Water-Data Report 2011

# 01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD

Potomac Basin
North Branch Potomac Subbasin

LOCATION.--Lat 39°37'18.5", long 78°46'24.3" referenced to North American Datum of 1983, Allegany County, MD, Hydrologic Unit 02070002, on left bank at downstream side of Wiley Ford Bridge, 2.0 mi south of Cumberland, 2.1 mi downstream from Wills Creek, and at mile 19.6.

DRAINAGE AREA.--877 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1929 to current year. Gage-height records collected at various sites about 2.0 mi upstream from September 1901 to December 1932 and thereafter at present site, are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 726: Drainage area. WSP 781: 1932(M). WDR WV-97-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 585.22 ft above National Geodetic Vertical Datum of 1929. Prior to June 18, 1929, nonrecording gage at same site and datum.

REMARKS.--Records good except for those above 13,000 $ft^3/s$, which are fair, and those for estimated daily discharges (ice effect) which are poor. Prior to July 1981 some regulation at low flow by Stony River Reservoir, 79 mi upstream from station. Low-flow regulation since December 1950 by Savage River Reservoir, 39 mi upstream from station (see station 01597500). Flow regulated by Jennings Randolph Lake, 43 mi upstream from station, since July 1981. Prior to July 1957, small amount of inflow from industrial wastes and sewage from city of Cumberland from water diverted from Evitts Creek, mouth of which is downstream from station. Diversion to Chesapeake and Ohio Canal prior to 1935. National Weather Service gage height telemeter at station. U.S. Army Corps of Engineers satellite collection platform at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 29.2 ft, June 1, 1889, discharge, about 89,000 $ft^3/s$. Flood of Mar. 29, 1924, reached a stage of 28.4 ft, discharge, about 82,000 $ft^3/s$.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,800 $ft^3/s$, May 18, gage height, 16.53 ft; minimum discharge, 190 $ft^3/s$, Nov. 14, 15.



Suggested citation: U.S. Geological Survey, 2012, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 01603000, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01603000.2011.pdf

**01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**
**DAILY MEAN VALUES**
[e, estimated]

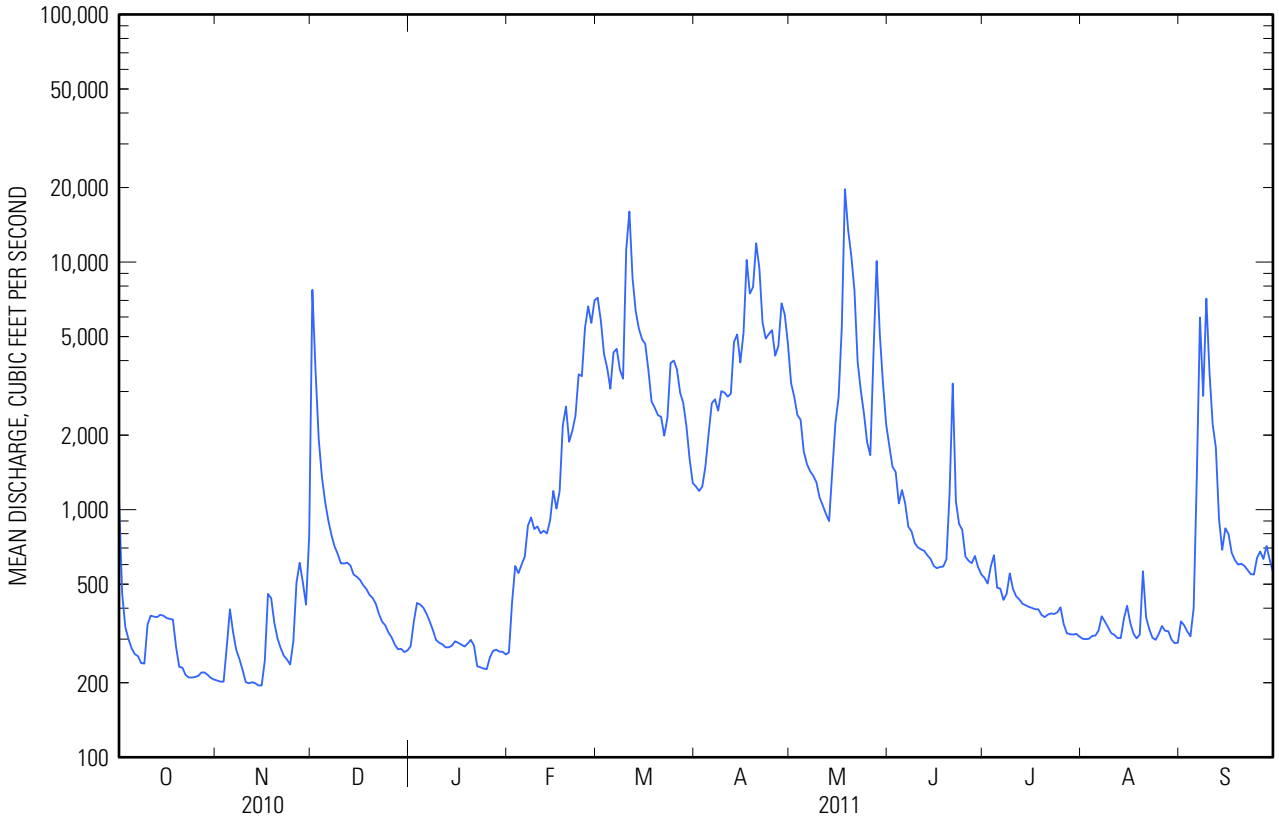
| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1,110 | 204 | 7,720 | 281 | 265 | 7,180 | 1,240 | 3,250 | 1,810 | 531 | 301 | 354 |
| 2 | 458 | 202 | 3,640 | 353 | 424 | 5,790 | 1,190 | 2,860 | 1,490 | 503 | 300 | 341 |
| 3 | 335 | 202 | 1,930 | 420 | 592 | 4,250 | 1,240 | 2,410 | 1,420 | 589 | 301 | 322 |
| 4 | 300 | 280 | 1,360 | 414 | 554 | 3,730 | 1,500 | 2,310 | 1,060 | 655 | 309 | 308 |
| 5 | 275 | 396 | 1,080 | e402 | 600 | 3,080 | 2,030 | 1,720 | 1,200 | 484 | 310 | 401 |
| 6 | 261 | 319 | 908 | 380 | 646 | 4,320 | 2,690 | 1,530 | 1,060 | 480 | 325 | 1,370 |
| 7 | 256 | 271 | 792 | e354 | 862 | 4,460 | 2,790 | 1,430 | 853 | 432 | 371 | 5,970 |
| 8 | 240 | 249 | 711 | e327 | 930 | 3,680 | 2,510 | 1,370 | 817 | 457 | 353 | 2,880 |
| 9 | 239 | 225 | 662 | e298 | 835 | 3,380 | 3,010 | 1,290 | 734 | 553 | 335 | 7,120 |
| 10 | 343 | 201 | 607 | e290 | 855 | 11,200 | 2,970 | 1,120 | 704 | 479 | 317 | 3,570 |
| 11 | 373 | 199 | 606 | e286 | 803 | 16,000 | 2,860 | 1,040 | 691 | 447 | 312 | 2,210 |
| 12 | 370 | 201 | 611 | e278 | 822 | 8,600 | 2,940 | 961 | 682 | 434 | 303 | 1,780 |
| 13 | 368 | 199 | e595 | e278 | 801 | 6,330 | 4,750 | 899 | 654 | 417 | 303 | 917 |
| 14 | 376 | 195 | 547 | e282 | 907 | 5,380 | 5,100 | 1,430 | 633 | 411 | 363 | 688 |
| 15 | 373 | 195 | 536 | e294 | 1,190 | 4,880 | 3,930 | 2,240 | 593 | 405 | 409 | 841 |
| 16 | 365 | 246 | e521 | e290 | 1,010 | 4,670 | 5,170 | 2,850 | 580 | 401 | 349 | 797 |
| 17 | 362 | 457 | e496 | e285 | 1,190 | 3,660 | 10,200 | 5,420 | 587 | 396 | 316 | 669 |
| 18 | 360 | 439 | 479 | e280 | 2,190 | 2,730 | 7,460 | 19,700 | 589 | 396 | 302 | 626 |
| 19 | 279 | 349 | e453 | 288 | 2,610 | 2,580 | 7,920 | 13,500 | 630 | 376 | 313 | 600 |
| 20 | 232 | 302 | e440 | 298 | 1,880 | 2,410 | 11,900 | 10,600 | 1,160 | 368 | 564 | 605 |
| 21 | 230 | 276 | e417 | 282 | 2,080 | 2,370 | 9,450 | 7,670 | 3,230 | 377 | 367 | 593 |
| 22 | 215 | 257 | 379 | 233 | 2,400 | 1,990 | 5,710 | 3,950 | 1,080 | 381 | 329 | 571 |
| 23 | 210 | 248 | 353 | e231 | 3,520 | 2,350 | 4,910 | 3,030 | 875 | 379 | 304 | 549 |
| 24 | 210 | 237 | 341 | e228 | 3,460 | 3,910 | 5,120 | 2,440 | 829 | 385 | 298 | 547 |
| 25 | 211 | 294 | 319 | e227 | 5,430 | 4,000 | 5,310 | 1,870 | 647 | 403 | 315 | 639 |
| 26 | 213 | 509 | 305 | e253 | 6,620 | 3,690 | 4,190 | 1,660 | 622 | 345 | 339 | 678 |
| 27 | 220 | 610 | 285 | e269 | 5,680 | 2,970 | 4,580 | 4,250 | 608 | 317 | 324 | 632 |
| 28 | 220 | 508 | 273 | 272 | 7,000 | 2,690 | 6,810 | 10,100 | 650 | 314 | 323 | 713 |
| 29 | 215 | 413 | 274 | 267 | --- | 2,170 | 6,150 | 5,100 | 586 | 313 | 299 | 626 |
| 30 | 209 | 783 | 266 | 267 | --- | 1,600 | 4,700 | 3,230 | 548 | 315 | 289 | 562 |
| 31 | 206 | --- | 270 | 260 | --- | 1,280 | --- | 2,210 | --- | 307 | 290 | --- |
| Total | 9,634 | 9,466 | 28,176 | 9,167 | 56,156 | 137,330 | 140,330 | 123,440 | 27,622 | 13,050 | 10,233 | 38,479 |
| Mean | 311 | 316 | 909 | 296 | 2,006 | 4,430 | 4,678 | 3,982 | 921 | 421 | 330 | 1,283 |
| Max | 1,110 | 783 | 7,720 | 420 | 7,000 | 16,000 | 11,900 | 19,700 | 3,230 | 655 | 564 | 7,120 |
| Min | 206 | 195 | 266 | 227 | 265 | 1,280 | 1,190 | 899 | 548 | 307 | 289 | 308 |
| Cfsm | 0.35 | 0.36 | 1.04 | 0.34 | 2.29 | 5.05 | 5.33 | 4.54 | 1.05 | 0.48 | 0.38 | 1.46 |
| In. | 0.41 | 0.40 | 1.20 | 0.39 | 2.38 | 5.83 | 5.95 | 5.24 | 1.17 | 0.55 | 0.43 | 1.63 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2011, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 580 | 801 | 1,318 | 1,583 | 1,943 | 2,907 | 2,358 | 1,789 | 943 | 533 | 463 | 497 |
| Max | 3,791 | 5,350 | 4,652 | 5,115 | 4,410 | 8,763 | 5,866 | 4,070 | 3,613 | 2,270 | 2,152 | 4,117 |
| (WY) | (1943) | (1986) | (1973) | (1937) | (1998) | (1936) | (1993) | (1996) | (2003) | (1989) | (1996) | (1996) |
| Min | 28.9 | 44.8 | 134 | 269 | 393 | 718 | 705 | 374 | 209 | 89.7 | 57.7 | 40.3 |
| (WY) | (1931) | (1931) | (1931) | (1940) | (1934) | (2009) | (1995) | (1934) | (1965) | (1930) | (1930) | (1932) |

**01603000 NORTH BRANCH POTOMAC RIVER NEAR CUMBERLAND, MD—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2010 | | Water Year 2011 | | Water Years 1929 - 2011 | |
|---|---|---|---|---|---|---|
| **Annual total** | 465,194 | | 603,083 | | | |
| **Annual mean** | 1,275 | | 1,652 | | 1,308 | |
| **Annual mean‡** | 1,276 | | 1,677 | | 1,308 | |
| **Highest annual mean** | | | | | 2,390 | 1996 |
| **Lowest annual mean** | | | | | 632 | 1969 |
| **Highest daily mean** | 19,900 | Mar 13 | 19,700 | May 18 | 47,400 | Mar 18, 1936 |
| **Lowest daily mean** | 176 | Sep 5[a] | 195 | Nov 14[b] | 13 | Sep 21, 1932[c] |
| **Annual seven-day minimum** | 177 | Sep 4 | 202 | Nov 9 | 16 | Sep 20, 1932 |
| **Maximum peak flow** | | | 21,800 | May 18 | [d]88,200 | Mar 17, 1936 |
| **Maximum peak stage** | | | 16.53 | May 18 | 29.10 | Mar 17, 1936 |
| **Instantaneous low flow** | | | 190 | Nov 14[b] | 12 | Sep 22, 1932 |
| **Annual runoff (cfsm)** | 1.45 | | 1.88 | | 1.49 | |
| **Annual runoff (cfsm)‡** | 1.45 | | 1.91 | | 1.49 | |
| **Annual runoff (inches)** | 19.73 | | 25.58 | | 20.26 | |
| **Annual runoff (inches)‡** | 19.75 | | 25.98 | | 20.25 | |
| **10 percent exceeds** | 3,010 | | 4,720 | | 3,040 | |
| **50 percent exceeds** | 576 | | 587 | | 687 | |
| **90 percent exceeds** | 207 | | 261 | | 185 | |

‡ Adjusted for change in reservoir contents since October 1949.
[a] Sept. 5, 6.
[b] Nov. 14, 15.
[c] Sept. 21-24, 1932.
[d] From rating curve extended above 33,000 ft³/s on basis of slope-area measurement of peak flow.