

Water-Data Report 2011

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE

 Lower Delaware Basin
 Brandywine-Christina Subbasin

LOCATION.--Lat 39°21'58.6", long 75°40'09.8" referenced to North American Datum of 1983, New Castle County, DE, Hydrologic Unit 02040205, on left bank 15 ft downstream from highway culverts, 0.5 mi upstream from Barlow Branch, 0.6 mi southwest of Blackbird, 5.6 mi northwest of Smyrna, and 13.8 mi upstream from mouth.

DRAINAGE AREA.--4.06 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Annual maximum, water years 1952-56, and occasional low-flow measurements, water years 1952-53, 1955-56. October 1956 to current year.

REVISED RECORDS.--WRD MD-DE-89-1: 1987-88(P).

GAGE.--Water-stage recorder. Concrete control since May 23, 1968. Datum of gage is 17.89 ft above National Geodetic Vertical Datum of 1929. Mar. 5, 1951, to Oct. 16, 1956, nonrecording gage and crest-stage gage at site 15 ft upstream at datum 1.0 ft higher. Oct. 17, 1956, to June 16, 1986, recording gage at same site on right bank at gage datum 1.0 ft higher.

REMARKS.—Records good except those for estimated daily discharges (stuck float), which are poor. Occasional regulation at low and medium flow by Blackbird Lake Dam upstream from station. U.S. Geological Survey satellite collection platform at station. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 50 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 1	0645	200	3.95
Apr 17	0415	71	2.29
Aug 14	1730	Unknown	Unknown
Aug 19	2330	88	2.57
Aug 28	0115	*669	*6.14
Sep 23	1930	74	2.35

Minimum discharge, 0.07 ft³/s, July 16, 17.

Water-Data Report 2011

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	99	1.4	8.4	2.5	3.2	9.4	6.5	3.2	1.3	0.48	0.22	9.1
2	12	1.4	7.5	4.3	16	5.8	5.3	3.2	1.1	0.41	0.29	8.5
3	2.4	1.5	2.5	3.4	16	4.3	4.5	3.0	0.94	0.38	0.82	7.8
4	4.4	12	1.9	2.3	7.6	3.9	4.3	6.3	1.1	0.39	0.97	6.9
5	4.3	11	1.8	2.1	8.0	3.7	5.4	4.5	1.4	0.35	0.84	6.2
6	2.1	3.2	1.7	1.9	14	11	4.5	2.8	1.3	0.30	0.49	20
7	1.6	1.9	1.8	1.9	10	27	4.0	2.8	1.2	0.27	0.48	28
8	1.4	1.8	1.7	1.9	7.6	9.8	6.7	2.4	1.2	1.9	0.65	19
9	1.3	1.7	1.6	1.8	4.9	6.5	11	2.2	1.0	2.4	0.97	15
10	1.1	1.6	1.6	1.7	4.6	10	5.9	2.0	1.5	0.90	1.2	9.9
11	1.1	1.6	1.7	1.8	3.7	21	4.9	2.0	1.6	0.79	0.45	9.5
12	1.1	1.6	4.7	1.9	3.8	11	5.8	1.9	2.0	0.66	0.32	12
13	0.94	1.6	7.3	1.9	4.0	7.4	10	1.9	1.6	0.35	1.5	8.2
14	2.0	1.7	2.7	1.8	4.1	6.1	5.9	3.0	1.3	0.29	e265	6.0
15	2.8	1.8	1.9	1.8	3.6	5.5	4.3	4.4	1.1	0.20	e40	5.0
16	1.9	2.5	1.8	2.0	3.2	16	15	7.6	1.0	0.12	14	4.4
17	0.79	4.3	1.8	2.1	3.3	11	43	4.3	1.1	0.08	4.4	4.3
18	0.77	2.8	1.8	7.2	3.2	7.6	12	3.2	1.1	0.09	2.5	4.1
19	4.1	1.9	1.9	9.5	2.9	6.4	7.7	3.7	1.1	0.30	32	3.7
20	2.3	1.7	1.8	6.8	2.6	5.1	6.8	4.6	1.1	0.77	38	4.0
21	1.6	1.7	1.8	4.4	4.6	6.3	5.3	3.7	1.2	0.27	16	4.6
22	1.3	1.8	1.9	2.6	3.8	6.2	4.5	2.4	1.2	0.21	9.2	3.9
23	1.7	1.9	1.8	2.1	3.5	8.3	6.7	2.3	0.99	0.15	2.3	35
24	1.9	1.8	1.8	1.8	4.1	16	6.1	2.3	0.88	0.13	2.2	30
25	1.0	2.0	1.8	2.1	16	8.0	8.0	2.0	0.79	0.62	9.7	11
26	1.0	2.1	2.0	4.6	12	5.9	4.9	1.8	0.84	8.1	17	7.9
27	3.6	1.8	1.9	6.7	5.8	5.2	3.9	1.7	0.65	1.1	98	6.9
28	4.6	1.6	1.9	6.6	7.4	4.9	9.6	1.6	1.0	0.68	314	7.8
29	1.8	1.6	1.8	4.5	---	4.6	9.2	1.6	1.1	1.0	36	7.7
30	1.6	1.8	1.8	3.7	---	4.5	4.1	1.5	0.67	0.52	18	5.7
31	1.5	---	2.1	3.3	---	4.9	---	1.3	---	0.36	12	---
Total	169.00	77.1	78.5	103.0	183.5	263.3	235.8	91.2	34.36	24.57	939.50	312.1
Mean	5.45	2.57	2.53	3.32	6.55	8.49	7.86	2.94	1.15	0.79	30.3	10.4
Max	99	12	8.4	9.5	16	27	43	7.6	2.0	8.1	314	35
Min	0.77	1.4	1.6	1.7	2.6	3.7	3.9	1.3	0.65	0.08	0.22	3.7
Cfsm	1.34	0.63	0.62	0.82	1.61	2.09	1.94	0.72	0.28	0.20	7.46	2.56
In.	1.55	0.71	0.72	0.94	1.68	2.41	2.16	0.84	0.31	0.23	8.61	2.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2.58	3.73	5.44	6.23	7.27	8.95	7.78	5.31	3.87	3.13	2.58	2.64
Max	8.83	11.1	23.5	18.1	19.2	20.3	21.0	13.9	24.4	17.0	30.3	20.1
(WY)	(1972)	(2004)	(1997)	(1978)	(1979)	(1958)	(1983)	(1989)	(1972)	(1989)	(2011)	(1999)
Min	0.02	0.71	0.71	1.51	1.49	1.98	2.16	1.26	0.54	0.08	0.01	0.13
(WY)	(2009)	(2008)	(1966)	(1981)	(2002)	(1966)	(1966)	(1977)	(1966)	(1966)	(1966)	(2007)

01483200 BLACKBIRD CREEK AT BLACKBIRD, DE—Continued**SUMMARY STATISTICS**

	Calendar Year 2010		Water Year 2011		Water Years 1957 - 2011	
Annual total	2,189.51		2,511.93			
Annual mean	6.00		6.88		4.95	
Highest annual mean					9.05	1972
Lowest annual mean					1.40	1966
Highest daily mean	99	Oct 1	314	Aug 28	397	Sep 16, 1999
Lowest daily mean	0.01	Sep 11 ^a	0.08	Jul 17	0.00	Sep 11, 1965 ^b
Annual seven-day minimum	0.04	Sep 5	0.20	Jul 13	0.00	Jul 17, 1966
Maximum peak flow			669	Aug 28	789	Sep 16, 1999
Maximum peak stage				6.14	Aug 28	6.47 Sep 16, 1999
Instantaneous low flow				0.07	Jul 16 ^d	0.00 Aug 1, 1964 ^f
Annual runoff (cfsm)	1.48		1.70			1.22
Annual runoff (inches)	20.06		23.02			16.55
10 percent exceeds	13		11			10
50 percent exceeds	2.0		2.5			2.8
90 percent exceeds	0.17		0.79			0.51

^a Sept. 11, 26.^b Sept. 11, 1965 and many days in 1966, 2008.^c From rating curve extended above 600 ft³/s.^d July 16, 17.^f No flow at times during 1964-66, 2008, 2010.