

Ground water is the source of drinking water for 51 percent of the 4.92 million residents in Tennessee. In 1988, public-supply withdrawal of ground water from wells and springs in the nine principal aquifers in Tennessee (fig. 1) averaged about 262 million gallons per day and accounted for 37 percent of the total public-supply withdrawals used in the State (fig. 2). This amount represents an increase of about 31 percent in the use of ground water for public supply since 1980 when public-supply withdrawals averaged about 200 million gallons per day.

Most of the ground water used for public supply in 1988 was withdrawn by public water-supply systems in West Tennessee. Ground-water withdrawals in West Tennessee averaged 203 million gallons per day and accounted for 77 percent of the ground water used for public supply in the State.

The principal public-supply systems that use ground water in Tennessee are shown in figure 3 and listed alphabetically by county in table 1. The data in table 1 also include surface-water withdrawals or purchases when the system used other sources as well as ground water. The county with the largest ground-water withdrawal for public supply in 1988 was Shelby County (Memphis), where withdrawals totaled 155 million gallons per day, or 59 percent of ground water withdrawn for public supply in the State. Thirty-one of the 201 principal public water-supply systems listed in table 1 (multiple public water-supply systems at FIPS codes 33D, 45A, 53D, 69C, 91A, 145B, 157A, 157B, 157F, and 167D, on figure 3) withdraw 1 million gallons per day or more and accounted for 82 percent of the ground water withdrawn for public supply. The sources of ground water withdrawn by public-supply systems in Tennessee also are listed in table 1.

SELECTED REFERENCES

- Alexander, F.M., Keck, L.A., Coon, L.G., and Wentz, S.J., 1984, Drought-related impacts on municipal and major self-supplied industrial water withdrawals in Tennessee—Part B: U.S. Geological Survey Water-Resources Investigations Report 84-4074, 16 p.
- Bradley, M.W., and Hollyday, E.F., 1985, Tennessee ground-water resources, in National water summary 1984—Ground-water resources: U.S. Geological Survey Water-Supply Paper 2275, p. 391-396.
- Brooks, R.E., 1988, Tennessee ground-water quality, in National water summary 1986—Ground-water quality: U.S. Geological Survey Water-Supply Paper 2325, p. 465-472.
- Hutchison, N.E., compiler, 1975, WATSTORE—National Water Data Storage and Retrieval System of the U.S. Geological Survey—User's Guide, Appendix C: County Codes: U.S. Geological Survey Open-File Report 75-426, p. C1-C16.
- Hutson, S.S., 1988, Estimated use of water in Tennessee, 1985: U.S. Geological Survey Open-File Report 88-348, 1 p.
- Hutson, S.S., Vines, C.A., and Keck, L.A., 1990, Tennessee supply and demand, in National water summary 1987—Water supply and demand: U.S. Geological Survey Water-Supply Paper 2350, p. 467-474.
- Solley, W.B., Chase, E.B., and Mann, W.B., IV, 1983, Estimated use of water in the United States in 1980: U.S. Geological Survey Circular 1001, 56 p.
- Zarzewski, Ann, 1978, Summary appraisals of the Nation's ground-water resources—Tennessee region: U.S. Geological Survey Professional Paper 813-L, 35 p.

CONVERSION FACTORS

Multiply	by	To obtain
gallon per minute (gal/min)	0.06309	liter per second (L/s)
million gallons per day (Mgal/d)	0.003785	cubic meters per day (m ³ /d)
billion gallons per day (Bgd)	3.785	cubic meters per day (m ³ /d)

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD) of 1929—a geoid datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Sea Level Datum of 1929."



For additional information write to: District Chief, U.S. Geological Survey, Suite 500, 810 Broadway, Nashville, Tennessee 37203.

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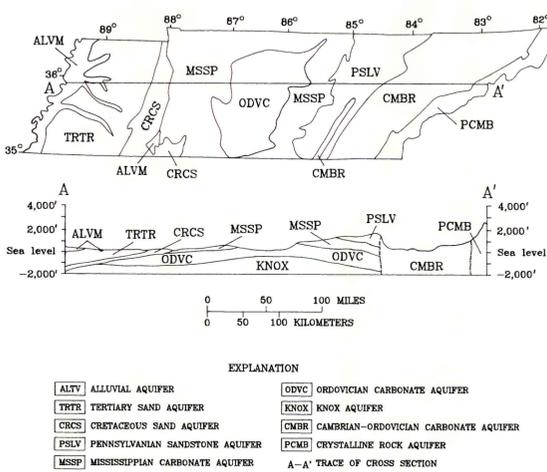


Figure 1.—Geographic distribution of principal aquifers in Tennessee. (From M.W. Bradley and E.F. Hollyday, 1985).

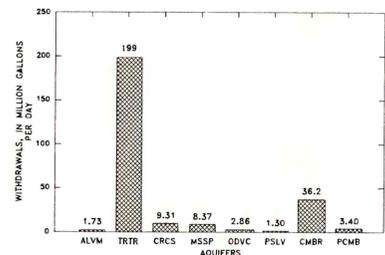
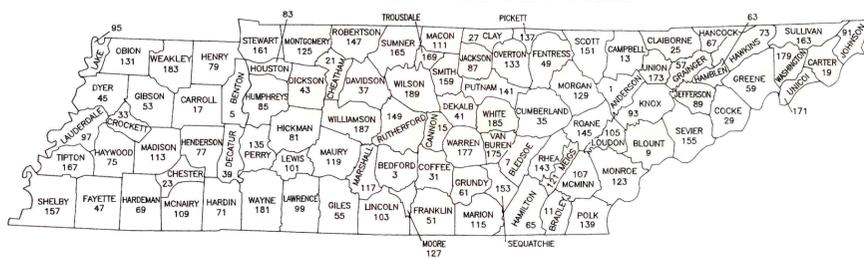


Figure 2.—Estimated ground-water withdrawals by aquifer for public-supply use for Tennessee during 1988.

COUNTY NAMES AND FIPS CODES*



* FIPS CODES—Unique number for each county in Tennessee defined under the Federal Information Processing System. Codes are used in table 1 to identify public water-supply systems in each county. In counties where more than one supply system is used, letters beginning with "A" follow the county FIPS code.

Table 1.—An inventory of principal public-supply systems

FIPS code	County	Public supply	Source name	Aquifer	Ground water (Mgal/d)	Surface water (Mgal/d)	Purchased water (Mgal/d)
1A	Anderson	North Anderson County Utility District	Shetterly Spring, Clinch River, Anderson Co. UB	CMBR	0.24	0.54	0.43
1B	Anderson	Norris Water Commission	Clear Creek Spring	CMBR	.32	.....	.....
1C	Anderson	Clinton Utility Board	Clinch River Springs, Hallsdale-Powell Ld.	CMBR	.22	1.33	.37
3A	Bedford	Wartrace Water System	Anderson County UB spring	ODVC	.52	.....	.....
5A	Benton	Big Sandy Water Department	well	CRCS	.06	.....	.....
7A	Bledsoe	Pikeville Water System	4 wells	CMBR	.33	.....	.....
11A	Bradley	Cleveland Utilities	Waterville Spring, Hiwassee UC	CMBR	1.25	3.00	1.85
15A	Cannon	Woodbury Water System	spring	ODVC	.28	.....	.....
17A	Carroll	Clarksburg Utility District	well	CRCS	.11	.....	.....
17B	Carroll	Cedar Grove Utility District	well	TRTR	.15	.....	.....
17C	Carroll	Atwood Water System	well	TRTR	.16	.....	.....
17D	Carroll	Trezevant Water System	2 wells	TRTR	.10	.....	.....
17E	Carroll	Huntington Water Department	2 wells	TRTR	.59	.....	.....
17F	Carroll	Kokomo Water Department	well	TRTR	.72	.....	.....
17G	Carroll	Bruceston Water System	well	CRCS	.26	.....	.....
17H	Carroll	Hollow Rock Water Department	2 wells	CRCS	.07	.....	.....
17I	Carter	Klan Mountain Utility District	spring	POWB	.05	.....	.....
19B	Carter	Hampson Utility District	spring	CMBR	.60	.....	.....
19C	Carter	First Utility District of Carter Co.	Campbell Spring	CMBR	.76	.....	.....
19D	Carter	Elizabethton Water Department	spring	CMBR	5.26	.....	.....
23A	Chester	Henderson Water Department	5 wells	CRCS	.86	.....	.....
25A	Claiborne	Lincoln Memorial University	spring	PSLV	.17	.....	.....
29B	Claiborne	Clear Fork Utility District	well	PSLV	.08	.....	.....
33A	Crockett	Crockett Mills Utility District	2 wells	TRTR	.05	.....	.....
33B	Crockett	Friendship Water Company	3 wells	TRTR	.10	.....	.....
33C	Crockett	Maury City Water Department	2 wells	TRTR	.10	.....	.....
33D	Crockett	Alamo Water Department	4 wells	TRTR	.31	.....	.....
33E	Crockett	Courty Wade Utility District	well	TRTR	.96	.....	.....
33F	Crockett	Wells Public Utility District	well	TRTR	.19	.....	.....
39A	Decatur	Decaturville Water System	well	ODVC	.15	.....	.....
41A	DeKalb	DeKalb-Liberty Utility District	well	ODVC	.16	.....	.....
42A	Dickson	Harpheth Utility District	Baker Spring, Turbulla UD	MSSP	.11	.....	.05
43B	Dickson	Van Lear Water System	spring	MSSP	.11	.....	.....
45B	Dyer	Dyersburg Sub. Co. Utility District	3 wells	TRTR	.38	.....	.....
45A	Dyer	Dyersburg Water Department	4 wells	TRTR	4.35	.....	.....
45B	Dyer	Newbern Water Department	3 wells	TRTR	.83	.....	.....
45C	Dyer	Trilbe Water System	2 wells	TRTR	.12	.....	.....
45D	Dyer	Northwest Dyersburg Utility District	well	TRTR	.24	.....	.....
47A	Fayette	Galloway Water Department	3 wells	TRTR	.19	.....	.....
47B	Fayette	Oakland Water Department	2 wells	TRTR	.12	.....	.....
47C	Fayette	Nosville Water System	2 wells	TRTR	.09	.....	.....
47D	Fayette	Moscow Water Department	well	TRTR	.08	.....	.....
47E	Fayette	Snowville Water System	5 wells	TRTR	.05	.....	.....
47F	Fayette	Pine Lake Cooperative, Inc.	5 wells	TRTR	.05	.....	.....
51A	Franklin	Estill Springs Water Department	Estill Spring	MSSP	.38	.....	.....
51B	Franklin	Huntland Water System	well	MSSP	.15	.....	.....
51C	Franklin	Belvidere Rural Utility District	well	MSSP	.13	.....	.....
51D	Franklin	Decherd Water Department	2 wells	MSSP	.28	.....	.....
51E	Franklin	Cowan Board of Public Utilities	spring	MSSP	.18	.....	.....
53A	Gilson	Bradford Water System	well	TRTR	.16	.....	.....
53B	Gilson	Rutherford Water System	2 wells	TRTR	.14	.....	.....
53C	Gilson	Dyer Water Department	3 wells	TRTR	.35	.....	.....
53D	Gilson	Gilson Court Mun. Water District	3 wells	TRTR	.75	.....	.....
53E	Gilson	Trenton Water System	3 wells	TRTR	.67	.....	.....
53F	Gilson	Milan Water Department	3 wells	TRTR	1.34	.....	.....
53G	Gilson	Medina Water Department	2 wells	TRTR	.07	.....	.....
53H	Gilson	Lincoln Memorial University	4 wells	TRTR	1.84	.....	.....
53I	Gilson	Milan Arsenal #1	well	TRTR	.46	.....	.....
55A	Siles	Well	well	MSSP	.30	.....	.....
61A	Grundy	Tracy City Water System	well and springs	PSLV	.36	.....	.....
63A	Harbin	Morriswater Water Department	Havley Spring	CMBR	0.0	6.22	.....
65A	Hamilton	Walden Ridge Utility District	well	CMBR	.53	.....	.....
65B	Hamilton	Union Fork-Bakewell Utility District	2 wells	CMBR	.18	.....	.....
65C	Hamilton	Sale Creek Utility District	2 wells	CMBR	.17	.....	.....
65D	Hamilton	Soddy-Fairfax Water Utility District	well	CMBR	.92	.68	.....
65E	Hamilton	Hixson Utility District	Cave Springs, rock quarry	CMBR	5.61	.....	.....
65F	Hamilton	Eastside Utility District	well	CMBR	3.77	.....	.....
65G	Hamilton	Savannah Valley Utility District	well	CMBR	.80	.....	.....
67A	Harcocok	Greenville Utility District	Fall Branch Spring, Briar Creek trib.	CMBR	.11	.10	.....
69A	Hardeman	Toone Water System	3 wells	CRCS	.18	.....	.....
69B	Hardeman	Whiteville Water Department	3 wells	TRTR	.11	.....	.....
69C	Hardeman	Bolivar Water Plant	well	CRCS	1.37	.....	.....
69D	Hardeman	Western State Hospital	well	CRCS	.17	.....	.....
69E	Hardeman	Hudson Water Department	2 wells	TRTR	.22	.....	.....
69F	Hardeman	Grand Junction Water Department	2 wells	TRTR	.19	.....	.....
71A	Hardin	Savannah Public Utility Department	6 wells	ALVM	1.73	.....	.....
71B	Hardin	Satellite Utility District	well	CRCS	.08	.....	.....
72A	Hawkins	Spartanville Utility District	spring	CMBR	.13	.....	.....
73A	Hawkins	First U.D. of Hawkins County	spring, Alexander Creek, Ford Creek	CMBR	.67	.68	.....
73C	Hawkins	Mooresburg Utility District	spring	CMBR	.07	.....	.....
75A	Haywood	Stanton Water System	well	TRTR	.06	.....	.....
75B	Haywood	Brownsville Water Department	well	TRTR	1.71	.....	.....
77A	Henderson	Scotts Hill Water System	2 wells	CRCS	.23	.....	.....
77B	Henderson	Sardis Water System	2 wells	CRCS	.06	.....	.....
77A	Henry	Henry Water System	2 wells	TRTR	.09	.....	.....

Table 1.—An inventory of principal public-supply systems—Continued

FIPS code	County	Public supply	Source name	Aquifer	Ground water (Mgal/d)	Surface water (Mgal/d)	Purchased water (Mgal/d)
79B	Henry	Paris Board of Public Utilities	4 wells	CRCS	2.17	.....	.....
79C	Henry	Henry County Water Company	3 wells	CRCS	.25	.....	.....
79D	Henry	Puryear Water System	2 wells	TRTR	.08	.....	.....
85A	Houston	Tennessee Ridge Water System	2 wells	MSSP	.14	.....	.....
85B	Houston	Erin Water Department Plant #2	spring	MSSP	.23	.....	.....
85A	Humphreys	Newum Water Department	2 wells	MSSP	.20	.....	.....
85B	Humphreys	Waverly Water Plant	2 wells	MSSP	.47	0.66	.....
85A	Jefferson	Duck River Water System	well	CMBR	.19	.....	.....
89B	Jefferson	Wandridge Water Department	well	CMBR	.26	.....	.....
89C	Jefferson	Jefferson City Water and Sewer Commission	Jarram Mine, Mossy Creek Spring	CMBR	1.51	.....	.....
91A	Johnson	Johnson County Utility District	Leoc Spring	CMBR	.08	.....	.....
91A	Johnson	Mountain City Water Department	Spring, Silver Lake Spring (surface water)	CMBR	1.10	.07	.....
93A	Knox	Hallsdale-Powell Utility District	spring	CMBR	.99	3.17	.....
93B	Knox	First Utility District of Knox County	Beaver Creek, Tennessee River	CMBR	.19	4.22	.....
95A	Lake	Ridgely Water System	well	TRTR	.23	.....	.....
95B	Lake	Tiptonville Water System	3 wells	TRTR	.70	.....	.....
95C	Lake	Reelfoot Utility District	2 wells	TRTR	.17	.....	.....
97A	Laurens	Fort Pillow State Farm	3 wells	TRTR	.50	.....	.....
97B	Laurens	Hennrich Water Department	well	TRTR	.12	.....	.....
97C	Laurens	Ripley Water System	4 wells	TRTR	1.87	.....	.....
97D	Laurens	Laurens County Water System	4 wells	TRTR	.57	.....	.....
97E	Laurens	Halls Water System	3 wells	TRTR	.79	.....	.....
97F	Laurens	St. Joseph Water System	spring	MSSP	.06	.....	.....
97G	Laurens	Loxley Water Department	5 wells	MSSP	.19	.....	.....
99C	Lawrence	Loona Utility District	spring	MSSP	.10	.....	.....
99D	Lawrence	Lawrenceburg Water System	City spring	MSSP	1.07	2.25	.....
99E	Lawrence	Summertown Water System	Shoal Creek	MSSP	.10	.....	.....
101A	Lewis	Hornhead Water System	Downey Spring	MSSP	.90	.....	.....
103A	Lincoln	Fayetteville Water System	Elk River	MSSP	.62	2.59	.....
103B	Lincoln	Lynch County Board of Public Utilities #1	well	MSSP	.74	.....	0.10
105A	Loudon	Dixie Lee Utility District	Spring, City UD, F.U.D., Knox Co., Roberson Spring	CMBR	.54	.....	.29
105B	Loudon	Loudon Utilities Board	Tennessee River	CMBR	.18	4.97	.....
105C	Loudon	Pinney Utility District	Dongola Spring	CMBR	.23	.....	.....
107A	McIntosh	Athens Utilities Board	Inglewood Spring, Stantonville Creek	CMBR	1.6	1.66	.....
109A	McNairy	Michie Water Department	well	CRCS	.24	.....	.....
109B	McNairy	Sellers Water Department	well	CRCS	.08	.....	.....
109C	McNairy	Bethel Springs Water System	well	CRCS	.08	.....	.....
109D	McNairy	Adamsville Water System	well	CRCS	.61	.....	.....
109E	McNairy	Ramer Water Department	well	CRCS	.06	.....	.....
111A	Macon	Lafayette Water System	Adams Spring	MSSP	.64	.....	.....
111B	Macon	Red Bolling Springs Water System	Spring Creek Spring	MSSP	.58	.....	.....
113A	Madison	Jackson Water System	well	TRTR	10.2	.....	.....
113B	Madison	Spring Creek Utility District	3 wells	TRTR	.28	.....	.....
115A	Marion	Jasper Water Department	Blue Spring, Sequatchie River	CMBR	.74	.06	.....
115B	Marion	Sequatchie Water Works	Blowing Cave Spring	CMBR	.09	.....	.....
117A	Marshall	Chapel Hill Water System					