

REDBANK CREEK BASIN

03032500 REDBANK CREEK AT ST. CHARLES, PA
(Pennsylvania Water-Quality Network Station)

LOCATION.--Lat 40°59'40", long 79°23'40", Armstrong County, Hydrologic Unit 05010006, on left bank 400 ft downstream from highway bridge on SR 1005 at St. Charles, 0.3 mi downstream from Leatherwood Creek, and 3 mi west of New Bethlehem.

DRAINAGE AREA.--528 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Annual maximums, water years 1910-18. October 1918 to current year. Monthly discharge only for some periods, published in WSP 1305. Figures of daily discharge for November 1920 to June 1921, published in WSP 523, are unreliable and should not be used.

REVISED RECORDS.--WSP 743: Drainage area. WSP 1385: 1919, 1936-39. WDR PA-72-1: 1923 (M), 1926 (M), 1928 (M), 1936, 1937 (M), 1938 (M), 1943, 1945 (P), 1952 (M), 1953 (M), 1955 (M), 1956 (P), 1958 (M), 1959 (M), 1964, 1966 (M). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 973.14 ft above National Geodetic Vertical Datum of 1929. Prior to July 10, 1940, nonrecording gage at site 500 ft upstream at datum 3.10 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Several measurements of water temperature were made during the year. U.S. Army Corps of Engineers satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 7,000 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Dec. 18	1615	8,920	10.25	Apr. 16	0630	9,080	10.33
Mar. 27	0345	9,800	10.66	May 14	0330	10,600	11.02
Apr. 15	0930	8,150	9.88	June 6	2400	*11,400	*11.35

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	79	145	1140	e442	3250	772	2170	e1730	796	299	263	79
2	72	141	950	e424	3020	764	1840	e2030	615	278	211	75
3	90	249	738	e422	2170	1430	1590	2030	463	280	262	70
4	55	323	634	e420	1720	1760	1380	1450	389	261	216	67
5	47	274	570	e418	1350	1210	1170	1190	545	246	188	63
6	46	213	536	e420	1130	1140	1050	1040	7120	221	170	60
7	43	177	512	e422	1000	1060	958	944	7070	202	149	57
8	41	158	483	e418	907	952	889	869	3670	190	128	53
9	43	151	502	412	808	855	859	1200	2110	306	114	52
10	44	142	518	e420	757	813	910	2570	1480	554	107	48
11	43	136	479	e478	1560	763	838	1780	1130	338	101	44
12	48	129	437	552	1610	692	736	1810	931	247	97	41
13	62	123	441	e510	1230	661	952	9030	857	202	102	39
14	65	119	524	e454	995	636	1940	8720	2050	182	92	39
15	80	116	730	e439	924	607	6350	5610	2990	170	86	71
16	97	115	789	e422	878	685	6670	3550	2190	157	86	728
17	117	112	1670	e408	833	781	3930	2630	1580	145	99	664
18	112	108	7260	e394	747	726	2690	4100	1220	139	138	317
19	107	108	4390	382	671	707	2020	3940	978	159	140	190
20	98	138	2660	352	664	838	1720	2830	754	183	123	144
21	86	152	1740	423	1030	1570	1500	2120	609	168	96	125
22	77	162	1270	461	1370	1380	1290	1720	512	147	84	119
23	93	149	1060	459	1160	1140	1100	1420	441	142	97	108
24	1180	136	e1050	859	984	1060	953	1210	403	173	331	94
25	1060	228	e992	2050	895	1070	873	1160	394	210	398	82
26	553	838	e914	1500	877	2640	842	989	328	201	255	80
27	348	743	e831	1150	975	7310	761	818	350	1030	178	256
28	254	592	e751	1010	903	4500	854	708	598	886	137	1110
29	211	681	e667	946	---	3180	2050	637	522	563	114	673
30	181	950	e511	1500	---	3200	1710	570	360	425	98	361
31	158	---	e462	2740	---	2710	---	592	---	364	87	---
TOTAL	5590	7808	36211	21707	34418	47612	52595	70997	43455	9068	4747	5909
MEAN	180	260	1168	700	1229	1536	1753	2290	1448	293	153	197
MAX	1180	950	7260	2740	3250	7310	6670	9030	7120	1030	398	1110
MIN	41	108	437	352	664	607	736	570	328	139	84	39
CFSM	0.34	0.49	2.21	1.33	2.33	2.91	3.32	4.34	2.74	0.55	0.29	0.37
IN.	0.39	0.55	2.55	1.53	2.42	3.35	3.71	5.00	3.06	0.64	0.33	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2002, BY WATER YEAR (WY)

MEAN	376	740	1072	1125	1216	1797	1505	1071	685	412	278	283
MAX	1385	2806	3151	4616	2707	5016	3337	2603	3887	2238	1498	2091
(WY)	1927	1922	1928	1937	1990	1936	1940	1919	1972	1996	1956	1996
MIN	40.3	50.9	75.9	96.8	179	358	367	180	123	61.1	33.5	29.2
(WY)	1931	1931	1961	1931	1934	1969	1925	1926	1936	1966	1930	1939

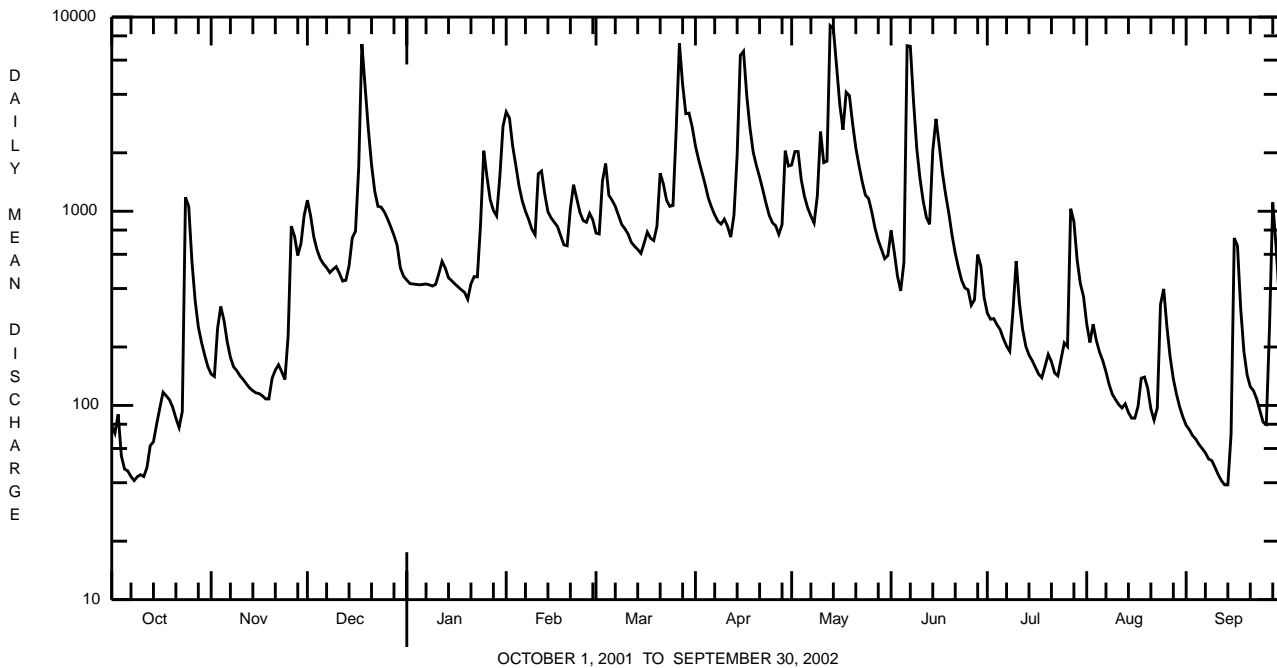
e Estimated.

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1919 - 2002	
ANNUAL TOTAL	225108		340117			
ANNUAL MEAN	617		932		878	
HIGHEST ANNUAL MEAN					1333	1996
LOWEST ANNUAL MEAN					430	1934
HIGHEST DAILY MEAN	7260	Dec 18	9030	May 13	28100	Jul 19 1996
LOWEST DAILY MEAN	37	Aug 9	39	Sep 13,14	20	Sep 28 1922
ANNUAL SEVEN-DAY MINIMUM	42	Jul 29	44	Oct 5	24	Aug 30 1939
MAXIMUM PEAK FLOW			11400	Jun 6	a 66300	Jul 19 1996
MAXIMUM PEAK STAGE			11.35	Jun 6	b 23.90	Jul 19 1996
INSTANTANEOUS LOW FLOW			38	Sep 13,14	c 19	Oct 1 1918
ANNUAL RUNOFF (CFSM)	1.17		1.76		1.66	
ANNUAL RUNOFF (INCHES)	15.86		23.96		22.58	
10 PERCENT EXCEEDS	1660		2050		2110	
50 PERCENT EXCEEDS	280		553		464	
90 PERCENT EXCEEDS	55		87		83	

- a** From rating curve extended above 35,000 ft³/s on basis of slope-area measurement of peak flow.
- b** From floodmarks.
- c** Minimum observed.



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03032500 REDBANK CREEK AT ST. CHARLES, PA--Continued
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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 (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SAM-PLING METHOD, CODES (82398)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (µS/CM) (90095)	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)
JUN 2002 19...	1330	9813	956	40	10.9	7.5	313	272	19.0	99	23.4	9.9	16
AUG 28...	1350	9813	134	40	9.1	8.1	446	419	24.3	160	39.0	15.5	36

Date	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE AT 105 DEG. C, DIS-SOLVED (MG/L) (00515)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (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)
JUN 2002 19...	89.9	226	8	<.020	.41	<.040	.56	.01	.020	1.7	<10	380	<1.0
AUG 28...	116	358	<2	.180	.48	<.200	.94	.01	.010	2.4	<10	200	<1.0

Date	MANGA-NESE, TOTAL RECOV-ERABLE (µG/L AS MN) (01055)	NICKEL, TOTAL RECOV-ERABLE (µG/L AS NI) (01067)	ZINC, TOTAL RECOV-ERABLE (µG/L AS ZN) (01092)
JUN 2002 19...	250	<50	<10
AUG 28...	50	<50	10