

Contributions of State and private forest lands to surface drinking water supply:

VIRGINIA

This file compiles State-specific excerpts from appendices A and B of the following report:

Liu, Ning; Dobbs, G. Rebecca; Caldwell, Peter V.; Miniati, Chelcy Ford; Bolstad, Paul V.; Nelson, Stacy; Sun, Ge. 2020. Quantifying the role of State and private forest lands in providing surface drinking water supply for the Southern United States. Gen. Tech. Rep. SRS-248. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 405 p. <https://doi.org/10.2737/SRS-GTR-248>.

Appendix A—Detailed information regarding forest ownership, water yield, surface drinking water intakes, and percent of water originating on State and private forest (SPF) lands in Virginia.

Table B.AL.1—Public water system intakes receiving water from State and private forest land in Virginia.

[This page intentionally left blank]

STATE OF VIRGINIA

Summary

State and private forest (SPF) lands cover about 49.6 percent of Virginia (figs. A.VA.1 and A.VA.2; table A.VA.1). About 47.4 percent of all Virginia surface water originates on SPF lands (fig. A.VA.3). The majority of SPF land area is in, and surface water is from, family-owned forests, accounting for about 68.6 percent of the land area of SPF and 68.3 percent of surface water from SPF. Corporate-owned forests contribute 23.7 percent of surface water from SPF and account for 23.6 percent of land area of SPF. Average annual water yield in Virginia is about 388 mm (fig. A.VA.4). Virginia has a total of 429 surface drinking water intakes where at least some available water comes from SPF (fig. A.VA.5). While about 51.5 percent of the total population of Virginia is served by surface drinking water overall, Virginia SPF surface drinking water serves about 50.1 percent of the State population, or 4.3 million people, to some degree. About 1.1 million people in Virginia are getting more than half of their surface drinking water from SPF within the State (fig. A.VA.6). State

and private forest lands in Virginia also supply water to 300 surface drinking water intakes in other States (Alabama, Illinois, Indiana, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Ohio, South Carolina, Tennessee, and West Virginia) (fig. A.VA.7), which collectively serve about 5.9 million people in 196 communities (fig. A.VA.8). Many public water systems in Virginia utilize more than one surface drinking water intake; these systems are shown (intakes aggregated) in figure A.VA.9 by population served (symbol size) and percentage of water from SPF lands in Virginia (symbol color). The detail maps of northern, southeastern, and southwestern Virginia (figs. A.VA.10–A.VA.12) add clarity on the hydrology, surface drinking water intakes, water originating on SPF lands, and population centers in areas where there is complex intersection between public water supply systems and population served. A case study (fig. A.VA.13) of the City of Richmond public water supply system presents an example of the important role SPF lands play in providing water supply to a single community in Virginia, where a single surface drinking water intake receives about 49.2 percent of its water from SPF and serves about 0.2 million people.

Table A.VA.1—Land area by land cover and forest ownership type in Virginia

| Land cover | Land area (km²) | Land area (acres) |
|--|-----------------------------------|--------------------------|
| Forest | 65 964 | 16,299,905 |
| Nonforest | 42 628 | 10,533,470 |
| Forest ownership type^a | Land area (km²) | Land area (acres) |
| Federal (public) | 12 109 | 2,992,211 |
| Tribal (public) | 0 | 0 |
| State (public) | 2269 | 560,567 |
| Local (public) | 1028 | 254,005 |
| Corporate (private) | 12 725 | 3,144,416 |
| Family (private) | 36 962 | 9,133,421 |
| Other private | 871 | 215,285 |

^aState and private forest land comprises State, local, corporate, family, and other private (the last two also referred to together as nonindustrial private forest, or NIPF). Corporate ownership lands include forest land owned by forest industry as well as other corporate entities such as Timber Investment Management Organizations and Real Estate Investment Trusts (TIMOs and REITs, respectively).

Virginia Forested Lands by Ownership

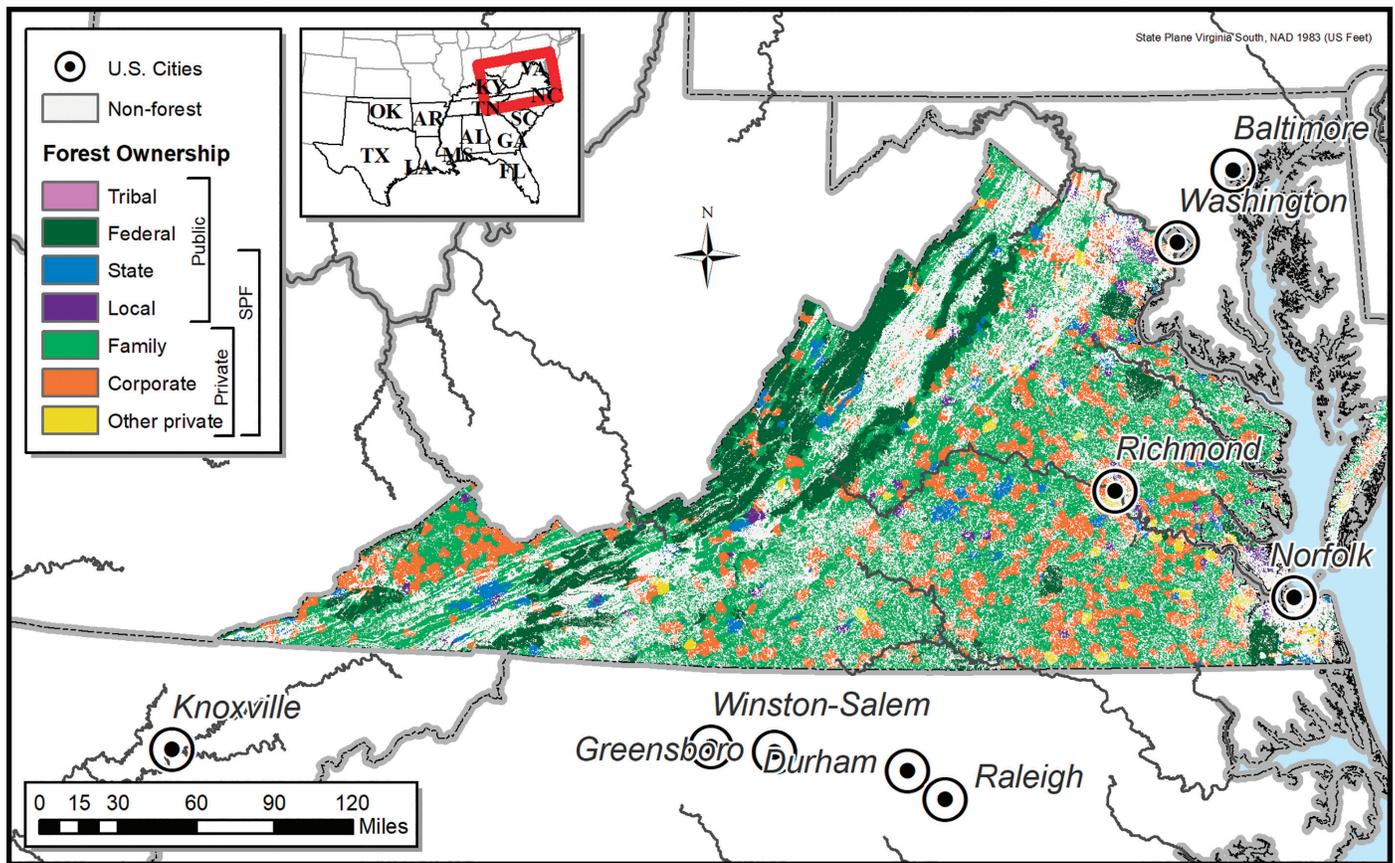


Figure A.VA.1—Virginia nonforest land and forest lands by ownership, ca. 2014. Forest ownership data source: raster dataset by Hewes and others (2017); see report for more discussion of data derivation and accuracy.

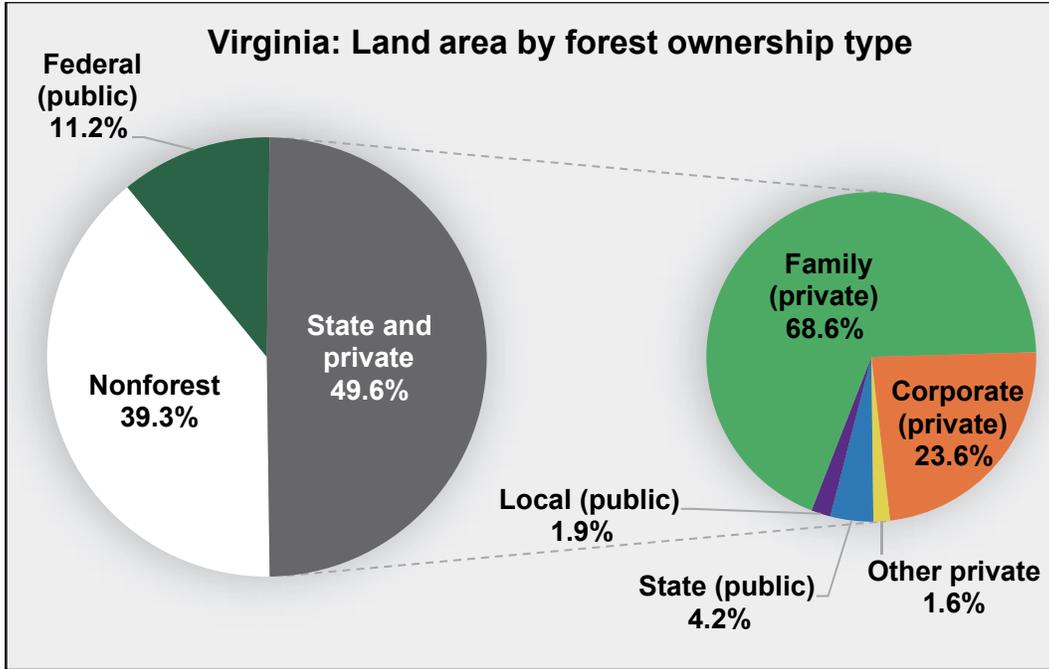


Figure A.VA.2—Land area percentages by forest ownership, ca. 2014. In the smaller circle, percentages represent portion of SPF total for each ownership category. Note: Due to rounding, percentages may not total exactly 100.

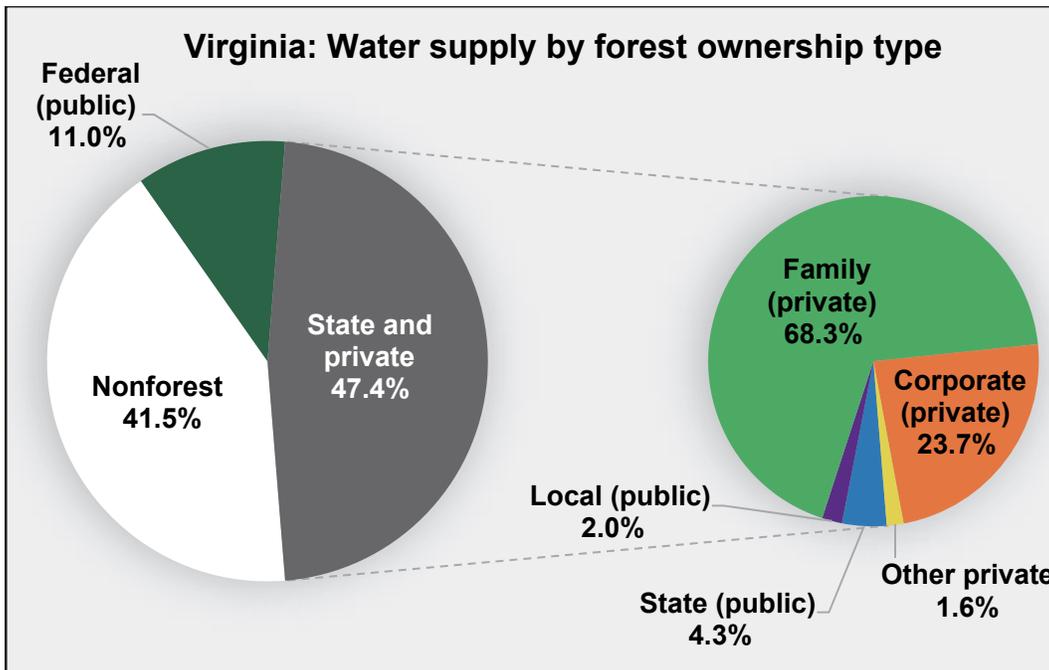


Figure A.VA.3—Percentage of Virginia’s water supply deriving from nonforest lands and forest lands of different ownership, ca. 2014. In the smaller circle, percentages represent portion of SPF total for each ownership category. Note: Due to rounding, percentages may not total exactly 100.

Virginia
 2001-2010 Mean Annual Water Yield by 12-Digit Hydrologic Unit

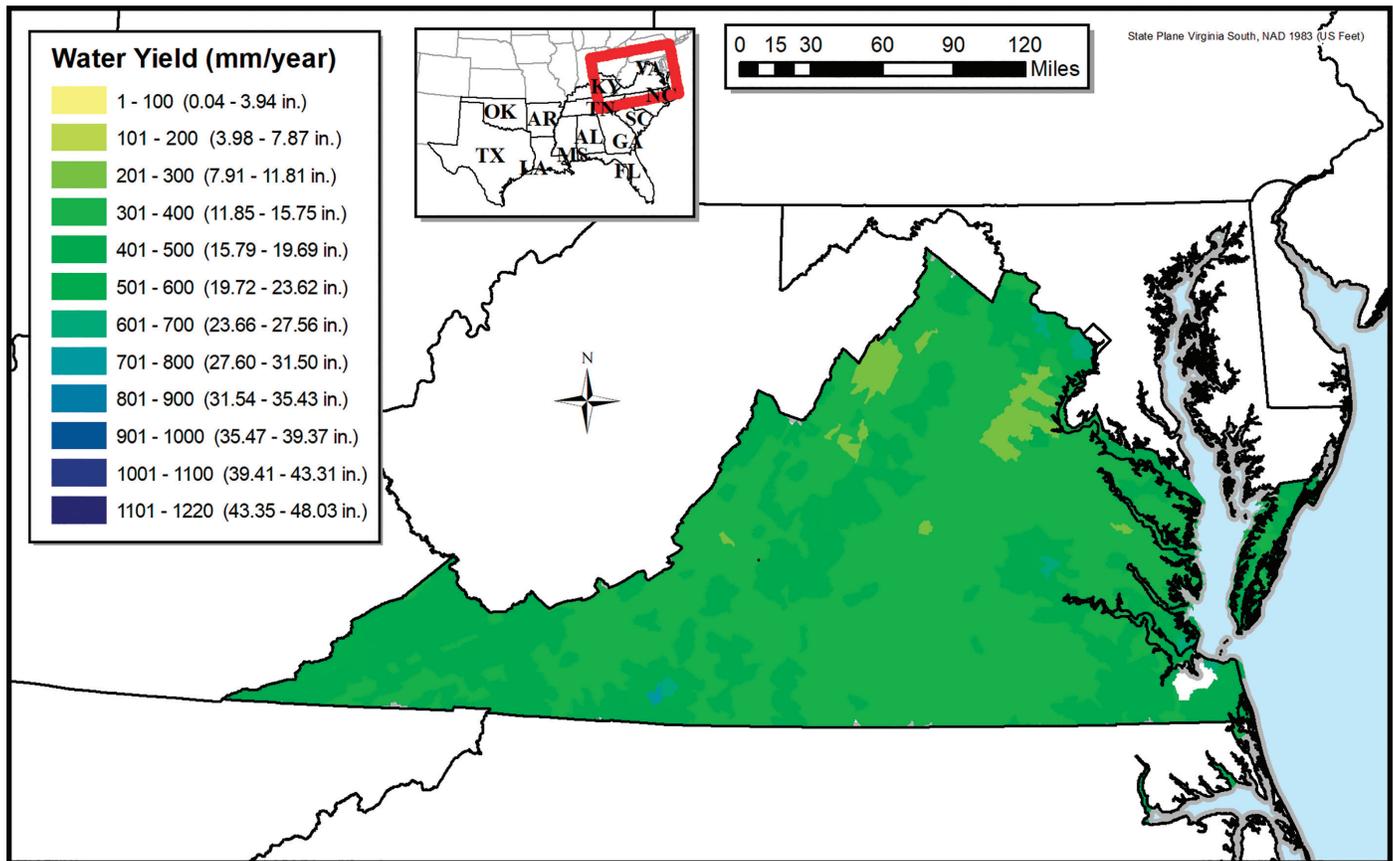


Figure A.VA.4—Estimated mean annual water yield by 12-digit hydrologic units in Virginia, 2001–2010. Hydrologic Unit Codes (HUC) use number of digits to represent watersheds of different scales. A 12-digit HUC (HUC12) represents a small local watershed. For explanation of water yield and how it is derived, see report.

(A) Streams and Intrastate Public Water System Intakes Receiving Water from Virginia State and Private Forests

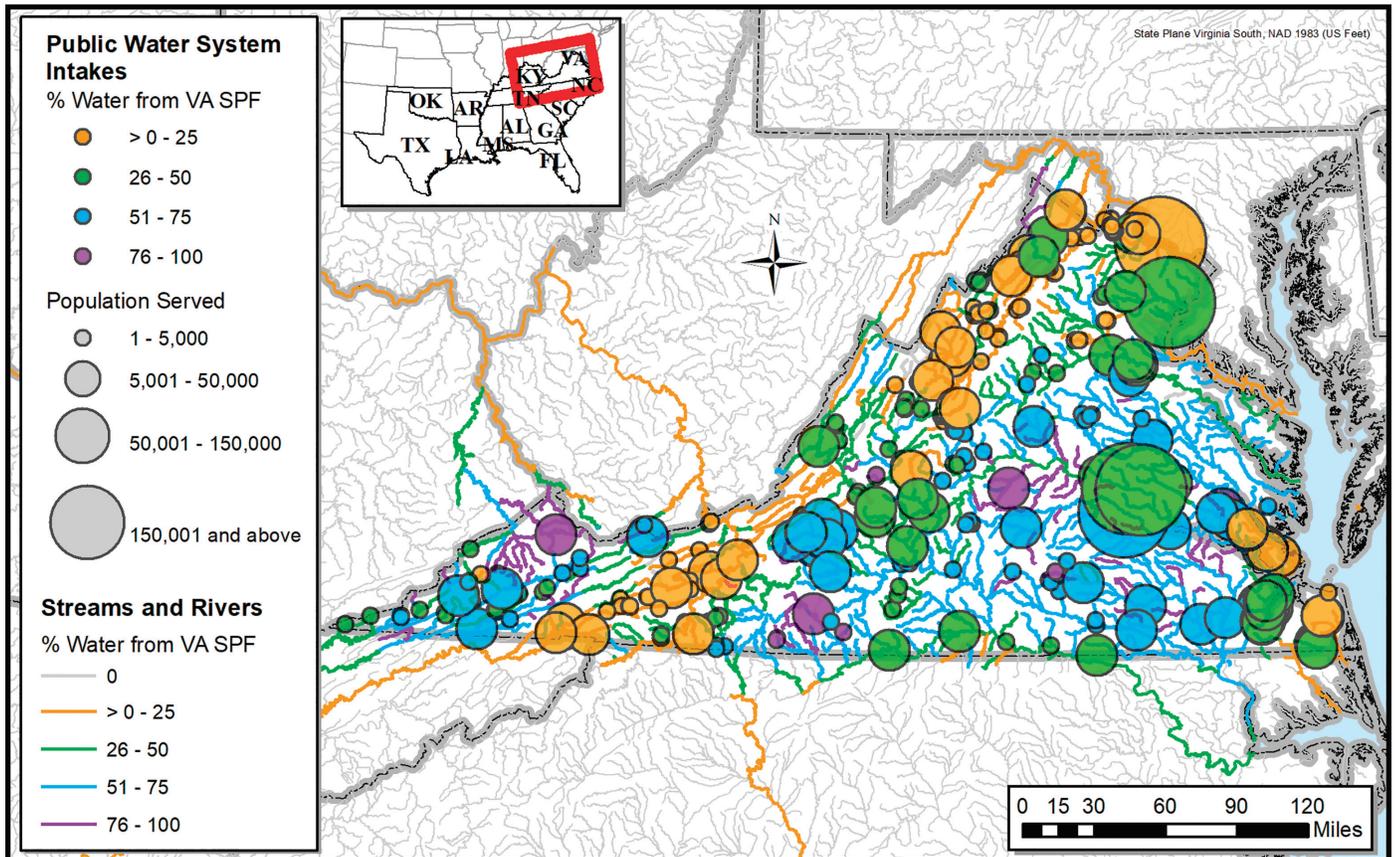


Figure A.VA.5—(A) Virginia streams by percentage of Virginia SPF water content, surface drinking water intakes within Virginia by percentage of Virginia SPF surface water available at intake (symbol color), and population served by each intake (symbol size). A total of 429 surface drinking water intakes within the State serve a population of 4,289,377 in 164 communities. Note: See figures A.VA.5 parts B and C on separate pages for streams and intakes only.

(B) Streams Receiving
Water from Virginia State and Private Forests

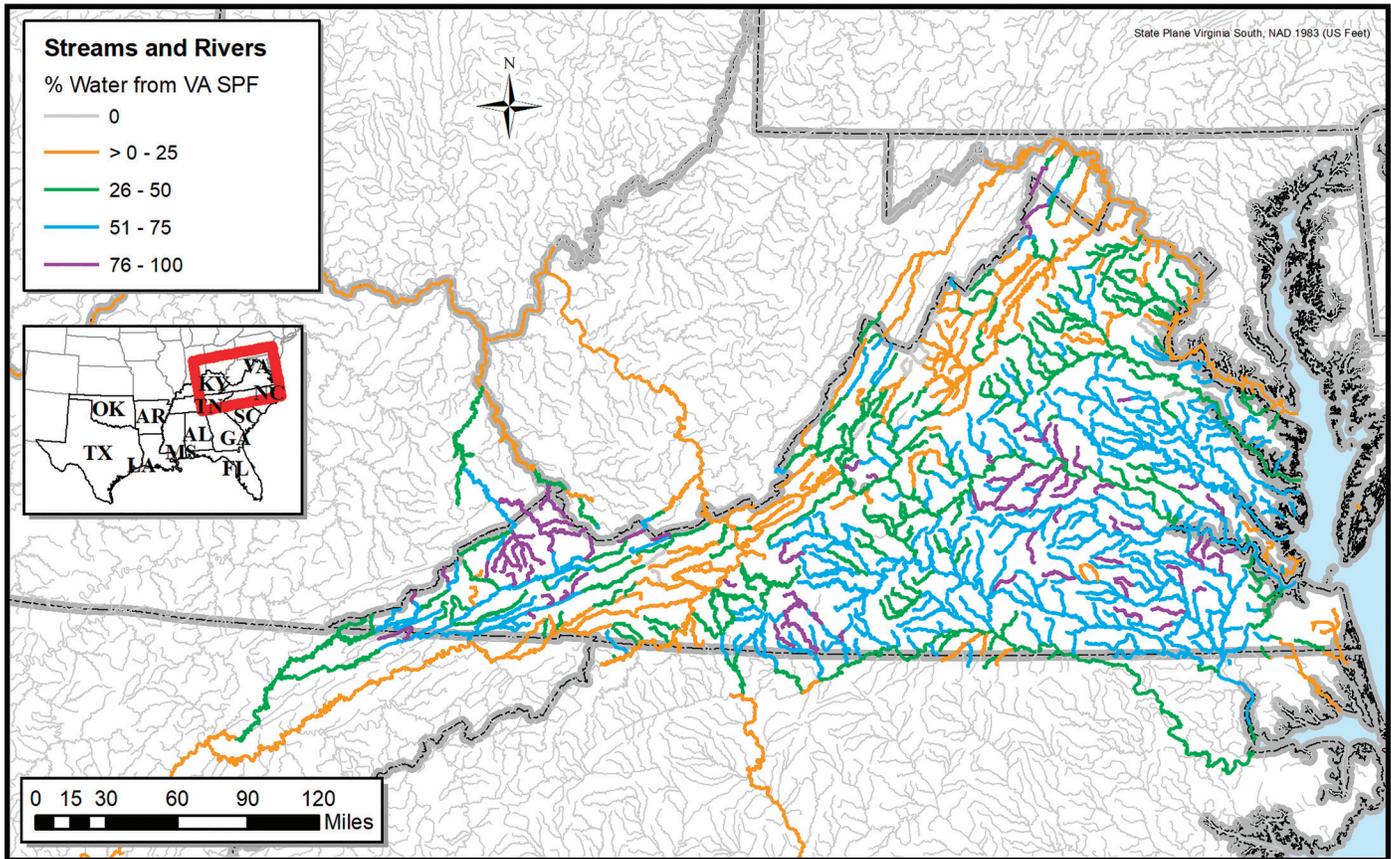


Figure A.VA.5—(B) Virginia streams by percentage of Virginia SPF water content.

(C) Intrastate Public Water System Intakes Receiving Water from Virginia State and Private Forests

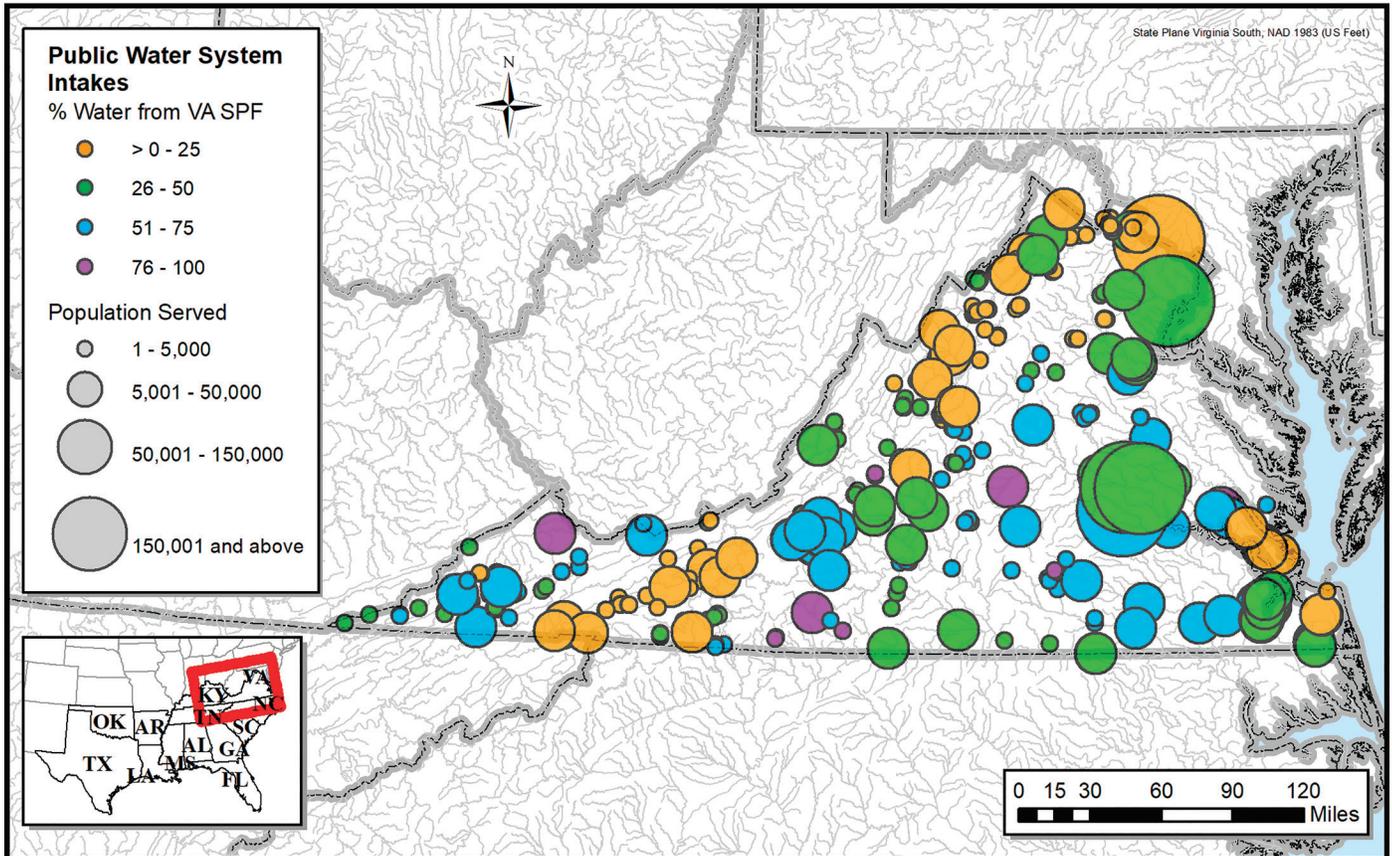


Figure A.VA.5—(C) Surface drinking water intakes within Virginia by percentage of Virginia SPF surface water available at intake (symbol color) and population served by each intake (symbol size). A total of 429 surface drinking water intakes within the State serve a population of 4,289,377 in 164 communities.

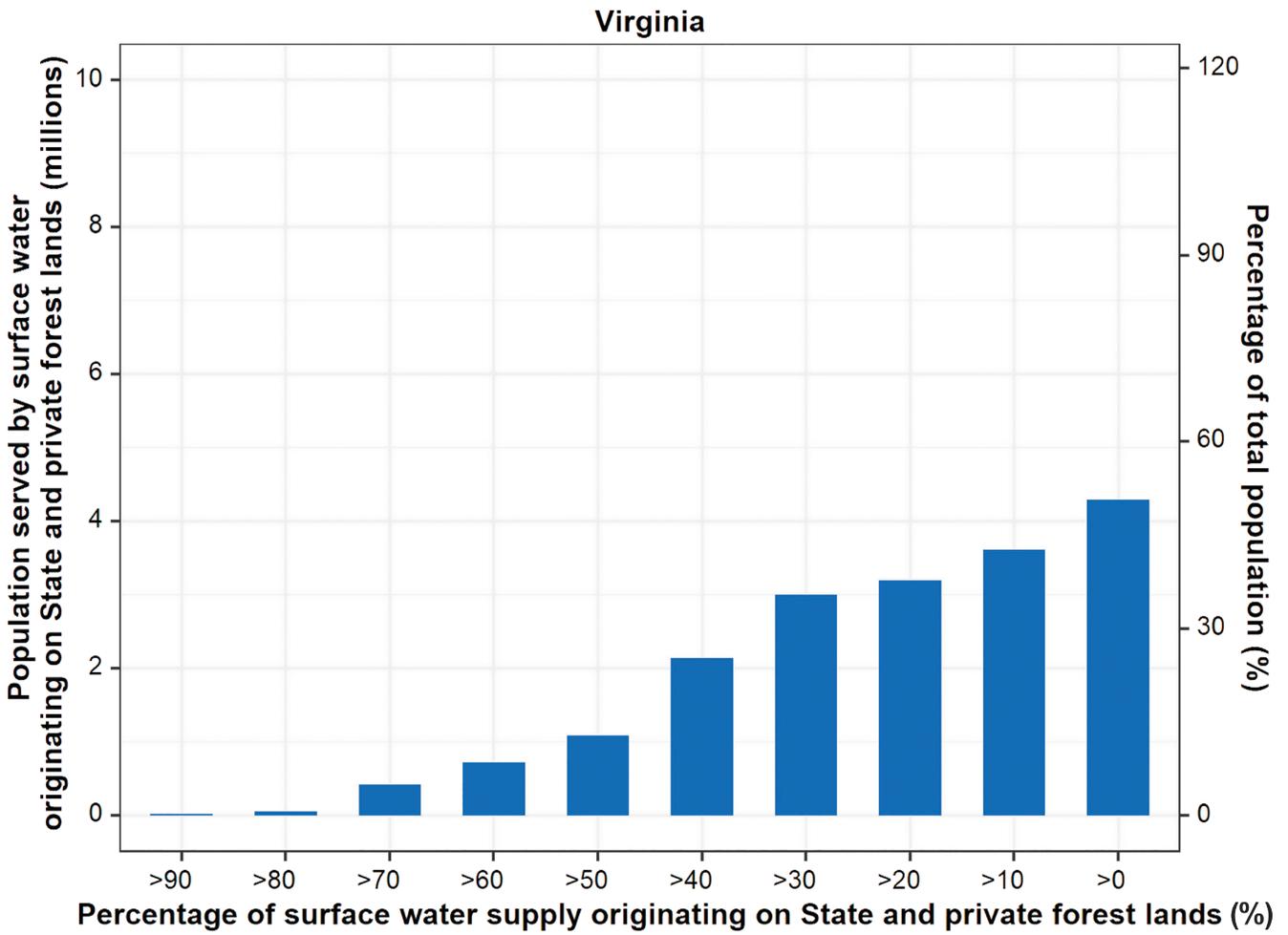


Figure A.VA.6—Cumulative frequency of population served according to percentage of water coming from Virginia SPF lands.

Public Water System Intakes Outside of Virginia Receiving Water from Virginia State and Private Forests

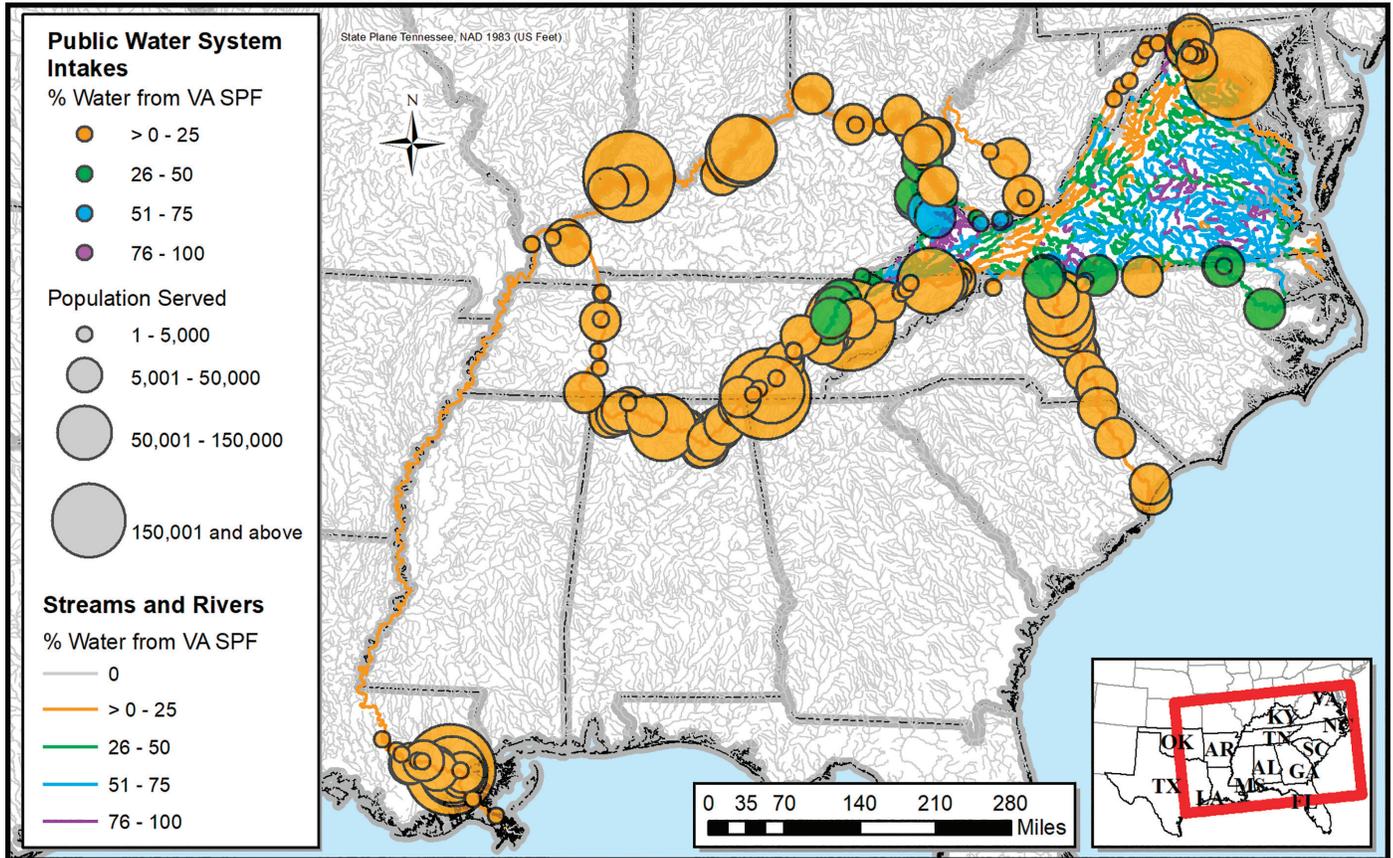


Figure A.VA.7—Virginia streams by percentage of Virginia SPF water content, surface drinking water intakes downstream of Virginia by percentage of Virginia SPF water content (symbol color), and population served by each of these external intakes (symbol size). A total of 300 surface drinking water intakes outside the State but carrying Virginia SPF water serve a population of 5,939,258 in 196 communities.

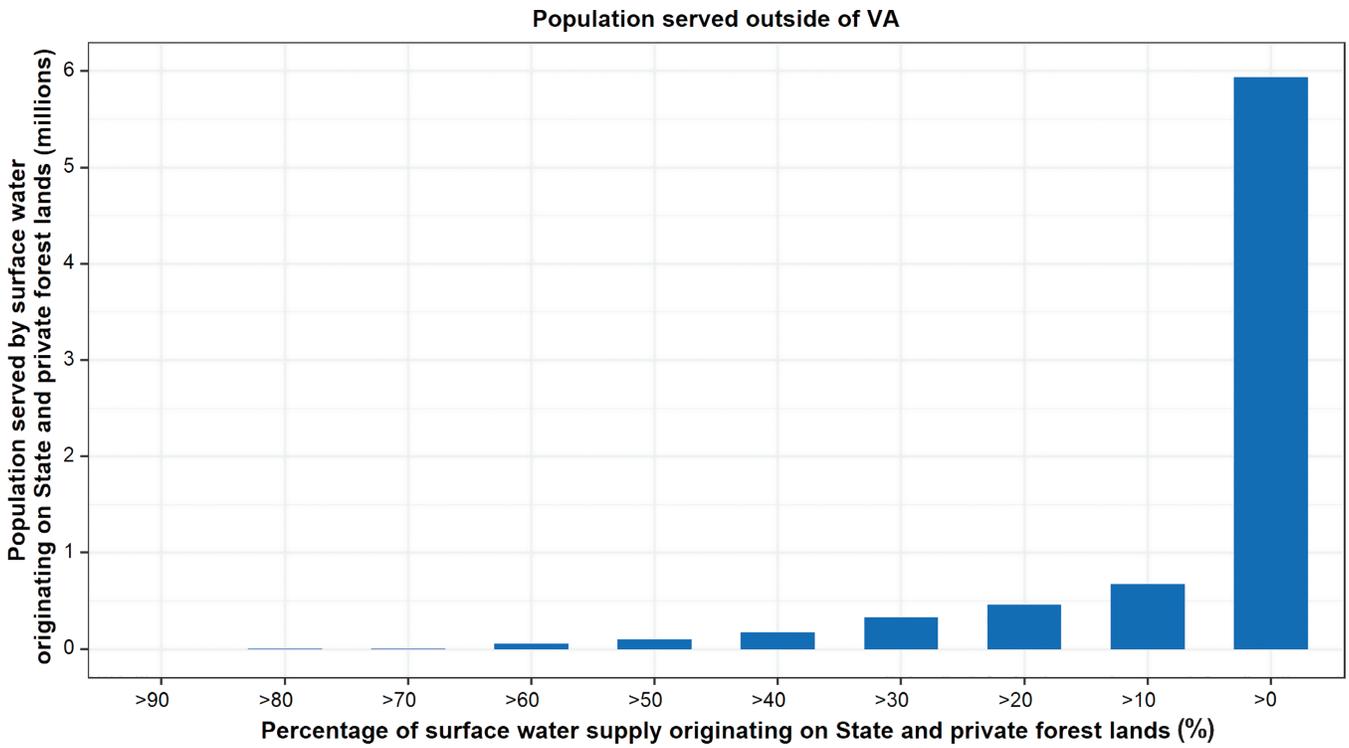


Figure A.VA.8—Cumulative frequency of non-Virginia population served according to percentage of water coming from Virginia SPF lands.

*Multi-Intake Public Water Systems (Aggregated to Single Symbol)
Receiving Water from Virginia State and Private Forests*

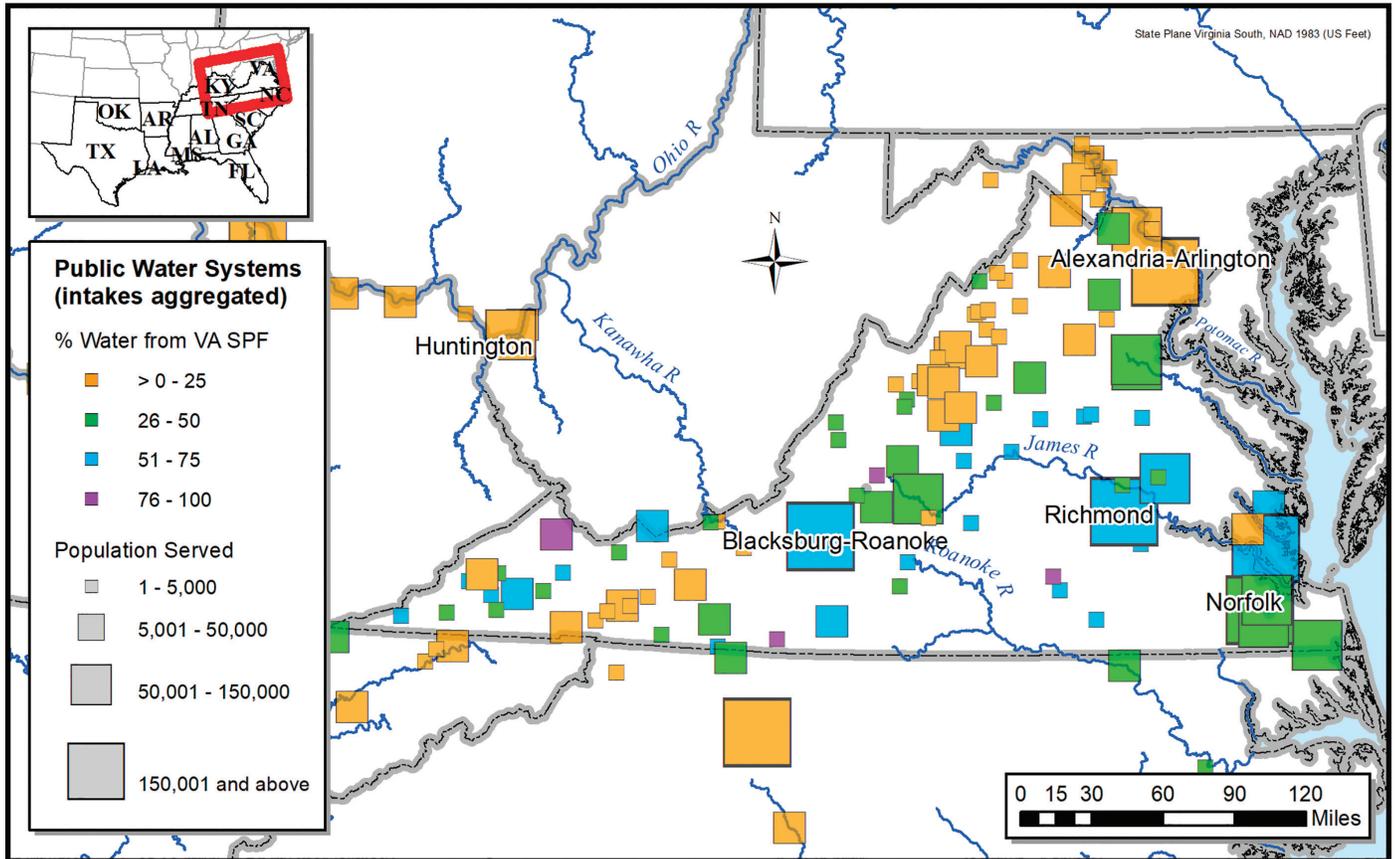


Figure A.VA.9—Multi-intake public water systems aggregated to single data point. Symbol color and size represent values for an entire municipal or corporate water supply system rather than values for individual surface drinking water intakes. Systems with no more than a single surface drinking water intake are not represented on this map.

Northern Virginia Detail

Streams and Intrastate Public Water System Intakes in Northeastern Virginia Receiving Water from Virginia State and Private Forests

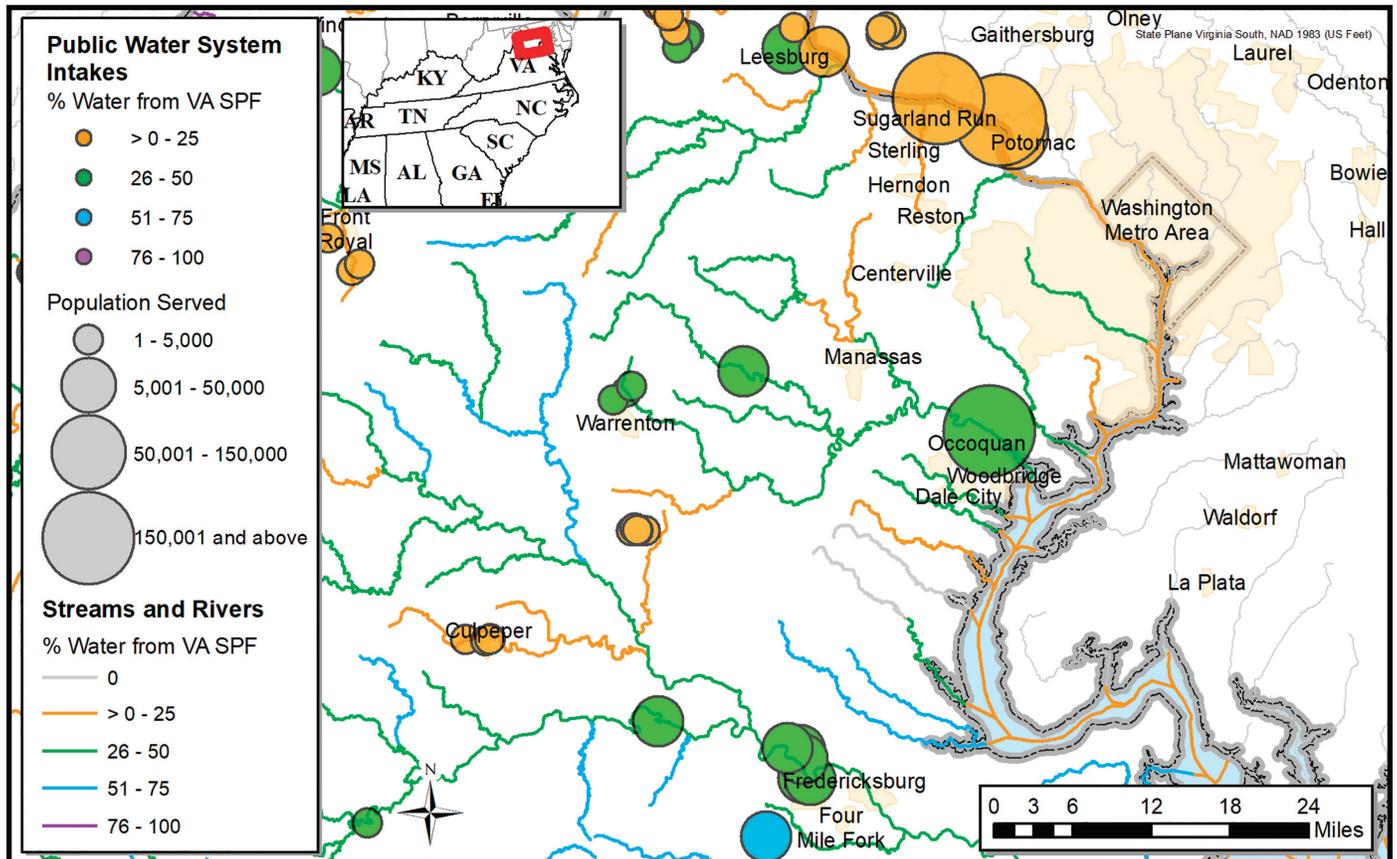


Figure A.VA.10—Local-scale detail showing percentage of water from Virginia SPF for streams and surface drinking water intakes in northern Virginia.

Southeastern Virginia Detail

Streams and Intrastate Public Water System Intakes in Southeastern Virginia Receiving Water from Virginia State and Private Forests

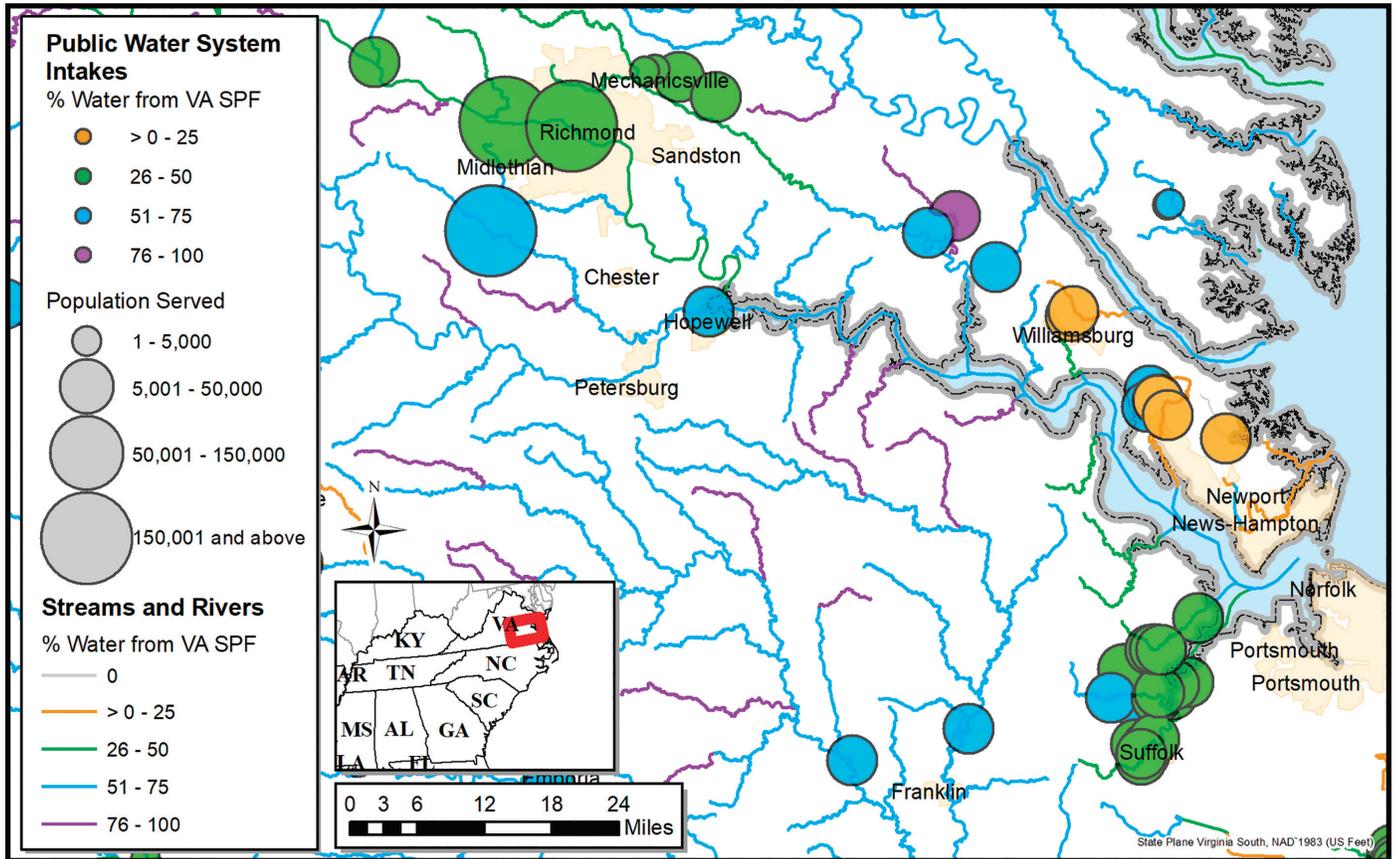


Figure A.VA.11—Local-scale detail showing percentage of water from Virginia SPF for streams and surface drinking water intakes in southeastern Virginia.

Southwestern Virginia Detail

Streams and Intrastate Public Water System Intakes in Southwestern Virginia Receiving Water from Virginia State and Private Forests

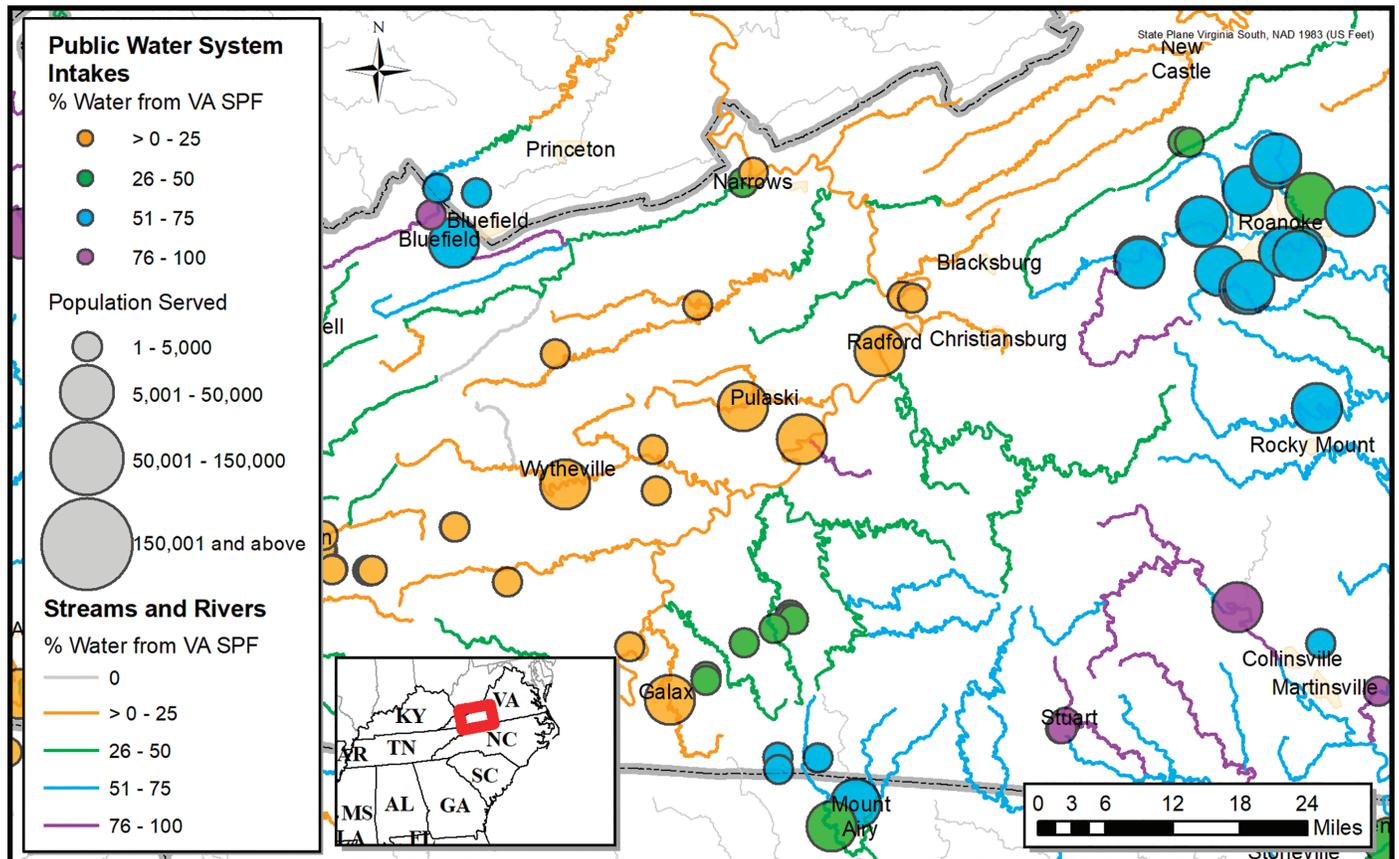


Figure A.VA.12—Local-scale detail showing percentage of water from Virginia SPF for streams and surface drinking water intakes in southwestern Virginia.

Richmond, VA, Case Study

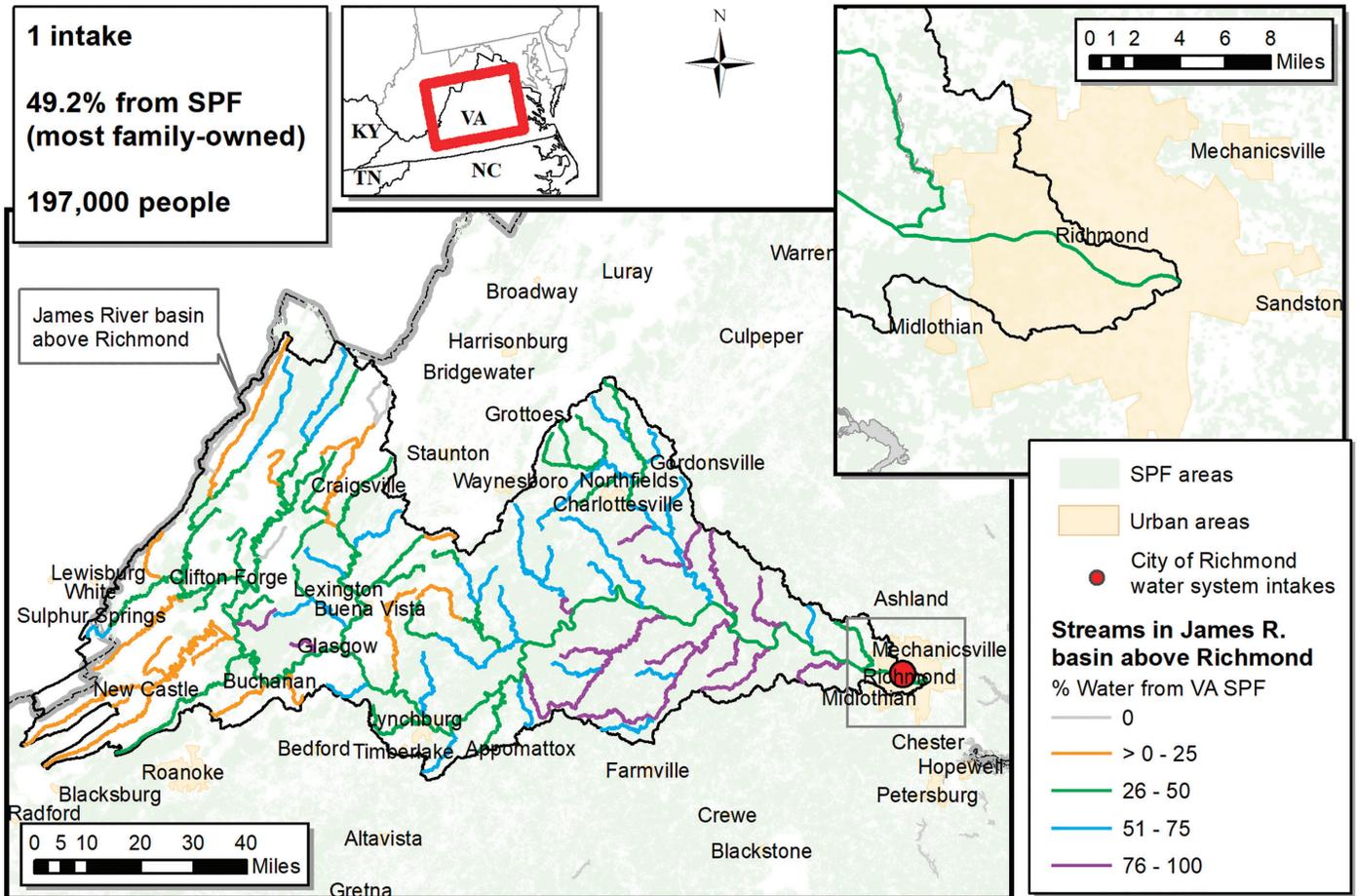


Figure A.VA.13—Case study of the City of Richmond public water supply system, Richmond, VA, illustrating SPF water in streams supplying the single surface drinking water intake. When this water reaches the intake, 49.2 percent of it comes from SPF lands. The largest ownership category in these specific SPF lands is family-owned.

[This page intentionally left blank]

Table B.AR.1—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|--------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 1 | ALMA WATERWORKS | | AR | 5,745 | 31 | 12.8 |
| 2 | AMITY WATERWORKS | | AR | 3,551 | 496 | 25.3 |
| 3 | ARKADELPHIA WATERWORKS | | AR | 10,716 | 3834 | 30.5 |
| 4 | ARKANSAS HEALTH CENTER | | AR | 1,000 | 931 | 77.3 |
| 5 | ASHLEY MINERAL SPRING | | AR | 25 | 15 629 | 68.5 |
| 6 | ATKINS WATER SYSTEM | | AR | 10,265 | 57 | 45.5 |
| 7 | BATESVILLE WATER UTILITIES | | AR | 12,375 | 12 221 | 31 |
| 8 | BEAVER WATER DISTRICT | 1 of 2 | AR | 162,971 | 1140 | 49.8 |
| 9 | BEAVER WATER DISTRICT | 2 of 2 | AR | 162,971 | 1140 | 49.8 |
| 10 | BEEBE WATERWORKS | 1 of 4 | AR | 1,975 | 549 | 40.1 |
| 11 | BEEBE WATERWORKS | 2 of 4 | AR | 1,975 | 549 | 40.1 |
| 12 | BEEBE WATERWORKS | 3 of 4 | AR | 1,975 | 549 | 40.1 |
| 13 | BEEBE WATERWORKS | 4 of 4 | AR | 1,975 | 549 | 40.1 |
| 14 | BENTON-WASHINGTON REGIONAL PWA | | AR | 77,102 | 1291 | 50.8 |
| 15 | BENTON WATERWORKS | | AR | 30,681 | 931 | 77.3 |
| 16 | BLACK BEAR SPRINGS | | AR | 25 | 62 | 24.1 |
| 17 | BOONEVILLE DEVELOPMENT CENTER | 1 of 2 | AR | 138 | 280 | 40.3 |
| 18 | BOONEVILLE DEVELOPMENT CENTER | 2 of 2 | AR | 138 | 280 | 40.3 |
| 19 | BOONEVILLE WATERWORKS | | AR | 12,010 | 58 | 49.2 |
| 20 | BUFFALO ISLAND REG WATER DIST | | AR | 3,429 | 139 | 1 |
| 21 | CABOT WATERWORKS | 1 of 6 | AR | 4,239 | 35 | 50.9 |
| 22 | CABOT WATERWORKS | 2 of 6 | AR | 4,239 | 58 | 39.8 |
| 23 | CABOT WATERWORKS | 3 of 6 | AR | 4,239 | 58 | 39.8 |
| 24 | CABOT WATERWORKS | 4 of 6 | AR | 4,239 | 58 | 39.8 |
| 25 | CABOT WATERWORKS | 5 of 6 | AR | 4,239 | 116 | 36.1 |
| 26 | CABOT WATERWORKS | 6 of 6 | AR | 4,239 | 116 | 36.1 |
| 27 | CALICO ROCK WATERWORKS | 1 of 5 | AR | 368 | 203 | 67.9 |
| 28 | CALICO ROCK WATERWORKS | 2 of 5 | AR | 368 | 10 923 | 27.5 |
| 29 | CALICO ROCK WATERWORKS | 3 of 5 | AR | 368 | 10 923 | 27.5 |
| 30 | CALICO ROCK WATERWORKS | 4 of 5 | AR | 368 | 10 923 | 27.5 |
| 31 | CALICO ROCK WATERWORKS | 5 of 5 | AR | 368 | 10 923 | 27.5 |
| 32 | CAMDEN WATERWORKS | | AR | 14,825 | 8089 | 55 |
| 33 | CARROLL-BOONE WATER DISTRICT | | AR | 24 | 1323 | 50.7 |
| 34 | CENTRAL ARKANSAS WATER | 1 of 3 | AR | 104,501 | 93 | 92.6 |
| 35 | CENTRAL ARKANSAS WATER | 2 of 3 | AR | 104,501 | 200 | 77.7 |
| 36 | CENTRAL ARKANSAS WATER | 3 of 3 | AR | 104,502 | 296 | 44.7 |
| 37 | CHARLESTON WATERWORKS | 1 of 2 | AR | 1,692 | 96 | 45.8 |
| 38 | CHARLESTON WATERWORKS | 2 of 2 | AR | 1,692 | 108 | 34.7 |
| 39 | CITY CORPORATION | 1 of 4 | AR | 7,279 | 454 | 22.5 |
| 40 | CITY CORPORATION | 2 of 4 | AR | 7,279 | 431 | 21.8 |
| 41 | CITY CORPORATION | 3 of 4 | AR | 7,279 | 431 | 21.8 |
| 42 | CITY CORPORATION | 4 of 4 | AR | 7,279 | 431 | 21.8 |
| 43 | CLARKSVILLE WATERWORKS | 1 of 2 | AR | 14,298 | 141 | 32 |
| 44 | CLARKSVILLE WATERWORKS | 2 of 2 | AR | 14,298 | 704 | 15.1 |
| 45 | CLINTON WATERWORKS | | AR | 12,838 | 645 | 68 |
| 46 | COMMUNITY WATER SYSTEM | | AR | 54,324 | 1558 | 70.9 |

(continued)

Table B.AR.1 (continued)—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|-------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 47 | CONWAY CO REGIONAL WATER DIST | | AR | 18,943 | 51 | 49.2 |
| 48 | CONWAY WATER SYSTEM | 1 of 2 | AR | 29,454 | 51 | 49.2 |
| 49 | CONWAY WATER SYSTEM | 2 of 2 | AR | 29,454 | 1117 | 41.1 |
| 50 | CUSHMAN WATER SYSTEM | | AR | 1,385 | 222 | 56.8 |
| 51 | DANVILLE WATERWORKS | 1 of 2 | AR | 5,097 | 976 | 23.6 |
| 52 | DANVILLE WATERWORKS | 2 of 2 | AR | 5,097 | 42 | 11.6 |
| 53 | DARDANELLE WATERWORKS | 1 of 10 | AR | 423 | 69 | 20.8 |
| 54 | DARDANELLE WATERWORKS | 2 of 10 | AR | 423 | 69 | 20.8 |
| 55 | DARDANELLE WATERWORKS | 3 of 10 | AR | 423 | 69 | 20.8 |
| 56 | DARDANELLE WATERWORKS | 4 of 10 | AR | 423 | 69 | 20.8 |
| 57 | DARDANELLE WATERWORKS | 5 of 10 | AR | 423 | 69 | 20.8 |
| 58 | DARDANELLE WATERWORKS | 6 of 10 | AR | 423 | 69 | 20.8 |
| 59 | DARDANELLE WATERWORKS | 7 of 10 | AR | 423 | 56 611 | 3.1 |
| 60 | DARDANELLE WATERWORKS | 8 of 10 | AR | 423 | 56 611 | 3.1 |
| 61 | DARDANELLE WATERWORKS | 9 of 10 | AR | 423 | 56 611 | 3.1 |
| 62 | DARDANELLE WATERWORKS | 10 of 10 | AR | 423 | 56 611 | 3.1 |
| 63 | DECATUR WATERWORKS | 1 of 3 | AR | 1,001 | 123 | 41.7 |
| 64 | DECATUR WATERWORKS | 2 of 3 | AR | 1,001 | 123 | 41.7 |
| 65 | DECATUR WATERWORKS | 3 of 3 | AR | 1,001 | 123 | 41.7 |
| 66 | DEQUEEN WATER WORK | | AR | 6,594 | 568 | 58.7 |
| 67 | DIERKS WATER WORKS | | AR | 2,364 | 174 | 73.3 |
| 68 | DOTA PUBLIC WATER AUTHORITY | 1 of 2 | AR | 1,285 | 44 | 40.1 |
| 69 | DOTA PUBLIC WATER AUTHORITY | 2 of 2 | AR | 1,285 | 44 | 40.1 |
| 70 | DOVER WATERWORKS | | AR | 1,587 | 359 | 13.6 |
| 71 | EVENING SHADE WATERWORKS | | AR | 728 | 154 | 48.5 |
| 72 | FORT SMITH WATER UTILITIES | 1 of 2 | AR | 79,103 | 534 | 33.1 |
| 73 | FORT SMITH WATER UTILITIES | 2 of 2 | AR | 79,103 | 169 | 32.2 |
| 74 | GILLHAM REGIONAL WATER DIST | | AR | 3,953 | 437 | 54.4 |
| 75 | GLENWOOD WATER DEPARTMENT | | AR | 7,148 | 361 | 19.7 |
| 76 | GRAND PRAIRIE BAYOU 2 PWA | 1 of 6 | AR | 1,727 | 35 | 50.9 |
| 77 | GRAND PRAIRIE BAYOU 2 PWA | 2 of 6 | AR | 1,727 | 35 | 50.9 |
| 78 | GRAND PRAIRIE BAYOU 2 PWA | 3 of 6 | AR | 1,727 | 35 | 50.9 |
| 79 | GRAND PRAIRIE BAYOU 2 PWA | 4 of 6 | AR | 1,727 | 35 | 50.9 |
| 80 | GRAND PRAIRIE BAYOU 2 PWA | 5 of 6 | AR | 1,727 | 35 | 50.9 |
| 81 | GRAND PRAIRIE BAYOU 2 PWA | 6 of 6 | AR | 1,727 | 35 | 50.9 |
| 82 | GREENWOOD WATERWORKS | | AR | 8,952 | 46 | 10.5 |
| 83 | HEBER SPRINGS WATER SYSTEM | | AR | 22,376 | 1630 | 69.2 |
| 84 | HOPE WATER LIGHT COMM | 1 of 10 | AR | 1,150 | 46 | 32.9 |
| 85 | HOPE WATER LIGHT COMM | 2 of 10 | AR | 1,150 | 46 | 32.9 |
| 86 | HOPE WATER LIGHT COMM | 3 of 10 | AR | 1,150 | 46 | 32.9 |
| 87 | HOPE WATER LIGHT COMM | 4 of 10 | AR | 1,150 | 46 | 32.9 |
| 88 | HOPE WATER LIGHT COMM | 5 of 10 | AR | 1,150 | 46 | 32.9 |
| 89 | HOPE WATER LIGHT COMM | 6 of 10 | AR | 1,150 | 46 | 32.9 |
| 90 | HOPE WATER LIGHT COMM | 7 of 10 | AR | 1,150 | 46 | 32.9 |
| 91 | HOPE WATER LIGHT COMM | 8 of 10 | AR | 1,150 | 46 | 32.9 |

(continued)

Table B.AR.1 (continued)—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|------------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 92 | HOPE WATER LIGHT COMM | 9 of 10 | AR | 1,150 | 46 | 32.9 |
| 93 | HOPE WATER LIGHT COMM | 10 of 10 | AR | 1,150 | 5460 | 30.4 |
| 94 | HOSANNA HEIGHTS WATER | | AR | 50 | 434 | 19.6 |
| 95 | HOT SPR NAT PK HAPPY HOLLOW SP | | AR | 25 | 77 | 64.9 |
| 96 | HOT SPR NAT PK WHITTINGTON SPR | | AR | 25 | 77 | 64.9 |
| 97 | HOT SPRINGS UTILITIES | 1 of 3 | AR | 30,674 | 2132 | 14.4 |
| 98 | HOT SPRINGS UTILITIES | 2 of 3 | AR | 30,674 | 2132 | 14.4 |
| 99 | HOT SPRINGS UTILITIES | 3 of 3 | AR | 30,674 | 1861 | 12.6 |
| 100 | HOT SPRINGS VILLAGE WATERWORKS | 1 of 2 | AR | 6,961 | 172 | 71.8 |
| 101 | HOT SPRINGS VILLAGE WATERWORKS | 2 of 2 | AR | 6,961 | 172 | 71.8 |
| 102 | JACKSONVILLE WATERWORKS | 1 of 10 | AR | 2,837 | 149 | 38.2 |
| 103 | JACKSONVILLE WATERWORKS | 2 of 10 | AR | 2,837 | 149 | 38.2 |
| 104 | JACKSONVILLE WATERWORKS | 3 of 10 | AR | 2,837 | 217 | 32.6 |
| 105 | JACKSONVILLE WATERWORKS | 4 of 10 | AR | 2,837 | 217 | 32.6 |
| 106 | JACKSONVILLE WATERWORKS | 5 of 10 | AR | 2,837 | 217 | 32.6 |
| 107 | JACKSONVILLE WATERWORKS | 6 of 10 | AR | 2,837 | 256 | 31.4 |
| 108 | JACKSONVILLE WATERWORKS | 7 of 10 | AR | 2,837 | 256 | 31.4 |
| 109 | JACKSONVILLE WATERWORKS | 8 of 10 | AR | 2,837 | 256 | 31.4 |
| 110 | JACKSONVILLE WATERWORKS | 9 of 10 | AR | 2,837 | 256 | 31.4 |
| 111 | JACKSONVILLE WATERWORKS | 10 of 10 | AR | 2,837 | 291 | 30.1 |
| 112 | JAMES FORK REGIONAL WATER DISTRICT | | AR | 11,380 | 25 | 11.6 |
| 113 | KIMZEY REGIONAL WATER DISTRICT | 1 of 2 | AR | 5,825 | 731 | 34.7 |
| 114 | KIMZEY REGIONAL WATER DISTRICT | 2 of 2 | AR | 5,825 | 2579 | 21.9 |
| 115 | LAWRENCE CO REG WATER DIST | 1 of 7 | AR | 1,025 | 31 | 69.8 |
| 116 | LAWRENCE CO REG WATER DIST | 2 of 7 | AR | 1,025 | 62 | 53.4 |
| 117 | LAWRENCE CO REG WATER DIST | 3 of 7 | AR | 1,025 | 62 | 53.4 |
| 118 | LAWRENCE CO REG WATER DIST | 4 of 7 | AR | 1,025 | 399 | 33 |
| 119 | LAWRENCE CO REG WATER DIST | 5 of 7 | AR | 1,025 | 399 | 33 |
| 120 | LAWRENCE CO REG WATER DIST | 6 of 7 | AR | 1,025 | 1389 | 9.2 |
| 121 | LAWRENCE CO REG WATER DIST | 7 of 7 | AR | 1,025 | 5375 | 5.1 |
| 122 | LITTLE RIVER CO RDA | | AR | 4,250 | 5320 | 29.5 |
| 123 | MADISON CO REGIONAL WATER | | AR | 18,834 | 1291 | 50.8 |
| 124 | MAGNOLIA WATERWORKS | 1 of 5 | AR | 2,400 | 57 | 92.5 |
| 125 | MAGNOLIA WATERWORKS | 2 of 5 | AR | 2,400 | 57 | 92.5 |
| 126 | MAGNOLIA WATERWORKS | 3 of 5 | AR | 2,400 | 57 | 92.5 |
| 127 | MAGNOLIA WATERWORKS | 4 of 5 | AR | 2,400 | 38 | 79.7 |
| 128 | MAGNOLIA WATERWORKS | 5 of 5 | AR | 2,400 | 62 | 73.2 |
| 129 | MALVERN WATERWORKS | | AR | 21,080 | 2579 | 21.9 |
| 130 | MARION COUNTY REG WATER DIST | | AR | 9,207 | 6313 | 24 |
| 131 | MC RAE WATERWORKS | | AR | 885 | 152 | 43.5 |
| 132 | MENA WATER DEPARTMENT | | AR | 7,777 | 66 | 1.1 |
| 133 | MOUNTAIN HOME WATERWORKS | | AR | 16,144 | 1434 | 4.6 |
| 134 | MOUNTAIN VIEW WATERWORKS | | AR | 15,876 | 11 329 | 28.8 |
| 135 | MT PLEASANT WATERWORKS | 1 of 2 | AR | 677 | 77 | 43.2 |
| 136 | MT PLEASANT WATERWORKS | 2 of 2 | AR | 677 | 77 | 43.2 |

(continued)

Table B.AR.1 (continued)—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|-------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 137 | MT VALLEY SPRING CO | 1 of 5 | AR | 5 | 84 | 66.1 |
| 138 | MT VALLEY SPRING CO | 2 of 5 | AR | 5 | 1861 | 12.6 |
| 139 | MT VALLEY SPRING CO | 3 of 5 | AR | 5 | 1861 | 12.6 |
| 140 | MT VALLEY SPRING CO | 4 of 5 | AR | 5 | 1861 | 12.6 |
| 141 | MT VALLEY SPRING CO | 5 of 5 | AR | 5 | 1861 | 12.6 |
| 142 | MULBERRY WATERWORKS | | AR | 1,603 | 29 | 43.7 |
| 143 | MURFREESBORO WATERWORKS | | AR | 3,694 | 424 | 53.2 |
| 144 | N GARLAND CO REG WATER DIST | | AR | 6,655 | 1778 | 10.7 |
| 145 | NASHVILLE WATERWORKS | 1 of 2 | AR | 6,214 | 672 | 62.5 |
| 146 | NASHVILLE WATERWORKS | 2 of 2 | AR | 6,214 | 60 | 22.5 |
| 147 | NEAPWA | | AR | 8,898 | 2875 | 26.8 |
| 148 | OLA WATERWORKS | | AR | 998 | 38 | 71.4 |
| 149 | OMAHA WATERWORKS | 1 of 2 | AR | 582 | 35 | 58.8 |
| 150 | OMAHA WATERWORKS | 2 of 2 | AR | 582 | 300 | 36.9 |
| 151 | OZARK MTN REGIONAL PWA | | AR | 2 | 5566 | 23.9 |
| 152 | OZARK WATERWORKS | | AR | 4,325 | 33 | 49.7 |
| 153 | PANGBURN WATERWORKS | | AR | 2,786 | 1928 | 67.5 |
| 154 | PARIS WATERWORKS | | AR | 8,824 | 61 | 3.1 |
| 155 | PERRYVILLE WATERWORKS | 1 of 2 | AR | 2,320 | 1512 | 25.6 |
| 156 | PERRYVILLE WATERWORKS | 2 of 2 | AR | 2,320 | 1512 | 25.6 |
| 157 | POCAHONTAS WATERWORKS | | AR | 7,547 | 5375 | 5.1 |
| 158 | PRAIRIE GROVE WATERWORKS | | AR | 5,419 | 33 | 41.2 |
| 159 | PRESCOTT WATERWORKS | | AR | 3,300 | 2005 | 66 |
| 160 | SARDIS WATER ASSOCIATION | 1 of 6 | AR | 2,292 | 152 | 47 |
| 161 | SARDIS WATER ASSOCIATION | 2 of 6 | AR | 2,292 | 152 | 47 |
| 162 | SARDIS WATER ASSOCIATION | 3 of 6 | AR | 2,292 | 152 | 47 |
| 163 | SARDIS WATER ASSOCIATION | 4 of 6 | AR | 2,292 | 152 | 47 |
| 164 | SARDIS WATER ASSOCIATION | 5 of 6 | AR | 2,292 | 152 | 47 |
| 165 | SARDIS WATER ASSOCIATION | 6 of 6 | AR | 2,292 | 152 | 47 |
| 166 | SEARCY WATERWORKS | | AR | 58,523 | 2428 | 63.3 |
| 167 | SEVIER CO WATER ASSOCIATION | | AR | 4,678 | 240 | 85.7 |
| 168 | SILLOAM SPRINGS WATERWORKS | | AR | 17,300 | 662 | 20.4 |
| 169 | SOUTHSIDE PUB WATER AUTHORITY | | AR | 9,139 | 12 007 | 30.6 |
| 170 | SUBIACO ACADEMY WATERWORKS | | AR | 683 | 323 | 26.6 |
| 171 | SUNRISE POINT RESORT | | AR | 76 | 25 | 36.8 |
| 172 | SW BOONE COUNTY WATER ASSOC | | AR | 4,085 | 23 | 30.7 |
| 173 | TEXARKANA WATER UTILITIES | | AR | 30,015 | 5320 | 29.5 |
| 174 | THE INN AT LOST BRIDGE | | AR | 25 | 1323 | 50.7 |
| 175 | TRI-COUNTY WATER DISTBR DIST | | AR | 16,671 | 302 | 6.7 |
| 176 | USCOE OC - BRADY MTN | | AR | 100 | 1631 | 9.4 |
| 177 | USCOE OC - LITTLE FIR | | AR | 100 | 973 | 13.1 |
| 178 | USFS BLANCHARD | | AR | 25 | 83 | 76.2 |
| 179 | USFS GUNNER POOL | | AR | 25 | 83 | 76.2 |
| 180 | USFS WHITE ROCK | | AR | 35 | 491 | 6.3 |
| 181 | WAGON WHEEL RESTAURANT | | AR | 150 | 5764 | 24.5 |

(continued)

Table B.AR.1 (continued)—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|---------------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 182 | WALDRON WATERWORKS | 1 of 2 | AR | 1,478 | 18 | 26.8 |
| 183 | WALDRON WATERWORKS | 2 of 2 | AR | 1,478 | 34 | 5.2 |
| 184 | WALKER WATER ASSOCIATION | | AR | 1,182 | 23 | 94.8 |
| 185 | WARD WATERWORKS | 1 of 3 | AR | 3,879 | 58 | 39.8 |
| 186 | WARD WATERWORKS | 2 of 3 | AR | 3,879 | 58 | 39.8 |
| 187 | WARD WATERWORKS | 3 of 3 | AR | 3,879 | 241 | 39 |
| 188 | WHITE RIVER CAMPGROUND | | AR | 250 | 6440 | 24.2 |
| 189 | WILDERNESS VALLEY SPRING | | AR | 25 | 58 | 11.2 |
| 190 | ALMATIS | | LA | 400 | 709,254 | 2.1 |
| 191 | BELLE CHASSE WATER DISTRICT | | LA | 17,391 | 709,344 | 2.1 |
| 192 | CITY OF BOSSIER CITY WATER SYSTEM | 1 of 3 | LA | 22,698 | 29 627 | 7.9 |
| 193 | CITY OF BOSSIER CITY WATER SYSTEM | 2 of 3 | LA | 22,698 | 29 627 | 7.9 |
| 194 | CITY OF BOSSIER CITY WATER SYSTEM | 3 of 3 | LA | 22,698 | 29 627 | 7.9 |
| 195 | DALCOUR WATERWORKS DISTRICT | | LA | 925 | 709,344 | 2.1 |
| 196 | DOMINO SUGAR | | LA | 360 | 709,344 | 2.1 |
| 197 | DOW USA, LA DIVISION | | LA | 3,960 | 709,151 | 2.1 |
| 198 | E JEFFERSON WW DISTRICT 1 | | LA | 243,782 | 709,344 | 2.1 |
| 199 | GRAMERCY WATERWORKS | | LA | 3,613 | 709,254 | 2.1 |
| 200 | GRETNA WATERWORKS | | LA | 17,802 | 709,344 | 2.1 |
| 201 | LUTCHER WATERWORKS | | LA | 4,781 | 709,254 | 2.1 |
| 202 | MARATHON PETROLEUM COMPANY LLC | | LA | 817 | 709,254 | 2.1 |
| 203 | MONROE WATER SYSTEM | 1 of 2 | LA | 26,286 | 21 619 | 60.2 |
| 204 | MONROE WATER SYSTEM | 2 of 2 | LA | 26,286 | 21 882 | 59.5 |
| 205 | MORGAN CITY WATER SYSTEM | | LA | 6,352 | 86 239 | 19.5 |
| 206 | NEW ORLEANS CARROLLTON WW | 1 of 2 | LA | 145,522 | 709,344 | 2.1 |
| 207 | NEW ORLEANS CARROLLTON WW | 2 of 2 | LA | 145,522 | 709,344 | 2.1 |
| 208 | NEW ORLEANS ALGIERS WATER WORKS | 1 of 2 | LA | 26,393 | 709,344 | 2.1 |
| 209 | NEW ORLEANS ALGIERS WATER WORKS | 2 of 2 | LA | 26,393 | 709,344 | 2.1 |
| 210 | NORANDA ALUMINA, LLC | | LA | 500 | 709,254 | 2.1 |
| 211 | POINTE A LA HACHE WATER SYSTEM | | LA | 653 | 709,344 | 2.1 |
| 212 | PORT SULPHUR WATER DISTRICT | 1 of 2 | LA | 4,611 | 709,344 | 2.1 |
| 213 | PORT SULPHUR WATER DISTRICT | 2 of 2 | LA | 4,611 | 709,398 | 2.1 |
| 214 | SHELL CHEMICAL COMPANY | | LA | 1,002 | 709,254 | 2.1 |
| 215 | SHREVEPORT WATER SYSTEM | | LA | 201,000 | 3785 | 2.5 |
| 216 | ST BERNARD PARISH WATERWORKS | | LA | 44,000 | 709,344 | 2.1 |
| 217 | ST CHARLES WATER DISTRICT 1 EAST BANK | | LA | 29,517 | 709,344 | 2.1 |
| 218 | ST CHARLES WATER DISTRICT 2 WEST BANK | | LA | 31,485 | 709,344 | 2.1 |
| 219 | ST JAMES WATER DISTRICT 1 | | LA | 6,120 | 709,254 | 2.1 |
| 220 | ST JAMES WATER DISTRICT 2 | | LA | 9,392 | 709,254 | 2.1 |
| 221 | ST JOHN WATER DISTRICT 1 | | LA | 12,577 | 709,254 | 2.1 |
| 222 | ST JOHN WATER DISTRICT 2 | | LA | 3,702 | 709,254 | 2.1 |
| 223 | ST MARY PARISH WW DISTRICT 5 | | LA | 3,750 | 83 004 | 20.3 |
| 224 | VIVIAN WATER SYSTEM | | LA | 1,500 | 269 | 15.9 |
| 225 | W JEFFERSON WW DISTRICT 2 | 1 of 2 | LA | 94,385 | 709,344 | 2.1 |

(continued)

Table B.AR.1 (continued)—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|---------------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 226 | W JEFFERSON WW DISTRICT 2 | 2 of 2 | LA | 94,385 | 709,344 | 2.1 |
| 227 | WATER & SEWER COMMISSION 4 OF ST MARY | | LA | 4,674 | 83 055 | 20.3 |
| 228 | BRANSON | 1 of 5 | MO | 1,320 | 4349 | 28.1 |
| 229 | BRANSON | 2 of 5 | MO | 1,320 | 4349 | 28.1 |
| 230 | BRANSON | 3 of 5 | MO | 1,320 | 4349 | 28.1 |
| 231 | BRANSON | 4 of 5 | MO | 1,320 | 4349 | 28.1 |
| 232 | BRANSON | 5 of 5 | MO | 1,320 | 4635 | 26.4 |
| 233 | COLLEGE OF THE OZARKS | 1 of 3 | MO | 567 | 4349 | 28.1 |
| 234 | COLLEGE OF THE OZARKS | 2 of 3 | MO | 567 | 4349 | 28.1 |
| 235 | COLLEGE OF THE OZARKS | 3 of 3 | MO | 567 | 4349 | 28.1 |
| 236 | ADAIR CO RWD #5 | | OK | 675 | 323 | 18.8 |
| 237 | AFTON PWA | | OK | 1,428 | 9827 | 1.5 |
| 238 | BROKEN BOW PWA | | OK | 4,320 | 1156 | 16.6 |
| 239 | BURNT CABIN RWD | | OK | 208 | 1601 | 13.4 |
| 240 | CHEROKEE CO. RWD #1 (FT GIBSON) | | OK | 710 | 11 824 | 1.8 |
| 241 | CHEROKEE CO. RWD #13 | | OK | 1,640 | 1542 | 13.9 |
| 242 | CHEROKEE CO. RWD #2 (KEYS) | | OK | 1,493 | 1542 | 13.9 |
| 243 | CHEROKEE CO. RWD #9 | | OK | 200 | 11 653 | 1.8 |
| 244 | DELAWARE CO RWD # 3 | | OK | 653 | 9827 | 1.5 |
| 245 | EAST CENTRAL OKLAHOMA WATER AUTHORITY | | OK | 1,200 | 1601 | 13.4 |
| 246 | FIN & FEATHER RESORT | | OK | 150 | 1601 | 13.4 |
| 247 | FLINT RIDGE RURAL WATER DISTRICT | 1 of 2 | OK | 750 | 874 | 17.6 |
| 248 | FLINT RIDGE RURAL WATER DISTRICT | 2 of 2 | OK | 750 | 874 | 17.6 |
| 249 | FORT GIBSON | | OK | 4,700 | 11 844 | 1.8 |
| 250 | GORE PWA | | OK | 1,688 | 1601 | 13.4 |
| 251 | GRDA #1 | | OK | 193 | 11 021 | 1.9 |
| 252 | GROVE MUNICIPAL SERVICES AUTH. | | OK | 11,000 | 9827 | 1.5 |
| 253 | HEAVENER UTILITY AUTH - PSG | 1 of 2 | OK | 1,650 | 390 | 15.7 |
| 254 | HEAVENER UTILITY AUTH - PSG | 2 of 2 | OK | 1,650 | 720 | 10.5 |
| 255 | JAY | | OK | 2,482 | 298 | 22.6 |
| 256 | KETCHUM PWA | | OK | 2,462 | 9904 | 1.5 |
| 257 | KETCHUM PWA DELAWARE CO SYSTEM | | OK | 1,780 | 9827 | 1.5 |
| 258 | LANGLEY | | OK | 950 | 9904 | 1.5 |
| 259 | LOCUST GROVE | | OK | 1,600 | 10 990 | 1.9 |
| 260 | LRED (CHICKEN CREEK) | | OK | 272 | 1601 | 13.4 |
| 261 | LRED (LAKEWOOD) | | OK | 200 | 1542 | 13.9 |
| 262 | LRED (WILDCAT) | | OK | 200 | 1542 | 13.9 |
| 263 | LRED (WOODHAVEN) | | OK | 200 | 1601 | 13.4 |
| 264 | MAYES CO RWD # 3 | | OK | 2,400 | 9904 | 1.5 |
| 265 | MAYES CO RWD # 6 | | OK | 3,750 | 10 485 | 1.4 |
| 266 | MCCURTAIN CO. RWD #8 (MT. FORK WATER) | | OK | 5,685 | 1208 | 15.9 |
| 267 | MONGOLDS WATER SYSTEM | | OK | 75 | 1601 | 13.4 |
| 268 | MUSKOGEE | | OK | 38,310 | 11 824 | 1.8 |
| 269 | OKLA ORDNANCE WORKS AUTHORITY | | OK | 4,000 | 11 021 | 1.9 |
| 270 | PETTIT BAY RESORT | | OK | 30 | 1542 | 13.9 |

(continued)

Table B.AR.1 (continued)—Public water system intakes receiving water from State and private forest land in Arkansas

| Intake ID | Public water system name | Intake number for system | State | Population served by intake | Total volume of surface water available to intake | Total surface water from State and private forest lands |
|-----------|--------------------------------|--------------------------|-------|-----------------------------|---|---|
| | | | | | (million m ³ yr ⁻¹) | (percent) |
| 271 | PETTIT MOUNTAIN WATER | | OK | 90 | 1542 | 13.9 |
| 272 | PVIA | | OK | 10 | 1234 | 6.1 |
| 273 | SEQUOYAH CO. WATER ASSOCIATION | | OK | 13,460 | 1601 | 13.4 |
| 274 | SEQUOYAH STATE PARK LODGE | | OK | 1,030 | 11 824 | 1.8 |
| 275 | SPAVINAW | | OK | 700 | 341 | 19.8 |
| 276 | SPINNAKER POINT ESTATES | | OK | 120 | 9904 | 1.5 |
| 277 | STILWELL | | OK | 1,092 | 160 | 38 |
| 278 | TAHLEQUAH PWA | 1 of 2 | OK | 7,229 | 987 | 15.6 |
| 279 | TAHLEQUAH PWA | 2 of 2 | OK | 7,229 | 1542 | 13.9 |
| 280 | TENKILLER AQUA PARK | | OK | 150 | 1601 | 13.4 |
| 281 | TENKILLER UTILITY CO | | OK | 860 | 1601 | 13.4 |
| 282 | TULSA | | OK | 235,500 | 341 | 19.8 |
| 283 | VINITA UTILITIES AUTHORITY | | OK | 6,472 | 9904 | 1.5 |
| 284 | WAGONER | | OK | 7,982 | 11 580 | 1.8 |
| 285 | WAGONER CO. RWD #1 | | OK | 397 | 11 824 | 1.8 |
| 286 | WAGONER CO. RWD #2 | | OK | 2,000 | 11 653 | 1.8 |
| 287 | WAGONER CO. RWD #7 (NEW) | | OK | 1,110 | 11 824 | 1.8 |
| 288 | WAGONER CO. RWD #9 | | OK | 4,363 | 11 580 | 1.8 |