Water-Data Report 2013

# 01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD

Potomac Basin
Conococheague-Opequon Subbasin

LOCATION.--Lat 39°26'59.2", long 77°43'48.7" referenced to North American Datum of 1983, Washington County, MD, Hydrologic Unit 02070004, on left bank 400 ft downstream from Burnside Bridge, 1.0 mi southeast of Sharpsburg, and 4.0 mi upstream from mouth.

DRAINAGE AREA.--281 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1897 to September 1905, August 1928 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 192: 1897-1905. WSP 726: Drainage area. WSP 1432: 1929-31(M), 1933, 1935(M), 1937(M), 1949(M), 1952(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Mar. 29, 1934. Datum of gage is 310.40 ft above North American Vertical Datum of 1988. June 24, 1897, to Aug. 25, 1905, nonrecording gage a few hundred feet downstream from Middle Bridge, 1.2 mi upstream at gage datum 12 ft higher. Aug. 21, 1928, to July 13, 1933, nonrecording gage at Burnside Bridge, 0.1 mi upstream at present gage datum.

REMARKS.—Records good except those for estimated daily discharges (missing data), which are fair. Some diurnal fluctuation caused by powerplant upstream from station. Since 1928 records include pumpage from the Potomac River for municipal supply of Hagerstown. This water later enters Antietam Creek upstream from station as sewage. Records adjusted for monthly and annual mean inflow from January 1930 to September 2011. U.S. Geological Survey satellite data-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 FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 $ft^3/s$ and (or) maximum (*):

| Date | Time | Discharge ($ft^3/s$) | Gage height (ft) |
|---|---|---|---|
| Oct 30 | 2015 | *5,130 | *9.89 |
| Jan 31 | 1545 | 1,960 | 5.56 |

Minimum discharge, 114 $ft^3/s$, Sept. 29, 30.



Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 01619500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/01619500.2013.pdf

**01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**
**DAILY MEAN VALUES**
[e, estimated]

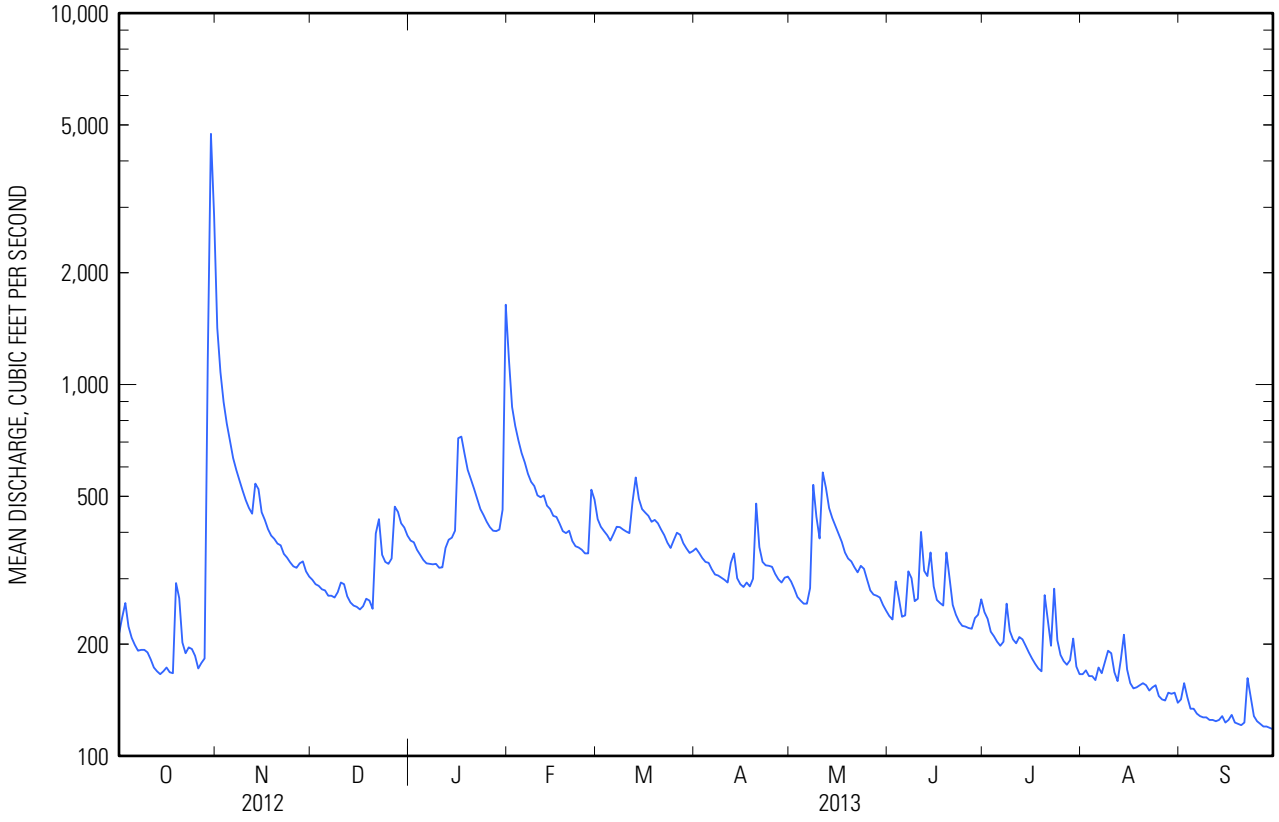
| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 213 | 1,420 | 298 | 380 | 1,170 | 434 | 362 | 295 | 238 | 244 | 166 | 142 |
| 2 | 236 | 1,080 | 290 | 376 | 870 | 414 | 352 | 282 | 233 | 234 | 170 | 157 |
| 3 | 258 | 897 | 287 | 359 | 773 | 403 | 341 | 268 | 295 | 216 | 164 | 144 |
| 4 | 223 | 785 | 281 | 348 | 707 | 393 | 333 | 262 | 266 | 210 | 164 | 134 |
| 5 | 208 | 706 | 279 | 337 | 654 | 380 | 331 | 257 | 237 | 203 | 160 | 134 |
| 6 | 199 | 634 | 270 | 330 | 617 | 396 | 318 | 257 | 239 | 198 | 173 | 130 |
| 7 | 192 | 589 | 270 | 329 | 575 | 414 | 308 | 283 | 314 | 203 | 167 | 128 |
| 8 | 193 | 552 | 267 | 328 | 547 | 413 | 306 | 537 | 301 | 257 | 179 | 127 |
| 9 | 193 | 518 | 276 | 329 | 533 | 407 | 302 | 440 | 261 | 217 | 192 | 127 |
| 10 | 190 | 488 | 293 | 321 | 503 | 402 | 298 | 385 | 265 | 206 | 189 | 125 |
| 11 | 182 | 465 | 290 | 322 | 497 | 398 | 293 | 580 | 401 | 201 | 168 | 125 |
| 12 | 173 | 449 | 269 | 363 | 503 | 484 | 331 | 527 | 315 | 209 | 159 | 124 |
| 13 | 169 | 541 | 259 | 382 | 472 | 562 | 351 | 465 | 305 | 206 | 181 | 125 |
| 14 | 166 | 523 | 254 | 387 | 462 | 492 | 301 | 437 | 353 | 198 | 212 | 128 |
| 15 | 169 | 453 | 252 | 404 | 443 | 462 | 290 | 416 | 286 | 190 | 171 | 123 |
| 16 | 173 | 432 | 248 | 717 | 440 | 452 | 285 | 396 | 263 | 183 | 157 | 125 |
| 17 | 168 | 408 | 253 | 724 | 422 | 443 | 293 | 377 | 258 | 177 | 152 | 129 |
| 18 | 167 | 392 | 265 | 651 | 403 | 427 | 286 | 353 | 254 | 172 | 153 | 123 |
| 19 | 292 | 384 | 262 | 589 | 398 | 432 | 300 | 340 | 353 | 169 | e155 | 122 |
| 20 | 266 | 373 | 249 | 556 | 404 | 423 | 478 | 334 | 301 | 271 | e157 | 121 |
| 21 | 202 | 369 | 397 | 524 | 379 | 407 | 365 | 322 | 255 | 232 | 155 | 123 |
| 22 | 189 | 350 | 434 | 492 | 367 | 393 | 333 | 312 | 240 | 198 | 150 | 162 |
| 23 | 196 | 342 | 348 | 462 | 364 | 375 | 326 | 325 | 230 | 282 | 153 | 144 |
| 24 | 194 | 332 | 333 | 445 | 359 | 363 | 325 | 319 | 224 | 205 | 155 | 128 |
| 25 | 186 | 324 | 329 | 427 | 351 | 381 | 323 | 298 | 223 | 187 | 145 | 124 |
| 26 | 172 | 321 | 340 | 413 | 351 | 399 | 309 | 279 | 221 | 180 | 142 | 122 |
| 27 | 178 | 330 | 469 | 404 | 521 | 394 | 299 | 272 | 220 | 176 | 141 | 120 |
| 28 | 183 | 334 | 454 | 403 | 490 | 374 | 293 | 270 | 235 | 181 | 148 | 120 |
| 29 | 1,160 | 314 | 423 | 407 | --- | 362 | 302 | 267 | 240 | 207 | 147 | 119 |
| 30 | 4,730 | 304 | 412 | 460 | --- | 352 | 304 | 255 | 264 | 174 | 148 | 118 |
| 31 | 2,850 | --- | 392 | 1,640 | --- | 356 | --- | 246 | --- | 166 | 139 | --- |
| Total | 14,270 | 15,409 | 9,743 | 14,609 | 14,575 | 12,787 | 9,638 | 10,656 | 8,090 | 6,352 | 5,012 | 3,873 |
| Mean | 460 | 514 | 314 | 471 | 521 | 412 | 321 | 344 | 270 | 205 | 162 | 129 |
| Max | 4,730 | 1,420 | 469 | 1,640 | 1,170 | 562 | 478 | 580 | 401 | 282 | 212 | 162 |
| Min | 166 | 304 | 248 | 321 | 351 | 352 | 285 | 246 | 220 | 166 | 139 | 118 |
| Cfsm | 1.64 | 1.83 | 1.12 | 1.68 | 1.85 | 1.47 | 1.14 | 1.22 | 0.96 | 0.73 | 0.58 | 0.46 |
| In. | 1.89 | 2.04 | 1.29 | 1.93 | 1.93 | 1.69 | 1.28 | 1.41 | 1.07 | 0.84 | 0.66 | 0.51 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1897 – 1905, 1928 – 2013, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 182 | 201 | 269 | 307 | 357 | 471 | 468 | 381 | 298 | 213 | 172 | 176 |
| Max | 916 | 628 | 964 | 943 | 1,206 | 1,299 | 1,201 | 859 | 1,278 | 604 | 531 | 1,090 |
| (WY) | (1977) | (1997) | (1997) | (1996) | (1998) | (1994) | (1993) | (1998) | (1972) | (1996) | (1996) | (1975) |
| Min | 65.5 | 65.6 | 61.5 | 57.3 | 66.0 | 91.5 | 105 | 119 | 95.9 | 66.4 | 58.6 | 69.4 |
| (WY) | (1964) | (1966) | (1966) | (1966) | (2002) | (2002) | (2002) | (2002) | (2002) | (2002) | (2002) | (1963) |

**01619500 ANTIETAM CREEK NEAR SHARPSBURG, MD—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2012 | | Water Year 2013 | | Water Years 1897 – 1905, 1928 – 2013 | |
|---|---|---|---|---|---|---|
| **Annual total** | 129,053 | | 125,014 | | | |
| **Annual mean** | 353 | | 343 | | 291 | |
| **Highest annual mean** | | | | | 554 | 1996 |
| **Lowest annual mean** | | | | | 82.7 | 2002 |
| **Highest daily mean** | 4,730 | Oct 30 | 4,730 | Oct 30 | 8,970 | Sep 26, 1975 |
| **Lowest daily mean** | 134 | Sep 17 | 118 | Sep 30 | 37 | Jan 30, 1966 |
| **Annual seven-day minimum** | 144 | Sep 11 | 122 | Sep 24 | 43 | Aug 17, 2002 |
| **Maximum peak flow** | | | 5,130 | Oct 30 | [a]12,600 | Jul 20, 1956 |
| **Maximum peak stage** | | | 9.89 | Oct 30 | 16.73 | Jul 20, 1956 |
| **Instantaneous low flow** | | | 114 | Sep 29[b] | [c]9.4 | Nov 22, 1957 |
| **Annual runoff (cfsm)** | 1.25 | | 1.22 | | 1.03 | |
| **Annual runoff (inches)** | 17.08 | | 16.55 | | 14.06 | |
| **10 percent exceeds** | 514 | | 503 | | 555 | |
| **50 percent exceeds** | 312 | | 298 | | 210 | |
| **90 percent exceeds** | 179 | | 151 | | 99 | |

[a] From rating curve extended above 7,300 ft³/s on basis of contracted-opening measurement of peak flow.
[b] Sept. 29, 30.
[c] Result of regulation caused by construction work upstream from station.