07040000 ST. FRANCIS RIVER AT FISK, MO

St. Francis Basin
Lower St. Francis Subbasin

LOCATION.--Lat 36°47′25″, long 90°12′03″ referenced to North American Datum of 1983, in NE ¼ NW ¼ sec.28, T.24 N., R.8 E., Butler County, MO, Hydrologic Unit 08020203, and at bridge on U.S. Hwy 60 at Fisk, Missouri.

DRAINAGE AREA.--1,370 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Oct 1927 to Sep 1941, and Oct 1997 to current year. Daily stages Jan 1917 to Feb 1922, and Aug 1992 to date, daily discharges Jan 1984 to current year, and results of discharge measurements Mar 1935 to Sep 1997 in reports of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 307.46 ft above NGVD of 1929. On Apr 16, 2004, the gage was moved approximately 0.8 mi upstream to present location at Hwy 60 bridge.

REMARKS.--Water-discharge records good. No estimated daily discharges. Some regulation by Wappapello Lake, (Missouri) 36.3 mi upstream, since Aug 1, 1941, capacity 625,000 acre-ft. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1917, 28.0 ft, from floodmark, Apr 18, 1927.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,180 ft^3/s, Dec. 31, Jan. 1, gage height, 14.99 ft; minimum discharge, 54 ft^3/s, Sept. 5, gage height, -1.90 ft.

07040000 ST. FRANCIS RIVER AT FISK, MO—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	114	1,190	3,240	6,170	2,940	1,310	4,460	854	679	149	465	58
2	114	994	3,230	6,130	2,860	1,270	4,240	1,120	641	149	486	57
3	114	1,060	3,310	6,060	2,770	1,210	4,070	1,370	630	153	672	58
4	115	2,120	3,200	5,990	2,570	1,120	3,910	1,550	617	151	740	56
5	114	2,560	3,160	5,910	2,420	924	3,750	1,590	539	147	751	57
6	123	2,800	3,160	5,820	2,480	802	3,610	1,590	503	138	724	69
7	121	2,860	3,290	5,730	2,600	765	3,340	1,590	495	130	525	72
8	154	2,860	3,350	5,640	2,750	654	2,640	1,570	487	133	340	73
9	473	2,850	3,550	5,530	3,080	530	1,540	1,560	479	142	272	76
10	526	2,860	3,360	5,430	3,160	372	1,030	1,550	373	135	262	262
11	811	3,050	3,310	5,310	3,140	306	646	1,530	319	131	259	373
12	1,470	3,080	3,280	5,180	3,110	868	514	1,510	314	136	253	401
13	2,050	3,070	3,270	5,050	3,060	1,910	586	1,490	309	375	205	643
14	2,180	3,060	3,250	4,690	3,000	2,330	744	1,480	307	885	162	944
15	2,220	3,040	3,210	4,290	2,940	2,630	791	1,470	303	1,060	149	969
16	2,190	3,050	3,190	4,000	2,860	3,140	794	1,460	299	1,080	146	847
17	2,170	3,090	3,200	3,740	2,640	3,500	795	1,460	297	934	141	814
18	2,150	3,050	3,560	3,440	2,380	3,340	790	1,460	294	615	136	812
19	1,930	3,080	3,660	3,150	1,920	3,120	792	1,640	289	494	123	852
20	1,450	3,340	3,640	2,900	1,540	2,740	791	1,980	287	623	99	843
21	1,010	3,410	3,600	2,800	1,440	2,190	781	2,080	290	643	93	723
22	902	3,400	3,550	2,780	1,420	2,090	672	2,470	292	664	80	677
23	1,170	3,390	3,520	2,670	1,410	2,380	541	3,000	290	639	72	652
24	875	3,380	4,300	2,680	1,410	2,910	942	3,120	285	628	67	631
25	1,250	3,360	5,480	2,710	1,410	3,570	776	2,790	280	535	63	559
26	1,800	3,350	4,710	3,080	1,410	3,850	628	2,220	218	487	60	446
27	1,950	3,330	4,330	3,190	1,410	4,110	615	1,390	167	471	62	296
28	2,090	3,310	4,340	3,170	1,390	4,570	604	1,120	159	462	62	232
29	2,360	3,290	5,020	3,130	---	4,720	597	1,070	154	485	62	215
30	3,090	3,260	5,860	3,090	---	4,720	598	914	151	476	62	204
31	2,440	---	6,140	3,020	---	4,630	---	791	---	469	62	---
Total	39,526	86,544	117,270	132,480	65,520	72,581	46,587	50,789	10,747	13,719	7,655	12,971
Mean	1,275	2,885	3,783	4,274	2,340	2,341	1,553	1,638	358	443	247	432
Max	3,090	3,410	6,140	6,170	3,160	4,720	4,460	3,120	679	1,080	751	969
Min	114	994	3,160	2,670	1,390	306	514	791	151	130	60	56
Ac-ft	78,400	171,700	232,600	262,800	130,000	144,000	92,410	100,700	21,320	27,210	15,180	25,730

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	354	778	1,665	2,441	2,065	2,432	2,614	2,389	1,460	493	367	277
Max	1,275	2,885	3,783	7,905	4,817	6,667	9,837	7,332	8,572	1,780	2,204	1,018
(WY)	(2010)	(2010)	(2010)	(1937)	(1999)	(2008)	(2008)	(2002)	(1928)	(1928)	(1998)	(2003)
Min	125	205	243	272	319	328	326	195	148	112	81.5	58.8
(WY)	(1941)	(2000)	(1939)	(1931)	(1934)	(1941)	(1941)	(2000)	(1936)	(1941)	(2007)	(1999)

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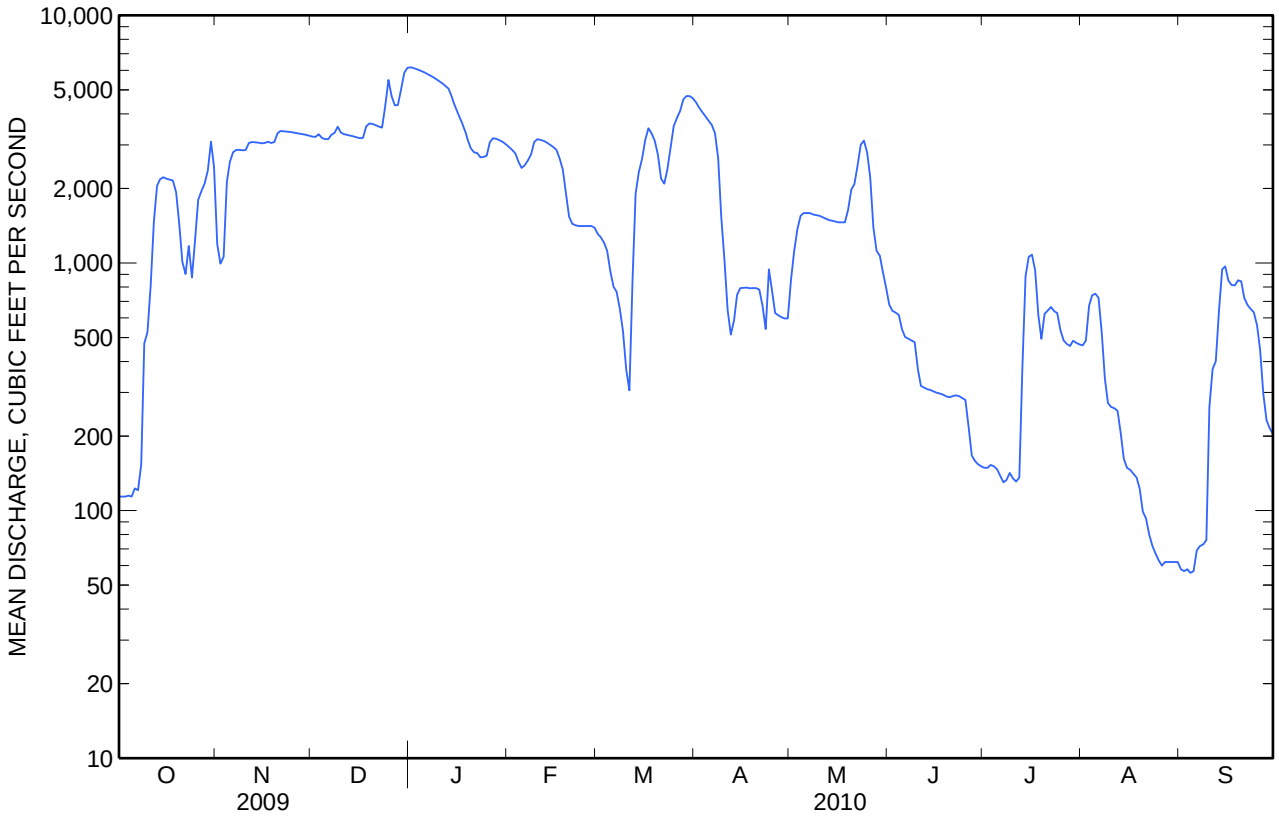
SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1928 - 2010	
Annual total	690,539		656,389			
Annual mean	1,892		1,798		1,442	
Highest annual mean					2,773	2002
Lowest annual mean					437	1941
Highest daily mean	6,390	Feb 15	6,170	Jan 1	36,000	May 16, 1933
Lowest daily mean	36	Sep 3	56	Sep 4	8.0	Jul 25, 1940
Annual seven-day minimum	54	Aug 30	59	Aug 30	16	Jul 20, 1940
Maximum peak flow			6,180	Dec 31[a]	49,900	Mar 13, 1935[b]
Maximum peak stage			14.99	Jan 1	26.71	Mar 13, 1935[b]
Instantaneous low flow			54	Sep 5	5.0	Jul 26, 1940
Annual runoff (ac-ft)	1,370,000		1,302,000		1,045,000	
10 percent exceeds	3,690		3,690		3,710	
50 percent exceeds	1,840		1,390		576	
90 percent exceeds	119		140		145	

[a] Also Jan 1

[b] Prior to regulation



07040000 ST. FRANCIS RIVER AT FISK, MO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Oct 1977 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 3

[%, percent; ft³/s, cubic feet per second; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Discharge, instantaneous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)	Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Transparency, water, in situ, Secchi disc, m (00078)
10-14-2009	0740	762	2,300	8.96	91.3	7.90	223	16.24	.15
11-17-2009	1505	760	3,220	9.77	94.8	7.11	117	13.90	.21
12-15-2009	1430	773	3,350	10.78	87.0	7.50	141	6.75	.27
01-20-2010	0735	756	3,140	10.84	84.7	7.25	140	4.63	.21
02-17-2010	0820	--	2,740	--	--	--	--	2.29	.24
03-23-2010	1430	--	2,460	--	--	--	--	13.2	.12
04-14-2010	0730	--	695	--	--	--	--	18.38	.24
05-19-2010	0735	--	1,600	--	--	--	--	21.80	.21
06-23-2010	0740	--	252	--	--	--	--	30.64	.24
07-20-2010	0715	--	630	--	--	--	--	29.4	.24
08-25-2010	0705	--	64.2	--	--	--	--	28.4	.27
09-22-2010	0810	--	681	--	--	--	--	25.3	.24

07040000 ST. FRANCIS RIVER AT FISK, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 3

[%, percent; ft³/s, cubic feet per second; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Sampler type (84164)	Sampling method (82398)	Bed sediment, fall diameter (deionized water), percent smaller than 0.0625 millimeters (80158)	Bed sediment, fall diameter (deionized water), percent smaller than 0.125 millimeters (80159)	Bed sediment, fall diameter (deionized water), percent smaller than 0.25 millimeters (80160)	Bed sediment, fall diameter (deionized water), percent smaller than 0.5 millimeters (80161)	Bed sediment, fall diameter (deionized water), percent smaller than 1 millimeter (80162)	Bed sediment, fall diameter (deionized water), percent smaller than 2 millimeters (80163)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.0625 mm (70342)
10-14-2009	Sampler US DH-59	EWI	6	18	96	100	--	--	97
11-17-2009	Sampler US DH-59	EWI	13	21	92	97	100	--	90
12-15-2009	Sampler US DH-59	EWI	10	21	95	100	--	--	92
01-20-2010	Sampler US DH-59	EWI	4	15	97	100	--	--	96
02-17-2010	Sampler US DH-59	EWI	18	32	94	100	--	--	92
03-23-2010	Sampler US DH-59	EWI	37	70	96	100	--	--	50
04-14-2010	Sampler US DH-59	EWI	3	13	94	100	--	--	99
05-19-2010	Sampler US DH-59	EWI	15	48	95	98	99	100	95
06-23-2010	Sampler US DH-59	EWI	24	39	95	100	--	--	96
07-20-2010	Sampler US DH-59	EWI	30	49	95	100	--	--	96
08-25-2010	Sampler US DH-59	EWI	17	50	98	99	100	--	97
09-22-2010	Sampler US DH-59	EWI	2	12	83	100	--	--	98

07040000 ST. FRANCIS RIVER AT FISK, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 3

[%, percent; ft³/s, cubic feet per second; m, meters; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; °C, degrees Celsius; µS/cm, microsiemens per centimeter]

Date	Suspended sediment, fall diameter (deionized water), percent smaller than 0.125 mm (70343)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.25 mm (70344)	Suspended sediment, fall diameter (deionized water), percent smaller than 0.5 mm (70345)	Suspended sediment, fall diameter (deionized water), percent smaller than 1 millimeter (70346)	Suspended sediment concen tration, mg/L (80154)	Suspended sediment discharge, tons per day (80155)
10-14-2009	97	97	100	--	97	602.4
11-17-2009	94	96	100	--	60	521.6
12-15-2009	93	100	--	--	46	416.1
01-20-2010	97	100	--	--	47	398.5
02-17-2010	94	100	--	--	34	251.5
03-23-2010	53	87	96	100	113	750.5
04-14-2010	99	100	--	--	54	101.3
05-19-2010	95	97	100	--	73	315.4
06-23-2010	96	100	--	--	64	43.5
07-20-2010	96	100	--	--	100	170.1
08-25-2010	97	100	--	--	77	13.3
09-22-2010	98	98	100	--	99	182.0