EXPLANATION

QUATERNARY — Pleistocene and Holocene
- Alluvium and terrace deposits

TERTIARY
- Eocene
  - Eocene deposits undifferentiated — *Includes Memphis and lower Wilcox aquifers*
  - Claiborne Group and younger Eocene deposits — *Includes Memphis aquifer*
  - Wilcox Group — *Lighter tone is lower Wilcox aquifer*
- Paleocene
  - Midway Group

CRETACEOUS — Upper Cretaceous
- Owl Creek, Ripley, and Demopolis Formations
- Ripley and Demopolis Formations
- Owl Creek Formation and Ripley Formation or McNairy Sand
- Coffee Sand
- Eutaw Formation
- Tuscaloosa Group or Formation

Paleozoic rocks

WATER-BEARING ZONES

Fresh water (contains less than 1,000 parts per million dissolved solids)

Saline water (contains more than 1,000 parts per million dissolved solids)

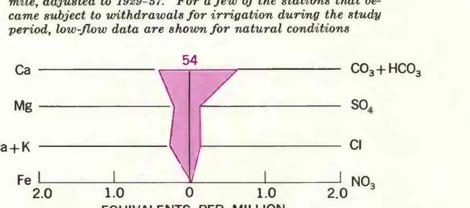
Contact

Basin boundary

▲ 7-0317 (0.25) — Daily-record station

△ 5-6000 (0.012) — Partial-record or short-term daily-record station

Upper number is station identification; number in parentheses is 7-day 2-year low flow, in cubic feet per second per square mile, adjusted to 1929-57. For a few of the stations that became subject to withdrawals for irrigation during the study period, low-flow data are shown for natural conditions



EQUIVALENTS PER MILLION
Surface-water chemical-analysis diagram
54—*Dissolved solids in parts per million*

Maximum, minimum, and median concentrations of selected constituents in ground water in the Obion River basin except Forked Deer River basin

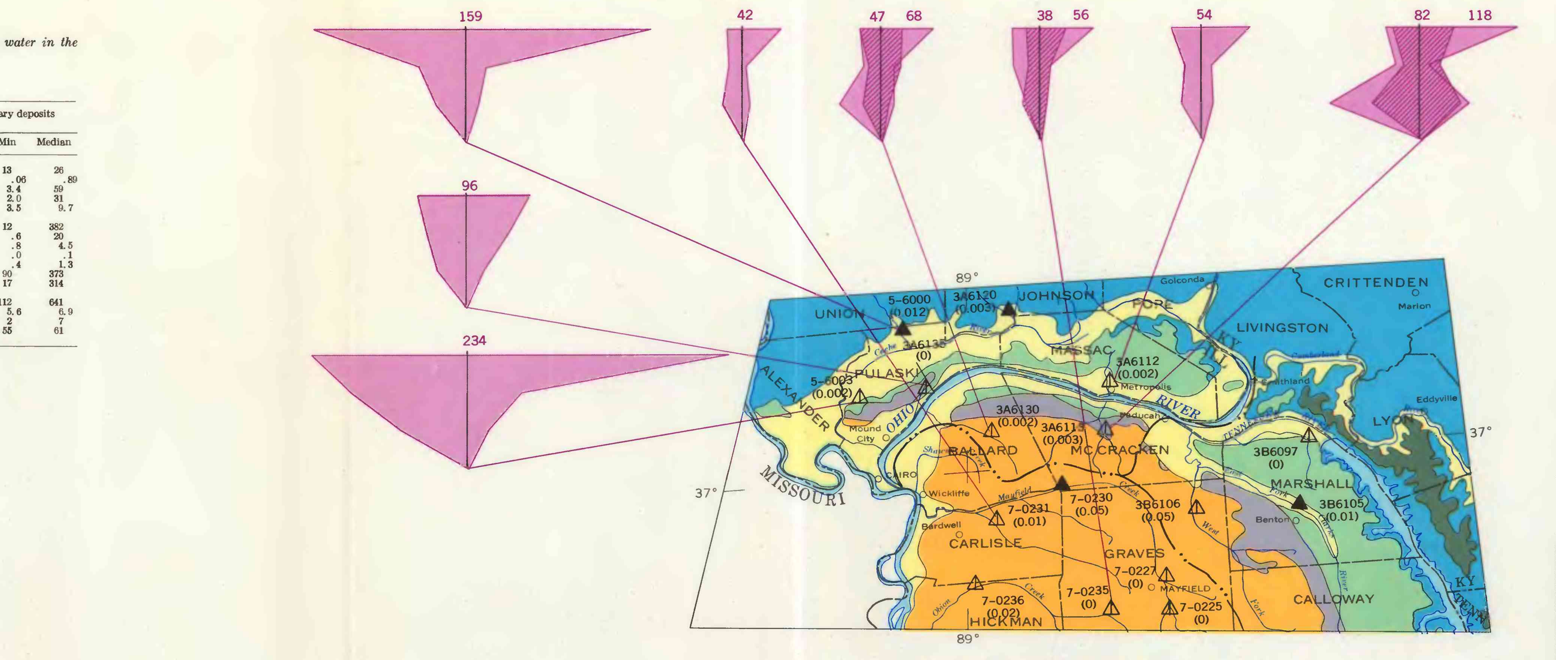
[Data in parts per million, except specific conductance, pH, color, and temperature]

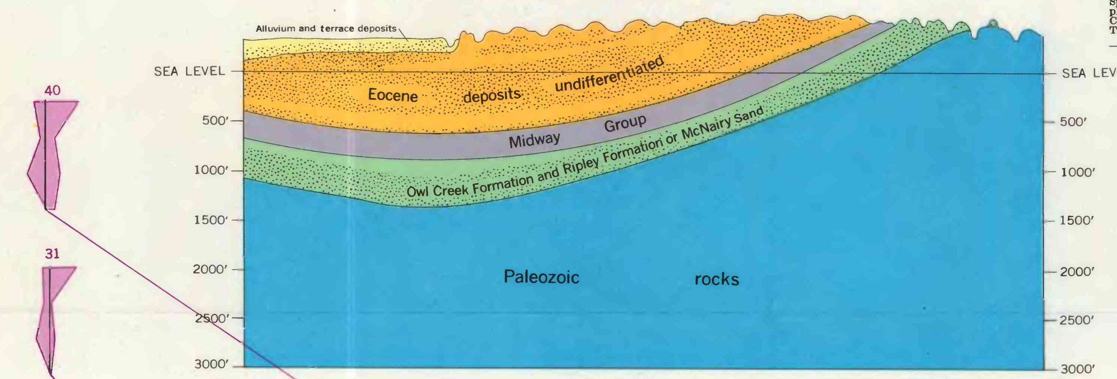
Constituent	Ripley Formation (McNairy Sand)			Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	25	7.2	9.6	21	3.6	12	43	13	26
Iron (Fe)	8.1	.36	1.6	23	.02	.13	35	.06	.80
Calcium (Ca)	9.4	1.8	4.2	46	.5	3.6	162	3.4	59
Magnesium (Mg)	5.2	.5	3.1	14	.4	1.5	74	2.0	31
Sodium (Na)	5.2	2.5	4.0	17	2.3	4.3	28	3.5	9.7
Carbonate plus bicarbonate (CO_3+HCO_3)	51	0	9	202	7	20	622	12	382
Sulfate (SO_4)	29	4.9	9.1	23	.4	2.9	114	.6	20
Chloride (Cl)	8.2	1.1	2.0	26	.6	2.9	44	.8	4.5
Fluoride (F)	.2	.0	.0	1.0	.0	.1	.2	.0	.1
Nitrate (NO_3)	10	.0	.0	53	.1	1.8	132	.4	1.3
Dissolved solids	88	32	53	202	26	46	612	90	373
Hardness as $CaCO_3$	45	7	24	172	4	14	545	17	314
Specific conductance (micromhos at 25°C)	97	28	88	359	28	60	950	112	641
pH	7.6	4.5	5.5	7.4	5.4	6.2	7.5	5.6	6.9
Color	7	1	4	20	0	5	12	2	7
Temperature (°F)	64	60	62	68	54	62	62	55	61

Maximum, minimum, and median concentrations of selected constituents in ground water in the Shawnee, Mayfield, and Obion Creek, and Bayou du Chien basins

[Data in parts per million, except specific conductance, pH, color, and temperature]

Constituent	Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	29	7.3	14	43	21	24
Iron (Fe)	39	.01	.25	12	.10	3.2
Calcium (Ca)	21	.8	3.3	114	57	63
Magnesium (Mg)	7.9	.4	1.2	42	17	35
Sodium (Na)	26	2.5	5.4	21	6.0	11
Carbonate plus bicarbonate (CO_3+HCO_3)	145	0	26	418	42	287
Sulfate (SO_4)	98	.0	1.8	98	2.8	19
Chloride (Cl)	167	.0	4.4	22	2.1	4.5
Fluoride (F)	2.0	.0	.0	.4	.0	.2
Nitrate (NO_3)	439	.0	1.7	24	.1	.5
Dissolved solids	848	28	48	547	269	350
Hardness as $CaCO_3$	398	5	14	457	40	212
Specific conductance (micromhos at 25°C)	1,460	26	70	864	148	463
pH	7.4	4.7	6.2	7.4	6.1	7.0
Color	5	0	2	12	5	5
Temperature (°F)	68	54	60	62	60	61





Maximum, minimum, and median concentrations of selected constituents in ground water in the Ohio and Cache River basins

[Data in parts per million, except specific conductance, pH, color, and temperature]

Constituent	Paleozoic rocks			McNairy Sand (Ripley Formation)			Lower Wilcox aquifer			Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	10	4.9	----	27	4.8	12	20	12	13	16	13	13	33	12	26
Iron (Fe)	.60	.11	0.17	23	.10	2.4	.66	.10	.42	3.7	.06	1.2	8.9	.02	.82
Calcium (Ca)	54	35	----	78	32	42	18	2.6	4.8	11	7.4	8.8	153	12	82
Magnesium (Mg)	11	10	----	131	8.5	10	7.0	1.2	2.0	6.0	2.8	4.9	56	1.2	21
Sodium (Na)	45	5.2	----	200	3.5	20	43	3.4	9.2	21	18	19	88	5.0	21
Carbonate plus bicarbonate (CO_3+HCO_3)	217	177	192	715	59	185	605	16	44	77	32	58	504	34	128
Sulfate (SO_4)	19	15	----	280	1.2	18	256	1.0	4.5	7.4	.0	2.6	214	.2	13
Chloride (Cl)	63	5.0	7.0	133	2.5	5.1	74	3.0	10	28	10	13	162	2.6	20
Fluoride (F)	.7	.1	----	1.0	.0	.3	.2	.0	.0	.2	.0	.1	.6	.0	.2
Nitrate (NO_3)	.0	.4	----	128	.0	.2	55	.1	2.0	14	.1	2.8	137	.0	15
Dissolved solids	300	195	235	1,270	166	238	520	35	84	118	95	107	911	103	290
Hardness as $CaCO_3$	193	133	176	734	78	149	468	13	25	52	17	28	613	31	131
Specific conductance (micromhos at 25°C)	529	318	----	445	234	363	925	41	121	228	99	184	1,330	96	388
pH	8.0	7.4	7.9	8.3	6.5	7.4	6.9	5.9	6.5	7.0	5.9	6.9	7.8	6.0	6.6
Color	12	0	4	3	0	1	1	0	1	3	1	3	10	0	4
Temperature (°F)	63	60	60	64	59	60	60	57	58	61	58	60	63	57	58

Maximum, minimum, and median concentrations of selected constituents in ground water in the Tennessee and Cumberland River basins

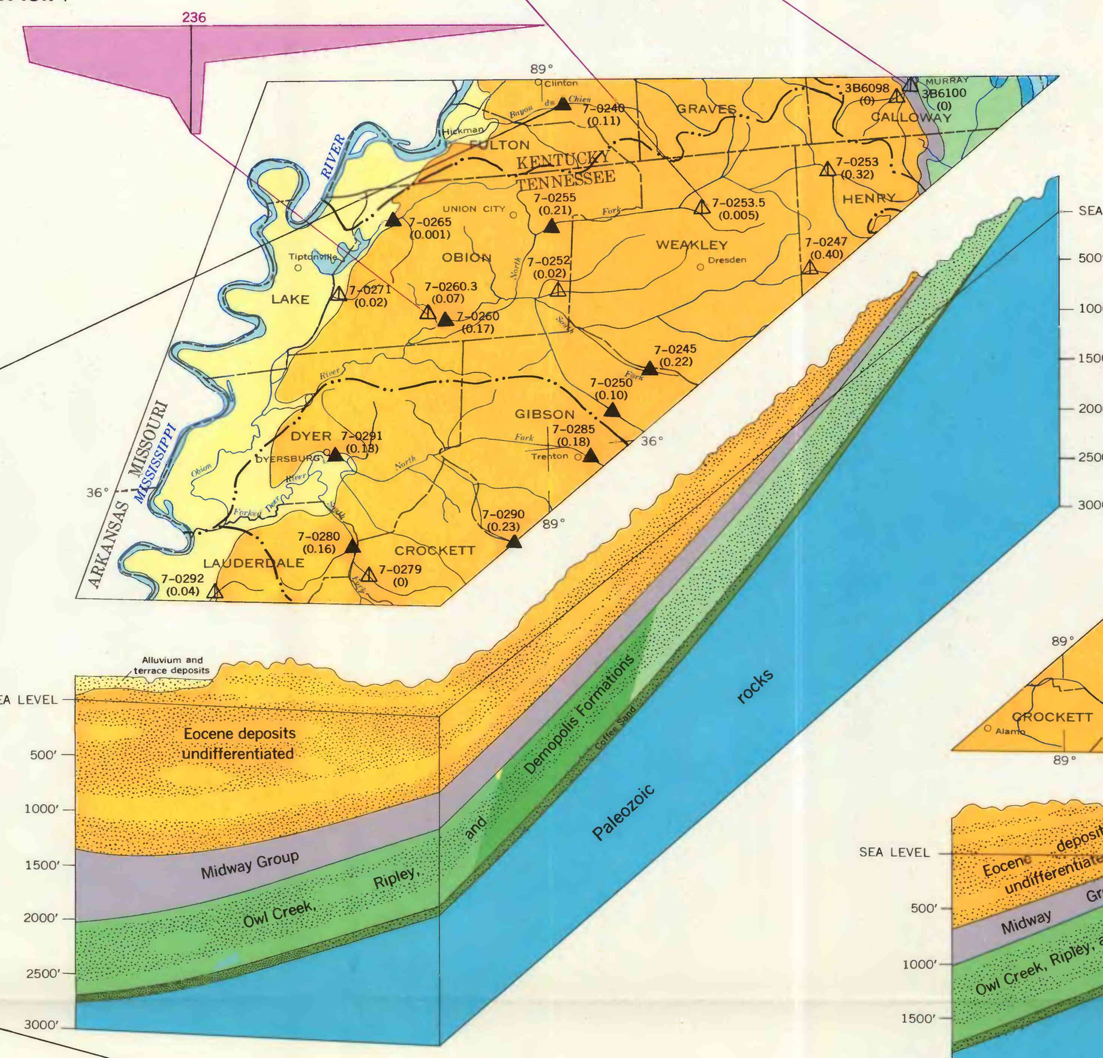
[Data in parts per million, except specific conductance, pH, color, and temperature]

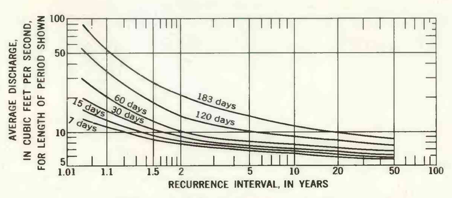
Constituent	Paleozoic rocks			Tuscaloosa Group			Eutaw Formation			Coffee Sand		
	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	13	4.2	9.3	12	5.0	8.2	23	10	----	30	13	----
Iron (Fe)	15	.00	.28	4.8	.06	.61	6.6	.00	----	15	.07	0.37
Calcium (Ca)	174	24	39	132	5.3	30	19	2.5	5.2	26	1.3	5.8
Magnesium (Mg)	18	2.6	7.9	9.9	2.4	4.2	3.9	1.0	2.0	11	.2	1.8
Sodium (Na)	61	1.7	5.4	4.3	3.1	4.0	3.8	2.2	----	83	.7	3.6
Carbonate plus bicarbonate (CO_3+HCO_3)	392	18	174	436	26	120	210	12	40	188	4	19
Sulfate (SO_4)	150	.4	7.6	17	2.5	8.8	12	.4	5.2	37	.2	4.4
Chloride (Cl)	107	1.0	4.0	15	1.9	3.5	24	1.3	3.0	73	1.5	4.0
Fluoride (F)	.9	.0	.1	.2	.0	.1	----	.1	----	2.2	.0	.2
Nitrate (NO_3)	22	.1	3.7	12	.0	.3	2.5	.1	.4	19	.1	.8
Dissolved solids	590	25	177	385	50	126	271	38	63	350	16	48
Hardness as $CaCO_3$	453	12	152	355	26	90	34	10	22	110	4	22
Specific conductance (micromhos at 25°C)	869	30	321	656	74	239	408	33	76	594	17	65
pH	8.2	6.1	7.4	7.6	6.2	7.0	8.2	6.0	6.7	7.6	5.4	6.1
Color	6	1	2	6	2	3	----	----	----	7	5	5
Temperature (°F)	66	53	58	61	57	58	68	61	66	69	63	65

Constituent	Ripley Formation (McNairy Sand)			Lower Wilcox aquifer			Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	34	5.9	11	----	----	----	27	7.8	11	19	13	17
Iron (Fe)	28	.02	.56	1.0	0.66	----	32	.03	.16	15	.01	.29
Calcium (Ca)	57	1.6	10	----	----	----	54	1.1	8.6	70	23	47
Magnesium (Mg)	12	.6	3.6	----	----	----	17	.3	1.9	12	3.1	7.4
Sodium (Na)	44	.5	4.0	----	----	----	57	2.0	8.8	100	4.6	7.8
Carbonate plus bicarbonate (CO_3+HCO_3)	208	0	46	38	16	----	144	8	40	675	5	54
Sulfate (SO_4)	1,430	.4	10	1.9	.0	----	52	.0	4.0	860	2.8	9.6
Chloride (Cl)	72	.0	4.5	26	8.0	----	174	.0	7.0	90	.0	8.0
Fluoride (F)	.6	.0	.1	.0	.0	----	.6	.0	.1	.5	.0	.1
Nitrate (NO_3)	40	.0	.7	1.0	.4	----	182	.1	4.5	46	.4	8.0
Dissolved solids	1,290	32	76	----	----	----	496	24	82	1,510	35	----
Hardness as $CaCO_3$	952	1	48	25	14	----	204	4	40	1,170	10	58
Specific conductance (micromhos at 25°C)	2,150	32	133	121	77	----	751	23	125	2,520	46	196
pH	7.9	4.0	6.4	6.5	5.9	----	8.5	5.3	6.2	7.6	5.2	6.6
Color	15	1	3	----	----	----	4	0	2	7	2	4
Temperature (°F)	66	53	60	60	58	----	67	52	59	66	53	58

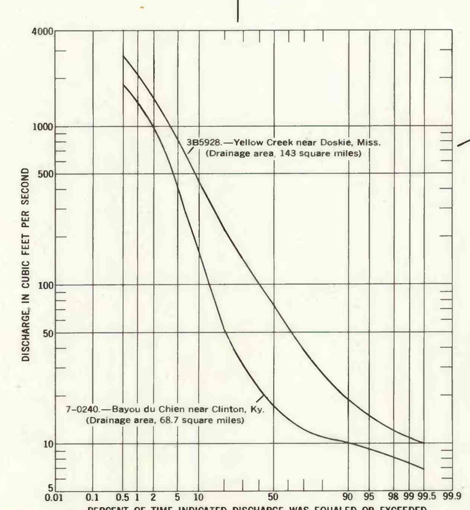
BLOCK 1.—OHIO RIVER, CUMBERLAND RIVER, CACHE RIVER, AND SHAWNEE CREEK BASINS AND NORTHERN PARTS OF MAYFIELD CREEK, OBION CREEK, AND TENNESSEE RIVER BASINS

BLOCK 2.—SOUTHERN PARTS OF MAYFIELD CREEK AND OBION CREEK BASINS, NORTH-CENTRAL PART OF TENNESSEE RIVER BASIN, BAYOU DU CHIEN BASIN, WESTERN PARTS OF OBION RIVER AND FORKED DEER RIVER BASINS, AND NORTHERN PART OF COLD CREEK BASIN

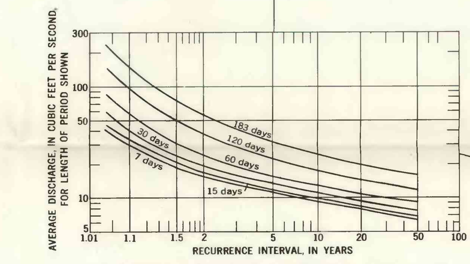




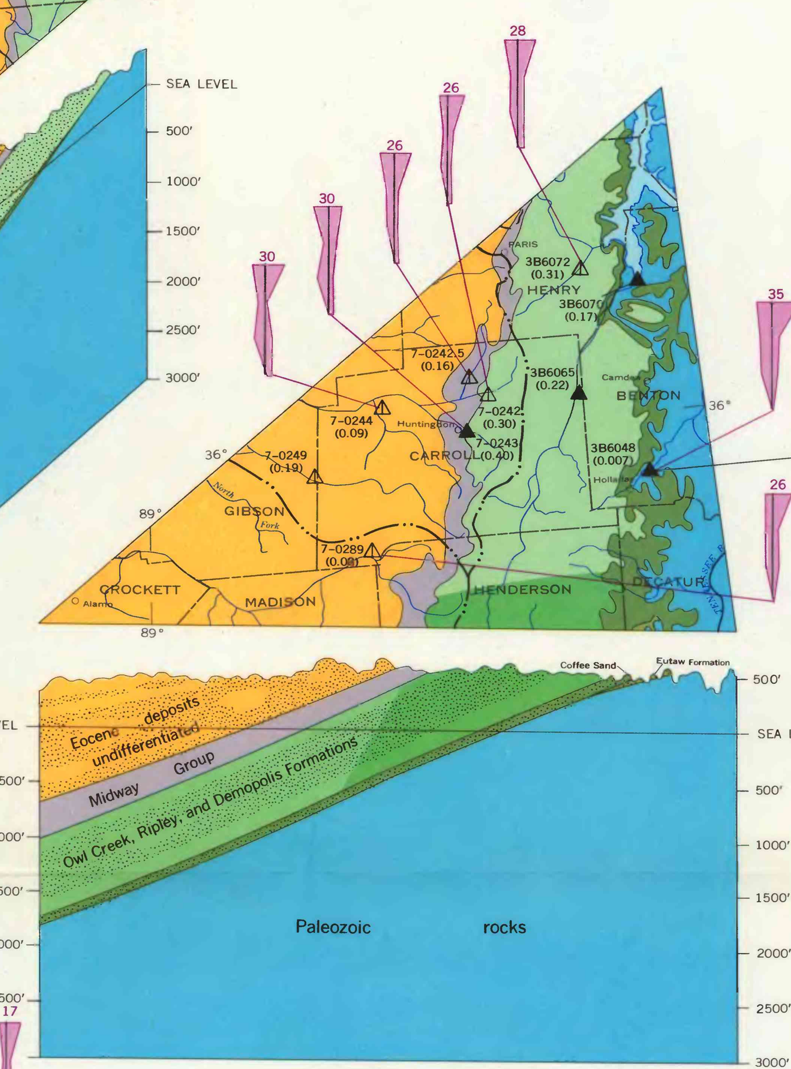
MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW, BAYOU DU CHIEN NEAR CLINTON, KY. (7-0240), 1929-57

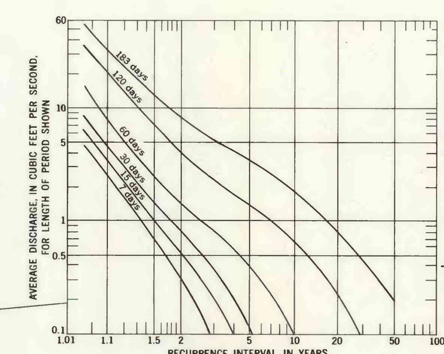


FLOW-DURATION CURVES FOR YELLOW CREEK NEAR DOSKIE, MISS., AND BAYOU DU CHIEN NEAR CLINTON, KY. 1929-57

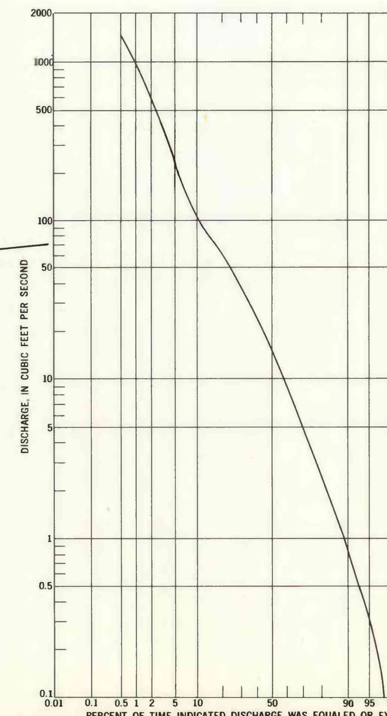


MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW, YELLOW CREEK NEAR DOSKIE, MISS. (3B5928), 1929-57





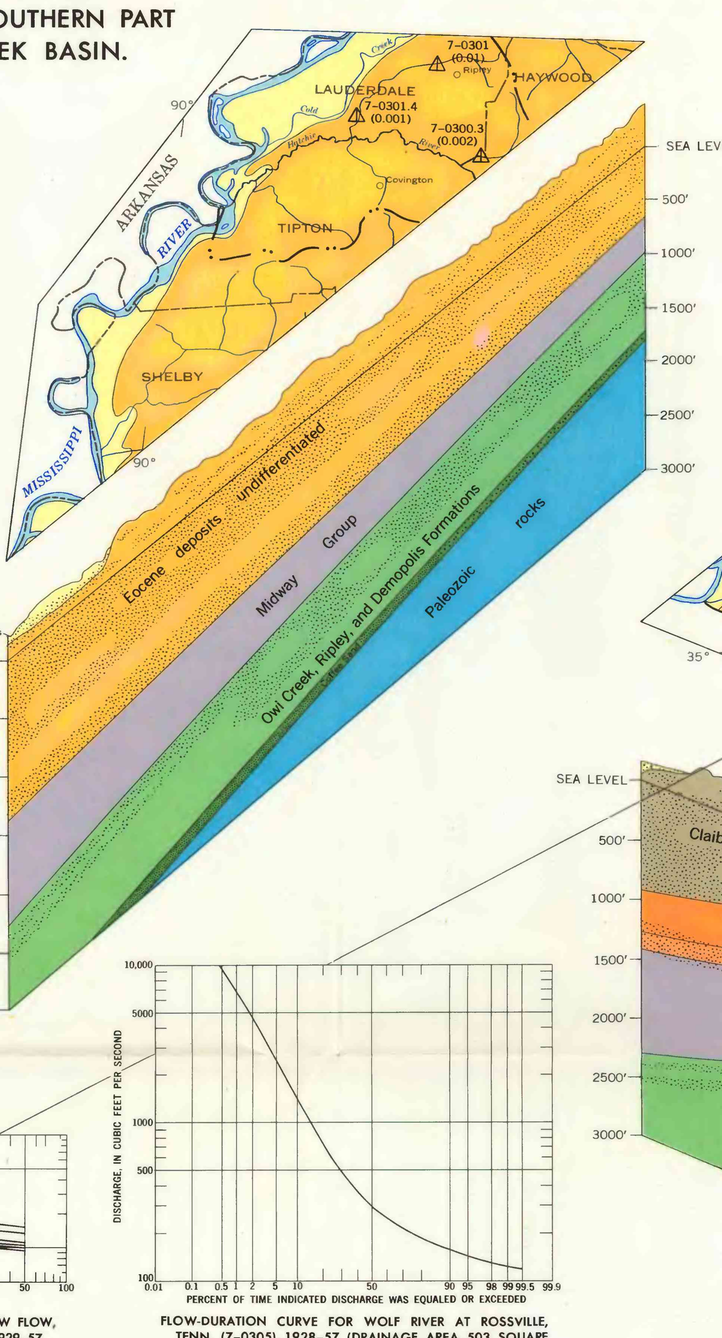
MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW, BIRDSONG CREEK NEAR HOLLADAY, TENN. (3B6048), 1929-57

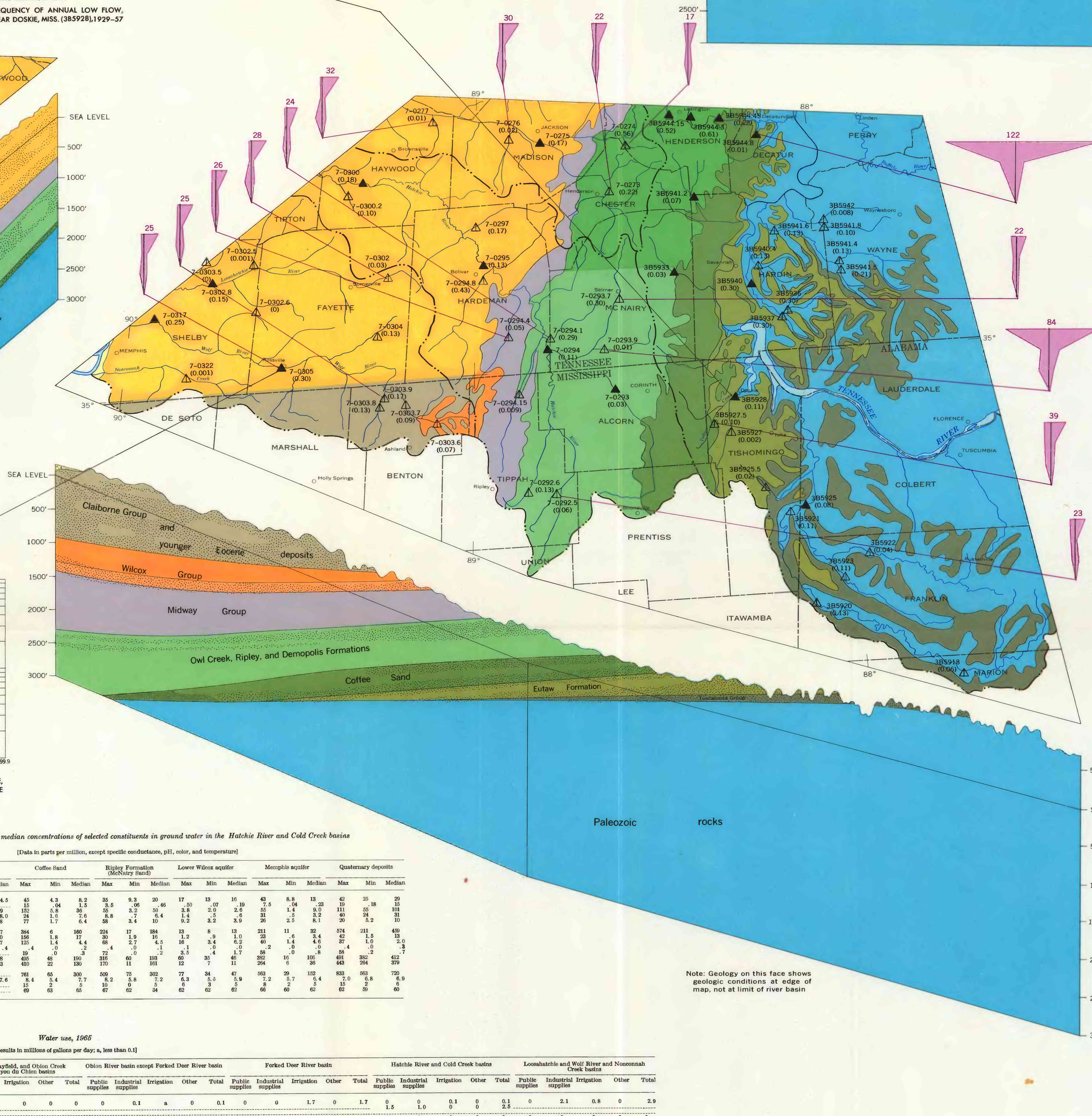


FLOW-DURATION CURVE FOR BIRDSONG CREEK NEAR HOLLADAY, TENN. (3B6048), 1929-57 (DRAINAGE AREA, 44.9 SQUARE MILES)

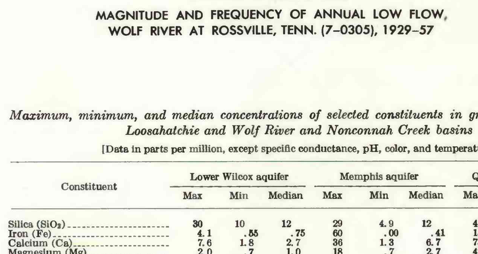
BLOCK 3.—CENTRAL PART OF TENNESSEE RIVER BASIN, EASTERN PART OF OBION RIVER BASIN, AND EAST-CENTRAL PART OF FORKED DEER RIVER BASIN

BLOCK 4.—WESTERN PARTS OF LOOSAHATCHIE RIVER AND WOLF RIVER BASINS, WEST-CENTRAL PART OF FORKED DEER RIVER BASIN, NORTHERN PART OF HATCHIE RIVER BASIN, AND SOUTHERN PART OF COLD CREEK BASIN.

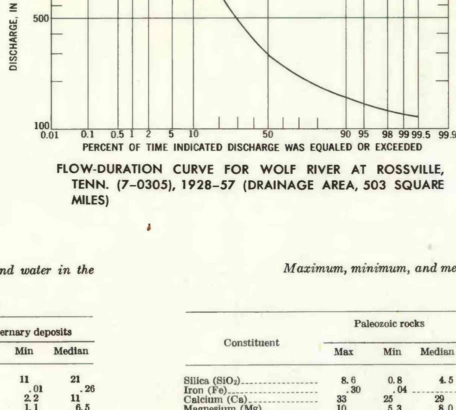




BLOCK 5.—SOUTHERN PARTS OF TENNESSEE RIVER, FORKED DEER RIVER, AND HATCHIE RIVER BASINS, NONCONNAH CREEK BASIN, AND EASTERN PARTS OF WOLF RIVER AND LOOSAHATCHIE RIVER BASINS



MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW, WOLF RIVER AT ROSSVILLE, TENN. (7-0305), 1929-57



FLOW-DURATION CURVE FOR WOLF RIVER AT ROSSVILLE, TENN. (7-0305), 1928-57 (DRAINAGE AREA, 503 SQUARE MILES)

Maximum, minimum, and median concentrations of selected constituents in ground water in the Forked Deer River basin

[Data in parts per million, except specific conductance, pH, color, and temperature]

Constituent	Ripley Formation (McNairy Sand)			Lower Wilcox aquifer			Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	34	6.5	17	19	7.9	14	26	3.3	12	47	25	33
Iron (Fe)	19	.21	5.7	3.8	.00	.07	9.5	.00	.08	3.7	.09	.33
Calcium (Ca)	17	2.8	10	14	1.5	1.6	43	1.4	5.4	56	6.4	34
Magnesium (Mg)	6.7	1.8	4.0	5.1	.4	1.5	19	.4	2.1	38	1.5	18
Sodium (Na)	13	5.3	6.2	8.9	2.7	3.2	21	2.3	6.2	52	6.1	11
Carbonate plus bicarbonate (CO_3+HCO_3)	86	21	57	17	6	9	238	8	23	290	6	98
Sulfate (SO_4)	20	8.0	14	37	.0	1.2	18	.0	4.6	291	2.3	24
Chloride (Cl)	5.5	1.5	2.2	14	2.0	3.9	27	.6	3.5	58	1.5	6.9
Fluoride (F)	.2	.0	.1	.4	.0	.1	.3	.0	.0	.3	.1	.1
Nitrate (NO_3)	11	.0	.1	13	.2	3.4	23	.0	3.4	51	.4	----
Dissolved solids	141	48	96	124	23	37	210	16	66	584	78	298
Hardness as $CaCO_3$	65	17	45	56	5	10	185	6	23	256	25	176
Specific conductance (micromhos at 25°C)	215	50	145	172	30	44	179	28	92	781	111	436
pH	7.7	5.8	6.6	5.9	5.2	5.5	6.8	5.5	6.0	8.1	4.9	6.3
Color	160	2	7	4	2	4	7	1	5	10	1	3
Temperature (°F)	66	61	64	62	59	61	65	58	61	62	57	60

Hydraulic characteristics of aquifers

[Averaged by aquifer; number in parentheses denotes number of tests used to compute average. gpd=gallons per day; gpm=gallons per minute]

Aquifer	Coefficient: Transmissibility (gpd per ft)	Coefficient: Storage	Permeability (gpd per sq ft)	Specific capacity (gpm per ft of drawdown)
Loosahatchie and Wolf River and Nonconnah Creek basins				
Lower Wilcox aquifer	(20) 98,000	(20) 0.0002	----	----
Memphis aquifer	(61) 250,000	(52) .001	----	----
Hatchie River and Cold Creek basins				
Memphis aquifer	(4) 150,000	(2) 0.0002	----	(2) 24
Forked Deer River basin				
Ripley Formation (McNairy Sand)	(1) 25,000	(1) 0.0008	----	(1) 1.5
Lower Wilcox aquifer	(4) 75,000	(3) .0015	(2) 510	(1) 12
Memphis aquifer	(8) 110,000	(5) .0025	(1) 600	(1) 11
Quaternary deposits	(1) 65,000	(1) .0014	(1) 650	----
Tennessee and Cumberland River basins				
Ripley Formation (McNairy Sand)	(1) 32,000	(1) 0.0001		
Obion River basin except Forked Deer River basin				
Memphis aquifer	(6) 75,000	(5) 0.0005	(2) 260	(2) 23
Quaternary deposits	(1) 280,000	(1) .0008	(1) 3,400	----
Shawnee, Mayfield, and Obion Creek and Bayou du Chien basins				
Memphis aquifer	(1) 300,000	(1) 0.0002	(1) 2,000	(1) 54
Ohio and Cache River basins				
Lower Wilcox aquifer	----	----	----	(2) 12

Note: The block diagrams are schematic, and depths and distances are not exact. For more detailed information about the aquifers and low flow of streams in these basins, refer to Prof. Papers 448-B, C, D, E, H, and I (Cushing and others, 1964; Boswell and others, 1965; Hosman and others, 1968; Boswell and others, 1968; Speer and others, 1965; and Speer and others, 1964). Additional water information for these basins is contained in the following publications:

Alabama

Harris, Moore, and West (1963)
Harris, Peace, and Harris (1963)
Peace (1963)
Peirce (1957, 1959, 1967)

Illinois

Glenn (1906)
Illinois State Water Survey (1950, 1958)
Pryor (1956)

Kentucky

Gallaher (1964)
Kulp and Hopkins (1960)
MacCary and Lambert (1962)
Pree and Walker (1952, 1953)
Pree, Walker, and MacCary (1957)
Walker (1957)
U.S. Geological Survey (1964-68)

Mississippi

Boswell (1963)
Ellison and Boswell (1960)
Lang and Boswell (1960)
Newcome and Callahan (1964)

Tennessee

Criner, Sun, and Nyman (1964)
Lanphere (1955)
Moore (1965)

Maximum, minimum, and median concentrations of selected constituents in ground water in the Loosahatchie and Wolf River and Nonconnah Creek basins

[Data in parts per million, except specific conductance, pH, color, and temperature]

Constituent	Lower Wilcox aquifer			Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	30	10	12	29	4.9	12	45	11	21
Iron (Fe)	4.1	.55	.75	60	.00	.41	15	.01	.26
Calcium (Ca)	7.6	1.8	2.7	36	1.3	6.7	78	2.2	11
Magnesium (Mg)	2.0	.7	1.0	18	.7	2.7	42	1.1	6.5
Sodium (Na)	41	31	38	26	1.9	7.6	66	7.0	15
Carbonate plus bicarbonate (CO_3+HCO_3)	112	96	108	212	4	45	442	16	68
Sulfate (SO_4)	6.7	4.2	4.7	7.8	.2	3.3	27	.0	8.6
Chloride (Cl)	4.0	1.5	2.0	32	.5	3.7	53	5.0	8.5
Fluoride (F)	.1	.0	.1	.4	.0	.1	.6	.0	.1
Nitrate (NO_3)	1.6	.0	.2	52	.0	.5	75	.0	4.0
Dissolved solids	136	101	114	188	19	73	388	76	134
Hardness as $CaCO_3$	22	8	12	164	6	31	367	14	68
Specific conductance (micromhos at 25°C)	223	145	174	343	23	102	689	101	185
pH	7.9	7.4	7.7	7.7	5.1	6.4	7.2	5.8	6.8
Color	60	9	25	18	0	5	25	0	3
Temperature (°F)	72	70	71	66	55	63	66	61	65

Maximum, minimum, and median concentrations of selected constituents in ground water in the Hatchie River and Cold Creek basins

[Data in parts per million, except specific conductance, pH, color, and temperature]

Constituent	Paleozoic rocks			Coffee Sand			Ripley Formation (McNairy Sand)		
	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	8.6	0.8	4.5	45	4.3	8.2	35	9.3	20
Iron (Fe)	.30	.04	----	15	.04	1.5	3.5	.06	.46
Calcium (Ca)	33	25	29	152	5.8	36	55	3.2	50
Magnesium (Mg)	10	5.3	8.0	24	1.6	7.6	8.8	.7	6.4
Sodium (Na)	81	10	78	77	1.7	6.4	58	3.4	10
Carbonate plus bicarbonate (CO_3+HCO_3)	146	110	117	384	6	160	224	17	184
Sulfate (SO_4)	16	8.7	10	156	1.8	17	30	1.9	16
Chloride (Cl)	123	5.5	107	125	1.4	4.4	68	2.7	4.5
Fluoride (F)	.8	.3	.4	.4	.0	.2	.4	.0	.1
Nitrate (NO_3)	----	----	----	19	.0	.3	72	.0	.2
Dissolved solids	332	113	318	495	48	190	316	60	193
Hardness as $CaCO_3$	137	84	123	410	22	130	170	11	161
Specific conductance (micromhos at 25°C)	556	212	----	761	65	300	509	75	302
pH	7.8	7.4	7.6	8.4	5.4	7.7	8.2	5.8	7.2
Color	5	0	----	15	2	5	10	0	5
Temperature (°F)	----	----	----	69	63	65	67	62	34

Constituent	Lower Wilcox aquifer			Memphis aquifer			Quaternary deposits		
	Max	Min	Median	Max	Min	Median	Max	Min	Median
Silica (SiO_2)	17	13	16	43	8.8	13	42	25	29
Iron (Fe)	.50	.07	.19	7.5	.04	.23	19	.18	15
Calcium (Ca)	3.8	2.0	2.6	55	1.4	9.0	111	55	101
Magnesium (Mg)	1.4	.5	.6	31	.5	3.2	40	24	31
Sodium (Na)	9.2	3.2	3.9	26	2.5	8.1	20	5.2	10
Carbonate plus bicarbonate (CO_3+HCO_3)	13	8	13	211	11	32	574	211	459
Sulfate (SO_4)	1.2	.9	1.0	23	.6	3.4	42	1.5	13
Chloride (Cl)	16	3.4	6.2	40	1.4	4.6	37	1.0	2.0
Fluoride (F)	.1	.0	.0	.2	.0	.0	.4	.0	.3
Nitrate (NO_3)	3.5	.4	1.7	58	.0	.8	58	.2	.7
Dissolved solids	60	35	46	382	16	106	491	382	412
Hardness as $CaCO_3$	12	7	11	264	6	36	443	264	379
Specific conductance (micromhos at 25°C)	77	34	47	563	29	152	833	563	720
pH	6.3	5.6	5.9	7.2	5.7	6.4	7.0	6.8	6.9
Color	6	3	5	8	2	5	15	2	6
Temperature (°F)	62	62	62	66	60	62	62	59	60

Water use, 1965

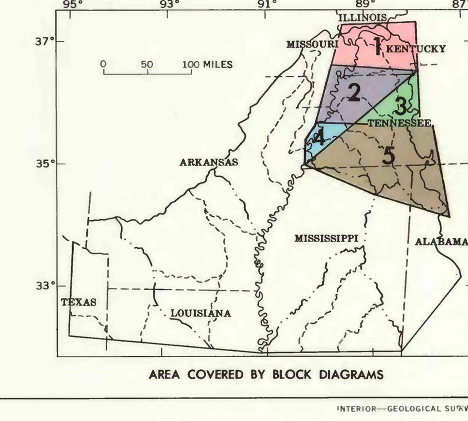
[Results in millions of gallons per day; a, less than 0.1]

Source	Ohio and Cache River basins: Public supplies	Industrial supplies	Irrigation	Other	Total	Tennessee and Cumberland River basins: Public supplies	Industrial supplies	Irrigation	Other	Total
Surface water	5.5	0.3	0	a	5.8	1.0	28.1	a	0.2	29.3
Paleozoic rocks	0	.1	0	a	.1	.7	a	a	.9	1.6
Tuscaloosa Group	----	----	----	----	----	.1	0	0	1.0	1.1
Eutaw Formation and Coffee Sand	----	----	----	----	----	.1	a	0	.3	.4
Ripley Formation (McNairy Sand)	.1	0	0	a	.1	6.3	.3	0	.5	7.1
Lower Wilcox aquifer	0	0	0	0	0	a	a	a	.2	.2
Memphis aquifer	.2	a	0	a	.2	a	a	0	0	a
Cockfield equivalent and Jackson(?) Formation	----	----	----	----	----	----	----	----	----	----
Quaternary deposits	0	0	0	0	0	.8	1.0	0	a	1.8
Total	5.8	.4	0	a	6.2	9.0	29.4	a	3.1	41.5

Source	Shawnee, Mayfield, and Obion Creek and Bayou du Chien basins: Public supplies	Industrial supplies	Irrigation	Other	Total	Obion River basin except Forked Deer River basin: Public supplies	Industrial supplies	Irrigation	Other	Total
Surface water	0	0	0	0	0	0	0.1	a	0	0.1
Paleozoic rocks	----	----	----	----	----	----	----	----	----	----
Tuscaloosa Group	----	----	----	----	----	----	----	----	----	----
Eutaw Formation and Coffee Sand	----	----	----	----	----	0	0	0	0	0
Ripley Formation (McNairy Sand)	0	0	0	0	0	.2	0	0	0	.2
Lower Wilcox aquifer	0	0	0	0	0	.4	a	0	a	.4
Memphis aquifer	2.2	1.8	0	0	4.0	4.5	1.1	.2	.3	6.1
Cockfield equivalent and Jackson(?) Formation	----	----	----	----	----	.3	.4	a	.1	.8
Quaternary deposits	----	----	----	----	----	.2	1.4	1.1	.2	2.9
Total	2.2	1.8	0	0	4.0	5.6	3.0	1.3	.6	10.5

Source	Forked Deer River basin: Public supplies	Industrial supplies	Irrigation	Other	Total	Hatchie River and Cold Creek basins: Public supplies	Industrial supplies	Irrigation	Other	Total
Surface water	0	0	1.7	0	1.7	0	0	0.1	0	0.1
Paleozoic rocks	----	----	----	----	----	1.5	1.0	0	0	2.5
Tuscaloosa Group	----	----	----	----	----	----	----	----	----	----
Eutaw Formation and Coffee Sand	0	0	0	0	0	0	0	0	0	0
Ripley Formation (McNairy Sand)	1.8	.4	a	a	2.2	.3	.7	a	.1	1.1
Lower Wilcox aquifer	3.3	3.6	a	a	6.9	.8	0	a	a	.8
Memphis aquifer	2.2	3.9	.6	.5	7.2	1.8	.8	.1	.2	2.9
Cockfield equivalent and Jackson(?) Formation	0	0	a	.2	.2	0	0	a	a	a
Quaternary deposits	.1	.3	.1	.1	.6	.5	.2	0	.1	.8
Total	7.4	8.2	2.4	.8	18.8	4.9	2.7	.2	.4	8.2

Source	Loosahatchie and Wolf River and Nonconnah Creek basins: Public supplies	Industrial supplies	Irrigation	Other	Total
Surface water	0	2.1	0.8	0	2.9
Paleozoic rocks	----	----	----	----	----
Tuscaloosa Group	----	----	----	----	----
Eutaw Formation and Coffee Sand	0	0	0	0	0
Ripley Formation (McNairy Sand)	0	0	0	0	0
Lower Wilcox aquifer	3.3	4.5	0	a	7.8
Memphis aquifer	76.7	51.4	.2	.8	129.1
Cockfield equivalent and Jackson(?) Formation	a	0	0	a	a
Quaternary deposits	0	0	a	.1	.1
Total	80.0	58.0	1.0	.9	139.9



AREA COVERED BY BLOCK DIAGRAMS

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D.C.—1970—W68264

BLOCK DIAGRAMS, GRAPHS, AND CHEMICAL-ANALYSES DIAGRAMS SHOWING AVAILABILITY AND QUALITY OF WATER IN THE NORTHEASTERN PART OF THE MISSISSIPPI EMBAYMENT