01362500 ESOPUS CREEK AT COLDBROOK, NY

LOCATION.--Lat 42°00'51", long 74°16'16", Ulster County, Hydrologic Unit 02020006, on left bank at downstream side of bridge on Coldbrook Road in Coldbrook, 0.3 mi downstream from Little Beaver Kill, 1.5 mi upstream from Ashokan Reservoir, and 2.5 mi south of Mount Tremper. Water-quality sampling site at discharge station.

DRAINAGE AREA.--192 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1914 to September 1925 (monthly discharge only, furnished by State engineer and surveyor of New York, published in WSP 1302), October 1925 to September 1931 (monthly discharge only, furnished by Board of Water Supply, City of New York, published in WSP 1302), October 1931 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 621.54 ft above NGVD of 1929. Prior to June 15, 1916, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1924, water diverted from Schoharie Reservoir through Shandaken Tunnel (see station 01362230) enters Esopus Creek 10.5 mi upstream from station and is included in records of daily discharge. Slight diversion from Beaver Kill into Cooper Lake for water supply of Kingston. Satellite and telephone gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,300 ft^3/s, Mar. 21, 1980, gage height 21.94 ft, from rating curve extended above 13,000 ft^3/s, on basis of slope-area measurements at gage heights 12.39 ft, 15.15 ft, and 20.70 ft; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,900 ft^3/s, Sept. 18, gage height, 13.59 ft; minimum discharge, 209 ft^3/s, Feb. 16, gage height, 4.15 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,100	1,250	1,140	678	e240	302	1,220	635	811	378	658	499
2	891	999	931	630	e240	420	1,900	610	745	344	647	472
3	823	842	772	647	e240	642	1,270	696	629	334	532	499
4	1,020	733	689	716	e250	685	1,010	631	634	327	481	496
5	950	719	627	825	e260	750	820	576	893	330	523	492
6	609	684	592	733	e270	1,610	703	532	814	341	443	473
7	540	601	531	643	e270	1,530	638	488	491	330	452	455
8	489	538	482	596	e260	1,190	577	444	405	344	424	489
9	442	495	446	507	e250	931	514	419	320	324	419	2,970
10	412	463	440	396	e300	784	457	399	378	319	523	1,770
11	461	498	5,280	e380	432	667	412	444	591	315	523	899
12	436	489	3,170	e350	323	626	386	377	519	311	977	691
13	409	478	1,690	e330	289	537	748	637	497	324	2,710	609
14	388	434	1,230	e320	270	470	1,240	841	486	355	1,400	476
15	1,010	417	1,040	e310	259	449	951	684	468	490	926	407
16	684	405	834	e300	249	418	811	621	448	480	1,330	389
17	625	400	1,140	e290	263	397	727	534	463	741	1,090	804
18	590	385	1,120	e280	259	406	673	453	510	708	819	8,980
19	597	1,150	884	e270	256	379	643	497	490	550	685	3,200
20	554	4,690	766	e270	256	370	602	404	463	499	584	1,650
21	493	2,080	678	e270	257	464	550	371	452	435	724	1,100
22	466	1,390	625	e270	257	413	509	338	455	411	623	820
23	440	1,060	608	e260	254	377	653	375	498	1,160	522	671
24	417	886	5,430	e260	254	389	636	492	470	961	468	573
25	403	855	4,180	e260	254	406	588	673	426	631	500	492
26	392	709	2,070	e260	268	448	909	639	456	525	489	429
27	4,210	632	1,410	e250	270	696	966	1,530	426	681	505	369
28	3,820	1,070	1,090	e250	272	869	859	1,290	414	1,050	523	1,040
29	4,910	2,280	917	e250	280	790	768	988	411	938	495	1,270
30	2,830	1,430	842	e250	---	675	695	808	397	698	483	932
31	1,730	---	748	e240	---	700	---	707	---	625	614	---
TOTAL	33,141	29,062	42,402	12,291	7,802	19,790	23,435	19,133	15,460	16,259	22,092	34,416
MEAN	1,069	969	1,368	396	269	638	781	617	515	524	713	1,147
MAX	4,910	4,690	5,430	825	432	1,610	1,900	1,530	893	1,160	2,710	8,980
MIN	388	385	440	240	240	302	386	338	320	311	419	369

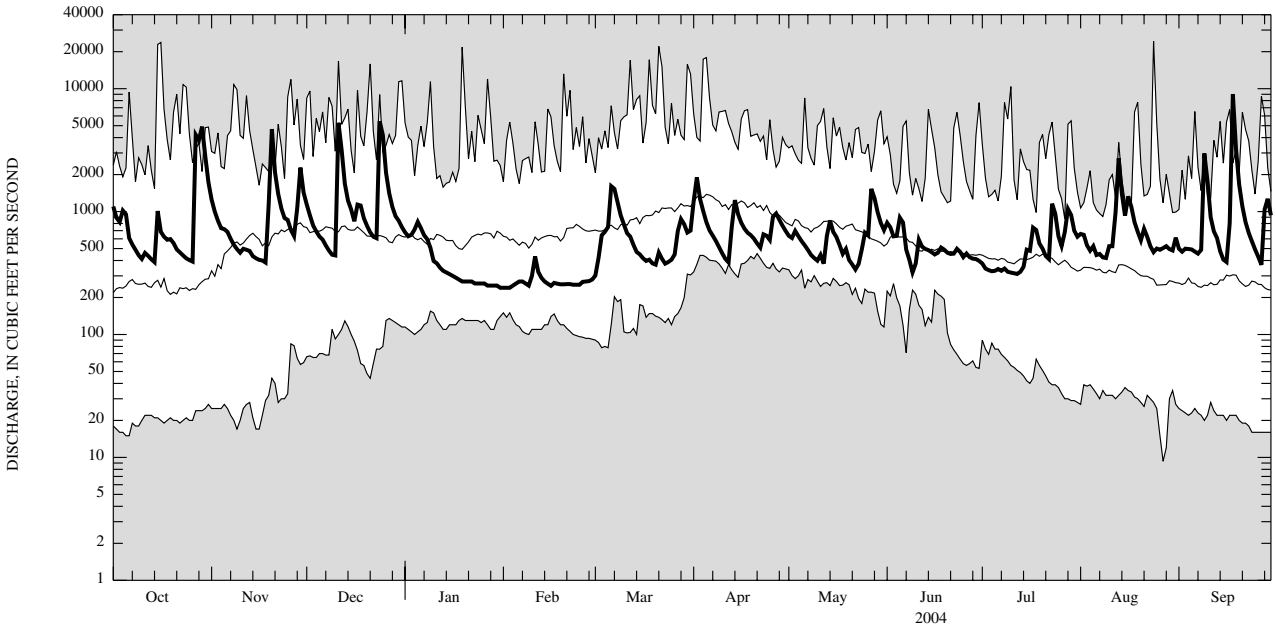
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

MEAN	474	771	881	800	767	1,149	1,342	882	604	489	391	413
MAX	2,509	1,699	2,083	2,123	2,756	2,810	3,309	2,320	1,216	1,364	1,460	1,331
(WY)	(1956)	(1943)	(1974)	(1996)	(1981)	(1936)	(1940)	(1989)	(1972)	(1945)	(1933)	(2003)
MIN	22.3	43.6	178	145	137	406	552	410	233	52.0	44.9	27.3
(WY)	(1942)	(1965)	(1965)	(1981)	(1980)	(1960)	(1985)	(1993)	(1933)	(1965)	(1962)	(1962)

01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	314,309		275,283			
ANNUAL MEAN	861		752		746	
HIGHEST ANNUAL MEAN					1,035	1952
LOWEST ANNUAL MEAN					419	1985
HIGHEST DAILY MEAN	5,660	Sep 28	8,980	Sep 18	24,400	Aug 24, 1933
LOWEST DAILY MEAN	219	Aug 31	240	Jan 31	9.3	Aug 27, 1949
ANNUAL SEVEN-DAY MINIMUM	236	Aug 25	244	Jan 28	16	Sep 24, 1943
10 PERCENT EXCEEDS	1,530		1,200		1,440	
50 PERCENT EXCEEDS	588		524		536	
90 PERCENT EXCEEDS	371		271		174	

e Estimated



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.

01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1996 to current year.

INSTRUMENTATION.--Water-temperature satellite and telephone telemeter provides 15-minute-interval readings.

REMARKS.--Interruption of record was due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Maximum, 26.5°C, Aug. 3, 19, 2002; minimum (water year 1997-2004), 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 21.5°C, June 9, Aug. 29; minimum, 0.0°C on many days during winter period.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.0	11.0	11.5	12.0	9.5	10.5	5.5	4.0	5.0	3.5	2.5	3.0
2	11.5	10.0	10.5	11.5	10.5	11.0	4.0	1.0	3.0	3.0	2.5	3.0
3	11.0	9.0	10.0	13.0	10.5	11.5	1.5	0.0	1.0	5.0	3.0	4.0
4	11.0	10.5	11.0	12.5	10.5	11.5	3.0	0.5	2.0	5.0	4.0	5.0
5	11.5	10.0	10.5	11.0	10.0	10.5	2.5	2.0	2.5	4.0	3.0	3.5
6	10.5	8.5	9.5	11.0	10.0	10.5	2.5	0.0	1.0	3.0	0.5	2.0
7	11.0	8.0	9.5	10.0	8.5	9.5	1.5	0.5	1.0	0.5	0.0	0.0
8	12.0	9.0	10.5	8.5	5.0	7.0	1.5	0.0	0.5	0.0	0.0	0.0
9	13.0	10.5	12.0	5.5	4.0	4.5	2.0	0.5	1.5	0.0	0.0	0.0
10	14.5	11.5	13.0	5.5	3.0	4.5	3.5	2.0	3.0	0.0	0.0	0.0
11	14.5	11.5	13.0	5.5	4.0	4.5	5.0	3.5	4.0	0.0	0.0	0.0
12	13.5	11.0	12.0	8.0	5.5	7.0	4.0	3.0	3.5	0.0	0.0	0.0
13	14.0	11.0	12.5	8.5	---	---	3.0	1.5	2.0	0.0	0.0	0.0
14	12.5	10.0	11.5	---	---	---	1.5	0.0	1.0	0.0	0.0	0.0
15	13.0	10.0	12.0	---	---	---	1.5	0.0	0.5	0.0	0.0	0.0
16	11.0	9.5	10.0	---	---	---	2.5	1.0	1.5	0.0	0.0	0.0
17	10.0	8.5	9.5	6.0	---	---	2.5	2.0	2.0	0.0	0.0	0.0
18	10.5	8.5	9.5	7.0	6.0	6.5	2.5	1.5	2.0	0.0	0.0	0.0
19	9.5	8.0	9.0	10.5	7.0	8.0	2.0	1.5	1.5	0.0	0.0	0.0
20	10.0	7.0	8.5	9.5	6.5	8.0	2.5	1.0	2.0	0.0	0.0	0.0
21	12.0	8.5	10.0	8.0	6.0	7.0	1.5	0.0	1.0	0.0	0.0	0.0
22	10.5	8.0	9.5	8.0	6.5	7.0	2.5	0.5	1.5	0.0	0.0	0.0
23	8.0	6.5	7.0	7.5	6.0	7.0	4.0	2.5	3.5	0.0	0.0	0.0
24	8.0	6.0	7.0	7.5	6.0	7.0	3.5	2.0	3.0	0.0	0.0	0.0
25	8.5	5.5	7.0	7.5	5.0	6.0	4.0	3.0	3.5	0.0	0.0	0.0
26	10.5	8.5	9.5	5.5	4.0	5.0	3.5	2.5	3.0	0.0	0.0	0.0
27	12.0	10.5	11.0	6.0	4.5	5.5	3.5	2.5	3.0	0.0	0.0	0.0
28	10.5	9.0	9.5	8.0	6.0	6.5	3.0	2.0	2.5	0.0	0.0	0.0
29	10.0	9.5	9.5	8.0	4.5	6.5	3.5	2.0	3.0	0.0	0.0	0.0
30	10.0	8.0	9.0	5.5	4.5	5.0	4.0	3.0	3.5	0.0	0.0	0.0
31	10.5	8.0	9.5	---	---	---	4.0	2.5	3.0	0.0	0.0	0.0
MONTH	14.5	5.5	10.1	---	---	---	5.5	0.0	2.3	5.0	0.0	0.7

01362500 ESOPUS CREEK AT COLDBROOK, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.0	0.0	0.0	4.5	1.0	2.5	6.0	5.0	5.5	16.0	10.5	13.5
2	0.0	0.0	0.0	4.0	1.0	2.5	5.5	4.5	5.0	14.5	12.5	13.0
3	0.0	0.0	0.0	3.0	1.0	2.0	7.5	4.5	6.0	13.5	9.5	11.5
4	0.0	0.0	0.0	3.0	1.5	2.0	7.0	4.0	5.5	12.5	7.5	10.0
5	0.0	0.0	0.0	2.0	1.5	2.0	5.0	2.0	3.0	9.5	7.5	8.5
6	0.0	0.0	0.0	3.0	1.5	2.0	6.0	0.5	3.5	14.0	7.5	11.0
7	0.0	0.0	0.0	4.0	1.5	2.5	5.5	3.5	4.5	16.5	10.5	13.5
8	0.0	0.0	0.0	3.0	2.0	2.5	7.0	3.5	5.5	13.0	9.5	11.5
9	0.0	0.0	0.0	3.0	2.0	2.5	8.5	4.0	6.0	12.5	9.5	11.0
10	0.0	0.0	0.0	4.5	2.0	3.0	7.5	4.0	6.0	16.5	10.0	13.0
11	0.5	0.0	0.0	5.5	1.0	3.0	8.5	4.5	6.5	17.5	13.0	15.0
12	0.5	0.0	0.0	4.5	2.0	3.0	8.5	5.0	7.0	18.0	14.0	16.0
13	1.5	0.5	1.0	3.5	0.0	2.0	7.0	5.5	6.0	18.0	14.0	15.5
14	2.0	0.0	1.0	2.5	0.0	1.5	7.0	6.0	6.5	17.0	13.0	14.5
15	1.0	0.0	0.5	5.0	2.0	3.0	9.5	5.5	7.0	17.5	13.0	15.5
16	0.5	0.0	0.0	3.0	0.5	1.5	10.0	4.5	7.5	17.0	13.0	15.0
17	0.5	0.0	0.0	2.0	0.0	1.0	11.5	6.0	9.0	17.5	11.5	14.5
18	2.0	0.0	0.5	3.0	0.5	1.5	13.0	8.5	10.5	18.0	14.0	16.0
19	2.0	0.0	0.5	4.0	1.0	2.5	14.5	8.5	11.5	17.0	14.0	15.5
20	2.0	0.0	1.0	4.5	0.5	2.5	14.5	10.5	12.5	17.5	11.5	14.5
21	3.0	0.5	1.5	4.5	2.0	3.0	11.5	9.0	10.5	18.5	14.0	16.0
22	3.5	0.5	1.5	3.0	0.0	1.5	13.5	9.0	11.5	18.5	14.5	16.5
23	3.0	0.0	1.5	4.0	0.0	1.5	12.5	9.5	10.5	20.0	15.5	17.5
24	2.0	0.5	1.0	7.0	1.5	4.0	13.5	8.5	10.5	18.0	16.0	17.0
25	2.0	0.0	0.5	5.0	4.0	4.5	10.0	7.5	8.5	16.5	14.5	15.5
26	3.5	0.0	1.0	8.5	3.5	6.0	8.5	7.0	8.0	16.0	13.0	14.5
27	3.5	0.0	1.5	8.5	6.0	7.0	11.5	7.5	9.5	17.0	13.5	15.0
28	4.5	0.0	2.0	9.0	5.0	7.0	10.5	6.5	8.5	15.5	13.5	14.5
29	3.5	0.5	2.0	8.0	4.0	6.0	13.5	7.0	10.0	14.5	11.5	13.0
30	---	---	---	8.0	4.0	6.0	15.0	9.5	12.0	15.5	10.0	12.5
31	---	---	---	6.5	5.0	6.0	---	---	---	13.0	11.0	12.0
MONTH	4.5	0.0	0.6	9.0	0.0	3.1	15.0	0.5	7.8	20.0	7.5	14.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	13.5	11.5	12.5	17.0	12.5	14.5	19.0	16.5	17.5	20.0	16.0	18.0
2	14.5	12.0	13.0	20.0	13.0	16.0	21.0	16.5	18.5	20.0	15.5	17.5
3	16.0	12.5	14.0	20.0	13.0	16.0	21.0	16.5	18.5	20.5	16.0	18.0
4	17.0	11.5	14.0	18.5	12.5	15.5	20.0	16.5	18.5	20.5	16.5	18.5
5	13.0	11.5	12.0	18.0	14.0	15.5	18.5	16.5	17.5	18.5	17.0	17.5
6	12.0	11.0	11.5	19.0	14.0	16.0	17.0	14.5	15.5	20.0	16.5	18.0
7	17.5	11.5	14.0	19.5	13.5	16.0	17.0	14.0	15.5	20.0	16.5	18.0
8	19.0	13.5	16.5	20.0	14.0	16.5	18.0	14.0	16.0	18.5	17.0	18.0
9	21.5	15.5	18.5	19.5	14.0	16.0	20.0	15.0	17.0	18.5	17.5	18.0
10	19.5	13.0	17.0	19.0	13.0	15.5	20.5	16.0	18.0	18.0	16.5	17.0
11	16.5	11.5	13.5	20.0	13.5	16.0	20.5	18.0	19.0	17.5	15.0	16.5
12	17.0	10.5	13.5	16.0	14.0	14.5	19.0	17.0	18.0	17.5	15.0	16.0
13	16.0	11.5	13.5	15.5	14.0	14.5	17.0	16.0	17.0	18.0	15.0	16.5
14	17.0	12.5	14.0	16.5	14.0	15.0	17.0	15.5	16.0	17.0	15.5	16.0
15	18.5	13.0	15.5	17.0	15.0	16.0	17.5	15.5	16.0	17.5	15.5	16.5
16	18.0	13.5	15.5	18.0	14.5	16.0	16.5	15.0	16.0	19.0	15.5	17.0
17	15.5	13.5	14.5	20.5	16.5	18.5	17.5	14.0	15.5	17.0	16.0	16.5
18	17.0	13.5	15.0	18.5	16.5	17.5	17.5	14.5	16.0	16.5	13.5	15.0
19	17.0	13.0	15.0	19.5	15.5	17.0	17.0	15.0	16.0	14.0	12.5	13.0
20	16.0	11.5	13.5	21.0	16.0	18.0	19.0	15.5	17.0	14.5	11.5	13.0
21	17.0	11.0	14.0	21.0	15.5	18.0	18.0	16.0	17.0	15.0	12.0	13.5
22	14.0	12.5	13.0	21.0	16.0	18.5	18.0	14.0	16.0	16.0	12.5	14.5
23	18.0	12.5	15.0	19.0	17.0	18.0	18.5	14.0	16.5	17.5	13.5	15.5
24	18.0	12.0	14.5	19.0	16.0	17.0	19.0	15.5	17.5	17.5	14.0	15.5
25	16.0	12.5	14.0	18.5	14.5	16.5	17.5	15.0	16.0	17.0	14.5	16.0
26	18.5	12.5	14.5	17.5	15.0	16.0	18.5	15.0	16.5	18.0	14.5	16.0
27	16.5	11.5	14.0	16.0	15.0	15.5	19.5	16.0	17.5	16.5	13.0	15.0
28	14.5	12.0	13.0	17.5	15.0	16.0	21.0	16.5	18.5	15.5	15.0	15.5
29	18.0	12.5	14.5	18.5	15.0	16.5	21.5	17.5	19.5	15.5	14.5	15.0
30	18.5	12.5	15.0	18.0	15.0	16.5	21.0	17.5	19.0	14.5	13.5	14.0
31	---	---	---	18.0	16.0	17.0	20.5	17.5	19.0	---	---	---
MONTH	21.5	10.5	14.3	21.0	12.5	16.3	21.5	14.0	17.2	20.5	11.5	16.2