

## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552500 MUNCY CREEK NEAR SONESTOWN, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 41°21'25", long 76°32'06", Sullivan County, Hydrologic Unit 02050206, on right bank 150 ft downstream from Slip Run, 185 ft downstream from bridge on SR 2002, and 1.2 mi east of Sonestown.

**DRAINAGE AREA.**--23.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

**REVISED RECORDS.**--WSP 1502: 1941-42; WDR PA-00-2: 1942, 1946, 1951-52, 1959, 1964, 1972, 1975, 1977-79, 1984, 1986, 1988, 1991, 1993-94, 1996-97(P).

**GAGE.**--Water-stage recorder. Datum of gage is 1,025.01 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 31, 1941, nonrecording gage at same site and datum.

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

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Flood in March 1936 reached a stage of about 9.3 ft, discharge not determined.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 1,100 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)
Oct. 12	0630	*1,860	*5.88	Sept. 23	0430	1,210	4.86
Mar. 20	2100	1,210	4.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	43	39	109	e14	38	83	23	242	20	35	40
2	20	38	33	147	e15	37	120	23	145	17	46	163
3	17	33	e30	97	e14	e34	112	22	101	16	159	121
4	15	31	e32	80	e42	57	93	20	89	14	80	228
5	19	29	e32	66	e50	31	119	19	70	12	76	122
6	14	48	e28	59	e34	29	91	19	56	11	71	80
7	12	38	e28	52	e28	e28	79	18	69	15	59	58
8	11	34	e24	49	e24	30	70	20	61	15	83	45
9	9.8	32	e22	50	e23	27	64	18	49	14	188	37
10	9.6	31	e30	50	e22	e28	63	17	40	13	157	31
11	72	32	42	e43	e21	e30	132	20	38	172	216	26
12	930	52	76	e40	e19	25	139	27	45	44	205	23
13	230	66	49	e36	e18	23	104	23	40	28	127	24
14	128	53	155	e34	e17	e24	84	21	33	22	90	26
15	86	49	113	e32	e16	25	70	19	29	19	64	23
16	318	50	91	e30	e20	59	60	21	24	19	164	28
17	269	138	70	e28	e22	181	53	26	22	16	148	20
18	143	118	e60	e23	e28	256	46	22	28	17	89	18
19	105	95	54	e26	e24	220	42	20	24	17	65	24
20	81	86	197	e26	e18	404	37	18	53	13	51	31
21	62	83	156	e28	e17	533	34	19	395	13	40	22
22	50	121	112	e24	e20	317	38	18	207	69	34	19
23	42	114	88	e22	e120	206	34	17	127	45	28	374
24	36	93	71	e20	e90	146	30	49	81	35	24	129
25	34	80	67	e22	e68	115	28	48	57	33	21	81
26	119	67	56	e18	e48	111	30	47	43	26	19	59
27	75	60	48	e24	e44	98	29	40	35	46	18	49
28	62	51	e44	e22	43	77	26	39	29	109	16	55
29	54	46	39	e20	---	96	25	50	25	54	15	41
30	50	43	36	e18	---	115	24	37	22	39	18	34
31	47	---	37	e15	---	94	---	45	---	31	15	---
TOTAL	3145.4	1854	1959	1310	919	3494	1959	825	2279	1014	2421	2031
MEAN	101	61.8	63.2	42.3	32.8	113	65.3	26.6	76.0	32.7	78.1	67.7
MAX	930	138	197	147	120	533	139	50	395	172	216	374
MIN	9.6	29	22	15	14	23	24	17	22	11	15	18
CFSM	4.26	2.60	2.66	1.78	1.38	4.74	2.74	1.12	3.19	1.37	3.28	2.84
IN.	4.92	2.90	3.06	2.05	1.44	5.46	3.06	1.29	3.56	1.58	3.78	3.17

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

MEAN	33.1	56.1	61.3	50.7	53.7	85.6	87.8	59.5	31.6	18.3	17.7	22.5
MAX	127	140	161	167	236	168	220	156	240	93.0	95.3	167
(WY)	1977	1973	1974	1976	1981	1964	1993	1946	1972	1972	1994	1975
MIN	1.44	2.62	8.57	6.60	7.70	25.4	20.9	11.9	4.93	2.21	1.60	0.73
(WY)	1965	1965	1999	1981	1987	1981	1946	1941	1991	1999	1957	1964

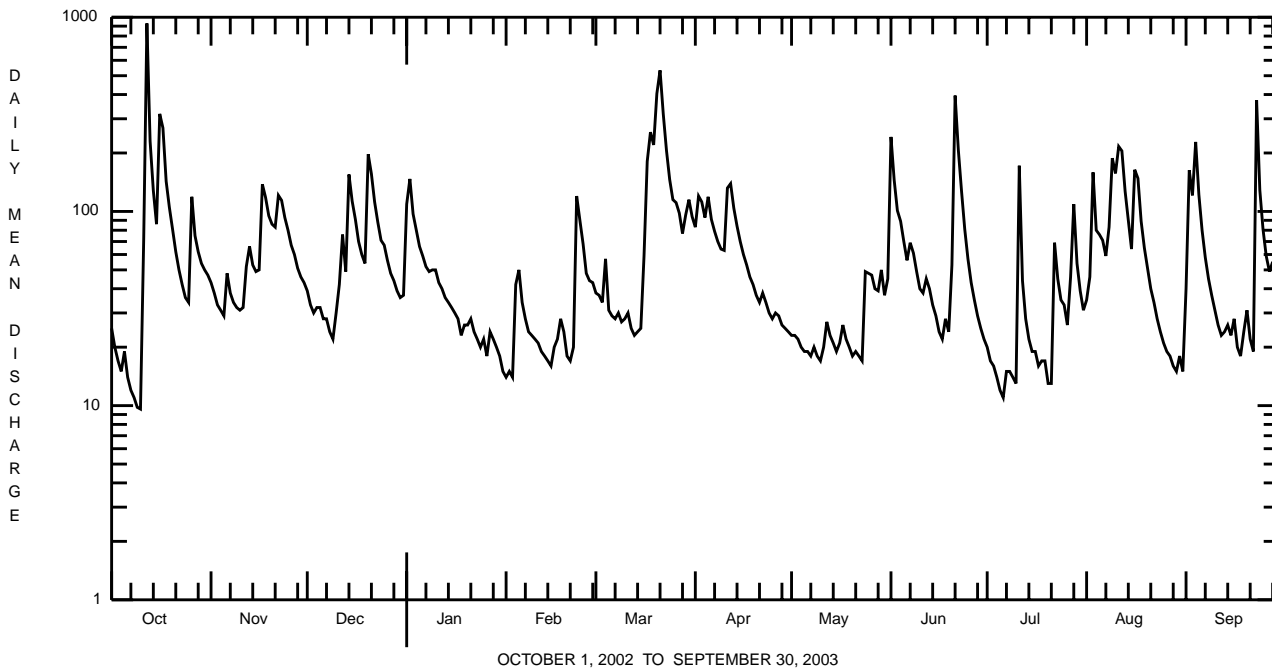
e Estimated.

WEST BRANCH SUSQUEHANNA RIVER BASIN

01552500 MUNCY CREEK NEAR SONESTOWN, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	18912.6		23210.4			
ANNUAL MEAN	51.8		63.6		48.1	
HIGHEST ANNUAL MEAN					77.3	1978
LOWEST ANNUAL MEAN					22.1	1965
HIGHEST DAILY MEAN	930	Oct 12	930	Oct 12	3910	Jun 22 1972
LOWEST DAILY MEAN	1.4	Sep 13,14	9.6	Oct 10	0.20	Sep 11 1964
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 8	13	Oct 4	0.31	Sep 8 1964
MAXIMUM PEAK FLOW			a1860	Oct 12	a4630	Jun 22 1972
MAXIMUM PEAK STAGE			5.88	Oct 12	8.94	Jun 22 1972
INSTANTANEOUS LOW FLOW					0.10	Sep 11 1964
ANNUAL RUNOFF (CFSM)	2.18		2.67		2.02	
ANNUAL RUNOFF (INCHES)	29.56		36.28		27.45	
10 PERCENT EXCEEDS	107		128		102	
50 PERCENT EXCEEDS	35		39		26	
90 PERCENT EXCEEDS	2.9		18		4.4	

a From rating curve extended above 900 ft<sup>3</sup>/s.



## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552500 MUNCY CREEK NEAR SONESTOWN, PA--Continued  
(Pennsylvania Water-Quality Network Station)

## WATER-QUALITY RECORDS

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

REMARKS.--Other data for the Water-Quality Network can be found on pages 368-434.

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 2002 TO SEPTEMBER 2003

Date	Time	Agency col- lecting sample, code (00027)	Agency ana- lyzing sample, code (00028)	Instan- taneous dis- charge, cfs (00061)	Sam- pling method, code (82398)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd µS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Calcium water unfltrd recover- able, mg/L (00916)	Magnes- ium, water, fltrd, mg/L (00925)	
Date		Magnes- ium, water, unfltrd recover- able, mg/L (00927)	ANC, wat unfl- fixed end pt, lab, mg/L as CaCO3 (00417)	Acidity water, unfltrd heated, mg/L as CaCO3 (70508)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, unfltrd mg/L (00951)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 105degC wat flt mg/L (00515)	Residue total at 105 deg. C, sus- pended, 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- phos- phate, water, unfltrd mg/L as P (70507)	Phos- phorus, water, unfltrd mg/L (00665)
OCT 2002														
10...	0900	1028	9813	9.4	30	10.9	7.6	73	12.2	29	9.39	9.5	1.18	
NOV														
13...	1150	1028	9813	64	30	11.8	7.5	55	7.8	20	6.81	6.7	.90	
DEC														
11...	0900	1028	9813	25	30	13.0	7.2	56	.1	21	7.20	6.8	.89	
MAR 2003														
17...	1045	1028	9813	89	30	12.8	7.0	71	1.8	20	--	6.5	.85	
APR														
15...	0830	1028	9813	73	30	12.5	7.2	54	5.7	19	5.59	6.1	.81	
MAY														
08...	0900	1028	9813	21	30	10.5	7.7	52	11.6	23	7.36	7.5	.94	
JUN														
11...	0830	1028	9813	35	30	9.9	7.1	58	12.8	21	6.76	6.8	.91	
JUL														
24...	0900	1028	9813	32	30	9.8	7.2	66	16.3	25	7.89	8.1	1.06	
AUG														
06...	0700	1028	9813	73	30	9.8	7.1	56	15.6	20	6.66	6.5	.86	
SEP														
03...	0830	1028	9813	93	30	9.9	7.2	55	15.1	18	5.71	6.0	.73	

## WEST BRANCH SUSQUEHANNA RIVER BASIN

## 01552500 MUNCY CREEK NEAR SONESTOWN, PA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Total nitrogen, water, unfltrd mg/L (00600)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Fecal coliform, M-FC col/100 mL (31616)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recoverable, µg/L (01042)	Iron, water, fltrd, µg/L (01046)	Iron, water, unfltrd recoverable, µg/L (01045)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recoverable, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Manganese, water, unfltrd recoverable, µg/L (01055)
OCT 2002 10...	.17	.8	20	16	18	<4	<4	<20	<20	<1.0	<1.0	2.6	3.3
NOV 13...	.43	.9	40	32	45	<4	<4	<20	<20	<1.0	<1.0	<2.0	<2
DEC 11...	.65	.5	<20	21	22	<4	<4	<20	<20	<1.0	<1.0	<2.0	<2
MAR 2003 17...	.41	--	20	<200	<200	6410	<10	<20	40	--	<1.0	<10	<10
APR 15...	.53	.7	<20	28	33	<4	<4	<20	20	<1.0	<1.0	<2.0	2.1
MAY 08...	.28	1.3	40	22	34	<4	<4	<20	<20	<1.0	<1.0	<2.0	<2
JUN 11...	.21	.8	<20	<10	19	<4	<4	<20	<20	<1.0	<1.0	<2.0	<2
JUL 24...	.14	.6	80	13	24	<4	<4	<20	30	<1.0	<1.0	<2.0	2.7
AUG 06...	.14	.7	100	23	26	<4	<4	<20	40	<1.0	<1.0	2.3	3.9
SEP 03...	.18	.8	20	25	49	<4	<4	30	80	<1.0	<1.0	<2.0	5.2

Date	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recoverable, µg/L (01067)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recoverable, µg/L (01092)	Phenolic compounds, water, unfltrd µg/L (32730)
OCT 2002 10...	<4.0	<4.0	<5.0	<5.0	<5
NOV 13...	<4.0	<4.0	<5.0	<5.0	<5
DEC 11...	<4.0	<4.0	<5.0	<5.0	<5
MAR 2003 17...	<50	<50	<10	<10	<5
APR 15...	<4.0	<4.0	<5.0	10	<5
MAY 08...	<4.0	<4.0	<5.0	<5.0	<5
JUN 11...	<4.0	<4.0	<5.0	<5.0	<5
JUL 24...	<4.0	<4.0	5.2	<5.0	<5
AUG 06...	<4.0	<4.0	<5.0	<5.0	<5
SEP 03...	<4.0	<4.0	<5.0	<5.0	<5

## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552500 MUNCY CREEK NEAR SONESTOWN, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES

REMARKS.--Samples were collected using rapid bioassessment protocols for benthic macroinvertebrates using a D-Frame net with a mesh size of 500 µm. Samples represent counts per 100 (approximate) subsamples.

Date	Count
Benthic Macroinvertebrate	
Annelida	
Oligochaeta (AQUATIC EARTHWORMS)	
Lumbriculida	
Lumbriculidae	1
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Baetis</u> sp	3
Ephemerellidae	
<u>Drunella</u> sp	12
<u>Ephemerella</u> sp	6
Heptageniidae	
<u>Cinygmula</u> sp	9
<u>Epeorus</u> sp	52
<u>Rhithrogena</u> sp	5
<u>Stenonema</u> sp	2
Isonychiidae	
<u>Isonychia</u> sp	4
Leptophlebiidae	
<u>Paraleptophlebia</u> sp	36
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Gomphidae	
<u>Lanthus</u> sp	1
Plecoptera (STONEFLIES)	
Chloroperlidae	
<u>Sweltsa</u> sp	5
Perlidae	
<u>Agnatina</u> sp	2
Perlodidae	
<u>Isoperla</u> sp	8
Taeniopterygidae	
<u>Taenionema</u> sp	7
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<u>Cheumatopsyche</u> sp	1
<u>Hydropsyche</u> sp	1
Lepidostomatidae	
<u>Lepidostoma</u> sp	5
Rhyacophilidae	
<u>Rhyacophila</u> sp	2
Uenoidae	
<u>Neophylax</u> sp	11

## WEST BRANCH SUSQUEHANNA RIVER BASIN

01552500 MUNCY CREEK NEAR SONESTOWN, PA--Continued

BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	3/19/02
Benthic Macroinvertebrate	Count
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	42
Empididae (DANCE FLIES)	
<u>Chelifera</u> sp	1
Simuliidae (BLACK FLIES)	
<u>Prosimulium</u> sp	1
Tipulidae (CRANE FLIES)	
<u>Hexatoma</u> sp	4
Total Organisms	222