Water-Data Report 2010

07185764 SPRING RIVER ABOVE CARTHAGE, MO

Neosho Basin
Spring Subbasin

LOCATION.--Lat 37°11′01″, long 94°17′59″ referenced to North American Datum of 1983, Jasper County, MO, Hydrologic Unit 11070207, upsteam of St. Francis Street bridge, 0.8 mi northwest of junction with Highway 96 in Carthage.

DRAINAGE AREA.--425 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 2008 to current year.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 1 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; MF, membrane filter; N, nitrogen; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Sample start time	Medium name	Sample type	Temperature, air, °C (00020)	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)
10-19-2009	1140	Surface water	Regular	18.4	876	9.9	97	7.2	315
11-17-2009	1345	Surface water	Regular	9.1	524	10.0	94	7.3	343
12-09-2009	1430	Surface water	Regular	2.0	282	14.0	114	7.7	347
12-09-2009	*1431*	*QC sample - Surface water*	*Replicate*	--	--	*14.1*	*115*	*7.6*	*346*
01-11-2010	1230	Surface water	Regular	7.5	277	14.8	110	7.6	356
02-02-2010	1605	Surface water	Regular	3.4	511	12.3	103	7.6	338
03-10-2010	1130	Surface water	Regular	18.3	359	9.8	97	7.9	346
04-06-2010	1500	Surface water	Regular	23.2	796	9.9	110	7.7	325
05-17-2010	1250	Surface water	Regular	25.5	2,820	8.1	87	7.6	213
06-09-2010	0740	Surface water	Regular	20.7	467	7.3	100	7.7	345
07-19-2010	1120	Surface water	Regular	33.0	201	7.3	96	8.0	358
08-09-2010	1120	Surface water	Regular	29.1	111	6.0	80	7.9	372
09-13-2010	1300	Surface water	Regular	23.5	291	7.7	89	8.1	333

07185764 SPRING RIVER ABOVE CARTHAGE, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 2 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; MF, membrane filter; N, nitrogen; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Temperature, water, °C (00010)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Hardness, water, mg/L as CaCO3 (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, inflection-point, incremental titration method, field, mg/L as CaCO3 (00419)
10-19-2009	12.9	182	155	< 15	56.9	3.12	2.32	4.22	134
11-17-2009	10.9	--	--	< 15	--	--	--	--	--
12-09-2009	4.9	--	--	< 15	--	--	--	--	--
12-09-2009	*4.9*	--	--	*< 15*	--	--	--	--	--
01-11-2010	1.8	224	161	< 15	59.0	3.21	1.51	5.26	150
02-02-2010	6.7	--	--	< 15	--	--	--	--	--
03-10-2010	12.5	--	--	< 15	--	--	--	--	--
04-06-2010	18.0	--	--	< 15	--	--	--	--	--
05-17-2010	17.1	266	99.7	< 15	36.1	2.33	3.35	3.76	86.7
06-09-2010	29.7	--	--	26	--	--	--	--	--
07-19-2010	27.2	213	171	< 15	62.5	3.48	2.10	5.38	150
08-09-2010	27.8	--	--	< 15	--	--	--	--	--
09-13-2010	21.1	--	--	39	--	--	--	--	--

07185764 SPRING RIVER ABOVE CARTHAGE, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 3 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; MF, membrane filter; N, nitrogen; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified]

Date	Bi-carbonate, water, unfiltered, inflection-point, incremental titration method, field, mg/L (00450)	Carbonate, water, unfiltered, inflection-point, incre-mental titration method, field, mg/L (00447)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Nitrite, water, filtered, mg/L as N (00613)
10-19-2009	163	.1	7.48	< .08	6.52	.18	< .020	2.75	.002
11-17-2009	--	--	--	--	--	.15	< .020	2.70	.003
12-09-2009	--	--	--	--	--	.11	< .020	2.80	.003
12-09-2009	--	--	--	--	--	*.12*	*< .020*	*2.77*	*.003*
01-11-2010	182	.3	10.3	< .08	6.45	.12	< .020	2.75	.004
02-02-2010	--	--	--	--	--	.13	< .020	2.87	.006
03-10-2010	--	--	--	--	--	.22	< .020	2.42	.009
04-06-2010	--	--	--	--	--	.17	< .020	2.57	.006
05-17-2010	105	.2	6.03	E .06	4.93	1.1	< .020	1.83	.015
06-09-2010	--	--	--	--	--	.21	E .015	2.63	.005
07-19-2010	180	1.1	10.7	.10	6.20	.21	< .020	2.32	.006
08-09-2010	--	--	--	--	--	.17	E .015	2.06	.006
09-13-2010	--	--	--	--	--	.32	< .020	2.73	.004

07185764 SPRING RIVER ABOVE CARTHAGE, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 4 of 6

[%, percent; ANC, acid neutralizing capacity; CaCO3, calcium carbonate; MF, membrane filter; N, nitrogen; P, phosphorus; col/100 mL, colonies per 100 milliliters; ft³/s, cubic feet per second; mg/L, milligrams per liter; °C, degrees Celsius; µS/cm, microsiemens per centimeter; µg/L, micrograms per liter; <, less than; E, estimated; M, presence verified but not quantified
Microbiology results with a remark code of E are based on non-ideal colony counts.]

Date	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Escherichia coli, modified m-TEC MF method, water, col/100 mL (90902)	Fecal coliform, M-FC MF (0.7 micron) method, water, col/100 mL (31625)	Aluminum, water, filtered, µg/L (01106)	Aluminum, water, unfiltered, recoverable, µg/L (01105)	Cadmium, water, filtered, µg/L (01025)	Cadmium, water, unfiltered, µg/L (01027)
10-19-2009	.070	.06	.08	E 170	250	< 3.4	196	< .02	E .02
11-17-2009	.048	.05	.06	220	280	--	--	--	--
12-09-2009	.018	< .04	E .03	E 16	55	--	--	--	--
12-09-2009	*.017*	*< .04*	*E .03*	*E 18*	*40*	--	--	--	--
01-11-2010	E .005	< .04	< .04	E 3	E 17	E 2.2	39	E .01	< .04
02-02-2010	.024	E .03	.06	E 4	E 9	--	--	--	--
03-10-2010	.013	< .04	E .02	E 5	E 15	--	--	--	--
04-06-2010	.028	.05	.07	34	51	--	--	--	--
05-17-2010	.140	.19	.31	7,100	E 6,400	4.6	1,280	.03	.17
06-09-2010	.060	.05	.09	E 190	240	--	--	--	--
07-19-2010	.050	.08	.10	73	E 78	< 3.4	205	E .01	E .04
08-09-2010	.068	.07	.08	56	40	--	--	--	--
09-13-2010	.123	.12	.15	310	210	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 of 6

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Date	Copper, water, filtered, µg/L (01040)	Iron, water, filtered, µg/L (01046)	Lead, water, filtered, µg/L (01049)	Lead, water, unfiltered, recoverable, µg/L (01051)	Lithium, water, filtered, µg/L (01130)	Manganese, water, filtered, µg/L (01056)	Mercury, water, unfiltered, recoverable, µg/L (71900)	Strontium, water, filtered, µg/L (01080)	Zinc, water, filtered, µg/L (01090)	Zinc, water, unfiltered, recoverable, µg/L (01092)
10-19-2009	< 1.0	< 6	< .03	.46	M	9.9	< .010	59.7	< 2.8	3.9
11-17-2009	--	--	--	--	--	--	--	--	--	--
12-09-2009	--	--	--	--	--	--	--	--	--	--
12-09-2009	--	--	--	--	--	--	--	--	--	--
01-11-2010	< 1.0	6	E .02	.09	M	10.5	--	64.6	< 2.8	E 2.0
02-02-2010	--	--	--	--	--	--	--	--	--	--
03-10-2010	--	--	--	--	--	--	--	--	--	--
04-06-2010	--	--	--	--	--	--	--	--	--	--
05-17-2010	1.2	31	.05	4.35	M	5.6	.010	45.8	E 2.3	33.3
06-09-2010	--	--	--	--	--	--	--	--	--	--
07-19-2010	E .51	< 6	< .03	.54	M	12.4	.027	65.0	< 2.8	2.5
08-09-2010	--	--	--	--	--	--	--	--	--	--
09-13-2010	--	--	--	--	--	--	--	--	--	--

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 6 of 6

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Date	Arsenic, water, filtered, µg/L (01000)	Boron, water, filtered, µg/L (01020)	Selenium, water, filtered, µg/L (01145)
10-19-2009	.34	9.6	.31
11-17-2009	--	--	--
12-09-2009	--	--	--
12-09-2009	--	--	--
01-11-2010	.18	6.0	.29
02-02-2010	--	--	--
03-10-2010	--	--	--
04-06-2010	--	--	--
05-17-2010	.54	11	.23
06-09-2010	--	--	--
07-19-2010	.47	10	.19
08-09-2010	--	--	--
09-13-2010	--	--	--