



2005 Water Year
 WEST BRANCH SUSQUEHANNA RIVER BASIN
 01546500 Spring Creek near Axemann, PA

Latitude: 40° 53 ' 23"

Longitude: 077° 47 ' 40"

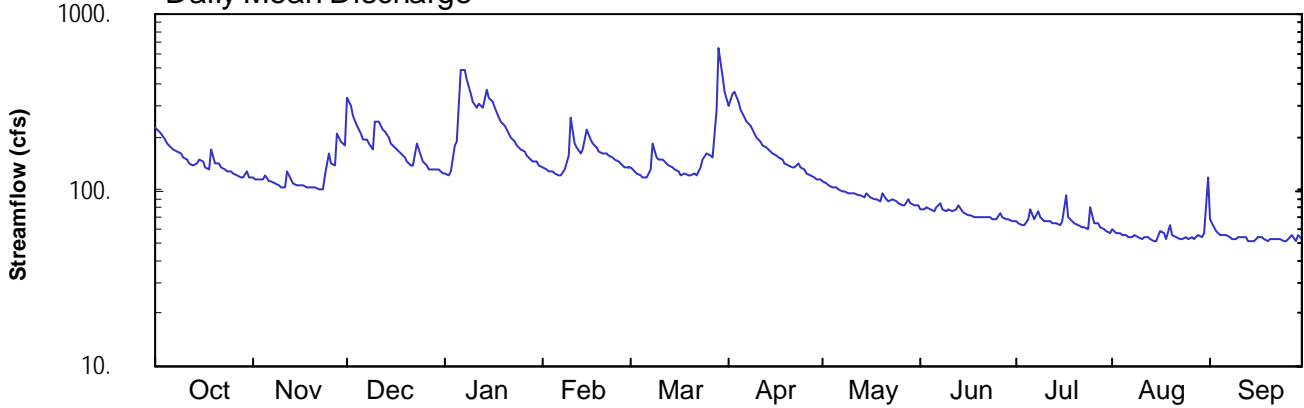
Hydrologic Unit Code: 02050204

Centre County

Datum: 788.81 feet

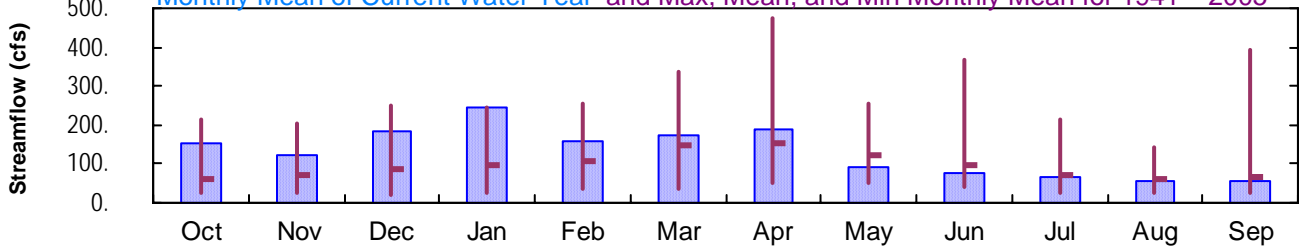
Drainage Area: 87.2 mi²

Daily Mean Discharge

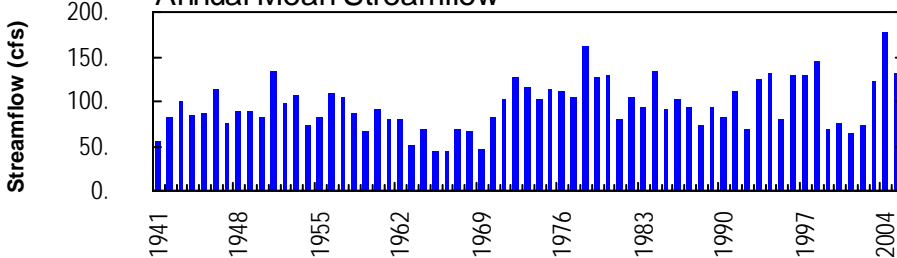


Monthly Statistics

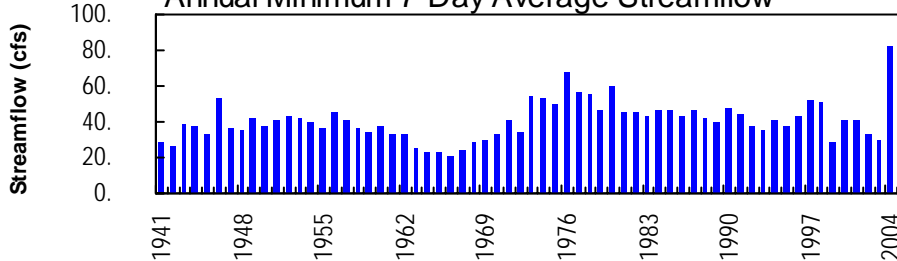
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1941 – 2005



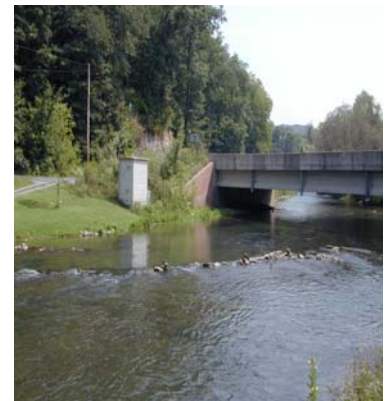
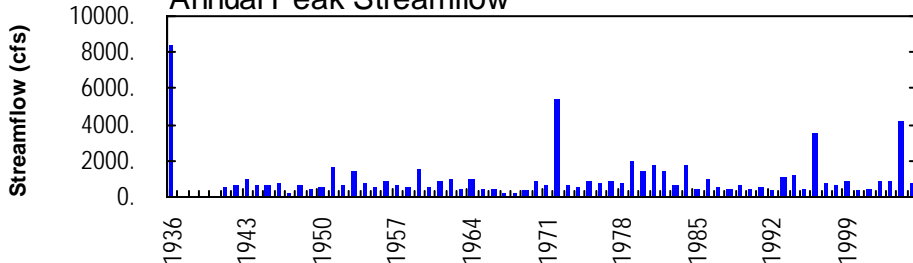
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WEST BRANCH SUSQUEHANNA RIVER BASIN

01546500 SPRING CREEK NEAR AXEMANN, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°53'23", long 77°47'40", Centre County, Hydrologic Unit 02050204, on right bank at upstream side of bridge on SR 3001, 1.6 mi west of Axemann, 1.8 mi southwest of Bellefonte, and 2.5 mi upstream from Logan Branch.

DRAINAGE AREA.--87.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 788.81 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 19, 1940, nonrecording gage at same site and datum. Nonrecording gage Mar. 6 to Sept. 30, 1995.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Occasional regulation at low flow by fish hatchery and Rockview Penitentiary. Several measurements of water temperature were made during the year. Satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1936 reached a stage of 8.6 ft, from information by local residents, discharge not determined.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 6	1645	580	3.72	Mar. 29	0915	*735	*3.98

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	228	120	336	125	135	135	306	112	79	66	60	69
2	218	115	299	120	130	129	353	110	77	65	58	62
3	212	114	262	129	129	124	365	108	81	64	57	59
4	196	115	231	180	129	122	319	105	78	64	56	56
5	186	121	208	191	124	120	283	103	76	69	55	55
6	177	114	194	480	122	119	261	101	81	77	54	56
7	170	111	194	483	121	130	246	100	84	69	54	54
8	165	109	186	427	130	184	233	98	77	77	56	53
9	160	107	172	358	159	154	213	97	76	70	54	53
10	155	105	245	318	260	148	200	96	77	67	53	55
11	149	104	246	297	185	149	190	95	75	67	54	54
12	143	127	222	314	173	146	180	94	77	66	54	55
13	140	116	214	293	164	140	174	93	83	65	52	52
14	141	109	201	374	171	134	167	92	77	65	51	52
15	151	107	184	333	218	130	163	96	74	64	52	52
16	146	106	175	316	196	127	158	91	73	67	58	54
17	137	106	168	294	185	123	154	89	72	93	58	54
18	131	105	160	261	174	125	149	88	71	70	53	53
19	169	103	155	245	165	122	144	87	71	67	63	52
20	144	105	145	232	161	122	140	96	71	65	55	53
21	142	103	140	212	163	124	136	88	71	63	54	52
22	136	101	137	199	157	120	134	87	70	63	53	53
23	131	102	184	191	153	135	142	90	70	61	53	53
24	129	122	171	179	149	151	137	87	69	60	54	51
25	129	161	145	173	146	161	130	85	69	80	53	51
26	124	142	e140	168	141	159	125	83	74	65	54	54
27	121	137	e130	159	136	155	121	81	71	65	53	56
28	119	208	e130	148	135	284	117	88	69	62	55	52
29	118	187	e130	145	---	638	114	85	68	60	55	56
30	128	178	130	145	---	450	115	82	66	59	57	52
31	119	---	126	139	---	361	---	81	---	58	119	---
TOTAL	4714	3660	5760	7628	4411	5421	5669	2888	2227	2073	1767	1633
MEAN	152	122	186	246	158	175	189	93.2	74.2	66.9	57.0	54.4
MAX	228	208	336	483	260	638	365	112	84	93	119	69
MIN	118	101	126	120	121	119	114	81	66	58	51	51
CFSM	1.74	1.40	2.13	2.82	1.81	2.01	2.17	1.07	0.85	0.77	0.65	0.62
IN.	2.01	1.56	2.46	3.25	1.88	2.31	2.42	1.23	0.95	0.88	0.75	0.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2005, BY WATER YEAR (WY)

MEAN	61.9	71.4	87.5	95.8	108	150	156	121	98.8	71.5	62.6	64.3
MAX	216	206	251	246	257	335	475	257	369	216	145	392
(WY)	1997	1978	1997	2005	1984	1994	1993	1978	1972	1972	2003	2004
MIN	26.1	26.0	22.8	23.3	38.1	36.5	49.6	50.5	41.1	28.0	24.4	24.9
(WY)	1964	1966	1966	1966	1963	1969	1969	1969	1965	1965	1966	1965

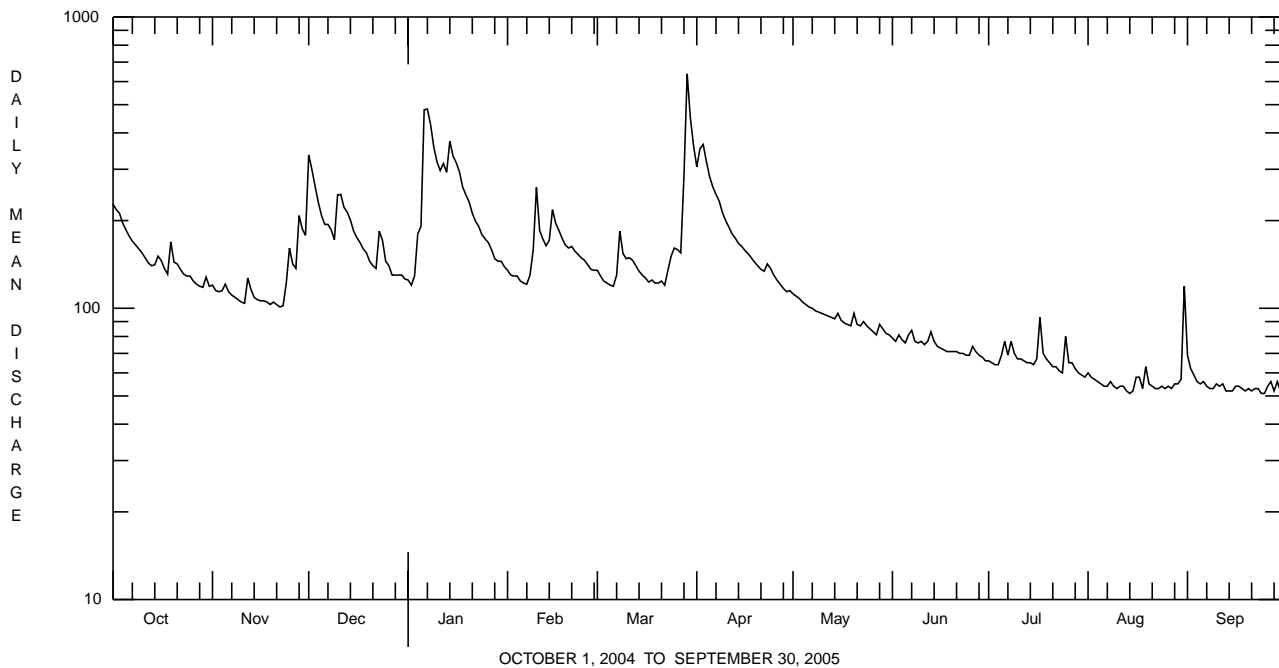
e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01546500 SPRING CREEK NEAR AXEMANN, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1941 - 2005	
ANNUAL TOTAL	63104		47851			
ANNUAL MEAN	172		131		95.5	
HIGHEST ANNUAL MEAN					179	2004
LOWEST ANNUAL MEAN					43.5	1965
HIGHEST DAILY MEAN	2840	Sep 18	638	Mar 29	2910	Jun 23 1972
LOWEST DAILY MEAN	80	Jul 3	51	Aug 14 ^a	20	Dec 20,30 1963 ^b
ANNUAL SEVEN-DAY MINIMUM	82	Jun 28	52	Sep 19	21	Jan 28 1966
MAXIMUM PEAK FLOW			735	Mar 29	c5410	Jun 23 1972
MAXIMUM PEAK STAGE			3.98	Mar 29	d7.47	Jun 23 1972
ANNUAL RUNOFF (CFSM)	1.98		1.50		1.10	
ANNUAL RUNOFF (INCHES)	26.92		20.41		14.89	
10 PERCENT EXCEEDS	253		220		169	
50 PERCENT EXCEEDS	140		120		74	
90 PERCENT EXCEEDS	94		54		40	

- a Also Sept. 24, 25.
- b Also Jan 28, 29, 31, 1966.
- c From rating curve extended above 1,400 ft³/s on basis of contracted-opening measurement of peak flow.
- d In gage; 8.75 ft from outside floodmark.



WEST BRANCH SUSQUEHANNA RIVER BASIN

01546500 SPRING CREEK NEAR AXEMANN, 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 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, 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)
NOV 2004 16...	1400	1028	9813	111	30	11.9	8.5	8.3	568	513	8.0	270	65.9
JAN 2005 05...	1045	1028	9813	178	30	11.2	8.1	8.2	511	506	7.7	230	59.4
MAR 22...	0945	1028	9813	118	30	12.4	8.4	8.2	562	544	7.4	250	63.8
MAY 18...	1115	1028	9813	85	30	13.7	8.5	8.5	575	577	12.6	260	62.1
JUL 06...	0930	1028	9813	71	30	9.0	8.0	8.3	565	580	16.9	260	62.1
SEP 14...	1115	1028	9813	49	30	12.4	8.4	8.5	608	635	15.6	260	60.7

Date	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat 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 as N mg/L (00610)	Nitrate water, unfltrd as N mg/L (00620)	Nitrite water, unfltrd as N mg/L (00615)	Ortho-phosphate, water, unfltrd mg/L (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)
NOV 2004 16...	24.5	212	21.5	350	2	.070	4.18	<.040	.03	.029	4.2	1.5	<200
JAN 2005 05...	19.9	192	26.4	312	4	.030	3.52	<.040	.02	.026	3.8	1.4	<200
MAR 22...	22.6	205	23.5	342	4	.060	4.02	.040	.02	.022	4.3	1.6	<200
MAY 18...	24.2	205	26.3	388	14	<.020	4.27	<.040	.01	.022	4.7	--	<200
JUL 06...	24.2	206	24.2	352	12	.040	4.02	<.040	.03	.050	4.2	--	<200
SEP 14...	25.2	205	29.7	454	2	.030	4.46	<.040	.02	.022	4.5	--	<200

Date	Copper, water, unfltrd recoverable, µg/L (01042)	Iron, water, unfltrd recoverable, µg/L (01051)	Lead, water, unfltrd recoverable, µg/L (01055)	Manganese, water, unfltrd recoverable, µg/L (01067)	Nickel, water, unfltrd recoverable, µg/L (01092)	Zinc, water, unfltrd recoverable, µg/L
NOV 2004 16...	<10	60	<1.0	<10	<50	<10
JAN 2005 05...	<10	200	<1.0	<10	<50	10
MAR 22...	<10	90	<1.0	<10	<50	<10
MAY 18...	<10	70	<1.0	<10	<50	10
JUL 06...	<10	160	<1.0	10	<50	10
SEP 14...	<10	50	<1.0	<10	<50	<10

WEST BRANCH SUSQUEHANNA RIVER BASIN

01546500 SPRING CREEK NEAR AXEMANN, 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	08/26/04
Benthic macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	10
Nematoda (NEMATODES)	1
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Hydrobiidae	
<i>Fontigens nickliniana</i>	1
Physidae	
<i>Physa</i>	1
Bivalvia (CLAMS)	
Veneroida	
Sphaeriidae	
<i>Sphaerium</i>	1
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Tubificida	
Tubificidae	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	5
Crustacea	
Amphipoda (SCUDS)	
Gammaridae	
<i>Gammarus</i>	10
Isopoda (AQUATIC SOWBUGS)	
Asellidae	
<i>Lirceus</i>	379
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<i>Baetis</i>	15
Ephemerellidae	
<i>Ephemerella</i>	1
Heptageniidae	
<i>Stenonema</i>	2
Tricorythidae	
<i>Tricorythodes</i>	1
Trichoptera (CADDISFLIES)	
Brachycentridae	
<i>Micrasema</i>	1
Hydropsychidae	3
<i>Hydropsyche</i>	36

WEST BRANCH SUSQUEHANNA RIVER BASIN

01546500 SPRING CREEK NEAR AXEMANN, PA--Continued

BIOLOGICAL DATA
BENTHIC MACROINVERTEBRATES--Continued

Date	08/26/04
Benthic macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<i>Optioservus</i>	22
<i>Stenelmis</i>	4
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	35
Simuliidae (BLACK FLIES)	
<i>Simulium</i>	1
Total Organisms	531
Total Taxa	20