

## WEST CONEWAGO CREEK BASIN

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA  
(Pennsylvania Water-Quality Network Station)

**LOCATION.**--Lat 40°04'56", long 76°43'13", York County, Hydrologic Unit 02050306, on left bank 500 ft upstream from bridge on State Highway 181, 0.6 mi downstream from Little Conewago Creek, and 1.5 mi north of Manchester.

**DRAINAGE AREA.**--510 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--October 1928 to current year. Prior to October 1931, published as Conewago Creek near Manchester.

**REVISED RECORDS.**--WSP 741: Drainage area. WSP 1502: 1930, 1936.

**GAGE.**--Water-stage recorder. Datum of gage is 263.68 ft above National Geodetic Vertical Datum of 1929.

**REMARKS.**--Records fair except those for estimated daily discharges, which are poor. Occasional slight regulation since October 1959 by Conewago Lake about 13 miles upstream, capacity, 3,570 acre-ft. Gage height record affected at times by backwater from the Susquehanna River. Satellite telemetry at station.

**PEAK DISCHARGES FOR CURRENT YEAR.**--Peak discharges greater than a base discharge of 10,800 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)
Mar. 21	0845	13,700	14.02	Sept. 23	2030	*14,400	*14.47
June 8	0445	12,900	13.48				

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	124	1320	401	2000	e230	656	1800	380	2160	419	132	226
2	93	748	356	7750	e260	805	1420	363	1600	372	145	920
3	76	547	351	3940	e280	3340	1130	390	1130	365	258	950
4	63	438	327	4190	e300	2150	882	333	5570	407	204	1180
5	54	378	228	2360	e500	1330	855	297	5240	367	217	2270
6	48	501	247	1790	e420	3650	916	316	2800	329	469	694
7	53	813	252	1570	e280	4860	767	617	4850	328	500	432
8	57	472	263	1390	e260	2060	1150	809	9020	587	304	337
9	52	367	265	1910	e250	3110	2400	1590	3300	330	211	289
10	50	320	239	1570	e270	4860	3100	1590	2250	276	307	258
11	373	304	e580	1130	e230	2010	2100	1440	1630	682	478	233
12	2030	427	4490	843	e200	1420	2340	1010	1390	345	2550	213
13	941	1830	3200	719	e190	1970	1530	723	1680	274	868	207
14	469	1000	5520	655	e180	3990	1130	571	1410	228	532	565
15	303	635	4430	526	e190	3310	959	474	1160	207	335	373
16	452	595	2440	e420	e130	3870	847	849	876	187	359	541
17	2510	2710	1500	e390	e90	3910	749	4290	706	173	3140	587
18	958	4340	1030	e360	e160	3350	669	1980	640	165	1880	432
19	559	1910	864	e350	e180	2460	670	1520	657	159	673	2730
20	387	1090	1870	e360	e290	3070	715	1050	1030	155	468	1650
21	309	923	2570	e310	e280	10700	608	849	3840	165	376	798
22	251	1690	1250	e270	e800	3940	585	772	5780	439	340	538
23	205	1460	987	e230	e3500	2500	650	663	2880	408	315	8220
24	179	906	787	e220	4650	1830	519	794	1550	778	263	6370
25	169	715	760	e230	2580	1450	435	1290	1090	533	231	1790
26	718	618	852	e240	1660	1160	500	2360	866	280	214	1330
27	1190	593	761	e230	1070	1520	650	2920	718	210	298	1080
28	514	595	643	e215	763	1190	536	4150	610	183	270	1540
29	391	493	591	e220	---	999	438	3820	531	165	234	1540
30	1680	423	625	e220	---	1800	410	1950	471	147	267	824
31	2660	---	670	e225	---	2860	---	1370	---	133	223	---
TOTAL	17918	29161	39349	36833	20193	86130	31460	41530	67435	9796	17061	39117
MEAN	578	972	1269	1188	721	2778	1049	1340	2248	316	550	1304
MAX	2660	4340	5520	7750	4650	10700	3100	4290	9020	778	3140	8220
MIN	48	304	228	215	90	656	410	297	471	133	132	207
CFSM	1.13	1.91	2.49	2.33	1.41	5.45	2.06	2.63	4.41	0.62	1.08	2.56
IN.	1.31	2.13	2.87	2.69	1.47	6.28	2.29	3.03	4.92	0.71	1.24	2.85

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

MEAN	276	459	671	782	949	1282	977	659	443	253	221	273
MAX	1783	1534	2578	3126	2526	4510	3273	2874	4445	1419	2423	3862
(WY)	1977	1933	1997	1996	1998	1994	1993	1989	1972	1969	1933	1975
MIN	9.71	14.7	43.3	37.7	86.2	345	253	135	52.7	12.2	13.3	12.0
(WY)	1942	1932	1966	1981	1934	1931	1995	1941	1965	1966	1930	1964

e Estimated.

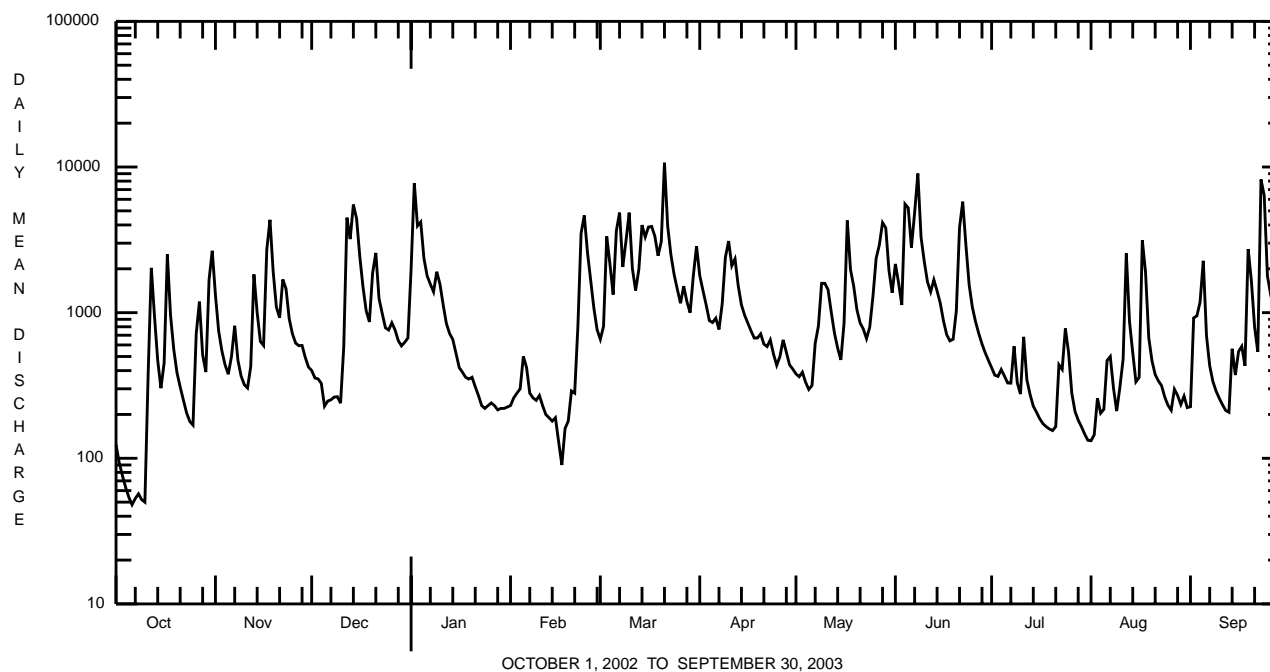
## WEST CONEWAGO CREEK BASIN

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, PA--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	138945.2		435983		602	
ANNUAL MEAN	381		1194		1194	
HIGHEST ANNUAL MEAN					2003	
LOWEST ANNUAL MEAN					154	
HIGHEST DAILY MEAN	5520	Dec 14	10700	Mar 21	64000	Sep 26 1975
LOWEST DAILY MEAN	5.6	Aug 22,23	48	Oct 6	2.0	Aug 8 1930
ANNUAL SEVEN-DAY MINIMUM	7.7	Aug 17	54	Oct 4	3.9	Aug 3 1966
MAXIMUM PEAK FLOW			14400	Sep 23	<b>a</b> 96200	Sep 26 1975
MAXIMUM PEAK STAGE			14.47	Sep 23	<b>b</b> 32.11	Sep 26 1975
INSTANTANEOUS LOW FLOW			45	Oct 10	1.9	Oct 13 1941
ANNUAL RUNOFF (CFSM)	0.75		2.34		1.18	
ANNUAL RUNOFF (INCHES)	10.13		31.80		16.04	
10 PERCENT EXCEEDS	930		3080		1310	
50 PERCENT EXCEEDS	161		650		250	
90 PERCENT EXCEEDS	22		209		46	

**a** From rating curve extended above 45,000 ft<sup>3</sup>/s on basis of slope-area computation at gage height 30.26 ft.

**b** From floodmark.



## WEST CONEWAGO CREEK BASIN

01574000 WEST CONEWAGO CREEK NEAR MANCHESTER, 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 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)	Specific conductance, wat unfltrd $\mu$ S/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, unfltrd recover -able, mg/L (00916)	Magnesium, water, unfltrd recover -able, mg/L (00927)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (00417)
NOV 2002	26...	1028	9813	630	40	11.5	7.6	278	6.2	110	29.0	8.3	68
JAN 2003	21...	1028	9813	E310	40	14.7	6.8	310	.2	120	33.1	9.7	68
MAR	17...	1028	9813	3980	40	12.2	7.4	147	5.6	59	15.5	4.9	37
MAY	08...	1028	9813	697	40	7.2	7.3	241	16.6	96	26.9	7.0	66
JUL	10...	1028	9813	273	40	5.2	7.6	277	24.4	110	29.6	8.1	83
SEP	03...	1028	9813	933	40	6.5	7.8	288	21.9	100	27.6	8.3	82

Date	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)	Total nitrogen, water, unfltrd mg/L (00600)	Organic carbon, water, unfltrd mg/L (00680)	Aluminum, water, unfltrd recover -able, $\mu$ g/L (01105)	Copper, water, unfltrd recover -able, $\mu$ g/L (01042)	Iron, water, unfltrd recover -able, $\mu$ g/L (01045)	
NOV 2002	25.4	220	<2	<.020	3.98	<.040	.06	.088	4.1	4.6	<200	<10	210	
JAN 2003	25.2	244	6	<.020	4.88	<.040	.04	.041	5.3	1.9	<200	<10	120	
MAR	17...	11.8	116	76	.150	1.60	<.040	.12	.193	2.4	5.3	2300	<10	2080
MAY	08...	17.8	182	52	.140	1.47	<.040	.14	.141	2.5	5.7	2400	<10	1870
JUL	10...	18.6	190	2	<.020	2.13	<.040	.09	.107	2.6	3.7	<200	<10	250
SEP	03...	16.4	274	26	.060	1.97	<.040	.18	.253	2.8	6.2	1800	<10	1570

Date	Lead, water, unfltrd recover -able, $\mu$ g/L (01051)	Manganese, water, unfltrd recover -able, $\mu$ g/L (01055)	Nickel, water, unfltrd recover -able, $\mu$ g/L (01067)	Zinc, water, unfltrd recover -able, $\mu$ g/L (01092)
NOV 2002	<1.0	<10	<50	<10
JAN 2003	<1.0	<10	<50	<10
MAR	1.8	90	<50	10
MAY	1.6	90	<50	10
JUL	<1.0	30	<50	<10
SEP	1.9	90	<50	130

## WEST CONEWAGO CREEK BASIN

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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	8/27/02
Benthic Macroinvertebrate	Count
Platyhelminthes	
Turbellaria (FLATWORMS)	
Tricladida	
Planariidae	5
Mollusca	
Gastropoda (SNAILS)	
Basommatophora	
Ancylidae	
<u>Ferrissia</u> sp	2
Bivalvia (CLAMS)	
Veneroida	
Corbiculidae	
<u>Corbicula fluminea</u>	3
Sphaeriidae	
<u>Sphaerium</u> sp	2
Arthropoda	
Acariformes	
Hydrachnidia (WATER MITES)	1
Insecta	
Ephemeroptera (MAYFLIES)	
Baetidae	
<u>Baetis</u> sp	10
<u>Heterocloeon</u> sp	1
Caenidae	
<u>Caenis</u> sp	10
Heptageniidae	
<u>Stenonema</u> sp	1
Isonychiidae	
<u>Isonychia</u> sp	5
Potamanthidae	
<u>Anthopotamus</u> sp	1
Tricorythidae	
<u>Tricorythodes</u> sp	9
Odonata (DRAGONFLIES AND DAMSELFLIES)	
Coenagrionidae	
<u>Argia</u> sp	2
Plecoptera (STONEFLIES)	
Perlidae	
<u>Agnatina</u> sp	1
Trichoptera (CADDISFLIES)	
Hydropsychidae	
<u>Cheumatopsyche</u> sp	33
<u>Hydropsyche</u> sp	2
<u>Macrostemum</u> sp	2
Philopotamidae	
<u>Chimarra</u> sp	20

## WEST CONEWAGO CREEK BASIN

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BIOLOGICAL DATA  
BENTHIC MACROINVERTEBRATES--Continued

Date	8/27/02
Benthic Macroinvertebrate	Count
Coleoptera (BEETLES)	
Elmidae (RIFFLE BEETLES)	
<u>Optioservus</u> sp	6
<u>Oulimnius</u> sp	1
<u>Stenelmis</u> sp	14
Psephenidae (WATER PENNIES)	
<u>Psephenus</u> sp	1
Diptera (TRUE FLIES)	
Chironomidae (MIDGES)	50
Total Organisms	182