primary source of water in Bowie County is Wright Patman Lake. A majority of the industrial and municipal user groups have either the contractual authority to use water from Wright Patman, or direct contracts with the City of Texarkana, Texas (Texarkana Water Utilities) as served through Riverbend Water Resources District for water supply from Wright Patman. A summary of the estimated water supply shortages in Bowie County is listed below in Table 4.1. Identified shortages in Bowie County are primarily related to infrastructure needs as identified in the Riverbend Regional Water Master Plan (continued functionality of the existing New Boston Road Water Treatment Plant and the associated functional elevation of the existing raw water intake), as well as contractual need to increase the existing conservation storage from an Interim operational rule curve to an Ultimate Rule Curve per contracts with the United States Army Corp of Engineers (USACE). Region D entities in the county also import and export water from/to Arkansas; however, due to legal uncertainty regarding water supply to, and use and

distribution by, the City of Texarkana, Texas, for the purposes of the 2026¹ Region D Plan it has been assumed that existing Arkansas sources are not presently available for Texas entities and are thus excluded from this Plan.

Table 4.1 Water Supply Shortages in Bowie County

| Bowie County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|------------------------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BURNS REDBANK WSC | 260 | 274 | 291 | 310 | 329 | 349 | EI |
| CENTRAL BOWIE COUNTY WSC | 769 | 769 | 776 | 783 | 790 | 797 | EI |
| DE KALB | 266 | 263 | 261 | 257 | 254 | 250 | A |
| HOOKS | 317 | 313 | 310 | 305 | 301 | 296 | EI |
| IRRIGATION, BOWIE | 5,216 | 5,216 | 5,216 | 5,216 | 5,216 | 5,216 | A |
| LIVESTOCK, BOWIE | 165 | 149 | 128 | 109 | 101 | 101 | A |
| MACEDONIA EYLAU MUD 1 | 710 | 705 | 698 | 688 | 677 | 666 | EI |
| MANUFACTURING, BOWIE | 1,801 | 1,869 | 1,940 | 2,013 | 2,089 | 2,168 | A |
| MAUD | 164 | 162 | 161 | 158 | 156 | 153 | A |
| NASH | 314 | 309 | 306 | 302 | 297 | 292 | A |
| NEW BOSTON | 1,309 | 1,297 | 1,285 | 1,265 | 1,245 | 1,225 | A |
| REDWATER | 337 | 333 | 329 | 323 | 317 | 311 | A |
| RIVERBEND WATER RESOURCES DISTRICT | 380 | 375 | 371 | 365 | 359 | 353 | A |
| TEXARKANA | 6,769 | 6,702 | 6,649 | 6,554 | 6,459 | 6,362 | A |
| WAKE VILLAGE | 649 | 641 | 635 | 625 | 615 | 605 | A |

4.1.2 Camp County

Groundwater from the Carrizo-Wilcox Aquifer and surface water from the Northeast Texas Municipal Water District (Lake Bob Sandlin and Lake O' The Pines) supply the majority of water for Camp County, with supplies supplemented by small local run-of-river surface water rights. Livestock is projected to have shortages. A summary of the identified water supply shortages in Camp County is listed below in Table 4.2.

Table 4.2 Water Supply Shortages in Camp County

| Camp County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|---------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| LIVESTOCK, CAMP | 496 | 496 | 496 | 496 | 496 | 496 | A |
| MANUFACTURING, CAMP | 42 | 44 | 46 | 48 | 50 | 52 | EI |
| PITTSBURG | 408 | 415 | 417 | 424 | 431 | 439 | A |

4.1.3 Cass County

Cass County is supplied by the Carrizo-Wilcox and Queen City Aquifers and surface water from Lake O' the Pines and Wright Patman. Shortages have been identified for livestock, county-other, and the Holly

Springs WSC in Cass County. A summary of the identified water supply shortages in Cass County is listed below in Table 4.3.

Table 4.3 Water Supply Shortages in Cass County

| Cass County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|---------------------|-------------------------------|-------|-------|-------|-------|--------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| COUNTY-OTHER, CASS | 361 | 291 | 216 | 148 | 82 | 25 | A |
| HOLLY SPRINGS WSC | 15 | 11 | 8 | 5 | 2 | 0 | EI |
| LIVESTOCK, CASS | 187 | 187 | 187 | 187 | 187 | 187 | A |
| MANUFACTURING, CASS | 3,534 | 4,873 | 6,261 | 7,698 | 9,190 | 10,737 | A |

4.1.4 Delta County

Delta County is primarily supplied by surface water from Big Creek Lake, Cooper Reservoir, Lake Tawakoni and run of river rights on the Sulphur River with supplemental supplies from groundwater in the Trinity, Nacatoch, and Woodbine aquifers. Water supply shortages have been identified for livestock and the North Hunt SUD in Delta County. A summary of the identified water supply shortages in Delta County is presented in Table 4.4.

Table 4.4 Water Supply Shortages in Delta County

| Delta County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| DELTA COUNTY MUD | 0 | 0 | 0 | 0 | 22 | 204 | A |
| LIVESTOCK, DELTA | 220 | 220 | 220 | 220 | 220 | 220 | A |
| NORTH HUNT SUD | 20 | 22 | 23 | 25 | 25 | 24 | A |

4.1.5 Franklin County

Both the Carrizo-Wilcox Aquifer and Lake Cypress Springs are important water supplies in Franklin County. The main wholesale water provider for customers in Franklin County is Franklin County Water District. The main retail suppliers are the City of Mount Vernon and Cypress Springs Special Utility District (SUD). Water supply shortages have been identified in Franklin County for livestock. A summary of the identified water supply shortages in Franklin County is presented in Table 4.5.

Table 4.5 Water Supply Shortages in Franklin County

| Franklin County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|---------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| LIVESTOCK, FRANKLIN | 308 | 308 | 308 | 308 | 308 | 308 | A |

4.1.6 Gregg County

The major surface water supply source in Gregg County is the Sabine River, which flows through the southern portion of the county and provides water for the cities of Kilgore and Longview. Longview also gets surface water from Lake Cherokee (Cherokee Water Company), Lake Fork (SRA), and Lake O’ The Pines (NETMWD). Groundwater from the Carrizo-Wilcox is also a significant water source in the Region. The City of Gladewater is supplied by Lake Gladewater. The City of White Oak gets water from Big Sandy Creek. Mining in Gregg County is identified as having shortages throughout the planning period, whereas Starrville-Friendship WSC has identified needs in the latter portions of the planning period. A summary of the identified water supply shortages in Gregg County is presented in Table 4.6.

Table 4.6 Water Supply Shortages in Gregg County

| Gregg County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|----------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| LIVESTOCK, GREGG | 16 | 16 | 16 | 16 | 16 | 16 | A |
| MANUFACTURING, GREGG | 0 | 38 | 98 | 160 | 224 | 291 | EIA |
| MINING, GREGG | 0 | 0 | 0 | 0 | 1 | 1 | A |
| WHITE OAK | 66 | 88 | 69 | 26 | 0 | 0 | A |

4.1.7 Harrison County

Harrison County uses groundwater from the Carrizo-Wilcox and Queen City Aquifers and surface water from Lake O’ the Pines, Cherokee Lake, Lake Fork and the Sabine and Cypress Rivers. Significant water shortages in Harrison County have been identified during this planning effort. These shortages are related to well production capacity, insufficient contract amounts, and limitations in the representation of surface water availability in the current round of planning. The following table, Table 4.7, is a summary of identified water supply shortages in Harrison County.

Table 4.7 Water Supply Shortages in Harrison County

| Harrison County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|----------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| CYPRESS VALLEY WSC | 11 | 14 | 15 | 17 | 18 | 19 | A |
| HALLSVILLE | 0 | 0 | 0 | 0 | 0 | 23 | A |
| HARLETON WSC | 0 | 0 | 0 | 0 | 4 | 8 | A |
| IRRIGATION, HARRISON | 474 | 474 | 474 | 474 | 474 | 474 | A |
| LEIGH WSC | 42 | 0 | 0 | 0 | 0 | 0 | A |
| MINING, HARRISON | 1,852 | 1,834 | 1,816 | 1,801 | 1,782 | 1,782 | A |
| NORTH HARRISON WSC | 2 | 9 | 10 | 14 | 19 | 23 | A |
| SCOTTSVILLE | 122 | 158 | 163 | 200 | 236 | 270 | A |
| TRYON ROAD SUD | 173 | 243 | 252 | 321 | 385 | 461 | A |

4.1.8 Hopkins County

The Carrizo Wilcox and the Nacatoch aquifers are the main source of groundwater supply for the County while Cooper Lake, Sulphur Springs Lake, and Lake Tawakoni are the major sources of surface water. Contracts in Hopkins County are mostly with the City of Sulphur Springs. The City of Sulphur Springs has a contract with the Sulphur River MWD for water from Cooper Reservoir, and also has rights to Lake Sulphur Springs. The following table, Table 4.8, is a summary of identified water supply shortages in Hopkins County.

Table 4.8 Water Supply Shortages in Hopkins County

| Hopkins County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|----------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BRASHEAR WSC | 55 | 62 | 58 | 55 | 53 | 61 | EI |
| BRINKER WSC | 97 | 122 | 130 | 143 | 157 | 171 | EI |
| CASH SUD | 4 | 8 | 10 | 9 | 29 | 38 | EI |
| IRRIGATION, HOPKINS | 3,787 | 3,787 | 3,787 | 3,787 | 3,787 | 3,787 | A |
| LIVESTOCK, HOPKINS | 128 | 124 | 124 | 120 | 118 | 118 | A |
| MILLER GROVE WSC | 30 | 40 | 44 | 51 | 58 | 64 | A |
| NORTH HOPKINS WSC | 231 | 271 | 297 | 325 | 354 | 383 | EI |
| SHADY GROVE NO 2 WSC | 14 | 15 | 14 | 13 | 12 | 15 | EI |

4.1.9 Hunt County

Water shortages in Hunt County are both contractual and actual in nature. The Sabine River Authority (SRA) is the leading wholesale water provider for consumers in Hunt County. The majority of SRA water from Lake Tawakoni and Lake Fork has been contracted; thus, there is limited water available from these lakes to meet projected shortages. Several entities also obtain supply from the North Texas Municipal Water District (NTMWD). Water from Lake Lavon and the Greenville City Lakes are also used by some systems in the county. Groundwater is mainly from the Nacatoch, Woodbine and the Trinity aquifers. The following table, Table 4.9, is a summary of identified water supply shortages in Hunt County.

Table 4.9 Water Supply Shortages in Hunt County

| Hunt County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------|-------------------------------|--------|--------|--------|--------|--------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| ABLES SPRINGS SUD | 4 | 8 | 14 | 17 | 20 | 23 | EI |
| B H P WSC | 41 | 133 | 216 | 287 | 356 | 413 | EI |
| CADDO BASIN SUD | 1,056 | 662 | 732 | 490 | 19 | 211 | EI |
| CASH SUD | 307 | 700 | 814 | 687 | 519 | 784 | EI |
| CELESTE | 14 | 19 | 24 | 28 | 32 | 35 | A |
| COUNTY-OTHER, HUNT | 230 | 209 | 259 | 217 | 146 | 103 | A |
| GREENVILLE | 13,658 | 16,254 | 17,865 | 19,224 | 20,604 | 21,801 | A |
| HICKORY CREEK SUD | 224 | 302 | 395 | 502 | 624 | 766 | A |
| IRRIGATION, HUNT | 193 | 193 | 193 | 193 | 193 | 193 | A |
| JOSEPHINE | 3 | 7 | 13 | 17 | 20 | 24 | EI |

| Hunt County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| LIVESTOCK, HUNT | 76 | 76 | 76 | 75 | 75 | 75 | A |
| MACBEE SUD | 8 | 1 | 0 | 0 | 0 | 0 | EI |
| NORTH HUNT SUD | 172 | 160 | 150 | 137 | 124 | 115 | A |
| POETRY WSC | 0 | 0 | 0 | 0 | 0 | 0 | EI |
| ROYSE CITY | 57 | 179 | 329 | 475 | 629 | 771 | EI |
| TEXAS A&M UNIVERSITY COMMERCE | 276 | 275 | 275 | 275 | 275 | 275 | EI |

4.1.10 Lamar County

Lamar County utilizes surface water from Crook Lake and Pat Mayse Reservoir and utilizes ground water from Trinity and Woodbine Aquifers. The City of Paris is the major supplier of surface water in the county. Irrigation in the county utilizes run-of-river supplies in the Red River and groundwater. A summary of the identified water supply shortages in Lamar County is presented below in Table 4.10.

Table 4.10 Water Supply Shortages in Lamar County

| Lamar County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|----------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BOIS D ARC MUD | 0 | 0 | 1 | 1 | 1 | 1 | A |
| COUNTY-OTHER, LAMAR | 121 | 114 | 114 | 114 | 115 | 113 | EI |
| IRRIGATION, LAMAR | 4,691 | 4,691 | 4,691 | 4,691 | 4,691 | 4,691 | A |
| LIVESTOCK, LAMAR | 82 | 82 | 82 | 82 | 82 | 82 | A |
| MANUFACTURING, LAMAR | 319 | 324 | 336 | 319 | 336 | 388 | EI |

4.1.11 Marion County

The Carrizo-Wilcox Aquifer and Lake O' The Pines supply most of the water demand in Marion County. ~~No~~ The following table, Table 4.11, is a summary of identified water supply shortages were identified in Marion County.

4.1.12 Morris County

Morris County is supplied by surface water from Lake O' the Pines and Ellison Lakes and groundwater from the Carrizo-Wilcox and Queen City Aquifers. Direct reuse is also a supply for manufacturing in the county. The following table, Table 4.11, is a summary of identified water supply shortages in Morris County.

Table 4.11 Water Supply Shortages in Morris County

| Morris County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| HOLLY SPRINGS WSC | 20 | 15 | 8 | 4 | 0 | 0 | EI |
| LIVESTOCK, MORRIS | 61 | 61 | 61 | 61 | 61 | 61 | A |
| TRI SUD | 45 | 47 | 41 | 35 | 26 | 17 | EI |

4.1.13 Rains County

The Sabine River Authority, via Lakes Tawakoni and Fork, is the main wholesale water provider for Rains County. Groundwater is predominantly from the Carrizo-Wilcox. Shortages in water supply have been identified for the Cash SUD and Miller Grove WSC. Table 4.12 is a summary of identified water supply shortages in Rains County.

Table 4.12 Water Supply Shortages in Rains County

| Rains County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| CASH SUD | 14 | 32 | 40 | 39 | 141 | 173 | EI |
| GOLDEN WSC | 0 | 1 | 1 | 1 | 1 | 1 | A |
| IRRIGATION, RAINS | 3 | 3 | 3 | 3 | 3 | 3 | A |
| MILLER GROVE WSC | 6 | 8 | 10 | 11 | 14 | 16 | A |
| SOUTH RAINS SUD | 0 | 12 | 28 | 49 | 70 | 92 | EI |

4.1.14 Red River County

Water supplies for Red River County are met by surface water from run-of-river rights, Pat Mayse Reservoir, and Lake Wright Patman, while groundwater is provided from the Blossom, Nacatoch, Trinity and Woodbine aquifers. Irrigation supplies are from run-of-river water rights for which available supplies can be limited. Water supply shortages have been identified for the City of Clarksville, as well as for irrigation and livestock in the county. Table 4.13 presents a summary of identified water supply shortages in Red River County.

Table 4.13 Water Supply Shortages in Red River County

| Red River County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| 410 WSC | 135 | 122 | 106 | 94 | 81 | 68 | EI |
| CLARKSVILLE | 252 | 179 | 106 | 49 | 0 | 0 | A |
| COUNTY-OTHER, RED RIVER | 30 | 12 | 0 | 0 | 0 | 0 | A |
| IRRIGATION, RED RIVER | 2,681 | 2,681 | 2,681 | 2,681 | 2,681 | 2,681 | A |
| LIVESTOCK, RED RIVER | 145 | 145 | 145 | 145 | 145 | 145 | A |

4.1.15 Smith County

The portion of Smith County that is in the North East Texas Region is almost entirely supplied by the Carrizo-Wilcox Aquifer, although a relatively smaller amount of supply is from the Queen City Aquifer. Most projected shortages in this county are due to insufficient well capacity to withdraw water from the aquifer. The City of Tyler's supply comes from sources in Region I. A summary of the identified water supply shortages in Smith County is listed below as Table 4.14.

Table 4.14 Water Supply Shortages in Smith County

| Smith County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |

| | | | | | | | |
|-----------------------|-----|-----|-----|-----|-----|-----|----|
| CRYSTAL SYSTEMS TEXAS | 204 | 296 | 363 | 393 | 417 | 443 | A |
| EAST TEXAS MUD | 172 | 385 | 537 | 678 | 820 | 962 | A |
| IRRIGATION, SMITH | 156 | 156 | 156 | 156 | 156 | 156 | A |
| LIBERTY CITY WSC | 1 | 3 | 5 | 7 | 9 | 11 | A |
| LINDALE | 86 | 116 | 153 | 154 | 150 | 158 | A |
| LINDALE RURAL WSC | 291 | 419 | 514 | 594 | 675 | 756 | A |
| MANUFACTURING, SMITH | 0 | 0 | 7 | 8 | 7 | 9 | EI |
| PINE RIDGE WSC | 0 | 0 | 0 | 0 | 0 | 11 | A |
| SOUTHERN UTILITIES | 0 | 0 | 64 | 116 | 170 | 223 | A |
| STAR MOUNTAIN WSC | 31 | 42 | 52 | 57 | 63 | 69 | A |
| WINONA | 11 | 30 | 43 | 55 | 66 | 77 | A |

4.1.16 Titus County

Water supply in Titus County is predominately from Lake Monticello, Lake Bob Sandlin, Welsh Reservoir, Lake O' the Pines, and Tankersley Lake, and from the Carrizo-Wilcox Aquifer. Titus County FWD #1 and Franklin County Water District supply water to the City of Mount Pleasant. Mount Pleasant supplies county-other, manufacturing, and a portion to Tri SUD in addition to its internal demands. Steam electric power generation is primarily self-supplied and supplemented with wholesale water from the Northeast Texas Municipal Water District. A summary of the identified water supply shortages in Titus County is listed below in Table 4.15.

Table 4.15 Water Supply Shortages in Titus County

| Titus County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-----------------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BI COUNTY WSC | 0 | 0 | 0 | 7 | 20 | 35 | A |
| LIVESTOCK, TITUS | 242 | 242 | 242 | 247 | 247 | 247 | A |
| MANUFACTURING, TITUS | 1,718 | 1,761 | 1,943 | 2,380 | 2,695 | 2,887 | EI |
| STEAM-ELECTRIC POWER, TITUS | 1,076 | 2,496 | 3,816 | 4,584 | 5,473 | 6,293 | EI |
| TRI SUD | 452 | 533 | 531 | 506 | 439 | 338 | EI |

4.1.17 Upshur County

Water supplies for Upshur County are met by surface water from Lake O' the Pines, Gilmer, and Gladewater Lakes and groundwater from the Carrizo-Wilcox aquifer. A summary of the identified water supply shortages in Upshur County is listed below in Table 4.16.

Table 4.16 Water Supply Shortages in Upshur County

| Upshur County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|----------------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BIG SANDY | 19 | 20 | 20 | 16 | 12 | 8 | A |
| EAST MOUNTAIN WATER SYSTEM | 175 | 177 | 176 | 172 | 167 | 163 | A |
| GLADEWATER | 0 | 0 | 0 | 0 | 0 | 98 | A |
| MANUFACTURING, UPSHUR | 27 | 28 | 30 | 31 | 32 | 33 | A |

| Upshur County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|---------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| PRITCHETT WSC | 46 | 49 | 46 | 37 | 28 | 19 | A |

4.1.18 Van Zandt County

Water supplies for Van Zandt County are met by surface water from Tawakoni, Fork, and Mill Creek Lakes, the Sabine River, and groundwater from the Carrizo-Wilcox aquifer. The following table, Table 4.17, is a summary of identified water supply shortages in Van Zandt County.

Table 4.17 Water Supply Shortages in Van Zandt County

| Van Zandt County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------------|-------------------------------|------|------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| ABLES SPRINGS SUD | 1 | 1 | 2 | 2 | 2 | 2 | EI |
| BEN WHEELER WSC | 0 | 36 | 82 | 132 | 183 | 227 | A |
| CANTON | 0 | 0 | 0 | 0 | 197 | 400 | A |
| COUNTY-OTHER, VAN ZANDT | 54 | 149 | 270 | 350 | 330 | 371 | A |
| EDOM WSC | 46 | 51 | 56 | 59 | 60 | 60 | A |
| FRUITVALE WSC | 0 | 3 | 18 | 43 | 76 | 95 | A |
| GOLDEN WSC | 0 | 9 | 19 | 29 | 39 | 49 | A |
| GRAND SALINE | 121 | 128 | 122 | 117 | 120 | 109 | A |
| LITTLE HOPE MOORE WSC | 12 | 20 | 28 | 36 | 44 | 48 | A |
| MABANK | 9 | 16 | 22 | 30 | 37 | 44 | A |
| MACBEE SUD | 389 | 593 | 843 | 1,167 | 1,582 | 2,123 | EI |
| MANUFACTURING, VAN ZANDT | 348 | 369 | 383 | 403 | 436 | 456 | EI |
| MYRTLE SPRINGS WSC | 130 | 192 | 245 | 314 | 384 | 449 | A |
| PINE RIDGE WSC | 31 | 44 | 55 | 68 | 82 | 95 | A |
| R P M WSC | 35 | 34 | 34 | 30 | 24 | 19 | A |
| VAN | 114 | 111 | 110 | 106 | 117 | 118 | A |

4.1.19 Wood County

Water supplies for Wood County are met by surface water from Cypress Springs Lake and Lake Fork, as well as groundwater from the Carrizo-Wilcox and Queen City aquifers. Water supply shortages have been identified in Wood County for the City of Quitman, livestock, and manufacturing. A summary of identified projected shortages in water supply is presented in Table 4.18.

Table 4.18 Water Supply Shortages in Wood County

| Wood County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|------------------------------------|-------------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BRIGHT STAR SALEM SUD | 0 | 0 | 5 | 46 | 87 | 128 | A |
| GOLDEN WSC | 1 | 12 | 19 | 30 | 42 | 53 | A |
| LIBERTY UTILITIES SILVERLEAF WATER | 331 | 355 | 370 | 391 | 412 | 434 | A |

| Wood County | Total Water Shortage ac-ft/yr | | | | | | Shortage Type |
|---------------------|-------------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| MANUFACTURING, WOOD | 1,410 | 1,518 | 1,630 | 1,746 | 1,866 | 1,991 | A |
| MINING, WOOD | 59 | 60 | 61 | 60 | 60 | 60 | A |
| NEW HOPE SUD | 167 | 162 | 160 | 141 | 122 | 105 | A |
| RAMEY WSC | 0 | 73 | 172 | 285 | 415 | 564 | A |
| SHARON WSC | 1 | 11 | 17 | 29 | 42 | 54 | A |

4.2 River Basin Summaries of Water Needs

The NETRWPA is primarily divided among four main river basins including the Red River Basin, the Sulphur River Basin, the Cypress Creek Basin, and the Sabine River Basin. There is a small area of the Neches Basin in Van Zandt County and a smaller portion of the Trinity Basin in Hunt and Van Zandt Counties.

4.2.1 Red River Basin

The Red River Basin includes portions of Bowie, Lamar, and Red River Counties. Water shortages in the Red River Basin are both contractual and actual shortages. The largest volume of shortages is associated with irrigation use, which utilizes groundwater and run-of-river water from the Red River. Table 4.19 and

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| 410 WSC | 87 | 81 | 74 | 69 | 64 | 58 | EI |
| BURNS REDBANK WSC | 260 | 274 | 291 | 310 | 329 | 349 | EI |
| CENTRAL BOWIE COUNTY WSC | 118 | 118 | 119 | 120 | 121 | 122 | EI |
| COUNTY-OTHER, LAMAR | 29 | 29 | 28 | 28 | 28 | 28 | EI |
| HOOKS | 317 | 313 | 310 | 305 | 301 | 296 | EI |
| MANUFACTURING, LAMAR | 319 | 324 | 336 | 319 | 336 | 388 | EI |

Table 4.20 detail the shortages in the basin.

Table 4.19 Water Shortages due to Expirations and Insufficient Contract Amounts – Red River Basin

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| 410 WSC | 87 | 81 | 74 | 69 | 64 | 58 | EI |
| BURNS REDBANK WSC | 260 | 274 | 291 | 310 | 329 | 349 | EI |
| CENTRAL BOWIE COUNTY WSC | 118 | 118 | 119 | 120 | 121 | 122 | EI |
| COUNTY-OTHER, LAMAR | 29 | 29 | 28 | 28 | 28 | 28 | EI |
| HOOKS | 317 | 313 | 310 | 305 | 301 | 296 | EI |
| MANUFACTURING, LAMAR | 319 | 324 | 336 | 319 | 336 | 388 | EI |

Table 4.20 Actual Water Shortages – Red River Basin

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|------------------------------------|-------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BOIS D ARC MUD | 0 | 0 | 1 | 1 | 1 | 1 | A |
| DE KALB | 48 | 48 | 47 | 47 | 46 | 45 | A |
| IRRIGATION, BOWIE | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | 2,184 | A |
| IRRIGATION, LAMAR | 3,883 | 3,883 | 3,883 | 3,883 | 3,883 | 3,883 | A |
| IRRIGATION, RED RIVER | 212 | 212 | 212 | 212 | 212 | 212 | A |
| LIVESTOCK, BOWIE | 52 | 47 | 40 | 35 | 32 | 32 | A |
| LIVESTOCK, LAMAR | 82 | 82 | 82 | 82 | 82 | 82 | A |
| MANUFACTURING, BOWIE | 289 | 300 | 311 | 323 | 335 | 348 | A |
| MANUFACTURING, LAMAR | 319 | 324 | 336 | 319 | 336 | 388 | A |
| NEW BOSTON | 403 | 399 | 396 | 389 | 383 | 377 | A |
| RIVERBEND WATER RESOURCES DISTRICT | 211 | 209 | 206 | 203 | 200 | 196 | A |
| TEXARKANA | 840 | 832 | 825 | 813 | 802 | 790 | A |

4.2.2 Sulphur River Basin

The Sulphur River Basin includes portions of Bowie, Cass, Franklin, Hopkins, Hunt, Lamar, Morris, Red River, and Titus Counties. It also includes all of Delta County. Water shortages in the Sulphur Basin are primarily due to actual water needs, though there are several entities with needs to renew and/or increase existing contracts. Most of the actual needs are caused by the need for new infrastructure and insufficient supplies from groundwater sources. Table 4.21 and

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| 410 WSC | 48 | 41 | 32 | 25 | 17 | 10 | EI |
| BRASHEAR WSC | 19 | 22 | 20 | 18 | 16 | 20 | EI |
| BRINKER WSC | 97 | 122 | 130 | 143 | 157 | 171 | EI |
| CENTRAL BOWIE COUNTY WSC | 651 | 651 | 657 | 663 | 669 | 675 | EI |
| COUNTY-OTHER, CASS | 76 | 56 | 34 | 15 | 0 | 0 | EI |
| COUNTY-OTHER, LAMAR | 92 | 85 | 86 | 86 | 87 | 85 | EI |
| MACEDONIA EYLAU MUD 1 | 710 | 705 | 698 | 688 | 677 | 666 | EI |
| NORTH HOPKINS WSC | 231 | 271 | 297 | 325 | 354 | 383 | EI |
| SHADY GROVE NO 2 WSC | 0 | 0 | 0 | 0 | 0 | 0 | EI |
| TEXAS A&M UNIVERSITY COMMERCE | 276 | 275 | 275 | 275 | 275 | 275 | EI |
| TRI SUD | 164 | 193 | 193 | 184 | 160 | 123 | EI |

Table 4.22 detail the shortages in the basin.

Table 4.21 Water Shortages due to Expiration and Insufficient Contract Amounts – Sulphur River Basin

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| 410 WSC | 48 | 41 | 32 | 25 | 17 | 10 | EI |
| BRASHEAR WSC | 19 | 22 | 20 | 18 | 16 | 20 | EI |
| BRINKER WSC | 97 | 122 | 130 | 143 | 157 | 171 | EI |
| CENTRAL BOWIE COUNTY WSC | 651 | 651 | 657 | 663 | 669 | 675 | EI |
| COUNTY-OTHER, CASS | 76 | 56 | 34 | 15 | 0 | 0 | EI |
| COUNTY-OTHER, LAMAR | 92 | 85 | 86 | 86 | 87 | 85 | EI |
| MACEDONIA EYLAU MUD 1 | 710 | 705 | 698 | 688 | 677 | 666 | EI |
| NORTH HOPKINS WSC | 231 | 271 | 297 | 325 | 354 | 383 | EI |
| SHADY GROVE NO 2 WSC | 0 | 0 | 0 | 0 | 0 | 0 | EI |
| TEXAS A&M UNIVERSITY COMMERCE | 276 | 275 | 275 | 275 | 275 | 275 | EI |
| TRI SUD | 164 | 193 | 193 | 184 | 160 | 123 | EI |

Table 4.22 Actual Water Shortages – Sulphur River Basin

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-------------------------|-------------------------|-------|-------|-------|-------|--------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BRINKER WSC | 97 | 122 | 130 | 143 | 157 | 171 | A |
| CLARKSVILLE | 252 | 179 | 106 | 49 | 0 | 0 | A |
| COUNTY-OTHER, CASS | 76 | 56 | 34 | 15 | 0 | 0 | A |
| COUNTY-OTHER, HUNT | 230 | 209 | 259 | 217 | 146 | 103 | A |
| COUNTY-OTHER, LAMAR | 92 | 85 | 86 | 86 | 87 | 85 | A |
| COUNTY-OTHER, RED RIVER | 30 | 12 | 0 | 0 | 0 | 0 | A |
| DE KALB | 218 | 215 | 214 | 210 | 208 | 205 | A |
| DELTA COUNTY MUD | 0 | 0 | 0 | 0 | 22 | 204 | A |
| HICKORY CREEK SUD | 75 | 101 | 129 | 164 | 204 | 249 | A |
| IRRIGATION, BOWIE | 3,032 | 3,032 | 3,032 | 3,032 | 3,032 | 3,032 | A |
| IRRIGATION, HOPKINS | 3,673 | 3,673 | 3,673 | 3,673 | 3,673 | 3,673 | A |
| IRRIGATION, HUNT | 69 | 69 | 69 | 69 | 69 | 69 | A |
| IRRIGATION, LAMAR | 808 | 808 | 808 | 808 | 808 | 808 | A |
| IRRIGATION, RED RIVER | 2,469 | 2,469 | 2,469 | 2,469 | 2,469 | 2,469 | A |
| LIVESTOCK, BOWIE | 113 | 102 | 88 | 74 | 69 | 69 | A |
| LIVESTOCK, DELTA | 220 | 220 | 220 | 220 | 220 | 220 | A |
| LIVESTOCK, FRANKLIN | 118 | 118 | 118 | 118 | 118 | 118 | A |
| LIVESTOCK, HUNT | 39 | 39 | 39 | 39 | 39 | 39 | A |
| LIVESTOCK, RED RIVER | 145 | 145 | 145 | 145 | 145 | 145 | A |
| MANUFACTURING, BOWIE | 1,512 | 1,569 | 1,629 | 1,690 | 1,754 | 1,820 | A |
| MANUFACTURING, CASS | 3,534 | 4,873 | 6,261 | 7,698 | 9,190 | 10,737 | A |
| MAUD | 164 | 162 | 161 | 158 | 156 | 153 | A |

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|------------------------------------|-------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| NASH | 314 | 309 | 306 | 302 | 297 | 292 | A |
| NEW BOSTON | 906 | 898 | 889 | 876 | 862 | 848 | A |
| NORTH HUNT SUD | 192 | 182 | 173 | 162 | 149 | 139 | A |
| REDWATER | 337 | 333 | 329 | 323 | 317 | 311 | A |
| RIVERBEND WATER RESOURCES DISTRICT | 169 | 166 | 165 | 162 | 159 | 157 | A |
| TEXARKANA | 5,929 | 5,870 | 5,824 | 5,741 | 5,657 | 5,572 | A |
| TEXAS A&M UNIVERSITY COMMERCE | 276 | 275 | 275 | 275 | 275 | 275 | A |
| WAKE VILLAGE | 649 | 641 | 635 | 625 | 615 | 605 | A |

4.2.3 Cypress Creek Basin

The Cypress Creek Basin includes portions of Cass, Franklin, Gregg, Harrison, Hopkins, Morris, Titus, Upshur, and Wood Counties, as well as all of Camp and Marion Counties. There are significant projected shortages in water supply in the Cypress Creek Basin. Table 4.23 and

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-----------------------------|-------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| HOLLY SPRINGS WSC | 35 | 26 | 16 | 9 | 2 | 0 | EI |
| MANUFACTURING, CAMP | 42 | 44 | 46 | 48 | 50 | 52 | EI |
| MANUFACTURING, TITUS | 1,718 | 1,761 | 1,943 | 2,380 | 2,695 | 2,887 | EI |
| STEAM-ELECTRIC POWER, TITUS | 1,076 | 2,496 | 3,816 | 4,584 | 5,473 | 6,293 | EI |
| TRI SUD | 333 | 387 | 379 | 357 | 305 | 232 | EI |

Table 4.24 detail the shortages in the basin.

Table 4.23 Water Shortages due to Expiration and Insufficient Contract Amounts – Cypress Creek Basin

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-----------------------------|-------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| HOLLY SPRINGS WSC | 35 | 26 | 16 | 9 | 2 | 0 | EI |
| MANUFACTURING, CAMP | 42 | 44 | 46 | 48 | 50 | 52 | EI |
| MANUFACTURING, TITUS | 1,718 | 1,761 | 1,943 | 2,380 | 2,695 | 2,887 | EI |
| STEAM-ELECTRIC POWER, TITUS | 1,076 | 2,496 | 3,816 | 4,584 | 5,473 | 6,293 | EI |
| TRI SUD | 333 | 387 | 379 | 357 | 305 | 232 | EI |

Table 4.24 Actual Water Shortages – Cypress Creek Basin

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|----------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BI COUNTY WSC | 0 | 0 | 0 | 7 | 20 | 35 | A |
| COUNTY-OTHER, CASS | 285 | 235 | 182 | 133 | 82 | 25 | A |
| CYPRESS VALLEY WSC | 11 | 14 | 15 | 17 | 18 | 19 | A |
| HARLETON WSC | 0 | 0 | 0 | 0 | 4 | 8 | A |
| IRRIGATION, HARRISON | 283 | 283 | 283 | 283 | 283 | 283 | A |

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-----------------------------|-------------------------|-------|-------|-------|-------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| IRRIGATION, HOPKINS | 8 | 8 | 8 | 8 | 8 | 8 | A |
| LEIGH WSC | 42 | 0 | 0 | 0 | 0 | 0 | A |
| LIVESTOCK, CAMP | 496 | 496 | 496 | 496 | 496 | 496 | A |
| LIVESTOCK, CASS | 187 | 187 | 187 | 187 | 187 | 187 | A |
| LIVESTOCK, FRANKLIN | 190 | 190 | 190 | 190 | 190 | 190 | A |
| LIVESTOCK, GREGG | 16 | 16 | 16 | 16 | 16 | 16 | A |
| LIVESTOCK, HOPKINS | 128 | 124 | 124 | 120 | 118 | 118 | A |
| LIVESTOCK, MORRIS | 61 | 61 | 61 | 61 | 61 | 61 | A |
| LIVESTOCK, TITUS | 242 | 242 | 242 | 247 | 247 | 247 | A |
| MANUFACTURING, TITUS | 1,718 | 1,761 | 1,943 | 2,380 | 2,695 | 2,887 | A |
| MANUFACTURING, UPSHUR | 27 | 28 | 30 | 31 | 32 | 33 | A |
| MINING, GREGG | 0 | 0 | 0 | 0 | 1 | 1 | A |
| MINING, HARRISON | 433 | 425 | 416 | 409 | 399 | 399 | A |
| NORTH HARRISON WSC | 2 | 9 | 10 | 14 | 19 | 23 | A |
| PITTSBURG | 408 | 415 | 417 | 424 | 431 | 439 | A |
| SCOTTSVILLE | 31 | 42 | 45 | 56 | 66 | 76 | A |
| SHARON WSC | 5 | 15 | 21 | 33 | 46 | 58 | A |
| STEAM-ELECTRIC POWER, TITUS | 1,076 | 2,496 | 3,816 | 4,584 | 5,473 | 6,293 | A |
| TRYON ROAD SUD | 173 | 243 | 252 | 321 | 385 | 461 | A |

4.2.4 Neches River Basin

The Neches Basin includes portions of Van Zandt and Smith Counties. The Smith County portion is not located within the NETRWPA and is not included. Supply shortages in the Neches River Basin are primarily related to groundwater sources from the Carrizo-Wilcox Aquifer. Table 4.25 details the shortages in the basin.

Table 4.25 Actual Water Shortages – Neches River Basin

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-----------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| BEN WHEELER WSC | 0 | 36 | 82 | 132 | 183 | 227 | A |
| EDOM WSC | 46 | 51 | 56 | 59 | 60 | 60 | A |
| LITTLE HOPE MOORE WSC | 4 | 6 | 9 | 11 | 14 | 15 | A |
| R P M WSC | 35 | 34 | 34 | 30 | 24 | 19 | A |
| VAN | 0 | 0 | 0 | 0 | 16 | 17 | A |

4.2.5 Sabine River Basin

The Sabine Basin includes portions of Gregg, Harrison, Hunt, Smith, Upshur, Van Zandt, and Wood Counties as well as all of Rains County. The Sabine Basin has both contractual and actual shortages, and many of the actual shortages are due to deficits in groundwater supply or production. Increasing growth

in population and limited WTP capacity also results in projected shortages for the City of Greenville.

Table 4.26 and

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| ABLES SPRINGS SUD | 5 | 9 | 16 | 19 | 22 | 25 | EI |
| B H P WSC | 41 | 133 | 216 | 287 | 356 | 413 | EI |
| BRASHEAR WSC | 36 | 40 | 38 | 37 | 37 | 41 | EI |
| CADDO BASIN SUD | 1,056 | 662 | 732 | 490 | 19 | 211 | EI |
| CASH SUD | 325 | 740 | 864 | 735 | 689 | 995 | EI |
| JOSEPHINE | 3 | 7 | 13 | 17 | 20 | 24 | EI |
| MACBEE SUD | 129 | 207 | 304 | 432 | 597 | 809 | EI |
| MANUFACTURING, GREGG | 0 | 38 | 98 | 160 | 224 | 291 | EI |
| MANUFACTURING, SMITH | 0 | 0 | 7 | 8 | 7 | 9 | EI |
| MANUFACTURING, VAN ZANDT | 348 | 369 | 383 | 403 | 436 | 456 | EI |
| POETRY WSC | 0 | 0 | 0 | 0 | 0 | 0 | EI |
| ROYSE CITY | 57 | 179 | 329 | 475 | 629 | 771 | EI |
| SHADY GROVE NO 2 WSC | 14 | 15 | 14 | 13 | 12 | 15 | EI |
| SOUTH RAINS SUD | 0 | 12 | 28 | 49 | 70 | 92 | EI |

Table 4.27 detail the shortages in the basin.

Table 4.26 Water Shortages due to Expiration and Insufficient Contract Amounts – Sabine River Basin

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| ABLES SPRINGS SUD | 5 | 9 | 16 | 19 | 22 | 25 | EI |
| B H P WSC | 41 | 133 | 216 | 287 | 356 | 413 | EI |
| BRASHEAR WSC | 36 | 40 | 38 | 37 | 37 | 41 | EI |
| CADDO BASIN SUD | 1,056 | 662 | 732 | 490 | 19 | 211 | EI |
| CASH SUD | 325 | 740 | 864 | 735 | 689 | 995 | EI |
| JOSEPHINE | 3 | 7 | 13 | 17 | 20 | 24 | EI |
| MACBEE SUD | 129 | 207 | 304 | 432 | 597 | 809 | EI |
| MANUFACTURING, GREGG | 0 | 38 | 98 | 160 | 224 | 291 | EI |
| MANUFACTURING, SMITH | 0 | 0 | 7 | 8 | 7 | 9 | EI |
| MANUFACTURING, VAN ZANDT | 348 | 369 | 383 | 403 | 436 | 456 | EI |
| POETRY WSC | 0 | 0 | 0 | 0 | 0 | 0 | EI |
| ROYSE CITY | 57 | 179 | 329 | 475 | 629 | 771 | EI |
| SHADY GROVE NO 2 WSC | 14 | 15 | 14 | 13 | 12 | 15 | EI |
| SOUTH RAINS SUD | 0 | 12 | 28 | 49 | 70 | 92 | EI |

Table 4.27 Actual Water Shortages – Sabine River Basin

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|------------------------------------|-------------------------|--------|--------|--------|--------|--------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| ABLES SPRINGS SUD | 5 | 9 | 16 | 19 | 22 | 25 | A |
| B H P WSC | 41 | 133 | 216 | 287 | 356 | 413 | A |
| BIG SANDY | 19 | 20 | 20 | 16 | 12 | 8 | A |
| BRIGHT STAR SALEM SUD | 0 | 0 | 5 | 46 | 87 | 128 | A |
| CANTON | 0 | 0 | 0 | 0 | 197 | 400 | A |
| CASH SUD | 325 | 740 | 864 | 735 | 689 | 995 | A |
| CELESTE | 14 | 19 | 24 | 28 | 32 | 35 | A |
| COUNTY-OTHER, VAN ZANDT | 54 | 149 | 270 | 350 | 330 | 371 | A |
| CRYSTAL SYSTEMS TEXAS | 204 | 296 | 363 | 393 | 417 | 443 | A |
| EAST MOUNTAIN WATER SYSTEM | 215 | 218 | 217 | 212 | 206 | 202 | A |
| EAST TEXAS MUD | 172 | 385 | 537 | 678 | 820 | 962 | A |
| FRUITVALE WSC | 0 | 3 | 18 | 43 | 76 | 95 | A |
| GLADEWATER | 0 | 0 | 0 | 0 | 0 | 98 | A |
| GOLDEN WSC | 1 | 22 | 39 | 60 | 82 | 103 | A |
| GRAND SALINE | 121 | 128 | 122 | 117 | 120 | 109 | A |
| GREENVILLE | 13,658 | 16,254 | 17,865 | 19,224 | 20,604 | 21,801 | A |
| HALLSVILLE | 0 | 0 | 0 | 0 | 0 | 23 | A |
| HICKORY CREEK SUD | 90 | 125 | 170 | 220 | 276 | 343 | A |
| IRRIGATION, HARRISON | 191 | 191 | 191 | 191 | 191 | 191 | A |
| IRRIGATION, HOPKINS | 106 | 106 | 106 | 106 | 106 | 106 | A |
| IRRIGATION, HUNT | 124 | 124 | 124 | 124 | 124 | 124 | A |
| IRRIGATION, RAINS | 3 | 3 | 3 | 3 | 3 | 3 | A |
| IRRIGATION, SMITH | 156 | 156 | 156 | 156 | 156 | 156 | A |
| LIBERTY CITY WSC | 1 | 3 | 5 | 7 | 9 | 11 | A |
| LIBERTY UTILITIES SILVERLEAF WATER | 331 | 355 | 370 | 391 | 412 | 434 | A |
| LINDALE | 86 | 116 | 153 | 154 | 150 | 158 | A |
| LINDALE RURAL WSC | 291 | 419 | 514 | 594 | 675 | 756 | A |
| LITTLE HOPE MOORE WSC | 8 | 14 | 19 | 25 | 30 | 33 | A |
| LIVESTOCK, HUNT | 23 | 23 | 23 | 23 | 23 | 23 | A |
| MACBEE SUD | 129 | 207 | 304 | 432 | 597 | 809 | A |
| MANUFACTURING, GREGG | 0 | 38 | 98 | 160 | 224 | 291 | A |
| MANUFACTURING, SMITH | 0 | 0 | 7 | 8 | 7 | 9 | A |
| MANUFACTURING, VAN ZANDT | 348 | 369 | 383 | 403 | 436 | 456 | A |
| MANUFACTURING, WOOD | 1,410 | 1,518 | 1,630 | 1,746 | 1,866 | 1,991 | A |
| MILLER GROVE WSC | 36 | 48 | 54 | 62 | 72 | 80 | A |
| MINING, HARRISON | 1,419 | 1,409 | 1,400 | 1,392 | 1,383 | 1,383 | A |
| MINING, WOOD | 59 | 60 | 61 | 60 | 60 | 60 | A |

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| MYRTLE SPRINGS WSC | 37 | 55 | 70 | 90 | 110 | 129 | A |
| NEW HOPE SUD | 167 | 162 | 160 | 141 | 122 | 105 | A |
| PINE RIDGE WSC | 31 | 44 | 55 | 68 | 82 | 106 | A |
| PRITCHETT WSC | 46 | 49 | 46 | 37 | 28 | 19 | A |
| RAMEY WSC | 0 | 73 | 172 | 285 | 415 | 564 | A |
| SCOTTSVILLE | 91 | 116 | 118 | 144 | 170 | 194 | A |
| SOUTHERN UTILITIES | 0 | 0 | 64 | 116 | 170 | 223 | A |
| STAR MOUNTAIN WSC | 31 | 42 | 52 | 57 | 63 | 69 | A |
| VAN | 114 | 111 | 110 | 106 | 101 | 101 | A |
| WEST GREGG SUD | 0 | 0 | 0 | 0 | 0 | 0 | A |
| WHITE OAK | 66 | 88 | 69 | 26 | 0 | 0 | A |
| WINONA | 11 | 30 | 43 | 55 | 66 | 77 | A |

4.2.6 Trinity River Basin

The Trinity Basin includes portions of Hunt and Van Zandt Counties. ~~Actual shortages have been identified and are presented in~~ Table 4.28 ~~and~~ Table 4.29 ~~detail the shortages in this basin.~~

Table 4.28 Water Shortages due to Expiration and Insufficient Contract Amounts – Trinity River Basin

| Insufficient Contract | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|-----------------------|-------------------------|------|------|------|------|-------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| MACBEE SUD | 268 | 387 | 539 | 735 | 985 | 1,314 | EI |

Table 4.29 Actual Water Shortages – Trinity River Basin

| Actual Shortage | Water Shortage ac-ft/yr | | | | | | Shortage Type |
|--------------------|-------------------------|------|------|------|------|------|---------------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 | |
| HICKORY CREEK SUD | 59 | 76 | 96 | 118 | 144 | 174 | A |
| LIVESTOCK, HUNT | 14 | 14 | 14 | 13 | 13 | 13 | A |
| MABANK | 9 | 16 | 22 | 30 | 37 | 44 | A |
| MYRTLE SPRINGS WSC | 93 | 137 | 175 | 224 | 274 | 320 | A |

4.3 Summary of Needs – Major Water Providers

The following section presents the supply/demand analysis for the ~~2918~~ Major Water Providers and additional WUG Sellers in the North East Texas Region that sell more than 1,000 acre-feet in any one year (which thus also represents Wholesale Water Providers for the purposes of the ~~20261~~ Region D Plan).

Table 4.30 presents the summary of contractual needs by Major Water Provider, which considers the potential full legal demand of WWP/WUG Sellers' customers. Subsequent tables present a perspective based on the total water supply for each major water provider assuming that current contracts, permits, and water rights are held constant, and need is assessed by comparison of supply to projected demands, as shown in Tables 4.31 – 4.59.

Commented [TS1]: THIS SECTION TO BE UPDATED BASED ON CONTINUING INPUT FROM MWPS AND WUGS.

The sales/transfer amounts presented in these tables are comprised of current customers' *projected demands up to their current contractual maximums. If (1) an individual customer's projected demand is lower than their contractual maximum, these tables display a sale/transfer amount equivalent to the projected demand. For those instances (2) where an individual customer's projected demand exceeds that customer's current contractual maximum, the sale/transfer amount presented is equivalent to the current contractual maximum.* For either (1) or (2), if supply is the limiting factor then the resultant sale/transfer amount is equivalent to the available supply, whichever is most restrictive. Self-supplied amounts are identified for those WUGs who have not only wholesale water customers, but also their own projected WUG demand.

While this presentation in Tables 4.31 – 4.59 alone does not portray the total current contracted amounts as the full legal demand on supply such as that shown in Table 4.30, it gives wholesale water providers a good approximation of what future demands will be if all current users continue with existing supplies and contracts at projected TWDB demands. Also included in Tables 4.31 – 4.59 is a breakdown of customers with projected needs for each WWP. This additional depiction provides a supplemental perspective to WWPs regarding their existing customers' identified projected needs in the Region D Plan. This represents an indication of potential customer need that could be relevant to an existing WWP. A characterization of the projected demands on supply, by WWP and WUG seller, is presented in Appendix C3-5, while a characterization of the full legal contractual demand on supply, by WWP and WUG seller, is presented in Appendix C3-6.

Table 4.30 Contractual Needs by Major Water Provider

| Name | WWP/WUG Seller | Use | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|------------------------------------|----------------|-------|-------|-------|-------|-------|------------|------------|
| BI COUNTY WSC | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| BRIGHT STAR SALEM SUD | WUG Seller | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| CASH SUD | WUG Seller | MUN | 541 | 632 | 699 | 875 | 1136 | 1121 |
| CHEROKEE WATER COMPANY | MWP | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| COMMERCE | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MUN | 516 | 516 | 516 | 516 | 516 | 516 |
| COOPER | WUG Seller | MUN | 86 | 89 | 90 | 92 | 118 | 309 |
| EMORY | WUG Seller | MUN | 527 | 526 | 526 | 525 | 525 | 525 |
| FRANKLIN COUNTY WD | MWP | MUN | 1464 | 1816 | 2168 | 2521 | 2872 | 3224 |
| GLADEWATER | WUG Seller | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| GRAND SALINE | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| GREENVILLE | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MUN | 1898 | 1837 | 1736 | 1592 | 1484 | 1431 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| HUGHES SPRINGS | WUG Seller | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| KILGORE | WUG Seller | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| LAMAR COUNTY WSD | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MUN | 139 | 139 | 139 | 139 | 139 | 139 |
| LONGVIEW | WUG Seller | MAN | 2940 | 2942 | 2942 | 2942 | 2942 | 2942 |
| | | MUN | 4045 | 4045 | 4045 | 4045 | 4045 | 4045 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| MARSHALL | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| MOUNT PLEASANT | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MUN | 1 | 420 | 818 | 1180 | 1513 | 1831 |
| NORTHEAST TEXAS MWD | MWP | MAN | 100 | 100 | 100 | 100 | 100 | 100 |
| | | MUN | 32302 | 32302 | 32302 | 32302 | 32302 | 32302 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| PARIS | WUG Seller | MAN | 0 | 0 | 25 | 403 | 589 | 571 |
| | | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| POINT | WUG Seller | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| RIVERBEND WATER RESOURCES DISTRICT | WUG Seller | MAN | 59928 | 66509 | 74735 | 82961 | 10081 3 | 10081 3 |
| | | MUN | 12434 | 12697 | 12998 | 13391 | 13746 | 13748 |

| Name | WWP/WUG Seller | Use | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
|------------------------|----------------|-------|---------------|---------------|---------------|---------------|---------------|---------------|
| SABINE RIVER AUTHORITY | MWP | IRR | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MAN | 0 | 343 | 376 | 408 | 443 | 478 |
| | | MIN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MUN | 49769 | 38663 | 41593 | 44759 | 48118 | 48067 |
| | | POWER | 0 | 0 | 0 | 0 | 0 | 0 |
| | | WWP | 619 | 546 | 636 | 726 | 806 | 908 |
| SULPHUR RIVER MWD | MWP | MUN | 1072 | 1072 | 1072 | 1072 | 1072 | |
| SULPHUR SPRINGS | WUG Seller | LIV | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MAN | 0 | 0 | 0 | 0 | 0 | 0 |
| | | MIN | 132 | 146 | 159 | 173 | 189 | 214 |
| | | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| TEXARKANA | WUG Seller | MUN | 57370 | 57377 | 57384 | 57385 | 57385 | 57385 |
| TITUS COUNTY FWD 1 | MWP | MUN | 11100 | 11100 | 11100 | 11100 | 11100 | 11100 |
| | | POWER | 2700 | 3240 | 3780 | 4320 | 4860 | 5400 |
| WHITE OAK | WUG Seller | MUN | 0 | 0 | 0 | 0 | 0 | 0 |
| GRAND TOTAL | | | 239683 | 237057 | 249939 | 263527 | 286813 | 288241 |

4.3.1 Bi County Water Supply Corporation

Bi County Water Supply Corporation (WSC) gets its water supplies directly from the Carrizo-Wilcox Aquifer. The water district supplies water to Camp and Titus counties for their manufacturing and power needs, respectively, as well as its own municipal needs. As shown in Table 4.31, Bi County WSC has a small surplus of 17 ac-ft/yr.

Table 4.31 Water Supplies and Demands for Bright Star Salem Water Supply Corporation

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CARRIZO-WILCOX AQUIFER | 1,846 | 1,846 | 1,846 | 1,846 | 1,846 | 1,846 |
| TOTAL | 1,846 | 1,846 | 1,846 | 1,846 | 1,846 | 1,846 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| MANUFACTURING, CAMP | 2 | 2 | 2 | 2 | 2 | 2 |
| STEAM-ELECTRIC POWER, TITUS | 3 | 3 | 3 | 3 | 3 | 3 |
| SELF-SUPPLIED: | | | | | | |
| BI COUNTY WSC | 1,824 | 1,824 | 1,824 | 1,824 | 1,824 | 1,824 |
| TOTAL | 1,829 | 1,829 | 1,829 | 1,829 | 1,829 | 1,829 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 17 | 17 | 17 | 17 | 17 | 17 |

Customers of Bi County WSC are projected to have shortages beginning in 2030. Table 4.32 presents the Bi County WSC customer WUGs with projected shortages.

Table 4.32 Bi County Water Supply Corporation Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| MANUFACTURING, CAMP | 42 | 44 | 46 | 48 | 50 | 52 |
| STEAM-ELECTRIC POWER, TITUS | 0 | 0 | 0 | 1 | 1 | 1 |
| TOTAL | 42 | 44 | 46 | 49 | 51 | 53 |

4.3.2 Bright Star Salem Special Utility District

Bright Star Salem Special Utility District (SUD) buys supplies from the Sabine River Authority, which come from Fork Lake, and gets additional direct supply from the Carrizo-Wilcox Aquifer. The water district supplies water to South Rains SUD, as well as its own municipal needs. As shown in Table 4.33, Bright Star Salem has a surplus.

Table 4.33 Water Supplies and Demands for Bright Star Salem Special Utility District

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CARRIZO-WILCOX AQUIFER | 777 | 777 | 777 | 777 | 777 | 777 |
| FORK LAKE/RESERVOIR | 354 | 758 | 750 | 742 | 734 | 725 |
| TOTAL | 1,131 | 1,535 | 1,527 | 1,519 | 1,511 | 1,502 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| SOUTH RAINS SUD | 90 | 90 | 90 | 90 | 90 | 90 |
| SELF-SUPPLIED: | | | | | | |
| BRIGHT STAR SALEM SUD | 1,445 | 1,437 | 1,429 | 1,421 | 1,412 | 1,412 |
| TOTAL | 1,535 | 1,527 | 1,519 | 1,511 | 1,502 | 1,502 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -404 | 8 | 8 | 8 | 9 | 0 |

Bright Star Salem SUD's customer, South Rains SUD, is projected to have shortages beginning in 2040.

Table 4.34 presents these projected shortages.

Table 4.34 Bright Star Salem Special Utility District Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|------------------|----------|----------|----------|-----------|-----------|-----------|
| SOUTH RAINS SUD | 0 | 4 | 9 | 16 | 23 | 30 |
| TOTAL | 0 | 4 | 9 | 16 | 23 | 30 |

4.3.3 Cash SUD

Cash SUD is a public water supply located primarily in Hunt County. The special utility district sells water to the City of Lone Oak, Caddo Mills, Hunt County, and the City of Quinlan. ~~In addition to meeting the needs of its retail customers, Cash SUD supplies water to consumers in Hunt, Hopkins, Rains and Rockwall counties.~~ Current water supply is from the Sabine River Authority (SRA) and North Texas Municipal Water District (NTMWD). Cash SUD is projected to have water supply deficits in the current planning period, as shown in Table 4.35.

Table 4.35 Water Supplies and Demands for Cash SUD

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|---------------------------------------|--------------|--------------|---------------|---------------|---------------|--------------|
| FORK LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 3,325 |
| INDIRECT REUSE | 372 | 355 | 334 | 322 | 307 | 298 |
| NORTH TEXAS MWD LAKE/RESERVOIR SYSTEM | 624 | 521 | 441 | 387 | 352 | 330 |
| TAWAKONI LAKE/RESERVOIR | 1,701 | 1,780 | 1,839 | 2,285 | 3,437 | 2,364 |
| TOTAL | 2,697 | 2,656 | 2,614 | 2,994 | 4,096 | 6,317 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| CADDO MILLS | 67 | 67 | 67 | 67 | 67 | 67 |
| COUNTY-OTHER, HUNT | 374 | 604 | 790 | 1,200 | 1,908 | 1,908 |
| QUINLAN | 240 | 258 | 276 | 292 | 307 | 322 |
| SELF-SUPPLIED: | | | | | | |
| CASH SUD | 2,595 | 2,558 | 2,883 | 3,437 | 3,699 | 3,684 |
| TOTAL | 3,276 | 3,487 | 4,016 | 4,996 | 5,981 | 5,981 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -579 | -831 | -1,402 | -2,002 | -1,885 | 336 |

Hunt County-Other, which obtains supply from Cash SUD, is projected to have increasing shortages starting in 2034, as presented in Table 4.36.

Table 4.36 Cash SUD Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------|------------|------------|------------|------------|------------|-----------|
| COUNTY-OTHER, HUNT | 193 | 185 | 204 | 184 | 131 | 93 |
| TOTAL | 193 | 185 | 204 | 184 | 131 | 93 |

4.3.4 Cherokee Water Company

This provider supplies the City of Longview and industry with surface water supply from Lake Cherokee in Gregg and Rusk Counties, Region I. Longview obtains water from three major water providers, Cherokee Water, Sabine River Authority, and Northeast Texas Municipal Water District, as well as owning water rights from the Sabine River. At projected sale/transfer Cherokee Water Company will have adequate supply, as shown in Table 4.37.

Table 4.37 Water Supplies and Demands for Cherokee Water Company

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| CHEROKEE LAKE/RESERVOIR | 31,456 | 31,309 | 31,162 | 31,015 | 30,867 | 30,720 |
| TOTAL | 31,456 | 31,309 | 31,162 | 31,015 | 30,867 | 30,720 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| LONGVIEW | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| STEAM-ELECTRIC POWER, GREGG | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,094 |
| TOTAL | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,094 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 13,456 | 13,309 | 13,162 | 13,015 | 12,867 | 12,626 |

4.3.5 City of Commerce (Commerce Water District)

The City of Commerce is served by the Commerce Water District, located in Hunt County, which buys most of its water from the Sabine River Authority, with additional supply from five wells into the Nacatoch Aquifer. ~~The city also has a contract with the Sulphur River Municipal Water District (SRMWD) for 16,000 ac-ft/yr, which has been leased to the Upper Trinity for 50 years.~~ Commerce supplies North Hunt SUD, ~~Texas A&M University Commerce, Gafford Chapel WSC,~~ rural areas in Delta ~~and Hunt Counties,~~ and Manufacturing in Hunt County. In addition, Commerce Water District serves its own municipal needs. Available supplies, demands, and needs are shown in Table 4.38.

Table 4.38 Water Supplies and Demands for Commerce

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| NACATOCH AQUIFER | 322 | 322 | 322 | 322 | 322 | 322 |
| TAWAKONI LAKE/RESERVOIR | 1,629 | 6,025 | 5,975 | 5,531 | 3,917 | 3,884 |
| TOTAL | 1,951 | 6,347 | 6,297 | 5,853 | 4,239 | 4,206 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, DELTA | 74 | 74 | 74 | 74 | 74 | 74 |
| GAFFORD CHAPEL WSC | 3 | 3 | 3 | 3 | 3 | 3 |
| MANUFACTURING, HUNT | 67 | 67 | 67 | 67 | 67 | 67 |
| NORTH HUNT SUD | 147 | 147 | 147 | 147 | 147 | 147 |
| TEXAS A&M UNIVERSITY COMMERCE | 1 | 1 | 1 | 1 | 1 | 1 |
| SELF-SUPPLIED: | | | | | | |
| COMMERCE | 2,130 | 2,130 | 2,130 | 2,130 | 2,130 | 2,130 |
| TOTAL | 2,422 | 2,422 | 2,422 | 2,422 | 2,422 | 2,422 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -471 | 3,925 | 3,875 | 3,431 | 1,817 | 1,784 |

Customers of the City of Commerce are projected to have shortages beginning in 2032. Table 4.39 presents the City of Commerce customer WUGs with projected shortages.

Table 4.39 City of Commerce Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-------------------------------|------------|------------|------------|------------|------------|------------|
| NORTH HUNT SUD | 135 | 131 | 126 | 121 | 114 | 107 |
| TEXAS A&M UNIVERSITY COMMERCE | 2 | 2 | 2 | 2 | 2 | 2 |
| TOTAL | 137 | 133 | 128 | 123 | 116 | 109 |

4.3.6 City of Cooper

The City of Cooper supplies Delta County MUD, as well as rural portions of Delta and Hunt counties. The city also supplies its own municipal needs. The City of Cooper buys water from Sulphur River MWD, coming from the Chapman/Cooper Lake Non-System Portion, and supplies its own additional water from Big Creek Lake. Available supplies and demands are shown in Table 4.40.

Table 4.40 Water Supplies and Demands for City of Cooper

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--|--------------|--------------|--------------|--------------|------------|------------|
| BIG CREEK LAKE/RESERVOIR | 940 | 752 | 564 | 376 | 188 | 0 |
| CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 767 | 749 | 731 | 712 | 694 | 676 |
| SULPHUR RUN-OF-RIVER | 60 | 60 | 60 | 60 | 60 | 60 |
| TOTAL | 1,767 | 1,561 | 1,355 | 1,148 | 942 | 736 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, DELTA | 0 | 0 | 0 | 0 | 0 | 0 |
| COUNTY-OTHER, HUNT | 0 | 0 | 0 | 0 | 0 | 0 |
| DELTA COUNTY MUD | 198 | 202 | 205 | 209 | 188 | 0 |
| SELF-SUPPLIED: | | | | | | |
| COOPER | 1,509 | 1,299 | 1,090 | 879 | 694 | 676 |
| TOTAL | 1,707 | 1,501 | 1,295 | 1,088 | 882 | 676 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 60 | 60 | 60 | 60 | 60 | 60 |

Customers of the City of Cooper are projected to have shortages beginning in 2070. Table 4.41 presents City of Cooper customer WUGs with projected shortages.

Table 4.41 City of Cooper Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------|----------|----------|----------|----------|-----------|------------|
| COUNTY-OTHER, HUNT | 0 | 0 | 0 | 0 | 0 | 0 |
| DELTA COUNTY MUD | 0 | 0 | 0 | 0 | 23 | 215 |
| TOTAL | 0 | 0 | 0 | 0 | 23 | 215 |

4.3.7 City of Emory

The City of Emory supplies East Tawakoni ~~and rural portions of Rains County and South Rains SUD~~. In addition, the city serves its own municipal needs. The City of Emory buys water from the Sabine River Authority. The current contract with the authority is for 3,229 ac-ft/yr. Available supplies and demands are shown in Table 4.42.

Table 4.42 Water Supplies and Demands for City of Emory

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TAWAKONI LAKE/RESERVOIR | 1,218 | 1,267 | 1,272 | 1,276 | 1,280 | 1,283 |
| TOTAL | 1,218 | 1,267 | 1,272 | 1,276 | 1,280 | 1,283 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| EAST TAWAKONI | 246 | 247 | 247 | 248 | 248 | 248 |
| SOUTH RAINS SUD | 192 | 188 | 187 | 187 | 188 | 188 |
| SELF-SUPPLIED: | | | | | | |
| EMORY | 829 | 837 | 842 | 845 | 847 | 847 |
| TOTAL | 1,267 | 1,272 | 1,276 | 1,280 | 1,283 | 1,283 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -49 | -5 | -4 | -4 | -3 | 0 |

South Rains SUD, a customer of the City of Emory, is projected to have shortages beginning in 2040. Table 4.43 presents these projected shortages.

Table 4.43 City of Emory Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|------------------|----------|----------|-----------|-----------|-----------|-----------|
| SOUTH RAINS SUD | 0 | 8 | 19 | 33 | 47 | 62 |
| TOTAL | 0 | 8 | 19 | 33 | 47 | 62 |

4.3.8 Franklin County Water District

The Franklin County Water District (FCWD) holds water rights in Lake Cypress Springs of 15,300 ac-ft, which exceeds the firm yield calculated for the reservoir using the Cypress Basin WAM. FCWD serves wholesale customers only, which include Cypress Springs SUD, the City of Mount Vernon, and the City of Winnsboro. Available supplies and demands are shown in Table 4.44.

Table 4.44 Water Supplies and Demands for Franklin County Water District

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| CYPRESS SPRINGS LAKE/RESERVOIR | 8,036 | 7,684 | 7,332 | 6,980 | 6,628 | 6,276 |
| TOTAL | 8,036 | 7,684 | 7,332 | 6,980 | 6,628 | 6,276 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| CYPRESS SPRINGS SUD | 3,806 | 3,640 | 3,473 | 3,306 | 3,140 | 2,973 |
| MOUNT VERNON | 2,538 | 2,426 | 2,315 | 2,204 | 2,093 | 1,982 |
| WINNSBORO | 1,692 | 1,618 | 1,544 | 1,469 | 1,395 | 1,321 |
| TOTAL | 8,036 | 7,684 | 7,332 | 6,979 | 6,628 | 6,276 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 1 | 0 | 0 |

4.3.9 City of Gladewater

The City of Gladewater gets its water supplies directly from Gladewater Lake. The city supplies water to rural areas of Gregg, Smith, and Upshur counties, as well as its own municipal needs. Available supplies and demands are shown in Table 4.45.

Table 4.45 Water Supplies and Demands for the City of Gladewater

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| GLADEWATER LAKE/RESERVOIR | 1,868 | 1,868 | 1,868 | 1,868 | 1,868 | 1,560 |
| TOTAL | 1,868 | 1,868 | 1,868 | 1,868 | 1,868 | 1,560 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, GREGG | 154 | 154 | 154 | 154 | 154 | 54 |
| COUNTY-OTHER, SMITH | 23 | 23 | 23 | 23 | 23 | 23 |
| COUNTY-OTHER, UPSHUR | 112 | 112 | 112 | 112 | 112 | 112 |
| SELF-SUPPLIED: | | | | | | |
| GLADEWATER | 1,579 | 1,579 | 1,579 | 1,579 | 1,579 | 1,371 |
| TOTAL | 1,868 | 1,868 | 1,868 | 1,868 | 1,868 | 1,560 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

4.3.10 Golden Water Supply Corporation

Golden Water Supply Corporation (WSC) gets its water supplies directly from the Carrizo-Wilcox Aquifer. The company currently does not supply any other WUGs, but does provide its own municipal water supplies. Table 4.46 provides available supplies and demands for this company.

Table 4.46 Water Supplies and Demands for Golden Water Supply Corporation

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|------------|------------|------------|------------|------------|------------|
| CARRIZO-WILCOX AQUIFER | 565 | 565 | 565 | 565 | 565 | 565 |
| TOTAL | 565 | 565 | 565 | 565 | 565 | 565 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| SELF-SUPPLIED: | | | | | | |
| GOLDEN WSC | 392 | 392 | 392 | 392 | 392 | 392 |
| TOTAL | 392 | 392 | 392 | 392 | 392 | 392 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 173 | 173 | 173 | 173 | 173 | 173 |

4.3.11 City of Greenville

The City of Greenville owns several small city lakes, which have a combined firm yield of 3,421 ac-ft/yr. In addition, Greenville has a contract with the Sabine River Authority for supply from Lake Tawakoni. Greenville supplies water to its own municipal, mining, and industrial customers as well as Jacobia WSC, Shady Grove WSC, and the City of Caddo Mills. The City currently owns and operates a 13 MGD WTP (approx. 8,090 ac-ft/yr with 1.8 peaking factor), and supplies 373 ac-ft/yr of raw water supply to steam-electric power generation in Hunt County. [Available supplies and demands are shown in Table 4.47.](#) ~~Greenville has a projected water supply deficit beginning in 2020.~~

Table 4.47 Water Supplies and Demands for the City of Greenville

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| GREENVILLE CITY LAKE/RESERVOIR | 3,318 | 3,318 | 3,318 | 3,318 | 3,318 | 3,318 |
| TAWAKONI LAKE/RESERVOIR | 10,297 | 20,362 | 20,194 | 20,027 | 19,879 | 19,690 |
| TOTAL | 13,615 | 23,680 | 23,512 | 23,345 | 23,197 | 23,008 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| CADDO MILLS | 186 | 201 | 242 | 309 | 319 | 319 |
| COUNTY-OTHER, HUNT | 806 | 806 | 806 | 806 | 806 | 734 |
| MANUFACTURING, HUNT | 965 | 1,146 | 1,319 | 1,438 | 1,624 | 1,624 |
| SHADY GROVE SUD | 174 | 220 | 280 | 357 | 455 | 580 |
| STEAM-ELECTRIC POWER, HUNT | 373 | 373 | 373 | 373 | 373 | 373 |
| SELF-SUPPLIED: | | | | | | |
| GREENVILLE | 5,752 | 5,553 | 5,338 | 5,147 | 4,950 | 4,950 |
| TOTAL | 8,256 | 8,299 | 8,358 | 8,430 | 8,527 | 8,580 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 5,359 | 15,381 | 15,154 | 14,915 | 14,670 | 14,428 |

~~Several customers of City of Greenville are projected to have shortages beginning in 2020. Table 4.64 presents the City of Greenville customer WUGs with projected shortages.~~

4.3.12 City of Grand Saline

The City of Grand Saline supplies manufacturing in Van Zandt county, as well as its own municipal needs. The city supplies its own water from the Carrizo-Wilcox Aquifer. Available supplies and demands are shown in Table 4.48.

Table 4.48 Water Supplies and Demands for the City of Grand Saline

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|------------|------------|------------|------------|------------|------------|
| CARRIZO-WILCOX AQUIFER | 360 | 360 | 374 | 379 | 376 | 388 |
| SABINE RUN-OF-RIVER | 112 | 112 | 112 | 112 | 112 | 112 |
| TOTAL | 472 | 472 | 486 | 491 | 488 | 500 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| MANUFACTURING, VAN ZANDT | 15 | 15 | 15 | 15 | 14 | 14 |
| SELF-SUPPLIED: | | | | | | |
| GRAND SALINE | 345 | 345 | 359 | 364 | 362 | 374 |
| TOTAL | 360 | 360 | 374 | 379 | 376 | 388 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 112 | 112 | 112 | 112 | 112 | 112 |

Manufacturing in Van Zandt, a customer of the City of Grand Saline, is projected to have shortages beginning in 2030. Table 4.49 presents these projected shortages.

Table 4.49 City of Grand Saline Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| MANUFACTURING, VAN ZANDT | 18 | 20 | 21 | 22 | 23 | 24 |
| TOTAL | 18 | 20 | 21 | 22 | 23 | 24 |

4.3.13 City of Hughes Springs

The City of Hughes Springs supplies Holly Springs WSC, as well as its own municipal needs. The city buys water from Northeast Texas MWD, coming from Lake O' the Pines. Available supplies and demands are shown in Table 4.48.

Table 4.50 Water Supplies and Demands for the City of Hughes Springs

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|------------|------------|------------|------------|------------|------------|
| O' THE PINES LAKE/RESERVOIR | 656 | 656 | 656 | 656 | 656 | 656 |
| TOTAL | 656 | 656 | 656 | 656 | 656 | 656 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| HOLLY SPRINGS WSC | 92 | 92 | 92 | 92 | 92 | 92 |
| SELF-SUPPLIED: | | | | | | |
| HUGHES SPRINGS | 562 | 562 | 562 | 562 | 562 | 562 |
| TOTAL | 654 | 654 | 654 | 654 | 654 | 654 |

| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|----------|----------|----------|----------|----------|----------|
| TOTAL | 2 | 2 | 2 | 2 | 2 | 2 |

[Holly Springs WSC, a customer of the City of Hughes Springs, is projected to have shortages beginning in 2030. Table 4.51 presents these projected shortages.](#)

Table 4.51 City of Grand Saline Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-------------------|-----------|-----------|-----------|----------|----------|----------|
| HOLLY SPRINGS WSC | 35 | 26 | 16 | 9 | 2 | 0 |
| TOTAL | 35 | 26 | 16 | 9 | 2 | 0 |

4.3.14 City of Kilgore

[The City of Kilgore supplies Cross Roads SUD, rural areas of Gregg county, and its own municipal needs. The city buys water from the Sabine River Authority, coming from Fork Lake, and provides additional supplies itself from the Carrizo-Wilcox Aquifer. Available supplies and demands are shown in Table 4.52.](#)

Table 4.52 Water Supplies and Demands for the City of Hughes Springs

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|---------------|--------------|--------------|--------------|--------------|--------------|
| CARRIZO-WILCOX AQUIFER | 1,554 | 1,554 | 1,554 | 1,554 | 1,554 | 1,554 |
| FORK LAKE/RESERVOIR | 2,240 | 6,063 | 5,998 | 5,937 | 5,919 | 6,411 |
| TOTAL | 3,794 | 7,617 | 7,552 | 7,491 | 7,473 | 7,965 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, GREGG | 621 | 663 | 730 | 808 | 900 | 900 |
| CROSS ROADS SUD | 307 | 324 | 349 | 380 | 413 | 413 |
| SELF-SUPPLIED: | | | | | | |
| KILGORE | 6,630 | 6,506 | 6,353 | 6,226 | 6,593 | 6,593 |
| TOTAL | 7,558 | 7,493 | 7,432 | 7,414 | 7,906 | 7,906 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -3,764 | 124 | 120 | 77 | -433 | 59 |

4.3.15 Lamar County Water Supply District

Lamar County Water Supply District (LCWSD) buys water from the City of Paris, the source being Pat Mayse Lake. The water district supplies water to several other water supply companies and cities, manufacturing, and its own retail needs. As shown in Table 4.53, LCWSD has a water supply surplus.

Table 4.53 Water Supplies and Demands for Lamar County Water Supply District

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| PAT MAYSE LAKE/RESERVOIR | 13,442 | 13,442 | 13,442 | 13,442 | 13,442 | 13,442 |
| TOTAL | 13,442 | 13,442 | 13,442 | 13,442 | 13,442 | 13,442 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| 410 WSC | 218 | 213 | 212 | 211 | 211 | 211 |
| BLOSSOM | 230 | 245 | 245 | 245 | 245 | 245 |
| COUNTY-OTHER, LAMAR | 280 | 285 | 283 | 281 | 279 | 279 |
| COUNTY-OTHER, RED RIVER | 250 | 247 | 247 | 247 | 247 | 247 |
| MANUFACTURING, LAMAR | 900 | 941 | 976 | 1,042 | 1,077 | 1,077 |
| RED RIVER COUNTY WSC | 184 | 184 | 184 | 184 | 184 | 184 |
| RENO (LAMAR) | 699 | 754 | 814 | 873 | 935 | 935 |
| SELF-SUPPLIED: | | | | | | |
| LAMAR COUNTY WSD | 8,796 | 8,715 | 8,655 | 8,597 | 8,512 | 8,512 |
| TOTAL | 11,557 | 11,584 | 11,616 | 11,680 | 11,690 | 11,690 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 1,885 | 1,858 | 1,826 | 1,762 | 1,752 | 1,752 |

While LCWSD does not have any projected water supply shortages, ~~Lamar County-Other~~ several of their customers are projected to have shortages beginning in 2032, as shown in Table 4.54.

Table 4.54 LCWSD Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-------------------------|------------|------------|------------|------------|------------|------------|
| 410 WSC | 135 | 122 | 106 | 94 | 81 | 68 |
| COUNTY-OTHER, LAMAR | 121 | 114 | 114 | 114 | 115 | 113 |
| COUNTY-OTHER, RED RIVER | 14 | 6 | 0 | 0 | 0 | 0 |
| MANUFACTURING, LAMAR | 315 | 320 | 332 | 315 | 332 | 384 |
| TOTAL | 584 | 561 | 547 | 507 | 497 | 514 |

4.3.16 City of Longview

The City of Longview purchases water supplies from the Northeast Texas Municipal Water District (NETMWD), Cherokee Water Co., SRA, and owns water rights on Big Sandy Creek and the Sabine River.

Table 4.55 shows Longview is projected to have a supply surplus throughout the planning period starting in 2040.

Table 4.55 Water Supplies and Demands for the City of Longview

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| BIG SANDY CREEK LAKE/RESERVOIR | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 |
| CHEROKEE LAKE/RESERVOIR | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| DIRECT REUSE | 6,161 | 6,161 | 6,161 | 6,161 | 6,161 | 6,161 |
| FORK LAKE/RESERVOIR | 8,000 | 18,042 | 17,850 | 17,666 | 17,470 | 17,271 |
| O' THE PINES LAKE/RESERVOIR | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| SABINE RUN-OF-RIVER | 12,670 | 12,670 | 12,670 | 12,670 | 12,670 | 12,670 |
| TOTAL | 65,511 | 75,553 | 75,361 | 75,177 | 74,981 | 74,782 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, GREGG | 50 | 50 | 50 | 50 | 50 | 50 |
| ELDERVILLE WSC | 566 | 566 | 566 | 566 | 566 | 566 |
| GUM SPRINGS WSC | 2,940 | 2,940 | 2,940 | 2,940 | 2,940 | 2,940 |
| HALLSVILLE | 887 | 887 | 887 | 887 | 887 | 887 |
| MANUFACTURING, GREGG | 1,092 | 1,092 | 1,092 | 1,092 | 1,092 | 1,092 |
| MANUFACTURING, HARRISON | 5,404 | 5,404 | 5,404 | 5,404 | 5,404 | 5,404 |
| STEAM-ELECTRIC POWER, HARRISON | 6,161 | 6,161 | 6,161 | 6,161 | 6,161 | 6,161 |
| WHITE OAK | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 |
| SELF-SUPPLIED: | | | | | | |
| LONGVIEW | 52,243 | 52,276 | 52,308 | 52,343 | 52,378 | 52,378 |
| TOTAL | 72,023 | 72,056 | 72,088 | 72,123 | 72,158 | 72,158 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -6,512 | 3,497 | 3,273 | 3,054 | 2,823 | 2,624 |

The City of Longview's identified projected customer shortages are presented in Table 4.56.

Table 4.56 City of Longview Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|----------------------|----------|-----------|-----------|-----------|------------|------------|
| HALLSVILLE | 0 | 0 | 0 | 0 | 0 | 21 |
| MANUFACTURING, GREGG | 0 | 26 | 68 | 111 | 156 | 202 |
| WHITE OAK | 66 | 88 | 69 | 26 | 0 | 0 |
| TOTAL | 0 | 12 | 41 | 82 | 121 | 162 |

4.3.17 City of Marshall

This water provider, located in Harrison County, supplies water to ~~several water supply corporations including Cypress Valley WSC, Talley WSC, Gill WSC, and Harrison County Leigh WSC,~~ with water from the Big Cypress Bayou and Lake O' the Pines. It also supplies its own water needs. Marshall is projected to have sufficient supplies, as shown in Table 4.57.

Table 4.57 Water Supplies and Demands for the City of Marshall

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| CYPRESS RUN-OF-RIVER | 7,240 | 7,240 | 7,240 | 7,240 | 7,240 | 7,240 |
| O' THE PINES LAKE/RESERVOIR | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| TOTAL | 16,240 | 16,240 | 16,240 | 16,240 | 16,240 | 16,240 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, HARRISON | 323 | 323 | 323 | 323 | 323 | 323 |
| GILL WSC | 100 | 100 | 100 | 100 | 100 | 100 |
| MANUFACTURING, HARRISON | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 |
| SELF-SUPPLIED: | | | | | | |
| MARSHALL | 13,817 | 13,817 | 13,817 | 13,817 | 13,817 | 13,817 |
| TOTAL | 16,240 | 16,240 | 16,240 | 16,240 | 16,240 | 16,240 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

Customers of the City of Marshall are not projected to have shortages during the planning period.

4.3.18 City of Mount Pleasant

The City of Mount Pleasant has water rights in Lake Cypress Springs and Lake Tankersley. The city also has a contract with Titus County Freshwater Supply District for 30,000 ac-ft from Lake Bob Sandlin. Mount Pleasant provides water to its own municipal customers as well as some of the manufacturing users in Titus County. Mount Pleasant's wholesale customers include Tri SUD and the City of Winfield. Lake Bob Sandlin State Park is a separate entity from Mount Pleasant, but is treated as a retail customer. The city is projected to have a surplus of 13,910 ac-ft/yr in 2020, reducing to a surplus of 9,392 ac-ft/yr by 2070, as shown in Table 4.58, the city is projected to have surpluses throughout the planning period.

Table 4.58 Water Supplies and Demands for the City of Mount Pleasant

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| BOB SANDLIN LAKE/RESERVOIR | 18,900 | 18,900 | 18,900 | 18,900 | 18,900 | 18,900 |
| CYPRESS RUN-OF-RIVER | 400 | 400 | 400 | 400 | 400 | 400 |
| CYPRESS SPRINGS LAKE/RESERVOIR | 2,464 | 2,356 | 2,248 | 2,140 | 2,032 | 1,924 |
| TANKERSLEY LAKE/RESERVOIR | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |
| TOTAL | 23,264 | 23,156 | 23,048 | 22,940 | 22,832 | 22,724 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, FRANKLIN | 14 | 16 | 17 | 17 | 17 | 17 |
| COUNTY-OTHER, TITUS | 687 | 743 | 776 | 810 | 848 | 890 |
| MANUFACTURING, TITUS | 3,345 | 3,409 | 3,472 | 3,483 | 3,617 | 3,651 |
| TRI SUD | 1,727 | 1,859 | 2,011 | 2,200 | 2,417 | 2,650 |
| SELF-SUPPLIED: | | | | | | |

| | | | | | | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MOUNT PLEASANT | 17,237 | 16,880 | 16,538 | 16,041 | 15,624 | 15,516 |
| TOTAL | 23,010 | 22,907 | 22,814 | 22,551 | 22,523 | 22,724 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 254 | 249 | 234 | 389 | 309 | 0 |

Table 4.59 presents the City of Mount Pleasant customer WUGs with projected shortages. **Manufacturing customers of the City of Mount Pleasant are projected to have shortages beginning in 2030.**

Table 4.59 City of Mount Pleasant Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|----------------------|------------|------------|------------|--------------|--------------|--------------|
| MANUFACTURING, TITUS | 345 | 339 | 375 | 505 | 602 | 645 |
| TRI SUD | 497 | 580 | 572 | 541 | 465 | 355 |
| TOTAL | 842 | 919 | 947 | 1,046 | 1,067 | 1,000 |

4.3.19 Northeast Texas Municipal Water District

The Northeast Texas Municipal Water District (NETMWD) obtains water from numerous sources, listed below, and supplies the cities of Avinger, Daingerfield, Hughes Springs, Jefferson, Lone Star, Longview, Marshall, Ore City, and Pittsburg. Also supplied are Diana SUD, Harleton WSC, Tryon Road SUD, and Mims WSC. The NETMWD has existing contracts to supply an aggregate of 46,668 ac-ft to three power plants owned by AEP-SWEPCO and one power plant operated by Luminant. U.S. Steel has a contractual right to 32,400 ac-ft of water in Lake O' the Pines. The NETMWD is projected to maintain a supply surplus throughout the planning period, which is shown in Table 4.60.

Table 4.60 Water Supplies and Demands for Northeast Texas Municipal Water District

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| BOB SANDLIN LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| ELLISON CREEK LAKE/RESERVOIR | 22,180 | 22,180 | 22,180 | 22,180 | 22,180 | 22,180 |
| MONTICELLO LAKE/RESERVOIR | 5,000 | 4,560 | 4,120 | 3,680 | 3,240 | 2,800 |
| O' THE PINES LAKE/RESERVOIR | 159,000 | 157,500 | 156,000 | 154,500 | 153,000 | 151,500 |
| WELSH LAKE/RESERVOIR | 2,900 | 2,620 | 2,340 | 2,060 | 1,780 | 1,500 |
| TOTAL | 189,080 | 186,860 | 184,640 | 182,420 | 180,200 | 177,980 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| AVINGER | 302 | 302 | 302 | 302 | 302 | 302 |
| COUNTY-OTHER, CASS | 0 | 0 | 0 | 0 | 0 | 0 |
| COUNTY-OTHER, MARION | 169 | 169 | 169 | 169 | 169 | 169 |
| DAINGERFIELD | 1,582 | 1,582 | 1,582 | 1,582 | 1,582 | 1,582 |
| DIANA SUD | 595 | 595 | 595 | 595 | 595 | 595 |
| HARLETON WSC | 68 | 68 | 68 | 68 | 68 | 68 |
| HUGHES SPRINGS | 656 | 656 | 656 | 656 | 656 | 656 |
| JEFFERSON | 1,509 | 1,509 | 1,509 | 1,509 | 1,509 | 1,509 |
| LONE STAR | 747 | 747 | 747 | 747 | 747 | 747 |

| | | | | | | |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| LONGVIEW | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| MANUFACTURING, CAMP | 0 | 0 | 0 | 0 | 0 | 0 |
| MANUFACTURING, MORRIS | 45,437 | 45,437 | 45,437 | 45,437 | 45,437 | 45,437 |
| MARSHALL | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| MIMS WSC | 896 | 896 | 896 | 896 | 896 | 896 |
| ORE CITY | 1,504 | 1,504 | 1,504 | 1,504 | 1,504 | 1,504 |
| PITTSBURG | 0 | 0 | 0 | 0 | 0 | 0 |
| STEAM-ELECTRIC POWER, HARRISON | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 |
| STEAM-ELECTRIC POWER, TITUS | 22,300 | 21,580 | 20,860 | 20,140 | 19,420 | 18,700 |
| STEAM-ELECTRIC POWER, MARION | 6,668 | 6,668 | 6,668 | 6,668 | 6,668 | 6,668 |
| TRYON ROAD SUD | 1,822 | 1,822 | 1,822 | 1,822 | 1,822 | 1,822 |
| TOTAL | 131,255 | 130,535 | 129,815 | 129,095 | 128,375 | 127,655 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 57,825 | 56,325 | 54,825 | 53,325 | 51,825 | 50,325 |

While NETMWD does not have any projected water supply shortages, several NETMWD customers are projected to have shortages beginning in 20230, predominantly from currently projected needs for steam electric power generation as shown in Table 4.61.

Table 4.61 NETMWD Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|------------|--------------|--------------|--------------|--------------|--------------|
| HARLETON WSC | 0 | 0 | 0 | 0 | 1 | 1 |
| MANUFACTURING, CAMP | 0 | 0 | 0 | 0 | 0 | 0 |
| PITTSBURG | 0 | 0 | 0 | 0 | 0 | 0 |
| STEAM-ELECTRIC POWER, TITUS | 800 | 1,872 | 2,893 | 3,435 | 4,180 | 4,899 |
| TRYON ROAD SUD | 151 | 211 | 218 | 259 | 287 | 343 |
| TOTAL | 948 | 2,082 | 3,110 | 3,694 | 4,467 | 5,244 |

4.3.20 City of Paris

The City of Paris, located within Lamar County, has water rights in Lake Crook and in Pat Mayse Lake. Paris serves its own municipal, steam electric and manufacturing needs. In addition, the city has wholesale contracts with Lamar County Water Supply District and MJC WSC. The city is projected to have ~~a surplus of 30,111 ac-ft/yr in 2020, slightly reducing to a surplus of 28,523 ac-ft/yr by 2070~~ sufficient supplies throughout the planning period, as shown in Table 4.62.

Table 4.62 Water Supplies and Demands for the City of Paris

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| CROOK LAKE/RESERVOIR | 1,592 | 1,592 | 1,592 | 1,592 | 1,592 | 1,592 |
| PAT MAYSE LAKE/RESERVOIR | 30,244 | 30,244 | 30,244 | 30,244 | 30,244 | 30,244 |
| TOTAL | 31,836 | 31,836 | 31,836 | 31,836 | 31,836 | 31,836 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| MANUFACTURING, LAMAR | 5,340 | 5,580 | 5,762 | 5,780 | 5,797 | 5,815 |
| LAMAR COUNTY WSD | 13,442 | 13,442 | 13,442 | 13,442 | 13,442 | 13,442 |
| STEAM-ELECTRIC POWER, LAMAR | 8,961 | 8,961 | 8,961 | 8,961 | 8,961 | 8,961 |
| SELF-SUPPLIED: | | | | | | |
| PARIS | 4,093 | 3,853 | 3,671 | 3,653 | 3,636 | 3,618 |
| TOTAL | 31,836 | 31,836 | 31,836 | 31,836 | 31,836 | 31,836 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

4.3.21 City of Point

The City of Point supplies manufacturing in Rains county, as well as its own municipal needs. The city buys water from the Sabine River Authority, coming from Tawakoni Lake. Available supplies and demands are shown in Table 4.63.

Table 4.63 Water Supplies and Demands for the City of Point

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|------------|------------|------------|------------|------------|------------|
| TAWAKONI LAKE/RESERVOIR | 376 | 391 | 392 | 393 | 395 | 395 |
| TOTAL | 376 | 391 | 392 | 393 | 395 | 395 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| MANUFACTURING, RAINS | 12 | 12 | 12 | 12 | 12 | 12 |
| SELF-SUPPLIED: | | | | | | |
| POINT | 379 | 380 | 381 | 383 | 383 | 383 |
| TOTAL | 391 | 392 | 393 | 395 | 395 | 395 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | -15 | -1 | -1 | -2 | 0 | 0 |

4.3.22 Sabine River Authority

The Sabine River Authority (SRA) holds water rights in Lake Fork (Wood and Rains Counties) and Lake Tawakoni (Hunt, Rains, and Van Zandt Counties). The SRA supplies the cities of Commerce, Edgewood, Emory, Greenville, Quitman, Kilgore, Longview, Point, West Tawakoni, Wills Point, the Ables Springs WSC, Cash SUD, Combined Consumers SUD, MacBee SUD and South Tawakoni, as well as industry. SRA also serves customers in other regions, but only Region D customers are identified in Table 4.64.

Table 4.64 Water Supplies and Demands for the Sabine River Authority

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| FORK LAKE/RESERVOIR | 168,966 | 167,119 | 165,272 | 163,424 | 161,577 | 159,730 |
| SABINE RUN-OF-RIVER | 129,961 | 129,961 | 129,961 | 129,961 | 129,961 | 129,961 |
| TAWAKONI LAKE/RESERVOIR | 226,239 | 224,543 | 222,847 | 221,152 | 219,456 | 217,760 |
| TOLEDO BEND LAKE/RESERVOIR | 941,900 | 941,583 | 941,230 | 940,949 | 940,632 | 940,315 |
| TOTAL | 1,467,066 | 1,463,206 | 1,459,310 | 1,455,486 | 1,451,626 | 1,447,766 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| BRIGHT STAR SALEM SUD | 354 | 758 | 750 | 742 | 734 | 725 |
| COMMERCE | 1,629 | 6,025 | 5,975 | 5,531 | 3,917 | 3,884 |
| GREENVILLE | 10,297 | 20,362 | 20,194 | 20,027 | 19,879 | 19,690 |
| KILGORE | 2,240 | 6,063 | 5,998 | 5,937 | 5,919 | 6,411 |
| LONGVIEW | 8,000 | 18,042 | 17,850 | 17,666 | 17,470 | 17,271 |
| MANUFACTURING, HARRISON | 3,500 | 3,157 | 3,124 | 3,092 | 3,057 | 3,022 |
| CASH SUD | 1,679 | 1,762 | 1,824 | 2,272 | 3,425 | 5,678 |
| COMBINED CONSUMERS SUD | 594 | 684 | 816 | 1,013 | 1,304 | 1,726 |
| COUNTY-OTHER, ORANGE | 228 | 228 | 228 | 228 | 228 | 228 |
| COUNTY-OTHER, SABINE | 37 | 37 | 37 | 37 | 37 | 37 |
| DALLAS | 310,480 | 290,490 | 287,837 | 285,237 | 282,553 | 279,846 |
| EDGEWOOD | 272 | 285 | 295 | 307 | 318 | 329 |
| EMORY | 1,218 | 1,267 | 1,272 | 1,276 | 1,280 | 1,283 |
| G M WSC | 560 | 560 | 560 | 560 | 560 | 560 |
| HEMPHILL | 476 | 476 | 476 | 476 | 476 | 476 |
| HENDERSON | 4,515 | 4,465 | 4,416 | 4,367 | 4,317 | 4,268 |
| HUXLEY | 280 | 280 | 280 | 280 | 280 | 280 |
| IRRIGATION, ORANGE | 2,402 | 2,402 | 2,402 | 2,402 | 2,402 | 2,402 |
| IRRIGATION, VAN ZANDT | 184 | 184 | 184 | 184 | 184 | 184 |
| MACBEE SUD | 516 | 572 | 621 | 673 | 724 | 779 |
| MANUFACTURING, JEFFERSON | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 |
| MANUFACTURING, ORANGE | 107,512 | 107,512 | 107,512 | 109,924 | 114,208 | 118,651 |
| MINING, PANOLA | 3,756 | 3,756 | 3,756 | 3,756 | 3,756 | 3,756 |
| MINING, SABINE | 334 | 334 | 334 | 334 | 334 | 334 |
| MINING, SHELBY | 3410 | 3410 | 3410 | 3410 | 3410 | 3410 |
| NORTH TEXAS MWD | 10582 | 10655 | 10565 | 10475 | 10395 | 10293 |
| POINT | 376 | 391 | 392 | 393 | 395 | 395 |
| QUITMAN | 316 | 1010 | 1000 | 989 | 978 | 967 |
| TOTAL | 476,867 | 486,287 | 483,228 | 482,708 | 483,660 | 488,005 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 990,199 | 976,919 | 976,082 | 972,778 | 967,966 | 959,761 |

The SRA's Region D customers with projected water shortages are presented in Table 4.65. Shortages presented for Greenville are not due to supply limitations, but rather WTP capacity limitations.

Table 4.65 Sabine River Authority Region D Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| CASH SUD | 165 | 325 | 433 | 507 | 445 | 686 |
| DALLAS | 10,491 | 32,339 | 39,480 | 41,894 | 45,559 | 51,440 |
| GREENVILLE | 6,024 | 6,843 | 7,105 | 7,216 | 7,222 | 7,641 |
| MACBEE SUD | 377 | 562 | 786 | 1,074 | 1,443 | 1,951 |
| MANUFACTURING, JEFFERSON | 34 | 230 | 450 | 668 | 883 | 1,097 |
| TOTAL | 17,090 | 40,300 | 48,254 | 51,359 | 55,552 | 62,815 |

4.3.23 Sulphur River Municipal Water District

The Sulphur River Municipal Water District (SRMWD) holds water rights in Cooper Lake. The City of Commerce, City of Cooper, and City of Sulphur Springs are the three member cities constituting the SRMWD. Water supplies and demands for the SRMWD are presented in Table 4.66.

Table 4.66 Water Supplies and Demands for the SRMWD

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--|---------------|---------------|---------------|---------------|---------------|---------------|
| CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 13,738 | 13,411 | 13,085 | 12,758 | 12,431 | 12,104 |
| TOTAL | 13,738 | 13,411 | 13,085 | 12,758 | 12,431 | 12,104 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COOPER | 767 | 749 | 731 | 712 | 694 | 676 |
| SULPHUR SPRINGS | 12,971 | 12,662 | 12,354 | 12,046 | 11,737 | 11,428 |
| TOTAL | 13,738 | 13,411 | 13,085 | 12,758 | 12,431 | 12,104 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

4.3.24 City of Sulphur Springs

The City of Sulphur Springs, located in Hopkins County, has three sources of water supply. The city has a contract with the Sulphur River Municipal Water District (SRMWD) for supply from Cooper Reservoir, available for the life of the reservoir. Sulphur Springs currently has a surplus of ~~15,132~~ 5,252 ac-ft/yr in 2030. By 2080, the surplus decreases to ~~12,977~~ 2,855 ac-ft/yr. Available supplies and demands are shown in Table 4.67.

Table 4.67 Water Supplies and Demands for the City of Sulphur Springs

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--|--------|--------|--------|--------|--------|--------|
| CHAPMAN/COOPER LAKE/RESERVOIR NON-SYSTEM PORTION | 12,971 | 12,662 | 12,354 | 12,046 | 11,737 | 11,428 |
| SULPHUR RUN-OF-RIVER | 0 | 0 | 0 | 0 | 0 | 0 |
| SULPHUR SPRINGS LAKE/RESERVOIR | 902 | 980 | 1,057 | 1,133 | 1,210 | 1,287 |

| | TOTAL | 13,873 | 13,642 | 13,411 | 13,179 | 12,947 | 12,715 |
|--------------------------|-------|--------|--------|--------|--------|--------|--------|
| SALE/TRANSFER (ac-ft/yr) | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | | |
| GAFFORD CHAPEL WSC | | 111 | 115 | 121 | 128 | 135 | 135 |
| MANUFACTURING, HUNT | | 50 | 50 | 50 | 50 | 50 | 50 |
| BRASHEAR WSC | | 155 | 163 | 170 | 181 | 192 | 192 |
| BRINKER WSC | | 77 | 77 | 77 | 77 | 77 | 77 |
| COUNTY-OTHER, HOPKINS | | 83 | 79 | 24 | 0 | 0 | 0 |
| LIVESTOCK, HOPKINS | | 1,551 | 1,720 | 1,730 | 1,914 | 1,996 | 1,996 |
| MANUFACTURING, HOPKINS | | 1,830 | 1,915 | 1,987 | 2,126 | 2,275 | 2,275 |
| MARTIN SPRINGS WSC | | 223 | 223 | 223 | 223 | 223 | 223 |
| MINING, HOPKINS | | 68 | 74 | 81 | 88 | 96 | 96 |
| NORTH HOPKINS WSC | | 921 | 921 | 921 | 921 | 921 | 921 |
| SHADY GROVE NO 2 WSC | | 112 | 118 | 123 | 131 | 138 | 138 |
| SELF-SUPPLIED: | | | | | | | |
| SULPHUR SPRINGS | | 3,440 | 3,497 | 3,590 | 3,646 | 3,701 | 3,757 |
| | TOTAL | 8,621 | 8,952 | 9,097 | 9,485 | 9,804 | 9,860 |
| SURPLUS/NEEDS (ac-ft/yr) | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| | TOTAL | 5,252 | 4,690 | 4,314 | 3,694 | 3,143 | 2,855 |

Customers of the City of Sulphur Springs are projected to have shortages beginning in 2030. Table 4.68 presents the City of Sulphur Springs customer WUGs with projected shortages.

Table 4.68 City of Sulphur Springs Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|----------------------|------------|------------|------------|------------|------------|------------|
| BRASHEAR WSC | 55 | 62 | 58 | 55 | 53 | 61 |
| BRINKER WSC | 23 | 29 | 31 | 33 | 37 | 40 |
| LIVESTOCK, HOPKINS | 24 | 26 | 26 | 27 | 27 | 27 |
| NORTH HOPKINS WSC | 231 | 271 | 297 | 325 | 354 | 383 |
| SHADY GROVE NO 2 WSC | 14 | 15 | 14 | 13 | 12 | 15 |
| TOTAL | 347 | 402 | 425 | 453 | 483 | 526 |

4.3.25 Titus County Fresh Water Supply District (TCFWSD) No. 1

TCFWSD No. 1 currently supplies the City of Mount Pleasant and Luminant with water from Lake Bob Sandlin. TCFWSD No. 1 has no uncommitted water supply in Lake Bob Sandlin. No shortages are projected for this system as shown in Table 4.69.

Table 4.69 Water Supplies and Demands for Titus County Fresh Water Supply District

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|----------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| BOB SANDLIN LAKE/RESERVOIR | 26,200 | 25,660 | 25,120 | 24,580 | 24,040 | 23,500 |
| TOTAL | 26,200 | 25,660 | 25,120 | 24,580 | 24,040 | 23,500 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |

| CONTRACTUAL: | | | | | | |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| MOUNT PLEASANT | 18,900 | 18,900 | 18,900 | 18,900 | 18,900 | 18,900 |
| STEAM-ELECTRIC POWER, TITUS | 7,300 | 6,760 | 6,220 | 5,680 | 5,140 | 4,600 |
| TOTAL | 26,200 | 25,660 | 25,120 | 24,580 | 24,040 | 23,500 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

TCFWSD's identified projected customer shortage is presented in Table 4.70.

Table 4.70 TCFWSD Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|------------|------------|------------|--------------|--------------|--------------|
| STEAM-ELECTRIC POWER, TITUS | 276 | 624 | 923 | 1,043 | 1,169 | 1,245 |
| TOTAL | 276 | 624 | 923 | 1,043 | 1,169 | 1,245 |

4.3.26 Tri Special Utility District

Tri Special Utility District (SUD) buys water from the City of Mount Pleasant, coming from Bob Sandlin Lak. The water district currently does not supply any other WUGs, but does provide its own municipal water supplies. Table 4.71 provides available supplies and demands for this company.

Table 4.71 Water Supplies and Demands for Tri Special Utility District

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| BOB SANDLIN LAKE/RESERVOIR | 1,727 | 1,859 | 2,011 | 2,200 | 2,417 | 2,650 |
| TOTAL | 1,727 | 1,859 | 2,011 | 2,200 | 2,417 | 2,650 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| SELF-SUPPLIED: | | | | | | |
| TRI SUD | 1,727 | 1,859 | 2,011 | 2,200 | 2,417 | 2,650 |
| TOTAL | 1,727 | 1,859 | 2,011 | 2,200 | 2,417 | 2,650 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

4.3.27 City of White Oak

The City of White Oak supplies rural portions of Gregg and Upshur counties, as well as its own municipal needs. The city buys water from the City of Longview, coming from Big Sandy Creek Lake. Available supplies and demands are shown in Table 4.72.

Table 4.72 Water Supplies and Demands for the City of White Oak

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| BIG SANDY CREEK LAKE/RESERVOIR | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 |
| TOTAL | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, GREGG | 50 | 50 | 50 | 50 | 50 | 50 |

| | | | | | | |
|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| COUNTY-OTHER, UPSHUR | 40 | 40 | 40 | 40 | 40 | 40 |
| SELF-SUPPLIED: | | | | | | |
| WHITE OAK | 2,590 | 2,590 | 2,590 | 2,590 | 2,590 | 2,590 |
| TOTAL | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 | 2,680 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |

4.3.28 Riverbend Water Resources District/City of Texarkana (Texarkana Water Utilities)

Texarkana Water Utilities supplies the Cities of Texarkana, Texas, and Texarkana, Arkansas. There is supply and demand in both states. As noted previously, given present legal uncertainties regarding Arkansas water supply potentially available for Texas entities' use, it has been assumed for the purposes of the 2026+ Region D Plan that only Texas sources and supplies are available for use by entities within Region D. Therefore, supply and demands in Table 4.73 only reflect Texas' Region D water use.

Through interlocal agreements with a number of local WUGs, Riverbend Water Resources District (Riverbend WRD) formally represents the water supply interests for most of the water suppliers in Bowie County. Riverbend WRD sells and/or supplies surface water to: City of Annona, City of Atlanta, City of Avery, City of De Kalb, City of Hooks, City of Leary, City of Maud, City of Nash, City of New Boston, City of Queen City, City of Redwater, City of Texarkana (Texas), City of Wake Village, and TexAmericas Center. Central Bowie County WSC and the City of Red Lick hold MOUs (Memorandum of Understanding) with Riverbend WRD for the collaboration and partnership of developing the region's water resource needs. Retail customers of the City of Texarkana (Texas) include the Macedonia-Eylau MUD #1, Red River County WSC, County-Other portions of Bowie, Cass and Red River Counties, and Manufacturing in Bowie and Cass Counties. Burns Redbank WSC has connected water supply via the City of Hooks.

Water supply comes from Lake Wright Patman through contracts with the U.S. Army Corps of Engineers. The permitted surface water right in Lake Wright Patman totals 180,000 ac-fy/yr, of supply, but is limited by contractual and infrastructure constraints on reservoir operations, as well as sedimentation. Demands come from three counties and are as follows: City of Texarkana, Texas, City of DeKalb, City of Hooks, City of Maud, City of Nash, City of New Boston, City of Redwater, City of Wake Village, City of Atlanta, City of Queen City, City of Domino, City of Annona, City of Avery, Central Bowie WSC, Macedonia-Eylau MUD #1, Oak Grove WSC, Red River County WSC, Burns Redbank WSC, Park Terrace MHP and manufacturing in Bowie and Cass Counties. Riverbend WRD, its member entities, and customers are projected to have a deficit of contractual supplies beginning in 2020. The deficit is primarily due to the functional treatment capacity of Texarkana's New Boston Road WTP limiting available supply, the elevation of the City of Texarkana's existing intake, outstanding full contractual implementation of the Ultimate Rule Curve increasing conservation storage in the reservoir, and sedimentation effects.

Table 4.73 Water Supplies and Demands for the Riverbend WRD/City of Texarkana

| SUPPLIES (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|-----------------------------|------|------|------|------|------|------|
| CANEY CREEK LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| ELLIOT CREEK LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| RED RUN-OF-RIVER | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|------------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| WRIGHT PATMAN LAKE/RESERVOIR | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 0 | 0 | 0 |
| SALE/TRANSFER (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| CONTRACTUAL: | | | | | | |
| COUNTY-OTHER, RED RIVER | 0 | 0 | 0 | 0 | 0 | 0 |
| RED RIVER COUNTY WSC | 0 | 0 | 0 | 0 | 0 | 0 |
| RIVERBEND WATER RESOURCES DISTRICT | 122,630 | 122,623 | 122,616 | 122,615 | 122,615 | 122,615 |
| CENTRAL BOWIE COUNTY WSC | 0 | 0 | 0 | 0 | 0 | 0 |
| COUNTY-OTHER, BOWIE | 0 | 0 | 0 | 0 | 0 | 0 |
| DE KALB | 0 | 0 | 0 | 0 | 0 | 0 |
| HOOKS | 0 | 0 | 0 | 0 | 0 | 0 |
| MACEDONIA EYLAU MUD 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANUFACTURING, BOWIE | 0 | 0 | 0 | 0 | 0 | 0 |
| MANUFACTURING, CASS | 122,623 | 122,616 | 122,615 | 122,615 | 122,615 | 122,615 |
| MAUD | 0 | 0 | 0 | 0 | 0 | 0 |
| NASH | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW BOSTON | 0 | 0 | 0 | 0 | 0 | 0 |
| REDWATER | 0 | 0 | 0 | 0 | 0 | 0 |
| TEXARKANA | 0 | 0 | 0 | 0 | 0 | 0 |
| WAKE VILLAGE | 0 | 0 | 0 | 0 | 0 | 0 |
| SELF-SUPPLIED: | | | | | | |
| RIVERBEND WATER RESOURCES DISTRICT | 0 | 0 | 0 | 0 | 0 | 0 |
| TEXARKANA | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 122,630 | 122,623 | 122,616 | 122,615 | 122,615 | 122,615 |
| SURPLUS/NEEDS (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| TOTAL | 122,630 | 122,623 | 122,616 | 122,615 | 122,615 | 122,615 |

Member entities and customers of Riverbend WRD/City of Texarkana are projected to have shortages beginning in 2032. Table 4.74 presents the WUGs with projected shortages.

Table 4.74 Riverbend Water Resources District/City of Texarkana Customer Entity Shortages

| Needs (ac-ft/yr) | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
|--------------------------|-------|-------|-------|-------|-------|--------|
| CENTRAL BOWIE COUNTY WSC | 769 | 769 | 776 | 783 | 790 | 797 |
| COUNTY-OTHER, RED RIVER | 0 | 0 | 0 | 0 | 0 | 0 |
| DE KALB | 266 | 263 | 261 | 257 | 254 | 250 |
| HOOKS | 317 | 313 | 310 | 305 | 301 | 296 |
| MACEDONIA EYLAU MUD 1 | 710 | 705 | 698 | 688 | 677 | 666 |
| MANUFACTURING, BOWIE | 0 | 0 | 0 | 0 | 0 | 0 |
| MANUFACTURING, CASS | 3,529 | 4,866 | 6,252 | 7,687 | 9,177 | 10,722 |
| MAUD | 164 | 162 | 161 | 158 | 156 | 153 |
| NASH | 314 | 309 | 306 | 302 | 297 | 292 |

| | | | | | | |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| NEW BOSTON | 856 | 848 | 841 | 827 | 814 | 801 |
| REDWATER | 0 | 0 | 0 | 0 | 0 | 0 |
| RIVERBEND WATER RESOURCES DISTRICT | 267 | 264 | 261 | 257 | 253 | 248 |
| TEXARKANA | 2,396 | 2,373 | 2,354 | 2,320 | 2,287 | 2,252 |
| WAKE VILLAGE | 649 | 641 | 635 | 625 | 615 | 605 |
| TOTAL | 10,237 | 11,513 | 12,854 | 14,209 | 15,621 | 17,083 |

4.4 Secondary Needs for Major Water Providers in the North East Texas Region

Secondary needs (after accounting for potential conservation savings) have been calculated for all customers and aggregated by Major Water Provider, as shown in Table 4.75.

Table 4.75 Secondary Needs for Major Water Providers in the North East Texas Region

| MWP | Total Secondary Water Need in ac-ft/yr | | | | | |
|------------------------------------|--|--------|--------|--------|--------|--------|
| | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| BI COUNTY WSC | 0 | 0 | 0 | 7 | 20 | 35 |
| BRIGHT STAR SALEM SUD | 0 | 0 | 0 | 21 | 61 | 100 |
| CASH SUD | 372 | 865 | 1,035 | 902 | 840 | 1,256 |
| COMMERCE | 0 | 0 | 0 | 0 | 0 | 0 |
| COOPER | 0 | 0 | 0 | 0 | 0 | 0 |
| EMORY | 0 | 0 | 0 | 0 | 0 | 0 |
| GLADEWATER | 0 | 0 | 0 | 0 | 0 | 0 |
| GOLDEN WSC | 1 | 22 | 39 | 60 | 82 | 103 |
| GRAND SALINE | 121 | 128 | 122 | 117 | 120 | 109 |
| GREENVILLE | 13,658 | 16,254 | 17,865 | 19,224 | 20,604 | 21,801 |
| HUGHES SPRINGS | 0 | 0 | 0 | 0 | 0 | 0 |
| KILGORE | 0 | 0 | 0 | 0 | 0 | 0 |
| LAMAR COUNTY WSD | 0 | 0 | 0 | 0 | 0 | 0 |
| LONGVIEW | 0 | 0 | 0 | 0 | 0 | 0 |
| MARSHALL | 0 | 0 | 0 | 0 | 0 | 0 |
| MOUNT PLEASANT | 0 | 0 | 0 | 0 | 0 | 0 |
| PARIS | 0 | 0 | 0 | 0 | 0 | 0 |
| POINT | 0 | 0 | 0 | 0 | 0 | 0 |
| RIVERBEND WATER RESOURCES DISTRICT | 380 | 375 | 371 | 365 | 359 | 353 |
| SULPHUR SPRINGS | 0 | 0 | 0 | 0 | 0 | 0 |
| TEXARKANA | 6,769 | 6,702 | 6,649 | 6,554 | 6,459 | 6,362 |
| TRI SUD | 497 | 580 | 572 | 541 | 465 | 355 |
| WHITE OAK | 0 | 0 | 0 | 0 | 0 | 0 |

4.5 Water Surpluses in the North East Texas Region

Table 4.76 lists the entities within the North East Texas Region that have a supply surplus during the planning period. TWDB designated WUGs and County Other WUGs surpluses are listed in the table. Several WUGs are split and require multiple entries in the following tables. For some WUGs split into multiple counties or basins, there may be a surplus in one area, and a shortage in another. Only those splits with surpluses are shown below.

Table 4.76 Water Surpluses in the North East Texas Region by County

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|---------------------|------------------------|--|-------------|-------------|-------------|-------------|-------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| BOWIE | COUNTY-OTHER, BOWIE | 1973 | 2080 | 2056 | 2083 | 2147 | 2213 |
| BOWIE TOTAL | | 1973 | 2080 | 2056 | 2083 | 2147 | 2213 |
| CAMP | BI COUNTY WSC | 505 | 503 | 501 | 496 | 490 | 485 |
| CAMP | COUNTY-OTHER, CAMP | 348 | 356 | 364 | 371 | 379 | 378 |
| CAMP TOTAL | | 853 | 859 | 865 | 867 | 869 | 863 |
| CASS | ATLANTA | 94 | 201 | 324 | 359 | 398 | 437 |
| CASS | AVINGER | 202 | 207 | 212 | 216 | 220 | 225 |
| CASS | COUNTY-OTHER, CASS | 0 | 0 | 0 | 0 | 6 | 29 |
| CASS | E M C WSC | 26 | 27 | 29 | 31 | 32 | 34 |
| CASS | EASTERN CASS WSC | 314 | 305 | 290 | 272 | 249 | 222 |
| CASS | HOLLY SPRINGS WSC | 0 | 0 | 0 | 0 | 0 | 1 |
| CASS | HUGHES SPRINGS | 184 | 202 | 221 | 236 | 251 | 266 |
| CASS | LINDEN | 97 | 113 | 129 | 142 | 155 | 168 |
| CASS | LIVESTOCK, CASS | 234 | 234 | 236 | 236 | 236 | 236 |
| CASS | MANUFACTURING, CASS | 231 | 230 | 230 | 229 | 228 | 228 |
| CASS | MIMS WSC | 118 | 119 | 119 | 120 | 121 | 121 |
| CASS | MINING, CASS | 804 | 827 | 836 | 869 | 891 | 917 |
| CASS | QUEEN CITY | 29 | 39 | 46 | 51 | 55 | 56 |
| CASS | WESTERN CASS WSC | 800 | 815 | 830 | 842 | 854 | 865 |
| CASS TOTAL | | 3133 | 3319 | 3502 | 3603 | 3696 | 3805 |
| COLLIN | CADDO BASIN SUD | 1 | 0 | 0 | 0 | 0 | 0 |
| COLLIN TOTAL | | 1 | 0 | 0 | 0 | 0 | 0 |
| DELTA | COOPER | 1045 | 838 | 632 | 427 | 248 | 236 |
| DELTA | COUNTY-OTHER, DELTA | 27 | 31 | 34 | 39 | 43 | 48 |
| DELTA | IRRIGATION, DELTA | 2053 | 2063 | 2068 | 2068 | 2080 | 2080 |
| DELTA TOTAL | | 3125 | 2932 | 2734 | 2534 | 2371 | 2364 |
| FANNIN | NORTH HUNT SUD | 6 | 2 | 0 | 0 | 0 | 0 |
| FANNIN | WOLFE CITY | 7 | 8 | 8 | 9 | 9 | 9 |
| FANNIN TOTAL | | 13 | 10 | 8 | 9 | 9 | 9 |
| FRANKLIN | COUNTY-OTHER, FRANKLIN | 138 | 155 | 156 | 156 | 156 | 157 |

CHAPTER 4- IDENTIFICATION OF WATER NEEDS
 SEPTEMBER 2024 / DRAFT / CAROLLO

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|-----------------------|--------------------------------|--|-------------|-------------|-------------|-------------|-------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| FRANKLIN | CYPRESS SPRINGS SUD | 1903 | 1734 | 1569 | 1402 | 1239 | 1077 |
| FRANKLIN | IRRIGATION, FRANKLIN | 169 | 169 | 169 | 169 | 169 | 169 |
| FRANKLIN | MOUNT VERNON | 2103 | 1997 | 1892 | 1778 | 1663 | 1549 |
| FRANKLIN | WINNSBORO | 234 | 208 | 185 | 163 | 142 | 122 |
| FRANKLIN TOTAL | | 4547 | 4263 | 3971 | 3668 | 3369 | 3074 |
| GREGG | CLARKSVILLE CITY | 119 | 119 | 119 | 121 | 123 | 125 |
| GREGG | COUNTY-OTHER, GREGG | 1282 | 1417 | 1609 | 1857 | 2029 | 2115 |
| GREGG | ELDERVILLE WSC | 110 | 107 | 113 | 120 | 83 | 113 |
| GREGG | GLADEWATER | 131 | 131 | 149 | 177 | 207 | 157 |
| GREGG | GLENWOOD WSC | 10 | 11 | 11 | 11 | 12 | 12 |
| GREGG | IRRIGATION, GREGG | 154 | 154 | 154 | 154 | 154 | 154 |
| GREGG | KILGORE | 2305 | 2094 | 1887 | 1730 | 2066 | 2117 |
| GREGG | LIBERTY CITY WSC | 315 | 314 | 318 | 327 | 335 | 344 |
| GREGG | LIVESTOCK, GREGG | 52 | 52 | 52 | 52 | 52 | 52 |
| GREGG | LONGVIEW | 2766 | 2740 | 2716 | 2714 | 2711 | 2704 |
| | | 7 | 3 | 9 | 0 | 2 | 3 |
| GREGG | MANUFACTURING, GREGG | 20 | 0 | 0 | 0 | 0 | 0 |
| GREGG | MINING, GREGG | 332 | 328 | 241 | 154 | 93 | 93 |
| GREGG | STARRVILLE-FRIENDSHIP WSC | 34 | 34 | 34 | 35 | 36 | 37 |
| GREGG | STEAM-ELECTRIC POWER, GREGG | 1302 | 1302 | 1302 | 1302 | 1302 | 1302 |
| GREGG | TRYON ROAD SUD | 1059 | 1053 | 1058 | 1063 | 1064 | 1079 |
| GREGG | WEST GREGG SUD | 171 | 158 | 141 | 122 | 98 | 77 |
| GREGG | WHITE OAK | 0 | 0 | 0 | 0 | 18 | 61 |
| GREGG TOTAL | | 3506 | 3467 | 3435 | 3436 | 3478 | 3488 |
| | | 3 | 7 | 7 | 5 | 4 | 1 |
| HARRISON | BLOCKER CROSSROADS WSC | 60 | 58 | 57 | 56 | 55 | 54 |
| HARRISON | COUNTY-OTHER, HARRISON | 620 | 706 | 742 | 891 | 1027 | 1121 |
| HARRISON | DIANA SUD | 56 | 55 | 55 | 54 | 53 | 52 |
| HARRISON | GILL WSC | 115 | 117 | 117 | 124 | 131 | 137 |
| HARRISON | GUM SPRINGS WSC | 1690 | 1558 | 1537 | 1411 | 1289 | 1171 |
| HARRISON | HALLSVILLE | 161 | 113 | 106 | 61 | 18 | 0 |
| HARRISON | HARLETON WSC | 14 | 6 | 5 | 0 | 0 | 0 |
| HARRISON | LEIGH WSC | 0 | 0 | 5 | 68 | 129 | 188 |
| HARRISON | LIVESTOCK, HARRISON | 369 | 416 | 465 | 493 | 506 | 506 |
| HARRISON | LONGVIEW | 1020 | 959 | 932 | 858 | 786 | 728 |
| HARRISON | MANUFACTURING, HARRISON | 8197 | 8097 | 7994 | 7887 | 7775 | 7663 |
| | | 7 | 8 | 4 | 0 | 7 | 9 |
| HARRISON | MARSHALL | 9161 | 9273 | 9281 | 9539 | 9789 | 1003 |
| | | | | | | | 2 |
| HARRISON | STEAM-ELECTRIC POWER, HARRISON | 3363 | 3363 | 3363 | 3363 | 3363 | 3363 |

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|-----------------------|-----------------------------|--|-------------|-------------|-------------|-------------|-------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| HARRISON | TALLEY WSC | 69 | 68 | 67 | 68 | 69 | 70 |
| HARRISON | WASKOM | 51 | 71 | 74 | 107 | 139 | 170 |
| HARRISON | WEST HARRISON WSC | 165 | 141 | 137 | 110 | 84 | 59 |
| HARRISON TOTAL | | 9889 | 9788 | 9688 | 9607 | 9519 | 9429 |
| | | 1 | 2 | 7 | 3 | 5 | 0 |
| HOPKINS | COMO | 12 | 13 | 13 | 13 | 13 | 13 |
| HOPKINS | CORNERSVILLE WSC | 91 | 86 | 82 | 78 | 73 | 69 |
| HOPKINS | COUNTY-OTHER, HOPKINS | 839 | 828 | 761 | 724 | 716 | 710 |
| HOPKINS | CUMBY | 22 | 25 | 21 | 21 | 22 | 23 |
| HOPKINS | CYPRESS SPRINGS SUD | 299 | 286 | 268 | 243 | 217 | 190 |
| HOPKINS | GAFFORD CHAPEL WSC | 36 | 37 | 40 | 44 | 49 | 46 |
| HOPKINS | JONES WSC | 7 | 6 | 5 | 2 | 3 | 3 |
| HOPKINS | LAKE FORK WSC | 26 | 25 | 25 | 24 | 24 | 23 |
| HOPKINS | LIVESTOCK, HOPKINS | 729 | 725 | 725 | 722 | 721 | 721 |
| HOPKINS | MANUFACTURING, HOPKINS | 788 | 834 | 866 | 963 | 1069 | 1024 |
| HOPKINS | MARTIN SPRINGS WSC | 187 | 173 | 163 | 154 | 143 | 133 |
| HOPKINS | MINING, HOPKINS | 258 | 265 | 272 | 281 | 289 | 289 |
| HOPKINS | SHADY GROVE NO 2 WSC | 9 | 8 | 11 | 13 | 15 | 13 |
| HOPKINS | SHIRLEY WSC | 91 | 78 | 69 | 57 | 44 | 33 |
| HOPKINS TOTAL | | 3394 | 3389 | 3321 | 3339 | 3398 | 3290 |
| HUNT | CADDO MILLS | 33 | 46 | 84 | 148 | 155 | 152 |
| HUNT | COMMERCE | 540 | 593 | 633 | 694 | 755 | 816 |
| HUNT | COUNTY-OTHER, HUNT | 919 | 1087 | 1318 | 1738 | 2466 | 2487 |
| HUNT | IRRIGATION, HUNT | 2 | 2 | 2 | 2 | 2 | 2 |
| HUNT | MACBEE SUD | 0 | 0 | 7 | 21 | 42 | 41 |
| HUNT | MANUFACTURING, HUNT | 465 | 622 | 770 | 864 | 1024 | 997 |
| HUNT | POETRY WSC | 25 | 30 | 48 | 99 | 250 | 248 |
| HUNT | WEST TAWAKONI | 481 | 443 | 355 | 376 | 344 | 318 |
| HUNT | WOLFE CITY | 88 | 87 | 84 | 84 | 82 | 81 |
| HUNT TOTAL | | 2553 | 2910 | 3301 | 4026 | 5120 | 5142 |
| LAMAR | BLOSSOM | 93 | 109 | 109 | 110 | 111 | 111 |
| LAMAR | LAMAR COUNTY WSD | 5890 | 5812 | 5766 | 5721 | 5650 | 5663 |
| LAMAR | LIVESTOCK, LAMAR | 575 | 575 | 575 | 575 | 575 | 575 |
| LAMAR | MANUFACTURING, LAMAR | 812 | 902 | 976 | 1005 | 845 | 678 |
| LAMAR | PARIS | 395 | 166 | 0 | 0 | 0 | 0 |
| LAMAR | RENO (LAMAR) | 297 | 353 | 415 | 476 | 539 | 541 |
| LAMAR | STEAM-ELECTRIC POWER, LAMAR | 3255 | 3255 | 3255 | 3255 | 3255 | 3255 |
| LAMAR TOTAL | | 1131 | 1117 | 1109 | 1114 | 1097 | 1082 |
| | | 7 | 2 | 6 | 2 | 5 | 3 |

CHAPTER 4- IDENTIFICATION OF WATER NEEDS
 SEPTEMBER 2024 / DRAFT / CAROLLO

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|---------------------|------------------------------|--|-------------|-------------|-------------|-------------|-------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| MARION | COUNTY-OTHER, MARION | 550 | 564 | 582 | 593 | 605 | 619 |
| MARION | DIANA SUD | 2 | 11 | 17 | 22 | 27 | 31 |
| MARION | E M C WSC | 113 | 127 | 142 | 152 | 163 | 174 |
| MARION | HARLETON WSC | 33 | 43 | 54 | 61 | 68 | 76 |
| MARION | IRRIGATION, MARION | 310 | 310 | 310 | 310 | 310 | 310 |
| MARION | JEFFERSON | 1829 | 1860 | 1892 | 1914 | 1936 | 1957 |
| MARION | KELLYVILLE-BEREA WSC | 23 | 26 | 29 | 31 | 32 | 33 |
| MARION | LIVESTOCK, MARION | 242 | 242 | 242 | 242 | 242 | 242 |
| MARION | MIMS WSC | 640 | 635 | 628 | 624 | 620 | 614 |
| MARION | MINING, MARION | 95 | 98 | 100 | 102 | 104 | 104 |
| MARION | STEAM-ELECTRIC POWER, MARION | 188 | 570 | 1035 | 1603 | 1990 | 1990 |
| MARION TOTAL | | 4025 | 4486 | 5031 | 5654 | 6097 | 6150 |
| MORRIS | BI COUNTY WSC | 10 | 22 | 35 | 43 | 51 | 60 |
| MORRIS | COUNTY-OTHER, MORRIS | 276 | 281 | 285 | 287 | 290 | 292 |
| MORRIS | DAINGERFIELD | 1130 | 1119 | 1103 | 1095 | 1086 | 1077 |
| MORRIS | HOLLY SPRINGS WSC | 0 | 0 | 0 | 0 | 0 | 3 |
| MORRIS | IRRIGATION, MORRIS | 59 | 59 | 59 | 59 | 59 | 59 |
| MORRIS | LIVESTOCK, MORRIS | 70 | 70 | 70 | 70 | 70 | 70 |
| MORRIS | LONE STAR | 541 | 557 | 575 | 587 | 598 | 611 |
| MORRIS | MANUFACTURING, MORRIS | 8769 | 8135 | 8155 | 8932 | 8195 | 8076 |
| MORRIS | NAPLES | 43 | 45 | 46 | 47 | 48 | 49 |
| MORRIS | OMAHA | 135 | 139 | 143 | 146 | 149 | 152 |
| MORRIS | STEAM-ELECTRIC POWER, MORRIS | 770 | 770 | 770 | 770 | 770 | 770 |
| MORRIS TOTAL | | 9073 | 8442 | 8463 | 9242 | 8507 | 8391 |
| | | 3 | 0 | 7 | 7 | 5 | 1 |
| PANOLA | GILL WSC | 68 | 75 | 82 | 88 | 93 | 98 |
| PANOLA TOTAL | | 68 | 75 | 82 | 88 | 93 | 98 |
| RAINS | BRIGHT STAR SALEM SUD | 695 | 659 | 628 | 589 | 548 | 515 |
| RAINS | COUNTY-OTHER, RAINS | 158 | 146 | 130 | 107 | 88 | 69 |
| RAINS | EAST TAWAKONI | 63 | 62 | 58 | 60 | 61 | 62 |
| RAINS | EMORY | 97 | 92 | 76 | 73 | 70 | 66 |
| RAINS | LIVESTOCK, RAINS | 3 | 3 | 3 | 3 | 3 | 3 |
| RAINS | MANUFACTURING, RAINS | 11 | 11 | 11 | 11 | 11 | 11 |
| RAINS | POINT | 150 | 147 | 142 | 143 | 142 | 142 |
| RAINS | SHIRLEY WSC | 43 | 38 | 35 | 31 | 26 | 19 |
| RAINS | SOUTH RAINS SUD | 11 | 0 | 0 | 0 | 0 | 0 |
| RAINS TOTAL | | 1231 | 1158 | 1083 | 1017 | 949 | 887 |
| RED RIVER | BOGATA | 340 | 350 | 359 | 367 | 374 | 381 |

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|------------------------|------------------------------------|--|-------------------|-------------------|-------------------|-------------------|-------------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| RED RIVER | CLARKSVILLE | 0 | 0 | 0 | 0 | 10 | 69 |
| RED RIVER | COUNTY-OTHER, RED RIVER | 11 | 18 | 37 | 67 | 105 | 157 |
| RED RIVER | LIVESTOCK, RED RIVER | 80 | 80 | 80 | 80 | 80 | 80 |
| RED RIVER | MANUFACTURING, RED RIVER | 5051 | 5044 | 5044 | 5044 | 5044 | 5044 |
| RED RIVER | RED RIVER COUNTY WSC | 122 | 151 | 170 | 181 | 184 | 176 |
| RED RIVER | TALCO | 12 | 11 | 11 | 11 | 10 | 10 |
| RED RIVER TOTAL | | 5616 | 5654 | 5701 | 5750 | 5807 | 5917 |
| RUSK | ELDERVILLE WSC | 101 | 104 | 110 | 115 | 136 | 143 |
| RUSK | KILGORE | 50 | 150 | 276 | 415 | 554 | 612 |
| RUSK | WEST GREGG SUD | 13 | 11 | 9 | 5 | 2 | 0 |
| RUSK TOTAL | | 164 | 265 | 395 | 535 | 692 | 755 |
| SMITH | CARROLL WSC | 23 | 25 | 32 | 43 | 56 | 50 |
| SMITH | CRYSTAL SYSTEMS TEXAS | 494 | 500 | 504 | 495 | 478 | 464 |
| SMITH | LIBERTY UTILITIES SILVERLEAF WATER | 29 | 0 | 0 | 0 | 0 | 0 |
| SMITH | LINDALE | 86 | 81 | 88 | 79 | 64 | 60 |
| SMITH | LINDALE RURAL WSC | 414 | 385 | 364 | 348 | 332 | 316 |
| SMITH | PINE RIDGE WSC | 72 | 50 | 32 | 18 | 3 | 0 |
| SMITH | R P M WSC | 14 | 15 | 15 | 16 | 17 | 18 |
| SMITH | SAND FLAT WSC | 227 | 215 | 207 | 203 | 200 | 196 |
| SMITH | STARRVILLE-FRIENDSHIP WSC | 81 | 83 | 83 | 86 | 89 | 92 |
| SMITH | WEST GREGG SUD | 28 | 23 | 18 | 16 | 16 | 13 |
| SMITH TOTAL | | 1468 | 1377 | 1343 | 1304 | 1255 | 1209 |
| TITUS | BI COUNTY WSC | 31 | 21 | 6 | 0 | 0 | 0 |
| TITUS | COUNTY-OTHER, TITUS | 755 | 814 | 887 | 900 | 905 | 937 |
| TITUS | CYPRESS SPRINGS SUD | 118 | 126 | 141 | 141 | 139 | 136 |
| TITUS | IRRIGATION, TITUS | 7 | 7 | 7 | 7 | 7 | 7 |
| TITUS | LIVESTOCK, TITUS | 77 | 77 | 77 | 37 | 16 | 16 |
| TITUS | MOUNT PLEASANT | 1318 8 | 1273 5 | 1232 9 | 1178 0 | 1130 5 | 1113 4 |
| TITUS | TALCO | 348 | 349 | 353 | 356 | 360 | 364 |
| TITUS TOTAL | | 1452 4 | 1412 9 | 1380 0 | 1322 1 | 1273 2 | 1259 4 |
| UPSHUR | BI COUNTY WSC | 77 | 76 | 78 | 83 | 89 | 95 |
| UPSHUR | COUNTY-OTHER, UPSHUR | 1117 | 1266 | 1334 | 1446 | 1566 | 1668 |
| UPSHUR | DIANA SUD | 605 | 559 | 504 | 445 | 379 | 307 |
| UPSHUR | EAST MOUNTAIN WATER SYSTEM | 8 | 8 | 8 | 9 | 10 | 11 |
| UPSHUR | FOUKE WSC | 3 | 2 | 2 | 2 | 1 | 1 |
| UPSHUR | GILMER | 280 | 275 | 279 | 292 | 306 | 320 |

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|------------------------|-------------------------|--|-------------|-------------|-------------|-------------|-------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| UPSHUR | GLADEWATER | 72 | 64 | 54 | 47 | 38 | 0 |
| UPSHUR | GLENWOOD WSC | 18 | 16 | 17 | 22 | 27 | 32 |
| UPSHUR | IRRIGATION, UPSHUR | 568 | 568 | 568 | 568 | 568 | 568 |
| UPSHUR | LIVESTOCK, UPSHUR | 403 | 403 | 403 | 403 | 403 | 403 |
| UPSHUR | MINING, UPSHUR | 119 | 129 | 95 | 61 | 36 | 36 |
| UPSHUR | ORE CITY | 1526 | 1525 | 1526 | 1529 | 1531 | 1534 |
| UPSHUR | PRITCHETT WSC | 186 | 185 | 186 | 189 | 193 | 197 |
| UPSHUR | SHARON WSC | 133 | 132 | 133 | 136 | 139 | 142 |
| UPSHUR | UNION GROVE WSC | 144 | 142 | 143 | 147 | 150 | 153 |
| UPSHUR TOTAL | | 5259 | 5350 | 5330 | 5379 | 5436 | 5467 |
| VAN ZANDT | BEN WHEELER WSC | 14 | 0 | 0 | 0 | 0 | 0 |
| VAN ZANDT | CANTON | 640 | 444 | 254 | 58 | 0 | 0 |
| VAN ZANDT | COUNTY-OTHER, VAN ZANDT | 1041 | 950 | 825 | 764 | 770 | 669 |
| VAN ZANDT | FRUITVALE WSC | 26 | 0 | 0 | 0 | 0 | 0 |
| VAN ZANDT | IRRIGATION, VAN ZANDT | 17 | 15 | 14 | 12 | 7 | 7 |
| VAN ZANDT | LIVESTOCK, VAN ZANDT | 884 | 876 | 846 | 897 | 825 | 871 |
| VAN ZANDT | MINING, VAN ZANDT | 2003 | 2176 | 2387 | 2576 | 2687 | 2725 |
| VAN ZANDT | PRUITT SANDFLAT WSC | 101 | 101 | 110 | 116 | 117 | 127 |
| VAN ZANDT | VAN | 68 | 42 | 21 | 3 | 0 | 0 |
| VAN ZANDT | WILLS POINT | 19 | 19 | 19 | 19 | 19 | 19 |
| VAN ZANDT TOTAL | | 4813 | 4623 | 4476 | 4445 | 4425 | 4418 |
| WOOD | BRIGHT STAR SALEM SUD | 42 | 13 | 0 | 0 | 0 | 0 |
| WOOD | CORNERVILLE WSC | 26 | 26 | 26 | 25 | 25 | 24 |
| WOOD | COUNTY-OTHER, WOOD | 4010 | 4023 | 4054 | 4071 | 4097 | 4134 |
| WOOD | CYPRESS SPRINGS SUD | 123 | 119 | 111 | 104 | 96 | 86 |
| WOOD | FOUKE WSC | 228 | 197 | 175 | 137 | 100 | 61 |
| WOOD | HAWKINS | 536 | 530 | 526 | 525 | 523 | 521 |
| WOOD | IRRIGATION, WOOD | 835 | 835 | 835 | 835 | 835 | 835 |
| WOOD | JONES WSC | 348 | 315 | 294 | 143 | 208 | 164 |
| WOOD | LAKE FORK WSC | 393 | 375 | 364 | 342 | 320 | 298 |
| WOOD | LIVESTOCK, WOOD | 527 | 527 | 527 | 527 | 527 | 527 |
| WOOD | MINEOLA | 806 | 764 | 736 | 685 | 634 | 582 |
| WOOD | PRITCHETT WSC | 2 | 1 | 1 | 1 | 1 | 1 |
| WOOD | QUITMAN | 665 | 656 | 645 | 643 | 639 | 647 |
| WOOD | RAMEY WSC | 10 | 0 | 0 | 0 | 0 | 0 |
| WOOD | SHARON WSC | 126 | 106 | 93 | 66 | 40 | 13 |
| WOOD | SHIRLEY WSC | 6 | 5 | 5 | 3 | 3 | 2 |

CHAPTER 4- IDENTIFICATION OF WATER NEEDS
 SEPTEMBER 2024 / DRAFT / CAROLLO

| COUNTY | WUG | Total Water Supply Surplus in ac-ft/yr | | | | | |
|-------------------|-----------|--|-------------|-------------|-------------|-------------|-------------|
| | | 2030 | 2040 | 2050 | 2060 | 2070 | 2080 |
| WOOD | WINNSBORO | 797 | 735 | 676 | 607 | 539 | 469 |
| WOOD TOTAL | | 9480 | 9227 | 9068 | 8714 | 8587 | 8364 |

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