

CONESTOGA RIVER BASIN

01576500 CONESTOGA RIVER AT LANCASTER, PA

LOCATION.--Lat 40°03'00", long 76°16'39", Lancaster County, Hydrologic Unit 02050306, on left bank at Penn Central Railroad bridge, 50 ft downstream from small right-bank tributary, 500 ft downstream from diversion dam at city water plant, and 0.7 mi east of Lancaster.

DRAINAGE AREA.--324 mi².

PERIOD OF RECORD.--October 1928 to March 1932; August, September 1932; April 1933 to current year. Prior to October 1973, published as Conestoga Creek at Lancaster.

REVISED RECORDS.--WSP 1202: Drainage area. WSP 1502: 1943(P). WDR PA-87-2: 1985-86(P) (monthly and yearly summaries) WDR PA-90-2: 1972(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 245.63 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1933, at site 600 ft upstream at different datum, excluding small tributary.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flow by water plant and mill above station. Diversion upstream for municipal supply of city of Lancaster. Several measurements of water temperature were made during the year. Satellite and landline telemetry at station.

COOPERATION.--Records of diversion provided by city of Lancaster.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 2,800 ft³/s and maximum (*):

Date	Time	Discharge ft ³ /s	Gage Height (ft)	Date	Time	Discharge ft ³ /s	Gage Height (ft)
May 14	1000	*5,390	*9.07	No other peak greater than base discharge.			

**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	87	50	60	55	142	56	143	321	211	131	49	70
2	82	52	69	51	149	55	148	445	196	117	44	74
3	67	52	56	49	e143	148	125	1020	181	107	52	65
4	58	61	56	50	e110	197	133	422	170	102	106	61
5	77	53	54	54	90	110	126	312	166	90	65	51
6	67	51	52	52	86	83	115	266	248	90	57	46
7	67	51	51	68	81	77	115	241	823	87	52	40
8	61	48	59	85	78	70	101	227	319	82	45	38
9	68	50	80	77	74	69	99	316	224	80	42	38
10	58	54	90	71	75	75	112	383	198	84	39	36
11	57	50	76	120	72	77	117	244	178	81	36	35
12	58	52	61	316	79	69	99	224	165	68	38	31
13	62	51	64	156	70	69	96	644	152	70	36	30
14	65	52	67	114	67	88	108	3370	193	70	35	28
15	67	52	104	97	66	87	364	871	290	72	30	32
16	68	49	104	84	64	77	284	595	209	65	27	42
17	73	47	81	79	60	80	178	473	173	59	40	50
18	70	34	84	74	63	97	144	963	160	54	34	52
19	64	46	112	75	64	216	130	829	317	49	32	37
20	61	54	92	72	59	358	127	515	203	51	35	32
21	57	58	75	71	60	682	127	430	164	49	49	34
22	56	56	69	73	60	287	179	385	144	55	39	48
23	55	52	66	72	59	189	257	352	137	56	40	45
24	56	54	71	166	56	155	163	320	128	60	50	42
25	57	59	71	440	58	138	131	302	123	59	60	36
26	54	161	76	192	55	135	136	290	119	57	69	38
27	52	121	61	136	57	352	131	293	123	49	55	237
28	60	75	60	109	58	257	419	276	420	81	45	418
29	60	61	61	102	---	176	968	258	225	100	75	198
30	52	61	49	96	---	147	414	237	153	77	87	111
31	60	---	47	118	---	137	---	219	---	59	76	---
TOTAL	1956	1767	2178	3374	2155	4813	5789	16043	6512	2311	1539	2095
MEAN	63.1	58.9	70.3	109	77.0	155	193	518	217	74.5	49.6	69.8
MAX	87	161	112	440	149	682	968	3370	823	131	106	418
MIN	52	34	47	49	55	55	96	219	119	49	27	28
CFSM	0.19	0.18	0.22	0.34	0.24	0.48	0.60	1.60	0.67	0.23	0.15	0.22
IN.	0.22	0.20	0.25	0.39	0.25	0.55	0.66	1.84	0.75	0.27	0.18	0.24
(†)	16.1	16.2	15.7	16.4	16.8	16.1	15.0	14.0	14.3	16.8	16.7	16.3

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF DAILY RECORD, BY WATER YEAR (WY)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
MEAN	208	274	389	467	543	679	620	458	375	297	232	217
MAX	930	866	1618	1699	1191	2089	1720	1529	3286	944	1427	908
(WY)	1980	1997	1997	1979	1979	1994	1993	1989	1972	1984	1933	1987
MIN	33.2	41.1	70.3	61.3	77.0	155	166	148	92.0	50.3	30.3	40.9
(WY)	1931	1931	2002	1981	2002	2002	1985	1965	1965	1999	1957	1957

† Diversion for municipal supply of city of Lancaster, equivalent in cubic feet per second.

e Estimated.

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF DAILY RECORD	
ANNUAL TOTAL	87510		50532			
ANNUAL MEAN	240		138		395	
HIGHEST ANNUAL MEAN					753	1972
LOWEST ANNUAL MEAN					138	2002
HIGHEST DAILY MEAN	1770	Mar 30	3370	May 14	47600	Jun 23 1972
LOWEST DAILY MEAN	34	Nov 18	27	Aug 16	7.0	Aug 11 1930
ANNUAL SEVEN-DAY MINIMUM	47	Nov 13	33	Sep 9	20	Aug 9 1930
MAXIMUM PEAK FLOW			5390	May 14	a 50300	Jun 23 1972
MAXIMUM PEAK STAGE			9.07	May 14	b 27.90	Jun 23 1972
ANNUAL RUNOFF (CFSM)	0.74		0.43		1.22	
ANNUAL RUNOFF (INCHES)	10.05		5.80		16.54	
10 PERCENT EXCEEDS	530		290		798	
50 PERCENT EXCEEDS	150		75		255	
90 PERCENT EXCEEDS	56		46		84	

- a** From rating curve extended above 13,000 ft³/s on basis of slope-area measurement at gage height 17.50 ft and contracted-opening measurement of peak flow.
- b** From floodmark.

