



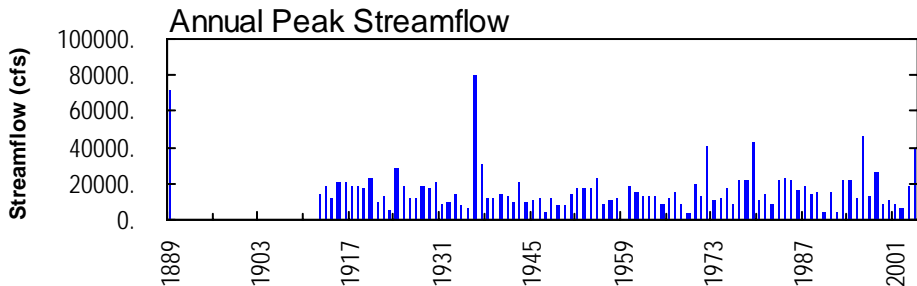
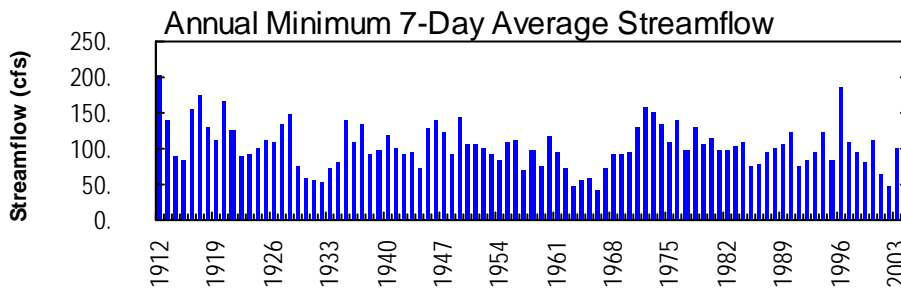
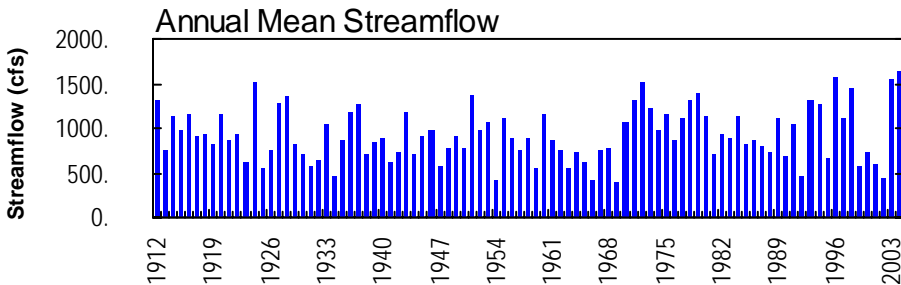
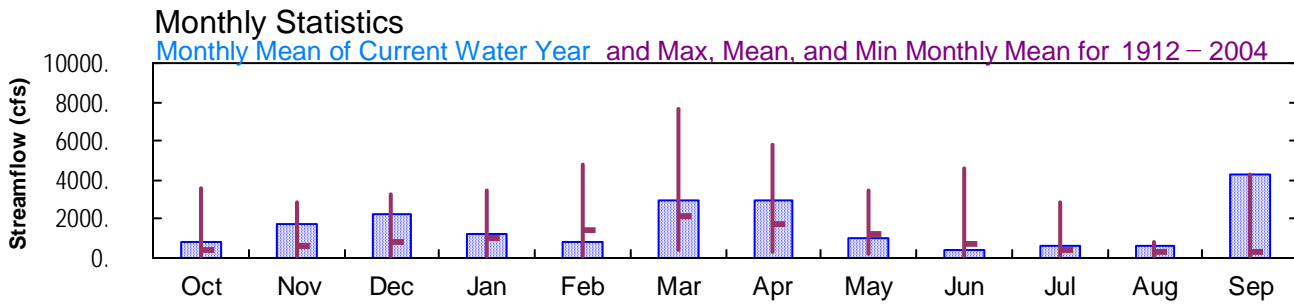
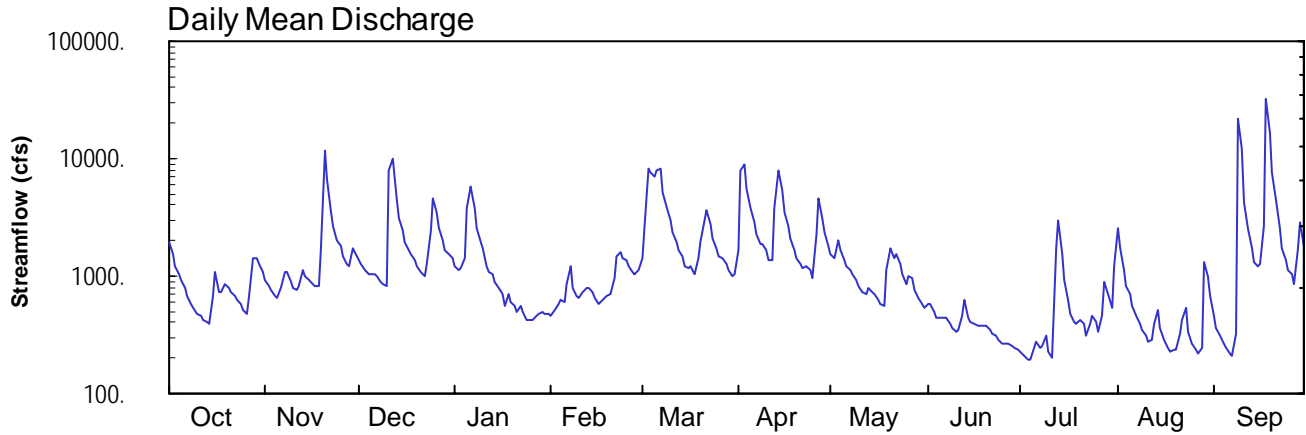
2004 Water Year
JUNIATA RIVER BASIN

01562000 Raystown Branch Juniata River at Saxton, PA

Latitude: 40° 12' 57"
Bedford County

Longitude: 078° 15' 56"
Datum: 795.77 feet

Hydrologic Unit Code: 02050303
Drainage Area: 756. mi²



JUNIATA RIVER BASIN

**01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA
(Pennsylvania Water-Quality Network Station)**

LOCATION.--Lat 40°12'57", long 78°15'56", Bedford County, Hydrologic Unit 02050303, on left bank 500 ft downstream from bridge on State Highway 913, 0.5 mi west of Saxton, and 1.5 mi upstream from Shoup Run.

DRAINAGE AREA.--756 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1911 to current year. Monthly discharge only for September 1911 published in WSP 1302.

REVISED RECORDS.--WSP 1302: 1912-13(M), 1914-15. WSP 1502: 1934, 1936.

GAGE.--Water-stage recorder. Datum of gage is 795.77 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at site 0.8 mi downstream at datum 4.82 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1, 1889, reached a stage of 23.0 ft at present site and datum, from floodmarks, discharge, about 71,300 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 7,700 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 20	0830	14,000	11.19	Apr. 2	2330	10,700	9.56
Dec. 11	2000	15,000	11.63	Apr. 14	1115	9,210	8.77
Mar. 3	1100	9,730	9.05	Sept. 9	1330	28,600	17.15
Mar. 6	2230	9,390	8.87	Sept. 18	1230	*39,200	*20.02

**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	1920	934	1380	1210	e460	1440	1640	1530	578	231	2540	458
2	1550	820	1260	1140	e520	2790	7780	1410	573	208	1730	361
3	1210	747	1130	1180	e570	8280	8960	2000	502	193	1130	305
4	1020	679	1040	1420	e620	7640	5540	1640	438	193	826	269
5	912	652	1030	3760	e600	7090	3820	1350	444	245	693	241
6	793	794	1050	5740	e850	7930	2840	1210	449	275	553	220
7	669	1100	992	3780	e1200	8120	2270	1130	440	241	459	213
8	587	1060	893	2560	e800	5250	1840	1050	394	258	389	316
9	530	881	847	e1950	e680	3950	1880	922	358	313	343	21600
10	485	801	828	e1700	e650	3020	1670	837	332	225	308	12300
11	455	767	8060	e1200	e720	2400	1360	728	353	205	281	4180
12	424	836	10000	e1100	e800	1950	1340	717	456	1750	290	2530
13	404	1140	4630	e1050	e800	1690	3810	805	631	3000	389	1730
14	392	1000	3120	e900	e720	1460	7860	746	444	1520	521	1320
15	670	909	2480	e800	e650	1230	5410	717	405	924	369	1230
16	1100	862	1970	e700	e580	1190	3530	632	391	627	286	1270
17	718	816	1690	e550	e610	1190	2670	590	376	479	249	2700
18	719	827	1570	e700	e650	1060	2080	556	372	411	228	32800
19	870	1640	1370	e600	e680	1420	1650	1110	381	385	232	16500
20	792	11800	1220	e550	e700	1930	1410	1750	375	432	239	7520
21	728	6810	1090	e500	e950	3040	1270	1410	349	388	320	4460
22	672	3650	1010	e550	e1500	3580	1180	1510	328	311	425	2590
23	623	2630	1260	e500	e1580	2750	1210	1260	312	397	525	1740
24	583	2000	2470	e430	1400	2080	1130	1040	290	467	330	1390
25	512	1780	4650	e420	1360	1720	961	869	266	403	270	1140
26	472	1500	3480	e420	1210	1490	2270	1010	270	330	237	1020
27	654	1260	2540	e450	1070	1430	4570	967	266	455	215	871
28	1430	1200	2010	e480	1020	1280	3080	763	255	884	242	1650
29	1410	1740	1680	e500	1140	1130	2320	659	250	707	1310	2860
30	1240	1600	1520	e480	---	1000	1820	580	241	534	1010	1800
31	1060	---	1420	e470	---	1050	---	537	---	1230	666	---
TOTAL	25604	53235	69690	37790	25090	91580	89171	32035	11519	18221	17605	127584
MEAN	826	1774	2248	1219	865	2954	2972	1033	384	588	568	4253
MAX	1920	11800	10000	5740	1580	8280	8960	2000	631	3000	2540	32800
MIN	392	652	828	420	460	1000	961	537	241	193	215	213
CFSM	1.09	2.35	2.97	1.61	1.14	3.91	3.93	1.37	0.51	0.78	0.75	5.63
IN.	1.26	2.62	3.43	1.86	1.23	4.51	4.39	1.58	0.57	0.90	0.87	6.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2004, BY WATER YEAR (WY)

MEAN	423	620	866	1015	1410	2120	1753	1242	750	398	269	327
MAX	3561	2897	3254	3477	4817	7669	5811	3425	4624	2847	851	4253
(WY)	1977	1998	1973	1937	1979	1936	1993	1924	1972	1989	1915	2004
MIN	59.5	65.3	93.6	132	138	459	338	211	134	66.6	55.1	57.6
(WY)	1964	1931	1931	1981	1934	1990	1915	1926	1965	1966	1966	1963

e Estimated.

JUNIATA RIVER BASIN

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1912 - 2004	
ANNUAL TOTAL	633410		599124			
ANNUAL MEAN	1735		1637		930	
HIGHEST ANNUAL MEAN					1637	2004
LOWEST ANNUAL MEAN					402	1969
HIGHEST DAILY MEAN	15300	Jun 4	32800	Sep 18	58300	Mar 18 1936
LOWEST DAILY MEAN	177	Jul 31	193	Jul 3	39	Sep 12 1966
ANNUAL SEVEN-DAY MINIMUM	207	Jul 26	223	Jun 29	41	Sep 7 1966
MAXIMUM PEAK FLOW			a 39200	Sep 18	a 80500	Mar 18 1936
MAXIMUM PEAK STAGE			20.02	Sep 18	b 24.54	Mar 18 1936
INSTANTANEOUS LOW FLOW			180	Jul 4	39	Sep 6 1966 c
ANNUAL RUNOFF (CFSM)	2.30		2.17		1.23	
ANNUAL RUNOFF (INCHES)	31.17		29.48		16.71	
10 PERCENT EXCEEDS	4280		3090		2200	
50 PERCENT EXCEEDS	1050		942		426	
90 PERCENT EXCEEDS	309		313		118	

a From rating curve extended above 28,000 ft³/s on basis of slope-area measurement of peak flow.

b From floodmark in gage.

c Also Sept. 7, 12, 1966.

JUNIATA RIVER BASIN

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, 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 28...	1000	1028	9813	1270	10.4	7.8	7.8	224	218	9.1	96	25.1	8.2
DEC 10...	0800	1028	9813	1810	13.2	7.6	7.7	270	284	1.7	100	27.3	8.2
FEB 2004 03...	0830	1028	9813	E570	13.7	7.8	7.9	329	337	.0	140	35.3	12.6
APR 27...	1215	1028	9813	4380	9.7	7.3	7.2	150	122	11.9	60	16.4	4.7
JUN 03...	0800	1028	9813	510	8.2	7.8	7.8	280	276	18.6	110	26.7	10.3
AUG 18...	0845	1028	9813	230	7.3	8.0	7.8	313	314	20.7	130	33.8	11.2

Date	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (00417)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC, wat flt mg/L (00515)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, unfltrd 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 28...	70	20.9	152	14	.050	1.36	<.040	.02	.027	1.8	3.2	500	<10
DEC 10...	71	21.8	174	<2	<.020	1.95	<.040	.01	.021	2.2	1.6	200	<10
FEB 2004 03...	94	25.8	224	14	.030	2.95	<.040	<.01	.014	3.3	1.3	<200	<10
APR 27...	41	13.5	128	142	.050	1.17	<.040	.03	.132	2.1	4.6	2800	<10
JUN 03...	87	22.6	202	12	.040	2.14	<.040	.03	.036	2.2	1.9	700	<10
AUG 18...	100	25.9	228	8	<.020	1.85	<.040	.01	.019	2.0	2.3	200	30

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 28...	620	<1.0	60	<50	110
DEC 10...	250	<1.0	40	<50	<10
FEB 2004 03...	170	<1.0	30	<50	<10
APR 27...	4030	3.5	150	<50	20
JUN 03...	810	1.0	70	<50	70
AUG 18...	250	<1.0	40	<50	90

JUNIATA RIVER BASIN

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, 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 animals (approximate) subsamples.

Date	09/16/03
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	2
Mollusca	
Bivalvia (CLAMS)	
Veneroidea	
Sphaeriidae	
<i>Sphaerium</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Branchiobdellida	
Branchiobdellidae	1
Lumbriculida	
Lumbriculidae	3
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	1
<i>Baetis</i>	57
<i>Plauditus</i>	8
Caenidae	
<i>Caenis</i>	3
Ephemerellidae	
<i>Serratella</i>	21
Heptageniidae	
<i>Leucrocuta</i>	6
<i>Stenacron</i>	2
<i>Stenonema</i>	24
Isonychiidae	
<i>Isonychia</i>	6
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<i>Argia</i>	2
Plecoptera (STONEFLIES)	
Perlidae	
<i>Agnatina</i>	2
Megaloptera	
Corydalidae (FISHFLIES AND DOBSONFLIES)	
<i>Corydalus</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	6
<i>Hydropsyche</i>	14
<i>Macrostemum</i>	1
Hydroptilidae	
<i>Leucotrichia</i>	8
Philopotamidae	
<i>Chimarra</i>	16

JUNIATA RIVER BASIN

01562000 RAYSTOWN BRANCH JUNIATA RIVER AT SAXTON, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	09/16/03
Benthic Macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	4
<i>Stenelmis</i>	30
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	11
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	9
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	3
Total Organisms	242
Total Taxa	26