04231000 BLACK CREEK AT CHURCHVILLE, NY

Southwestern Lake Ontario Basin
Lower Genesee Subbasin

LOCATION.--Lat 43°06′02″, long 77°52′57″ referenced to North American Datum of 1927, Monroe County, NY, Hydrologic Unit 04130003, on right bank at east end of Carrol Street in Churchville, 100 ft downstream from mainline tracks of Penn Central Transportation Co., and 0.3 mi downstream from Black Creek Dam.

DRAINAGE AREA.--130 mi^2.

SURFACE-WATER RECORDS

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

REVISED RECORDS.--WDR NY-82-3: Drainage area. WDR NY-00-3: 1998 (M), 1999 (M).

GAGE.--Water-stage recorder. Datum of gage is 551.88 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to May 1952, small diversion by Penn Central Transportation Co. and slight regulation by pumping operations upstream from station. Telephone and satellite gage-height telemeters at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,880 ft^3/s, Mar. 31, 1960, gage height, 9.44 ft; minimum discharge, 0.17 ft^3/s, Aug. 12, 2001; minimum gage height, 0.93 ft, Aug. 5, 6, 7, Sept. 15, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 29	0745	*2,520	*7.85
Feb 13	2030	2,390	7.63
Mar 9	1415	1,730	6.47

Minimum discharge, 5.0 ft^3/s, Oct. 14, 15, gage height, 1.30 ft.

04231000 BLACK CREEK AT CHURCHVILLE, NY—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12	37	78	e300	70	351	133	95	79	103	44	18
2	15	33	88	e271	74	e281	141	97	60	121	40	17
3	19	30	99	e240	e68	e224	156	98	49	142	38	15
4	19	27	88	e218	e66	e181	278	95	41	184	32	14
5	18	25	77	191	e65	e160	399	92	36	102	26	13
6	16	28	71	e160	e62	152	381	93	31	62	22	11
7	13	26	61	173	63	231	347	117	28	51	19	10
8	12	25	34	e221	208	782	318	142	26	47	18	9.7
9	13	23	44	e189	458	1,650	254	131	29	42	23	10
10	11	22	71	e175	922	1,430	202	122	28	34	60	9.6
11	9.7	23	149	e162	923	1,000	163	113	29	32	114	9.3
12	10	25	182	e140	1,330	974	136	93	32	38	92	8.5
13	9.4	28	114	e127	2,150	657	119	76	32	45	61	8.2
14	8.8	29	90	e113	1,860	396	111	67	27	36	43	9.1
15	6.1	36	107	e111	972	324	105	60	24	28	32	9.3
16	15	66	164	e104	532	284	98	57	20	24	26	8.8
17	39	111	e119	e109	354	252	94	50	20	22	23	8.0
18	56	94	e98	e108	267	234	89	46	53	24	20	8.0
19	42	66	77	e90	236	216	88	43	100	26	17	7.6
20	30	52	48	e82	195	199	86	40	116	23	17	7.3
21	28	46	e56	e77	157	178	94	37	165	21	33	7.8
22	31	40	e59	e77	179	164	103	e30	138	25	41	9.1
23	40	30	57	e76	149	154	102	e29	89	44	35	8.7
24	42	33	65	e77	127	145	95	e29	57	124	36	7.4
25	46	38	121	e74	125	138	92	e29	43	243	33	7.4
26	79	64	190	e77	152	140	95	e28	64	198	27	7.2
27	91	116	401	e70	232	148	99	e28	99	198	23	15
28	70	113	1,230	e71	342	150	95	68	75	131	21	23
29	57	92	2,360	e71	---	147	95	195	93	88	22	43
30	51	80	1,380	69	---	144	94	174	101	70	21	88
31	44	---	510	79	---	135	---	102	---	55	20	---
Total	953.0	1,458	8,288	4,102	12,338	11,621	4,662	2,476	1,784	2,383	1,079	428.0
Mean	30.7	48.6	267	132	441	375	155	79.9	59.5	76.9	34.8	14.3
Max	91	116	2,360	300	2,150	1,650	399	195	165	243	114	88
Min	6.1	22	34	69	62	135	86	28	20	21	17	7.2
Cfsm	0.24	0.37	2.06	1.02	3.39	2.88	1.20	0.61	0.46	0.59	0.27	0.11
In.	0.27	0.42	2.37	1.17	3.53	3.33	1.33	0.71	0.51	0.68	0.31	0.12

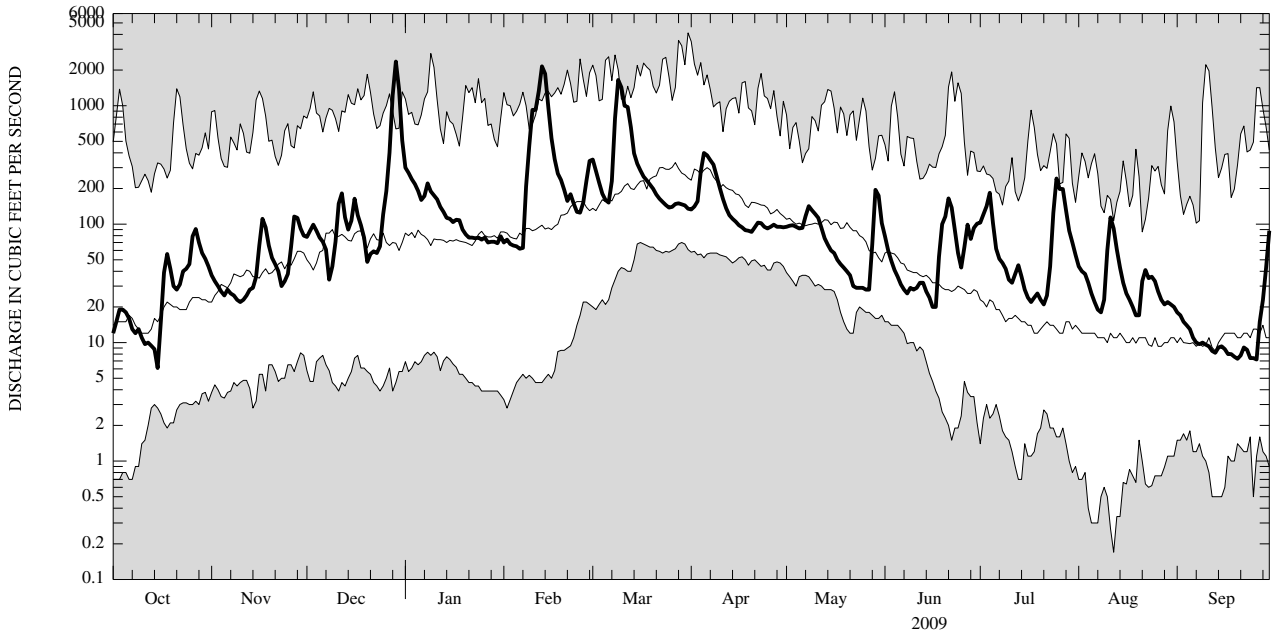
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	42.9	78.3	131	136	192	332	256	128	64.1	28.7	22.4	29.4
Max	247	405	497	484	460	664	497	325	348	143	201	291
(WY)	(2007)	(1971)	(1978)	(1998)	(1981)	(1971)	(1947)	(1956)	(1989)	(1992)	(1992)	(2004)
Min	2.61	6.07	5.68	6.15	15.4	122	51.6	38.1	10.7	3.75	2.35	1.66
(WY)	(1964)	(1965)	(1961)	(1961)	(1958)	(1989)	(1946)	(1949)	(1949)	(1965)	(2001)	(1959)

04231000 BLACK CREEK AT CHURCHVILLE, NY—Continued

SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1946 - 2009	
Annual total	53,181.0		51,572.0			
Annual mean	145		141		120	
Highest annual mean					207	1978
Lowest annual mean					52.3	1953
Highest daily mean	2,360	Dec 29	2,360	Dec 29	4,120	Mar 31, 1960
Lowest daily mean	5.7	Sep 5	6.1	Oct 15	0.17	Aug 12, 2001
Annual seven-day minimum	6.3	Sep 1	7.8	Sep 20	0.47	Aug 3, 1959
Annual runoff (cfsm)	1.12		1.09		0.921	
Annual runoff (inches)	15.22		14.76		12.51	
10 percent exceeds	414		247		293	
50 percent exceeds	62		71		52	
90 percent exceeds	11		15		7.2	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.

04231000 BLACK CREEK AT CHURCHVILLE, NY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1956, 1961, 1962, 1965-76, 1998 to current year.
CHEMICAL DATA: Water years 1954 (a), 1956 (a), 1961 (b), 1962 (e), 1965 (a), 1966-74 (d), 1975-76 (e), 1998 to 2003 (e), 2004 (d), 2005 (c), 2006 (b), 2007 (c), 2008-09 (d).
NUTRIENT DATA: Water years 1954 (a), 1956 (a), 1961 (b), 1962 (e), 1965 (a), 1966-74 (d), 1975-76 (e), 1998 to 2003 (e), 2004 (d), 2005 (c), 2006 (b), 2007 (c), 2008-09 (d).
SEDIMENT DATA: Water years 1975-76 (e).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1961 to September 1962.

INSTRUMENTATION.--Automatic water sampler since April 1998.

COOPERATION.--Water-quality samples were collected and analyzed by the Monroe County Environmental Health Laboratory at Rochester, NY.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
[Remark codes: <, less than.]

Date	Begin time	End time	Dis-charge, ft^3/s (00060)	Sus-pended solids, water, unfltrd mg/L (00530)	Chlor-ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water unfltrd mg/L as N (00630)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L as P (00665)
Oct 16-20	1030	1030	40	28	80.0	.99	<.015	.351	.004	.126
Oct 21-27	2110	0910	51	12	76.6	.64	<.010	.650	.019	.066
Oct 27-Nov 03	1145	0745	51	8	80.8	.85	<.010	.903	.039	.114
Nov 15-19	0900	1000	81	17	75.4	.67	<.010	.789	.026	.100
Nov 19-25	1100	1400	42	18	82.5	.88	.012	1.24	.027	.106
Dec 24-30	1430	0929	867	86	69.9	1.2	<.010	1.80	.044	.215
Dec 30 2008-Jan 06 2009	1030	0930	370	10	58.0	.49	<.010	1.89	.036	.071
Feb 07-10	1020	1020	356	37	65.5	.86	.057	1.71	.038	.110
Feb 10-17	1025	0925	1,220	32	51.3	.66	.039	1.69	.051	.156
Mar 10-17	1140	0840	638	42	46.7	.77	.020	1.67	.033	.136
Apr 01-07	1130	0830	264	244	61.5	.96	<.010	1.43	.010	.178
Apr 07-08	0910	0509	344	748	60.9	2.4	.016	1.26	.017	.618
May 27-Jun 02	1610	1010	114	118	63.5	1.2	.045	1.35	.035	.308
Jul 11-15	0750	0750	38	28	78.2	.79	<.010	.826	.009	.045