Water-Data Report 2013

# 07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS

Middle Arkansas Basin
Middle Arkansas-Slate Subbasin

LOCATION.--Lat 37°03′23″, long 97°03′28″ referenced to North American Datum of 1927, in NE ¼ NE ¼ NE ¼ sec.35, T.34 S., R.3 E., Cowley County, KS, Hydrologic Unit 11030013, on left bank at downstream side of bridge on U.S. Highway 166, 0.5 mi west of Arkansas City, 5.4 mi upstream from Walnut River, and at mile 701.4.

DRAINAGE AREA.--43,713 mi² of which 7,607 mi² probably is noncontributing.

## SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1902 to September 1906, September 1921 to current year. Published as "near Arkansas City" 1903-04. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1905. WSP 1341: 1922-23, 1927, 1929, 1931, 1933, 1940, 1945-46(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,050.04 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Sept. 23, 1902, to July 31, 1906, nonrecording gage at site 0.5 mi upstream at datum 9.5 ft higher. Sept. 10, 1921, to Sept 27, 1929, nonrecording gage and Sept. 28, 1929, to Aug. 28, 1956, water-stage recorder at site 0.5 mi upstream at datum 2.97 ft higher than present datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow slightly regulated since 1948 by John Martin Reservoir (station 07130000), and since 1964 by Cheney Reservoir (station 07144790). Diversions upstream from station for irrigation. Satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft³/s and (or) maximum (*):

| Date | Time | Discharge (ft³/s) | Gage height (ft) |
|---|---|---|---|
| Aug 1 | 0745 | 16,300 | 16.64 |
| Aug 10 | 0830 | *39,900 | *21.57 |



Suggested citation: U.S. Geological Survey, 2014, Water-resources data for the United States, Water Year 2013: U.S. Geological Survey Water-Data Report WDR-US-2013, site 07146500, accessed at http://wdr.water.usgs.gov/wy2013/pdfs/07146500.2013.pdf

**07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS—Continued**

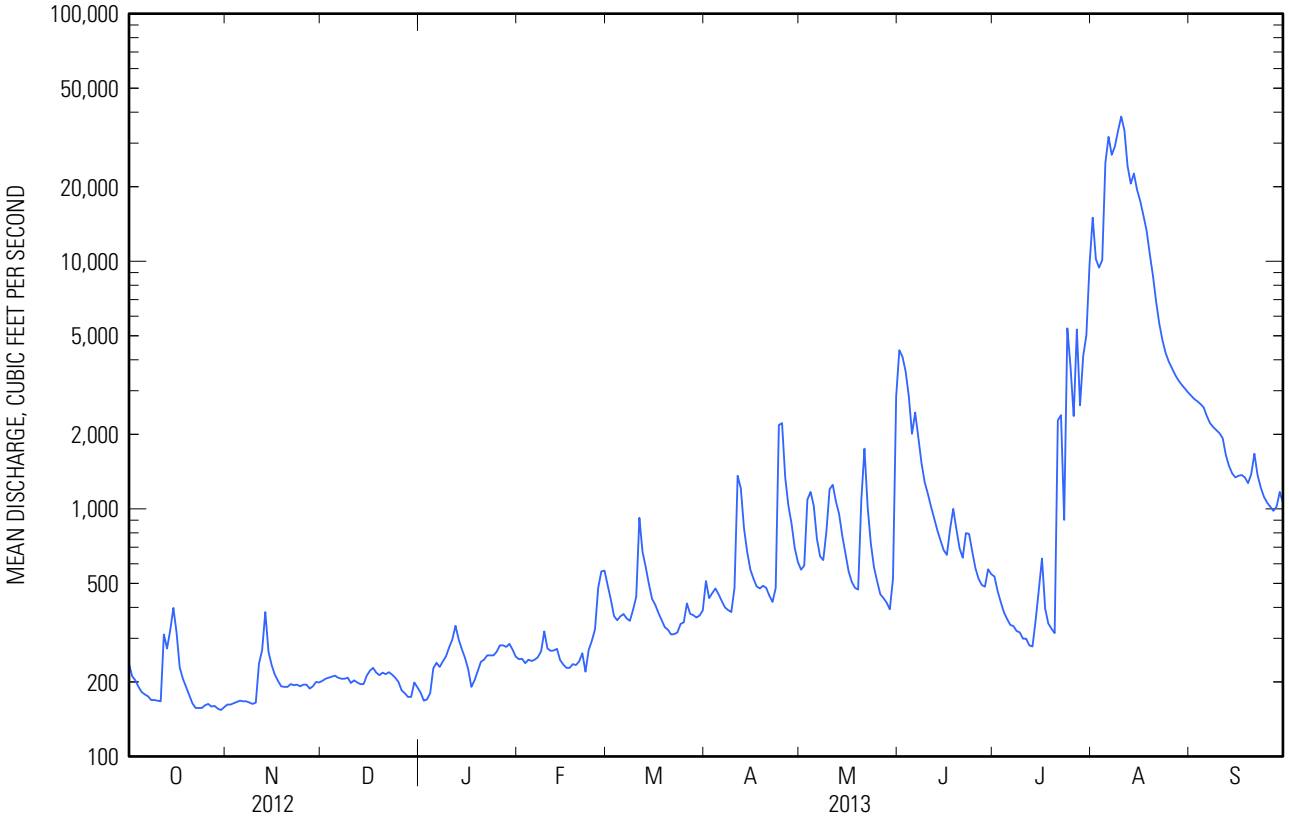
**DISCHARGE, CUBIC FEET PER SECOND**
**WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013**
**DAILY MEAN VALUES**
[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 236 | 162 | 202 | e181 | e247 | 491 | 511 | 568 | 4,370 | 533 | 15,000 | 2,870 |
| 2 | 211 | 162 | 206 | e168 | e248 | e430 | 436 | 590 | 4,110 | 466 | 10,200 | 2,780 |
| 3 | 203 | 164 | 208 | e170 | 238 | e369 | 457 | 1,090 | 3,580 | 420 | 9,430 | 2,720 |
| 4 | 191 | 166 | 210 | e180 | 246 | 355 | 477 | 1,170 | 2,840 | 382 | 10,100 | 2,650 |
| 5 | 182 | 168 | 212 | e227 | 243 | 368 | 451 | 1,030 | 2,010 | 359 | 25,000 | 2,570 |
| 6 | 178 | 167 | 208 | 239 | 246 | e376 | 424 | 757 | 2,450 | 340 | 31,800 | 2,370 |
| 7 | 175 | 167 | 206 | 230 | 252 | 361 | 400 | 643 | 1,940 | 336 | 26,900 | 2,220 |
| 8 | 169 | 165 | 206 | 242 | 266 | 353 | 390 | 621 | 1,530 | 321 | 29,100 | e2,140 |
| 9 | 169 | 163 | 208 | 254 | e320 | 391 | 383 | 812 | 1,280 | 317 | 33,700 | 2,080 |
| 10 | 168 | 165 | 198 | 276 | 273 | 441 | 479 | 1,200 | 1,150 | 299 | 38,400 | 2,020 |
| 11 | 167 | 237 | 203 | 297 | e267 | 920 | 1,360 | 1,250 | 1,020 | 299 | 33,800 | 1,930 |
| 12 | 311 | 269 | 199 | 337 | 268 | 669 | 1,210 | 1,070 | 915 | 281 | 24,200 | 1,650 |
| 13 | 273 | 383 | 196 | 297 | e272 | 582 | 835 | 953 | 818 | 278 | 20,600 | 1,490 |
| 14 | 323 | 265 | 196 | e271 | e245 | 497 | 671 | 779 | 745 | 355 | 22,600 | 1,390 |
| 15 | 398 | 234 | 212 | e250 | e235 | 433 | 569 | 661 | 681 | 471 | 19,400 | 1,340 |
| 16 | 317 | 214 | 222 | e225 | e228 | 410 | 522 | 559 | 652 | 630 | 17,500 | 1,360 |
| 17 | 229 | 202 | 228 | 191 | 228 | 380 | 486 | 507 | 827 | 396 | 15,300 | 1,370 |
| 18 | 206 | 192 | 218 | 203 | 236 | 356 | 477 | 480 | 1,000 | 344 | 13,300 | 1,340 |
| 19 | 191 | 191 | 213 | 221 | 234 | 333 | 489 | 472 | 828 | 328 | 10,700 | 1,270 |
| 20 | 177 | 191 | 218 | 241 | e242 | 325 | 480 | 1,080 | 693 | 315 | 8,740 | 1,380 |
| 21 | 164 | 196 | 215 | e246 | e261 | 311 | 446 | 1,750 | 635 | 2,280 | 6,870 | 1,670 |
| 22 | 157 | 194 | 219 | e256 | e220 | 312 | 421 | 1,020 | 798 | 2,390 | 5,600 | 1,370 |
| 23 | 157 | 195 | 214 | 256 | 269 | 317 | 479 | 727 | 792 | 902 | 4,800 | 1,220 |
| 24 | 157 | 192 | 208 | 256 | e293 | 343 | 2,180 | 581 | 673 | 5,360 | 4,260 | 1,120 |
| 25 | 161 | 195 | e200 | 265 | 326 | 348 | 2,220 | 510 | 576 | 3,750 | 3,930 | 1,060 |
| 26 | 163 | 195 | e185 | 281 | 479 | 415 | 1,340 | 452 | 522 | 2,370 | 3,700 | 1,020 |
| 27 | 159 | 188 | e180 | 281 | e559 | 377 | 1,030 | 436 | 493 | 5,300 | 3,480 | 982 |
| 28 | 160 | 192 | e174 | 277 | e563 | 372 | 872 | 418 | 485 | 2,620 | 3,310 | 1,020 |
| 29 | 156 | 200 | e174 | 285 | --- | 364 | 695 | 393 | 570 | 4,140 | 3,180 | 1,170 |
| 30 | 154 | 199 | e199 | 270 | --- | 371 | 610 | 522 | 545 | 5,030 | 3,070 | 1,060 |
| 31 | 158 | --- | e190 | 253 | --- | 389 | --- | 2,840 | --- | 9,700 | 2,960 | --- |
| Mean | 201 | 199 | 204 | 246 | 286 | 412 | 727 | 837 | 1,318 | 1,655 | 14,870 | 1,688 |
| Max | 398 | 383 | 228 | 337 | 563 | 920 | 2,220 | 2,840 | 4,370 | 9,700 | 38,400 | 2,870 |
| Min | 154 | 162 | 174 | 168 | 220 | 311 | 383 | 393 | 485 | 278 | 2,960 | 982 |
| Ac-ft | 12,340 | 11,850 | 12,550 | 15,130 | 15,880 | 25,310 | 43,240 | 51,450 | 78,400 | 101,800 | 914,300 | 100,400 |

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2013, BY WATER YEAR (WY)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 1,645 | 1,359 | 961 | 888 | 1,243 | 2,044 | 2,386 | 3,111 | 3,757 | 2,652 | 1,742 | 1,577 |
| Max | 18,890 | 11,550 | 3,908 | 3,673 | 9,658 | 14,600 | 14,780 | 16,890 | 16,040 | 17,190 | 14,870 | 7,870 |
| (WY) | (1974) | (1999) | (1945) | (1949) | (1949) | (1973) | (1944) | (1993) | (1923) | (1951) | (2013) | (1951) |
| Min | 19.6 | 8.27 | 18.2 | 84.1 | 41.6 | 36.9 | 118 | 334 | 248 | 112 | 65.4 | 32.4 |
| (WY) | (1922) | (1922) | (1922) | (1922) | (1923) | (1923) | (1923) | (1967) | (1956) | (1934) | (1934) | (1956) |

**07146500 ARKANSAS RIVER AT ARKANSAS CITY, KS—Continued**

**SUMMARY STATISTICS**

| | Calendar Year 2012 | | Water Year 2013 | | Water Years 1903 - 2013 | |
|---|---|---|---|---|---|---|
| **Annual mean** | 655 | | 1,910 | | 1,949 | |
| **Highest annual mean** | | | | | 5,830 | 1951 |
| **Lowest annual mean** | | | | | 366 | 1934 |
| **Highest daily mean** | 12,700 | Feb 5 | 38,400 | Aug 10 | 79,700 | Nov 3, 1998 |
| **Lowest daily mean** | 78 | Aug 13 | 154 | Oct 30 | 4.0 | Oct 23, 1921 |
| **Annual seven-day minimum** | 90 | Aug 11 | 159 | Oct 24 | 5.6 | Nov 5, 1921 |
| **Maximum peak flow** | | | 39,900 | Aug 10 | 103,000 | Jun 10, 1923 |
| **Maximum peak stage** | | | 21.57 | Aug 10 | 28.89 | Nov 3, 1998 |
| **Instantaneous low flow** | | | 147 | Oct 29 | 1.0 | Oct 9, 1921 |
| **Annual runoff (ac-ft)** | 475,500 | | 1,383,000 | | 1,412,000 | |
| **10 percent exceeds** | 1,330 | | 3,380 | | 4,140 | |
| **50 percent exceeds** | 335 | | 390 | | 903 | |
| **90 percent exceeds** | 128 | | 184 | | 281 | |