

01477800 SHELLPOT CREEK AT WILMINGTON, DE

Lower Delaware Basin
Brandywine-Christina Subbasin

LOCATION.--Lat 39°45'39.5", long 75°31'07.3" referenced to North American Datum of 1983, New Castle County, DE, Hydrologic Unit 02040205, on right bank 100 ft east of intersection of 44th and Pine Streets in Clifton Park, 700 ft downstream from bridge on North Market Street in Wilmington, 0.2 mi downstream from Matson Run, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--7.46 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--December 1945 to current year.

REVISED RECORDS.--WSP 1382: 1948(m).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 15.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those between 100 and 4,000 ft³/s, which are fair. Records for estimated daily discharges (backwater, missing record), are poor. Occasional regulation at low flow from unknown source upstream from station. U.S. Geological Survey gage-height telemeter 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 OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1940, that of July 5, 1989. Flood of Aug. 1, 1945, reached a stage of about 8.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 8	1420	*1,630	*5.46
Jul 23	1615	1,480	5.21
Sep 6	1735	1,140	4.58

Minimum discharge, 0.20 ft³/s, Oct. 1, 2.

01477800 SHELLPOT CREEK AT WILMINGTON, DE—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.22	1.2	1.8	5.8	136	7.3	10	2.5	3.4	1.1	1.4	0.98
2	0.25	1.4	12	3.9	18	8.8	7.4	2.6	2.4	0.95	1.4	0.80
3	0.25	1.4	60	2.9	8.3	9.2	4.5	2.6	e2.2	0.88	1.4	0.78
4	0.26	1.4	4.0	2.6	7.0	7.7	21	2.4	62	1.0	1.2	0.80
5	0.26	1.4	3.1	2.7	6.3	57	5.5	2.3	11	1.4	1.2	0.96
6	0.30	2.9	3.0	3.8	6.2	9.3	9.8	2.4	e3.0	1.1	1.1	133
7	0.30	2.3	2.6	2.7	6.7	36	4.8	2.1	e2.6	2.1	0.99	7.2
8	0.28	1.6	8.2	2.6	5.7	273	3.9	2.2	2.4	1.3	0.95	1.8
9	39	1.7	3.9	2.5	5.7	19	3.4	134	2.2	2.9	0.92	17
10	6.8	1.4	7.8	2.5	6.5	8.3	3.3	8.4	3.3	2.8	26	13
11	15	1.5	6.1	13	5.2	6.2	3.7	4.4	9.5	0.94	4.5	1.8
12	2.0	2.2	3.4	4.4	5.9	5.3	8.4	23	1.9	0.80	1.3	12
13	1.0	9.4	20	3.9	263	4.3	3.5	9.5	1.7	0.74	1.1	5.4
14	0.73	1.9	6.8	7.1	22	3.9	3.1	4.8	4.3	10	2.3	1.9
15	0.68	11	3.2	3.5	11	3.7	2.8	3.4	3.7	1.4	2.0	1.4
16	0.73	3.0	112	2.7	8.9	5.5	2.6	41	1.6	0.92	1.1	1.2
17	0.75	1.7	8.5	4.9	8.1	3.3	2.6	8.6	1.4	0.76	0.99	1.1
18	0.79	2.3	3.9	31	25	3.3	e2.4	13	1.6	0.69	0.92	1.1
19	4.9	21	3.1	7.3	12	e10	e2.4	7.7	1.6	0.67	0.89	1.2
20	7.8	3.3	2.7	4.1	6.9	e30	e2.2	54	1.5	1.6	0.82	1.2
21	0.96	2.3	2.4	3.0	6.0	6.5	e2.2	11	1.5	4.6	0.87	1.1
22	0.73	e2.0	2.2	2.9	8.3	4.8	2.6	5.5	1.4	0.86	0.87	1.1
23	0.93	e1.8	47	2.9	12	4.7	2.4	3.9	1.3	212	0.88	1.2
24	3.7	e1.7	11	2.6	11	3.9	2.4	3.3	1.2	22	0.88	1.1
25	11	e1.6	3.8	2.3	11	3.4	2.4	3.1	1.2	3.4	0.91	1.3
26	68	e8.0	4.9	2.2	11	3.2	2.5	2.8	1.2	1.9	0.83	1.7
27	146	6.3	6.5	2.3	13	3.5	7.5	3.1	3.2	21	0.77	15
28	6.2	2.4	3.8	2.1	8.1	3.3	23	3.9	2.7	4.1	0.77	25
29	2.4	2.0	46	2.2	7.2	3.0	6.1	e2.4	1.2	1.8	0.91	4.3
30	1.7	1.8	7.4	3.5	---	2.7	2.9	e2.2	1.3	1.5	0.99	6.6
31	1.4	---	26	2.3	---	2.9	---	6.1	---	1.6	0.95	---
Total	325.32	103.9	437.1	142.2	662.0	553.0	161.3	378.2	139.5	308.81	62.11	263.02
Mean	10.5	3.46	14.1	4.59	22.8	17.8	5.38	12.2	4.65	9.96	2.00	8.77
Max	146	21	112	31	263	273	23	134	62	212	26	133
Min	0.22	1.2	1.8	2.1	5.2	2.7	2.2	2.1	1.2	0.67	0.77	0.78
Cfsm	1.41	0.46	1.89	0.61	3.06	2.39	0.72	1.64	0.62	1.34	0.27	1.18
In.	1.62	0.52	2.18	0.71	3.30	2.76	0.80	1.89	0.70	1.54	0.31	1.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	5.75	8.68	12.0	12.4	13.2	16.6	13.5	10.3	8.25	8.60	6.80	8.15
Max	22.5	27.7	48.7	37.9	34.1	46.4	49.1	31.6	44.9	69.5	62.8	58.3
(WY)	(1996)	(1973)	(1997)	(1979)	(1979)	(2000)	(2007)	(1947)	(2003)	(1989)	(1967)	(1971)
Min	0.62	1.35	1.03	1.18	1.80	2.24	2.55	1.76	1.09	0.65	0.32	0.78
(WY)	(1964)	(1966)	(1956)	(1981)	(2002)	(2006)	(1985)	(1955)	(1966)	(1957)	(1966)	(2007)

01477800 SHELLPOT CREEK AT WILMINGTON, DE—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1946 - 2008	
Annual total	4,268.23		3,536.46			
Annual mean	11.7		9.66		10.3	
Highest annual mean					19.6	2003
Lowest annual mean					3.93	2002
Highest daily mean	774	Apr 15	273	Mar 8	1,480	Sep 16, 1999
Lowest daily mean	0.22	Oct 1	0.22	Oct 1	0.09	Oct 2, 1968 ^a
Annual seven-day minimum	0.25	Sep 29	0.26	Oct 1	0.10	Aug 27, 1966
Maximum peak flow			1,630	Mar 8	^b 8,040	Jul 5, 1989
Maximum peak stage			5.46	Mar 8	13.76	Jul 5, 1989
Instantaneous low flow			0.20	Oct 1 ^c	0.09	Oct 2, 1968
Annual runoff (cfsm)	1.57		1.30		1.38	
Annual runoff (inches)	21.28		17.63		18.82	
10 percent exceeds	15		15		18	
50 percent exceeds	3.0		2.9		2.9	
90 percent exceeds	0.59		0.92		0.78	

^a Oct. 2, 4, 1968.

^b From rating curve extended above 200 ft³/s on basis of culvert and flow-over-road measurements at gage heights 9.10 and 11.91 feet.

^c Oct. 1, 2.

