06896187 MIDDLE FORK GRAND RIVER NEAR GRANT CITY, MO

Grand Basin
Upper Grand Subbasin

LOCATION.--Lat 40°27′17″, long 94°24′12″ referenced to North American Datum of 1927, in NW ¼ SW ¼ NW ¼ sec.9, T.65 N., R.31 W., Worth County, MO, Hydrologic Unit 10280101, on Highway 169 approximately 2.0 mi south of the junction of Highway 169 and State Highway 46 in Grant City.

DRAINAGE AREA.--82.4 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1999 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; ft^3/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]

Date	Sample start time	Medium name	Sample type	Temperature, air, °C (00020)	Discharge, instantaneous, ft^3/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)
10-23-2009	0945	Surface water	Regular	4.5	220	9.5	88	7.4	225
01-13-2010	1105	Surface water	Regular	8.5	15	14.1	100	7.7	479
03-02-2010	1430	Surface water	Regular	7.0	33	13.9	101	8.2	552
05-05-2010	1335	Surface water	Regular	22.0	27	8.2	96	8.2	444
07-16-2010	1020	Surface water	Regular	31.0	15	7.6	96	8.2	452
07-16-2010	*1021*	*QC sample - Artificial*	*Blank*	--	--	--	--	--	--
09-14-2010	1150	Surface water	Regular	23.5	35	8.7	102	7.8	298

06896187 MIDDLE FORK GRAND RIVER NEAR GRANT CITY, 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]

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)
10-23-2009	9.7	138	88.0	835	26.2	5.45	6.95	8.07	84.0
01-13-2010	.1	--	--	18	--	--	--	--	--
03-02-2010	1.0	--	--	196	--	--	--	--	--
05-05-2010	21.4	287	215	78	63.9	13.4	3.57	13.2	199
07-16-2010	25.8	--	--	78	--	--	--	--	--
07-16-2010	--	--	--	*< 15*	--	--	--	--	--
09-14-2010	21.7	--	--	1,080	--	--	--	--	--

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]

Date	Bicarbonate, water, unfiltered, inflection-point, incremental titration method, field, mg/L (00450)	Carbonate, water, unfiltered, inflection-point, incremental 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)
10-23-2009	102	.2	12.5	.21	13.3	3.2	.142	.86	.015
01-13-2010	--	--	--	--	--	.42	.134	.69	.006
03-02-2010	--	--	--	--	--	1.3	.497	.83	.010
05-05-2010	243	1.8	13.7	.25	30.5	.42	< .020	.66	.006
07-16-2010	--	--	--	--	--	.57	< .020	.33	.004
07-16-2010	--	--	--	--	--	*< .10*	*< .020*	*< .04*	*< .002*
09-14-2010	--	--	--	--	--	2.4	< .020	.43	.009

06896187 MIDDLE FORK GRAND RIVER NEAR GRANT CITY, 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

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)
10-23-2009	.180	.19	1.27	E 120,000	E 170,000	5.8	9,860	.04	.76
01-13-2010	.036	.04	.10	47	47	--	--	--	--
03-02-2010	.032	E .03	.28	E 6	E 20	--	--	--	--
05-05-2010	.109	.11	.23	270	E 250	E 2.6	957	.03	.05
07-16-2010	.115	.11	.21	540	E 760	--	--	--	--
07-16-2010	*< .008*	*< .04*	*< .04*	--	--	--	--	--	--
09-14-2010	.095	.12	1.01	15,000	14,000	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

Part 5 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]

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)
10-23-2009	2.3	50	.07	18.5	2	214	.047	101	< 2.8	54.8
01-13-2010	--	--	--	--	--	--	--	--	--	--
03-02-2010	--	--	--	--	--	--	--	--	--	--
05-05-2010	1.1	< 6	< .03	1.58	6	37.6	< .010	248	< 2.8	4.7
07-16-2010	--	--	--	--	--	--	--	--	--	--
07-16-2010	--	--	--	--	--	--	--	--	--	--
09-14-2010	--	--	--	--	--	--	--	--	--	--

06896187 MIDDLE FORK GRAND RIVER NEAR GRANT CITY, MO—Continued

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)
10-23-2009	2.0	24	.63
01-13-2010	--	--	--
03-02-2010	--	--	--
05-05-2010	1.8	29	.63
07-16-2010	--	--	--
07-16-2010	--	--	--
09-14-2010	--	--	--