

Water-Data Report 2012

01361000 KINDERHOOK CREEK AT ROSSMAN, NY

Upper Hudson Basin
Middle Hudson Subbasin

LOCATION.--Lat 42°19'50", long 73°44'38" referenced to North American Datum of 1983, Columbia County, NY, Hydrologic Unit 02020006, on right bank just downstream from Rossman Road bridge, 1.0 mi upstream from Claverack Creek, and 2.25 mi downstream from Stuyvesant Falls, in Rossman.

DRAINAGE AREA.--329 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1906 to June 1911, July 1911 to May 1914 (fragmentary, monthly discharge only for some periods, published in WSP 1302), July 1928 to September 1968, annual maximum only--1984, 1988-2011, August 2011 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 24.78 ft above NGVD of 1929. Prior to May 1914, at same site at different datum, and 1928-1962 water years, at same site at datum 1.00 ft higher.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Diurnal fluctuation and considerable regulation at low and medium flow caused by power plant above station. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,800 ft³/s, Dec. 31, 1948, gage height, 20.8 ft, present datum, from floodmarks; minimum discharge not determined.

EXTREMES FOR 2011 YEAR.--(August to September) Maximum discharge, 15,000 ft³/s, Aug. 29, gage height, 11.81 ft, from crest-stage gage; minimum discharge, 13 ft³/s, Aug. 21, gage height, 1.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,690 ft³/s, Dec. 8, gage height, 7.24 ft; minimum discharge, 1.8 ft³/s, Aug. 28, gage height, 1.03 ft.

01361000 KINDERHOOK CREEK AT ROSSMAN, NY—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	---	---	---	---	---	---	---	---	---	---	110	1,240
2	---	---	---	---	---	---	---	---	---	---	99	882
3	---	---	---	---	---	---	---	---	---	---	89	680
4	---	---	---	---	---	---	---	---	---	---	84	554
5	---	---	---	---	---	---	---	---	---	---	77	953
6	---	---	---	---	---	---	---	---	---	---	82	6,510
7	---	---	---	---	---	---	---	---	---	---	69	7,990
8	---	---	---	---	---	---	---	---	---	---	80	10,900
9	---	---	---	---	---	---	---	---	---	---	80	6,640
10	---	---	---	---	---	---	---	---	---	---	102	3,280
11	---	---	---	---	---	---	---	---	---	---	111	2,140
12	---	---	---	---	---	---	---	---	---	---	92	1,570
13	---	---	---	---	---	---	---	---	---	---	80	1,220
14	---	---	---	---	---	---	---	---	---	---	75	910
15	---	---	---	---	---	---	---	---	---	---	86	718
16	---	---	---	---	---	---	---	---	---	---	402	712
17	---	---	---	---	---	---	---	---	---	---	328	606
18	---	---	---	---	---	---	---	---	---	---	230	531
19	---	---	---	---	---	---	---	---	---	---	190	462
20	---	---	---	---	---	---	---	---	---	---	159	435
21	---	---	---	---	---	---	---	---	---	---	140	488
22	---	---	---	---	---	---	---	---	---	---	433	576
23	---	---	---	---	---	---	---	---	---	---	364	764
24	---	---	---	---	---	---	---	---	---	---	254	942
25	---	---	---	---	---	---	---	---	---	---	204	718
26	---	---	---	---	---	---	---	---	---	---	226	579
27	---	---	---	---	---	---	---	---	---	---	329	502
28	---	---	---	---	---	---	---	---	---	---	3,730	459
29	---	---	---	---	---	---	---	---	---	---	11,300	764
30	---	---	---	---	---	---	---	---	---	---	3,600	2,960
31	---	---	---	---	---	---	---	---	---	---	1,880	---
Total	---	---	---	---	---	---	---	---	---	---	25,085	57,685
Mean	---	---	---	---	---	---	---	---	---	---	809	1,923
Max	---	---	---	---	---	---	---	---	---	---	11,300	10,900
Min	---	---	---	---	---	---	---	---	---	---	69	435
Cfsm	---	---	---	---	---	---	---	---	---	---	2.46	5.84
In.	---	---	---	---	---	---	---	---	---	---	2.84	6.52

01361000 KINDERHOOK CREEK AT ROSSMAN, NY—Continued



CURRENT WATER YEAR DAILY MEAN DISCHARGE.

01361000 KINDERHOOK CREEK AT ROSSMAN, NY—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1,920	781	672	875	771	280	229	267	419	88	60	74
2	1,620	834	579	834	788	280	243	344	374	82	56	73
3	1,530	808	537	760	640	298	238	424	407	63	54	70
4	1,260	769	499	574	609	376	220	557	454	71	43	66
5	1,060	698	472	595	557	344	208	527	424	70	41	67
6	800	635	457	537	493	294	196	442	365	69	41	77
7	693	580	699	522	453	295	185	403	326	66	41	78
8	629	548	4,200	492	421	326	180	407	293	62	45	94
9	560	507	2,540	431	398	564	169	1,360	267	59	47	210
10	508	484	1,820	426	373	625	177	1,170	245	54	91	189
11	463	462	1,440	409	362	524	168	964	225	53	734	122
12	425	434	1,200	448	336	475	162	693	205	48	1,710	109
13	409	407	1,050	544	294	468	158	562	260	48	545	99
14	487	385	961	531	300	529	149	526	369	52	333	90
15	826	398	991	369	296	525	147	1,050	268	52	275	85
16	847	411	1,230	e370	343	513	148	1,420	222	53	249	82
17	698	447	1,060	378	366	563	143	1,050	186	46	205	73
18	622	417	899	457	394	517	131	797	170	50	246	93
19	564	377	763	420	326	444	129	644	151	44	235	407
20	546	357	745	410	303	415	126	527	145	41	187	448
21	501	372	703	412	281	385	123	404	138	39	154	290
22	450	351	958	440	276	366	152	400	115	38	144	223
23	420	1,140	1,560	370	278	344	838	432	122	39	113	265
24	385	1,420	1,460	477	285	319	717	380	114	56	114	253
25	386	1,020	1,100	534	310	303	497	356	112	55	108	209
26	370	857	981	442	293	292	460	332	143	57	101	182
27	402	749	902	878	271	263	347	298	128	57	92	170
28	665	681	1,670	1,570	267	252	317	265	113	56	93	185
29	654	625	1,240	1,120	267	253	286	245	103	64	131	257
30	695	683	992	910	---	251	261	420	96	75	105	267
31	761	---	923	792	---	238	---	544	---	66	77	---
Total	22,156	18,637	35,303	18,327	11,351	11,921	7,504	18,210	6,959	1,773	6,470	4,907
Mean	715	621	1,139	591	391	385	250	587	232	57.2	209	164
Max	1,920	1,420	4,200	1,570	788	625	838	1,420	454	88	1,710	448
Min	370	351	457	369	267	238	123	245	96	38	41	66
Cfsm	2.17	1.89	3.46	1.80	1.19	1.17	0.76	1.79	0.71	0.17	0.63	0.50
In.	2.51	2.11	3.99	2.07	1.28	1.35	0.85	2.06	0.79	0.20	0.73	0.55

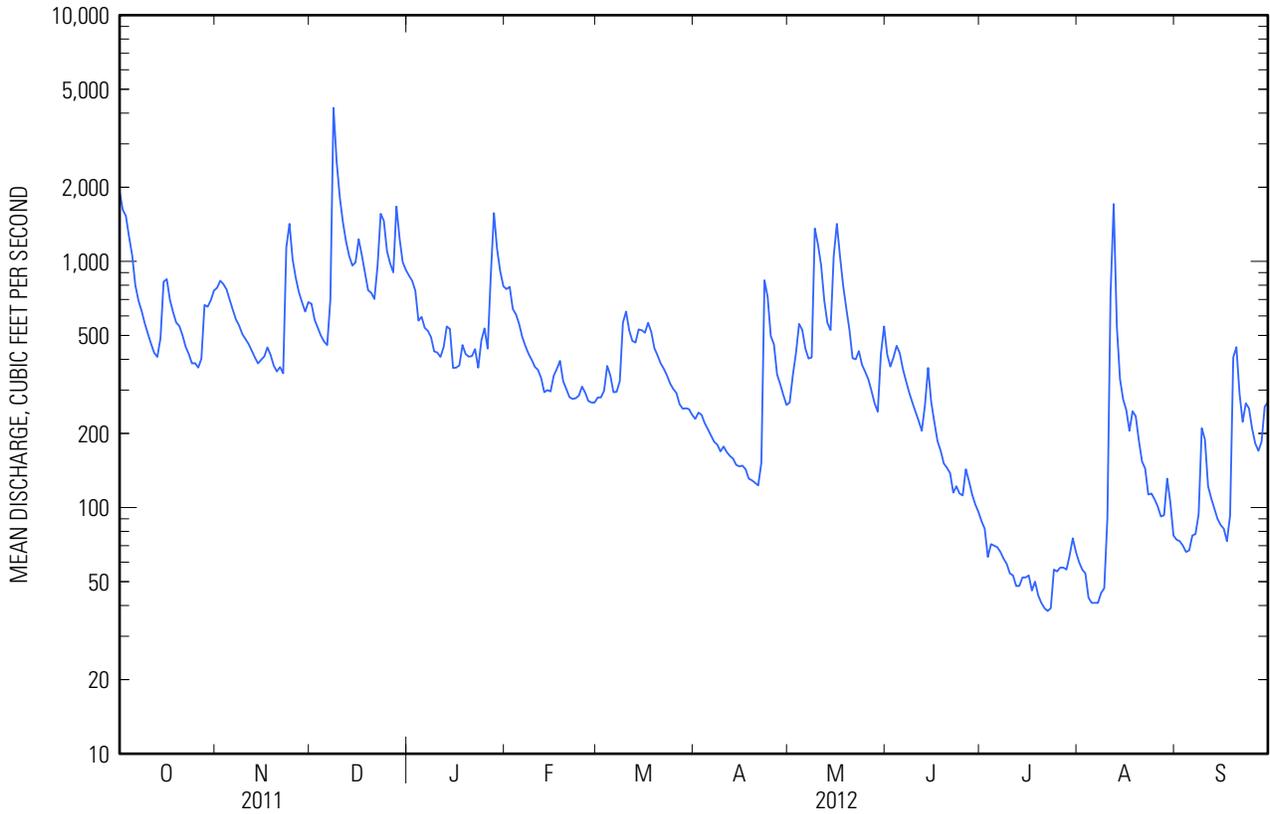
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	187	382	441	465	433	927	1,048	557	324	188	130	226
Max	715	1,179	1,139	1,735	1,089	2,594	2,396	1,394	968	1,360	809	1,923
(WY)	(2012)	(1956)	(2012)	(1949)	(1951)	(1936)	(1940)	(1943)	(1948)	(1945)	(2011)	(2011)
Min	23.4	16.5	58.9	46.3	20.1	240	250	190	59.8	22.3	10.8	8.65
(WY)	(1965)	(1965)	(1965)	(1931)	(1963)	(1965)	(2012)	(1964)	(1964)	(1964)	(1964)	(1964)

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SUMMARY STATISTICS

	Water Year 2012		Water Years 1929 - 2012	
Annual total	163,518			
Annual mean	447		437	
Highest annual mean			698	1945
Lowest annual mean			155	1965
Highest daily mean	4,200	Dec 8	18,500	Dec 31, 1948
Lowest daily mean	38	Jul 22	1.0	Sep 16, 1962
Annual seven-day minimum	42	Jul 17	4.4	Sep 22, 1964
Annual runoff (cfsm)	1.36		1.33	
Annual runoff (inches)	18.49		18.05	
10 percent exceeds	914		1,010	
50 percent exceeds	370		240	
90 percent exceeds	68		47	



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--

SEDIMENT DATA: 2011-12 (e).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: August 2011 to current year.

REMARKS.--Point samples are collected using an automatic sampler with teflon-lined sample tubing. Tubing is housed in a 2 in diameter galvanized steel pipe extending 25 ft from the right bank. Sample intake tubing is 18 in above channel bottom. A sampling method code of "SS Pumping" indicates suspended sediment sampling using a pumping mechanism. Turbidity data are collected every 15 minutes using an in situ turbidity probe located near the downstream end of the central bridge pier directly across from the gage. Daily suspended-sediment load and concentration are derived from a regression equation relating turbidity to suspended-sediment concentration.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 1,070 mg/L, Aug. 28, 2011; minimum daily mean, 2 mg/L on many days during 2012 water year.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 27,900 tons, Aug. 29, 2011; minimum daily, 0.44 tons, July 4, Aug. 9, 2012.

EXTREMES FOR 2011 YEAR.--(August to September)

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 1,070 mg/L, Aug. 28; minimum daily mean, 5 mg/L, Aug. 5.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 27,900 tons, Aug. 29; minimum daily, 1.1 tons, Aug. 7.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, about 481 mg/L, Dec. 8; minimum daily mean, 2 mg/L on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, about 5,200 tons, Dec. 8; minimum daily, 0.44 tons, July 4, Aug. 9.

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER
2012

[mg/L, milligrams per liter]

Date	Sample start time	Sampling method (82398)	Suspended sediment concentration, mg/L (80154)
04-21-2012	2055	SS Pumping	272
04-22-2012	2045	SS Pumping	15
04-23-2012	0000	SS Pumping	38
04-23-2012	0315	SS Pumping	82
04-23-2012	0630	SS Pumping	51
04-23-2012	0945	SS Pumping	30
04-23-2012	1300	SS Pumping	35
04-23-2012	1615	SS Pumping	44
04-23-2012	1930	SS Pumping	44
04-23-2012	2245	SS Pumping	41
04-24-2012	0200	SS Pumping	34
04-24-2012	0515	SS Pumping	26
04-24-2012	0830	SS Pumping	18
04-24-2012	1145	SS Pumping	15
04-25-2012	1530	SS Pumping	4
08-11-2012	1930	SS Pumping	78
08-11-2012	2245	SS Pumping	308
08-12-2012	0200	SS Pumping	503
08-12-2012	0515	SS Pumping	327
08-12-2012	0830	SS Pumping	216
08-12-2012	1145	SS Pumping	130
08-12-2012	1500	SS Pumping	76
08-12-2012	1815	SS Pumping	52
08-12-2012	2130	SS Pumping	38
08-13-2012	1030	SS Pumping	22
09-18-2012	0820	SS Pumping	18
09-18-2012	1130	SS Pumping	34
09-18-2012	1445	SS Pumping	18
09-19-2012	0031	SS Pumping	49
09-19-2012	0345	SS Pumping	32
09-19-2012	1015	SS Pumping	14
09-19-2012	2315	SS Pumping	21

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**SUSPENDED SEDIMENT CONCENTRATION, WATER, UNFILTERED, ESTIMATED BY REGRESSION EQUATION, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Day	Mean	Sediment										
	concen- tration (mg/L)	discharge (tons/ day)										
	April		May		June		July		August		September	
1	---	---	---	---	---	---	---	---	12	3.4	47	161
2	---	---	---	---	---	---	---	---	9	2.7	31	75
3	---	---	---	---	---	---	---	---	6	1.4	22	41
4	---	---	---	---	---	---	---	---	6	1.3	18	27
5	---	---	---	---	---	---	---	---	5	1.3	106	381
6	---	---	---	---	---	---	---	---	6	1.3	647	11,400
7	---	---	---	---	---	---	---	---	6	1.1	550	12,800
8	---	---	---	---	---	---	---	---	12	2.7	552	16,400
9	---	---	---	---	---	---	---	---	19	4.6	258	4,980
10	---	---	---	---	---	---	---	---	40	13	132	1,190
11	---	---	---	---	---	---	---	---	8	2.6	76	447
12	---	---	---	---	---	---	---	---	7	1.8	47	200
13	---	---	---	---	---	---	---	---	12	2.6	39	127
14	---	---	---	---	---	---	---	---	26	5.1	30	72
15	---	---	---	---	---	---	---	---	67	18	21	41
16	---	---	---	---	---	---	---	---	141	101	17	34
17	---	---	---	---	---	---	---	---	25	23	12	19
18	---	---	---	---	---	---	---	---	12	7.3	9	13
19	---	---	---	---	---	---	---	---	9	4.9	8	9.5
20	---	---	---	---	---	---	---	---	10	4.1	7	8.7
21	---	---	---	---	---	---	---	---	9	3.4	8	10
22	---	---	---	---	---	---	---	---	30	41	29	42
23	---	---	---	---	---	---	---	---	29	31	26	53
24	---	---	---	---	---	---	---	---	12	8.4	35	89
25	---	---	---	---	---	---	---	---	12	6.6	19	38
26	---	---	---	---	---	---	---	---	14	8.7	10	15
27	---	---	---	---	---	---	---	---	32	28	8	11
28	---	---	---	---	---	---	---	---	1,070	17,000	6	7.8
29	---	---	---	---	---	---	---	---	834	27,900	147	344
30	---	---	---	---	---	---	---	---	187	1,960	254	2,140
31	---	---	---	---	---	---	---	---	84	440	---	---
Total	---	---	---	---	---	---	---	---	---	47,630.3	---	51,176.0

01361000 KINDERHOOK CREEK AT ROSSMAN, NY—Continued

**SUSPENDED SEDIMENT CONCENTRATION, WATER, UNFILTERED, ESTIMATED BY REGRESSION EQUATION, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

[e, estimated]

Day	Mean	Sediment										
	concentration (mg/L)	discharge (tons/day)										
	October		November		December		January		February		March	
1	59	309	8	16	8	15	11	27	14	29	3	2.4
2	36	156	9	20	5	7.1	10	22	15	33	3	2.3
3	30	125	7	15	4	5.7	9	18	10	17	30	25
4	22	74	6	12	4	5.3	10	15	8	12	9	9.0
5	17	49	5	9.3	4	5.1	8	13	7	10	7	6.4
6	12	26	4	6.9	5	6.0	7	11	6	8.6	4	2.9
7	9	17	4	5.6	e97	e277	7	10	6	7.6	4	2.9
8	8	13	4	5.6	e481	e5,200	7	9.3	5	6.0	6	5.2
9	7	10	5	6.4	e91	e649	6	6.9	5	5.7	19	28
10	6	7.8	3	4.1	e48	e236	5	5.7	5	5.3	19	33
11	5	6.8	3	3.7	e34	e134	5	5.2	5	4.8	9	13
12	5	5.7	2	2.9	e25	e81	12	15	4	3.8	4	5.6
13	5	5.6	2	2.2	e19	e54	13	20	4	3.0	4	5.7
14	33	44	2	2.1	e15	e40	12	17	4	2.9	7	9.8
15	21	47	2	2.6	e14	e39	8	8.4	4	3.1	8	11
16	13	31	4	4.4	25	82	6	e6.2	5	4.2	5	6.9
17	7	12	4	4.5	14	41	6	6.6	5	4.7	6	9.2
18	6	9.6	3	3.5	9	23	9	11	8	8.2	5	6.9
19	5	8.0	2	2.4	8	17	13	15	6	5.6	5	5.5
20	6	8.2	2	2.2	8	17	22	25	5	3.8	5	5.4
21	4	5.9	2	2.2	9	18	269	298	4	2.9	5	5.0
22	3	4.2	2	2.2	24	65	5	6.1	3	2.5	5	4.6
23	3	3.8	123	412	104	489	6	6.0	4	3.3	5	4.7
24	3	3.4	56	229	42	173	16	21	5	3.7	5	4.7
25	3	3.4	17	47	15	45	36	51	4	3.2	4	3.6
26	3	3.1	10	23	11	29	15	18	4	3.1	4	3.3
27	8	9.5	7	15	28	72	89	292	3	2.4	2	1.6
28	11	20	6	12	98	491	150	678	3	2.2	2	1.4
29	8	13	6	11	28	98	39	118	3	2.0	2	1.4
30	10	19	7	13	12	31	20	50	---	---	2	1.2
31	10	21	---	---	10	24	12	27	---	---	2	1.3
Total	---	1,071.0	---	897.8	---	8,469.2	---	1,832.4	---	203.6	---	228.9

01361000 KINDERHOOK CREEK AT ROSSMAN, NY—Continued

**SUSPENDED SEDIMENT CONCENTRATION, WATER, UNFILTERED, ESTIMATED BY REGRESSION EQUATION, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**

[e, estimated]

Day	Mean concentration (mg/L)	Sediment discharge (tons/ day)										
	April		May		June		July		August		September	
1	2	1.4	4	2.8	10	11	4	1.1	3	0.49	3	0.61
2	2	1.4	4	3.4	9	9.3	5	1.1	7	1.0	2	0.48
3	2	1.4	4	4.5	8	8.5	4	0.72	4	0.59	3	0.60
4	3	1.9	9	13	9	11	2	0.44	5	0.61	4	0.63
5	3	1.7	5	6.9	9	11	4	0.68	6	0.71	12	2.3
6	2	1.0	4	4.8	7	6.6	3	0.62	7	0.74	7	1.4
7	2	0.95	4	4.2	7	5.9	3	0.50	7	0.82	3	0.68
8	2	0.97	5	5.8	7	5.8	3	0.56	4	0.51	72	27
9	3	1.2	67	252	8	5.8	4	0.61	3	0.44	62	29
10	3	1.2	29	93	7	4.8	4	0.64	118	46	13	6.5
11	3	1.1	18	47	8	4.9	4	0.62	186	607	10	3.2
12	2	1.1	10	19	10	5.8	4	0.55	340	2,130	4	1.3
13	3	1.2	7	11	12	8.0	5	0.63	34	54	4	1.0
14	3	1.2	7	10	12	12	18	2.4	15	14	6	1.4
15	3	1.2	30	108	11	7.9	7	0.96	14	10	4	0.97
16	3	1.4	48	188	10	6.1	6	0.80	10	6.5	4	0.89
17	4	1.7	24	67	11	5.5	6	0.77	9	5.1	5	1.0
18	6	2.0	16	34	12	5.5	4	0.59	9	5.9	61	21
19	5	1.7	12	21	11	4.3	6	0.72	10	6.1	43	37
20	4	1.3	9	13	8	3.0	8	0.93	7	3.7	17	21
21	5	1.7	7	7.9	6	2.3	7	0.71	6	2.4	8	6.4
22	14	6.5	10	11	7	2.1	7	0.74	5	1.8	20	12
23	87	161	8	9.8	6	1.9	45	4.8	7	2.0	15	11
24	26	56	7	6.8	7	2.1	77	12	7	2.2	6	4.3
25	8	10	7	6.8	7	2.1	12	1.7	5	1.5	4	2.5
26	5	6.2	7	5.9	8	3.1	6	0.94	5	1.4	4	2.2
27	4	3.8	6	5.0	7	2.4	5	0.74	7	1.7	5	2.3
28	3	2.5	5	3.3	6	2.0	6	0.95	18	4.7	9	4.3
29	3	2.5	12	8.0	5	1.4	22	3.7	7	2.5	6	4.1
30	4	2.7	13	15	5	1.2	8	1.7	7	1.9	6	4.4
31	---	---	17	24	---	---	3	0.62	6	1.3	---	---
Total	---	279.92	---	1,011.9	---	163.3	---	44.54	---	2,917.61	---	211.46

Total suspended sediment discharge (tons)	
Year	17,331.63