

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 41°19'50", long 79°12'33", Clarion County, Hydrologic Unit 05010005, on right bank at downstream side of bridge on State Highway 36 at Cooksburg, 300 ft downstream from Toms Run, and 2.7 mi upstream from Cathers Run.

DRAINAGE AREA.--807 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for October, November 1938, published in WSP 1305.

REVISED RECORDS.--WSP 1305: 1939 (M). WDR PA-85-3: 1979 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,147.00 ft above National Geodetic Vertical Datum of 1929. Prior to May 17, 1939, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since June 1952 by East Branch Clarion River Lake (station 03027000) and at low flow by industrial plants above station. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1935, 19 ft, Mar. 17, 1936, from floodmarks, discharge, about 56,000 ft³/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 10,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
May 14	0100	*16,100	*11.60	June 15	0100	11,800	10.16

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	331	1650	e821	4680	1060	3470	3110	1530	628	359	257
2	252	322	1370	e772	4950	1010	2940	3870	1230	531	418	252
3	240	410	1100	e724	3740	1430	2660	4750	1020	486	346	254
4	225	611	946	e686	3080	2210	2510	3330	921	444	319	256
5	230	468	843	e676	2500	1620	2030	2670	906	413	298	266
6	234	386	769	e657	2070	1570	1800	2270	2170	386	302	258
7	226	359	707	e638	1800	1510	1620	2030	4500	370	302	239
8	225	338	656	e609	1610	1380	1460	1780	2940	357	269	237
9	235	325	643	596	1430	1260	1390	1900	2310	349	266	230
10	228	317	638	580	1260	1250	1590	3490	1910	363	261	227
11	229	308	595	582	2260	1250	1410	2880	1570	383	255	241
12	236	295	552	598	2510	1090	1200	4190	1350	343	253	229
13	230	283	539	579	2040	1030	1230	14700	1220	325	252	227
14	233	270	643	556	1730	981	2510	13700	4900	319	259	225
15	256	262	1110	535	1600	925	6470	10200	8280	310	258	257
16	327	269	1170	558	1530	969	5060	6940	5350	304	258	801
17	321	266	1210	539	1460	1110	3840	5800	4010	292	306	611
18	337	264	6540	518	1310	972	3200	7400	3430	287	357	366
19	271	262	4800	475	1170	995	2760	7250	2800	310	319	319
20	234	287	3370	409	1100	1010	2460	5640	2330	317	283	338
21	217	357	2620	e416	1330	1530	2250	4670	2000	315	269	337
22	237	355	2090	e445	1650	1490	1960	3990	1670	298	267	324
23	274	317	1750	e455	1390	1330	1680	3250	1340	342	323	313
24	752	296	2200	630	1200	1350	1430	2420	1100	621	469	304
25	1280	412	2150	1960	1130	1390	1320	2050	962	449	420	296
26	688	1460	1700	1800	1130	1640	1330	1940	815	361	336	296
27	516	1040	1500	1560	1290	5780	1260	1850	733	542	271	399
28	464	795	e1310	1500	1210	4250	1590	1480	968	457	287	1290
29	433	780	e1180	1520	---	3850	4080	1250	941	400	280	826
30	377	1070	e1050	2190	---	4590	3310	1270	736	479	272	447
31	341	---	e898	3500	---	4200	---	1650	---	419	264	---
TOTAL	10634	13515	48299	28084	54160	56032	71820	133720	65942	12200	9398	10922
MEAN	343	450	1558	906	1934	1807	2394	4314	2198	394	303	364
MAX	1280	1460	6540	3500	4950	5780	6470	14700	8280	628	469	1290
MIN	217	262	539	409	1100	925	1200	1250	733	287	252	225
CFSM	0.43	0.56	1.93	1.12	2.40	2.24	2.97	5.35	2.72	0.49	0.38	0.45
IN.	0.49	0.62	2.23	1.29	2.50	2.58	3.31	6.16	3.04	0.56	0.43	0.50

e Estimated.

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, PA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2002, BY WATER YEAR (WY) (SINCE REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	773	1303	1770	1586	1771	2711	2587	1878	1204	764	615	621
MAX (WY)	2357	3906	3821	5654	4138	6185	4721	4314	5307	2565	2732	1995
MIN (WY)	1991	1986	1978	1952	1976	1979	1994	2002	1972	1992	1994	1992
MIN (WY)	86.6	204	150	211	369	764	1217	566	325	139	117	109
(WY)	1952	1961	1961	1961	1987	1969	1976	1985	1999	1952	1952	1952

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1952 - 2002

ANNUAL TOTAL		335270		514726								
ANNUAL MEAN		919		1410						1463		
HIGHEST ANNUAL MEAN										2066		1994
LOWEST ANNUAL MEAN										912		2001
HIGHEST DAILY MEAN			6810	Mar 22		14700	May 13		43200	Jun 23	1972	
LOWEST DAILY MEAN			217	Oct 21		217	Oct 21		59	Sep 14	1952	
ANNUAL SEVEN-DAY MINIMUM			229	Oct 4		229	Oct 4		67	Sep 8	1952	
MAXIMUM PEAK FLOW						16100	May 14		a53300	Jun 23	1972	
MAXIMUM PEAK STAGE						11.60	May 14		b18.84	Jun 23	1972	
INSTANTANEOUS LOW FLOW						209	Oct 21		57	Sep 14	1952	
ANNUAL RUNOFF (CFSM)			1.14			1.75				1.81		
ANNUAL RUNOFF (INCHES)			15.45			23.73				24.64		
10 PERCENT EXCEEDS			2200			3390			3200			
50 PERCENT EXCEEDS			512			821			898			
90 PERCENT EXCEEDS			257			259			295			

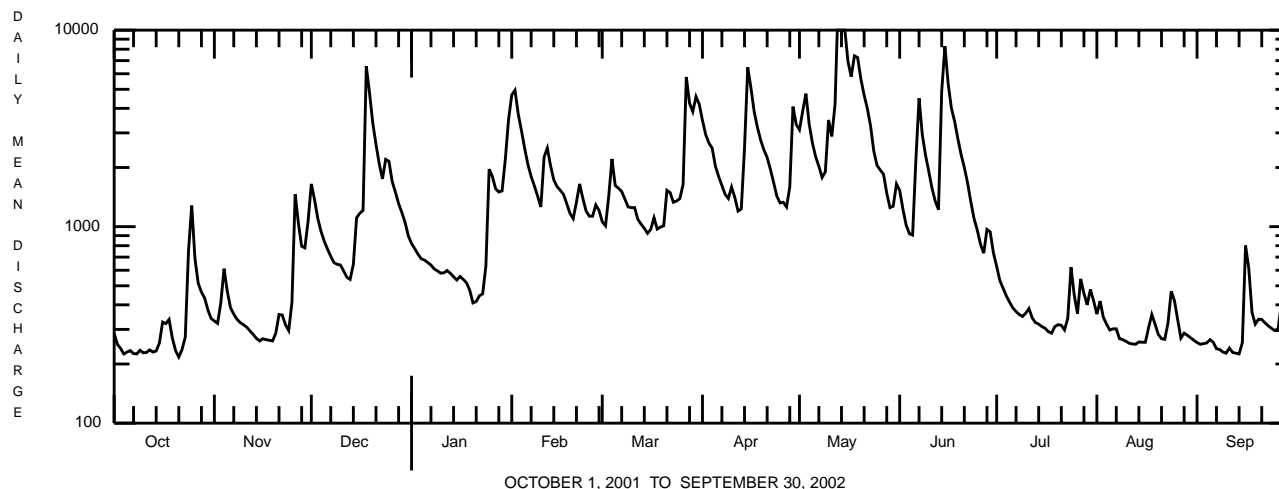
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1951, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	590	1085	1475	1891	1961	3055	2969	1971	1154	579	288	348
MAX (WY)	2134	4241	3050	3962	3881	6815	6288	3965	2789	1765	580	1078
MIN (WY)	1946	1951	1941	1950	1951	1945	1940	1943	1946	1942	1950	1945
MIN (WY)	113	170	337	417	764	1610	725	606	261	158	94.2	82.8
(WY)	1950	1950	1944	1944	1941	1949	1946	1941	1939	1949	1944	1943

SUMMARY STATISTICS WATER YEARS 1939 - 1951

ANNUAL MEAN	1444											
HIGHEST ANNUAL MEAN	2023					1951						
LOWEST ANNUAL MEAN	953					1944						
HIGHEST DAILY MEAN	24600				Dec 30	1942						
LOWEST DAILY MEAN	43				Aug 30	1939						
ANNUAL SEVEN-DAY MINIMUM	50				Aug 29	1939						
MAXIMUM PEAK FLOW	32700				Jul 19	1942						
MAXIMUM PEAK STAGE	14.96				Jul 19	1942						
INSTANTANEOUS LOW FLOW	41				Aug 30	1939						
ANNUAL RUNOFF (CFSM)	1.79											
ANNUAL RUNOFF (INCHES)	24.31											
10 PERCENT EXCEEDS	3350											
50 PERCENT EXCEEDS	793											
90 PERCENT EXCEEDS	140											

- a From rating curve extended above 40,000 ft³/s.
- b From peak-stage indicator.



OCTOBER 1, 2001 TO SEPTEMBER 30, 2002

CLARION RIVER BASIN

03029500 CLARION RIVER AT COOKSBURG, 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 210-233.

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 2001 TO SEPTEMBER 2002

Date	Time	AGENCY ANA-LYZING SAMPLE NUMBER (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	ANC WATER UNFLTRD FET LAB (MG/L AS CACO3) (00417)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
APR 2002 16...	1300	9813	4910	40	10.7	6.2	87	12.1	27	7.0	2.3	7	21.2
JUN 25...	0930	9813	1000	40	9.1	7.7	161	21.4	51	13.3	4.2	18	45.8
AUG 22...	1500	9813	260	40	8.8	8.2	344	26.1	69	19.1	5.2	42	87.1

Date	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA (MG/L AS N) (00610)	NITRO-GEN, NITRATE (MG/L AS N) (00620)	NITRO-GEN, NITRITE (MG/L AS N) (00615)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	COPPER, TOTAL RECOV-ERABLE (µG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (µG/L AS FE) (01045)	LEAD, TOTAL RECOV-ERABLE (µG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L AS MN) (01055)
APR 2002 16...	90	6	<.020	.24	<.040	.47	.02	.020	1.7	<10	550	<1.0	220
JUN 25...	<2	<2	<.020	.06	<.040	.11	.01	.020	2.3	<10	220	<1.0	90
AUG 22...	218	4	<.020	.17	<.040	.48	.02	.035	5.4	<10	330	<1.0	220

Date	NICKEL, TOTAL RECOV-ERABLE (µG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L AS ZN) (01092)
APR 2002 16...	<50	30
JUN 25...	<50	20
AUG 22...	<50	<10