



2005 Water Year  
WEST BRANCH SUSQUEHANNA RIVER BASIN  
01552000 Loyalsock Creek at Loyalsockville, PA

Latitude: 41° 19' 30"

Longitude: 076° 54' 46"

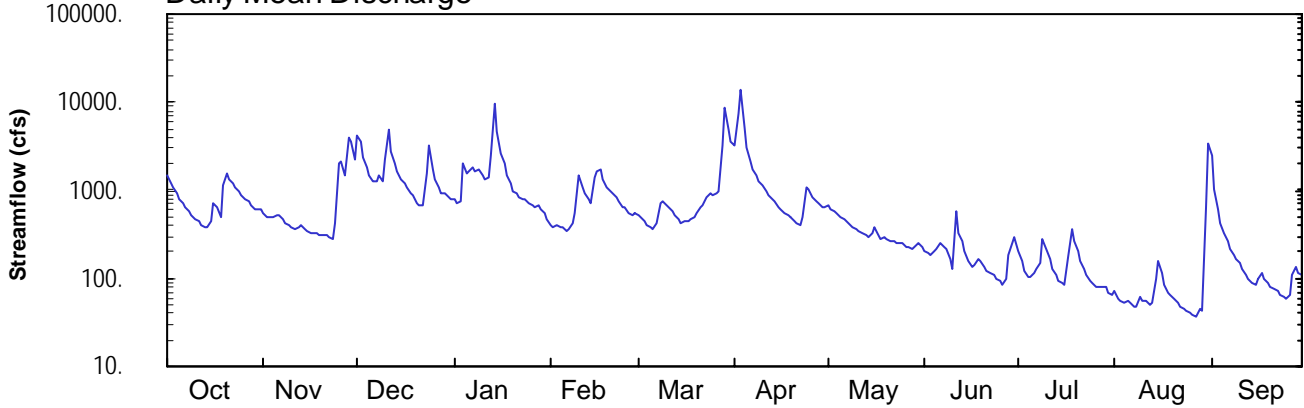
Hydrologic Unit Code: 02050206

Lycoming County

Datum: 586.33 feet

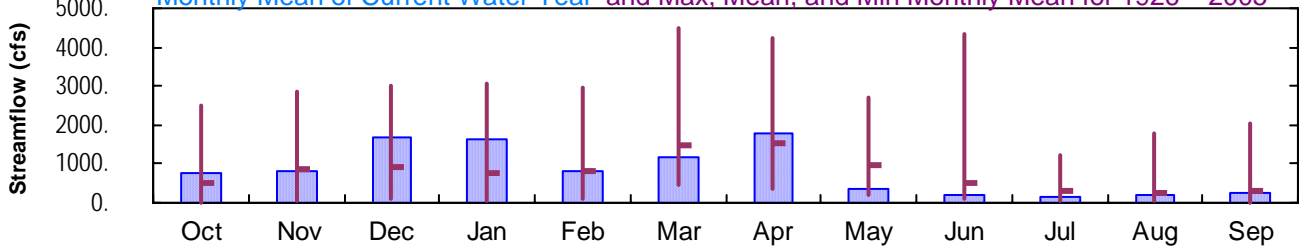
Drainage Area: 435. mi<sup>2</sup>

### Daily Mean Discharge

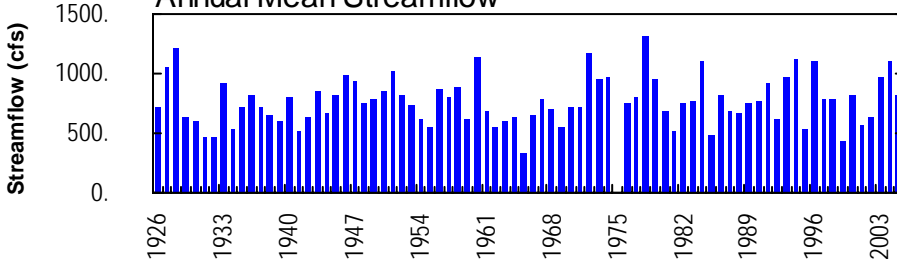


### Monthly Statistics

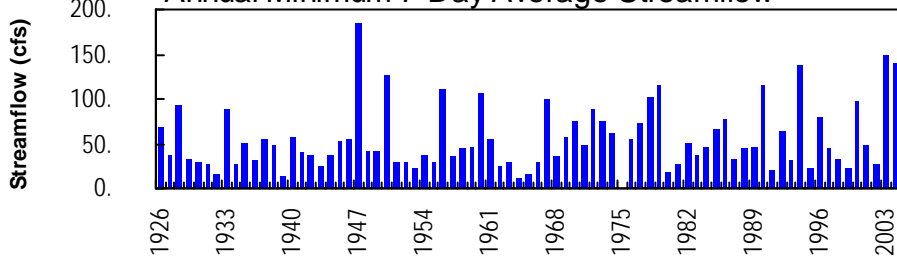
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1926 – 2005



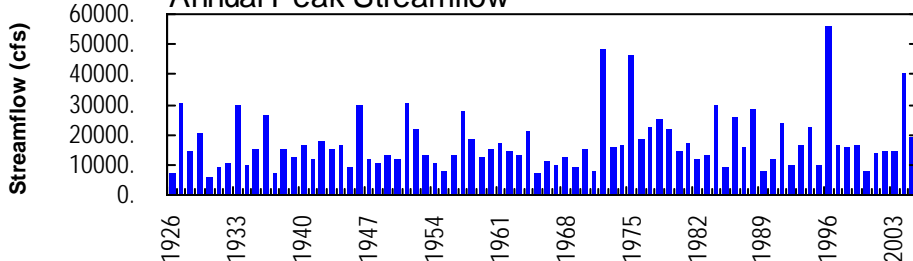
### Annual Mean Streamflow



### Annual Minimum 7-Day Average Streamflow



### Annual Peak Streamflow



## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 41°19'30", long 76°54'46", Lycoming County, Hydrologic Unit 02050206, on right bank 30 ft downstream from bridge on State Highway 973 at Loyalsockville, 2.5 mi downstream from Wallis Run, and 7.3 mi upstream from mouth.

**DRAINAGE AREA.**--435 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--August 1925 to September 1974, October 1975 to current year. Prior to October 1925, monthly discharge only, published in WSP 1302. Prior to October 1969, published as "at Loyalsock".

**REVISED RECORDS.**--WSP 871: 1938(M). WSP 1051: 1926(M), 1933(M), 1936(M). WSP 1302: 1926-30. WSP 1502: 1932-33, 1935(M), 1937(M). WDR PA-99-2: Drainage area, 1972(M). WDR PA-02-2: 1926-95(M).

**GAGE.**--Water-stage recorder. Datum of gage is 586.33 ft above National Geodetic Vertical Datum of 1929 (revised). August 1925 to Sept. 16, 1926, nonrecording gage, and Sept. 17, 1926, to June 13, 1988, water-stage recorder at site 500 feet downstream on left bank at same datum.

**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 Sept. 26, 1975, reached a stage of 14.50 ft, from floodmark, discharge, 46,000 ft<sup>3</sup>/s (revised), from rating curve extended above 16,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 6,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Nov. 28	1700	7,900	7.40	Mar. 29	1215	11,500	8.66
Dec. 1	1630	6,730	6.92	Apr. 3	0115	*19,400	*10.85
Jan. 14	1145	14,000	9.42				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1480	541	4290	778	e410	e530	3160	668	e209	205	72	2500
2	1210	491	3640	715	e390	507	7260	612	e190	155	59	1010
3	1080	485	2350	759	e400	e440	13500	574	e180	124	56	622
4	940	493	1790	1980	e390	e400	5270	539	e200	105	54	430
5	811	531	1480	1590	e380	e390	3000	504	e210	103	56	325
6	709	510	1260	1600	e350	e370	2170	462	e250	118	53	267
7	633	462	1260	1830	e360	416	1740	437	e230	128	47	214
8	570	421	1470	1670	427	e700	1510	412	e210	147	47	187
9	518	398	1250	1740	558	e750	1270	387	e170	277	63	168
10	481	375	2250	1460	e1500	e670	1120	367	e130	219	57	146
11	444	364	4810	1350	e1100	e630	993	349	e580	163	55	125
12	405	379	2800	1430	930	587	880	323	331	126	50	110
13	378	403	2070	2520	796	524	792	302	e270	111	52	100
14	384	371	1650	9830	728	481	734	288	e200	95	100	91
15	440	342	1360	4600	1390	435	650	321	158	88	154	85
16	718	330	1170	2650	1680	446	599	388	133	84	114	97
17	629	322	1070	1980	1730	437	557	317	146	173	84	117
18	504	320	942	e1500	e1300	468	524	285	168	372	68	101
19	1120	315	878	e1200	e1100	486	488	e290	155	269	66	88
20	1590	311	e720	e1000	e980	543	456	e280	137	200	59	80
21	1320	314	e670	e940	927	644	427	e270	123	157	54	75
22	1190	301	e690	e840	844	677	402	e260	115	131	49	72
23	1060	286	1560	e790	761	842	501	e250	109	112	44	66
24	953	432	3240	e780	659	914	1090	e250	100	95	42	62
25	872	1980	1690	e730	641	898	1030	e250	91	90	40	58
26	801	2110	e1300	e690	556	906	844	e230	85	82	38	64
27	733	1470	e1100	e640	518	965	758	e230	98	81	37	112
28	666	3920	e910	e660	537	3260	699	e220	180	82	44	132
29	615	3600	e920	e620	---	8890	640	e240	252	80	43	116
30	620	2190	894	e540	---	4920	627	e250	290	70	638	110
31	609	---	800	e480	---	3500	---	e227	---	65	3350	---
TOTAL	24483	24767	52284	49892	22342	36626	53691	10782	5700	4307	5745	7730
MEAN	790	826	1687	1609	798	1181	1790	348	190	139	185	258
MAX	1590	3920	4810	9830	1730	8890	13500	668	580	372	3350	2500
MIN	378	286	670	480	350	370	402	220	85	65	37	58
CFSM	1.82	1.90	3.88	3.70	1.83	2.72	4.11	0.80	0.44	0.32	0.43	0.59
IN.	2.09	2.12	4.47	4.27	1.91	3.13	4.59	0.92	0.49	0.37	0.49	0.66

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2005, BY WATER YEAR (WY)

MEAN	495	848	913	787	814	1472	1552	946	518	282	279	305
MAX	2512	2856	3033	3070	2961	4490	4236	2694	4327	1206	1797	2037
(WY)	1991	1951	1974	1996	1981	1936	1993	1946	1972	1928	1994	2004
MIN	20.2	28.4	80.5	34.1	108	449	363	220	92.4	41.6	31.5	13.8
(WY)	1965	1965	1931	1931	1931	1969	1946	1941	1991	1962	1964	1964

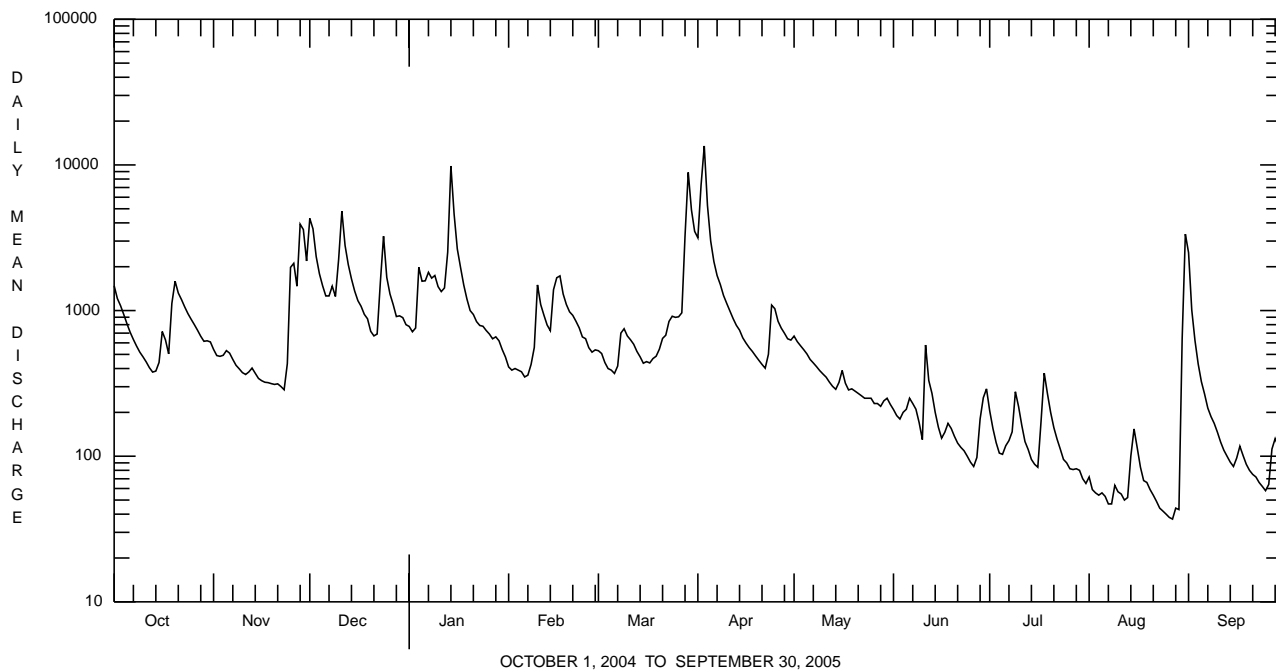
e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1926 - 2005	
ANNUAL TOTAL	375751		298349		767	
ANNUAL MEAN	1027		817		1312	
HIGHEST ANNUAL MEAN					1978	
LOWEST ANNUAL MEAN					1965	
HIGHEST DAILY MEAN	28100	Sep 18	13500	Apr 3	45000	Jun 23 1972
LOWEST DAILY MEAN	122	Jul 7	37	Aug 27	11	Sep 25 1964
ANNUAL SEVEN-DAY MINIMUM	140	Jul 1	41	Aug 23	12	Sep 20 1964
MAXIMUM PEAK FLOW			a19400	Apr 3	a55800	Jan 19 1996
MAXIMUM PEAK STAGE			10.85	Apr 3	b17.93	Jan 19 1996
INSTANTANEOUS LOW FLOW					11	Sep 25,26 1964c
ANNUAL RUNOFF (CFSM)	2.36		1.88		1.76	
ANNUAL RUNOFF (INCHES)	32.13		25.51		23.94	
10 PERCENT EXCEEDS	1920		1710		1690	
50 PERCENT EXCEEDS	690		462		410	
90 PERCENT EXCEEDS	256		82		70	

- a From rating curve extended above 11,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- b From floodmark in gage.
- c Also Nov. 24, 1964.



## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA--Continued  
(Pennsylvania Water-Quality Network Station)

## WATER-QUALITY RECORDS

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

REMARKS.--Some values for "dissolved" parameters exceed values for the corresponding "total" parameter. These results are within the limits of analytical precision and methods.

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 2004 TO SEPTEMBER 2005

Date	Time	Agency collecting sample, code (00027)	Agency analyzing sample, code (00028)	Instantaneous discharge, cfs (00061)	Sampling method, code (82398)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Specif. conductance, wat unfltrd lab, $\mu$ S/cm 25 degC (90095)	Specif. conductance, wat unfltrd lab, $\mu$ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NOV 2004 09...	1145	1028	9813	399	30	13.4	7.8	7.0	59	56	6.3	22	6.4
JAN 2005 25...	1430	1028	9813	E730	30	16.3	7.1	7.2	55	39	.0	19	5.5
MAR 15...	1130	1028	9813	395	30	15.1	7.0	7.3	63	66	2.4	22	6.9
MAY 19...	1145	1028	9813	E290	30	11.8	7.5	7.6	61	60	15.3	22	7.0
JUL 21...	1200	1028	9813	158	30	9.6	8.3	7.8	70	74	25.2	29	9.0
SEP 29...	1115	1028	9813	120	30	9.8	7.6	7.4	73	76	17.5	29	9.2

Date	Calcium water unfltrd recoverable, mg/L (00916)	Magnesium, water, fltrd, mg/L (00925)	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unfltrd fixed 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 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)
NOV 2004 09...	7.1	1.04	1.1	16	7.4	44	2	<.020	.16	<.040	<.01	<.010
JAN 2005 25...	5.8	.93	1.0	12	8.7	--	<2	.150	.49	<.040	<.01	<.010
MAR 15...	6.9	1.15	1.1	13	8.9	38	<2	<.020	.49	<.040	<.01	<.010
MAY 19...	6.9	1.09	1.1	14	8.2	54	<2	<.020	.22	<.040	<.01	<.010
JUL 21...	9.3	1.32	1.4	22	8.1	56	6	<.020	.11	<.040	<.01	<.010
SEP 29...	9.2	1.45	1.4	22	8.3	48	<2	.020	.27	<.040	<.01	.013

## WEST BRANCH SUSQUEHANNA RIVER BASIN

## 01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

Date	Total nitrogen, water, unfltrd mg/L (00600)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recover-able, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recover-able, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Manganese, water, unfltrd recover-able, µg/L (01055)	Nickel, water, fltrd, µg/L (01065)
NOV 2004 09...	.25	1.7	<10	30	<4	<4	<20	40	<1.0	<1.0	<2.0	2.4	<4.0
JAN 2005 25...	.58	.4	20	50	<4	<4	<20	50	<1.0	<1.0	5.1	9.3	<4.0
MAR 15...	.50	2.3	10	30	<4	<4	<20	<20	<1.0	<1.0	3.0	3.7	<4.0
MAY 19...	.18	.6	<10	10	<4	<4	<20	<20	<1.0	<1.0	3.5	4.0	<4.0
JUL 21...	.10	.3	<10	10	<4	<4	<20	20	<1.0	<1.0	6.4	10	<4.0
SEP 29...	.28	.4	<10	<10	<4	<4	<20	20	<1.0	<1.0	3.2	6.1	<4.0

Date	Nickel, water, unfltrd recover-able, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
NOV 2004 09...	<4.0	<5.0	<5.0
JAN 2005 25...	<4.0	<5.0	<5.0
MAR 15...	<4.0	<5.0	<5.0
MAY 19...	<4.0	<5.0	<5.0
JUL 21...	<4.0	<5.0	<5.0
SEP 29...	<4.0	<5.0	<5.0

## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, 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	08/04/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	2
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<i>Ferrissia</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbricina	
Lumbriculida	1
Lumbriculidae	10
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Acentrella</i>	4
<i>Heterocloeon</i>	1
<i>Plauditus</i>	3
Ephemerellidae	
<i>Ephemerella</i>	1
Heptageniidae	
<i>Epeorus</i>	5
<i>Leucrocuta</i>	2
<i>Stenonema</i>	24
Isonychiidae	
<i>Isonychia</i>	19
Leptophlebiidae	
<i>Paraleptophlebia</i>	2
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Gomphidae	
<i>Lanthus</i>	2
Plecoptera (STONEFLIES)	
Chloroperlidae	
<i>Sweltsa</i>	1
Perlidae	
<i>Acroneuria</i>	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<i>Cheumatopsyche</i>	2
<i>Hydropsyche</i>	4
Philopotamidae	
<i>Chimarra</i>	3

## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552000 LOYALSOCK CREEK AT LOYALSOCKVILLE, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	08/04/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	14
<i>Stenelmis</i>	2
Psephenidae (WATER PENNIES)	
<i>Psephenus</i>	7
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	6
Total Organisms	118
Total Taxa	24