Water-Data Report 2008

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO

Lower Missouri Basin
Osage Subbasin

LOCATION.--Lat 38°03'21.1", long 94°08'43.5" referenced to North American Datum of 1983, in SE ¼ SW ¼ NW ¼ sec.20, T.38 N., R.29 W., Bates County, MO, Hydrologic Unit 10290105, on downstream side of left pier of bridge on State Highway M, 0.8 mi downstream from Shaw Branch, 0.2 mi upstream from McKenzie Creek, and 3.0 mi northwest of Schell City.

DRAINAGE AREA.--5,410 mi^2, by U.S. Army Corps of Engineers.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1981 to current year.

GAGE.--Water-stage recorder and slope gage 1.7 mi downstream. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. Discharge is calculated using fall computations due to backwater from Harry S. Truman Reservoir.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 438,700 ft^3/s, Sept. 17, gage height, 32.79 ft; minimum daily discharge, 53 ft^3/s, Dec. 7.

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	156	459	e83	1,100	742	4,930	9,700	3,560	14,200	8,530	2,480	283
2	141	334	e88	913	667	4,420	9,620	5,710	13,300	5,790	1,160	369
3	159	241	e80	1,050	612	7,090	10,300	10,900	16,100	4,860	729	327
4	156	220	69	1,100	579	14,700	10,700	11,300	19,800	4,440	329	2,290
5	142	218	61	1,070	661	16,000	10,500	8,250	22,700	4,040	162	5,640
6	132	214	55	1,370	4,030	14,400	10,100	5,510	26,500	3,710	203	5,230
7	132	221	53	1,560	10,500	8,350	8,280	6,060	25,200	3,530	912	2,750
8	138	207	61	2,370	9,620	5,540	5,740	13,000	23,900	3,600	614	1,550
9	117	192	64	2,600	5,910	4,870	10,800	13,800	30,500	3,620	458	1,050
10	90	195	71	3,030	4,340	4,420	19,100	13,800	32,100	3,370	414	846
11	84	170	88	3,020	3,980	4,150	24,300	15,200	34,100	3,170	358	738
12	89	177	140	2,710	3,430	3,960	24,600	16,300	34,200	3,050	1,100	2,860
13	102	186	600	2,480	2,900	3,900	23,900	14,900	34,100	2,830	1,860	12,400
14	100	176	1,240	2,030	2,570	3,970	21,300	13,600	33,200	2,670	1,120	26,600
15	96	166	1,480	1,660	2,450	3,870	16,200	11,800	32,100	2,420	721	32,200
16	120	158	1,160	1,510	2,670	3,470	12,100	7,990	31,400	2,290	538	36,200
17	268	143	1,190	1,510	3,340	3,760	7,900	5,320	26,400	2,020	422	38,700
18	560	134	1,170	1,700	7,250	11,500	6,740	3,950	21,200	1,520	272	37,000
19	2,120	132	1,080	1,750	10,800	18,100	8,160	3,140	16,500	1,500	267	29,300
20	4,250	126	1,030	1,470	10,500	20,500	7,360	2,560	11,900	1,190	425	19,400
21	2,330	121	1,080	1,570	6,950	20,800	5,490	2,280	8,700	815	384	12,900
22	952	123	1,100	1,550	4,160	e12,100	4,200	3,040	6,630	610	429	8,120
23	575	e120	1,100	1,600	4,140	e7,560	4,010	8,270	5,880	600	275	5,510
24	557	e118	1,070	1,420	4,330	e5,250	7,200	9,350	5,590	518	316	4,490
25	1,590	e115	1,060	1,390	4,490	e4,180	12,200	11,500	5,790	160	287	4,620
26	1,350	e109	1,070	996	7,200	3,480	12,200	13,500	5,690	191	259	4,430
27	914	e105	1,060	628	9,140	3,190	10,900	17,100	5,510	337	157	4,180
28	669	e100	1,060	602	7,680	3,080	9,660	19,600	12,500	2,400	207	3,730
29	566	e92	1,080	631	5,940	3,050	7,160	20,100	11,600	1,930	190	2,670
30	435	e85	1,130	620	---	3,510	4,630	18,300	10,500	979	196	1,810
31	445	---	1,120	622	---	5,740	---	15,700	---	3,460	191	---
Total	19,535	5,157	21,793	47,632	141,581	233,840	335,050	325,390	577,790	80,150	17,435	308,193
Mean	630	172	703	1,537	4,882	7,543	11,170	10,500	19,260	2,585	562	10,270
Max	4,250	459	1,480	3,030	10,800	20,800	24,600	20,100	34,200	8,530	2,480	38,700
Min	84	85	53	602	579	3,050	4,010	2,280	5,510	160	157	283
Cfsm	0.12	0.03	0.13	0.28	0.90	1.39	2.06	1.94	3.56	0.48	0.10	1.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,061	3,948	2,959	2,514	3,254	6,032	5,650	8,893	9,311	6,557	1,653	2,506
Max	24,810	19,890	15,700	14,590	10,470	18,920	19,970	28,260	26,530	48,990	6,925	15,510
(WY)	(1999)	(1999)	(1993)	(2005)	(1997)	(1987)	(1994)	(1995)	(1995)	(2007)	(1989)	(1998)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	639	829	331	3.35	0.00
(WY)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(1981)	(2000)	(2006)	(2006)	(1984)	(1982)

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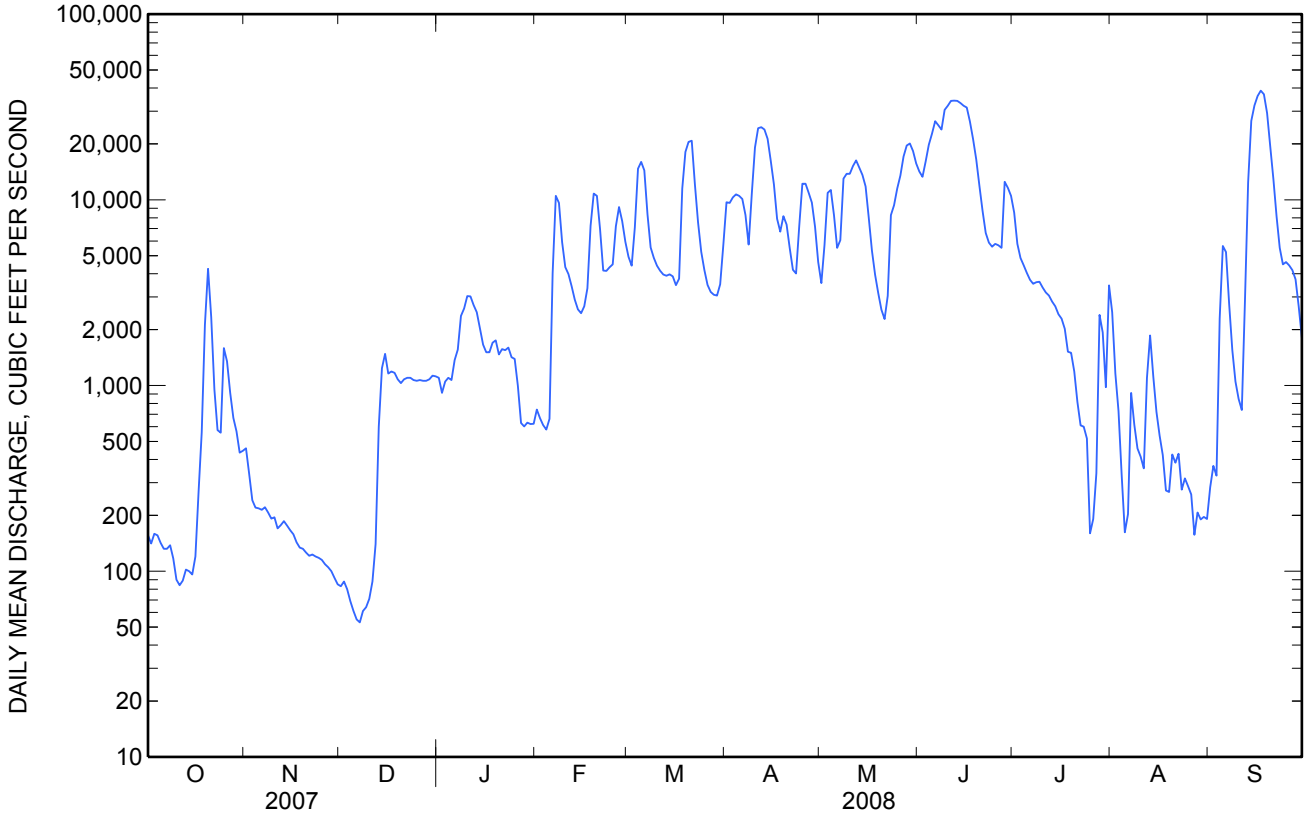

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1979 to September 1993, November 1994 to current year. Formerly published as Osage River near Schell City (06918080).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1979 to September 1981.
WATER TEMPERATURE: March 1979 to September 1981.
SUSPENDED-SEDIMENT: February 1991 to September 1999.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,950 microsiemens per centimeter, Oct. 11, 1980; minimum daily, 114 microsiemens per centimeter, June 12, 1981.
WATER TEMPERATURE: Maximum daily, 32.0 °C, July 11, 1980; minimum daily, 0.0 °C, Feb. 5, 1980, and Feb. 11-14, 1981.
SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 4,020 mg/L, Feb. 21, 1997; minimum daily mean, 8 mg/L, Aug. 4 and 5, 1993, and Jan. 10-12, 1995.
SUSPENDED-SEDIMENT LOAD: Maximum daily, 160,000 tons, Feb. 21, 1997; minimum daily, 1.7 tons, Nov. 7-13, 1991.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 1 of 9

[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	Time	Sample medium and type	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
Nov									
05...	1410	Surface water, regular	179	8.8	85	7.7	381	12.6	150
Mar									
17...	1500	Surface water, regular	3,400	11.3	96	8.2	393	7.2	--
Apr									
22...	1100	Surface water, regular	4,330	7.7	80	8.0	388	15.6	--
22...	*1101*	*QC - Surface water, replicate*	--	*7.7*	*80*	*8.0*	*387*	*15.7*	--
May									
28...	1100	Surface water, regular	19,900	5.3	60	7.8	267	20.2	110
Jun									
03...	1220	Surface water, regular	15,700	4.3	51	7.0	229	21.1	--
Jul									
21...	1330	Surface water, regular	785	4.8	66	7.1	403	30.8	180

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf infl pt titr., field, mg/L as CaCO3 (00419)	Bicar-bonate, wat unf infl pt titr., field, mg/L (00450)	Carbon-ate, wat unf infl pt titr., field, mg/L (00447)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total non-filter-able, mg/L (00530)
Nov												
05...	45.9	9.30	4.70	14.2	115	139	<1	11.7	.22	54.5	237	58
Mar												
17...	--	--	--	--	--	--	--	--	--	--	--	111
Apr												
22...	--	--	--	--	--	--	--	--	--	--	--	108
22...	--	--	--	--	--	--	--	--	--	--	--	*85*
May												
28...	38.3	4.65	3.42	5.79	107	130	<1	5.45	.20	20.7	173	532
Jun												
03...	--	--	--	--	--	--	--	--	--	--	--	456
Jul												
21...	53.5	11.0	4.07	11.6	129	158	<1	8.54	.25	64.9	274	50

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 3 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated. Microbiology results with a remark code of E are based on non-ideal colony counts.]

Date	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L as P (00666)	Phos-phorus, water, unfltrd mg/L as P (00665)	E coli, modif. m-TEC, water, col/ 100 mL (90902)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)	Alum-inum, water, fltrd, µg/L (01106)	Alum-inum, water, unfltrd recover -able, µg/L (01105)	Arsenic water, fltrd, µg/L (01000)	Boron, water, fltrd, µg/L (01020)
Nov													
05...	.71	<.020	.46	.004	.054	.06	.17	100	94	1.7	1,260	1.3	39
Mar													
17...	.71	<.020	.50	.006	.009	E.03	.13	E28	64	--	--	--	--
Apr													
22...	.90	.039	.47	.011	.015	E.04	.17	E150	E130	--	--	--	--
22...	*.85*	*.039*	*.54*	*.013*	*.023*	*.05*	*.16*	*E160*	*E100*	--	--	--	--
May													
28...	2.2	.032	.67	.027	.058	.07	.74	E1,600	E2,000	2.9	8,800	1.2	27
Jun													
03...	2.1	.033	.51	.020	.073	.09	.63	>8,000	>6,000	--	--	--	--
Jul													
21...	.80	.115	.38	.020	.036	E.03	.13	E7	E10	9.9	943	1.6	34

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 4 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Copper, water, fltrd, µg/L (01040)	Iron, water, fltrd, µg/L (01046)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover -able, µg/L (01051)	Lithium water, fltrd, µg/L (01130)	Manganese, water, fltrd, µg/L (01056)	Mercury water, unfltrd recover -able, µg/L (71900)	Selenium, water, fltrd, µg/L (01145)	Strontium, water, fltrd, µg/L (01080)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover -able, µg/L (01092)
Nov													
05...	E.02	.07	1.4	E5	<.08	1.86	4	39.8	<.010	.41	273	<1.8	7.5
Mar													
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
Apr													
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
May													
28...	<.04	.40	2.9	26	.08	18.0	2	1.3	.020	.40	181	E1.6	62.1
Jun													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
Jul													
21...	<.04	.05	1.1	12	<.08	1.64	5	272	<.010	.49	309	<1.8	5.4

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 5 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	2,6-Diethylaniline water, fltrd 0.7u GF µg/L (82660)	CIAT, water, fltrd, µg/L (04040)	Acetochlor, water, fltrd, µg/L (49260)	Alachlor, water, fltrd, µg/L (46342)	alpha-HCH, water, fltrd, µg/L (34253)	Atrazine, water, fltrd, µg/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF µg/L (82686)	Benfluralin, water, fltrd 0.7u GF µg/L (82673)	Butylate, water, fltrd, µg/L (04028)	Carbaryl, water, fltrd 0.7u GF µg/L (82680)	Carbofuran, water, fltrd 0.7u GF µg/L (82674)	Chlorpyrifos water, fltrd, µg/L (38933)	cis-Permethrin water fltrd 0.7u GF µg/L (82687)
Nov													
05...	<.002	E.124	.019	<.006	<.070	.376	<.120	<.004	<.002	<.060	<.041	<.115	<.010
Mar													
17...	<.002	E.119	.014	E.006	<.002	.548	<.120	<.004	<.002	<.060	<.020	<.007	<.010
Apr													
22...	<.002	E.060	.051	<.006	<.002	.557	<.120	<.004	<.002	<.060	<.020	<.010	<.010
22...	*<.002*	*E.050*	*.049*	*<.006*	*<.002*	*.541*	*<.120*	*<.004*	*<.002*	*<.060*	*<.020*	*<.005*	*<.010*
May													
28...	<.002	E.324	.492	.099	<.002	4.87	<.120	<.004	<.002	<.060	<.020	<.005	<.010
Jun													
03...	<.002	E.124	.341	.050	<.002	3.16	<.120	<.004	<.002	E.009	<.020	<.005	<.010
Jul													
21...	<.002	E.122	.127	.017	<.002	1.13	<.120	<.004	<.002	<.060	<.020	<.005	<.010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 6 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	Cyanazine, water, fltrd, µg/L (04041)	DCPA, water, fltrd 0.7u GF µg/L (82682)	Desulfinylfipronil, water, fltrd, µg/L (62170)	Diazinon, water, fltrd, µg/L (39572)	Dieldrin, water, fltrd, µg/L (39381)	Disulfoton, water, fltrd 0.7u GF µg/L (82677)	EPTC, water, fltrd 0.7u GF µg/L (82668)	Ethalfluralin, water, fltrd 0.7u GF µg/L (82663)	Ethoprop, water, fltrd 0.7u GF µg/L (82672)	Desulfinylfipronil amide, wat flt µg/L (62169)	Fipronil sulfide water, fltrd, µg/L (62167)	Fipronil sulfone water, fltrd, µg/L (62168)	Fipronil, water, fltrd, µg/L (62166)
Nov													
05...	<.020	<.003	E.001	<.005	<.009	<.04	<.002	<.009	<.014	<.029	<.013	<.024	<.020
Mar													
17...	<.020	<.003	E.001	<.005	<.009	<.04	<.002	<.009	<.012	<.029	<.013	<.024	<.020
Apr													
22...	<.020	<.003	<.012	<.005	<.009	<.04	<.002	<.009	<.012	<.029	<.013	<.024	<.020
22...	*<.020*	*<.003*	*<.012*	*<.005*	*<.009*	*<.04*	*<.002*	*<.009*	*<.012*	*<.029*	*<.013*	*<.024*	*<.020*
May													
28...	<.020	<.003	<.012	<.031	<.009	<.04	<.002	<.009	<.012	<.029	<.013	E.005	E.015
Jun													
03...	<.020	<.003	<.012	<.005	<.009	<.04	<.002	<.009	<.012	<.029	<.013	<.024	<.020
Jul													
21...	<.020	<.003	<.012	<.005	<.009	<.04	<.002	<.009	<.012	<.029	<.013	<.024	<.020

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 7 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	Fonofos water, fltrd, µg/L (04095)	Lindane water, fltrd, µg/L (39341)	Linuron water, fltrd 0.7u GF µg/L (82666)	Malathion, water, fltrd, µg/L (39532)	Methyl parathion, water, fltrd 0.7u GF µg/L (82667)	Metolachlor, water, fltrd, µg/L (39415)	Metribuzin, water, fltrd, µg/L (82630)	Molinate, water, fltrd 0.7u GF µg/L (82671)	Napropamide, water, fltrd 0.7u GF µg/L (82684)	p,p'-DDE, water, fltrd, µg/L (34653)	Parathion, water, fltrd, µg/L (39542)	Pebulate, water, fltrd 0.7u GF µg/L (82669)	Pendimethalin, water, fltrd 0.7u GF µg/L (82683)
Nov													
05...	<.010	<.006	<.060	<.016	<.008	.062	<.012	<.002	<.018	<.003	<.010	<.004	<.012
Mar													
17...	<.010	<.006	<.060	<.016	<.008	.042	E.009	<.002	<.018	<.003	<.010	<.004	<.012
Apr													
22...	<.010	<.006	<.060	<.016	<.008	.063	E.007	<.002	<.018	<.003	<.010	<.004	<.012
22...	*<.010*	*<.006*	*<.060*	*<.016*	*<.008*	*.061*	*E.005*	*<.002*	*<.018*	*<.003*	*<.010*	*<.004*	*<.012*
May													
28...	<.010	<.006	<.060	<.016	<.008	1.18	.073	<.002	<.018	<.003	<.010	<.004	.013
Jun													
03...	<.010	<.006	<.060	<.016	<.008	.431	.023	<.002	<.018	<.003	<.010	<.004	<.012
Jul													
21...	<.010	<.006	<.060	<.016	<.008	.226	.028	<.002	<.018	<.003	<.010	<.004	<.012

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 8 of 9
[QC, quality control sample. Remark codes: <, less than; >, greater than; E, estimated.]

Date	Phorate water, fltrd 0.7u GF µg/L (82664)	Prometon, water, fltrd, µg/L (04037)	Propyzamide, water, fltrd 0.7u GF µg/L (82676)	Propachlor, water, fltrd, µg/L (04024)	Propanil, water, fltrd 0.7u GF µg/L (82679)	Propargite, water, fltrd 0.7u GF µg/L (82685)	Simazine, water, fltrd, µg/L (04035)	Tebuthiuron water, fltrd 0.7u GF µg/L (82670)	Terbacil, water, fltrd 0.7u GF µg/L (82665)	Terbufos, water, fltrd 0.7u GF µg/L (82675)	Thiobencarb water, fltrd 0.7u GF µg/L (82681)	Triallate, water, fltrd 0.7u GF µg/L (82678)	Trifluralin, water, fltrd 0.7u GF µg/L (82661)
Nov													
05...	<.040	<.04	<.004	<.006	<.006	<.04	.006	<.09	<.018	<.02	<.013	<.006	<.006
Mar													
17...	<.040	<.01	<.004	<.006	<.006	<.04	.025	.05	<.018	<.02	<.010	<.006	<.006
Apr													
22...	<.040	<.01	<.004	<.006	<.006	<.04	.057	.06	<.018	<.02	<.010	<.006	<.006
22...	*<.040*	*<.01*	*<.004*	*<.006*	*<.006*	*<.04*	*.053*	*.03*	*<.018*	*<.02*	*<.010*	*<.006*	*<.006*
May													
28...	<.040	<.01	<.004	<.006	<.006	<.04	.034	<.02	<.018	<.02	<.010	<.006	<.006
Jun													
03...	<.040	<.01	<.004	<.006	<.006	<.04	.026	<.06	<.018	<.02	<.010	<.006	<.006
Jul													
21...	<.040	E.01	<.004	<.006	<.006	<.04	.010	<.03	<.018	<.02	<.010	<.006	<.006