

## 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 mi<sup>2</sup>.

**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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)	Date	Time	Discharge ft <sup>3</sup> /s	Gage Height (ft)
Oct. 17	0200	3,200	7.07	Mar. 21	0945	4,440	8.36
Nov. 17	1200	2,800	6.73	June 4	1800	3,860	7.84
Dec. 14	1345	3,090	6.98	June 8	0215	2,900	6.92
Jan. 2	0245	4,100	8.07	June 21	1330	9,460	12.20
Feb. 23	2300	3,820	7.81	Sept. 16	0415	3,150	7.17
Mar. 6	1945	3,480	7.49	Sept. 23	2030	*10,400	*12.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	573	373	1290	337	564	887	417	589	661	256	168
2	71	412	343	2980	354	741	810	408	715	613	257	1050
3	66	346	328	1780	354	1930	746	395	447	584	242	692
4	86	316	302	1910	406	1070	e670	367	2150	554	244	536
5	93	287	309	1390	544	941	e650	360	1870	522	277	530
6	79	456	319	1170	349	2360	e610	356	1130	610	501	340
7	63	396	e280	1060	e280	1740	e610	360	1230	525	392	285
8	58	293	e270	970	e220	1090	684	391	2080	525	282	250
9	52	266	e260	983	e230	1520	789	410	1260	468	247	233
10	58	248	e240	915	e250	1800	962	393	1030	453	354	217
11	674	239	499	790	e230	1070	1260	360	885	447	333	203
12	1230	294	2190	692	e200	911	1610	341	806	418	283	190
13	381	742	1520	643	e180	1150	1080	315	739	390	248	239
14	235	403	2540	597	e160	1430	888	298	710	361	221	446
15	185	322	1980	566	e140	1170	812	285	759	343	208	588
16	918	393	1270	516	e130	1170	758	288	604	332	333	1700
17	1870	2110	975	e450	e120	1220	698	330	542	320	511	544
18	583	1910	819	e410	e130	1120	650	300	599	301	280	381
19	363	1060	732	e420	e140	947	642	285	612	304	226	e1190
20	306	753	816	e440	e150	1050	607	266	1090	299	205	843
21	259	645	957	e400	e160	3360	575	272	6010	287	183	492
22	223	788	711	e360	e600	1780	581	291	2860	779	180	401
23	204	756	625	e320	3210	1310	547	264	1890	831	174	5090
24	192	565	559	e340	2520	1100	499	340	1400	643	166	3160
25	183	500	819	e350	1420	981	464	440	1180	428	158	1150
26	371	461	1250	e360	978	918	644	904	1040	340	153	1020
27	361	477	881	e330	735	1080	751	917	937	312	164	812
28	244	489	748	e330	624	868	525	564	843	297	158	746
29	224	418	675	e330	---	806	468	472	768	278	153	648
30	514	398	645	334	---	1050	450	396	709	260	205	554
31	1150	---	641	335	---	1230	---	364	---	246	178	---
TOTAL	11381	17316	24876	23761	15151	39477	21927	12149	37484	13731	7772	24698
MEAN	367	577	802	766	541	1273	731	392	1249	443	251	823
MAX	1870	2110	2540	2980	3210	3360	1610	917	6010	831	511	5090
MIN	52	239	240	320	120	564	450	264	447	246	153	168
CFSM	1.13	1.78	2.48	2.37	1.67	3.93	2.26	1.21	3.86	1.37	0.77	2.54
IN.	1.31	1.99	2.86	2.73	1.74	4.53	2.52	1.39	4.30	1.58	0.89	2.84
(†)	12.8	13.0	15.0	16.1	16.5	15.4	15.9	15.7	15.9	16.4	17.6	14.9

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

e Estimated.

CONESTOGA RIVER BASIN

01576500 CONESTOGA RIVER AT LANCASTER, PA--Continued

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

MEAN	210	278	394	471	543	688	621	457	387	299	232	225
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

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR FOR PERIOD OF DAILY RECORD

ANNUAL TOTAL	98204		249723		398		
ANNUAL MEAN	269		684		138		
HIGHEST ANNUAL MEAN					753		
LOWEST ANNUAL MEAN					138		
HIGHEST DAILY MEAN	3370	May 14	6010	Jun 21	47600	Jun 23	1972
LOWEST DAILY MEAN	27	Aug 16	52	Oct 9	7.0	Aug 11	1930
ANNUAL SEVEN-DAY MINIMUM	33	Sep 9	70	Oct 4	20	Aug 9	1930
MAXIMUM PEAK FLOW			10400	Sep 23	a50300	Jun 23	1972
MAXIMUM PEAK STAGE			12.74	Sep 23	b27.90	Jun 23	1972
ANNUAL RUNOFF (CFSM)	0.83		2.11		1.23		
ANNUAL RUNOFF (INCHES)	11.28		28.67		16.71		
10 PERCENT EXCEEDS	657		1260		806		
50 PERCENT EXCEEDS	131		499		258		
90 PERCENT EXCEEDS	49		204		84		

- a From rating curve extended above 13,000 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 17.50 ft and contracted-opening measurement of peak flow.
- b From floodmark.

