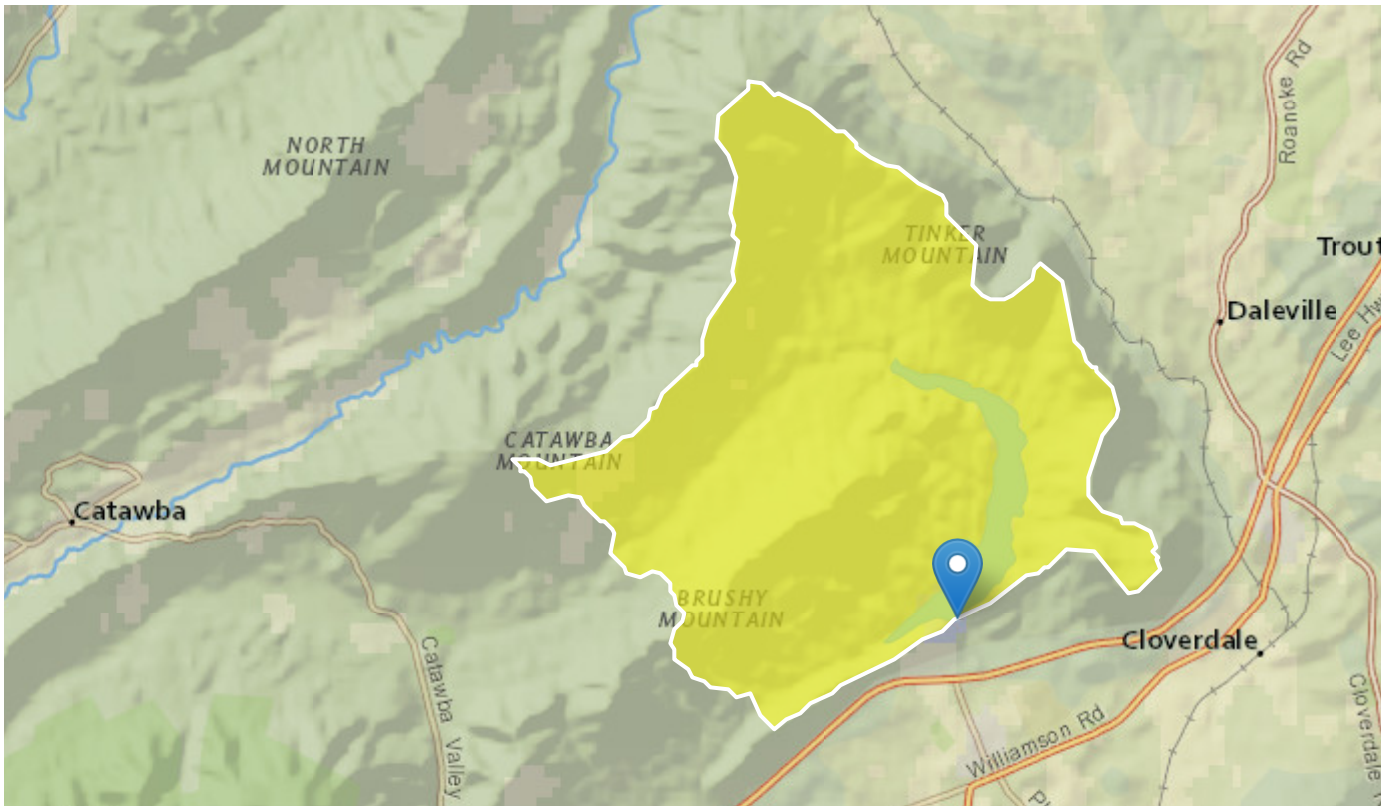
Carvins Cove Reservoir Watershed StreamStats Report

Region ID: VA
Workspace ID: VA20200619164243995000
Clicked Point (Latitude, Longitude): 37.36927, -79.95768
Time: 2020-06-19 12:43:02 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	17.7	square miles
LC01DEV	Percentage of land-use from NLCD 2001 classes 21-24	1.15	percent
LC06DEV	Percentage of land-use from NLCD 2006 classes 21-24	1.16	percent
LC11DEV	Percentage of developed (urban) land from NLCD 2011 classes 21-24	1.16	percent

Parameter Code	Parameter Description	Value	Unit
BRMETA	Percent area of metamorphic rocks within the Blue Ridge Physiographic Region	0	percent
CPSED	Percent area of sedimentary rockswithin the Coastal Plain Physiographic Region	0	percent
ELEV	Mean Basin Elevation	1577.83	feet
ELEVMAX	Maximum basin elevation	2975.18	feet
I24H2Y	Maximum 24-hour precipitation that occurs on average once in 2 years - Equivalent to precipitation intensity index	3.25	inches
LC01BARE	Percentage of area barren land, NLCD 2001 category 31	0	percent
LC01CRPHAY	Percentage of cultivated crops and hay, classes 81 and 82, from NLCD 2001	0.33	percent
LC01FORSHB	Percentage of forests and shrub lands, classes 41 to 52, from NLCD 2001	92.13	percent
LC01HERB	Percentage of herbaceous upland from NLCD 2001 class 71	0	percent
LC01IMP	Percent imperviousness of basin area 2001 NLCD	0.1	percent
LC01WATER	Percentage of open water, class 11, from NLCD 2001	6.4	percent
LC01WETLND	Percentage of wetlands, classes 90 and 95, from NLCD 2001	0	percent
LC06BARE	Percent of area covered by barren rock using 2006 NLCD	0	percent
LC06CRPHAY	Percentage of cultivated crops and hay, classes 81 and 82, from NLCD 2006	0.33	percent
LC06FORSHB	Percentage of forests and shrub lands, classes 41 to 52, from NLCD 2006	92.14	percent
LC06GRASS	Percent of area covered by grassland/herbaceous using 2006 NLCD	0.16	percent
LC06IMP	Percentage of impervious area determined from NLCD 2006 impervious dataset	0.11	percent
LC06WATER	Percent of open water, class 11, from NLCD 2006	6.21	percent
LC06WETLND	Percent of area covered by wetland using 2006 NLCD	0	percent

Parameter Code	Parameter Description	Value	Unit
LC11BARE	Percentage of barren from NLCD 2011 class 31	0	percent
LC11CRPHAY	Percentage of cultivated crops and hay, classes 81 and 82, from NLCD 2011	0.32	percent
LC11FORSHB	Percentage of forests and shrub lands, classes 41 to 52, from NLCD 2011	92.04	percent
LC11GRASS	Percent of area covered by grassland/herbaceous using 2011 NLCD	0.13	percent
LC11IMP	Average percentage of impervious area determined from NLCD 2011 impervious dataset	0.11	percent
LC11WATER	Percent of open water, class 11, from NLCD 2011	6.28	percent
LC11WETLND	Percentage of wetlands, classes 90 and 95, from NLCD 2011	0.06	percent
LFREGNO	Low Flow Region Number	1547	dimensionless
MESZOIC	Percent of area within the Mesozoic Basins	0	percent
MINBELEV	Minimum basin elevation	1087.13	feet
PDIGMET	Percent area of igneous and metamorphic within the Piedmont Physiographic Region	0	percent
PKREGNO	Peak Flow Region Number	1554	dimensionless
PRECIP	Mean Annual Precipitation	43.527	inches
RELIEF	Maximum - minimum elevation	1890	feet
STATOM19_8	Percentage of soils with greater than 7.3 percent and less than or equal to 19.8 percent organic matter from STATSGO	0	percent
STATOM55_7	Percentage of soils with greater than 19.8 percent and less than or equal to 55.7 percent organic matter from STATSGO	0	percent
STATSCLY20	Percentage of soils with greater than 10 percent and less than or equal to 20 percent clay from STATSGO	100	percent
STATSCLY50	Percentage of soils with greater than 40 percent and less than or equal to 50 percent clay from STATSGO	0	percent
STATSGODEP	Area-weighted average soil depth from NRCS STATSGO database	36.88	inches

Parameter Code	Parameter Description	Value	Unit
STATSOM0_5	Percentage of soils with less than 0.5 percent organic matter from STATSGO	44.07	percent
STATSOM2_6	Percentage of soils with greater than 0.50 percent and less than or equal to 2.60 percent organic matter from STATSGO	55.93	percent
STATSOM7_3	Percentage of soils with greater than 2.6 percent and less than or equal to 7.3 percent organic matter from STATSGO	0	percent
STATSWATCP	Available water capacity of the top 60 inches of soil - determined from STATSGO data	0.084	inch per inch
STATSPERM	Area-weighted average soil permeability from NRCS STATSGO database	5.02	inches per hour
VRCARB	Percent of area of carbonate rocks within the Valley and Ridge Physiographic Region	0	percent
VRPLSLC	Percent of area of siliciclastic rocks witin the Valley and Ridge or Appalachian Plateau Physiographic Regions	93.61	percent

Low-Flow Statistics Parameters[Valley and Ridge 2011 5143]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17.7	square miles	0.09	7393

Low-Flow Statistics Flow Report[Valley and Ridge 2011 5143]

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
1 Day 1.11 Year Low Flow	3.42	ft^3/s	53.6
1 Day 1.25 Year Low Flow	2.77	ft^3/s	59.6
1 Day 1.43 Year Low Flow	2.36	ft^3/s	64.6
1 Day 1.67 Year Low Flow	2.04	ft^3/s	69.2
1 Day 2 Year Low Flow	1.77	ft^3/s	74.1
1 Day 2.5 Year Low Flow	1.53	ft^3/s	79.3
1 Day 3.33 Year Low Flow	1.3	ft^3/s	85.5

Statistic	Value	Unit	SEp
1 Day 5 Year Low Flow	1.07	ft^3/s	94
1 Day 10 Year Low Flow	0.793	ft^3/s	109
1 Day 20 Year Low Flow	0.603	ft^3/s	128
4 Day 1.11 Year Low Flow	3.56	ft^3/s	52.4
4 Day 1.25 Year Low Flow	2.88	ft^3/s	58.4
4 Day 1.43 Year Low Flow	2.45	ft^3/s	63.3
4 Day 1.67 Year Low Flow	2.13	ft^3/s	68
4 Day 2 Year Low Flow	1.86	ft^3/s	72.8
4 Day 2.5 Year Low Flow	1.62	ft^3/s	78.1
4 Day 3.33 Year Low Flow	1.39	ft^3/s	84.3
4 Day 5 Year Low Flow	1.15	ft^3/s	92.8
4 Day 10 Year Low Flow	0.885	ft^3/s	107
4 Day 20 Year Low Flow	0.704	ft^3/s	121
4 Day 50 Year Low Flow	0.535	ft^3/s	142
4 Day 100 Year Low Flow	0.439	ft^3/s	160
4 Day 200 Year Low Flow	0.373	ft^3/s	179
4 Day 500 Year Low Flow	0.297	ft^3/s	209
4 Day 1000 Year Low Flow	0.252	ft^3/s	233
7 Day 1.11 Year Low Flow	3.66	ft^3/s	50.7
7 Day 1.25 Year Low Flow	2.94	ft^3/s	56.7
7 Day 1.43 Year Low Flow	2.5	ft^3/s	61.6
7 Day 1.67 Year Low Flow	2.17	ft^3/s	66.2
7 Day 2 Year Low Flow	1.9	ft^3/s	70.9
7 Day 2.5 Year Low Flow	1.65	ft^3/s	76
7 Day 3.33 Year Low Flow	1.42	ft^3/s	82
7 Day 5 Year Low Flow	1.18	ft^3/s	90
7 Day 10 Year Low Flow	0.911	ft^3/s	103
7 Day 20 Year Low Flow	0.732	ft^3/s	117
7 Day 50 Year Low Flow	0.564	ft^3/s	135
7 Day 100 Year Low Flow	0.474	ft^3/s	151

Statistic	Value	Unit	SEp
7 Day 200 Year Low Flow	0.401	ft^3/s	168
7 Day 500 Year Low Flow	0.323	ft^3/s	194
7 Day 1000 Year Low Flow	0.278	ft^3/s	216
30 Day 1.11 Year Low Flow	4.91	ft^3/s	41.4
30 Day 1.25 Year Low Flow	3.8	ft^3/s	48.2
30 Day 1.43 Year Low Flow	3.18	ft^3/s	53.5
30 Day 1.67 Year Low Flow	2.74	ft^3/s	58.3
30 Day 2 Year Low Flow	2.38	ft^3/s	62.9
30 Day 2.5 Year Low Flow	2.08	ft^3/s	67.8
30 Day 3.33 Year Low Flow	1.8	ft^3/s	73.4
30 Day 5 Year Low Flow	1.52	ft^3/s	80.4
30 Day 10 Year Low Flow	1.21	ft^3/s	91.1
30 Day 20 Year Low Flow	1.01	ft^3/s	101
30 Day 50 Year Low Flow	0.824	ft^3/s	114
30 Day 100 Year Low Flow	0.716	ft^3/s	124
30 Day 200 Year Low Flow	0.635	ft^3/s	134
30 Day 500 Year Low Flow	0.55	ft^3/s	148
30 Day 1000 Year Low Flow	0.491	ft^3/s	160

Low-Flow Statistics Citations

Austin, S.H., Krstolic, J.L., and Wiegand, Ute,2011, Low-flow characteristics of Virginia streams: U.S. Geological Survey Scientific Investigations Report 2011–5143, 122 p. + 9 tables on CD. (http://pubs.usgs.gov/sir/2011/5143/)

Peak-Flow Statistics Parameters[Valley and Ridge 2011 5144]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17.7	square miles	0.06	7866

Peak-Flow Statistics Flow Report[Valley and Ridge 2011 5144]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SEp
2 Year Peak Flood	928	ft^3/s	22
2 33 Year Peak Flood	1060	ft^3/s	23
5 Year Peak Flood	1750	ft^3/s	24
10 Year Peak Flood	2440	ft^3/s	27
25 Year Peak Flood	3480	ft^3/s	31
50 Year Peak Flood	4400	ft^3/s	35
100 Year Peak Flood	5380	ft^3/s	39
200 Year Peak Flood	6540	ft^3/s	43

Peak-Flow Statistics Citations

Austin, S.H., Krstolic, J.L., and Wiegand, Ute,2011, Peak-flow characteristics of Virginia streams: U.S. Geological Survey Scientific Investigations Report 2011–5144, 106 p. + 3 tables and 2 appendixes on CD. (http://pubs.usgs.gov/sir/2011/5144/)

Urban Peak-Flow Statistics Parameters[Peak Urban01 2014 5090]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17.7	square miles	0.07	2404
LC01DEV	Percent_Developed_from_NLCD2001	1.15	percent	10	96

Urban Peak-Flow Statistics Parameters[Peak Urban06 2014 5090]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17.7	square miles	0.07	2404
LC06DEV	Percent Developed from NLCD2006	1.16	percent	10	96

Urban Peak-Flow Statistics Parameters[Peak Urban11 2014 5090]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	17.7	square miles	0.07	2404
LC11DEV	Percent Developed from NLCD2011	1.16	percent	10	96

Urban Peak-Flow Statistics Disclaimers[Peak Urban01 2014 5090]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Urban Peak-Flow Statistics Flow Report[Peak Urban01 2014 5090]

Statistic	Value	Unit
Urban 1.005 Year Peak Flood	175	ft^3/s
Urban 1.01 Year Peak Flood	197	ft^3/s
Urban 1.05 Year Peak Flood	272	ft^3/s
Urban 1.11 Year Peak Flood	350	ft^3/s
Urban 1.25 Year Peak Flood	457	ft^3/s
Urban 1.5 Year Peak Flood	542	ft^3/s
Urban 2 Year Peak Flood	674	ft^3/s
Urban 2.33 Year Peak Flood	759	ft^3/s
Urban 5 Year Peak Flood	1190	ft^3/s
Urban 10 Year Peak Flood	1680	ft^3/s
Urban 25 Year Peak Flood	2570	ft^3/s
Urban 50 Year Peak Flood	3430	ft^3/s
Urban 100 Year Peak Flood	4150	ft^3/s
Urban 200 Year Peak Flood	5270	ft^3/s
Urban 500 Year Peak Flood	6720	ft^3/s

Urban Peak-Flow Statistics Disclaimers[Peak Urban06 2014 5090]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Urban Peak-Flow Statistics Flow Report[Peak Urban06 2014 5090]

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Urban 2 Year Peak Flood	674	ft^3/s
Urban 2.33 Year Peak Flood	759	ft^3/s
Urban 5 Year Peak Flood	1190	ft^3/s
Urban 10 Year Peak Flood	1690	ft^3/s
Urban 25 Year Peak Flood	2570	ft^3/s
Urban 50 Year Peak Flood	3430	ft^3/s
Urban 100 Year Peak Flood	4150	ft^3/s
Urban 200 Year Peak Flood	5270	ft^3/s
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Urban 100 Year Peak Flood	4150	ft^3/s
Urban 200 Year Peak Flood	5270	ft^3/s
Urban 500 Year Peak Flood	6720	ft^3/s

Urban Peak-Flow Statistics Citations

Austin, S.H.,2014, Methods and equations for estimating peak streamflow per square mile in Virginia's urban basins: U.S. Geological Survey Scientific Investigations Report 2014–5090, 25 p. (http://pubs.usgs.gov/sir/2014/5090/http://pubs.usgs.gov/sir/2014/5090/)

Application Version: 4.3.11