

CHESTER CREEK BASIN

01477000 CHESTER CREEK NEAR CHESTER, PA

LOCATION.--Lat 39°52'08", long 75°24'31", Delaware County, Hydrologic Unit 02040202, on right bank 30 ft downstream from bridge on Dutton Mill Road, and 3.0 mi northwest of Chester.

DRAINAGE AREA.--61.1 mi².

PERIOD OF RECORD.--August 1931 to current year. Monthly discharges only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR PA-72-1: 1971.

GAGE.--Water-stage recorder. Datum of gage is 23.41 ft above Penn Central Railroad datum. Prior to June 27, 1966, water-stage recorder at site 50 ft upstream, and June 28, 1966, to Oct. 4, 1967, nonrecording gage 30 ft upstream and at gage, all at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion about 2.6 mi upstream into Ridley Creek basin (see station 01476480 Ridley Creek at Media) by Philadelphia Suburban Water Company. Diversion for the year was equivalent to a mean daily discharge of 3.2 ft³/s. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
Jan. 3	1315	1,570	6.63	Mar. 22	0100	2,350	8.07
Jan. 18	1900	1,730	6.93	Sept. 16	1800	*13,400	*19.55

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	31	33	e30	61	162	66	53	38	28	12	21
2	24	31	33	e30	201	84	72	51	39	33	12	19
3	22	33	32	644	161	71	64	51	44	52	11	18
4	43	30	33	e140	102	110	65	54	39	28	10	19
5	39	31	35	e60	84	76	83	52	35	24	11	111
6	28	32	36	e51	69	78	66	53	32	22	11	209
7	27	33	35	e45	62	108	62	55	33	21	10	50
8	95	35	37	e60	104	70	60	58	32	18	11	35
9	101	34	58	e86	84	65	88	54	31	16	12	37
10	148	34	38	e95	70	66	259	52	31	16	11	319
11	44	59	35	65	62	64	163	48	31	17	11	48
12	34	44	33	51	71	60	235	46	30	16	11	34
13	31	32	33	66	144	57	99	82	31	17	11	30
14	52	32	34	77	80	63	79	54	41	18	51	28
15	34	32	32	404	67	115	73	49	54	16	49	48
16	30	30	33	163	63	127	82	44	34	16	19	5740
17	28	31	32	110	62	135	97	44	34	14	15	1270
18	28	31	32	612	267	116	73	44	36	14	14	219
19	27	29	31	299	127	85	67	91	33	17	14	112
20	29	31	32	108	86	74	67	70	31	26	95	88
21	28	36	31	91	73	200	67	48	49	19	46	306
22	29	33	33	91	66	943	84	41	40	18	23	277
23	29	32	34	88	60	150	88	51	33	18	20	106
24	29	33	32	343	59	106	97	194	31	16	18	78
25	29	32	32	187	59	92	69	99	29	15	16	66
26	30	99	e31	110	58	79	64	54	28	13	196	59
27	29	53	e31	92	56	73	61	48	26	11	261	56
28	29	36	e31	83	108	78	60	45	26	12	40	57
29	32	35	e33	74	---	72	55	41	27	11	29	55
30	32	33	e32	67	---	68	55	40	26	11	24	317
31	31	---	e31	64	---	64	---	38	---	12	22	---
TOTAL	1216	1097	1048	4486	2566	3711	2620	1804	1024	585	1096	9832
MEAN	39.2	36.6	33.8	145	91.6	120	87.3	58.2	34.1	18.9	35.4	328
MAX	148	99	58	644	267	943	259	194	54	52	261	5740
MIN	22	29	31	30	56	57	55	38	26	11	10	18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

MEAN	55.5	77.6	89.9	105	115	140	128	102	77.0	68.8	62.3	67.8
MAX	234	233	328	326	326	627	413	224	176	254	217	543
(WY)	1980	1951	1997	1979	1979	1994	1980	1983	1982	1975	1955	1971
MIN	13.7	18.2	24.3	23.4	41.4	53.1	41.9	34.8	28.3	17.4	13.7	10.4
(WY)	1942	1932	1932	1981	1932	1981	1963	1942	1966	1932	1966	1932

e Estimated.

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SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL TOTAL	27937		31085		90.6	
ANNUAL MEAN	76.5		85.2		168	
HIGHEST ANNUAL MEAN					1979	
LOWEST ANNUAL MEAN					1932	
HIGHEST DAILY MEAN	727	Jan 23	5740	Sep 16	6510	Sep 13 1971
LOWEST DAILY MEAN	19	Sep 29	10	Aug 4,7	6.5	Sep 25 1941
ANNUAL SEVEN-DAY MINIMUM	22	Sep 27	11	Aug 2	8.3	Sep 9 1932
INSTANTANEOUS PEAK FLOW			a13400	Sep 16	a21000	Sep 13 1971
INSTANTANEOUS PEAK STAGE			19.55	Sep 16	b24.59	Sep 13 1971
INSTANTANEOUS LOW FLOW			8.7	Jul 27	.30	Aug 7 1934
10 PERCENT EXCEEDS	138		113		154	
50 PERCENT EXCEEDS	54		44		60	
90 PERCENT EXCEEDS	27		18		27	

- a From rating curve extended above 2,400 ft³/s on basis of contracted-opening measurement at 9,400 ft³/s, at gage height 13.57 ft, and slope-area measurement of peak flow.
- b From floodmark.

