01364500 ESOPUS CREEK AT MOUNT MARION, NY

Upper Hudson Basin
Middle Hudson Subbasin

LOCATION.--Lat 42°02′16″, long 73°58′21″ referenced to North American Datum of 1927, Ulster County, NY, Hydrologic Unit 02020006, on left bank at downstream side of bridge on Glasco Turnpike, 0.8 mi east of Mount Marion, 1.6 mi downstream from Plattekill Creek, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--419 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--April 1907 to December 1913 (furnished by Board of Water Supply, City of New York), January 1914 to March 1918 (monthly discharges only, furnished by Board of Water Supply, City of New York, published in WSP 1302), March 1970 to current year. Occasional miscellaneous measurements, 1902, 1951, 1956, 1966, 1967, 1969.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 40.16 ft above NGVD of 1929. Prior to Aug. 12, 1970, nonrecording gage at same site (at different datum April 1907 to March 1918, and at present datum June 9, 1966 to Aug. 12, 1970).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow from 256 mi^2 of drainage area regulated by Ashokan Reservoir since Sept. 9, 1913. Water diverted from Schoharie Creek through Shandaken Tunnel (see station 01362230) since Feb. 3, 1924, enters Esopus Creek about 12.2 mi upstream from Ashokan Reservoir. Diversion from Plattekill Creek for water supply of village of Saugerties. Slight diversion at headwaters into Cooper Lake for water supply of Kingston. Diversions upstream during summer months for irrigation purposes. Diversions for water supply of city of New York made from Ashokan Reservoir (see 01363400). Discharge records for this station now represent the natural flow from 112 mi^2, together with spillage during high stages from the upstream reservoirs. Satellite and telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 28,000 ft^3/s, Apr. 26, 1910, gage height, 25.10 ft, datum then in use; maximum discharge since March 1970, 30,500 ft^3/s, Apr. 3, 2005, gage height, 26.46 ft, outside gage height was 26.19 ft, from crest-stage gage; minimum discharge, 5.3 ft^3/s, Aug. 10, 1999, gage height, 11.51 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,500 ft^3/s, Apr. 17, gage height, 24.05 ft, outside gage height was 24.36 ft, from crest-stage gage; minimum discharge, 24 ft^3/s, Sept. 27, 30, gage height, 12.02 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	561	2,420	515	525	168	86	523	1,090	64	52	66	66
2	798	2,050	1,080	688	152	315	521	867	73	49	57	49
3	507	1,840	1,140	612	148	809	445	861	314	44	50	38
4	373	1,610	1,030	491	132	631	533	813	1,630	46	46	33
5	312	1,430	913	430	126	520	1,120	726	2,370	102	42	30
6	257	1,390	793	539	114	e390	1,190	628	2,360	103	38	28
7	219	1,280	720	644	108	321	1,150	606	1,620	93	37	27
8	194	1,750	728	1,280	102	270	1,020	354	999	72	64	29
9	176	4,870	562	1,970	98	e230	870	267	524	60	63	34
10	163	4,300	462	1,900	95	214	706	229	310	53	408	33
11	150	2,960	452	1,440	92	342	557	243	213	50	385	50
12	333	2,220	432	1,020	90	476	541	297	185	91	206	116
13	328	1,780	430	887	e89	531	692	248	155	72	146	72
14	253	1,550	493	820	e88	945	681	213	136	54	110	56
15	215	1,570	477	991	e87	2,030	1,900	173	121	56	89	56
16	196	1,470	699	1,430	e87	1,510	13,600	151	108	59	77	55
17	200	3,570	733	1,250	e86	856	17,700	143	107	50	69	47
18	863	5,190	660	855	90	829	9,620	127	98	56	65	42
19	702	3,870	443	873	95	614	5,510	118	88	64	56	40
20	1,010	2,720	228	987	86	499	4,080	129	96	64	52	36
21	1,210	2,000	184	e730	89	428	3,400	122	93	56	55	35
22	1,460	1,570	170	672	95	456	3,040	112	86	47	64	33
23	1,690	1,730	416	e620	93	999	2,800	105	77	58	58	30
24	1,430	1,890	520	e570	94	1,190	2,580	95	68	98	53	29
25	1,140	1,530	476	568	89	1,780	2,440	89	63	84	50	28
26	848	1,350	710	e480	89	1,460	2,140	84	58	69	46	26
27	648	1,190	822	417	88	1,410	1,820	77	56	61	42	27
28	5,620	821	730	363	86	1,390	1,620	90	60	92	38	28
29	8,630	707	606	e310	---	1,010	1,420	75	54	99	35	27
30	5,710	651	498	265	---	758	1,240	70	50	81	36	25
31	3,430	---	429	218	---	618	---	64	---	72	73	---
Total	39,626	63,279	18,551	24,845	2,856	23,917	85,459	9,266	12,236	2,107	2,676	1,225
Mean	1,278	2,109	598	801	102	772	2,849	299	408	68.0	86.3	40.8
Max	8,630	5,190	1,140	1,970	168	2,030	17,700	1,090	2,370	103	408	116
Min	150	651	170	218	86	86	445	64	50	44	35	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	324	499	609	548	470	752	1,235	692	475	187	102	198
Max	1,562	2,109	2,775	2,641	1,745	2,049	3,306	1,738	2,926	1,163	426	1,700
(WY)	(2006)	(2007)	(1997)	(2006)	(1976)	(1977)	(1987)	(1998)	(2006)	(1996)	(1990)	(2004)
Min	19.2	20.4	64.6	31.6	59.4	167	136	97.9	37.5	14.4	12.4	13.6
(WY)	(2002)	(2002)	(2002)	(1981)	(1980)	(1981)	(1985)	(1995)	(1991)	(1993)	(1993)	(1980)

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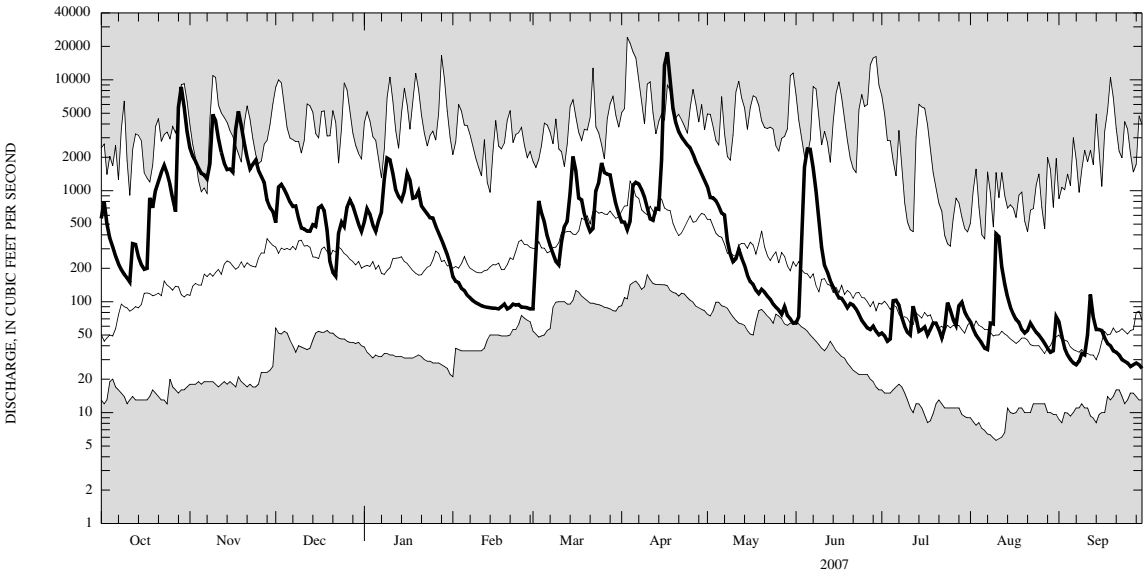
SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1914 - 2007	
Annual total	433,646		286,043			
Annual mean	1,188		784		503	
Highest annual mean					1,194	2006
Lowest annual mean					98.5	1985
Highest daily mean	16,200	Jun 29	17,700	Apr 17	24,200	Apr 3, 2005
Lowest daily mean	34	Aug 18	25	Sep 30	5.6	Aug 10, 1999
Annual seven-day minimum	37	Aug 13	27	Sep 24	6.1	Aug 7, 1999
10 percent exceeds	2,630		1,780		1,260	
50 percent exceeds	620		310		180	
90 percent exceeds	111		50		32	



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.