Water-Data Report 2013

07185765 SPRING RIVER AT CARTHAGE, MO

Neosho Basin
Spring Subbasin

LOCATION.--Lat 37°11'19.1", long 94°19'33.3" referenced to North American Datum of 1983, in SW ¼ NW ¼ SW ¼ sec.33, T.29 N., R.31 W., Jasper County, MO, Hydrologic Unit 11070207, on left downstream wingwall of St. Francis Street bridge 0.8 mi northwest of junction with Highway 96 in Carthage.

DRAINAGE AREA.--425 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1966 to October 14, 1980, May 23, 2001 to current year. Occasional discharge measurements 1951-1954. Intermittent gage readings since Oct. 31, 1945, collected by Corps of Engineers.

REVISED RECORDS.--WRD-MO-69-1: 1968(P) WDR-US-11: 2002, 2005, 2007, 2008, 2010(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is unknown. Jan. 26, 1967 to September 1980, gage located approximately 0.75 mi upstream, at datum of 923.68 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 26, 1967, nonrecording gage at site 0.87 mi upstream of current site, at former datum.

REMARKS.--No estimated daily discharges. Records fair except for discharges above 22,000 ft^3/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 22.0 ft by highwater mark 1 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 11	1000	6,800	10.81
Apr 19	0000	5,660	9.83
Apr 27	1330	4,990	9.22
May 20	2045	3,710	7.97
Jun 1	0515	6,460	10.52
Jul 30	1415	*20,200	*16.15
Aug 3	2245	4,740	8.99
Aug 5	0400	4,630	8.89

Minimum discharge, 39 ft^3/s, Oct. 10, gage height, 2.82 ft.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	46	103	60	46	291	443	1,400	992	4,650	315	865	242
2	45	99	59	45	259	409	957	896	1,990	297	628	238
3	45	94	60	43	245	383	860	972	1,290	285	1,830	226
4	45	90	78	43	231	396	766	1,610	1,090	274	2,590	219
5	45	87	68	42	216	408	693	1,390	1,080	262	2,620	212
6	44	83	66	42	202	365	638	1,130	1,060	254	1,700	202
7	44	78	66	41	198	334	589	1,010	921	238	1,340	191
8	43	76	65	42	191	315	546	934	821	227	1,500	187
9	42	75	63	44	182	310	512	905	751	218	1,840	183
10	41	77	60	44	179	714	724	976	760	206	1,180	173
11	42	88	58	44	176	1,430	4,410	978	662	197	994	172
12	79	87	56	49	175	907	1,270	835	588	188	887	167
13	85	83	55	57	180	712	971	760	529	180	813	163
14	140	79	55	64	180	611	843	706	490	176	724	155
15	470	76	58	73	180	551	743	662	1,130	169	649	150
16	227	71	55	75	177	510	660	632	1,580	165	588	152
17	187	72	54	74	175	490	597	608	1,350	157	542	163
18	166	71	53	72	172	631	2,920	562	1,710	150	501	163
19	151	72	52	68	167	643	2,390	522	1,010	144	466	155
20	137	70	51	66	160	521	1,150	1,850	822	147	438	206
21	127	68	50	63	170	473	961	2,260	704	285	415	189
22	119	67	49	61	174	463	849	1,240	616	267	384	170
23	115	65	47	60	164	447	820	956	550	243	358	158
24	157	63	46	58	174	470	794	813	497	206	342	150
25	163	63	46	57	240	620	697	722	454	185	331	145
26	142	62	45	55	454	569	778	651	425	196	316	141
27	131	61	44	55	538	522	3,600	584	396	225	296	136
28	123	60	43	54	486	500	2,100	530	377	215	282	140
29	118	60	43	67	---	485	1,340	489	354	202	269	139
30	112	60	43	103	---	553	1,130	733	331	10,700	260	137
31	107	---	45	281	---	1,330	---	4,870	---	3,720	250	---
Mean	114	75.3	54.6	64.1	226	565	1,224	1,057	966	668	845	174
Max	470	103	78	281	538	1,430	4,410	4,870	4,650	10,700	2,620	242
Min	41	60	43	41	160	310	512	489	331	144	250	136
In.	0.31	0.20	0.15	0.17	0.55	1.53	3.21	2.87	2.54	1.81	2.29	0.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2013[a], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	250	362	315	354	416	695	667	641	541	299	174	244
Max	2,045	1,785	1,475	1,927	1,567	2,861	2,911	2,123	2,286	1,038	845	1,418
(WY)	(2010)	(1973)	(1974)	(2005)	(1975)	(2008)	(2008)	(2002)	(2008)	(1976)	(2013)	(2007)
Min	26.1	40.2	41.1	43.2	37.5	37.8	26.9	174	70.8	40.0	32.0	46.3
(WY)	(2007)	(2007)	(2006)	(2006)	(2006)	(2006)	(2006)	(1971)	(1972)	(2012)	(2012)	(1980)

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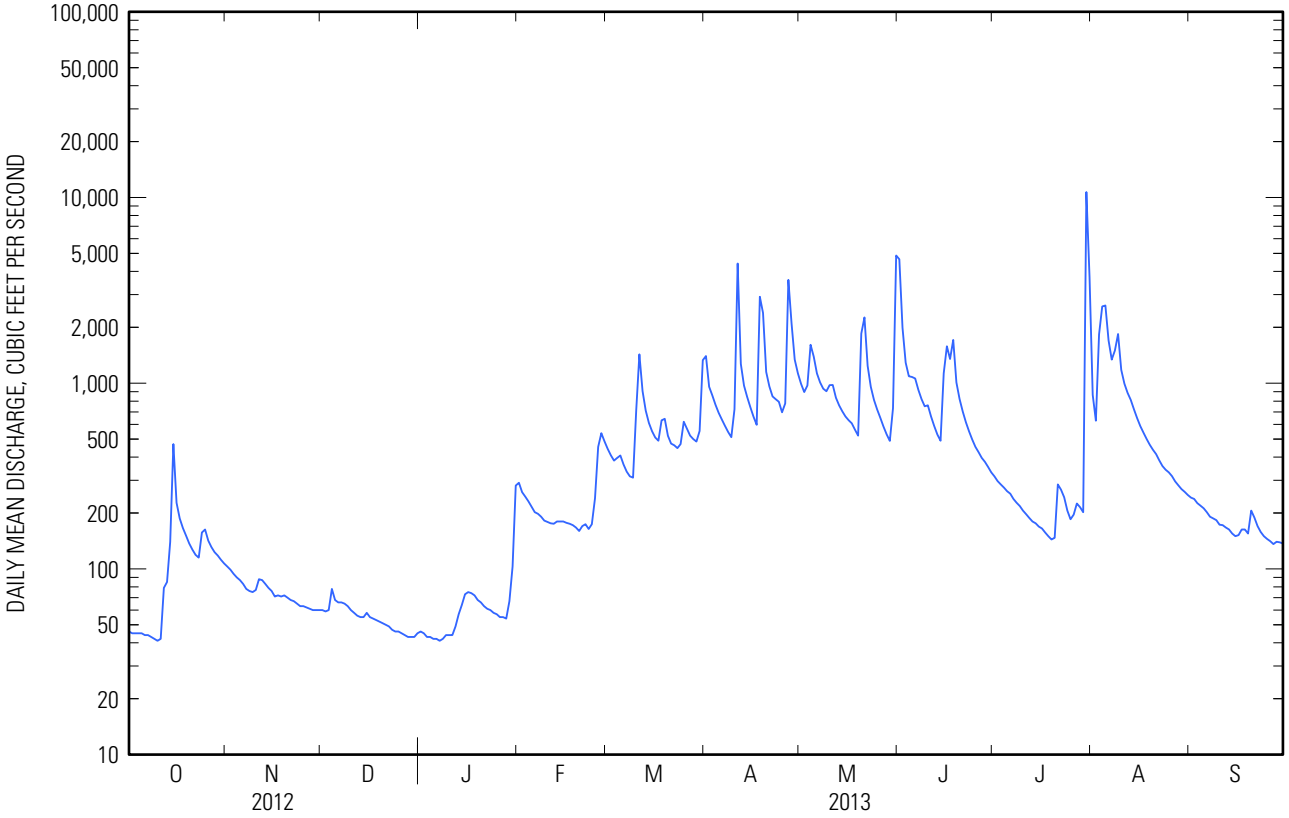
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1967 - 2013[a]	
Annual mean	155		504		415	
Highest annual mean					1,062	2008
Lowest annual mean					70.8	2006
Highest daily mean	2,830	Mar 22	10,700	Jul 30	30,600	Mar 19, 2008
Lowest daily mean	20	Aug 23	41	Oct 10[b]	12	Apr 24, 2006
Annual seven-day minimum	24	Aug 18	42	Jan 3	14	Apr 21, 2006
Maximum peak flow			20,200	Jul 30	29,000	Mar 19, 2008
Maximum peak stage			16.15	Jul 30	18.38	Mar 19, 2008
Instantaneous low flow			39	Oct 10	5.9	Apr 23, 2006
Annual runoff (inches)	4.97		16.10		13.28	
10 percent exceeds	325		1,110		825	
50 percent exceeds	96		218		208	
90 percent exceeds	36		53		60	

[a] For Period of Record
[b] Also Jan 7



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GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
OBSERVATION AT 0800

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	2.87	3.18	2.96	2.87	3.68	3.98	5.38	4.75	9.71	3.75	4.69	3.52
2	2.86	3.16	2.95	2.86	3.60	3.92	4.71	4.62	6.18	3.71	4.33	3.50
3	2.86	3.14	2.94	2.85	3.56	3.87	4.58	4.64	5.16	3.68	4.32	3.48
4	2.86	3.12	3.06	2.85	3.53	3.84	4.46	5.54	4.88	3.66	6.52	3.45
5	2.87	3.11	3.02	2.84	3.48	3.94	4.35	5.32	4.78	3.63	7.55	3.43
6	2.86	3.09	3.00	2.84	3.44	3.83	4.27	4.94	4.83	3.60	5.21	3.40
7	2.85	3.06	3.00	2.83	3.41	3.76	4.22	4.77	4.65	3.56	5.38	3.37
8	2.85	3.06	2.99	2.83	3.41	3.73	4.17	4.67	4.54	3.53	5.01	3.36
9	2.84	3.05	2.99	2.86	3.39	3.70	4.11	4.63	4.42	3.51	5.71	3.35
10	2.82	3.06	2.96	2.86	3.38	3.89	4.08	4.61	4.46	3.47	5.00	3.32
11	2.84	3.06	2.95	2.86	3.37	5.45	10.27	4.77	4.35	3.45	4.73	3.31
12	3.17	3.11	2.94	2.86	3.36	4.64	5.16	4.55	4.23	3.43	4.59	3.29
13	3.04	3.10	2.94	2.93	3.38	4.38	4.73	4.45	4.14	3.40	4.48	3.28
14	3.28	3.07	2.93	2.97	3.38	4.24	4.55	4.37	4.09	3.39	4.37	3.25
15	4.35	3.05	2.95	3.03	3.38	4.15	4.43	4.31	4.02	3.37	4.26	3.24
16	3.60	3.03	2.93	3.04	3.37	4.09	4.32	4.27	5.88	3.36	4.18	3.24
17	3.45	3.03	2.92	3.04	3.36	4.06	4.23	4.25	4.57	3.33	4.11	3.27
18	3.42	3.02	2.92	3.03	3.35	4.22	5.12	4.19	6.24	3.31	4.04	3.29
19	3.36	3.04	2.91	3.01	3.34	4.33	6.36	4.13	4.78	3.28	3.99	3.25
20	3.32	3.02	2.90	3.00	3.32	4.11	4.96	4.44	4.54	3.29	3.94	3.38
21	3.27	3.01	2.90	2.98	3.34	4.03	4.72	6.39	4.38	4.06	3.89	3.38
22	3.25	3.00	2.90	2.97	3.37	4.01	4.57	5.08	4.26	3.54	3.85	3.31
23	3.25	3.00	2.88	2.96	3.34	3.97	4.54	4.73	4.18	3.58	3.79	3.26
24	3.23	2.98	2.87	2.95	3.35	4.00	4.49	4.53	4.09	3.49	3.75	3.24
25	3.41	2.98	2.86	2.95	3.44	4.24	4.36	4.40	4.02	3.42	3.73	3.22
26	3.33	2.98	2.86	2.94	3.83	4.19	4.32	4.32	3.97	3.39	3.69	3.20
27	3.29	2.97	2.85	2.93	4.13	4.10	7.95	4.21	3.91	3.55	3.65	3.19
28	3.26	2.96	2.85	2.92	4.04	4.07	6.32	4.14	3.87	3.52	3.62	3.17
29	3.24	2.96	2.85	2.92	---	4.06	5.21	4.08	3.83	3.45	3.58	3.20
30	3.22	2.95	2.84	3.06	---	4.09	4.94	4.09	3.78	8.90	3.57	3.19
31	3.20	---	2.86	3.60	---	4.90	---	9.14	---	7.36	3.54	---
Mean	3.17	3.04	2.93	2.95	3.48	4.12	5.00	4.75	4.69	3.81	4.42	3.31
Max	4.35	3.18	3.06	3.60	4.13	5.45	10.27	9.14	9.71	8.90	7.55	3.52
Min	2.82	2.95	2.84	2.83	3.32	3.70	4.08	4.08	3.78	3.28	3.54	3.17