Water-Data Report 2008

# 01362500 ESOPUS CREEK AT COLDBROOK, NY

Upper Hudson Basin
Middle Hudson Subbasin

LOCATION.--Lat 42°00′51″, long 74°16′16″ referenced to North American Datum of 1927, Ulster County, NY, Hydrologic Unit 02020006, on left bank at downstream side of bridge on Nissen Road in Coldbrook, 0.3 mi downstream from Little Beaver Kill, 1.5 mi upstream from Ashokan Reservoir, and 2.5 mi south of Mount Tremper. Water-quality sampling site at discharge station.

DRAINAGE AREA.--192 $mi^2$.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--January 1914 to September 1925 (monthly discharge only, furnished by State engineer and surveyor of New York, published in WSP 1302), October 1925 to September 1931 (monthly discharge only, furnished by Board of Water Supply, City of New York, published in WSP 1302), October 1931 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 621.54 ft above NGVD of 1929. Prior to June 15, 1916, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1924, water diverted from Schoharie Reservoir through Shandaken Tunnel (see station 01362230) enters Esopus Creek 10.5 mi upstream from station and is included in records of daily discharge. Slight diversion from Beaver Kill into Cooper Lake for water supply of Kingston. Satellite and telephone gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,300 $ft^3/s$, Mar. 21, 1980, gage height, 21.94 ft, from rating curve extended above 13,000 $ft^3/s$, on basis of slope-area measurements at gage heights 12.39 ft, 15.15 ft, and 20.70 ft; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 $ft^3/s$, Mar. 8, gage height, 12.11 ft, outside gage height was 12.32 ft, from crest-stage gage; minimum discharge, 185 $ft^3/s$, July 10, gage height, 4.06 ft.

**01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued**

**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**
**DAILY MEAN VALUES**
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 284 | 1,190 | 1,310 | 883 | 378 | e400 | 1,140 | 678 | 557 | 223 | 375 | 806 |
| 2 | 284 | 1,110 | 1,250 | 780 | 609 | e310 | 1,560 | 645 | 515 | 211 | 372 | 678 |
| 3 | 277 | 1,060 | 1,320 | e609 | 455 | e400 | 1,210 | 679 | 473 | 200 | 392 | 474 |
| 4 | 283 | 1,020 | 1,260 | e593 | 426 | 608 | 1,320 | 777 | 470 | 205 | 335 | 486 |
| 5 | 370 | 982 | 1,200 | e593 | 650 | 7,480 | 1,410 | 678 | 461 | 201 | 318 | 436 |
| 6 | 720 | 1,130 | 1,150 | e585 | 1,930 | 3,110 | 1,260 | 624 | 579 | 200 | 408 | 373 |
| 7 | 660 | 1,060 | 1,110 | 694 | 3,380 | 2,070 | 1,110 | 589 | 867 | 197 | 393 | 449 |
| 8 | 471 | 1,020 | 1,100 | 1,400 | 1,890 | 6,030 | 993 | 566 | 787 | 195 | 362 | 346 |
| 9 | 480 | 1,000 | 1,070 | 2,320 | 1,350 | 5,100 | 914 | 564 | 470 | 191 | 346 | 462 |
| 10 | 499 | 1,000 | 1,070 | 1,880 | 1,080 | 2,270 | 876 | 561 | 254 | 187 | 344 | 418 |
| 11 | 507 | 980 | 1,060 | 1,770 | 801 | 1,560 | 839 | 521 | 255 | 188 | 415 | 363 |
| 12 | 571 | 963 | 1,170 | 1,520 | 699 | 1,230 | 909 | 580 | 223 | 194 | 471 | 353 |
| 13 | 550 | 992 | 1,160 | 1,210 | 1,260 | 989 | 842 | 842 | 214 | 195 | 423 | 354 |
| 14 | 531 | 978 | 1,140 | 1,050 | 1,300 | 848 | 719 | 1,010 | 247 | 226 | 367 | 361 |
| 15 | 514 | 2,330 | 1,120 | 899 | 1,030 | 962 | 627 | 993 | 286 | 202 | 406 | 346 |
| 16 | 497 | 2,040 | 1,160 | 744 | 868 | 896 | 560 | 1,010 | 252 | 196 | 504 | 334 |
| 17 | 491 | 1,830 | 1,120 | e645 | 762 | 754 | 507 | 1,040 | 246 | 192 | 429 | 325 |
| 18 | 484 | 1,570 | 1,100 | e630 | 3,470 | 671 | 463 | 1,000 | 230 | 190 | 428 | 328 |
| 19 | 565 | 1,450 | 1,080 | e550 | 2,530 | 794 | 434 | 936 | 225 | 198 | 463 | 324 |
| 20 | 1,210 | 1,520 | 1,040 | e500 | 1,610 | 1,770 | 449 | 770 | 220 | 195 | 446 | 334 |
| 21 | 722 | 1,450 | 1,030 | e400 | 1,180 | 1,310 | 529 | 651 | 217 | 212 | 434 | 333 |
| 22 | 633 | 1,390 | 1,010 | e380 | 989 | 1,090 | 496 | 645 | 223 | 204 | 420 | 338 |
| 23 | 598 | 1,330 | 2,750 | e370 | 847 | 933 | 474 | 679 | 252 | 432 | 411 | 325 |
| 24 | 644 | 1,280 | 3,860 | e365 | 710 | 806 | 457 | 737 | 227 | 1,320 | 401 | 319 |
| 25 | 637 | 1,240 | 1,790 | e360 | 629 | 710 | 450 | 725 | 216 | 748 | 374 | 316 |
| 26 | 611 | 1,330 | 1,280 | e355 | e570 | 656 | 445 | 717 | 209 | 493 | 282 | 486 |
| 27 | 2,650 | 1,640 | 1,060 | e355 | e530 | 607 | 439 | 794 | 208 | 1,400 | 246 | 501 |
| 28 | 1,890 | 1,480 | 993 | e352 | e440 | 891 | 704 | 906 | 206 | 842 | 237 | 463 |
| 29 | 1,140 | 1,450 | 1,270 | e351 | e375 | 747 | 935 | 828 | 202 | 577 | 389 | 505 |
| 30 | 1,040 | 1,380 | 1,080 | 383 | --- | 649 | 743 | 624 | 224 | 483 | 817 | 462 |
| 31 | 1,280 | --- | 982 | 347 | --- | 744 | --- | 556 | --- | 413 | 811 | --- |
| Total | 22,093 | 39,195 | 40,095 | 23,873 | 32,748 | 47,395 | 23,814 | 22,925 | 10,015 | 11,110 | 12,819 | 12,398 |
| Mean | 713 | 1,306 | 1,293 | 770 | 1,129 | 1,529 | 794 | 740 | 334 | 358 | 414 | 413 |
| Max | 2,650 | 2,330 | 3,860 | 2,320 | 3,470 | 7,480 | 1,560 | 1,040 | 867 | 1,400 | 817 | 806 |
| Min | 277 | 963 | 982 | 347 | 375 | 310 | 434 | 521 | 202 | 187 | 237 | 316 |

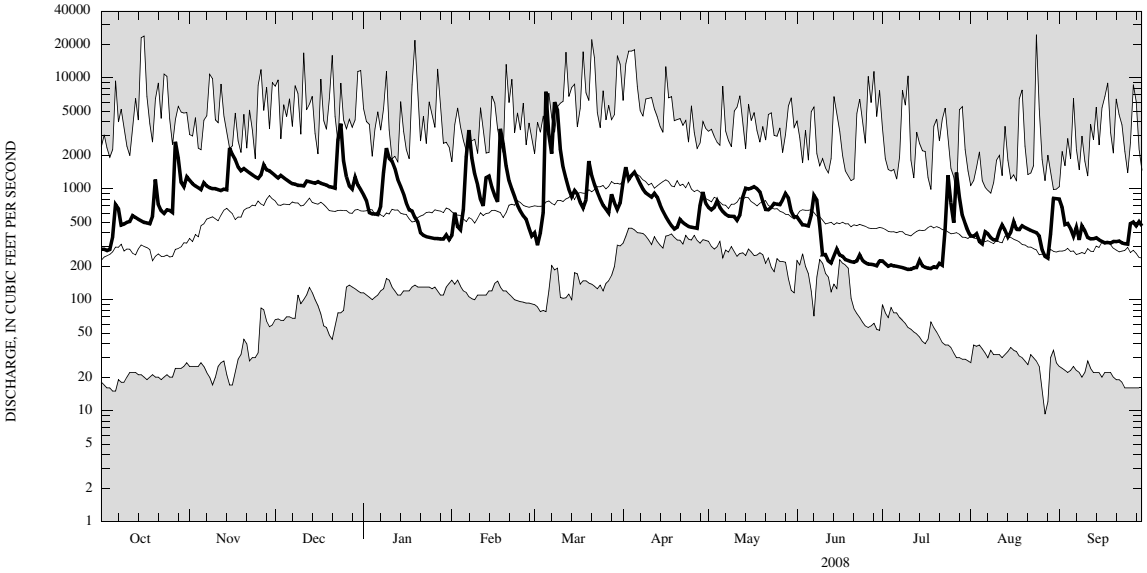
**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2008, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 504 | 795 | 893 | 814 | 770 | 1,144 | 1,343 | 879 | 623 | 493 | 391 | 418 |
| Max | 2,509 | 1,699 | 2,083 | 2,123 | 2,756 | 2,810 | 3,309 | 2,320 | 2,291 | 1,364 | 1,460 | 1,331 |
| (WY) | (1956) | (1943) | (1974) | (1996) | (1981) | (1936) | (1940) | (1989) | (2006) | (1945) | (1933) | (2003) |
| Min | 22.3 | 43.6 | 178 | 145 | 137 | 406 | 552 | 410 | 233 | 52.0 | 44.9 | 27.3 |
| (WY) | (1942) | (1965) | (1965) | (1981) | (1980) | (1960) | (1985) | (1993) | (1933) | (1965) | (1962) | (1962) |

**01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2007 | | Water Year 2008 | | Water Years 1932 - 2008 | |
|---|---|---|---|---|---|---|
| **Annual total** | 286,098 | | 298,480 | | | |
| **Annual mean** | 784 | | 816 | | 755 | |
| **Highest annual mean** | | | | | 1,308 | 2006 |
| **Lowest annual mean** | | | | | 419 | 1985 |
| **Highest daily mean** | 12,600 | Apr 16 | 7,480 | Mar 5 | 24,400 | Aug 24, 1933 |
| **Lowest daily mean** | 247 | Sep 13 | 187 | Jul 10 | 9.3 | Aug 27, 1949 |
| **Annual seven-day minimum** | 290 | Sep 28 | 192 | Jul 7 | 16 | Sep 24, 1943 |
| **10 percent exceeds** | 1,450 | | 1,400 | | 1,450 | |
| **50 percent exceeds** | 520 | | 628 | | 540 | |
| **90 percent exceeds** | 317 | | 235 | | 180 | |




CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

**01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued**

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1996 to current year.

INSTRUMENTATION.--Water-temperature satellite and telephone telemeter provides 15-minute-interval readings.

REMARKS.--Temperature readings prior to Oct. 1, 2007, rounded to nearest 0.5°C. Interruption of record was due to malfunction of recording intrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Prior to Oct. 1, 2007--Maximum, 27.0°C, Aug. 2, 2006; minimum (water year 1997-2007), 0.0°C on many days during winter periods.
WATER TEMPERATURE: After Oct. 1, 2007--Maximum, 26.0°C, July 16, 18, 2008; minimum, -0.5°C, Jan. 21, Feb. 29, 2008.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 26.0°C, July 16, 18; minimum, -0.5°C, Jan. 21, Feb. 29.

**TEMPERATURE, WATER, DEGREES CELSIUS**
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

| Day | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | October | | | November | | | December | | | January | |
| 1 | 17.9 | 15.3 | 16.6 | 11.1 | 10.2 | 10.8 | 4.3 | 2.5 | 3.4 | 2.0 | 0.0 | 1.2 |
| 2 | 19.1 | 15.3 | 17.2 | 11.4 | 9.6 | 10.3 | 3.0 | 2.2 | 2.5 | 1.9 | -0.1 | 1.1 |
| 3 | 20.2 | 16.6 | 18.2 | 10.4 | 9.3 | 9.7 | 4.5 | 2.9 | 3.6 | 0.0 | -0.2 | -0.1 |
| 4 | 21.0 | 16.9 | 18.9 | 10.8 | 9.2 | 9.9 | 3.2 | 2.3 | 2.6 | 0.0 | -0.4 | -0.2 |
| 5 | 21.4 | 17.1 | 18.9 | 10.9 | 9.1 | 9.9 | 3.0 | 2.1 | 2.5 | 0.4 | -0.3 | 0.0 |
| 6 | 20.9 | 18.1 | 19.2 | 10.3 | 8.7 | 9.7 | 2.7 | 1.6 | 2.1 | 2.4 | 0.4 | 1.4 |
| 7 | 20.8 | 18.3 | 19.3 | 9.2 | 8.1 | 8.7 | 2.8 | 1.7 | 2.3 | 3.1 | 2.3 | 2.6 |
| 8 | 21.4 | 18.0 | 19.5 | 9.1 | 7.5 | 8.2 | 4.0 | 2.7 | 3.1 | 4.1 | 2.7 | 3.3 |
| 9 | 19.5 | 17.7 | 18.6 | 8.7 | 7.6 | 8.2 | 3.3 | 2.6 | 3.0 | 5.9 | 3.8 | 4.7 |
| 10 | 19.1 | 17.2 | 17.9 | 8.7 | 7.3 | 7.8 | 3.7 | 3.1 | 3.3 | 4.2 | 3.3 | 3.7 |
| 11 | 17.8 | 17.1 | 17.6 | 8.2 | 6.6 | 7.3 | 3.4 | 2.4 | 2.9 | 4.4 | 3.6 | 4.0 |
| 12 | 17.1 | 13.7 | 15.8 | 7.7 | 6.8 | 7.3 | 4.3 | 2.8 | 3.7 | 4.6 | 3.6 | 4.2 |
| 13 | 15.9 | 13.5 | 14.4 | 9.4 | 7.6 | 8.2 | 2.8 | 0.6 | 1.9 | 3.8 | 2.7 | 3.2 |
| 14 | 15.3 | 13.5 | 14.2 | 8.5 | 6.9 | 7.8 | 3.0 | 1.8 | 2.4 | 3.5 | 2.9 | 3.2 |
| 15 | 15.6 | 13.8 | 14.4 | 8.6 | 7.2 | 8.0 | 2.3 | 1.4 | 1.8 | 3.6 | 2.5 | 3.1 |
| 16 | 16.6 | 13.0 | 14.4 | 7.2 | 6.1 | 6.7 | 1.4 | -0.2 | 0.5 | 2.5 | 1.0 | 1.6 |
| 17 | 16.5 | 13.2 | 14.6 | 6.9 | 5.9 | 6.2 | 1.6 | 0.7 | 1.1 | 1.4 | 0.1 | 0.8 |
| 18 | 16.8 | 14.0 | 15.2 | 6.8 | 5.6 | 6.1 | 2.3 | 1.0 | 1.5 | 2.7 | 0.2 | 1.5 |
| 19 | 16.5 | 15.3 | 15.8 | 6.8 | 5.9 | 6.3 | 2.5 | 1.4 | 1.9 | 1.9 | 0.4 | 1.2 |
| 20 | 15.9 | 13.4 | 14.7 | 6.3 | 5.5 | 6.0 | 2.8 | 2.2 | 2.4 | 1.5 | -0.3 | 0.2 |
| 21 | 15.6 | 12.5 | 13.8 | 7.1 | 5.7 | 6.4 | 2.5 | 2.0 | 2.3 | -0.1 | -0.5 | -0.3 |
| 22 | 15.6 | 12.3 | 13.8 | 8.7 | 6.8 | 7.6 | 2.5 | 1.9 | 2.2 | 0.0 | -0.2 | -0.1 |
| 23 | 16.0 | 13.9 | 14.9 | 6.8 | 4.5 | 5.7 | 2.6 | 1.5 | 2.2 | 0.5 | -0.2 | 0.1 |
| 24 | 14.8 | 13.5 | 13.9 | 5.3 | 3.9 | 4.6 | 3.0 | 2.0 | 2.4 | 0.6 | -0.3 | 0.1 |
| 25 | 14.5 | 12.1 | 13.4 | 5.8 | 4.1 | 4.8 | 3.2 | 2.5 | 2.9 | 0.1 | -0.2 | -0.1 |
| 26 | 12.4 | 10.9 | 11.8 | 6.0 | 4.8 | 5.5 | 3.2 | 2.2 | 2.8 | 0.3 | -0.3 | 0.0 |
| 27 | 12.6 | 11.9 | 12.2 | 6.7 | 5.6 | 6.3 | 3.5 | 3.1 | 3.3 | 1.5 | 0.0 | 0.6 |
| 28 | 11.9 | 9.3 | 10.7 | 5.8 | 4.9 | 5.3 | 4.1 | 3.3 | 3.6 | 1.6 | -0.1 | 0.6 |
| 29 | 9.7 | 7.9 | 8.8 | 5.8 | 4.7 | 5.2 | 4.3 | 3.1 | 3.6 | 1.2 | -0.1 | 0.5 |
| 30 | 10.6 | 7.5 | 9.2 | 5.0 | 4.0 | 4.5 | 3.5 | 2.2 | 3.0 | 3.1 | 0.5 | 1.6 |
| 31 | 11.7 | 9.7 | 10.7 | --- | --- | --- | 2.8 | 1.2 | 2.0 | 1.3 | -0.1 | 0.4 |
| Month | 21.4 | 7.5 | 15.1 | 11.4 | 3.9 | 7.3 | 4.5 | -0.2 | 2.5 | 5.9 | -0.5 | 1.4 |

**01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued**

**TEMPERATURE, WATER, DEGREES CELSIUS**
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

| Day | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | February | | | March | | | April | | | May | |
| 1 | 0.4 | -0.2 | 0.0 | 1.1 | -0.1 | 0.2 | 7.5 | 4.0 | 6.0 | 10.6 | 5.6 | 8.3 |
| 2 | 1.4 | -0.1 | 0.9 | 2.2 | 0.0 | 0.8 | 6.5 | 3.4 | 5.0 | 9.2 | 8.6 | 8.9 |
| 3 | 2.4 | 0.6 | 1.4 | 2.9 | -0.1 | 1.2 | 6.3 | 2.0 | 4.1 | 9.0 | 8.3 | 8.6 |
| 4 | 1.6 | 1.1 | 1.3 | 2.2 | 1.0 | 1.7 | 4.8 | 3.6 | 4.2 | 12.1 | 8.1 | 9.9 |
| 5 | 2.2 | 1.3 | 1.8 | 1.9 | 0.4 | 1.2 | 7.7 | 4.7 | 5.9 | 14.0 | 8.0 | 10.9 |
| 6 | 2.1 | 1.2 | 1.8 | 3.7 | 1.2 | 2.3 | 7.7 | 4.7 | 5.9 | 13.7 | 8.8 | 11.2 |
| 7 | 2.4 | 1.4 | 1.8 | 4.0 | 1.6 | 2.7 | 9.1 | 4.9 | 6.8 | 14.9 | 9.2 | 11.9 |
| 8 | 2.4 | 1.3 | 1.8 | 2.8 | 2.2 | 2.5 | 10.1 | 5.4 | 7.6 | 14.2 | 11.1 | 12.3 |
| 9 | 2.1 | 1.6 | 1.9 | 3.0 | 1.2 | 2.0 | 10.2 | 5.5 | 8.0 | 11.6 | 9.5 | 10.4 |
| 10 | 2.5 | 0.0 | 1.5 | 3.0 | 0.7 | 1.7 | 11.7 | 7.1 | 9.3 | 13.4 | 8.4 | 10.8 |
| 11 | 0.1 | -0.3 | -0.1 | 4.3 | 1.3 | 2.7 | 9.0 | 7.3 | 7.9 | 13.8 | 8.7 | 11.2 |
| 12 | 0.0 | -0.2 | -0.1 | 4.2 | 2.4 | 3.2 | 12.7 | 7.5 | 9.8 | 10.9 | 9.0 | 9.8 |
| 13 | 0.2 | -0.4 | -0.2 | 4.2 | 1.5 | 2.7 | 9.9 | 6.5 | 8.2 | 13.2 | 8.1 | 10.3 |
| 14 | 1.3 | 0.0 | 0.6 | 4.1 | 1.8 | 3.0 | 9.3 | 4.8 | 6.9 | 13.5 | 9.3 | 11.3 |
| 15 | 2.4 | 0.3 | 1.1 | 4.9 | 3.0 | 3.9 | 10.3 | 4.3 | 7.2 | 13.3 | 10.7 | 11.7 |
| 16 | 1.5 | 0.0 | 0.7 | 4.5 | 2.7 | 3.7 | 11.3 | 4.8 | 8.2 | 11.4 | 9.8 | 10.4 |
| 17 | 1.0 | -0.1 | 0.2 | 4.9 | 0.9 | 2.9 | 13.0 | 6.2 | 9.7 | 13.6 | 10.0 | 11.5 |
| 18 | 2.5 | 0.5 | 1.5 | 3.9 | 1.7 | 2.9 | 14.4 | 7.8 | 11.2 | 11.4 | 10.0 | 10.8 |
| 19 | 3.0 | 1.0 | 2.1 | 3.1 | 2.7 | 2.9 | 15.3 | 9.4 | 12.5 | 13.2 | 9.3 | 10.6 |
| 20 | 1.7 | 0.2 | 0.8 | 4.2 | 2.5 | 3.4 | 12.8 | 10.1 | 11.0 | 10.9 | 9.3 | 10.0 |
| 21 | 1.4 | 0.0 | 0.5 | 3.9 | 1.2 | 2.4 | 14.2 | 8.3 | 11.1 | 12.1 | 8.8 | 10.4 |
| 22 | 0.4 | -0.1 | 0.1 | 4.4 | 0.5 | 2.2 | 14.4 | 8.4 | 11.3 | 13.0 | 9.2 | 10.5 |
| 23 | 1.9 | 0.3 | 1.0 | 4.8 | 0.8 | 2.6 | 15.1 | 9.2 | 12.1 | 13.9 | 9.5 | 11.6 |
| 24 | 2.6 | -0.1 | 1.1 | 5.1 | 1.1 | 3.0 | 15.3 | 10.2 | 12.5 | 13.5 | 11.0 | 11.9 |
| 25 | 3.0 | -0.1 | 1.3 | 5.4 | 1.1 | 3.3 | 14.0 | 8.5 | 11.3 | 15.5 | 10.9 | 12.7 |
| 26 | 1.7 | -0.1 | 0.8 | 7.4 | 3.0 | 4.9 | 15.1 | 10.1 | 12.3 | 16.8 | 10.9 | 13.5 |
| 27 | 2.1 | 0.0 | 1.0 | 4.7 | 2.5 | 3.9 | 14.1 | 9.9 | 11.8 | 17.2 | 11.7 | 14.1 |
| 28 | 0.9 | -0.1 | 0.2 | 4.2 | 3.2 | 3.6 | 11.3 | 9.3 | 10 | 15.5 | 12.7 | 13.7 |
| 29 | 0.3 | -0.5 | -0.1 | 5.5 | 1.9 | 3.4 | 10.9 | 8.3 | 9.4 | 16.3 | 11.1 | 13.4 |
| 30 | --- | --- | --- | 5.9 | 0.6 | 3.2 | 9.6 | 6.8 | 8.1 | 16.7 | 11.9 | 13.9 |
| 31 | --- | --- | --- | 4.0 | 2.0 | 2.9 | --- | --- | --- | 15.8 | 13.0 | 13.9 |
| Month | 3.0 | -0.5 | 0.9 | 7.4 | -0.1 | 2.7 | 15.3 | 2.0 | 8.8 | 17.2 | 5.6 | 11.3 |

**01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued**

**TEMPERATURE, WATER, DEGREES CELSIUS**
**WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008**

| Day | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean | Max | Min | Mean |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | June | | | July | | | August | | | September | |
| 1 | 17.5 | 12.7 | 14.6 | 19.5 | 16.9 | 18.4 | 22.3 | 17.6 | 19.8 | 23.0 | 19.3 | 20.6 |
| 2 | 17.7 | 12.3 | 14.7 | 22.9 | 16.7 | 19.6 | 19.5 | 17.4 | 18.4 | 24.1 | 19.6 | 21.2 |
| 3 | 16.6 | 12.7 | 14.5 | 20.9 | 16.5 | 18.9 | 20.8 | 16.3 | 18.3 | 24.0 | 19.5 | 21.2 |
| 4 | 15.6 | 14.0 | 14.5 | 20.7 | 16.7 | 18.7 | 21.8 | 16.9 | 19.1 | 24.3 | 19.1 | 21.1 |
| 5 | 16.7 | 12.5 | 14.5 | 20.9 | 17.7 | 19.4 | 23.0 | 17.2 | 19.9 | 24.1 | 19.2 | 21.3 |
| 6 | 17.6 | 14.1 | 15.5 | 23.6 | 17.9 | 20.5 | 23.1 | 18.6 | 20.3 | 20.7 | 18.8 | 20.0 |
| 7 | 19.8 | 15.8 | 17.5 | 25.4 | 18.3 | 21.5 | 22.1 | 17.8 | 19.6 | 22.5 | 18.0 | 20.0 |
| 8 | 18.6 | 15.8 | 17.2 | 24.1 | 18.7 | 21.6 | 21.6 | 17.8 | 19.3 | 22.6 | 17.6 | 19.7 |
| 9 | 22.4 | 16.3 | 18.9 | 23.2 | 18.9 | 21.0 | 21.1 | 17.0 | 19.0 | 19.4 | 17.4 | 18.5 |
| 10 | 23.9 | 17.1 | 20.2 | 24.4 | 17.5 | 21.0 | 18.8 | 16.6 | 17.9 | 21.0 | 16.2 | 18.2 |
| 11 | 22.8 | 17.1 | 19.8 | 21.6 | 16.9 | 19.6 | 17.7 | 16.5 | 17.2 | 20.1 | 16.2 | 17.9 |
| 12 | 22.4 | 15.1 | 18.8 | 25.6 | 18.1 | 21.6 | 20.9 | 16.4 | 18.4 | 18.4 | 17.2 | 17.8 |
| 13 | 22.2 | 15.2 | 18.7 | 21.9 | 18.8 | 20.1 | 21.0 | 16.5 | 18.8 | 21.1 | 17.5 | 19.3 |
| 14 | 20.4 | 16.4 | 18.5 | 22.7 | 19.1 | 20.6 | 22.1 | 17.5 | 19.5 | 23.0 | 19.1 | 20.8 |
| 15 | 22.1 | 16.8 | 19.1 | 25.1 | 18.2 | 21.6 | 19.1 | 17.5 | 18.2 | 21.6 | 17.4 | 19.9 |
| 16 | 20.1 | 15.9 | 17.8 | 26.0 | 17.3 | 21.8 | 20.7 | 16.7 | 18.4 | 19.6 | 17.0 | 18.1 |
| 17 | 20.6 | 15.3 | 17.3 | 25.3 | 18.6 | 22.1 | 21.9 | 16.2 | 18.7 | 20.9 | 15.5 | 18.0 |
| 18 | 16.3 | 13.8 | 15.2 | 26.0 | 19.5 | 22.7 | 22.6 | 17.1 | 19.5 | 20.8 | 16.1 | 17.9 |
| 19 | 18.5 | 13.2 | 15.9 | 25.9 | 19.9 | --- | 22.0 | 17.2 | 19.4 | 19.4 | 14.9 | 17.0 |
| 20 | 19.2 | 14.1 | 16.3 | 25.5 | --- | --- | 21.5 | 15.6 | 18.3 | 19.7 | 14.4 | 16.8 |
| 21 | 21.4 | 13.9 | 17.7 | 25.6 | --- | --- | 22.3 | 16.3 | 18.9 | 19.9 | 15.0 | 17.4 |
| 22 | 19.5 | 15.0 | 17.3 | 24.3 | --- | --- | 23.5 | 17.3 | 19.8 | 20.7 | 16.6 | 18.3 |
| 23 | 20.9 | 16.0 | 18.2 | 21.3 | 19.1 | 20.4 | 22.6 | 17.5 | 19.7 | 19.8 | 14.7 | 17.1 |
| 24 | 20.7 | 15.7 | 17.9 | 20.0 | 17.3 | 18.8 | 23.8 | 17.4 | 20.2 | 20.1 | 14.8 | 17.2 |
| 25 | 22.3 | 15.3 | 18.6 | 20.6 | 15.8 | 18.2 | 22.9 | 18.2 | 20.1 | 18.9 | 15.7 | 17.1 |
| 26 | 18.4 | 15.7 | 17.0 | 20.6 | 16.1 | 18.5 | 22.0 | 16.5 | 18.9 | 16.3 | 15.4 | 15.8 |
| 27 | 20.3 | 15.9 | 17.8 | 19.0 | 17.4 | 18.2 | 21.8 | 15.6 | 18.5 | 18.1 | 15.8 | 16.7 |
| 28 | 21.9 | 16.3 | 19.2 | 20.5 | 16.2 | 18.2 | 22.6 | 16.1 | 19.2 | 17.8 | 16.0 | 16.8 |
| 29 | 21.3 | 17.6 | 19.6 | 21.6 | 16.5 | 18.8 | 19.6 | 17.4 | 18.7 | 18.0 | 15.6 | 16.8 |
| 30 | 22.3 | 16.8 | 19.3 | 20.8 | 16.5 | 18.7 | 22.6 | 19.6 | 20.7 | 18.2 | 15.1 | 16.2 |
| 31 | --- | --- | --- | 21.8 | 17.6 | 19.7 | 23.0 | 19.1 | 20.6 | --- | --- | --- |
| Month | 23.9 | 12.3 | 17.4 | 26.0 | --- | --- | 23.8 | 15.6 | 19.1 | 24.3 | 14.4 | 18.5 |