

**APPENDIX I**

**TEXAS WATER DEVELOPMENT BOARD TABLE 4  
WATER SUPPLY AVAILABLE TO REGION C**

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Texas Water Development Board Table 4 is attached at the end of this appendix. The rest of the appendix summarizes the sources of the data in the table. The table represents the reliable supply currently available to the region. The table is based on:

- Existing water rights
- Firm yields for reservoirs
- Reliable supplies from reservoir systems
- Renewable supplies from groundwater
- Estimated reliable local supplies for irrigation, mining, and livestock
- Existing and permitted reuse projects

Limits to water supply due to current water transmission facilities and wells are not considered in the development of TWDB Table 4. Actual 1996 use in TWDB Table 4 is based on data from the Texas Water Development Board <sup>(9)</sup> and the Texas Natural Resource Conservation Service <sup>(13)</sup>.

## **Water Supply Systems**

The water supply systems listed are operated as physical systems – the water they provide cannot easily be separated by individual source. The supply available from each system is limited to the current Texas Natural Resource Conservation Commission (TNRCC) water rights or the firm yield, whichever is less. Specific sources of information and more detailed discussions on water supply available for each system are given below.

**North Texas Municipal Water District System.** The North Texas Municipal Water District system includes four sources – Lake Lavon, Lake Texoma, Chapman Lake in the Sulphur Basin, and permitted reuse of treated wastewater returned to the Lake Lavon

watershed from the Wilson Creek Wastewater Treatment Plant. Table I-1 shows the supply available to the system from each source.

- The supply available from Lavon is taken from previous TWDB analyses <sup>(37)</sup>.
- The supply available from Texoma is from the TNRCC water right, which is based on firm yield for the storage controlled by NTMWD. North Texas Municipal Water District's water right allows a diversion of 84,000 acre-feet per year from Lake Texoma. However, due to channel losses in delivery to Lake Lavon where the water is used, only 77,300 acre-feet per year can be used for water supply in Region C. (Note that supplies for other users from Lake Texoma are included in the section on reservoirs in Region C.)
- The supply available from Chapman is NTMWD's share of the estimated firm yield of the project. The derivation of the firm yield for Lake Chapman is discussed in the section of this appendix on imports. (Note that supplies from Lake Chapman for other Region C users are included in the section on imports.)
- The supply available from reuse is based on the fact that the North Texas Municipal Water District currently has a water right to reuse up to 35,943 acre-feet per year of the discharge from its Wilson Creek wastewater treatment plant upstream from Lake Lavon <sup>(12)</sup>.

**Lost Creek/Jacksboro System (Jacksboro).** The supply is from the TNRCC permit <sup>(12)</sup>. HDR's original analysis for the project indicates that this is the yield of the project if releases are made for prior downstream water rights in Lake Bridgeport <sup>(14)</sup>.

**West Fork less Bridgeport Local System (Tarrant Regional Water District).** The supply is from firm yield studies for the reservoirs conducted by Freese and Nichols for

**Table I-1**  
**Supply Available from the North Texas Municipal Water District System by Source**

Source	1996 Use/ (Ac-Ft)	Available Supply in Acre-Feet Per Year					
		2000	2010	2020	2030	2040	2050
Lavon	126,063	103,900	102,200	100,600	98,800	97,000	95,200
Texoma	35,284	77,300	77,300	77,300	77,300	77,300	77,300
Chapman	1,256	53,600	53,200	52,800	52,400	52,000	51,600
Reuse	23,345	35,943	35,943	35,943	35,943	35,943	35,943
<b>TOTAL</b>	<b>185,948</b>	<b>270,743</b>	<b>268,643</b>	<b>266,643</b>	<b>264,443</b>	<b>262,243</b>	<b>260,043</b>

this project. Table I-2 shows the firm yield by reservoir. (Note that a part of the yield available from Lake Bridgeport is reserved for use around the lake. This supply is listed separately in the section on reservoirs in Region C and is not available to the system.)

Under current conditions, this system provides somewhat less supply than shown. With existing facilities, it is not possible to divert water from Lake Worth when the lake is drawn down more than four feet, which makes some of the water stored in Lake Worth unavailable. In addition, the Tarrant Regional Water District operates its water supplies on a safe yield basis, which provides a smaller supply than the firm yield numbers shown. (In safe yield operation, the user takes less than the firm yield in order to leave a reserve supply in the reservoir in case a drought worse than any historical drought occurs.) Table I-2 also shows the safe yield available from this system for comparison with the firm yield.

**Cedar Creek/Richland-Chambers System (Tarrant Regional Water District).**

The supply is limited by TNRCC water rights <sup>(12)</sup> until 2050. (Previous yield studies by Freese and Nichols <sup>(39, 40)</sup> and HDR <sup>(41)</sup> indicate that the yield for each reservoir exceeds the water right until 2050.) As of 2050, the estimated firm yield after sedimentation for Richland-Chambers Lake is slightly less than the permitted diversion. Table I-3 shows the supply available from this system by source. Both Cedar Creek Lake and Richland-Chambers Lake have a firm yield in excess of their permit. The unpermitted yield of each lake is discussed in the section on unpermitted yields. (Note that Corsicana also has a diversion from Richland-Chambers Lake. This diversion is included in the section on reservoirs in Region C.)

**Ray Hubbard/Tawakoni System (Dallas).** Table I-4 gives the supply for this system by source. (Note that the Lake Tawakoni yield in this system is only for Dallas' share of the yield. Terrell's share is included in the section on imports. The remainder of the reservoir's yield is not used in Region C.) The supplies for Lake Ray Hubbard and

**Table I-2**  
**Supply Available from the West Fork Less Bridgeport Local System**

Source	1996 Use/ (Ac-Ft)	Water Supply Available in Acre-Feet Per Year					
		2000	2010	2020	2030	2040	2050
Bridgeport	--	73,500	73,200	72,900	72,600	72,400	72,200
Reserved for Local Use	--	15,000	15,000	15,000	15,000	15,000	15,000
Bridgeport in System	--	58,500	58,200	57,900	57,600	57,400	57,200
Eagle Mountain	--	27,100	26,400	25,700	25,000	24,200	23,500
Worth	--	1,000	1,000	1,000	1,000	1,000	1,000
Total System (firm yield)	75,350	86,600	85,600	84,600	83,600	82,600	81,700
Safe Yield System Supply*		72,000	70,000	68,000	66,000	64,000	62,000

\*Safe yield system supply is based on previous analyses by Freese and Nichols<sup>(14)</sup>

**Table I-3**  
**Supply Available from the Cedar Creek/Richland-Chambers System**

Source	1996 Use/ (Ac-Ft)	Water Supply Available in Acre-Feet Per Year					
		2000	2010	2020	2030	2040	2050
Cedar Creek	--	175,000	175,000	175,000	175,000	175,000	175,000
Richland-Chambers	--	210,000	210,000	210,000	210,000	210,000	207,700
Total	162,313	385,000	385,000	385,000	385,000	385,000	382,700

**Table I-4**  
**Supply Available from the Ray Hubbard/Tawakoni System**

<b>Source</b>	<b>1996 Use/ (Ac-Ft)</b>	<b>Water Supply Available in Acre-Feet Per Year</b>					
		<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>
Ray Hubbard	80,535	59,500	59,100	58,700	58,400	58,000	57,600
Tawakoni	119,327	181,800	181,300	180,800	180,200	179,700	179,100
Additional Dry - Year Supply from System Operation		8,925	8,865	8,805	8,760	8,700	8,640
Total	199,862	250,225	249,265	248,305	247,360	246,400	245,340

Lake Tawakoni are based on yield studies conducted by Chiang, Patel, and Yerby <sup>(42)</sup> for Dallas. (Freese and Nichols' yield studies for Lake Tawakoni in the *Comprehensive Sabine Basin Management Plan* for the Sabine River Authority <sup>(43)</sup> are consistent with the Chiang, Patel and Yerby yields.) The additional dry-year supply from system operation represents 15% overdraft of Lake Ray Hubbard in the highest use year. This would be compensated by underdrafting Lake Ray Hubbard in other years of an extended drought.

**Elm Fork/Lake Grapevine System (Dallas).** Table I-5 gives the supplies for this system by source. (Note that the supplies given are only for Dallas' share of each lake. Supplies for other users are given in the section on reservoirs in Region C.) The supplies for Lake Ray Roberts, Lake Lewisville, and the Elm Fork channel dams are based on yield studies for Dallas conducted by Chiang, Patel, and Yerby <sup>(42)</sup>. Water rights in Lake Grapevine are currently in dispute among Dallas County Park Cities Municipal Utility District Number One, Dallas, and Grapevine. For this study, each user was given the minimum yield proposed for them by any party in the dispute <sup>(44)</sup>. The remaining firm yield of the reservoir (4,100 acre-feet per year) is not allocated to any specific party. The additional dry-year supply from system operation represents 15 percent overdrafting of Lake Ray Roberts, Lake Lewisville, and Lake Grapevine in the highest use year. This would be compensated by underdrafting these sources in the other years of an extended drought.

## **Reservoirs in Region C**

All major reservoirs in Region C not included in water supply systems are listed, as are some smaller reservoirs used for municipal supply. In general, the supply available is limited to the current Texas Natural Resource Conservation Commission (TNRCC) water right or the firm yield, whichever is less. If the firm yield of the reservoir exceeds the water right, the extra yield is discussed in the section on unpermitted reservoir yield. Specific sources of information on water supply available for each reservoir are discussed below.

**Table I-5**  
**Supply Available from the Elm Fork/Lake Grapevine System**

Source	1996 Use/ (Ac-Ft)	Water Supply Available in Acre-Feet Per Year					
		2000	2010	2020	2030	2040	2050
Ray Roberts/Lewisville	188,042	164,300	163,100	161,800	160,600	159,300	158,100
Elm Fork Channel Dams	17,957	11,200	11,200	11,200	11,200	11,200	11,200
Lake Grapevine	32,709	6,400	6,400	6,400	6,400	6,400	6,400
Permit		10,000	10,000	0	0	0	0
TXU Industrial Permit		2,915	2,915	2,915	2,915	2,915	2,915
Additional Dry -Tear Supply from System Operation		25,605	25,425	25,230	25,050	24,855	24,675
Total	238,708	220,420	219,040	207,545	206,165	204,670	203,290

**Moss.** The supply is limited by the water right <sup>(12)</sup>. Freese and Nichols' 1961 yield study for the reservoir <sup>(45)</sup> and previous TWDB work show that the firm yield is substantially in excess of 4,500 acre-feet per year, and the excess is discussed in the section on unpermitted reservoir yields.

**Muenster.** The reservoir is not yet built and thus has no supply. The previous Texas Water Development Board study shows a yield of 500 acre-feet per year once the reservoir is built <sup>(37)</sup>, which matches the TNRCC water right <sup>(12)</sup>.

**Texoma (Texas' Share).** The supply for each user with a permit in Lake Texoma is based on the user's TNRCC water right <sup>(12)</sup>. TNRCC water rights are based on firm yield. (North Texas MWD's yield is included in the NTMWD system.) Most of the conservation storage in Lake Texoma is currently dedicated to hydropower generation. As a result, there is considerable unpermitted yield in Lake Texoma, and this unpermitted yield is discussed in the section on unpermitted reservoir yields below.

**Randell.** The supply is taken from previous TWDB analyses <sup>(37)</sup>. Valley. This reservoir has no reliable supply without diversions from Lake Texoma, which are shown under TXU's Lake Texoma water right.

**Bonham.** The supply is based on the TNRCC water right <sup>(12)</sup>. Previous TWDB analyses show a yield greater than the permitted diversion <sup>(37)</sup>. The firm yield in excess of the water right is discussed in the section on unpermitted reservoir yields.

**Coffee Mill.** This is a recreation reservoir with no diversion permitted <sup>(12)</sup>.

**Kiowa.** This is a recreation reservoir with no diversion permitted <sup>(12)</sup>.

**Ray Roberts (Denton).** The initial supply is from the raw water supply contract between Dallas and Denton <sup>(46)</sup>. The reduction over time is proportional to the estimated reduction in yield for Dallas' supply in the Lake Ray Roberts/Lewisville system as determined by studies for Dallas by Chiang, Patel, and Yerby <sup>(42)</sup>.

**Lewisville (Denton).** The initial yield is from the raw water supply contract between Dallas and Denton <sup>(46)</sup>. The reduction over time is proportional to the estimated reduction in yield for Dallas' supply in the Lake Ray Roberts/Lewisville system as determined by studies for Dallas by Chiang, Patel, and Yerby <sup>(42)</sup>.

**Bridgeport Local.** The supply is from the TNRCC permit <sup>(12)</sup>. (This water can be made available downstream if not fully utilized around the lake.)

**Benbrook.** The supply is limited by the TNRCC water right <sup>(12)</sup> until 2010. Values after 2010 are based on yield studies by Freese and Nichols <sup>(39)</sup>.

**Weatherford.** The supply is taken from previous TWDB analyses <sup>(37)</sup>.

**Grapevine.** Water rights in Lake Grapevine are currently in dispute among Dallas County Park Cities Municipal Utility District Number One, Dallas, and Grapevine. For this study, each user was given the minimum yield proposed for them by any party in the dispute <sup>(44)</sup>. The remaining firm yield of the reservoir (4,100 acre-feet per year) is not allocated to any specific party. Dallas' share of the yield is included in their Elm Fork/Lake Grapevine system.

**Arlington.** The year 2000 yield for Lake Arlington is based on analyses by Freese and Nichols. The reduction in yield over time is based on previous TWDB work <sup>(37)</sup>. As currently operated for terminal storage with a minimum elevation to allow power plant use, Lake Arlington has essentially no reliable supply in a drought year.

**Joe Pool.** The supply is taken from previous TWDB analyses <sup>(37)</sup>.

**Mountain Creek.** The supply is taken from previous TWDB analyses <sup>(37)</sup> and includes the impact of releases from Joe Pool Lake.

**North Lake.** This reservoir has no reliable supply without purchases from Dallas.

**White Rock.** The supply is limited to the TNRCC water right for irrigation <sup>(12)</sup> since the reservoir is currently used only for irrigation purposes.

**Terrell.** The supply is taken from previous TWDB analyses <sup>(37)</sup>.

**Clark.** Based on discussions with the City Manager of Ennis, this reservoir (which is not currently used for water supply) is assumed to have no reliable supply in a drought year.

**Bardwell.** The supply is based on yield studies that incorporate area-capacity data based on the recent Texas Water Development Board sedimentation survey <sup>(47)</sup>. For the next few years, Bardwell has yield in excess of its water right, and the additional yield is discussed in the section on unpermitted reservoir yield.

**Waxahachie.** The supply is taken from previous TWDB analyses <sup>(37)</sup>.

**Forest Grove.** In 1974, Freese and Nichols conducted some analyses for Texas Utilities (predecessor of TXU) that showed an average supply of 3,700 acre-feet per year during the critical period in excess of water purchased from Cedar Creek Lake <sup>(72)</sup>.

**Trinidad City Lake.** The yield is equal to the permitted diversion under the TNRCC water rights.<sup>(12)</sup>

**Trinidad.** The supply is taken from previous TWDB analyses <sup>(37)</sup> and includes the impact of diversions from the Trinity River into the lake under TXU Electric's water right permit.

**Navarro Mills.** The supply is limited by the TNRCC water right <sup>(12)</sup> until 2050. (Previous TWDB analyses <sup>(37)</sup> show that the yield exceeds the water right until 2050.) The 2050 supply is based on the previous TWDB analyses <sup>(37)</sup>. The yield in excess of the current water right is discussed in the section on unpermitted reservoir yield.

**Halbert.** The supply is taken from previous TWDB analyses <sup>(37)</sup>.

**Fairfield.** The supply is from a 1968 Forrest and Cotton study <sup>(48)</sup> with a maximum allowable drawdown of 10 feet to allow the power plant to operate. (The remaining reliable supply from Lake Fairfield is based on diversions from the Trinity River of water purchased from the Trinity River Authority and charged against the Lake Livingston water right. This supply is shown as an import to the region in this table.)

**Bryson.** The available supply is assumed to equal the TNRCC water right <sup>(12)</sup>. Recent diversions have been nearly that amount.

**Mineral Wells.** The supply is taken from previous TWDB analyses <sup>(37)</sup>.

**Wortham Lake.** This lake has no reliable supply.

**Teague Lake.** This lake has no reliable supply.

## Groundwater

Groundwater availability by county and basin was taken from previous TWDB analyses of aquifers in Region C <sup>(38)</sup>. No additional groundwater studies have been made for this project. The only changes from previous TWDB groundwater availability figures were:

- The addition of 2,919 acre-feet per year of available water in Fannin County from the “other/undifferentiated” aquifer in the Red River Basin. Historically, this water has been pumped from the Red River alluvium for irrigation use <sup>(15)</sup>, and the amount available is based on historical use. Such diversions should be available as a reliable water supply in the future.
- The 2050 availability for the Trinity Aquifer was set equal to the estimated annual recharge. (Previous TWDB analyses had the availability equal to the average annual recharge for 2030 and 2040 and somewhat less than the average annual recharge for 2050.)

The large groundwater availability shown for the Carrizo-Wilcox Aquifer in Freestone County may not be of great practical significance. Demand in Freestone County is much less than the

availability shown and is unlikely to increase to the level of the availability. In addition, some of the Freestone County water suppliers using the Carrizo-Wilcox have expressed interest in converting to a surface water supply due to concerns over quality and reliability even at the current low use levels.

## **Irrigation Local Supply**

The local irrigation availability is based on existing surface water rights for irrigation not associated with major reservoirs <sup>(10)</sup>. The TNRCC is currently developing Water Availability Models to determine the reliable supply available for existing water rights in Texas. However, the Water Availability Models for Region C basins are not yet available. The local irrigation values for Region C counties in Table 4 represent estimated reliable supplies. They were developed using the following approach:

- Irrigation water rights on major streams were assumed to be reliable.
- Irrigation water rights on minor streams were assumed to be reliable if they have authorized storage equal to or greater than one-half the authorized diversion.
- Irrigation water rights on minor streams were assumed not to be reliable if they have authorized storage less than one-half the authorized diversion.

In some cases, the estimated supply from surface water for irrigation exceeds the projected irrigation demand for the county.

## **Mining Local Supply**

Projected mining uses from TWDB represent the projected diversion of water, which may be much greater than the consumptive use of water in some cases. As a result, a water right permit with a small consumptive use can sometimes provide a large mining diversion. Also, local supplies which may not be state water (such as quarries and gravel pits filled by groundwater) may provide substantial supplies for non-consumptive mining use. The maximum historical use from these small local sources (according to TWDB records) is assumed to be available in the future.

## Livestock Local Supply

Most surface water used for livestock is taken from unpermitted stock ponds or directly from streams. The maximum historical use from these sources (according to TWDB records) is assumed to be available in the future.

## Reuse

The reuse listed in TWDB Table 4 is limited to currently permitted and operating reuse projects and existing direct reuse for irrigation or industrial purposes. The values for reuse in Region C given in TWDB Table 4 are based on the following analyses:

**Trinity River Authority/Los Colinas.** The Trinity River Authority (TRA) has a contract with Dallas County Utility and Reclamation District to supply water for irrigation use in Los Colinas in Irving. The contract allows use of 8,000 acre-feet per year or more, but actual use to date has been 2,400 acre-feet per year <sup>(9, 49)</sup>. The future amount available is assumed to be 8,000 acre-feet per year.

**Trinity River Authority/Waxahachie.** The TRA has a water right to reuse up to 5,129 acre-feet per year of the discharge from Waxahachie's wastewater treatment plant <sup>(12)</sup>. The supply is based on 7% channel losses and 65% return flow from Waxahachie's projected municipal water use, limited to the 5,129 acre-feet per year permit.

The Trinity River Authority also has a water right to reuse up to 3,626 acre-feet per year of return flows of the discharge from Ennis' wastewater treatment plant after the discharge location is moved to the Lake Bardwell watershed <sup>(12)</sup>. Since development of this supply will require moving the discharge for Ennis' wastewater treatment plant, it is not included as a currently available water supply.

**Jacksboro.** The City of Jacksboro has a water right to reuse up to 200 acre-feet per year of its wastewater effluent for irrigation <sup>(12)</sup>.

**Lake Worth for Cooling.** Texas Water Development Board projections of manufacturing demand represent diversions of water rather than consumptive use. In many cases the water is not returned to the source, and the diversions are the same as the consumptive use. However, diversions of raw water to cool industrial plants are sometimes returned to the source, and consumptive use in such cases can be much less than the amount diverted. In order for TWDB projections of manufacturing demand to balance properly with the supply available, it is necessary to show return flows from such diversions as a source of supply. The only major historical diversion of this sort in Region C has been Lockheed's diversion of cooling water from Lake Worth. These diversions have been as high as 39,231 acre-feet (in 1989). They were 14,053 acre-feet in 1996 and 16,067 acre-feet in 1997. The diversions are used for once-through cooling, and most of the water diverted is returned to the lake. The consumptive use is only a small fraction of the water diverted. It is assumed that cooling water diversions for Lockheed-Martin are a portion of the projected industrial demands for Tarrant County, and that most of the water diverted will continue to be returned for the lake and available for reuse by Lockheed or others. A return flow of 40,000 acre-feet per year from this source is assumed to be available for reuse in 2000 reducing to 25,000 acre-feet per year by 2030. (In effect, this supply offsets the portion of projected manufacturing use from Tarrant County that has historically been a non-consumptive diversion.)

In addition to the specific water rights for reuse described above, a number of entities have received authorizations from the TNRCC for direct reuse of treated wastewater effluent, primarily for irrigation of golf courses and other landscapes<sup>(50)</sup>. Reuse by The Colony, Trophy Club, Denton, Denison, Crandall, and Azle is assumed to remain at historical levels reported by the TWDB<sup>(49)</sup>. Reuse for a golf course in Kaufman is assumed to increase from less than 100 acre-feet per year to 100 acre-feet per year.

Fort Worth is currently selling treated wastewater to the Water Chase Golf Course in Tarrant County, and the existing facilities will supply up to 2,240 acre-feet per year. The North Texas Municipal Water District has facilities to sell up to 1,120 acre-feet per year to a golf course in Rockwall County.

Grapevine and Upper Trinity Regional Municipal Water District have recently received authorization for direct reuse projects that are not yet developed. Since the facilities to implement these projects are not yet built, they are not included as currently available supplies.

It is likely that reuse will increase dramatically in Region C over the next 50 years, but proposed and potential direct reuse projects are not included in TWDB Table 4. In particular, Grapevine, the Trinity River Authority, and Tarrant Regional Water District all have applications pending with TNRCC that would allow indirect reuse of significant quantities of treated wastewater. Other applications and additional direct reuse are likely to come in the future.

## Imports

The supply available from imports in TWDB Table 4 is limited to current Texas Natural Resource Conservation Commission (TNRCC) water rights <sup>(12)</sup> or the firm yield, whichever is less. Specific sources for imports are listed below:

**Chapman.** North Texas Municipal Water District, the City of Irving, and the Sulphur River Water District hold water rights in Lake Chapman totaling 146,520 acre-feet per year. Of this total, 127,320 acre-feet per year can be exported for use in Region C – 57,214 acre-feet per year for North Texas Municipal Water District, 54,000 acre-feet per year for Irving, and 16,106 acre-feet per year for the Upper Trinity Regional Water District. The recently completed Water Availability Model for the Sulphur Basin <sup>(51)</sup> indicated that the firm yield of Lake Chapman is less than 146,520 acre-feet per year. According to the R.J. Brandes Company, the study showed a shortage of 30,315 acre-feet in a 3 year, 8 month critical period <sup>(52)</sup>. Based on that information, the initial firm yield of Lake Chapman is about 138,250 acre-feet per year.

According to the U.S. Corps of Engineers <sup>(53)</sup>, sedimentation in Lake Chapman is expected to be 37,000 acre-feet over 100 years, and this sedimentation would gradually reduce the reservoir's yield. The values in TWDB Table 4 show Lake Chapman's computed firm yield divided proportionally among the Region C water suppliers with a share of the water. (North Texas MWD's share of the firm yield is included in the NTMWD system supply.) The water supply for Upper Trinity Regional Water District could reduce by 25% in 2050 because the City

of Commerce has the option to reclaim a portion of the water it has sold to UTRWD after 2040. However, based on future water projections for the City of Commerce, it is expected that Commerce may not need to exercise the option, thereby letting the water remain available to UTRWD.

**Tawakoni (Terrell).** The supply is based on Terrell's contract for water from Lake Tawakoni, with the amount available reduced by the same percent as Dallas' supply from Lake Tawakoni.

**Lake Fork (Dallas).** The supply is based on Dallas' right for interbasin transfer from the Neches River Basin, confirmed by updated yield studies by Chiang, Patel, and Yerby <sup>(42)</sup> and by the *Comprehensive Sabine Basin Management Plan* <sup>(43)</sup>.

**Palestine (Dallas).** The supply is based on updated yield studies for Dallas by Chiang, Patel, and Yerby <sup>(42)</sup>.

**Athens (Athens).** The yield of Lake Athens is based on the Neches Basin Water Availability Model, with inflows based on drainage area ratio with Lake Palestine <sup>(54)</sup>. The yield from the WAM study is reduced by 100 acre-feet per year every two decades to account for sedimentation. This reduction for sedimentation is consistent with previous TWDB analyses <sup>(37)</sup>.

**Livingston (TXU-Fairfield).** TXU has a contract with the Trinity River Authority to divert up to 20,000 acre-feet per year from the Trinity River into Lake Fairfield under TRA's Lake Livingston water right. The contract limits diversions to a maximum of 48,000 acre-feet in any three years. The average allowable diversion of 16,000 acre-feet per year was used as the available supply.

**Vulcan Materials (from BRA).** Vulcan Materials has a contract to purchase 35 acre-feet per year of water originating in Possum Kingdom Lake from the Brazos River Authority for mining use. (Possum Kingdom Lake is in Region G.) Vulcan Materials has requested to purchase additional water from BRA, and BRA is currently considering that request.

**Parker County.** A portion of Mineral Wells is in Parker County in Region C, and Mineral Wells also sells water to Millsap Water Supply Corporation and Parker County Water Supply Corporation in Parker County. All of Mineral Wells' water supply currently comes from Lake Palo Pinto in Region G. (Mineral Wells has a water right in Lake Mineral Wells in Parker County but has no plans to use that source for water supply.) In 1997, Mineral Wells sold 66 acre-feet to Millsap WSC and 176 acre-feet to Parker County WSC. We assume that the supply available from this source will be as follows:

- All projected City of Mineral Wells demand in Parker County
- 300 acre-feet per year in 2000 for the two water supply corporations, changing over time in proportion to projected changes in Parker County Other municipal demand until 2030. (After 2030, the importation to these two water supply corporations is assumed to remain constant as projected County Other water use for Parker County decreases.)

## **Unpermitted Reservoir Yields**

The Texas Water Development Board requirements for Senate Bill One planning indicate that the list of current water supply sources in TWDB Table 4 must be based on firm yield for existing reservoirs. However, some reservoirs in Region C do not have a TNRCC water right permit that allows use of the full firm yield of the project. For those reservoirs, the unpermitted reservoir yield is listed separately at the end of TWDB Table 4. In our opinion, this unpermitted yield is not currently available to users in Region C. It is a potential water supply source if appropriate water right permits can be obtained, but permitting additional diversions would be very difficult for most of these reservoirs. The text below discusses the derivation of the unpermitted reservoir yields for Region C:

**Moss.** The yield for Moss Lake was obtained from previous TWDB analyses <sup>(37)</sup>. The permitted diversions were subtracted from the firm yield to determine the unpermitted yield.

**Texoma (Texas' Share).** Most of the conservation storage of Lake Texoma is dedicated for hydropower generation and is not available for water supply. The firm yield was computed assuming that all conservation storage was converted to water supply use, and half of the firm

yield was assumed to be available to Texas. (Hydrologic data for the firm yield analysis was obtained from a Corps of Engineers report <sup>(55)</sup>.) The currently permitted diversions from Lake Texoma in Texas were subtracted from the firm yield to determine the unpermitted yield.

**Bonham.** The yield for Bonham Lake was obtained from previous TWDB analyses <sup>(37)</sup>. The permitted diversions were subtracted from the firm yield to determine the unpermitted yield.

**Cedar Creek.** Freese and Nichols determined the yield for Cedar Creek Lake using hydrologic data developed in previous studies <sup>(39, 40, 41)</sup> and area-capacity data based on a recent Texas Water Development Board volumetric survey. The currently permitted diversions from Cedar Creek Lake were subtracted from the firm yield to determine the unpermitted yield.

**Richland-Chambers.** Freese and Nichols determined the yield for Richland-Chambers Lake using hydrologic data developed in previous studies <sup>(39, 40, 41)</sup> and area-capacity data based on a recent Texas Water Development Board volumetric survey. The currently permitted diversions from Richland-Chambers Lake were subtracted from the firm yield to determine the unpermitted yield.

**Bardwell.** Freese and Nichols determined the yield for Lake Bardwell using hydrologic data developed in previous studies and area-capacity data based on a recent Texas Water Development Board volumetric survey. The currently permitted diversions from Lake Bardwell were subtracted from the firm yield to determine the unpermitted yield.

**Navarro Mills.** The yield for Navarro Mills Lake was obtained from previous TWDB analyses <sup>(37)</sup>. The permitted diversions were subtracted from the firm yield to determine the unpermitted yield.

## Identification Codes for TWDB Table 4

The TWDB has developed a source identification code for each source of water within the State of Texas. In Region C, the sources assigned identification codes are classified as water

supply systems, reservoirs in Region C, groundwater, local irrigation supplies, other local supply (for mining purposes), livestock local supply, reuse, and imports. The TWDB provided a code for each supply source or system. The identification code for reservoirs (both in Region C and imports) consists of a two-digit basin number followed by 3 to 4 digits designating each reservoir, as determined by the TWDB. The groundwater is encoded with the first 3 digits representing the TWDB county number associated with the county name and the last 2 digits representing the TWDB aquifer code associated with specific aquifers. The irrigation local supply identification source code is based on the TWDB county number followed by the TWDB code “996” representing irrigation local supply. The identification code for other local supply includes the TWDB county number followed by the TWDB code “999”. The livestock local supply code consists of the TWDB basin number and the TWDB code “997” representing water used for livestock purposes. The TWDB provided the source identification codes for all of the reuse projects. The TWDB identification codes are used for identification purposes to aid the TWDB in sorting through the data for all of the regions.

### ***Water Supply Systems***

The TWDB provided these identification numbers for the Region C water supply systems:

020B0 North Texas MWD  
08290 Lost Creek/Jacksboro  
086C0 West Fork less Bridgeport Local  
086E0 Cedar Creek/Richland-Chambers  
086F0 Ray Hubbard/Tawakoni System  
086D0 Elm Fork/Lake Grapevine

### ***Reservoirs in Region C***

The first two digits represent the TWDB basin code for the basin in which the reservoir is located:

- 02 Red River Basin
- 05 Sabine River Basin
- 08 Trinity River Basin
- 12 Brazos River Basin

The last 3 (sometimes 4) digits and letters of the reservoir codes were provided by the TWDB and are as follows:

- 02220 Moss
- 08380 Muenster
- 02230P Texoma (GTUA)
- 02230P Texoma (Denison)
- 02230P Texoma (TXU)
- 02230P Texoma (RRA)
- 02240 Randell
- 02250 Valley
- 02270 Bonham
- 02280 Coffee Mill
- 08090 Kiowa
- 08100P Ray Roberts (Denton)
- 08110P Lewisville (Denton)
- 08010P Bridgeport Local
- 08060 Benbrook
- 08240P Richland-Chambers (Corsicana)
- 08050 Weatherford
- 0807A Grapevine (PCMUD)
- 0807A Grapevine (Grapevine)
- 0807A Grapevine (in dispute)
- 08120 Arlington
- 08130 Joe Pool
- 08140 Mountain Creek
- 08080 North

08150	White Rock
08180	Terrell
08640	Clark
08210	Bardwell
08200	Waxahachie
08410	Forest Grove
A08195	Trinidad City Lake
08390	Trinidad
08230	Navarro Mills
08220	Halbert
08420	Fairfield
12148	Bryson
12170	Mineral Wells
08265	Wortham Lake
12375	Teague City Lake

### ***Groundwater***

For the groundwater source identification code, the first three digits represent the county in which the aquifer is located. The Region C TWDB county numbers are:

043	Collin County
049	Cooke County
057	Dallas County
061	Denton County
070	Ellis County
074	Fannin County
081	Freestone County
091	Grayson County
107	Henderson County
119	Jack County

- 129 Kaufman County
- 175 Navarro County
- 184 Parker County
- 199 Rockwall County
- 220 Tarrant County
- 249 Wise County

The last two digits in the groundwater identification code represent the aquifer name. The Region C aquifer identification codes and their corresponding names are as follows:

- 10 Carrizo Wilcox Aquifer
- 20 Nacatoch Aquifer
- 22 Other Aquifer
- 28 Trinity Aquifer
- 29 Woodbine Aquifer

The specific identification codes for Region C groundwater sources include:

- 04328 Trinity-Collin
- 04329 Woodbine-Collin
- 04922 Other-Cooke
- 04928 Trinity-Cooke
- 04928 Trinity
- 04929 Woodbine-Cooke
- 05722 Other-Dallas
- 05728 Trinity-Dallas
- 05729 Woodbine-Dallas
- 06128 Trinity-Denton
- 06129 Woodbine-Denton
- 07028 Trinity-Ellis
- 07029 Woodbine-Ellis

07428 Trinity-Fannin  
07429 Woodbine-Fannin  
07422 Other-Fannin  
08110 Carrizo-Wilcox-Freestone  
08124 Queen City-Freestone  
09122 Other-Freestone  
09128 Trinity-Grayson  
09129 Woodbine-Grayson  
10710 Carrizo-Wilcox-Henderson  
10720 Nacatoch-Henderson  
10722 Other-Henderson  
10724 Queen City-Henderson  
11922 Other-Jack  
11928 Trinity-Jack  
12920 Nacatoch-Kaufman  
12928 Trinity-Kaufman  
12929 Woodbine\Kaufman  
17510 Carrizo-Wilcox-Navarro  
17520 Nacatoch-Navarro  
17522 Other-Navarro  
17528 Trinity-Navarro  
17529 Woodbine-Navarro  
18422 Other-Parker  
18428 Trinity-Parker  
19920 Nacatoch-Rockwall  
19928 Trinity-Rockwall  
19929 Woodbine-Rockwall  
22028 Trinity-Tarrant  
22029 Woodbine-Tarrant  
24928 Trinity-Wise

### ***Local Irrigation Supplies from Surface Water***

The local irrigation supply identification codes begin with the first three digits representing the TWDB county number.

- 043 Collin County
- 049 Cooke County
- 057 Dallas County
- 061 Denton County
- 070 Ellis County
- 074 Fannin County
- 081 Freestone County
- 091 Grayson County
- 107 Henderson County
- 119 Jack County
- 129 Kaufman County
- 175 Navarro County
- 184 Parker County
- 199 Rockwall County
- 220 Tarrant County
- 249 Wise County

The "996" is the TWDB code referring to local irrigation supplies from surface water and are listed below. Thus 04996 is local irrigation supply in Cooke County, for example.

### ***Mining Local Supply***

The first two digits in the code for mining local supply represent the basin number.

- 02 Red River Basin
- 05 Sabine River Basin

- 08 Trinity River Basin
- 12 Brazos River Basin

The "999" is the TWDB code to represent other local surface water supply for mining purposes. Thus 08999 is mining local supply in the Trinity Basin, etc.

***Livestock Local Supply***

The first two digits in the livestock local supply code represent the basin number.

- 02 Red River Basin
- 05 Sabine River Basin
- 08 Trinity River Basin
- 12 Brazos River Basin

The "997" is the TWDB code representing surface water used for livestock purposes. Thus 05997 is surface water used for livestock in the Sabine Basin, etc.

***Reuse***

The source identification codes for reuse projects in Region C were provided by the TWDB. The following list contains the reuse projects and the codes assigned per the TWDB:

- 3508C1 Trinity River Authority/Los Colinas
- 3508C1 Trinity River Authority/Waxahachie
- 3508C1 Jacksboro (irrigation)
- 36147 Lake Worth for Cooling
- 36132 The Colony (golf)
- 36132 Trophy Club (golf)
- 36132 Denton (Power Plant)
- 36132 UTRWD
- 36135 Denison (golf)

36142 Country Club Water Supply (golf)  
36142 Crandall (golf)  
36147 Azle (golf)  
Water Chase Golf Course  
Buffalo Creek Golf Course

### ***Imports***

The Region C imports are all surface water supply sources and are assigned codes to their names as explained above in "Reservoirs in Region C". The imported waters are identified below:

03010P Chapman (Irving)  
03010P Chapman (Upper Trinity RWD)  
05010P Tawakoni (Terrell)  
    05040 Fork (Dallas)  
    06020 Palestine (Dallas)  
06010 Athens (Athens)  
08400 Livingston (TXU-Fairfield)  
12150 Vulcan Materials (from BRA)  
12160 Parker County (from Mineral Wells)

### ***Unpermitted Reservoir Yield***

The source identification codes for unpermitted reservoir yields are based on the same methodology as explained in "Reservoirs in Region C" above. The unpermitted reservoir yield identification codes are as follows:

02220 Moss  
02230 Texoma  
02270 Bonham  
086E0 Cedar Creek

08240 Richland Chambers

08210 Bardwell

08230 Navarro Mills

**TWDB Table 4  
Current Water Supply Sources**

A	B	C	D			E		F		G	H	I	J	K	L	
Name of Specific Source	Type of Water Supply	Regional Water Planning Group Letter	County Number for Supply Source	User	County Name of Supply Source	Basin Number for Supply Source	Basin Name for Supply Source	Specific Source Identifier Number	Estimated 1996 Use	Value for Year 2000 of Total Supply from Source During Drought of Record Conditions	Value for Year 2010 of Total Supply from Source During Drought of Record Conditions	Value for Year 2020 of Total Supply from Source During Drought of Record Conditions	Value for Year 2030 of Total Supply from Source During Drought of Record Conditions	Value for Year 2040 of Total Supply from Source During Drought of Record Conditions	Value for Year 2050 of Total Supply from Source During Drought of Record Conditions	Comments
<b>WATER SUPPLY SYSTEMS</b>																
Lake Lavon/Reuse	02	C	43	NTMWD	Collin	8	Trinity	080C0	149,408	139,843	138,143	136,543	134,743	132,943	131,143	Includes Lavon and permitted reuse.
Lost Creek/Jacksboro System	02	C	119	Jacksboro	Jack	8	Trinity	08290	589	1,397	1,397	1,397	1,397	1,397	1,397	Permitted amount equal to firm yield.
West Fork less Bridgeport Local	02	C	220	TRWD	Tarrant	8	Trinity	086C0	75,350	86,600	85,600	84,600	83,600	82,600	81,700	Includes Eagle Mountain, Worth, and part of Bridgeport.
Cedar Creek/Richland-Chambers System	02	C		TRWD	Henderson (Kaufman)/ Freestone (Navarro)	8	Trinity	086E0	162,313	385,000	385,000	385,000	385,000	385,000	382,700	Limited to permit or firm yield, whichever is less. Unpermitted yield shown below.
Elm Fork/Lake Grapevine System	02	C	61	Dallas	Dallas (Tarrant, Denton)	8	Trinity	086D0	238,708	220,420	219,040	207,545	206,165	204,670	203,290	Includes diversions under CF-75 and Dallas' share of Ray Roberts, Lewisville, and Grapevine. Also, 10,000 AF/Y through 2010 for #5414 and 2915 AF/Y for TXU Industrial use through 2050. 15% Overdraft of Ray Roberts and Lake Grapevine.
<b>Total for Systems</b>									626,368	833,260	829,180	815,085	810,905	806,610	800,230	
- Portion from Region C Reservoirs									603,023	797,317	793,237	779,142	774,962	770,667	764,287	
- Portion from Reuse									23,345	35,943	35,943	35,943	35,943	35,943	35,943	NTMWD Lake Lavon
<b>RESERVOIRS IN REGION C</b>																
Moss	00	C	49	Gainesville	Cooke	2	Red	02220	0	4,500	4,500	4,500	4,500	4,500	4,500	Limited by permit. Unpermitted yield shown below.
Lake Texoma (Texas' Share - NTMWD)	02	C	91	NTMWD	Grayson	2	Red	020C0	35,284	77,300	77,300	77,300	77,300	77,300	77,300	NTMWD share of Lake Texoma.
Lake Texoma (Texas' Share - GTUA)	00	C	91	GTUA	Grayson	2	Red	02230P	6,165	25,000	25,000	25,000	25,000	25,000	25,000	P-4301. Unpermitted yield for Texoma listed below.
Lake Texoma (Texas' Share - Denison)	00	C	91	Denison	Grayson	2	Red	02230P	156	24,400	24,400	24,400	24,400	24,400	24,400	CA-4901. Unpermitted yield for Texoma listed below.
Lake Texoma (Texas' Share - TXU)	00	C	91	TXU	Grayson	2	Red	02230P	2,322	10,000	10,000	10,000	10,000	10,000	10,000	CA-4900. Unpermitted yield for Texoma listed below.
Lake Texoma (Texas' Share - RRA)	00	C	91	RRA	Grayson	2	Red	02230P	234	2,000	2,000	2,000	2,000	2,000	2,000	CA-4898. Unpermitted yield for Texoma listed below.
Randell	00	C	91	Denison	Grayson	2	Red	02240	5,350	5,280	5,280	5,280	5,280	5,280	5,280	Yields from TWDB data (CA-4901).
Valley	00	C	74	TXU	Fannin (Grayson)	2	Red	02250	0	0	0	0	0	0	0	Reliable yield depends on Texoma contract. Forced evaporation was 2,735 acre-feet in 1996.

A	B	C	D			E		F		G	H	I	J	K	L	
Name of Specific Source	Type of Water Supply	Regional Water Planning Group Letter	County Number for Supply Source	User	County Name of Supply Source	Basin Number for Supply Source	Basin Name for Supply Source	Specific Source Identifier Number	Estimated 1996 Use	Value for Year 2000 of Total Supply from Source During Drought of Record Conditions	Value for Year 2010 of Total Supply from Source During Drought of Record Conditions	Value for Year 2020 of Total Supply from Source During Drought of Record Conditions	Value for Year 2030 of Total Supply from Source During Drought of Record Conditions	Value for Year 2040 of Total Supply from Source During Drought of Record Conditions	Value for Year 2050 of Total Supply from Source During Drought of Record Conditions	Comments
Bonham	00	C	74	Bonham	Fannin	2	Red	02270	1,577	5,340	5,340	5,340	5,340	4,850	4,250	Limited to permit or firm yield, whichever is less. Unpermitted yield shown below.
Coffee Mill	00	C	74	TPWD	Fannin	2	Red	02280	0	0	0	0	0	0	0	No diversion (recreation, CA-4915)
Kiowa	00	C	49	Homeowners	Cooke	8	Trinity	08090	0	0	0	0	0	0	0	No diversion (recreation, CA-2334A)
Ray Roberts (Denton)	00	C	61	Denton	Denton (Cooke, Grayson)	8	Trinity	08100P	11,150	22,150	22,000	21,800	21,600	21,450	21,300	Dallas/Denton Contract
Lewisville (Denton)	00	C	61	Denton	Denton	8	Trinity	08110P	4,875	4,870	4,830	4,790	4,760	4,720	4,680	Dallas/Denton Contract
Bridgeport Local	00	C	249	TRWD	Wise (Jack)	8	Trinity	08010P	3,019	15,000	15,000	15,000	15,000	15,000	15,000	Limited by permit. Remainder of yield in West Fork less Bridgeport Local system.
Benbrook	00	C	220	TRWD	Tarrant	8	Trinity	08060	4,650	6,833	6,833	6,600	6,400	6,200	6,000	TRWD 1990 study by Freese and Nichols. 1996 use from TNRCC files.
Richland-Chambers (Corsicana)	00	C	81	Corsicana	Freestone (Navarro)	8	Trinity	08240P	0	13,650	13,650	13,650	13,650	13,650	13,650	CA-5030. Unpermitted yield for Richland-Chambers is given below.
Weatherford	00	C	184	Weatherford	Parker	8	Trinity	08050	2,845	2,000	1,850	1,730	1,600	1,470	1,350	Yields from TWDB data.
Grapevine (PCMUD)	00	C	61	PCMUD	Tarrant (Denton)	8	Trinity	08070	9,983	10,800	10,800	10,800	10,800	10,800	10,800	Rights in dispute. This is minimum proposed by any party in the dispute.
Grapevine (Grapevine)	00	C	61	Grapevine	Tarrant (Denton)	8	Trinity	08070	4,332	1,800	1,800	1,800	1,800	1,800	1,800	Rights in dispute. This is minimum proposed by any party in the dispute.
Grapevine (in dispute)	00	C	61	Unknown	Tarrant (Denton)	8	Trinity	08070	0	4,100	4,100	4,100	4,100	4,100	4,100	Rights in dispute. This is the amount claimed by more than one party.
Arlington	00	C	220	Arlington, TXU	Tarrant	8	Trinity	08120	13,000	6,450	6,400	6,350	6,300	6,250	6,200	Yield from F&N operation study (1999). Lose 50 ac-ft/yr per decade per TWDB.
Joe Pool	00	C	57	TRA	Dallas (Tarrant, Ellis)	8	Trinity	08130	6,860	16,900	16,800	16,600	16,500	16,400	16,300	Yields from TWDB data.
Mountain Creek	00	C	57	TXU	Dallas	8	Trinity	08140	4,577	6,400	6,400	6,400	6,400	6,400	6,400	Yields from TWDB data. Yield includes required releases from Joe Pool Lake.
North	00	C	57	TXU	Dallas	8	Trinity	08080	0	0	0	0	0	0	0	Reliable supply depends on purchase from Dallas. Forced evaporation was 1,796 acre-feet in 1996.
Lake Ray Hubbard (Dallas)	02	C	57	Dallas	Dallas	08	Trinity	08170	80,535	68,425	67,965	67,505	67,160	66,700	66,240	Includes 15% overdraft of Ray Hubbard.
White Rock	00	C	57	Dallas	Dallas	8	Trinity	08150	0	3,000	3,000	3,000	3,000	3,000	3,000	Current irrigation authorization (CA-2461).
Terrell	00	C	129	Terrell	Kaufman	8	Trinity	08180	3,594	1,650	1,634	1,617	1,600	1,580	1,560	Yields from TWDB data.
Clark	00	C	70	Ennis	Ellis	8	Trinity	08640	0	0	0	0	0	0	0	Assumed no yield.

A	B	C	D			E		F		G	H	I	J	K	L	
Name of Specific Source	Type of Water Supply	Regional Water Planning Group Letter	County Number for Supply Source	User	County Name of Supply Source	Basin Number for Supply Source	Basin Name for Supply Source	Specific Source Identifier Number	Estimated 1996 Use	Value for Year 2000 of Total Supply from Source During Drought of Record Conditions	Value for Year 2010 of Total Supply from Source During Drought of Record Conditions	Value for Year 2020 of Total Supply from Source During Drought of Record Conditions	Value for Year 2030 of Total Supply from Source During Drought of Record Conditions	Value for Year 2040 of Total Supply from Source During Drought of Record Conditions	Value for Year 2050 of Total Supply from Source During Drought of Record Conditions	Comments
Bardwell	00	C	70	TRA	Ellis	8	Trinity	08210	4,976	9,600	9,600	9,500	9,000	8,600	8,100	Yields from yield study, limited to permit. Unpermitted yield is shown below.
Waxahachie	00	C	70	Waxahachie	Ellis	8	Trinity	08200	1,757	2,400	2,400	2,400	2,400	2,400	2,400	Yields from TWDB data.
Forest Grove	00	C	107	TXU	Henderson	8	Trinity	08410	805	3,700	3,700	3,700	3,700	3,700	3,700	Freese and Nichols 1974 study for TXU. 1996 release was for Lake Trinidad.
Trinidad City Lake	00	C	107	Trinidad	Henderson	8	Trinity	A08195	166	1,000	1,000	1,000	1,000	1,000	1,000	CA-4984.
Trinidad	00	C	107	TXU	Henderson	8	Trinity	08390	4,000	4,000	4,000	4,000	4,000	4,000	4,000	Yields from TWDB data (including diversions from Trinity).
Navarro Mills	00	C	175	TRA	Navarro	8	Trinity	08230	6,236	19,400	19,400	19,400	19,400	19,400	19,130	Yields from TWDB, limited to permit. Unpermitted yield is shown below.
Halbert	00	C	175	Corsicana	Navarro	8	Trinity	08220	2,238	600	600	600	600	600	600	Yields from TWDB data.
Fairfield	00	C	81	TXU	Freestone	8	Trinity	08420	0	2,000	2,000	2,000	2,000	2,000	2,000	Yields with maximum allowable drawdown (Forrest and Cotton, 1968). Additional supply depends on purchase from TRA. Forced evaporation was 6,916 acre-feet in 1996.
Bryson	00	C	119	Bryson	Jack	12	Brazos	12870	67	90	90	90	90	90	90	Has supplied up to 74 acre-feet.
Mineral Wells	00	C	182	Mineral Wells	Parker	12	Brazos	12170	0	1,500	1,500	1,500	1,500	1,500	1,500	Yields from TWDB data.
Wortham Lake	00	C	81	Wortham	Freestone	8	Trinity	08700	101	0	0	0	0	0	0	Not a reliable supply.
Teague City Lake	00	C	81	Teague	Freestone	12	Brazos	12860	0	0	0	0	0	0	0	Not a reliable supply.
<b>GROUNDWATER</b>																
Other	01	C	43		Collin	5	Sabine	04322	4	5	5	5	5	5	5	
Other	01	C	43		Collin	8	Trinity	04322	107	134	134	134	134	134	134	
Trinity	01	C	43		Collin	5	Sabine	04328	Incl. Below	125	125	125	125	125	125	
Trinity	01	C	43		Collin	8	Trinity	04328	1,124	5,496	5,496	5,496	4,567	4,567	4,567	279 AF Other-Undif. In 1996
Woodbine	01	C	43		Collin	5	Sabine	04329	Incl. Below	94	94	94	94	94	94	
Woodbine	01	C	43		Collin	8	Trinity	04329	1,106	1,738	1,738	1,738	1,738	1,738	1,738	
Other	01	C	49		Cooke	2	Red	04922	0	316	203	158	130	112	117	
Other	01	C	49		Cooke	8	Trinity	04922	0	309	0	0	0	0	0	
Trinity	01	C	49		Cooke	2	Red	04928	Incl. Below	669	669	669	554	554	554	
Trinity	01	C	49		Cooke	8	Trinity	04928	6,809	3,860	3,860	3,860	3,199	3,199	3,199	
Woodbine	01	C	49		Cooke	2	Red	04929	0	140	140	140	140	140	140	
Woodbine	01	C	49		Cooke	8	Trinity	04929	0	300	300	300	300	300	300	
Other	01	C	57		Dallas	8	Trinity	05722	526	591	591	591	591	591	591	
Trinity	01	C	57		Dallas	8	Trinity	05728	4,221	4,964	4,964	4,964	4,964	4,964	4,964	
Woodbine	01	C	57		Dallas	8	Trinity	05729	805	1,440	1,440	1,440	1,444	1,444	1,444	
Other	01	C	61		Denton	8	Trinity	06122	9	5	5	5	4	4	4	
Trinity	01	C	61		Denton	8	Trinity	06128	10,006	6,109	6,109	6,109	5,119	5,119	5,119	

A	B	C	D			E		F		G	H	I	J	K	L	
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Woodbine	01	C	61		Denton	8	Trinity	06129	1,845	1,010	1,010	1,010	1,010	1,010	1,010	
Other	01	C	70		Ellis	8	Trinity	07022	155	105	105	105	88	88	88	
Trinity	01	C	70		Ellis	8	Trinity	07028	3,776	5,629	5,629	5,629	4,717	4,717	4,717	
Woodbine	01	C	70		Ellis	8	Trinity	07029	2,656	1,832	1,832	1,832	1,832	1,832	1,832	
Trinity	01	C	74		Fannin	2	Red	07428	614	1,749	1,749	1,749	1,368	1,368	1,368	
Trinity	01	C	74		Fannin	3	Sulphur	07428	Incl. Above	224	224	224	224	224	224	
Trinity	01	C	74		Fannin	8	Trinity	07428	Incl. Above	89	89	89	89	89	89	
Woodbine	01	C	74		Fannin	2	Red	07429	2,288	3,439	3,439	3,439	3,439	3,439	3,439	
Woodbine	01	C	74		Fannin	3	Sulpnur	07429	Inc. Above	1,546	1,546	1,546	1,546	1,546	1,546	
Woodbine	01	C	74		Fannin	8	Trinity	07429	Incl. Above	888	888	888	888	888	888	
Other	01	C	74		Fannin	2	Red	07422	2,458	2,919	2,919	2,919	2,919	2,919	2,919	Based on maximum historical
Carrizo-Wilcox	01	C	81		Freestone	8	Trinity	08110	2,382	82,511	82,511	82,511	82,511	82,511	82,511	46 AF Other-Undif. In 1996
Carrizo-Wilcox	01	C	81		Freestone	12	Brazos	08110	Incl. Above	10,946	10,946	10,946	10,946	10,946	10,946	
Other	01	C	81		Freestone	8	Trinity	08122	28	35	35	35	35	35	35	
Other	01	C	81		Freestone	12	Brazos	08122	17	21	21	21	21	21	21	
Queen City	01	C	81		Freestone	8	Trinity	08124	37	345	345	345	345	345	345	
Queen City	01	C	81		Freestone	12	Brazos	08124	38	48	48	48	48	48	48	
Other	01	C	91		Grayson	2	Red	09122	29	25	25	25	25	25	25	
Other	01	C	91		Grayson	8	Trinity	09122	18	10	10	10	9	9	9	
Trinity	01	C	91		Grayson	2	Red	09128	Incl. Below	1,295	1,295	1,295	1,165	1,165	1,165	
Trinity	01	C	91		Grayson	8	Trinity	09128	9,325	2,129	2,129	2,129	1,914	1,914	1,914	
Woodbine	01	C	91		Grayson	2	Red	09129	5,954	4,900	4,900	4,900	4,900	4,900	4,900	
Woodbine	01	C	91		Grayson	8	Trinity	09129	Incl. Above	810	810	810	810	810	810	
Carrizo-Wilcox	01	C	107		Henderson	8	Trinity	10710	3,243	4,258	4,258	4,258	4,258	4,258	4,258	
Nacatoch	01	C	107		Henderson	8	Trinity	10720	0	10	10	10	10	10	10	
Other	01	C	107		Henderson	8	Trinity	10722	162	167	167	167	167	167	167	
Queen City	01	C	107		Henderson	8	Trinity	10724	39	480	480	480	480	480	480	
Other	01	C	119		Jack	12	Brazos	11922	Incl. Below	284	284	234	216	204	234	
Other	01	C	119		Jack	8	Trinity	11922	640	650	650	600	600	630	600	
Trinity	01	C	119		Jack	8	Trinity	11928	Incl. Below	398	322	436	315	315	304	
Trinity	01	C	119		Jack	12	Brazos	11928	5	450	450	400	380	370	400	
Nacatoch	01	C	129		Kaufman	5	Sabine	12920	Incl. Below	7	7	7	7	7	7	
Nacatoch	01	C	129		Kaufman	8	Trinity	12920	249	53	53	53	53	53	53	
Other	01	C	129		Kaufman	5	Sabine	12922	187	124	124	124	124	124	124	
Other	01	C	129		Kaufman	8	Trinity	12922	73	87	87	87	87	87	87	
Trinity	01	C	129		Kaufman	8	Trinity	12928	0	1,184	1,184	1,184	992	992	992	
Woodbine	01	C	129		Kaufman	8	Trinity	12929	113	135	135	135	135	135	135	
Carrizo-Wilcox	01	C	175		Navarro	8	Trinity	17510	73	9,172	9,172	9,172	9,172	9,172	9,172	

A	B	C	D			E		F		G	H	I	J	K	L	
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Nacatoch	01	C	175		Navarro	8	Trinity	17520	67	229	229	229	229	229	229	
Other	01	C	175		Navarro	8	Trinity	17522	155	104	110	121	132	143	155	
Trinity	01	C	175		Navarro	8	Trinity	17528	0	1,873	1,873	1,873	1,570	1,570	1,570	
Woodbine	01	C	175		Navarro	8	Trinity	17529	81	499	499	499	499	499	499	
Other	01	C	184		Parker	8	Trinity	18422	Inc. Below	156	156	156	129	129	129	
Other	01	C	184		Parker	12	Brazos	18422	31	1,812	1,993	2,212	2,503	2,740	2,926	
Trinity	01	C	184		Parker	8	Trinity	18428	5,500	2,473	2,473	2,473	2,040	2,040	2,040	
Trinity	01	C	184		Parker	12	Brazos	18428	0	1,258	1,258	1,258	1,038	1,038	1,038	
Woodbine	01	C	184		Parker	8	Trinity	18429	4	4	4	4	3	3	3	
Woodbine	01	C	184		Parker	12	Brazos	18429	2	3	3	3	3	3	3	
Nacatoch	01	C	199		Rockwall	8	Trinity	19920	0	1	1	1	1	1	1	158 AF Other-Undif. In 1996
Other	01	C	199		Rockwall	5	Sabine	19922	150	188	188	188	188	188	188	
Other	01	C	199		Rockwall	8	Trinity	19922	15	19	19	19	19	19	19	
Trinity	01	C	199		Rockwall	5	Sabine	19928	0	211	211	211	169	169	169	
Trinity	01	C	199		Rockwall	8	Trinity	19928	0	747	747	747	665	665	665	
Woodbine	01	C	199		Rockwall	8	Trinity	19929	0	144	144	144	144	144	144	
Other	01	C	220		Tarrant		Trinity	22022	673	207	207	207	207	207	207	
Trinity	01	C	220		Tarrant	8	Trinity	22028	14,616	4,789	4,789	4,789	4,789	4,789	4,789	
Woodbine	01	C	220		Tarrant	8	Trinity	22029	0	766	766	766	766	766	766	
Other	01	C	249		Wise		Trinity	24922	115	106	106	106	89	89	89	
Trinity	01	C	249		Wise	8	Trinity	24928	4,592	4,862	4,862	4,862	4,074	4,074	4,074	15 AF Other-Undif. In 1996
<b>LOCAL IRRIGATION SUPPLIES FROM SURFACE WATER</b>																
Irrigation Local Supply:BaZoCo2 -3 -49	00	C	49		Cooke	2	Red	049996	N/A	23	23	23	23	23	23	
Irrigation Local Supply:BaZoCo2 -3 -74	00	C	74		Fannin	2	Red	074996	N/A	12,728	12,728	12,728	12,728	12,728	12,728	
Irrigation Local Supply:BaZoCo2 -3 -91	00	C	91		Grayson	2	Red	091996	N/A	996	996	996	996	996	996	
Irrigation Local Supply:BaZoCo3 -1 -74	00	C	74		Fannin	3	Sulphur	074996	N/A	0	0	0	0	0	0	
Irrigation Local Supply:BaZoCo5 -1 -43	00	C	43		Collin	5	Sabine	043996	N/A	0	0	0	0	0	0	
Irrigation Local Supply:BaZoCo5 -1 -129	00	C	129		Kaufman	5	Sabine	129996	N/A	0	0	0	0	0	0	
Irrigation Local Supply:BaZoCo5 -1 -199	00	C	199		Rockwall	5	Sabine	199996	N/A	0	0	0	0	0	0	
Irrigation Local Supply:BaZoCo8 -1 -43	00	C	43		Collin	8	Trinity	043996	N/A	1,017	1,017	1,017	1,017	1,017	1,017	
Irrigation Local Supply:BaZoCo8 -1 -49	00	C	49		Cooke	8	Trinity	049996	N/A	70	70	70	70	70	70	
Irrigation Local Supply:BaZoCo8 -1 -57	00	C	57		Dallas	8	Trinity	057996	N/A	3,387	2,719	2,719	2,719	2,719	2,719	
Irrigation Local Supply:BaZoCo8 -1 -61	00	C	61		Denton	8	Trinity	061996	N/A	634	634	634	634	634	634	
Irrigation Local Supply:BaZoCo8 -1 -70	00	C	70		Ellis	8	Trinity	070996	N/A	508	508	508	508	508	508	
Irrigation Local Supply:BaZoCo8 -1 -74	00	C	74		Fannin	8	Trinity	074996	N/A	0	0	0	0	0	0	
Irrigation Local Supply:BaZoCo8 -1 -91	00	C	91		Grayson	8	Trinity	091996	N/A	0	0	0	0	0	0	
Irrigation Local Supply:BaZoCo8 -1 -107	00	C	107		Henderson	8	Trinity	107996	N/A	2,382	2,382	2,382	2,382	2,382	2,382	
Irrigation Local Supply:BaZoCo8 -1 -119	00	C	119		Jack	8	Trinity	119996	N/A	110	110	110	110	110	110	
Irrigation Local Supply:BaZoCo8 -1 -129	00	C	129		Kaufman	8	Trinity	129996	N/A	347	347	347	347	347	347	
Irrigation Local Supply:BaZoCo8 -1 -175	00	C	175		Navarro	8	Trinity	175996	N/A	2,901	2,841	2,841	2,841	2,841	2,841	
Irrigation Local Supply:BaZoCo8 -1 -184	00	C	184		Parker	8	Trinity	184996	N/A	472	472	472	472	472	472	
Irrigation Local Supply:BaZoCo8 -1 -199	00	C	199		Rockwall	8	Trinity	199996	N/A	0	0	0	0	0	0	

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Irrigation Local Supply:BaZoCo8 -1 -220	00	C	220		Tarrant	8	Trinity	220996	N/A	5,326	4,386	4,386	4,386	4,386	4,386		
Irrigation Local Supply:BaZoCo8 -1 -249	00	C	249		Wise	8	Trinity	249996	N/A	714	714	714	714	714	714		
Irrigation Local Supply:BaZoCo8 -2 -81	00	C	81		Freestone	8	Trinity	081996	N/A	353	353	353	353	353	353		
Irrigation Local Supply:BaZoCo12 -3 -119	00	C	119		Jack	12	Brazos	119996	N/A	15	15	15	15	15	15		
Irrigation Local Supply:BaZoCo12 -3 -184	00	C	184		Parker	12	Brazos	184996	N/A	1,317	1,317	1,317	1,317	1,317	1,317		
Irrigation Local Supply:BaZoCo12 -5 -81	00	C	81		Freestone	12	Brazos	081996	N/A	0	0	0	0	0	0		
<b>OTHER LOCAL SUPPLY</b>																	
Other Local Supply	00	C	43	Mining	Collin	8	Trinity	08999	341	349	349	349	349	349	349	349	Based on maximum historical use (1992)
Other Local Supply	00	C	49	Mining	Cooke	8	Trinity	08999	237	237	237	237	237	237	237	237	Based on maximum historical use (1997)
Other Local Supply	00	C	57	Mining	Dallas	8	Trinity	08999	1,521	1,525	1,525	1,525	1,525	1,525	1,525	1,525	Based on maximum historical use (1997)
Other Local Supply	00	C	61	Mining	Denton	8	Trinity	08999	90	90	90	90	90	90	90	90	Based on maximum historical use (1997)
Other Local Supply	00	C	74	Mining	Fannin	2	Red	02999	161	161	161	161	161	161	161	161	Based on maximum historical use (1996)
Other Local Supply	00	C	81	Mining	Freestone	8	Trinity	08999	170	236	236	236	236	236	236	236	Based on maximum historical use (1994)
Other Local Supply	00	C	107	Mining	Henderson	8	Trinity	08999	13	29	29	29	29	29	29	29	Based on maximum historical use (1997)
Other Local Supply	00	C	119	Mining	Jack	8	Trinity	08999	370	370	370	370	370	370	370	370	Based on maximum historical use (1997)
Other Local Supply	00	C	129	Mining	Kaufman	8	Trinity	08999	75	75	75	75	75	75	75	75	Based on maximum historical use (1997)
Other Local Supply	00	C	184	Mining	Parker	12	Brazos	12999	242	242	242	242	242	242	242	242	Based on maximum historical use (1997)
Other Local Supply	00	C	199	Mining	Rockwall	5	Sabine	05999	33	33	33	33	33	33	33	33	Based on maximum historical use (1997)
Other Local Supply	00	C	220	Mining	Tarrant	8	Trinity	08999	103	103	103	103	103	103	103	105	Based on maximum historical use (1997). Year 2050 increased to meet demand.
Other Local Supply	00	C	249	Manufacturing	Wise	8	Trinity	08999		8,000	8,000	8,000	8,000	8,000	8,000	8,000	Based on maximum historical use (1997)
Other Local Supply	00	C	249	Mining	Wise	8	Trinity	08999	15,470	8,084	8,084	8,084	8,084	8,084	8,084	8,084	Based on maximum historical use (1997)
<b>LIVESTOCK LOCAL SUPPLY</b>																	
Livestock Local Supply	00	C	43	Livestock	Collin	5	Sabine	05997	27	35	35	35	35	35	35	35	Based on maximum historical use (1991)
Livestock Local Supply	00	C	43	Livestock	Collin	8	Trinity	08997	757	967	967	967	967	967	967	967	Based on maximum historical use (1991)
Livestock Local Supply	00	C	49	Livestock	Cooke	2	Red	02997	337	377	377	377	377	377	377	377	Based on maximum historical use (1994)
Livestock Local Supply	00	C	49	Livestock	Cooke	8	Trinity	08997	722	810	810	810	810	810	810	810	Based on maximum historical use (1994)
Livestock Local Supply	00	C	57	Livestock	Dallas	8	Trinity	08997	462	712	712	712	712	712	712	712	Based on maximum historical use (1993)
Livestock Local Supply	00	C	61	Livestock	Denton	8	Trinity	08997	935	935	935	935	935	935	935	935	Based on maximum historical use (1996)
Livestock Local Supply	00	C	70	Livestock	Ellis	8	Trinity	08997	1,688	1,688	1,688	1,688	1,688	1,688	1,688	1,688	Based on maximum historical use (1996)
Livestock Local Supply	00	C	74	Livestock	Fannin	2	Red	02997	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	Based on maximum historical use (1996)
Livestock Local Supply	00	C	74	Livestock	Fannin	3	Sulphur	03997	367	367	367	367	367	367	367	367	Based on maximum historical use (1996)
Livestock Local Supply	00	C	74	Livestock	Fannin	8	Trinity	08997	76	76	76	76	76	76	76	76	Based on maximum historical use (1996)
Livestock Local Supply	00	C	81	Livestock	Freestone	8	Trinity	08997	961	961	961	961	961	961	961	961	Based on maximum historical use (1996)
Livestock Local Supply	00	C	81	Livestock	Freestone	12	Brazos	12997	82	82	82	82	82	82	82	82	Based on maximum historical use (1996)
Livestock Local Supply	00	C	91	Livestock	Grayson	2	Red	02997	1,079	1,079	1,079	1,079	1,079	1,079	1,079	1,079	Based on maximum historical use (1996)
Livestock Local Supply	00	C	91	Livestock	Grayson	8	Trinity	08997	604	604	604	604	604	604	604	604	Based on maximum historical use (1996)
Livestock Local Supply	00	C	107	Livestock	Henderson	8	Trinity	08997	429	475	475	475	475	475	475	475	Based on maximum historical use (1991)
Livestock Local Supply	00	C	119	Livestock	Jack	8	Trinity	08997	1,214	1,214	1,214	1,214	1,214	1,214	1,214	1,214	Based on maximum historical use (1996)
Livestock Local Supply	00	C	119	Livestock	Jack	12	Brazos	12997	451	451	451	451	451	451	451	451	Based on maximum historical use (1996)
Livestock Local Supply	00	C	129	Livestock	Kaufman	5	Sabine	05997	91	91	91	91	91	91	91	91	Based on maximum historical use (1996)
Livestock Local Supply	00	C	129	Livestock	Kaufman	8	Trinity	08997	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531	Based on maximum historical use (1996)

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Livestock Local Supply	00	C	175	Livestock	Navarro	8	Trinity	08997	1,603	1,603	1,603	1,603	1,603	1,603	1,603	Based on maximum historical use (1996)
Livestock Local Supply	00	C	184	Livestock	Parker	8	Trinity	08997	1,026	1,026	1,026	1,026	1,026	1,026	1,026	Based on maximum historical use (1996)
Livestock Local Supply	00	C	184	Livestock	Parker	12	Brazos	12997	896	896	896	896	896	896	896	Based on maximum historical use (1996)
Livestock Local Supply	00	C	199	Livestock	Rockwall	5	Sabine	05997	20	32	32	32	32	32	32	Based on maximum historical use (1991)
Livestock Local Supply	00	C	199	Livestock	Rockwall	8	Trinity	08997	86	136	136	136	136	136	136	Based on maximum historical use (1991)
Livestock Local Supply	00	C	220	Livestock	Tarrant	8	Trinity	08997	360	438	438	438	438	438	438	Based on maximum historical use (1993)
Livestock Local Supply	00	C	249	Livestock	Wise	8	Trinity	08997	1,117	1,117	1,117	1,117	1,117	1,117	1,117	Based on maximum historical use (1996)
<b>REUSE (CURRENTLY PERMITTED OR UNDERWAY)</b>																
Trinity River Authority/Las Colinas Indirect Reuse	00	C	57	TRA	Dallas	8	Trinity	35081	2,433	8,000	8,000	8,000	8,000	8,000	8,000	Contract allows for 8,000 AF/Y or more.
Trinity River Authority/Waxahachie Indirect Reuse	00	C	70	TRA	Ellis	8	Trinity	35081	0	3,400	3,800	3,900	4,400	4,900	5,129	93% of 65% of projected use, limited to permit.
Jacksboro Indirect Reuse (irrigation)	00	C	119	Jacksboro	Jack	8	Trinity	35081	0	0	200	200	200	200	200	
Lake Worth Indirect Reuse for Cooling	00	C	220	Lockheed	Tarrant	8	Trinity	35081	14,053	40,000	35,000	30,000	25,000	25,000	25,000	Return flow from non-consumptive cooling use. Based on highest recent use.
The Colony (golf - direct reuse)	00	C	61	The Colony	Denton	8	Trinity	36132	0	100	100	100	100	100	100	
Trophy Club (golf - direct reuse)	00	C	61	Trophy Club	Denton	8	Trinity	36132	601	600	600	600	600	600	600	
Denton (Power Plant - direct reuse)	00	C	61	Denton	Denton	8	Trinity	36132	135	500	500	500	500	500	500	
UTRWD Direct Reuse	00	C	61	Denton Co. FWSD #1	Denton	8	Trinity	36132	0	2,240	2,240	2,240	2,240	2,240	2,240	
Denison (golf - direct reuse)	00	C	91	Denison	Grayson	2	Red	36055	0	100	100	100	100	100	100	
Country Club Water Supply (golf - direct reuse)	00	C	129	Country Club	Kaufman	8	Trinity	36142	18	0	100	100	100	100	100	
Crandall (golf - direct reuse)	00	C	129	Crandall	Kaufman	8	Trinity	36142	153	200	200	200	200	200	200	
Azle (golf - direct reuse)	00	C	220	Azle	Tarrant	8	Trinity	36147	123	100	100	100	100	100	100	
Water Chase Golf Course Direct Reuse	00	C	220	Golf Course	Tarrant	8	Trinity	36146	0	2,240	2,240	2,240	2,240	2,240	2,240	Buys from Fort Worth
North Texas MWD Buffalo Creek Direct Reuse	00	C	199	Golf Course	Rockwall	8	Trinity	36147	0	1,120	1,120	1,120	1,120	1,120	1,120	Buys from NTMWD
<b>IMPORTS</b>																
Chapman (NTMWD)	02	D	60	NTMWD	Delta (Hopkins)	3	Sulphur	030C0	1,256	53,600	53,200	52,800	52,400	52,000	51,600	NTMWD share of Lake Chapman.
Chapman (Irving)	00	D	60	Irving	Delta (Hopkins)	3	Sulphur	03010	0	50,600	50,200	49,900	49,500	49,100	48,800	

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Chapman (Upper Trinity MWD)	00	D	60	UTRWD	Delta (Hopkins)	3	Sulphur	03010	0	15,100	15,000	14,900	14,800	14,700	10,900	
Fawakoni (Terrell)	00	D	190	Terrell	Rains (Van Zandt, Hunt)	5	Sabine	05010	1	9,937	9,910	9,877	9,850	9,822	9,789	
Fawakoni (Dallas)	02	D	190	Dallas	Rains (Van Zandt, Hunt)	02	Sabine	05010	119,327	181,800	181,300	180,800	180,200	179,700	179,100	Lake Tawakoni
Fork (Dallas)	00	D	250	Dallas	Wood (Rains)	5	Sabine	05040	0	120,000	120,000	120,000	120,000	120,000	120,000	Exportation to Region C limited by trans-basin diversion permit.
Palestine (Dallas)	00	I	1	Dallas	Anderson (Cherokee, Smith, Henderson)	6	Neches	06020	0	112,700	112,100	111,500	110,900	110,200	109,600	
Athens (Athens)	00	I	107	Athens	Henderson	6	Neches	06010	1,640	6,300	6,200	6,200	6,100	6,100	6,000	
Livingston (TXU-Fairfield)	00	H		TXU Electric		8	Trinity	08400	12,682	16,000	16,000	16,000	16,000	16,000	16,000	
Vulcan Materials (from BRA-Possum Kingdom)	00	G	182	Vulcan Materials (Mining)	Palo Pinto	12	Brazos	12150	15	35	35	35	35	35	35	Contract with BRA
Parker County (from Mineral Wells-Lake Palo Pinto)	00	G	182	Mineral Wells, County Other	Palo Pinto	12	Brazos	12160	230	398	532	554	622	632	644	Supply from Lake Palo Pinto.
<b>SUMMARY</b>																
<b>Reservoirs in Region C</b>									823,877	1,179,455	1,174,409	1,158,894	1,153,142	1,146,807	1,137,917	56.26%
<b>Groundwater</b>									87,122	186,710	186,399	186,548	180,210	180,448	180,670	8.93%
<b>Local Irrigation</b>									Not Avail.	33,300	31,632	31,632	31,632	31,632	31,632	1.56%
<b>Other Local Supply</b>									18,826	19,534	19,534	19,534	19,534	19,534	0.97%	
<b>Livestock Local Supply</b>									18,061	18,843	18,843	18,843	18,843	18,843	0.93%	
<b>Reuse</b>									40,862	94,543	90,243	85,343	80,843	81,343	4.03%	
<b>Imports</b>									135,151	566,470	564,477	562,566	560,407	558,289	552,468	27.31%
<b>REGION C TOTAL</b>									1,123,899	2,098,855	2,085,537	2,063,360	2,044,611	2,036,896	2,022,638	100.00%
<b>UNPERMITTED RESERVOIR YIELD</b>																
Moss	00	C	49		Cooke	2	Red	02220		1,800	1,600	1,400	1,200	1,000	800	TWDB yield in excess of permitted 4,500 acre-feet per year.

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>			<b>E</b>		<b>F</b>		<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	
<b>Name of Specific Source</b>	<b>Type of Water Supply</b>	<b>Regional Water Planning Group Letter</b>	<b>County Number for Supply Source</b>	User	County Name of Supply Source	<b>Basin Number for Supply Source</b>	Basin Name for Supply Source	<b>Specific Source Identifier Number</b>	Estimated 1996 Use	<b>Value for Year 2000 of Total Supply from Source During Drought of Record Conditions</b>	<b>Value for Year 2010 of Total Supply from Source During Drought of Record Conditions</b>	<b>Value for Year 2020 of Total Supply from Source During Drought of Record Conditions</b>	<b>Value for Year 2030 of Total Supply from Source During Drought of Record Conditions</b>	<b>Value for Year 2040 of Total Supply from Source During Drought of Record Conditions</b>	<b>Value for Year 2050 of Total Supply from Source During Drought of Record Conditions</b>	Comments
Texoma (Texas' Share)	00	C	91		Grayson	2	Red	02230		787,550	759,800	732,050	704,300	676,550	648,700	Texas share of yield from yield study in excess of permitted diversion of 145,400 acre-feet per year.
Bonham	00	C	74		Fannin	2	Red	02270		1,900	1,300	700	100	0	0	TWDB yield in excess of permitted 5,340 acre-feet per year.
Cedar Creek	00	C	107		Henderson	8	Trinity	08190P		47,900	44,500	41,100	37,700	34,300	31,000	Freese and Nichols computed yield in excess of permitted 175,000 acre-feet/year.
Richland-Chambers	00	C	81		Freestone	8	Trinity	08240		28,200	22,100	16,000	9,900	3,800	0	Freese and Nichols computed yield in excess of permitted 210,000 acre-feet/year.
Bardwell	00	C	70		Ellis	8	Trinity	08210		900	400	0	0	0	0	Yields from yield study in excess of permitted 9,600 acre-feet per year.
Navarro Mills	00	C	175		Navarro	8	Trinity	08230		3,500	2,100	700	0	0	0	TWDB yield in excess of permitted 19,400 acre-feet per year.
<b>TOTAL UNPERMITTED YIELD</b>										871,750	831,800	791,950	753,200	715,650	680,500	

**NOTE:** Column titles in bold print are columns required by the Texas Water Development Board. The non-bolded columns are provided as additional information.