



2004 Water Year JUNIATA RIVER BASIN

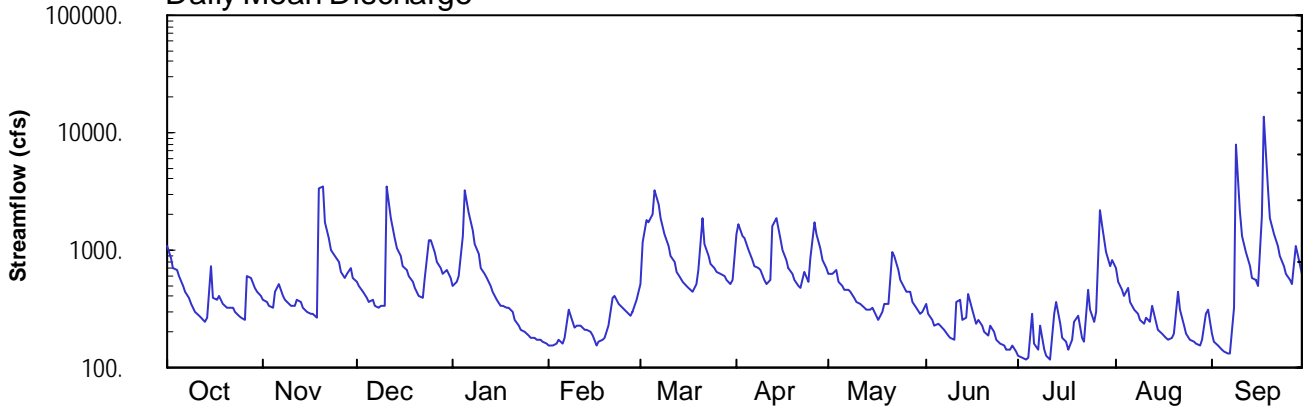
01558000 Little Juniata River at Spruce Creek, PA

Latitude: 40° 36' 45"
Huntingdon County

Longitude: 078° 08' 27"
Datum: 751.15 feet

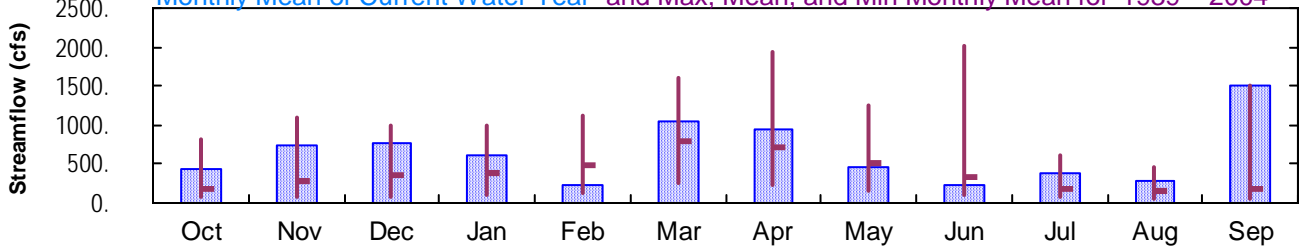
Hydrologic Unit Code: 02050302
Drainage Area: 220. mi²

Daily Mean Discharge

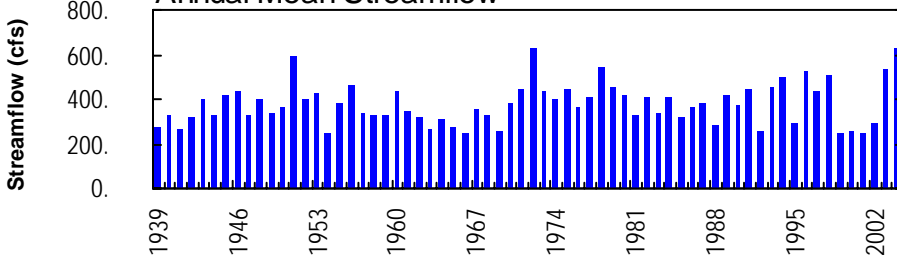


Monthly Statistics

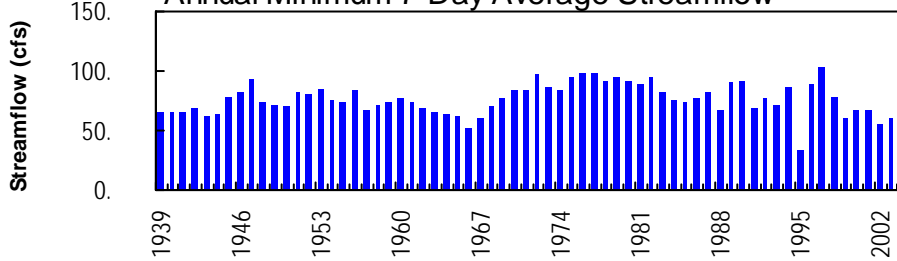
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1939 – 2004



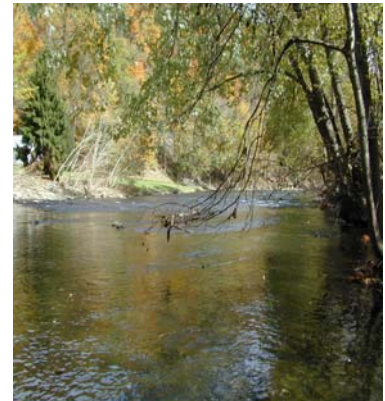
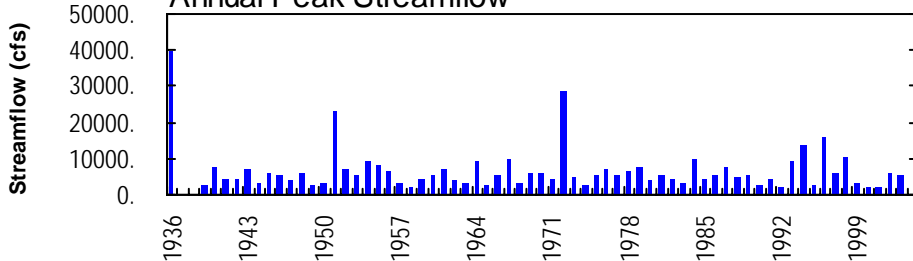
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



JUNIATA RIVER BASIN

**01558000 LITTLE JUNIATA RIVER AT SPRUCE CREEK, PA
(Pennsylvania Water-Quality Network Station)**

LOCATION.--Lat 40°36'45", long 78°08'27", Huntingdon County, Hydrologic Unit 02050302, on right bank on SR 4006, 150 ft downstream from Penn Central Railroad bridge, 0.5 mi northwest of village of Spruce Creek, and 0.5 mi upstream from Spruce Creek.

DRAINAGE AREA.--220 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1938 to current year. Prior to October 1938 monthly discharge only, published in WSP 1302.

GAGE.--Water-stage recorder. Datum of gage is 751.15 ft above National Geodetic Vertical Datum of 1929.

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 Mar. 18, 1936 reached a stage of 19.1 ft, from floodmarks 175 ft downstream, discharge, 39,800 ft³/s, from rating curve extended above 5,600 ft³/s on basis of slope-area measurement of peak flow.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 3,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Nov. 19	2145	8,540	9.43	July 27	2000	3,640	6.32
Dec. 11	0930	5,110	7.35	Sept. 9	0645	14,800	12.94
Jan. 5	0845	3,810	6.41	Sept. 18	0600	*22,100	*15.46
Mar. 6	0945	3,780	6.39				

**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	1060	378	535	501	e155	519	1380	618	343	129	706	194
2	862	357	488	537	e155	1170	1630	625	282	122	539	169
3	714	337	447	594	e160	1810	1330	683	256	117	459	153
4	686	321	e395	1290	e170	1740	1240	525	227	120	412	144
5	606	435	e360	3270	e160	2020	1000	488	240	290	482	138
6	501	509	e370	2110	e180	3280	835	454	228	161	359	130
7	440	405	e330	1460	310	2420	735	452	208	142	312	129
8	393	370	e320	1130	277	1860	699	439	190	227	284	319
9	350	346	331	933	222	1370	687	385	179	142	258	7760
10	301	337	336	e700	225	1090	562	368	173	124	239	2190
11	280	335	3460	e620	225	898	508	343	369	116	263	1330
12	262	377	1850	e575	208	787	553	318	382	291	248	967
13	248	364	1250	e505	211	648	1600	308	252	363	336	743
14	262	326	1030	e440	201	568	1840	311	262	235	244	583
15	735	295	874	e370	189	532	1270	320	418	177	213	560
16	393	286	730	e340	156	497	989	276	304	165	192	490
17	374	287	669	e330	168	479	820	254	e235	144	181	1970
18	402	269	600	e325	170	447	701	299	257	173	172	13400
19	353	3400	527	e320	180	510	618	342	224	244	178	3350
20	328	3430	469	297	228	685	552	354	200	280	195	1890
21	324	1760	413	e260	391	1840	497	955	188	183	444	1390
22	318	1270	397	e230	409	1130	471	887	225	167	316	1100
23	302	1010	577	e210	346	888	643	677	200	458	224	892
24	278	875	1220	e200	336	755	527	563	172	311	194	740
25	261	798	1200	e185	306	699	860	481	161	248	174	638
26	253	657	952	e180	295	646	1760	432	154	294	165	566
27	596	573	796	e180	277	632	1370	444	143	2210	157	510
28	577	619	691	e175	293	600	1040	366	142	1620	156	1070
29	476	701	614	e170	373	555	824	318	153	966	175	878
30	441	568	677	e165	---	515	697	284	136	727	286	632
31	403	---	570	e160	---	548	---	297	---	830	307	---
TOTAL	13779	21995	23478	18762	6976	32138	28238	13866	6903	11776	8870	45025
MEAN	444	733	757	605	241	1037	941	447	230	380	286	1501
MAX	1060	3430	3460	3270	409	3280	1840	955	418	2210	706	13400
MIN	248	269	320	160	155	447	471	254	136	116	156	129
CFSM	2.02	3.33	3.44	2.75	1.09	4.71	4.28	2.03	1.05	1.73	1.30	6.82
IN.	2.33	3.72	3.97	3.17	1.18	5.43	4.77	2.34	1.17	1.99	1.50	7.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	187	280	364	376	479	782	718	521	339	190	146	180
MAX	816	1092	997	991	1128	1609	1928	1239	2022	623	462	1501
(WY)	1991	1951	1973	1949	1976	1979	1993	1978	1972	1956	2003	2004
MIN	64.7	71.3	73.2	90.5	138	261	228	150	104	70.4	56.9	50.8
(WY)	1964	1939	1966	1940	1963	1990	1946	1976	1965	1965	1966	1995

e Estimated.

JUNIATA RIVER BASIN

01558000 LITTLE JUNIATA RIVER AT SPRUCE CREEK, PA--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	230969		231806			
ANNUAL MEAN	633		633		380	
HIGHEST ANNUAL MEAN					633	
LOWEST ANNUAL MEAN					248	
HIGHEST DAILY MEAN	3600	Sep 28	13400	Sep 18	21100	Jun 23 1972
LOWEST DAILY MEAN	85	Jul 31	116	Jul 11	31	Sep 12 1995
ANNUAL SEVEN-DAY MINIMUM	98	Jul 25	131	Jun 28	34	Sep 7 1995
MAXIMUM PEAK FLOW			a22100	Sep 18	a28600	Jun 23 1972
MAXIMUM PEAK STAGE			15.46	Sep 18	16.98	Jun 23 1972
INSTANTANEOUS LOW FLOW			111	Jul 12	45	Sep 26 1943b
ANNUAL RUNOFF (CFSM)	2.88		2.88		1.73	
ANNUAL RUNOFF (INCHES)	39.05		39.20		23.44	
10 PERCENT EXCEEDS	1280		1260		821	
50 PERCENT EXCEEDS	466		388		224	
90 PERCENT EXCEEDS	164		170		83	

a From rating curve, then in use, extended above 10,900 ft³/s on basis of slope-area measurement at gage height 15.77 ft.

b Also Oct. 4, 1949.

JUNIATA RIVER BASIN

01558000 LITTLE JUNIATA RIVER AT SPRUCE CREEK, 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 recover-able, mg/L (00916)	Magnesium, water, unfltrd recover-able, mg/L (00927)
OCT 2003													
30...	1200	1028	9813	440	11.8	8.0	7.5	215	196	9.4	92	24.4	7.4
DEC 10...	1245	1028	9813	320	13.4	8.4	8.2	251	255	4.8	110	29.1	9.0
FEB 2004													
11...	1115	1028	9813	230	14.1	8.2	8.0	350	357	2.5	120	31.2	9.7
APR 27...	1700	1028	9813	1280	10.8	7.6	7.4	151	138	10.6	59	16.0	4.7
JUN 03...	1230	1028	9813	250	11.0	8.2	8.0	269	258	15.7	97	24.0	9.0
AUG 18...	1345	1028	9813	170	12.2	8.7	8.5	314	310	16.8	130	33.9	10.7
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 recover-able, µg/L (01105)	Copper, water, unfltrd recover-able, µg/L (01042)
OCT 2003													
30...	70	18.7	166	10	<.020	1.32	<.040	.04	.060	1.4	1.8	<200	<10
DEC 10...	79	20.7	170	<2	<.020	1.58	<.040	.03	.033	1.8	1.3	<200	<10
FEB 2004													
11...	83	21.4	178	20	<.020	1.66	<.040	.09	.089	1.9	1.7	<200	<10
APR 27...	44	15.3	116	4	<.020	.81	<.040	.04	.062	1.1	1.8	400	<10
JUN 03...	84	22.0	172	10	.030	1.58	<.040	.08	.097	1.8	1.7	<200	<10
AUG 18...	104	22.9	216	4	<.020	1.72	<.040	.25	.261	2.0	2.1	<200	<10
Date	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, unfltrd recover-able, µg/L (01092)								
OCT 2003													
30...	110	<1.0	<10	<50	100								
DEC 10...	70	<1.0	<10	<50	<10								
FEB 2004													
11...	70	<1.0	10	<50	<10								
APR 27...	490	<1.0	40	<50	<10								
JUN 03...	170	<1.0	20	<50	70								
AUG 18...	70	<1.0	10	<50	80								

JUNIATA RIVER BASIN

01558000 LITTLE JUNIATA RIVER AT SPRUCE CREEK, 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	10/30/03
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	8
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	9
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	3
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Caecidotea</i>	2
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	2
Ephemerellidae	
<i>Ephemerella</i>	17
<i>Serratella</i>	16
Heptageniidae	
<i>Stenonema</i>	7
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	2
<i>Hydropsyche</i>	7
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	20
<i>Stenelmis</i>	2
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	25
Empididae (DANCE FLIES)	
<i>Hemerodromia</i>	1
Tipulidae (CRANE FLIES)	
<i>Antocha</i>	6
Total Organisms	128
Total Taxa	16