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Table 6.—*Chemical analyses of ground water and surface water in the vicinity of Horseshoe Lake, Ark.*

[Chemical analyses in milligrams per liter except as indicated. Dissolved phosphorus (P) Concentration in filtered sample]

Source	Location	Discharge	Date of collection	Water temperature (°C)	Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (Fl)	Nitrate (NO_3)	Amonia nitrogen as N	Organic nitrogen as N	Dissolved phosphorus (P)	Total phosphorus (P)	Dissolved solids (residue at 180°C)	Hardness as $CaCO_3$		Total alkalinity	Specific conductance (micromhos at 25°C)	pH	Color	Turbidity	Dissolved oxygen (D.O.)
																							Calcium, magnesium	Noncarbonate						
Well in Quaternary alluvium	3N-7E-3cab	----------	10- 6-69	17	27	18	1.1	128	28	7.8	3.2	556	0	0.6	2.2	0.3	0.0	----	----	----	----	479	435	0	456	780	7.9	0	----	----
Do	3N-7E-4bca	----------	10- 8-69	16	24	13	.92	104	23	5.9	1.9	452	0	.4	1.0	.3	.4	----	----	----	----	305	354	0	371	507	7.2	0	----	----
Do	3N-7E-16add	----------	10- 7-69	16	31	18	.52	119	30	7.3	3.3	552	0	.0	2.0	.2	.0	----	----	----	----	300	421	0	453	496	7.0	1	----	----
Do	4N-7E-9aaa	1,425 gpm	10- 7-69	16	30	15	.13	139	36	9.6	4.1	644	0	.2	1.9	.5	5.1	----	----	----	----	376	495	0	528	636	7.1	0	----	----
Do	4N-7E-20bcd	----------	10- 7-69	16	27	17	.65	107	27	6.3	3.1	482	0	.6	2.0	.3	2.6	----	----	----	----	419	378	0	395	688	7.9	0	----	----
Do	4N-7E-34dac	1,480 gpm	10- 6-69	17	24	17	.82	80	18	4.5	2.3	372	0	.2	2.2	.2	.0	----	----	----	----	277	274	0	305	452	7.2	0	----	----
Well in Tertiary aquifer	4N-7E-23bcd	----------	2- 6-58	23	----	.29	----	1.1	.1	44	2.0	115	0	2.8	3.0	----	0	----	----	----	----	110	3	0	94	179	7.8	----	----	----
Horseshoe Lake	----------	----------	10- 8-69	24	6.8	.06	.05	23	6.7	2.2	3.9	104	0	4.0	.0	.2	.9	----	----	----	----	107	85	0	85	179	8.1	2	3.2	----
Do	----------	----------	10-14-70	----	5.3	.00	.01	22	6.5	2.4	3.9	102	0	3.2	2.2	.2	1.6	0.02	0.27	0.05	0.10	121	82	0	84	184	7.8	3	----	----
Porter lake	----------	----------	10- 7-69	22	13	----	.10	21	5.7	8.2	4.6	28	30	2.6	3.8	.2	12	----	----	----	----	120	76	3	72	174	9.8	60	180	9.9
Do	----------	----------	10-14-70	----	4.1	.05	.02	16	4.9	3.3	6.3	72	0	5.6	3.8	.3	2.3	.05	.75	.42	.84	108	60	1	59	151	7.6	2	----	----
Goose Lake	----------	----------	10- 6-69	24	16	.19	.07	46	13	7.0	3.8	216	0	1.0	2.2	.3	5.1	----	----	----	----	208	169	0	177	343	8.0	1	7.9	10.6
Brushy Lake	----------	----------	10- 7-69	22	3.3	.17	.04	37	22	6.1	1.3	230	0	1.0	1.9	.2	.5	----	----	----	----	187	183	0	189	346	8.2	1	4.0	9.4
Beck Bayou	----------	[1]4 cfs	10-14-70	----	8.7	.12	.00	12	4.0	1.7	8.6	48	0	8.4	3.7	.4	7.6	.00	1.3	.59	.90	104	46	7	39	125	7.2	3	----	----
Mississippi River	West Memphis, Ark	205,000 cfs	10- 9-69	22	----	----	----	45	14	----	----	160	0	82	17	----	----	----	----	----	.15	----	170	38	131	478	7.7	50	----	----
Do	do	915,000 cfs	4-30-70	18	----	----	----	34	11	9.8	2.6	104	0	49	11	----	----	.00	----	----	.11	----	131	46	85	309	8.0	----	----	6.6

[1]Estimated.