

TENNESSEE RIVER BASIN

03473000 SOUTH FORK HOLSTON RIVER NEAR DAMASCUS, VA

LOCATION.--Lat 36°39'06", long 81°50'39", Washington County, Hydrologic Unit 06010102, on right bank 500 ft upstream from bridge on U.S. Highway 58, 0.7 mi downstream from Laurel Creek, 3.2 mi northwest of Damascus, 4.9 mi upstream from Middle Fork, and at mile 77.2.

DRAINAGE AREA.--301 mi².

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for some periods, published in WSP 1306. Published as "at Vestal" prior to October 1978.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1932-33(M).

GAGE.--Water-stage recorder. Datum of gage is 1,792.30 ft above sea level.

REMARKS.--Records good except for period with ice effect, Jan. 7, which is fair. Prior to 1980, some diurnal fluctuation at low flow caused by powerplant upstream from station. Maximum discharge, 22,000 ft³/s, from rating curve extended above 10,000 ft³/s on basis of slope-area measurement of peak flow. Minimum gage height, 2.07 ft, Aug. 19, 1988. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft³/s and maximum (*):

| Date | Time | Discharge (ft ³ /s) | Gage height (ft) | Date | Time | Discharge (ft ³ /s) | Gage height (ft) |
|-------|------|--------------------------------|------------------|--|------|--------------------------------|------------------|
| May 8 | 0915 | *3,190 | *6.89 | No other peak greater than base discharge. | | | |

Minimum discharge, 68 ft³/s, Sep 27, gage height, 2.08 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|-------|-------|-------|-------|-------|------|------|------|------|
| 1 | 101 | 100 | 90 | 157 | 460 | 1020 | 304 | 850 | 173 | 128 | 246 | 88 |
| 2 | 98 | 99 | 88 | 145 | 598 | 813 | 289 | 702 | 172 | 134 | 281 | 84 |
| 3 | 96 | 103 | 88 | 446 | 556 | 819 | 274 | 578 | 191 | 118 | 233 | 82 |
| 4 | 102 | 106 | 88 | 383 | 498 | 868 | 262 | 492 | 174 | 111 | 194 | 81 |
| 5 | 104 | 104 | 92 | 267 | 424 | 781 | 249 | 429 | 160 | 106 | 170 | 108 |
| 6 | 99 | 101 | 101 | 228 | 376 | 881 | 238 | 441 | 151 | 101 | 156 | 442 |
| 7 | 97 | 100 | 96 | e220 | 362 | 1170 | 231 | 446 | 146 | 97 | 140 | 215 |
| 8 | 119 | 99 | 119 | 216 | 365 | 978 | 224 | 2710 | 142 | 108 | 132 | 151 |
| 9 | 135 | 104 | 240 | 602 | 327 | 833 | 225 | 1680 | 138 | 98 | 173 | 123 |
| 10 | 114 | 104 | 158 | 828 | 319 | 756 | 219 | 1020 | 135 | 109 | 143 | 122 |
| 11 | 105 | 120 | 119 | 518 | 297 | 627 | 436 | 741 | 132 | 280 | 126 | 105 |
| 12 | 102 | 116 | 110 | 387 | 293 | 551 | 516 | 587 | 125 | 417 | 118 | 95 |
| 13 | 99 | 98 | 515 | 323 | 286 | 504 | 414 | 513 | 120 | 424 | 112 | 89 |
| 14 | 98 | 96 | 343 | 313 | 260 | 538 | 362 | 686 | 118 | 257 | 149 | 86 |
| 15 | 97 | 99 | 208 | 1750 | 249 | 634 | 419 | 678 | 118 | 202 | 127 | 84 |
| 16 | 97 | 99 | 160 | 1190 | 245 | 631 | 489 | 503 | 138 | 184 | 112 | 82 |
| 17 | 95 | 93 | 145 | 720 | 255 | 733 | 473 | 420 | 176 | 164 | 105 | 77 |
| 18 | 95 | 90 | 131 | 631 | 455 | 889 | 436 | 372 | 139 | 151 | 100 | 76 |
| 19 | 95 | 89 | 122 | 571 | 547 | 934 | 391 | 389 | 122 | 140 | 97 | 75 |
| 20 | 97 | 94 | 139 | 506 | 581 | 779 | 364 | 328 | 116 | 140 | 298 | 74 |
| 21 | 97 | 118 | 132 | 441 | 542 | 688 | 335 | 296 | 116 | 154 | 173 | 78 |
| 22 | 96 | 105 | 192 | 382 | 475 | 601 | 309 | 289 | 114 | 180 | 129 | 84 |
| 23 | 94 | 96 | 236 | 591 | 421 | 517 | 289 | 284 | 110 | 152 | 113 | 79 |
| 24 | 95 | 94 | 368 | 1530 | 385 | 468 | 321 | 272 | 115 | 177 | 106 | 76 |
| 25 | 96 | 91 | 328 | 1390 | 363 | 429 | 286 | 252 | 145 | 407 | 109 | 74 |
| 26 | 96 | 106 | 252 | 881 | 340 | 391 | 295 | 237 | 163 | 282 | 130 | 71 |
| 27 | 98 | 109 | 206 | 650 | 327 | 362 | 379 | 223 | 130 | 208 | 129 | 71 |
| 28 | 99 | 98 | 183 | 523 | 685 | 339 | 1260 | 207 | 146 | 177 | 110 | 80 |
| 29 | 103 | 93 | 172 | 435 | --- | 321 | 1150 | 195 | 177 | 177 | 102 | 100 |
| 30 | 102 | 90 | 184 | 372 | --- | 302 | 980 | 186 | 161 | 232 | 96 | 268 |
| 31 | 100 | --- | 165 | 331 | --- | 287 | --- | 179 | --- | 244 | 91 | --- |
| TOTAL | 3121 | 3014 | 5570 | 17927 | 11291 | 20444 | 12419 | 17185 | 4263 | 5859 | 4500 | 3320 |
| MEAN | 101 | 100 | 180 | 578 | 403 | 659 | 414 | 554 | 142 | 189 | 145 | 111 |
| MAX | 135 | 120 | 515 | 1750 | 685 | 1170 | 1260 | 2710 | 191 | 424 | 298 | 442 |
| MIN | 94 | 89 | 88 | 145 | 245 | 287 | 219 | 179 | 110 | 97 | 91 | 71 |
| CFSM | .33 | .33 | .60 | 1.92 | 1.34 | 2.19 | 1.38 | 1.84 | .47 | .63 | .48 | .37 |
| IN. | .39 | .37 | .69 | 2.22 | 1.40 | 2.53 | 1.53 | 2.12 | .53 | .72 | .56 | .41 |

03473000 SOUTH FORK HOLSTON RIVER NEAR DAMASCUS, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 214 | 285 | 481 | 670 | 846 | 886 | 722 | 580 | 364 | 284 | 251 | 177 |
| MAX | 938 | 1258 | 1203 | 1490 | 2022 | 2075 | 1995 | 1367 | 968 | 1079 | 1193 | 790 |
| (WY) | 1978 | 1978 | 1973 | 1957 | 1957 | 1955 | 1987 | 1998 | 1998 | 1938 | 1940 | 1989 |
| MIN | 76.5 | 85.3 | 93.6 | 101 | 200 | 228 | 224 | 155 | 129 | 100 | 89.6 | 79.0 |
| (WY) | 1953 | 1940 | 1940 | 1940 | 1941 | 1988 | 1942 | 1941 | 1988 | 1988 | 1988 | 1954 |

| SUMMARY STATISTICS | FOR 1998 CALENDAR YEAR | FOR 1999 WATER YEAR | WATER YEARS 1932 - 1999 |
|--------------------------|------------------------|---------------------|-----------------------------|
| ANNUAL TOTAL | 222613 | 108913 | |
| ANNUAL MEAN | 610 | 298 | 478 |
| HIGHEST ANNUAL MEAN | | | 712 1974 |
| LOWEST ANNUAL MEAN | | | 245 1988 |
| HIGHEST DAILY MEAN | 4840 | Apr 17 | 2710 May 8 12800 Apr 5 1977 |
| LOWEST DAILY MEAN | 88 | aDec 2 | 71 bSep 26 40 Dec 27 1983 |
| ANNUAL SEVEN-DAY MINIMUM | 90 | Nov 29 | 76 Sep 21 63 Sep 13 1954 |
| INSTANTANEOUS PEAK FLOW | | | 3190 May 8 22000 Apr 5 1977 |
| INSTANTANEOUS PEAK STAGE | | | 6.89 May 8 17.11 Apr 5 1977 |
| INSTANTANEOUS LOW FLOW | | | 68 Sep 27 30 cOct 14 1941 |
| ANNUAL RUNOFF (CFSM) | 2.03 | .99 | 1.59 |
| ANNUAL RUNOFF (INCHES) | 27.51 | 13.46 | 21.60 |
| 10 PERCENT EXCEEDS | 1390 | 632 | 994 |
| 50 PERCENT EXCEEDS | 405 | 177 | 305 |
| 90 PERCENT EXCEEDS | 99 | 95 | 110 |

- a Also Dec 3, 4, 1998.
- b Also Sep 27, 1999.
- c Also Dec. 24, 1943.
- e Estimated.

