Prepared in cooperation with the Virginia Department of Transportation

Peak-Flow Characteristics of Virginia Streams

Scientific Investigations Report 2011–5144

Cover art. See figure 1 (map showing peak-flow study sites in Virginia).

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By Samuel H. Austin, Jennifer L. Krstolic, and Ute Wiegand

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U.S. Department of the Interior
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Conversion Factors

Inch/Pound to SI

Multiply	By	To obtain
Length		
inch (in.)	2.54	centimeter (cm)
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
Area		
acre	0.4047	hectare (ha)
square mile (mi²)	259.0	hectare (ha)
Volume		
gallon (gal)	0.003785	cubic meter (m³)
cubic foot (ft³)	0.02832	cubic meter (m³)
acre-foot (acre-ft)	1,233	cubic meter (m³)
Flow rate		
cubic foot per second (ft³/s)	0.02832	cubic meter per second (m³/s)
Hydraulic gradient		
foot per mile (ft/mi)	0.1894	meter per kilometer (m/km)

Vertical coordinate information is referenced to the North American Vertical Datum of 1929 (NAVD 29).

Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83).

Elevation, as used in this report, refers to distance above the vertical datum.

Peak-Flow Characteristics of Virginia Streams

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Abstract

Peak-flow annual exceedance probabilities, also called probability-percent chance flow estimates, and regional regression equations are provided describing the peak-flow characteristics of Virginia streams. Statistical methods are used to evaluate peak-flow data. Analysis of Virginia peak-flow data collected from 1895 through 2007 is summarized. Methods are provided for estimating unregulated peak flow of gaged and ungaged streams. Station peak-flow characteristics identified by fitting the logarithms of annual peak flows to a Log-Pearson Type III frequency distribution yield annual exceedance probabilities of 0.5, 0.4292, 0.2, 0.1, 0.04, 0.02, 0.01, 0.005, and 0.002 for 476 streamgaging stations. Stream basin characteristics computed using spatial data and a geographic information system are used as explanatory variables in regional regression model equations for six physiographic regions to estimate regional annual exceedance probabilities at gaged and ungaged sites. Weighted peak-flow values that combine annual exceedance probabilities computed from gaging station data and from regional regression equations provide improved peak-flow estimates. Text, figures, and lists are provided summarizing selected peak-flow sites, delineated physiographic regions, peak-flow estimates, basin characteristics, regional regression model equations, error estimates, definitions, datasources, and candidate regression model equations. This study supersedes previous studies of peak flows in Virginia.

Introduction

Understanding peak water flows in Virginia streams is essential to human safety and sound management of our water resources and associated riparian and watershed ecosystems. Meaningful characterizations of the magnitude and frequency of peak flows provide valuable insights into the dynamics and variability of water movement through these unique stream systems. Improved estimates of peak flows are helpful for management decisions including (1) locating highways, industries, railroads, farms, and residences, (2) designing and building bridges, dams, reservoirs, levees, floodwalls, and culverts, and (3) effectively managing the riparian systems and ecology associated with forested, agricultural, and urban

landscapes. Peak-flow estimates provide a basis for analysis of future streamflow response to changes in ecosystem and climate.

Purpose and Scope

This report summarizes a statistical analysis of peak-flow data collected in Virginia from 1895 through 2007. Methods are provided for estimating the peak flow of gaged and ungaged streams in Virginia. Basin characteristics and station peak-flow characteristics are presented for 476 streamgaging stations located throughout the State. Regression methods are used with gaging-station records to develop regional equations to estimate peak flows at ungaged sites. Regional regression equations are presented for six peak-flow regions based on physiography to estimate peak flows at ungaged sites in each region. Methods are provided to incorporate peak-flow data at gaging stations with regional estimates and to improve peak-flow estimates at sites where nearby gaging-station records are available. This study supersedes previous studies of peak flows in Virginia.

Background

Since 1949, the U.S. Geological Survey (USGS), in cooperation with the Virginia Department of Transportation (VDOT), has maintained a network of partial-record peak-flow gaging stations. Records from continuous-record and partial-record gaging stations provide annual peak-flow data throughout Virginia (Prugh and others, 1991; Bisese, 1995). In this cooperative study with VDOT, peak-flow data from 476 streamgaging stations were used to provide detailed analysis of the magnitude and frequency of peak flows at gaged sites. Equations were developed for estimating peak flows at ungaged locations. These data and methods support evaluation by VDOT of peak flows throughout Virginia.

Physical Setting

Virginia is located on the Atlantic Coast, bordered to the north by Maryland and West Virginia, to the south by North Carolina and Tennessee, and to the west by Kentucky and West Virginia, (fig. 1). The total area of Virginia is

Base from U.S. Geological Survey Digital Line Graph, 1:2,000,000, 1987
Adapted physiography from Fenneman and Johnson (1946), 1:7,000,000, and Virginia Geologic Map, Dicken and others (2005), 1:500,000

Figure 1. Selected peak-flow study sites and physiographic provinces for application of peak-flow regional estimating equations.

approximately 41,000 square miles (mi²). This includes almost 1,000 mi² of lakes, tidal rivers, and bays. There are more than 3,000 miles (mi) of nontidal rivers and more than 5,000 mi of shoreline along the Atlantic Coast and Chesapeake Bay (Fenneman, 1938; Fenneman and Johnson, 1946).

Virginia lies within five physiographic provinces—the Coastal Plain, Piedmont, Blue Ridge, Valley and Ridge, and Appalachian Plateaus Physiographic Provinces. Each province, hereafter termed physiographic region or peak-flow region, has distinctive geologic features and landforms. Geology ranges from unconsolidated sands and clays in the Coastal Plain physiographic region, to igneous and metamorphic rocks in the Piedmont and Blue Ridge physiographic regions, to sedimentary rocks, carbonate rocks, sandstone, and shale in the Valley and Ridge and Appalachian Plateaus physiographic regions (Hayes, 1991). Topography ranges from virtually flat in the Coastal Plain to highly dissected rugged terrain along the Blue Ridge and Appalachian crests. The central Piedmont is characterized by rolling hills and valleys, and is separated from the Valley and Ridge physiographic region by the Blue Ridge Mountains. Land-surface elevations range from 0 feet (ft) to over 5,000 ft above sea level (Fenneman, 1938).

Coastal Plain

The Coastal Plain physiographic region (Coastal Plain) generally consists of unconsolidated, gently sloping layers of sand and gravel separated by layers of clay and marl. The eastern boundary of the Coastal Plain is the Atlantic Ocean. The western boundary is the Fall Line, where the resistant rock of the Piedmont forms a contact with the unconsolidated sediments of the Coastal Plain (Fenneman, 1938). Sediments are thin at the Fall Line and thicken to as much as 6,000 ft at the eastern edge of the Coastal Plain and are more than 13,000 ft thick under the Continental Shelf. These sediments rest on an eroded surface of Precambrian to early Mesozoic rock. Two-thirds of this material is composed of late Jurassic and Cretaceous clay, sand, and gravel, which was stripped from the Appalachian mountains, carried eastward by rivers, and deposited in deltas in the newly formed Atlantic Ocean basin. A sequence of thin, fossiliferous marine sands of Tertiary age overlies the older strata. These sands were deposited in warm, shallow seas during repeated marine transgressions across the Coastal Plain (Hayes, 1991). This pattern of deposition was interrupted about 35 million years ago by a large meteorite that plummeted into a shallow sea and created a crater more than 55 mi in diameter, termed the Chesapeake Bay impact structure, which was subsequently buried under about 4,000 ft of younger sediment (Edwards and others, 2005). Rivers and streams are affected by tides over a substantial area (Fenneman, 1938; Fenneman and Johnson, 1946).

Piedmont

The Piedmont physiographic region (Piedmont) in Virginia consists of gently rolling terrain, which extends from

the base of the Blue Ridge Mountains east to the Fall Line. It is the largest physiographic region in Virginia, is widest along the Virginia–North Carolina border (approximately 125 mi wide), then narrows to about 25 mi wide in northern Virginia. The Piedmont is formed mainly of metamorphic and igneous rocks that consist of granite, gneiss, schist, slate, phyllite, and quartzite. Triassic and Jurassic sedimentary rocks form several early Mesozoic Basins in the Piedmont that consist mainly of shales and sandstones intruded by diabase. Geologic formations of the Piedmont trend northeast-southwest and generally are covered by a deep (6 to 65 ft) layer of saprolite. Outcrops commonly are restricted to stream valleys where saprolite has been removed by erosion. The topography becomes somewhat more rugged with proximity to the Blue Ridge physiographic region, where local hills, knobs, or ridges of more resistant rock are present (Fenneman, 1938).

The Mesozoic Basins are located within the Piedmont, but they are evaluated as a separate physiographic region in this study because of their unique geomorphology and the associated improvements in explanatory power of basin characteristics in regional regression equations developed specifically for Mesozoic Basins. The Mesozoic Basins consist of sediments deposited in fault basins and are usually referred to as Triassic Basin deposits, though they are known to also contain lower Jurassic rocks. These basins formed when Africa separated from North America to create the Atlantic Ocean. The Culpeper basin in the western Piedmont near the Blue Ridge physiographic region is the largest Mesozoic Basin in Virginia, but smaller basins, including the Richmond, Farmville, and Danville, are scattered throughout the Piedmont. Structurally, these are partially depressed blocks of land with a main fault on the western side. Ancient alluvial fan conglomerates fill these basins along the western borders, and deep red sediments often containing fish fossils or dinosaur tracks fill the eastern portions of these basins, indicating that tropical lakes and mudflats were present. Numerous igneous rocks and lava flows are cut into these Triassic sediments and are remnants of the volcanic activity that accompanied the opening of the Atlantic Ocean (Hayes, 1991).

Blue Ridge

The Blue Ridge physiographic region (Blue Ridge) lies between the Valley and Ridge physiographic region and the Piedmont physiographic region. It is a fairly thin ridge of northeast-southwest-trending mountains consisting mainly of metamorphic and igneous rocks, with some sedimentary rock on the western slope. By the early Cambrian, the Iapetus Ocean had opened to the east of the Blue Ridge, and a westward transgression occurred along the ancient North American margin. In the western Blue Ridge, shallow marine siliclastics of the Chilhowee Group were deposited in the early Cambrian and eventually gave way to carbonates of Cambro-Ordovician age. In central and northern Virginia, the Blue Ridge Mountains rise to elevations exceeding 4,000 ft. Local relief on the east side of the Blue Ridge is up to 3,000 ft. In

southern Virginia, the Blue Ridge forms a broad plateau-like upland that rises over 1,500 ft from the Piedmont along a prominent escarpment. Mt. Rogers (5,728 ft), in the southwestern Virginia Blue Ridge, is the highest peak in Virginia. Steep slopes allow only thin soils in some areas, thus reducing the amount of groundwater storage (Hayes, 1991).

Valley and Ridge

The Valley and Ridge physiographic region (Valley and Ridge) was formed by the folding and faulting of sedimentary rocks. Northeast-southwest-trending ridges are formed by resistant quartzite, sandstone, and conglomerates, while narrow valleys are underlain by limestone, shale, and dolostone. The characteristic topography of this region is the result of differential weathering of linear belts of rocks that has been repeated by folding and faulting. Cambrian clastic sediments of the western Blue Ridge are overlain by carbonate rocks. For at least 70 million years, carbonates were deposited in a shallow, tropical ocean along the southeastern edge of North America. Today these carbonates, up to 2 mi thick, are exposed in the Great Valley, known as the Shenandoah Valley in central and northern Virginia, and in the easternmost part of the Valley and Ridge. Well-developed karst topography is characteristic of the Great Valley, and many caverns are located in the subsurface (Hayes, 1991).

Appalachian Plateaus

The Appalachian Plateaus physiographic region (Appalachian Plateaus), locally known as the Cumberland Plateau, consists of westward-dipping, consolidated, sedimentary rocks composed mainly of sandstone, shale, and coal. It is located at the western end of Virginia. Extensive erosion has formed steep slopes and narrow valleys throughout this province. Although some parts of the Appalachian Plateaus exhibit a low relief plateau-like morphology, much of the Appalachian Plateaus is strongly dissected by stream erosion, and the topography is rugged. Regional-scale folds in the Appalachian Plateaus were formed in response to shortening on thrust faults that do not reach the present surface and are rooted to the east in the Valley and Ridge. The upper Paleozoic strata of the Appalachian Plateaus are rich in mineral resources, such as coal, natural gas, and petroleum (Fenneman, 1938; Fenneman and Johnson, 1946).

Previous Studies

Previous statistical analyses of peak-flow data in Virginia have been reported by Tice (1950), Speer and Gamble (1964a, 1964b, 1965), Miller (1969, 1978), and Bisese (1995). This study builds on these earlier analyses, incorporating 12 years of data collected since Bisese's (1995) report. Population has increased, urban areas have expanded, and land use has changed at an accelerating pace since Bisese's study was published.

Approach

Peak-flow characteristics were determined by flood-frequency analysis and regional regression of basin characteristics. Study sites were selected, data were evaluated, basin characteristics were compiled, and flood-frequency and regional analyses were performed.

Flood-frequency analysis consisted of fitting the logarithms of annual peak flows for 476 streamgaging stations to a Log-Pearson Type III frequency distribution yielding annual exceedance probabilities of 0.5, 0.4292, 0.2, 0.1, 0.04, 0.02, 0.01, 0.005, and 0.002. Regional regression of basin characteristics consisted of using spatial data and a geographic information system to compute basin characteristics, and using basin characteristics as explanatory variables in regional regression equations specific to six physiographic regions to estimate regional annual exceedance probabilities. Past USGS publications that describe peak-flow characteristics have often reported these values using a recurrence interval format. Annual exceedance probability (AEP), now recognized as a preferred reporting format, is used in this report.

Study results are presented in six tables and two appendixes. Sites selected for study are identified in table 1 (compact disc (CD) in pocket). Peak-flow characteristics from Log-Pearson Type III analyses, weighted peak-flow estimates, and estimates based on regional regression equations are summarized in table 2 (p. 21). Peak-flow regional regression equations are listed in table 3. Statistics summarizing selected basin characteristics are presented in table 4 (CD in pocket). Table 5 lists selected basin characteristic definitions and datasources. Table 6 (CD in pocket) lists values of selected basin characteristics for each study site. Appendix 1 shows curves and residual plots describing the candidate single-parameter regional regression equations for estimating peak flows of streams in Virginia. Appendix 2 shows curves and residual plots describing the candidate multi-parameter regional regression equations for estimating peak flows of streams in Virginia. (Appendixes are on CD in pocket.)

Site Selection

Streamgaging stations with at least 10 years of continuous record were identified as candidates for study. All of these streamgaging stations were considered, including those in predominately urban and predominately rural basins. Peak-flow data from each candidate streamgaging station were quality checked to identify any numerical errors. Then, a data table was created for each candidate streamgaging station listing all datapoints collected during the period of record. Each list of datapoints was individually evaluated using written accounts of past data-collection procedures and anecdotal information specific to each gaging site, to discover and segregate any intervals in the record in which concomitant effects such as data of poor quality or severely altered or regulated flows negatively affected the candidate data. Data

Table 3. Regional regression equations for estimating peak flows of streams in Virginia.

[DA, basin drainage area in square miles]

	Pseudo R-square ^a	Average standard error of prediction ^a (in percent)	Standard model error ^a (in percent)
Virginia basins in the Coastal Plain region			
Log10(0.2 peak) = 1.918 + 0.644 • Log10(DA)	0.91	48	44
Log10(0.1 peak) = 2.107 + 0.626 • Log10(DA)	0.90	51	47
Log10(0.04 peak) = 2.315 + 0.609 • Log10(DA)	0.88	56	51
Log10(0.02 peak) = 2.457 + 0.594 • Log10(DA)	0.86	60	55
Log10(0.01 peak) = 2.580 + 0.583 • Log10(DA)	0.84	65	58
Log10(0.005 peak) = 2.698 + 0.573 • Log10(DA)	0.82	71	64
Virginia basins in the Piedmont region, except those within the Mesozoic Basin region			
Log10(0.5 peak) = 2.197 + 0.593 • Log10(DA)	0.74	46	43
Log10(0.4292 peak) = 2.287 + 0.576 • Log10(DA)	0.74	45	42
Log10(0.2 peak) = 2.540 + 0.551 • Log10(DA)	0.93	34	32
Log10(0.1 peak) = 2.719 + 0.534 • Log10(DA)	0.93	33	31
Log10(0.04 peak) = 2.916 + 0.514 • Log10(DA)	0.92	34	32
Log10(0.02 peak) = 3.043 + 0.501 • Log10(DA)	0.91	36	34
Log10(0.01 peak) = 3.157 + 0.490 • Log10(DA)	0.90	38	36
Log10(0.005 peak) = 3.263 + 0.480 • Log10(DA)	0.89	41	38
Virginia basins in the Mesozoic Basin region			
Log10(0.5 peak) = 2.002 + 0.722 • Log10(DA)	0.85	44	41
Log10(0.4292 peak) = 2.090 + 0.707 • Log10(DA)	0.85	44	42
Log10(0.2 peak) = 2.416 + 0.660 • Log10(DA)	0.83	44	42
Log10(0.1 peak) = 2.656 + 0.624 • Log10(DA)	0.82	44	41
Log10(0.04 peak) = 2.923 + 0.586 • Log10(DA)	0.81	43	40
Log10(0.02 peak) = 3.097 + 0.561 • Log10(DA)	0.80	42	39
Log10(0.01 peak) = 3.265 + 0.537 • Log10(DA)	0.80	41	37
Log10(0.005 peak) = 3.401 + 0.521 • Log10(DA)	0.80	40	36
Virginia basins in the Blue Ridge region			
Log10(0.5 peak) = 2.127 + 0.709 • Log10(DA)	0.98	18	17
Log10(0.4292 peak) = 2.204 + 0.700 • Log10(DA)	0.98	19	18
Log10(0.2 peak) = 2.490 + 0.668 • Log10(DA)	0.97	22	20
Log10(0.1 peak) = 2.689 + 0.647 • Log10(DA)	0.95	26	24
Log10(0.04 peak) = 2.893 + 0.629 • Log10(DA)	0.92	31	29
Log10(0.02 peak) = 3.030 + 0.616 • Log10(DA)	0.91	34	32
Log10(0.01 peak) = 3.184 + 0.593 • Log10(DA)	0.86	33	30
Log10(0.005 peak) = 3.288 + 0.586 • Log10(DA)	0.83	37	33
Virginia basins in the Valley and Ridge region			
Log10(0.5 peak) = 2.053 + 0.733 • Log10(DA)	0.94	24	22
Log10(0.4292 peak) = 2.121 + 0.725 • Log10(DA)	0.94	24	23
Log10(0.2 peak) = 2.382 + 0.689 • Log10(DA)	0.92	25	24
Log10(0.1 peak) = 2.557 + 0.665 • Log10(DA)	0.90	28	27
Log10(0.04 peak) = 2.741 + 0.642 • Log10(DA)	0.86	33	31
Log10(0.02 peak) = 2.862 + 0.626 • Log10(DA)	0.83	37	35
Log10(0.01 peak) = 2.963 + 0.615 • Log10(DA)	0.80	41	39
Log10(0.005 peak) = 3.063 + 0.603 • Log10(DA)	0.76	46	43
Virginia basins in the Appalachian Plateau region			
Log10(0.5 peak) = 1.980 + 0.833 • Log10(DA)	0.94	0.25	0.23
Log10(0.4292 peak) = 2.048 + 0.824 • Log10(DA)	0.94	0.26	0.23
Log10(0.2 peak) = 2.289 + 0.798 • Log10(DA)	0.91	0.31	0.28
Log10(0.1 peak) = 2.450 + 0.781 • Log10(DA)	0.86	0.37	0.34
Log10(0.04 peak) = 2.631 + 0.759 • Log10(DA)	0.80	0.45	0.41
Log10(0.02 peak) = 2.740 + 0.750 • Log10(DA)	0.76	0.51	0.47

^a Generalized least squares regression.

6 Peak-Flow Characteristics of Virginia Streams

Table 5. Selected basin characteristics, their definitions, and datasources.

[ft, foot; mi², square mile; ft/mi, foot per mile; DD, decimal degrees; in., inch]

Basin characteristic	Units	Definition	Datasource
Mean elevation	ft	The average elevation in the basin.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Drainage area	mi ²	Published values of surface drainage area for each basin in the study.	Hayes and Wiegand, 2006
Basin slope	ft/mi	The average slope of the basin from upland to outlet.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Perimeter	mi	The length of the basin boundary.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Latitude	DD	The east-west coordinate at the centroid of the basin boundary.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Longitude	DD	The north-south coordinate at the centroid of the basin boundary.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Elevation	ft	The distance above sea level associated with the center point of the watershed polygon.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Basin relief	ft	The difference between maximum and minimum elevation within the basin.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Valley length	mi	The length of the main valley within the basin.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Channel slope	ft/mi	The slope of the main channel within the basin.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Elevation at 10 percent	ft	The distance above sea level associated with the main channel at 10 percent of the basin drainage area from the outlet.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Elevation at 85 percent	ft	The distance above sea level associated with the main channel at 85 percent of the basin drainage area from the outlet.	U.S. Geological Survey, 2007, National Elevation Data Set (NED)
Stream length	mi	Length along the main channel from the outlet to the basin divide.	U.S. Geological Survey, 2006, National Hydrography Dataset
Forest	percent	Fraction of basin land area classified as forest.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Urban	percent	Fraction of basin land area classified as urban area.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Agriculture	percent	Fraction of basin land area classified as agricultural land.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Wetland	percent	Fraction of basin land area classified as wetland.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Water	percent	Fraction of basin land area classified as surface water.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Grass	percent	Fraction of basin land area classified as grassland.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Bare	percent	Fraction of basin land area classified as exposed soil.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Basin area in Coastal Plain physiographic region	mi ²	Area within the Coastal Plain physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Piedmont physiographic region	mi ²	Area within the Piedmont physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Blue Ridge physiographic region	mi ²	Area within the Blue Ridge physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Valley and Ridge physiographic region	mi ²	Area within the Valley and Ridge physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Appalachian Plateaus physiographic region	mi ²	Area within the Appalachian Plateau physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Mesozoic Basins physiographic region	mi ²	Area within the Mesozoic Basin physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in water	mi ²	Area covered in surface water.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Coastal Plain physiographic region	percent	Percent of the basin within the Coastal Plain physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Piedmont physiographic region	percent	Percent of the basin within the Piedmont physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Blue Ridge physiographic region	percent	Percent of the basin within the Blue Ridge physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005

Table 5. Selected basin characteristics, their definitions, and datasources.—Continued

[ft, foot; mi², square mile; ft/mi, foot per mile; DD, decimal degrees; in., inch]

Basin characteristic	Units	Definition	Datasource
Basin area in Valley and Ridge physiographic region	percent	Percent of the basin within the Valley and Ridge physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Appalachian Plateau physiographic region	percent	Percent of the basin within the Appalachian Plateau physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Mesozoic Basin physiographic region	percent	Percent of the basin within the Mesozoic Basin physiographic region.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in water	percent	Percent of basin area covered in surface water.	Fenneman and Johnson, 1946; Mixon and others, 1989; Dicken and others, 2005
Mean annual precipitation	in.	Mean annual precipitation falling on the basin, averaged over the whole basin.	PRISM Climate Group, 2007; Paybins, 2008
Mean January–February–March precipitation	in.	Mean January–February–March precipitation falling on the basin, averaged over the whole basin.	PRISM Climate Group, 2007
2-year 24-hour precipitation intensity	in.	Basin average rainfall at the 24-hour 2-year recurrence interval.	National Oceanic and Atmospheric Administration, 2007; Paybins, 2008
Basin area with 0 percent impervious surface	percent	Percent of the basin coded as 0 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 1–5 percent impervious surface	percent	Percent of the basin coded as 1 to 5 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 6–10 percent impervious surface	percent	Percent of the basin coded as 6 to 10 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 11–25 percent impervious surface	percent	Percent of the basin coded as 11 to 25 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 26–50 percent impervious surface	percent	Percent of the basin coded as 26 to 50 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 51–75 percent impervious surface	percent	Percent of the basin coded as 51 to 75 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 76–100 percent impervious surface	percent	Percent of the basin coded as 76 to 100 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 0 percent impervious surface	mi ²	Area within the basin coded as 0 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 1–5 percent impervious surface	mi ²	Area within the basin coded as 1 to 5 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 6–10 percent impervious surface	mi ²	Area within the basin coded as 6 to 10 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 11–25 percent impervious surface	mi ²	Area within the basin coded as 11 to 25 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 26–50 percent impervious surface	mi ²	Area within the basin coded as 26 to 50 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 51–75 percent impervious surface	mi ²	Area within the basin coded as 51 to 75 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 76–100 percent impervious surface	mi ²	Area within the basin coded as 76 to 100 percent impervious.	Yang and others, 2002; Homer and others, 2004

within these affected intervals were segregated from the larger dataset and not used in further analysis.

Similarly, using professional judgment, basin drainage area and usable watershed storage volume upstream from the gaging location were calculated for each candidate dataset in which regulation was suspected. If the calculated volume of usable water storage upstream from the gaging site met or exceeded 100 acre-feet per square mile, an amount considered to significantly regulate streamflow, then the gaging station was eliminated as a candidate site (Benson, 1962, 1964). Streamgaging stations used in this study are listed in table 1 (CD in pocket).

Data Evaluation

Datapoints from each remaining dataset were plotted in station-specific scatter plots, and each scatter plot was visually checked for evidence of trends. Summary statistics were generated for each dataset along with additional statistics useful for identifying trends in data and monotonic, non-monotonic, linear, and non-linear correlation, including (1) calculating Kendall's Tau, (2) creating an index of Kendall's trend probability, and (3) calculating Spearman's rho to help determine the strength of any linear or non-linear monotonic trend (Helsel and Hirsch, 2002). Other statistical analyses include (4) calculating and plotting a linear regression of each dataset with time, (5) plotting residuals to help identify any significant correlation with time and, if evident, any negative or positive autocorrelation, and (6) performing a runs test of each dataset to help determine any significantly non-linear change over time using GraphPad Prism.¹

The results of these statistical tests were summarized for each candidate dataset and used to help determine the degree of significant auto-correlation within the data of each candidate site. If no significant trend was evident at the 0.05 confidence level, the candidate site became part of the study pool. If a significant trend was evident in the dataset of a candidate site, the trend in the data was further evaluated to determine if (1) the trend could be directly attributed to a causal factor or (2) the trend produced values that exceed those normally expected from a random sample. If the trend could not be directly attributed to a causal factor or trend values ranged within the bounds of expected statistical variation, then the trend was considered non-problematic and no efforts were made to compensate for it by adjusting the station dataset. If the trend could be attributed to a causal factor or trend values were determined to range outside the bounds of expected statistical variation, then several methods to evaluate the dataset and remove the trend were considered. These methods included (1) testing the dataset against an annual precipitation time series to identify any correlation with annual precipitation, (2) sampling from the dataset, then re-evaluating the auto-correlation of the sample, (3) grouping the data into

alternate time periods and computing a summary statistic for the period, such as a time-weighted mean or median, and (4) removing the dataset from the pool of sites to be analyzed. If trends persisted in the revised dataset, then the candidate dataset was removed from consideration as a possible study site.

Of the 589 candidate datasets considered for study, 113 were removed from consideration because they either had too few datapoints available for analysis, or they characterized streams with excessively regulated flow. Of the remaining 476 sites, statistical trends were identified in 68 datasets. None of these trends were determined to be problematic, and none were detrended by sampling from the dataset and re-evaluating the auto-correlation of the sample. Thirty of these datasets were partially censored due to indications of excessively regulated flow, and 5 datasets were partially censored because too many peak flows were measured below the gage base. These partially censored datasets were then used in the analysis.

Flood-Frequency Analysis

Log-Pearson Type III adjusted flood-frequency analyses of data from each of the 476 selected gaging stations were used to determine peak flows at each site. The Log-Pearson Type III analyses were performed using program PeakFQ (Flynn and others, 2006) following methods outlined in the revised Bulletin 17B of the Hydrology Subcommittee of the Interagency Advisory Committee on Water Data (Interagency Advisory Committee on Water Data, 1982). These analyses involve fitting a Pearson Type III frequency distribution to the logarithms of annual peak flows and are used by all Federal agencies for determining flood frequency. Major steps performed as part of this process are summarized below.

- 1. Systematic-Record Analysis.** An analysis of the systematic record of data collected at each selected gage was performed to compute the mean, standard deviation, and coefficient of skewness (mean $\bar{X}$, S , and G , respectively) of the common logarithms of the annual peak flows.
- 2. Outlier Tests.** Peaks that departed substantially from the trend of the remaining peaks were classified as outliers. Adjustments of the initial frequency curve involved detecting and accounting for high and low outliers. An iterative sequence of tests and adjustments was made to each initial frequency curve to compensate for outlier values. The order of this sequence of adjustments was dependent on the station skew coefficient, G , as computed in the systematic-record analysis.
- 3. Historical-Record Adjustment.** Recalculation of the statistics of the above-base peaks was performed after detection of outliers or historical information such as historical peaks, as specified in Appendix 6 of Bulletin 17B (Interagency Advisory Committee on Water Data, 1982). This historical adjustment filled in the ungaged portion of the historic period in each record with an appropriate

¹ GraphPad Prism version 5.0b, 2009, GraphPad Software, San Diego, California.

number of replications of the below-historical threshold streamflow portion of the systematic record.

4. **Conditional-Probability Adjustment.** After the peak-streamflow frequency curve parameters were determined, the historically weighted frequency curve was tabulated. If no low outliers, zero flows, or below-gage base peaks were present, Pearson Type III standardized ordinates for the desired skew coefficient and probability were determined and the logarithmic frequency curve ordinates were computed. When peaks below the flood base were present, a conditional frequency curve was determined describing only those peaks above the base. Then, a conditional-probability adjustment was made to account for the fraction of the population below the flood base.
5. **Computation of Weighted Skew Coefficient.** The station skew coefficient reflects the average of the cubed deviations from the sample mean and is highly sensitive to the observations in both the upper and lower tails of the sample. The station skew coefficient was combined with the generalized skew, which is a skew coefficient representative of neighboring stations, in a weighted average coefficient that is more accurate than either of its constituents.
6. **Expected-Probability Adjustment.** The expected probability frequency curve and a set of upper and lower confidence limits were computed. These computations aid the interpretation of the principal, historically weighted frequency curve calculated in the conditional-probability adjustment.

Fitting the Log-Pearson Type III frequency distribution to the logarithms of the annual peak flows required calculating the mean, standard deviation, and skew coefficient of the logarithms of the annual peak-flow series. The mean, standard deviation, and skew coefficient describe the mid-point, slope, and curvature of the peak-flow frequency curve.

Annual exceedance probabilities, the reciprocals of which are recurrence intervals, may be expressed as fractions (or percentages), indicating the likelihood that a particular peak flow may occur. An annual exceedance probability of 1 indicates a 1/1 or 100-percent chance of a particular flow, while an annual exceedance probability of 0.10 indicates a 1/10 or 10-percent chance of a particular peak flow. Using this terminology, a particular flood-frequency annual exceedance probability may be termed a P-percent chance flow where P is the probability. Estimates of the annual peak-flow probabilities were computed with program PeakFQ by inserting the three statistics of the frequency distribution into the following equation:

$$X = \bar{X} + KS, \quad (1)$$

where

- X = the logarithm of the magnitude of the P-percent chance discharge, in cubic feet per second;
- $\bar{X}$ = the mean of the logarithms of the annual peak streamflows;
- K = the integration factor based on the skew of the logarithms and the given P-percent chance and is tabulated in Bulletin 17B (Interagency Advisory Committee on Water Data, 1982); and
- S = the standard deviation of the logarithms and is a measure of the variation of the peaks about the mean.

Completion of this analytical process resulted in peak-flow frequency estimates (table 2). These estimates were based on weighting of the streamgaging station skew and the generalized skew as identified in Plate I of Bulletin 17B (Interagency Advisory Committee on Water Data, 1982).

Basin Characteristics

Measurements and statistics describing characteristics associated with delineated drainage basins in Virginia were developed and compiled for use as possible explanatory variables in peak-flow regional regression analyses. These basin characteristics describing 312 unique attributes for each of 3,469 delineated drainage basins form a matrix of 1,082,328 values. The basin characteristics were compiled using ArcGIS^{TM2} and data from the following sources: (1) a Virginia delineated drainage basin dataset (Hayes and Wiegand, 2006); (2) a USGS national hydrography dataset (U.S. Geological Survey, 2006); (3) a Natural Resources Conservation Service (NRCS) soil statistics dataset (U.S. Department of Agriculture, 2007); (4) a PRISM climate dataset (PRISM Climate Group, 2007); (5) a National Oceanic and Atmospheric Administration (NOAA) rainfall intensity and climate dataset (National Oceanic and Atmospheric Administration, 2007; Paybins, 2008); (6) a USGS 2005 geology dataset (Dicken and others, 2005); (7) a USGS 2007 national elevation dataset (U.S. Geological Survey, 2007); and (8) a physiography dataset for the United States (Fenneman, 1938). Table 4 (CD in pocket) lists statistics summarizing the basin characteristics that were tested in regional regressions. Descriptions of these basin characteristics, their definitions, and datasources are listed in table 5. Basin characteristics chosen for possible use in candidate regional regression models are listed in table 6 (CD in pocket). Drainage-basin boundaries were obtained

² Arc-GIS, ESRI Inc., copyright 1999–2009, ESRI ArcMap 9.3.1 and ArcInfo Workstation GIS software, ESRI Inc., 380 New York Street, Redlands, California 92373–8100.

from the delineated drainage basin dataset listed above (Hayes and Wiegand, 2006).

Regionalization

Regional regression analysis was used to develop equations for estimating the magnitude and frequency of peak flows at ungaged sites in Virginia. These equations relate the annual exceedance probability flows computed using flood-frequency analysis to the measured basin characteristics of delineated drainage basins.

Six physiographic regions were used to organize regression analyses of basin characteristics against peak-flow estimates. These six physiographic regions are similar to the five physiographic provinces identified in the discussion of physical setting except that the Mesozoic Basins, considered a subset of the Piedmont Physiographic Province, are identified separately as one of the six physiographic regions. A rationale for this organizational framework, that physiographic differences expressed in these six regions are related to hydrologic response, appeared to be a sound rationale because candidate regression models significantly improved across the range of peak-flow probabilities as a consequence of these regressions based on physiographic regions.

Definition of Regions

The six regions used to evaluate peak flows are Coastal Plain, Piedmont, Mesozoic Basins, Blue Ridge, Valley and Ridge, and Appalachian Plateaus (fig. 1). Each region was identified using ArcGIS™ to perform spatial separations of the geology dataset. Regions were selected and identified iteratively, based on the improved explanatory power of candidate regression models associated with the regions across the range of peak-flow annual exceedance probabilities. The Mesozoic Basins, usually grouped with the Piedmont physiographic region, were explicitly identified as a unique region for the purposes of this study, leading to improved correlations among candidate regional regression models.

Model Development

Exploratory analyses of all computed annual exceedance probability peak flows and potential explanatory variables (basin characteristics) were performed, prior to developing candidate regression models, using statistical software, JMP® version 8.³ Sites with 50 percent or more of their drainage area within a region were included in developing that region's regression equations, with the exception of the Coastal Plain region, in which all sites with 5 percent or more of their drainage area within the region were included in developing the region's regression equations. Of the 476 sites, 52 sites were available in the Coastal Plain, 105 sites were available in the Piedmont, 55 sites were available in the Mesozoic Basins,

88 sites were available in the Blue Ridge, 157 sites were available in the Valley and Ridge, and 19 sites were available in the Appalachian Plateaus for use in developing regional regression equations. Scatter plots showing relations between pairs of basin characteristics were evaluated along with basic descriptive statistics to (1) identify explanatory variable pairs that are highly correlated with one another so that they may be evaluated and possibly removed from the selection dataset and (2) determine candidate explanatory variable, response variable pairs that are highly correlated with potentially significant explanatory power. In some instances, one or both variables in an explanatory variable, response variable pair were mathematically transformed to potentially enhance their relation and statistical power when part of a linear regression model. Depending on the shape of each scatter plot relation, possible transformations of the X variable included $\log X$, $\sqrt{X}$, X^2 , and X^3 , and possible transformations of the Y variable included $\log Y$, $\sqrt{Y}$, Y^2 , and Y^3 , as suggested by Tukey's bulging rule (Mosteller and Tukey, 1977). Exploratory statistical investigation and comparison of the 312 candidate explanatory basin characteristics associated with each annual exceedance probability peak-flow value proceeded iteratively until each candidate variable, peak-flow value x-y pair was vetted for possible explanatory power.

Candidate regional regression models also were developed following an iterative approach. For each region, and for each peak-flow response variable, forward-, backward-, and mixed-stepwise regressions were used to identify combinations of basin characteristics with likely explanatory power. A list of all possible 1-, 2-, and 3-parameter candidate models was prepared for each peak-flow response variable. The list of candidate models was sorted by the number of explanatory variables in each model. Then, candidate models in each sub-list were evaluated using three metrics—the coefficient of determination (R-square), the root mean square error (RMSE), and Akaike's information criterion (AIC), modified with a second-order correction for small sample sizes and identified as AICc (Burnham and Anderson, 2002). The most reasonable 1-, 2-, and 3-parameter models for each region were chosen as final candidates for regional regression. Final candidate 1-, 2-, and 3-parameter regional regression models were prepared using statistical software (JMP® version 8). Explanatory variables for any 2- and 3-parameter models were carefully chosen to ensure that each variable in the model contributed adequate explanatory power and to avoid instances of collinearity, autocorrelation, or excessive variance inflation. Regional regression models were evaluated and modified iteratively. Final models were then selected. Coefficients of final models were specified using the generalized least squares (GLS) option of the Weighted-Multiple-Linear Regression Program (WREG version 1.01; Eng and others, 2009). Preference was given to regional regression models with explanatory variables that are easily determined and understood. Models with little explanatory power and high standard errors were not reported here. All final models, specified using GLS, are 1-parameter models.

³ SAS Institute Inc., 2009, Cary, North Carolina.

Model Verification and Diagnostics

Evaluation of candidate models using R-square, RMSE, and AICc provided insights into the most appropriate candidate model choices for each peak-flow response variable in each region. The R-square value indicated the proportion of variability in each relation that was accounted for by the statistical model—in this case, a linear regression model. R-square values approaching 1 suggest increased explanatory power. The RMSE value indicated the differences between values predicted by each model and the values actually observed or measured. The RMSE helped to aggregate individual residual differences into a single measure of predictive power. To assist in choosing among candidate models in each region, plots were constructed identifying each candidate model by the number of model parameters (x-axis) and RMSE value (y-axis), providing a spatial representation of increased or decreased RMSE relative to the number of model terms. The AICc value indicated the goodness of fit of each regression model, relative to other candidate models in the list, providing a tool for model selection. AICc values are grounded in the concept of entropy, offering a relative measure of the information lost when a given model is used to describe reality. AICc describes the difference between model bias and model variance, or the tradeoff between model precision and model complexity. Several competing models were ranked by their AICc values. Lower AICc values were considered better than higher values.

Leverage plots (Sall, 1990), also known as “partial-regression residual leverage plots” (Belsley and others, 1980) or “added variable plots” (Cook and Weisberg, 1982), were used to further investigate and screen candidate regional regression models. Leverage plots allow one to view the significance of each model parameter in the candidate regression model within the context of the larger model. The effect of a model parameter on the larger model is displayed on the leverage plot by comparing the sum of squared residuals of the model to the sum of squared residuals of the model with the effect of a particular parameter is included in the model help confirm that the effect contributes significantly to the model fit. The leverage plot graphically displays this potential significance for each candidate explanatory variable in each candidate model, showing for each point in the model what the residual would be with and without the effect of the explanatory variable in the model. In the leverage plot, the distance from a point to the line of fit describes the actual residual. The distance from a point to the horizontal line of the mean describes the potential residual error if the effect were not part of the model. In other words, the mean line of the leverage plot represents the model if the value of the parameter effect were constrained to zero. The idea is to determine if the line of fit on the leverage plot for each explanatory variable carries each point on the plot significantly better than does the horizontal line of the mean shown on the plot. Leverage plots were used to identify (1) regression variables with significant explanatory power, (2) regression variables with borderline or insignificant explanatory power, and (3) regression variables exhibiting significant collinearity within the model (fig. 2).

Figure 2. Example leverage plots showing (A) significant explanatory power, (B) insignificant explanatory power, and (C) evidence of collinearity. The solid red lines represent the significance of each explanatory model parameter, shown on the x-axis, within the context of the larger model. The dashed red lines represent the confidence interval of the significance of each explanatory model parameter. The dashed blue lines represent the horizontal line of the mean, describing the larger model if the effect of each explanatory model parameter were constrained to zero. The idea behind each leverage plot is to determine if the line of fit for each potential explanatory model variable carries each point on the plot significantly better than does the horizontal line of the mean shown on the plot.

Analyses of leverage plots for each potential explanatory variable in a candidate regression model afforded the opportunity to see the characteristics of each candidate variable, the influential strength of the variable, and its consequences within the larger model. The picture provided by each leverage plot enabled a thorough, visual vetting of individual candidate model variables and a measure of confidence in variable selection that could not be obtained from non-graphical indices of collinearity and variable inflation, preparing a means to construct robust regional regressions. A leverage plot was constructed and evaluated for each model parameter in each candidate regional regression model. Iterative comparisons of models were made, and the stronger models were selected as final candidates. Models containing explanatory variables with significant explanatory power, limited parameter counts, and limited collinearity were preferred as final candidates.

Explanatory variables associated with the best candidate models were chosen for inclusion in final candidate single-parameter and multi-parameter regional regression models. Preference was given to explanatory variables that are easily measured and understood.

Final models were specified using GLS regression as described by Stedinger and Tasker (1985) and Tasker and Stedinger (1989). Candidate regional regressions and their associated leverage plots were carefully evaluated to avoid the effects of potential cross correlation between sites and excessive variability in peak flows at streamgaging stations.

Because the length of streamflow record varies among stream gages, the precision of streamflow estimates also varies. Different streamflow records have different variances. Peak flows at streamgaging stations within a particular region are at risk of being correlated with other peak flows in the region due to atmospheric conditions that may cause temporally coincident flood peaks. The concurrent flows observed at different gages in a region can yield cross correlations. If these correlations are not accounted for in a regional analysis, regression parameters may be less precise, and estimators of precision may be less accurate (Eng and others, 2009).

GLS analyses account for cross correlations among these characteristics. In GLS analyses, weights are formed using the period of record and the variance of the response variable annual time series. The series of annual peaks at streamgaging stations and the geographic distances between streamgages are examined to help determine the degree of potential correlation between sites. Weights are assigned to account for variability. Sites exhibiting potentially cross-correlated concurrent peak flows are given less weight than other sites. Pseudo R-square is reported for each GLS regression model. A metric in the style of the R-square commonly reported as part of ordinary least squares regression, pseudo R-square is designed specifically to evaluate the iterative models developed using GLS.

The average variance of prediction (AVP; Stedinger and Tasker, 1985; Tasker and Stedinger, 1989) is a helpful indication of the average error of a GLS regression. The AVP may be represented by one of two equations. The first option is

$$AVP = \sigma_i^T + \left(\frac{1}{n} \right) \sum_{i=1}^n x_i (X^T \wedge X)^{-1} X_i^T, \quad (2)$$

where

- AVP = the average variance of prediction;
- σ_i^T = the model error variance;
- n = the number of stations in the regression model;
- x = the vector containing the basin attributes of the i^{th} station augmented by the value of 1;
- X = the matrix of all basin attributes at all stations in the regression augmented by a column of ones;
- $\wedge$ = the weighting matrix (Tasker and Stedinger, 1989);
- T = superscript indicating taking the transpose of a matrix; and
- $^{-1}$ = superscript indicating taking the inverse of a matrix.

The second option is

$$AVP = error_m + error_t, \quad (3)$$

where

- AVP = the average variance of prediction;
- $error_m$ = model error; and
- $error_t$ = time sampling error.

The AVP may be used to provide an estimate of errors that may be associated with the use of a regression model to estimate flow statistics at an ungaged site. An important consideration is that the AVP metric assumes that basin characteristics at the ungaged location are similar to those used to develop the model.

The average standard error of prediction in percent, S_p , is used in this report to express the AVP as a percentage. S_p is computed from the AVP (Aitchison and Brown, 1957) and modified for use with common logarithms as follows:

$$S_p = 100 \sqrt{EXP \left[\sigma^2 \cdot \ln(10)^2 \right]} - 1, \quad (4)$$

where

- S_p = the average standard error of prediction, in percent; and
- σ^2 = the average variance of prediction.

Weighting Multiple Estimates

Weighting techniques often improve regional flow estimates. This is true of peak-flow estimates, which may be

improved by computing a weighted average of two independent estimates: (1) an estimate made by fitting a Log-Pearson Type III distribution to data using peak-flow analysis, and (2) an estimate made by developing a regional regression equation describing station peak flow.

Weighting of Independent Estimates

Methods described in Appendix 8 of Bulletin 17B (Interagency Advisory Committee on Water Data, 1982) were used to calculate a weighted estimate and variance at each peak-flow station using information from flood-frequency analysis and a corresponding regional regression equation. The equations developed by Gilroy were used to determine the weighted discharge and variance of peak flow at each station. The recommended procedure assumes that the two peak-flow estimates are independent, which, as noted in Bulletin 17B, is true in most practical situations (Interagency Advisory Committee on Water Data, 1982, p. 8-1; Cohn and others, 2001; Berenbrock, 2002).

The idea is that if two independent estimates are weighted in inverse proportion to their variances, then the variance of the weighted average is less than the variance of either estimate. This is accomplished using the following equations (Interagency Advisory Committee on Water Data, 1982):

$$Z = \frac{x(V_y) + y(V_x)}{V_y + V_x} \quad (5)$$

and

$$V_z = \frac{V_x V_y}{V_x + V_y}, \quad (6)$$

where

- x = a first independent estimate of peak flow;
- y = a second independent estimate of peak flow;
- Z = a weighted average estimate of peak flow;
- V_x = variance of a first independent estimate of peak flow;
- V_y = variance of a second independent estimate of peak flow; and
- V_z = variance of a weighted average estimate of peak flow.

Using the procedures described in Bulletin 17B and equations 5 and 6, peak-flow estimates determined using Log-Pearson Type III frequency analysis (table 2) were used with peak-flow estimates determined by the regional regression equations (table 3) to yield weighted peak-flow estimates (table 2). As the number of years of record becomes large, the weighted peak-flow estimate approaches the station peak-flow estimate.

Peak-Flow Characteristics

Peak-flow characteristics describe the magnitude and frequency of peak flows, providing insights into the dynamics and variability of water movement through stream systems. They offer a basis for evaluating risk and analyzing stream-flow response to changes in ecosystem and climate. Peak-flow characteristics are listed in table 2. Table 2 lists peak-flow values determined by flood-frequency analysis as outlined in Bulletin 17B, in which a Log-Pearson Type III frequency distribution is fitted to the logarithms of annual peak flows. These values were calculated using program PeakFQ (Flynn and others, 2006).

Table 3 lists peak-flow regional regression equations of the final models. Candidate single- and multi-parameter equations were developed to determine annual exceedance probability peak flows for each of six regions. Single-parameter equations describing annual exceedance probability peak flow as a function of basin drainage area (DA) were found to be superior to multi-parameter regional regression equations, combining explanatory power, an easily measured explanatory variable (DA), ease of interpretation and use, and lower risks of explanatory variable inflation or collinearity.

Table 2 also lists peak-flow values computed from the regional regression equations listed in table 3 and peak-flow values determined by weighting the independent Log-Pearson Type III peak-flow estimates listed in table 2 with those computed from the equations in table 3.

For a gaged site, the most reliable estimates of peak-flow probabilities are generally provided by the values listed in table 2 developed from fitting a Log-Pearson Type III frequency distribution to the logarithms of the annual peak flows. Weighted peak-flow probabilities listed in table 2 may be used when circumstances suggest that a weighted estimate may be helpful, combining Log-Pearson Type III fitted values and estimates from regional regression equations.

Other Methods for Estimation at Ungaged Sites

For an ungaged site, the appropriate method for calculating peak-flow estimates depends on whether (1) the drainage basin lies within a single peak-flow region, (2) the drainage area crosses peak-flow regional boundaries, or (3) the ungaged site is located on a gaged stream.

Peak-flow estimates at sites on ungaged streams that lie entirely within a single peak-flow region may be calculated using the regional regression equations listed in table 3.

Peak-flow estimates at sites with drainage basins that cross peak-flow regional boundaries may be made by first determining the percentage of the basin in each region. Peak-flow estimates are then computed for the entire basin drainage area by using the appropriate equation for each peak-flow

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region, then multiplying the peak flow for each part of the basin by the percentage of the entire basin in that region, and summing the contributions from each peak-flow region.

Peak-flow estimates at an ungaged site located on a gaged stream, where the drainage area of the ungaged site is between 50 and 150 percent of the drainage area at the gaged site, may be adjusted using the following method (Hannum, 1976; Glatfelter, 1984; Bisese, 1995).

1. Estimate the peak flow at the ungaged site using one of the methods previously described.
2. Compute a correction factor for the gaged site as follows:

$$C_g = \frac{Q_{(p)w(gaged)}}{Q_{(p)r(gaged)}}, \quad (7)$$

where

- C_g = the correction factor for the gaged site;
 $Q_{(p)w(gaged)}$ = the weighted peak-flow estimate at the gaged site for exceedance probability, p , from table 2 and
 $Q_{(p)r(gaged)}$ = the regional regression peak-flow estimate at the gaged site for exceedance probability, p , computed from the equations listed in table 3.

3. Compute a correction factor for the ungaged site as follows:

$$C_u = C_g - \left(\frac{2|A_g - A_u|}{A_g} \right) (C_g - 1), \quad (8)$$

where

- C_u = the correction factor for the ungaged site;
 C_g = the correction factor for the gaged site, from the previous equation;
 A_g = the drainage area at the gaged site;
 A_u = the drainage area at the ungaged site; and
 $|A_g - A_u|$ = the absolute value of the difference between the drainage area of the gaged site and the drainage area of the ungaged site.

4. Estimate the adjusted peak flow at the ungaged site as follows:

$$Q_{(p)a(ungaged)} = C_u Q_{(p)r(ungaged)}, \quad (9)$$

where

C_u = correction factor ratio from the previous equation;

$Q_{(p)a(ungaged)}$ = adjusted peak-flow estimate for the ungaged site for flow probability, p ; and

$Q_{(p)r(ungaged)}$ = regression peak-flow estimate for the ungaged site for flow probability, p .

As the difference in drainage area between the gaged and ungaged sites approaches 50 percent or 150 percent of the drainage area of the gaged site, the correction factor for the ungaged site approaches 1, and the adjusted value approaches the regression estimate for the ungaged site.

Examples of Calculating Peak-Flow Estimates

The following four exercises provide step-by-step examples of how to perform calculations and apply the methods suggested in this report to estimate peak flows. Example calculations are shown for estimating peak flows by (1) using the regression equations provided in this report, (2) using the drainage-area ratio method when a drainage basin spans two or more peak-flow regions, (3) using a nearby gage for an ungaged site, and (4) using a gaged site.

Use of Regression Equations

Example 1. Estimating 0.02-probability (50-year) peak flow at an ungaged site on a stream with a drainage basin completely contained within the Valley and Ridge region.

Given: Drainage area (DA) of 0.80 mi² for this basin, measured from a 1:24,000-scale topographic map.

Solution: The regression estimate for the site is computed using the appropriate equation in table 3 for the 0.02-probability (50-year) discharge within the Valley and Ridge region as follows:

$$\text{Log}10(Q_{(0.02)}) = 2.862 + 0.626 \bullet \text{Log}10(0.80)$$

$$\text{Log}10(Q_{(0.02)}) = 2.801$$

$$Q_{(0.02)} = 10^{2.801} = 633 \text{ cubic feet per second.} \quad (10)$$

Drainage-Area Ratio Method

Example 2. Estimating the 0.01-probability (100-year) peak flow at an ungaged site on a stream with a drainage basin that spans the Piedmont and Blue Ridge regions.

Given:

1. Drainage area (DA) of 7.6 mi² for the entire basin, measured from a 1:24,000-scale topographic map.
2. Thirty-seven percent of the basin is located in the Piedmont region, and the remaining 63 percent of the basin lies within the Blue Ridge region.

Solution: Calculate the 0.01-probability (100-year) peak flow for the basin using the Piedmont and Blue Ridge regional regression equations from table 3, then multiply each by the fraction of the drainage area in each region to compute a final estimate, as follows:

For the Piedmont region:

$$\begin{aligned}\text{Log10}(Q_{(0.01 \text{ Piedmont})}) &= 3.157 + 0.490 \bullet \text{Log10}(7.6) = 3.589 \\ Q_{(0.01 \text{ Piedmont})} &= 10^{3.589} = 3,878 \text{ cubic feet per second.} \quad (11)\end{aligned}$$

For the Blue Ridge region:

$$\begin{aligned}\text{Log10}(Q_{(0.01 \text{ Blue Ridge})}) &= 3.184 + 0.593 \bullet \text{Log10}(7.6) = 3.706 \\ Q_{(0.01 \text{ Blue Ridge})} &= 10^{3.706} = 5,085 \text{ cubic feet per second.} \quad (12)\end{aligned}$$

The combined estimate for the basin:

$$\begin{aligned}Q_{(0.01 \text{ combined})} &= (3,878 \bullet 0.37) + 5,085 \bullet 0.63 \\ &= 4,639 \text{ cubic feet per second.} \quad (13)\end{aligned}$$

Ungaged Site with Nearby Gage

Example 3. Estimating the 0.10-probability (10-year) peak flow at an ungaged site on the New River, located upstream from New River streamgage number 03164000 near Galax, Virginia, in the Blue Ridge region.

Given:

1. Drainage area (A_u) of 275 mi² for the basin above the ungaged site, measured from a 1:24,000-scale topographic map.
2. Drainage area (A_g) of 1,141 mi² for the basin above the gaged site, from table 2.

Solution: The drainage area of the ungaged site is 24 percent of the drainage area at the gaged site. Using eq 7, the correction factor ratio for the gaged site (C_g) is 0.992.

The correction factor ratio for the ungaged (C_u) site is determined using eq 8 and is 1.004.

Estimate the adjusted peak flow at the ungaged site as follows (eq 9):

$$\begin{aligned}Q_{(p)a(ungaged)} &= C_u Q_{(p)r(ungaged)}, \\ &= 1.004 \bullet 10 \text{ (equation result from table 3 for} \\ &\quad \text{the ungaged site as a superscript)} \\ &= 1.004 \bullet 10^{4.267} \\ &= 18,577 \text{ cubic feet per second.}\end{aligned}$$

Gaged Site

Example 4. Estimating the 100-year peak-flow at a gaged site on the North Fork of the Rivanna River at Route 606 near Earlysville, Virginia (station number 02032640).

Given: Because this is a gaged site, the 100-year peak-flow may be read directly from table 2 (Peak-flow frequency estimates for streamgaging stations in Virginia).

Solution: In table 2, find station number 02032640 in the left hand column, identifying the gage on the North Fork of the Rivanna River at Route 606 near Earlysville, Virginia. Read across to find the peak-flow discharge of 49,710 cubic feet per second (ft³/s) corresponding to the annual exceedance probability of 0.01 (100-year recurrence interval): $Q_{(100)} = 49,710 \text{ ft}^3/\text{s}$.

Summary

Understanding peak water flows in Virginia streams is essential to human safety and sound management of water resources and associated riparian and watershed ecosystems. Meaningful characterizations of the magnitude and frequency of peak flows provide valuable insights into the dynamics and variability of water movement through these unique stream systems. This report summarizes a statistical analysis of peak-flow data collected in Virginia from 1895 through 2007. Peak-flow values for annual exceedance probability estimates of 0.5, 0.4292, 0.2, 0.1, 0.04, 0.02, 0.01, 0.005, and 0.002 are summarized for 476 streamgaging stations, and regression equations organized by physiographic region are presented for estimating annual exceedance probability peak flows using basin characteristics.

Streamgaging stations with at least 10 years of peak-flow record were identified as study candidates. All of these streamgaging stations were considered, including those in predominately urban and predominately rural basins. Data from each candidate streamgaging station were quality checked to identify numerical errors. Each list of datapoints was individually evaluated to discover and segregate intervals in the record

in which concomitant effects such as data of poor quality or severely altered or regulated flows negatively affected the candidate data. Remaining datapoints in each dataset were evaluated for evidence of trends. Statistics were generated to identify monotonic, non-monotonic, linear, and non-linear correlation, including (1) Kendall's Tau, (2) an index of Kendall's trend probability, and (3) Spearman's rho. Other statistical analyses performed include (4) calculating and plotting a linear regression of each dataset with time, (5) plotting residuals to help identify any significant correlation or autocorrelation, and (6) performing runs tests to identify non-linear change over time. Of the 589 candidate datasets considered for study, 113 were removed from consideration because they either had too few datapoints available for analysis, or they characterized streams with excessively regulated flow. Thirty-five of the remaining 476 sites were partially censored prior to analysis due to indications of excessively regulated flow or peak flows measured below the gage base.

Regional regression analyses of peak-flow response associated with explanatory basin characteristics provide insights into the nature of peak flows across Virginia. Regional regression equations describing peak flow as a function of basin drainage area are identified within each of the six physiographic regions delineated for study. Regression equations describing peak-flow annual exceedance probability as a function of basin drainage area in the Coastal Plain, Piedmont, Mesozoic Basins, Blue Ridge, Valley and Ridge, and Appalachian Plateaus physiographic regions yielded median pseudo R-square values of 0.87, 0.91, 0.81, 0.94, 0.88, and 0.88, respectively. These same equations yielded median standard error of prediction values of 58 percent, 37 percent, 43 percent, 28 percent, 31 percent, and 0.34 percent, and median standard model error values of 53 percent, 35 percent, 40 percent, 26 percent, 29 percent, and 0.31 percent, respectively. Pseudo R-square is used to evaluate the final models developed using GLS. The standard error of prediction expresses AVP as a percentage of the predicted value. The standard model error expresses variance in model accuracy as a percentage of the predicted value. Four example calculations are presented in the report as an aid in applying recommended methods for estimating peak flows at ungaged sites, including the use of regional regression model equations. Results of this study supersede published results in previous studies of peak flows in Virginia.

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Glossary

[Unless otherwise noted, definitions are based on Langbein, W.B., and Iseri, K.T, 1995, Hydrologic definitions, available at USGS Web site <http://water.usgs.gov/wsc/glossary.html>]

Bankfull stage The elevation at which the active channel meets the actively forming floodplain in the current climatic regime. It is the stage at which the stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Cubic feet per second (ft³/s) A measure of the rate of water discharge representing a volume of 1 cubic foot of water passing a given point in 1 second.

Discharge The volume of water that passes a given point within a given period of time.

Drainage area The area measured in a horizontal plane and enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into a stream, upstream from a specified location.

Gage A water-level measuring device at a streamflow-gaging station.

Gage height The water-surface elevation referred to an arbitrary gage datum. Gage height is often used interchangeably with the more general term *stage*, although *gage height* is more appropriate when used with a reading on a gage.

Historic peak A peak-flow measurement collected outside the systematic period of record of data collection. Generally a high-magnitude peak of a noteworthy flood.

Hydrologic unit A geographic area representing part or all of a surface-water drainage basin or distinct hydrologic feature as delineated on a State Hydrologic Unit Map prepared by the U.S. Geological Survey.

Location A description of the placement of a streamflow-gaging station. Location may include the latitude, longitude, datum, county, and hydrologic unit code of the station.

Regulation The artificial manipulation of the flow of a stream.

Remarks Additional information enriching the characterization of a streamflow-gaging station.

Stage-discharge relation The relation between gage height and the rate at which water flows in a stream. It is defined by measurements of stage and discharge, by theoretical assumptions based on hydraulic properties of the stream channel or manmade flow-confining structures, or by a combination of both.

Streamgaging or streamflow-gaging station A particular site on a stream, canal, lake, or reservoir where systematic observations of water heights and water discharges are made.

Water year The 12-month period from October 1 through September 30. The date of the water year is designated by the calendar year in which the period ends and which includes 9 of the 12 months. A water year beginning October 1, 2005, and ending September 30, 2006, is called the “2006 water year.”

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01484800	(p) Guy Creek at Route 606 near Nassawadox, Va.	1.9	27.3	31.4	52.9	74.9	109	138	172	210	267	
01484800	(r) Guy Creek at Route 606 near Nassawadox, Va.	1.9	--	--	125	191	305	419	553	721	1,523	
01484800	(w) Guy Creek at Route 606 near Nassawadox, Va.	1.9	--	--	79.7	117	174	224	277	337	489	
01613900	(p) Hogue Creek at Route 614 near Hayfield, Va.	15.9	857	986	1,643	2,280	3,203	3,971	4,801	5,695	6,982	
01613900	(r) Hogue Creek at Route 614 near Hayfield, Va.	15.9	858	982	1,621	2,269	3,253	4,112	5,033	6,130	--	
01613900	(w) Hogue Creek at Route 614 near Hayfield, Va.	15.9	858	983	1,626	2,272	3,236	4,056	4,928	5,909	--	
01614830	(p) Opequon Creek at Route 11 near Stephens City, Va.	15.2	131	161	362	643	1,228	1,904	2,860	4,198	6,780	
01614830	(r) Opequon Creek at Route 11 near Stephens City, Va.	15.2	830	950	1,571	2,203	3,160	3,998	4,896	5,966	--	
01614830	(w) Opequon Creek at Route 11 near Stephens City, Va.	15.2	635	743	1,289	1,817	2,614	3,342	4,202	5,317	--	
01615000	(p) Opequon Creek above Route 7 near Berryville, Va.	58.2	2,378	2,706	4,418	6,170	8,876	11,270	14,020	17,160	21,980	
01615000	(r) Opequon Creek above Route 7 near Berryville, Va.	58.2	2,222	2,515	3,963	5,379	7,483	9,265	11,180	13,404	--	
01615000	(w) Opequon Creek above Route 7 near Berryville, Va.	58.2	2,267	2,568	4,084	5,614	7,986	10,095	12,500	15,333	--	
01615500	(p) Abrams Creek at railroad bridge at Winchester, Va.	5.89	--	--	--	--	--	--	--	--	--	
01615500	(r) Abrams Creek at railroad bridge at Winchester, Va.	5.89	414	478	818	1,173	1,720	2,208	2,733	3,368	--	
01615500	(w) Abrams Creek at railroad bridge at Winchester, Va.	5.89	--	--	--	--	--	--	--	--	--	
01616000	(p) Abrams Creek above Route 659 near Winchester, Va.	17	539	605	933	1,248	1,705	2,089	2,511	2,974	3,654	
01616000	(r) Abrams Creek above Route 659 near Winchester, Va.	17	901	1,031	1,697	2,373	3,396	4,288	5,245	6,382	--	
01616000	(w) Abrams Creek above Route 659 near Winchester, Va.	17	757	866	1,401	1,885	2,523	3,014	3,509	4,051	--	
01616100	(p) Dry Marsh Run at Route 645 near Berryville, Va.	11	155	176	289	405	584	743	925	1,133	1,453	
01616100	(r) Dry Marsh Run at Route 645 near Berryville, Va.	11	655	752	1,258	1,776	2,568	3,265	4,013	4,909	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01621450	(p) Blacks Run tributary 1 at Route 11 near Harrisonburg, Va.	0.67	44.8	51.0	86.2	128	202	279	378	506	732	
01621450	(r) Blacks Run tributary 1 at Route 11 near Harrisonburg, Va.	0.67	84.2	98.8	183	276	426	566	718	908	--	
01621450	(w) Blacks Run tributary 1 at Route 11 near Harrisonburg, Va.	0.67	--	--	--	217	320	414	522	659	--	
01621470	(p) Blacks Run at Route 704 near Mt. Crawford, Va.	18.8	--	--	--	--	--	--	--	--	--	
01621470	(r) Blacks Run at Route 704 near Mt. Crawford, Va.	18.8	970	1,109	1,819	2,537	3,623	4,567	5,580	6,781	--	
01621470	(w) Blacks Run at Route 704 near Mt. Crawford, Va.	18.8	--	--	--	--	--	--	--	--	--	
01622000	(p) North River along Route 693 near Burke-town, Va.	376	7,039	8,031	13,810	20,740	33,380	46,510	63,720	86,180	126,500	
01622000	(r) North River along Route 693 near Burke-town, Va.	376	8,722	9,728	14,332	18,599	24,790	29,790	35,216	41,289	--	
01622000	(w) North River along Route 693 near Burke-town, Va.	376	8,204	9,229	14,190	19,224	27,686	36,049	46,897	61,162	--	
01622100	(p) North River tributary at Route 11 near Mt. Crawford, Va.	1.56	58.5	65.6	102	138	194	242	298	361	457	
01622100	(r) North River tributary at Route 11 near Mt. Crawford, Va.	1.56	157	182	327	485	733	961	1,207	1,512	--	
01622100	(w) North River tributary at Route 11 near Mt. Crawford, Va.	1.56	--	--	239	331	447	533	614	703	--	
01622300	(p) Buffalo Branch tributary 1 at Route 42 near Augusta Springs, Va.	0.54	52.7	56.4	73.6	89.1	110	128	146	166	194	
01622300	(r) Buffalo Branch tributary 1 at Route 42 near Augusta Springs, Va.	0.54	71.9	84.5	158	239	371	495	629	797	--	
01622300	(w) Buffalo Branch tributary 1 at Route 42 near Augusta Springs, Va.	0.54	--	--	--	--	309	385	456	532	--	
01622400	(p) Buffalo Branch tributary 2 at Route 42 near Christian, Va.	0.46	52.9	59.0	91.4	126	182	234	296	371	492	
01622400	(r) Buffalo Branch tributary 2 at Route 42 near Christian, Va.	0.46	63.9	75.2	141	215	335	448	570	724	--	
01622400	(w) Buffalo Branch tributary 2 at Route 42 near Christian, Va.	0.46	--	--	--	202	305	397	493	609	--	
01623000	(p) Bell Creek at St. Pauls Chapel, near Staunton, Va.	0.67	8.90	13.5	72.0	242	964	2,481	6,014	13,930	40,040	
01623000	(r) Bell Creek at St. Pauls Chapel, near Staunton, Va.	0.67	84.2	98.8	183	276	426	566	718	908	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft ³ /s)											
01628060	(p) White Oak Run 0.15 miles above mouth near Grottoes, Va.	1.95	160	181	287	390	542	672	816	975	1,210
01628060	(r) White Oak Run 0.15 miles above mouth near Grottoes, Va.	1.95	215	255	483	753	1,190	1,617	2,270	2,871	--
01628060	(w) White Oak Run 0.15 miles above mouth near Grottoes, Va.	1.95	198	231	405	581	825	1,027	1,278	1,499	--
01628150	(p) Deep Run 0.5 miles above Route 708 near Grottoes, Va.	1.18	--	--	--	--	--	--	--	--	--
01628150	(r) Deep Run 0.5 miles above Route 708 near Grottoes, Va.	1.18	151	180	345	544	867	1,187	1,685	2,139	--
01628150	(w) Deep Run 0.5 miles above Route 708 near Grottoes, Va.	1.18	--	--	--	--	--	--	--	--	--
01628500	(p) South Fork Shenandoah River below Lower Lewis Run near Lynnwood, Va.	1,079	16,490	18,860	31,860	46,020	69,370	91,350	117,800	149,600	201,200
01628500	(r) South Fork Shenandoah River below Lower Lewis Run near Lynnwood, Va.	1,079	18,889	20,890	29,631	37,494	48,775	57,633	67,345	77,967	--
01628500	(w) South Fork Shenandoah River below Lower Lewis Run near Lynnwood, Va.	1,079	18,181	20,321	30,204	39,858	55,490	70,017	87,953	110,016	--
01628600	(p) Cub Run tributary at Route 33 at Montevideo, Va.	0.49	54.7	60.2	85.5	108	139	163	188	215	253
01628600	(r) Cub Run tributary at Route 33 at Montevideo, Va.	0.49	67.0	78.8	147	224	348	466	592	752	--
01628600	(w) Cub Run tributary at Route 33 at Montevideo, Va.	0.49	--	--	--	180	249	299	343	388	--
01629400	(p) South Fork Shenandoah River tributary near Luray, Va.	0.66	54.4	61.1	95.7	131	185	234	290	354	454
01629400	(r) South Fork Shenandoah River tributary near Luray, Va.	0.66	83.3	97.8	181	274	422	561	711	900	--
01629400	(w) South Fork Shenandoah River tributary near Luray, Va.	0.66	--	--	--	219	312	388	463	549	--
01629500	(p) South Fork Shenandoah River at Route 211 near Luray, Va.	1,372	19,500	22,340	38,070	55,620	85,250	113,800	148,800	191,600	262,700
01629500	(r) South Fork Shenandoah River at Route 211 near Luray, Va.	1,372	22,526	24,865	34,965	43,989	56,909	66,986	78,068	90,121	--
01629500	(w) South Fork Shenandoah River at Route 211 near Luray, Va.	1,372	21,630	24,156	35,760	47,181	65,989	83,806	106,232	134,262	--
01629945	(p) Chub Run near Stanley, Va.	3	177	177	384	668	1,163	1,632	2,184	2,821	3,798
01629945	(r) Chub Run near Stanley, Va.	3	292	345	644	995	1,560	2,108	2,930	3,696	--
01629945	(w) Chub Run near Stanley, Va.	3	270	310	581	904	1,429	1,931	2,617	3,296	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01630700	(p) Gooney Run at Route 622 near Glen Echo, Va.	20.5	1,600	1,730	2,339	2,886	3,642	4,254	4,907	5,608	6,616	
01630700	(r) Gooney Run at Route 622 near Glen Echo, Va.	20.5	1,140	1,325	2,324	3,449	5,225	6,887	9,159	11,408	--	
01630700	(w) Gooney Run at Route 622 near Glen Echo, Va.	20.5	1,351	1,519	2,333	3,082	4,063	4,827	5,661	6,470	--	
01631000	(p) South Fork Shenandoah River below Route 619 at Front Royal, Va.	1,634	20,850	23,920	40,730	59,160	89,680	118,500	153,300	195,100	263,300	
01631000	(r) South Fork Shenandoah River below Route 619 at Front Royal, Va.	1,634	25,604	28,223	39,439	49,410	63,666	74,730	86,926	100,136	--	
01631000	(w) South Fork Shenandoah River below Route 619 at Front Royal, Va.	1,634	24,196	27,015	39,769	52,082	72,009	90,508	113,501	141,757	--	
01632000	(p) North Fork Shenandoah River above Route 259 at Cootes Store, Va.	210	8,858	10,120	16,740	23,580	34,260	43,780	54,750	67,350	86,820	
01632000	(r) North Fork Shenandoah River above Route 259 at Cootes Store, Va.	210	5,691	6,377	9,594	12,626	17,056	20,688	24,613	29,060	--	
01632000	(w) North Fork Shenandoah River above Route 259 at Cootes Store, Va.	210	6,451	7,231	11,127	15,236	22,057	28,455	36,131	45,412	--	
01632082	(p) Linville Creek below Route 786 at Broadway, Va.	45.7	1,589	1,877	3,679	6,024	10,640	15,720	22,720	32,260	50,210	
01632082	(r) Linville Creek below Route 786 at Broadway, Va.	45.7	1,861	2,111	3,355	4,580	6,407	7,964	9,635	11,586	--	
01632082	(w) Linville Creek below Route 786 at Broadway, Va.	45.7	1,801	2,063	3,415	4,864	7,372	9,942	13,311	17,916	--	
01632300	(p) Long Meadow (Long Glade) at Route 259 near Broadway, Va.	7.94	128	152	294	471	803	1,154	1,616	2,221	3,306	
01632300	(r) Long Meadow (Long Glade) at Route 259 near Broadway, Va.	7.94	516	593	1,005	1,430	2,083	2,662	3,284	4,033	--	
01632300	(w) Long Meadow (Long Glade) at Route 259 near Broadway, Va.	7.94	390	456	798	1,126	1,609	2,037	2,526	3,141	--	
01632900	(p) Smith Creek at Route 616 near New Market, Va.	93.6	2,082	2,427	4,296	6,277	9,408	12,220	15,470	19,190	24,920	
01632900	(r) Smith Creek at Route 616 near New Market, Va.	93.6	3,147	3,550	5,498	7,377	10,152	12,474	14,974	17,852	--	
01632900	(w) Smith Creek at Route 616 near New Market, Va.	93.6	2,859	3,262	5,211	7,088	9,916	12,382	15,177	18,461	--	
01632950	(p) Crooked Run tributary at Route 42 near Conicville, Va.	0.34	22.7	24.7	33.7	41.7	52.7	61.5	70.8	80.7	94.9	
01632950	(r) Crooked Run tributary at Route 42 near Conicville, Va.	0.34	51.2	60.4	115	176	276	370	473	603	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01632950	(w) Crooked Run tributary at Route 42 near Conieville, Va.	0.34	42.1	49.1	86.9	121	162	189	210	231	--	
01632970	(p) Crooked Run at Route 263 near Mt. Jackson, Va.	6.61	247	287	513	771	1,214	1,646	2,181	2,838	3,937	
01632970	(r) Crooked Run at Route 263 near Mt. Jackson, Va.	6.61	451	520	885	1,266	1,852	2,374	2,934	3,611	--	
01632970	(w) Crooked Run at Route 263 near Mt. Jackson, Va.	6.61	390	453	782	1,114	1,618	2,070	2,585	3,219	--	
01633000	(p) North Fork Shenandoah River at Route 698 at Mt. Jackson, Va.	508	10,800	12,220	19,620	27,200	38,950	49,430	61,490	75,350	96,820	
01633000	(r) North Fork Shenandoah River at Route 698 at Mt. Jackson, Va.	508	10,874	12,099	17,634	22,720	30,072	35,964	42,375	49,503	--	
01633000	(w) North Fork Shenandoah River at Route 698 at Mt. Jackson, Va.	508	10,851	12,136	18,207	24,138	33,418	41,709	51,452	62,946	--	
01633500	(p) Stony Creek along Route 675 at Columbia Furnace, Va.	77.5	2,017	2,260	3,491	4,713	6,556	8,161	9,975	12,030	15,150	
01633500	(r) Stony Creek along Route 675 at Columbia Furnace, Va.	77.5	2,741	3,096	4,828	6,507	8,994	11,084	13,333	15,931	--	
01633500	(w) Stony Creek along Route 675 at Columbia Furnace, Va.	77.5	2,457	2,779	4,329	5,765	7,803	9,487	11,323	13,413	--	
01633650	(p) Pughs Run at Route 623 near Woodstock, Va.	3.43	110	128	230	346	546	741	982	1,278	1,772	
01633650	(r) Pughs Run at Route 623 near Woodstock, Va.	3.43	279	323	563	818	1,215	1,574	1,960	2,431	--	
01633650	(w) Pughs Run at Route 623 near Woodstock, Va.	3.43	223	261	461	657	943	1,190	1,462	1,792	--	
01633700	(p) Pughs Run tributary at Route 623 near Columbia Furnace, Va.	0.41	38.3	44.6	81.2	124	199	274	368	487	688	
01633700	(r) Pughs Run tributary at Route 623 near Columbia Furnace, Va.	0.41	58.8	69.2	130	199	311	416	531	675	--	
01633700	(w) Pughs Run tributary at Route 623 near Columbia Furnace, Va.	0.41	--	--	--	177	270	357	455	578	--	
01634000	(p) North Fork Shenandoah River at Route 55 near Strasburg, Va.	770	11,370	12,970	21,920	32,030	49,350	66,290	87,380	113,500	157,700	
01634000	(r) North Fork Shenandoah River at Route 55 near Strasburg, Va.	770	14,750	16,357	23,485	29,958	39,276	46,660	54,726	63,614	--	
01634000	(w) North Fork Shenandoah River at Route 55 near Strasburg, Va.	770	13,667	15,323	23,043	30,587	42,832	54,391	68,885	87,096	--	
01634500	(p) Cedar Creek above Route 628 near Winchester, Va.	102	3,248	3,733	6,382	9,260	13,970	18,380	23,640	29,910	40,010	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01636242	(r) Crooked Run below Route 340 at River-ton, Va.	46.9	1,897	2,151	3,415	4,659	6,515	8,094	9,790	11,768	--	--
01636242	(w) Crooked Run below Route 340 at River-ton, Va.	46.9	--	--	--	--	--	--	--	--	--	--
01636266	(p) Manassas Run at Route 79 near Linden, Va.	5.54	--	--	--	--	--	--	--	--	--	--
01636266	(r) Manassas Run at Route 79 near Linden, Va.	5.54	451	530	970	1,479	2,294	3,076	4,216	5,297	--	--
01636266	(w) Manassas Run at Route 79 near Linden, Va.	5.54	--	--	--	--	--	--	--	--	--	--
0163626650	(p) Manassas Run at Route 645 near Front Royal, Va.	11.2	561	590	710	806	925	1,013	1,100	1,188	1,305	--
0163626650	(r) Manassas Run at Route 645 near Front Royal, Va.	11.2	743	868	1,552	2,333	3,572	4,746	6,400	8,003	--	--
0163626650	(w) Manassas Run at Route 645 near Front Royal, Va.	11.2	609	658	854	991	1,137	1,236	1,335	1,423	--	--
01636316	(p) Spout Run at Route 621 near Millwood, Va.	21.4	--	--	--	--	--	--	--	--	--	--
01636316	(r) Spout Run at Route 621 near Millwood, Va.	21.4	1,067	1,218	1,989	2,765	3,937	4,953	6,042	7,332	--	--
01636316	(w) Spout Run at Route 621 near Millwood, Va.	21.4	--	--	--	--	--	--	--	--	--	--
01636690	(p) Piney Run at Route 671 near Lovettsville, Va.	13.5	380	427	661	888	1,223	1,508	1,824	2,173	2,692	--
01636690	(r) Piney Run at Route 671 near Lovettsville, Va.	13.5	848	989	1,758	2,632	4,018	5,325	7,150	8,930	--	--
01636690	(w) Piney Run at Route 671 near Lovettsville, Va.	13.5	663	758	1,221	1,648	2,205	2,646	3,157	3,628	--	--
01638350	(p) South Fork Catoctin Creek at Route 698 near Waterford, Va.	31.6	1,727	2,072	4,192	6,863	11,870	17,140	24,040	32,990	40,570	--
01638350	(r) South Fork Catoctin Creek at Route 698 near Waterford, Va.	31.6	1,550	1,794	3,103	4,563	6,860	8,991	11,839	14,703	--	--
01638350	(w) South Fork Catoctin Creek at Route 698 near Waterford, Va.	31.6	1,576	1,835	3,291	5,026	8,060	11,177	15,482	20,615	--	--
01638420	(p) North Fork Catoctin Creek at Route 681 bridge near Waterford, Va.	23.1	644	820	2,049	3,819	7,520	11,740	17,600	25,610	40,570	--
01638420	(r) North Fork Catoctin Creek at Route 681 bridge near Waterford, Va.	23.1	1,241	1,441	2,517	3,726	5,633	7,413	9,832	12,236	--	--
01638420	(w) North Fork Catoctin Creek at Route 681 bridge near Waterford, Va.	23.1	1,169	1,366	2,457	3,740	5,944	8,197	11,379	15,082	--	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01638480	(p) Catotcin Creek at Route 663 at Taylorstown, Va.	89.5	3,719	4,323	7,576	11,000	16,380	21,190	26,720	33,050	42,760	
01638480	(r) Catotcin Creek at Route 663 at Taylorstown, Va.	89.5	3,242	3,718	6,220	8,950	13,204	17,074	21,950	27,074	--	
01638480	(w) Catotcin Creek at Route 663 at Taylorstown, Va.	89.5	3,335	3,839	6,545	9,537	14,313	18,702	24,059	29,958	--	
01643590	(p) Limestone Branch at Route 15 near Leesburg, Va.	7.88	1,116	1,506	4,768	10,590	25,550	45,890	78,590	129,800	241,300	
01643590	(r) Limestone Branch at Route 15 near Leesburg, Va.	7.88	579	679	1,227	1,858	2,864	3,822	5,196	6,512	--	
01643590	(w) Limestone Branch at Route 15 near Leesburg, Va.	7.88	603	714	1,368	2,211	3,803	5,602	8,447	12,004	--	
01643700	(p) Goose Creek at Route 611 near Middleburg, Va.	122	3,747	4,360	7,793	11,640	18,100	24,260	31,740	40,760	55,520	
01643700	(r) Goose Creek at Route 611 near Middleburg, Va.	122	4,039	4,618	7,650	10,936	16,044	20,663	26,376	32,467	--	
01643700	(w) Goose Creek at Route 611 near Middleburg, Va.	122	3,977	4,562	7,687	11,147	16,779	22,100	28,739	36,416	--	
01643800	(p) North Fork Goose Creek at Route 722 near Lincoln, Va.	24	--	--	--	--	--	--	--	--	--	
01643800	(r) North Fork Goose Creek at Route 722 near Lincoln, Va.	24	1,275	1,480	2,582	3,819	5,770	7,589	10,057	12,513	--	
01643800	(w) North Fork Goose Creek at Route 722 near Lincoln, Va.	24	--	--	--	--	--	--	--	--	--	
01643805	(p) North Fork Goose Creek at Route 729 near Lincoln, Va.	38.1	4,539	5,394	10,470	16,570	27,490	38,490	52,430	69,940	99,860	
01643805	(r) North Fork Goose Creek at Route 729 near Lincoln, Va.	38.1	1,770	2,045	3,516	5,151	7,716	10,089	13,228	16,408	--	
01643805	(w) North Fork Goose Creek at Route 729 near Lincoln, Va.	38.1	2,065	2,411	4,411	6,907	11,448	16,224	22,857	30,925	--	
01643880	(p) Beaverdam Creek at Route 734 near Mountville, Va.	47.2	2,198	2,910	8,788	19,340	47,130	86,170	151,100	256,700	498,000	
01643880	(r) Beaverdam Creek at Route 734 near Mountville, Va.	47.2	2,060	2,376	4,057	5,916	8,829	11,512	15,019	18,604	--	
01643880	(w) Beaverdam Creek at Route 734 near Mountville, Va.	47.2	2,069	2,411	4,354	6,770	11,297	16,342	23,921	33,968	--	
01644000	(p) Goose Creek above Route 621 near Leesburg, Va.	332	7,172	8,239	14,270	21,160	33,090	44,850	59,560	77,880	109,000	
01644000	(r) Goose Creek above Route 621 near Leesburg, Va.	332	8,213	9,307	14,932	20,901	30,116	38,284	47,757	58,398	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01644000	(w) Goose Creek above Route 621 near Leesburg, Va.	332	7,960	9,040	14,739	20,989	31,296	41,156	53,358	68,282	--	
01644100	(p) South Fork Sycolin Creek at Route 15 near Leesburg, Va.	2.06	381	428	675	932	1,339	1,711	2,147	2,659	3,471	
01644100	(r) South Fork Sycolin Creek at Route 15 near Leesburg, Va.	2.06	224	265	501	780	1,231	1,672	2,345	2,965	--	
01644100	(w) South Fork Sycolin Creek at Route 15 near Leesburg, Va.	2.06	264	309	560	843	1,285	1,694	2,224	2,765	--	
01644200	(p) Lenah Run (Broad Run) at Route 50 at Lenah, Va.	1.11	--	--	--	--	--	--	--	--	--	
01644200	(r) Lenah Run (Broad Run) at Route 50 at Lenah, Va.	1.11	108	132	279	483	890	1,326	1,947	2,658	--	
01644200	(w) Lenah Run (Broad Run) at Route 50 at Lenah, Va.	1.11	--	--	--	--	--	--	--	--	--	
01644250	(p) South Fork Broad Run at Route 50 near Arcola, Va.	3.88	447	542	1,192	2,161	4,347	7,084	11,270	17,610	31,070	
01644250	(r) South Fork Broad Run at Route 50 near Arcola, Va.	3.88	267	321	638	1,055	1,854	2,675	3,812	5,102	--	
01644250	(w) South Fork Broad Run at Route 50 near Arcola, Va.	3.88	299	359	739	1,292	2,521	4,031	6,402	9,842	--	
01644280	(p) Broad Run at Route 7 near Leesburg, Va.	76.1	5,225	5,474	6,575	7,493	8,685	9,597	10,530	11,500	12,830	
01644280	(r) Broad Run at Route 7 near Leesburg, Va.	76.1	2,293	2,631	4,547	6,761	10,605	14,206	18,850	24,055	--	
01644280	(w) Broad Run at Route 7 near Leesburg, Va.	76.1	4,549	4,826	6,207	7,396	8,845	9,873	10,893	11,913	--	
01644290	(p) Slave Run at Parking Lot Road at Reston, Va.	0.069	6.80	9.00	28.4	66.0	175	342	643	1,173	2,508	
01644290	(r) Slave Run at Parking Lot Road at Reston, Va.	0.069	14.6	18.6	44.6	85.4	175	279	438	625	--	
01644290	(w) Slave Run at Parking Lot Road at Reston, Va.	0.069	9.63	12.6	34.6	72.7	175	325	594	1,052	--	
01644291	(p) Slave Run below Parking Lot Road near Reston, Va.	0.085	103	113	166	220	305	382	473	580	751	
01644291	(r) Slave Run below Parking Lot Road near Reston, Va.	0.085	16.9	21.5	51.2	97.3	198	314	490	697	--	
01644291	(w) Slave Run below Parking Lot Road near Reston, Va.	0.085	45.2	52.5	99.5	162	268	364	476	598	--	
01644295	(p) Smilax Branch at Dulles Airport Road at Reston, Va.	0.33	82.8	96.0	170	255	398	538	709	918	1,267	
01644295	(r) Smilax Branch at Dulles Airport Road at Reston, Va.	0.33	81.6	102	188	290	466	563	834	1,076	1,438	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01644295	(w) Smilax Branch at Dulles Airport Road at Reston, Va.	0.33	--	--	179	271	426	548	754	969	1,315	
01644300	(p) Sugarland Run at Route 606 at Herndon, Va.	3.39	373	399	519	628	778	900	1,031	1,173	1,378	
01644300	(r) Sugarland Run at Route 606 at Herndon, Va.	3.39	243	292	583	970	1,713	2,480	3,546	4,756	--	
01644300	(w) Sugarland Run at Route 606 at Herndon, Va.	3.39	306	345	546	739	982	1,154	1,328	1,494	--	
01644370	(p) Sugarland Run at Route 7 near Dranesville, Va.	13.4	--	--	--	--	--	--	--	--	--	
01644370	(r) Sugarland Run at Route 7 near Dranesville, Va.	13.4	654	771	1,445	2,287	3,833	5,362	7,417	9,732	--	
01644370	(w) Sugarland Run at Route 7 near Dranesville, Va.	13.4	--	--	--	--	--	--	--	--	--	
01645700	(p) Difficult Run at Route 665 near Fairfax, Va.	4.36	489	534	745	933	1,191	1,397	1,616	1,848	2,178	
01645700	(r) Difficult Run at Route 665 near Fairfax, Va.	4.36	377	452	780	1,149	1,757	2,219	2,954	3,715	5,560	
01645700	(w) Difficult Run at Route 665 near Fairfax, Va.	4.36	440	498	761	1,026	1,383	1,669	1,990	2,291	2,786	
01645750	(p) South Fork Little Difficult Run at Fox Mill Road near Fairfax, Va.	1.58	104	115	175	238	338	431	541	672	883	
01645750	(r) South Fork Little Difficult Run at Fox Mill Road near Fairfax, Va.	1.58	206	252	446	668	1,043	1,294	1,796	2,282	3,267	
01645750	(w) South Fork Little Difficult Run at Fox Mill Road near Fairfax, Va.	1.58	145	171	289	412	568	714	894	1,066	1,355	
01645784	(p) Snakeden Branch at Soapstone Drive at Reston, Va.	0.79	419	455	622	768	965	1,119	1,280	1,449	1,686	
01645784	(r) Snakeden Branch at Soapstone Drive at Reston, Va.	0.79	137	169	305	462	730	895	1,279	1,636	2,272	
01645784	(w) Snakeden Branch at Soapstone Drive at Reston, Va.	0.79	274	309	459	620	874	1,034	1,280	1,499	1,810	
01645800	(p) Piney Branch above railroad at Vienna, Va.	0.27	224	230	259	281	309	329	349	369	396	
01645800	(r) Piney Branch above railroad at Vienna, Va.	0.27	72.4	91.1	169	260	420	506	756	977	1,294	
01645800	(w) Piney Branch above railroad at Vienna, Va.	0.27	206	215	249	279	315	338	364	386	414	
01645900	(p) Colvin Run at Hunter Mill Road at Reston (near Herndon), Va.	5.04	365	402	593	783	1,073	1,329	1,624	1,961	2,485	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01645900	(r) Colvin Run at Hunter Mill Road at Reston (near Herndon), Va.	5.04	411	492	845	1,242	1,893	2,397	3,171	3,983	5,999	
01645900	(w) Colvin Run at Hunter Mill Road at Reston (near Herndon), Va.	5.04	385	443	712	993	1,379	1,725	2,124	2,533	3,270	
01645950	(p) Piney Run at Leesburg Pike at Reston, Va.	2.05	--	--	--	--	--	--	--	--	--	
01645950	(r) Piney Run at Leesburg Pike at Reston, Va.	2.05	241	293	515	768	1,192	1,486	2,041	2,586	3,744	
01645950	(w) Piney Run at Leesburg Pike at Reston, Va.	2.05	--	--	--	--	--	--	--	--	--	
01645975	(p) Rocky Run at Towlston Road near Great Falls, Va.	3.19	1,220	1,239	1,321	1,386	1,466	1,525	1,583	1,641	1,718	
01645975	(r) Rocky Run at Towlston Road near Great Falls, Va.	3.19	313	378	657	973	1,496	1,879	2,534	3,198	4,720	
01645975	(w) Rocky Run at Towlston Road near Great Falls, Va.	3.19	546	603	846	1,107	1,483	1,716	2,026	2,263	2,644	
01646000	(p) Difficult Run below Route 193 near Great Falls, Va.	57.8	1,770	2,002	3,380	5,075	8,264	11,680	16,270	22,440	33,910	
01646000	(r) Difficult Run below Route 193 near Great Falls, Va.	57.8	1,745	2,005	3,242	4,570	6,632	8,768	10,480	12,845	21,540	
01646000	(w) Difficult Run below Route 193 near Great Falls, Va.	57.8	1,755	2,004	3,291	4,748	7,296	9,930	12,918	17,153	27,940	
01646200	(p) Scott Run at Old Georgetown Pike near McLean, Va.	4.67	1,107	1,271	2,189	3,226	4,999	6,723	8,859	11,490	15,910	
01646200	(r) Scott Run at Old Georgetown Pike near McLean, Va.	4.67	393	471	811	1,192	1,820	2,302	3,055	3,839	5,764	
01646200	(w) Scott Run at Old Georgetown Pike near McLean, Va.	4.67	576	670	1,119	1,652	2,710	3,512	4,854	6,479	9,900	
01646300	(p) Dead Run at Benjamin Street near McLean, Va.	1.89	--	--	--	--	--	--	--	--	--	
01646300	(r) Dead Run at Benjamin Street near McLean, Va.	1.89	230	279	492	736	1,143	1,423	1,961	2,487	3,588	
01646300	(w) Dead Run at Benjamin Street near McLean, Va.	1.89	--	--	--	--	--	--	--	--	--	
01646600	(p) Pimmit Run at Great Falls Road near Falls Church, Va.	2.88	621	675	931	1,162	1,483	1,744	2,024	2,325	2,759	
01646600	(r) Pimmit Run at Great Falls Road near Falls Church, Va.	2.88	295	356	621	921	1,419	1,780	2,410	3,044	4,474	
01646600	(w) Pimmit Run at Great Falls Road near Falls Church, Va.	2.88	465	522	781	1,051	1,460	1,757	2,142	2,513	3,106	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01646700	(p) Pimmit Run below Kirby Road at Arlington, Va.	8.26	1,257	1,397	2,117	2,849	3,983	4,998	6,173	7,534	9,665	
01646700	(r) Pimmit Run below Kirby Road at Arlington, Va.	8.26	551	654	1,110	1,617	2,440	3,117	4,039	5,048	7,771	
01646700	(w) Pimmit Run below Kirby Road at Arlington, Va.	8.26	832	945	1,485	2,091	3,158	3,996	5,139	6,443	8,976	
01646750	(p) Little Pimmit Run tributary above Little Falls Road at Arlington, Va.	0.43	287	321	499	683	974	1,239	1,549	1,912	2,490	
01646750	(r) Little Pimmit Run tributary above Little Falls Road at Arlington, Va.	0.43	95.4	119	218	334	534	648	949	1,222	1,652	
01646750	(w) Little Pimmit Run tributary above Little Falls Road at Arlington, Va.	0.43	160	187	309	453	720	894	1,236	1,585	2,143	
01646800	(p) Little Pimmit Run at Route 689 at Arlington, Va.	2.31	957	1,058	1,587	2,143	3,035	3,861	4,845	6,019	7,921	
01646800	(r) Little Pimmit Run at Route 689 at Arlington, Va.	2.31	259	314	550	819	1,267	1,583	2,164	2,739	3,986	
01646800	(w) Little Pimmit Run at Route 689 at Arlington, Va.	2.31	512	581	907	1,294	2,045	2,580	3,479	4,497	6,358	
01652400	(p) Long Branch at South Carlyn Springs Road at Arlington, Va.	0.94	683	723	909	1,074	1,300	1,481	1,675	1,881	2,178	
01652400	(r) Long Branch at South Carlyn Springs Road at Arlington, Va.	0.94	152	187	335	507	798	982	1,393	1,779	2,488	
01652400	(w) Long Branch at South Carlyn Springs Road at Arlington, Va.	0.94	484	522	697	881	1,173	1,358	1,619	1,864	2,217	
01652430	(p) Doctors Run at 8th Street at Arlington, Va.	0.93	663	724	1,041	1,362	1,858	2,304	2,822	3,426	4,378	
01652430	(r) Doctors Run at 8th Street at Arlington, Va.	0.93	--	--	79.0	122	198	274	364	479	1,030	
01652430	(w) Doctors Run at 8th Street at Arlington, Va.	0.93	--	--	515	708	1,043	1,379	1,788	2,292	3,373	
01652470	(p) Lucky Run at Dimwiddie Street at Arlington, Va.	1.3	745	844	1,390	1,988	2,985	3,936	5,095	6,503	8,832	
01652470	(r) Lucky Run at Dimwiddie Street at Arlington, Va.	1.3	--	--	98.0	151	242	335	443	580	1,237	
01652470	(w) Lucky Run at Dimwiddie Street at Arlington, Va.	1.3	--	--	447	662	1,069	1,512	2,094	2,869	4,851	
01652500	(p) Fournile Run at Shirlington Road at Alexandria, Va.	12.6	2,978	3,389	5,520	7,684	11,000	13,920	17,240	21,010	26,770	
01652500	(r) Fournile Run at Shirlington Road at Alexandria, Va.	12.6	--	--	423	625	966	1,290	1,665	2,131	4,295	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01652690	(r) Holmes Run above Route 236 at Alexandria, Va.	18.8	897	1,050	1,746	2,508	3,723	4,826	6,044	7,492	11,958	
01652690	(w) Holmes Run above Route 236 at Alexandria, Va.	18.8	--	--	--	--	--	--	--	--	--	--
01652710	(p) Backlick Run at Leesville Boulevard at Springfield, Va.	2.08	545	601	871	1,124	1,486	1,788	2,118	2,479	3,009	
01652710	(r) Backlick Run at Leesville Boulevard at Springfield, Va.	2.08	243	295	519	774	1,201	1,497	2,055	2,604	3,773	
01652710	(w) Backlick Run at Leesville Boulevard at Springfield, Va.	2.08	378	430	671	933	1,356	1,657	2,093	2,522	3,220	
01652810	(p) Turkeycock Run at Shirley Route at Alexandria, Va.	2.28	365	397	559	720	966	1,183	1,434	1,722	2,172	
01652810	(r) Turkeycock Run at Shirley Route at Alexandria, Va.	2.28	--	--	141	214	341	467	615	800	1,683	
01652810	(w) Turkeycock Run at Shirley Route at Alexandria, Va.	2.28	--	--	396	532	755	963	1,207	1,493	2,083	
01652910	(p) Backlick Run below South Van Dorn Street at Alexandria, Va.	13.5	2,108	2,371	3,703	5,021	6,999	8,712	10,640	12,800	16,070	
01652910	(r) Backlick Run below South Van Dorn Street at Alexandria, Va.	13.5	737	867	1,455	2,102	3,140	4,047	5,139	6,391	10,053	
01652910	(w) Backlick Run below South Van Dorn Street at Alexandria, Va.	13.5	1,170	1,330	2,098	2,964	4,561	5,784	7,436	9,366	13,348	
01653000	(p) Cameron Run below railroad bridge at Alexandria, Va.	33.9	4,170	4,642	6,976	9,211	12,470	15,230	18,270	21,620	26,600	
01653000	(r) Cameron Run below railroad bridge at Alexandria, Va.	33.9	1,272	1,474	2,416	3,437	5,041	6,602	8,069	9,943	16,286	
01653000	(w) Cameron Run below railroad bridge at Alexandria, Va.	33.9	2,263	2,528	3,836	5,298	8,011	10,124	12,681	15,785	22,372	
01653210	(p) Pike Branch at Route 611 at Alexandria, Va.	2.59	573	619	840	1,045	1,339	1,584	1,853	2,149	2,587	
01653210	(r) Pike Branch at Route 611 at Alexandria, Va.	2.59	--	--	153	232	369	504	662	861	1,805	
01653210	(w) Pike Branch at Route 611 at Alexandria, Va.	2.59	--	--	579	754	1,028	1,273	1,546	1,856	2,459	
01653447	(p) Penn Daw outfall at Huntington Avenue at Alexandria, Va.	0.79	214	229	301	365	453	524	600	681	799	
01653447	(r) Penn Daw outfall at Huntington Avenue at Alexandria, Va.	0.79	--	--	71.1	110	179	249	331	436	942	
01653447	(w) Penn Daw outfall at Huntington Avenue at Alexandria, Va.	0.79	--	--	220	282	375	455	541	634	818	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01653700	(p) Little Hunting Creek at Route 1 at Gum Springs, Va.	1.97	--	--	--	--	--	--	--	--	--	--
01653700	(r) Little Hunting Creek at Route 1 at Gum Springs, Va.	1.97	128	196	312	428	565	736	1,554	--	--	--
01653700	(w) Little Hunting Creek at Route 1 at Gum Springs, Va.	1.97	--	--	--	--	--	--	--	--	--	--
01653800	(p) Dogue Creek at Route 1 near Accotink, Va.	10.8	--	--	--	--	--	--	--	--	--	--
01653800	(r) Dogue Creek at Route 1 near Accotink, Va.	10.8	383	567	880	1,177	1,522	1,951	3,947	--	--	--
01653800	(w) Dogue Creek at Route 1 near Accotink, Va.	10.8	--	--	--	--	--	--	--	--	--	--
01653900	(p) Accotink Creek at Pickett Street at Fairfax, Va.	6.86	1,271	1,466	2,623	4,041	6,682	9,468	13,170	18,050	26,910	
01653900	(r) Accotink Creek at Pickett Street at Fairfax, Va.	6.86	493	587	1,002	1,464	2,218	2,824	3,688	4,618	7,051	
01653900	(w) Accotink Creek at Pickett Street at Fairfax, Va.	6.86	683	795	1,339	1,993	3,329	4,409	6,201	8,530	13,874	
01653925	(p) Bear Branch at Arlington Boulevard near Vienna, Va.	2.07	--	--	--	--	--	--	--	--	--	--
01653925	(r) Bear Branch at Arlington Boulevard near Vienna, Va.	2.07	242	294	518	772	1,198	1,493	2,050	2,598	3,763	
01653925	(w) Bear Branch at Arlington Boulevard near Vienna, Va.	2.07	--	--	--	--	--	--	--	--	--	--
01653950	(p) Long Branch at Lee Route at Vienna, Va.	1.21	967	1,066	1,547	2,007	2,677	3,244	3,872	4,570	5,610	
01653950	(r) Long Branch at Lee Route at Vienna, Va.	1.21	176	216	385	580	909	1,123	1,576	2,008	2,840	
01653950	(w) Long Branch at Lee Route at Vienna, Va.	1.21	451	509	775	1,087	1,697	2,073	2,747	3,449	4,592	
01654000	(p) Accotink Creek above Route 620 near Annandale, Va.	23.9	2,358	2,673	4,318	6,003	8,618	10,950	13,630	16,710	21,470	
01654000	(r) Accotink Creek above Route 620 near Annandale, Va.	23.9	1,034	1,205	1,993	2,851	4,212	5,483	6,799	8,407	13,561	
01654000	(w) Accotink Creek above Route 620 near Annandale, Va.	23.9	1,459	1,662	2,655	3,766	5,787	7,453	9,530	12,085	17,726	
01654500	(p) Long Branch (Little Run) at Route 620 near Annandale, Va.	3.72	426	503	989	1,634	2,929	4,388	6,430	9,267	14,730	
01654500	(r) Long Branch (Little Run) at Route 620 near Annandale, Va.	3.72	343	413	715	1,056	1,619	2,039	2,733	3,442	5,116	
01654500	(w) Long Branch (Little Run) at Route 620 near Annandale, Va.	3.72	364	435	774	1,175	1,936	2,570	3,651	5,005	8,072	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft ³ /s)									
01655000	(p) Accotink Creek at Army Engineer Road near Accotink Station, Va.	37.1	1,416	1,532	2,111	2,677	3,527	4,269	5,112	6,073	7,554	
01655000	(r) Accotink Creek at Army Engineer Road near Accotink Station, Va.	37.1	1,342	1,553	2,539	3,606	5,280	6,927	8,433	10,382	17,075	
01655000	(w) Accotink Creek at Army Engineer Road near Accotink Station, Va.	37.1	1,388	1,540	2,278	3,024	4,047	5,034	5,952	7,016	9,096	
01655160	(p) Long Branch at Newington Road, near Accotink, Va.	4.26	--	--	--	--	--	--	--	--	--	
01655160	(r) Long Branch at Newington Road, near Accotink, Va.	4.26	211	317	499	677	885	1,145	2,371	--	--	
01655160	(w) Long Branch at Newington Road, near Accotink, Va.	4.26	--	--	--	--	--	--	--	--	--	
01655310	(p) Rabbit Branch at Guinea Road near Burke, Va.	3.82	440	509	933	1,477	2,543	3,721	5,348	7,583	11,840	
01655310	(r) Rabbit Branch at Guinea Road near Burke, Va.	3.82	348	419	726	1,071	1,641	2,068	2,768	3,487	5,188	
01655310	(w) Rabbit Branch at Guinea Road near Burke, Va.	3.82	377	447	782	1,179	1,925	2,562	3,612	4,930	7,844	
01655330	(p) Sideburn Branch at Poburn Road near Fairfax Station, Va.	2.79	--	--	--	--	--	--	--	--	--	
01655330	(r) Sideburn Branch at Poburn Road near Fairfax Station, Va.	2.79	289	350	610	906	1,396	1,750	2,373	2,998	4,400	
01655330	(w) Sideburn Branch at Poburn Road near Fairfax Station, Va.	2.79	--	--	--	--	--	--	--	--	--	
01655340	(p) Pohick Creek tributary at Keene Mill Road near Burke, Va.	0.33	--	--	--	--	--	--	--	--	--	
01655340	(r) Pohick Creek tributary at Keene Mill Road near Burke, Va.	0.33	81.6	102	188	290	466	563	834	1,076	1,438	
01655340	(w) Pohick Creek tributary at Keene Mill Road near Burke, Va.	0.33	--	--	--	--	--	--	--	--	--	
01655350	(p) Pohick Creek at Hooes Road near Springfield, Va.	15.2	871	958	1,434	1,956	2,832	3,680	4,728	6,024	8,217	
01655350	(r) Pohick Creek at Hooes Road near Springfield, Va.	15.2	790	929	1,553	2,239	3,338	4,310	5,446	6,765	10,698	
01655350	(w) Pohick Creek at Hooes Road near Springfield, Va.	15.2	833	944	1,493	2,094	3,040	3,940	4,997	6,274	8,899	
01655370	(p) Middle Run at Route 640 near Lorton, Va.	3.64	497	567	945	1,352	2,015	2,634	3,373	4,254	5,674	
01655370	(r) Middle Run at Route 640 near Lorton, Va.	3.64	339	408	707	1,044	1,601	2,016	2,704	3,407	5,058	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01655370	(w) Middle Run at Route 640 near Lorton, Va.	3.64	394	462	781	1,143	1,763	2,254	2,993	3,809	5,393	
01655380	(p) South Run at Hooes Road near Lorton, Va.	6.3	454	517	869	1,263	1,935	2,589	3,399	4,401	6,087	
01655380	(r) South Run at Hooes Road near Lorton, Va.	6.3	469	559	956	1,399	2,123	2,699	3,537	4,433	6,743	
01655380	(w) South Run at Hooes Road near Lorton, Va.	6.3	463	543	924	1,349	2,041	2,651	3,472	4,417	6,364	
01655390	(p) Pohick Creek at Lorton Road at Lorton, Va.	31.3	1,556	1,738	2,738	3,853	5,757	7,618	9,940	12,830	17,770	
01655390	(r) Pohick Creek at Lorton Road at Lorton, Va.	31.3	1,213	1,408	2,312	3,293	4,838	6,328	7,759	9,569	15,619	
01655390	(w) Pohick Creek at Lorton Road at Lorton, Va.	31.3	1,364	1,549	2,483	3,520	5,274	6,938	8,864	11,343	16,948	
01655500	(p) Cedar Run at Route 672 near Warrenton, Va.	13.1	922	1,091	2,070	3,201	5,145	7,028	9,338	12,150	16,770	
01655500	(r) Cedar Run at Route 672 near Warrenton, Va.	13.1	830	968	1,723	2,582	3,942	5,227	7,023	8,773	--	
01655500	(w) Cedar Run at Route 672 near Warrenton, Va.	13.1	845	989	1,792	2,729	4,291	5,821	7,885	10,146	--	
01656000	(p) Cedar Run at Route 806 near Catlett, Va.	93.4	3,473	3,897	6,155	8,558	12,450	16,080	20,430	25,620	34,040	
01656000	(r) Cedar Run at Route 806 near Catlett, Va.	93.4	2,658	3,041	5,205	7,682	11,957	15,935	21,041	26,764	--	
01656000	(w) Cedar Run at Route 806 near Catlett, Va.	93.4	3,000	3,396	5,636	8,140	12,262	16,034	20,594	25,880	--	
01656100	(p) Cedar Run at Route 611 near Aden, Va.	155	8,578	9,078	11,300	13,170	15,620	17,500	19,440	21,450	24,230	
01656100	(r) Cedar Run at Route 611 near Aden, Va.	155	3,832	4,351	7,271	10,538	16,089	21,173	27,619	34,847	--	
01656100	(w) Cedar Run at Route 611 near Aden, Va.	155	7,141	7,652	10,291	12,670	15,679	17,843	20,012	22,171	--	
01656102	(p) Goslin Run at Marine Road near Aden, Va.	4.82	--	--	--	--	--	--	--	--	--	
01656102	(r) Goslin Run at Marine Road near Aden, Va.	4.82	313	374	736	1,208	2,105	3,021	4,283	5,713	--	
01656102	(w) Goslin Run at Marine Road near Aden, Va.	4.82	--	--	--	--	--	--	--	--	--	
01656120	(p) Cedar Run at Route 646 near Aden, Va.	175	--	--	--	--	--	--	--	--	--	
01656120	(r) Cedar Run at Route 646 near Aden, Va.	175	4,183	4,741	7,878	11,367	17,275	22,664	29,479	37,121	--	
01656120	(w) Cedar Run at Route 646 near Aden, Va.	175	--	--	--	--	--	--	--	--	--	
01656200	(p) Broad Run at Route 17 near Warrenton, Va.	2.55	86.5	94.7	133	166	211	247	283	322	375	
01656200	(r) Broad Run at Route 17 near Warrenton, Va.	2.55	260	308	578	895	1,408	1,907	2,661	3,360	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01656940	(p) Cub Run at Route 29 near Centreville, Va.	39.6	--	--	--	--	--	--	--	--	--	--
01656940	(r) Cub Run at Route 29 near Centreville, Va.	39.6	1,431	1,658	2,954	4,497	7,232	9,847	13,273	17,116	--	--
01656940	(w) Cub Run at Route 29 near Centreville, Va.	39.6	--	--	--	--	--	--	--	--	--	--
01656960	(p) Cub Run at Route 658 near Bull Run, Va.	49.7	3,118	3,579	5,999	8,480	12,300	15,670	19,510	23,850	30,480	--
01656960	(r) Cub Run at Route 658 near Bull Run, Va.	49.7	1,686	1,947	3,432	5,182	8,262	11,186	14,995	19,266	--	--
01656960	(w) Cub Run at Route 658 near Bull Run, Va.	49.7	2,093	2,403	4,227	6,412	10,172	13,625	17,746	22,306	--	--
01657000	(p) Bull Run at Route 616 near Manassas, Va.	146	6,825	7,680	12,500	18,020	27,690	37,370	49,670	65,290	92,450	--
01657000	(r) Bull Run at Route 616 near Manassas, Va.	146	3,670	4,171	6,990	10,152	15,535	20,474	26,746	33,778	--	--
01657000	(w) Bull Run at Route 616 near Manassas, Va.	146	4,779	5,386	9,067	13,599	21,958	30,415	41,451	55,335	--	--
01657020	(p) Bull Run at Route 28 near Manassas Park, Va.	147	--	--	--	--	--	--	--	--	--	--
01657020	(r) Bull Run at Route 28 near Manassas Park, Va.	147	3,688	4,191	7,021	10,195	15,597	20,553	26,844	33,898	--	--
01657020	(w) Bull Run at Route 28 near Manassas Park, Va.	147	--	--	--	--	--	--	--	--	--	--
01657300	(p) Popes Head Creek at Route 654 near Fairfax, Va.	3.59	--	--	--	--	--	--	--	--	--	--
01657300	(r) Popes Head Creek at Route 654 near Fairfax, Va.	3.59	336	404	701	1,036	1,590	2,001	2,685	3,384	5,022	--
01657300	(w) Popes Head Creek at Route 654 near Fairfax, Va.	3.59	--	--	--	--	--	--	--	--	--	--
01657415	(p) Bull Run above Yates Ford near Clifton, Va.	185	10,740	12,080	19,930	29,360	46,710	64,910	89,010	120,800	178,900	--
01657415	(r) Bull Run above Yates Ford near Clifton, Va.	185	4,354	4,930	8,172	11,768	17,847	23,382	30,372	38,212	--	--
01657415	(w) Bull Run above Yates Ford near Clifton, Va.	185	6,370	7,150	12,135	18,676	31,624	45,590	64,765	90,155	--	--
01657500	(p) Occoquan River (Creek) near Occoquan (site now in Occoquan Reservoir), Va.	570	11,020	11,930	16,190	20,000	25,260	29,500	34,030	38,870	45,820	--
01657500	(r) Occoquan River (Creek) near Occoquan (site now in Occoquan Reservoir), Va.	570	9,812	10,925	17,174	23,750	34,510	43,959	55,578	68,677	--	--
01657500	(w) Occoquan River (Creek) near Occoquan (site now in Occoquan Reservoir), Va.	570	10,551	11,536	16,532	21,057	27,134	31,793	36,718	41,845	--	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01657600	(p) Sandy Run at Henderson Road near Fairfax Station, Va.	2.35	269	320	666	1,163	2,255	3,589	5,595	8,583	14,830	
01657600	(r) Sandy Run at Henderson Road near Fairfax Station, Va.	2.35	261	317	555	826	1,279	1,598	2,182	2,761	4,022	
01657600	(w) Sandy Run at Henderson Road near Fairfax Station, Va.	2.35	263	318	578	892	1,498	2,003	2,934	4,119	6,820	
01657655	(p) Hoopes Run above Route 641 near Occoquan, Va.	3.92	558	623	964	1,316	1,873	2,379	2,974	3,672	4,780	
01657655	(r) Hoopes Run above Route 641 near Occoquan, Va.	3.92	354	425	736	1,086	1,663	2,097	2,804	3,530	5,259	
01657655	(w) Hoopes Run above Route 641 near Occoquan, Va.	3.92	439	507	826	1,179	1,765	2,234	2,895	3,612	4,948	
01657800	(p) Giles Run at Route 1 near Woodbridge, Va.	4.52	518	559	760	955	1,243	1,492	1,772	2,089	2,572	
01657800	(r) Giles Run at Route 1 near Woodbridge, Va.	4.52	--	--	219	329	518	702	916	1,184	2,449	
01657800	(w) Giles Run at Route 1 near Woodbridge, Va.	4.52	--	--	583	762	1,043	1,296	1,583	1,912	2,555	
01658480	(p) Quantico Creek at pyrite mine road near Dumfries, Va.	6.89	--	--	--	--	--	--	--	--	--	
01658480	(r) Quantico Creek at pyrite mine road near Dumfries, Va.	6.89	494	589	1,004	1,468	2,223	2,830	3,696	4,627	7,067	
01658480	(w) Quantico Creek at pyrite mine road near Dumfries, Va.	6.89	--	--	--	--	--	--	--	--	--	
01658500	(p) South Fork Quantico Creek at Route 619 near Independent Hill, Va.	7.62	531	607	1,025	1,487	2,257	2,992	3,886	4,969	6,753	
01658500	(r) South Fork Quantico Creek at Route 619 near Independent Hill, Va.	7.62	525	624	1,062	1,549	2,341	2,986	3,883	4,857	7,450	
01658500	(w) South Fork Quantico Creek at Route 619 near Independent Hill, Va.	7.62	528	614	1,042	1,515	2,290	2,990	3,885	4,933	6,934	
01658550	(p) South Fork Quantico Creek at Camp 5 Lake, near Joplin, Va.	9.57	--	--	--	--	--	--	--	--	--	
01658550	(r) South Fork Quantico Creek at Camp 5 Lake, near Joplin, Va.	9.57	601	711	1,204	1,749	2,631	3,370	4,342	5,418	8,395	
01658550	(w) South Fork Quantico Creek at Camp 5 Lake, near Joplin, Va.	9.57	--	--	--	--	--	--	--	--	--	
01658650	(p) South Fork Quantico Creek above mouth near Dumfries, Va.	16.7	--	--	--	--	--	--	--	--	--	
01658650	(r) South Fork Quantico Creek above mouth near Dumfries, Va.	16.7	836	980	1,636	2,355	3,503	4,531	5,703	7,078	11,238	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01658650	(w) South Fork Quantico Creek above mouth near Dumfries, Va.	16.7	--	--	--	--	--	--	--	--	--	--
01658698	(p) Little Creek at Mocking Bird Road at Triangle, Va.	2.06	--	--	--	--	--	--	--	--	--	--
01658698	(r) Little Creek at Mocking Bird Road at Triangle, Va.	2.06	132	201	321	440	579	755	1,592	--	--	--
01658698	(w) Little Creek at Mocking Bird Road at Triangle, Va.	2.06	--	--	--	--	--	--	--	--	--	--
01658705	(p) Little Creek at Geiger Road at Quantico, Va.	3.28	--	--	--	--	--	--	--	--	--	--
01658705	(r) Little Creek at Geiger Road at Quantico, Va.	3.28	178	269	426	580	760	985	2,054	--	--	--
01658705	(w) Little Creek at Geiger Road at Quantico, Va.	3.28	--	--	--	--	--	--	--	--	--	--
01659000	(p) North Branch Chopawamsic Creek above Marine Road 1 near Independent Hill, Va.	5.69	211	231	323	406	521	614	713	819	972	
01659000	(r) North Branch Chopawamsic Creek above Marine Road 1 near Independent Hill, Va.	5.69	441	527	904	1,325	2,014	2,556	3,365	4,221	6,393	
01659000	(w) North Branch Chopawamsic Creek above Marine Road 1 near Independent Hill, Va.	5.69	287	330	522	703	886	1,076	1,235	1,375	1,616	
01659500	(p) Middle Branch Chopawamsic Creek above Marine Road near Garrisonville, Va.	4.46	127	151	294	470	793	1,125	1,554	2,103	3,063	
01659500	(r) Middle Branch Chopawamsic Creek above Marine Road near Garrisonville, Va.	4.46	382	458	790	1,163	1,777	2,246	2,987	3,756	5,627	
01659500	(w) Middle Branch Chopawamsic Creek above Marine Road near Garrisonville, Va.	4.46	282	342	626	937	1,400	1,831	2,405	3,029	4,349	
01660000	(p) South Branch Chopawamsic Creek below Marine Road 1 near Garrisonville, Va.	2.46	202	224	336	444	603	738	889	1,057	1,308	
01660000	(r) South Branch Chopawamsic Creek below Marine Road 1 near Garrisonville, Va.	2.46	268	325	569	847	1,309	1,637	2,231	2,823	4,120	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
01660000	(w) South Branch Chopawamsic Creek below Marine Road 1 near Garrisonville, Va.	2.46	233	271	449	631	870	1,076	1,322	1549.78	1928.40	
01660100	(p) Chopawamsic Creek at Russell Road near Joplin, Va.	22.1	583	612	745	857	1,004	1,118	1,236	1,359	1,530	
01660100	(r) Chopawamsic Creek at Russell Road near Joplin, Va.	22.1	987	1,152	1,909	2,735	4,046	5,259	6,543	8,097	13,016	
01660100	(w) Chopawamsic Creek at Russell Road near Joplin, Va.	22.1	641	691	911	1,095	1,268	1,449	1,574	1,699	1,907	
01660110	(p) Chopawamsic Creek at Interstate 95 near Joplin, Va.	22.6	--	--	--	--	--	--	--	--	--	
01660110	(r) Chopawamsic Creek at Interstate 95 near Joplin, Va.	22.6	1,000	1,167	1,932	2,768	4,093	5,322	6,615	8,184	13,169	
01660110	(w) Chopawamsic Creek at Interstate 95 near Joplin, Va.	22.6	--	--	--	--	--	--	--	--	--	
01660400	(p) Aquia Creek at Route 641 near Garrisonville, Va.	35	1,389	1,563	2,574	3,787	6,014	8,342	11,420	15,470	22,850	
01660400	(r) Aquia Creek at Route 641 near Garrisonville, Va.	35	1,296	1,502	2,459	3,496	5,124	6,715	8,196	10,096	16,561	
01660400	(w) Aquia Creek at Route 641 near Garrisonville, Va.	35	1,336	1,527	2,503	3,606	5,516	7,419	9,679	12,735	20,079	
01660500	(p) Beaverdam Run at Marine Road 2 near Garrisonville, Va.	13.2	379	457	959	1,638	3,012	4,562	6,725	9,713	15,410	
01660500	(r) Beaverdam Run at Marine Road 2 near Garrisonville, Va.	13.2	727	856	1,437	2,077	3,104	3,999	5,083	6,322	9,935	
01660500	(w) Beaverdam Run at Marine Road 2 near Garrisonville, Va.	13.2	548	658	1,229	1,894	3,062	4,248	5,849	7,986	12,919	
01661600	(p) Great Wicomico River at Route 604 near Horse Head, Va.	7.03	748	784	960	1,127	1,368	1,572	1,798	2,049	2,425	
01661600	(r) Great Wicomico River at Route 604 near Horse Head, Va.	7.03	291	434	677	912	1,185	1,525	3,120	--	--	
01661600	(w) Great Wicomico River at Route 604 near Horse Head, Va.	7.03	--	--	853	1,026	1,282	1,501	1,741	2,007	2,462	
01661800	(p) Bush Mill Stream at Route 601 near Heathsville, Va.	6.77	170	193	322	469	723	974	1,290	1,686	2,362	
01661800	(r) Bush Mill Stream at Route 601 near Heathsville, Va.	6.77	284	424	662	892	1,159	1,493	3,056	--	--	
01661800	(w) Bush Mill Stream at Route 601 near Heathsville, Va.	6.77	--	--	305	449	698	942	1,241	1,619	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01661900	(p) Carter Run off Route 691 near Marshall, Va.	20.4	1,377	1,571	2,635	3,810	5,777	7,657	9,952	12,740	17,360	
01661900	(r) Carter Run off Route 691 near Marshall, Va.	20.4	1,136	1,321	2,317	3,438	5,209	6,866	9,133	11,375	--	
01661900	(w) Carter Run off Route 691 near Marshall, Va.	20.4	1,194	1,382	2,412	3,571	5,452	7,244	9,563	12,143	--	
01662000	(p) Rappahannock River at Route 211 near Warrenton, Va.	195	4,399	4,981	8,125	11,520	17,090	22,320	28,620	36,180	48,520	
01662000	(r) Rappahannock River at Route 211 near Warrenton, Va.	195	5,632	6,412	10,465	14,813	21,549	27,584	34,833	42,744	--	
01662000	(w) Rappahannock River at Route 211 near Warrenton, Va.	195	5,259	5,966	9,604	13,409	19,332	24,718	31,185	38,656	--	
01662300	(p) Thornton River tributary at Route 211 near Thornton Gap, Va.	1.37	53.3	59.4	90.9	123	172	216	267	326	417	
01662300	(r) Thornton River tributary at Route 211 near Thornton Gap, Va.	1.37	167	199	381	599	953	1,301	1,841	2,334	--	
01662300	(w) Thornton River tributary at Route 211 near Thornton Gap, Va.	1.37	122	141	234	320	427	513	621	712	--	
01662500	(p) Rush River at old Route 522 at Washington, Va.	14.6	518	586	977	1,437	2,264	3,111	4,209	5,629	8,152	
01662500	(r) Rush River at old Route 522 at Washington, Va.	14.6	896	1,045	1,853	2,769	4,221	5,588	7,490	9,349	--	
01662500	(w) Rush River at old Route 522 at Washington, Va.	14.6	773	890	1,500	2,150	3,173	4,151	5,447	6,920	--	
01662600	(p) Rush River tributary at Route 522 near Washington, Va.	0.057	14.2	15.1	19.0	22.3	26.9	30.6	34.4	38.5	44.3	
01662600	(r) Rush River tributary at Route 522 near Washington, Va.	0.057	17.6	21.5	45.6	76.6	129	183	279	362	--	
01662600	(w) Rush River tributary at Route 522 near Washington, Va.	0.057	16.6	19.5	34.2	47.6	62.9	73.9	87.8	95.8	--	
01662800	(p) Battle Run at Route 729 near Laurel Mills, Va.	25.8	1,312	1,531	2,857	4,519	7,673	11,050	15,570	21,600	32,670	
01662800	(r) Battle Run at Route 729 near Laurel Mills, Va.	25.8	1,342	1,556	2,710	4,002	6,038	7,935	10,498	13,055	--	
01662800	(w) Battle Run at Route 729 near Laurel Mills, Va.	25.8	1,336	1,551	2,746	4,150	6,588	9,092	12,562	16,763	--	
01663000	(p) Thornton River at Route 729 near Laurel Mills, Va.	139	5,861	6,840	12,840	20,470	35,240	51,330	73,250	102,900	158,300	
01663000	(r) Thornton River at Route 729 near Laurel Mills, Va.	139	4,430	5,060	8,347	11,900	17,416	22,392	28,498	35,048	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01663000	(w) Thornton River at Route 729 near Laurel Mills, Va.	139	4,676	5,373	9,265	13,927	22,356	31,234	43,387	59,167	--	
01663500	(p) Hazel River at Route 229 at Rixeyville, Va.	285	7,615	8,620	14,280	20,770	32,090	43,380	57,670	75,710	106,900	
01663500	(r) Hazel River at Route 229 at Rixeyville, Va.	285	7,370	8,364	13,485	18,936	27,359	34,849	43,624	53,398	--	
01663500	(w) Hazel River at Route 229 at Rixeyville, Va.	285	7,436	8,434	13,744	19,628	29,444	38,969	50,939	65,739	--	
01664000	(p) Rappahannock River at Route 29 (Alternate) at Remington, Va.	619	12,280	13,800	21,900	30,480	44,330	57,150	72,430	90,590	119,900	
01664000	(r) Rappahannock River at Route 29 (Alternate) at Remington, Va.	619	12,773	14,394	22,639	31,277	44,563	56,193	69,099	84,149	--	
01664000	(w) Rappahannock River at Route 29 (Alternate) at Remington, Va.	619	12,624	14,208	22,367	30,938	44,447	56,712	71,043	88,141	--	
01664500	(p) Rappahannock River at Route 620 at Kellys Ford near Remington, Va.	641	11,590	13,190	22,400	33,320	53,040	73,330	99,710	133,900	194,700	
01664500	(r) Rappahannock River at Route 620 at Kellys Ford near Remington, Va.	641	13,094	14,750	23,173	31,992	45,553	57,415	70,545	85,890	--	
01664500	(w) Rappahannock River at Route 620 at Kellys Ford near Remington, Va.	641	12,687	14,317	22,924	32,482	48,743	64,799	85,026	111,125	--	
01664700	(p) Browns Run at Route 17 near Bealeton, Va.	7.75	637	651	712	759	816	857	897	936	988	
01664700	(r) Browns Run at Route 17 near Bealeton, Va.	7.75	441	523	1,007	1,625	2,781	3,944	5,528	7,317	--	
01664700	(w) Browns Run at Route 17 near Bealeton, Va.	7.75	626	645	723	779	840	881	921	959	--	
01664800	(p) Harpers Run at Route 17 near Morrisville, Va.	2.32	218	263	551	939	1,723	2,603	3,828	5,515	8,718	
01664800	(r) Harpers Run at Route 17 near Morrisville, Va.	2.32	259	314	551	821	1,270	1,587	2,168	2,744	3,995	
01664800	(w) Harpers Run at Route 17 near Morrisville, Va.	2.32	248	301	551	845	1,378	1,811	2,574	3,477	5,417	
01665000	(p) Mountain Run at Route 641 near Culpeper, Va.	16.1	1,374	1,645	3,271	5,248	8,823	12,440	17,050	22,850	32,790	
01665000	(r) Mountain Run at Route 641 near Culpeper, Va.	16.1	961	1,119	1,978	2,950	4,488	5,935	7,937	9,901	--	
01665000	(w) Mountain Run at Route 641 near Culpeper, Va.	16.1	1,016	1,191	2,185	3,388	5,491	7,642	10,641	--	--	
01665050	(p) Pony Mountain Branch at Route 3 near Culpeper, Va.	0.28	66.2	76.5	134	197	303	405	528	676	920	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01665050	(r) Pony Mountain Branch at Route 3 near Culpeper, Va.	0.28	40.1	50.0	112	205	397	612	929	1,297	--	
01665050	(w) Pony Mountain Branch at Route 3 near Culpeper, Va.	0.28	45.4	55.5	118	202	356	505	692	892	--	
01665200	(p) Rock Run tributary 2 at Route 17 near Goldvein, Va.	1.02	80.1	95.2	191	317	567	846	1,231	1,761	2,763	
01665200	(r) Rock Run tributary 2 at Route 17 near Goldvein, Va.	1.02	159	196	351	529	833	1,025	1,449	1,850	2,597	
01665200	(w) Rock Run tributary 2 at Route 17 near Goldvein, Va.	1.02	133	164	306	472	748	972	1,377	1,818	2,663	
01665300	(p) Rapidan River at Route 230 near Stanardsville, Va.	37.6	--	--	--	--	--	--	--	--	--	
01665300	(r) Rapidan River at Route 230 near Stanardsville, Va.	37.6	1,753	2,026	3,485	5,107	7,652	10,007	13,125	16,281	--	
01665300	(w) Rapidan River at Route 230 near Stanardsville, Va.	37.6	--	--	--	--	--	--	--	--	--	
01665400	(p) Conway River at Route 230 near Stanardsville, Va.	26	--	--	--	--	--	--	--	--	--	
01665400	(r) Conway River at Route 230 near Stanardsville, Va.	26	1,350	1,565	2,724	4,022	6,068	7,973	10,546	13,114	--	
01665400	(w) Conway River at Route 230 near Stanardsville, Va.	26	--	--	--	--	--	--	--	--	--	
01665450	(p) South River at Route 230 near Stanardsville, Va.	19	--	--	--	--	--	--	--	--	--	
01665450	(r) South River at Route 230 near Stanardsville, Va.	19	1,081	1,256	2,209	3,284	4,981	6,572	8,756	10,911	--	
01665450	(w) South River at Route 230 near Stanardsville, Va.	19	--	--	--	--	--	--	--	--	--	
01665500	(p) Rapidan River below Route 29 near Ruckersville, Va.	115	4,688	5,553	10,930	17,880	31,370	46,100	66,110	93,100	143,200	
01665500	(r) Rapidan River below Route 29 near Ruckersville, Va.	115	3,873	4,431	7,354	10,526	15,459	19,925	25,468	31,361	--	
01665500	(w) Rapidan River below Route 29 near Ruckersville, Va.	115	4,001	4,610	8,008	12,076	19,385	27,055	37,567	51,048	--	
01666500	(p) Robinson (Robertson) River at Route 614 near Locust Dale, Va.	179	5,920	6,830	11,750	17,010	25,460	33,200	42,290	52,910	69,670	
01666500	(r) Robinson (Robertson) River at Route 614 near Locust Dale, Va.	179	5,300	6,039	9,883	14,015	20,419	26,167	33,109	40,651	--	
01666500	(w) Robinson (Robertson) River at Route 614 near Locust Dale, Va.	179	5,431	6,211	10,364	14,927	22,271	29,070	37,299	46,720	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01667000	(p) Rapidan River below Route 615 at Rapidan, Va.	445	7,970	9,155	15,900	23,710	37,390	51,040	68,290	90,000	127,300	
01667000	(r) Rapidan River below Route 615 at Rapidan, Va.	445	10,109	11,425	18,160	25,263	36,209	45,855	56,817	69,342	--	
01667000	(w) Rapidan River below Route 615 at Rapidan, Va.	445	9,554	10,822	17,465	24,713	36,696	48,200	62,413	80,070	--	
01667500	(p) Rapidan River above Route 522 near Culpeper, Va.	468	10,030	11,460	19,250	27,720	41,660	54,770	70,550	89,460	120,200	
01667500	(r) Rapidan River above Route 522 near Culpeper, Va.	468	10,476	11,835	18,781	26,101	37,375	47,301	58,540	71,422	--	
01667500	(w) Rapidan River above Route 522 near Culpeper, Va.	468	10,363	11,738	18,924	26,674	39,168	50,758	64,582	81,150	--	
01667600	(p) Cedar Run tributary at Route 522 near Culpeper, Va.	0.67	76.8	82.0	105	125	151	171	192	214	243	
01667600	(r) Cedar Run tributary at Route 522 near Culpeper, Va.	0.67	75.2	92.7	200	353	662	999	1,485	2,044	--	
01667600	(w) Cedar Run tributary at Route 522 near Culpeper, Va.	0.67	75.8	88.6	155	220	295	342	384	415	--	
01667870	(p) Mountain Run at Route 611 near Burr Hill, Va.	28.8	1,637	2,023	4,696	8,636	17,310	27,820	43,380	66,100	112,200	
01667870	(r) Mountain Run at Route 611 near Burr Hill, Va.	28.8	1,155	1,342	2,209	3,150	4,636	6,054	7,449	9,194	14,953	
01667870	(w) Mountain Run at Route 611 near Burr Hill, Va.	28.8	1,239	1,452	2,513	3,750	6,181	8,446	11,538	16,025	28,993	
01668000	(p) Rappahannock River below Motts Run near Fredericksburg, Va.	1,595	28,550	31,460	45,690	59,140	78,610	94,970	113,000	132,800	162,200	
01668000	(r) Rappahannock River below Motts Run near Fredericksburg, Va.	1,595	24,989	27,921	42,603	57,701	80,823	100,670	121,126	146,588	--	
01668000	(w) Rappahannock River below Motts Run near Fredericksburg, Va.	1,595	26,297	29,261	43,977	58,437	79,515	97,013	115,573	136,650	--	
01668200	(p) Gingoteague Run at Route 623 near Port Royal, Va.	2.8	66.1	76.2	138	215	365	529	752	1,056	1,627	
01668200	(r) Gingoteague Run at Route 623 near Port Royal, Va.	2.8	--	--	161	244	387	528	693	900	1,884	
01668200	(w) Gingoteague Run at Route 623 near Port Royal, Va.	2.8	--	--	149	230	376	529	724	986	1,723	
01668300	(p) Farmers Hall Creek at Route 17 near Champlain, Va.	2.18	78.5	90.0	155	231	363	496	664	877	1,243	
01668300	(r) Farmers Hall Creek at Route 17 near Champlain, Va.	2.18	--	--	137	208	332	455	599	780	1,642	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01668300	(w) Farmers Hall Creek at Route 17 near Champlain, Va.	2.18	--	--	145	219	347	476	633	834	1,386	
01668500	(p) Cat Point Creek below Route 637 near Montross, Va.	45.6	668	777	1,439	2,277	3,884	5,625	7,987	11,170	17,090	
01668500	(r) Cat Point Creek below Route 637 near Montross, Va.	45.6	--	--	969	1,398	2,115	2,770	3,525	4,452	8,692	
01668500	(w) Cat Point Creek below Route 637 near Montross, Va.	45.6	--	--	1,170	1,765	2,859	3,996	5,497	7,526	13,112	
01668800	(p) Hoskins Creek at Route 717 near Tap-pahannock, Va.	15.4	148	164	243	324	447	558	685	832	1,061	
01668800	(r) Hoskins Creek at Route 717 near Tap-pahannock, Va.	15.4	--	--	482	709	1,092	1,453	1,872	2,390	4,795	
01668800	(w) Hoskins Creek at Route 717 near Tap-pahannock, Va.	15.4	--	--	303	416	587	734	895	1,077	1,473	
01669000	(p) Piscataway Creek at Route 691 near Tap-pahannock, Va.	27.9	312	357	604	875	1,326	1,754	2,273	2,900	3,926	
01669000	(r) Piscataway Creek at Route 691 near Tap-pahannock, Va.	27.9	--	--	706	1,028	1,568	2,069	2,647	3,360	6,640	
01669000	(w) Piscataway Creek at Route 691 near Tap-pahannock, Va.	27.9	--	--	649	942	1,428	1,880	2,414	3,062	4,678	
01669300	(p) Yorkers Swamp at Route 17 near Center Cross, Va.	1.42	31.1	35.7	63.0	96.3	158	224	311	426	635	
01669300	(r) Yorkers Swamp at Route 17 near Center Cross, Va.	1.42	--	--	104	159	256	353	466	610	1,299	
01669300	(w) Yorkers Swamp at Route 17 near Center Cross, Va.	1.42	--	--	79.3	121	195	271	365	486	806	
01669500	(p) Dragon Swamp at Route 602 near Church View, Va.	86	608	708	1,306	2,037	3,390	4,803	6,661	9,086	13,430	
01669500	(r) Dragon Swamp at Route 602 near Church View, Va.	86	--	--	1,458	2,080	3,113	4,037	5,103	6,404	12,306	
01669500	(w) Dragon Swamp at Route 602 near Church View, Va.	86	--	--	1,383	2,059	3,248	4,419	5,902	7,826	12,980	
01669520	(p) Dragon Swamp at Route 603 at Mascot, Va.	109	1,071	1,216	2,030	2,959	4,573	6,172	8,187	10,720	15,060	
01669520	(r) Dragon Swamp at Route 603 at Mascot, Va.	109	--	--	1,699	2,412	3,596	4,648	5,859	7,336	14,012	
01669520	(w) Dragon Swamp at Route 603 at Mascot, Va.	109	--	--	1,882	2,714	4,148	5,533	7,256	9,438	14,735	
01669800	(p) My Ladys Swamp at Route 629 near Saluda, Va.	4.92	188	204	284	365	487	596	721	866	1,092	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined][illegible]

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01671020	(r) North Anna River at Route 30 at Hart Corner, near Doswell, Va.	462	5,986	6,639	10,191	13,865	19,303	26,472	29,018	34,836	64,014	
01671020	(w) North Anna River at Route 30 at Hart Corner, near Doswell, Va.	462	--	--	--	--	--	--	--	--	--	
01671025	(p) North Anna River above Little River near Doswell, Va.	467	--	--	--	--	--	--	--	--	--	
01671025	(r) North Anna River above Little River near Doswell, Va.	467	6,024	6,680	10,252	13,945	19,410	26,624	29,172	35,016	64,376	
01671025	(w) North Anna River above Little River near Doswell, Va.	467	--	--	--	--	--	--	--	--	--	
01671100	(p) Little River at Route 685 near Doswell, Va.	107	1,617	1,891	3,360	4,901	7,302	9,427	11,850	14,590	18,740	
01671100	(r) Little River at Route 685 near Doswell, Va.	107	2,514	2,858	4,552	6,349	9,101	12,164	14,171	17,263	29,744	
01671100	(w) Little River at Route 685 near Doswell, Va.	107	2,195	2,531	4,198	5,921	8,463	11,182	13,267	16,115	24,011	
01671500	(p) Bunch (Hudson) Creek at Route 15 near Boswells Tavern, Va.	4.34	267	306	540	839	1,423	2,069	2,965	4,201	6,568	
01671500	(r) Bunch (Hudson) Creek at Route 15 near Boswells Tavern, Va.	4.34	376	451	778	1,147	1,753	2,214	2,947	3,707	5,547	
01671500	(w) Bunch (Hudson) Creek at Route 15 near Boswells Tavern, Va.	4.34	331	393	691	1,035	1,614	2,155	2,955	3,935	6,070	
01671615	(p) Fosters Creek at Route 250 near Fern-cliff, Va.	0.61	123	144	272	431	730	1,047	1,467	2,022	3,026	
01671615	(r) Fosters Creek at Route 250 near Fern-cliff, Va.	0.61	117	146	264	402	639	780	1,127	1,445	1,984	
01671615	(w) Fosters Creek at Route 250 near Fern-cliff, Va.	0.61	119	145	266	410	668	859	1,241	1,657	2,410	
01671650	(p) Waldrop (Waldrops) Creek at Route 632 near Louisa, Va.	3.03	352	410	735	1,104	1,735	2,346	3,099	4,021	5,553	
01671650	(r) Waldrop (Waldrops) Creek at Route 632 near Louisa, Va.	3.03	304	367	639	946	1,457	1,829	2,471	3,120	4,595	
01671650	(w) Waldrop (Waldrops) Creek at Route 632 near Louisa, Va.	3.03	319	380	665	990	1,551	1,999	2,704	3,487	5,046	
01671750	(p) Harris Creek at Route 632 near Trevilians, Va.	3.43	530	596	966	1,393	2,146	2,903	3,873	5,109	7,274	
01671750	(r) Harris Creek at Route 632 near Trevilians, Va.	3.43	327	394	684	1,011	1,553	1,953	2,626	3,311	4,903	
01671750	(w) Harris Creek at Route 632 near Trevilians, Va.	3.43	406	471	785	1,151	1,811	2,358	3,210	4,220	6,244	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
01672400	(p) South Anna River tributary 6 at Route 54 near Ashland, Va.	0.33	40.8	51.7	134	267	593	1,025	1,713	2,792	5,168	
01672400	(r) South Anna River tributary 6 at Route 54 near Ashland, Va.	0.33	--	--	40.5	63.9	105	148	199	264	584	
01672400	(w) South Anna River tributary 6 at Route 54 near Ashland, Va.	0.33	--	--	95.3	178	373	630	1,038	1,688	3,425	
01672500	(p) South Anna River at Route 54 near Ashland, Va.	395	3,794	4,160	6,069	8,055	11,220	14,130	17,600	21,710	28,350	
01672500	(r) South Anna River at Route 54 near Ashland, Va.	395	5,455	6,066	9,348	12,752	17,809	24,356	26,874	32,312	58,968	
01672500	(w) South Anna River at Route 54 near Ashland, Va.	395	4,445	4,931	7,485	10,052	13,564	17,669	20,589	24,770	34,916	
01672900	(p) Pamunkey River tributary 1 at Route 301 near Hanover, Va.	0.82	27.0	31.1	56.4	89.3	155	228	330	472	748	
01672900	(r) Pamunkey River tributary 1 at Route 301 near Hanover, Va.	0.82	--	--	72.9	113	183	255	339	445	961	
01672900	(w) Pamunkey River tributary 1 at Route 301 near Hanover, Va.	0.82	--	--	60.7	95.5	162	234	332	466	785	
01673000	(p) Pamunkey River at Route 614 near Hanover, Va.	1,078	8,207	9,011	13,220	17,590	24,550	30,940	38,530	47,540	62,080	
01673000	(r) Pamunkey River at Route 614 near Hanover, Va.	1,078	9,893	10,817	16,254	21,798	29,838	41,534	43,952	52,319	99,791	
01673000	(w) Pamunkey River at Route 614 near Hanover, Va.	1,078	8,910	9,791	14,626	19,523	26,616	34,955	40,476	49,091	71,161	
01673500	(p) Totopotomoy Creek at Route 301 near Atlee, Va.	5.77	109	122	197	280	421	558	728	938	1,293	
01673500	(r) Totopotomoy Creek at Route 301 near Atlee, Va.	5.77	--	--	256	383	601	811	1,056	1,362	2,800	
01673500	(w) Totopotomoy Creek at Route 301 near Atlee, Va.	5.77	--	--	218	317	481	637	824	1,052	1,599	
01673550	(p) Totopotomoy Creek at Route 606 near Studley, Va.	25.5	377	440	858	1,451	2,737	4,303	6,658	10,170	17,560	
01673550	(r) Totopotomoy Creek at Route 606 near Studley, Va.	25.5	--	--	667	972	1,485	1,961	2,512	3,191	6,321	
01673550	(w) Totopotomoy Creek at Route 606 near Studley, Va.	25.5	--	--	748	1,168	1,988	2,904	4,191	6,057	11,559	
01673638	(p) Cohoke Mill Creek near Lester Manor, Va.	8.81	150	195	556	1,183	2,792	5,012	8,659	14,530	27,830	
01673638	(r) Cohoke Mill Creek near Lester Manor, Va.	8.81	--	--	336	500	777	1,043	1,352	1,736	3,531	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft³/s)											
01673638	(w) Cohoke Mill Creek near Lester Manor, Va.	8.81	--	--	380	616	1,080	1,604	2,339	3,418	7,325
01673800	(p) Po River at Route 208 near Spotsylvania, Va.	77.6	1,886	2,107	3,283	4,537	6,580	8,491	10,790	13,550	18,060
01673800	(r) Po River at Route 208 near Spotsylvania, Va.	77.6	2,078	2,375	3,813	5,348	7,716	10,254	12,107	14,796	25,136
01673800	(w) Po River at Route 208 near Spotsylvania, Va.	77.6	1,985	2,249	3,580	4,987	7,129	9,337	11,379	14,059	20,387
01674000	(p) Mattaponi River above Route 605 near Bowling Green, Va.	256	3,083	3,502	5,592	7,592	10,480	12,870	15,460	18,260	22,320
01674000	(r) Mattaponi River above Route 605 near Bowling Green, Va.	256	4,218	4,725	7,361	10,116	14,251	19,341	21,729	26,239	46,981
01674000	(w) Mattaponi River above Route 605 near Bowling Green, Va.	256	3,716	4,204	6,673	9,122	12,489	16,237	18,511	21,781	30,769
01674100	(p) Motto River tributary at Route 605 near Cedon, Va.	1.62	130	151	274	432	738	1,073	1,534	2,161	3,347
01674100	(r) Motto River tributary at Route 605 near Cedon, Va.	1.62	--	--	113	173	277	381	504	658	1,396
01674100	(w) Motto River tributary at Route 605 near Cedon, Va.	1.62	--	--	175	272	458	664	941	1,324	2,411
01674200	(p) Reedy Creek at Route 301 near Dawn, Va.	17.5	169	183	263	352	505	656	845	1,084	1,495
01674200	(r) Reedy Creek at Route 301 near Dawn, Va.	17.5	--	--	523	768	1,180	1,568	2,017	2,572	5,143
01674200	(w) Reedy Creek at Route 301 near Dawn, Va.	17.5	--	--	313	428	618	796	1,011	1,275	1,834
01674500	(p) Mattaponi River near Beulahville, Va.	602	3,396	3,823	5,975	8,083	11,210	13,890	16,880	20,200	25,170
01674500	(r) Mattaponi River near Beulahville, Va.	602	--	--	5,106	7,031	10,181	12,826	15,867	19,530	35,745
01674500	(w) Mattaponi River near Beulahville, Va.	602	--	--	5,619	7,656	10,815	13,506	16,540	19,993	27,700
01674700	(p) Aylett Creek at Route 360 at Aylett, Va.	6.55	246	270	399	533	746	943	1,176	1,452	1,898
01674700	(r) Aylett Creek at Route 360 at Aylett, Va.	6.55	--	--	278	415	649	875	1,137	1,465	3,001
01674700	(w) Aylett Creek at Route 360 at Aylett, Va.	6.55	--	--	357	494	717	924	1,166	1,455	2,084
01677000	(p) Ware Creek at Route 600 near Toano, Va.	6.29	62.2	71.1	123	184	296	410	560	754	1,099
01677000	(r) Ware Creek at Route 600 near Toano, Va.	6.29	--	--	271	405	633	854	1,111	1,431	2,935
01677000	(w) Ware Creek at Route 600 near Toano, Va.	6.29	--	--	156	234	368	500	665	874	1,343
02009500	(p) Cattail Run at Route 220 near Bolar, Va.	0.68	32.0	33.3	39.3	44.2	50.6	55.4	60.3	65.3	72.2
02009500	(r) Cattail Run at Route 220 near Bolar, Va.	0.68	85.2	99.9	185	279	430	572	724	916	--
02009500	(w) Cattail Run at Route 220 near Bolar, Va.	0.68	56.0	63.4	98.5	122	140	147	149	152	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft ³ /s)									
02011400	(p) Jackson River along Route 603 near Bacova, Va.	157	3,712	4,153	6,585	9,297	13,920	18,430	24,050	31,040	42,930	
02011400	(r) Jackson River along Route 603 near Bacova, Va.	157	4,598	5,164	7,852	10,406	14,150	17,244	20,582	24,385	--	
02011400	(w) Jackson River along Route 603 near Bacova, Va.	157	4,259	4,791	7,399	9,973	14,046	17,839	22,475	28,282	--	
02011460	(p) Back Creek above Route 600 near Sunrise, Va.	60.9	2,914	3,230	4,896	6,649	9,474	12,090	15,220	18,960	25,030	
02011460	(r) Back Creek above Route 600 near Sunrise, Va.	60.9	2,297	2,599	4,089	5,543	7,704	9,532	11,496	13,776	--	
02011460	(w) Back Creek above Route 600 near Sunrise, Va.	60.9	2,527	2,828	4,379	5,985	8,539	10,880	13,643	16,995	--	
02011470	(p) Back Creek at Route 600 at Sunrise, Va.	75.6	--	--	--	--	--	--	--	--	--	
02011470	(r) Back Creek at Route 600 at Sunrise, Va.	75.6	2,691	3,040	4,746	6,401	8,851	10,913	13,131	15,695	--	
02011470	(w) Back Creek at Route 600 at Sunrise, Va.	75.6	--	--	--	--	--	--	--	--	--	
02011480	(p) Back Creek on Route 600, near Mountain Grove, Va.	88.6	4,367	4,698	6,177	7,426	9,058	10,310	11,590	12,920	14,740	
02011480	(r) Back Creek on Route 600, near Mountain Grove, Va.	88.6	3,023	3,411	5,294	7,113	9,801	12,053	14,477	17,270	--	
02011480	(w) Back Creek on Route 600, near Mountain Grove, Va.	88.6	3,741	4,088	5,770	7,299	9,296	10,770	12,218	13,701	--	
02011490	(p) Little Back Creek near Sunrise, Va.	4.9	--	--	--	--	--	--	--	--	--	
02011490	(r) Little Back Creek near Sunrise, Va.	4.9	362	418	720	1,037	1,528	1,968	2,440	3,014	--	
02011490	(w) Little Back Creek near Sunrise, Va.	4.9	--	--	--	--	--	--	--	--	--	
02011500	(p) Back Creek along Route 39 near Mountain Grove, Va.	134	5,941	6,447	8,695	10,560	12,930	14,710	16,500	18,300	20,720	
02011500	(r) Back Creek along Route 39 near Mountain Grove, Va.	134	4,094	4,604	7,040	9,365	12,782	15,616	18,671	22,164	--	
02011500	(w) Back Creek along Route 39 near Mountain Grove, Va.	134	4,966	5,457	7,819	9,992	12,873	15,005	17,091	19,179	--	
02011800	(p) Jackson River below Gathright Dam, near Hot Springs, Va.	345	11,690	12,000	13,260	14,210	15,340	16,130	16,910	17,660	18,630	
02011800	(r) Jackson River below Gathright Dam, near Hot Springs, Va.	345	8,189	9,139	13,507	17,565	23,457	28,228	33,401	39,202	--	
02011800	(w) Jackson River below Gathright Dam, near Hot Springs, Va.	345	9,639	10,315	13,399	15,870	18,531	20,037	21,261	22,298	--	
02012000	(p) Falling Spring Creek at Route 220 near Falling Spring, Va.	11.2	246	267	370	470	618	746	890	1,053	1,301	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02012000	(r) Falling Spring Creek at Route 220 near Falling Spring, Va.	11.2	664	762	1,273	1,798	2,598	3,302	4,058	4,962	--	
02012000	(w) Falling Spring Creek at Route 220 near Falling Spring, Va.	11.2	400	452	696	881	1,087	1,234	1,383	1,553	--	
02012500	(p) Jackson River at Route 687 at Falling Spring, Va.	410	10,210	11,180	15,350	18,640	22,600	25,410	28,100	30,690	33,980	
02012500	(r) Jackson River at Route 687 at Falling Spring, Va.	410	9,293	10,358	15,213	19,702	26,206	31,449	37,142	43,502	--	
02012500	(w) Jackson River at Route 687 at Falling Spring, Va.	410	9,702	10,715	15,273	19,186	24,139	27,599	30,864	33,987	--	
02012950	(p) Sweet Springs Creek tributary at Route 311 at Sweet Chalybeate, Va.	0.86	40.7	51.3	122	219	410	616	891	1,251	1,892	
02012950	(r) Sweet Springs Creek tributary at Route 311 at Sweet Chalybeate, Va.	0.86	101	118	217	326	500	662	837	1,056	--	
02012950	(w) Sweet Springs Creek tributary at Route 311 at Sweet Chalybeate, Va.	0.86	63.5	78.2	164	264	443	631	875	1,199	--	
02013000	(p) Dunlap Creek at Route 60 near Covington, Va.	162	5,250	5,826	8,641	11,300	15,120	18,320	21,810	25,630	31,240	
02013000	(r) Dunlap Creek at Route 60 near Covington, Va.	162	4,705	5,283	8,023	10,625	14,438	17,586	20,982	24,851	--	
02013000	(w) Dunlap Creek at Route 60 near Covington, Va.	162	4,912	5,483	8,248	10,899	14,767	17,984	21,476	25,354	--	
02013100	(p) Jackson River below Dunlap Creek, at Covington, Va.	612	17,200	18,280	23,160	27,380	33,020	37,470	42,130	47,030	53,940	
02013100	(r) Jackson River below Dunlap Creek, at Covington, Va.	612	12,465	13,848	20,048	25,715	33,892	40,412	47,517	55,387	--	
02013100	(w) Jackson River below Dunlap Creek, at Covington, Va.	612	14,446	15,666	21,352	26,499	33,405	38,584	43,870	49,334	--	
02014000	(p) Potts Creek at Route 18 near Covington, Va.	153	3,954	4,360	6,259	7,939	10,210	12,000	13,870	15,820	18,540	
02014000	(r) Potts Creek at Route 18 near Covington, Va.	153	4,512	5,069	7,714	10,229	13,918	16,967	20,257	24,009	--	
02014000	(w) Potts Creek at Route 18 near Covington, Va.	153	4,271	4,770	7,101	9,157	11,873	13,919	15,987	18,144	--	
02014500	(p) Smith Creek above old dam, near Clifton Forge, Va.	12.3	425	476	733	988	1,373	1,708	2,088	2,516	3,170	
02014500	(r) Smith Creek above old dam, near Clifton Forge, Va.	12.3	711	815	1,358	1,913	2,759	3,502	4,298	5,251	--	
02014500	(w) Smith Creek above old dam, near Clifton Forge, Va.	12.3	592	677	1,102	1,491	2,013	2,427	2,857	3,340	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft ³ /s)									
02015600	(p) Cowpasture River at Route 250 near Head Waters, Va.	11.2	316	374	749	1,263	2,331	3,577	5,373	7,941	13,060	
02015600	(r) Cowpasture River at Route 250 near Head Waters, Va.	11.2	664	762	1,273	1,798	2,598	3,302	4,058	4,962	--	
02015600	(w) Cowpasture River at Route 250 near Head Waters, Va.	11.2	575	667	1,156	1,670	2,525	3,386	4,491	6,015	--	
02015700	(p) Bullpasture River at Route 614 at Williamsville, Va.	110	4,336	4,795	7,172	9,611	13,440	16,910	20,970	25,740	33,300	
02015700	(r) Bullpasture River at Route 614 at Williamsville, Va.	110	3,543	3,990	6,145	8,213	11,261	13,801	16,537	19,677	--	
02015700	(w) Bullpasture River at Route 614 at Williamsville, Va.	110	3,848	4,292	6,526	8,788	12,315	15,479	19,153	23,526	--	
02015900	(p) Jerry Branch at Route 42 near Clifton Forge, Va.	0.56	88.2	101	169	243	365	479	615	778	1,042	
02015900	(r) Jerry Branch at Route 42 near Clifton Forge, Va.	0.56	73.9	86.8	162	245	380	506	643	815	--	
02015900	(w) Jerry Branch at Route 42 near Clifton Forge, Va.	0.56	80.8	93.5	165	244	371	488	623	787	--	
02016000	(p) Cowpasture River below Route 633 near Clifton Forge, Va.	461	10,970	11,920	16,340	20,220	25,440	29,570	33,880	38,420	44,800	
02016000	(r) Cowpasture River below Route 633 near Clifton Forge, Va.	461	10,127	11,277	16,493	21,299	28,255	33,844	39,919	46,689	--	
02016000	(w) Cowpasture River below Route 633 near Clifton Forge, Va.	461	10,547	11,590	16,418	20,722	26,520	30,964	35,550	40,361	--	
02016500	(p) James River below Route 220 at Lick Run, Va.	1,371	28,380	30,790	41,240	49,580	59,850	67,280	74,540	81,660	90,930	
02016500	(r) James River below Route 220 at Lick Run, Va.	1,371	22,514	24,851	34,948	43,967	56,882	66,955	78,033	90,081	--	
02016500	(w) James River below Route 220 at Lick Run, Va.	1,371	25,302	27,604	37,855	46,831	58,646	67,168	75,558	83,735	--	
02017000	(p) Meadow Creek above Route 311 at New Castle, Va.	13.3	173	189	268	344	457	555	664	788	976	
02017000	(r) Meadow Creek above Route 311 at New Castle, Va.	13.3	753	863	1,433	2,015	2,901	3,677	4,510	5,504	--	
02017000	(w) Meadow Creek above Route 311 at New Castle, Va.	13.3	376	430	673	843	1,013	1,125	1,235	1,360	--	
02017300	(p) Craig Creek at Route 616 at New Castle, Va.	112	4,487	4,955	7,464	10,160	14,620	18,830	23,970	30,220	40,590	
02017300	(r) Craig Creek at Route 616 at New Castle, Va.	112	3,590	4,043	6,222	8,312	11,392	13,958	16,721	19,892	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02017300	(w) Craig Creek at Route 616 at New Castle, Va.	112	3,934	4,383	6,679	9,063	12,928	16,534	20,898	26,281	--	
02017400	(p) Johns Creek tributary at Route 311 near New Castle, Va.	1.46	81.4	95.4	179	281	468	662	915	1,242	1,820	
02017400	(r) Johns Creek tributary at Route 311 near New Castle, Va.	1.46	149	174	313	464	702	922	1,159	1,452	--	
02017400	(w) Johns Creek tributary at Route 311 near New Castle, Va.	1.46	110	130	240	358	552	744	983	1,294	--	
02017500	(p) Johns Creek at Route 615 at New Castle, Va.	105	3,064	3,336	4,529	5,503	6,727	7,631	8,526	9,417	10,590	
02017500	(r) Johns Creek at Route 615 at New Castle, Va.	105	3,424	3,858	5,951	7,963	10,930	13,405	16,071	19,133	--	
02017500	(w) Johns Creek at Route 615 at New Castle, Va.	105	3,240	3,596	5,227	6,576	8,195	9,301	10,328	11,333	--	
02017700	(p) Craig Creek tributary at Route 606 near New Castle, Va.	2.05	197	232	421	620	931	1,206	1,518	1,871	2,403	
02017700	(r) Craig Creek tributary at Route 606 near New Castle, Va.	2.05	191	222	395	581	873	1,141	1,428	1,782	--	
02017700	(w) Craig Creek tributary at Route 606 near New Castle, Va.	2.05	192	224	400	590	889	1,162	1,462	1,820	--	
02018000	(p) Craig Creek at abandoned railroad bridge at Parr, Va.	329	7,845	8,670	12,810	16,870	22,970	28,260	34,250	41,030	51,370	
02018000	(r) Craig Creek at abandoned railroad bridge at Parr, Va.	329	7,909	8,830	13,072	17,019	22,753	27,401	32,440	38,095	--	
02018000	(w) Craig Creek at abandoned railroad bridge at Parr, Va.	329	7,882	8,766	12,969	16,955	22,863	27,884	33,549	40,025	--	
02018500	(p) Catawba Creek at Route 600 near Catawba, Va.	34.3	1,648	1,913	3,368	4,959	7,568	10,000	12,900	16,340	21,840	
02018500	(r) Catawba Creek at Route 600 near Catawba, Va.	34.3	1,508	1,714	2,753	3,784	5,329	6,654	8,076	9,745	--	
02018500	(w) Catawba Creek at Route 600 near Catawba, Va.	34.3	1,542	1,760	2,886	4,066	5,983	7,781	9,913	12,543	--	
02018700	(p) Campbell Branch at Route 606 near Fincastle, Va.	1.5	--	--	--	--	--	--	--	--	--	
02018700	(r) Campbell Branch at Route 606 near Fincastle, Va.	1.5	152	177	319	472	715	938	1,178	1,476	--	
02018700	(w) Campbell Branch at Route 606 near Fincastle, Va.	1.5	--	--	--	--	--	--	--	--	--	
02018800	(p) North Fork at Route 606 near Fincastle, Va.	5.63	393	461	884	1,428	2,489	3,654	5,247	7,412	11,480	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft ³ /s)									
02018800	(r) North Fork at Route 606 near Fincastle, Va.	5.63	401	463	793	1,138	1,670	2,147	2,658	3,278	--	
02018800	(w) North Fork at Route 606 near Fincastle, Va.	5.63	399	462	810	1,199	1,873	2,569	3,463	4,688	--	
02019000	(p) Catawba Creek near Fincastle, Va.	104	2,958	3,351	5,430	7,609	11,070	14,220	17,920	22,250	29,100	
02019000	(r) Catawba Creek near Fincastle, Va.	104	3,400	3,831	5,912	7,913	10,863	13,325	15,976	19,023	--	
02019000	(w) Catawba Creek near Fincastle, Va.	104	3,253	3,677	5,763	7,809	10,947	13,735	16,961	20,806	--	
02019400	(p) Mill (Looney Mill) Creek at Route 636 near Buchanan, Va.	29.3	2,145	2,422	3,896	5,446	7,924	10,200	12,880	16,030	21,060	
02019400	(r) Mill (Looney Mill) Creek at Route 636 near Buchanan, Va.	29.3	1,343	1,529	2,470	3,408	4,816	6,029	7,330	8,862	--	
02019400	(w) Mill (Looney Mill) Creek at Route 636 near Buchanan, Va.	29.3	1,560	1,762	2,834	3,994	5,907	7,712	9,847	12,454	--	
02019500	(p) James River at Route 11 at Buchanan, Va.	2,073	37,480	40,530	54,050	65,280	79,680	90,540	101,500	112,600	127,600	
02019500	(r) James River at Route 11 at Buchanan, Va.	2,073	30,484	33,538	46,466	57,881	74,175	86,734	100,626	115,587	--	
02019500	(w) James River at Route 11 at Buchanan, Va.	2,073	34,019	36,988	50,187	61,854	77,573	89,302	101,259	113,297	--	
02020100	(p) Renick Run at Frontage Road near Buchanan, Va.	2.08	376	420	648	875	1,220	1,522	1,866	2,257	2,856	
02020100	(r) Renick Run at Frontage Road near Buchanan, Va.	2.08	193	225	399	587	881	1,151	1,441	1,798	--	
02020100	(w) Renick Run at Frontage Road near Buchanan, Va.	2.08	245	278	469	681	1,020	1,326	1,666	2,066	--	
02020200	(p) Calpasture River near Route 250 near West Augusta, Va.	12.5	548	647	1,246	1,985	3,351	4,774	6,631	9,037	13,300	
02020200	(r) Calpasture River near Route 250 near West Augusta, Va.	12.5	720	825	1,373	1,934	2,788	3,537	4,341	5,302	--	
02020200	(w) Calpasture River near Route 250 near West Augusta, Va.	12.5	680	786	1,348	1,945	2,934	3,902	5,094	6,657	--	
02020500	(p) Calpasture River at Route 42 above Mill Creek, at Goshen, Va.	141	5,813	6,658	11,390	16,730	25,870	34,780	45,840	59,500	82,500	
02020500	(r) Calpasture River at Route 42 above Mill Creek, at Goshen, Va.	141	4,250	4,777	7,291	9,688	13,207	16,122	19,265	22,855	--	
02020500	(w) Calpasture River at Route 42 above Mill Creek, at Goshen, Va.	141	4,632	5,215	8,181	11,363	16,811	22,180	28,944	37,608	--	
02021000	(p) Calpasture River below Mill Creek at Goshen, Va.	186	7,004	7,798	11,700	15,410	20,790	25,290	30,220	35,640	43,610	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02021000	(r) Calpasture River below Mill Creek at Goshen, Va.	186	5,207	5,840	8,825	11,647	15,777	19,174	22,843	27,009	--	
02021000	(w) Calpasture River below Mill Creek at Goshen, Va.	186	5,828	6,494	9,769	13,029	17,989	22,232	26,937	32,231	--	
02021100	(p) Brattons Run tributary at Route 780 near Goshen, Va.	0.92	--	--	--	--	--	--	--	--	--	
02021100	(r) Brattons Run tributary at Route 780 near Goshen, Va.	0.92	106	124	228	341	522	691	872	1,099	--	
02021100	(w) Brattons Run tributary at Route 780 near Goshen, Va.	0.92	--	--	--	--	--	--	--	--	--	
02021500	(p) Maury River above Route 39 at Rock-bridge Baths, Va.	329	9,777	10,920	16,930	23,200	33,160	42,280	53,040	65,720	85,990	
02021500	(r) Maury River above Route 39 at Rock-bridge Baths, Va.	329	7,909	8,830	13,072	17,019	22,753	27,401	32,440	38,095	--	
02021500	(w) Maury River above Route 39 at Rock-bridge Baths, Va.	329	8,538	9,509	14,279	19,150	27,006	34,244	42,912	53,367	--	
02021700	(p) Cedar Grove Branch at Route 39 near Rockbridge Baths, Va.	12	364	422	787	1,269	2,244	3,353	4,925	7,139	11,480	
02021700	(r) Cedar Grove Branch at Route 39 near Rockbridge Baths, Va.	12	698	801	1,335	1,882	2,715	3,448	4,233	5,173	--	
02021700	(w) Cedar Grove Branch at Route 39 near Rockbridge Baths, Va.	12	600	694	1,190	1,707	2,560	3,413	4,507	6,007	--	
02022500	(p) Kerrs Creek at Interstate 64 near Lexington, Va.	35.1	2,602	3,073	5,687	8,529	13,100	17,270	22,120	27,710	36,380	
02022500	(r) Kerrs Creek at Interstate 64 near Lexington, Va.	35.1	1,534	1,743	2,797	3,843	5,409	6,751	8,192	9,881	--	
02022500	(w) Kerrs Creek at Interstate 64 near Lexington, Va.	35.1	1,714	1,953	3,214	4,594	6,939	9,220	11,981	15,426	--	
02023000	(p) Maury (North) River above Route 631 near Lexington, Va.	481	9,633	10,550	15,000	19,190	25,240	30,320	35,900	42,050	51,170	
02023000	(r) Maury (North) River above Route 631 near Lexington, Va.	481	10,447	11,629	16,982	21,909	29,036	34,755	40,975	47,900	--	
02023000	(w) Maury (North) River above Route 631 near Lexington, Va.	481	10,059	11,128	16,070	20,539	26,832	31,932	37,495	43,643	--	
02023300	(p) South (Saint Marys) River at Route 608 near Steeles Tavern, Va.	15.8	720	819	1,351	1,918	2,835	3,682	4,689	5,881	7,792	
02023300	(r) South (Saint Marys) River at Route 608 near Steeles Tavern, Va.	15.8	948	1,104	1,953	2,914	4,436	5,866	7,849	9,792	--	
02023300	(w) South (Saint Marys) River at Route 608 near Steeles Tavern, Va.	15.8	882	1,018	1,733	2,486	3,624	4,645	5,923	7,260	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02025000	(p) Pedlar River at Route 635 near Pedlar Mills, Va.	94.6	3,270	3,788	6,639	9,750	14,850	19,600	25,250	31,960	42,700	
02025000	(r) Pedlar River at Route 635 near Pedlar Mills, Va.	94.6	3,372	3,865	6,455	9,277	13,672	17,666	22,683	27,968	--	
02025000	(w) Pedlar River at Route 635 near Pedlar Mills, Va.	94.6	3,349	3,847	6,505	9,428	14,123	18,494	23,895	30,004	--	
02025500	(p) James River at Holcomb(s) Rock, Va.	3,256	49,620	53,730	72,220	87,840	108,200	123,800	139,700	156,000	178,400	
02025500	(r) James River at Holcomb(s) Rock, Va.	3,256	42,442	46,526	63,422	78,151	99,116	115,064	132,831	151,757	--	
02025500	(w) James River at Holcomb(s) Rock, Va.	3,256	46,119	50,127	67,768	83,364	104,712	120,934	137,784	154,991	--	
02025800	(p) Burton Creek tributary at Route 29 at Lynchburg, Va.	2.36	--	--	--	--	--	--	--	--	--	
02025800	(r) Burton Creek tributary at Route 29 at Lynchburg, Va.	2.36	246	292	548	852	1,341	1,819	2,542	3,211	--	
02025800	(w) Burton Creek tributary at Route 29 at Lynchburg, Va.	2.36	--	--	--	--	--	--	--	--	--	
02026000	(p) James River above Route 60 at Bent Creek, Va.	3,649	51,280	55,700	75,860	93,210	116,200	134,100	152,600	171,800	198,400	
02026000	(r) James River above Route 60 at Bent Creek, Va.	3,649	46,140	50,533	68,602	84,304	106,639	123,572	142,474	162,551	--	
02026000	(w) James River above Route 60 at Bent Creek, Va.	3,649	48,671	53,011	72,025	88,882	112,293	130,389	149,539	169,397	--	
02026500	(p) Tye River at Roseland, Va.	69	2,757	3,063	4,570	6,008	8,100	9,864	11,810	13,950	17,130	
02026500	(r) Tye River at Roseland, Va.	69	2,696	3,099	5,228	7,564	11,211	14,546	18,812	23,243	--	
02026500	(w) Tye River at Roseland, Va.	69	2,718	3,086	4,937	6,762	9,345	11,483	13,895	16,366	--	
02027000	(p) Tye River at Route 158 near Lovingston, Va.	93	3,950	4,533	7,864	11,740	18,590	25,470	34,220	45,310	64,520	
02027000	(r) Tye River at Route 158 near Lovingston, Va.	93	3,332	3,819	6,382	9,175	13,526	17,482	22,455	27,690	--	
02027000	(w) Tye River at Route 158 near Lovingston, Va.	93	3,468	3,981	6,782	9,988	15,429	20,810	27,816	36,288	--	
02027500	(p) Piney River at Route 151 at Piney River, Va.	47.7	1,903	2,277	4,731	8,149	15,350	23,800	36,050	53,630	88,740	
02027500	(r) Piney River at Route 151 at Piney River, Va.	47.7	2,075	2,393	4,086	5,957	8,888	11,587	15,113	18,719	--	
02027500	(w) Piney River at Route 151 at Piney River, Va.	47.7	2,048	2,375	4,201	6,405	10,402	14,700	20,879	28,849	--	
02027700	(p) Buffalo River tributary at Route 60 near Amherst, Va.	0.45	35.8	41.2	72.3	109	175	242	328	438	632	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02027700	(r) Buffalo River tributary at Route 60 near Amherst, Va.	0.45	76.1	91.5	181	291	473	655	951	1,215	--	
02027700	(w) Buffalo River tributary at Route 60 near Amherst, Va.	0.45	66.8	79.4	149	225	344	455	615	768	--	
02027800	(p) Buffalo River at Route 657 near Tye River, Va.	148	5,029	5,961	11,530	18,290	30,600	43,180	59,350	79,960	115,800	
02027800	(r) Buffalo River at Route 657 near Tye River, Va.	148	4,631	5,287	8,704	12,393	18,117	23,275	29,578	36,361	--	
02027800	(w) Buffalo River at Route 657 near Tye River, Va.	148	4,697	5,400	9,251	13,718	21,445	29,196	39,344	51,838	--	
02028000	(p) Tye (Buffalo) River near Norwood, Va.	355	7,720	9,022	16,570	25,440	41,110	56,760	76,520	101,300	143,600	
02028000	(r) Tye (Buffalo) River near Norwood, Va.	355	8,612	9,753	15,615	21,827	31,412	39,897	49,692	60,737	--	
02028000	(w) Tye (Buffalo) River near Norwood, Va.	355	8,432	9,603	15,842	22,819	34,556	45,962	60,231	77,899	--	
02028500	(p) Rockfish River at Route 634 near Greenfield, Va.	94.8	3,849	4,464	8,031	12,240	19,740	27,320	37,000	49,280	70,580	
02028500	(r) Rockfish River at Route 634 near Greenfield, Va.	94.8	3,377	3,870	6,464	9,290	13,690	17,689	22,712	28,003	--	
02028500	(w) Rockfish River at Route 634 near Greenfield, Va.	94.8	3,470	3,991	6,839	10,118	15,711	21,270	28,550	37,355	--	
02028700	(p) Cove Creek at Route 29 near Coveseville, Va.	3.85	395	459	831	1,262	2,018	2,767	3,708	4,882	6,876	
02028700	(r) Cove Creek at Route 29 near Coveseville, Va.	3.85	348	411	760	1,169	1,825	2,458	3,398	4,279	--	
02028700	(w) Cove Creek at Route 29 near Coveseville, Va.	3.85	357	421	778	1,196	1,893	2,581	3,536	4,569	--	
02028750	(p) Cove Creek at Route 632 at Faber, Va.	16.9	--	--	--	--	--	--	--	--	--	
02028750	(r) Cove Creek at Route 632 at Faber, Va.	16.9	994	1,157	2,043	3,044	4,627	6,115	8,168	10,187	--	
02028750	(w) Cove Creek at Route 632 at Faber, Va.	16.9	--	--	--	--	--	--	--	--	--	
02028800	(p) Ballinger Creek at Route 6 at Esmont, Va.	5.56	939	1,045	1,635	2,306	3,474	4,637	6,114	7,984	11,240	
02028800	(r) Ballinger Creek at Route 6 at Esmont, Va.	5.56	452	532	972	1,483	2,300	3,083	4,225	5,308	--	
02028800	(w) Ballinger Creek at Route 6 at Esmont, Va.	5.56	574	667	1,193	1,812	2,859	3,902	5,314	6,945	--	
02028900	(p) Miller Creek at Route 6 near Scottsville, Va.	6.39	1,106	1,268	2,229	3,405	5,600	7,923	11,020	15,120	22,610	
02028900	(r) Miller Creek at Route 6 near Scottsville, Va.	6.39	383	457	886	1,441	2,483	3,539	4,984	6,617	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02028900	(w) Miller Creek at Route 6 near Scottsville, Va.	6.39	559	652	1,254	2,097	3,810	5,689	8,305	11,701	--	
02029000	(p) James River below Route 20 at Scottsville, Va.	4,581	59,140	64,950	93,630	121,200	161,900	196,800	235,700	279,300	345,100	
02029000	(r) James River below Route 20 at Scottsville, Va.	4,581	54,511	59,593	80,242	98,071	123,406	142,482	163,867	186,449	--	
02029000	(w) James River below Route 20 at Scottsville, Va.	4,581	56,509	61,830	85,623	108,161	142,846	172,770	207,454	246,790	--	
02029200	(p) North Fork Hardware River at Route 29 at Red Hill, Va.	11.2	305	372	860	1,644	3,574	6,191	10,490	17,470	33,600	
02029200	(r) North Fork Hardware River at Route 29 at Red Hill, Va.	11.2	743	868	1,552	2,333	3,572	4,746	6,400	8,003	--	
02029200	(w) North Fork Hardware River at Route 29 at Red Hill, Va.	11.2	664	777	1,411	2,177	3,573	5,123	7,520	10,628	--	
02029400	(p) South Branch of North Fork Hardware River at Route 29 near North Garden, Va.	6.58	696	824	1,597	2,546	4,294	6,104	8,456	11,490	16,820	
02029400	(r) South Branch of North Fork Hardware River at Route 29 near North Garden, Va.	6.58	509	598	1,088	1,653	2,557	3,420	4,669	5,859	--	
02029400	(w) South Branch of North Fork Hardware River at Route 29 near North Garden, Va.	6.58	537	632	1,180	1,847	3,013	4,216	5,935	7,902	--	
02029410	(p) Sowell Branch at Route 20 near Charlottesville, Va.	1.46	--	--	--	--	--	--	--	--	--	
02029410	(r) Sowell Branch at Route 20 near Charlottesville, Va.	1.46	175	208	398	624	992	1,353	1,912	2,423	--	
02029410	(w) Sowell Branch at Route 20 near Charlottesville, Va.	1.46	--	--	--	--	--	--	--	--	--	
02029430	(p) Harris Creek at Route 20 near Keene, Va.	1.68	--	--	--	--	--	--	--	--	--	
02029430	(r) Harris Creek at Route 20 near Keene, Va.	1.68	194	230	437	684	1,083	1,475	2,078	2,631	--	
02029430	(w) Harris Creek at Route 20 near Keene, Va.	1.68	--	--	--	--	--	--	--	--	--	
02029450	(p) Thomas Creek at Route 20 at Keene, Va.	0.28	--	--	--	--	--	--	--	--	--	
02029450	(r) Thomas Creek at Route 20 at Keene, Va.	0.28	54.3	65.6	132	214	351	489	718	920	--	
02029450	(w) Thomas Creek at Route 20 at Keene, Va.	0.28	--	--	--	--	--	--	--	--	--	
02029500	(p) Hardware River at Route 618 near Scottsville, Va.	104	2,894	3,279	5,261	7,253	10,280	12,930	15,930	19,320	24,480	
02029500	(r) Hardware River at Route 618 near Scottsville, Va.	104	3,606	4,130	6,877	9,863	14,512	18,728	23,994	29,566	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			Peak flow (ft³/s)									
0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002				
02029500	(w) Hardware River at Route 618 near Scottsville, Va.	104	3,396	3,870	6,288	8,747	12,371	15,488	19,094	22,926	--	
02030000	(p) Hardware River at Route 637 below Briery Creek (Run), near Scottsville, Va.	116	2,975	3,460	6,327	9,809	16,200	22,850	31,530	42,810	62,910	
02030000	(r) Hardware River at Route 637 below Briery Creek (Run), near Scottsville, Va.	116	3,897	4,458	7,397	10,585	15,543	20,031	25,599	31,521	--	
02030000	(w) Hardware River at Route 637 below Briery Creek (Run), near Scottsville, Va.	116	3,687	4,225	7,107	10,342	15,784	21,167	28,195	36,787	--	
02030100	(p) Frisby Branch at Route 24 near Buckingham, Va.	4.33	280	341	768	1,405	2,839	4,623	7,335	11,410	19,970	
02030100	(r) Frisby Branch at Route 24 near Buckingham, Va.	4.33	375	450	778	1,145	1,750	2,211	2,944	3,703	5,540	
02030100	(w) Frisby Branch at Route 24 near Buckingham, Va.	4.33	353	426	776	1,189	1,956	2,620	3,736	5,163	8,607	
02030500	(p) Slate River above Route 676 near Arvonia, Va.	226	4,356	4,861	7,723	11,040	16,920	22,880	30,560	40,440	57,880	
02030500	(r) Slate River above Route 676 near Arvonia, Va.	226	3,917	4,397	6,872	9,464	13,366	18,101	20,442	24,716	44,010	
02030500	(w) Slate River above Route 676 near Arvonia, Va.	226	4,119	4,604	7,220	10,107	15,033	20,344	25,404	32,927	52,377	
02030800	(p) Stockton Creek at Route 6 near Afton, Va.	2.7	244	270	400	524	707	861	1,033	1,223	1,507	
02030800	(r) Stockton Creek at Route 6 near Afton, Va.	2.7	271	321	600	929	1,460	1,976	2,753	3,475	--	
02030800	(w) Stockton Creek at Route 6 near Afton, Va.	2.7	261	301	504	702	969	1,188	1,449	1,689	--	
02030900	(p) Powells Creek at Route 684 near Crozet, Va.	2.4	--	--	--	--	--	--	--	--	--	
02030900	(r) Powells Creek at Route 684 near Crozet, Va.	2.4	249	295	555	861	1,356	1,837	2,567	3,243	--	
02030900	(w) Powells Creek at Route 684 near Crozet, Va.	2.4	--	--	--	--	--	--	--	--	--	
02031000	(p) Mechums River at Route 614 near White Hall (Ivy), Va.	95.3	4,600	5,303	8,905	12,450	17,660	22,040	26,830	32,040	39,620	
02031000	(r) Mechums River at Route 614 near White Hall (Ivy), Va.	95.3	3,390	3,885	6,487	9,321	13,736	17,747	22,783	28,089	--	
02031000	(w) Mechums River at Route 614 near White Hall (Ivy), Va.	95.3	3,638	4,184	7,104	10,284	15,220	19,596	24,734	30,172	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02031500	(p) North Fork Moormans River above Charlottesville Reservoir near White Hall, Va.	11.2	641	727	1,185	1,670	2,447	3,161	4,006	5,001	6,588	
02031500	(r) North Fork Moormans River above Charlottesville Reservoir near White Hall, Va.	11.2	743	868	1,552	2,333	3,572	4,746	6,400	8,003	--	
02031500	(w) North Fork Moormans River above Charlottesville Reservoir near White Hall, Va.	11.2	714	826	1,418	2,047	2,999	3,854	4,929	6,043	--	
02032000	(p) Moormans River below Charlottesville Reservoir near White Hall, Va.	17.8	--	--	--	--	--	--	--	--	--	
02032000	(r) Moormans River below Charlottesville Reservoir near White Hall, Va.	17.8	1,032	1,200	2,115	3,148	4,781	6,313	8,424	10,501	--	
02032000	(w) Moormans River below Charlottesville Reservoir near White Hall, Va.	17.8	--	--	--	--	--	--	--	--	--	
02032200	(p) Doyles River at Route 810 near White Hall, Va.	6.76	--	--	--	--	--	--	--	--	--	
02032200	(r) Doyles River at Route 810 near White Hall, Va.	6.76	519	609	1,108	1,683	2,600	3,477	4,744	5,952	--	
02032200	(w) Doyles River at Route 810 near White Hall, Va.	6.76	--	--	--	--	--	--	--	--	--	
02032250	(p) Moormans River at Route 601 near Free Union, Va.	77	4,374	5,209	10,150	16,050	26,540	37,020	50,200	66,630	94,440	
02032250	(r) Moormans River at Route 601 near Free Union, Va.	77	2,914	3,346	5,626	8,120	12,012	15,562	20,077	24,788	--	
02032250	(w) Moormans River at Route 601 near Free Union, Va.	77	3,116	3,609	6,363	9,642	15,378	21,186	28,924	38,240	--	
02032300	(p) Muddy Run at Route 810 near Stanardsville, Va.	3.21	--	--	--	--	--	--	--	--	--	
02032300	(r) Muddy Run at Route 810 near Stanardsville, Va.	3.21	306	362	674	1,039	1,628	2,198	3,050	3,846	--	
02032300	(w) Muddy Run at Route 810 near Stanardsville, Va.	3.21	--	--	--	--	--	--	--	--	--	
02032400	(p) Buck Mountain Creek at Route 665 near Free Union, Va.	34.5	3,014	3,387	5,273	7,129	9,905	12,300	14,980	17,990	22,510	
02032400	(r) Buck Mountain Creek at Route 665 near Free Union, Va.	34.5	1,649	1,908	3,291	4,830	7,249	9,491	12,472	15,480	--	
02032400	(w) Buck Mountain Creek at Route 665 near Free Union, Va.	34.5	1,974	2,275	3,904	5,690	8,457	10,927	13,890	17,010	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft³/s)									
02032500	(p) South Fork Rivanna River at Route 660 near Earlysville, Va.	215	5,853	6,625	11,070	16,320	25,800	35,540	48,210	64,640	93,940	
02032500	(r) South Fork Rivanna River at Route 660 near Earlysville, Va.	215	6,035	6,866	11,170	15,779	22,914	29,294	36,909	45,263	--	
02032500	(w) South Fork Rivanna River at Route 660 near Earlysville, Va.	215	5,986	6,799	11,137	15,984	24,185	32,296	42,747	55,854	--	
02032515	(p) South Fork Rivanna River at Route 29 near Charlottesville, Va.	259	--	--	--	--	--	--	--	--	--	
02032515	(r) South Fork Rivanna River at Route 29 near Charlottesville, Va.	259	6,887	7,822	12,650	17,799	25,761	32,854	41,218	50,485	--	
02032515	(w) South Fork Rivanna River at Route 29 near Charlottesville, Va.	259	--	--	--	--	--	--	--	--	--	
02032530	(p) Parker Branch at Route 810 near Stanardsville, Va.	3.21	664	746	1,183	1,647	2,397	3,093	3,925	4,915	6,515	
02032530	(r) Parker Branch at Route 810 near Stanardsville, Va.	3.21	306	362	674	1,039	1,628	2,198	3,050	3,846	--	
02032530	(w) Parker Branch at Route 810 near Stanardsville, Va.	3.21	386	452	826	1,262	1,971	2,647	3,538	4,486	--	
02032540	(p) Haneytown Creek at Route 810 near Stanardsville, Va.	4.02	446	504	788	1,055	1,436	1,748	2,084	2,446	2,964	
02032540	(r) Haneytown Creek at Route 810 near Stanardsville, Va.	4.02	359	424	783	1,202	1,875	2,525	3,486	4,389	--	
02032540	(w) Haneytown Creek at Route 810 near Stanardsville, Va.	4.02	382	446	785	1,141	1,652	2,082	2,601	3,074	--	
02032550	(p) Lynch River at Route 810 at Nortonsville, Va.	13.6	3,914	4,870	10,890	18,430	32,120	45,830	62,940	84,010	118,900	
02032550	(r) Lynch River at Route 810 at Nortonsville, Va.	13.6	852	994	1,767	2,645	4,036	5,349	7,181	8,968	--	
02032550	(w) Lynch River at Route 810 at Nortonsville, Va.	13.6	1,005	1,188	2,277	3,691	6,340	9,223	13,457	18,527	--	
02032600	(p) Swift Run tributary at Route 33 near Stanardsville, Va.	0.31	15.8	18.5	35.0	56.0	96.4	140	200	280	429	
02032600	(r) Swift Run tributary at Route 33 near Stanardsville, Va.	0.31	58.4	70.5	141	229	374	521	763	977	--	
02032600	(w) Swift Run tributary at Route 33 near Stanardsville, Va.	0.31	26.3	30.8	55.1	82.3	130	179	248	333	--	
02032640	(p) North Fork Rivanna River at Route 606 near Earlysville, Va.	108	6,188	7,003	11,670	17,130	26,900	36,860	49,710	66,250	95,500	
02032640	(r) North Fork Rivanna River at Route 606 near Earlysville, Va.	108	3,704	4,240	7,052	10,107	14,860	19,169	24,537	30,227	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02032640	(w) North Fork Rivanna River at Route 606 near Earlysville, Va.	108	4,258	4,879	8,338	12,409	19,534	26,767	36,324	48,244	--	
02032680	(p) North Fork Rivanna River at Route 649 near Proffit, Va.	174	--	--	--	--	--	--	--	--	--	
02032680	(r) North Fork Rivanna River at Route 649 near Proffit, Va.	174	5,195	5,921	9,698	13,761	20,059	25,715	32,557	39,981	--	
02032680	(w) North Fork Rivanna River at Route 649 near Proffit, Va.	174	--	--	--	--	--	--	--	--	--	
02032700	(p) Schenks Branch above Route 250 at Charlottesville, Va.	1.39	402	441	645	852	1,175	1,467	1,808	2,207	2,389	
02032700	(r) Schenks Branch above Route 250 at Charlottesville, Va.	1.39	169	201	385	605	962	1,312	1,857	2,354	--	
02032700	(w) Schenks Branch above Route 250 at Charlottesville, Va.	1.39	240	278	492	726	1,086	1,412	1,823	2,246	--	
02033300	(p) Moores Creek along Route 29 near Charlottesville, Va.	3.37	170	199	387	640	1,166	1,776	2,656	3,914	6,425	
02033300	(r) Moores Creek along Route 29 near Charlottesville, Va.	3.37	317	374	696	1,072	1,678	2,265	3,140	3,957	--	
02033300	(w) Moores Creek along Route 29 near Charlottesville, Va.	3.37	283	332	607	929	1,482	2,061	2,921	3,937	--	
02033500	(p) Rivanna River below Moores Creek near Charlottesville, Va.	503	8,946	9,509	12,220	14,750	18,380	21,430	24,790	28,500	34,030	
02033500	(r) Rivanna River below Moores Creek near Charlottesville, Va.	503	11,026	12,448	19,708	27,347	39,110	49,450	61,098	74,507	--	
02033500	(w) Rivanna River below Moores Creek near Charlottesville, Va.	503	9,708	10,537	14,270	17,461	21,681	25,047	28,655	--	--	
02033700	(p) Henderson Creek at Route 729 near Shadwell, Va.	1.75	--	--	--	--	--	--	--	--	--	
02033700	(r) Henderson Creek at Route 729 near Shadwell, Va.	1.75	199	237	449	702	1,111	1,513	2,129	2,695	--	
02033700	(w) Henderson Creek at Route 729 near Shadwell, Va.	1.75	--	--	--	--	--	--	--	--	--	
02034000	(p) Rivanna River at Route 15 at Palmyra, Va.	663	15,730	17,860	29,010	40,510	58,490	74,610	93,240	114,700	148,200	
02034000	(r) Rivanna River at Route 15 at Palmyra, Va.	663	13,411	15,103	23,701	32,698	46,530	58,621	71,971	87,606	--	
02034000	(w) Rivanna River at Route 15 at Palmyra, Va.	663	14,002	15,826	25,344	35,531	51,691	66,288	83,085	102,837	--	
02034050	(p) Hunters Branch at Route 15 near Palmyra, Va.	1.59	198	249	637	1,280	2,883	5,061	8,616	14,330	27,320	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
			Peak flow (ft³/s)								
02034050	(r) Hunters Branch at Route 15 near Palmyra, Va.	1.59	207	253	448	671	1,046	1,298	1,802	2,289	3,277
02034050	(w) Hunters Branch at Route 15 near Palmyra, Va.	1.59	206	252	471	736	1,259	1,665	2,500	3,548	5,954
02034200	(p) Willis River at Route 15 at Curdsville, Va.	40.7	--	--	--	--	--	--	--	--	--
02034200	(r) Willis River at Route 15 at Curdsville, Va.	40.7	1,417	1,638	2,672	3,789	5,538	7,276	8,825	10,854	17,924
02034200	(w) Willis River at Route 15 at Curdsville, Va.	40.7	--	--	--	--	--	--	--	--	--
02034250	(p) Whispering Creek at Route 60 at Sprouses Corner, Va.	0.37	29.7	36.8	83.3	146	270	406	589	833	1,276
02034250	(r) Whispering Creek at Route 60 at Sprouses Corner, Va.	0.37	87.3	109	200	308	494	598	882	1,137	1,527
02034250	(w) Whispering Creek at Route 60 at Sprouses Corner, Va.	0.37	33.2	41.4	92.8	160	286	421	608	851	1,289
02034300	(p) Little Willis River at Route 15 at Curdsville, Va.	6.85	392	406	466	512	568	609	649	688	740
02034300	(r) Little Willis River at Route 15 at Curdsville, Va.	6.85	493	587	1,001	1,463	2,216	2,821	3,685	4,615	7,045
02034300	(w) Little Willis River at Route 15 at Curdsville, Va.	6.85	401	423	512	582	646	703	746	784	839
02034500	(p) Willis River at Route 690 at Lakeside Village (Flanagan Mills), Va.	262	2,807	3,185	5,250	7,519	11,310	14,920	19,330	24,700	33,580
02034500	(r) Willis River at Route 690 at Lakeside Village (Flanagan Mills), Va.	262	4,276	4,788	7,456	10,242	14,421	19,580	21,977	26,533	47,554
02034500	(w) Willis River at Route 690 at Lakeside Village (Flanagan Mills), Va.	262	3,606	4,083	6,575	9,160	12,989	17,418	20,685	25,573	39,002
02035000	(p) James River at Route 45 at Cartersville, Va.	6,252	69,680	75,950	106,700	136,100	179,100	215,800	256,700	302,400	371,200
02035000	(r) James River at Route 45 at Cartersville, Va.	6,252	28,057	29,777	42,816	55,728	73,647	105,740	104,004	121,644	250,677
02035000	(w) James River at Route 45 at Cartersville, Va.	6,252	48,365	51,448	70,748	91,323	128,155	164,955	189,134	229,921	335,652
02035400	(p) Big Lickinghole Creek tributary at Route 250 near Ferncliff, Va.	0.54	52.4	61.0	115	189	340	515	766	1,126	1,843
02035400	(r) Big Lickinghole Creek tributary at Route 250 near Ferncliff, Va.	0.54	109	136	247	377	600	731	1,061	1,363	1,861
02035400	(w) Big Lickinghole Creek tributary at Route 250 near Ferncliff, Va.	0.54	72.8	88.3	168	266	432	597	867	1,202	1,848

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02035450	(p) Rocketts Creek tributary at Route 250 near Gum Springs, Va.	0.31	55.6	65.8	126	197	323	448	606	803	1,136	
02035450	(r) Rocketts Creek tributary at Route 250 near Gum Springs, Va.	0.31	78.6	98.6	182	280	451	544	809	1,044	1,391	
02035450	(w) Rocketts Creek tributary at Route 250 near Gum Springs, Va.	0.31	64.9	79.3	151	234	372	486	677	879	1,206	
02035500	(p) Big Lickinghole Creek at Route 600 near Goochland, Va.	68.4	--	--	--	--	--	--	--	--	--	
02035500	(r) Big Lickinghole Creek at Route 600 near Goochland, Va.	68.4	1,928	2,209	3,557	4,999	7,231	9,589	11,381	13,926	23,527	
02035500	(w) Big Lickinghole Creek at Route 600 near Goochland, Va.	68.4	--	--	--	--	--	--	--	--	--	
02036000	(p) Beaverdam Creek at Route 6 at State Farm, Va.	39.8	--	--	--	--	--	--	--	--	--	
02036000	(r) Beaverdam Creek at Route 6 at State Farm, Va.	39.8	1,399	1,617	2,640	3,744	5,474	7,190	8,729	10,739	17,715	
02036000	(w) Beaverdam Creek at Route 6 at State Farm, Va.	39.8	--	--	--	--	--	--	--	--	--	
02036500	(p) Fine Creek at Route 711 at Fine Creek Mills, Va.	22.4	484	577	1,128	1,784	2,945	4,098	5,544	7,337	10,360	
02036500	(r) Fine Creek at Route 711 at Fine Creek Mills, Va.	22.4	995	1,161	1,923	2,754	4,074	5,297	6,586	8,149	13,108	
02036500	(w) Fine Creek at Route 711 at Fine Creek Mills, Va.	22.4	818	968	1,698	2,486	3,705	4,914	6,224	7,841	11,875	
0203667510	(p) Tuckahoe Creek tributary 1 at Route 288 near Centerville, Va.	0.004	--	--	--	--	--	--	--	--	--	
0203667510	(r) Tuckahoe Creek tributary 1 at Route 288 near Centerville, Va.	0.004	1.87	2.48	6.81	14.4	32.9	56.5	94.9	142	--	
0203667510	(w) Tuckahoe Creek tributary 1 at Route 288 near Centerville, Va.	0.004	--	--	--	--	--	--	--	--	--	
0203667525	(p) Tuckahoe Creek tributary 2 at Route 288 near Centerville, Va.	0.01	1.70	2.00	3.50	5.40	8.80	12.5	17.3	23.7	35.2	
0203667525	(r) Tuckahoe Creek tributary 2 at Route 288 near Centerville, Va.	0.01	3.61	4.74	12.5	25.6	56.4	94.4	155	229	--	
0203667525	(w) Tuckahoe Creek tributary 2 at Route 288 near Centerville, Va.	0.01	2.96	3.80	8.73	15.2	25.9	35.7	47.6	60.1	--	
0203667530	(p) Tuckahoe Creek tributary to tributary 3 at Route 288 near Centerville, Va.	0.036	--	--	--	--	--	--	--	--	--	
0203667530	(r) Tuckahoe Creek tributary to tributary 3 at Route 288 near Centerville, Va.	0.036	9.11	11.7	29.1	56.9	119	194	309	445	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft³/s)									
0203667530	(w) Tuckahoe Creek tributary to tributary 3 at Route 288 near Centerville, Va.	0.036	--	--	--	--	--	--	--	--	--	
0203668010	(p) Stony Run tributary to tributary at Short Pump, Va.	0.006	1.50	1.90	3.90	6.70	12.4	18.9	27.9	40.3	63.9	
0203668010	(r) Stony Run tributary to tributary at Short Pump, Va.	0.006	7.58	10.2	20.7	34.1	59.4	66.8	117	157	176	
0203668010	(w) Stony Run tributary to tributary at Short Pump, Va.	0.006	4.88	6.58	14.0	23.2	37.6	46.2	73.1	95.4	115	
02037500	(p) James River above Route 147 near Richmond, Va.	6,753	73,650	81,140	117,300	150,800	198,600	238,000	280,900	327,400	395,400	
02037500	(r) James River above Route 147 near Richmond, Va.	6,753	29,369	31,130	44,674	58,070	76,623	110,164	108,007	126,229	261,009	
02037500	(w) James River above Route 147 near Richmond, Va.	6,753	48,812	52,101	72,602	94,136	132,894	171,973	195,075	236,333	349,950	
02037800	(p) Falling Creek at Route 653 near Midlothian, Va.	18.2	478	555	1,037	1,663	2,900	4,278	6,194	8,839	13,910	
02037800	(r) Falling Creek at Route 653 near Midlothian, Va.	18.2	879	1,030	1,715	2,465	3,662	4,743	5,949	7,376	11,756	
02037800	(w) Falling Creek at Route 653 near Midlothian, Va.	18.2	725	854	1,493	2,210	3,383	4,580	6,040	7,958	12,733	
02038000	(p) Falling Creek at Route 651 near Chesterfield, Va.	33.1	775	921	1,852	3,093	5,591	8,404	12,340	17,780	28,220	
02038000	(r) Falling Creek at Route 651 near Chesterfield, Va.	33.1	1,254	1,454	2,385	3,393	4,980	6,519	7,975	9,829	16,084	
02038000	(w) Falling Creek at Route 651 near Chesterfield, Va.	33.1	1,100	1,291	2,247	3,319	5,152	7,024	9,210	12,230	20,386	
02038500	(p) Falling Creek at Hopkins Road near Drewrys Bluff, Va.	53.3	1,088	1,253	2,245	3,472	5,782	8,246	11,550	15,940	24,030	
02038500	(r) Falling Creek at Hopkins Road near Drewrys Bluff, Va.	53.3	1,663	1,913	3,100	4,376	6,361	8,398	10,072	12,355	20,645	
02038500	(w) Falling Creek at Hopkins Road near Drewrys Bluff, Va.	53.3	1,432	1,657	2,806	4,071	6,136	8,340	10,664	13,889	22,323	
0203856510	(p) Reedy Creek Industrial Drainage near Chesterfield, Va.	0.016	5.00	5.30	6.60	7.80	9.30	10.4	11.6	12.9	14.6	
0203856510	(r) Reedy Creek Industrial Drainage near Chesterfield, Va.	0.016	--	--	5.77	9.61	16.6	24.6	34.1	46.7	111	
0203856510	(w) Reedy Creek Industrial Drainage near Chesterfield, Va.	0.016	--	--	6.19	8.63	12.2	15.2	18.2	21.3	30.0	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02038800	(p) Appomattox River (North Branch Appomattox) at Route 24 near Appomattox, Va.	5.67	454	522	920	1,405	2,303	3,245	4,491	6,131	9,101	
02038800	(r) Appomattox River (North Branch Appomattox) at Route 24 near Appomattox, Va.	5.67	440	526	902	1,323	2,011	2,552	3,359	4,214	6,381	
02038800	(w) Appomattox River (North Branch Appomattox) at Route 24 near Appomattox, Va.	5.67	445	525	908	1,349	2,120	2,804	3,809	5,035	7,703	
02038830	(p) Fishpond Creek at Route 617 near Hixburg, Va.	13.9	--	--	--	--	--	--	--	--	--	
02038830	(r) Fishpond Creek at Route 617 near Hixburg, Va.	13.9	750	882	1,478	2,135	3,188	4,110	5,213	6,481	10,208	
02038830	(w) Fishpond Creek at Route 617 near Hixburg, Va.	13.9	--	--	--	--	--	--	--	--	--	
02038840	(p) Holiday Creek near Toga, Va.	1.67	166	217	583	1,099	2,127	3,229	4,672	6,518	9,699	
02038840	(r) Holiday Creek near Toga, Va.	1.67	213	260	460	689	1,073	1,332	1,846	2,344	3,363	
02038840	(w) Holiday Creek near Toga, Va.	1.67	207	255	472	724	1,180	1,507	2,142	2,831	4,248	
02038845	(p) North Holiday Creek near Toga, Va.	1.35	80.2	99.8	238	446	912	1,484	2,338	3,598	6,179	
02038845	(r) North Holiday Creek near Toga, Va.	1.35	188	230	409	615	962	1,190	1,663	2,116	3,008	
02038845	(w) North Holiday Creek near Toga, Va.	1.35	169	208	386	594	955	1,227	1,756	2,334	3,526	
02038850	(p) Holiday Creek above Route 614 near Andersonville, Va.	8.54	488	594	1,302	2,296	4,389	6,832	10,340	15,310	25,080	
02038850	(r) Holiday Creek above Route 614 near Andersonville, Va.	8.54	562	666	1,130	1,646	2,482	3,172	4,106	5,130	7,908	
02038850	(w) Holiday Creek above Route 614 near Andersonville, Va.	8.54	544	650	1,161	1,756	2,851	3,824	5,297	7,209	11,989	
02038880	(p) Vaughans Creek at Route 626 near Hixburg, Va.	23.2	--	--	--	--	--	--	--	--	--	
02038880	(r) Vaughans Creek at Route 626 near Hixburg, Va.	23.2	1,016	1,185	1,961	2,807	4,148	5,397	6,700	8,288	13,351	
02038880	(w) Vaughans Creek at Route 626 near Hixburg, Va.	23.2	--	--	--	--	--	--	--	--	--	
02038900	(p) Dry Creek at Route 635 near Farmville, Va.	3.6	217	242	380	529	778	1,016	1,307	1,663	2,255	
02038900	(r) Dry Creek at Route 635 near Farmville, Va.	3.6	253	304	607	1,007	1,774	2,565	3,662	4,907	--	
02038900	(w) Dry Creek at Route 635 near Farmville, Va.	3.6	236	274	484	709	1,054	1,355	1,715	2,122	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft³/s)											
02041650	(r) Appomattox River at Route 600 at Matoaca, Va.	1,342	11,266	12,272	18,340	24,503	33,394	46,664	48,933	58,119	111,929
02041650	(w) Appomattox River at Route 600 at Matoaca, Va.	1,342	--	--	--	--	--	--	--	--	--
02042000	(p) Swift Creek at Bradley Bridge Road near Chester, Va.	140	1,989	2,343	4,656	7,878	14,730	22,880	34,870	52,360	88,090
02042000	(r) Swift Creek at Bradley Bridge Road near Chester, Va.	140	2,949	3,337	5,279	7,329	10,450	14,032	16,166	19,640	34,243
02042000	(w) Swift Creek at Bradley Bridge Road near Chester, Va.	140	2,244	2,623	4,865	7,683	13,358	19,906	28,731	42,157	73,946
0204206210	(p) Swift Creek tributary Industrial Drainage near Walthall, Va.	0.087	65.8	73.9	118	164	241	312	398	501	670
0204206210	(r) Swift Creek tributary Industrial Drainage near Walthall, Va.	0.087	--	--	17.2	27.7	46.7	67.2	91.6	123	281
0204206210	(w) Swift Creek tributary Industrial Drainage near Walthall, Va.	0.087	--	--	82.7	118	181	244	320	415	605
02042200	(p) Glebe Creek tributary at Route 155 near Charles City, Va.	0.99	27.2	33.4	79.3	155	346	611	1,054	1,788	3,522
02042200	(r) Glebe Creek tributary at Route 155 near Charles City, Va.	0.99	--	--	82.3	127	205	285	378	496	1,066
02042200	(w) Glebe Creek tributary at Route 155 near Charles City, Va.	0.99	--	--	79.8	149	316	540	906	1,505	3,061
02042250	(p) Bailey Branch tributary at Route 10 at Spring Grove, Va.	0.55	51.1	60.9	121	199	348	509	726	1,014	1,542
02042250	(r) Bailey Branch tributary at Route 10 at Spring Grove, Va.	0.55	--	--	56.3	88.0	144	201	268	354	772
02042250	(w) Bailey Branch tributary at Route 10 at Spring Grove, Va.	0.55	--	--	86.8	140	241	353	502	706	1,244
02042287	(p) Chickahominy River at Route 301 near Atlee, Va.	62.2	1,605	1,825	3,054	4,438	6,803	9,112	11,980	15,540	21,550
02042287	(r) Chickahominy River at Route 301 near Atlee, Va.	62.2	--	--	1,184	1,698	2,555	3,331	4,225	5,319	10,304
02042287	(w) Chickahominy River at Route 301 near Atlee, Va.	62.2	--	--	2,024	2,929	4,532	6,129	8,149	10,746	17,143
0204228775	(p) Chickahominy River tributary to tributary at Ellerson, Va.	0.041	5.60	6.10	8.70	11.4	15.7	19.5	24.0	29.3	37.7
0204228775	(r) Chickahominy River tributary to tributary at Ellerson, Va.	0.041			10.6	17.3	29.5	43.0	59.1	80.0	186
0204228775	(w) Chickahominy River tributary to tributary at Ellerson, Va.	0.041	--	--	9.47	13.7	20.4	26.6	33.5	41.4	61.9

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft³/s)									
02042300	(p) Horsepen Branch at Route 250 at Richmond, Va.	1.06	--	--	--	--	--	--	--	--	--	--
02042300	(r) Horsepen Branch at Route 250 at Richmond, Va.	1.06	163	200	358	540	849	1,046	1,477	1,884	2,650	
02042300	(w) Horsepen Branch at Route 250 at Richmond, Va.	1.06	--	--	--	--	--	--	--	--	--	--
02042400	(p) Jordans Branch at Route 250 at Richmond, Va.	2.47	--	--	--	--	--	--	--	--	--	--
02042400	(r) Jordans Branch at Route 250 at Richmond, Va.	2.47	269	326	571	849	1,312	1,640	2,236	2,828	4,128	
02042400	(w) Jordans Branch at Route 250 at Richmond, Va.	2.47	--	--	--	--	--	--	--	--	--	--
02042426	(p) Upham Brook at Wilkinson Road near Richmond, Va.	37.4	1,967	2,025	2,275	2,480	2,740	2,935	3,132	3,332	3,604	
02042426	(r) Upham Brook at Wilkinson Road near Richmond, Va.	37.4	--	--	853	1,235	1,874	2,462	3,140	3,974	7,797	
02042426	(w) Upham Brook at Wilkinson Road near Richmond, Va.	37.4	--	--	2,194	2,417	2,704	2,919	3,132	3,347	3,666	
0204243150	(p) Beaverdam Creek tributary at Ellerson, Va.	0.008	8.10	9.20	14.8	20.7	30.0	38.6	48.7	60.5	79.3	
0204243150	(r) Beaverdam Creek tributary at Ellerson, Va.	0.008	--	--	3.69	6.23	10.9	16.3	22.8	31.4	76.0	
0204243150	(w) Beaverdam Creek tributary at Ellerson, Va.	0.008	--	--	8.26	12.5	20.0	27.8	37.1	48.7	78.3	
02042500	(p) Chickahominy River at Route 618 near Providence Forge, Va.	251	1,615	1,830	3,038	4,411	6,789	9,141	12,100	15,810	22,170	
02042500	(r) Chickahominy River at Route 618 near Providence Forge, Va.	251	--	--	2,907	4,066	5,976	7,628	9,528	11,831	22,132	
02042500	(w) Chickahominy River at Route 618 near Providence Forge, Va.	251	--	--	2,982	4,263	6,450	8,533	11,112	14,362	22,159	
02042700	(p) Collins Run at Route 155 near Providence Forge, Va.	2.83	123	139	234	347	554	770	1,055	1,429	2,104	
02042700	(r) Collins Run at Route 155 near Providence Forge, Va.	2.83	--	--	162	245	389	531	697	905	1,895	
02042700	(w) Collins Run at Route 155 near Providence Forge, Va.	2.83	--	--	200	300	480	668	909	1,227	2,039	
02042710	(p) Collins Run tributary at Route 155 near Providence Forge, Va.	0.32	24.2	26.2	35.4	43.8	55.6	65.2	75.6	86.8	103	
02042710	(r) Collins Run tributary at Route 155 near Providence Forge, Va.	0.32			39.7	62.7	103	146	196	260	574	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02042710	(w) Collins Run tributary at Route 155 near Providence Forge, Va.	0.32	--	--	37.2	51.0	71.4	88.8	106	125	173	
02042780	(p) West Branch Long Hill Swamp at Route 612 near Lightfoot, Va.	2.47	90.8	97.1	128	159	206	247	294	348	432	
02042780	(r) West Branch Long Hill Swamp at Route 612 near Lightfoot, Va.	2.47	--	--	148	225	358	490	644	838	1,759	
02042780	(w) West Branch Long Hill Swamp at Route 612 near Lightfoot, Va.	2.47	--	--	132	173	233	285	341	405	535	
02043500	(p) Cypress Swamp at Route 32 at Cypress Chapel, Va.	23.6	539	585	803	1,004	1,288	1,523	1,778	2,056	2,464	
02043500	(r) Cypress Swamp at Route 32 at Cypress Chapel, Va.	23.6	--	--	634	926	1,416	1,873	2,401	3,053	6,058	
02043500	(w) Cypress Swamp at Route 32 at Cypress Chapel, Va.	23.6	--	--	760	985	1,315	1,590	1,883	2,202	2,827	
02043550	(p) Washington Ditch along road near Cypress Chapel, Va.	41.3	--	--	--	--	--	--	--	--	--	
02043550	(r) Washington Ditch along road near Cypress Chapel, Va.	41.3	909	1,314	1,991	2,611	3,327	4,207	8,233	--	--	
02043550	(w) Washington Ditch along road near Cypress Chapel, Va.	41.3	--	--	--	--	--	--	--	--	--	
02043600	(p) Lake Drummond in Great Dismal Swamp, Va.	119	--	--	--	--	--	--	--	--	--	
02043600	(r) Lake Drummond in Great Dismal Swamp, Va.	119	1,797	2,549	3,793	4,896	6,167	7,714	14,703	--	--	
02043600	(w) Lake Drummond in Great Dismal Swamp, Va.	119	--	--	--	--	--	--	--	--	--	
02044000	(p) Nottoway River at Route 723 near Burkeville, Va.	38.7	1,846	2,073	3,245	4,440	6,292	7,944	9,851	12,050	15,470	
02044000	(r) Nottoway River at Route 723 near Burkeville, Va.	38.7	1,376	1,591	2,599	3,688	5,396	7,084	8,610	10,595	17,457	
02044000	(w) Nottoway River at Route 723 near Burkeville, Va.	38.7	1,574	1,789	2,846	3,982	5,813	7,488	9,242	11,399	16,193	
02044200	(p) Falls Creek tributary at Route 49 near Victoria, Va.	0.37	89.8	101	161	224	326	420	532	665	877	
02044200	(r) Falls Creek tributary at Route 49 near Victoria, Va.	0.37	87.3	109	200	308	494	598	882	1,137	1,527	
02044200	(w) Falls Creek tributary at Route 49 near Victoria, Va.	0.37	87.8	108	193	292	453	556	782	984	1,282	
02044400	(p) Hurricane Branch at Route 40 at Blackstone, Va.	1.61	193	238	567	1,079	2,285	3,844	6,288	10,070	18,290	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
			Peak flow (ft³/s)								
02044400	(r) Hurricane Branch at Route 40 at Blackstone, Va.	1.61	209	255	451	675	1,053	1,307	1,813	2,303	3,299
02044400	(w) Hurricane Branch at Route 40 at Blackstone, Va.	1.61	206	252	468	729	1,237	1,635	2,434	3,426	5,658
02044500	(p) Nottoway River at Route 612 near Rawlings, Va.	317	4,826	5,507	9,248	13,370	20,250	26,810	34,800	44,490	60,480
02044500	(r) Nottoway River at Route 612 near Rawlings, Va.	317	4,788	5,344	8,281	11,339	15,905	21,668	24,128	29,074	52,548
02044500	(w) Nottoway River at Route 612 near Rawlings, Va.	317	4,803	5,405	8,605	12,013	17,599	23,690	28,559	36,012	56,838
02045500	(p) Nottoway River at Route 301 near Stony Creek, Va.	577	5,862	6,467	9,454	12,320	16,510	20,080	24,050	28,460	35,060
02045500	(r) Nottoway River at Route 301 near Stony Creek, Va.	577	6,829	7,546	11,519	15,612	21,639	29,792	32,358	38,758	71,921
02045500	(w) Nottoway River at Route 301 near Stony Creek, Va.	577	6,285	6,955	10,448	13,878	18,551	23,800	27,002	31,711	43,545
02046000	(p) Stony Creek at Route 1 near (at) Dinwiddie, Va.	113	2,030	2,332	3,974	5,746	8,630	11,310	14,490	18,270	24,310
02046000	(r) Stony Creek at Route 1 near (at) Dinwiddie, Va.	113	2,597	2,950	4,691	6,536	9,360	12,522	14,555	17,721	30,606
02046000	(w) Stony Creek at Route 1 near (at) Dinwiddie, Va.	113	2,374	2,717	4,449	6,270	9,069	12,036	14,527	17,978	27,108
02046200	(p) Millrun Branch at Route 40 near McKenney, Va.	2.23	305	308	322	331	343	350	358	365	373
02046200	(r) Millrun Branch at Route 40 near McKenney, Va.	2.23	--	--	139	211	337	461	607	790	1,663
02046200	(w) Millrun Branch at Route 40 near McKenney, Va.	2.23	--	--	216	268	340	394	444	489	624
02046400	(p) Jones Hole Swamp tributary at Route 35 near Carson, Va.	3.08	55.5	60.0	81.7	102	130	153	178	205	245
02046400	(r) Jones Hole Swamp tributary at Route 35 near Carson, Va.	3.08	--	--	171	259	410	559	733	950	1,985
02046400	(w) Jones Hole Swamp tributary at Route 35 near Carson, Va.	3.08	--	--	116	158	219	268	316	367	503
02046500	(p) Anderson Branch at Route 40 at Sussex, Va.	4.99	91.4	106	180	253	361	452	553	662	822
02046500	(r) Anderson Branch at Route 40 at Sussex, Va.	4.99	--	--	233	350	550	744	970	1,253	2,586
02046500	(w) Anderson Branch at Route 40 at Sussex, Va.	4.99	--	--	203	295	437	561	695	844	1,219

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02046800	(p) Three Creek tributary at Route 58 near Drewryville, Va.	1.06	92.2	97.0	119	138	163	184	205	227	258	
02046800	(r) Three Creek tributary at Route 58 near Drewryville, Va.	1.06	--	--	86.0	133	214	297	393	516	1,106	
02046800	(w) Three Creek tributary at Route 58 near Drewryville, Va.	1.06	--	--	102	135	184	226	267	310	426	
02046900	(p) Musgrave Branch at Route 58 near Drewryville, Va.	1.96	61.1	65.7	87.6	107	135	158	182	208	247	
02046900	(r) Musgrave Branch at Route 58 near Drewryville, Va.	1.96	--	--	128	195	311	427	563	734	1,549	
02046900	(w) Musgrave Branch at Route 58 near Drewryville, Va.	1.96	--	--	105	142	197	243	288	336	465	
02047000	(p) Nottoway River above Route 653 near Sebrell, Va.	1,441	8,425	9,260	13,460	17,620	23,900	29,420	35,710	42,900	53,990	
02047000	(r) Nottoway River above Route 653 near Sebrell, Va.	1,441	11,751	12,785	19,073	25,452	34,638	48,463	50,669	60,139	116,182	
02047000	(w) Nottoway River above Route 653 near Sebrell, Va.	1,441	9,790	10,763	16,028	21,159	27,990	36,384	40,862	48,211	67,803	
02047100	(p) Assamooick Swamp at Route 35 near Sebrell, Va.	86	1,364	1,513	2,313	3,167	4,562	5,871	7,452	9,359	12,490	
02047100	(r) Assamooick Swamp at Route 35 near Sebrell, Va.	86	--	--	1,458	2,080	3,113	4,037	5,103	6,404	12,306	
02047100	(w) Assamooick Swamp at Route 35 near Sebrell, Va.	86	--	--	1,977	2,747	4,033	5,240	6,696	8,478	12,447	
02047500	(p) Blackwater River at Route 617 near Dendron, Va.	290	2,240	2,515	3,911	5,292	7,371	9,173	11,200	13,490	16,960	
02047500	(r) Blackwater River at Route 617 near Dendron, Va.	290	--	--	3,190	4,451	6,525	8,311	10,365	12,852	23,955	
02047500	(w) Blackwater River at Route 617 near Dendron, Va.	290	--	--	3,623	4,961	7,057	8,873	10,930	13,301	18,555	
02048000	(p) Blackwater River at Route 460 at Zuni, Va.	451	2,760	3,028	4,291	5,429	6,999	8,263	9,605	11,040	13,070	
02048000	(r) Blackwater River at Route 460 at Zuni, Va.	451	--	--	4,239	5,868	8,539	10,804	13,409	16,552	30,513	
02048000	(w) Blackwater River at Route 460 at Zuni, Va.	451	--	--	4,276	5,548	7,376	8,830	10,366	12,018	15,291	
02048400	(p) Seacock Creek (Swamp) at Route 618 near Ivor, Va.	28	310	358	655	1,040	1,806	2,664	3,864	5,536	8,769	
02048400	(r) Seacock Creek (Swamp) at Route 618 near Ivor, Va.	28	--	--	708	1,030	1,572	2,073	2,653	3,367	6,653	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft³/s)									
02048400	(w) Seacock Creek (Swamp) at Route 618 near Ivor, Va.	28	--	--	681	1,035	1,689	2,373	3,279	4,517	7,912	
02048500	(p) Seacock Swamp (Creek) at Route 635 near Berlin (at Unity), Va.	102	646	696	933	1,148	1,448	1,693	1,957	2,243	2,658	
02048500	(r) Seacock Swamp (Creek) at Route 635 near Berlin (at Unity), Va.	102	--	--	1,628	2,314	3,453	4,468	5,637	7,062	13,512	
02048500	(w) Seacock Swamp (Creek) at Route 635 near Berlin (at Unity), Va.	102	--	--	1,049	1,329	1,719	2,024	2,340	2,676	3,309	
02049000	(p) Blackwater River at Route 603 near Burdette, Va.	578	--	--	--	--	--	--	--	--	--	
02049000	(r) Blackwater River at Route 603 near Burdette, Va.	578	4,974	6,854	9,931	12,519	15,495	19,080	34,957	--	--	
02049000	(w) Blackwater River at Route 603 near Burdette, Va.	578	--	--	--	--	--	--	--	--	--	
02049500	(p) Blackwater River near Franklin, Va.	613	3,344	3,711	5,641	7,665	10,910	13,910	17,470	21,710	28,560	
02049500	(r) Blackwater River near Franklin, Va.	613	--	--	5,166	7,111	10,294	12,964	16,036	19,734	36,102	
02049500	(w) Blackwater River near Franklin, Va.	613	--	--	5,474	7,472	10,706	13,614	17,050	21,174	30,164	
02049700	(p) Cypress Swamp at Route 635 near Burdette, Va.	8.43	126	138	193	245	323	390	465	548	675	
02049700	(r) Cypress Swamp at Route 635 near Burdette, Va.	8.43	--	--	327	486	757	1,016	1,318	1,692	3,446	
02049700	(w) Cypress Swamp at Route 635 near Burdette, Va.	8.43	--	--	219	290	393	479	571	672	875	
02050050	(p) Blackwater River tributary 1 at Route 189 near Holland, Va.	2.72	171	192	307	431	634	826	1,057	1,336	1,794	
02050050	(r) Blackwater River tributary 1 at Route 189 near Holland, Va.	2.72	--	--	158	239	380	519	681	885	1,854	
02050050	(w) Blackwater River tributary 1 at Route 189 near Holland, Va.	2.72	--	--	237	343	525	702	916	1,180	1,810	
02050400	(p) North Meherrin River at Route 360 near Briery, Va.	1.22	269	287	372	448	552	635	723	818	953	
02050400	(r) North Meherrin River at Route 360 near Briery, Va.	1.22	177	217	387	582	913	1,128	1,582	2,016	2,853	
02050400	(w) North Meherrin River at Route 360 near Briery, Va.	1.22	239	265	377	487	628	736	864	979	1,144	
02050500	(p) North Meherrin River at Route 687 near Keysville, Va.	9.06	807	858	1,084	1,273	1,518	1,705	1,897	2,095	2,367	
02050500	(r) North Meherrin River at Route 687 near Keysville, Va.	9.06	582	689	1,168	1,699	2,558	3,274	4,227	5,277	8,157	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02050500	(w) North Meherrin River at Route 687 near Keyesville, Va.	9.06	744	811	1,107	1,382	1,711	1,980	2,228	2,462	2,832	
02051000	(p) North Meherrin River at Route 40 near Lunenburg, Va.	56	2,684	3,002	4,596	6,149	8,450	10,420	12,620	15,070	18,740	
02051000	(r) North Meherrin River at Route 40 near Lunenburg, Va.	56	1,713	1,968	3,186	4,493	6,525	8,621	10,318	12,651	21,186	
02051000	(w) North Meherrin River at Route 40 near Lunenburg, Va.	56	2,125	2,395	3,731	5,148	7,437	9,489	11,522	14,027	19,581	
02051400	(p) Saddletree Creek at Route 58 near Lawrenceville, Va.	0.87	59.4	71.5	152	264	501	780	1,184	1,762	2,914	
02051400	(r) Saddletree Creek at Route 58 near Lawrenceville, Va.	0.87	145	179	321	486	767	942	1,341	1,714	2,390	
02051400	(w) Saddletree Creek at Route 58 near Lawrenceville, Va.	0.87	85.9	106	215	349	591	839	1,237	1,747	2,764	
02051500	(p) Meherrin River at Route 715 near Lawrenceville, Va.	552	7,407	8,099	11,560	14,940	20,010	24,420	29,430	35,110	43,830	
02051500	(r) Meherrin River at Route 715 near Lawrenceville, Va.	552	6,652	7,356	11,241	15,247	21,152	29,099	31,663	37,943	70,271	
02051500	(w) Meherrin River at Route 715 near Lawrenceville, Va.	552	7,085	7,772	11,412	15,080	20,446	26,140	30,191	35,968	49,691	
02051600	(p) Great Creek at Route 763 (old Route 618) near Cochran, Va.	30.8	881	1,064	2,239	3,808	6,943	10,430	15,240	21,790	34,090	
02051600	(r) Great Creek at Route 763 (old Route 618) near Cochran, Va.	30.8	1,201	1,395	2,292	3,265	4,799	6,274	7,698	9,495	15,488	
02051600	(w) Great Creek at Route 763 (old Route 618) near Cochran, Va.	30.8	1,116	1,312	2,281	3,370	5,277	7,150	9,388	12,460	20,864	
02051650	(p) Rocky Run at Route 641 near Dolphin, Va.	1.42	130	144	212	280	380	468	567	679	849	
02051650	(r) Rocky Run at Route 641 near Dolphin, Va.	1.42	194	237	421	631	987	1,222	1,705	2,168	3,089	
02051650	(w) Rocky Run at Route 641 near Dolphin, Va.	1.42	157	184	304	428	585	722	890	1,042	1,283	
02051700	(p) Rocky Run at Route 642 at Lawrenceville, Va.	6.13	--	--	--	--	--	--	--	--	--	
02051700	(r) Rocky Run at Route 642 at Lawrenceville, Va.	6.13	461	550	942	1,379	2,093	2,660	3,490	4,375	6,647	
02051700	(w) Rocky Run at Route 642 at Lawrenceville, Va.	6.13	--	--	--	--	--	--	--	--	--	
02052000	(p) Meherrin River at Route 301 at Emporia, Va.	744	8,966	9,724	13,230	16,310	20,480	23,790	27,270	30,950	36,140	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
			Peak flow (ft³/s)								
02052000	(r) Meherrin River at Route 301 at Emporia, Va.	744	7,940	8,736	13,251	17,882	24,660	34,103	36,650	43,788	82,168
02052000	(w) Meherrin River at Route 301 at Emporia, Va.	744	8,566	9,326	13,239	16,953	21,861	26,999	29,923	34,089	43,876
02052500	(p) Fountains (Fontaine) Creek at Route 603 near Brink, Va.	68.7	1,483	1,716	3,019	4,471	6,907	9,230	12,050	15,470	21,060
02052500	(r) Fountains (Fontaine) Creek at Route 603 near Brink, Va.	68.7	1,933	2,214	3,566	5,011	7,248	9,611	11,405	13,955	23,581
02052500	(w) Fountains (Fontaine) Creek at Route 603 near Brink, Va.	68.7	1,762	2,032	3,388	4,837	7,118	9,466	11,669	14,628	22,254
02053000	(p) Fountains (Fontaine) Creek at Route 639 near Emporia, Va.	95.9	1,237	1,414	2,363	3,373	5,000	6,497	8,267	10,350	13,670
02053000	(r) Fountains (Fontaine) Creek at Route 639 near Emporia, Va.	95.9	2,356	2,684	4,285	5,988	8,603	11,476	13,430	16,378	28,085
02053000	(w) Fountains (Fontaine) Creek at Route 639 near Emporia, Va.	95.9	1,844	2,123	3,512	4,934	6,906	9,114	10,817	13,088	18,984
02053800	(p) South Fork Roanoke River at Route 637 near Shawsville, Va.	109	2,776	3,196	5,396	7,638	11,060	14,060	17,440	21,230	26,960
02053800	(r) South Fork Roanoke River at Route 637 near Shawsville, Va.	109	3,729	4,268	7,096	10,168	14,947	19,278	24,671	30,391	--
02053800	(w) South Fork Roanoke River at Route 637 near Shawsville, Va.	109	3,483	3,984	6,561	9,228	13,220	16,691	20,731	25,015	--
02054500	(p) Roanoke River at Route 603 at Lafayette, Va.	254	6,188	6,848	10,060	13,070	17,390	20,970	24,870	29,130	35,370
02054500	(r) Roanoke River at Route 603 at Lafayette, Va.	254	6,542	7,320	10,938	14,329	19,271	23,304	27,668	32,592	--
02054500	(w) Roanoke River at Route 603 at Lafayette, Va.	254	6,397	7,132	10,592	13,780	18,306	21,968	25,918	30,264	--
02054510	(p) Roanoke River near Wabun, Va.	270	9,006	9,723	13,060	16,030	20,110	23,390	26,870	30,590	35,910
02054510	(r) Roanoke River near Wabun, Va.	270	6,842	7,651	11,408	14,923	20,042	24,212	28,727	33,815	--
02054510	(w) Roanoke River near Wabun, Va.	270	7,940	8,682	12,239	15,536	20,085	23,643	27,352	31,298	--
02054530	(p) Roanoke River at Route 1154 at Glenvar, Va.	281	9,116	10,060	14,650	18,940	25,060	30,150	35,680	41,720	50,560
02054530	(r) Roanoke River at Route 1154 at Glenvar, Va.	281	7,045	7,876	11,726	15,325	20,562	24,825	29,441	34,639	--
02054530	(w) Roanoke River at Route 1154 at Glenvar, Va.	281	7,873	8,723	12,847	16,863	22,826	27,821	33,288	39,343	--
02055000	(p) Roanoke River at Walnut Street at Roanoke, Va.	384	7,631	8,537	12,830	16,690	21,940	26,090	30,400	34,910	41,170

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02055000	(r) Roanoke River at Walnut Street at Roanoke, Va.	384	8,858	9,877	14,541	18,862	25,127	30,185	35,675	41,817	--	
02055000	(w) Roanoke River at Walnut Street at Roanoke, Va.	384	8,406	9,401	13,949	18,026	23,658	28,050	32,626	37,471	--	
02055100	(p) Tinker Creek below railroad bridge near Daleville, Va.	11.7	777	921	1,758	2,739	4,453	6,139	8,234	10,820	15,130	
02055100	(r) Tinker Creek below railroad bridge near Daleville, Va.	11.7	685	786	1,312	1,851	2,672	3,394	4,168	5,095	--	
02055100	(w) Tinker Creek below railroad bridge near Daleville, Va.	11.7	703	810	1,387	2,014	3,070	4,106	5,368	6,993	--	
02056000	(p) Roanoke River below powerplant at Niagara, Va.	509	10,990	12,110	17,540	22,610	29,850	35,850	42,400	49,540	59,990	
02056000	(r) Roanoke River below powerplant at Niagara, Va.	509	10,890	12,116	17,657	22,749	30,110	36,009	42,426	49,562	--	
02056000	(w) Roanoke River below powerplant at Niagara, Va.	509	10,933	12,114	17,609	22,686	29,971	35,915	42,409	49,547	--	
02056650	(p) Back Creek at Route 660 near Dundee, Va.	55.8	2,672	3,128	5,673	8,499	13,190	17,590	22,860	29,140	39,220	
02056650	(r) Back Creek at Route 660 near Dundee, Va.	55.8	2,319	2,671	4,537	6,593	9,809	12,762	16,586	20,522	--	
02056650	(w) Back Creek at Route 660 near Dundee, Va.	55.8	2,383	2,756	4,788	7,094	10,888	14,506	19,121	24,319	--	
02056900	(p) Blackwater River at Route 122 near Rocky Mount, Va.	115	3,942	4,518	7,482	10,430	14,840	18,610	22,800	27,440	34,320	
02056900	(r) Blackwater River at Route 122 near Rocky Mount, Va.	115	3,873	4,431	7,354	10,526	15,459	19,925	25,468	31,361	--	
02056900	(w) Blackwater River at Route 122 near Rocky Mount, Va.	115	3,890	4,453	7,393	10,491	15,190	19,283	24,031	29,080	--	
02057000	(p) Blackwater River near Union Hall, Va.	208	4,511	5,138	8,438	11,860	17,210	22,010	27,560	33,960	43,910	
02057000	(r) Blackwater River near Union Hall, Va.	208	5,895	6,709	10,926	15,445	22,442	28,703	36,192	44,393	--	
02057000	(w) Blackwater River near Union Hall, Va.	208	5,493	6,239	10,048	13,970	19,907	25,126	31,187	37,936	--	
02057500	(p) Roanoke River near Toshes, Va.	1,017	15,940	17,620	25,980	34,070	46,040	56,310	67,800	80,670	100,100	
02057500	(r) Roanoke River near Toshes, Va.	1,017	18,163	20,376	31,542	43,126	60,898	76,297	92,756	112,588	--	
02057500	(w) Roanoke River near Toshes, Va.	1,017	17,294	19,267	28,930	38,272	51,784	63,059	75,221	89,037	--	
02057700	(p) Powder Mill Creek at Route 220 at Rocky Mount, Va.	0.78	140	150	191	227	275	312	351	392	449	
02057700	(r) Powder Mill Creek at Route 220 at Rocky Mount, Va.	0.78	112	134	262	416	669	919	1,318	1,678	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft ³ /s)									
02057700	(w) Powder Mill Creek at Route 220 at Rocky Mount, Va.	0.78	128	143	212	269	335	384	437	483	--	--
02058000	(p) Snow Creek at Route 969 at Sago, Va.	59.6	1,750	1,994	3,436	5,194	8,465	11,920	16,530	22,640	33,830	
02058000	(r) Snow Creek at Route 969 at Sago, Va.	59.6	1,777	2,040	3,297	4,645	6,737	8,912	10,638	13,035	21,889	
02058000	(w) Snow Creek at Route 969 at Sago, Va.	59.6	1,767	2,023	3,344	4,828	7,407	10,055	13,007	17,168	27,860	
02058400	(p) Pigg River above Route 40 near Sandy Level, Va.	351	8,451	9,517	15,400	21,970	33,150	44,030	57,550	74,320	102,700	
02058400	(r) Pigg River above Route 40 near Sandy Level, Va.	351	8,543	9,676	15,498	21,668	31,189	39,620	49,359	60,335	--	--
02058400	(w) Pigg River above Route 40 near Sandy Level, Va.	351	8,516	9,628	15,463	21,793	32,130	41,931	53,971	68,677	--	--
02058500	(p) Pigg River along Route 605 near Toshes, Va.	382	8,063	8,820	12,680	16,570	22,580	27,940	34,160	41,380	52,740	
02058500	(r) Pigg River along Route 605 near Toshes, Va.	382	9,072	10,267	16,399	22,887	32,894	41,740	51,900	63,405	--	--
02058500	(w) Pigg River along Route 605 near Toshes, Va.	382	8,631	9,614	14,440	19,128	25,985	31,870	38,555	46,171	--	--
02059000	(p) Roanoke River at Route 1109 near Gretna, Va.	1,418	20,750	22,700	32,070	40,710	52,970	63,080	74,050	85,980	103,400	
02059000	(r) Roanoke River at Route 1109 near Gretna, Va.	1,418	22,990	25,714	39,384	53,473	75,059	93,634	112,965	136,818	--	--
02059000	(w) Roanoke River at Route 1109 near Gretna, Va.	1,418	21,975	24,309	35,447	45,732	59,977	71,354	83,155	96,257	--	--
02059450	(p) South Fork Goose Creek at Route 607 at Montvale, Va.	11	450	513	867	1,269	1,961	2,641	3,491	4,549	6,347	
02059450	(r) South Fork Goose Creek at Route 607 at Montvale, Va.	11	652	771	1,300	1,884	2,827	3,629	4,648	5,793	9,030	
02059450	(w) South Fork Goose Creek at Route 607 at Montvale, Va.	11	564	661	1,130	1,642	2,427	3,179	4,077	5,132	7,423	
02059500	(p) Goose Creek above Route 732 near Huddleston, Va.	188	6,005	6,900	11,720	16,830	25,010	32,490	41,250	51,490	67,620	
02059500	(r) Goose Creek above Route 732 near Huddleston, Va.	188	5,488	6,250	10,213	14,467	21,059	26,970	34,086	41,838	--	--
02059500	(w) Goose Creek above Route 732 near Huddleston, Va.	188	5,608	6,406	10,639	15,256	22,639	29,436	37,605	46,956	--	--
02060000	(p) Goose Creek at Route 626 at Huddleston, Va.	213	--	--	--	--	--	--	--	--	--	--
02060000	(r) Goose Creek at Route 626 at Huddleston, Va.	213	5,995	6,821	11,101	15,684	22,780	29,126	36,705	45,015	--	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02060000	(w) Goose Creek at Route 626 at Huddleston, Va.	213	--	--	--	--	--	--	--	--	--	--
02060500	(p) Roanoke (Staunton) River at Route 29 (Alternate) at Altavista, Va.	1,782	29,830	32,560	45,700	57,920	75,360	89,860	105,700	123,000	148,500	
02060500	(r) Roanoke (Staunton) River at Route 29 (Alternate) at Altavista, Va.	1,782	27,033	30,174	45,878	61,992	86,660	107,785	129,357	156,434	--	
02060500	(w) Roanoke (Staunton) River at Route 29 (Alternate) at Altavista, Va.	1,782	28,231	31,227	45,787	59,623	79,208	95,107	111,728	130,403	--	
02061000	(p) Big Otter River (Otter River) at Route 221 near Bedford, Va.	114	4,246	4,797	7,649	10,540	14,980	18,900	23,380	28,490	36,360	
02061000	(r) Big Otter River (Otter River) at Route 221 near Bedford, Va.	114	3,849	4,404	7,312	10,467	15,374	19,818	25,336	31,201	--	
02061000	(w) Big Otter River (Otter River) at Route 221 near Bedford, Va.	114	3,959	4,517	7,428	10,497	15,183	19,325	24,191	29,505	--	
02061150	(p) Chestnut Branch near Forest at Goode, Va.	1.54	142	173	382	674	1,281	1,979	2,969	4,355	7,036	
02061150	(r) Chestnut Branch near Forest at Goode, Va.	1.54	182	216	412	646	1,026	1,398	1,973	2,500	--	
02061150	(w) Chestnut Branch near Forest at Goode, Va.	1.54	176	210	407	652	1,084	1,546	2,256	3,062	--	
02061300	(p) Nininger Creek at Route 43 near Forest (near Otter Hill, near Bedford), Va.	4.87	562	617	901	1,190	1,643	2,052	2,531	3,091	3,981	
02061300	(r) Nininger Creek at Route 43 near Forest (near Otter Hill, near Bedford), Va.	4.87	412	484	890	1,361	2,116	2,841	3,906	4,911	--	
02061300	(w) Nininger Creek at Route 43 near Forest (near Otter Hill, near Bedford), Va.	4.87	527	648	1,123	1,630	2,319	2,979	3,951	--	--	
02061500	(p) Big Otter River (Otter River) at Route 682 near Evington, Va.	315	7,938	9,005	14,850	21,290	32,060	42,360	54,950	70,290	95,730	
02061500	(r) Big Otter River (Otter River) at Route 682 near Evington, Va.	315	7,912	8,971	14,417	20,203	29,136	37,065	46,291	56,625	--	
02061500	(w) Big Otter River (Otter River) at Route 682 near Evington, Va.	315	7,919	8,980	14,556	20,610	30,424	39,634	50,843	64,291	--	
02062000	(p) Big Otter River above Tardy Branch near Altavista, Va.	362	10,590	11,840	18,090	24,190	33,230	40,970	49,620	59,260	73,710	
02062000	(r) Big Otter River above Tardy Branch near Altavista, Va.	362	8,732	9,888	15,820	22,105	31,800	40,380	50,271	61,437	--	
02062000	(w) Big Otter River above Tardy Branch near Altavista, Va.	362	9,306	10,511	16,685	23,034	32,551	40,721	49,864	59,989	--	
02062500	(p) Roanoke (Staunton) River above Route 501 at Brookneal, Va.	2,404	31,330	34,230	48,840	63,290	85,230	104,500	126,600	152,000	191,200	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02062500	(r) Roanoke (Staunton) River above Route 501 at Brookneal, Va.	2,404	33,426	37,210	56,036	75,243	104,618	129,615	154,488	186,458	--	--
02062500	(w) Roanoke (Staunton) River above Route 501 at Brookneal, Va.	2,404	32,521	35,886	52,344	68,332	91,983	112,117	134,076	160,151	--	--
02063000	(p) Caldwell's Creek (East Fork Falling River) at Route 719 near Appomattox, Va.	3.85	--	--	--	--	--	--	--	--	--	--
02063000	(r) Caldwell's Creek (East Fork Falling River) at Route 719 near Appomattox, Va.	3.85	350	421	729	1,076	1,648	2,077	2,779	3,500	5,209	
02063000	(w) Caldwell's Creek (East Fork Falling River) at Route 719 near Appomattox, Va.	3.85	--	--	--	--	--	--	--	--	--	--
02063500	(p) Falling River (East Fork Falling River) above Route 646 at Spring Mills, Va.	49.3	996	1,065	1,384	1,670	2,066	2,387	2,732	3,103	3,640	
02063500	(r) Falling River (East Fork Falling River) above Route 646 at Spring Mills, Va.	49.3	1,588	1,829	2,970	4,197	6,111	8,057	9,694	11,901	19,818	
02063500	(w) Falling River (East Fork Falling River) above Route 646 at Spring Mills, Va.	49.3	1,324	1,493	2,285	3,051	3,899	4,867	5,444	6,091	7,757	
02063600	(p) Button Creek at Route 24 near Rustburg, Va.	0.57	68.4	75.9	117	162	237	309	398	507	691	
02063600	(r) Button Creek at Route 24 near Rustburg, Va.	0.57	113	140	254	388	617	752	1,090	1,399	1,915	
02063600	(w) Button Creek at Route 24 near Rustburg, Va.	0.57	92.8	111	195	287	415	520	689	844	1,089	
02063700	(p) Button Creek tributary at Route 24 near Rustburg, Va.	0.15	--	--	--	--	--	--	--	--	--	--
02063700	(r) Button Creek tributary at Route 24 near Rustburg, Va.	0.15	51.1	64.9	122	190	311	370	567	737	951	
02063700	(w) Button Creek tributary at Route 24 near Rustburg, Va.	0.15	--	--	--	--	--	--	--	--	--	--
02064000	(p) Falling River at Route 643 near Naruna, Va.	165	4,229	4,814	8,221	12,300	19,750	27,490	37,630	50,890	74,720	
02064000	(r) Falling River at Route 643 near Naruna, Va.	165	3,251	3,669	5,779	8,001	11,371	15,313	17,521	21,252	37,322	
02064000	(w) Falling River at Route 643 near Naruna, Va.	165	3,601	4,062	6,522	9,285	14,294	19,515	24,821	32,838	54,806	
02064500	(p) Little Falling River at Route 618 at Hat Creek, Va.	39.2	626	714	1,237	1,868	3,034	4,255	5,867	7,988	11,830	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02064500	(r) Little Falling River at Route 618 at Hat Creek, Va.	39.2	1,386	1,603	2,618	3,714	5,432	7,132	8,664	10,660	17,574	
02064500	(w) Little Falling River at Route 618 at Hat Creek, Va.	39.2	1,017	1,184	2,024	2,928	4,267	5,758	7,254	9,233	14,117	
02065000	(p) Falling River below Hat Creek near Brookneal, Va.	222	13,020	14,360	20,870	26,980	35,740	43,040	51,010	59,740	72,560	
02065000	(r) Falling River below Hat Creek near Brookneal, Va.	222	3,876	4,352	6,805	9,375	13,244	17,930	20,263	24,505	43,600	
02065000	(w) Falling River below Hat Creek near Brookneal, Va.	222	7,482	8,172	11,826	15,841	23,286	29,496	35,557	43,695	62,205	
02065100	(p) Snake Creek at Route 501 near Brookneal, Va.	1.65	202	238	449	698	1,137	1,575	2,126	2,814	3,980	
02065100	(r) Snake Creek at Route 501 near Brookneal, Va.	1.65	212	258	457	684	1,066	1,324	1,835	2,330	3,342	
02065100	(w) Snake Creek at Route 501 near Brookneal, Va.	1.65	209	252	455	688	1,088	1,400	1,935	2,513	3,618	
02065200	(p) Roanoke (Staunton) River at Route 620 at Clarkton, Va.	2,682	--	--	--	--	--	--	--	--	--	
02065200	(r) Roanoke (Staunton) River at Route 620 at Clarkton, Va.	2,682	36,122	40,172	60,285	80,763	112,073	138,653	164,845	198,815	--	
02065200	(w) Roanoke (Staunton) River at Route 620 at Clarkton, Va.	2,682	--	--	--	--	--	--	--	--	--	
02065300	(p) Right Hand Fork at Route 727 near Ap-pomattox, Va.	2.2	156	181	322	487	773	1,056	1,412	1,856	2,610	
02065300	(r) Right Hand Fork at Route 727 near Ap-pomattox, Va.	2.2	251	305	535	798	1,236	1,543	2,112	2,675	3,885	
02065300	(w) Right Hand Fork at Route 727 near Ap-pomattox, Va.	2.2	213	257	460	687	1,041	1,342	1,793	2,271	3,180	
02065500	(p) Cub Creek at Route 40 at Phenix, Va.	97.6	1,827	2,111	3,685	5,429	8,342	11,110	14,460	18,500	25,090	
02065500	(r) Cub Creek at Route 40 at Phenix, Va.	97.6	2,381	2,711	4,327	6,045	8,681	11,583	13,547	16,517	28,345	
02065500	(w) Cub Creek at Route 40 at Phenix, Va.	97.6	2,166	2,488	4,115	5,843	8,550	11,401	13,924	17,408	26,607	
02066000	(p) Roanoke (Staunton) River at Route 746 at Randolph, Va.	2,966	33,740	36,640	50,760	64,100	83,490	99,890	118,100	138,200	168,500	
02066000	(r) Roanoke (Staunton) River at Route 746 at Randolph, Va.	2,966	18,030	19,378	28,390	37,423	50,199	71,134	92,171	113,204	169,597	
02066000	(w) Roanoke (Staunton) River at Route 746 at Randolph, Va.	2,966	26,552	28,459	39,531	50,936	69,587	88,457	100,860	120,379	168,764	
02066500	(p) Roanoke Creek at Route 612 at Saxe, Va.	135	1,786	1,984	2,978	3,956	5,422	6,694	8,129	9,749	12,210	
02066500	(r) Roanoke Creek at Route 612 at Saxe, Va.	135	2,886	3,268	5,174	7,188	10,256	13,764	15,880	19,300	33,597	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
02066500	(w) Roanoke Creek at Route 612 at Saxe, Va.	135	2,261	2,555	4,016	5,456	7,297	9,365	10,801	12,665	17,093	
02066600	(p) Sandy Creek at Route 608 near Wyl-liesburg, Va.	8.97	456	512	822	1,171	1,769	2,357	3,093	4,012	5,584	
02066600	(r) Sandy Creek at Route 608 near Wyl-liesburg, Va.	8.97	578	685	1,161	1,690	2,545	3,256	4,206	5,252	8,115	
02066600	(w) Sandy Creek at Route 608 near Wyl-liesburg, Va.	8.97	512	593	991	1,427	2,096	2,740	3,524	4,448	6,323	
02067000	(p) Roanoke (Staunton) River at Route 360 near Clover, Va.	3,227	35,920	39,600	58,830	78,770	110,400	139,400	173,700	214,200	279,400	
02067000	(r) Roanoke (Staunton) River at Route 360 near Clover, Va.	3,227	18,955	20,343	29,740	39,147	52,423	74,396	75,216	88,557	177,260	
02067000	(w) Roanoke (Staunton) River at Route 360 near Clover, Va.	3,227	26,706	28,788	41,449	55,137	79,677	105,887	124,586	156,285	242,886	
02067810	(p) Maple Swamp Branch at Route 58 near Meadows of Dan, Va.	0.46	68.7	75.5	109	141	186	224	266	313	381	
02067810	(r) Maple Swamp Branch at Route 58 near Meadows of Dan, Va.	0.46	77.2	92.9	184	296	480	664	964	1,231	--	
02067810	(w) Maple Swamp Branch at Route 58 near Meadows of Dan, Va.	0.46	73.7	85.4	144	199	271	328	397	457	--	
02069600	(p) Anglin Branch at Route 58 near Stuart, Va.	3.39	235	259	373	480	631	757	893	1,042	1,259	
02069600	(r) Anglin Branch at Route 58 near Stuart, Va.	3.39	325	391	679	1,005	1,544	1,941	2,611	3,292	4,873	
02069600	(w) Anglin Branch at Route 58 near Stuart, Va.	3.39	271	313	502	690	919	1,125	1,343	1,542	1,871	
02069700	(p) South Mayo River at Route 700 near Nettleridge, Va.	85.5	2,300	2,661	4,813	7,470	12,450	17,740	24,780	34,120	51,170	
02069700	(r) South Mayo River at Route 700 near Nettleridge, Va.	85.5	2,201	2,512	4,023	5,632	8,110	10,796	12,696	15,500	26,445	
02069700	(w) South Mayo River at Route 700 near Nettleridge, Va.	85.5	2,234	2,559	4,241	6,125	9,466	12,914	16,593	21,968	36,716	
02070000	(p) North Mayo River below Route 629 near Spencer, Va.	108	2,752	3,114	5,119	7,369	11,220	14,970	19,650	25,460	35,310	
02070000	(r) North Mayo River below Route 629 near Spencer, Va.	108	2,528	2,874	4,575	6,380	9,145	12,224	14,236	17,340	29,889	
02070000	(w) North Mayo River below Route 629 near Spencer, Va.	108	2,621	2,970	4,774	6,741	10,031	13,397	16,693	21,309	32,984	
02071530	(p) Smith River at Smith River Church (Route 798) near Woolwine, Va.	26.3	1,020	1,163	1,891	2,610	3,682	4,598	5,615	6,741	8,413	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02071530	(r) Smith River at Smith River Church (Route 798) near Woolwine, Va.	26.3	1,361	1,577	2,745	4,052	6,112	8,030	10,618	13,203	--	
02071530	(w) Smith River at Smith River Church (Route 798) near Woolwine, Va.	26.3	1,263	1,454	2,438	3,439	4,880	6,097	7,532	8,943	--	
02071800	(p) Nicholas Creek at Route 605 near Ferum, Va.	12.1	--	--	--	--	--	--	--	--	--	
02071800	(r) Nicholas Creek at Route 605 near Ferum, Va.	12.1	785	916	1,634	2,452	3,750	4,977	6,700	8,374	--	
02071800	(w) Nicholas Creek at Route 605 near Ferum, Va.	12.1	--	--	--	--	--	--	--	--	--	
02072000	(p) Smith River below Philpott Dam near Philpott, Va.	215	8,525	9,430	14,190	19,170	27,150	34,520	43,290	53,720	70,590	
02072000	(r) Smith River below Philpott Dam near Philpott, Va.	215	6,035	6,866	11,170	15,779	22,914	29,294	36,909	45,263	--	
02072000	(w) Smith River below Philpott Dam near Philpott, Va.	215	6,599	7,472	12,054	16,969	24,709	31,770	40,225	49,991	--	
02072500	(p) Smith River at Route 666 (north) at Bassett, Va.	259	11,870	13,520	22,440	32,010	47,590	62,070	79,360	99,910	133,000	
02072500	(r) Smith River at Route 666 (north) at Bassett, Va.	259	6,887	7,822	12,650	17,799	25,761	32,854	41,218	50,485	--	
02072500	(w) Smith River at Route 666 (north) at Bassett, Va.	259	7,928	9,051	15,180	22,161	33,844	44,995	58,690	75,005	--	
02073000	(p) Smith River below Route 58 at Martinsville, Va.	379	13,080	14,450	21,340	28,150	38,440	47,450	57,700	69,370	87,300	
02073000	(r) Smith River below Route 58 at Martinsville, Va.	379	9,021	10,211	16,313	22,771	32,731	41,538	51,657	63,112	--	
02073000	(w) Smith River below Route 58 at Martinsville, Va.	379	10,386	11,688	18,407	25,376	35,952	45,178	55,646	67,478	--	
02073500	(p) Leatherwood Creek at Route 650 near Martinsville (Old Liberty), Va.	68.4	778	861	1,306	1,786	2,579	3,332	4,250	5,369	7,228	
02073500	(r) Leatherwood Creek at Route 650 near Martinsville (Old Liberty), Va.	68.4	1,928	2,209	3,557	4,999	7,231	9,589	11,381	13,926	23,527	
02073500	(w) Leatherwood Creek at Route 650 near Martinsville (Old Liberty), Va.	68.4	1,210	1,381	2,234	3,090	4,145	5,420	6,420	7,697	10,636	
02074500	(p) Sandy River above Route 863 near Danville, Va.	111	4,074	4,564	7,071	9,587	13,430	16,810	20,680	25,080	31,850	
02074500	(r) Sandy River above Route 863 near Danville, Va.	111	2,570	2,920	4,645	6,474	9,275	12,403	14,428	17,569	30,321	
02074500	(w) Sandy River above Route 863 near Danville, Va.	111	3,196	3,583	5,551	7,657	11,158	14,437	17,532	21,624	31,285	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
02075000	(p) Dan River at railroad bridge at Danville, Va.	2,060	32,100	34,460	45,950	56,820	72,660	86,110	101,100	117,800	142,900	
02075000	(r) Dan River at railroad bridge at Danville, Va.	2,060	14,525	15,708	23,224	30,804	41,622	58,603	60,366	71,393	140,109	
02075000	(w) Dan River at railroad bridge at Danville, Va.	2,060	25,021	26,646	35,977	45,703	61,744	76,952	88,474	105,129	142,364	
02075045	(p) Dan River at wastewater outfall near Danville, Va.	2,116	--	--	--	--	--	--	--	--	--	
02075045	(r) Dan River at wastewater outfall near Danville, Va.	2,116	14,758	15,953	23,570	31,248	42,200	59,445	61,165	72,318	142,092	
02075045	(w) Dan River at wastewater outfall near Danville, Va.	2,116	--	--	--	--	--	--	--	--	--	
02075350	(p) Powells Creek at Route 58 near Turbeville, Va.	0.29	68.9	77.6	122	167	236	296	365	444	565	
02075350	(r) Powells Creek at Route 58 near Turbeville, Va.	0.29	75.5	94.9	175	270	436	525	783	1,011	1,344	
02075350	(w) Powells Creek at Route 58 near Turbeville, Va.	0.29	73.0	88.4	156	231	342	419	562	683	848	
02075450	(p) Little Winns Creek at Route 58 near Turbeville, Va.	2.23	232	266	448	637	936	1,204	1,515	1,873	2,429	
02075450	(r) Little Winns Creek at Route 58 near Turbeville, Va.	2.23	253	307	539	804	1,245	1,554	2,127	2,693	3,913	
02075450	(w) Little Winns Creek at Route 58 near Turbeville, Va.	2.23	245	292	508	745	1,113	1,405	1,836	2,265	3,037	
02075500	(p) Dan River at Route 658 at Paces, Va.	2,587	--	--	--	--	--	--	--	--	--	
02075500	(r) Dan River at Route 658 at Paces, Va.	2,587	16,626	17,911	26,330	34,788	46,793	66,147	67,495	79,642	157,872	
02075500	(w) Dan River at Route 658 at Paces, Va.	2,587	--	--	--	--	--	--	--	--	--	
02075900	(p) Lawsons Creek at Route 658 at Turbeville, Va.	8.64	916	1,056	1,910	3,000	5,121	7,455	10,670	15,070	23,430	
02075900	(r) Lawsons Creek at Route 658 at Turbeville, Va.	8.64	565	671	1,138	1,656	2,497	3,192	4,129	5,159	7,957	
02075900	(w) Lawsons Creek at Route 658 at Turbeville, Va.	8.64	669	781	1,332	1,988	3,262	4,377	6,108	8,396	13,796	
02076000	(p) Dan River at railroad bridge at South Boston, Va.	2,762	28,840	30,830	40,490	49,620	62,910	74,190	86,720	100,700	121,800	
02076000	(r) Dan River at railroad bridge at South Boston, Va.	2,762	17,284	18,599	27,297	36,026	48,394	68,490	69,695	82,184	163,381	
02076000	(w) Dan River at railroad bridge at South Boston, Va.	2,762	24,929	26,532	35,595	44,731	58,702	72,641	82,422	96,622	128,031	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft³/s)											
02076200	(p) Bearskin Creek at Route 57 near Chatham, Va.	3.99	421	488	875	1,331	2,143	2,961	4,004	5,326	7,614
02076200	(r) Bearskin Creek at Route 57 near Chatham, Va.	3.99	358	430	743	1,096	1,678	2,117	2,828	3,560	5,308
02076200	(w) Bearskin Creek at Route 57 near Chatham, Va.	3.99	377	447	779	1,160	1,831	2,386	3,245	4,246	6,340
02076400	(p) Whitethorn Creek tributary at Route 29 at Gretna, Va.	2.02	181	198	288	377	515	638	780	945	1,203
02076400	(r) Whitethorn Creek tributary at Route 29 at Gretna, Va.	2.02	239	290	511	762	1,183	1,474	2,026	2,568	3,715
02076400	(w) Whitethorn Creek tributary at Route 29 at Gretna, Va.	2.02	204	236	381	531	728	904	1,116	1,323	1,666
02076500	(p) Georges Creek at Route 40 near Gretna, Va.	9.18	497	567	932	1,299	1,855	2,337	2,878	3,486	4,399
02076500	(r) Georges Creek at Route 40 near Gretna, Va.	9.18	586	695	1,176	1,711	2,576	3,297	4,254	5,311	8,214
02076500	(w) Georges Creek at Route 40 near Gretna, Va.	9.18	550	645	1,088	1,558	2,254	2,866	3,571	4,320	5,842
02076700	(p) Blacks Creek at Route 40 near Mount Airy, Va.	3.54	240	277	491	750	1,223	1,713	2,353	3,185	4,669
02076700	(r) Blacks Creek at Route 40 near Mount Airy, Va.	3.54	250	301	600	997	1,757	2,541	3,629	4,864	--
02076700	(w) Blacks Creek at Route 40 near Mount Airy, Va.	3.54	247	292	558	883	1,458	2,023	2,758	3,647	--
02077000	(p) Banister River at Route 360 (Business) at Halifax, Va.	547	6,523	7,259	11,100	15,060	21,300	26,970	33,630	41,430	53,820
02077000	(r) Banister River at Route 360 (Business) at Halifax, Va.	547	6,616	7,317	11,185	15,173	21,054	28,958	31,522	37,778	69,937
02077000	(w) Banister River at Route 360 (Business) at Halifax, Va.	547	6,571	7,290	11,148	15,124	21,179	27,924	32,671	39,910	59,033
02077500	(p) Hyco River at Route 501 near Denniston, Va.	288	3,636	3,933	5,301	6,497	8,109	9,383	10,720	12,120	14,100
02077500	(r) Hyco River at Route 501 near Denniston, Va.	288	4,523	5,057	7,855	10,772	15,140	20,590	23,020	27,766	49,971
02077500	(w) Hyco River at Route 501 near Denniston, Va.	288	3,935	4,323	6,227	7,979	10,018	12,243	13,503	15,125	18,769
02078000	(p) Hyco River at Route 738 near Omega, Va.	412	5,109	5,570	7,837	10,010	13,200	15,920	18,970	22,380	27,530
02078000	(r) Hyco River at Route 738 near Omega, Va.	412	5,593	6,215	9,568	13,042	18,199	24,908	27,435	32,972	60,285

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
03162800	(r) Mill Creek at Route 16 near Trout Dale, Va.	4.7	401	473	869	1,330	2,069	2,780	3,824	4,810	--	
03162800	(w) Mill Creek at Route 16 near Trout Dale, Va.	4.7	--	--	--	--	--	--	--	--	--	
03162810	(p) Saddle Creek tributary at Route 58 near Independence, Va.	0.37	--	--	--	--	--	--	--	--	--	
03162810	(r) Saddle Creek tributary at Route 58 near Independence, Va.	0.37	66.2	79.8	159	257	418	581	847	1,083	--	
03162810	(w) Saddle Creek tributary at Route 58 near Independence, Va.	0.37	--	--	--	--	--	--	--	--	--	
03163000	(p) New River above Kings Branch near Baywood, Va.	1,004	--	--	--	--	--	--	--	--	--	
03163000	(r) New River above Kings Branch near Baywood, Va.	1,004	17,998	20,194	31,272	42,768	60,407	75,695	92,051	111,742	--	
03163000	(w) New River above Kings Branch near Baywood, Va.	1,004	--	--	--	--	--	--	--	--	--	
03164000	(p) New River at Route 94 near Galax, Va.	1,141	20,500	22,720	34,140	45,740	63,790	79,980	98,780	120,600	155,000	
03164000	(r) New River at Route 94 near Galax, Va.	1,141	19,707	22,085	34,062	46,458	65,469	81,901	99,305	120,446	--	
03164000	(w) New River at Route 94 near Galax, Va.	1,141	19,983	22,313	34,095	46,111	64,531	80,735	98,965	120,551	--	
03165000	(p) Chestnut Creek above Route 89 at Galax, Va.	39.4	1,796	2,004	3,048	4,073	5,607	6,932	8,423	10,100	12,640	
03165000	(r) Chestnut Creek above Route 89 at Galax, Va.	39.4	1,812	2,093	3,596	5,264	7,881	10,300	13,494	16,734	--	
03165000	(w) Chestnut Creek above Route 89 at Galax, Va.	39.4	1,807	2,063	3,368	4,682	6,579	8,188	10,061	11,988	--	
03165200	(p) Mill Creek tributary at Route 58 at Galax, Va.	1.07	92.4	106	172	237	333	415	505	604	750	
03165200	(r) Mill Creek tributary at Route 58 at Galax, Va.	1.07	141	168	323	511	816	1,117	1,590	2,019	--	
03165200	(w) Mill Creek tributary at Route 58 at Galax, Va.	1.07	122	143	252	360	507	629	778	910	--	
03165500	(p) New River at Ivanhoe, Va.	1,350	21,000	22,990	33,320	43,980	60,840	76,250	94,450	116,000	150,500	
03165500	(r) New River at Ivanhoe, Va.	1,350	22,203	24,845	38,112	51,800	72,775	90,842	109,721	132,931	--	
03165500	(w) New River at Ivanhoe, Va.	1,350	21,693	24,035	35,689	47,342	65,109	80,827	98,705	120,200	--	
03165700	(p) Cripple Creek at Route 749 at Cedar Springs, Va.	11.2	--	--	--	--	--	--	--	--	--	
03165700	(r) Cripple Creek at Route 749 at Cedar Springs, Va.	11.2	664	762	1,273	1,798	2,598	3,302	4,058	4,962	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
03165700	(w) Cripple Creek at Route 749 at Cedar Springs, Va.	11.2	--	--	--	--	--	--	--	--	--	--
03165800	(p) Sugar Run at Route 684 near Speedwell, Va.	3.73	--	--	--	--	--	--	--	--	--	--
03165800	(r) Sugar Run at Route 684 near Speedwell, Va.	3.73	297	343	597	865	1,282	1,659	2,063	2,557	--	--
03165800	(w) Sugar Run at Route 684 near Speedwell, Va.	3.73	--	--	--	--	--	--	--	--	--	--
03166000	(p) Cripple Creek at Route 94 near Ivanhoe, Va.	136	1,503	1,650	2,407	3,182	4,396	5,495	6,784	8,296	10,700	--
03166000	(r) Cripple Creek at Route 94 near Ivanhoe, Va.	136	4,139	4,654	7,112	9,458	12,904	15,761	18,842	22,363	--	--
03166000	(w) Cripple Creek at Route 94 near Ivanhoe, Va.	136	2,633	2,971	4,487	5,686	7,187	8,364	9,669	11,195	--	--
03166800	(p) Glade Creek at Route 629 at Grahams Forge, Va.	7.15	271	342	814	1,448	2,682	3,996	5,723	7,955	11,860	--
03166800	(r) Glade Creek at Route 629 at Grahams Forge, Va.	7.15	478	550	935	1,334	1,947	2,493	3,079	3,786	--	--
03166800	(w) Glade Creek at Route 629 at Grahams Forge, Va.	7.15	447	522	921	1,348	2,051	2,736	3,559	4,635	--	--
03167000	(p) Reed Creek at Route 619 at Grahams Forge, Va.	258	4,066	4,466	6,412	8,240	10,870	13,080	15,500	18,160	22,090	--
03167000	(r) Reed Creek at Route 619 at Grahams Forge, Va.	258	6,618	7,403	11,056	14,479	19,465	23,533	27,935	32,901	--	--
03167000	(w) Reed Creek at Route 619 at Grahams Forge, Va.	258	5,339	5,966	8,797	11,163	14,229	16,585	19,072	21,796	--	--
03167300	(p) Mira Fork tributary at Route 221 near Dugspur, Va.	0.66	64.5	72.7	114	153	211	260	314	373	460	--
03167300	(r) Mira Fork tributary at Route 221 near Dugspur, Va.	0.66	99.8	120	234	373	602	830	1,194	1,521	--	--
03167300	(w) Mira Fork tributary at Route 221 near Dugspur, Va.	0.66	83.9	97.7	167	233	321	391	477	552	--	--
03167500	(p) Big Reed Island Creek below Route 693 near Allisonia, Va.	267	6,534	7,065	9,529	11,710	14,680	17,060	19,570	22,240	26,030	--
03167500	(r) Big Reed Island Creek below Route 693 near Allisonia, Va.	267	7,037	7,990	12,910	18,153	26,259	33,476	41,968	51,393	--	--
03167500	(w) Big Reed Island Creek below Route 693 near Allisonia, Va.	267	6,784	7,509	10,870	13,801	17,566	20,434	23,391	26,420	--	--
03167700	(p) Beaverdam Creek at Route 1009 at Hillsville, Va.	4.47	320	351	504	651	866	1,050	1,254	1,483	1,826	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
03167700	(r) Beaverdam Creek at Route 1009 at Hillsville, Va.	4.47	387	456	840	1,288	2,005	2,695	3,712	4,670	--	
03167700	(w) Beaverdam Creek at Route 1009 at Hillsville, Va.	4.47	358	409	659	894	1,204	1,455	1,749	2,028	--	
03168000	(p) New River along Route 653 at Allisonia, Va.	2,212	34,500	37,960	54,990	71,300	95,260	115,700	138,400	163,700	201,700	
03168000	(r) New River along Route 653 at Allisonia, Va.	2,212	31,510	35,103	53,005	71,298	99,282	123,137	147,047	177,575	--	
03168000	(w) New River along Route 653 at Allisonia, Va.	2,212	32,659	36,233	53,921	71,299	96,850	118,276	141,054	167,460	--	
03168500	(p) Peak Creek below Route 11 at Pulaski, Va.	60.8	2,109	2,300	3,208	4,039	5,206	6,162	7,194	8,310	9,932	
03168500	(r) Peak Creek below Route 11 at Pulaski, Va.	60.8	2,294	2,596	4,084	5,537	7,696	9,522	11,484	13,762	--	
03168500	(w) Peak Creek below Route 11 at Pulaski, Va.	60.8	2,203	2,453	3,653	4,722	6,134	7,217	8,331	9,530	--	
03168600	(p) Peak Creek tributary at Route 636 near Pulaski, Va.	0.55	--	--	--	--	--	--	--	--	--	
03168600	(r) Peak Creek tributary at Route 636 near Pulaski, Va.	0.55	72.9	85.7	160	242	375	501	636	806	--	
03168600	(w) Peak Creek tributary at Route 636 near Pulaski, Va.	0.55	--	--	--	--	--	--	--	--	--	
03168750	(p) Thorne Springs Branch at Route 11 near Dublin, Va.	4.7	70.2	90.2	239	475	1,021	1,707	2,746	4,290	7,473	
03168750	(r) Thorne Springs Branch at Route 11 near Dublin, Va.	4.7	351	406	700	1,009	1,488	1,917	2,379	2,940	--	
03168750	(w) Thorne Springs Branch at Route 11 near Dublin, Va.	4.7	161	200	426	690	1,196	1,781	2,625	3,872	--	
03169200	(p) West Fork Dodd Creek tributary at Route 8 near Floyd, Va.	1.48	75.8	87.6	156	237	380	526	712	948	1,359	
03169200	(r) West Fork Dodd Creek tributary at Route 8 near Floyd, Va.	1.48	177	210	402	630	1,000	1,364	1,927	2,443	--	
03169200	(w) West Fork Dodd Creek tributary at Route 8 near Floyd, Va.	1.48	122	142	248	360	538	709	937	1,195	--	
03169350	(p) Brush Creek at Route 615 at Terrys Fork, Va.	1.4	93.5	110	206	325	544	771	1,069	1,454	2,140	
03169350	(r) Brush Creek at Route 615 at Terrys Fork, Va.	1.4	170	202	387	607	966	1,318	1,865	2,364	--	
03169350	(w) Brush Creek at Route 615 at Terrys Fork, Va.	1.4	131	154	281	425	668	912	1,247	1,638	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft ³ /s)									
03169500	(p) Little River at Route 787 near Copper Valley, Va.	250	3,313	3,525	4,437	5,168	6,082	6,756	7,427	8,099	8,995	
03169500	(r) Little River at Route 787 near Copper Valley, Va.	250	6,716	7,631	12,354	17,397	25,194	32,146	40,363	49,448	--	
03169500	(w) Little River at Route 787 near Copper Valley, Va.	250	4,369	4,733	6,188	7,204	8,303	9,041	9,751	--	--	
03170000	(p) Little River at Route 693 at Grayson town (Grayson), Va.	309	6,516	7,233	10,620	13,670	17,850	21,180	24,670	28,350	33,530	
03170000	(r) Little River at Route 693 at Grayson town (Grayson), Va.	309	7,805	8,851	14,233	19,953	28,786	36,628	45,766	55,990	--	
03170000	(w) Little River at Route 693 at Grayson town (Grayson), Va.	309	7,333	8,239	12,609	16,677	22,156	26,417	30,830	35,337	--	
03171000	(p) New River below Route 11 at Radford, Va.	2,767	38,280	42,260	63,000	84,490	118,600	149,800	186,600	230,100	299,900	
03171000	(r) New River below Route 11 at Radford, Va.	2,767	36,930	41,059	61,555	82,410	114,294	141,344	167,923	202,486	--	
03171000	(w) New River below Route 11 at Radford, Va.	2,767	37,435	41,521	62,199	83,463	116,782	146,614	180,238	221,622	--	
03171150	(p) Crab Creek tributary at Route 11 near Christiansburg, Va.	1.18	58.5	71.0	143	224	356	478	619	782	1,031	
03171150	(r) Crab Creek tributary at Route 11 near Christiansburg, Va.	1.18	128	149	270	403	613	807	1,017	1,277	--	
03171150	(w) Crab Creek tributary at Route 11 near Christiansburg, Va.	1.18	91.8	110	209	310	462	596	744	916	--	
03171500	(p) New River at Route 730 at Eggleston, Va.	2,961	32,490	35,920	54,390	74,330	107,300	138,600	176,900	223,500	301,100	
03171500	(r) New River at Route 730 at Eggleston, Va.	2,961	38,748	43,053	64,405	86,103	119,271	147,369	174,809	210,694	--	
03171500	(w) New River at Route 730 at Eggleston, Va.	2,961	36,366	40,263	59,896	80,115	112,368	141,938	176,174	219,452	--	
03171600	(p) Little Stony Creek at Route 460 at Pembroke, Va.	22.5	439	466	587	691	830	939	1,053	1,172	1,340	
03171600	(r) Little Stony Creek at Route 460 at Pembroke, Va.	22.5	1,107	1,263	2,059	2,859	4,065	5,111	6,231	7,557	--	
03171600	(w) Little Stony Creek at Route 460 at Pembroke, Va.	22.5	733	820	1,208	1,473	1,714	1,845	1,951	2,058	--	
03171800	(p) Helveys Mill Creek tributary 1 at Route 42 at Point Pleasant, Va.	0.39	--	--	--	--	--	--	--	--	--	
03171800	(r) Helveys Mill Creek tributary 1 at Route 42 at Point Pleasant, Va.	0.39	56.7	66.8	126	193	301	404	515	655	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
			Peak flow (ft³/s)									
03171800	(w) Helveys Mill Creek tributary 1 at Route 42 at Point Pleasant, Va.	0.39	--	--	--	--	--	--	--	--	--	
03172500	(p) Walker Creek at Route 660 at Staffordsville, Va.	275	5,565	6,113	8,805	11,380	15,140	18,340	21,890	25,850	31,770	
03172500	(r) Walker Creek at Route 660 at Staffordsville, Va.	275	6,935	7,754	11,553	15,106	20,279	24,492	29,053	34,191	--	
03172500	(w) Walker Creek at Route 660 at Staffordsville, Va.	275	6,286	6,996	10,293	13,234	17,301	20,582	24,148	28,129	--	
03173000	(p) Walker Creek below Route 100 at Bane, Va.	299	6,747	7,386	10,380	13,050	16,710	19,630	22,720	26,000	30,650	
03173000	(r) Walker Creek below Route 100 at Bane, Va.	299	7,373	8,239	12,239	15,971	21,398	25,809	30,587	35,961	--	
03173000	(w) Walker Creek below Route 100 at Bane, Va.	299	7,071	7,837	11,365	14,460	18,594	21,753	25,024	28,488	--	
03175100	(p) Cox Branch above Tazewell Reservoir, near Gratton, Va.	1.9	--	--	--	--	--	--	--	--	--	
03175100	(r) Cox Branch above Tazewell Reservoir, near Gratton, Va.	1.9	181	210	375	553	832	1,088	1,363	1,703	--	
03175100	(w) Cox Branch above Tazewell Reservoir, near Gratton, Va.	1.9	--	--	--	--	--	--	--	--	--	
03175140	(p) West Fork Cove Creek below Oneida Branch near Bluefield, Va.	4.68	--	--	--	--	--	--	--	--	--	
03175140	(r) West Fork Cove Creek below Oneida Branch near Bluefield, Va.	4.68	350	405	698	1,006	1,484	1,912	2,372	2,932	--	
03175140	(w) West Fork Cove Creek below Oneida Branch near Bluefield, Va.	4.68	--	--	--	--	--	--	--	--	--	
03175500	(p) Wolf Creek at Route 724 near Narrows, Va.	223	5,381	5,903	8,199	10,060	12,370	14,040	15,680	17,290	19,370	
03175500	(r) Wolf Creek at Route 724 near Narrows, Va.	223	5,947	6,661	10,000	13,141	17,726	21,480	25,539	30,132	--	
03175500	(w) Wolf Creek at Route 724 near Narrows, Va.	223	5,683	6,316	9,178	11,578	14,542	16,587	18,514	20,384	--	
03176500	(p) New River at Route 460 at Glen Lyn, Va.	3,783	38,110	42,120	63,290	85,670	121,900	155,600	196,000	244,400	323,500	
03176500	(r) New River at Route 460 at Glen Lyn, Va.	3,783	46,098	51,108	75,857	100,893	139,142	171,375	202,142	243,245	--	
03176500	(w) New River at Route 460 at Glen Lyn, Va.	3,783	43,025	47,558	70,149	93,081	129,102	161,503	198,090	244,044	--	
03177700	(p) Bluestone River above wastewater outfall at Bluefield, Va.	39.7	704	747	939	1,097	1,300	1,454	1,611	1,771	1,990	
03177700	(r) Bluestone River above wastewater outfall at Bluefield, Va.	39.7	1,678	1,906	3,045	4,171	5,854	7,292	8,836	10,643	--	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									0.002
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005		
Peak flow (ft ³ /s)												
03177700	(w) Bluestone River above wastewater outfall at Bluefield, Va.	39.7	948	1,043	1,439	1,693	1,927	2,068	2,200	2,336	--	
03177710	(p) Bluestone River at Route 717 at Falls Mills, Va.	44.3	741	795	1,029	1,221	1,466	1,650	1,835	2,022	2,274	
03177710	(r) Bluestone River at Route 717 at Falls Mills, Va.	44.3	1,819	2,064	3,284	4,486	6,280	7,810	9,452	11,371	--	
03177710	(w) Bluestone River at Route 717 at Falls Mills, Va.	44.3	1,064	1,183	1,683	2,011	2,315	2,493	2,651	2,812	--	
03207400	(p) Big Prater (Prater) Creek at Route 620 at Vansant, Va.	20	844	1,014	1,997	3,117	4,992	6,754	8,851	11,320	15,240	
03207400	(r) Big Prater (Prater) Creek at Route 620 at Vansant, Va.	20	1,158	1,318	2,124	2,925	4,154	5,197	6,730	8,248	15,151	
03207400	(w) Big Prater (Prater) Creek at Route 620 at Vansant, Va.	20	1,139	1,300	2,115	2,944	4,264	5,442	7,128	8,906	15,187	
03207500	(p) Levisa Fork along Route 460 near Grundy, Va.	239	9,292	10,400	15,520	19,960	25,770	30,190	34,660	39,190	45,260	
03207500	(r) Levisa Fork along Route 460 near Grundy, Va.	239	9,145	10,181	15,380	20,302	27,303	33,404	40,255	47,058	54,090	
03207500	(w) Levisa Fork along Route 460 near Grundy, Va.	239	9,165	10,210	15,404	20,222	26,820	32,194	37,826	43,239	48,181	
03207800	(p) Levisa Fork below Route 645 at Big Rock, Va.	297	8,838	10,090	16,590	23,190	33,320	42,210	52,310	63,750	81,160	
03207800	(r) Levisa Fork below Route 645 at Big Rock, Va.	297	10,960	12,177	18,292	24,056	32,197	39,316	47,082	54,812	60,468	
03207800	(w) Levisa Fork below Route 645 at Big Rock, Va.	297	10,718	11,942	18,049	23,894	32,478	40,172	48,854	58,183	71,805	
03208034	(p) Grissom Creek at Route 626 near Council, Va.	2.82	--	--	--	--	--	--	--	--	--	
03208034	(r) Grissom Creek at Route 626 near Council, Va.	2.82	226	262	445	633	939	1,196	1,639	2,085	5,546	
03208034	(w) Grissom Creek at Route 626 near Council, Va.	2.82	--	--	--	--	--	--	--	--	--	
03208036	(p) Barton Fork above mouth near Council, Va.	1.24	--	--	--	--	--	--	--	--	--	
03208036	(r) Barton Fork above mouth near Council, Va.	1.24	114	133	231	333	503	646	906	1,171	3,639	
03208036	(w) Barton Fork above mouth near Council, Va.	1.24	--	--	--	--	--	--	--	--	--	
03208040	(p) Russell Fork at Route 80 at Council, Va.	10.2	537	600	913	1,211	1,643	2,006	2,403	2,839	3,481	
03208040	(r) Russell Fork at Route 80 at Council, Va.	10.2	661	757	1,241	1,729	2,492	3,137	4,142	5,141	10,725	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft ³ /s)											
03208040	(w) Russell Fork at Route 80 at Council, Va.	10.2	642	733	1,173	1,586	2,178	2,647	3,274	3,868	5,081
03208100	(p) Russell Fork at Route 80 near Birchleaf, Va.	87.7	3,900	4,625	8,793	13,570	21,720	29,530	39,040	50,520	69,230
03208100	(r) Russell Fork at Route 80 near Birchleaf, Va.	87.7	3,968	4,457	6,911	9,279	12,757	15,749	19,539	23,280	32,341
03208100	(w) Russell Fork at Route 80 near Birchleaf, Va.	87.7	3,963	4,468	7,056	9,708	13,949	17,925	23,126	28,923	45,738
03208500	(p) Russell Fork below Route 63 at Haysi, Va.	286	12,930	14,570	22,440	29,540	39,230	46,870	54,810	63,080	74,510
03208500	(r) Russell Fork below Route 63 at Haysi, Va.	286	10,621	11,804	17,749	23,357	31,288	38,219	45,818	53,379	59,308
03208500	(w) Russell Fork below Route 63 at Haysi, Va.	286	10,878	12,110	18,425	24,556	33,395	40,981	49,155	57,432	68,421
03208700	(p) North Fork Pound River below dam at Pound, Va.	18.5	1,211	1,473	3,175	5,472	10,090	15,250	22,380	32,110	50,370
03208700	(r) North Fork Pound River below dam at Pound, Va.	18.5	1,085	1,236	1,996	2,752	3,915	4,902	6,363	7,808	14,557
03208700	(w) North Fork Pound River below dam at Pound, Va.	18.5	1,106	1,274	2,211	3,353	5,588	8,042	11,783	16,691	35,310
03208800	(p) Pound River above Indian Creek, at Pound, Va.	36.7	--	--	--	--	--	--	--	--	--
03208800	(r) Pound River above Indian Creek, at Pound, Va.	36.7	1,920	2,174	3,448	4,699	6,585	8,194	10,426	12,630	20,686
03208800	(w) Pound River above Indian Creek, at Pound, Va.	36.7	--	--	--	--	--	--	--	--	--
03208850	(p) Pound River below Bold Camp Creek, at Pound, Va.	61.2	--	--	--	--	--	--	--	--	--
03208850	(r) Pound River below Bold Camp Creek, at Pound, Va.	61.2	2,940	3,313	5,186	7,006	9,708	12,024	15,075	18,084	26,891
03208850	(w) Pound River below Bold Camp Creek, at Pound, Va.	61.2	--	--	--	--	--	--	--	--	--
03208900	(p) Pound River at Route 624 near Georges Fork, Va.	80.4	2,443	2,624	3,432	4,112	4,999	5,679	6,375	7,091	8,076
03208900	(r) Pound River at Route 624 near Georges Fork, Va.	80.4	3,690	4,149	6,448	8,670	11,942	14,755	18,352	21,902	30,931
03208900	(w) Pound River at Route 624 near Georges Fork, Va.	80.4	3,439	3,837	5,612	6,997	8,609	9,729	10,932	11,950	11,860
03208950	(p) Cranes Nest River below railroad bridge near Clintwood, Va.	66.5	2,493	2,825	4,568	6,367	9,181	11,710	14,630	18,010	23,280

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft ³ /s)												
03208950	(r) Cranes Nest River below railroad bridge near Clintwood, Va.	66.5	3,151	3,548	5,541	7,475	10,340	12,797	16,005	19,170	28,061	
03208950	(w) Cranes Nest River below railroad bridge near Clintwood, Va.	66.5	3,069	3,459	5,386	7,242	10,015	12,438	15,482	18,680	25,069	
03209000	(p) Pound River near Haysi, Va.	221	9,373	10,320	14,740	18,630	23,850	27,940	32,200	36,640	42,800	
03209000	(r) Pound River near Haysi, Va.	221	8,568	9,545	14,449	19,097	25,727	31,499	38,046	44,541	51,960	
03209000	(w) Pound River near Haysi, Va.	221	8,700	9,673	14,512	18,962	25,005	29,894	35,060	40,105	45,242	
03209200	(p) Russell Fork at Route 611 at Bartlick, Va.	526	16,380	19,420	37,480	59,330	98,800	138,900	190,200	255,200	367,500	
03209200	(r) Russell Fork at Route 611 at Bartlick, Va.	526	17,643	19,503	28,863	37,592	49,685	60,359	71,094	81,871	81,071	
03209200	(w) Russell Fork at Route 611 at Bartlick, Va.	526	17,421	19,488	30,571	42,857	64,329	86,819	115,137	150,799	238,467	
03213577	(p) Kershaw Branch near Hurley, Va.	0.6	--	--	--	--	--	--	--	--	--	--
03213577	(r) Kershaw Branch near Hurley, Va.	0.6	62.4	73.3	129	189	290	375	537	703	2,507	--
03213577	(w) Kershaw Branch near Hurley, Va.	0.6	--	--	--	--	--	--	--	--	--	--
03213590	(p) Knox Creek at Route 697 at Kelsa, Va.	84.5	3,779	4,318	7,112	9,932	14,220	17,950	22,160	26,900	34,050	
03213590	(r) Knox Creek at Route 697 at Kelsa, Va.	84.5	3,847	4,322	6,709	9,013	12,402	15,316	19,022	22,681	31,731	
03213590	(w) Knox Creek at Route 697 at Kelsa, Va.	84.5	3,840	4,322	6,759	9,168	12,817	16,036	20,024	24,198	33,028	
03470900	(p) Slemp Creek tributary at Route 16 near Sugar Grove, Va.	0.62	--	--	--	--	--	--	--	--	--	--
03470900	(r) Slemp Creek tributary at Route 16 near Sugar Grove, Va.	0.62	79.6	93.4	173	262	405	540	684	867	--	--
03470900	(w) Slemp Creek tributary at Route 16 near Sugar Grove, Va.	0.62	--	--	--	--	--	--	--	--	--	--
03471100	(p) Dickey Creek at Route 16 at Sugar Grove, Va.	7.18	231	253	354	443	564	659	759	863	1,010	
03471100	(r) Dickey Creek at Route 16 at Sugar Grove, Va.	7.18	479	552	937	1,338	1,953	2,500	3,087	3,795	--	--
03471100	(w) Dickey Creek at Route 16 at Sugar Grove, Va.	7.18	342	389	610	785	975	1,099	1,210	1,325	--	--
03471200	(p) South Fork Holston River at Route 601 at Teas, Va.	31.1	1,479	1,680	2,786	4,016	6,093	8,099	10,570	13,600	18,680	
03471200	(r) South Fork Holston River at Route 601 at Teas, Va.	31.1	1,403	1,597	2,573	3,546	5,004	6,258	7,604	9,186	--	--
03471200	(w) South Fork Holston River at Route 601 at Teas, Va.	31.1	1,426	1,621	2,633	3,693	5,411	7,037	8,994	11,446	--	--
03471500	(p) South Fork Holston River above Route 645 at Riverside, near Chilhowie, Va.	76.6	1,964	2,167	3,143	4,050	5,339	6,404	7,559	8,814	10,640	
03471500	(r) South Fork Holston River above Route 645 at Riverside, near Chilhowie, Va.	76.6	2,717	3,069	4,789	6,457	8,926	11,003	13,237	15,819	--	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
Peak flow (ft³/s)												
03471500	(w) South Fork Holston River above Route 645 at Riverside, near Chilhowie, Va.	76.6	2,371	2,665	4,049	5,259	6,846	8,062	9,312	10,665	--	
03472000	(p) South Fork Holston River above Grosses Creek near Chilhowie, Va.	98.1	--	--	--	--	--	--	--	--	--	
03472000	(r) South Fork Holston River above Grosses Creek near Chilhowie, Va.	98.1	3,258	3,672	5,679	7,611	10,463	12,846	15,413	18,364	--	
03472000	(w) South Fork Holston River above Grosses Creek near Chilhowie, Va.	98.1	--	--	--	--	--	--	--	--	--	
03472500	(p) Beaverdam Creek above railroad bridge at Damascus, Va.	55.6	2,096	2,281	3,133	3,880	4,889	5,685	6,519	7,395	8,627	
03472500	(r) Beaverdam Creek above railroad bridge at Damascus, Va.	55.6	2,149	2,433	3,840	5,218	7,267	9,004	10,870	13,040	--	
03472500	(w) Beaverdam Creek above railroad bridge at Damascus, Va.	55.6	2,122	2,357	3,480	4,465	5,727	6,659	7,584	8,547	--	
03473000	(p) South Fork Holston River above Route 58 near Damascus, Va.	303	6,528	7,087	9,682	11,970	15,090	17,570	20,190	22,960	26,880	
03473000	(r) South Fork Holston River above Route 58 near Damascus, Va.	303	7,446	8,319	12,351	16,112	21,582	26,025	30,838	36,250	--	
03473000	(w) South Fork Holston River above Route 58 near Damascus, Va.	303	6,965	7,686	10,974	13,772	17,392	20,095	22,865	25,776	--	
03473500	(p) Middle Fork Holston River at Route 679 at Groseclose, Va.	7.4	174	196	303	404	547	665	793	929	1,127	
03473500	(r) Middle Fork Holston River at Route 679 at Groseclose, Va.	7.4	490	564	957	1,365	1,991	2,548	3,145	3,865	--	
03473500	(w) Middle Fork Holston River at Route 679 at Groseclose, Va.	7.4	342	396	657	874	1,129	1,306	1,467	1,637	--	
03473600	(p) Middle Fork Holston River at Route 11 near Groseclose, Va.	13.2	--	--	--	--	--	--	--	--	--	
03473600	(r) Middle Fork Holston River at Route 11 near Groseclose, Va.	13.2	749	858	1,426	2,005	2,887	3,660	4,489	5,479	--	
03473600	(w) Middle Fork Holston River at Route 11 near Groseclose, Va.	13.2	--	--	--	--	--	--	--	--	--	
03473800	(p) Staley Creek at Route 688 near Marion, Va.	8.27	212	226	290	350	433	503	578	661	782	
03473800	(r) Staley Creek at Route 688 near Marion, Va.	8.27	532	611	1,033	1,469	2,138	2,731	3,367	4,133	--	
03473800	(w) Staley Creek at Route 688 near Marion, Va.	8.27	294	325	467	566	668	739	809	888	--	
03474000	(p) Middle Fork Holston River at Route 11 at Seven Mile Ford, Va.	132	3,337	3,734	5,713	7,622	10,420	12,800	15,420	18,320	22,630	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft ³ /s)											
03474000	(r) Middle Fork Holston River at Route 11 at Seven Mile Ford, Va.	132	4,049	4,554	6,967	9,272	12,659	15,470	18,499	21,964	--
03474000	(w) Middle Fork Holston River at Route 11 at Seven Mile Ford, Va.	132	3,778	4,252	6,513	8,609	11,591	14,041	16,686	19,642	--
03474500	(p) Middle Fork Holston River at Route 762 at Chilhowie, Va.	153	3,840	4,239	6,249	8,233	11,230	13,850	16,830	20,230	25,440
03474500	(r) Middle Fork Holston River at Route 762 at Chilhowie, Va.	153	4,512	5,069	7,714	10,229	13,918	16,967	20,257	24,009	--
03474500	(w) Middle Fork Holston River at Route 762 at Chilhowie, Va.	153	4,213	4,709	7,084	9,285	12,442	15,081	18,013	21,371	--
03474700	(p) Hutton Creek at Route 11 near Chilhowie, Va.	8.2	238	270	444	638	967	1,286	1,681	2,169	2,989
03474700	(r) Hutton Creek at Route 11 near Chilhowie, Va.	8.2	528	607	1,027	1,461	2,127	2,717	3,350	4,112	--
03474700	(w) Hutton Creek at Route 11 near Chilhowie, Va.	8.2	412	476	803	1,112	1,552	1,929	2,352	2,867	--
03474800	(p) Hall Creek at Route 11 near Glade Spring, Va.	7.83	340	404	749	1,103	1,634	2,084	2,576	3,110	3,879
03474800	(r) Hall Creek at Route 11 near Glade Spring, Va.	7.83	511	587	995	1,417	2,064	2,639	3,256	3,999	--
03474800	(w) Hall Creek at Route 11 near Glade Spring, Va.	7.83	473	549	947	1,347	1,945	2,458	2,999	3,618	--
03475000	(p) Middle Fork Holston River at Route 803 near Meadowview, Va.	206	3,903	4,299	6,153	7,801	10,040	11,810	13,670	15,630	18,370
03475000	(r) Middle Fork Holston River at Route 803 near Meadowview, Va.	206	5,611	6,289	9,468	12,466	16,846	20,440	24,324	28,725	--
03475000	(w) Middle Fork Holston River at Route 803 near Meadowview, Va.	206	4,789	5,355	7,916	10,062	12,782	14,776	16,784	18,885	--
03475600	(p) Cedar Creek at Route 11 near Meadowview, Va.	3.42	40.7	43.2	54.4	64.3	77.8	88.6	100	112	130
03475600	(r) Cedar Creek at Route 11 near Meadowview, Va.	3.42	278	322	562	817	1,213	1,571	1,956	2,427	--
03475600	(w) Cedar Creek at Route 11 near Meadowview, Va.	3.42	138	158	250	306	343	353	355	357	--
03475700	(p) Spring Creek at Route 11 near Abingdon, Va.	2.78	135	151	227	296	390	465	543	625	739
03475700	(r) Spring Creek at Route 11 near Abingdon, Va.	2.78	239	277	487	712	1,062	1,380	1,722	2,142	--
03475700	(w) Spring Creek at Route 11 near Abingdon, Va.	2.78	194	224	374	507	670	785	888	994	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi ²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft ³ /s)											
03488450	(p) Brumley Creek at Route 611 at Brumley Gap, Va.	21.4	685	737	977	1,185	1,464	1,682	1,911	2,150	2,486
03488450	(r) Brumley Creek at Route 611 at Brumley Gap, Va.	21.4	1,067	1,218	1,989	2,765	3,937	4,953	6,042	7,332	--
03488450	(w) Brumley Creek at Route 611 at Brumley Gap, Va.	21.4	828	920	1,344	1,673	2,041	2,289	2,526	2,771	--
03488500	(p) North Fork Holston River at Route 19 at Holston, Va.	401	10,050	10,970	15,400	19,550	25,500	30,480	35,950	41,960	50,850
03488500	(r) North Fork Holston River at Route 19 at Holston, Va.	401	9,143	10,192	14,982	19,413	25,836	31,015	36,638	42,924	--
03488500	(w) North Fork Holston River at Route 19 at Holston, Va.	401	9,570	10,549	15,173	19,482	25,641	30,674	36,165	42,221	--
03489500	(p) North Fork Holston River at Route 615 at Mendota, Va.	493	9,448	10,250	13,970	17,250	21,720	25,280	29,030	33,000	38,630
03489500	(r) North Fork Holston River at Route 615 at Mendota, Va.	493	10,638	11,839	17,273	22,271	29,499	35,296	41,601	48,617	--
03489500	(w) North Fork Holston River at Route 615 at Mendota, Va.	493	10,013	11,022	15,572	19,446	24,505	28,310	32,239	36,372	--
03489700	(p) Fleenor Branch at Route 58 near Bristol, Va.	0.6	--	--	--	--	--	--	--	--	--
03489700	(r) Fleenor Branch at Route 58 near Bristol, Va.	0.6	77.7	91.2	169	257	397	529	671	850	--
03489700	(w) Fleenor Branch at Route 58 near Bristol, Va.	0.6	--	--	--	--	--	--	--	--	--
03489800	(p) Cove Creek at Route 58 near Shelleys, Va.	17.2	824	892	1,177	1,394	1,648	1,824	1,989	2,146	2,341
03489800	(r) Cove Creek at Route 58 near Shelleys, Va.	17.2	909	1,039	1,711	2,391	3,421	4,320	5,283	6,427	--
03489800	(w) Cove Creek at Route 58 near Shelleys, Va.	17.2	863	961	1,416	1,779	2,171	2,411	2,608	2,787	--
03489850	(p) Cove Creek at Route 803 near Hilton, Va.	18.1	1,060	1,130	1,433	1,677	1,981	2,205	2,429	2,652	2,950
03489850	(r) Cove Creek at Route 803 near Hilton, Va.	18.1	944	1,078	1,772	2,474	3,535	4,460	5,451	6,628	--
03489850	(w) Cove Creek at Route 803 near Hilton, Va.	18.1	1,016	1,110	1,554	1,915	2,326	2,597	2,843	3,084	--
03489870	(p) Big Moccasin Creek at Route 612 at Col-linwood, near Hansonville, Va.	42.1	1,672	1,844	2,619	3,269	4,102	4,725	5,348	5,972	6,804
03489870	(r) Big Moccasin Creek at Route 612 at Col-linwood, near Hansonville, Va.	42.1	1,752	1,989	3,171	4,337	6,078	7,565	9,161	11,027	--
03489870	(w) Big Moccasin Creek at Route 612 at Col-linwood, near Hansonville, Va.	42.1	1,719	1,930	2,942	3,837	4,976	5,792	6,558	7,322	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)								
			2	2.33	5	10	25	50	100	200	500
			Exceedance probability								
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002
Peak flow (ft³/s)											
03489900	(p) Big Moccasin Creek at Route 71 near Gate City, Va.	79.6	2,396	2,576	3,392	4,092	5,020	5,744	6,494	7,276	8,366
03489900	(r) Big Moccasin Creek at Route 71 near Gate City, Va.	79.6	2,795	3,156	4,917	6,624	9,149	11,271	13,554	16,190	--
03489900	(w) Big Moccasin Creek at Route 71 near Gate City, Va.	79.6	2,560	2,820	4,012	4,987	6,153	6,976	7,777	8,601	--
03490000	(p) North Fork Holston River at Route 23 near Gate City, Va.	671	14,500	15,700	21,150	25,810	31,970	36,740	41,660	46,760	53,810
03490000	(r) North Fork Holston River at Route 23 near Gate City, Va.	671	13,335	14,804	21,361	27,338	35,955	42,808	50,285	58,548	--
03490000	(w) North Fork Holston River at Route 23 near Gate City, Va.	671	13,931	15,253	21,255	26,498	33,440	38,633	43,927	49,378	--
03521000	(p) Clinch River at Route 631 at Cedar Bluff, Va.	124	--	--	--	--	--	--	--	--	--
03521000	(r) Clinch River at Route 631 at Cedar Bluff, Va.	124	3,868	4,352	6,674	8,895	12,161	14,876	17,801	21,151	--
03521000	(w) Clinch River at Route 631 at Cedar Bluff, Va.	124	--	--	--	--	--	--	--	--	--
03521500	(p) Clinch River along Route 707 at Rich-lands, Va.	137	3,502	3,795	5,081	6,130	7,451	8,430	9,402	10,370	11,660
03521500	(r) Clinch River along Route 707 at Rich-lands, Va.	137	4,161	4,679	7,148	9,504	12,965	15,834	18,927	22,462	--
03521500	(w) Clinch River along Route 707 at Rich-lands, Va.	137	3,808	4,213	6,041	7,515	9,246	10,413	11,498	12,558	--
03522000	(p) Little River at Route 19 at Wardell, Va.	102	--	--	--	--	--	--	--	--	--
03522000	(r) Little River at Route 19 at Wardell, Va.	102	3,352	3,778	5,833	7,811	10,728	13,164	15,787	18,801	--
03522000	(w) Little River at Route 19 at Wardell, Va.	102	--	--	--	--	--	--	--	--	--
03523000	(p) Big Cedar (Cedar) Creek above Route 19 near Lebanon, Va.	51.6	2,154	2,334	3,116	3,745	4,524	5,092	5,650	6,201	6,924
03523000	(r) Big Cedar (Cedar) Creek above Route 19 near Lebanon, Va.	51.6	2,034	2,305	3,648	4,965	6,927	8,592	10,382	12,466	--
03523000	(w) Big Cedar (Cedar) Creek above Route 19 near Lebanon, Va.	51.6	2,096	2,320	3,369	4,255	5,315	6,035	6,691	7,327	--
03523500	(p) Thompson Creek at Route 646 near Coulwood, Va.	14.1	351	368	447	514	603	672	745	822	929
03523500	(r) Thompson Creek at Route 646 near Coulwood, Va.	14.1	786	900	1,492	2,095	3,012	3,814	4,675	5,701	--
03523500	(w) Thompson Creek at Route 646 near Coulwood, Va.	14.1	428	464	614	712	808	872	935	1,003	--

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									
			Peak flow (ft³/s)									
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005	0.002	
03524000	(p) Clinch River above Route 661 at Cleveland, Va.	533	10,330	11,300	15,730	19,580	24,700	28,680	32,810	37,090	43,020	
03524000	(r) Clinch River above Route 661 at Cleveland, Va.	533	11,264	12,528	18,227	23,457	31,014	37,062	43,645	50,958	--	
03524000	(w) Clinch River above Route 661 at Cleveland, Va.	533	10,809	11,944	17,045	21,440	27,218	31,533	35,945	40,504	--	
03524500	(p) Guest River at Route 72 at Coeburn, Va.	87.2	2,776	3,041	4,428	5,878	8,198	10,340	12,900	15,950	20,900	
03524500	(r) Guest River at Route 72 at Coeburn, Va.	87.2	3,949	4,436	6,879	9,237	12,701	15,681	19,459	23,187	32,247	
03524500	(w) Guest River at Route 72 at Coeburn, Va.	87.2	3,697	4,134	6,191	8,029	10,653	12,930	15,732	18,774	23,439	
03524550	(p) Guest River near Miller Yard, Va.	100	--	--	--	--	--	--	--	--	--	
03524550	(r) Guest River near Miller Yard, Va.	100	4,426	4,966	7,674	10,280	14,093	17,378	21,478	25,527	34,594	
03524550	(w) Guest River near Miller Yard, Va.	100	--	--	--	--	--	--	--	--	--	
03524900	(p) Stony Creek at Route 619 at Ka, Va.	30.8	2,859	3,173	4,752	6,298	8,610	10,610	12,860	15,400	19,250	
03524900	(r) Stony Creek at Route 619 at Ka, Va.	30.8	1,659	1,882	2,998	4,098	5,765	7,185	9,189	11,168	18,907	
03524900	(w) Stony Creek at Route 619 at Ka, Va.	30.8	1,808	2,043	3,293	4,597	6,642	8,437	10,745	13,168	19,144	
03525000	(p) Stony Creek above Route 66 at Fort Blackmore, Va.	41.5	2,881	3,256	5,157	7,026	9,807	12,190	14,850	17,800	22,110	
03525000	(r) Stony Creek above Route 66 at Fort Blackmore, Va.	41.5	2,127	2,406	3,804	5,172	7,229	8,985	11,392	13,768	22,032	
03525000	(w) Stony Creek above Route 66 at Fort Blackmore, Va.	41.5	2,206	2,495	3,990	5,517	7,885	9,963	12,628	15,393	22,081	
03525500	(p) Clinch River at Clinchport, Va.	987	--	--	--	--	--	--	--	--	--	
03525500	(r) Clinch River at Clinchport, Va.	987	17,694	19,583	27,867	35,336	46,063	54,506	63,754	73,888	--	
03525500	(w) Clinch River at Clinchport, Va.	987	--	--	--	--	--	--	--	--	--	
03525800	(p) Copper Creek tributary 1 at Route 58 (Alternate) near Dickensonville, Va.	0.68	93.0	99.0	126	149	180	204	228	254	290	
03525800	(r) Copper Creek tributary 1 at Route 58 (Alternate) near Dickensonville, Va.	0.68	85.2	99.9	185	279	430	572	724	916	--	
03525800	(w) Copper Creek tributary 1 at Route 58 (Alternate) near Dickensonville, Va.	0.68	89.1	99.5	153	200	253	288	319	350	--	
03526000	(p) Copper Creek at Route 619 near Gate City, Va.	106	2,747	2,984	4,129	5,203	6,751	8,052	9,484	11,070	13,420	
03526000	(r) Copper Creek at Route 619 near Gate City, Va.	106	3,448	3,885	5,990	8,014	10,996	13,485	16,165	19,242	--	
03526000	(w) Copper Creek at Route 619 near Gate City, Va.	106	3,069	3,406	4,989	6,364	8,171	9,579	11,065	12,704	--	
03527000	(p) Clinch River below Route 58 at Speers Ferry, Va.	1,123	20,520	22,350	31,080	39,080	50,340	59,580	69,580	80,420	96,190	

Table 2. Peak-flow characteristics of streamgaging stations in Virginia.—Continued

[mi², square mile; ft, foot; ft³/s, cubic foot per second; p, Log-Pearson Type III; r, regional regression; w, weighted value; --, not determined]

Station number	Station description	Drainage area (mi²)	Return period (years)									
			2	2.33	5	10	25	50	100	200	500	
			Exceedance probability									0.002
			0.5	0.4292	0.2	0.1	0.04	0.02	0.01	0.005		
Peak flow (ft³/s)												
03527000	(r) Clinch River below Route 58 at Speers Ferry, Va.	1,123	19,450	21,504	30,459	38,504	50,043	59,093	69,021	79,869	--	
03527000	(w) Clinch River below Route 58 at Speers Ferry, Va.	1,123	19,963	21,900	30,746	38,795	50,216	59,404	69,405	80,271	--	
03527500	(p) North Fork Clinch River at Route 58 at Duffield, Va.	23.1	765	773	803	823	845	859	871	883	897	
03527500	(r) North Fork Clinch River at Route 58 at Duffield, Va.	23.1	1,129	1,287	2,097	2,909	4,135	5,195	6,333	7,678	--	
03527500	(w) North Fork Clinch River at Route 58 at Duffield, Va.	23.1	769	779	816	838	859	871	883	893	--	
03529500	(p) Powell River at Route 23 at Big Stone Gap, Va.	112	5,077	5,574	8,027	10,390	13,870	16,840	20,170	23,900	29,520	
03529500	(r) Powell River at Route 23 at Big Stone Gap, Va.	112	4,864	5,452	8,400	11,232	15,359	18,920	23,307	27,641	36,665	
03529500	(w) Powell River at Route 23 at Big Stone Gap, Va.	112	4,902	5,474	8,311	10,970	14,755	17,944	21,655	25,495	31,307	
03530000	(p) South Fork Powell River at Route 23 at Big Stone Gap, Va.	39.7	2,295	2,469	3,233	3,859	4,654	5,247	5,842	6,443	7,249	
03530000	(r) South Fork Powell River at Route 23 at Big Stone Gap, Va.	39.7	1,678	1,906	3,045	4,171	5,854	7,292	8,836	10,643	--	
03530000	(w) South Fork Powell River at Route 23 at Big Stone Gap, Va.	39.7	2,002	2,197	3,145	3,986	5,037	5,779	6,478	7,171	--	
03530500	(p) North Fork Powell River at Route 621 at Pennington Gap, Va.	71.2	4,003	4,396	6,376	8,339	11,320	13,940	16,950	20,380	25,700	
03530500	(r) North Fork Powell River at Route 621 at Pennington Gap, Va.	71.2	3,335	3,754	5,852	7,885	10,890	13,470	16,813	20,111	29,062	
03530500	(w) North Fork Powell River at Route 621 at Pennington Gap, Va.	71.2	3,451	3,866	5,974	8,023	11,061	13,686	16,884	20,263	26,546	
03531000	(p) Powell River at Route 421 near Pennington Gap, Va.	290	13,160	14,160	18,810	22,930	28,560	33,080	37,860	42,960	50,250	
03531000	(r) Powell River at Route 421 near Pennington Gap, Va.	290	10,744	11,940	17,947	23,612	31,620	38,619	46,280	53,902	59,732	
03531000	(w) Powell River at Route 421 near Pennington Gap, Va.	290	11,359	12,512	18,237	23,320	29,975	35,265	40,713	46,188	51,831	
03531500	(p) Powell River at Route 70 near Jonesville, Va.	319	11,100	12,140	17,280	22,230	29,520	35,770	42,760	50,600	62,450	
03531500	(r) Powell River at Route 70 near Jonesville, Va.	319	11,632	12,916	19,365	25,437	33,992	41,480	49,572	57,632	62,726	
03531500	(w) Powell River at Route 70 near Jonesville, Va.	319	11,524	12,758	18,814	24,341	32,035	38,620	45,793	53,421	62,519	

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