05495000 FOX RIVER AT WAYLAND, MO

LOCATION.--Lat 40°23'33", long 91°35'50", in NW $\frac{1}{4}$ sec.31, T.65 N., R.6 W., Clark County, Hydrologic Unit 07110001, on left bank 30 ft downstream from bridge on U.S. Highway 136, 0.8 mi west of Wayland, 5.0 mi downstream from Brush Creek, and at mile 15.2.

DRAINAGE AREA.--400 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1922 to current year.

REVISED RECORDS.--WSP 785: 1934. Revised daily mean discharges for the period Aug. 9, 1977, to Sept. 30, 1977, and the annual maximum peak for the 1977 water year published in WDR-MO-79-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 501.52 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1929, nonrecording gage at bridge 2.8 mi upstream at different datum; Oct. 1, 1929, to June 11, 1936, nonrecording gage at bridge 90 ft upstream; June 1936 to August 1988 at site 300 ft upstream, at present datum.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	e9.5	e7.2	e4.3	e2.9	29	9.7	256	28	43	24	130
2	2.0	e8.4	e6.7	e4.0	e2.9	23	9.9	300	27	33	22	91
3	2.1	e8.3	e6.5	e3.7	e3.3	22	11	112	29	27	18	41
4	2.6	e7.8	e6.4	e3.8	e2.9	18	15	77	28	23	16	29
5	3.3	e7.2	e6.1	e3.9	e2.5	20	20	2,700	25	25	15	22
6	2.8	e7.5	e5.9	e3.9	e2.3	16	16	1,000	26	1,860	13	18
7	4.4	e7.1	e6.1	e4.2	e2.3	13	23	378	74	625	12	15
8	5.4	e6.8	e5.9	e4.1	e2.2	12	30	182	76	355	12	12
9	3.7	e6.6	e5.7	e3.8	e2.0	14	29	486	41	2,490	11	10
10	3.2	e6.5	e5.7	e3.3	e1.9	13	31	781	51	6,520	10	9.4
11	3.0	e7.0	e5.5	e2.9	e1.9	12	29	1,670	102	3,470	9.1	8.5
12	2.6	e11	e5.4	e2.8	e1.9	14	25	1,270	81	480	8.2	9.3
13	2.7	e8.7	e5.3	e2.5	e2.2	101	19	354	58	246	7.7	12
14	2.6	e7.9	e5.3	e2.1	e5.3	273	e15	178	39	154	7.4	454
15	2.4	e7.1	e5.3	e1.8	19	237	12	120	28	106	7.0	274
16	2.6	e6.5	e5.2	e1.8	35	151	10	94	31	75	6.4	110
17	2.2	e6.2	e5.3	e1.9	38	124	12	79	27	58	6.8	55
18	1.7	e6.2	e7.4	e2.2	28	87	13	75	21	92	6.0	35
19	1.7	e9.0	e9.4	e2.3	e24	62	14	61	17	85	6.1	66
20	1.7	e7.5	e14	e2.2	e23	47	35	76	15	47	5.9	62
21	1.7	e6.5	e20	e2.0	e50	37	112	162	13	40	5.5	63
22	1.6	e6.3	e13	e1.9	e81	34	163	93	12	35	4.2	489
23	1.6	e6.5	e14	e1.7	e75	32	70	59	11	33	4.1	264
24	3.7	e6.2	e9.9	e1.6	e59	26	45	48	11	33	4.6	80
25	4.0	e6.6	e7.2	e1.6	e48	21	206	50	13	30	3.9	45
26	3.8	e9.2	e6.6	e1.8	e42	18	890	52	1,160	29	3.8	32
27	3.6	e12	e5.9	e1.9	e36	15	472	43	687	28	6.9	25
28	5.9	e10	e5.5	e1.8	e32	15	178	37	241	30	5.5	22
29	6.5	e9.0	e5.3	e1.9	---	14	105	33	99	30	5.1	20
30	8.0	e7.6	e4.9	e2.2	---	13	76	31	60	30	6.7	18
31	e11	---	e4.7	e2.6	---	11	---	28	---	28	28	---
MEAN	3.45	7.76	7.33	2.66	22.4	49.2	89.9	351	104	554	9.74	84.0
MAX	11	12	20	4.3	81	273	890	2,700	1,160	6,520	28	489
MIN	1.6	6.2	4.7	1.6	1.9	11	9.7	28	11	23	3.8	8.5
IN.	0.01	0.02	0.02	0.01	0.06	0.14	0.25	1.01	0.29	1.60	0.03	0.23

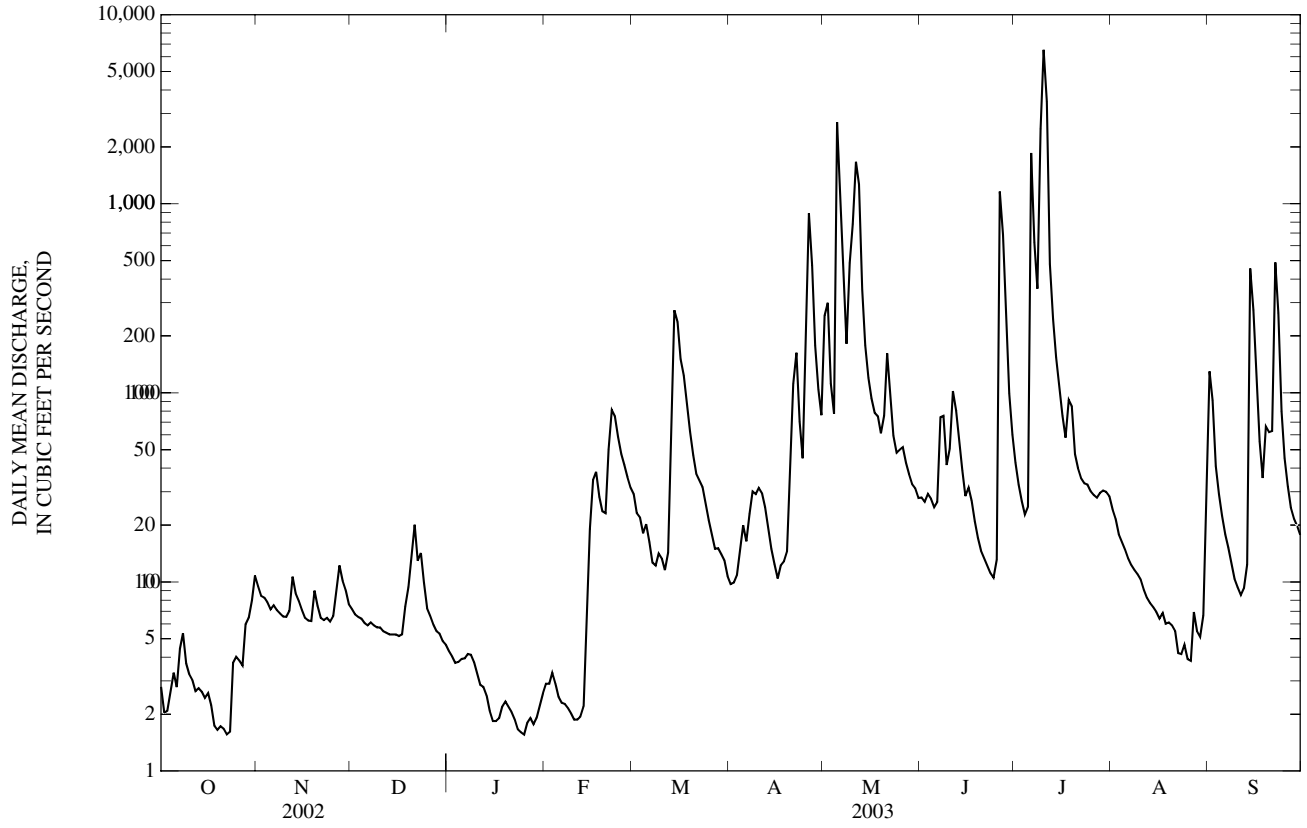
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	163	170	135	162	333	433	464	395	393	246	114	170
MAX	1,313	1,375	1,330	1,133	1,433	2,264	2,750	2,795	2,223	3,387	1,509	1,999
(WY)	(1987)	(1929)	(1983)	(1969)	(1982)	(1979)	(1973)	(1996)	(1947)	(1993)	(1970)	(1970)
MIN	0.000	0.007	0.019	0.19	0.42	8.56	2.35	1.39	0.060	0.21	0.019	0.17
(WY)	(1957)	(1957)	(1957)	(1957)	(1957)	(1956)	(1956)	(1956)	(1956)	(1936)	(1936)	(1937)

05495000 FOX RIVER AT WAYLAND, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL MEAN	216		108		264	
HIGHEST ANNUAL MEAN					927	1993
LOWEST ANNUAL MEAN					17.6	1956
HIGHEST DAILY MEAN	9,530	May 12	6,520	Jul 10	19,900	Apr 22, 1973
LOWEST DAILY MEAN	1.6	Sep 17,Oct. 22,23	1.6	Oct 22,23,Jan 24,25	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	1.7	Oct 17	1.7	Oct 17	0.00	Several Years
MAXIMUM PEAK FLOW	---		8,350	Jul 11	26,400	Apr 22, 1973
MAXIMUM PEAK STAGE	---		16.85	Jul 11	21.71	Apr 22, 1973
INSTANTANEOUS LOW FLOW	---		1.0	Oct 4,22,23	0.00	Several Years
ANNUAL RUNOFF (INCHES)	7.34		3.67		8.98	
10 PERCENT EXCEEDS	382		152		542	
50 PERCENT EXCEEDS	26		13		38	
90 PERCENT EXCEEDS	3.6		2.5		2.4	

e Estimated



05495000 FOX RIVER AT WAYLAND, MO—Continued
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1967 to September 1972, November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as $CaCO_3$ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV												
04...	1350	Environmental	e7.8	11.7	97	7.9	551	6.6	260	73.2	17.6	4.93
JAN												
06...	1325	Environmental	e3.8	13.8	101	8.1	441	2.2	--	--	--	--
MAR												
04...	0830	Environmental	15	12.2	86	7.5	261	0.4	--	--	--	--
04...	0831	Replicate	--	12.1	86	7.6	261	0.4	--	--	--	--
MAY												
20...	0840	Environmental	57	10.4	109	7.9	463	17.2	210	61.2	13.2	6.45
JUL												
21...	1415	Environmental	37	8.3	114	7.7	249	30.2	--	--	--	--
SEP												
02...	1320	Environmental	81	7.8	89	7.8	288	20.7	--	--	--	--

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as $CaCO_3$ (00410)	ANC, wat unf incrm. titr., field, mg/L as $CaCO_3$ (00419)	Bicarbonate, wat unf incrm. titr., field, mg/L (00450)	Carbonate, wat unf incrm. titr., field, mg/L (00447)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV													
04...	16.6	197	197	240	<1	11.4	0.2	87.1	350	33	0.45	<0.04	0.06
JAN													
06...	--	208	211	257	<1	--	--	--	--	<10	0.34	<0.04	<0.06
MAR													
04...	--	134	134	163	<1	--	--	--	--	<10	1.8	0.27	0.42
04...	--	--	--	--	--	--	--	--	--	<10	1.9	0.52	0.80
MAY													
20...	16.0	141	142	173	<1	14.1	0.2	66.9	297	49	1.0	<0.04	0.31
JUL													
21...	--	154	154	187	<1	--	--	--	--	25	0.79	<0.04	<0.06
SEP													
02...	--	96	96	118	<1	--	--	--	--	138d	1.1	<0.04	0.37

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Copper, water, fltrd, µg/L (01040)
NOV													
04...	<0.008	E.01	E.02	0.06	1k	6k	13k	E1	220	0.8	<0.04	<0.2	<6
JAN													
06...	<0.008	<0.02	<0.04	E.03	<1b	13k	8k	--	--	--	--	--	--
MAR													
04...	0.015	0.03	0.07	0.20	<1b	2k	24	--	--	--	--	--	--
04...	0.028	0.07	0.12	0.19	1k	4k	20	--	--	--	--	--	--
MAY													
20...	0.008	0.03	E.03	0.17	180	140	210	2	579	1.4	<0.04	<0.2	<6
JUL													
21...	<0.008	0.02	E.03	0.11	96	230	88	--	--	--	--	--	--
SEP													
02...	0.016	<0.18d	0.05	0.24	1,400	1,340k	3,700k	--	--	--	--	--	--

05495000 FOX RIVER AT WAYLAND, MO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Mercury water, unfltrd recover -able, µg/L (71900)	Selenium, water, fltrd, µg/L (01145)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
NOV								
04...	27	<0.08	M	233	<0.02	0.5	M	2
JAN								
06...	--	--	--	--	--	--	--	--
MAR								
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
MAY								
20...	E7	<0.08	1	42.5	<0.02	0.9	M	4
JUL								
21...	--	--	--	--	--	--	--	--
SEP								
02...	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
b -- Value was extrapolated below
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range

05496000 WYACONDA RIVER ABOVE CANTON, MO

LOCATION.--Lat 40°08'32", long 91°33'55", in SW ¼ SW ¼ NE ¼ sec.28, T.62 N., R.6 W., Lewis County, Hydrologic Unit 07110001, on left bank on downstream side of bridge on State Highway 16, 1.9 mi upstream from Sugar Creek, 2.5 mi west of Canton, and at mile 16.7.

DRAINAGE AREA.--393 mi^2.

PERIOD OF RECORD.--October 1932 to September 1972, October 1979 to current year.

REVISED RECORDS.--WDR MO-92-1: (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 517.41 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1939, nonrecording gage 500 ft downstream at datum 2.00 ft lower; Sept. 25, 1975, to Sept. 17, 1979, nonrecording gage at present site and at datum 2.00 ft lower.

REMARKS.--Records fair except for estimated daily discharges and discharges below 50 ft^3/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	5.4	3.8	2.2	e2.4	29	12	1,160	33	31	19	317
2	2.5	5.2	3.0	2.3	e2.5	24	11	1,070	32	27	19	94
3	2.6	4.9	3.0	e1.7	e2.6	e21	9.5	337	29	24	19	61
4	9.7	4.6	2.9	0.75	e2.2	e19	15	225	29	23	18	38
5	8.6	4.2	2.9	0.96	e2.1	e16	22	2,400	29	22	17	24
6	6.0	4.4	2.1	0.83	e1.9	e15	18	2,340	31	346	17	18
7	7.2	4.1	2.3	1.0	e1.7	e13	35	660	59	271	16	16
8	7.3	3.8	2.2	1.1	e1.7	e12	38	308	87	186	16	13
9	4.2	2.9	1.9	0.69	e1.6	e10	40	359	49	2,880	14	11
10	3.3	3.6	2.0	e0.57	e1.5	e9.6	34	1,270	81	3,430	12	10
11	2.9	3.2	1.8	0.56	e1.5	e9.2	29	1,850	204	2,970	10	9.9
12	3.5	6.3	2.3	0.93	e1.6	8.4	23	826	114	760	8.8	10
13	3.0	4.5	3.0	0.75	e3.1	45	18	330	58	322	8.3	12
14	2.6	3.0	3.3	0.60	6.0	294	15	210	42	174	6.7	15
15	2.6	2.8	3.5	0.77	21	138	13	146	29	103	5.5	232
16	2.5	2.4	4.4	e0.97	31	92	10	112	21	64	5.5	84
17	2.4	2.5	3.4	e1.2	22	76	11	87	17	55	6.2	36
18	2.1	2.8	5.5	e1.4	20	57	13	73	14	48	5.8	30
19	2.4	6.6	6.5	e1.6	19	54	15	67	13	43	4.8	91
20	5.0	4.9	10	e1.7	34	49	23	67	11	38	4.4	111
21	3.8	3.7	18	e1.7	80	39	117	295	8.6	35	3.6	52
22	2.9	2.9	9.7	e1.5	118	32	121	108	8.0	31	3.7	1,970
23	2.4	2.6	e4.9	e1.4	232	27	69	75	9.0	29	3.7	856
24	2.2	2.6	e2.9	e1.4	203	22	64	64	8.6	27	3.1	155
25	3.0	2.7	e2.8	e1.5	116	20	1,180	54	10	26	2.5	64
26	4.3	2.7	2.6	e1.8	83	17	1,800	49	186	25	3.2	41
27	4.8	2.6	2.6	e1.9	53	15	619	45	308	24	4.6	54
28	5.0	2.8	2.3	e1.6	37	17	265	41	96	24	6.2	29
29	5.2	4.1	2.4	e1.5	---	20	189	38	46	23	16	20
30	5.5	4.4	2.2	1.9	---	15	155	36	34	22	8.2	16
31	6.6	---	2.4	e2.2	---	14	---	35	---	20	32	---
MEAN	4.15	3.77	3.95	1.32	39.3	39.7	166	475	56.5	390	10.3	150
MAX	9.7	6.6	18	2.3	232	294	1,800	2,400	308	3,430	32	1,970
MIN	2.1	2.4	1.8	0.56	1.5	8.4	9.5	35	8.0	20	2.5	9.9
IN.	0.01	0.01	0.01	0.00	0.10	0.12	0.47	1.39	0.16	1.15	0.03	0.42

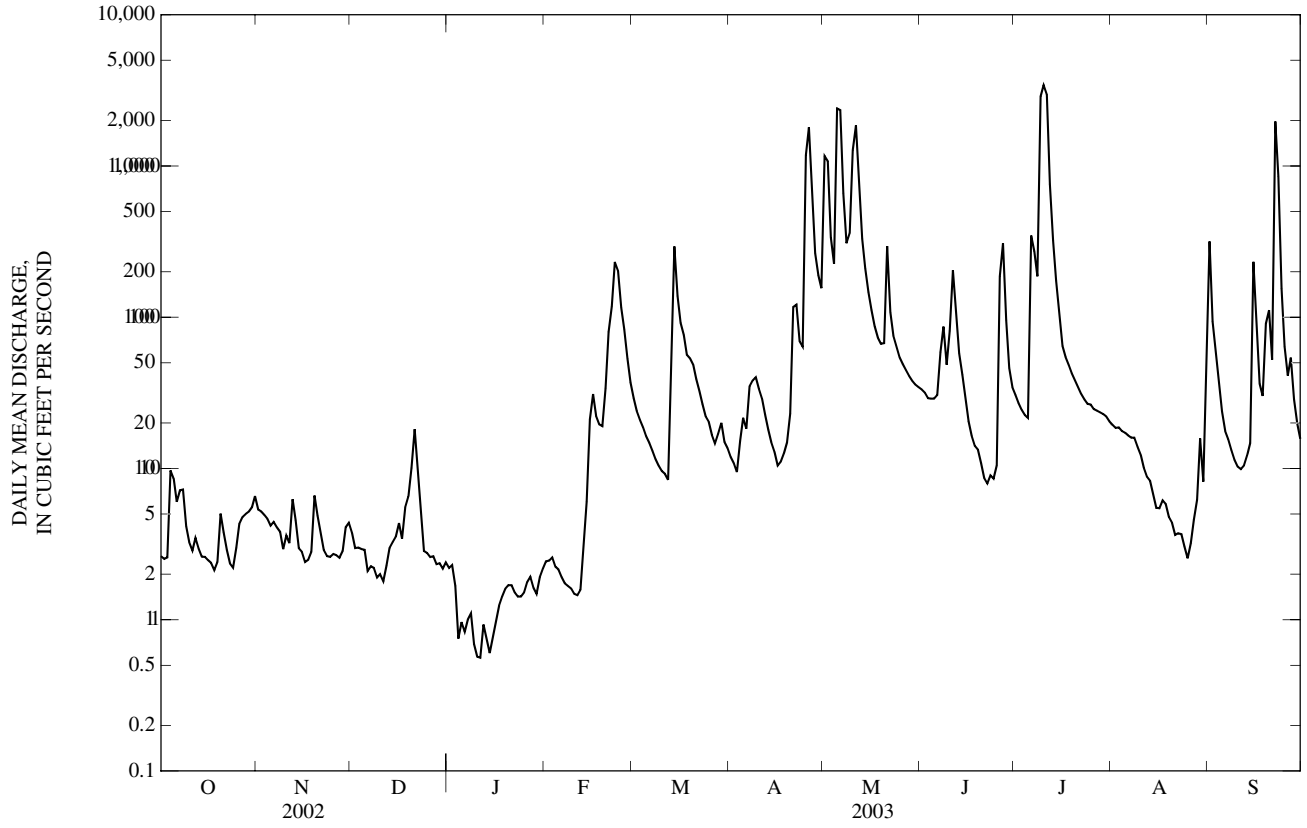
STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	137	161	149	158	357	404	434	471	371	283	126	155
MAX	1,677	1,463	1,399	946	1,529	1,346	1,809	3,196	2,594	2,792	2,242	2,510
(WY)	(1987)	(1986)	(1983)	(1946)	(2001)	(1985)	(1983)	(1996)	(1947)	(1993)	(1970)	(1986)
MIN	0.00	0.00	0.47	0.10	2.05	7.53	3.38	1.69	0.66	0.02	0.00	0.02
(WY)	(1954)	(1954)	(1954)	(1954)	(1989)	(1957)	(1956)	(1934)	(1956)	(1934)	(1934)	(1953)

05496000 WYACONDA RIVER ABOVE CANTON, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	287		113		266	
HIGHEST ANNUAL MEAN					861	1993
LOWEST ANNUAL MEAN					14.2	1989
HIGHEST DAILY MEAN	12,400	May 13	3,430	Jul 10	16,500	Sep 22, 1986
LOWEST DAILY MEAN	1.8	Dec 11	0.56	Jan 11	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	2.1	Dec 6	0.70	Jan 9	0.00	Many Years
MAXIMUM PEAK FLOW	---		3,840	Jul 11	17,700	Jun 30, 1933
MAXIMUM PEAK STAGE	---		16.91	Jul 11	31.33	Sep 22, 1986
INSTANTANEOUS LOW FLOW	---		0.42	Jan 14,15	0.00	Many Years
ANNUAL RUNOFF (INCHES)	9.90		3.89		9.21	
10 PERCENT EXCEEDS	534		187		552	
50 PERCENT EXCEEDS	22		14		31	
90 PERCENT EXCEEDS	2.7		1.9		2.2	

e Estimated



05497000 NORTH FABIUS RIVER AT MONTICELLO, MO

LOCATION.--Lat 40°06'30", long 91°42'51", in SW $^1/_4$ SE $^1/_4$ sec.6, T.61 N., R.7 W., Lewis County, Hydrologic Unit 07110002, on right bank upstream from bridge on State Highway 16, 1.0 mi south of Monticello, and 19.0 mi upstream from Middle Fabius River.

DRAINAGE AREA.--452 mi^2.

PERIOD OF RECORD.--February 1922 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 925: 1937-39(M). WSP 1308: 1922(M), 1924-26(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 540.73 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1930, nonrecording gage at site 400 ft downstream at datum 0.03 ft lower; Nov. 22, 1930, to Nov. 28, 1967, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	15	e6.6	e4.7	3.9	25	17	1,050	27	30	12	73
2	7.3	14	e6.1	e4.3	3.7	23	16	659	25	111	11	51
3	7.4	13	5.8	e4.1	4.5	e20	15	224	30	50	12	32
4	14	12	e5.8	e3.9	4.0	e17	22	172	30	27	11	22
5	12	11	e5.6	e3.7	4.0	e14	25	2,960	27	22	9.0	15
6	14	11	e5.4	e3.5	3.2	12	20	1,630	30	26	8.4	12
7	13	11	e5.4	e3.4	3.5	e12	36	447	49	28	7.9	9.2
8	10	10	e5.7	e3.3	2.5	e12	39	224	72	48	7.3	7.7
9	8.0	11	e5.9	3.0	2.3	e11	41	247	52	2,740	7.6	6.6
10	6.8	10	e6.1	3.8	2.3	e10	34	1,020	103	2,430	6.9	9.6
11	6.5	11	e6.1	3.4	2.4	e10	31	1,420	178	734	6.0	7.5
12	6.6	10	e6.1	3.3	2.4	20	27	644	133	235	5.7	6.7
13	6.8	9.3	e6.4	3.3	2.5	28	22	250	74	122	5.7	13
14	6.4	8.7	e6.3	3.4	3.0	65	19	145	43	82	5.8	29
15	6.7	9.3	e6.2	3.2	15	103	16	103	35	59	5.7	111
16	6.2	9.1	e5.7	3.2	14	93	14	83	33	45	6.5	76
17	5.9	8.5	5.4	2.9	8.2	78	12	70	27	37	5.0	45
18	6.3	8.7	7.5	2.9	7.8	65	15	59	23	31	4.7	34
19	7.4	9.4	8.3	2.9	15	60	14	52	20	28	4.5	190
20	6.6	9.3	17	2.7	22	58	28	45	17	24	4.5	109
21	6.6	9.2	11	2.6	e33	51	82	202	15	21	4.4	58
22	6.3	9.2	8.0	2.6	e156	45	94	80	15	18	4.6	1,140
23	6.0	9.2	e6.5	2.5	e128	38	56	60	15	16	4.2	367
24	6.7	9.4	e5.4	2.5	69	32	42	52	15	15	3.8	121
25	9.5	9.2	e4.6	2.4	50	31	535	53	14	14	4.1	65
26	11	e12	e4.2	2.3	39	25	1,270	47	20	12	4.5	46
27	13	e14	3.9	2.3	32	24	436	44	57	12	4.8	44
28	13	e12	4.6	2.3	28	29	192	40	71	25	5.3	35
29	16	e10	4.8	2.4	---	27	161	33	50	19	11	26
30	15	e8.1	6.1	2.3	---	21	123	31	36	16	12	23
31	15	---	5.4	2.7	---	19	---	30	---	13	22	---
MEAN	9.10	10.5	6.38	3.09	23.6	34.8	115	393	44.5	229	7.35	92.8
MAX	16	15	17	4.7	156	103	1,270	2,960	178	2,740	22	1,140
MIN	5.9	8.1	3.9	2.3	2.3	10	12	30	14	12	3.8	6.6
IN.	0.02	0.03	0.02	0.01	0.05	0.09	0.28	1.00	0.11	0.58	0.02	0.23

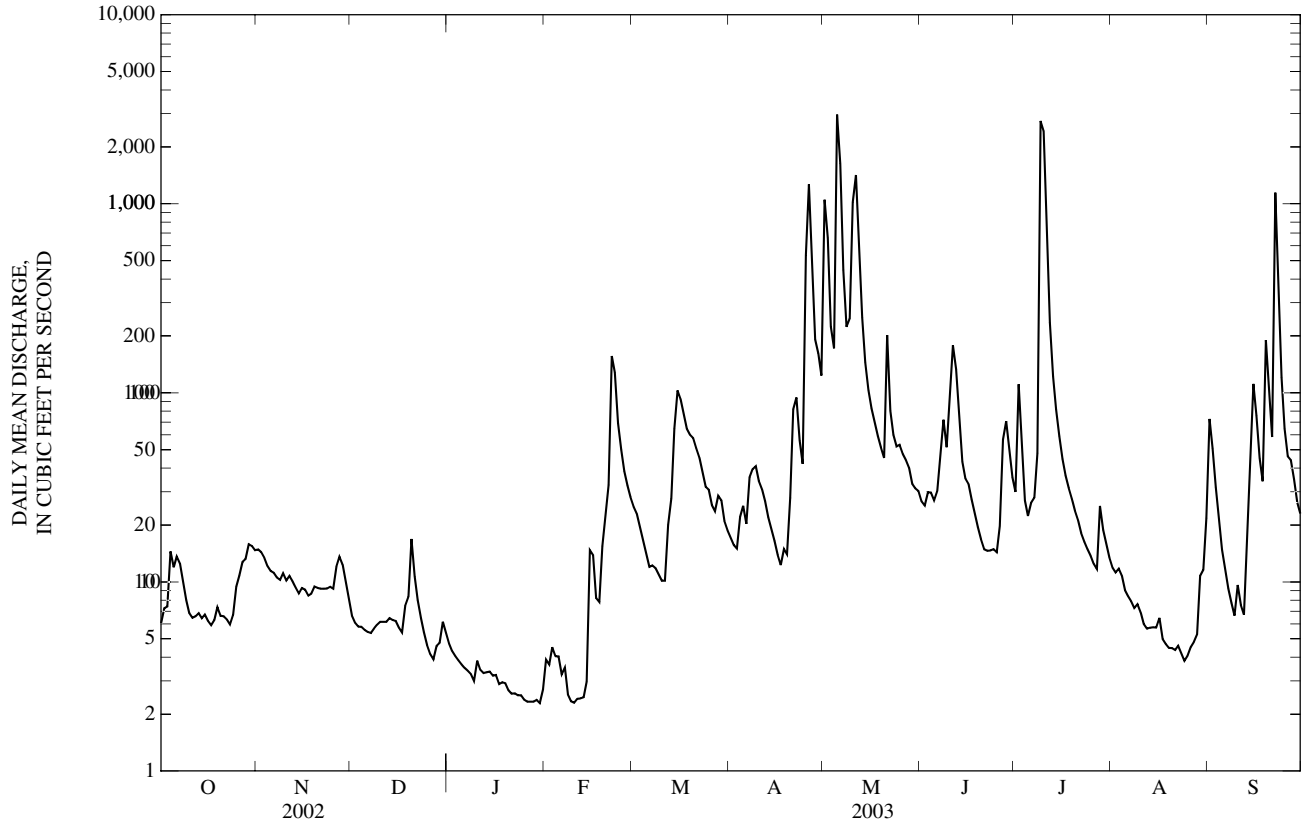
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	181	191	167	191	355	451	522	473	418	295	127	178
MAX	1,496	1,347	1,521	1,679	1,346	2,336	3,171	2,941	3,148	3,320	2,149	1,966
(WY)	(1987)	(1929)	(1983)	(1974)	(1937)	(1979)	(1973)	(1996)	(1947)	(1993)	(1970)	(1970)
MIN	0.01	1.06	0.73	0.14	2.43	7.91	7.15	1.71	0.07	0.00	0.00	0.51
(WY)	(1957)	(1957)	(1957)	(1940)	(1989)	(1956)	(1956)	(1934)	(1934)	(1934)	(1934)	(1953)

05497000 NORTH FABIUS RIVER AT MONTICELLO, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL MEAN	287		81.4		295	
HIGHEST ANNUAL MEAN					923	1993
LOWEST ANNUAL MEAN					18.0	1989
HIGHEST DAILY MEAN	15,600	May 13	2,960	May 5	17,900	Apr 23, 1973
LOWEST DAILY MEAN	3.9	Dec 27	2.3	Jan 26-28,30,Feb 9,10	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	4.8	Dec 24	2.4	Jan 24	0.00	Many Years
MAXIMUM PEAK FLOW	---		4,110	May 5	20,700	Apr 22, 1973
MAXIMUM PEAK STAGE	---		17.74	May 5	33.03	Apr 22, 1973
INSTANTANEOUS LOW FLOW	---		1.6	Jan 9	0.00	Many Years
ANNUAL RUNOFF (INCHES)	8.61		2.44		8.88	
10 PERCENT EXCEEDS	618		110		570	
50 PERCENT EXCEEDS	28		14		45	
90 PERCENT EXCEEDS	6.6		3.8		4.2	

e Estimated



05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO

LOCATION.--Lat 40°05'37", long 91°44'08", in SE $\frac{1}{4}$ sec.12, T.61 N., R.8 W., Lewis County, Hydrologic Unit 07110002, on downstream side of bridge pier on State Highway 16, 2.5 mi southwest of Monticello, 8.0 mi downstream from Radish Branch, and 17 mi upstream from mouth.

DRAINAGE AREA.--393 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 540.46 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1967, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1945, reached a stage of 23.3 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.2	4.1	3.1	2.1	18	6.3	915	27	15	15	408
2	2.6	5.3	3.5	3.1	2.0	16	e5.3	1,160	25	12	12	155
3	3.1	5.7	2.8	3.0	2.2	e16	4.8	418	28	60	11	76
4	4.7	4.9	2.6	3.2	e2.1	e15	11	324	27	41	9.7	37
5	3.3	4.8	2.6	3.1	e2.1	e15	25	1,910	23	21	7.9	20
6	2.8	5.2	2.6	2.9	e2.0	e14	10	3,500	29	19	7.0	13
7	2.2	6.6	2.7	2.9	e2.0	e13	29	807	46	12	6.5	9.3
8	2.2	6.7	3.1	3.2	e1.9	e13	28	339	45	108	6.1	7.3
9	3.2	8.2	3.5	2.9	e1.9	e12	21	273	53	2,620	5.7	5.7
10	3.1	8.4	3.5	2.5	e1.9	e12	30	1,170	130	3,550	5.4	4.8
11	2.8	8.6	3.1	2.2	e2.0	11	27	1,420	156	1,480	5.1	4.5
12	2.6	13	3.3	2.2	e2.0	11	19	1,120	232	396	4.8	4.5
13	2.4	11	3.4	2.2	e2.0	18	14	355	117	179	4.9	8.8
14	2.3	7.5	3.4	2.1	e2.0	306	11	210	65	105	5.1	176
15	2.2	5.8	3.7	1.8	12	219	8.5	157	43	69	4.8	381
16	1.9	4.7	3.8	1.9	9.4	119	8.4	128	41	48	4.5	146
17	1.9	3.7	3.6	2.2	3.1	82	13	105	91	35	4.0	64
18	2.0	3.4	6.3	2.4	1.9	62	20	88	52	30	3.8	63
19	2.1	4.2	7.0	2.4	2.4	58	22	75	31	25	3.8	812
20	1.9	5.1	5.6	2.3	2.7	56	34	64	22	20	3.6	470
21	1.9	4.9	4.9	2.1	e7.1	39	97	102	18	17	3.5	340
22	2.0	5.1	5.5	2.1	e28	32	86	145	16	15	3.2	1,860
23	1.9	5.6	7.8	2.4	e162	29	85	82	14	13	2.9	596
24	2.1	5.4	8.0	2.2	149	21	70	64	13	11	2.7	187
25	2.7	5.5	6.5	2.0	119	18	593	57	13	10	2.7	91
26	2.9	8.6	5.0	2.1	70	13	1,070	48	16	9.9	2.5	58
27	3.1	10	4.9	2.0	47	10	568	43	19	9.3	2.3	45
28	3.3	9.3	4.4	1.8	26	15	243	39	36	256	2.5	41
29	4.3	7.0	3.8	1.9	---	15	210	34	26	63	5.5	32
30	5.1	5.1	3.8	2.0	---	9.5	200	32	18	34	8.0	27
31	4.8	---	3.4	2.1	---	7.3	---	31	---	21	19	---
MEAN	2.75	6.48	4.26	2.40	23.9	41.8	119	491	49.1	300	5.98	205
MAX	5.1	13	8.0	3.2	162	306	1,070	3,500	232	3,550	19	1,860
MIN	1.9	3.4	2.6	1.8	1.9	7.3	4.8	31	13	9.3	2.3	4.5
IN.	0.01	0.02	0.01	0.01	0.06	0.12	0.34	1.44	0.14	0.88	0.02	0.58

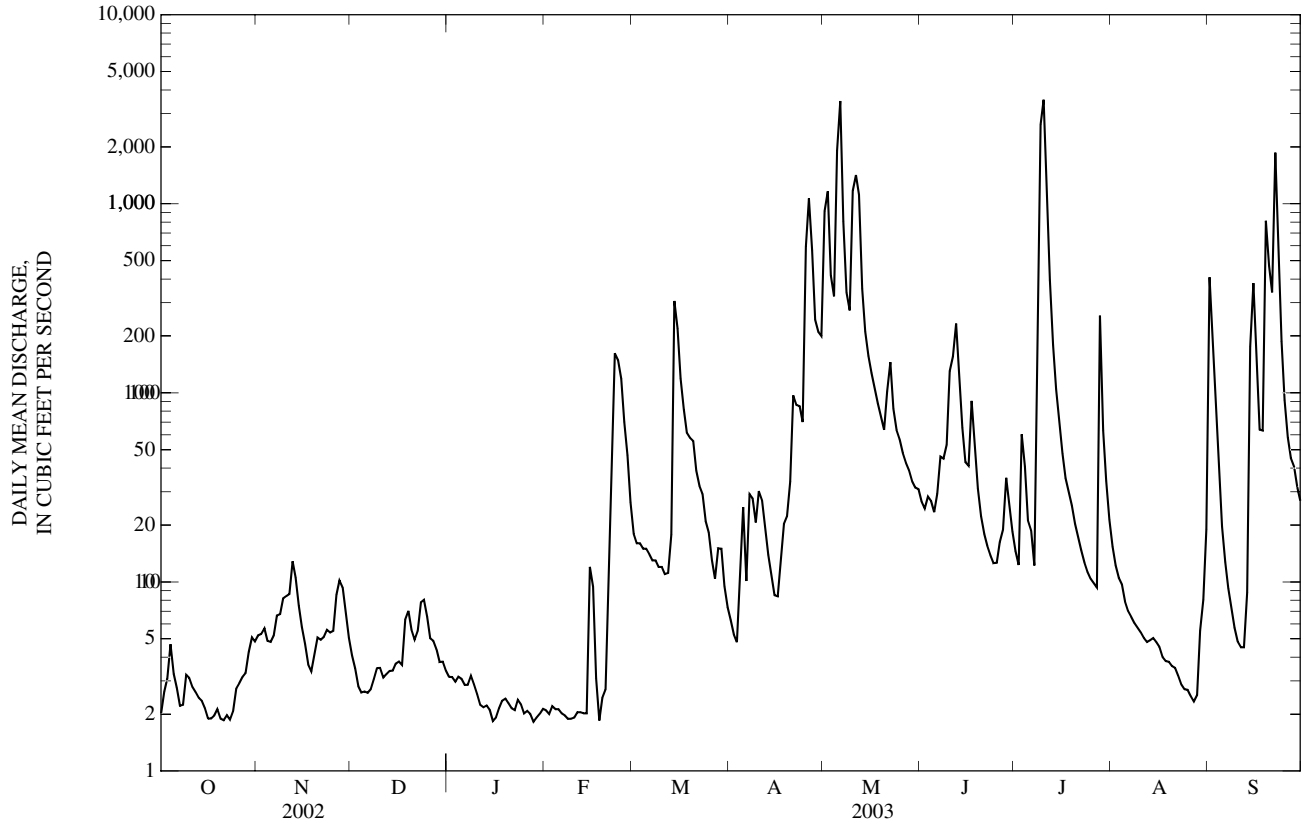
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

MEAN	157	171	154	198	332	444	495	496	311	301	112	151
MAX	1,368	1,481	1,418	1,179	1,359	1,521	2,719	2,776	2,582	3,038	1,758	1,815
(WY)	(1987)	(1986)	(1983)	(1969)	(1969)	(1979)	(1973)	(1996)	(1947)	(1993)	(1970)	(1970)
MIN	0.00	0.00	0.11	0.31	1.23	6.32	3.83	1.48	1.04	0.78	0.56	0.09
(WY)	(1954)	(1954)	(1957)	(1957)	(1957)	(1957)	(1956)	(1989)	(1956)	(1988)	(1988)	(1953)

05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1946 - 2003	
ANNUAL MEAN	304		105		276	
HIGHEST ANNUAL MEAN					837	1993
LOWEST ANNUAL MEAN					18.7	1989
HIGHEST DAILY MEAN	16,500	May 13	3,550	Jul 10	16,500	May 13, 2002
LOWEST DAILY MEAN	1.7	Sep 14-16,30	1.8	Jan 15,28	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 12	2.0	Oct 16	0.00	Several Years
MAXIMUM PEAK FLOW	---		3,940	May 6	17,700	Apr 23, 1973
MAXIMUM PEAK STAGE	---		15.00	May 6	27.14	Apr 23, 1973
INSTANTANEOUS LOW FLOW	---		1.4	Feb 19	0.00	Several Years
ANNUAL RUNOFF (INCHES)	10.50		3.63		9.56	
10 PERCENT EXCEEDS	501		182		570	
50 PERCENT EXCEEDS	16		9.9		38	
90 PERCENT EXCEEDS	2.6		2.2		2.8	

e Estimated



05499900 TROUBLESOME CREEK NEAR EWING, MO
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°59'52", long 91°50'37", in NE ¼ NE ¼ SE ¼ sec.13, T.60 N., R.9 W., Lewis County, Hydrologic Unit 07110003, approximately 2.0 mi west of Ewing on U.S. Highway 156.

DRAINAGE AREA.--2.88 mi^2.

PERIOD OF RECORD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as $CaCO_3$ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV 04...	1600	Environmental	0.18	6.5	53	7.1	697	5.4	260	74.2	17.9	13.3
JAN 06...	1540	Environmental	--	8.3	65	7.3	834	4.3	--	--	--	--
MAR 04...	1025	Environmental	0.12	6.3	46	7.0	248	0.7	--	--	--	--
MAY 20...	1055	Environmental	6.1	8.0	85	7.2	298	17.5	120	35.6	7.65	6.62
JUL 21...	1630	Environmental	4.2	8.3	108	7.5	173	27.1	--	--	--	--
SEP 02...	1700	Environmental	99	7.5	84	7.3	179	20.0	--	--	--	--

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as $CaCO_3$ (00410)	ANC, wat unf incrm. titr., field, mg/L as $CaCO_3$ (00419)	Bicarbonate, wat unf incrm. titr., field, mg/L (00450)	Carbonate, wat unf incrm. titr., field, mg/L (00447)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV 04...	35.1	173	172	210	<1	60.9	0.2	39.5	432	54	1.7	<0.04	13.1
JAN 06...	--	215	214	262	<1	--	--	--	--	<10	1.5	0.08	5.76
MAR 04...	--	121	120	147	<1	--	--	--	--	36	1.9	0.27	0.31
MAY 20...	11.4	100	101	123	<1	11.2	0.2	24.6	193	39	1.1	E.03n	0.76
JUL 21...	--	73	75	91	<1	--	--	--	--	27	1.0	E.02	<0.06
SEP 02...	--	57	56	68	<1	--	--	--	--	168d	1.4	<0.04	0.98

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Copper, water, fltrd, µg/L (01040)
NOV 04...	0.089	0.05	0.06	0.23	17k	80	140	M	640	0.8	E.02	<0.2	<6
JAN 06...	0.044	<0.02	E.03	0.13	20k	<4b	7k	--	--	--	--	--	--
MAR 04...	0.015	E.01	0.05	0.24	3k	2k	56	--	--	--	--	--	--
MAY 20...	0.031	E.01n	E.03n	0.17	150	280	320	2	756	1.5	<0.04	<0.2	<6
JUL 21...	<0.008	E.02	0.04	0.20	300	420	420k	--	--	--	--	--	--
SEP 02...	0.017	<0.18d	0.12	0.32	1,700k	1,200k	2,000k	--	--	--	--	--	--

05499900 TROUBLESOME CREEK NEAR EWING, MO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Mercury water, unfltrd recover -able, µg/L (71900)	Selenium, water, fltrd, µg/L (01145)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
NOV								
04...	42	<0.08	1	275	<0.02	<0.5	1	4
JAN								
06...	--	--	--	--	--	--	--	--
MAR								
04...	--	--	--	--	--	--	--	--
MAY								
20...	27	<0.08	2	208	E.01	E.4	M	3
JUL								
21...	--	--	--	--	--	--	--	--
SEP								
02...	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
b -- Value was extrapolated below
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO

LOCATION.--Lat 39°53'49", long 91°34'49", in SW $^1/_4$ NW $^1/_4$ sec.21, T.59 N., R.6 W., Marion County, Hydrologic Unit 07110003, on right bank at downstream side of county highway bridge, 4.5 mi southwest of Taylor, 5.0 mi downstream from Grassy Creek, and 5.3 mi upstream from confluence with North Fabius River.

DRAINAGE AREA.--620 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Prior to December 1934 monthly discharge only published in WSP 1308.

REVISED RECORDS.--WSP 825: 1936.

GAGE.--Water-stage recorder. Datum of gage is 482.91 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to May 14, 1936, nonrecording gage at bridge 4.0 mi downstream at datum 21.94 ft lower; May 14, 1936, to Dec. 2, 1940, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1928 reached a stage of 18.49 ft, from floodmarks, at present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	6.5	7.4	6.6	e4.4	22	19	692	30	20	84	741
2	3.1	5.1	6.6	7.8	e4.4	21	16	1,980	28	21	55	629
3	3.1	5.1	5.7	7.9	e4.3	20	14	984	29	19	220	212
4	6.9	4.4	4.8	7.7	e4.3	19	14	456	27	16	126	111
5	9.3	4.5	4.0	7.7	e4.4	17	14	1,790	27	46	49	66
6	7.2	4.3	3.4	7.3	e4.3	15	13	3,050	30	66	34	43
7	4.8	4.4	3.3	6.9	e4.3	14	25	2,020	39	45	24	31
8	4.1	5.4	3.9	6.9	e4.3	12	38	575	52	35	18	23
9	3.9	6.1	4.3	6.3	e4.2	15	41	430	44	770	15	18
10	3.7	6.5	4.3	5.8	e4.3	16	34	486	72	2,630	13	15
11	3.7	13	4.7	5.1	e4.3	16	25	3,070	199	3,300	11	13
12	3.4	11	5.0	4.8	e4.3	17	19	2,410	135	946	9.4	12
13	3.4	8.2	5.2	4.6	e4.3	17	16	1,040	90	432	8.4	19
14	2.8	6.6	5.2	4.5	6.3	17	16	436	100	265	7.9	23
15	3.0	6.3	5.4	4.5	11	17	16	268	78	178	7.6	631
16	3.1	6.1	5.7	4.5	50	27	15	188	55	119	6.6	435
17	3.0	5.7	5.2	4.4	85	79	22	142	41	81	6.1	193
18	3.7	5.5	8.4	4.3	70	56	72	115	33	66	5.7	104
19	8.4	5.3	13	4.4	54	71	77	98	28	53	5.0	213
20	6.5	5.1	10	4.5	e65	122	63	85	23	42	4.8	587
21	6.0	4.8	11	4.5	e71	94	95	73	19	35	4.7	426
22	7.5	5.0	9.5	4.3	e77	56	76	63	17	28	3.8	1,690
23	6.5	5.3	8.0	4.0	e65	37	58	54	15	22	3.2	1,950
24	6.2	5.4	7.5	4.0	e53	28	53	50	15	18	2.9	706
25	7.2	5.4	7.2	4.1	e41	25	450	52	18	16	2.7	343
26	6.6	5.4	6.6	4.3	e27	21	769	48	140	15	2.6	214
27	5.3	5.1	6.2	4.1	22	19	558	45	86	13	2.3	268
28	5.1	13	6.2	4.1	22	23	400	39	35	945	3.2	175
29	6.7	12	6.5	4.3	---	23	304	34	23	1,000	8.6	116
30	7.0	8.6	7.2	4.4	---	22	199	36	21	288	7.3	72
31	6.5	---	7.0	e4.4	---	24	---	35	---	130	12	---
MEAN	5.17	6.50	6.40	5.26	27.7	31.7	118	672	51.6	376	24.6	336
MAX	9.3	13	13	7.9	85	122	769	3,070	199	3,300	220	1,950
MIN	2.7	4.3	3.3	4.0	4.2	12	13	34	15	13	2.3	12
IN.	0.01	0.01	0.01	0.01	0.05	0.06	0.21	1.25	0.09	0.70	0.05	0.60

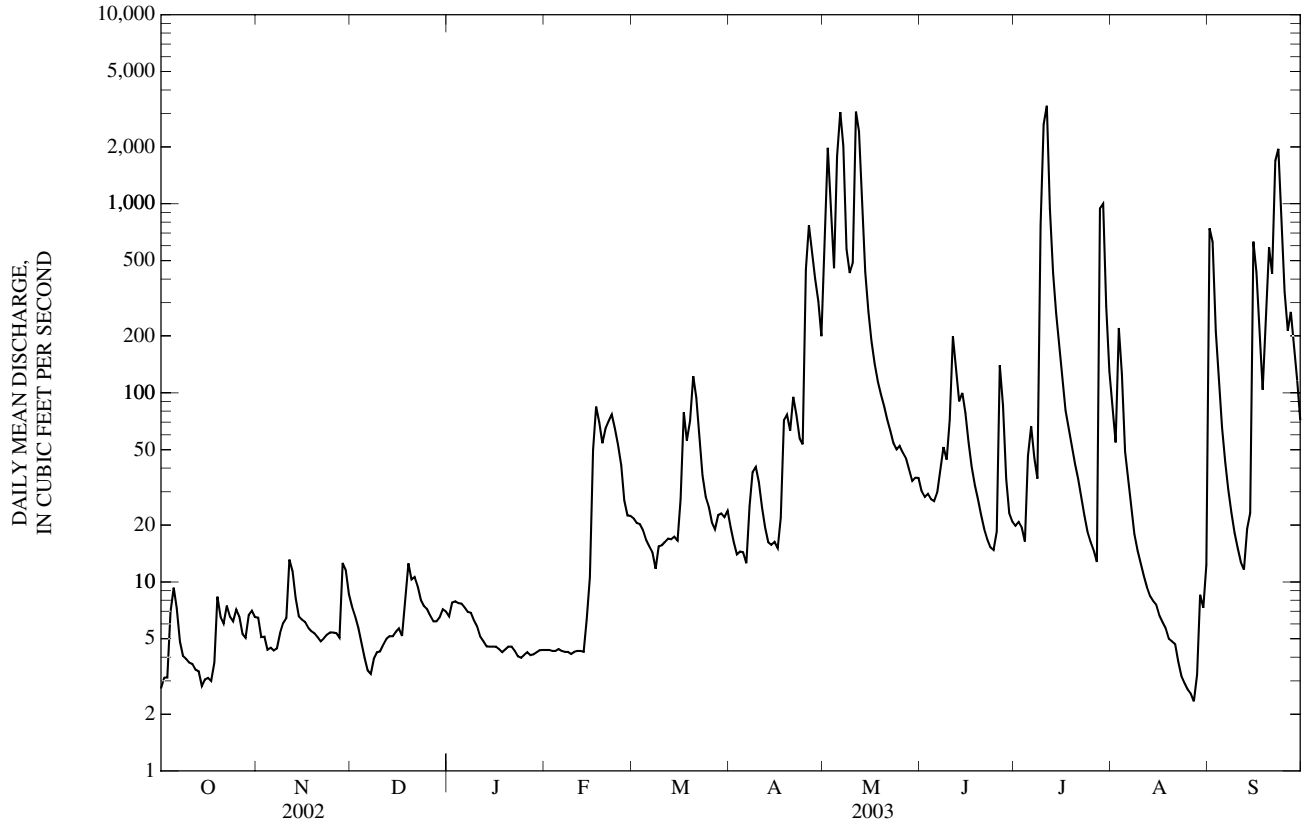
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	257	286	246	294	529	691	764	784	493	379	165	193
MAX	2,690	3,103	2,137	2,000	2,340	2,659	3,989	4,078	3,891	3,647	2,335	2,841
(WY)	(1987)	(1986)	(1983)	(1965)	(1982)	(1973)	(1973)	(1995)	(1947)	(1993)	(1970)	(1970)
MIN	0.00	0.00	1.52	2.12	4.78	15.0	13.4	7.56	5.68	0.71	0.00	0.39
(WY)	(1957)	(1957)	(1964)	(1954)	(1989)	(1956)	(1989)	(1989)	(1977)	(1988)	(1936)	(1953)

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL MEAN	441		139		416	
HIGHEST ANNUAL MEAN					1,147	1993
LOWEST ANNUAL MEAN					27.4	1989
HIGHEST DAILY MEAN	15,400	May 15	3,300	Jul 11	18,800	Jun 8, 1947
LOWEST DAILY MEAN	2.0	Sep 11,12	2.3	Aug 27	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	2.5	Sep 22	3.0	Aug 22	0.00	Several Years
MAXIMUM PEAK FLOW	---		3,760	Jul 11	19,700	Jun 8, 1947
MAXIMUM PEAK STAGE	---		7.45	Jul 11	19.50	Jun 8, 1947
INSTANTANEOUS LOW FLOW	---		2.1	Aug 27,28	0.00	Several Years
ANNUAL RUNOFF (INCHES)	9.67		3.05		9.12	
10 PERCENT EXCEEDS	806		294		964	
50 PERCENT EXCEEDS	14		16		58	
90 PERCENT EXCEEDS	3.9		4.3		4.3	

e Estimated



05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO—Continued
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1972 to August 1973, October 1979 to October 1989, November 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as $CaCO_3$ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
OCT												
08...	1230	Environmental	3.9	9.3	96	7.9	415	16.2	--	--	--	--
NOV												
05...	0850	Environmental	4.5	9.6	80	7.8	417	6.4	190	54.3	12.5	4.41
DEC												
18...	1235	Environmental	7.7	12.9	110	8.1	451	6.5	--	--	--	--
JAN												
07...	0900	Environmental	6.9	14.1	101	8.2	502	1.3	180	52.4	12.3	2.83
07...	0901	Blank	--	--	--	--	--	--	--	0.02	<0.008	<0.10
FEB												
20...	0920	Environmental	65	12.9	90	7.5	416	0.3	--	--	--	--
MAR												
04...	1145	Environmental	18	14.8	114	7.7	394	3.1	--	--	--	--
APR												
08...	1415	Environmental	44	11.7	95	7.9	469	6.5	--	--	--	--
MAY												
20...	1310	Environmental	85	12.6	142	7.4	345	20.9	150	46.1	9.00	6.60
JUN												
17...	1030	Environmental	42	9.9	123	8.2	427	25.5	--	--	--	--
JUL												
22...	0820	Environmental	29	5.9	75	7.1	222	25.9	90	25.8	6.22	5.49
AUG												
06...	0840	Environmental	35	5.1	63	7.1	157	25.2	--	--	--	--
SEP												
03...	0820	Environmental	226	7.1	79	7.2	203	19.6	--	--	--	--

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as $CaCO_3$ (00410)	ANC, wat unf incrm. titr., field, mg/L as $CaCO_3$ (00419)	Bicarbonate, wat unf incrm. titr., field, mg/L (00450)	Carbonate, wat unf incrm. titr., field, mg/L (00447)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
08...	--	142	141	173	<1	--	--	--	--	<10	0.45	<0.04	<0.06
NOV													
05...	12.5	166	168	205	<1	10.3	<0.2	41.2	249	13	0.43	<0.04	<0.06
DEC													
18...	--	172	173	211	<1	--	--	--	--	<10	0.36	<0.04	E.03
JAN													
07...	11.6	196	196	240	<1	10.8	<0.17	63.3	307	<10	0.28	<0.04	<0.06
07...	<0.09	--	--	--	--	<0.20	<0.17	<0.2	<10	<10	<0.10	<0.04	<0.06
FEB													
20...	--	141	143	174	<1	--	--	--	--	<10	0.86	0.07	0.51
MAR													
04...	--	133	133	162	<1	--	--	--	--	<10	0.56	<0.04	E.29n
APR													
08...	--	152	155	189	<1	--	--	--	--	13	0.55	<0.04	<0.06
MAY													
20...	9.89	112	113	138	<1	9.60	0.2	37.6	229	17	0.73	<0.04	0.61
JUN													
17...	--	144	145	177	<1	--	--	--	--	<10	1.0	<0.04	0.29
JUL													
22...	6.36	77	79	96	<1	7.11	0.2	16.0	135	16	0.73	<0.04	0.09
AUG													
06...	--	48	47	57	<1	--	--	--	--	27	0.98	0.09	0.72
SEP													
03...	--	66	66	80	<1	--	--	--	--	34	1.2	<0.04	0.76

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7µ MF col/ 100 mL (31625)	Fecal strep-tococci KF MF, col/ 100 mL (31673)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover-able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Copper, water, fltrd, µg/L (01040)
OCT													
08...	<0.008	E.01	E.03	E.04	55	70k	23	--	--	--	--	--	--
NOV													
05...	<0.008	<0.02	E.02	E.04	7k	17k	32	<2	146	0.9	<0.04	<0.2	<6
DEC													
18...	<0.008	<0.02	E.03	E.03	24	130	335	--	--	--	--	--	--
JAN													
07...	<0.008	<0.02	<0.04	E.03	1k	10k	30	E1	21	0.4	<0.04	<0.2	<6
07...	<0.008	<0.02	<0.04	<0.04	--	--	--	<2	<2	<0.3	<0.04	<0.2	<6
FEB													
20...	0.045	0.15	0.21	0.26	52	174k	1,330	--	--	--	--	--	--
MAR													
04...	0.009	E.01	E.03	0.08	<2b	4k	12k	--	--	--	--	--	--
APR													
08...	E.005	E.01	E.02	0.07	100	163k	126	--	--	--	--	--	--
MAY													
20...	0.021	0.02	0.04	0.12	30k	66	64	4	371	1.5	<0.04	<0.2	<6
JUN													
17...	0.016	<0.02	E.02	0.07	90k	88	60	--	--	--	--	--	--
JUL													
22...	E.005	E.01	0.06	0.10	82	116	78	3	248	2.4	<0.04	<0.2	<7
AUG													
06...	0.031	<0.02	0.09	0.22	52	330	118	--	--	--	--	--	--
SEP													
03...	0.013	<0.18d	0.14	0.27	760	1,920k	1,740	--	--	--	--	--	--

Date	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Manga-nese, water, fltrd, µg/L (01056)	Mercury water, unfltrd recover-able, µg/L (71900)	Selen-ium, water, fltrd, µg/L (01145)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
OCT								
08...	--	--	--	--	--	--	--	--
NOV								
05...	12	<0.08	M	17.7	<0.02	E.4	M	E1
DEC								
18...	--	--	--	--	--	--	--	--
JAN								
07...	28	<0.08	<1	13.9	<0.02	<0.5	19	2
07...	<10	<0.08	<1	<2.0	<0.02	<0.5	M	E1
FEB								
20...	--	--	--	--	--	--	--	--
MAR								
04...	--	--	--	--	--	--	--	--
APR								
08...	--	--	--	--	--	--	--	--
MAY								
20...	19	<0.08	1	108	<0.02	0.7	1	4
JUN								
17...	--	--	--	--	--	--	--	--
JUL								
22...	10	0.13	M	63.9	<0.02	E.4	2	E2
AUG								
06...	--	--	--	--	--	--	--	--
SEP								
03...	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
b -- Value was extrapolated below
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL

05501000 NORTH RIVER AT PALMYRA, MO

LOCATION.--Lat 39°49'06", long 91°31'13", in SE $^1/_4$ SW $^1/_4$ sec.13, T.58 N., R.6 W., Marion County, Hydrologic Unit 07110004, on right bank 100 ft upstream from City Waterworks Dam, 1,000 ft upstream from upstream bridge on dual U.S. Highways 24 and 61, 0.5 mi north of Palmyra, and 7.0 mi upstream from mouth.

DRAINAGE AREA.--373 mi^2.

PERIOD OF RECORD.--December 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 464.81 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to Oct. 1, 1945, nonrecording gage at bridge 1,000 ft downstream; Oct. 1, 1945, to June 22, 1951, nonrecording gage at present site and datum.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1934, about 28.0 ft, from floodmarks, date unknown, at site 1,000 ft downstream, at present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.69	e3.5	2.1	6.3	4.0	15	22	185	17	26	6.3	926
2	0.75	e3.5	1.9	6.9	4.2	15	19	443	16	262	4.5	320
3	0.91	e3.5	1.9	6.8	4.7	14	16	244	20	193	3.5	112
4	2.5	e3.5	2.0	6.5	4.1	15	17	162	21	121	2.7	77
5	8.3	e3.4	2.1	6.1	4.8	16	18	777	20	70	2.3	45
6	6.3	e3.4	2.1	6.1	4.9	14	18	588	22	42	2.0	27
7	5.2	3.4	2.4	6.0	4.7	15	26	286	35	29	1.8	17
8	4.4	3.3	2.5	6.0	4.7	14	46	162	44	21	1.6	11
9	4.0	3.1	2.3	5.7	4.5	14	54	237	34	23	1.4	7.8
10	3.5	3.1	2.1	5.2	4.3	15	41	709	55	37	1.3	6.3
11	2.9	3.0	2.3	4.9	4.5	19	30	2,080	78	17	1.2	4.6
12	2.7	2.6	2.7	4.5	4.2	19	23	699	101	48	1.3	4.3
13	3.4	2.7	3.4	4.5	3.9	19	19	270	88	53	1.4	8.8
14	3.2	2.7	11	4.4	4.6	20	15	142	120	28	1.4	21
15	3.0	2.7	8.4	4.1	120	22	13	105	73	e16	1.6	227
16	2.7	2.6	7.4	4.0	134	25	12	82	44	12	2.2	137
17	2.4	2.6	7.1	3.7	32	22	271	71	34	8.5	2.1	83
18	2.7	2.7	11	3.6	20	19	189	58	27	e7.4	1.9	45
19	8.5	2.5	16	3.4	19	43	118	50	20	6.6	1.6	30
20	12	2.4	14	3.4	98	167	106	42	17	7.0	1.4	21
21	6.6	2.3	17	3.2	129	109	147	36	13	e5.5	1.2	17
22	5.4	2.2	14	3.1	120	63	104	31	11	3.8	1.0	227
23	5.3	2.2	9.9	3.0	78	40	75	28	10	3.1	1.0	379
24	5.0	2.3	8.3	2.9	51	28	75	27	10	2.6	1.0	162
25	e4.5	2.4	7.8	3.0	32	22	329	34	45	2.4	0.88	78
26	e4.2	2.3	7.3	3.1	26	17	349	31	661	2.1	0.86	48
27	e3.9	2.2	7.0	3.0	20	15	193	29	161	2.0	1.2	35
28	e3.8	2.2	6.9	3.2	16	19	159	24	74	20	1.5	34
29	e3.7	2.1	6.9	3.1	---	24	252	20	43	11	2.0	28
30	e3.6	2.1	6.9	3.1	---	36	161	22	32	7.0	2.4	17
31	e3.6	---	7.0	3.6	---	28	---	20	---	9.6	12	---
MEAN	4.18	2.75	6.57	4.40	34.2	29.8	97.2	248	64.9	35.4	2.21	105
MAX	12	3.5	17	6.9	134	167	349	2,080	661	262	12	926
MIN	0.69	2.1	1.9	2.9	3.9	14	12	20	10	2.0	0.86	4.3
IN.	0.01	0.01	0.02	0.01	0.10	0.09	0.29	0.77	0.19	0.11	0.01	0.31

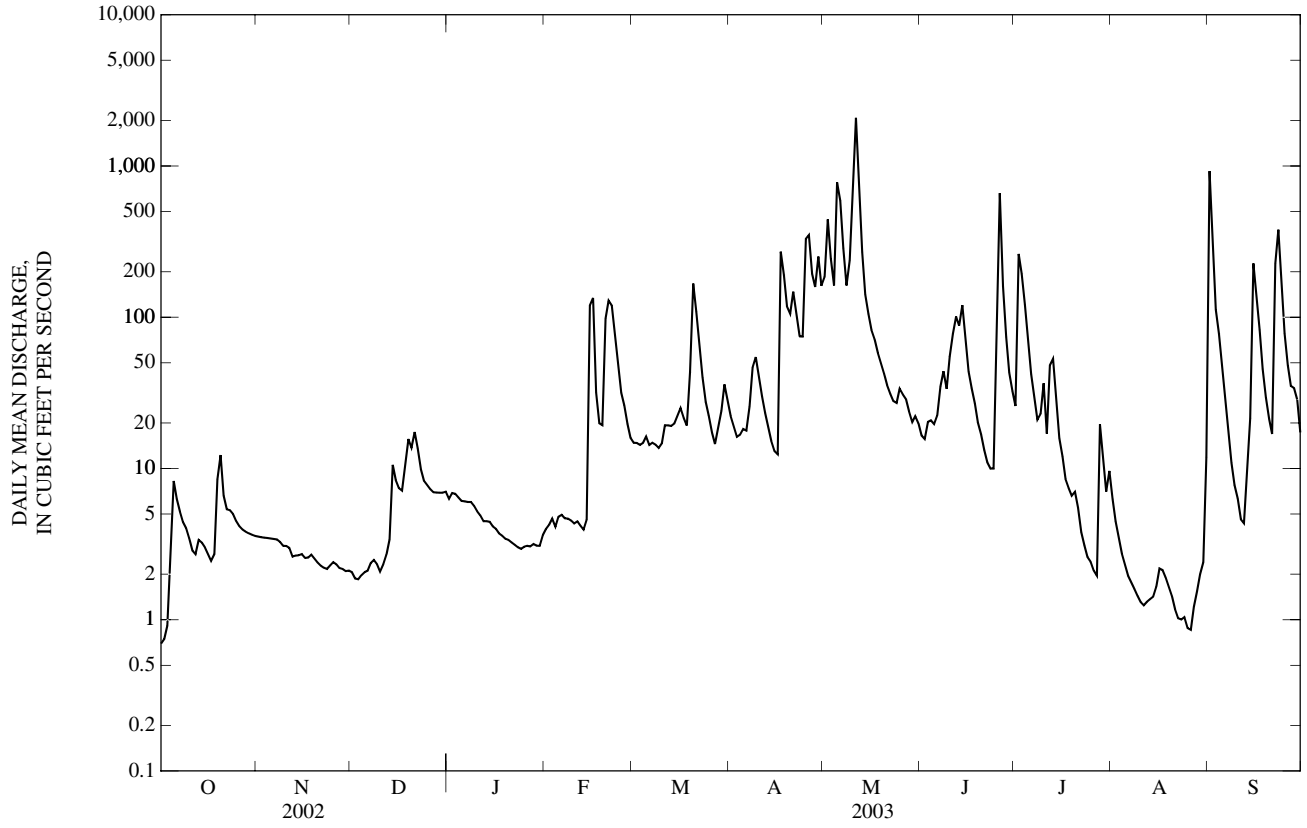
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	146	173	163	181	318	434	482	499	308	238	103	121
MAX	1,742	2,639	1,832	991	1,720	2,783	2,691	2,322	2,296	2,100	1,357	1,351
(WY)	(1987)	(1986)	(1983)	(1969)	(1982)	(1973)	(1973)	(2002)	(1947)	(1993)	(1970)	(1970)
MIN	0.00	0.00	0.23	0.66	0.92	6.54	24.8	15.5	4.77	0.52	0.00	0.17
(WY)	(1957)	(1957)	(1957)	(1954)	(1954)	(1956)	(2000)	(1989)	(1936)	(1936)	(1936)	(1940)

05501000 NORTH RIVER AT PALMYRA, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL MEAN	299		52.9		260	
HIGHEST ANNUAL MEAN					748	1973
LOWEST ANNUAL MEAN					22.1	1989
HIGHEST DAILY MEAN	16,000	May 9	2,080	May 11	32,600	Apr 21, 1973
LOWEST DAILY MEAN	0.69	Oct 1	0.69	Oct 1	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	0.91	Sep 27	1.0	Aug 21	0.00	Several Years
MAXIMUM PEAK FLOW	---		5,490	May 11	57,400	Apr 21, 1973
MAXIMUM PEAK STAGE	---		16.24	May 11	29.70	Apr 21, 1973
INSTANTANEOUS LOW FLOW	---		0.66	Oct 1,2	0.00	Several Years
ANNUAL RUNOFF (INCHES)	10.89		1.93		9.49	
10 PERCENT EXCEEDS	439		131		456	
50 PERCENT EXCEEDS	16		11		38	
90 PERCENT EXCEEDS	2.3		2.1		3.4	

e Estimated



05502000 BEAR CREEK AT HANNIBAL, MO

LOCATION.--Lat 39°40'43", long 91°24'41", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.56 N., R.5 W., Ralls County, Hydrologic Unit 07110004, at bridge on Industrial Drive, on right downstream bank, and 4.65 mi upstream from mouth.

DRAINAGE AREA.--31.0 mi^2.

PERIOD OF RECORD.--October 1938 to September 1942, October 1947 to current year in reports of the U.S. Geological Survey. Monthly discharge only for some periods published in WSP 1308. October 1936 to November 1938 (gage- height and discharge measurements only) in reports of the Missouri Department of Natural Resources.

REVISED RECORDS.--WSP 1115: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 508.91 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 26, 1948, nonrecording gage; Mar. 26, 1948, to Sept. 30, 1953, water-stage recorder at datum 2.00 ft higher; Oct. 1, 1953, to Oct. 30, 1961, at present datum; Oct. 31, 1961, to Sept. 5, 1972, water-stage recorder 400 ft downstream at present datum; Sept. 6, 1972, to July 2, 1986, water-stage recorder 525 ft upstream at present datum.

REMARKS.--Records poor. Flow partially regulated by Bear Creek flood control reservoir, 1.0 mi upstream, since Aug. 7, 1961. U.S.G.S. satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,500 ft^3/s, Aug. 3, 1957; gage height, 14.05 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.38	1.6	1.4	2.1	2.2	3.4	5.4	7.6	3.3	4.6	1.2	48
2	0.54	1.3	1.4	2.2	2.0	3.5	4.8	7.0	3.5	2.6	0.98	98
3	0.77	1.5	1.3	2.3	2.2	3.3	4.6	5.6	4.2	2.3	0.76	145
4	1.9	1.5	1.3	2.1	8.4	3.7	5.7	31	3.8	1.9	0.65	115
5	1.1	1.6	1.3	2.2	1.7	3.6	5.2	98	3.1	1.6	0.54	87
6	1.0	1.7	1.3	2.3	1.6	3.2	4.7	21	4.6	1.5	0.51	86
7	0.81	1.5	1.3	2.4	1.6	3.3	6.4	9.8	5.8	1.5	0.45	85
8	0.76	1.6	1.4	2.7	1.5	3.5	6.4	8.2	3.9	1.2	0.37	58
9	0.73	1.6	1.4	2.8	1.5	3.3	5.4	9.1	3.0	2.4	0.23	4.7
10	0.74	1.7	1.4	2.6	1.6	2.9	4.7	55	11	3.0	0.05	3.0
11	0.69	1.5	2.3	2.1	1.6	2.8	4.2	73	9.0	1.9	0.04	2.6
12	0.73	1.5	1.8	1.9	1.6	3.4	4.2	27	5.0	1.5	0.04	2.7
13	0.74	1.5	1.7	1.9	1.6	7.3	3.6	9.0	51	1.3	0.07	5.8
14	0.71	1.7	1.6	1.8	2.3	4.6	3.4	7.5	35	1.1	0.47	6.9
15	0.98	1.6	1.6	1.7	90	4.0	3.1	7.2	6.5	0.98	0.52	7.8
16	0.72	1.5	1.6	1.7	76	3.7	4.5	6.5	4.4	0.86	0.36	3.4
17	0.73	1.4	1.8	1.7	23	3.5	9.0	6.0	3.5	0.92	0.12	2.7
18	1.3	1.4	10	1.7	6.9	3.6	6.0	5.5	3.1	1.2	0.00	3.5
19	2.4	2.2	9.1	1.7	35	28	5.3	5.3	2.7	1.1	0.00	3.6
20	1.7	3.3	3.1	1.8	85	32	22	4.7	2.3	0.96	0.00	2.9
21	1.2	1.7	2.4	1.7	41	9.7	10	4.1	2.2	0.80	0.00	14
22	0.93	1.5	2.2	1.6	10	6.4	6.3	3.9	2.0	0.64	0.00	71
23	0.91	1.4	2.1	1.4	6.1	5.5	5.3	3.8	1.9	0.59	0.00	66
24	1.1	1.6	2.1	e1.7	4.6	5.3	9.5	4.3	1.8	0.56	0.00	53
25	1.8	1.8	2.1	1.8	3.6	6.2	46	5.8	39	0.48	0.00	6.2
26	1.9	1.9	1.9	e1.7	3.5	5.5	16	4.4	6.7	0.42	0.00	14
27	1.3	2.1	1.9	1.8	3.4	4.9	8.0	3.6	4.2	0.37	0.00	30
28	1.2	1.6	2.0	1.7	3.3	10	18	3.2	3.8	3.9	0.16	8.2
29	2.0	1.6	2.0	1.7	---	12	17	2.9	23	7.1	0.08	5.2
30	2.1	1.5	2.3	1.5	---	6.4	8.2	3.9	64	1.6	0.55	4.1
31	2.1	---	2.2	2.3	---	5.7	---	4.0	---	1.1	68	---
MEAN	1.16	1.66	2.30	1.95	15.1	6.59	8.76	14.4	10.6	1.68	2.46	34.8
MAX	2.4	3.3	10	2.8	90	32	46	98	64	7.1	68	145
MIN	0.38	1.3	1.3	1.4	1.5	2.8	3.1	2.9	1.8	0.37	0.00	2.6
IN.	0.04	0.06	0.09	0.07	0.51	0.25	0.32	0.54	0.38	0.06	0.09	1.25

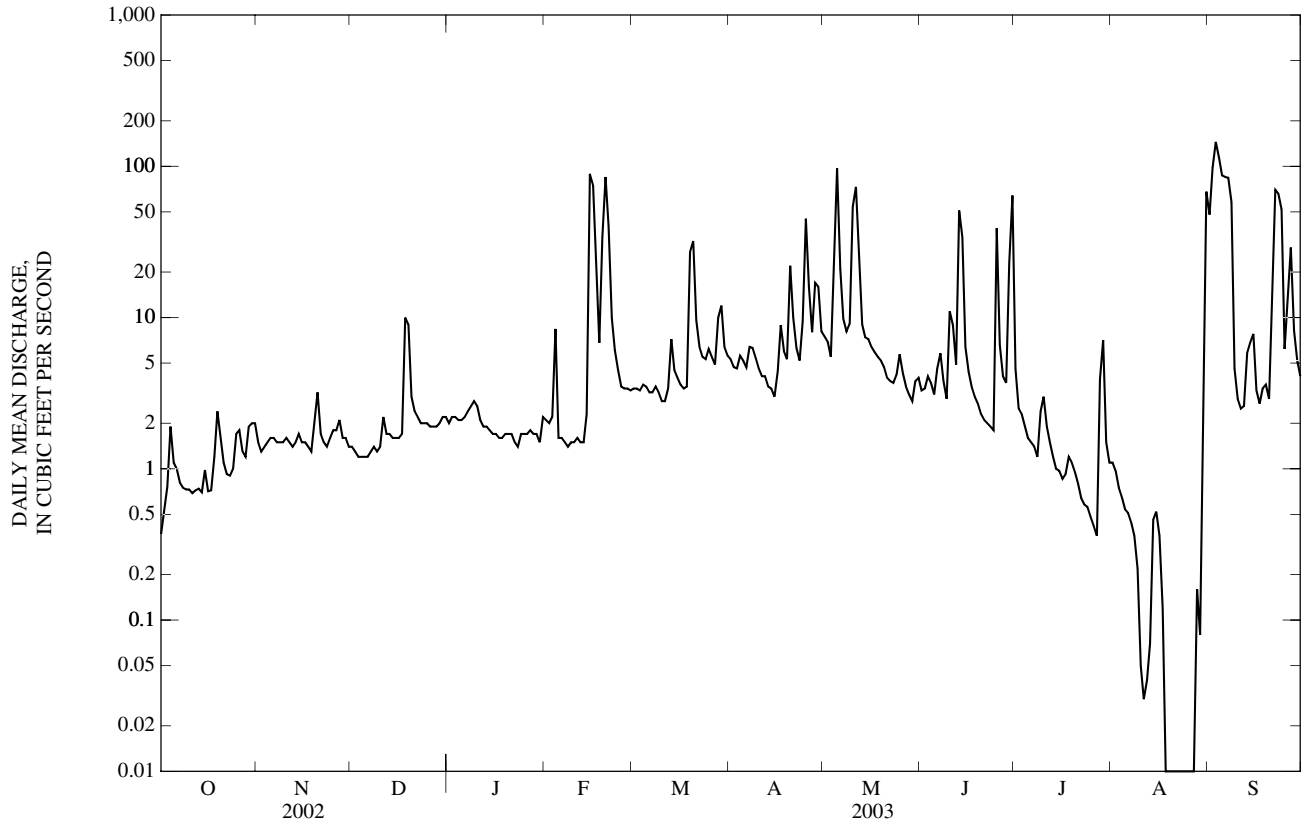
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003[a], BY WATER YEAR (WY)

MEAN	13.6	19.2	17.7	15.4	31.8	36.9	38.0	39.9	21.7	18.6	14.1	14.3
MAX	116	225	155	84.0	136	125	193	183	76.5	193	141	190
(WY)	(1970)	(1986)	(1983)	(1969)	(1997)	(1973)	(1973)	(2002)	(1982)	(1981)	(1993)	(1970)
MIN	0.02	0.15	0.11	0.27	0.85	2.86	2.94	2.25	0.58	0.03	0.15	0.01
(WY)	(1964)	(1964)	(1964)	(1977)	(1964)	(1981)	(2000)	(2000)	(1963)	(1977)	(1962)	(1988)

05502000 BEAR CREEK AT HANNIBAL, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003[a]	
ANNUAL MEAN	25.9		8.34		23.4	
HIGHEST ANNUAL MEAN					57.9	1993
LOWEST ANNUAL MEAN					5.33	1989
HIGHEST DAILY MEAN	521	May 21	145	Sep 3	1,470	Sep 25, 1970
LOWEST DAILY MEAN	0.38	Oct 1	0.00	Aug 18-27	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	0.55	Sep 25	0.00	Aug 18	0.00	Several Years
MAXIMUM PEAK FLOW	---		516	Aug 31	3,120	Sep 23, 1970
MAXIMUM PEAK STAGE	---		5.26	Aug 31	9.24	May 14, 1970
INSTANTANEOUS LOW FLOW	---		0.00	Many Days	0.00	Several Years
ANNUAL RUNOFF (INCHES)	11.36		3.65		10.24	
10 PERCENT EXCEEDS	76		16		51	
50 PERCENT EXCEEDS	3.0		2.3		4.5	
90 PERCENT EXCEEDS	0.97		0.70		0.58	

e Estimated
[a] Post-regulation period.



05502300 NORTH FORK SALT RIVER AT HAGERS GROVE, MO

LOCATION.--Lat 39°49'40", long 92°14'10", in NE ¼ SW ¼ sec.15, T.58 N., R.12 W., Shelby County, Hydrologic Unit 07110005, at bridge on State Highway 151, 200 ft downstream from old channel carrying Bear Creek, 0.25 mi west of Hagers Grove, 2.5 mi upstream from Ten Mile Creek, and at mile 143.8.

DRAINAGE AREA.--365 mi^2.

PERIOD OF RECORD.--September 1974 to current year. Prior to October 1983 published as "Salt River at Hagers Grove, Mo.". September 1939 to August 1974, gage-height and miscellaneous measurements published by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 702.30 ft above sea level.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1947 reached a stage of 19.7 ft, discharge 26,900 ft^3/s, according to information furnished by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	10	3.1	e4.0	e13	e7.0	5.9	1,110	5.1	8.8	13	296
2	3.0	10	4.5	e3.5	e18	e5.9	5.8	615	6.9	106	45	262
3	3.0	22	3.8	e3.8	e20	e3.8	5.1	191	13	47	53	115
4	4.2	20	3.4	e4.5	e13	e5.4	8.9	525	7.7	19	19	e36
5	4.5	13	5.1	e4.0	e11	e3.7	18	3,520	8.2	10	13	e18
6	3.9	9.5	4.0	e5.0	e16	e3.3	13	1,140	30	6.8	11	e11
7	10	7.1	3.5	e5.2	e12	e4.2	36	296	35	3.8	8.9	e8.0
8	9.9	6.0	3.7	e5.0	e11	e7.0	37	178	49	1.9	7.8	e6.8
9	6.7	5.2	3.9	e4.5	e11	e6.5	31	197	25	520	6.5	e5.6
10	e5.0	4.1	4.1	e3.8	e11	e4.9	41	629	170	450	5.9	e4.5
11	e4.0	3.9	4.3	e3.6	e9.3	e4.7	26	2,320	152	175	5.5	3.7
12	e5.0	3.9	e4.0	e3.8	e9.0	e6.1	23	674	103	99	4.4	5.9
13	e4.8	3.4	e3.7	e4.0	e11	82	12	209	53	59	3.4	106
14	e4.3	3.6	e3.4	e5.2	e15	151	8.7	126	71	47	3.1	576
15	e3.8	5.2	e3.2	e4.0	e23	84	8.6	94	86	40	2.7	316
16	e3.5	4.2	e3.0	e5.0	e16	64	14	70	42	34	1.9	108
17	e3.2	3.9	4.7	e4.2	e35	49	134	55	27	195	1.7	45
18	e3.0	4.0	5.9	e4.0	e20	32	54	44	20	168	1.6	24
19	6.6	3.9	3.7	e3.8	e12	33	30	38	17	86	1.7	87
20	3.1	4.0	4.5	e4.0	e24	35	108	35	16	52	1.5	172
21	2.3	4.2	14	e5.0	e81	25	59	58	12	35	1.1	152
22	2.1	3.5	22	e5.9	e43	39	97	62	9.8	24	0.70	450
23	2.4	3.3	12	e4.5	e11	37	55	34	7.7	19	2.0	207
24	4.5	3.2	7.1	e3.5	e11	27	62	27	7.0	15	2.2	66
25	9.4	3.1	9.6	e3.0	e13	22	306	28	7.8	10	1.5	26
26	7.7	3.8	15	e3.5	e14	18	398	21	16	8.0	1.1	32
27	7.2	3.5	e4.5	e3.0	e8.6	13	199	23	35	7.7	5.3	23
28	8.5	4.0	e5.0	e3.4	e6.0	16	143	17	38	24	2.6	13
29	32	4.4	e4.0	e4.7	---	22	140	11	19	20	e6.8	9.6
30	22	4.2	e3.5	e6.0	---	14	148	9.1	11	16	11	7.6
31	17	---	e3.2	e8.5	---	9.5	---	6.8	---	13	164	---
MEAN	6.76	6.14	5.79	4.38	17.8	26.9	74.2	399	36.7	74.8	13.2	106
MAX	32	22	22	8.5	81	151	398	3,520	170	520	164	576
MIN	2.1	3.1	3.0	3.0	6.0	3.3	5.1	6.8	5.1	1.9	0.70	3.7
IN.	0.02	0.02	0.02	0.01	0.05	0.09	0.23	1.26	0.11	0.24	0.04	0.33

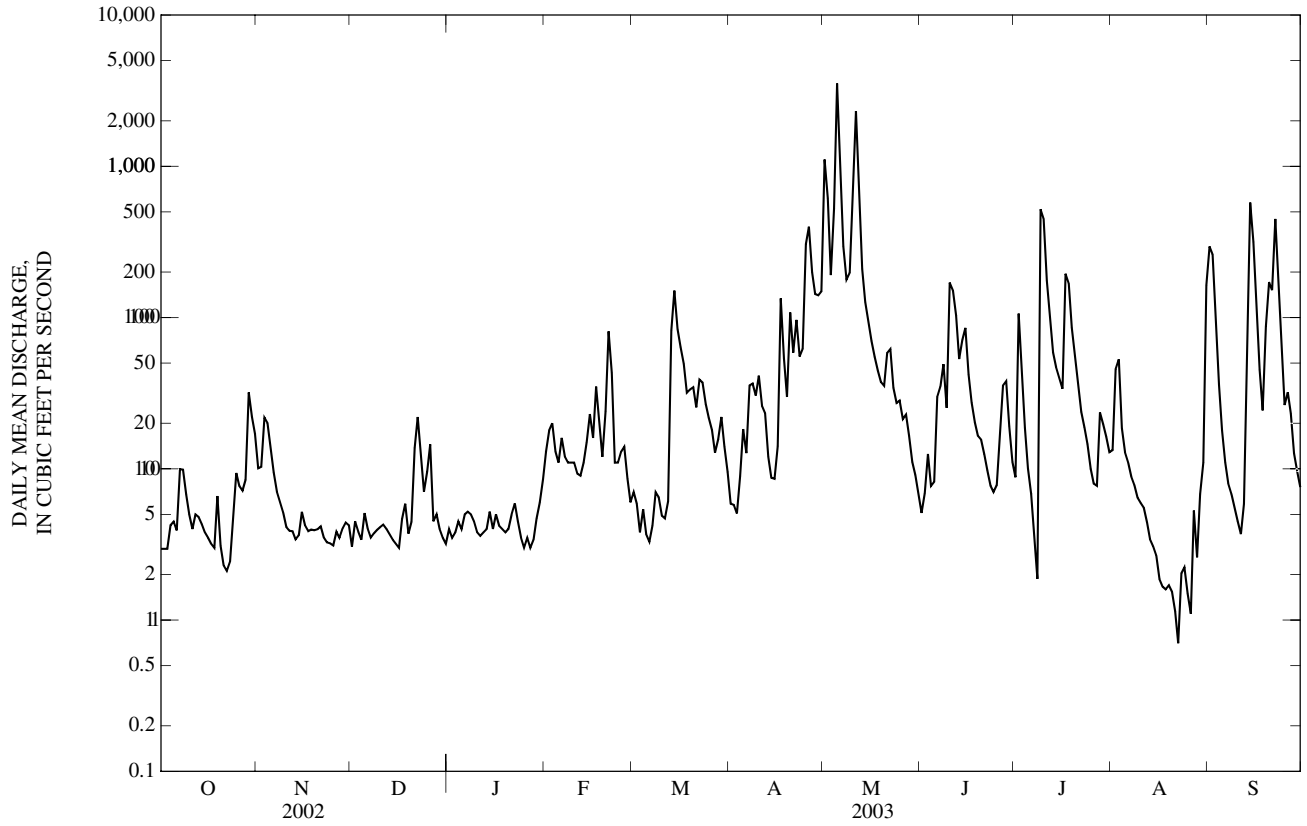
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	171	267	186	123	339	403	450	633	272	362	85.3	105
MAX	1,201	1,426	1,319	576	1,599	1,177	2,036	2,631	1,074	3,033	441	937
(WY)	(1987)	(1986)	(1983)	(1999)	(1982)	(1979)	(1983)	(1995)	(1984)	(1993)	(1982)	(1993)
MIN	2.02	4.40	2.20	1.13	5.18	22.5	8.20	10.4	3.55	4.01	3.90	3.41
(WY)	(1989)	(1976)	(1977)	(1977)	(1989)	(1989)	(1989)	(1980)	(1988)	(1988)	(1984)	(1988)

05502300 NORTH FORK SALT RIVER AT HAGERS GROVE, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1974 - 2003	
ANNUAL MEAN	295		64.8		283	
HIGHEST ANNUAL MEAN					767	1993
LOWEST ANNUAL MEAN					30.1	2000
HIGHEST DAILY MEAN	25,000	May 13	3,520	May 5	25,000	May 13, 2002
LOWEST DAILY MEAN	2.1	Oct 22	0.70	Aug 22	0.18	Aug 7, 1988
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 6	1.4	Aug 20	0.44	Oct 20, 1991
MAXIMUM PEAK FLOW	---		5,520	May 5	42,000[a]	May 12, 2002
MAXIMUM PEAK STAGE	---		12.82	May 5	20.91	May 12, 2002
INSTANTANEOUS LOW FLOW	---		0.10	Aug 22,23	0.10	Aug 22,23, 2003
ANNUAL RUNOFF (INCHES)	10.96		2.41		10.53	
10 PERCENT EXCEEDS	349		136		499	
50 PERCENT EXCEEDS	13		10		30	
90 PERCENT EXCEEDS	3.4		3.4		4.1	

e Estimated
[a] Discharge determined by indirect measurement of peak flow.



05502500 NORTH FORK SALT RIVER NEAR SHELBINA, MO

LOCATION.--Lat 39°44'29", long 92°02'26", in SW ¼ NE ¼ sec.17, T.57 N., R.10 W., Shelby County, Hydrologic Unit 07110005, on right bank near downstream end of bridge on State Highway 15, 3.0 mi north of Shelbina, l5.0 mi upstream from Black Creek, and at mile 122.3.

DRAINAGE AREA.--481 mi^2.

PERIOD OF RECORD.--April 1930 to February 1934, March 1934 to September 1972. March 1988 to current year. Prior to March 1988 published as "Salt River near Shelbina, Mo.". Fragmentary record prior to October 1933. Monthly discharge only for period October 1933 to February 1934 published in WSP 1308.

GAGE.--Water-stage recorder and crest-stage gage with concrete control since Mar. 25, 1988. Datum of gage is 664.58 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1934, nonrecording gage at site 100 ft downstream at present datum; Mar. 1, 1934, to Nov. 2, 1962, water-stage recorder at site 175 ft downstream at present datum; Nov. 3, 1962, to Sept. 30, 1972, water-stage recorder at site 100 ft upstream at present datum; Oct. 1, 1972, to Sept. 30, 1979, gage-height records collected by U.S. Army Corps of Engineers, St. Louis District, at site 100 ft downstream; Oct. 1, 1979, to Sept. 1981, gage-height data collected by the U.S. Geological Survey at site 100 ft downstream.

REMARKS.--Records good except for estimated daily discharges and discharges below 50 ft^3/s, which are poor. Water is pumped from river at the gage by the city of Shelbina. U. S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1928 reached a stage of 23.54 ft, from floodmarks, discharge 18,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

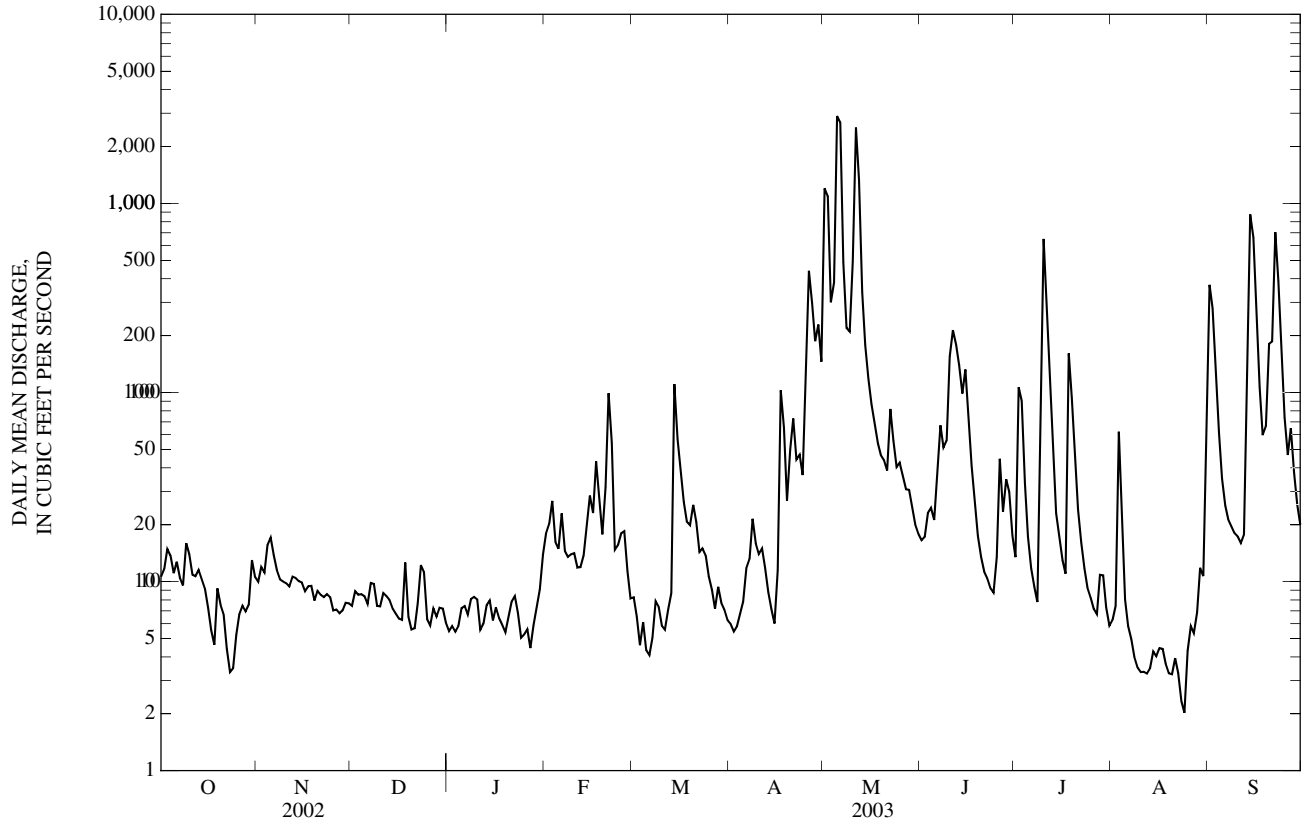
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	7.4	5.5	18	8.3	6.0	1,200	17	13	6.3	371
2	12	12	8.9	5.8	20	6.5	5.5	1,090	17	106	7.4	278
3	15	11	8.5	5.4	27	4.6	5.8	300	23	90	62	147
4	14	16	8.6	5.8	16	6.1	6.8	381	25	33	19	61
5	11	17	8.4	7.2	15	4.3	7.8	2,900	21	17	8.0	35
6	13	14	7.6	7.4	23	4.1	12	2,680	36	12	5.8	25
7	10	11	9.8	6.7	15	5.0	13	489	67	9.4	5.0	21
8	9.5	10	9.7	8.1	14	7.9	21	220	51	7.8	4.0	20
9	16	10	7.4	8.3	14	7.4	16	210	56	136	3.5	18
10	14	9.8	7.4	8.1	14	5.8	14	492	155	649	3.3	17
11	11	9.4	8.7	5.6	12	5.6	15	2,520	214	215	3.3	16
12	11	11	8.4	6.0	12	7.1	12	1,340	179	90	3.3	18
13	12	10	8.0	7.5	14	8.7	8.8	340	139	41	3.5	179
14	10	10	7.2	8.0	20	111	7.2	178	99	23	4.3	874
15	9.2	9.9	6.8	6.2	28	57	6.0	118	132	17	4.0	660
16	7.3	8.9	6.4	7.3	23	39	11	87	71	13	4.4	255
17	5.5	9.5	6.3	6.4	43	26	103	68	41	11	4.4	107
18	4.6	9.5	13	5.9	27	21	65	54	26	161	3.7	59
19	9.2	7.9	6.5	5.4	18	20	27	47	17	94	3.3	66
20	7.5	8.9	5.6	6.5	32	25	50	44	14	42	3.2	181
21	6.7	8.5	5.7	7.8	99	21	73	39	11	24	3.9	186
22	4.4	8.3	7.7	8.4	54	14	44	82	10	16	3.3	704
23	3.3	8.6	12	6.8	15	15	47	56	9.2	12	2.3	390
24	3.5	8.3	11	5.0	16	14	37	40	8.7	9.3	2.0	156
25	5.2	7.0	6.3	5.2	18	11	151	43	13	8.2	4.3	74
26	6.7	7.1	5.9	5.6	18	9.0	440	36	45	7.2	5.8	47
27	7.4	6.8	7.2	4.4	11	7.2	297	31	23	6.7	5.3	65
28	7.0	7.1	6.5	5.9	8.1	9.4	187	31	35	11	6.9	38
29	7.5	7.7	7.3	7.2	---	7.7	229	24	30	11	12	26
30	13	7.7	7.2	9.1	---	7.1	145	20	17	7.3	11	20
31	11	---	6.1	14	---	6.2	---	18	---	5.8	37	---
MEAN	9.31	9.76	7.85	6.85	23.0	16.2	68.8	490	53.4	61.2	8.24	170
MAX	16	17	13	14	99	111	440	2,900	214	649	62	874
MIN	3.3	6.8	5.6	4.4	8.1	4.1	5.5	18	8.7	5.8	2.0	16
IN.	0.02	0.02	0.02	0.02	0.05	0.04	0.16	1.17	0.12	0.15	0.02	0.40

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	140	170	143	210	376	444	533	564	431	329	117	156
MAX	1,208	1,327	835	1,319	1,475	1,417	1,944	3,559	4,171	4,119	1,214	1,831
(WY)	(1999)	(1993)	(1972)	(1965)	(1997)	(1948)	(1944)	(2002)	(1947)	(1993)	(1970)	(1970)
MIN	0.00	0.00	0.00	0.01	1.80	6.41	7.24	12.2	2.93	0.00	0.00	0.00
(WY)	(1953)	(1954)	(1954)	(1954)	(1934)	(1956)	(1989)	(2000)	(1988)	(1934)	(1936)	(1953)

05502500 NORTH FORK SALT RIVER NEAR SHELBINA, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	423		77.5		303	
HIGHEST ANNUAL MEAN					1,037	1993
LOWEST ANNUAL MEAN					36.2	1989
HIGHEST DAILY MEAN	20,500	May 14	2,900	May 5	20,500	May 14, 2002
LOWEST DAILY MEAN	2.8	Sep 11	2.0	Aug 24	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 7	3.1	Aug 18	0.00	Many Years
MAXIMUM PEAK FLOW	---		4,170	May 6	24,600	May 13, 2002
MAXIMUM PEAK STAGE	---		13.12	May 6	27.40	Jun 7, 1947
INSTANTANEOUS LOW FLOW	---		1.8	Aug 23,24	0.00	Many Years
ANNUAL RUNOFF (INCHES)	11.93		2.19		8.56	
10 PERCENT EXCEEDS	604		149		660	
50 PERCENT EXCEEDS	15		12		31	
90 PERCENT EXCEEDS	6.0		5.5		2.1	



05503800 CROOKED CREEK NEAR PARIS, MO

LOCATION.--Lat 39°35'06", long 91°59'36", NE $^1/_4$ NW $^1/_4$ SW $^1/_4$ sec.2, T.55 N., R.10 W., Monroe County, Hydrologic Unit 07110005, on right bank downstream from county road bridge, 7.0 mi north of Paris, 1.4 mi north of State Route 15, and at mile 8.9.

DRAINAGE AREA.--80.0 mi^2.

PERIOD OF RECORD.--October 1979 to current year. March 1966 to October 1979 published by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 650.00 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1967, wire-weight gage and Nov. 9, 1967, to Sept. 30, 1979, recording gage at datum 50 ft lower.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 21, 1973 reached a stage of 15.53 ft; discharge, 12,100 ft^3/s, according to information furnished by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	0.00	0.00	0.06	0.04	2.4	0.75	83	3.4	1.7	0.00	426
2	e0.00	0.00	0.00	0.12	0.15	2.2	0.51	367	3.5	1.2	0.00	139
3	e0.00	0.00	0.00	0.13	0.21	2.0	0.37	34	4.4	0.88	0.00	27
4	e0.00	0.00	0.00	0.12	0.19	2.0	0.43	21	4.2	0.67	0.00	11
5	e0.00	0.00	0.00	0.14	0.14	2.1	0.47	205	3.7	0.49	8.4	5.8
6	e0.00	0.00	0.00	0.15	0.15	1.9	0.53	64	11	0.40	3.3	3.8
7	e0.00	0.00	0.00	0.14	0.12	1.7	0.77	21	22	0.31	1.4	2.7
8	e0.00	0.00	0.00	0.12	0.08	1.4	1.2	12	19	0.24	0.64	2.0
9	e0.00	0.00	0.00	0.10	0.07	1.7	1.1	68	9.9	0.21	0.23	1.5
10	0.00	0.00	0.00	0.09	0.08	1.6	0.92	299	31	0.32	0.08	1.3
11	0.00	0.00	0.00	0.07	0.09	1.4	0.68	468	91	0.52	0.01	1.0
12	0.00	0.00	0.00	0.05	0.09	1.5	0.52	67	27	0.90	0.00	0.97
13	0.00	0.00	0.00	0.05	0.09	2.2	0.49	27	35	0.83	0.00	5.4
14	0.00	0.00	0.00	0.05	0.32	2.4	0.43	17	45	1.7	0.00	523
15	0.00	0.00	0.00	0.03	61	2.6	0.39	12	18	1.1	0.00	120
16	0.00	0.00	0.00	0.03	25	2.4	0.40	8.7	8.7	0.76	0.00	24
17	0.00	0.00	0.00	0.02	10	2.6	33	6.4	4.9	0.54	0.00	10
18	0.02	0.00	0.03	0.01	13	2.7	36	5.5	3.1	0.41	0.00	5.9
19	0.01	0.00	0.10	0.01	16	5.2	15	4.8	2.1	0.34	0.00	4.0
20	0.00	0.00	0.22	0.01	21	8.5	23	5.2	1.5	0.22	0.00	2.9
21	0.00	0.00	0.26	0.01	23	5.6	15	4.7	1.2	0.17	0.00	2.8
22	0.00	0.00	0.22	0.01	39	6.5	7.0	3.9	0.96	0.13	0.00	294
23	0.00	0.00	0.18	0.01	22	8.2	4.1	3.5	0.82	0.08	0.00	73
24	0.00	0.00	0.16	0.01	14	4.7	9.5	3.6	0.75	0.05	0.00	17
25	0.00	0.00	0.13	0.02	8.1	3.5	40	5.7	1.7	0.02	0.00	7.4
26	0.00	0.00	0.09	0.06	5.0	2.4	56	5.0	2.2	0.01	0.00	4.3
27	0.00	0.00	0.09	0.04	3.6	1.4	19	4.2	23	0.00	0.00	3.3
28	0.00	0.00	0.08	0.06	2.8	2.3	72	4.0	11	0.04	0.00	7.7
29	0.00	0.00	0.08	0.04	---	3.7	207	3.9	4.6	0.03	0.00	6.1
30	0.00	0.00	0.07	0.02	---	1.8	41	3.7	2.6	0.02	0.00	3.5
31	0.00	---	0.07	0.04	---	1.1	---	3.5	---	0.01	123	---
MEAN	0.00	0.00	0.06	0.06	9.48	2.96	19.6	59.4	13.2	0.46	4.42	57.9
MAX	0.02	0.00	0.26	0.15	61	8.5	207	468	91	1.7	123	523
MIN	0.00	0.00	0.00	0.01	0.04	1.1	0.37	3.5	0.75	0.00	0.00	0.97
IN.	0.00	0.00	0.00	0.00	0.12	0.04	0.27	0.86	0.18	0.01	0.06	0.81

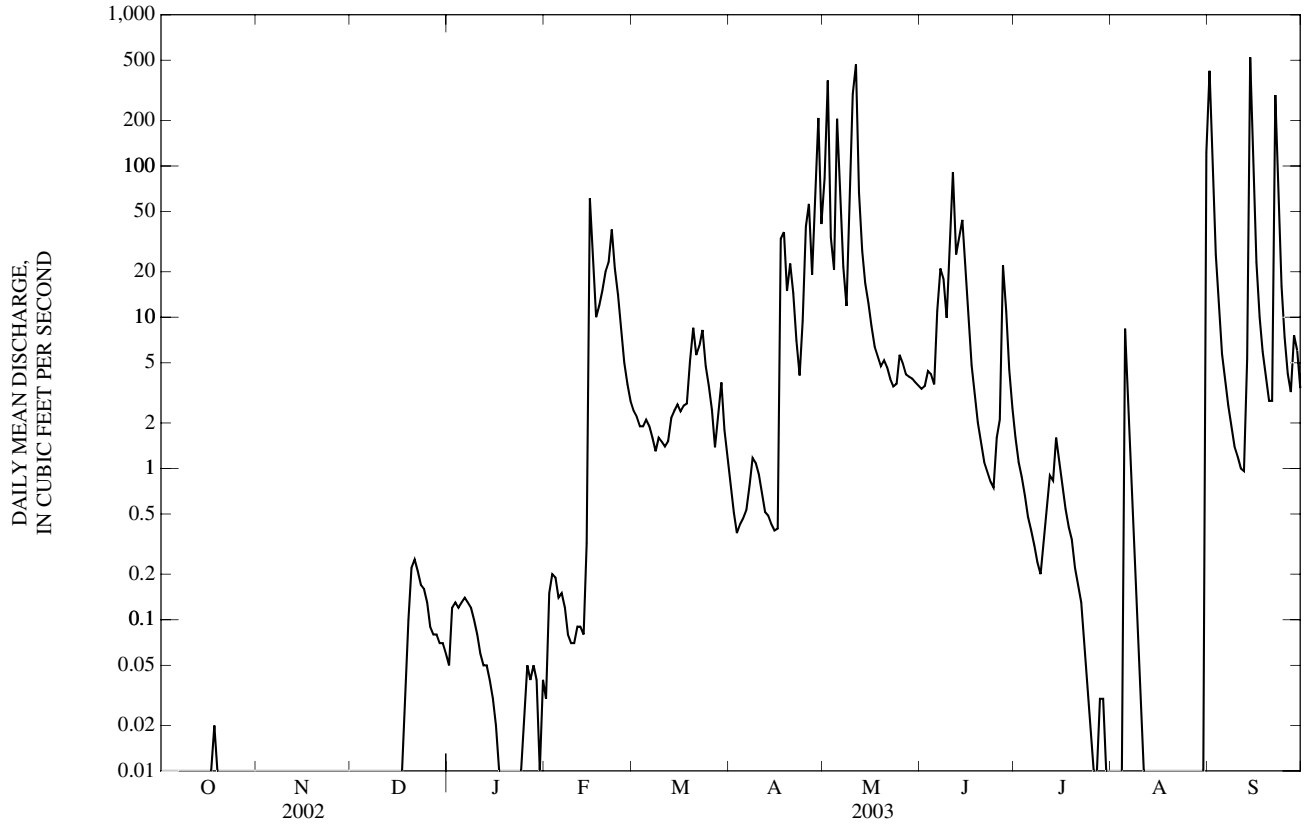
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	24.5	56.3	48.8	32.1	78.7	78.1	87.7	146	70.4	72.7	22.2	36.7
MAX	321	550	247	162	359	244	319	669	250	554	223	510
(WY)	(1987)	(1986)	(1983)	(1999)	(1985)	(1998)	(1983)	(1995)	(1998)	(1993)	(1993)	(1993)
MIN	0.00	0.00	0.00	0.00	0.00	0.07	0.16	1.53	0.03	0.00	0.00	0.00
(WY)	(1980)	(1981)	(1989)	(1989)	(1989)	(1989)	(1989)	(1988)	(1988)	(1988)	(1988)	(198)

05503800 CROOKED CREEK NEAR PARIS, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL MEAN	55.2		13.9		62.8	
HIGHEST ANNUAL MEAN					179	1993
LOWEST ANNUAL MEAN					7.38	1989
HIGHEST DAILY MEAN	3,280	May 9	523	Sep 14	7,150	May 7, 1996
LOWEST DAILY MEAN	0.00	Many Days	0.00	Many Days	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	0.00	At Times	0.00	At Times	0.00	Many Years
MAXIMUM PEAK FLOW	---		866	May 11	9,460	May 7, 1996
MAXIMUM PEAK STAGE	---		5.72	May 11	13.62	May 7, 1996
INSTANTANEOUS LOW FLOW	---		0.00	Many Days	0.00	Many Years
ANNUAL RUNOFF (INCHES)	9.36		2.36		10.66	
10 PERCENT EXCEEDS	42		23		86	
50 PERCENT EXCEEDS	0.76		0.40		2.9	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated



05504800 SOUTH FORK SALT RIVER ABOVE SANTA FE, MO

LOCATION.--Lat 39°19'34", long 91°50'02", in SE ¼ SE ¼ sec.31, T.53 N., R.8 W., Audrain County, Hydrologic Unit 07110006, on left bank near downstream side of bridge on County Road ZZ, 3.6 mi southwest of Santa Fe, 1.0 mi upstream from Littleby Creek, and at mile 104.2 above mouth of Salt River.

DRAINAGE AREA.--233 mi^2.

PERIOD OF RECORD.--February 1940 to current year. Published as "near Santa Fe" (05504900) October 1968 to September 1975 and as "at Santa Fe" (05505000) February 1940 to September 1968 and October 1975 to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 644.87 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 5, 1940, nonrecording gage; Feb. 5, 1940, to Sept. 30, 1968, and Oct. 1, 1975 to Sept. 30, 1986, water-stage recorder 8.0 mi downstream at datum 613.05; Oct. 1, 1968, to Sept. 30, 1975, water-stage recorder, 1.0 mi downstream at datum 5.78 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Gage was removed due to bridge construction Oct. 23, 2002 to May 13, 2003. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, unknown, probably occurred May 10, maximum recorded 3,170 ft^3/s, June 14, gage height 13.21 ft; minimum recorded 0.29 ft^3/s, Aug. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	---	---	---	---	---	---	---	8.1	25	1.3	1,110
2	4.3	---	---	---	---	---	---	---	9.6	120	1.1	390
3	5.7	---	---	---	---	---	---	---	22	79	7.0	86
4	8.6	---	---	---	---	---	---	---	60	35	4.7	35
5	11	---	---	---	---	---	---	---	48	22	4.6	20
6	14	---	---	---	---	---	---	---	29	16	3.7	13
7	8.0	---	---	---	---	---	---	---	27	13	2.4	9.7
8	5.5	---	---	---	---	---	---	---	21	11	1.6	6.7
9	4.9	---	---	---	---	---	---	---	18	9.4	1.7	5.3
10	5.1	---	---	---	---	---	---	---	16	11	1.4	4.5
11	4.9	---	---	---	---	---	---	---	36	14	1.5	4.1
12	4.4	---	---	---	---	---	---	---	69	11	1.0	6.5
13	3.4	---	---	---	---	---	---	---	1,580	9.8	0.70	16
14	2.5	---	---	---	---	---	---	e148	2,650	8.7	1.0	112
15	2.0	---	---	---	---	---	---	e111	342	7.7	0.84	143
16	3.3	---	---	---	---	---	---	e87	139	5.3	0.59	47
17	3.3	---	---	---	---	---	---	e85	82	6.2	0.47	23
18	3.3	---	---	---	---	---	---	e71	57	5.1	3.0	16
19	4.1	---	---	---	---	---	---	e61	41	5.1	2.3	18
20	4.7	---	---	---	---	---	---	e55	31	4.7	1.4	20
21	9.1	---	---	---	---	---	---	e44	24	3.1	1.1	17
22	5.6	---	---	---	---	---	---	32	22	2.5	1.7	442
23	---	---	---	---	---	---	---	27	20	2.2	1.4	242
24	---	---	---	---	---	---	---	24	18	1.7	0.85	63
25	---	---	---	---	---	---	---	27	203	1.2	0.55	30
26	---	---	---	---	---	---	---	35	1,060	0.86	0.46	19
27	---	---	---	---	---	---	---	31	272	1.4	0.41	15
28	---	---	---	---	---	---	---	23	81	2.1	1.7	58
29	---	---	---	---	---	---	---	16	45	1.3	3.0	29
30	---	---	---	---	---	---	---	12	30	0.91	2.3	20
31	---	---	---	---	---	---	---	9.6	---	1.3	34	---
MEAN	---	---	---	---	---	---	---	---	235	14.1	2.90	101
MAX	---	---	---	---	---	---	---	---	2,650	120	34	1,110
MIN	---	---	---	---	---	---	---	---	8.1	0.86	0.41	4.1
IN.	---	---	---	---	---	---	---	---	1.13	0.07	0.01	0.48

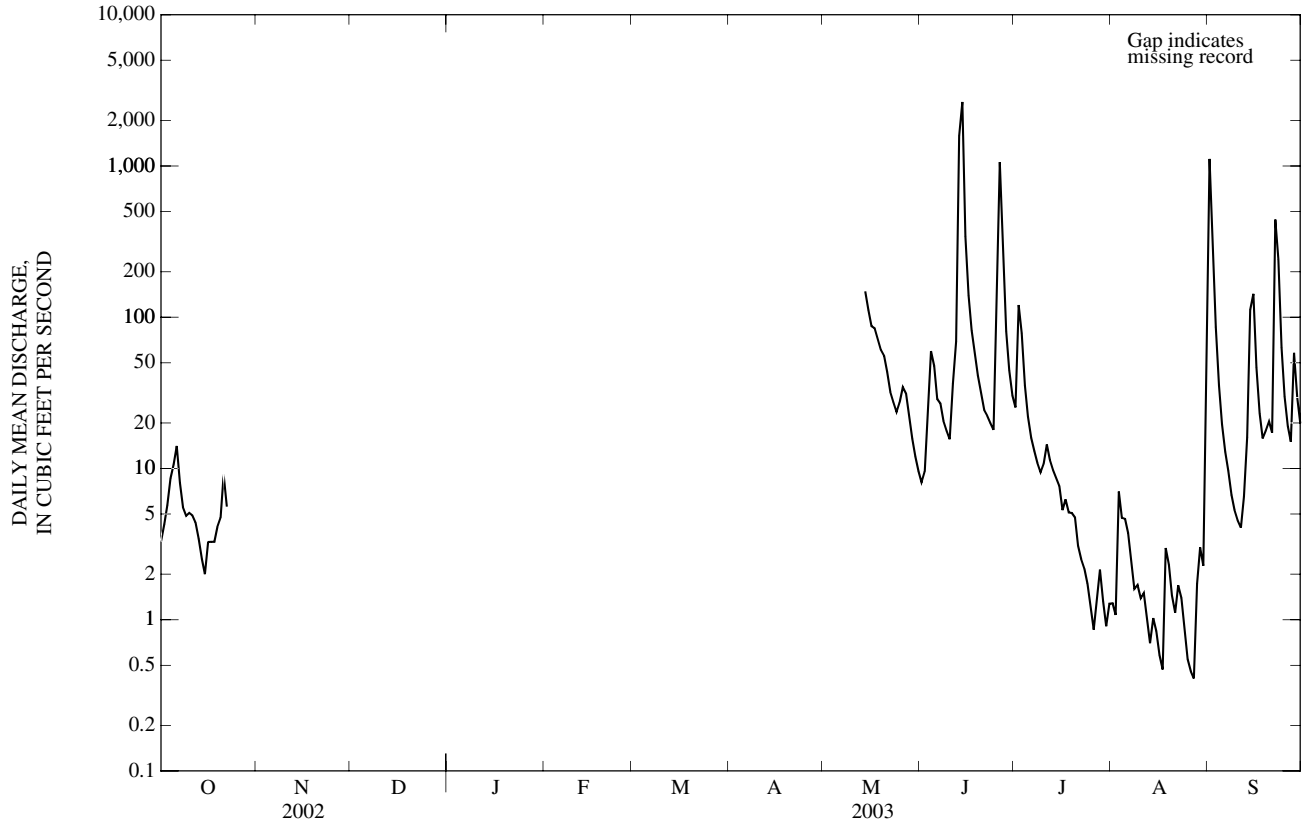
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	123	127	127	139	227	300	334	312	244	198	55.4	127
MAX	1,646	1,378	1,447	792	1,031	1,715	1,734	2,238	1,307	2,415	544	1,830
(WY)	(1942)	(1986)	(1983)	(1974)	(1985)	(1973)	(1944)	(1943)	(1942)	(1969)	(1982)	(1993)
MIN	0.006	0.36	0.58	1.18	1.91	2.74	3.42	5.92	3.28	1.31	0.46	0.22
(WY)	(1954)	(1954)	(1964)	(1963)	(1954)	(1954)	(2000)	(1980)	(1988)	(1944)	(1964)	(1960)

05504800 SOUTH FORK SALT RIVER ABOVE SANTA FE, MO—Continued

SUMMARY STATISTICS	WATER YEARS 1940 - 2003	
ANNUAL MEAN	193	
HIGHEST ANNUAL MEAN	509	1969
LOWEST ANNUAL MEAN	10.7	1954
HIGHEST DAILY MEAN	24,000	Oct 13, 1969
LOWEST DAILY MEAN	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	0.00	Many Years
MAXIMUM PEAK FLOW	31,800	Sep 23, 1993
MAXIMUM PEAK STAGE	28.66	Sep 23, 1993
INSTANTANEOUS LOW FLOW	0.00	Many Years
ANNUAL RUNOFF (INCHES)	11.24	
10 PERCENT EXCEEDS	317	
50 PERCENT EXCEEDS	16	
90 PERCENT EXCEEDS	1.6	

e Estimated



05506100 LONG BRANCH NEAR SANTA FE, MO

LOCATION.--Lat 39°21'21", long 91°50'03", in NE ¼ SE ¼ SE ¼ sec. 19, T.53 N., R.8 W., Monroe County, Hydrologic Unit 07110006, on left bank on west side of concrete ford on County Road 614, 2 mi southwest of Santa Fe.

DRAINAGE AREA.--180 mi^2.

PERIOD OF RECORD.--December 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 625.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair except for discharges below 10 ft^3/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

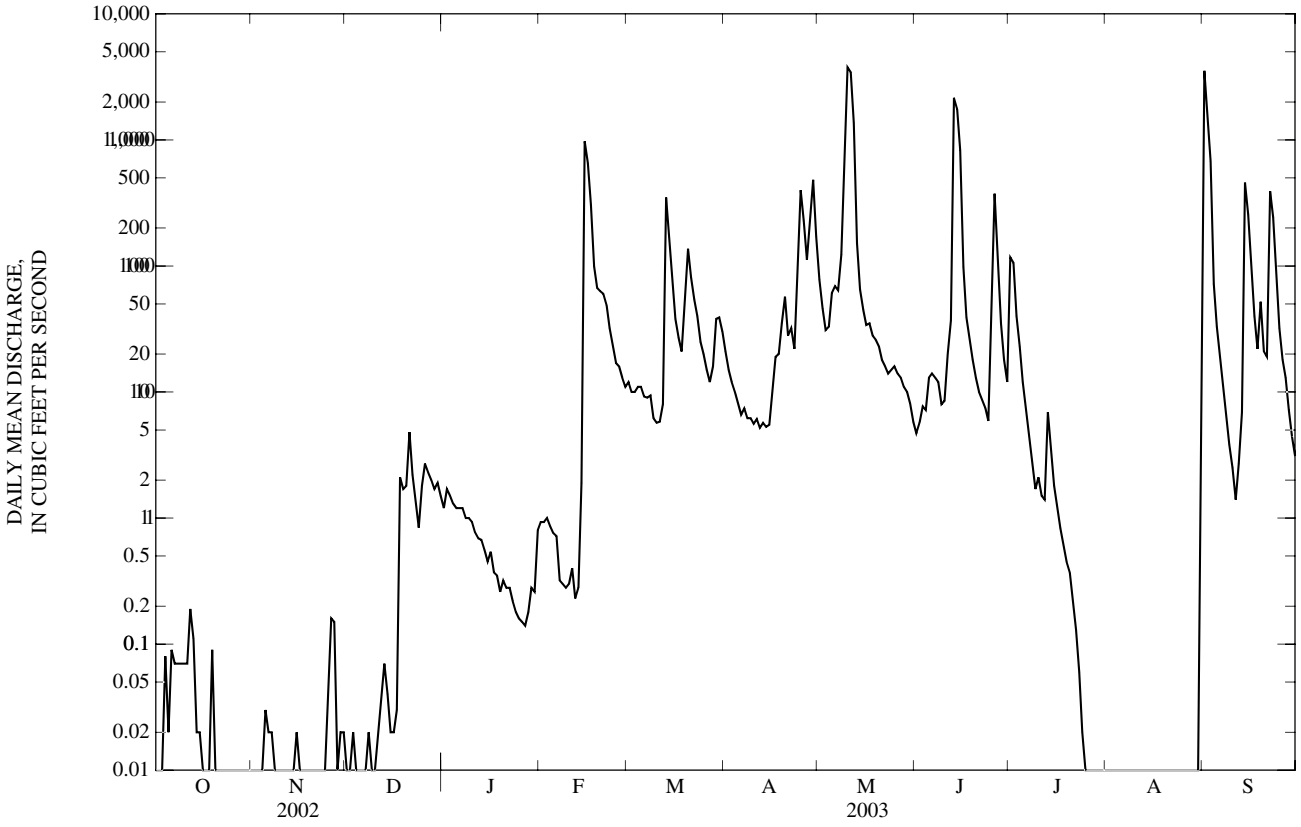
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.01	1.3	0.94	13	21	78	4.8	117	0.00	3,540
2	0.00	0.01	0.01	1.8	0.94	10	16	46	5.7	106	0.00	1,520
3	0.00	0.01	0.02	1.5	1.1	11	13	31	7.8	40	0.00	681
4	0.08	0.01	0.02	1.3	0.87	11	10	33	7.2	23	0.00	73
5	0.03	0.04	0.01	1.3	0.77	11	8.2	61	14	13	0.00	33
6	0.10	0.03	0.00	1.3	0.72	9.3	6.7	69	15	6.9	0.00	19
7	0.08	0.03	0.01	1.3	0.32	9.0	7.5	65	14	4.1	0.00	12
8	0.08	0.02	0.02	1.1	0.31	9.5	6.3	123	12	2.6	0.00	6.7
9	0.08	0.01	0.02	1.1	0.29	6.2	6.3	691	8.1	1.8	0.00	3.9
10	0.08	0.01	0.01	0.93	0.31	5.8	5.7	3,760	8.6	2.2	0.00	2.5
11	0.08	0.01	0.03	0.77	0.41	5.9	6.2	3,440	21	1.5	0.00	1.4
12	0.20	0.01	0.04	0.69	0.23	8.0	5.3	1,360	37	1.4	0.00	2.7
13	0.12	0.01	0.08	0.67	0.28	350	5.7	153	2,160	7.0	0.00	6.9
14	0.03	0.01	0.05	0.56	1.9	151	5.3	65	1,760	3.5	0.00	459
15	0.03	0.03	0.03	0.46	973	70	5.5	45	826	1.9	0.00	255
16	0.01	0.02	0.03	0.55	653	39	9.9	34	99	1.2	0.00	92
17	0.01	0.01	0.03	0.37	307	27	19	36	40	0.83	0.00	40
18	0.01	0.01	2.2	0.35	100	21	20	29	27	0.61	0.00	22
19	0.10	0.01	1.8	0.26	68	56	35	27	18	0.46	0.00	53
20	0.02	0.01	1.8	0.33	64	138	58	24	13	0.37	0.00	21
21	0.01	0.01	4.8	0.29	60	81	29	19	10	0.23	0.00	19
22	0.00	0.01	2.2	0.29	49	55	33	16	8.8	0.13	0.00	391
23	0.00	0.01	1.3	0.22	32	41	22	15	7.6	0.06	0.00	243
24	0.00	0.01	0.85	0.19	24	26	107	15	5.9	0.03	0.00	86
25	0.01	0.05	1.9	0.16	18	20	400	16	35	0.01	0.00	33
26	0.01	0.16	2.7	0.16	17	16	231	15	374	0.00	0.00	19
27	0.01	0.15	2.3	0.15	14	13	112	13	107	0.00	0.00	13
28	0.01	0.01	2.0	0.19	12	16	226	12	36	0.00	0.00	7.2
29	0.02	0.02	1.8	0.29	---	38	483	10	18	0.00	0.00	4.4
30	0.01	0.03	2.0	0.26	---	39	172	8.1	13	0.00	0.00	3.1
31	0.01	---	1.6	0.80	---	31	---	5.8	---	0.00	195	---
MEAN	0.04	0.03	0.96	0.68	85.7	43.2	69.5	333	190	10.8	6.29	255
MAX	0.20	0.16	4.8	1.8	973	350	483	3,760	2,160	117	195	3,540
MIN	0.00	0.01	0.00	0.15	0.23	5.8	5.3	5.8	4.8	0.00	0.00	1.4
IN.	0.00	0.00	0.01	0.00	0.50	0.28	0.43	2.13	1.18	0.07	0.04	1.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	39.9	37.2	9.73	162	296	133	229	374	200	139	58.5	35.9
MAX	266	246	32.0	534	1,053	487	636	1,062	514	943	254	255
(WY)	(1999)	(1999)	(1999)	(1999)	(1997)	(1998)	(1999)	(1995)	(1998)	(1998)	(2000)	(2003)
MIN	0.01	0.00	0.61	0.11	17.6	13.1	1.25	16.4	23.2	4.23	0.04	0.00
(WY)	(2000)	(2000)	(2000)	(2000)	(1996)	(2000)	(2000)	(2000)	(1996)	(2002)	(1999)	(1999)

05506100 LONG BRANCH NEAR SANTA FE, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL MEAN	123		82.5		135	
HIGHEST ANNUAL MEAN					237	1999
LOWEST ANNUAL MEAN					35.8	2000
HIGHEST DAILY MEAN	3,670	May 9	3,760	May 10	12,400	Feb 21, 1997
LOWEST DAILY MEAN	0.00	Many Days	0.00	Many Days	0.00	Many Days 1999-2003
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 5,Sep 11	0.00	Jul 26	0.00	At TImes
MAXIMUM PEAK FLOW	---		6,920	May 10	16,700	Jul 4, 1998
MAXIMUM PEAK STAGE	---		13.97	May 10	22.43	Jul 4, 1998
INSTANTANEOUS LOW FLOW	---		0.00	Many Days	0.00	Many Days 1999-2003
ANNUAL RUNOFF (INCHES)	9.29		6.22		10.20	
10 PERCENT EXCEEDS	102		95		182	
50 PERCENT EXCEEDS	2.0		2.0		8.7	
90 PERCENT EXCEEDS	0.00		0.00		0.04	



05506350 MIDDLE FORK SALT RIVER NEAR HOLLIDAY, MO

LOCATION.--Lat 39°31'32", long 92°07'40", in NE ¼ SW ¼ NW ¼ sec. 27, T. 55 N., R. 11 W., Monroe County, Hydrologic Unit 07110006, on right bank, downstream side of Highway A bridge, approximately 2.1 mi north of Holliday.

DRAINAGE AREA.--313 mi^2.

PERIOD OF RECORD.--Dec. 17, 1998 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 651.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	4.9	e3.2	e4.9	e2.6	18	21	594	12	130	8.7	2,040
2	3.7	4.6	e2.5	e4.6	e2.6	17	18	1,310	13	34	6.2	614
3	4.9	4.5	e2.5	e4.3	4.4	16	16	e341	20	16	5.3	167
4	5.8	3.6	e2.4	e4.1	4.0	17	14	e391	20	12	87	74
5	4.9	4.8	e2.4	e3.9	3.5	17	13	e555	22	12	39	31
6	5.7	5.4	e2.7	e3.8	3.2	16	12	e680	48	11	16	18
7	5.4	4.3	e2.4	e3.6	2.9	15	16	e479	126	10	10	13
8	11	3.3	e2.3	e3.7	2.6	16	20	e429	83	8.1	7.2	9.9
9	15	3.2	e2.4	e4.3	2.4	16	19	e981	54	6.8	5.6	7.8
10	12	2.8	e2.8	e3.7	2.2	15	20	e2,240	46	9.4	4.6	6.6
11	8.9	2.8	e2.4	e3.3	2.2	14	22	2,650	34	8.5	4.0	6.0
12	7.4	2.6	e2.3	e3.2	2.3	17	21	1,040	120	6.7	3.7	8.2
13	6.1	2.8	e2.3	e3.2	2.4	68	17	419	1,210	5.8	3.4	534
14	4.9	3.1	e2.2	e3.1	3.2	72	15	160	1,060	5.4	3.3	912
15	3.8	3.1	e2.3	e3.1	210	51	13	92	473	5.4	3.2	590
16	2.2	3.0	e2.2	e3.1	141	38	28	65	176	5.0	3.1	249
17	2.7	3.2	4.1	e3.0	90	30	251	52	84	4.7	3.0	96
18	3.5	e3.0	6.1	e3.0	61	25	106	42	46	4.7	3.0	41
19	6.1	e2.7	7.0	e3.0	67	43	86	35	30	385	3.1	24
20	6.6	e2.5	10	e3.1	75	119	120	34	22	219	3.3	20
21	6.3	e2.4	9.4	e3.5	71	91	70	30	17	56	3.4	71
22	4.5	e2.3	7.4	e4.0	107	51	54	26	13	22	3.6	1,090
23	2.0	e3.1	6.5	e3.1	87	35	48	24	12	13	3.3	251
24	4.0	e2.7	7.9	e2.8	65	26	128	23	11	9.6	3.5	137
25	6.0	e2.5	6.8	e2.8	50	27	223	33	11	7.2	2.9	71
26	3.1	e2.6	6.0	e2.8	34	25	179	40	282	5.9	3.7	37
27	3.0	e2.5	e5.6	e2.7	25	19	134	43	137	4.9	5.8	63
28	3.7	e2.4	e5.4	e2.7	21	26	209	29	59	6.7	4.6	59
29	5.2	e2.4	e5.6	e2.6	---	67	924	20	27	6.3	6.0	24
30	5.9	e2.4	e6.1	e2.6	---	35	279	16	48	5.3	6.1	17
31	5.2	---	e5.3	e2.6	---	25	---	14	---	7.6	349	---
MEAN	5.57	3.18	4.47	3.36	40.9	34.4	103	416	144	33.7	19.8	243
MAX	15	5.4	10	4.9	210	119	924	2,650	1,210	385	349	2,040
MIN	2.0	2.3	2.2	2.6	2.2	14	12	14	11	4.7	2.9	6.0
IN.	0.02	0.01	0.02	0.01	0.14	0.13	0.37	1.53	0.51	0.12	0.07	0.87

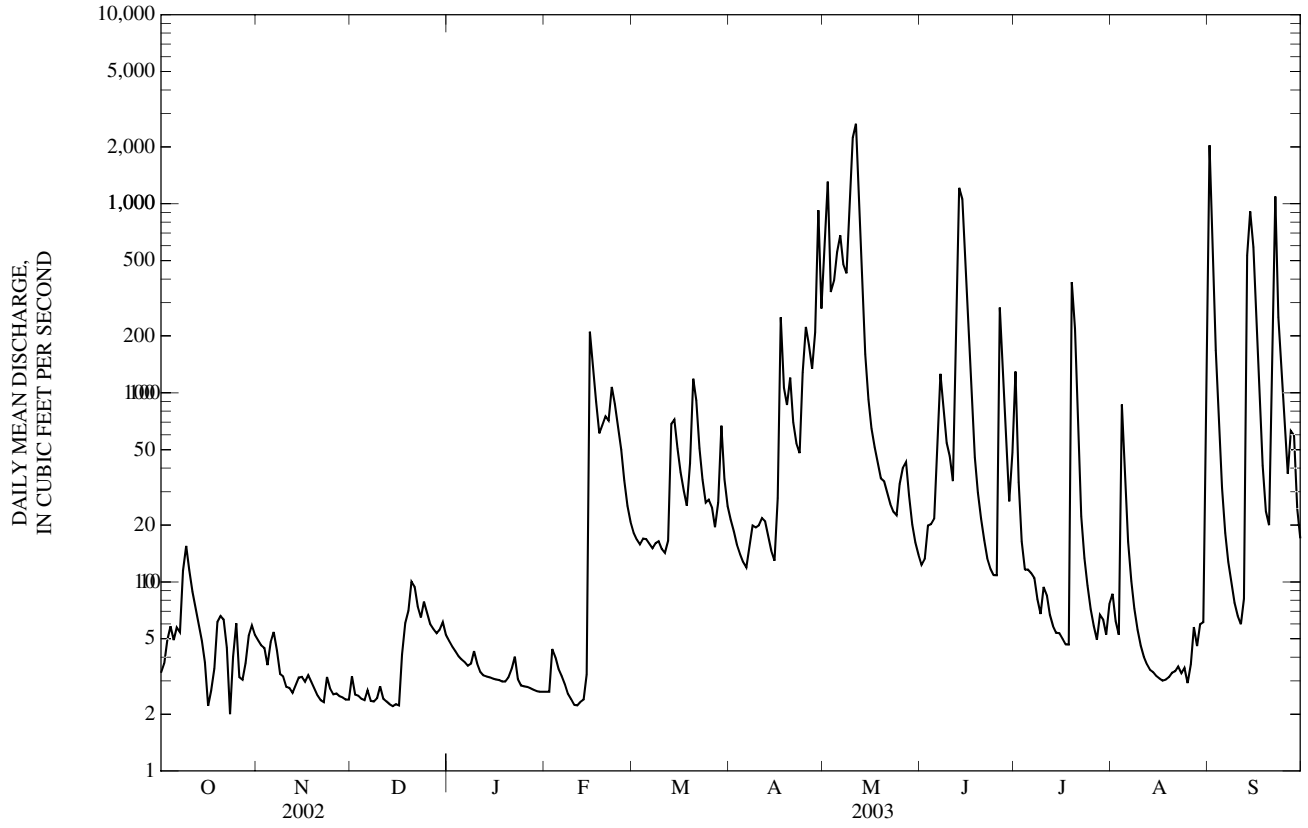
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	30.4	23.6	7.24	234	367	215	325	668	309	88.9	28.9	61.4
MAX	93.2	78.8	13.1	611	1,136	490	771	2,021	978	237	99.9	243
(WY)	(2002)	(2001)	(2002)	(1999)	(2001)	(1999)	(1999)	(2002)	(2001)	(1999)	(2000)	(2003)
MIN	5.57	1.12	4.47	2.12	29.7	34.4	3.89	21.9	72.3	33.7	2.64	2.82
(WY)	(2003)	(2000)	(2003)	(2000)	(2000)	(2003)	(2000)	(2000)	(1999)	(2003)	(1999)	(2002)

05506350 MIDDLE FORK SALT RIVER NEAR HOLLIDAY, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL MEAN	260		87.6		174	
HIGHEST ANNUAL MEAN					296	2001
LOWEST ANNUAL MEAN					44.5	2000
HIGHEST DAILY MEAN	8,730	May 9	2,650	May 11	8,730	May 9, 2002
LOWEST DAILY MEAN	1.2	Sep 10	2.0	Oct 23	0.22	Oct 19, 1999
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 8	2.4	Dec 10	0.46	Oct 17, 1999
MAXIMUM PEAK FLOW	---		2,910	May 11	9,360	May 9, 2002
MAXIMUM PEAK STAGE	---		15.93	May 11	21.53	May 9, 2002
INSTANTANEOUS LOW FLOW	---		2.0	Oct 23	0.18	Oct 18, 1999
ANNUAL RUNOFF (INCHES)	11.28		3.80		7.56	
10 PERCENT EXCEEDS	333		171		236	
50 PERCENT EXCEEDS	10		9.9		13	
90 PERCENT EXCEEDS	2.5		2.7		2.4	

e Estimated



05506800 ELK FORK SALT RIVER NEAR MADISON, MO

LOCATION.--Lat 39°26'05", long 92°10'04", in SE ¼ NE ¼ SW ¼ sec.29, T.54 N., R.11 W., Monroe County, Hydrologic Unit 07110006, on downstream side and 25 ft to the left of bridge on State Highway AA, 500 ft downstream from Allen Creek, 3.5 mi southeast of Madison, and at mile 29.8.

DRAINAGE AREA.--200 mi^2.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WRD MO 1973: 1970(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 690.16 ft above National Geodetic Vertical Datum of 1929 (Missouri State Highway and Transportation Commission bench mark).

REMARKS.--No estimated daily discharges. Records fair except discharges below 10 ft^3/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 9, 1967, reached a stage of 31.25 ft, from floodmark, discharge 33,300 ft^3/s, by contracted-opening method. Flood in 1871 reached nearly the same stage, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

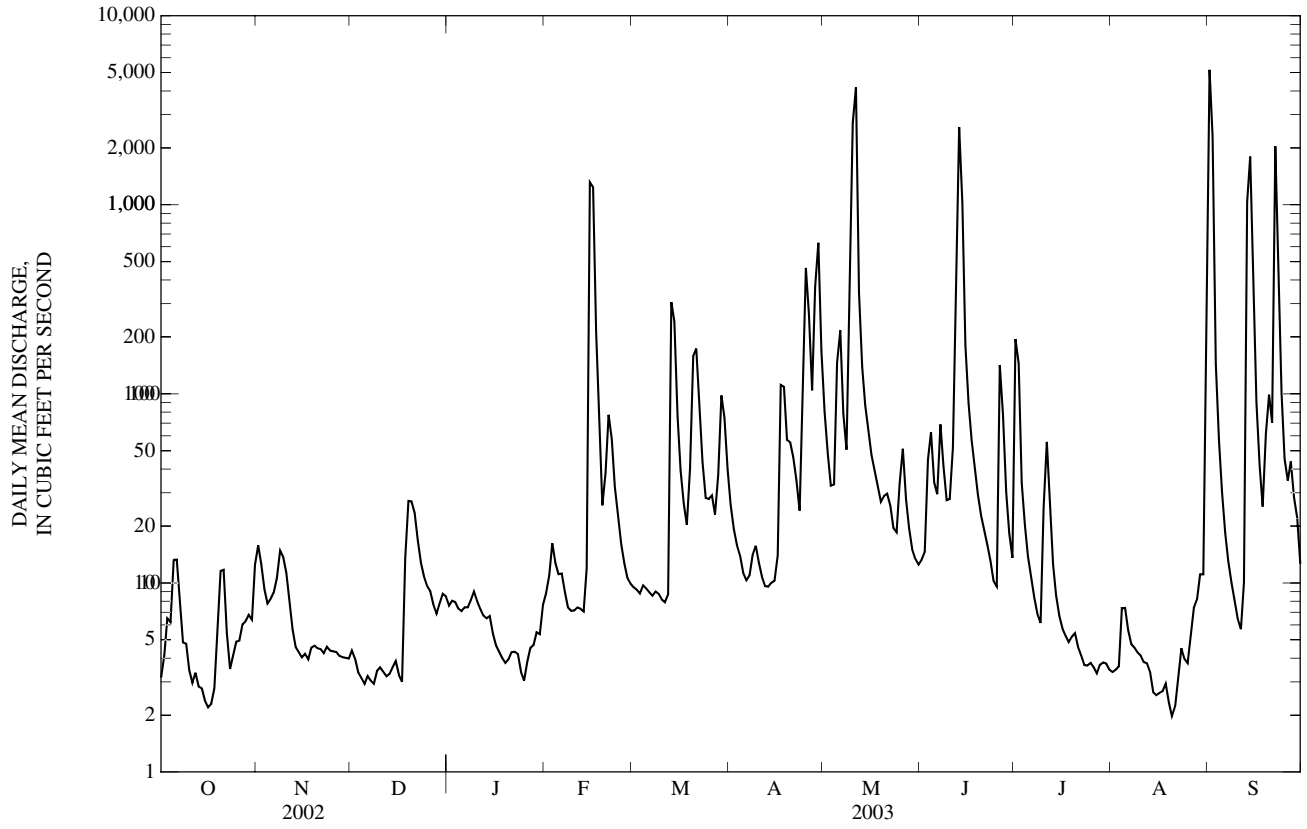
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	16	4.4	7.6	8.8	9.5	26	80	13	195	3.4	5,170
2	4.1	13	4.0	8.0	11	9.2	19	48	15	144	3.5	2,290
3	6.5	9.3	3.3	7.9	16	8.8	16	33	45	34	3.6	145
4	6.2	7.8	3.1	7.3	13	9.7	14	33	63	20	7.3	56
5	13	8.2	2.9	7.1	11	9.3	11	146	34	14	7.4	30
6	13	8.9	3.2	7.4	11	8.9	10	216	29	11	5.6	18
7	7.7	11	3.0	7.4	8.9	8.6	11	79	69	8.3	4.7	13
8	4.8	15	2.9	8.1	7.4	9.0	14	51	41	6.9	4.6	10
9	4.8	14	3.4	9.0	7.1	8.8	16	687	27	6.1	4.3	8.2
10	3.5	11	3.6	8.0	7.1	8.2	13	2,710	28	25	4.1	6.5
11	3.0	7.9	3.4	7.3	7.4	7.9	11	4,180	52	56	3.8	5.7
12	3.4	5.7	3.2	6.7	7.3	8.7	9.6	343	482	26	3.8	10
13	2.8	4.6	3.3	6.5	7.1	305	9.6	139	2,580	13	3.4	1,040
14	2.8	4.3	3.6	6.7	12	242	10	87	1,030	8.6	2.6	1,800
15	2.4	4.0	3.9	5.4	1,320	76	10	63	180	6.7	2.6	323
16	2.2	4.2	3.3	4.7	1,240	39	14	48	89	5.7	2.6	90
17	2.3	3.9	3.0	4.3	214	26	111	39	57	5.3	2.7	42
18	2.8	4.5	14	4.0	90	20	109	32	40	4.9	2.9	25
19	6.0	4.7	27	3.8	26	40	57	27	29	5.2	2.3	61
20	12	4.5	27	3.9	38	158	55	29	23	5.4	2.0	99
21	12	4.5	23	4.3	77	173	46	30	19	4.6	2.2	70
22	5.4	4.3	17	4.3	57	81	35	26	16	4.1	3.1	2,040
23	3.5	4.6	13	4.2	32	44	24	20	13	3.7	4.5	421
24	4.1	4.4	11	3.4	22	28	110	19	10	3.7	4.0	101
25	4.9	4.3	9.6	3.0	16	28	463	34	9.5	3.8	3.8	45
26	4.9	4.3	9.1	3.8	13	29	264	51	142	3.6	5.3	35
27	6.1	4.1	7.7	4.5	11	23	104	28	78	3.3	7.4	44
28	6.3	4.0	6.9	4.7	9.9	37	369	20	30	3.7	8.2	28
29	6.8	4.0	7.8	5.5	---	98	630	15	18	3.8	11	22
30	6.4	4.0	8.8	5.4	---	75	170	13	14	3.8	11	13
31	12	---	8.5	7.7	---	40	---	13	---	3.5	966	---
MEAN	5.77	6.83	8.00	5.87	118	53.8	92.0	301	176	20.7	35.6	469
MAX	13	16	27	9.0	1,320	305	630	4,180	2,580	195	966	5,170
MIN	2.2	3.9	2.9	3.0	7.1	7.9	9.6	13	9.5	3.3	2.0	5.7
IN.	0.03	0.04	0.05	0.03	0.61	0.31	0.51	1.74	0.98	0.12	0.21	2.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	97.6	124	125	121	207	256	326	280	197	154	47.8	115
MAX	1,077	1,248	750	533	935	1,154	1,651	1,554	1,005	1,409	268	1,381
(WY)	(1987)	(1986)	(1983)	(1974)	(1985)	(1973)	(1973)	(1995)	(1969)	(1981)	(2000)	(1993)
MIN	0.25	1.24	0.94	0.95	2.07	3.02	4.76	10.0	1.61	1.06	0.82	0.63
(WY)	(1981)	(1981)	(1989)	(1977)	(1989)	(1981)	(2000)	(1992)	(1988)	(1988)	(1980)	(1988)

05506800 ELK FORK SALT RIVER NEAR MADISON, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL MEAN	139		107		170	
HIGHEST ANNUAL MEAN					380	1993
LOWEST ANNUAL MEAN					23.6	1976
HIGHEST DAILY MEAN	4,890	May 9	5,170	Sep 1	24,100	Apr 21, 1973
LOWEST DAILY MEAN	0.64	Sep 12	2.0	Aug 20	0.00	Aug 4, 1976
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 7	2.5	Aug 15	0.00	Aug 4, 1976
MAXIMUM PEAK FLOW	---		5,790	Sep 1	42,300	Apr 21, 1973
MAXIMUM PEAK STAGE	---		18.32	Sep 1	33.40	Apr 21, 1973
INSTANTANEOUS LOW FLOW	---		1.9	Aug 20,21	0.00	Aug 4, 1970
ANNUAL RUNOFF (INCHES)	9.43		7.25		11.58	
10 PERCENT EXCEEDS	147		110		265	
50 PERCENT EXCEEDS	8.8		10		14	
90 PERCENT EXCEEDS	2.4		3.5		1.3	



05507600 LICK CREEK AT PERRY, MO

LOCATION.--Lat 39°25'53", long 91°40'34", near center of NW ¼ SW ¼ sec.27, T.54 N., R.7 W., Ralls County, Hydrologic Unit 07110007, on right bank and downstream side of State Highway 154 bridge, 0.1 mi west of Perry, and at mile 11.9.

DRAINAGE AREA.--104 mi^2.

PERIOD OF RECORD.--October 1979 to current year. Prior to October 1979 gages were maintained and operated by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 625.00 ft above National Geodetic Vertical Datum of 1929. Prior to November 1967, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1969, reached a stage of 26.24 ft, as determined by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

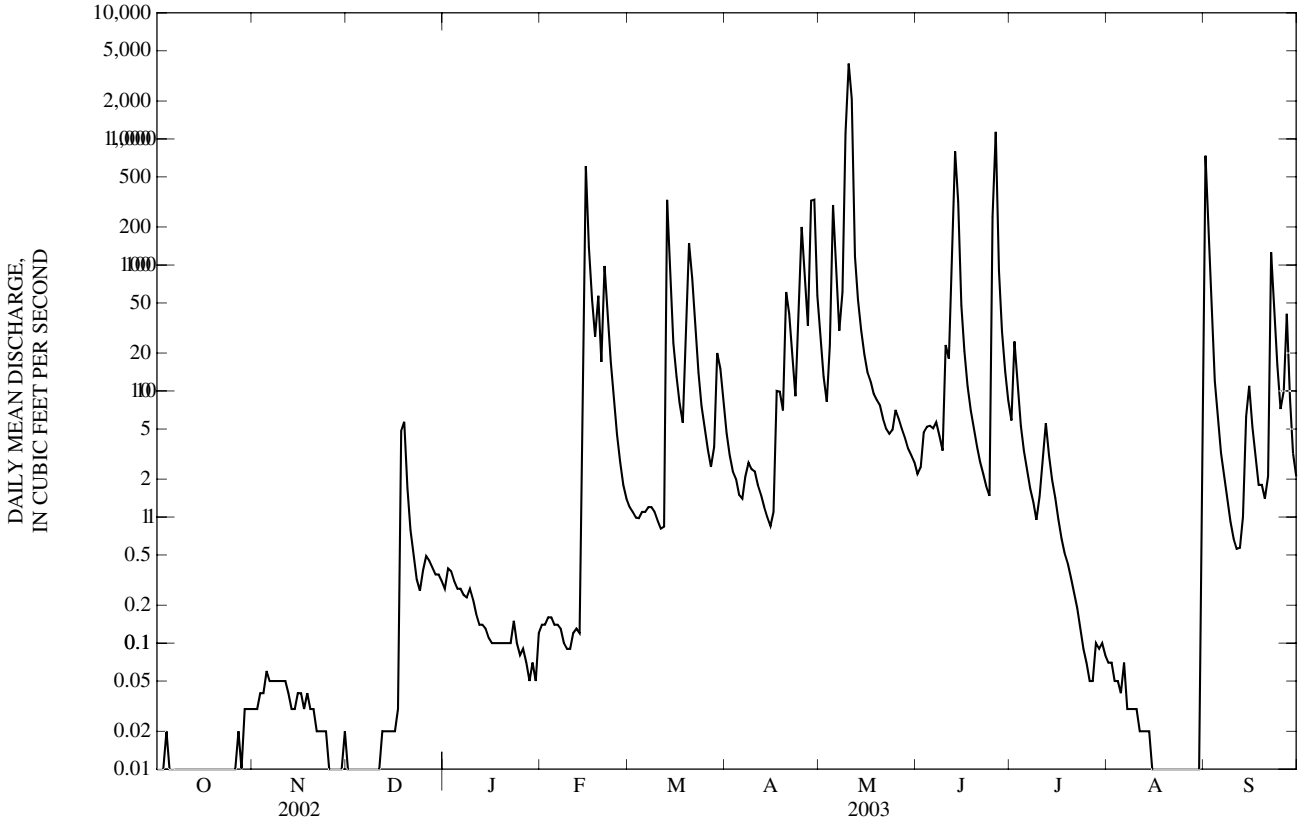
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.03	0.02	0.27	0.15	1.3	4.7	26	2.2	5.8	0.08	735
2	0.00	0.03	0.02	0.40	0.14	1.2	3.2	13	2.5	25	0.07	114
3	0.00	0.04	0.02	0.38	0.17	0.99	2.4	8.2	4.7	11	0.06	31
4	0.03	0.04	0.02	0.31	0.17	0.99	2.0	23	5.2	5.3	0.05	12
5	0.01	0.06	0.02	0.27	0.14	1.1	1.6	300	5.3	3.3	0.05	5.9
6	0.02	0.05	0.01	0.27	0.15	1.1	1.4	81	5.0	2.3	0.08	3.2
7	0.02	0.05	0.02	0.24	0.14	1.2	2.1	30	5.6	1.7	0.03	2.1
8	0.01	0.05	0.02	0.24	0.11	1.2	2.7	62	4.4	1.3	0.04	1.4
9	0.01	0.05	0.02	0.27	0.10	1.1	2.4	1,110	3.4	0.95	0.04	0.92
10	0.00	0.05	0.02	0.23	0.10	0.93	2.3	3,950	23	1.5	0.03	0.68
11	0.00	0.05	0.02	0.18	0.13	0.82	1.9	2,080	18	2.7	0.03	0.56
12	0.00	0.05	0.02	0.14	0.14	0.85	1.6	117	137	5.6	0.02	0.58
13	0.00	0.03	0.02	0.14	0.12	328	1.3	53	796	3.1	0.02	1.1
14	0.00	0.03	0.02	0.13	1.2	70	1.0	30	321	2.0	0.02	6.4
15	0.00	0.04	0.02	0.11	609	25	0.85	19	48	1.4	0.02	12
16	0.00	0.04	0.02	0.10	139	13	1.1	14	21	0.96	0.01	5.3
17	0.00	0.04	0.03	0.11	54	8.1	10	12	11	0.68	0.01	3.1
18	0.00	0.04	4.9	0.10	27	5.7	9.9	9.5	7.0	0.52	0.00	1.9
19	0.01	0.04	5.8	0.10	57	43	7.0	8.5	5.0	0.44	0.00	1.8
20	0.00	0.03	1.7	0.11	175	149	61	7.7	3.6	0.34	0.00	1.5
21	0.00	0.03	0.79	0.10	98	79	42	6.0	2.7	0.26	0.00	2.1
22	0.00	0.02	0.50	0.10	36	35	20	5.0	2.2	0.19	0.00	126
23	0.00	0.02	0.33	0.15	17	14	9.2	4.6	1.7	0.13	0.00	49
24	0.00	0.02	0.27	0.10	9.1	7.6	52	4.9	1.5	0.09	0.00	17
25	0.02	0.02	0.39	0.09	4.5	5.0	201	7.1	242	0.07	0.00	7.2
26	0.02	0.02	0.49	0.09	2.7	3.4	83	6.0	1,140	0.06	0.00	10
27	0.02	0.02	0.45	0.08	1.9	2.5	33	5.0	90	0.06	0.00	41
28	0.02	0.02	0.41	0.06	1.5	3.7	324	4.2	30	0.11	0.00	8.8
29	0.03	0.02	0.36	0.07	---	20	329	3.5	14	0.09	0.00	3.2
30	0.03	0.02	0.35	0.05	---	15	58	3.1	8.4	0.10	0.00	2.2
31	0.03	---	0.31	0.13	---	8.0	---	2.7	---	0.09	12	---
MEAN	0.01	0.04	0.56	0.17	44.1	27.3	42.4	258	98.7	2.49	0.41	40.2
MAX	0.03	0.06	5.8	0.40	609	328	329	3,950	1,140	25	12	735
MIN	0.00	0.02	0.01	0.05	0.10	0.82	0.85	2.7	1.5	0.06	0.00	0.56
IN.	0.00	0.00	0.01	0.00	0.44	0.30	0.45	2.86	1.06	0.03	0.00	0.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	13.5	76.0	65.2	50.7	113	83.6	114	139	74.8	78.7	27.0	41.5
MAX	95.9	652	442	190	441	340	541	532	300	482	143	748
(WY)	(1987)	(1986)	(1983)	(2001)	(1997)	(1984)	(1994)	(2002)	(1998)	(1981)	(1982)	(1993)
MIN	0.00	0.00	0.05	0.00	1.67	0.41	2.15	1.27	0.04	0.03	0.00	0.00
(WY)	(1989)	(2000)	(1980)	(1980)	(1981)	(1981)	(2000)	(1988)	(1988)	(1994)	(1994)	(1999)

05507600 LICK CREEK AT PERRY, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL MEAN	85.8		42.9		72.7	
HIGHEST ANNUAL MEAN					188	1993
LOWEST ANNUAL MEAN					15.1	1980
HIGHEST DAILY MEAN	3,580	May 7	3,950	May 10	7,880	Sep 23, 1993
LOWEST DAILY MEAN	0.00	Many Days	0.00	Many Days	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 2,Sep 3,16,Oct 10	0.00	Oct 10,Aug 18	0.00	Many Years
MAXIMUM PEAK FLOW	---		6,800	May 10	11,800	May 7, 1996
MAXIMUM PEAK STAGE	---		18.37	May 10	22.25	May 7, 1996
INSTANTANEOUS LOW FLOW	---		0.00	Many Days	0.00	Many Years
ANNUAL RUNOFF (INCHES)	11.20		5.60		9.50	
10 PERCENT EXCEEDS	45		45		83	
50 PERCENT EXCEEDS	1.2		0.85		3.6	
90 PERCENT EXCEEDS	0.00		0.01		0.02	



05507700 MARK TWAIN LAKE NEAR CENTER, MO

LOCATION.--Lat 39°31'29", long 91°38'37", sec.26, T.55 N., R.7 W., Ralls County, Hydrologic Unit 07110007, inside dam structure at mile 63.0 on Salt River.

DRAINAGE AREA.--2,318 mi^2.

PERIOD OF RECORD.--1984 to current year. 1984 to Sept. 30, 1991, available in files at the U.S. Army Corps of Engineers.

GAGE.--Water stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

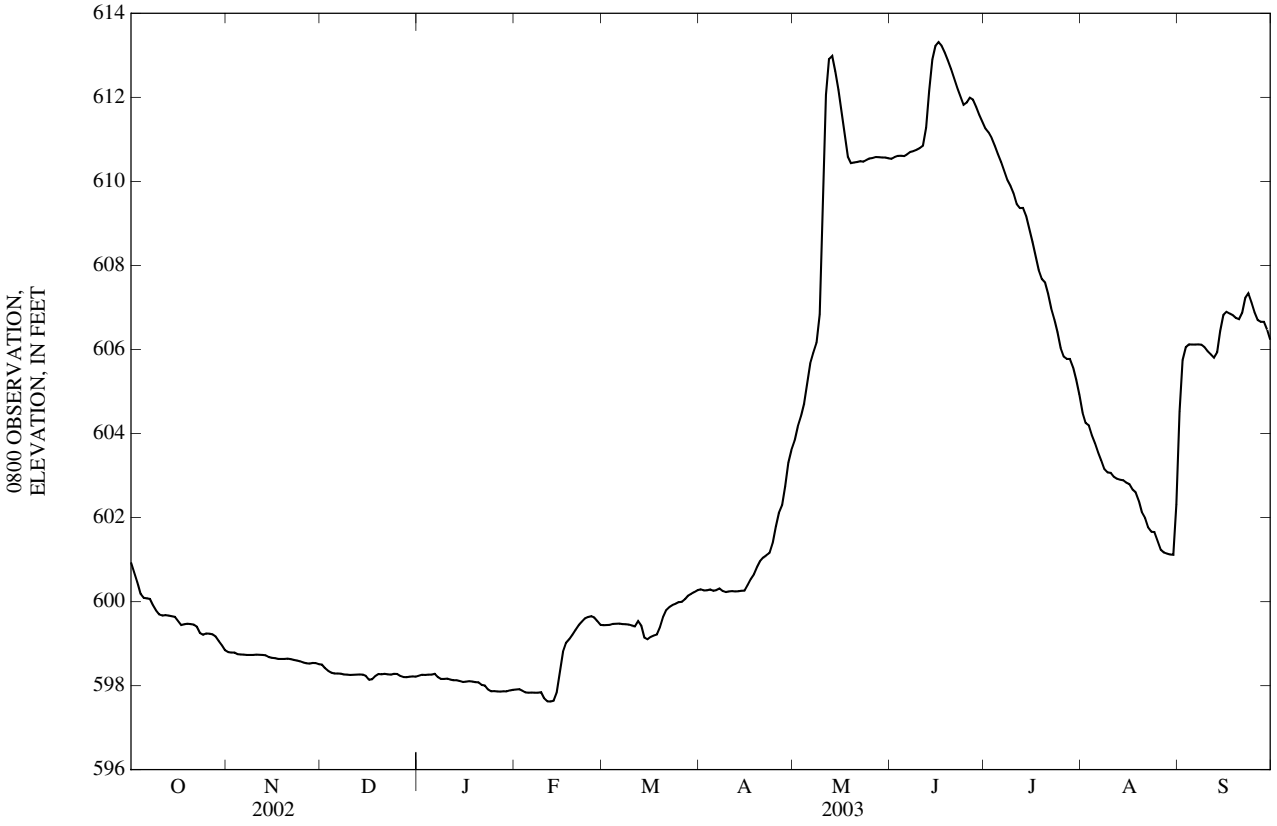
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,380,000 ac-ft, Sept. 27, 1993, elevation, 636.77 ft; minimum, 386,000 ac-ft, Oct. 10, 1984, elevation, 596.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 698,000 ac-ft, June 17, elevation, 613.33 ft; minimum, 405,000 ac-ft, Feb. 11-13, elevation, 597.62 ft, Feb. 11 and 13.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	601.09	598.80	598.50	598.21	597.90	599.42	600.29	603.66	610.54	611.36	604.79	602.91
2	600.85	598.80	598.50	598.25	597.91	599.45	600.29	603.91	610.54	611.21	604.35	605.33
3	600.61	598.78	598.37	598.26	597.92	599.44	600.25	604.29	610.60	611.14	604.20	605.96
4	600.39	598.79	598.34	598.25	597.86	599.45	600.28	604.45	610.61	610.98	604.19	606.10
5	600.09	598.73	598.29	598.27	597.83	599.48	600.29	604.83	610.61	610.78	603.85	606.13
6	600.09	598.75	598.29	598.26	597.83	599.47	600.24	605.36	610.60	610.59	603.73	606.11
7	600.07	598.73	598.29	598.29	597.84	599.48	600.29	605.82	610.67	610.40	603.47	606.12
8	600.06	598.73	598.28	598.16	597.83	599.46	600.32	605.97	610.72	610.17	603.30	606.12
9	599.84	598.73	598.26	598.16	597.83	599.46	600.22	606.25	610.72	609.97	603.08	606.11
10	599.76	598.73	598.26	598.16	597.85	599.45	600.23	607.13	610.77	609.85	603.07	606.03
11	599.66	598.74	598.25	598.17	597.62	599.42	600.25	610.57	610.80	609.65	603.06	605.92
12	599.67	598.73	598.26	598.13	597.63	599.41	600.25	612.81	610.87	609.36	602.93	605.86
13	599.68	598.73	598.26	598.13	597.62	599.60	600.24	612.96	611.48	609.37	602.92	605.78
14	599.66	598.72	598.27	598.13	597.65	599.34	600.25	613.00	612.49	609.37	602.89	606.01
15	599.65	598.66	598.26	598.10	597.92	599.05	600.26	612.44	613.11	609.09	602.89	606.66
16	599.63	598.66	598.22	598.08	598.55	599.13	600.26	612.05	613.28	608.76	602.80	606.91
17	599.49	598.65	598.10	598.10	598.94	599.17	600.47	611.49	613.33	608.46	602.79	606.89
18	599.42	598.63	598.18	598.11	599.06	599.20	600.57	610.95	613.18	608.12	602.60	606.84
19	599.48	598.64	598.25	598.09	599.13	599.22	600.69	610.41	613.01	607.77	602.60	606.81
20	599.47	598.63	598.29	598.08	599.25	599.48	600.88	610.45	612.82	607.64	602.29	606.72
21	599.46	598.65	598.26	598.08	599.37	599.72	601.01	610.45	612.61	607.58	602.04	606.72
22	599.45	598.62	598.29	597.99	599.47	599.84	601.07	610.47	612.37	607.21	601.96	606.94
23	599.38	598.61	598.26	598.01	599.55	599.89	601.12	610.49	612.16	606.86	601.67	607.38
24	599.19	598.59	598.26	597.86	599.62	599.93	601.18	610.46	611.96	606.64	601.66	607.32
25	599.22	598.57	598.29	597.87	599.64	599.96	601.49	610.54	611.76	606.30	601.65	607.02
26	599.25	598.54	598.27	597.87	599.66	600.00	601.94	610.55	611.94	605.90	601.34	606.82
27	599.23	598.53	598.21	597.86	599.60	599.99	602.20	610.56	612.02	605.80	601.18	606.64
28	599.22	598.52	598.20	597.86	599.50	600.09	602.34	610.59	611.91	605.76	601.16	606.67
29	599.15	598.55	598.20	597.87	---	600.17	602.94	610.57	611.71	605.78	601.13	606.65
30	599.02	598.53	598.22	597.86	---	600.20	603.49	610.57	611.53	605.47	601.12	606.38
31	598.93	---	598.22	597.90	---	600.24	---	610.57	---	605.19	601.11	---
MEAN	599.68	598.67	598.27	598.08	598.51	599.60	600.85	609.18	611.69	608.47	602.64	606.33
MAX	601.09	598.80	598.50	598.29	599.66	600.24	603.49	613.00	613.33	611.36	604.79	607.38
MIN	598.93	598.52	598.10	597.86	597.62	599.05	600.22	603.66	610.54	605.19	601.11	602.91

05507700 MARK TWAIN LAKE NEAR CENTER, MO—Continued



RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	458,000	422,000	418,000	414,000	409,000	431,000	444,000	502,000	635,000	652,000	523,000	489,000
2	454,000	422,000	418,000	414,000	409,000	431,000	444,000	506,000	635,000	649,000	515,000	533,000
3	450,000	422,000	416,000	414,000	409,000	431,000	444,000	513,000	636,000	648,000	512,000	544,000
4	446,000	422,000	415,000	414,000	409,000	431,000	444,000	516,000	636,000	644,000	511,000	547,000
5	441,000	421,000	415,000	414,000	408,000	432,000	444,000	523,000	636,000	640,000	506,000	547,000
6	441,000	421,000	415,000	414,000	408,000	432,000	444,000	533,000	636,000	636,000	504,000	547,000
7	441,000	421,000	415,000	415,000	408,000	432,000	444,000	541,000	638,000	632,000	499,000	547,000
8	440,000	421,000	415,000	413,000	408,000	432,000	445,000	544,000	639,000	627,000	496,000	547,000
9	437,000	421,000	414,000	413,000	408,000	432,000	443,000	549,000	639,000	623,000	492,000	547,000
10	436,000	421,000	414,000	413,000	408,000	431,000	443,000	566,000	640,000	621,000	492,000	546,000
11	435,000	421,000	414,000	413,000	405,000	431,000	444,000	636,000	640,000	616,000	492,000	543,000
12	435,000	421,000	414,000	412,000	405,000	431,000	444,000	686,000	642,000	610,000	490,000	542,000
13	435,000	421,000	414,000	412,000	405,000	434,000	444,000	689,000	655,000	611,000	489,000	541,000
14	435,000	421,000	414,000	412,000	406,000	430,000	444,000	690,000	678,000	611,000	489,000	545,000
15	434,000	420,000	414,000	412,000	409,000	426,000	444,000	677,000	693,000	605,000	489,000	557,000
16	434,000	420,000	414,000	412,000	419,000	427,000	444,000	668,000	697,000	598,000	487,000	562,000
17	432,000	420,000	412,000	412,000	424,000	427,000	447,000	655,000	698,000	592,000	487,000	562,000
18	431,000	420,000	413,000	412,000	426,000	428,000	449,000	643,000	694,000	585,000	484,000	561,000
19	432,000	420,000	414,000	412,000	427,000	428,000	451,000	632,000	690,000	578,000	484,000	560,000
20	432,000	420,000	415,000	412,000	429,000	432,000	454,000	633,000	686,000	576,000	479,000	558,000
21	432,000	420,000	414,000	412,000	430,000	435,000	457,000	633,000	681,000	575,000	474,000	558,000
22	431,000	420,000	415,000	410,000	432,000	437,000	458,000	633,000	675,000	568,000	473,000	563,000
23	430,000	419,000	414,000	411,000	433,000	438,000	459,000	634,000	670,000	561,000	468,000	571,000
24	428,000	419,000	414,000	409,000	434,000	438,000	460,000	633,000	666,000	557,000	468,000	570,000
25	428,000	419,000	415,000	409,000	434,000	439,000	465,000	635,000	661,000	550,000	468,000	564,000
26	429,000	418,000	414,000	409,000	435,000	439,000	473,000	635,000	665,000	543,000	462,000	560,000
27	428,000	418,000	414,000	409,000	434,000	439,000	477,000	635,000	667,000	541,000	460,000	557,000
28	428,000	418,000	413,000	409,000	432,000	441,000	480,000	636,000	664,000	540,000	459,000	557,000
29	427,000	419,000	413,000	409,000	---	442,000	490,000	636,000	660,000	541,000	459,000	557,000
30	425,000	418,000	414,000	409,000	---	443,000	499,000	636,000	656,000	535,000	459,000	552,000
31	424,000	---	414,000	409,000	---	444,000	---	636,000	---	530,000	458,000	---
MEAN	435,000	420,000	414,000	412,000	418,000	434,000	454,000	609,000	660,000	593,000	485,000	551,000
MAX	458,000	422,000	418,000	415,000	435,000	444,000	499,000	690,000	698,000	652,000	523,000	571,000
MIN	424,000	418,000	412,000	409,000	405,000	426,000	443,000	502,000	635,000	530,000	458,000	489,000

05507800 SALT RIVER NEAR CENTER, MO

LOCATION.--Lat 39°34'26", long 91°34'15", NW $^1/_4$ SE $^1/_4$ SE $^1/_4$ sec.4, T.55 N., R.6 W., Ralls County, Hydrologic Unit 07110007, on left bank at left downstream end of bridge on Highway A, 0.5 mi downstream from Clarence Cannon Dam, 5.0 mi northwest of Center, and at mile 53.1.

DRAINAGE AREA.--2,350 mi^2, approximately.

PERIOD OF RECORD.--October 1979 to current year. Prior to October 1979, gage height records only by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929. Prior to October 1979 nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records fair except for discharges below 30 ft^3/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station. Flow regulated by Clarence Cannon Dam, 0.5 mi upstream.

EXTREME OUTSIDE PERIOD OF RECORD.--Maximum gage height, 33.00 ft, Apr. 22, 1973, by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

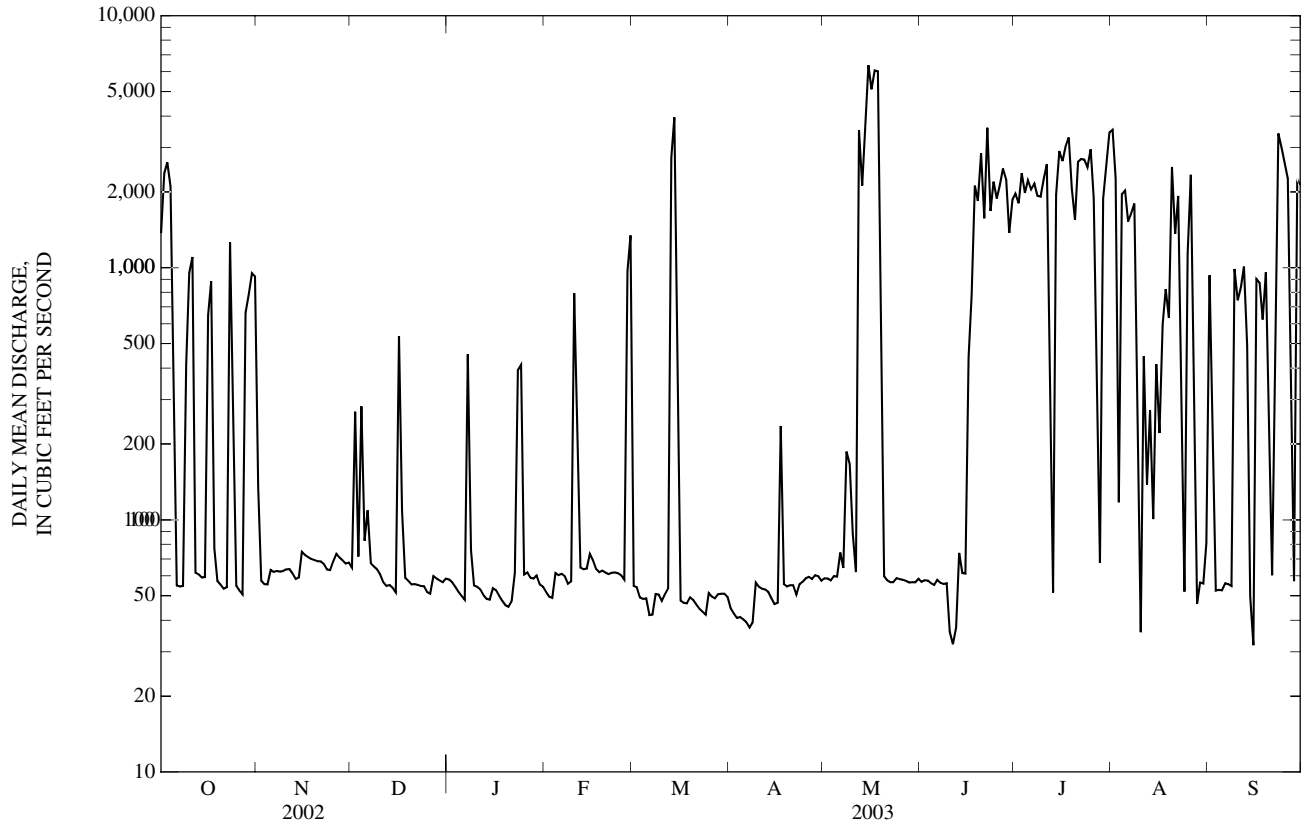
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,370	135	65	58	52	55	45	59	57	1,970	3,530	934
2	2,370	57	269	57	50	54	43	59	58	1,800	2,270	164
3	2,620	56	72	54	49	49	41	58	57	2,370	117	52
4	2,100	55	282	52	62	49	41	60	56	1,980	1,960	53
5	523	63	83	50	60	49	40	60	55	2,230	2,020	53
6	55	62	109	48	61	42	39	74	58	2,050	1,520	56
7	54	63	67	454	60	42	37	64	56	2,160	1,650	56
8	55	62	65	76	56	51	39	187	56	1,930	1,800	55
9	415	63	64	55	57	51	56	166	56	1,910	593	989
10	954	64	61	54	793	48	54	88	36	2,240	36	743
11	1,100	64	57	53	218	51	53	62	32	2,580	445	839
12	62	61	55	50	65	54	53	3,510	37	778	138	1,010
13	61	58	55	49	64	2,730	52	2,120	74	52	273	492
14	59	59	54	48	64	3,950	49	3,610	62	1,950	101	50
15	59	75	52	54	73	147	46	6,360	61	2,900	415	32
16	649	73	536	53	69	48	47	5,100	443	2,650	221	903
17	883	71	109	50	64	47	236	6,060	779	3,030	598	872
18	77	70	59	48	62	47	56	6,020	2,120	3,290	822	624
19	57	69	57	46	63	49	54	1,080	1,840	2,070	632	961
20	55	69	55	45	62	48	55	60	2,850	1,550	2,510	229
21	53	69	56	48	61	46	55	58	1,570	2,630	1,360	60
22	54	67	55	62	62	44	51	57	3,590	2,700	1,930	996
23	1,260	64	55	393	62	43	56	57	1,680	2,690	472	3,410
24	443	63	55	413	61	42	57	59	2,200	2,510	52	3,000
25	55	68	52	61	60	51	59	58	1,880	2,950	1,140	2,610
26	53	73	51	62	58	50	59	58	2,120	1,890	2,340	2,260
27	51	71	60	59	971	49	58	57	2,480	483	506	587
28	663	69	59	59	1,340	51	60	56	2,240	67	46	57
29	784	67	58	60	---	51	60	57	1,380	1,880	56	2,250
30	951	68	57	55	---	51	57	57	1,860	2,460	56	2,130
31	924	---	58	54	---	49	---	58	---	3,440	81	---
MEAN	609	67.6	91.7	89.7	171	264	56.9	1,145	995	2,103	958	884
MAX	2,620	135	536	454	1,340	3,950	236	6,360	3,590	3,440	3,530	3,410
MIN	51	55	51	45	49	42	37	56	32	52	36	32
IN.	0.30	0.03	0.04	0.04	0.08	0.13	0.03	0.56	0.47	1.03	0.47	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	1,021	1,287	1,690	956	1,714	2,647	2,208	2,676	2,642	2,867	1,453	997
MAX	9,085	6,038	10,360	3,703	8,098	10,530	10,310	7,784	10,560	10,810	7,895	7,902
(WY)	(1994)	(1987)	(1983)	(1986)	(1982)	(1985)	(1983)	(2002)	(1995)	(1981)	(1993)	(1993)
MIN	4.62	14.8	31.4	30.5	81.6	87.0	56.9	67.5	126	75.2	13.9	25.3
(WY)	(1980)	(1981)	(1980)	(1980)	(1989)	(1989)	(2003)	(1989)	(1988)	(1983)	(1980)	(1983)

05507800 SALT RIVER NEAR CENTER, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL MEAN	1,812		624		1,848	
HIGHEST ANNUAL MEAN					3,462	1993
LOWEST ANNUAL MEAN					283	1989
HIGHEST DAILY MEAN	12,000	May 18	6,360	May 15	65,600	Jul 29, 1981
LOWEST DAILY MEAN	19	Sep 18	32	Jun 11,Sep 15	0.44	Oct 14, 1979
ANNUAL SEVEN-DAY MINIMUM	48	Jan 13	40	Apr 2	0.65	Oct 11, 1979
MAXIMUM PEAK FLOW	---		8,230	May 18	72,800	Jul 29, 1981
MAXIMUM PEAK STAGE	---		12.23	May 18	32.62	Jul 29, 1981
INSTANTANEOUS LOW FLOW	---		9.0	Sep 16	0.44	Oct 14, 1979
ANNUAL RUNOFF (INCHES)	10.47		3.61		10.69	
10 PERCENT EXCEEDS	6,450		2,240		5,450	
50 PERCENT EXCEEDS	296		62		407	
90 PERCENT EXCEEDS	53		49		45	



05508000 SALT RIVER NEAR NEW LONDON, MO

LOCATION.--Lat 39°36'44", long 91°24'30", in NE $^1/_4$ NW $^1/_4$ sec.36, T.56 N., R.5 W., Ralls County, Hydrologic Unit 07110007, on left bank near downstream end of bridge on north bound side of dual U.S. Highway 61, 9.9 mi downstream from Clarence Cannon Dam, 2.0 mi north of New London, 8.0 mi upstream from Spencer Creek, and at mile 35.5.

DRAINAGE AREA.--2,480 mi^2, approximately.

PERIOD OF RECORD.--February 1922 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 477.03 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 7, 1931, nonrecording gage 400 ft upstream at datum 0.03 ft higher; Apr. 7, 1931 to Jan. 17, 1935, nonrecording gage at site 180 ft upstream at datum 0.04 ft lower; Jan. 17, 1935 to April 1985, water-stage recorder 400 ft upstream same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station. Flow mostly regulated by Clarence Cannon Dam, 9.9 mi upstream, since September 1979. Five percent of the drainage area, 130 mi^2, is natural drainage not regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft^3/s, Apr. 22, 1973; gage height, 31.8 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1858, reached a stage of 27.6 ft, present site and datum, based on comparison of June 1928 flood crest at stone marker, 1.0 mi downstream of gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,250	964	60	73	e48	311	57	93	79	1,930	3,420	2,640
2	2,140	97	59	83	e47	111	51	84	81	2,000	3,180	514
3	2,690	76	264	76	e47	100	48	74	90	2,010	1,020	215
4	2,340	69	78	72	e57	95	48	88	82	2,020	556	104
5	1,890	72	291	70	e58	90	42	266	77	2,210	2,480	85
6	121	79	84	66	e57	84	40	148	83	2,060	1,360	78
7	80	75	119	63	e57	78	47	121	87	2,280	1,880	78
8	74	74	76	489	e55	78	43	95	79	1,910	1,560	74
9	350	72	68	83	e54	87	43	313	75	1,960	1,670	139
10	189	73	66	66	59	84	60	378	109	2,130	107	939
11	1,690	69	65	62	1,110	82	60	484	70	2,240	49	767
12	427	67	64	60	101	94	58	2,190	48	2,200	501	953
13	92	64	63	58	82	1,230	56	3,300	838	133	93	1,320
14	80	60	62	e56	89	4,340	56	2,310	261	548	314	115
15	77	62	60	e61	581	1,470	52	6,760	136	2,960	98	90
16	75	76	58	e59	191	86	53	5,110	221	2,810	548	55
17	1,150	75	608	e57	116	64	211	6,280	425	3,030	116	1,110
18	451	72	152	e55	100	60	150	6,200	1,960	3,270	1,170	780
19	115	71	116	e53	151	121	75	3,210	1,770	2,360	227	714
20	76	69	83	e52	207	190	118	184	2,350	1,650	1,760	977
21	69	68	78	e53	140	100	105	109	1,970	1,890	2,430	127
22	65	66	76	e62	114	73	81	100	3,070	2,840	725	541
23	81	64	73	e73	96	63	65	94	2,000	2,810	1,810	2,560
24	1,600	60	73	e472	89	58	87	95	2,090	2,350	124	3,020
25	153	55	73	e486	81	67	136	105	2,240	2,870	95	2,820
26	78	61	66	e73	80	66	117	92	2,290	3,230	2,230	2,150
27	68	69	69	e64	642	61	92	87	2,560	298	1,600	2,110
28	64	68	79	e58	1,530	73	109	83	2,300	533	101	168
29	780	66	79	e56	---	91	160	79	1,640	550	73	559
30	797	62	79	e51	---	69	105	85	1,810	2,510	76	2,270
31	1,010	---	74	e49	---	64	---	81	---	3,110	507	---
MEAN	649	99.2	107	104	216	311	80.8	1,248	1,030	2,087	1,028	936
MAX	2,690	964	608	489	1,530	4,340	211	6,760	3,070	3,270	3,420	3,020
MIN	64	55	58	49	47	58	40	74	48	133	49	55
IN.	0.30	0.04	0.05	0.05	0.09	0.14	0.04	0.58	0.46	0.97	0.48	0.42

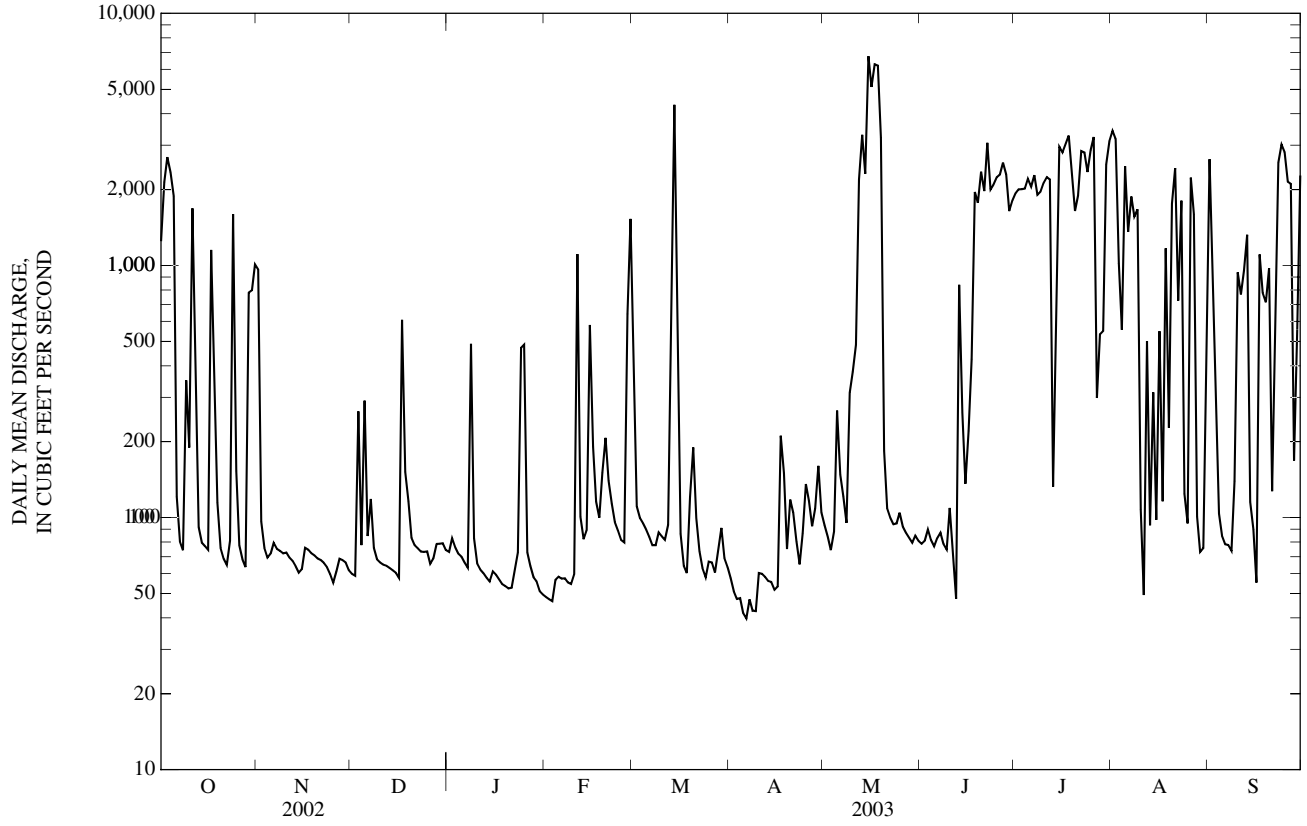
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003,[a] BY WATER YEAR (WY)

MEAN	1,049	1,401	1,805	1,040	1,857	2,831	2,365	2,866	2,733	2,971	1,533	1,048
MAX	9,165	6,406	11,100	4,001	8,787	10,810	10,660	9,003	10,950	11,900	7,961	8,300
(WY)	(1994)	(1986)	(1983)	(1985)	(1982)	(1985)	(1983)	(2002)	(1995)	(1981)	(1993)	(1993)
MIN	16.9	18.4	48.6	37.1	84.9	90.2	80.8	93.4	128	88.4	42.8	28.5
(WY)	(1980)	(1981)	(1980)	(1981)	(1989)	(1989)	(2003)	(1989)	(1988)	(1983)	(1983)	(1983)

05508000 SALT RIVER NEAR NEW LONDON, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980-2003[a]	
ANNUAL MEAN	2,029		663		1,960	
HIGHEST ANNUAL MEAN					3,577	1993
LOWEST ANNUAL MEAN					307	1989
HIGHEST DAILY MEAN	13,800	May 18	6,760	May 15	62,100	Jul 30, 1981
LOWEST DAILY MEAN	23	Sep 19	40	Apr 6	9.5	Nov 21, 1980
ANNUAL SEVEN-DAY MINIMUM	62	Jan 19	44	Apr 3	9.6	Nov 20, 1980
MAXIMUM PEAK FLOW	---		8,570	May 19	74,200	Jul 29, 1981
MAXIMUM PEAK STAGE	---		10.68	May 19	31.09	Jul 29, 1981
INSTANTANEOUS LOW FLOW	---		35	Jun 12	9.5	Nov 21, 1980
ANNUAL RUNOFF (INCHES)	11.11		3.63		10.74	
10 PERCENT EXCEEDS	7,450		2,270		5,720	
50 PERCENT EXCEEDS	306		94		478	
90 PERCENT EXCEEDS	64		58		58	

e Estimated
[a] Post-regulation period.



05508805 SPENCER CREEK BELOW PLUM CREEK NEAR FRANKFORD, MO

LOCATION.--Lat 39°31'13", long 91°20'32", in NW ¼ NW ¼ NW ¼ sec.27, T.55 N., R.4 W., Ralls County, Hydrologic Unit 07110007, on left bank 25 ft downstream from bridge on dual U.S. Highway 61, 0.75 mi downstream from Plum Creek, 2.5 mi northwest of Frankford, and at mile 4.5.

DRAINAGE AREA.--206 mi^2.

PERIOD OF RECORD.--Oct. 1, 1979 to current year. Mar. 27, 1930 to September 1978, fragmentary record.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 485.00 ft above National Geodetic Vertical Datum of 1929. Mar. 24, 1930, to Sept. 30, 1936, nonrecording gage at site 0.75 mi upstream at datum 3.63 ft higher; Oct. 7, 1961, to July 15, 1974, fragmentary record, at present site, datum unknown; July 26, 1974, to Apr. 15, 1975, from nonrecording gage present site and datum.

REMARKS.--No estimated daily discharges. Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

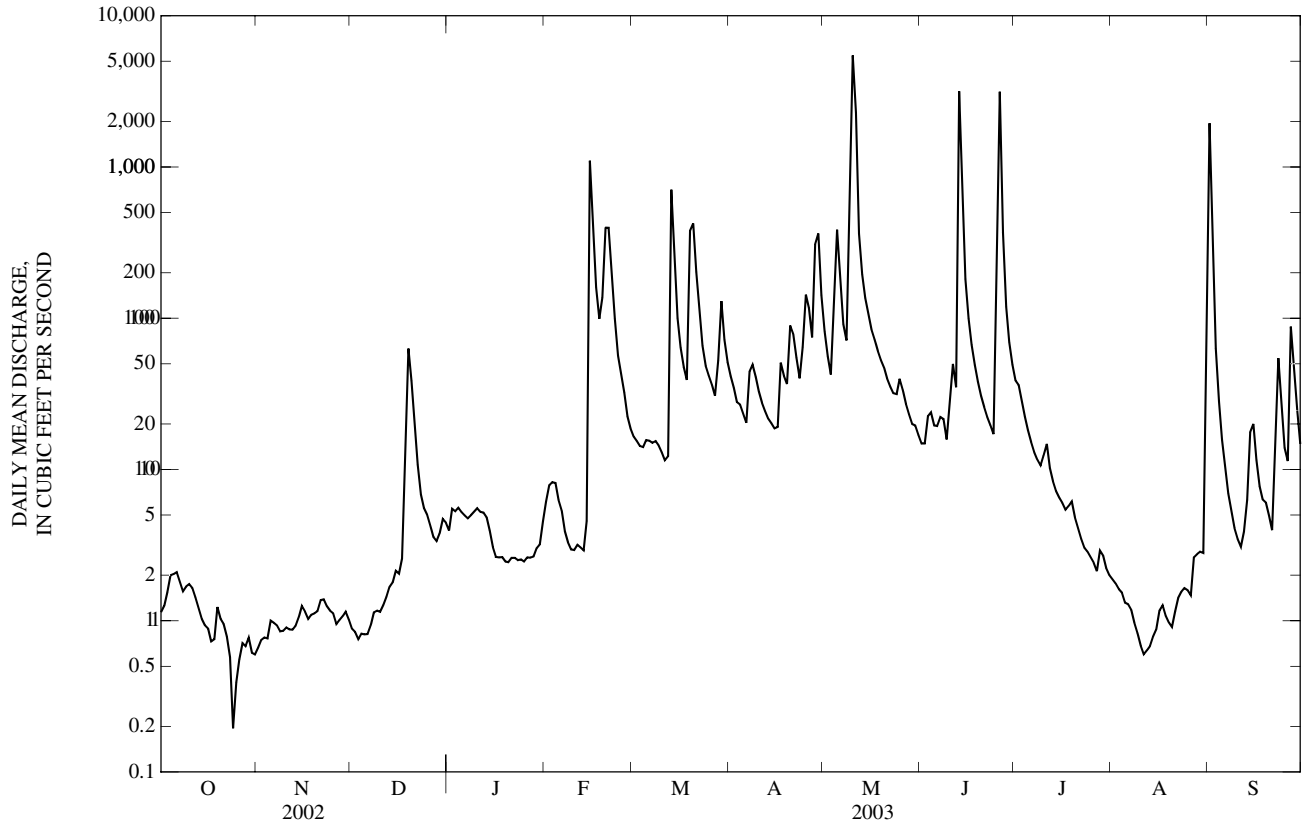
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	0.66	0.89	4.0	6.1	16	41	82	15	39	1.9	1,950
2	1.3	0.75	0.84	5.5	7.9	15	35	56	15	36	1.8	247
3	1.5	0.77	0.76	5.3	8.2	14	28	42	22	28	1.6	63
4	2.0	0.76	0.82	5.6	8.2	14	27	146	24	22	1.5	28
5	2.0	1.0	0.81	5.2	6.3	16	24	385	20	18	1.3	16
6	2.1	0.97	0.82	5.0	5.4	16	20	180	19	15	1.3	10
7	1.8	0.93	0.94	4.8	3.9	15	44	92	22	13	1.2	6.9
8	1.6	0.85	1.1	5.0	3.3	15	49	71	22	12	0.97	5.3
9	1.7	0.86	1.2	5.3	3.0	14	41	803	16	11	0.83	4.1
10	1.7	0.90	1.1	5.5	2.9	13	33	5,460	29	12	0.68	3.5
11	1.6	0.88	1.3	5.2	3.2	12	28	2,290	50	15	0.60	3.1
12	1.4	0.87	1.4	5.2	3.1	12	24	363	35	10	0.64	3.9
13	1.2	0.93	1.7	4.8	2.9	707	22	195	3,160	8.3	0.68	6.3
14	1.0	1.1	1.8	4.0	4.6	245	20	136	675	7.2	0.79	18
15	0.93	1.3	2.1	3.1	1,100	100	19	106	182	6.5	0.88	20
16	0.89	1.1	2.0	2.6	375	64	19	84	100	6.0	1.2	12
17	0.73	1.0	2.6	2.6	160	48	51	72	67	5.4	1.3	7.7
18	0.76	1.1	10	2.6	99	39	42	61	49	5.7	1.1	6.3
19	1.2	1.1	63	2.5	137	378	37	53	38	6.2	0.97	6.0
20	1.0	1.2	39	2.4	397	423	89	47	31	4.8	0.91	4.9
21	0.95	1.4	19	2.6	396	202	79	40	26	4.1	1.2	4.0
22	0.79	1.4	11	2.6	197	113	55	35	22	3.5	1.4	14
23	0.57	1.2	6.8	2.5	99	66	40	32	20	3.0	1.6	54
24	0.19	1.2	5.6	2.5	56	48	64	31	17	2.9	1.6	27
25	0.39	1.1	5.0	2.5	42	42	143	40	610	2.6	1.6	14
26	0.55	0.95	4.3	2.6	32	36	117	34	3,140	2.4	1.5	11
27	0.71	1.0	3.6	2.6	22	31	75	27	367	2.1	2.6	88
28	0.68	1.1	3.4	2.7	19	52	308	23	119	2.9	2.8	48
29	0.77	1.1	3.8	3.0	---	130	363	20	69	2.7	2.9	25
30	0.61	1.0	4.7	3.2	---	72	142	20	49	2.2	2.8	15
31	0.60	---	4.5	4.5	---	51	---	17	---	2.0	81	---
MEAN	1.11	1.02	6.64	3.79	114	97.4	69.3	356	301	10.0	3.97	90.7
MAX	2.1	1.4	63	5.6	1,100	707	363	5,460	3,160	39	81	1,950
MIN	0.19	0.66	0.76	2.4	2.9	12	19	17	15	2.0	0.60	3.1
IN.	0.01	0.01	0.04	0.02	0.58	0.55	0.38	1.99	1.63	0.06	0.02	0.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	42.8	169	156	113	215	198	250	298	140	157	60.0	85.2
MAX	376	1,310	985	453	766	738	919	1,028	451	1,788	290	1,402
(WY)	(1987)	(1986)	(1983)	(1999)	(1985)	(1984)	(1994)	(2002)	(1982)	(1981)	(1995)	(1993)
MIN	0.22	0.48	1.67	2.58	3.40	9.23	14.3	15.1	2.23	0.84	0.96	0.32
(WY)	(1989)	(1990)	(1990)	(1980)	(1980)	(1981)	(2000)	(1988)	(1988)	(1988)	(1994)	(1988)

05508805 SPENCER CREEK BELOW PLUM CREEK NEAR FRANKFORD, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL MEAN	169		87.4		156	
HIGHEST ANNUAL MEAN					355	1993
LOWEST ANNUAL MEAN					33.1	2000
HIGHEST DAILY MEAN	8,010	May 6	5,460	May 10	15,600	Jul 28, 1981
LOWEST DAILY MEAN	0.19	Oct 24	0.19	Oct 24	0.08	Aug 14, 1989
ANNUAL SEVEN-DAY MINIMUM	0.45	Sep 8	0.55	Oct 23	0.10	Sep 7, 1990
MAXIMUM PEAK FLOW	---		10,200	May 10	20,300	Sep 22, 1993
MAXIMUM PEAK STAGE	---		14.59	May 10	18.54	Sep 22, 1993
INSTANTANEOUS LOW FLOW	---		0.17	Oct 24	0.00	Jan 1, 1989
ANNUAL RUNOFF (INCHES)	11.17		5.76		10.32	
10 PERCENT EXCEEDS	184		115		223	
50 PERCENT EXCEEDS	12		6.3		22	
90 PERCENT EXCEEDS	0.90		0.92		1.1	



05514500 CUIVRE RIVER NEAR TROY, MO

LOCATION.--Lat 39°00'59", long 90°59'00", in SE $^1/_4$ sec.14, T.49 N., R.1 W., Lincoln County, Hydrologic Unit 07110008, on downstream side of right end of downstream bridge on dual U.S. Highway 61, 1.2 mi downstream from confluence of North Fork and West Fork Cuivre Rivers, and 2.0 mi north of Troy.

DRAINAGE AREA.--903 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1922 to July 1972, May 1979 to current year.

REVISED RECORDS.--WSP 855: 1933(m), 1935(m), 1937(m). WSP 895: 1939. WSP 1005: 1942(m). WSP 1308: 1922-25(m).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.27 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1930, nonrecording gage at site 3 mi downstream at datum 4.31 ft lower; Oct. 1, 1930, to July 1939, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--The highest flood since 1888 was the flood of December 1895 which reached a gage height of 27.90 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	19	7.1	97	20	97	402	608	88	257	19	9,130
2	7.2	16	7.7	80	24	91	323	420	83	201	18	3,440
3	37	19	6.5	66	25	132	266	319	98	166	17	619
4	17	17	6.3	52	24	117	213	1,850	143	139	16	295
5	10	19	6.5	47	24	105	161	6,860	136	116	16	162
6	9.2	22	6.6	43	24	98	143	2,460	112	98	15	103
7	7.6	22	6.9	40	20	90	180	1,030	154	84	15	73
8	6.7	20	6.6	44	20	82	274	2,870	164	73	14	e58
9	6.8	19	6.3	47	19	67	237	13,400	120	66	13	e49
10	6.3	17	6.4	45	19	60	192	13,100	102	88	12	e41
11	6.5	14	6.6	45	18	58	163	31,300	99	363	12	e36
12	7.4	14	7.1	42	17	61	146	7,810	208	155	11	31
13	6.4	14	7.4	38	17	942	129	1,670	6,880	102	12	32
14	5.5	14	7.4	33	22	1,460	120	932	7,910	75	14	35
15	5.5	14	7.6	28	3,450	621	109	676	1,630	62	14	81
16	5.4	12	7.2	26	4,840	356	102	513	438	51	12	102
17	5.2	12	8.1	23	1,130	249	309	421	225	44	11	72
18	5.7	12	449	21	505	191	399	352	164	46	10	49
19	7.2	12	1,240	20	542	2,100	268	304	128	51	9.2	33
20	6.3	11	647	20	1,320	8,240	216	264	103	46	9.0	26
21	6.4	10	280	18	886	7,040	243	225	87	41	9.2	25
22	6.8	9.7	142	17	499	1,580	263	200	75	33	7.6	61
23	6.6	9.7	84	15	341	755	218	187	65	28	7.2	339
24	6.7	9.2	64	13	254	530	229	178	58	26	6.6	296
25	11	8.3	55	13	175	419	2,910	198	259	24	6.5	115
26	13	8.0	44	13	142	364	2,170	205	14,000	23	6.6	68
27	13	7.6	38	12	125	317	781	200	6,480	23	6.0	54
28	11	7.9	32	14	111	391	649	160	1,330	22	5.9	82
29	20	9.4	31	14	---	2,410	3,290	120	561	21	11	64
30	29	7.7	58	15	---	742	1,270	106	356	19	9.9	48
31	25	---	118	18	---	513	---	97	---	18	12	---
MEAN	10.4	13.6	110	32.9	522	977	546	2,872	1,409	82.6	11.5	521
MAX	37	22	1,240	97	4,840	8,240	3,290	31,300	14,000	363	19	9,130
MIN	5.2	7.6	6.3	12	17	58	102	97	58	18	5.9	25
IN.	0.01	0.02	0.14	0.04	0.60	1.25	0.67	3.67	1.74	0.11	0.01	0.64

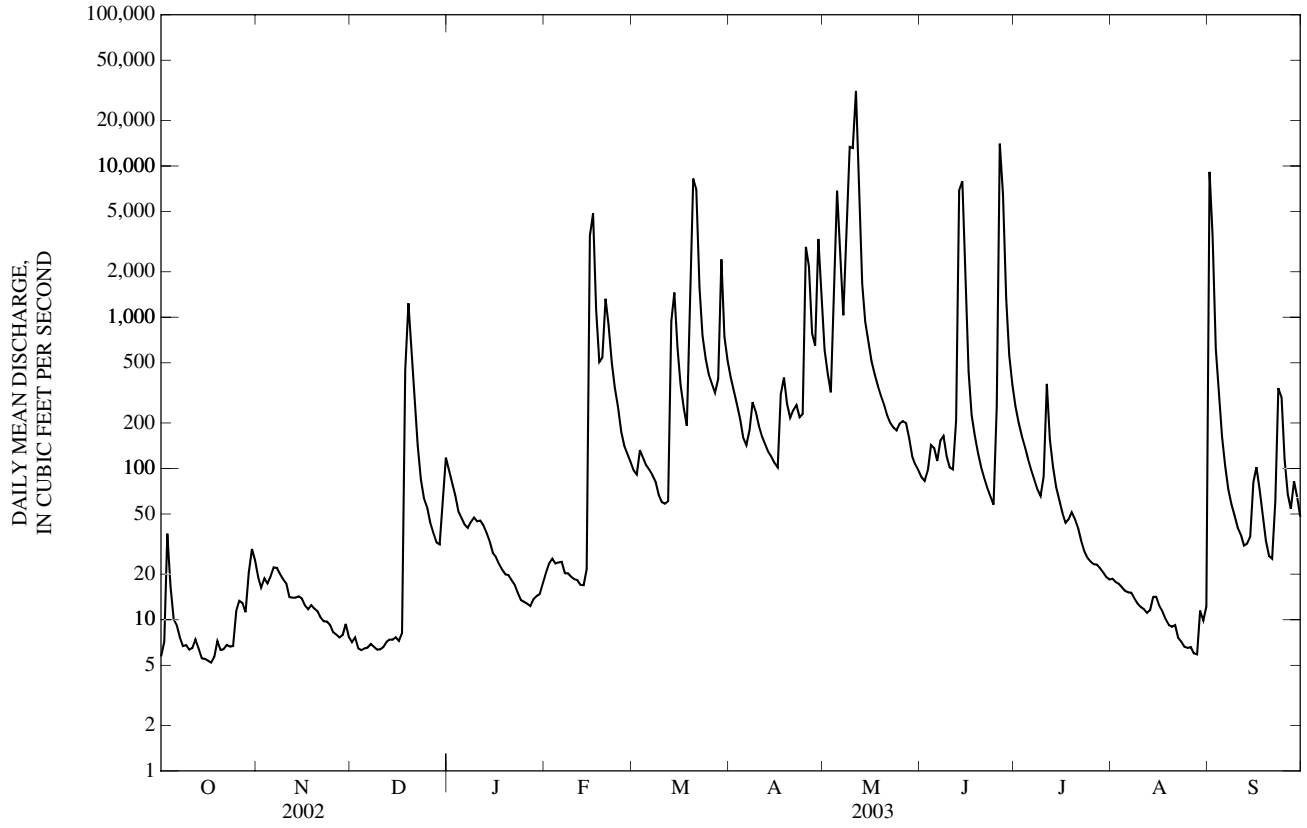
STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	393	502	498	533	865	995	1,207	1,109	720	547	288	446
MAX	6,704	4,503	5,924	2,465	4,250	3,596	6,126	6,311	4,735	4,366	1,994	9,098
(WY)	(1942)	(1986)	(1983)	(1949)	(1962)	(1922)	(1994)	(1929)	(1970)	(1981)	(1923)	(1993)
MIN	0.10	1.30	1.11	1.63	1.80	2.51	25.8	17.1	11.0	0.44	0.23	0.24
(WY)	(1965)	(1954)	(1964)	(1954)	(1954)	(1954)	(1954)	(1934)	(1936)	(1934)	(1936)	(1964)

05514500 CUIVRE RIVER NEAR TROY, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	860		592		674	
HIGHEST ANNUAL MEAN					2,186	1993
LOWEST ANNUAL MEAN					27.3	1954
HIGHEST DAILY MEAN	36,600	May 7	31,300	May 11	76,400	Oct 5, 1941
LOWEST DAILY MEAN	5.2	Oct 17	5.2	Oct 17	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	5.8	Sep 11	5.8	Oct 14	0.00	At Times
MAXIMUM PEAK FLOW	---		42,300	May 11	120,000	Oct 5, 1941
MAXIMUM PEAK STAGE	---		27.68	May 11	33.40	Oct 5, 1941
INSTANTANEOUS LOW FLOW	---		4.4	Oct 2,16-18	0.00	Several Years
ANNUAL RUNOFF (INCHES)	12.94		8.91		10.14	
10 PERCENT EXCEEDS	1,250		823		1,240	
50 PERCENT EXCEEDS	66		54		91	
90 PERCENT EXCEEDS	7.2		7.3		6.0	

e Estimated



05514500 CUIVRE RIVER NEAR TROY, MO—Continued
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

REMARKS.--National Stream-Quality Accounting Network station October 1986 through September 1994. Ambient Water-Quality Monitoring Network station October 1994 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as $CaCO_3$ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV 05...	1145	Environmental	21	10.1	89	7.5	385	8.5	170	52.3	9.14	3.96
JAN 07...	1200	Environmental	42	14.2	103	7.7	374	1.7	--	--	--	--
MAR 04...	1500	Environmental	117	13.7	112	7.3	346	5.5	--	--	--	--
MAY 20...	1630	Environmental	265	10.9	124	7.7	385	21.1	180	58.7	8.46	4.13
JUL 22...	1200	Environmental	34	8.6	110	7.6	416	27.3	--	--	--	--
SEP 03...	1140	Environmental	641	6.5	74	7.2	186	20.5	--	--	--	--

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as $CaCO_3$ (00410)	ANC, wat unf incrm. titr., field, mg/L as $CaCO_3$ (00419)	Bicarbonate, wat unf incrm. titr., field, mg/L (00450)	Carbonate, wat unf incrm. titr., field, mg/L (00447)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV 05...	8.88	163	164	201	<1	14.9	<0.2	18.5	221	11	0.32	<0.04	0.21
JAN 07...	--	150	149	182	<1	--	--	--	--	<10	0.36	<0.04	1.02
MAR 04...	--	125	126	153	<1	--	--	--	--	12	0.51	<0.21	1.92
MAY 20...	9.41	151	152	185	<1	12.4	<0.2	23.0	242	41	0.64	<0.04	1.45
JUL 22...	--	167	168	205	<1	--	--	--	--	25	0.98	E.03	<0.06
SEP 03...	--	66	68	83	<1	--	--	--	--	42	1.1	<0.04	0.92

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Copper, water, fltrd, µg/L (01040)
NOV 05...	<0.008	<0.02	<0.04	0.05	12k	64k	104	<2	130	0.6	<0.04	<0.2	<6
JAN 07...	E.006	0.03	<0.04	0.09	4k	6k	31	--	--	--	--	--	--
MAR 04...	E.030n	E.06n	0.08	0.13	3k	10k	22	--	--	--	--	--	--
MAY 20...	0.012	<0.02	E.02	0.10	29k	100	129	2	426	0.8	<0.04	<0.2	<6
JUL 22...	<0.008	<0.02	<0.04	0.09	96	143k	70	--	--	--	--	--	--
SEP 03...	E.005n	E.09nd	0.15	0.34	1,500	1,560k	1,760	--	--	--	--	--	--

05514500 CUIVRE RIVER NEAR TROY, MO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Manganese, water, fltrd, µg/L (01056)	Mercury water, unfltrd recover -able, µg/L (71900)	Selenium, water, fltrd, µg/L (01145)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
NOV 05...	19	<0.08	M	229	<0.02	<0.5	M	E1
JAN 07...	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	--	--	--	--
MAY 20...	<10	<0.08	2	203	<0.02	0.8	2	2
JUL 22...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
d -- Diluted sample: method hi range exceeded
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL

05514840 DARDENNE CREEK AT O'FALLON, MO

LOCATION.--Lat 38°44'26", long 90°41'42", in NE ¼ NE ¼ SE ¼ sec.16, T.46 N., R.3 E., St. Charles County, Hydrologic Unit 07110009, attached to downstream side of State Highway K bridge, 4.2 mi south of Interstate 70.

DRAINAGE AREA.--61.0 mi^2.

PERIOD OF RECORD.--Nov. 18, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--No estimated daily discharges. Records fair. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

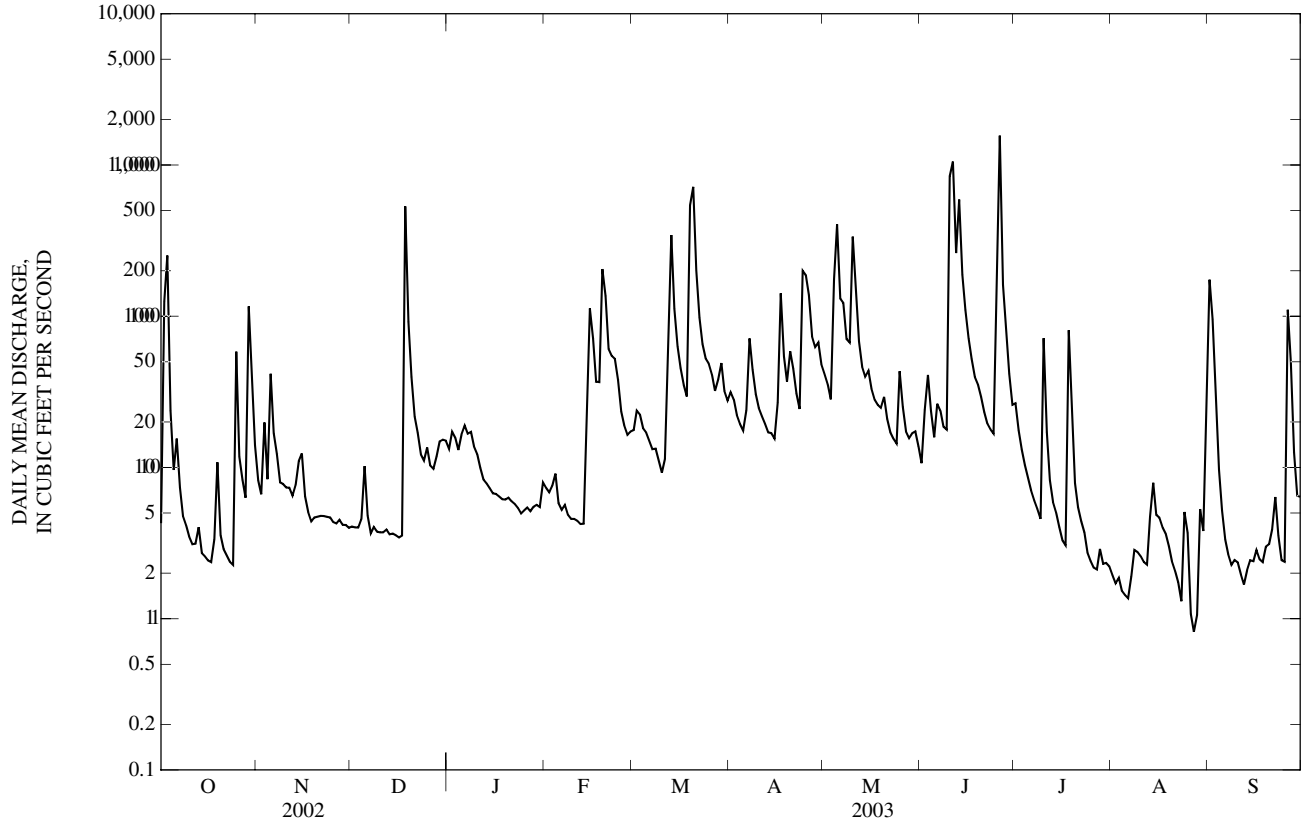
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	8.2	4.1	13	7.3	18	31	41	11	27	1.9	174
2	125	6.6	4.0	17	6.9	24	28	35	24	18	1.7	95
3	252	20	4.0	16	7.6	22	22	28	41	13	1.9	33
4	24	8.4	4.6	13	9.1	18	19	176	24	10	1.5	9.7
5	9.6	42	10	17	5.8	17	18	405	16	8.5	1.4	5.2
6	16	17	4.8	19	5.2	15	24	131	26	7.0	1.4	3.3
7	7.4	12	3.7	17	5.7	13	71	123	24	6.0	1.9	2.7
8	4.8	8.0	4.0	17	4.9	13	44	71	19	5.3	2.8	2.3
9	4.1	7.8	3.8	14	4.6	11	31	67	18	4.6	2.8	2.4
10	3.5	7.4	3.7	12	4.6	9.2	25	336	843	72	2.6	2.4
11	3.1	7.3	3.7	10	4.4	11	22	151	1,050	17	2.4	2.0
12	3.1	6.5	3.9	8.3	4.2	46	19	68	262	8.2	2.3	1.7
13	4.0	7.6	3.6	7.8	4.3	344	17	46	591	5.9	4.7	2.1
14	2.7	11	3.7	7.3	24	112	17	40	188	5.0	7.9	2.4
15	2.6	12	3.6	6.7	112	63	16	44	110	4.0	4.9	2.4
16	2.4	6.4	3.4	6.7	71	45	27	33	71	3.3	4.7	2.8
17	2.4	5.0	3.5	6.4	37	35	142	28	52	3.1	4.0	2.5
18	3.4	4.4	532	6.2	37	29	54	26	40	81	3.7	2.4
19	11	4.7	92	6.1	205	541	37	25	36	21	3.0	3.0
20	3.6	4.7	40	6.3	136	716	59	29	29	7.9	2.4	3.1
21	2.9	4.8	22	6.0	61	201	45	21	23	5.5	2.1	3.9
22	2.6	4.8	17	5.7	55	98	31	17	20	4.4	1.7	6.4
23	2.4	4.7	12	5.4	52	66	24	16	18	3.7	1.3	3.6
24	2.3	4.7	11	5.0	38	52	199	14	17	2.7	5.1	2.4
25	58	4.3	14	5.2	23	49	186	43	145	2.4	3.7	2.4
26	12	4.3	10	5.4	19	41	138	25	1,560	2.2	1.1	110
27	8.3	4.5	9.8	5.1	16	32	73	17	161	2.1	0.82	50
28	6.3	4.2	12	5.5	17	38	63	16	77	2.9	1.1	13
29	116	4.2	15	5.7	---	49	67	17	42	2.3	5.3	6.5
30	32	4.0	15	5.5	---	32	48	17	26	2.3	3.8	6.4
31	14	---	15	8.0	---	28	---	14	---	2.2	27	---
MEAN	24.1	8.38	28.7	9.33	34.9	89.9	53.2	68.4	185	11.6	3.64	18.6
MAX	252	42	532	19	205	716	199	405	1,560	81	27	174
MIN	2.3	4.0	3.4	5.0	4.2	9.2	16	14	11	2.1	0.82	1.7
IN.	0.45	0.15	0.54	0.18	0.60	1.70	0.97	1.29	3.39	0.22	0.07	0.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	21.5	21.1	37.7	27.3	64.5	65.3	69.0	118	147	15.1	8.75	9.38
MAX	33.4	45.1	91.2	74.2	101	116	138	271	220	23.1	17.8	18.6
(WY)	(2002)	(2002)	(2002)	(2002)	(2001)	(2002)	(2002)	(2002)	(2000)	(2000)	(2000)	(2003)
MIN	6.93	8.38	4.14	3.84	34.9	22.9	20.1	10.5	65.3	8.97	3.64	3.37
(WY)	(2001)	(2003)	(2001)	(2000)	(2003)	(2000)	(2000)	(2001)	(2001)	(2001)	(2003)	(2001)

05514840 DARDENNE CREEK AT O'FALLON, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL MEAN	73.0		44.5		51.3	
HIGHEST ANNUAL MEAN					82.2	2002
LOWEST ANNUAL MEAN					27.2	2001
HIGHEST DAILY MEAN	2,330	Jun 12	1,560	Jun 26	4,140	Jun 24, 2000
LOWEST DAILY MEAN	1.4	Sep 5,6	0.82	Aug 27	0.82	Aug 27, 2003
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 2	1.7	Aug 1	1.3	Sep 17, 2000
MAXIMUM PEAK FLOW	---		3,470	Jun 26	5,770	Jun 24, 2000
MAXIMUM PEAK STAGE	---		14.62	Jun 26	19.14	Jun 24, 2000
INSTANTANEOUS LOW FLOW	---		0.78	Aug 27	0.53	Sep 20, 2000
ANNUAL RUNOFF (INCHES)	16.26		9.91		11.43	
10 PERCENT EXCEEDS	144		85		92	
50 PERCENT EXCEEDS	14		11		11	
90 PERCENT EXCEEDS	3.6		2.4		2.5	



05514860 DARDENNE CREEK AT OLD TOWN ST. PETERS, MO

LOCATION.--Lat 38°48'12", long 90°38'06", in SE ¼ SW ¼ SW ¼ sec.24, T.47 N., R.3 E., St. Charles County, Hydrologic Unit 07110009, on left bank 0.6 mi upstream from State Highway C.

DRAINAGE AREA.--102 mi^2.

PERIOD OF RECORD.--Nov. 18, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	51	8.7	42	36	60	33	60	27	100	8.2	549
2	116	36	9.6	55	22	84	36	46	56	241	15	e186
3	1,470	137	10	74	21	58	29	30	208	52	48	e89
4	172	69	11	52	20	48	30	435	82	37	14	e30
5	62	243	14	60	17	46	26	909	48	31	8.8	e18
6	96	89	23	111	13	41	67	318	110	28	5.4	e13
7	58	42	15	71	16	34	217	425	96	23	8.8	e11
8	25	25	11	60	12	28	70	201	61	20	5.5	e9.5
9	17	13	10	49	10	26	39	179	39	20	5.5	e9.7
10	13	17	10	38	9.7	19	29	789	834	258	5.2	e9.5
11	9.7	17	13	28	9.6	20	25	401	3,670	82	5.1	e9.7
12	8.7	16	13	26	8.6	181	25	185	565	32	4.9	e16
13	18	22	10	26	8.9	768	28	131	1,230	22	6.6	e8.1
14	11	25	9.0	20	164	208	20	104	330	17	16	e7.5
15	6.1	98	8.5	17	408	105	23	129	173	16	9.4	e7.2
16	5.2	41	7.9	15	235	71	50	97	109	13	7.3	e7.2
17	4.8	25	7.7	14	144	54	272	91	82	10	5.6	e6.9
18	11	23	1,980	12	145	43	104	79	70	437	4.8	6.3
19	117	17	702	12	567	915	59	64	60	193	3.6	5.8
20	30	13	182	13	357	1,800	136	104	51	51	3.9	6.0
21	12	14	96	13	153	342	74	66	41	23	2.7	11
22	7.8	12	61	11	131	176	62	46	33	18	3.6	18
23	5.5	11	45	8.9	124	114	59	36	27	17	3.0	8.7
24	6.8	11	33	7.8	101	85	489	32	27	13	3.1	6.1
25	342	12	37	8.4	71	74	411	227	87	13	6.2	3.8
26	101	13	33	9.6	51	63	300	90	3,920	9.7	5.1	255
27	41	11	31	8.7	46	44	131	54	526	9.5	2.8	316
28	30	11	40	10	49	63	127	39	149	13	2.1	31
29	578	9.9	74	13	---	76	104	37	89	12	3.6	13
30	141	10	75	11	---	42	66	54	58	11	16	11
31	73	---	71	35	---	32	---	46	---	9.5	80	---
MEAN	116	37.8	118	30.0	105	185	105	178	429	59.1	10.3	56.0
MAX	1,470	243	1,980	111	567	1,800	489	909	3,920	437	80	549
MIN	3.1	9.9	7.7	7.8	8.6	19	20	30	27	9.5	2.1	3.8
IN.	1.31	0.41	1.33	0.34	1.08	2.09	1.15	2.01	4.69	0.67	0.12	0.61

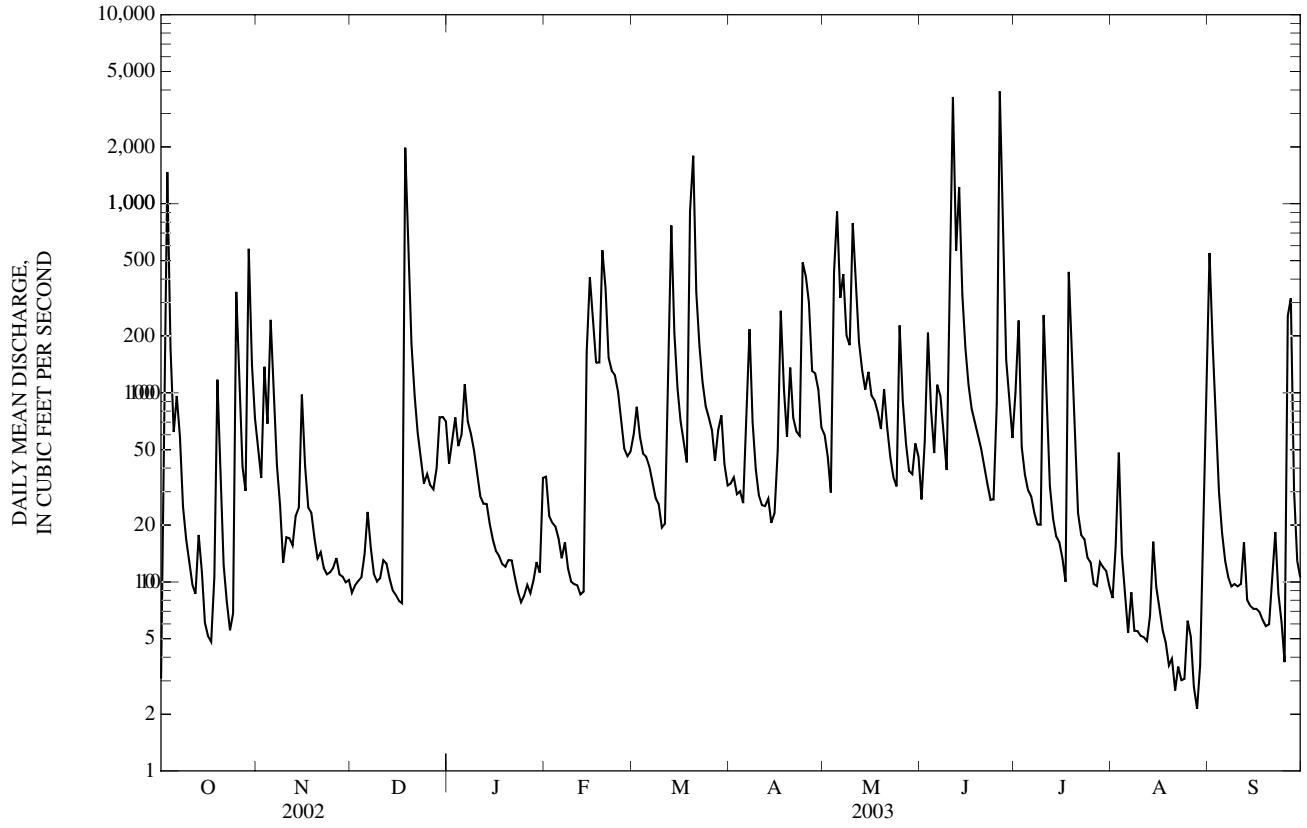
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	70.2	51.1	83.1	60.1	130	108	127	235	309	37.8	22.5	37.6
MAX	116	83.0	160	149	193	185	237	522	429	59.1	45.3	67.7
(WY)	(2003)	(2002)	(2002)	(2002)	(2001)	(2003)	(2002)	(2002)	(2003)	(2003)	(2000)	(2002)
MIN	27.0	32.6	7.16	6.85	105	33.2	31.1	30.0	149	15.5	10.3	5.76
(WY)	(2001)	(2001)	(2001)	(2000)	(2002)	(2000)	(2000)	(2001)	(2001)	(2002)	(2003)	(2001)

05514860 DARDENNE CREEK AT OLD TOWN ST. PETERS, MO—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL MEAN	149		119		110	
HIGHEST ANNUAL MEAN					152	2002
LOWEST ANNUAL MEAN					59.2	2001
HIGHEST DAILY MEAN	3,830	Jun 12	3,920	Jun 26	4,670	Jun 24, 2000
LOWEST DAILY MEAN	0.51	Aug 12	2.1	Aug 28	0.45	Oct 3,4, 2001
ANNUAL SEVEN-DAY MINIMUM	0.96	Sep 7	3.5	Aug 18	0.68	Sep 28, 2001
MAXIMUM PEAK FLOW	---		4,690	Jun 11	6,370	Jun 24, 2000
MAXIMUM PEAK STAGE	---		19.23	Jun 11	22.14	Jun 24, 2000
INSTANTANEOUS LOW FLOW	---		2.0	Aug 28,29	0.30	Oct 3, 2001
ANNUAL RUNOFF (INCHES)	19.77		15.80		14.64	
10 PERCENT EXCEEDS	251		237		189	
50 PERCENT EXCEEDS	29		32		21	
90 PERCENT EXCEEDS	3.0		7.6		4.3	

e Estimated



05587450 MISSISSIPPI RIVER AT GRAFTON, IL

LOCATION.--Lat 38°58'05", long 90°25'42", in NE $^1/_4$ sec.15, T.6 N., R.12 W., Jersey County, Hydrologic Unit 07110009, on left bank 0.2 mi downstream from the mouth of Illinois River, 15.3 mi above Lock and Dam 26, 23.0 mi above mouth of Missouri River, and at mile 218.6 upstream of the mouth of Ohio River.

DRAINAGE AREA.--171,300 mi^2, approximately.

PERIOD OF RECORD.--
DISCHARGE: October 1, 1986 to current year. Intermittently from 1880 to 1928, computed daily 1928 to 1932 by the National Weather Service and/or the U.S. Army Corps of Engineers. 1929 to September 1986, stage only at this site. Discharge published at site 15.3 mi downstream, "Mississippi River at Alton, IL" (05587500), October 1927 to September 1986.
GAGE HEIGHT: August 1879 through September 1892, 1929 to September 1986, October 1986 to current year. Stages also available from reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 403.79 ft above National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder 15.3 mi downstream.

REMARKS.--Records poor. Natural flow of river affected by many navigation dams in upper Mississippi River Basin. Flood water from Missouri River overtops or breaches the levees at extremely high stages. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached an elevation of 435.89 ft, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63,100	77,300	e47,900	66,400	e39,800	37,700	68,900	143,000	187,000	97,400	92,500	55,900
2	65,200	73,200	e47,700	62,800	e40,900	39,200	70,600	155,000	169,000	97,200	84,400	41,300
3	67,000	80,400	e47,900	52,800	e39,800	40,700	67,500	177,000	164,000	105,000	68,700	20,600
4	68,500	76,600	e48,400	50,400	e39,800	39,800	60,000	195,000	151,000	105,000	63,400	31,000
5	73,600	81,900	48,000	54,400	39,200	38,500	71,900	215,000	141,000	105,000	59,000	25,100
6	73,100	76,700	e49,400	55,900	e38,500	38,000	82,500	222,000	132,000	107,000	61,500	29,200
7	80,100	79,700	e47,900	49,900	e37,500	42,500	77,800	222,000	139,000	106,000	53,300	30,800
8	82,300	78,900	47,100	53,600	e36,700	35,100	77,900	220,000	128,000	112,000	56,500	28,400
9	83,000	71,600	45,500	51,000	e36,800	35,900	75,000	218,000	110,000	116,000	51,300	23,800
10	81,800	61,700	e45,200	48,500	e35,400	36,000	70,600	222,000	109,000	163,000	46,000	26,100
11	87,900	61,300	43,900	52,200	e35,700	40,100	67,200	241,000	117,000	190,000	42,900	24,900
12	91,000	63,300	45,000	53,300	e39,300	42,000	68,300	248,000	115,000	192,000	38,300	23,000
13	95,200	65,700	e48,700	47,100	e44,300	45,400	70,700	239,000	128,000	189,000	37,100	23,600
14	92,400	63,300	e51,800	35,100	e48,300	55,200	63,100	225,000	149,000	185,000	40,800	27,700
15	94,000	66,600	e52,900	31,300	e50,000	51,800	62,800	218,000	138,000	177,000	37,200	39,400
16	109,000	65,300	e51,900	43,500	e50,800	52,300	59,300	218,000	124,000	168,000	30,400	42,600
17	94,500	67,500	63,200	51,300	39,300	57,800	74,600	218,000	115,000	156,000	30,800	35,400
18	100,000	67,200	73,500	42,200	37,300	55,500	78,300	219,000	116,000	148,000	34,300	23,400
19	105,000	62,700	69,000	42,500	41,200	59,900	84,300	220,000	120,000	171,000	34,500	26,100
20	100,000	56,300	51,400	37,300	45,600	93,500	81,900	221,000	116,000	161,000	35,800	32,800
21	102,000	56,800	54,200	e36,500	47,400	99,800	79,200	220,000	110,000	135,000	34,800	33,800
22	105,000	52,700	54,500	e35,200	40,200	88,900	88,800	220,000	106,000	119,000	31,400	34,400
23	101,000	61,600	57,800	e35,600	36,800	84,000	97,800	222,000	103,000	131,000	27,900	26,400
24	98,000	59,100	65,400	e38,700	33,300	73,100	107,000	225,000	100,000	134,000	26,900	33,300
25	101,000	52,900	63,700	e37,100	34,200	72,000	110,000	228,000	84,300	127,000	40,100	33,700
26	89,200	54,400	57,900	e35,300	32,600	66,200	120,000	229,000	106,000	122,000	37,100	25,300
27	76,900	56,300	53,800	e34,500	37,800	71,400	123,000	230,000	102,000	115,000	35,200	30,700
28	79,800	48,000	45,000	34,300	37,500	67,500	123,000	230,000	97,300	105,000	33,500	27,200
29	88,200	47,500	44,000	32,800	---	66,000	134,000	227,000	92,400	108,000	27,100	29,600
30	87,700	47,000	47,700	34,600	---	61,100	143,000	221,000	91,200	103,000	22,600	32,600
31	89,300	---	59,000	33,200	---	66,500	---	205,000	---	94,000	28,300	---
MEAN	87,900	64,450	52,560	44,170	39,860	56,560	85,300	216,500	122,000	133,700	43,340	30,600
MAX	109,000	81,900	73,500	66,400	50,800	99,800	143,000	248,000	187,000	192,000	92,500	55,900
MIN	63,100	47,000	43,900	31,300	32,600	35,100	59,300	143,000	84,300	94,000	22,600	20,600
IN.	0.59	0.42	0.35	0.30	0.24	0.38	0.56	1.46	0.79	0.90	0.29	0.20

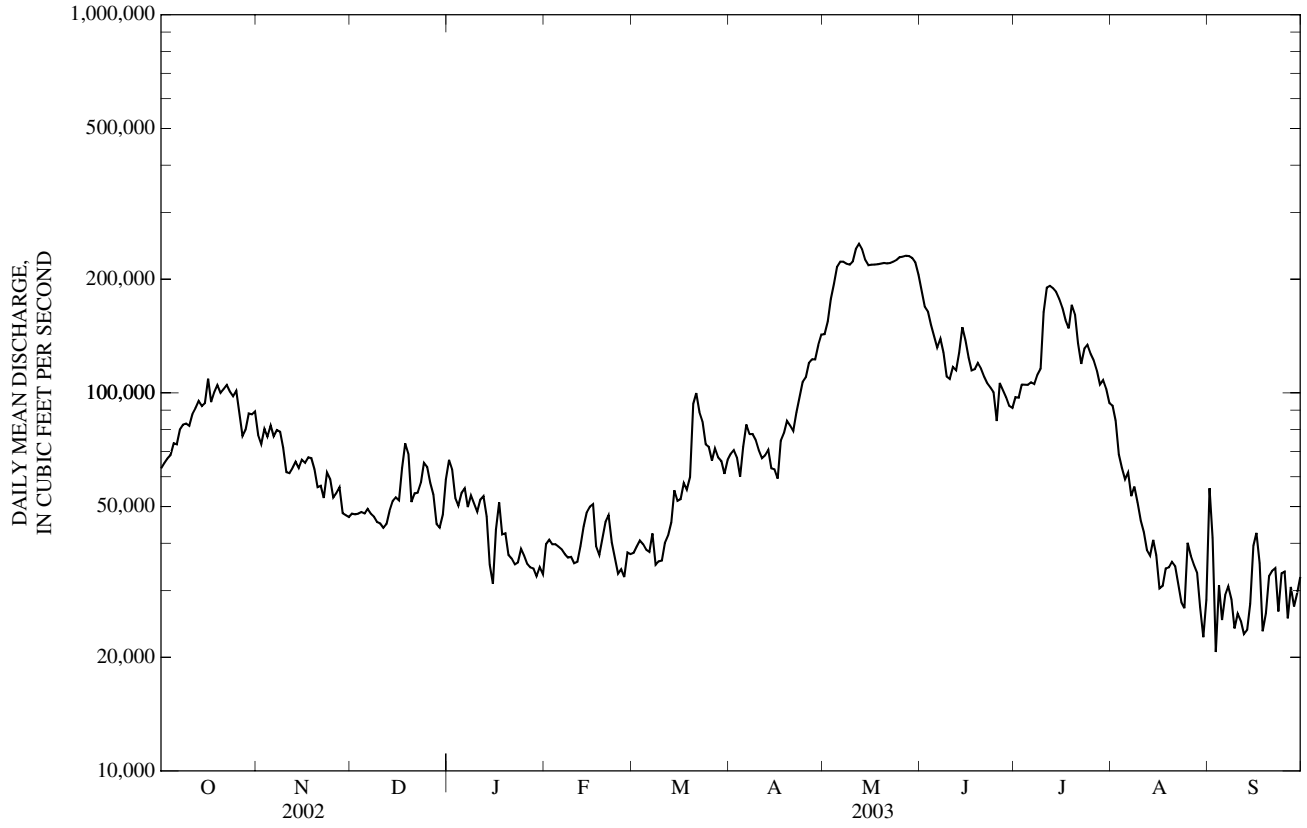
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	87,890	90,370	84,940	76,060	94,450	139,700	180,300	206,400	176,500	148,600	102,300	80,610
MAX	334,900	171,300	169,900	161,000	158,000	217,400	342,100	333,300	273,400	469,300	416,900	309,900
(WY)	(1987)	(1987)	(1993)	(1993)	(1999)	(1997)	(1993)	(1993)	(2001)	(1993)	(1993)	(1993)
MIN	28,050	33,270	31,810	34,800	39,860	56,560	72,770	69,140	36,310	30,420	37,230	30,600
(WY)	(1989)	(1990)	(1990)	(1990)	(2003)	(2003)	(2000)	(1988)	(1988)	(1988)	(1988)	(2003)

05587450 MISSISSIPPI RIVER AT GRAFTON, IL—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL MEAN	124,200		81,820		122,500	
HIGHEST ANNUAL MEAN					250,700	1993
LOWEST ANNUAL MEAN					53,860	1989
HIGHEST DAILY MEAN	374,000	May 15	248,000	May 12	596,000	Aug 3, 1993
LOWEST DAILY MEAN	39,500	Jan 22	20,600	Sep 3	20,100	Dec 14, 1988
ANNUAL SEVEN-DAY MINIMUM	46,200	Dec 7	25,400	Sep 8	23,600	Dec 12, 1988
MAXIMUM PEAK FLOW	---		249,000	May 12	598,000	Aug 1, 1993
MAXIMUM PEAK STAGE	---		422.53	May 12	441.96	Aug 1, 1993
INSTANTANEOUS LOW FLOW	---		20,600	Sep 3	20,100	Dec 14, 1988
ANNUAL RUNOFF (INCHES)	9.85		6.49		9.71	
10 PERCENT EXCEEDS	272,000		170,000		246,000	
50 PERCENT EXCEEDS	94,900		63,300		94,600	
90 PERCENT EXCEEDS	53,300		33,600		43,000	

e Estimated



05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 38°57'04", long 90°22'16", in sec.24, T.6 N., R.11 W., Jersey County, Hydrologic Unit 07110009, 11.3 mi above Lock and Dam 26, 19.0 mi above mouth of Missouri River, and at mile 214.6 upstream from the mouth of the Ohio River.

DRAINAGE AREA.--171,300 mi^2, approximately.

PERIOD OF RECORD.--March 1989 to current year. National Stream-Quality Accounting Network station September 1989 to October 1992. National Stream-Quality Accounting Network station November 1992 to September 2002. Ambient Water-Quality Monitoring Network November 1992 to current year.

REMARKS.--Sediment records fair except for estimated daily loads, which are poor.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT: October 1989 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 1,910 mg/L, May 23, 1990; minimum daily mean, 1 mg/L, Sept. 10, 1991.
SUSPENDED-SEDIMENT LOAD: Maximum daily, 1,090,000 tons, May 23, 1990; minimum daily, 186 tons, Sept. 10, 1991.

EXTREMES FOR CURRENT YEAR.--
SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 691 mg/L, May 10; minimum daily mean, 11 mg/L, Jan. 15.
SUSPENDED-SEDIMENT LOAD: Maximum daily, 420,000 tons, May 11; minimum daily, 973 tons, Jan. 15.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as $CaCO_3$ (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
OCT												
21...	1320	Environmental	102,000	E56	9.7	92	8.1	366	12.7	170	41.0	15.9
NOV												
06...	1400	Environmental	76,700	19	11.5	97	8.1	431	7.6	190	46.7	18.7
DEC												
02...	1345	Environmental	e47,700	14	14.2	111	8.6	492	4.1	210	49.1	20.3
FEB												
19...	1255	Environmental	41,200	46	16.6	118	8.6	379	1.1	240	55.4	23.6
MAR												
04...	1025	Environmental	39,800	18	20.1	147	9.1	408	1.8	230	51.6	23.5
18...	1045	Environmental	55,500	32	16.6	166	8.9	516	14.0	200	46.0	21.8
APR												
21...	1405	Environmental	79,200	44	8.6	86	8.4	514	14.4	190	43.6	20.8
MAY												
05...	1345	Environmental	215,000	110	9.8	104	7.9	447	16.8	150	36.9	14.7
JUN												
02...	1300	Environmental	169,000	67	7.1	80	8.1	436	19.8	190	47.2	17.2
JUL												
07...	1335	Environmental	106,000	48	10.2	137	8.2	502	29.7	230	54.8	22.2
AUG												
04...	1345	Environmental	63,400	88	11.2	147	7.9	470	28.2	250	64.2	22.8
SEP												
08...	1405	Environmental	28,400	58	7.9	98	8.1	369	25.9	180	40.6	18.7

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, field, mg/L as $CaCO_3$ (00410)	ANC, wat unf incrm. titr., field, mg/L as $CaCO_3$ (00419)	Bicarbonate, wat unf incrm. titr., field, mg/L (00450)	Carbonate, wat unf incrm. titr., field, mg/L (00447)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT														
21...	2.88	12.7	132	131	160	<1	19.6	<0.20	10.9	21.0	226	--	E.95	<0.04
NOV														
06...	2.92	18.1	143	144	176	<1	26.2	<0.20	10.9	26.5	266	--	0.74	E.03
DEC														
02...	2.93	19.8	165	165	188	6	29.5	0.20	8.2	32.7	302	20	0.77	<0.04
FEB														
19...	3.44	25.9	176	177	186	15	39.9	0.21	4.2	37.6	324	--	1.3	E.03
MAR														
04...	3.35	26.2	180	181	170	25	37.7	0.19	3.3	36.6	309	34	1.4	<0.04
18...	3.20	28.7	153	154	171	8	40.4	0.20	0.6	35.3	283	59	1.4	<0.04
APR														
21...	4.50	27.8	148	148	158	11	43.3	0.19	1.0	35.0	286	93	1.3	0.14
MAY														
05...	4.03	17.6	120	123	150	<1	29.5	<0.17	4.5	27.2	230	231	1.5	0.08
JUN														
02...	3.14	10.5	146	147	179	<1	19.5	0.20	5.2	27.3	270	296	1.4	<0.04
JUL														
07...	3.14	14.2	168	173	211	<1	24.0	0.20	5.0	34.5	293	100	0.95	E.02
AUG														
04...	3.97	16.3	160	162	197	<1	25.7	0.30	7.7	32.5	285	247	1.5	<0.04
SEP														
08...	4.53	19.8	123	125	152	<1	29.3	0.20	2.9	31.7	253	126	1.1	<0.04

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7µ MF col/ 100 mL (31625)	Fecal streptococci KF MF, col/ 100 mL (31673)	Aluminum, water, fltrd, µg/L (01106)	Aluminum, water, unfltrd recoverable, µg/L (01105)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)
OCT														
21...	E1.73	E.014	E.11	E.12	E.25	110k	160	45	--	--	--	--	--	--
NOV														
06...	2.30	0.011	0.12	0.11	0.18	32	56	4k	--	--	--	--	--	--
DEC														
02...	2.23	0.008	0.07	0.08	0.15	8k	31	1k	<20	200	<8	<0.2	<6	19
FEB														
19...	2.08	0.028	0.04	0.04	0.23	28	125	490	--	--	--	--	--	--
MAR														
04...	1.81	0.029	<0.02	E.03	0.14	24	22	4k	<20	130	<8	<0.2	<6	22
18...	1.65	0.027	<0.02	E.02	0.18	56	37	5k	--	--	--	--	--	--
APR														
21...	1.44	0.027	0.06	0.08	0.22	6k	15k	2k	--	--	--	--	--	--
MAY														
05...	1.71	0.043	0.06	0.09	0.37	110	208	245	<20	2,000	<8	E.1	<6	15
JUN														
02...	3.49	0.033	--r	0.08	0.27	7k	13k	20	--	--	--	--	--	--
JUL														
07...	3.62	0.061	0.09	0.12	0.24	8k	10k	3k	43	940	<2	<0.2	<7	10
AUG														
04...	2.88	0.031	0.11	0.13	0.41	55	115	58	--	--	--	--	--	--
SEP														
08...	0.64	0.126	0.12	0.15	0.31	27	29	5k	--	--	--	--	--	--

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan- ese, water, fltrd, µg/L (01056)	Mercury water, unfltrd recover -able, µg/L (71900)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
OCT						
21...	--	--	--	--	--	--
NOV						
06...	--	--	--	--	--	--
DEC						
02...	E.07	M	E1.9b	<0.02	<24	<20
FEB						
19...	--	--	--	--	--	--
MAR						
04...	E.04	M	13.2	<0.02	<24	<20
18...	--	--	--	--	--	--
APR						
21...	--	--	--	--	--	--
MAY						
05...	E.04	4	2.9	E.01	<24	E20
JUN						
02...	--	--	--	--	--	--
JUL						
07...	E.05n	2	4.6	<0.02	5	20
AUG						
04...	--	--	--	--	--	--
SEP						
08...	--	--	--	--	--	--

Remark codes used in this table:
< -- Less than
e -- Estimated discharge
E -- Estimated value
M -- Presence verified, not quantified

Value qualifier codes used in this table:
b -- Value was extrapolated below
k -- Counts outside acceptable range
n -- Below the LRL and above the LT-MDL

Null value qualifier codes used in this table:
r -- Sample ruined in preparation

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
	OCTOBER			NOVEMBER			DECEMBER		
1	63,100	68	11,600	77,300	79	17,800	47,900	61	7,830
2	65,200	68	11,800	73,200	70	14,100	47,700	68	8,720
3	67,000	69	12,400	80,400	66	13,700	47,900	77	9,930
4	68,500	77	14,000	76,600	71	15,100	48,400	72	9,370
5	73,600	85	16,200	81,900	73	15,600	48,000	76	9,860
6	73,100	75	14,900	76,700	72	15,300	49,400	76	10,000
7	80,100	46	9,540	79,700	72	15,100	47,900	73	9,540
8	82,300	57	12,500	78,900	75	16,100	47,100	76	9,740
9	83,000	78	17,400	71,600	82	16,700	45,500	74	9,210
10	81,800	74	16,400	61,700	87	15,600	45,200	63	7,740
11	87,900	74	16,900	61,300	88	14,600	43,900	61	7,320
12	91,000	83	20,000	63,300	88	14,800	45,000	66	7,960
13	95,200	94	23,600	65,700	80	14,000	48,700	67	8,480
14	92,400	92	23,200	63,300	68	11,800	51,800	72	9,770
15	94,000	99	24,800	66,600	64	11,200	52,900	79	11,100
16	109,000	108	29,600	65,300	71	12,700	51,900	86	12,200
17	94,500	115	31,700	67,500	74	13,300	63,200	81	12,600
18	100,000	130	34,200	67,200	69	12,600	73,500	81	14,900
19	105,000	134	37,300	62,700	70	12,300	69,000	92	17,700
20	100,000	130	35,800	56,300	73	11,700	51,400	88	14,300
21	102,000	129	35,200	56,800	73	11,100	54,200	85	12,100
22	105,000	120	33,600	52,700	68	9,990	54,500	81	11,900
23	101,000	102	28,300	61,600	65	9,980	57,800	85	12,900
24	98,000	96	25,800	59,100	65	10,500	65,400	84	13,900
25	101,000	94	25,400	52,900	61	9,210	63,700	78	13,500
26	89,200	89	22,900	54,400	62	8,960	57,900	94	15,400
27	76,900	90	20,200	56,300	70	10,500	53,800	115	17,300
28	79,800	85	18,100	48,000	73	10,300	45,000	135	18,100
29	88,200	75	17,100	47,500	70	9,000	44,000	144	17,300
30	87,700	74	17,600	47,000	67	8,560	47,700	120	14,900
31	89,300	80	19,000	---	---	---	59,000	106	15,300
	JANUARY			FEBRUARY			MARCH		
1	66,400	107	18,100	39,800	19	1,840	37,700	109	11,100
2	62,800	108	18,900	40,900	---	3,090	39,200	113	11,700
3	52,800	120	18,700	39,800	---	3,900	40,700	112	12,100
4	50,400	130	18,100	39,800	---	3,710	39,800	108	11,700
5	54,400	136	19,200	39,200	---	3,400	38,500	107	11,300
6	55,900	131	19,500	38,500	---	3,190	38,000	104	10,800
7	49,900	124	17,700	37,500	---	2,960	42,500	100	10,800
8	53,600	97	13,500	36,700	29	2,940	35,100	98	10,200
9	51,000	63	8,960	36,800	32	3,180	35,900	100	9,610
10	48,500	54	7,250	35,400	34	3,360	36,000	101	9,820
11	52,200	39	5,340	35,700	42	4,030	40,100	97	10,000
12	53,300	22	3,160	39,300	54	5,490	42,000	113	12,500
13	47,100	20	2,760	44,300	49	5,520	45,400	138	16,300
14	35,100	16	1,730	48,300	41	5,100	55,200	131	17,800
15	31,300	11	973	50,000	89	11,800	51,800	120	17,400
16	43,500	14	1,440	50,800	129	17,500	52,300	132	18,600
17	51,300	15	1,960	39,300	95	11,600	57,800	129	19,200
18	42,200	19	2,410	37,300	77	8,010	55,500	109	16,700
19	42,500	19	2,200	41,200	71	7,550	59,900	178	27,800
20	37,300	30	3,190	45,600	48	5,640	93,500	273	56,500
21	36,500	45	4,460	47,400	39	4,910	99,800	268	69,900
22	35,200	43	4,110	40,200	35	4,160	88,900	249	63,400
23	35,600	40	3,840	36,800	70	7,220	84,000	230	53,600
24	38,700	---	4,350	33,300	100	9,440	73,100	197	41,800
25	37,100	---	4,800	34,200	105	9,580	72,000	184	36,100
26	35,300	---	4,340	32,600	121	10,900	66,200	179	33,300
27	34,500	---	3,790	37,800	119	11,300	71,400	181	33,600
28	34,300	28	2,610	37,500	110	11,200	67,500	182	34,100
29	32,800	25	2,300	---	---	---	66,000	164	29,500
30	34,600	28	2,570	---	---	---	61,100	129	22,100
31	33,200	20	1,820	---	---	---	66,500	156	26,900

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
		APRIL			MAY			JUNE	
1	68,900	229	41,900	143,000	187	72,200	187,000	265	140,000
2	70,600	247	46,500	155,000	173	69,300	169,000	288	139,000
3	67,500	213	39,700	177,000	181	81,100	164,000	310	139,000
4	60,000	190	32,700	195,000	230	116,000	151,000	296	126,000
5	71,900	184	32,800	215,000	275	152,000	141,000	248	97,700
6	82,500	173	36,000	222,000	309	183,000	132,000	205	75,400
7	77,800	154	33,300	222,000	334	200,000	139,000	195	71,200
8	77,900	129	27,000	220,000	336	200,000	128,000	195	70,200
9	75,000	120	24,800	218,000	466	276,000	110,000	196	63,000
10	70,600	126	24,700	222,000	691	411,000	109,000	197	58,200
11	67,200	124	23,000	241,000	672	420,000	117,000	208	63,600
12	68,300	130	23,800	248,000	526	347,000	115,000	243	76,200
13	70,700	158	29,700	239,000	502	330,000	128,000	260	85,300
14	63,100	157	28,300	225,000	511	320,000	149,000	267	99,800
15	62,800	137	23,300	218,000	431	257,000	138,000	258	100,000
16	59,300	127	20,900	218,000	340	200,000	124,000	220	78,000
17	74,600	121	22,000	218,000	344	203,000	115,000	215	69,300
18	78,300	110	22,600	219,000	385	227,000	116,000	217	67,400
19	84,300	82	18,000	220,000	400	237,000	120,000	210	66,800
20	81,900	69	15,400	221,000	382	227,000	116,000	207	66,000
21	79,200	68	14,800	220,000	345	205,000	110,000	197	60,100
22	88,800	72	16,300	220,000	314	187,000	106,000	183	53,500
23	97,800	91	22,900	222,000	308	184,000	103,000	161	45,400
24	107,000	118	32,600	225,000	294	177,000	100,000	169	46,500
25	110,000	144	42,300	228,000	286	175,000	84,300	234	58,200
26	120,000	169	52,300	229,000	303	187,000	106,000	282	72,700
27	123,000	181	59,300	230,000	317	197,000	102,000	307	86,000
28	123,000	189	62,600	230,000	314	195,000	97,300	277	74,400
29	134,000	188	65,100	227,000	298	184,000	92,400	227	58,200
30	143,000	186	69,300	221,000	279	169,000	91,200	228	56,600
31	---	---	---	205,000	264	152,000	---	---	---
		JULY			AUGUST			SEPTEMBER	
1	97,400	235	59,800	92,500	114	28,800	55,900	154	17,500
2	97,200	198	51,900	84,400	111	26,400	41,300	159	20,900
3	105,000	150	41,000	68,700	116	24,000	20,600	137	11,400
4	105,000	143	40,700	63,400	119	21,300	31,000	116	8,120
5	105,000	149	42,300	59,000	127	21,000	25,100	108	8,190
6	107,000	142	40,700	61,500	127	20,600	29,200	103	7,530
7	106,000	154	44,100	53,300	118	18,400	30,800	95	7,720
8	112,000	193	56,400	56,500	98	14,500	28,400	86	6,860
9	116,000	257	79,000	51,300	89	13,000	23,800	85	6,010
10	163,000	368	139,000	46,000	94	12,300	26,100	84	5,690
11	190,000	468	223,000	42,900	98	11,800	24,900	83	5,740
12	192,000	521	269,000	38,300	89	9,790	23,000	85	5,480
13	189,000	500	257,000	37,100	71	7,220	23,600	81	5,080
14	185,000	404	204,000	40,800	70	7,330	27,700	74	5,120
15	177,000	316	155,000	37,200	86	9,080	39,400	71	6,450
16	168,000	284	132,000	30,400	94	8,580	42,600	68	7,520
17	156,000	271	118,000	30,800	72	5,970	35,400	64	6,780
18	148,000	277	114,000	34,300	58	5,120	23,400	63	5,010
19	171,000	309	133,000	34,500	75	6,930	26,100	80	5,360
20	161,000	336	150,000	35,800	90	8,580	32,800	81	6,480
21	135,000	294	117,000	34,800	87	8,270	33,800	65	5,810
22	119,000	241	82,700	31,400	82	7,360	34,400	65	5,940
23	131,000	240	81,200	27,900	82	6,570	26,400	67	5,530
24	134,000	268	95,800	26,900	74	5,480	33,300	73	5,900
25	127,000	268	94,500	40,100	58	5,290	33,700	72	6,510
26	122,000	221	74,200	37,100	56	5,830	25,300	68	5,450
27	115,000	178	56,700	35,200	55	5,360	30,700	78	5,910
28	105,000	175	51,900	33,500	60	5,580	27,200	79	6,210
29	108,000	198	57,100	27,100	92	7,540	29,600	71	5,450
30	103,000	181	51,500	22,600	122	8,210	32,600	70	5,850
31	94,000	144	38,100	28,300	139	9,540	---	---	---