



# 2004 Water Year JUNIATA RIVER BASIN

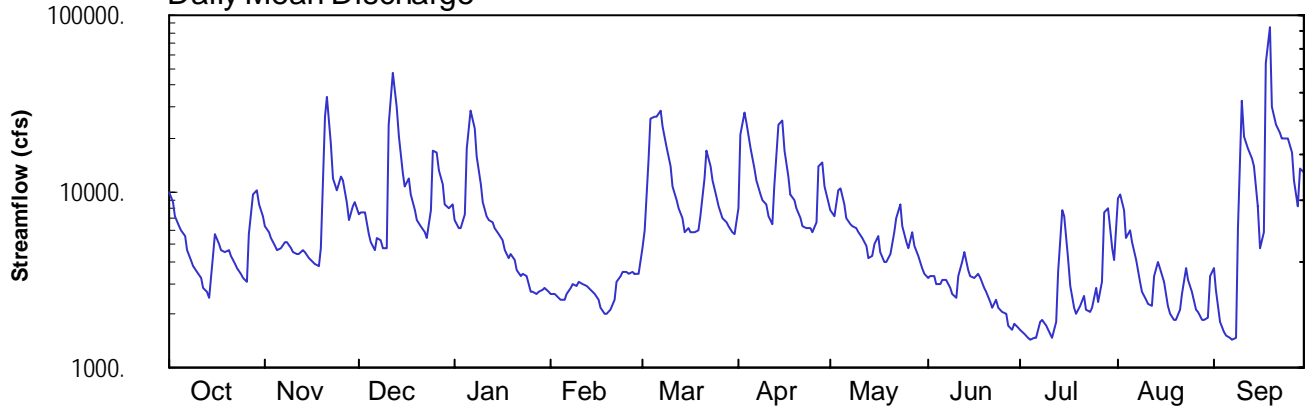
## 01567000 Juniata River at Newport, PA

Latitude: 40° 28 ' 42"  
Perry County

Longitude: 077° 07 ' 46"  
Datum: 363.93 feet

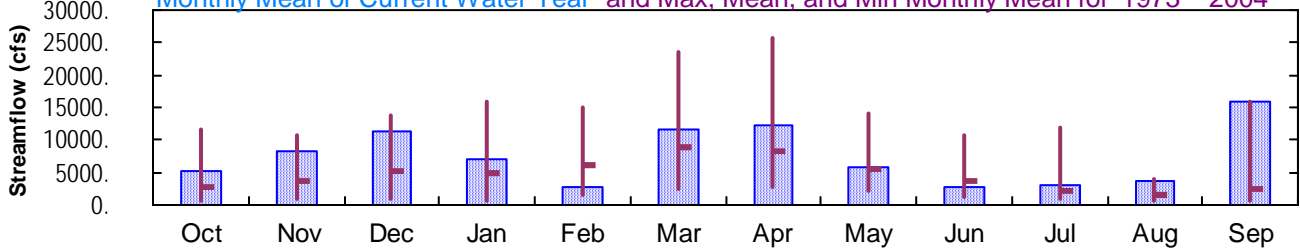
Hydrologic Unit Code: 02050304  
Drainage Area: 3354. mi<sup>2</sup>

### Daily Mean Discharge

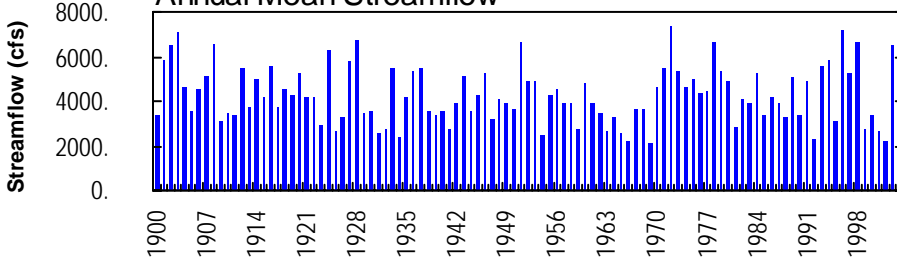


### Monthly Statistics

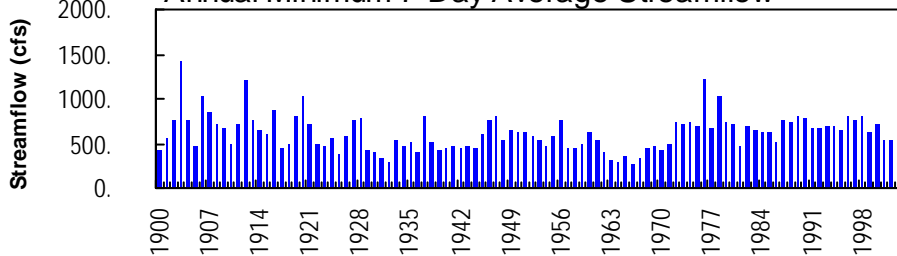
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1973 – 2004



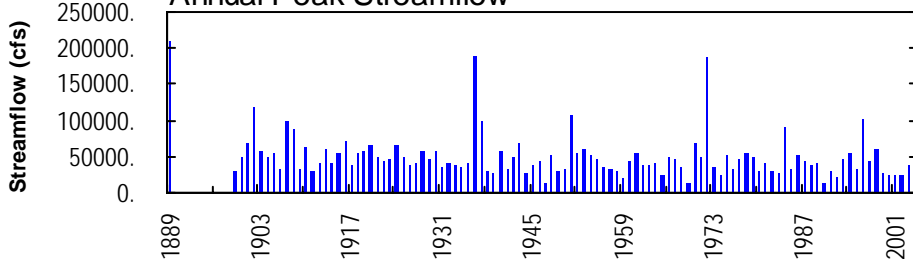
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



01567000-Juniata River at Newport

**JUNIATA RIVER BASIN**

**01567000 JUNIATA RIVER AT NEWPORT, PA  
(Pennsylvania Water-Quality Network Station)**

**LOCATION.**--Lat 40°28'42", long 77°07'46", Perry County, Hydrologic Unit 02050304, on right bank at downstream side of bridge on State Highway 34 at Newport, and 1,000 ft upstream from Little Buffalo Creek.

**DRAINAGE AREA.**--3,354 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

**PERIOD OF RECORD.**--April 1899 to current year.

**REVISED RECORDS.**--WSP 756: Drainage area. WSP 781: 1902(M). WSP 1302: 1915-17. WSP 1502: 1899-1908, 1914, 1924, 1936. WSP 1722: 1916.

**GAGE.**--Water-stage recorder and crest-stage gage. Datum of gage is 363.93 ft above National Geodetic Vertical Datum of 1929. Prior to July 16, 1929, nonrecording gage at same site and datum.

**REMARKS.**--Records good except those for estimated daily discharges, which are poor. Flow regulated since October 1972 by Raystown Dam (station 01563100) about 75 mi upstream. Satellite and landline telemetry at station.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood of June 1, 1889, reached a stage of 35.9 ft, from floodmarks, discharge, about 209,000 ft<sup>3</sup>/s, from rating curve extended above 100,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9890	6400	7470	6870	e2600	e4800	7940	7770	3230	1620	9080	3710
2	8730	5910	7690	6220	e2600	e6000	21100	7190	3350	1550	9650	2760
3	7250	5450	7510	6130	e2500	e15000	28200	10200	3330	1480	7890	1830
4	6270	4880	5790	7340	e2400	25700	24200	10500	2960	1420	5400	1580
5	6020	4610	5120	17300	e2450	26800	17500	8450	2980	1490	6050	1520
6	5600	4740	4670	28600	e2600	26700	13400	7040	3180	1490	5150	1460
7	4590	5100	5450	22800	e2800	29000	11500	6500	3160	1820	4060	1440
8	4080	5140	5220	15600	e3000	23100	9520	6350	2870	1860	3060	1460
9	3820	4750	4790	10900	e2900	17800	8830	6250	2590	1710	2690	6250
10	3450	4490	4730	8630	e3100	13700	8440	5840	2510	1640	2440	32300
11	3220	4370	24000	e7200	e3000	10700	7250	5440	3290	1470	2280	20700
12	2860	4420	46700	e6850	e2900	8970	6460	4910	3950	1810	2250	17300
13	2690	4600	29900	e6750	e2800	8060	10800	4210	4570	3500	3290	15300
14	2520	4540	20600	e6200	e2700	7060	24100	4280	3600	7890	4020	14000
15	4340	4200	12900	e5700	e2600	5880	24900	5060	3320	7140	3690	8190
16	5690	3920	10800	e5300	e2400	6140	17200	5630	3190	4210	3060	4770
17	5070	3860	12000	e4700	e2200	5910	12100	4530	3420	2940	2250	5800
18	4600	3800	9550	e4200	e2000	5840	9720	3990	3200	2190	2000	54300
19	4550	4780	7820	e4400	e2000	6090	8790	3950	2870	2010	1880	85100
20	4590	26400	6780	e4100	e2100	7140	8060	4380	2670	2250	1860	30600
21	4240	34000	6270	e3600	e2400	11700	7020	5830	2380	2520	2110	24000
22	3890	18900	5840	e3300	e3100	17100	6290	6960	2170	2100	2650	21700
23	3690	11900	5450	e3400	e3300	13700	6170	8490	2430	2070	3700	20200
24	3360	10300	7910	e3300	e3500	11600	6210	6260	2200	2200	3160	20100
25	3190	12100	16900	e2700	e3500	9390	5860	5120	2050	2800	2690	19900
26	3050	11500	16500	e2700	e3400	8140	6730	4750	2000	2330	2120	16700
27	5710	8560	13300	e2650	e3500	7120	14000	5880	1710	3050	2060	11400
28	9500	6830	11000	e2700	e3400	6610	14400	4950	1650	7630	1860	8140
29	10000	8300	8540	e2750	e3400	6290	10600	4300	1750	7930	1870	13500
30	8390	8780	8040	e2800	---	5930	8770	3680	1660	4740	1910	12700
31	7170	---	8400	e2700	---	5760	---	3360	---	4030	3310	---
TOTAL	162020	247530	347640	218390	81150	363730	366060	182050	84240	92890	109490	478710
MEAN	5226	8251	11210	7045	2798	11730	12200	5873	2808	2996	3532	15960
MAX	10000	34000	46700	28600	3500	29000	28200	10500	4570	7930	9650	85100
MIN	2520	3800	4670	2650	2000	4800	5860	3360	1650	1420	1860	1440

e Estimated.

**JUNIATA RIVER BASIN**

**01567000 JUNIATA RIVER AT NEWPORT, PA--Continued**

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004, BY WATER YEAR (WY) (SINCE REGULATION)**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2633	3709	5101	4847	5988	8797	8311	5643	3560	2172	1600	2458
MAX	11610	10850	13770	15810	15070	23500	25780	13940	10640	12080	3916	15960
(WY)	1977	1998	1973	1996	1984	1994	1993	1978	2003	1989	2003	2004
MIN	657	789	1045	495	1498	2576	2898	2258	1084	864	674	586
(WY)	2002	2002	1999	1981	2002	1990	1995	2001	1991	1988	2002	1986

**SUMMARY STATISTICS FOR 2003 CALENDAR YEAR FOR 2004 WATER YEAR WATER YEARS 1973 - 2004**

ANNUAL TOTAL	2771700	2733900	
ANNUAL MEAN	7594	7470	4558
HIGHEST ANNUAL MEAN			7470
LOWEST ANNUAL MEAN			2241
HIGHEST DAILY MEAN	46700	Dec 12	85100
LOWEST DAILY MEAN	1180	Jul 31	1420
ANNUAL SEVEN-DAY MINIMUM	1340	Jul 26	1530
MAXIMUM PEAK FLOW			96200
MAXIMUM PEAK STAGE			23.74
10 PERCENT EXCEEDS	15200		16800
50 PERCENT EXCEEDS	5600		5000
90 PERCENT EXCEEDS	2150		2100

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 1972, BY WATER YEAR (WY) (PRIOR TO REGULATION)**

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1820	2658	3649	4621	5570	9856	8097	5797	3612	2072	1563	1419
MAX	8108	10880	11310	13300	16160	33600	17160	14870	25050	7865	4605	6890
(WY)	1928	1951	1902	1937	1915	1936	1940	1908	1972	1972	1905	1911
MIN	351	418	471	841	943	2340	2026	1319	890	455	327	370
(WY)	1964	1931	1931	1931	1934	1931	1915	1941	1965	1966	1966	1964

**SUMMARY STATISTICS WATER YEARS 1899 - 1972**

ANNUAL MEAN	4228
HIGHEST ANNUAL MEAN	7403
LOWEST ANNUAL MEAN	2166
HIGHEST DAILY MEAN	172000
LOWEST DAILY MEAN	207
ANNUAL SEVEN-DAY MINIMUM	269
MAXIMUM PEAK FLOW	a190000
MAXIMUM PEAK STAGE	b34.24
INSTANTANEOUS LOW FLOW	195
ANNUAL RUNOFF (CFSM)	1.26
ANNUAL RUNOFF (INCHES)	17.13
10 PERCENT EXCEEDS	9360
50 PERCENT EXCEEDS	2300
90 PERCENT EXCEEDS	680

- a From rating curve extended above 100,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.
- b From floodmark in gage.

JUNIATA RIVER BASIN

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued  
(Pennsylvania Water-Quality Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2002 to current year.

COOPERATION.--Samples were collected as part of the Pennsylvania Department of Environmental Protection Water-Quality Network (WQN) with cooperation from the Pennsylvania Department of Environmental Protection.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd, field, std units (00400)	pH, water, unfltrd, lab, std units (00403)	Specif. conductance, wat unfltrd, lab, µS/cm 25 degC (90095)	Specif. conductance, wat unfltrd, lab, µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, unfltrd recoverable, mg/L (00927)
OCT 2003													
14...	1300	1028	9813	2450	8.7	8.3	8.2	276	280	15.5	120	33.9	9.8
DEC 11...	0830	1028	9813	18170	11.7	7.7	7.6	173	212	4.9	67	17.0	5.9
FEB 2004													
24...	1030	1028	9813	E3500	14.5	7.6	8.0	279	280	2.5	99	27.9	7.1
APR 01...	1330	1028	9813	7380	11.9	7.9	8.0	215	181	8.4	87	24.1	6.6
JUN 09...	1145	1028	9813	2600	9.1	8.7	8.7	273	236	24.4	110	30.9	8.5
AUG 03...	1200	1028	9813	8120	7.3	7.5	7.3	199	209	23.3	79	20.8	6.5
Date	ANC, wat unfltrd, end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat fltrd, mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd, mg/L as N (00610)	Nitrate water, unfltrd, mg/L as N (00620)	Nitrite water, unfltrd, mg/L as N (00615)	Ortho-phosphate, water, unfltrd, mg/L as P (70507)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, unfltrd, mg/L (00600)	Organic carbon, water, unfltrd, mg/L (00680)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Copper, water, unfltrd recoverable, µg/L (01042)
OCT 2003													
14...	93	22.5	158	4	<.020	1.81	<.040	.02	.022	2.3	2.1	<200	<10
DEC 11...	49	13.5	174	300	.080	1.76	<.040	.07	.345	3.6	4.2	4700	20
FEB 2004													
24...	66	20.3	196	<2	.040	1.66	<.040	.03	.034	1.9	2.4	200	<10
APR 01...	63	18.2	120	2	<.020	1.63	<.040	.03	.024	1.9	2.0	300	<10
JUN 09...	86	20.4	174	<2	<.020	1.60	<.040	.05	.051	1.9	2.4	<200	<10
AUG 03...	62	16.7	142	40	.040	1.36	<.040	.04	.071	1.8	3.3	1400	<10
Date	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, unfltrd recoverable, µg/L (01055)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, unfltrd recoverable, µg/L (01092)								
OCT 2003													
14...	110	<1.0	10	<50	<10								
DEC 11...	7520	8.2	460	<50	120								
FEB 2004													
24...	290	<1.0	20	<50	<10								
APR 01...	390	<1.0	30	<50	<10								
JUN 09...	290	<1.0	30	<50	<10								
AUG 03...	1950	2.4	100	<50	40								

JUNIATA RIVER BASIN

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 animal (approximate) subsamples.

Date	Count
10/14/03	
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Nematoda (NEMATODES)	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancyliidae	
<i>Ferrissia</i>	5
Hydrobiidae	
<i>Ammicola</i>	33
Pleuroceridae	
<i>Leptoxis carinata</i>	4
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
<i>Corbicula fluminea</i>	3
Sphaeriidae	
<i>Sphaerium</i>	14
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Tubificidae	6
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Plauditus</i>	1
Ephemerellidae	
<i>Serratella</i>	3
Heptageniidae	
<i>Leucrocuta</i>	6
<i>Stenonema</i>	16
Isonychiidae	
<i>Isonychia</i>	12
Leptophlebiidae	
<i>Paraleptophlebia</i>	2
Potamanthidae	
<i>Anthopotamus</i>	16
Plecoptera (STONEFLIES)	
Taeniopterygidae	
<i>Taeniopteryx</i>	8

JUNIATA RIVER BASIN

01567000 JUNIATA RIVER AT NEWPORT, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	10/14/03
Benthic Macroinvertebrate	Count
Trichoptera (CADDISFLIES)	
Glossosomatidae	
<i>Proptila</i>	7
Hydropsychidae	
<i>Cheumatopsyche</i>	4
<i>Hydropsyche</i>	2
Philopotamidae	
<i>Chimarra</i>	2
Psychomyiidae	
<i>Psychomyia</i>	1
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	26
<i>Oulimnius</i>	1
<i>Stenelmis</i>	48
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	
Total Organisms	233
Total Taxa	28