2005 Water Year

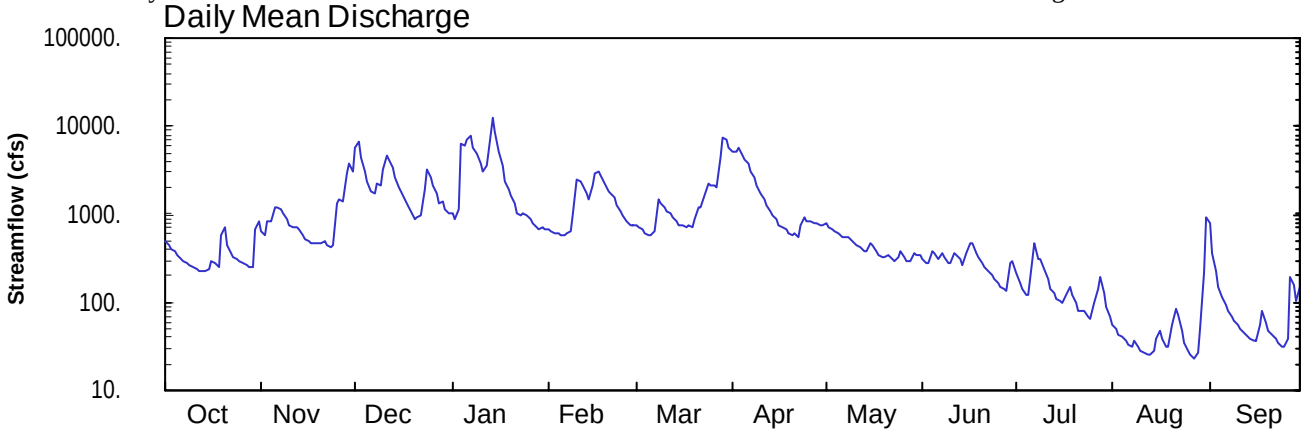
WEST BRANCH SUSQUEHANNA RIVER BASIN

01543500 Sinnemahoning Creek at Sinnemahoning, PA

Latitude: 41° 19 ' 02" Longitude: 078° 06 ' 12" Hydrologic Unit Code: 02050202

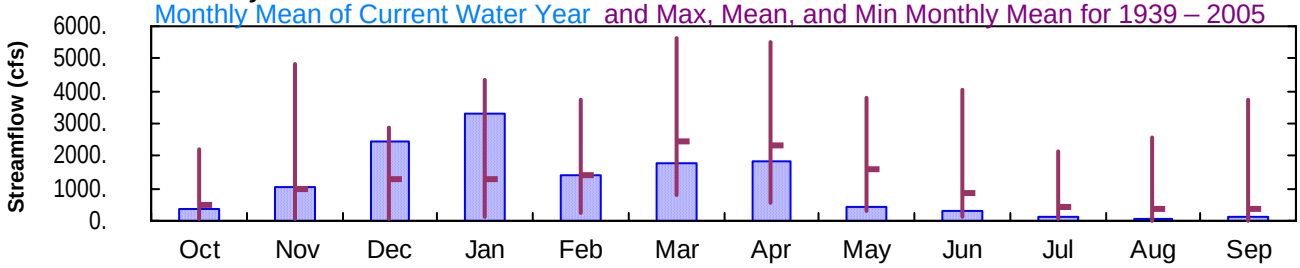
Cameron County Datum: 769.36 feet Drainage Area: 685. mi²

Daily Mean Discharge

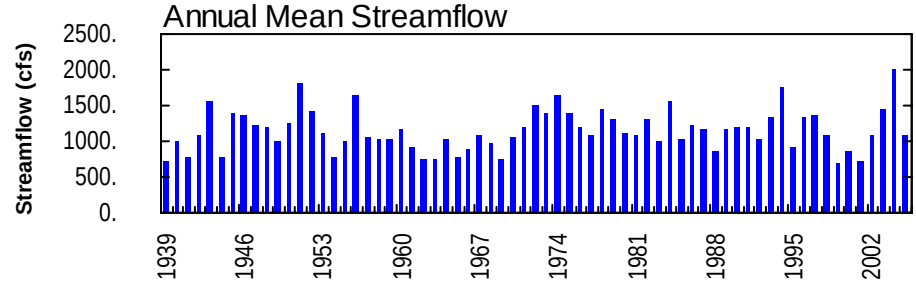


Monthly Statistics

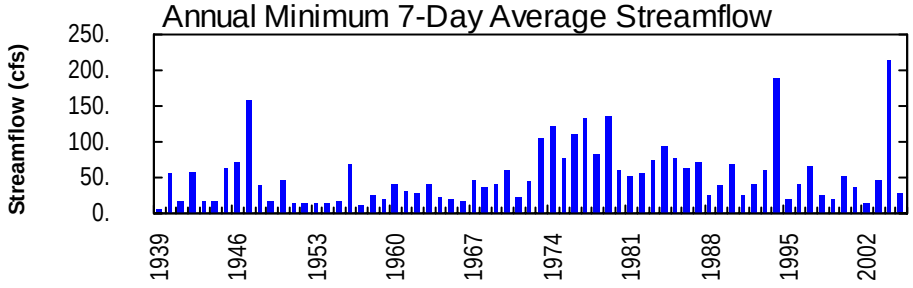
Monthly Mean of Current Water Year and Max, Mean, and Min Monthly Mean for 1939 – 2005



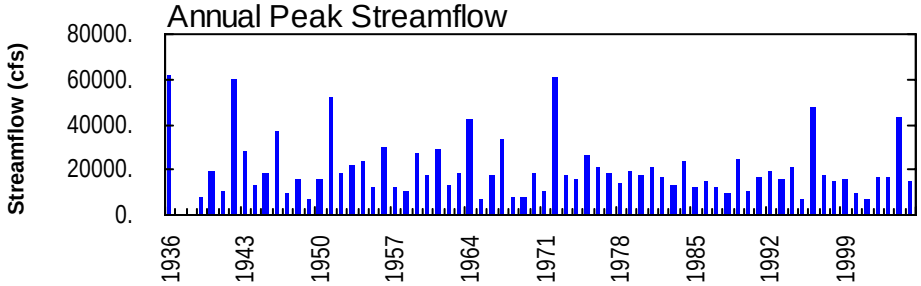
Annual Mean Streamflow



Annual Minimum 7-Day Average Streamflow



Annual Peak Streamflow



WEST BRANCH SUSQUEHANNA RIVER BASIN

01543500 SINNEMAHONING CREEK AT SINNEMAHONING, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°19'02", long 78°06'12", Cameron County, Hydrologic Unit 02050202, on left bank 0.2 mi upstream from Grove Run, and 0.7 mi upstream from Penn Central Railroad bridge at Sinnemahoning.

DRAINAGE AREA.--685 mi^2.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 769.36 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.--Maximum stage known, 21.94 ft, Mar. 18, 1936, from floodmark, discharge, 61,200 ft^3/s, from rating curve extended above 31,000 ft^3/s on basis of slope-area measurement at gage height 21.58 ft.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 8,400 ft^3/s and maximum (*):

Date	Time	Discharge ft^3/s	Gage Height (ft)	Date	Time	Discharge ft^3/s	Gage Height (ft)
Dec. 1	1645	8,970	7.35	Jan. 14	1045	*15,200	*9.68
Jan. 6	2300	9,290	7.48				

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	486	647	5770	1000	e660	e770	5070	788	316	211	56	800
2	438	565	6670	877	e640	e730	5040	717	278	166	49	361
3	409	816	4520	1110	e620	667	5860	684	277	139	44	223
4	374	824	3140	6310	e600	613	4740	644	389	120	40	153
5	341	1220	2360	6060	e590	579	4240	596	358	120	37	118
6	317	1190	1850	6860	e590	593	3680	560	310	287	33	95
7	293	1120	1720	7690	e600	641	3120	546	361	469	31	80
8	278	1010	2260	5740	e650	e1500	2610	538	329	305	36	68
9	262	861	2120	4940	e950	e1300	2090	511	284	316	31	61
10	252	762	3250	3840	e2500	e1200	1720	480	280	239	29	55
11	242	705	4610	3080	e2400	e1100	1450	456	364	181	27	51
12	231	703	4260	3520	2080	e1000	1230	429	342	146	25	46
13	221	676	3420	5400	1690	e920	1100	386	302	126	26	42
14	228	571	2590	12800	1510	e850	984	388	266	110	28	39
15	240	515	1990	8470	2180	e770	865	477	363	102	39	37
16	289	491	1620	5080	2840	e760	768	445	473	100	47	36
17	286	478	1440	3550	3070	716	701	380	460	119	40	57
18	248	474	e1200	e2400	2700	743	664	349	369	153	32	82
19	566	462	e1100	e1900	2190	725	624	324	322	125	31	57
20	698	463	e900	e1600	1820	887	592	322	286	97	54	48
21	438	492	e910	e1300	1690	1200	610	343	253	81	86	42
22	363	450	e950	e1000	1530	1190	550	312	229	81	73	38
23	328	422	1870	e960	1270	1630	762	298	209	79	47	35
24	303	445	3230	e1000	1100	2240	907	330	185	67	35	32
25	301	1350	e2600	e950	e950	2170	850	387	163	64	29	31
26	286	1500	e2100	e900	e840	2110	829	334	148	99	25	39
27	266	1390	e1700	e800	e740	2010	807	290	139	140	23	195
28	251	2960	e1300	e700	e770	4510	789	288	134	199	28	161
29	246	3810	1430	e680	---	7350	753	368	274	130	50	104
30	668	3070	1140	e700	---	7110	763	342	298	88	210	152
31	826	---	1030	e680	---	5800	---	347	---	68	929	---
TOTAL	10975	30442	75050	101897	39770	54384	54768	13659	8761	4727	2270	3338
MEAN	354	1015	2421	3287	1420	1754	1826	441	292	152	73.2	111
MAX	826	3810	6670	12800	3070	7350	5860	788	473	469	929	800
MIN	221	422	900	680	590	579	550	288	134	64	23	31
CFSM	0.52	1.48	3.53	4.80	2.07	2.56	2.67	0.64	0.43	0.22	0.11	0.16
IN.	0.60	1.65	4.08	5.53	2.16	2.95	2.97	0.74	0.48	0.26	0.12	0.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	467	972	1296	1282	1436	2448	2309	1591	842	438	337	382
MAX	2186	4836	2883	4349	3732	5608	5500	3771	4066	2134	2596	3736
(WY)	1991	1951	1973	1952	1976	1945	1940	1953	1972	1992	1994	2004
MIN	31.5	52.0	64.1	91.8	257	771	556	313	97.3	37.9	28.7	29.6
(WY)	1965	1965	1961	1961	1963	1981	1946	1941	1999	1966	1957	1939

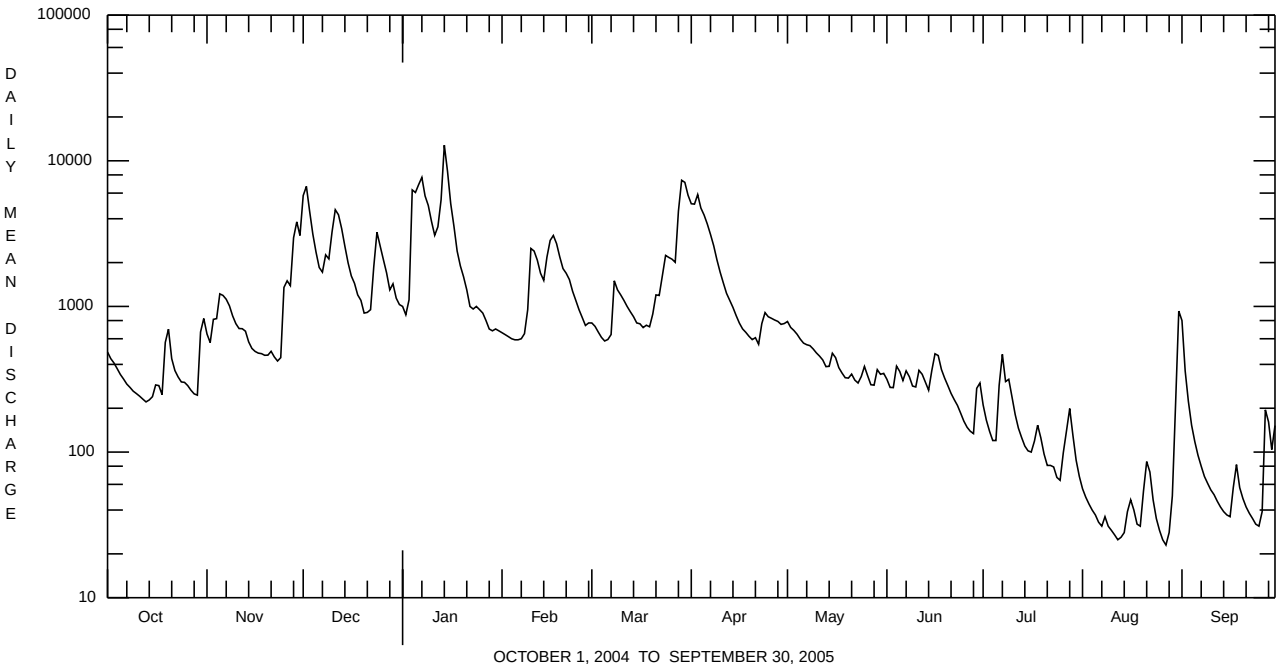
e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01543500 SINNEMAHONING CREEK AT SINNEMAHONING, PA--Continued

SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	671181		400041			
ANNUAL MEAN	1834		1096		1148	
HIGHEST ANNUAL MEAN					1997	2004
LOWEST ANNUAL MEAN					705	1999
HIGHEST DAILY MEAN	**e**38000	Sep 18	12800	Jan 14	44000	Jun 23 1972
LOWEST DAILY MEAN	149	Jul 11	23	Aug 27	1.4	Sep 3 1939
ANNUAL SEVEN-DAY MINIMUM	215	Jun 28	29	Aug 8	4.2	Aug 29 1939
MAXIMUM PEAK FLOW			15200	Jan 14	**a**60800	Jun 23 1972
MAXIMUM PEAK STAGE			9.68	Jan 14	21.78	Jun 23 1972
INSTANTANEOUS LOW FLOW					1.2	Sep 4 1939
ANNUAL RUNOFF (CFSM)	2.68		1.60		1.68	
ANNUAL RUNOFF (INCHES)	36.45		21.72		22.77	
10 PERCENT EXCEEDS	4150		3070		2780	
50 PERCENT EXCEEDS	1030		550		574	
90 PERCENT EXCEEDS	322		50		71	

a From rating curve extended above 31,000 ft^3/s on basis of slope-area measurement at gage height 21.58 ft.
e Estimated.



01543500 SINNEMAHONING CREEK AT SINNEMAHONING, 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 unf lab, µS/cm 25 degC (90095)	Specif. conductance, wat unf 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													
29...	1435	1028	9813	3750	40	12.4	7.0	6.8	61	60	6.5	21	5.5
JAN 2005													
26...	1230	1028	9813	E900	40	15.5	6.9	7.1	89	78	.1	29	7.2
MAR													
23...	0715	1028	9813	1570	40	12.2	6.8	7.1	83	82	4.4	27	7.0
MAY													
04...	1115	1028	9813	641	40	12.0	7.3	7.0	78	76	7.7	26	6.8
JUL													
27...	0830	1028	9813	113	40	6.8	7.5	7.6	123	128	26.0	41	10.3
SEP													
08...	1115	1028	9813	67	40	7.7	7.5	6.6	131	135	21.1	46	11.9

Date	Magnesium, water, unfltrd recoverable, mg/L (00927)	ANC, wat unf 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)	Orthophosphate, 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)
NOV 2004													
29...	1.9	9	13.2	56	10	<.020	.31	<.040	.01	.016	.47	1.5	360
JAN 2005													
26...	2.6	9	22.8	66	16	.150	.34	<.040	.02	<.010	.46	.7	<200
MAR													
23...	2.5	8	19.9	80	<2	.030	.28	<.040	<.01	<.010	.26	.8	200
MAY													
04...	2.3	8	19.4	86	4	<.020	.24	<.040	<.01	<.010	.30	--	<200
JUL													
27...	3.7	16	28.0	78	<2	<.020	.09	<.040	<.01	<.010	.14	--	<200
SEP													
08...	3.8	15	32.1	96	<2	.030	<.04	<.040	<.01	.010	.13	--	<200

Date	Copper, water, unfltrd recoverable, µg/L (01042)	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)
NOV 2004						
29...	<10	560	<1.0	90	<50	<10
JAN 2005						
26...	<10	150	<1.0	120	<50	40
MAR						
23...	<10	220	<1.0	90	<50	10
MAY						
04...	<10	50	<1.0	60	<50	<10
JUL						
27...	<10	60	<1.0	40	<50	<10
SEP						
08...	<10	40	<1.0	30	<50	<10

WEST BRANCH SUSQUEHANNA RIVER BASIN

01543500 SINNEMAHONING CREEK AT SINNEMAHONING, 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	10/25/04
Benthic macroinvertebrate	Count
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	2
Arthropoda	
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
Acentrella	5
Heptageniidae	
Epeorus	4
Leucrocuta	9
Stenonema	5
Isonychiidae	
Isonychia	47
Leptophlebiidae	
Paraleptophlebia	1
Plecoptera (STONEFLIES)	
Taeniopterygidae	
Taenionema	6
Taeniopteryx	3
Trichoptera (CADDISFLIES)	
Glossosomatidae	
Protoptila	2
Hydropsychidae	
Hydropsyche	18
Philopotamidae	
Chimarra	2
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
Optioservus	4
Diptera (TRUE FLIES)	
Ceratopogonidae (BITING MIDGES)	1
Chironomidae (MIDGES)	2
Total Organisms	111
Total Taxa	15