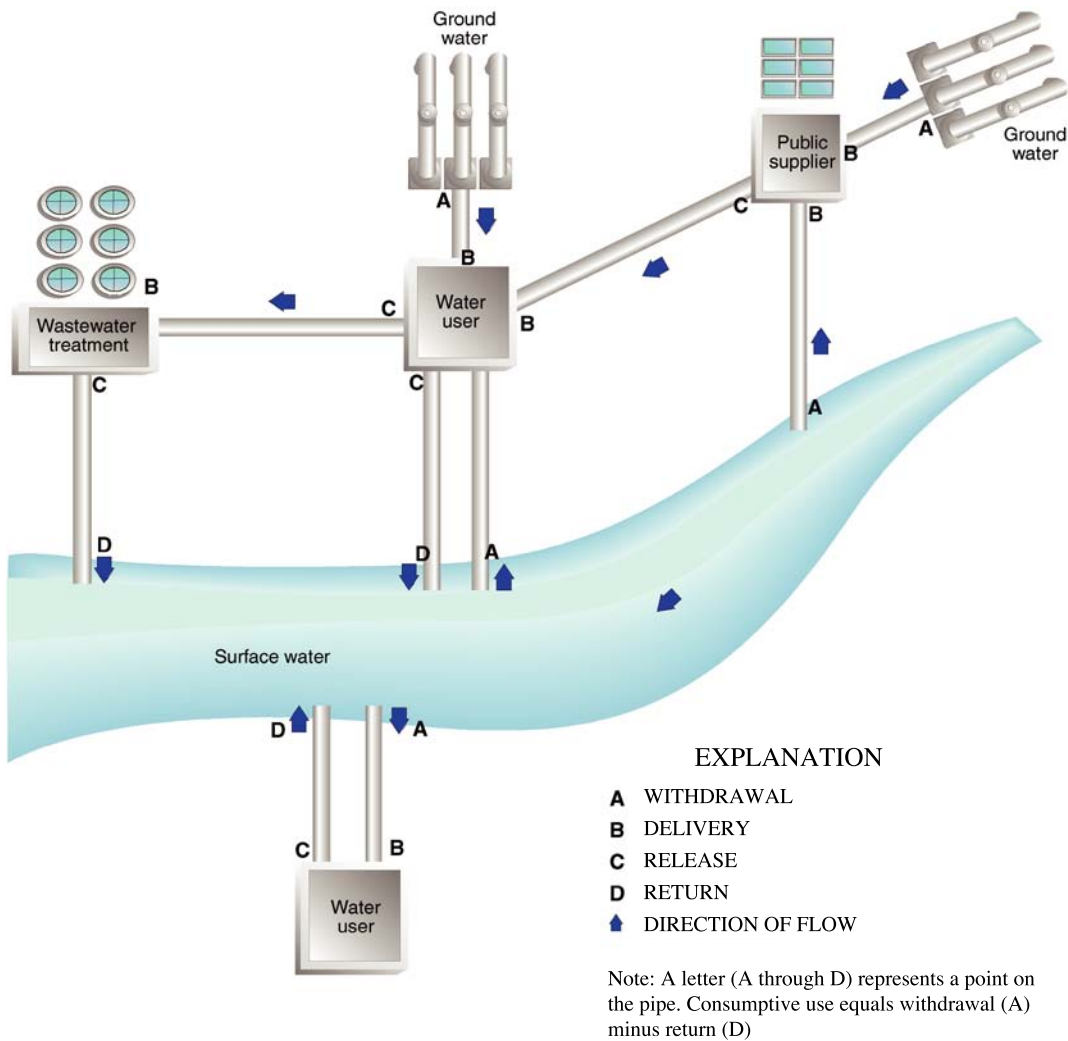


## WATER USE

Water in river and reservoir systems can be used instream for hydroelectric power generation, for navigation, for maintaining minimum streamflows to support fish and wildlife habitat, and for the assimilation of wastewater. Water also can be withdrawn from the river and reservoir systems to meet offstream needs for thermoelectric power, industry, public supply, and irrigation. Water use in this report is limited primarily to the offstream transactions of water withdrawal, return flow, and consumptive use in the Tennessee River watershed (fig. 6). Water delivered to a user from a public supplier or water released from a user to a wastewater treatment plant is not accounted for in this report; however, these transactions are shown as B and C in figure 6.

Surface- and ground-water withdrawals and consumptive-use estimates are reported for thermoelectric power, industry, public supply, and irrigation. Wastewater releases are reported as return flows in the public-supply category. Wastewater releases refer to water released from private and public wastewater-treatment facilities as designated by the USEPA as publicly owned treatment works (POTW). The reported wastewater releases include the quantity of water released to a stream and exclude the quantity of water reclaimed for beneficial uses, such as irrigation of golf courses and parks. Return flow also is reported for the thermoelectric power and industrial categories. The diversion of flow to the Tennessee-Tombigbee Waterway in the Mobile River watershed for lockages for navigation and to the Barkley Reservoir in the Cumberland River watershed for generating hydroelectric power are identified as interbasin transfers.



**Figure 6.** The interrelation of water-using entities and water-use transactions to sources of supply.

## Instream use

Instream use occurs without diverting or withdrawing water from surface- or ground-water sources. Examples of instream use are hydroelectric power generation, navigation, maintenance of minimum streamflows to support fish and wildlife habitat, and for wastewater assimilation. Quantitative estimates for most instream uses are difficult to compile for a large-scale regional watershed, and assessing the instream water use in the Tennessee River watershed was beyond the scope of this report. However, because instream uses compete with offstream uses and affect the quality and quantity of water resources for all uses, effective water-resources management requires that methods and procedures be devised to enable instream uses to be assessed quantitatively.

Knowledge about the processes and functions of instream flow can be integrated with engineering designs sensitive to the environment to meet the biological and commercial water-use needs for instream use. TVA is developing the science and technology to increase the efficiency and capacity of its 30 hydroelectric plants without degrading water quality (appendix C). Nine main river and 19 tributary hydroelectric projects within the Tennessee River watershed have the potential to generate 3,700 megawatt hours of electricity. This capacity represents about 13 percent of TVA's generating capacity and is important to meet peak power demands and maintain power system reli-

ability within the watershed, particularly during the summer months. State-of-the-art hydroturbines, control systems, system optimization models, and water-quality technologies are used to balance regional needs for energy and power. Minimum instream flows typically are provided by multiple techniques, including re-regulation weirs at Norris, Chatuge, South Holston, small minimum flow turbines at Tims Ford, Nottely, Blue Ridge, and turbine pulsing units at Apalachia, Boone, Cherokee, Douglas, Ft. Patrick Henry, Watauga, and Wilbur.

Navigation on the Tennessee River system is important for commercial shipping and recreational boating. Cargo transported on the Tennessee River system averages 50 million tons per year. The Tennessee River system also provides passage for 20,000 recreational vessels each year and supports the boat building, marina, and sports fishing industries. Fourteen locks at 10 dams in the river system are operated to support navigation. Jointly, the USACE, U.S. Coast Guard, and TVA maintain a year-round 11-foot deep navigation channel on 800 miles of main stem and tributary rivers. Passage also is maintained on many more miles of secondary channels for recreational use. The instream use for hydroelectric power and navigation of the Tennessee River system does not affect the consumptive use because the water remains in the river system.

## Total Offstream Water Use

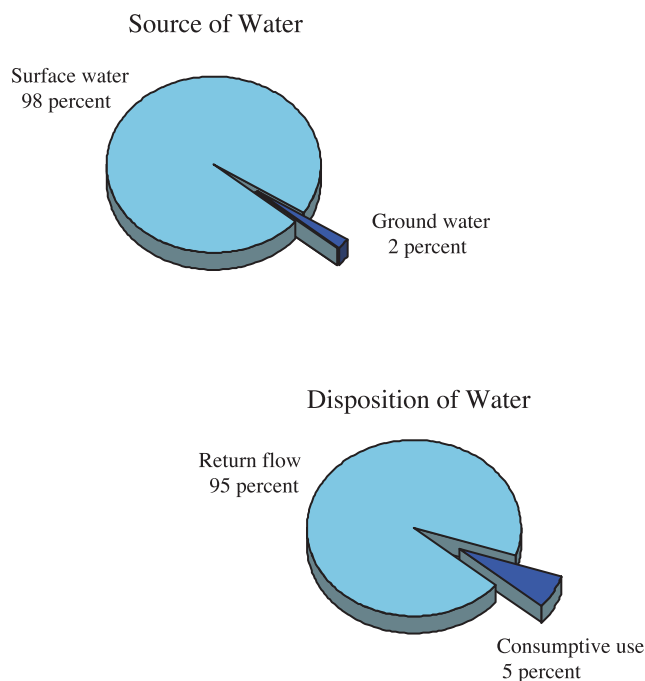
Total freshwater withdrawals during 2000 were estimated to be 12,211 Mgal/d for the offstream categories of thermoelectric power, industry, public supply, and irrigation (tables 1, 2, and 3). Per capita use for the offstream uses in 2000 was 2,710 gal/d of freshwater (table 2). Estimates of withdrawals by source indicate that during 2000, total surface-water withdrawals were 11,996 Mgal/d. Total ground-water withdrawals were 215 Mgal/d. Return flows to streams from thermoelectric power, industrial, and municipal wastewater facilities are estimated to have been 11,562 Mgal/d. Consumptive use was 649 Mgal/d. Water withdrawals that exclude thermoelectric power totals (nonpower withdrawals) are estimated as 1,935 Mgal/d, return flows as 1,319 Mgal/d, and consumptive use as 617 Mgal/d. Surface water supplied 98 percent of the total water, and ground water supplied the remaining 2 percent (fig. 7). The total consumptive use of water was 5 percent, and return flow was 95 percent of the disposition of the water.

A comparison of total water withdrawals by WUTA (table 1) indicates that Watts Bar-Chickamauga (3,187 Mgal/d) and Wheeler-Wilson (2,552 Mgal/d) account for 47 percent of the total water withdrawn in the Tennessee River watershed. A similar comparison of total withdrawals by HUC (table 2, appendix B) indicates that 06030002 Wheeler Lake (2,390 Mgal/d) and 06010207 Lower Clinch (1,848 Mgal/d) account for about 35 percent of the total withdrawals. The spatial distribution of total water withdrawals by HUC and by source is shown in figure 8. A comparison of total water withdrawals by State within the watershed is shown in table 3.

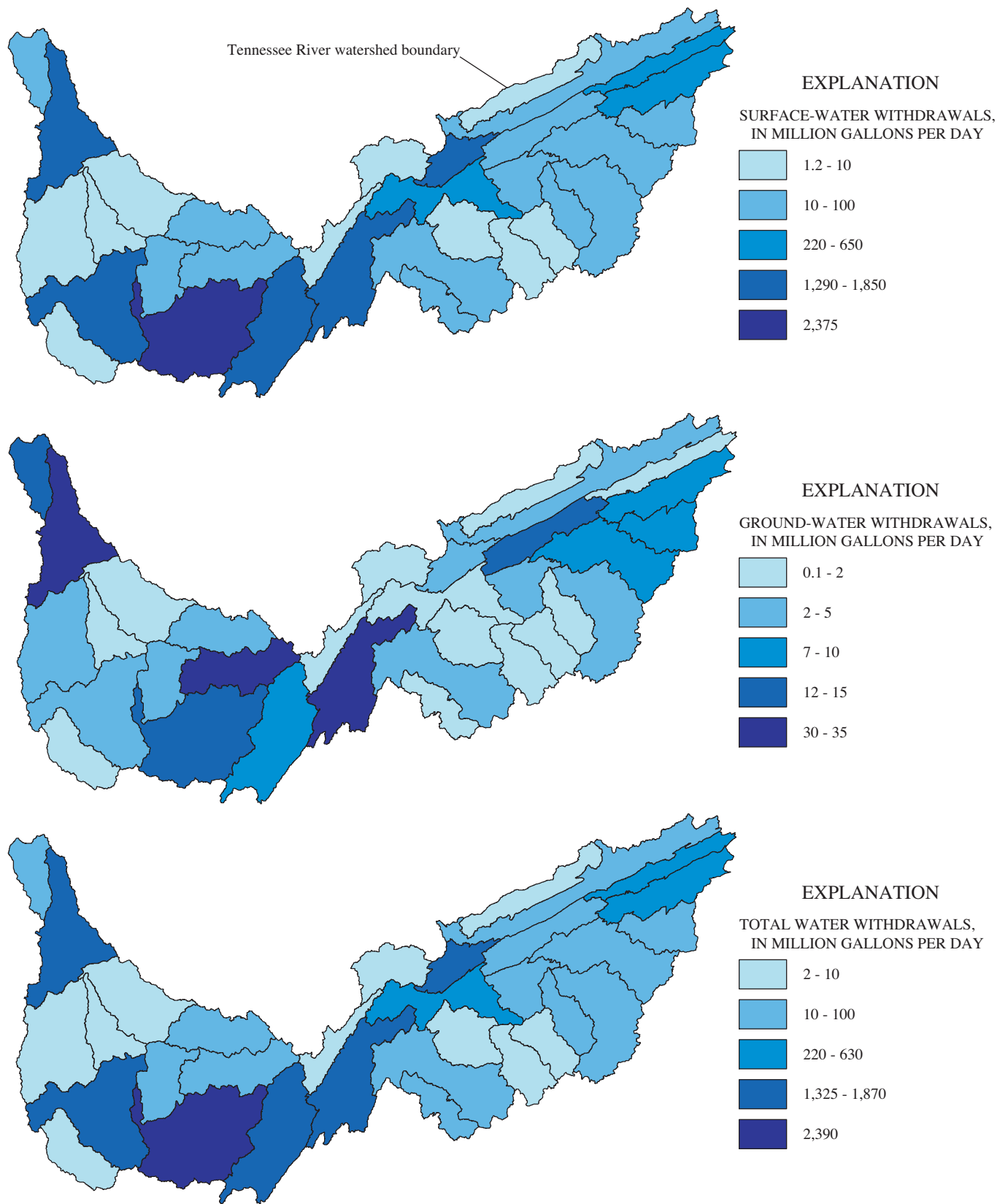
The two largest categories of withdrawals were thermoelectric power and industrial (tables 4, 5, and 6). During 2000, the most water (10,276 Mgal/d, 84 percent) was withdrawn for cooling at the thermoelectric plants (table 4). The largest thermoelectric-power water withdrawal (2,108 Mgal/d, 21 percent) was from the Wheeler Reservoir in the Wheeler-Wilson WUTA (table 4). Industrial withdrawals accounted for 10 percent (1,205 Mgal/d) of the total (table 4). The largest industrial withdrawal, 497 Mgal/d, was from the Fort Patrick Henry RCA and was 41 percent of the total industrial withdrawals (table 4). The return flow from thermoelectric power, industrial, and municipal wastewater facilities is 11,562 Mgal/d, or 95 percent of the water withdrawals (table 4). The largest return flow by category is thermoelectric power, 10,244 Mgal/d, or 89 percent of

the total return flow (table 4). Overall, thermoelectric power has the smallest consumptive use; less than 1 percent, or 32.2 Mgal/d, of the thermoelectric power water withdrawals is consumptively used, compared to 263 Mgal/d (22 percent) for industry, 285 Mgal/d (43 percent) for public supply, and 68.9 Mgal/d (100 percent) for irrigation. Surface-water withdrawals by water-use category are shown by WUTA (table 7), by HUC (table 8), and by county (table 9). Ground-water withdrawals by water-use category are shown by WUTA (table 10), by HUC (table 11), and by county (table 12).

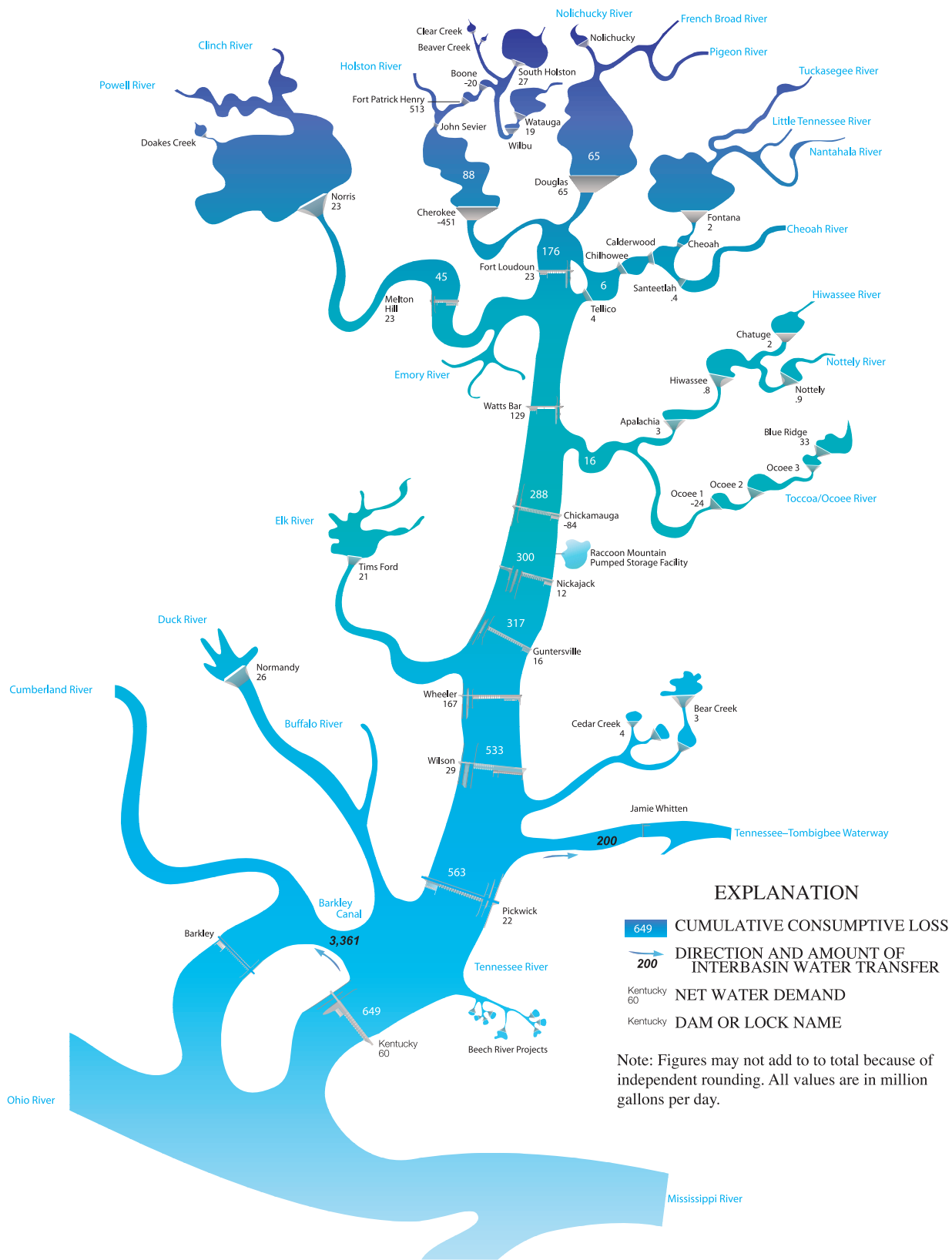
Consumptive use and interbasin transfers account for most of the water lost from the Tennessee River watershed. Consumptive use is reported as an increasing number at the junctures of the WUTAs to show the influence of the cumulative water withdrawals and return flows on water availability. The cumulative consumptive use at the juncture of Fort Loudoun WUTA is 176 Mgal/d; Watts Bar-Chickamauga, 288 Mgal/d; Nickajack, 300 Mgal/d; Guntersville, 317 Mgal/d; Wheeler-Wilson, 533 Mgal/d; Pickwick, 563 Mgal/d; and Kentucky, 649 Mgal/d for 2000 (fig. 9). The average daily lockage is 200 Mgal/d through the Jamie Whitten lock on the Tennessee-Tombigbee Waterway, and the average daily diversion of flow is 3,361 Mgal/d for hydroelectric power generation at Barkley Dam; the 200 and the 3,361 Mgal/d are interbasin transfers.



**Figure 7.** Source and disposition of total water use in the Tennessee River watershed in 2000.



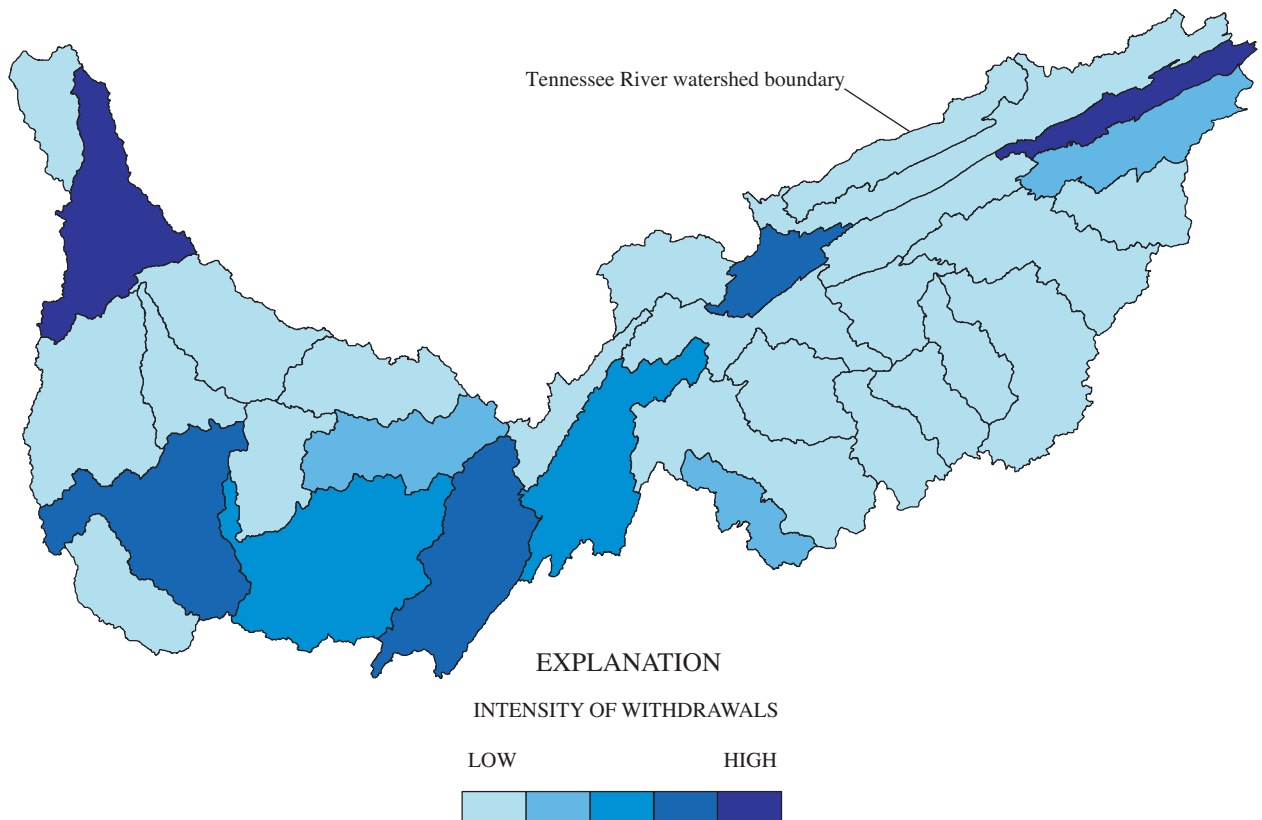
**Figure 8.** Total water withdrawals by source and by hydrologic unit in the Tennessee River watershed in 2000.



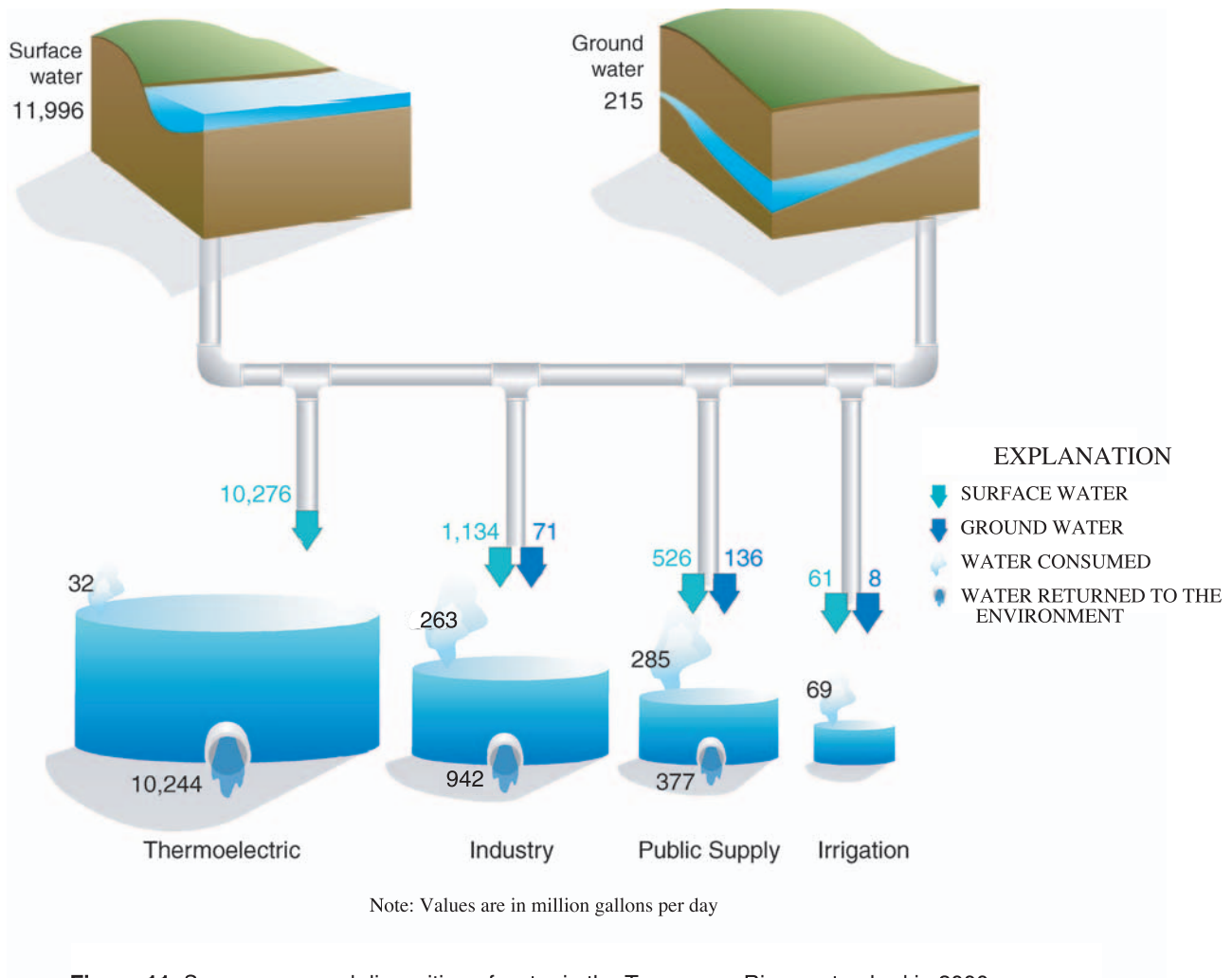
**Figure 9.** Cumulative consumptive use at major water-use tabulation area junctures and net water demand for reservoir catchment areas in the Tennessee River watershed in 2000.

The intensity of use for the Tennessee River watershed measured as a function of area was 298,489 gal/d/mi<sup>2</sup> in 2000. Gross per capita use also is a measure of intensity of use. High per capita use values in the Tennessee River watershed generally correspond to sparsely populated watersheds with large thermoelectric power water withdrawals. Gross per capita use (fig. 10 and table 2) ranges from 19,782 gal/d (Kentucky Lake, 0604005) to 39 gal/d (Lower Duck, 06040003).

The source, use, and disposition of the 12,211 Mgal/d of water withdrawn in the Tennessee watershed during 2000 is summarized in figure 11. Surface water was the source of 11,996 Mgal/d, and ground water was the source of the remaining 215 Mgal/d. Industry withdrew 1,134 Mgal/d of surface water and 71 Mgal/d of ground water; consumed 263 Mgal/d; and returned the remaining 942 Mgal/d as flow to the river (fig. 11).



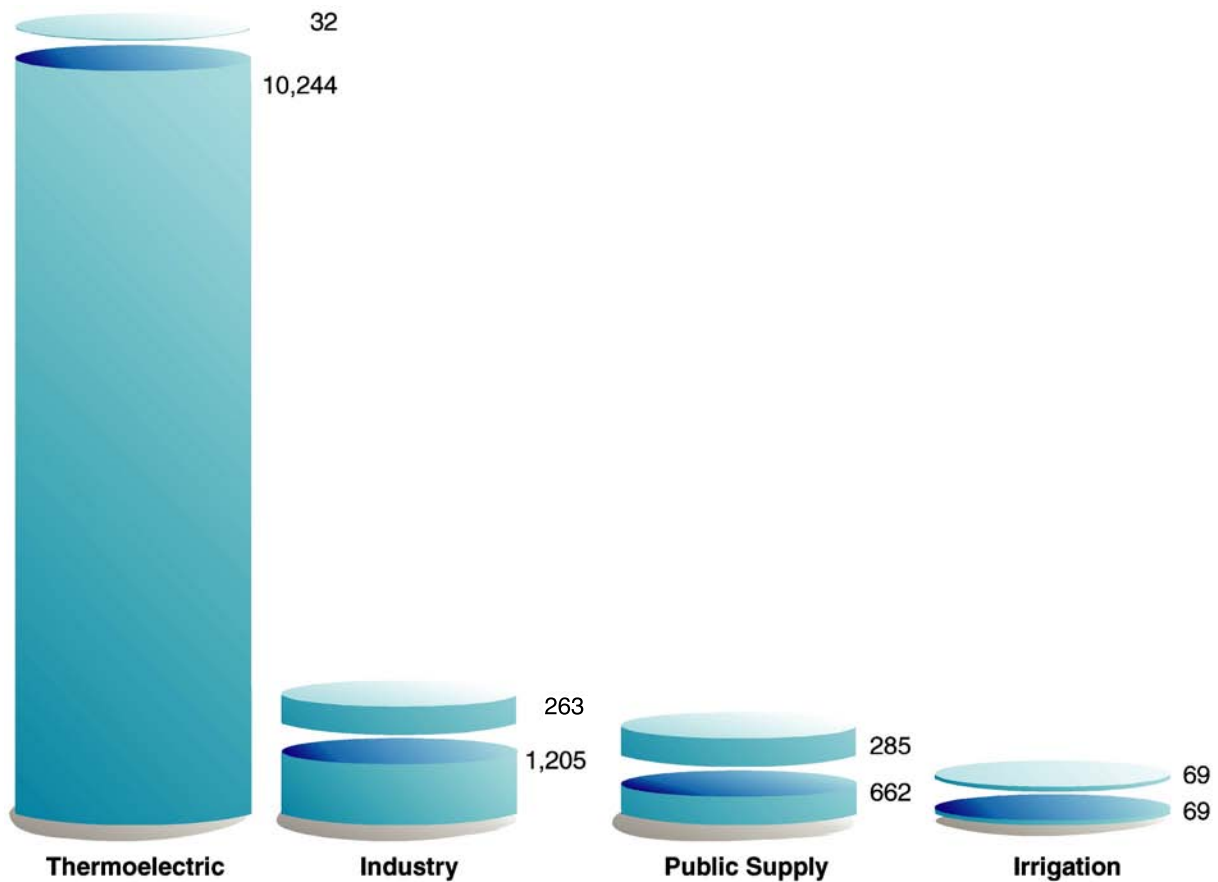
**Figure 10.** Intensity of per capita use withdrawals by hydrologic unit in the Tennessee River watershed in 2000.



**Figure 11.** Source, use, and disposition of water in the Tennessee River watershed in 2000.

Water withdrawn for thermoelectric power is used for cooling water, and most of this water is returned to the Tennessee River. As a result, thermoelectric power use has little impact on overall water availability in the watershed because the resulting consumptive use is low. By category, withdrawals and consumptive use are compared as follows. Thermoelectric power water withdrawals are more than eight times larger than industrial water withdrawals (fig. 12). Public supply water withdrawals are slightly more than one-half of industrial water withdrawals, and irrigation water withdrawals are slightly more

than one-tenth of public-supply withdrawals. Consumptive use accounts for 5 percent of the total water withdrawals. Consumptive use for irrigation is more than twice that of thermoelectric power. Consumptive use for industry (263 Mgal/d) and public supply (285 Mgal/d) is about the same for both categories, and together these two categories account for about 84 percent of the total consumptive use. The combined consumptive use for industry and public supply is about 17 times greater than that of thermoelectric power.



Note: Consumptive use is indicated in top layer and total water withdrawn is indicated in lower layer.

**Figure 12.** Comparison of water withdrawal and consumptive use by category, in million gallons per day, in the Tennessee River watershed in 2000.



**Table 1.** Total offstream water use by water-use tabulation area in 2000

[Figures may not add to totals because of independent rounding. All values are in million gallons per day. Net water demand and consumptive use are expressed as integers. WUTA, water-use tabulation area]

Water-use tabulation area Reservoir catchment area	Withdrawal			Total return flow	Net water demand <i>Consumptive use</i>
	Surface water	Ground water	Total water		
<b>Cherokee</b>					
Watauga	12.40	9.40	21.80	2.85	19
South Holston	21.30	8.01	29.31	2.33	27
Boone	0.00	3.72	3.72	23.62	-20
Fort Patrick Henry	513.10	.00	513.10	.00	513
Cherokee	639.22	13.00	652.22	1,103.66	-451
<b>WUTA total</b>	<b>1,186.02</b>	<b>34.13</b>	<b>1,220.15</b>	<b>1,132.46</b>	<b>88</b>
<b>Douglas</b>					
Douglas	<b>110.78</b>	<b>11.98</b>	<b>122.76</b>	<b>57.50</b>	<b>65</b>
<b>Fort Loudoun</b>					
Fort Loudoun	77.52	1.60	79.12	56.39	23
<i>Cumulative consumptive use</i>					<b>176</b>
<b>Fontana-Tellico</b>					
Fontana	4.64	1.13	5.76	3.37	2
Santeetlah	0.44	.00	0.44	.00	0.4
Tellico	4.16	0.57	4.73	1.09	4
<b>WUTA total</b>	<b>9.23</b>	<b>1.70</b>	<b>10.93</b>	<b>4.46</b>	<b>6</b>
<b>Norris</b>					
Norris	29.88	3.42	33.30	10.69	23
Melton Hill	500.36	1.58	501.94	479.33	23
<b>WUTA total</b>	<b>530.25</b>	<b>4.99</b>	<b>535.24</b>	<b>490.02</b>	<b>45</b>
<b>Hiwassee-Ocoee</b>					
Chatuge	1.73	0.18	1.91	0.27	2
Nottely	0.60	0.55	1.15	0.24	.9
Hiwassee	0.93	0.00	0.93	0.10	.8
Apalachia	2.94	0.00	2.94	.00	3
Blue Ridge	33.25	0.05	33.30	0.33	33
Ocoee	0.01	1.11	1.12	24.63	-24
<b>WUTA total</b>	<b>39.46</b>	<b>1.90</b>	<b>41.36</b>	<b>25.57</b>	<b>16</b>
<b>Watts Bar-Chickamauga</b>					
Watts Bar	1,494.66	1.11	1,495.77	1,366.58	129
Chickamauga	1,667.10	24.02	1,691.12	1,775.56	-84
<b>WUTA total</b>	<b>3,161.76</b>	<b>25.13</b>	<b>3,186.89</b>	<b>3,142.13</b>	<b>45</b>
<i>Cumulative consumptive use</i>					<b>288</b>

**Table 1.** Total offstream water use by water-use tabulation area in 2000—Continued

Water-use tabulation area Reservoir catchment area	Withdrawal			Total return flow	Net water demand <i>Consumptive use</i>
	Surface water	Ground water	Total water		
<b>Nickajack</b>					
Nickajack	62.94	9.86	72.80	60.49	12
<i>Cumulative consumptive use</i>					<b>300</b>
<b>Guntersville</b>					
Guntersville	1,594.42	7.86	1,602.28	1,585.93	16
<i>Cumulative consumptive use</i>					<b>317</b>
<b>Tims Ford</b>					
Tims Ford	58.57	2.80	61.37	40.50	21
<b>Wheeler-Wilson</b>					
Wheeler	2,449.02	45.82	2,494.84	2,328.13	167
Wilson	53.77	3.36	57.13	27.81	29
<b>WUTA total</b>	<b>2,502.79</b>	<b>49.18</b>	<b>2,551.96</b>	<b>2,355.94</b>	<b>196</b>
<i>Cumulative consumptive use</i>					<b>533</b>
<b>Pickwick</b>					
Pickwick	1,308.23	5.41	1,313.64	1,291.56	22
Cedar Creek	3.00	1.13	4.13	.00	4
Upper Bear Creek	2.81	0.16	2.97	.00	3
<b>WUTA total</b>	<b>1,314.04</b>	<b>6.70</b>	<b>1,320.74</b>	<b>1,291.56</b>	<b>29</b>
<i>Cumulative consumptive use</i>					<b>563</b>
<b>Normandy</b>					
Normandy	26.30	2.11	28.41	2.19	26
<b>Kentucky</b>					
Kentucky	1,322.24	54.94	1,377.17	1,317.30	60
<b>Watershed total</b>	<b>11,996</b>	<b>215</b>	<b>12,211</b>	<b>11,562</b>	<b>649</b>

**Table 2.** Total offshore water use by hydrologic unit in 2000

[Figures may not add to totals because of independent rounding. Water-use transactions in million gallons per day; gross per capita use, in gallons per day]

Hydrologic unit code	Population	Gross per capita use	Withdrawal			Total return flow	Net water demand
			Surface water	Ground water	Total water		
06010101	32,017	19,446	621.90	0.71	622.61	0.00	623
06010102	238,626	2,273	534.40	8.00	542.40	488.56	54
06010103	163,921	129	12.20	9.01	21.21	13.46	8
06010104	178,460	166	17.32	12.30	29.62	632.52	-603
06010105	338,535	147	47.09	2.70	49.79	19.93	30
06010106	72,472	498	35.45	0.65	36.10	27.31	9
06010107	107,541	129	11.62	2.31	13.92	5.78	8
06010108	164,582	164	16.57	10.43	27.01	11.39	16
06010201	419,747	524	218.28	1.62	219.90	59.07	161
06010202	36,959	114	3.95	0.26	4.21	2.17	2
06010203	43,448	48	1.22	0.88	2.10	1.20	0.9
06010204	48,438	107	4.60	0.57	5.17	1.09	4
06010205	142,559	194	25.13	2.58	27.71	9.90	18
06010206	64,584	83	4.50	0.83	5.33	0.42	5
06010207	181,670	10,172	1,845.46	2.44	1,847.90	486.73	1,361
06010208	68,681	135	9.06	0.21	9.27	1,347.86	-1,339
06020001	467,720	3,600	1,652.85	30.87	1,683.71	1,757.61	-74
06020002	202,501	433	83.11	4.48	87.59	79.05	9
06020003	25,753	1,309	33.25	0.45	33.71	24.96	9
06020004	30,169	112	2.36	1.03	3.39	0.62	3
06030001	145,766	10,969	1,592.06	6.83	1,598.89	1,585.32	14
06030002	505,179	4,730	2,374.82	14.87	2,389.69	2,259.60	130
06030003	71,769	1,261	59.88	30.60	90.49	48.25	42
06030004	46,328	348	12.98	3.12	16.10	2.27	14
06030005	198,508	7,206	1,422.52	7.87	1,430.40	1,378.51	52
06030006	40,750	197	5.84	2.19	8.03	1.63	6
06040001	77,951	124	5.45	4.19	9.64	22.87	-13
06040002	99,674	286	26.36	2.11	28.47	9.63	19
06040003	115,264	39	4.36	0.09	4.45	8.94	-4
06040004	22,681	130	1.20	1.75	2.94	1.33	2
06040005	66,943	19,782	1,289.19	35.07	1,324.26	1,274.45	50
06040006	86,427	407	21.32	13.84	35.16	0.01	35
<b>Watershed total</b>	<b>4,505,623</b>	<b>2,710</b>	<b>11,996</b>	<b>215</b>	<b>12,211</b>	<b>11,562</b>	<b>649</b>

**Table 3.** Total offstream water use by county in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

State County	Withdrawal			Total return flow	Net water demand
	Surface water	Ground water	Total water		
<b>Alabama</b>					
Colbert	1,317.44	1.54	1,318.98	1,303.09	15.89
Cullman	1.15		1.15		1.15
Dekalb	7.20	2.48	9.68	5.73	3.95
Franklin	3.02	1.13	4.16	1.61	2.54
Jackson	1,565.74	1.01	1,566.75	1,570.19	-3.44
Lauderdale	14.75	0.85	15.60	10.80	4.81
Lawrence	67.43		67.43	49.90	17.54
Limestone	2,139.65	7.78	2,147.43	2,119.34	28.09
Madison	36.36	27.27	63.63	36.39	27.23
Marion	2.50		2.50		2.50
Marshall	17.30	3.31	20.61	8.60	12.01
Morgan	203.40	8.16	211.56	122.17	89.39
Winston	0.31	0.16	0.47		0.47
<b>State total</b>	<b>5,376.25</b>	<b>53.69</b>	<b>5,429.94</b>	<b>5,227.82</b>	<b>202.12</b>
<b>Georgia</b>					
Catoosa	1.24	8.18	9.42	2.39	7.03
Dade	1.79	0.47	2.26	0.28	1.98
Fannin	1.29	0.02	1.31	0.33	0.98
Rabun	1.63		1.63	1.40	0.23
Towns	0.81		0.81	0.27	0.54
Union	0.60	0.55	1.15	0.24	0.91
Walker	3.93	6.64	10.57	10.02	0.55
<b>State total</b>	<b>11.29</b>	<b>15.86</b>	<b>27.15</b>	<b>14.93</b>	<b>12.22</b>
<b>Kentucky</b>					
Calloway		4.90	4.90		4.90
Graves		0.05	0.05		0.05
Livingston	20.10	2.44	22.54	0.22	22.32
Lyon			0.00	0.01	-0.01
Marshall	12.97	6.08	19.05	0.04	19.01
McCracken		0.78	0.78		0.78
<b>State total</b>	<b>33.07</b>	<b>14.26</b>	<b>47.33</b>	<b>0.27</b>	<b>47.07</b>
<b>Mississippi</b>					
Tishomingo	.02	4.36	4.38	0.34	4.04
<b>State total</b>	<b>.02</b>	<b>4.36</b>	<b>4.38</b>	<b>0.34</b>	<b>4.04</b>
<b>North Carolina</b>					
Avery	0.20	1.42	1.62	1.56	0.06
Buncombe	32.01	1.63	33.64	15.71	17.93
Cherokee	1.71	0.00	1.71	0.00	1.71
Clay	0.04	0.18	0.22	0.10	0.12
Graham	0.94		0.94		0.94
Haywood	34.62	0.20	34.82	25.91	8.91
Henderson	8.54	0.25	8.79	3.08	5.71
Jackson	0.88	0.85	1.73	0.89	0.84
Macon	1.53	0.26	1.79	0.77	1.02
Madison	0.26	0.24	0.50	0.19	0.31
Mitchell	1.38	3.59	4.96	0.61	4.35
Swain	0.34	0.02	0.36	0.31	0.05

**Table 3.** Total offstream water use by county in 2000—Continued

State County	Withdrawal			Total return flow	Net water demand
	Surface water	Ground water	Total water		
<b>North Carolina—Continued</b>					
Transylvania	2.19	0.58	2.77	0.95	1.82
Watauga	1.15	0.28	1.43	0.60	0.83
Yancey	0.57	0.00	0.57	0.31	0.26
<b>State total</b>	<b>86.35</b>	<b>9.50</b>	<b>95.85</b>	<b>50.99</b>	<b>44.86</b>
<b>Tennessee</b>					
Anderson	489.82	0.97	490.79	476.63	14.17
Bedford	5.70	0.83	6.53	3.36	3.18
Benton	4.28	19.36	23.64	1.59	22.05
Bledsoe	0.20	0.39	0.59	0.14	0.45
Blount	14.57	0.26	14.84	7.18	7.65
Bradley	12.01	1.38	13.39	9.93	3.46
Campbell	2.57	0.52	3.09	1.19	1.90
Carroll		0.69	0.69	0.14	0.54
Carter	0.05	7.53	7.59	2.44	5.14
Claiborne	2.60	0.23	2.83	0.42	2.41
Cocke	5.09	0.46	5.54	1.40	4.14
Coffee	60.60	0.06	60.66	41.33	19.33
Cumberland	5.02	0.21	5.23	2.22	3.01
Decatur	1.29	0.23	1.52	0.49	1.02
Dickson	1.53		1.53		1.53
Franklin	2.42	2.02	4.43	0.98	3.45
Giles	3.64	0.21	3.85	2.27	1.58
Grainger	0.06	0.05	0.10	0.14	-0.03
Greene	11.86	0.01	11.87	6.96	4.91
Grundy	0.75		0.75	0.26	0.49
Hamblen	9.25	1.05	10.30	4.09	6.21
Hamilton	1,608.78	14.18	1,622.97	1,585.72	37.24
Hancock	0.34		0.34	0.15	0.20
Hardin	24.53	2.41	26.94	20.92	6.03
Hawkins	624.46	1.15	625.61	622.39	3.22
Henderson	3.59	0.37	3.96	1.15	2.80
Henry	0.02	3.06	3.08	2.07	1.01
Hickman	2.33	0.00	2.33	0.44	1.89
Houston		0.16	0.16		0.16
Humphreys	1,273.53	11.37	1,284.90	1,270.71	14.19
Jefferson	2.79	12.17	14.97	3.36	11.61
Johnson	1.24	0.99	2.23	0.69	1.54
Knox	62.38	1.16	63.55	50.43	13.12
Lawrence	1.90	2.41	4.31	2.07	2.24
Lewis	0.10	1.59	1.69	0.78	0.92
Lincoln	1.65	2.17	3.81	1.18	2.63
Loudoun	13.87	1.20	15.07	8.30	6.77
Marion	2.64	0.71	3.36	0.80	2.55
Marshall	2.76	0.14	2.90	4.20	-1.29
Maury	12.30	1.10	13.40	8.18	5.22
McMinn	67.79	2.36	70.15	68.47	1.68
McNairy	0.01	0.98	0.99	0.26	0.73
Meigs	0.32	0.58	0.90	0.22	0.68
Monroe	5.08	0.57	5.65	2.66	2.99
Moore	1.02	0.75	1.77	0.61	1.17

**Table 3.** Total offstream water use by county in 2000—Continued

State County	Withdrawal			Total return flow	Net water demand
	Surface water	Ground water	Total water		
<b>Tennessee—Continued</b>					
Morgan	1.05	0.00	1.05	0.64	0.41
Perry	0.76	0.00	0.76	0.25	0.51
Polk	32.12	0.44	32.56	24.67	7.89
Rhea	176.59	0.80	177.38	159.55	17.83
Roane	1,351.06	0.20	1,351.25	1,348.77	2.48
Sequatchie	0.67	0.00	0.67	0.47	0.19
Sevier	7.66	0.24	7.90	5.28	2.61
Stewart	0.00	0.02	0.02	0.00	0.02
Sullivan	521.83	0.38	522.21	485.05	37.17
Unicoi	0.09	5.93	6.02	1.46	4.55
Union	0.00	0.58	0.58	0.38	0.19
Washington	13.27	0.41	13.68	11.40	2.28
Wayne	0.87	0.20	1.07	0.35	0.73
Williamson	0.00	0.05	0.05	0.00	0.05
<b>State total</b>	<b>6,452.71</b>	<b>107.31</b>	<b>6,560.02</b>	<b>6,257.22</b>	<b>302.8</b>
<b>Virginia</b>					
Lee	0.78	0.58	1.36	0.00	1.36
Russell	13.59	0.48	14.07	0.00	14.07
Scott	1.05	0.01	1.06	0.00	1.06
Smyth	2.93	4.09	7.03	0.00	7.03
Tazewell	2.43	0.57	3.00	6.02	-3.02
Washington	8.43	3.26	11.69	2.33	9.36
Wise	7.42	0.89	8.32	2.54	5.78
<b>State total</b>	<b>36.64</b>	<b>9.88</b>	<b>46.52</b>	<b>10.89</b>	<b>35.63</b>
<b>Watershed total</b>	<b>11,996</b>	<b>215</b>	<b>12,211</b>	<b>11,562</b>	<b>649</b>

**Table 4.** Total water use by category and water-use tabulation area in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day; WUTA, water-use tabulation area]

Water-use tabulation area Reservoir catchment area	Thermoelectric power				Public supply			Total	
	Water withdrawal	Cooling water return flow	Industrial		Water withdrawal	Waste-water return flow	Irrigation Water withdrawal	Water withdrawal	Return flow
			Water withdrawal	Return flow					
<b>Cherokee</b>									
Watauga	0.00	0.00	0.64	0.47	21.04	2.38	0.12	21.80	2.85
South Holston	0.00	0.00	0.83	0.47	26.25	1.86	2.23	29.31	2.33
Boone	0.00	0.00	0.00	0.04	3.72	23.58	0.00	3.72	23.62
Fort Patrick Henry	0.00	0.00	496.70	0.00	16.40	0.00	0.00	513.10	0.00
Cherokee	621.00	621.00	10.72	467.53	20.22	15.13	0.28	652.22	1,103.66
<b>WUTA total</b>	<b>621.00</b>	<b>621.00</b>	<b>508.89</b>	<b>468.51</b>	<b>87.63</b>	<b>42.95</b>	<b>2.63</b>	<b>1,220.15</b>	<b>1,132.46</b>
<b>Douglas</b>									
Douglas	<b>4.97</b>	<b>0.00</b>	<b>42.28</b>	<b>28.49</b>	<b>73.07</b>	<b>29.01</b>	<b>2.44</b>	<b>122.76</b>	<b>57.50</b>
<b>Fort Loudoun</b>									
Fort Loudoun	<b>0.00</b>	<b>0.00</b>	<b>5.02</b>	<b>1.37</b>	<b>72.42</b>	<b>55.03</b>	<b>1.68</b>	<b>79.12</b>	<b>56.39</b>
<b>Fontana-Tellico</b>									
Fontana	0.00	0.00	1.94	1.36	3.83	2.01	0.00	5.76	3.37
Santeetlah	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.44	0.00
Tellico	0.00	0.00	0.00	0.00	4.68	1.09	0.05	4.73	1.09
<b>WUTA total</b>	<b>0.00</b>	<b>0.00</b>	<b>1.94</b>	<b>1.36</b>	<b>8.94</b>	<b>3.10</b>	<b>0.05</b>	<b>10.93</b>	<b>4.46</b>
<b>Norris</b>									
Norris	9.24	0.00	6.24	0.21	17.56	10.48	0.26	33.30	10.69
Melton Hill	469.00	469.00	1.48	0.90	31.40	9.43	0.05	501.94	479.33
<b>WUTA total</b>	<b>478.24</b>	<b>469</b>	<b>7.72</b>	<b>1.11</b>	<b>48.97</b>	<b>19.91</b>	<b>.31</b>	<b>535.24</b>	<b>490.02</b>
<b>Hiwassee-Ocoee</b>									
Chatuge	0.00	0.00	0.04	0.00	1.88	0.27	0.00	1.91	0.27
Nottely	0.00	0.00	0.00	0.00	1.00	0.24	0.15	1.15	0.24
Hiwassee	0.00	0.00	0.08	0.00	0.75	0.10	0.11	0.93	0.10
Apalachia	0.00	0.00	0.00	0.00	2.89	0.00	0.05	2.94	0.00
Blue Ridge	0.00	0.00	31.77	0.00	1.47	0.33	0.07	33.30	0.33
Ocoee	0.00	0.00	0.00	24.37	1.11	0.26	0.01	1.12	24.63
<b>WUTA total</b>	<b>0.00</b>	<b>0.00</b>	<b>31.88</b>	<b>24.37</b>	<b>9.09</b>	<b>1.20</b>	<b>0.39</b>	<b>41.36</b>	<b>25.57</b>
<b>Watts Bar-Chickamauga</b>									
Watts Bar	1,484.10	1,345.00	0.03	0.24	9.53	21.34	2.12	1,495.77	1,366.58
Chickamauga	1,571.40	1,693.50	68.36	68.14	47.39	13.92	3.97	1,691.12	1,775.56
<b>WUTA total</b>	<b>3,055.50</b>	<b>3,038.50</b>	<b>68.38</b>	<b>68.37</b>	<b>56.91</b>	<b>35.26</b>	<b>6.09</b>	<b>3,186.89</b>	<b>3,142.13</b>
<b>Nickajack</b>									
Nickajack	<b>0.00</b>	<b>0.00</b>	<b>23.66</b>	<b>15.30</b>	<b>48.78</b>	<b>45.19</b>	<b>0.35</b>	<b>72.80</b>	<b>60.49</b>
<b>Guntersville</b>									
Guntersville	<b>1,546.00</b>	<b>1,546.00</b>	<b>10.97</b>	<b>19.49</b>	<b>42.43</b>	<b>20.45</b>	<b>2.88</b>	<b>1,602.28</b>	<b>1,585.93</b>

**Table 4.** Total water use by category and water-use tabulation area in 2000—Continued

Water-use tabulation area Reservoir catchment area	Thermoelectric power		Public supply						
	Water withdrawal	Cooling water return flow	Industrial		Waste- water return flow	Irrigation Water withdrawal	Total		
			Water withdrawal	Return flow			Water withdrawal	Return flow	
<b>Tims Ford</b>									
Tims Ford	0.00	0.00	56.26	35.93	4.86	4.57	0.26	61.37	40.50
<b>Wheeler-Wilson</b>									
Wheeler	2,108.00	2,107.00	229.62	147.86	110.82	73.27	46.39	2,494.84	2,328.13
Wilson	0.00	0.00	30.01	21.01	23.16	6.80	3.96	57.13	27.81
WUTA total	2,108.00	2,107.00	259.63	168.87	133.98	80.07	50.35	2,551.96	2,355.94
<b>Pickwick</b>									
Pickwick	1,251.00	1,251.00	53.61	26.66	8.92	13.89	0.11	1,313.64	1,291.56
Cedar Creek	0.00	0.00	0.00	0.00	4.13	0.00	0.00	4.13	0.00
Upper Bear Creek	0.00	0.00	0.00	0.00	2.97	0.00	0.00	2.97	0.00
WUTA total	1,251.00	1,251.00	53.61	26.66	16.02	13.89	0.11	1,320.74	1,291.56
<b>Normandy</b>									
Normandy	0.00	0.00	1.45	0.00	26.26	2.19	0.69	28.41	2.19
<b>Kentucky</b>									
Kentucky	1,211.00	1,211.00	133.17	82.55	32.35	23.74	0.65	1,377.17	1,317.30
Watershed total	10,276	10,244	1,205	942	662	377	68.9	12,211	11,562



**Table 5.** Total water use by category and hydrologic unit in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

Hydrologic unit code	Thermoelectric power		Public supply				Total		
	Water withdrawal	Cooling water return flow	Industrial		Water withdrawal	Waste- water return flow	Irrigation Water withdrawal	Water withdrawal	Return flow
			Water withdrawal	Return flow					
06010101	621.00	0.00	0.00	0.00	1.61	0.00	0.00	622.61	0.00
06010102	0.00	0.00	497.53	465.70	42.64	22.87	2.23	542.40	488.56
06010103	0.00	0.00	0.05	0.04	21.04	13.42	0.12	21.21	13.46
06010104	0.00	621.00	10.72	2.94	18.62	8.58	0.28	29.62	632.52
06010105	4.97	0.00	4.48	2.25	40.34	17.68	0.00	49.79	19.93
06010106	0.00	0.00	29.00	22.63	6.27	4.68	0.83	36.10	27.31
06010107	0.00	0.00	1.61	0.72	11.83	5.06	0.48	13.92	5.78
06010108	0.00	0.00	7.78	4.08	18.10	7.32	1.13	27.01	11.39
06010201	139.10	0.00	5.02	0.24	73.80	58.84	1.98	219.90	59.07
06010202	0.00	0.00	2.16	1.36	2.05	0.81	0.00	4.21	2.17
06010203	0.00	0.00	0.07	0.00	2.03	1.20	0.00	2.10	1.20
06010204	0.00	0.00	0.00	0.00	5.11	1.09	0.05	5.17	1.09
06010205	9.24	0.00	6.24	0.21	12.23	9.69	0.01	27.71	9.90
06010206	0.00	0.00	0.00	0.00	5.33	0.42	0.00	5.33	0.42
06010207	1,814.00	469.00	1.51	0.90	32.26	16.83	0.13	1,847.90	486.73
06010208	0.00	1,345.00	0.00	0.00	7.29	2.86	1.98	9.27	1,347.86
06020001	1,571.40	1,693.50	24.33	15.30	83.89	48.80	4.10	1,683.71	1,757.61
06020002	0.00	0.00	67.52	68.14	19.53	10.91	0.54	87.59	79.05
06020003	0.00	0.00	31.77	24.37	1.85	0.59	0.09	33.71	24.96
06020004	0.00	0.00	0.00	0.00	3.23	0.62	0.16	3.39	0.62
06030001	1,546.00	1,546.00	10.97	19.49	39.21	19.83	2.72	1,598.89	1,585.32
06030002	2,108.00	2,107.00	169.45	99.20	67.33	53.41	44.91	2,389.69	2,259.60
06030003	0.00	0.00	56.26	37.34	33.98	10.92	0.26	90.49	48.25
06030004	0.00	0.00	0.32	0.07	14.38	2.20	1.40	16.10	2.27
06030005	1,251.00	1,251.00	143.47	94.93	31.91	32.58	4.02	1,430.40	1,378.51
06030006	0.00	0.00	0.00	0.00	8.00	1.63	0.03	8.03	1.63
06040001	0.00	0.00	0.07	19.89	9.26	2.98	0.32	9.64	22.87
06040002	0.00	0.00	1.45	2.05	26.26	7.57	0.75	28.47	9.63
06040003	0.00	0.00	0.00	2.45	4.31	6.49	0.14	4.45	8.94
06040004	0.00	0.00	0.09	0.00	2.83	1.33	0.03	2.94	1.33
06040005	1,211.00	1,211.00	105.19	58.09	7.89	5.35	0.18	1,324.26	1,274.45
06040006	0.00	0.00	27.82	0.00	7.33	0.01	0.00	35.16	0.01
<b>Watershed total</b>	<b>10,276</b>	<b>10,244</b>	<b>1,205</b>	<b>942</b>	<b>662</b>	<b>377</b>	<b>68.9</b>	<b>12,211</b>	<b>11,562</b>

**Table 6.** Total water use by category and county in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

State County	Thermoelectric power				Public supply			Total	
	Water withdrawal	Cooling water return flow	Industrial		Water withdrawal	Waste- water return flow	Irrigation Water withdrawal	Water withdrawal	Return flow
			Water withdrawal	Return flow					
<b>Alabama</b>									
Colbert	1,251.00	1,251.00	60.02	47.45	7.96	4.64		1,318.98	1,303.09
Cullman			1.15					1.15	0.00
Dekalb			1.11	0.88	8.57	4.85		9.68	5.73
Franklin					4.13	1.61	0.03	4.16	1.61
Jackson	1,546.00	1,546.00	9.20	18.09	8.95	6.10	2.60	1,566.75	1,570.19
Lauderdale					13.74	10.80	1.86	15.60	10.80
Lawrence			59.85	47.26	2.19	2.64	5.39	67.43	49.90
Limestone	2,108.00	2,107.00			11.01	12.34	28.42	2,147.43	2,119.34
Madison			1.34	1.03	49.86	35.36	12.43	63.63	36.39
Marion					2.50			2.50	0.00
Marshall			0.66	0.52	19.82	8.08	0.13	20.61	8.60
Morgan			166.96	99.20	42.90	22.97	1.70	211.56	122.17
Winston					0.47			0.47	0.00
<b>State total</b>	<b>4,905.00</b>	<b>4,904.00</b>	<b>300.29</b>	<b>214.42</b>	<b>172.10</b>	<b>109.40</b>	<b>52.55</b>	<b>5,429.94</b>	<b>5,227.82</b>
<b>Georgia</b>									
Catoosa					8.53	2.39	0.89	9.42	2.39
Dade					1.70	0.28	0.56	2.26	0.28
Fannin					1.22	0.33	0.09	1.31	0.33
Rabun			1.63	1.36		0.04		1.63	1.40
Towns					0.81	0.27		0.81	0.27
Union					1.00	0.24	0.15	1.15	0.24
Walker			2.35	2.31	7.63	7.72	0.59	10.57	10.02
<b>State total</b>	<b>0.00</b>	<b>0.00</b>	<b>3.98</b>	<b>3.67</b>	<b>20.89</b>	<b>11.26</b>	<b>2.28</b>	<b>27.15</b>	<b>14.93</b>
<b>Kentucky</b>									
Calloway			1.59		3.31			4.90	0.00
Graves					0.05			0.05	0.00
Livingston			22.29		0.25	0.22		22.54	0.22
Lyon				0.01				0.00	0.01
Marshall			15.45		3.61	0.04		19.05	0.04
McCracken					0.78			0.78	0.00
<b>State total</b>	<b>0.00</b>	<b>0.00</b>	<b>39.33</b>	<b>0.01</b>	<b>8.01</b>	<b>0.26</b>	<b>0.00</b>	<b>47.33</b>	<b>0.27</b>
<b>Mississippi</b>									
Tishomingo					4.36	0.34	0.02	4.38	0.34
<b>State total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.36</b>	<b>0.34</b>	<b>0.02</b>	<b>4.38</b>	<b>0.34</b>
<b>North Carolina</b>									
Avery			0.59	0.47	1.03	1.09		1.62	1.56
Buncombe	4.97		2.48	1.38	26.19	14.33		33.64	15.71
Cherokee			0.08		1.64	0.00		1.71	0.00
Clay			0.04		0.18	0.10		0.22	0.10
Graham					0.94			0.94	0.00
Haywood			28.55	22.53	6.27	3.38		34.82	25.91
Henderson			0.97	0.87	7.82	2.21		8.79	3.08
Jackson			0.07		1.66	0.89		1.73	0.89
Macon			0.24		1.55	0.77		1.79	0.77
Madison					0.50	0.19		0.50	0.19
Mitchell			3.84	0.00	1.13	0.61		4.96	0.61
Swain					0.36	0.31		0.36	0.31

**Table 6.** Total water use by category and county in 2000—Continued

State County	Thermoelectric power				Public supply			Total	
	Cooling		Industrial		Water withdrawal	Waste- water return flow	Irrigation Water withdrawal	Water withdrawal	Return flow
	Water withdrawal	water return flow	Water withdrawal	Return flow					
<b>North Carolina—Continued</b>									
Transylvania			1.03	0.00	1.74	0.95		2.77	0.95
Watauga					1.43	0.60		1.43	0.60
Yancey			0.00		0.57	0.31		0.57	0.31
<b>State total</b>	<b>4.97</b>	<b>0.00</b>	<b>37.88</b>	<b>25.25</b>	<b>53.00</b>	<b>25.74</b>	<b>0.00</b>	<b>95.85</b>	<b>50.99</b>
<b>Tennessee</b>									
Anderson	469.00	469.00	1.48	0.90	20.23	6.73	0.08	490.79	476.63
Bedford				0.06	6.52	3.29	0.01	6.53	3.36
Benton			22.10		1.54	1.59	0.00	23.64	1.59
Bledsoe					0.39	0.14	0.20	0.59	0.14
Blount					14.29	7.18	0.55	14.84	7.18
Bradley			2.50	2.41	10.66	7.52	0.23	13.39	9.93
Campbell					2.84	1.19	0.25	3.09	1.19
Carroll					0.56	0.14	0.13	0.69	0.14
Carter				0.04	7.53	2.40	0.05	7.59	2.44
Claiborne					2.82	0.42	0.01	2.83	0.42
Cocke			0.45	0.10	4.09	1.30	1.00	5.54	1.40
Coffee			55.04	35.93	5.21	5.41	0.42	60.66	41.33
Cumberland					3.25	2.22	1.98	5.23	2.22
Decatur			0.07		1.38	0.49	0.06	1.52	0.49
Dickson					1.53			1.53	0.00
Franklin					4.31	0.98	0.13	4.44	0.98
Giles			0.32	0.07	3.30	2.20	0.23	3.85	2.27
Grainger					0.03	0.14	0.08	0.10	0.14
Greene			3.35	3.49	8.11	3.48	0.41	11.87	6.96
Grundy					0.75	0.26		0.75	0.26
Hamblen					10.29	4.09	0.02	10.30	4.09
Hamilton	1,537.00	1,536.00	22.27	13.00	62.38	36.73	1.32	1,622.97	1,585.72
Hancock					0.34	0.15	0.00	0.34	0.15
Hardin			23.60	19.89	3.11	1.02	0.23	26.94	20.92
Hawkins	621.00	621.00	0.56	0.53	4.00	0.86	0.04	625.61	622.39
Henderson					3.91	1.15	0.05	3.96	1.15
Henry					3.05	2.07	0.03	3.08	2.07
Hickman				0.08	2.29	0.35	0.04	2.33	0.44
Houston					0.16			0.16	0.00
Humphreys	1,211.00	1,211.00	71.59	58.08	2.31	1.63		1,284.90	1,270.71
Jefferson			11.64	2.31	3.23	1.05	0.10	14.97	3.36
Johnson			0.01		2.18	0.69	0.04	2.23	0.69
Knox			0.21	0.18	62.04	50.25	1.29	63.55	50.43
Lawrence				0.23	4.29	1.84	0.03	4.31	2.07
Lewis			0.09		1.51	0.78	0.10	1.69	0.78
Lincoln					3.48	1.18	0.34	3.81	1.18
Loudoun			4.95	0.12	10.09	8.18	0.04	15.07	8.30
Marion					3.35	0.80	0.00	3.36	0.80
Marshall				1.99	2.90	2.21		2.90	4.20
Maury			1.44	2.36	11.63	5.82	0.33	13.40	8.18
McMinn			64.90	65.73	5.24	2.74	0.00	70.15	68.47
McNairy					0.97	0.26	0.02	0.99	0.26
Meigs					0.58	0.22	0.32	0.90	0.22
Monroe				0.12	5.58	2.54	0.07	5.65	2.66

**Table 6.** Total water use by category and county in 2000—Continued

State County	Thermoelectric power				Public supply			Total	
	Cooling		Industrial		Water withdrawal	Waste- water return flow	Irrigation Water withdrawal	Water withdrawal	Return flow
	Water withdrawal	water return flow	Water withdrawal	Return flow					
<b>Tennessee—Continued</b>									
Moore			1.23	0.38	0.55	0.23		1.78	0.61
Morgan					1.05	0.64		1.05	0.64
Perry					0.75	0.25	0.01	0.76	0.25
Polk			31.77	24.37	0.63	0.31	0.17	32.56	24.67
Rhea	173.50	157.50			3.46	2.05	0.42	177.38	159.55
Roane	1,345.00	1,345.00			6.25	3.77	0.00	1,351.25	1,348.77
Sequatchie					0.65	0.47	0.02	0.67	0.47
Sevier			0.01	0.65	7.51	4.64	0.37	7.90	5.28
Stewart					0.02			0.02	0.00
Sullivan			496.70	465.23	25.43	19.82	0.08	522.21	485.05
Unicoi			0.04	0.10	5.93	1.36	0.05	6.02	1.46
Union					0.58	0.38	0.00	0.58	0.38
Washington				0.02	13.16	11.38	0.52	13.68	11.40
Wayne					1.03	0.35	0.04	1.07	0.35
Williamson					0.05			0.05	0.00
<b>State total</b>	<b>5,356.50</b>	<b>5,339.50</b>	<b>816.33</b>	<b>698.35</b>	<b>375.31</b>	<b>219.36</b>	<b>11.87</b>	<b>6,560.02</b>	<b>6257.22</b>
<b>Virginia</b>									
Lee			0.00		1.36			1.36	0.00
Russell	9.24	0.00	3.79		1.03		0.01	14.07	0.00
Scott					1.06			1.06	0.00
Smyth			0.00		4.88		2.15	7.03	0.00
Tazewell			0.28	0.21	2.72	5.81		3.00	6.02
Washington			0.83	0.47	10.86	1.86		11.69	2.33
Wise			2.17		6.15	2.54		8.32	2.54
<b>State total</b>	<b>9.24</b>	<b>0.00</b>	<b>7.06</b>	<b>0.68</b>	<b>28.06</b>	<b>10.21</b>	<b>2.15</b>	<b>46.52</b>	<b>10.89</b>
<b>Watershed</b>									
<b>total</b>	<b>10,276</b>	<b>10,244</b>	<b>1,205</b>	<b>942</b>	<b>662</b>	<b>377</b>	<b>68.9</b>	<b>12,211</b>	<b>11,562</b>

**Table 7. Surface-water withdrawal by category and water-use tabulation area in 2000**

[Figures may not add to totals because of independent rounding. All values in million gallons per day; WUTA, Water-use tabulation area]

<b>Water-use tabulation area</b> Reservoir catchment area	<b>Thermoelectric power</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
<b>Cherokee</b>					
Watauga		0.24	12.07	0.10	12.40
South Holston		0.24	18.85	2.20	21.30
Boone					0.00
Fort Patrick Henry		496.70	16.40		513.10
Cherokee	621.00	0.60	17.38	0.24	639.22
<b>WUTA total</b>	<b>621.00</b>	<b>497.78</b>	<b>64.70</b>	<b>2.55</b>	<b>1,186.02</b>
<b>Douglas</b>					
Douglas	4.97	36.09	67.73	1.98	110.78
<b>Fort Loudoun</b>					
Fort Loudoun		5.00	71.18	1.33	77.52
<b>Fontana-Tellico</b>					
Fontana		1.91	2.73		4.64
Santeetlah			0.44		0.44
Tellico			4.11	0.05	4.16
<b>WUTA total</b>	<b>0.00</b>	<b>1.91</b>	<b>7.28</b>	<b>0.05</b>	<b>9.24</b>
<b>Norris</b>					
Norris	9.24	5.28	15.10	0.26	29.88
Melton Hill	469.00	1.48	29.83	0.05	500.36
<b>WUTA total</b>	<b>478.24</b>	<b>6.76</b>	<b>44.93</b>	<b>0.31</b>	<b>530.25</b>
<b>Hiwassee-Ocoee</b>					
Chatuge		0.04	1.70		1.73
Nottely			0.45	0.15	0.60
Hiwassee		0.08	0.75	0.11	0.93
Apalachia			2.89	0.05	2.94
Blue Ridge		31.77	1.41	0.07	33.25
Ocoee				0.01	0.01
<b>WUTA total</b>	<b>0.00</b>	<b>31.88</b>	<b>7.20</b>	<b>0.38</b>	<b>39.46</b>
<b>Watts Bar-Chickamauga</b>					
Watts Bar	1,484.10	0.03	8.67	1.87	1,494.66
Chickamauga	1,571.40	68.24	24.55	2.91	1,667.10
<b>WUTA total</b>	<b>3,055.50</b>	<b>68.27</b>	<b>33.22</b>	<b>4.78</b>	<b>3,161.76</b>
<b>Nickajack</b>					
Nickajack		18.74	44.00	0.20	62.94
<b>Guntersville</b>					
Guntersville	1,546.00	9.18	36.37	2.88	1,594.42
<b>Tims Ford</b>					
Tims Ford		55.48	2.90	0.20	58.57

**Table 7.** Surface-water withdrawal by category and water-use tabulation area in 2000—Continued

<b>Water-use tabulation area</b>					
Reservoir catchment area	<b>Thermoelectric power</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
<b>Wheeler-Wilson</b>					
Wheeler	2,108.00	221.46	78.08	41.48	2,449.02
Wilson		29.48	20.33	3.96	53.77
<b>WUTA total</b>	<b>2,108.00</b>	<b>250.94</b>	<b>98.41</b>	<b>45.43</b>	<b>2,502.79</b>
<b>Pickwick</b>					
Pickwick	1,251.00	53.08	4.04	0.11	1,308.23
Cedar Creek			3.00		3.00
Upper Bear Creek			2.81		2.81
<b>WUTA total</b>	<b>1,251.00</b>	<b>53.08</b>	<b>9.85</b>	<b>0.11</b>	<b>1,314.04</b>
<b>Normandy</b>					
Normandy		1.44	24.25	0.61	26.30
<b>Kentucky</b>					
Kentucky	1,211.00	97.20	13.60	0.44	1,322.24
<b>Watershed total</b>	<b>10,276</b>	<b>1,134</b>	<b>526</b>	<b>61.3</b>	<b>11,996</b>

**Table 8.** Surface-water withdrawal by category and hydrologic unit in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

<b>Hydrologic unit code</b>	<b>Thermoelectric power</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
06010101	621.00	0.00	0.91		621.90
06010102		496.94	35.25	2.20	534.40
06010103		0.04	12.07	0.10	12.20
06010104		0.60	16.47	0.24	17.32
06010105	4.97	4.00	38.12		47.09
06010106		28.41	6.21	0.83	35.45
06010107			11.18	0.44	11.62
06010108		3.89	11.97	0.72	16.57
06010201	139.10	5.00	72.57	1.61	218.28
06010202		2.13	1.82		3.95
06010203		0.07	1.15		1.22
06010204			4.55	0.05	4.60
06010205	9.24	5.28	10.60	0.01	25.13
06010206		0.00	4.50	0.00	4.50
06010207	1,814.00	1.51	29.83	0.12	1,845.46
06010208			7.29	1.77	9.06
06020001	1,571.40	19.29	59.22	2.94	1,652.85
06020002		67.51	15.12	0.49	83.11
06020003		31.77	1.41	0.07	33.25
06020004			2.20	0.16	2.36
06030001	1,546.00	9.18	34.17	2.72	1,592.06
06030002	2,108.00	161.29	65.49	40.04	2,374.82
06030003		55.48	4.21	0.20	59.88
06030004		0.32	11.28	1.38	12.98
06030005	1,251.00	142.41	25.11	4.02	1,422.54
06030006			5.81	0.03	5.84
06040001		0.07	5.13	0.26	5.45
06040002		1.44	24.25	0.67	26.36
06040003			4.22	0.14	4.36
06040004			1.17	0.03	1.20
06040005	1,211.00	75.81	2.34	0.04	1,289.19
06040006		21.32			21.32
<b>Watershed total</b>	<b>10,276</b>	<b>1,134</b>	<b>526</b>	<b>61.3</b>	<b>11,996</b>

**Table 9.** Surface-water withdrawal by category and county in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

State County	Thermoelectric power	Industrial	Public supply	Irrigation	Total water withdrawal
<b>Alabama</b>					
Colbert	1,251.00	58.96	7.48		1,317.44
Cullman		1.15			1.15
Dekalb			7.20		7.20
Franklin			3.00	0.03	3.02
Jackson	1,546.00	9.18	7.96	2.60	1,565.74
Lauderdale			12.89	1.86	14.75
Lawrence		59.85	2.19	5.39	67.43
Limestone	2,108.00		8.10	23.55	2,139.65
Madison		1.34	22.59	12.43	36.36
Marion			2.50		2.50
Marshall			17.17	0.13	17.30
Morgan		158.80	42.90	1.70	203.40
Winston			0.31		0.31
<b>State total</b>	<b>4,905.00</b>	<b>289.28</b>	<b>134.29</b>	<b>47.68</b>	<b>5,376.25</b>
<b>Georgia</b>					
Catoosa			0.65	0.59	1.24
Dade			1.70	0.09	1.79
Fannin			1.22	0.07	1.29
Rabun		1.63			1.63
Towns			0.81		0.81
Union			0.45	0.15	0.60
Walker		0.84	2.50	0.59	3.93
<b>State total</b>	<b>0.00</b>	<b>2.47</b>	<b>7.33</b>	<b>1.49</b>	<b>11.29</b>
<b>Kentucky</b>					
Livingston		19.85	0.25		20.10
Marshall		12.97			12.97
<b>State total</b>	<b>0.00</b>	<b>32.82</b>	<b>0.25</b>	<b>0.00</b>	<b>33.07</b>
<b>Mississippi</b>					
Tishomingo				0.02	.02
<b>State total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.02</b>	<b>.02</b>
<b>North Carolina</b>					
Avery		0.20			0.20
Buncombe	4.97	2.02	25.01		32.01
Cherokee		0.08	1.64		1.71
Clay		0.04			0.04
Graham			0.94		0.94
Haywood		28.41	6.21		34.62
Henderson		0.97	7.57		8.54
Jackson		0.07	0.81		0.88
Macon		0.21	1.32		1.53
Madison			0.26		0.26
Mitchell		0.34	1.04		1.38
Swain			0.34		0.34
Transylvania		1.00	1.19		2.19
Watauga			1.15		1.15
Yancey			0.57		0.57
<b>State total</b>	<b>4.97</b>	<b>33.33</b>	<b>48.05</b>	<b>0.00</b>	<b>86.35</b>



**Table 9.** Surface-water withdrawal by category and county in 2000—Continued

State County	Thermoelectric power	Industrial	Public supply	Irrigation	Total water withdrawal
<b>Tennessee</b>					
Anderson	469.00	1.48	19.27	0.07	489.82
Bedford			5.69	0.01	5.70
Benton		2.90	1.38		4.28
Bledsoe				0.20	0.20
Blount			14.27	0.30	14.57
Bradley		2.50	9.33	0.18	12.01
Campbell			2.32	0.25	2.57
Carter				0.05	0.05
Claiborne			2.59	0.01	2.60
Cocke			4.09	1.00	5.09
Coffee		55.00	5.20	0.40	60.60
Cumberland			3.25	1.77	5.02
Decatur		0.07	1.17	0.05	1.29
Dickson			1.53		1.53
Franklin			2.35	0.06	2.42
Giles		0.32	3.09	0.23	3.64
Grainger				0.06	0.06
Greene		3.35	8.11	0.41	11.86
Grundy			0.75		0.75
Hamblen			9.25	0.00	9.25
Hamilton	1,537.00	18.74	52.11	0.93	1,608.78
Hancock			0.34	0.00	0.34
Hardin		23.60	0.74	0.20	24.53
Hawkins	621.00	0.56	2.86	0.04	624.46
Henderson			3.54	0.05	3.59
Henry				0.02	0.02
Hickman			2.29	0.04	2.33
Humphreys	1,211.00	61.41	1.12		1,273.53
Jefferson		0.04	2.70	0.05	2.79
Johnson		0.00	1.22	0.02	1.24
Knox		0.08	61.12	1.19	62.38
Lawrence			1.90	0.00	1.90
Lewis				0.10	0.10
Lincoln			1.31	0.34	1.65
Loudoun		4.95	8.88	0.04	13.87
Marion			2.64	0.00	2.64
Marshall			2.76		2.76
Maury		1.44	10.60	0.26	12.30
McMinn		64.90	2.89	0.00	67.79
McNairy				0.01	0.01
Meigs				0.32	0.32
Monroe			5.01	0.07	5.08
Moore		0.47	0.55		1.02
Morgan			1.05		1.05
Perry			0.75	0.01	0.76
Polk		31.77	0.19	0.16	32.12
Rhea	173.50		2.71	0.38	176.59
Roane	1,345.00		6.06	0.00	1,351.06
Sequatchie			0.65	0.02	0.67
Sevier			7.29	0.37	7.66
Sullivan		496.70	25.08	0.05	521.83
Unicoi		0.04		0.05	0.09

**Table 9.** Surface-water withdrawal by category and county in 2000—Continued

<b>State County</b>	<b>Thermoelectric power</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
<b>Tennessee—Continued</b>					
Washington			13.16	0.11	13.27
Wayne			0.83	0.03	0.87
<b>State total</b>	<b>5,356.50</b>	<b>770.33</b>	<b>315.97</b>	<b>9.92</b>	<b>6,452.71</b>
<b>Virginia</b>					
Lee			0.78		0.78
Russell	9.24	3.79	0.55	0.01	13.59
Scott			1.05		1.05
Smyth			0.78	2.15	2.93
Tazewell		0.00	2.43		2.43
Washington		0.24	8.19		8.43
Wise		1.49	5.93		7.42
<b>State total</b>	<b>9.24</b>	<b>5.52</b>	<b>19.72</b>	<b>2.15</b>	<b>36.64</b>
<b>Watershed total</b>	<b>10,276</b>	<b>1,134</b>	<b>526</b>	<b>61.3</b>	<b>11,996</b>

**Table 10.** Ground-water withdrawal by category and water-use tabulation area in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day; WUTA, water-use tabulation area]

<b>Water-use tabulation area</b>				<b>Total water withdrawal</b>
Reservoir catchment area	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	
<b>Cherokee</b>				
Watauga	0.40	8.98	0.02	9.40
South Holston	0.59	7.39	0.03	8.01
Boone	0.00	3.72		3.72
Fort Patrick Henry				0.00
Cherokee	10.12	2.85	0.03	13.00
<b>WUTA total</b>	<b>11.11</b>	<b>22.94</b>	<b>0.08</b>	<b>34.13</b>
<b>Douglas</b>				
Douglas	6.19	5.34	0.45	11.98
<b>Fort Loudoun</b>				
Fort Loudoun	0.02	1.24	0.34	1.60
<b>Fontana-Tellico</b>				
Fontana	0.03	1.09		1.13
Santeetlah				0.00
Tellico		0.57		0.57
<b>WUTA total</b>	<b>0.03</b>	<b>1.66</b>	<b>0.00</b>	<b>1.70</b>
<b>Norris</b>				
Norris	0.95	2.46	0.00	3.42
Melton Hill		1.58		1.58
<b>WUTA total</b>	<b>0.95</b>	<b>4.04</b>	<b>0.00</b>	<b>4.99</b>
<b>Hiwassee-Ocoee</b>				
Chatuge	0.00	0.18		0.18
Nottely		0.55		0.55
Hiwassee	0.00			0.00
Apalachia			0.00	0.00
Blue Ridge		0.05		0.05
Ocoee		1.11		1.11
<b>WUTA total</b>	<b>0.00</b>	<b>1.90</b>	<b>0.00</b>	<b>1.90</b>
<b>Watts Bar-Chickamauga</b>				
Watts Bar		0.85	0.25	1.11
Chickamauga	0.12	22.84	1.06	24.02
<b>WUTA total</b>	<b>0.12</b>	<b>23.69</b>	<b>1.32</b>	<b>25.13</b>
<b>Nickajack</b>				
Nickajack	4.92	4.78	0.15	9.86
<b>Guntersville</b>				
Guntersville	1.79	6.07		7.86

**Table 10.** Ground-water withdrawal by category and water-use tabulation area in 2000—Continued

<b>Water-use tabulation area</b> Reservoir catchment area	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
<b>Tims Ford</b>				
Tims Ford	0.78	1.96	0.06	2.80
<b>Wheeler-Wilson</b>				
Wheeler	8.16	32.74	4.92	45.82
Wilson	0.53	2.83		3.36
<b>WUTA total</b>	<b>8.69</b>	<b>35.57</b>	<b>4.92</b>	<b>49.18</b>
<b>Pickwick</b>				
Pickwick	0.53	4.88		5.41
Cedar Creek		1.13		1.13
Upper Bear Creek		0.16		0.16
<b>WUTA total</b>	<b>0.53</b>	<b>6.17</b>	<b>0.00</b>	<b>6.70</b>
<b>Normandy</b>				
Normandy	0.01	2.01	0.09	2.11
<b>Kentucky</b>				
Kentucky	35.97	18.76	0.21	54.94
<b>Watershed total</b>	<b>71.1</b>	<b>136</b>	<b>7.62</b>	<b>215</b>

**Table 11.** Ground-water withdrawal by category and hydrologic unit in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

<b>Hydrologic unit code</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
06010101	0.00	0.71		0.71
06010102	0.59	7.38	0.03	8.00
06010103	0.01	8.98	0.02	9.01
06010104	10.12	2.15	0.03	12.30
06010105	0.48	2.22		2.70
06010106	0.59	0.06		0.65
06010107	1.61	0.65	0.04	2.31
06010108	3.89	6.13	0.41	10.43
06010201	0.02	1.23	0.37	1.62
06010202	0.03	0.22		0.26
06010203	0.00	0.88		0.88
06010204		0.57		0.57
06010205	0.95	1.63	0.00	2.59
06010206	0.00	0.83		0.83
06010207		2.43	0.01	2.44
06010208			0.21	0.21
06020001	5.04	24.67	1.16	30.87
06020002	0.01	4.41	0.05	4.48
06020003		0.43	0.02	0.45
06020004		1.03		1.03
06030001	1.79	5.04		6.83
06030002	8.16	1.84	4.87	14.87
06030003	0.78	29.76	0.06	30.60
06030004		3.10	0.02	3.12
06030005	1.06	6.81		7.87
06030006		2.19		2.19
06040001		4.13	0.06	4.19
06040002	0.01	2.01	0.09	2.11
06040003		0.09	0.00	0.09
06040004	0.09	1.66	0.00	1.75
06040005	29.38	5.55	0.15	35.07
06040006	6.50	7.33		13.84
<b>Watershed total</b>	<b>71.1</b>	<b>136</b>	<b>7.62</b>	<b>215</b>

**Table 12.** Ground-water withdrawal by category and county in 2000

[Figures may not add to totals because of independent rounding. All values in million gallons per day]

<b>State County</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
<b>Alabama</b>				
Colbert	1.06	0.48		1.54
Dekalb	1.11	1.37		2.48
Franklin		1.13		1.13
Jackson	0.02	0.99		1.01
Lauderdale		0.85		0.85
Limestone		2.91	4.87	7.78
Madison		27.27		27.27
Marshall	0.66	2.65		3.31
Morgan	8.16			8.16
Winston		0.16		0.16
<b>State total</b>	<b>11.01</b>	<b>37.81</b>	<b>4.87</b>	<b>53.69</b>
<b>Georgia</b>				
Catoosa		7.88	0.30	8.18
Dade			0.47	0.47
Fannin			0.02	0.02
Union		0.55		0.55
Walker	1.51	5.13		6.64
<b>State total</b>	<b>1.51</b>	<b>13.56</b>	<b>0.79</b>	<b>15.86</b>
<b>Kentucky</b>				
Calloway	1.59	3.31		4.90
Graves		0.05		0.05
Livingston	2.44			2.44
Marshall	2.47	3.61		6.08
McCracken		0.78		0.78
<b>State total</b>	<b>6.50</b>	<b>7.75</b>	<b>0.00</b>	<b>14.26</b>
<b>Mississippi</b>				
Tishomingo		4.36		4.36
<b>State total</b>	<b>0.00</b>	<b>4.36</b>	<b>0.00</b>	<b>4.36</b>
<b>North Carolina</b>				
Avery	0.39	1.03		1.42
Buncombe	0.45	1.18		1.63
Cherokee	0.00			0.00
Clay	0.00	0.18		0.18
Haywood	0.14	0.06		0.20
Henderson	0.00	0.25		0.25
Jackson	0.00	0.85		0.85
Macon	0.03	0.22		0.26
Madison		0.24		0.24
Mitchell	3.50	0.09		3.59
Swain		0.02		0.02
Transylvania	0.03	0.55		0.58
Watauga		0.28		0.28
Yancey	0.00			0.00
<b>State total</b>	<b>4.55</b>	<b>4.95</b>	<b>0.00</b>	<b>9.50</b>

**Table 12.** Ground-water withdrawal by category and county in 2000—Continued

State County	Industrial	Public supply	Irrigation	Total water withdrawal
<b>Tennessee</b>				
Anderson		0.96	0.01	0.97
Bedford		0.83	0.00	0.83
Benton	19.20	0.16	0.00	19.36
Bledsoe		0.39		0.39
Blount		0.02	0.24	0.26
Bradley		1.33	0.05	1.38
Campbell		0.52		0.52
Carroll		0.56	0.13	0.69
Carter		7.53		7.53
Claiborne		0.23		0.23
Cocke	0.45	0.00	0.00	0.46
Coffee	0.04	0.01	0.02	0.06
Cumberland			0.21	0.21
Decatur		0.21	0.02	0.23
Franklin		1.96	0.06	2.02
Giles		0.21		0.21
Grainger		0.03	0.02	0.05
Greene	0.00	0.01		0.01
Hamblen		1.04	0.01	1.05
Hamilton	3.53	10.27	0.38	14.18
Hardin		2.38	0.03	2.41
Hawkins		1.15	0.00	1.15
Henderson		0.36	0.00	0.37
Henry		3.05	0.01	3.06
Hickman			0.00	0.00
Houston		0.16		0.16
Humphreys	10.18	1.19		11.37
Jefferson	11.60	0.53	0.04	12.17
Johnson	0.01	0.96	0.02	0.99
Knox	0.13	0.93	0.10	1.16
Lawrence		2.39	0.02	2.41
Lewis	0.09	1.51	0.00	1.59
Lincoln		2.17		2.17
Loudoun		1.20		1.20
Marion		0.71		0.71
Marshall		0.14		0.14
Maury		1.03	0.07	1.10
McMinn	0.00	2.35		2.36
McNairy		0.97	0.00	0.98
Meigs		0.58		0.58
Monroe		0.57		0.57
Moore	0.75			0.75
Perry			0.00	0.00
Polk		0.43	0.00	0.44
Rhea		0.76	0.04	0.80
Roane		0.20		0.20
Sevier	0.01	0.23		0.24
Stewart		0.02		0.02

**Table 12.** Ground-water withdrawal by category and county in 2000—Continued

<b>State County</b>	<b>Industrial</b>	<b>Public supply</b>	<b>Irrigation</b>	<b>Total water withdrawal</b>
<b>Tennessee—Continued</b>				
Sullivan	0.00	0.35	0.03	0.38
Unicoi	0.00	5.93	0.00	5.93
Union		0.58	0.00	0.58
Washington			0.41	0.41
Wayne		0.20	0.00	0.20
Williamson		0.05		0.05
<b>State total</b>	<b>46.00</b>	<b>59.35</b>	<b>1.96</b>	<b>107.31</b>
<b>Virginia</b>				
Lee	0.00	0.58		0.58
Russell	0.00	0.48		0.48
Scott		0.01		0.01
Smyth	0.00	4.09		4.09
Tazewell	0.28	0.29		0.57
Washington	0.59	2.67		3.26
Wise	0.68	0.22		0.89
<b>State total</b>	<b>1.54</b>	<b>8.34</b>	<b>0.00</b>	<b>9.88</b>
<b>Watershed total</b>	<b>71.1</b>	<b>136</b>	<b>7.62</b>	<b>215</b>