

Gaging Stations

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06819185 EAST FORK ONE HUNDRED AND TWO RIVER AT BEDFORD, IA

LOCATION.--Lat 40°39'38", long 94°42'59", in NE $\frac{1}{4}$ sec.35, T.68 N., R.34 W., Taylor County, Hydrologic Unit 10240013, on left bank at downstream side of bridge of County Highway N44, 0.1 mi south of Bedford, 0.4 mi upstream from concrete stabilization dam, and 3.0 mi upstream from Daugherty Creek.

DRAINAGE AREA.--85.4 mi².

PERIOD OF RECORD.--October 1983 to current year. September 1959 to September 1983, at site 2 mi downstream published as "near Bedford" (station 06819190) not equivalent because of difference in drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,069.16 ft above NGVD of 1929.

REMARKS.--Records are fair, except those for estimated daily discharges, which are poor. Slight regulation at low flow by low dam used for water supply in Bedford. U.S. Geological Survey data collection platform with satellite telemetry and a U.S. National Weather Service Limited Automatic Remote Collector (LARC) at station.

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	0.03	0.24	0.26	2.2	e2.7	38	60	7.4	39	8.0	6.9	1.6
2	0.02	12	0.23	2.1	e1.4	35	50	6.2	21	10	4.5	1.6
3	0.01	16	0.34	2.7	e0.53	13	43	5.7	20	9.3	5.1	7.1
4	0.00	133	0.15	2.9	e1.3	436	37	5.6	18	14	1,520	6.7
5	0.01	30	0.22	2.9	e2.9	732	35	6.2	18	17	47	5.6
6	0.01	0.28	0.30	2.0	e1.9	106	33	5.9	18	15	29	7.0
7	0.01	0.14	0.34	1.2	e1.2	76	28	5.1	18	9.8	26	5.8
8	0.05	0.14	0.27	1.4	e0.84	41	23	4.5	18	9.0	24	3.8
9	0.08	0.14	0.87	1.8	e1.3	29	16	28	17	753	23	3.4
10	0.09	0.15	27	1.2	1.9	19	16	47	18	56	13	2.8
11	0.28	0.18	14	1.5	1.9	17	13	16	20	663	7.9	2.0
12	0.16	0.20	5.5	2.1	1.9	11	13	7.7	57	228	6.2	1.7
13	0.44	0.15	3.3	2.3	1.6	13	12	121	188	33	5.4	1.3
14	0.36	0.14	2.8	2.6	1.7	17	11	57	142	28	3.9	1.2
15	0.12	0.15	3.0	2.8	e1.0	14	12	34	37	27	3.1	1.4
16	0.17	0.15	3.1	3.4	1.2	26	12	19	20	763	2.5	3.2
17	0.21	0.17	2.9	3.3	1.2	85	10	13	19	49	2.4	1.2
18	0.18	0.14	2.9	3.0	1.8	197	9.7	382	18	30	2.5	916
19	0.13	0.16	2.9	e1.6	2.5	107	12	107	18	27	2.5	29
20	0.27	0.17	2.7	e1.6	162	81	17	52	18	25	1.0	23
21	0.35	0.28	2.7	e2.1	176	42	34	35	19	24	1.0	15
22	0.28	0.19	3.4	e0.92	107	36	16	25	18	24	1.0	8.8
23	0.25	0.27	4.2	e1.9	77	38	11	805	17	27	1.0	6.7
24	0.21	0.15	3.3	e2.0	8.7	38	13	545	17	25	1.0	6.2
25	0.20	0.15	2.6	e2.5	2.7	39	20	504	17	24	69	5.1
26	0.20	0.15	2.5	e1.7	3.8	55	12	49	17	20	113	4.5
27	0.25	0.19	2.9	e0.77	6.4	944	7.3	272	16	17	942	3.5
28	0.31	0.23	5.9	e0.84	7.8	976	6.4	114	14	12	14	3.6
29	0.25	0.26	5.4	e1.2	10	174	7.0	27	11	12	3.9	3.4
30	0.28	0.29	2.7	e1.6	---	104	7.2	1,000	9.0	9.8	2.7	3.8
31	0.24	---	2.3	e2.3	---	74	---	103	---	7.7	2.1	---
TOTAL	5.45	195.86	110.98	62.43	592.17	4,613	596.6	4,409.3	897.0	2,976.6	2,886.6	1,086.0
MEAN	0.18	6.53	3.58	2.01	20.4	149	19.9	142	29.9	96.0	93.1	36.2
MAX	0.44	133	27	3.4	176	976	60	1,000	188	763	1,520	916
MIN	0.00	0.14	0.15	0.77	0.53	11	6.4	4.5	9.0	7.7	1.0	1.2
AC-FT	11	388	220	124	1,170	9,150	1,180	8,750	1,780	5,900	5,730	2,150
CFSM	0.00	0.08	0.04	0.02	0.24	1.74	0.23	1.67	0.35	1.12	1.09	0.42
IN.	0.00	0.09	0.05	0.03	0.26	2.01	0.26	1.92	0.39	1.30	1.26	0.47

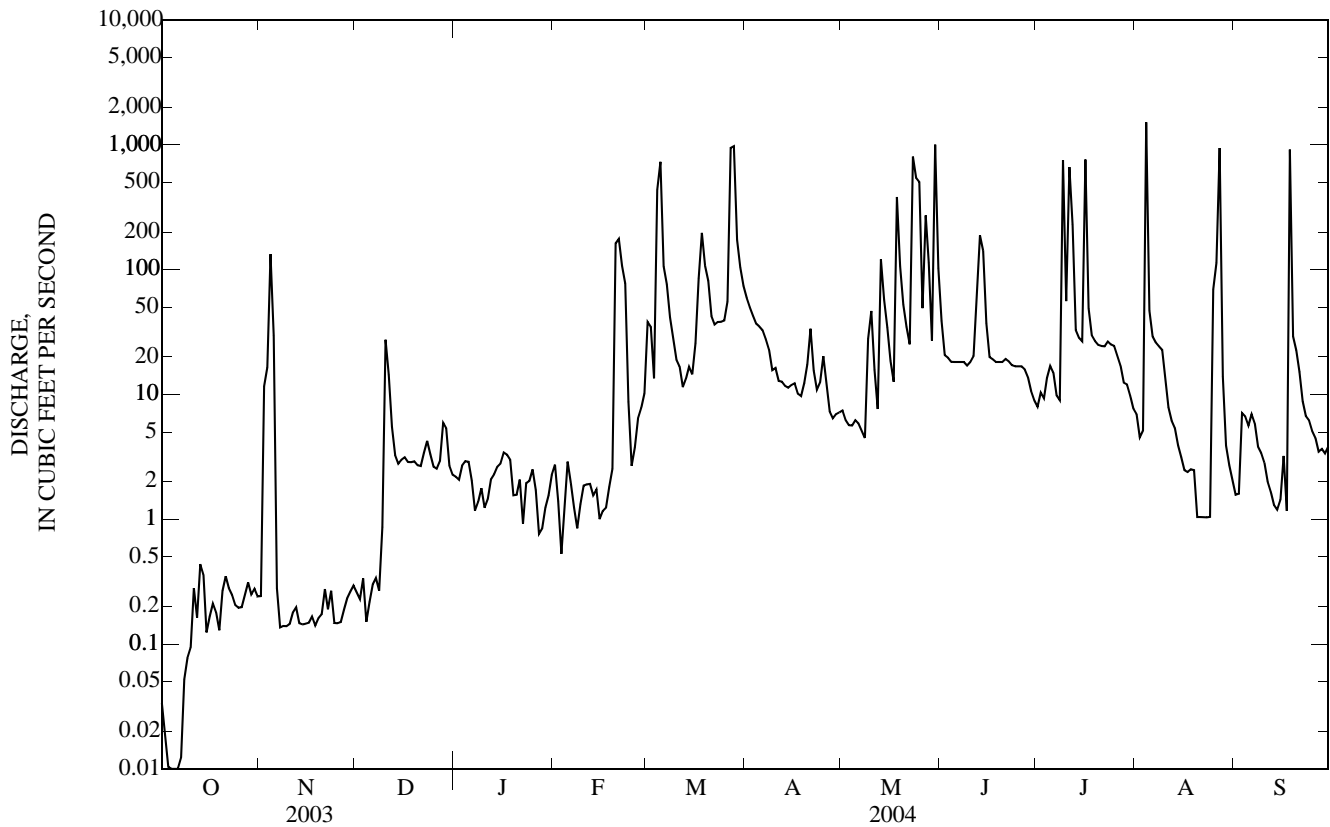
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2004, BY WATER YEAR (WY)

MEAN	20.2	25.5	23.5	9.65	39.6	77.3	89.7	139	98.3	103	23.6	43.9
MAX	159	202	181	50.2	149	276	289	488	255	889	173	260
(WY)	(1987)	(1993)	(1993)	(1998)	(1997)	(1998)	(1984)	(1995)	(1995)	(1993)	(1987)	(1993)
MIN	0.18	0.28	0.31	0.22	0.17	2.13	0.82	0.67	1.90	0.39	0.41	0.19
(WY)	(2004)	(2003)	(2003)	(2003)	(1989)	(1989)	(1989)	(1989)	(1988)	(2003)	(2003)	(2003)

06819185 EAST FORK ONE HUNDRED AND TWO RIVER AT BEDFORD, IA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	2,580.97		18,431.99		57.8	
ANNUAL MEAN	7.07		50.4		200	
HIGHEST ANNUAL MEAN					1993	
LOWEST ANNUAL MEAN					2003	
HIGHEST DAILY MEAN	146	May 9	1,520	Aug 4	7,600	Jul 5, 1993
LOWEST DAILY MEAN	0.00	Oct 4	0.00	Oct 4	0.00	Jul 6, 1989 a
ANNUAL SEVEN-DAY MINIMUM	0.01	Oct 1	0.01	Oct 1	0.00	Aug 3, 1989 b
MAXIMUM PEAK FLOW			5,910	Aug 4	9,570	Jul 14, 1986
MAXIMUM PEAK STAGE			22.24	Aug 4	23.85	Jul 5, 1993
INSTANTANEOUS LOW FLOW			0.00	Oct 4 c		
ANNUAL RUNOFF (AC-FT)	5,120		36,560		41,870	
ANNUAL RUNOFF (CFSM)	0.083		0.590		0.677	
ANNUAL RUNOFF (INCHES)	1.12		8.03		9.19	
10 PERCENT EXCEEDS	25		76		92	
50 PERCENT EXCEEDS	0.41		6.2		6.7	
90 PERCENT EXCEEDS	0.12		0.20		0.54	

a Many days between July 6 to Dec. 24, 1989.
 b Also Sept. 20, 2002.
 c Also Oct. 5-7.
 e Estimated.



06898000 THOMPSON RIVER AT DAVIS CITY, IA

LOCATION.--Lat 40°38'25", long 93°48'29", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.35, T.68 N., R.26 W., Decatur County, Hydrologic Unit 10280102, on left bank 15 ft downstream from bridge on U.S. Highway 69 at Davis City, 3.1 mi. upstream from Dickersons Branch, and 5.8 mi. upstream from Iowa-Missouri State line. On Aug. 13, gage moved 15 ft downstream of bridge on left bank.

DRAINAGE AREA.--701 mi².

PERIOD OF RECORD.--May 1918 to July 1925, July 1941 to current year. Monthly discharge only for some periods, published in WSP 1310. No winter records 1921-25. Prior to October 1918, published as "Grand River".

REVISED RECORDS.--WSP 1240: 1918, 1920-21 (M), 1922-24, 1925 (M), 1946-47 (M). WSP 1440: Drainage area. WSP 1710: 1957.

GAGE.--Water-stage recorder. Datum of gage is 874.04 ft above NGVD of 1929. May 14, 1918 to July 2, 1925, July 14, 1941 to Feb. 24, 1942, nonrecording gage, and Feb. 25, 1942 to Feb. 8, 1967, water-stage recorder at same site at datum 2.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Geological Survey data collection platform with satellite telemetry and U.S. National Weather Service Limited Automatic Remote Collector (LARC) at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 8, 1885, reached a stage of 22.8 ft, datum in use prior to Feb. 9, 1967, from floodmark, discharge, 30,000 ft³/s.

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	2.4	3.2	13	24	e19	366	539	110	942	146	54	539
2	2.0	8.9	14	33	e13	293	446	131	553	147	56	429
3	2.2	413	16	27	e5.9	245	385	115	426	144	57	361
4	2.4	222	15	14	e17	289	344	110	355	148	1,830	310
5	2.8	263	16	e2.4	e24	1,960	306	112	307	173	2,200	268
6	3.3	312	17	e4.5	e18	1,760	277	115	273	169	848	1,070
7	3.5	122	18	e6.6	e12	859	252	111	254	151	393	598
8	3.3	60	18	14	e7.8	475	232	102	239	132	264	317
9	3.6	39	e17	13	e9.9	343	206	93	217	129	200	251
10	3.7	30	e10	11	e12	267	189	94	218	291	153	179
11	3.7	26	e7.4	12	e10	225	171	209	240	442	120	145
12	3.7	22	e5.5	13	e8.2	188	159	243	247	2,010	101	112
13	e3.7	18	e10	13	e6.9	167	149	182	368	631	89	91
14	e3.0	16	e23	13	e6.7	160	146	716	637	334	79	78
15	2.6	15	25	13	e5.7	161	145	367	847	228	72	71
16	2.9	14	22	14	e23	165	143	301	653	177	67	70
17	2.8	15	20	e13	e21	205	140	250	693	141	64	72
18	3.0	15	23	e11	e36	432	134	234	353	119	59	64
19	3.2	14	22	e6.3	e40	702	123	736	284	100	55	60
20	3.2	14	20	e17	e89	787	150	619	243	84	67	57
21	3.1	14	22	e16	e274	558	416	399	223	74	53	53
22	3.3	e13	23	e9.9	e701	423	381	339	211	70	48	65
23	3.4	e12	18	e17	e456	322	239	1,800	204	71	48	50
24	3.1	e9.9	e13	e17	e385	284	178	2,570	193	80	2,640	48
25	2.7	16	17	e19	e313	259	163	2,660	173	149	3,210	48
26	2.4	15	21	e12	e261	262	214	2,480	164	105	3,690	49
27	3.2	15	26	e2.1	e203	271	179	1,690	157	82	8,850	49
28	4.1	13	27	e4.0	260	1,400	155	1,570	151	73	9,340	47
29	3.8	12	25	e6.3	341	e2,070	131	699	143	64	3,560	44
30	4.3	14	18	e9.0	---	e918	112	1,770	143	60	1,150	41
31	3.4	---	e16	e13	---	698	---	1,150	---	55	719	---
TOTAL	97.8	1,776.0	557.9	400.1	3,579.1	17,514	6,804	22,077	10,111	6,779	40,136	5,636
MEAN	3.15	59.2	18.0	12.9	123	565	227	712	337	219	1,295	188
MAX	4.3	413	27	33	701	2,070	539	2,660	942	2,010	9,340	1,070
MIN	2.0	3.2	5.5	2.1	5.7	160	112	93	143	55	48	41
AC-FT	194	3,520	1,110	794	7,100	34,740	13,500	43,790	20,060	13,450	79,610	11,180
CFSM	0.00	0.08	0.03	0.02	0.18	0.81	0.32	1.02	0.48	0.31	1.85	0.27
IN.	0.01	0.09	0.03	0.02	0.19	0.93	0.36	1.17	0.54	0.36	2.13	0.30

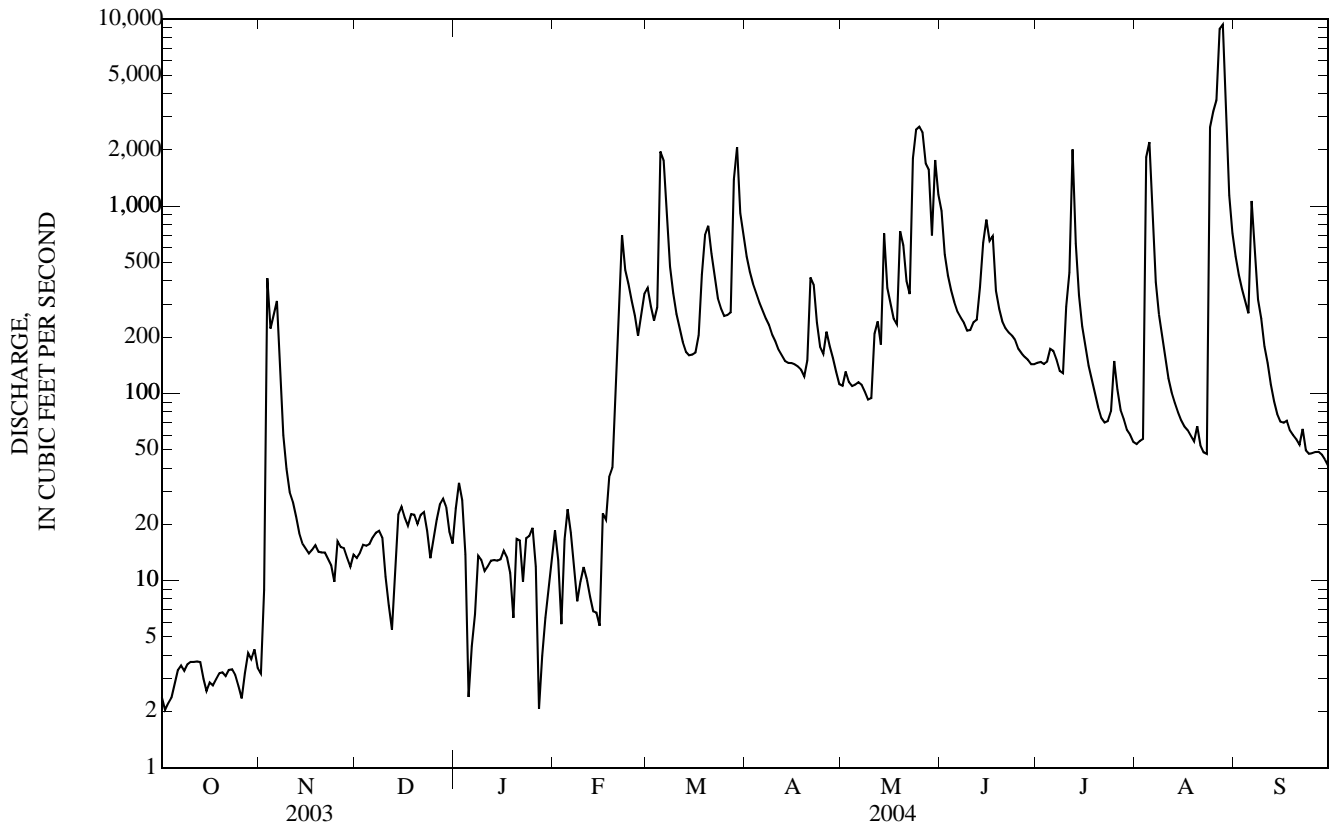
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2004, BY WATER YEAR (WY)

MEAN	179	207	143	148	327	639	678	698	643	411	195	321
MAX	2,138	1,462	1,299	1,292	1,849	2,375	2,586	3,364	4,750	7,239	2,255	5,178
(WY)	(1974)	(1962)	(1983)	(1960)	(1973)	(1979)	(1973)	(1996)	(1947)	(1993)	(1987)	(1992)
MIN	1.41	2.07	0.94	0.62	1.14	10.7	2.55	1.19	3.08	1.98	6.16	3.87
(WY)	(1957)	(1956)	(1956)	(1956)	(1956)	(1954)	(1956)	(1956)	(1956)	(1977)	(2003)	(2003)

06898000 THOMPSON RIVER AT DAVIS CITY, IA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1919 - 2004	
ANNUAL TOTAL	29,771.1		115,467.9		385	
ANNUAL MEAN	81.6		315		1,469	
HIGHEST ANNUAL MEAN					1993	
LOWEST ANNUAL MEAN					2000	
HIGHEST DAILY MEAN	1,850	May 9	9,340	Aug 28	52,900	Sep 16, 1992
LOWEST DAILY MEAN	1.4	Sep 10	2.0	Oct 2	0.10	Jun 25, 1956
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 24	2.7	Oct 1	0.36	Jun 19, 1956
MAXIMUM PEAK FLOW			11,100	Aug 27	57,000	Sep 16, 1992
MAXIMUM PEAK STAGE			10.92	Aug 27	24.29	Sep 16, 1992
INSTANTANEOUS LOW FLOW			1.5	Oct 2		
ANNUAL RUNOFF (AC-FT)	59,050		229,000		278,800	
ANNUAL RUNOFF (CFSM)	0.116		0.450		0.549	
ANNUAL RUNOFF (INCHES)	1.58		6.13		7.46	
10 PERCENT EXCEEDS	175		694		830	
50 PERCENT EXCEEDS	17		100		80	
90 PERCENT EXCEEDS	3.1		5.2		9.0	

e Estimated



CHARITON RIVER BASIN

06903400 CHARITON RIVER NEAR CHARITON, IA

LOCATION.--(revised) Lat 40°57'07", long 93°15'35", in SW¹/₄ NE¹/₄ sec.15, T.71 N., R.21 W., Lucas County, Hydrologic Unit 10280201, on right bank 15 ft downstream from bridge on County Highway S43, 0.1 mi downstream from Wolf Creek, and 5.0 mi southeast of Chariton.

DRAINAGE AREA.--182 mi².

PERIOD OF RECORD.--October 1965 to current year. Occasional low-flow measurements, water years 1958-60, 1962, 1964.

GAGE.--Water stage recorder. Datum of gage is 917.90 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good, except estimated daily discharges, which are poor. Beaver activity in September. U.S. Army Corps of Engineers rain gage and data collection platform with satellite telemetry at station. Precipitation records are available online at the U.S. Army Corps of Engineers website: www2.mvr.usace.army.mil/WaterControl/datamining2.cfm.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1960 reached a stage of about 23 ft, discharge, about 15,000 ft³/s and flood of June 5, 1947 reached a stage of 21.65 ft, from floodmark, discharge, 11,000 ft³/s. A discharge of 0.08 ft³/s was measured on Oct. 30, 1963.

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	0.39	0.60	6.9	e3.5	e3.1	e121	71	e6.2	890	3.9	1.4	213
2	0.38	3.0	6.8	e4.8	e5.1	e134	55	e6.3	533	3.6	1.1	91
3	0.37	920	7.7	e3.8	e3.3	e117	44	e7.7	105	6.1	1.6	61
4	0.37	652	7.7	e3.8	e2.5	e292	36	e8.2	55	5.7	986	46
5	0.34	469	9.7	e3.3	e4.3	2,440	32	8.3	36	29	918	37
6	0.31	143	12	e4.4	e7.3	1,320	29	7.7	27	57	722	39
7	0.30	64	12	e3.1	e5.9	1,030	25	6.4	22	22	165	37
8	0.29	35	12	e3.3	e7.4	367	22	5.5	17	13	54	29
9	0.29	21	15	e2.6	e8.6	139	19	7.1	13	13	32	23
10	0.30	15	195	e3.3	e7.1	95	17	5.5	27	13	21	20
11	0.32	11	128	e3.8	e5.6	74	15	4.7	377	85	14	18
12	0.33	9.8	92	e5.7	e5.1	59	14	4.0	119	396	11	15
13	0.32	9.2	e43	e6.5	e3.8	52	16	4.0	202	261	8.8	13
14	0.38	7.6	e22	e6.5	e5.5	52	14	4.9	1,060	89	7.0	10
15	0.39	6.4	e17	e4.3	e6.3	52	14	5.0	1,950	36	5.6	8.5
16	0.44	5.5	e16	e5.3	e7.1	57	13	7.8	721	22	4.9	9.6
17	0.46	4.7	e14	e17	e6.9	93	12	13	431	14	4.4	9.7
18	0.50	6.8	e6.6	e34	e7.8	364	12	13	227	9.4	5.0	7.6
19	0.52	7.2	e6.2	e16	e9.2	377	11	16	96	6.5	29	6.1
20	0.52	7.8	e4.2	e11	e119	200	15	15	57	4.7	74	5.2
21	0.53	7.7	e4.7	e11	e263	104	30	38	43	3.5	41	4.3
22	0.51	7.1	e4.5	e6.7	e380	68	67	23	33	4.7	17	4.0
23	0.49	9.7	e4.4	e3.6	e542	54	43	39	24	15	10	4.0
24	0.47	14	e5.6	e4.9	e320	47	25	263	17	9.5	8.3	4.2
25	0.50	12	e4.7	e5.7	e235	43	22	912	13	6.0	149	3.1
26	0.48	10	e3.3	e6.5	e179	51	20	523	11	4.4	626	2.3
27	0.47	9.2	e3.8	e6.5	e123	64	16	146	8.6	3.2	2,390	1.9
28	0.56	8.2	e6.0	e5.3	e113	545	e12	67	6.8	2.2	2,970	2.2
29	0.60	7.4	e6.1	e3.7	e117	659	e9.1	57	5.6	1.8	2,560	e1.6
30	0.62	7.3	e5.6	e2.0	---	228	e6.6	1,330	4.7	1.7	2,430	1.4
31	0.59	---	e4.8	e2.8	---	107	---	1,460	---	2.1	1,660	---
TOTAL	13.34	2,491.20	687.3	204.7	2,502.9	9,405	736.7	5,014.3	7,131.7	1,144.0	15,927.1	727.7
MEAN	0.43	83.0	22.2	6.60	86.3	303	24.6	162	238	36.9	514	24.3
MAX	0.62	920	195	34	542	2,440	71	1,460	1,950	396	2,970	213
MIN	0.29	0.60	3.3	2.0	2.5	43	6.6	4.0	4.7	1.7	1.1	1.4
CFSM	0.00	0.46	0.12	0.04	0.47	1.67	0.13	0.89	1.31	0.20	2.82	0.13
IN.	0.00	0.51	0.14	0.04	0.51	1.92	0.15	1.02	1.46	0.23	3.26	0.15

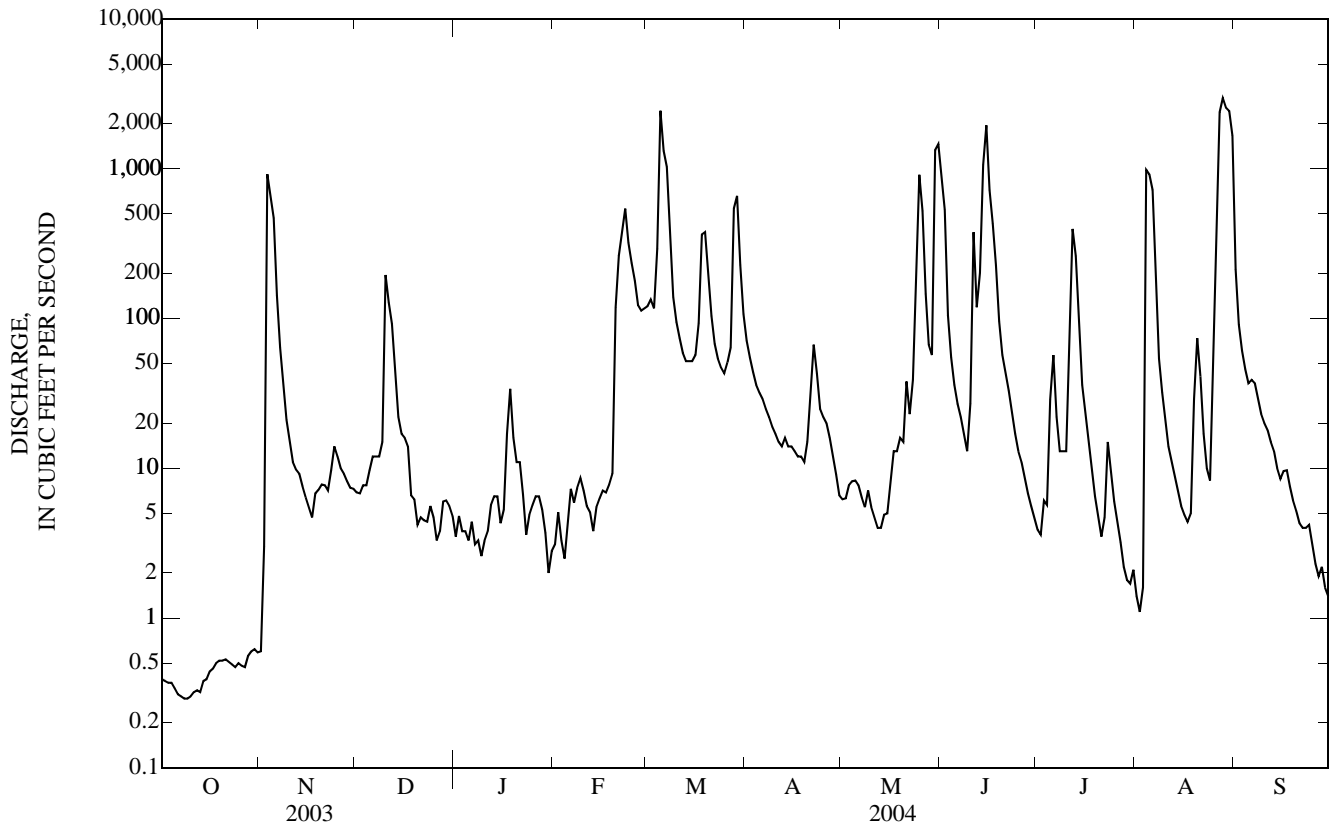
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2004, BY WATER YEAR (WY)

MEAN	74.2	56.0	56.0	33.1	82.9	180	230	232	165	149	76.4	114
MAX	568	294	408	340	403	761	1,093	1,097	856	1,711	618	1,704
(WY)	(1974)	(1993)	(1983)	(1974)	(1997)	(1979)	(1991)	(1995)	(1967)	(1993)	(1987)	(1992)
MIN	0.01	0.00	0.00	0.01	0.22	1.22	0.07	2.12	0.38	0.00	0.04	0.09
(WY)	(1990)	(1990)	(1990)	(2003)	(1989)	(2000)	(1989)	(2000)	(1988)	(1988)	(2003)	(1991)

06903400 CHARITON RIVER NEAR CHARITON, IA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1966 - 2004	
ANNUAL TOTAL	7,094.77		45,985.94			
ANNUAL MEAN	19.4		126		121	
HIGHEST ANNUAL MEAN					345 1993	
LOWEST ANNUAL MEAN					9.71 1989	
HIGHEST DAILY MEAN	920	Nov 3	2,970	Aug 28	24,600	Sep 15, 1992
LOWEST DAILY MEAN	0.00	Jan 16	0.29	Oct 8 a	0.00	Aug 1, 1977 b
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 22	0.31	Oct 6	0.00	Jun 21, 1988
MAXIMUM PEAK FLOW			3,050	Aug 28	37,700	Sep 15, 1992
MAXIMUM PEAK STAGE			17.78	Aug 28	29.32	Sep 15, 1992
ANNUAL RUNOFF (CFSM)	0.107		0.690		0.663	
ANNUAL RUNOFF (INCHES)	1.45		9.40		9.01	
10 PERCENT EXCEEDS	27		272		260	
50 PERCENT EXCEEDS	2.5		11		12	
90 PERCENT EXCEEDS	0.00		1.6		0.50	

a Also Oct. 9.
 b Many days in 1977, 1978, 1988-92, 2003.
 c Estimated.



06903700 SOUTH FORK CHARITON RIVER NEAR PROMISE CITY, IA

LOCATION.--Lat 40°48'02", long 93°11'32", in SW¹/₄ SW¹/₄ sec.5, T.69 N., R.20 W., Wayne County, Hydrologic Unit 10280201, on right bank 20 ft downstream from bridge on County Highway S50, 1.3 mi downstream from Jordan Creek, and 4.3 mi northwest of Promise City.

DRAINAGE AREA.--168 mi².

PERIOD OF RECORD.--October 1967 to current year. Occasional low-flow measurements, water years 1958-66, published as "near Bethlehem". Monthly discharge measurements for March 1965 to September 1967 available in files of Iowa City District Office.

GAGE.--Water-stage recorder. Datum of gage is 913.70 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. U.S. Army Corps of Engineers data collection platform with satellite telemetry at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 21, 1965, reached a stage of 25.5 ft, from floodmarks, discharge, about 18,000 ft³/s.

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	0.87	2.3	3.5	e5.8	e5.4	137	64	7.9	111	9.9	4.3	47
2	1.0	3.9	3.1	e7.0	e7.4	113	49	7.9	53	11	11	33
3	1.1	966	3.3	e6.3	e5.9	86	41	7.8	34	16	11	25
4	1.0	203	3.5	e5.7	e5.3	662	36	7.5	25	19	5,290	20
5	0.99	94	4.5	e5.7	e6.9	3,770	31	7.7	19	17	751	16
6	0.97	34	4.8	e7.6	e9.4	405	29	7.6	16	15	144	31
7	0.92	17	5.2	e6.2	e8.6	176	26	6.8	14	14	73	24
8	1.0	10	4.8	e5.1	e10	101	e21	5.3	11	14	56	15
9	1.0	7.0	33	e4.4	e12	67	e19	4.8	9.6	17	e40	12
10	1.1	5.1	e208	e4.4	e11	52	e17	4.0	21	16	e29	10
11	1.3	4.5	e76	e5.8	e10	43	e15	3.9	100	273	e23	8.8
12	1.5	3.8	e41	e7.4	e8.4	34	e15	3.6	48	1,040	e17	7.7
13	1.6	3.2	e26	e8.6	e7.7	31	e14	4.4	257	110	e14	6.6
14	2.8	4.7	e20	e8.9	e9.0	46	14	7.6	2,370	42	e11	7.3
15	3.2	3.4	e18	e7.4	e9.6	47	14	7.0	1,270	23	e8.9	6.7
16	4.0	2.8	e19	e13	e11	54	13	4.5	176	17	e7.4	6.2
17	3.5	2.9	e18	e50	e11	161	14	3.5	112	17	e6.7	5.7
18	2.9	3.3	e8.9	e42	e15	350	13	6.7	68	11	e6.1	5.3
19	2.6	3.1	e4.2	e28	e48	130	12	26	58	8.2	e5.8	4.5
20	3.6	3.4	e4.7	e9.0	e834	73	14	17	40	6.5	e5.3	3.8
21	1.6	3.4	e6.8	e5.7	e488	46	27	8.0	37	5.8	e4.8	3.6
22	1.3	2.9	e6.6	e5.0	e362	34	20	6.7	40	105	e4.2	3.4
23	1.4	12	e6.8	e5.4	e274	31	13	40	26	116	4.2	3.4
24	1.5	38	e4.9	e6.6	e220	30	11	68	21	50	7.5	3.5
25	1.7	17	e6.7	e7.7	e176	28	13	623	18	23	96	3.2
26	1.9	9.6	e5.2	e8.3	e145	42	12	109	16	14	256	3.1
27	2.4	6.2	e6.1	e8.6	e133	46	9.7	45	14	9.3	6,360	3.1
28	2.6	4.5	e7.8	e6.6	e124	1,050	8.4	171	13	6.8	5,620	2.9
29	2.7	4.3	e9.4	e5.7	130	317	6.8	59	11	5.6	839	2.8
30	2.6	4.6	e8.4	e5.4	---	137	6.5	1,960	10	5.1	175	2.7
31	2.3	---	e7.0	e4.7	---	88	---	703	---	4.6	81	---
TOTAL	58.95	1,479.9	585.2	308.0	3,097.6	8,387	598.4	3,944.2	5,018.6	2,041.8	19,962.2	327.3
MEAN	1.90	49.3	18.9	9.94	107	271	19.9	127	167	65.9	644	10.9
MAX	4.0	966	208	50	834	3,770	64	1,960	2,370	1,040	6,360	47
MIN	0.87	2.3	3.1	4.4	5.3	28	6.5	3.5	9.6	4.6	4.2	2.7
AC-FT	117	2,940	1,160	611	6,140	16,640	1,190	7,820	9,950	4,050	39,600	649
CFSM	0.01	0.29	0.11	0.06	0.64	1.61	0.12	0.76	1.00	0.39	3.83	0.06
IN.	0.01	0.33	0.13	0.07	0.69	1.86	0.13	0.87	1.11	0.45	4.42	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

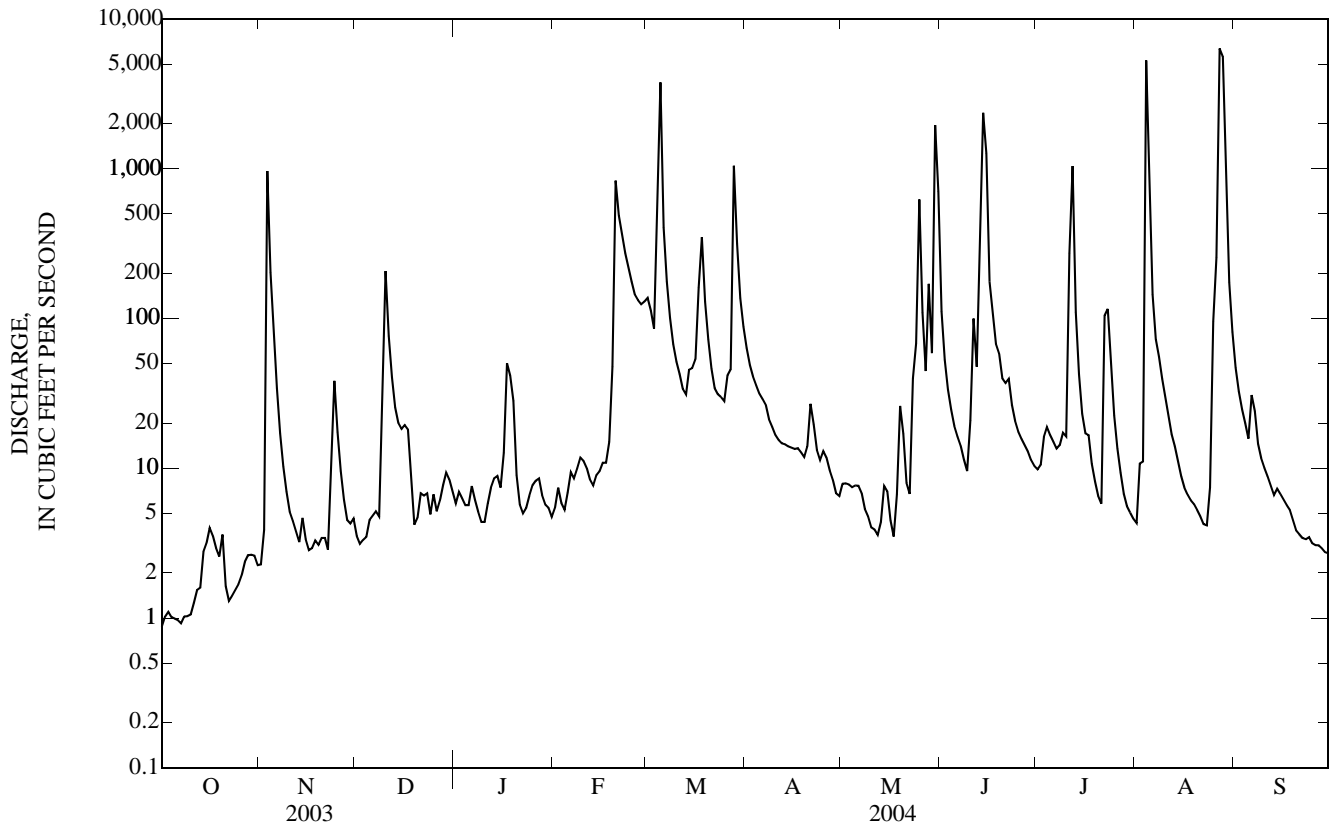
MEAN	90.2	55.0	57.7	34.0	98.5	182	224	232	161	169	60.6	127
MAX	498	357	440	335	534	853	730	1,043	625	2,351	644	2,227
(WY)	(1978)	(1993)	(1983)	(1974)	(2001)	(1979)	(1991)	(1995)	(2001)	(1993)	(2004)	(1992)
MIN	0.15	0.39	0.40	0.19	0.88	2.74	1.21	1.89	1.18	0.24	0.52	0.45
(WY)	(1989)	(1990)	(1977)	(1977)	(1989)	(2000)	(1989)	(2000)	(1988)	(1977)	(2003)	(2000)

06903700 SOUTH FORK CHARITON RIVER NEAR PROMISE CITY, IA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	5,729.03		45,809.15		124	
ANNUAL MEAN	15.7		125		446	
HIGHEST ANNUAL MEAN					10.1	
LOWEST ANNUAL MEAN					1993	
HIGHEST DAILY MEAN	966	Nov 3	6,360	Aug 27	34,700	Sep 15, 1992
LOWEST DAILY MEAN	0.04	Feb 9	0.87	Oct 1	0.00	Jul 6, 1977 ^a
ANNUAL SEVEN-DAY MINIMUM	0.10	Feb 6	0.98	Oct 1	0.00	Aug 16, 1989
MAXIMUM PEAK FLOW			8,350	Aug 28	70,600	Sep 15, 1992
MAXIMUM PEAK STAGE			20.89	Aug 28	34.84	Sep 15, 1992
ANNUAL RUNOFF (AC-FT)	11,360		90,860		90,030	
ANNUAL RUNOFF (CFSM)	0.093		0.745		0.740	
ANNUAL RUNOFF (INCHES)	1.27		10.14		10.05	
10 PERCENT EXCEEDS	21		139		195	
50 PERCENT EXCEEDS	2.2		11		13	
90 PERCENT EXCEEDS	0.49		3.1		0.88	

a Also July 7, 21-24, 28 to Aug. 1, 1977, July 9, 10, and Aug. 14, 18-22, 1989.

e Estimated.



06903880 RATHBUN LAKE NEAR RATHBUN, IA

LOCATION.--Lat 40°49'30", long 92°53'33", in NW¹/₄ NE¹/₄ sec.35, T.70 N., R.18 W., Appanoose County, Hydrologic Unit 10280201, at control tower of Rathbun Dam, 1.8 mi north of Rathbun, 3.9 mi upstream from Walnut Creek, and at mile 142.3.

DRAINAGE AREA.--549 mi².

PERIOD OF RECORD.--October 1969 to current year.

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

REMARKS.--Reservoir is formed by earthfill dam completed in 1969. Storage began in November 1969. Release is controlled by two hydraulically controlled slide gages, 6 ft wide and 12 ft high, into forechamber of an 11-ft diameter horseshoe conduit through the dam. No dead storage. Maximum design discharge through gates is 5,000 ft³/s. Uncontrolled notch spillway is concrete overflow section 500 ft in length, located about 3,000 ft west of the right abutment of the dam and provides emergency discharge into the adjacent drainage area of Little Walnut Creek. Uncontrolled notch spillway is at elevation 926 ft, contents 545,621 acre-ft, surface area, 20,974 acres. Conservation pool level is at elevation 904.0 ft, contents 199,830 acre-ft, surface area, 10,989 acres. Reservoir is used for flood control, low-flow augmentation, conservation and recreation. Prior to October 1, 2000 published as mean daily contents in acre feet, and as mean daily elevation in feet NGVD thereafter. U.S. Geological Survey data collection platform with satellite telemetry at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 927.16 ft July 28, 1993; minimum elevation, 855.40 ft Oct. 6-10, 1969.

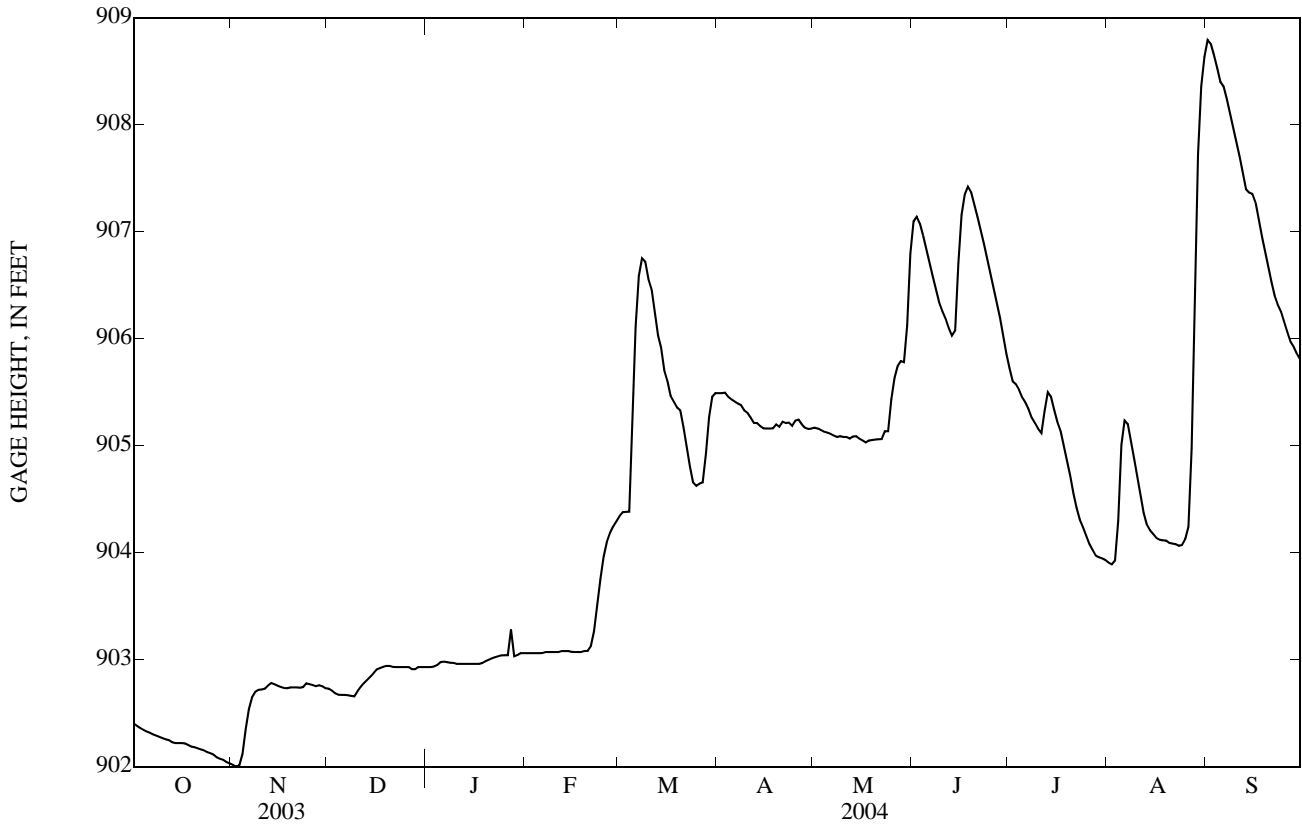
EXTREMES FOR CURRENT YEAR.--Maximum elevation 908.81 ft on Sept. 1; minimum elevation, 902.00 ft on Nov. 2, 3.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	902.40	902.02	902.73	902.93	903.06	904.34	905.49	905.17	907.10	905.72	903.91	908.79
2	902.38	902.00	902.71	902.93	903.06	904.38	905.49	905.16	907.14	905.60	903.89	908.75
3	902.36	902.01	902.68	902.94	903.06	904.38	905.49	905.15	907.07	905.57	903.92	908.65
4	902.34	902.12	902.67	902.95	903.06	904.38	905.46	905.13	906.96	905.52	904.29	908.53
5	902.33	902.35	902.67	902.98	903.06	905.26	905.43	905.12	906.84	905.45	905.01	908.40
6	902.31	902.54	902.67	902.98	903.06	906.11	905.41	905.11	906.72	905.40	905.23	908.36
7	902.30	902.65	902.67	902.98	903.07	906.59	905.39	905.09	906.58	905.34	905.20	908.24
8	902.29	902.70	902.66	902.97	903.07	906.75	905.38	905.08	906.46	905.26	905.04	908.09
9	902.28	902.72	902.66	902.97	903.07	906.72	905.33	905.09	906.34	905.21	904.87	907.96
10	902.26	902.72	902.70	902.96	903.07	906.56	905.31	905.08	906.26	905.16	904.69	907.83
11	902.25	902.73	902.75	902.96	903.07	906.46	905.26	905.08	906.19	905.12	904.53	907.70
12	902.25	902.76	e902.78	902.96	903.08	906.25	905.21	905.07	906.10	905.32	904.37	907.54
13	902.23	902.78	e902.81	902.96	903.08	906.03	905.21	905.09	906.03	905.50	904.26	907.40
14	902.22	902.77	e902.84	902.96	903.08	905.92	905.18	905.09	906.08	905.46	904.21	907.36
15	902.22	902.75	902.87	902.96	903.07	905.70	905.16	905.07	906.70	905.33	904.17	907.35
16	902.22	902.74	902.91	902.96	903.07	905.60	905.16	905.05	907.16	905.22	904.14	907.27
17	902.22	902.73	902.92	902.96	903.07	905.46	905.16	905.03	907.35	905.14	904.12	907.11
18	902.20	902.73	902.93	902.97	903.07	905.41	905.16	905.05	907.42	905.00	904.11	906.96
19	902.19	902.74	902.94	902.98	903.08	905.36	905.20	905.05	907.37	904.86	904.11	906.82
20	902.18	902.74	902.94	903.00	903.08	905.33	905.18	905.06	907.25	904.72	904.09	906.67
21	902.17	902.74	902.93	903.01	903.13	905.17	905.22	905.06	907.14	904.55	904.08	906.53
22	902.16	902.74	902.93	903.02	903.27	904.98	905.21	905.06	907.01	904.42	904.08	906.40
23	902.15	902.74	902.93	903.03	903.50	904.81	905.22	905.13	906.89	904.31	904.06	906.32
24	902.13	902.78	e902.93	903.04	903.75	904.66	905.19	905.13	906.74	904.24	904.07	906.25
25	902.12	902.77	e902.93	903.04	903.96	904.62	905.23	905.43	906.61	904.16	904.13	906.16
26	902.11	902.76	e902.93	903.04	904.10	904.64	905.24	905.63	906.47	904.08	904.24	906.06
27	902.08	902.75	e902.91	e903.28	904.18	904.66	905.20	905.75	906.34	904.02	904.97	905.97
28	902.07	902.76	e902.91	e903.03	904.24	904.92	905.17	905.79	906.20	903.97	906.38	905.92
29	902.06	902.75	e902.93	903.04	904.29	905.26	905.16	905.78	906.02	903.96	907.73	905.85
30	902.04	902.73	902.93	903.06	---	905.46	905.16	906.12	905.86	903.95	908.36	905.80
31	902.03	---	902.93	903.06	---	905.49	---	906.79	---	903.93	908.63	---
MEAN	902.21	902.63	902.83	903.00	903.30	905.41	905.27	905.27	906.68	904.89	904.80	907.23
MAX	902.40	902.78	902.94	903.28	904.29	906.75	905.49	906.79	907.42	905.72	908.63	908.79
MIN	902.03	902.00	902.66	902.93	903.06	904.34	905.16	905.03	905.86	903.93	903.89	905.80

e Estimated

06903880 RATHBUN LAKE NEAR RATHBUN, IA—Continued



06903900 CHARITON RIVER NEAR RATHBUN, IA

LOCATION.--(revised) Lat 40°49'19", long 92°53'28", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.35, T.70 N., R.18 W., Appanoose County, Hydrologic Unit 10280201, on left bank 600 ft downstream from outlet of Rathbun Dam, 1.8 mi north of Rathbun, 3.7 mi upstream from Walnut Creek, and at mile 142.1.

DRAINAGE AREA.--549 mi².

PERIOD OF RECORD.--October 1956 to current year. Monthly discharge only for some periods, published in WSP 1730.

REVISED RECORDS.--WSP 1560: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 847.92 ft above NGVD of 1929. Prior to Nov. 16, 1960, nonrecording gage and Nov. 17, 1960 to Sept. 30, 1969, recording gage, at site 3.1 mi downstream at datum 4.65 ft lower.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,800 ft³/s Mar. 31, 1960, gage height, 25.3 ft from floodmark, site and datum then in use.

REMARKS.--Records good except for those periods of estimated daily discharge, which are poor. U.S. Geological Survey data collection platform with satellite and telephone modem telemetry at station. Flow regulated by Rathbun Lake (station 06903880) since Nov. 21, 1969. Records of discharge include diversions of: Oct. 1-17, 11 ft³/s; Oct. 18 to Oct. 31, 5.0 ft³/s; Nov. 1 to Dec 1, 2.0 ft³/s; Dec 2 to Apr. 22, 4.0 ft³/s; Apr. 23 to Apr. 27, 10 ft³/s; Apr. 28 to Jun 4, 4.0 ft³/s; Jun 5 to Jun 17, 6.0 ft³/s; Jun 18 to to Jun 30, 5.0 ft³/s; July 1 to July 6, 7.0 ft³/s; July 7 to Aug. 23, 8.0 ft³/s; Aug 24, to Sept. 30, 10 ft³/s. The flow is diverted from the reservoir for fish ponds downstream from dam. Diverted flow returns to stream 0.1 mi downstream from gage. Rathbun Regional Water Association permit No. 0400900 allows withdrawal from Rathbun Dam discharge immediately downstream from gage for maximum rate of 4,200 gpm (9.36 ft³/s). In the 2003 water year, 1.90 billion gallons were withdrawn from the river.

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	26	16	16	e22	22	199	161	22	221	753	23	743	
2	26	15	18	e23	22	471	162	21	838	555	23	735	
3	26	15	18	e23	22	462	161	20	842	353	24	732	
4	26	16	18	e24	22	408	160	21	835	350	25	733	
5	26	16	18	e24	22	411	161	22	832	350	190	735	
6	26	16	18	e25	22	25	162	22	830	352	830	764	
7	26	16	18	e26	22	21	162	21	828	356	1,110	757	
8	26	16	18	27	22	476	161	20	828	354	1,110	754	
9	26	16	19	26	22	1,110	160	20	825	353	1,100	751	
10	26	16	19	27	22	1,110	158	20	832	350	825	749	
11	26	16	18	26	22	1,110	157	19	829	198	524	746	
12	26	16	18	25	22	1,090	77	19	827	44	526	744	
13	26	16	18	24	22	1,060	20	19	831	346	328	349	
14	26	16	18	23	22	1,060	19	18	630	748	76	23	
15	26	16	18	23	22	1,060	18	17	210	745	75	287	
16	26	16	18	23	22	1,060	19	16	108	745	45	734	
17	26	16	18	24	22	1,070	19	16	83	742	25	729	
18	20	16	19	23	21	1,080	19	16	446	735	26	728	
19	20	16	21	23	22	1,060	19	16	780	733	27	728	
20	20	17	21	23	22	1,050	20	16	782	729	27	728	
21	20	16	22	23	22	1,040	20	16	780	724	27	728	
22	19	17	21	23	22	1,040	20	17	776	719	28	555	
23	19	17	21	22	21	1,040	27	17	774	496	29	368	
24	20	17	21	22	21	635	27	17	772	340	30	368	
25	19	17	21	23	22	159	27	17	765	339	29	367	
26	e19	17	21	22	22	159	27	17	760	259	28	366	
27	e19	16	21	22	22	160	27	18	756	146	801	221	
28	19	16	22	22	22	182	22	81	752	77	230	162	
29	19	16	22	24	22	164	22	182	748	22	32	123	
30	19	16	22	26	---	161	22	944	750	---	22	389	77
31	19	---	e22	26	---	161	---	433	---	23	739	---	
TOTAL	713	484	603	739	635	20,294	2,236	2,140	20,870	13,058	9,301	16,584	
MEAN	23.0	16.1	19.5	23.8	21.9	655	74.5	69.0	696	421	300	553	
MAX	26	17	22	27	22	1,110	162	944	842	753	1,110	764	
MIN	19	15	16	22	21	21	18	16	83	22	23	23	
AC-FT	1,410	960	1,200	1,470	1,260	40,250	4,440	4,240	41,400	25,900	18,450	32,890	

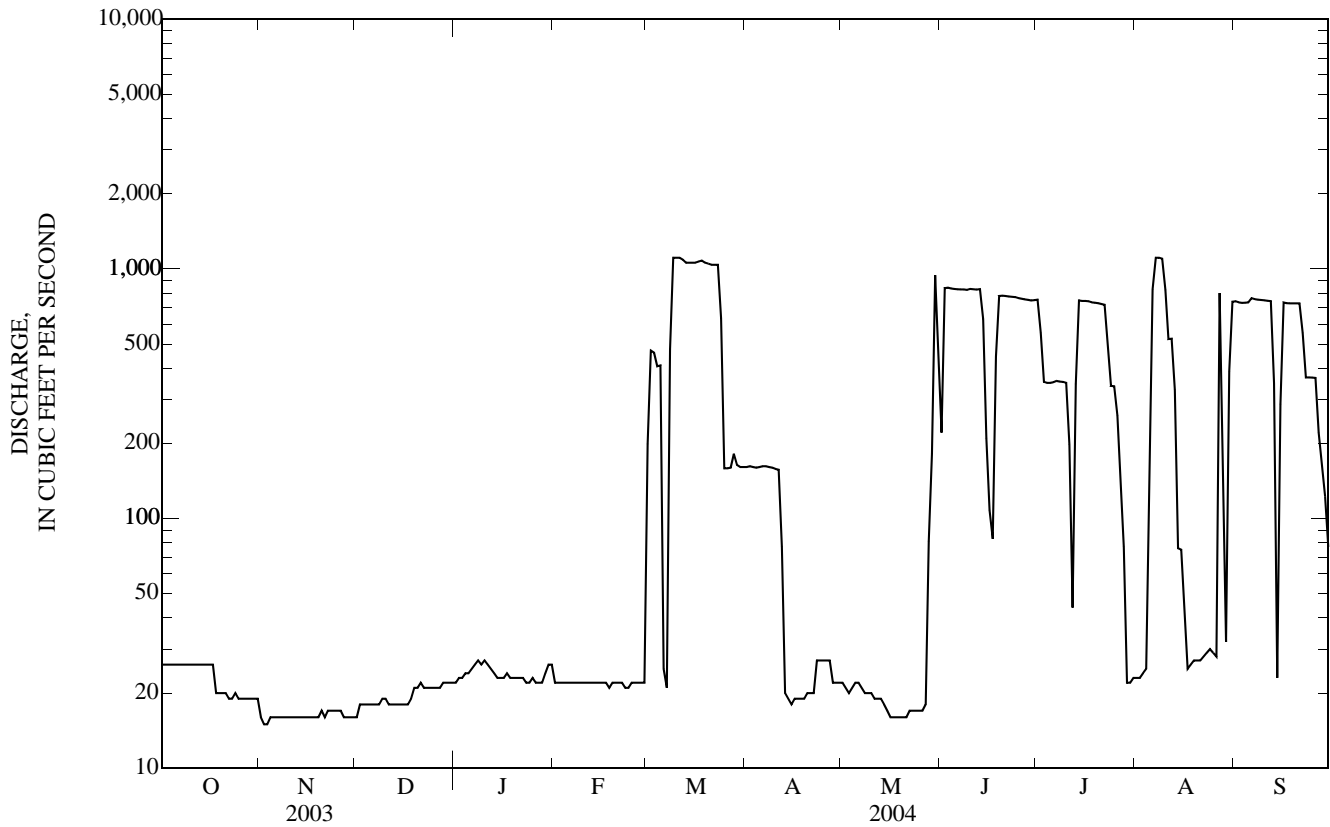
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2004, BY WATER YEAR (WY)

MEAN	252	261	387	224	295	442	348	425	482	556	456	302
MAX	1,790	1,828	1,364	1,546	1,550	1,271	1,480	1,281	1,573	1,377	1,826	1,707
(WY)	(1994)	(1994)	(1993)	(1993)	(1993)	(1993)	(2001)	(1973)	(1973)	(2001)	(1993)	(1993)
MIN	11.5	9.97	5.54	8.98	5.60	9.40	6.74	19.3	16.6	6.53	9.10	11.0
(WY)	(1975)	(1975)	(1970)	(1970)	(1970)	(1970)	(1970)	(1977)	(1988)	(1970)	(1970)	(1974)

06903900 CHARITON RIVER NEAR RATHBUN, IA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1970 - 2004 a	
ANNUAL TOTAL	7,958		87,657		370	
ANNUAL MEAN	21.8		240		1,164	
HIGHEST ANNUAL MEAN					1993	
LOWEST ANNUAL MEAN					1989	
HIGHEST DAILY MEAN	31	Jul 25	1,110	Mar 9 b	1,950	Oct 17, 1993
LOWEST DAILY MEAN	15	Nov 2	15	Nov 2 c	0.00	Oct 26, 1977
ANNUAL SEVEN-DAY MINIMUM	16	Nov 1	16	Nov 1	1.0	Apr 1, 1970
MAXIMUM PEAK FLOW			1,470	May 30	2,780	Dec 14, 1993
MAXIMUM PEAK STAGE			10.65	May 30	14.94	Dec 14, 1993
INSTANTANEOUS LOW FLOW					0.00	Oct 26, 1977
ANNUAL RUNOFF (AC-FT)	15,780		173,900		268,000	
10 PERCENT EXCEEDS	26		780		1,190	
50 PERCENT EXCEEDS	21		26		39	
90 PERCENT EXCEEDS	18		17		16	

a Post regulation.
 b Also March 10-11.
 c Also Nov 3.
 e Estimated.



CHARITON RIVER BASIN

06904010 CHARITON RIVER NEAR MOULTON, IA

LOCATION.--(revised) Lat 40°41'33", long 92°46'20", in SE¹/₄ NE¹/₄ sec.14, T.68 N., R.17 W., Appanoose County, Hydrologic Unit 10280201, on right bank 6 ft downstream from bridge on County Highway J45 (543rd St.), 0.7 mi downstream from Hickory Creek, 5.0 mi west of Moulton, 8.0 mi upstream from Iowa-Missouri border, 20.8 mi downstream from Rathbun Dam, and at mile 121.5.

DRAINAGE AREA.--740 mi².

PERIOD OF RECORD--August 1979 to current year.

WATER-DISCHARGE RECORDS

GAGE--Water stage recorder. Datum of gage is 800.00 ft above NGVD of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Rathbun Reservoir (station 06903880) 20.8 mi upstream. U.S. Geological data collection platform with satellite and telephone modem telemetry and U.S. Army Corps of Engineers rain gage at station. Precipitation records are available online at the U.S. Army Corps of Engineers website: www2.mvr.usace.army.mil/WaterControl/datamining2.cfm.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1947 reached a stage of about 45 ft, discharge unknown, from information by U.S. Army Corps of Engineers.

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	35	29	28	71	e33	97	330	47	1,410	799	53	e807
2	29	31	29	64	e37	418	306	42	885	786	69	818
3	28	101	34	59	e34	522	289	40	937	469	79	803
4	33	89	35	e55	e39	953	278	39	895	443	658	e794
5	34	61	36	e53	e39	3,740	272	40	867	429	680	e786
6	34	44	36	e57	e43	1,670	267	40	852	425	646	e796
7	35	36	37	e51	e40	441	264	38	845	389	1,110	e788
8	34	32	35	e46	e42	247	257	37	839	377	1,110	e786
9	35	30	69	e42	e44	1,200	250	36	838	379	1,100	e776
10	35	29	e108	e44	e46	1,280	239	34	1,010	373	1,060	e767
11	36	29	e69	e46	e46	1,260	235	34	1,110	519	621	e750
12	37	30	e50	e48	e50	1,240	226	34	918	1,390	578	e738
13	37	29	e38	e47	e51	1,230	90	36	1,130	339	563	e502
14	51	30	e36	e45	e50	1,250	56	40	1,200	763	211	135
15	47	31	e39	e39	e47	1,240	54	32	1,220	802	132	66
16	39	30	e42	e67	e48	1,250	53	26	583	790	128	651
17	37	29	e42	e94	e48	1,360	50	20	780	810	73	763
18	35	42	e38	e72	e52	1,620	49	35	223	796	58	761
19	35	44	e34	e63	e106	1,430	46	49	804	778	58	762
20	34	36	e33	e51	e455	1,300	55	41	821	771	56	759
21	35	33	e34	e52	e674	1,250	70	36	815	765	53	758
22	36	31	e39	e45	e475	1,240	60	33	812	767	51	734
23	38	143	e37	e43	e309	1,230	53	41	803	720	48	439
24	37	124	e30	e43	e222	1,170	51	62	796	423	59	412
25	34	63	e34	e41	e143	364	53	975	789	405	122	410
26	33	47	e41	e41	e122	374	50	443	780	401	299	407
27	35	39	e54	e43	e95	369	47	147	773	264	3,520	386
28	36	34	e123	e42	e76	1,440	45	91	780	225	3,430	219
29	36	44	e104	e41	92	1,140	41	215	788	91	1,500	233
30	37	30	e88	e40	---	520	41	4,230	790	58	e460	139
31	32	---	e78	e35	---	383	---	4,180	---	55	e764	---
TOTAL	1,109	1,400	1,530	1,580	3,558	33,228	4,177	11,193	26,093	16,801	19,349	17,945
MEAN	35.8	46.7	49.4	51.0	123	1,072	139	361	870	542	624	598
MAX	51	143	123	94	674	3,740	330	4,230	1,410	1,390	3,520	818
MIN	28	29	28	35	33	97	41	20	223	55	48	66
AC-FT	2,200	2,780	3,030	3,130	7,060	65,910	8,290	22,200	51,760	33,320	38,380	35,590
CFSM	0.05	0.06	0.07	0.07	0.17	1.45	0.19	0.49	1.18	0.73	0.84	0.81
IN.	0.06	0.07	0.08	0.08	0.18	1.67	0.21	0.56	1.31	0.84	0.97	0.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004, BY WATER YEAR (WY)

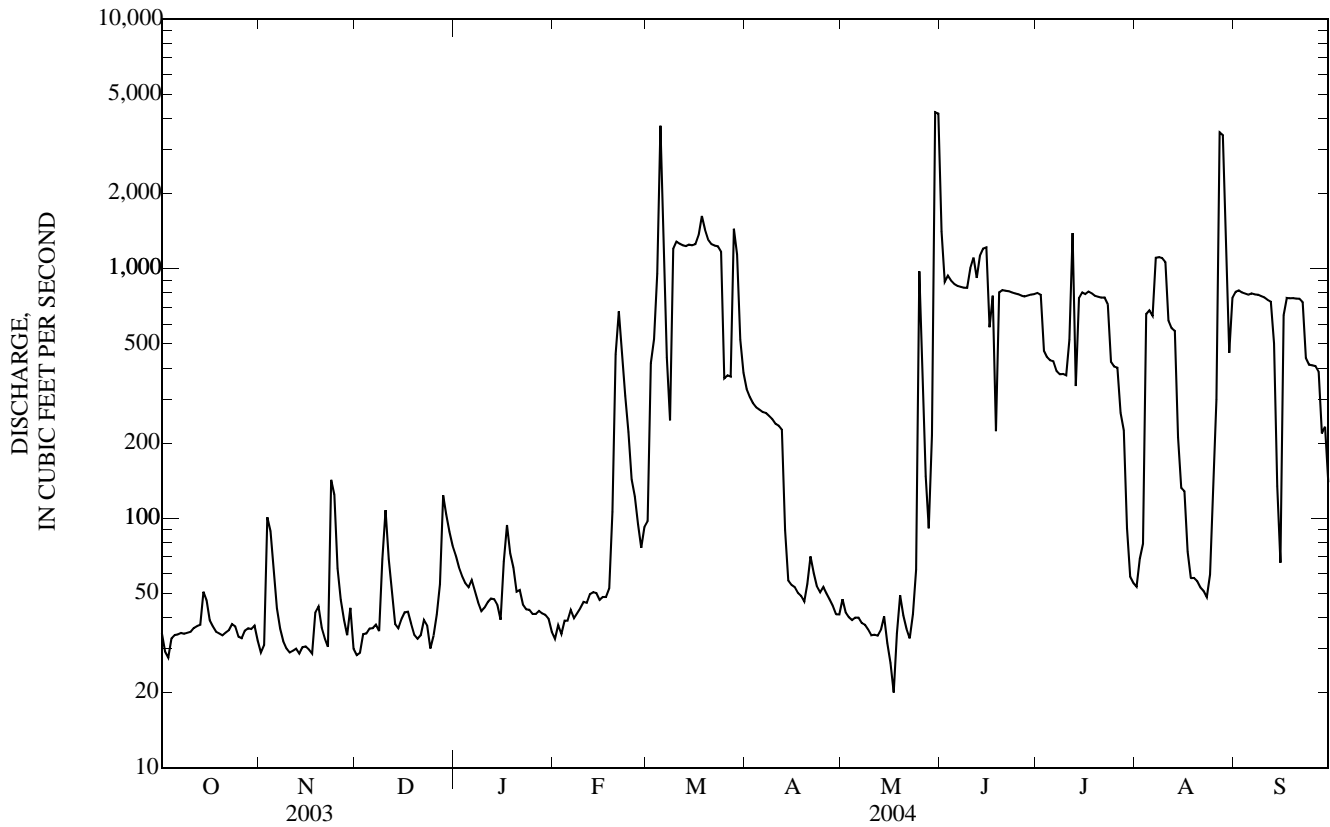
MEAN	365	357	473	285	410	685	608	699	691	858	608	437
MAX	1,874	1,931	1,557	1,696	1,772	1,831	1,731	1,421	1,593	2,849	2,004	1,976
(WY)	(1994)	(1994)	(1983)	(1993)	(1983)	(1993)	(2001)	(1995)	(2001)	(1982)	(1993)	(1993)
MIN	24.2	23.0	20.1	22.2	20.6	24.3	22.7	32.2	20.3	17.9	21.0	26.6
(WY)	(1989)	(1989)	(1990)	(1989)	(1989)	(1989)	(1989)	(2000)	(1988)	(1988)	(1988)	(1988)

06904010 CHARITON RIVER NEAR MOULTON, IA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1980 - 2004	
ANNUAL TOTAL	22,481		137,963		541	
ANNUAL MEAN	61.6		377		43.6	
HIGHEST ANNUAL MEAN					1,555	1993
LOWEST ANNUAL MEAN					43.6	1989
HIGHEST DAILY MEAN	1,730	Jun 26	4,230	May 30	8,720	Jul 17, 1982
LOWEST DAILY MEAN	24	Jan 5	20	May 17	14	Jun 22, 1988 ^a
ANNUAL SEVEN-DAY MINIMUM	25	Jan 1	30	Nov 9	15	Jun 22, 1988
MAXIMUM PEAK FLOW			5,760	May 30	11,200	Jul 16, 1982
MAXIMUM PEAK STAGE			34.35	May 30	36.83	Jul 16, 1982
ANNUAL RUNOFF (AC-FT)	44,590		273,600		391,900	
ANNUAL RUNOFF (CFSM)	0.083		0.509		0.731	
ANNUAL RUNOFF (INCHES)	1.13		6.94		9.93	
10 PERCENT EXCEEDS	89		986		1,360	
50 PERCENT EXCEEDS	38		72		192	
90 PERCENT EXCEEDS	30		34		27	

^a Also June 23, 27, and July 9, 1988.

^e Estimated.



06904010 CHARITON RIVER NEAR MOULTON, IA—Continued

(Large river mass contaminants station)

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 2003 to September 30, 2004.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Stream width, feet (00004)	Turbidity, wat unflab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfl uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)
MAR 18...	0900	1,660	110	100	735	12.6	100	7.9	304	4.4	100	122	9.73
APR 22...	1320	60	76.0	15	738	17.1	177	8.3	470	15.4	156	190	14.1
MAY 17...	1100	29	73.0	14	739	10.0	113	8.0	388	19.8	135	164	12.8
JUN 14...	1050	1,100	100	--	738	6.7	79	7.6	280	22.3	--	--	8.70
JUL 19...	1230	776	100	59	737	7.4	90	7.8	272	23.8	89	109	8.24
AUG 16...	1030	130	80.0	22	--	8.4	--	7.9	283	20.6	97	118	8.35
SEP 13...	1030	745	105	38	739	7.8	92	7.7	240	21.7	86	105	7.42

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, wat flt by analysis, mg/L (62854)	Total nitrogen, wat unfl by analysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)
MAR 18...	4.2	34.3	E.03	.66	E.006	.40	.019	.034	.28	1.12	1.61	3.4	.1
APR 22...	2.6	78.9	<.04	.45	.010	.27	.020	.034	.114	.88	1.10	1.6	<.1
MAY 17...	3.3	60.0	.04	.52	.023	.15	.027	.043	.082	.98	1.13	.9	<.1
JUN 14...	4.3	21.9	E.03	1.30	.032	.32	.033	.050	.33	1.89	1.77	2.5	<.1
JUL 19...	2.7	24.1	<.04	.56	.008	.38	.007	.023	.21	1.11	1.37	2.9	<.1
AUG 16...	2.6	27.5	<.04	.24	E.004	.23	.018	.031	.116	.69	.97	1.6	<.1
SEP 13...	2.8	19.5	<.04	.27	.010	.21	.022	.032	.119	.74	.84	1.4	<.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a, phytoplankton, fluoro, ug/L (70953)	2,6-Diethyl aniline water fltrd, 0.7u GF, ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd, 0.7u GF, ug/L (82686)	Benfluralin, water, fltrd, 0.7u GF, ug/L (82673)	Butylate, water, fltrd, ug/L (04028)
MAR 18...	3.3	6.3	3.4	6.1	<.006	E.222	.011	.006	<.005	.657	<.050	<.010	<.004
APR 22...	1.6	6.1	7.1	13.8	<.006	E.107	.022	<.005	<.005	.493	<.050	<.010	<.004
MAY 17...	.9	6.1	4.7	5.7	<.006	E.158	.065	<.005	<.005	.555	<.050	<.010	<.004
JUN 14...	2.4	6.6	8.1	11.7	<.006	E.343	.206	<.005	<.005	1.30	<.050	<.010	<.004
JUL 19...	2.8	5.7	9.2	8.2	<.006	E.270	.083	<.005	<.005	1.14	<.050	<.010	<.004
AUG 16...	1.5	5.6	5.0	11.0	<.006	E.235	.047	<.005	<.005	1.07	<.050	<.010	<.004
SEP 13...	1.4	5.4	2.7	4.6	<.006	E.223	.036	<.005	<.005	.853	<.050	<.010	<.004

06904010 CHARITON RIVER NEAR MOULTON, IA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Carbaryl, water, fltrd 0.7u GF (82680)	Carbofuran, water, fltrd 0.7u GF (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water, fltrd 0.7u GF (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF (82677)	EPTC, water, fltrd 0.7u GF (82668)	Ethalfuralin, water, fltrd 0.7u GF (82663)	Ethoprop, water, fltrd 0.7u GF (82672)
MAR 18...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005
APR 22...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005
MAY 17...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005
JUN 14...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005
JUL 19...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005
AUG 16...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005
SEP 13...	<.041	<.020	<.005	<.006	<.018	<.003	<.012	<.005	<.009	<.02	<.004	<.009	<.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Desulf-inyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water, fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)
MAR 18...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.123	<.006	<.003	<.007
APR 22...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.079	<.006	<.003	<.007
MAY 17...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.102	<.006	<.003	<.007
JUN 14...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.193	<.006	<.003	<.007
JUL 19...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.301	<.006	<.003	<.007
AUG 16...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.222	<.006	<.003	<.007
SEP 13...	<.029	<.013	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.228	<.006	<.003	<.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water, fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Propyzamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebu-thiuron water, fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)
MAR 18...	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011	<.02	.043	<.02	<.034
APR 22...	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011	<.02	.031	<.02	<.034
MAY 17...	<.003	<.010	<.004	<.022	<.011	.04	<.004	<.025	<.011	<.02	.037	E.01	<.034
JUN 14...	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011	<.02	.041	<.02	<.034
JUL 19...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	.035	<.02	<.034
AUG 16...	<.003	<.010	<.004	<.022	<.011	.01	<.004	<.025	<.011	<.02	.033	<.02	<.034
SEP 13...	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025	<.011	<.02	.032	<.02	<.034

CHARITON RIVER BASIN

06904010 CHARITON RIVER NEAR MOULTON, IA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004—CONTINUED

Date	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Sus- pended sedi- ment concen- tration mg/L (80154)	Number of sam- pling points, count (00063)
MAR 18...	<.02	<.010	<.002	<.009	409	11
APR 22...	<.02	<.010	<.002	<.009	25	11
MAY 17...	<.02	<.010	<.002	<.009	21	11
JUN 14...	<.02	<.010	<.002	<.009	152	10
JUL 19...	<.02	<.010	<.002	<.009	620	10
AUG 16...	<.02	<.010	<.002	<.009	54	12
SEP 13...	<.02	<.010	<.002	<.009	95	10