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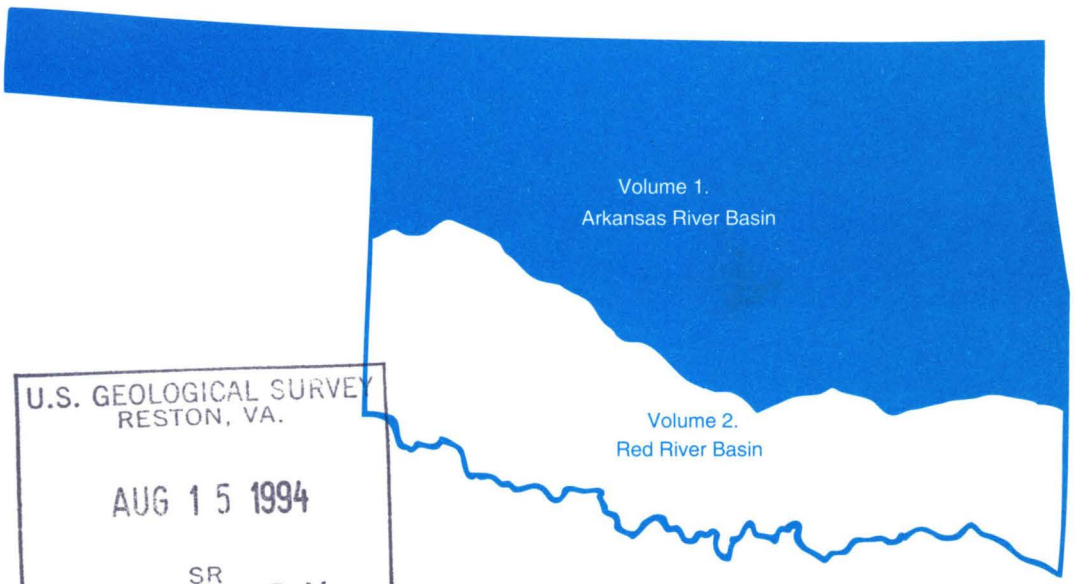
Water Resources Data Oklahoma Water Year 1993

Volume 1. Arkansas River Basin



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Prepared in cooperation with the State of Oklahoma and with other agencies

CALENDAR FOR WATER YEAR 1993

1992

OCTOBER

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1993

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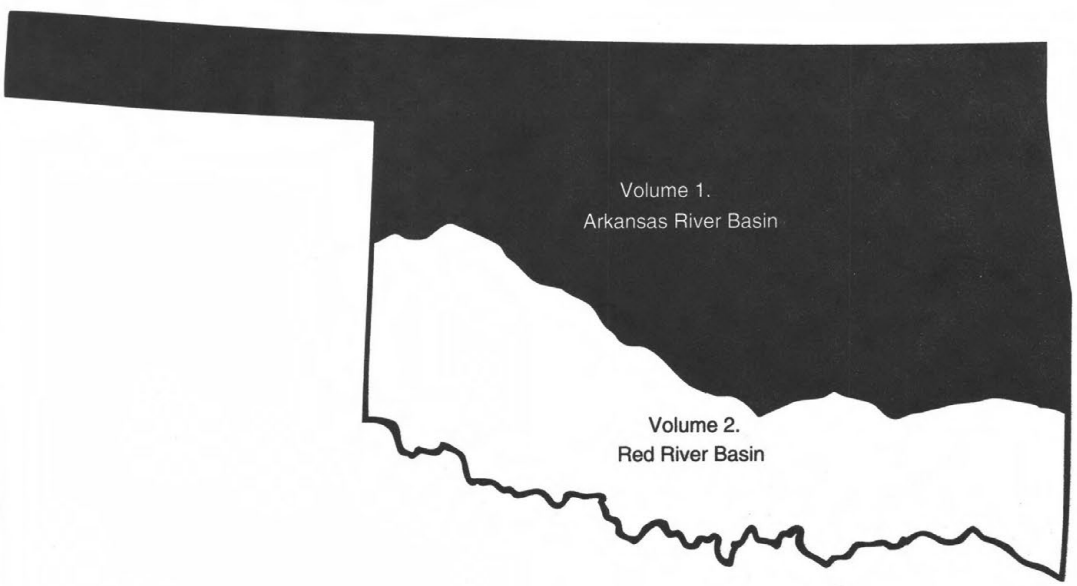
Water Resources Data Oklahoma Water Year 1993

Volume 1. Arkansas River Basin

by R.L. Blazs, D.M. Walters, T.E. Coffey, D.K. White, D.L. Boyle, and J.F. Kerestes



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT OK-93-1
Prepared in cooperation with the State of Oklahoma and with other agencies

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, *Secretary*

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

For information on the water program in Oklahoma write to
District Chief, Water Resources Division
U.S. Geological Survey
202 N.W. 66 St., Building 7
Oklahoma City, Oklahoma 73116

1994

PREFACE

This hydrologic-data report for Oklahoma is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface-water and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by state, local, and federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. The authors had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines.

The data were collected, computed, and processed by the following personnel:

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L.K. Osburn typed the text of the report.

This report was prepared in cooperation with the State of Oklahoma and with other agencies under the general supervision of Robert L. Blazs, Hydrologic Records Section Chief, and Kathy D. Peter, District Chief.

Data for Oklahoma are in three volumes as follows:

Volume 1. Arkansas River Basin
Volume 2. Red River Basin and Ground-Water Records
Volume 3. Statewide Miscellaneous Water-Quality Data Water Years 1991-1993

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD/94/290	2.	3. Recipient's Accession No.
4. Title and Subtitle: Water Resources Data for Oklahoma, Water Year 1993			5. Report Date: May 1994 6.
7. Author(s): R.L. Blazs, D.M. Walters, T.E. Coffey, D.K. White, D.L., Boyle, J.K. Kerestes			8. Performing Organization Rept. No. USGS-WDR-OK-93-1
9. Performing Organization Name and Address: U.S. Geological Survey, Water Resources Division, 202 NW 66 St., Bldg. 7, Oklahoma City, OK 73116			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address			13. Type of Report & Period Covered: Annual - Oct. 1, 1992 to Sept. 30, 1993 14.

15. Supplementary Notes
Prepared in cooperation with the State of Oklahoma and with other agencies.

16. Abstract (Limit: 200 words)
Volumes 1 and 2 of the water resources data for the 1993 water year for Oklahoma consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes or reservoirs; and water levels of ground-water wells. This report contains discharge records for 135 gaging stations; stage and contents for 30 lakes or reservoirs; water quality for 58 gaging stations; 23 partial-record or miscellaneous streamflow stations and 28 ground-water sites. Also included are lists of discontinued surface-water discharge and water-quality sites. Volume 3 contains statewide miscellaneous water-quality data. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Oklahoma.

17. Document Analysis a. Descriptors
*Oklahoma, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperature, Sampling sites, Water analyses, Ground water.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161

19. Security Class (This Report): UNCLASSIFIED
20. Security Class (This Page): UNCLASSIFIED
21. No. of Pages: 552
22. Price

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SURFACE WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station name designate type of data: (d) discharge, (c) chemical, (b) biological, (e) contents, (m) microbiological, (t) water temperature, (s) sediment]

	Station number	Page
LOWER MISSISSIPPI RIVER BASIN		
MISSISSIPPI RIVER		
ARKANSAS RIVER BASIN		
Kaw Lake near Ponca City (e)	07148130	46
Arkansas River near Ponca City (d)	07148140	48
Salt Fork Arkansas River near Winchester (d)	07148350	50
Salt Fork Arkansas River near Alva (d)	07148400	52
Great Salt Plains Lake near Jet (e)	07150000	54
Salt Fork Arkansas River near Jet (d)	07150500	56
Salt Fork Arkansas River at Tonkawa (d)	07151000	58
Chikaskia River near Blackwell (d)	07152000	60
Arkansas River at Ralston (dcmst)	07152500	62
Black Bear Creek at Pawnee (d)	07153000	68
Cimarron River near Kenton (d)	07154500	70
Cimarron River near Forgan (d)	07156900	72
Cimarron River near Buffalo (dcms)	07157950	74
Buffalo Creek near Lovedale (d)	07157960	80
Cimarron River near Waynoka (d)	07158000	82
Cimarron River near Dover (d)	07159100	84
Cottonwood Creek:		
Deer Creek:		
Bluff Creek above Bethany and Warr Acres Sewage Treatment Plant near Edmond (c)	07159639	86
Deer Creek below Bluff Creek at Oklahoma City (c)	07159643	87
Deer Creek at Oklahoma City (c)	07159650	88
Chisholm Creek at Edmond (c)	07159690	89
Chisholm Creek near Edmond (c)	07159695	90
Cottonwood Creek near Seward (d)	07159750	92
Cimarron River near Guthrie (d)	07160000	94
Skeleton Creek near Lovell (d)	07160500	96
Cimarron River at Perkins (cms)	07161000	98
Cimarron River near Ripley (d)	07161450	102
Council Creek near Stillwater (d)	07163000	104
Keystone Lake near Sand Springs (e)	07164200	106

	Station number	Page
LOWER MISSISSIPPI RIVER BASIN		
MISSISSIPPI RIVER--Continued		
ARKANSAS RIVER BASIN--Continued		
Arkansas River at Tulsa (dcmts)	07164500	108
Joe Creek at 61st Street at Tulsa (d)	07164600	120
Polecat Creek:		
Heyburn Lake near Heyburn (e)	07165000	122
Haikey Creek at 101st Street South at Tulsa (d)	07165562	124
Little Haikey Creek at 101st Street South at Tulsa (d)	07165565	126
Arkansas River near Haskell (d)	07165570	128
Verdigris River near Lenapah (d)	07171000	130
Oologah Lake near Oologah (e)	07171300	132
Hulah Lake near Hulah (e)	07172500	134
Caney River near Hulah (d)	07173000	136
Little Caney River:		
Copan Lake near Copan (e)	07174300	138
Caney River above Coon Creek at Bartlesville (d)	07174400	140
Sand Creek at Okesa (d)	07174600	142
Caney River near Ramona (dcms)	07175500	144
Verdigris River near Claremore (d)	07176000	150
Bird Creek:		
Birch Creek:		
Birch Lake near Barnsdall (e)	07176460	152
Bird Creek near Avant (d)	07176500	154
Hominy Creek:		
Skiatook Lake near Skiatook (e)	07177400	156
Hominy Creek below Skiatook Lake near Skiatook (d)	07177410	158
Bird Creek near Sperry (dcst)	07177500	160
Flat Rock Creek at Cincinnati Avenue at Tulsa (d)	07177650	174
Coal Creek at Tulsa (d)	07177800	176
Bird Creek near Owasso (dcst)	07178000	178
Mingo Creek at 46th Street North at Tulsa (dcst)	07178040	192
Bird Creek at State Highway 266 near Catoosa (dcst)	07178200	206
Neosho River near Commerce (d)	07185000	220
Tar Creek at 22nd Street Bridge at Miami (dc)	07185095	222
Spring River near Quapaw (d)	07188000	226
Elk River near Tiff City, MO (d)	07189000	228
Lake O' The Cherokees at Langley (e)	07190000	230
Neosho River near Langley (d)	07190500	232
Big Cabin Creek near Big Cabin (d)	07191000	234
Spavinaw Creek near Sycamore (d)	07191220	236
Spavinaw Lake at Spavinaw (e)	07191300	238
Lake Hudson near Locust Grove (e)	07191400	240
Neosho River near Chouteau (d)	07191500	242
Fort Gibson Lake near Fort Gibson (e)	07193000	244
Neosho River below Fort Gibson near Fort Gibson (cms)	07193500	246
Illinois River near Watts (dc)	07195500	248
Sager Creek near West Siloam Springs (c)	07195865	255
Flint Creek near Kansas (dc)	07196000	260
Illinois River near Tahlequah (dc)	07196500	264
Baron Fork:		
Peacheater Creek at Christe (dc)	07196973	272
Baron Fork at Eldon (dct)	07197000	276
Tenkiller Ferry Lake near Gore (e)	07197500	282
Illinois River near Gore (dct)	07198000	284
Canadian River at Bridgeport (d)	07228500	294
Canadian River at Purcell (d)	07229200	296
Walnut Creek at Purcell (d)	07229300	298

	Station number	Page
LOWER MISSISSIPPI RIVER BASIN		
MISSISSIPPI RIVER--Continued		
ARKANSAS RIVER BASIN--Continued		
Canadian River Basin--Continued		
Little River:		
Lake Thunderbird near Norman (e)	07229900	300
Little River below Lake Thunderbird near Norman (d)	07230000	302
Little River near Tecumseh (d)	07230500	304
Little River near Sasakwa (d)	07231000	306
Canadian River at Calvin (dcms)	07231500	308
Gaines Creek near Higgins (c)	07231955	313
Pit Creek near Hartshorne (c)	07231959	314
Gaines Creek near Gowen (c)	07231960	315
Beaver River near Felt (d)	07232250	316
Beaver River near Guymon (d)	07232500	318
Coldwater Creek near Guymon (d)	07232900	320
Optima Lake near Hardesty (e)	07233200	322
Beaver River:		
Palo Duro Creek at Range (d)	07233650	324
Beaver River at Beaver (dcms)	07234000	326
Clear Creek near Elmwood (d)	07234100	330
North Canadian River:		
Wolf Creek:		
Fort Supply Lake near Fort Supply (e)	07236500	332
Wolf Creek near Fort Supply (d)	07237000	334
North Canadian River at Woodward (dcms)	07237500	336
North Canadian River near Seiling (d)	07238000	342
Canton Lake near Canton (e)	07238500	344
North Canadian River at Canton (d)	07239000	346
North Canadian River below Weavers Creek near Watonga (d)	07239300	348
North Canadian River near Calumet (dct)	07239450	350
North Canadian River near El Reno (dct)	07239500	372
Lake Hefner Canal near Oklahoma City (d)	07240000	380
North Canadian River blw Lake Overholser near Oklahoma City (dct)	07241000	382
North Canadian River at Britton Road at Oklahoma City (dct)	07241520	400
North Canadian River near Harrah (dcmtb)	07241550	418
North Canadian River near Wetumka (dcmts)	07242000	442
Deep Fork:		
Arcadia Lake near Arcadia (e)	07242340	448
Deep Fork near Arcadia (d)	07242350	450
Deep Fork near Warwick (d)	07242380	452
Dry Creek near Kendrick (d)	07243000	454
Deep Fork near Beggs (dcmts)	07243500	456
Eufaula Lake near Brooken (e)	07244800	462
Canadian River near Whitefield (d)	07245000	464
Poteau River East of Waldron, AR (c)	07246940	466
Poteau River Northwest of Waldron, AR (c)	07246950	468
Poteau River near Hon, AR (c)	07246960	471
Jones Creek near Hon, AR (c)	07246980	474
Poteau River at Cauthron, Ar (dct)	07247000	476
Poteau River at Loving (dct)	07247015	482
Black Fork Below Big Creek near Page (dc)	07247250	488
Black Fork at Hodgen (c),	07247345	494
Fourche Maline near Red Oak (dc)	07247500	498
Fourche Maline near Leflore (c)	07247650	504
Holson Creek at Summerfield (c)	07247800	508
Wister Lake near Wister (e)	07248000	512
Poteau River near Panama (d)	07249413	514

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations (gaging stations) in Oklahoma have been discontinued. Daily streamflow records were collected and published for the period of record, expressed in water years, shown for each station. Discontinued project stations with less than 2 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Discontinued surface-water discharge stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Salt Fork Arkansas River near Ingersoll, OK	07148450	1,140	1961-62 1974-79
Salt Fork Arkansas River near Cherokee, OK	07149500	2,439	1941-50
Greasy Creek near Watchorn, OK	07152290	28.0	1974-76
Ranch Creek at Cleveland Dam near Cleveland, OK	07153100	21.9	1945-63
Cimarron River above Ute Creek near Boise City, OK	07155000	1,955	1906-07 1943-46 1947-54
Cimarron River near Boise City, OK	07155500	2,214	1939-42
Cimarron River near Mocane, OK	07157000	8,670	1943-65
Cimarron River near Englewood, KS	07157580	10,096	1982-87
Cimarron River at Freedom, OK	07157980	12,706	1974-80
Salt Creek near Hitchcock, OK	07158150	44.4	1968-70
Salt Creek near Okeene, OK	07158400	196	1961-67 1974-79
Preacher Creek near Dover, OK	07158500	14.5	1952-57
Turkey Creek near Drummond, OK	07159000	248	1948-70
Cimarron River near Crescent, OK	07159400	16,453	1971-72
Bluff Creek above Lake Hefner near Oklahoma City, OK	07159500	1.62	1950-58
Cottonwood Creek near Navina, OK	07159720	247	1978-80 1982-89
Cimarron River near Perkins, OK	07161000	17,852	1940-89
Stillwater Creek near Stillwater, OK	07162000	168	1935-38
West Fork Brush Creek near Stillwater, OK	07162500	13.1	1935-38
Cimarron River at Oilton, OK	07163500	18,669	1935-45
Cimarron River at Mannford, OK	07164000	18,849	1939-50 1960-63
Polecat Creek below Heyburn Reservoir near Heyburn, OK	07165500	123	1944-79
Arkansas River near Tullahasse, OK	07165600	75,815	1970-72
Verdigris River near Oologah, OK	07171400	4,339	1961-92
Verdigris River near Sageeyah, OK	07171500	4,402	1939-45
Little Caney River near Copan, OK	07174000	424	1944-58
Little Caney River below Cotton Creek near Copan, OK	07174200	502	1959-81
Caney River at Bartlesville, OK	07174500	1,465	1950-56 1986-87
Caney River near Ochelata, OK	07174700	1,753	1956-76
Double Creek subwater shed 5 near Ramona, OK	07175000	2.39	1955-69

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Caney River near Collinsville, OK	07175550	2,046	1936-38
Birch Creek below Birch Lake near Barnsdall, OK	07176465	66.0	1977-92
Candy Creek near Wolco, OK	07176800	30.6	1970-81
Bird Creek at 66th Street near Tulsa, OK	07177600	967	1987-91
Hominy Creek near Skiatook, OK	07177000	340	1944-81
Flat Rock Creek at U.S. Highway 75 at Tulsa, OK	07177700	22.6	1987-91
Mingo Creek at 36th Street North at Tulsa, OK	07178035	56.0	1987-89
Verdigris River near Inola, OK	07178600	7,911	1945-70
Tar Creek at Miami, OK	07185100	52.0	1980-84
Lost Creek at Seneca, MO	07188500	42.0	1949-59
Neosho River near Grove, OK	07189500	9,969	1925-39
Big Cabin Creek near Pyramid Corners, OK	07190600	71.1	1964-72
Spavinaw Creek near Row, OK	07191200	128	1959-62
Pryor Creek near Pryor, OK	07192000	229	1948-63
Neosho River near Wagoner, OK	07192500	12,307	1924-25 1938-49
Neosho River below Fort Gibson Lake near Fort Gibson, OK	07193500	12,495	1951-89
Arkansas River near Muskogee, OK	07194500	96,674	1926-70
Dirty Creek near Warner, OK	07198500	227	1940-46
Deer Creek at Hydro, OK	07228400	274	1961-63 1978-80
Canadian River near Newcastle, OK	07229000	25,763	1939-45
Canadian River near Noble, OK	07229100	25,911	1960-61 1964-75
Canadian Sandy Creek near Ada, OK	07229427	198	1987-88
Little River near Norman, OK	07229500	120	1952-55
Little River near Bowlegs, OK	07230597	550	1983-88
Salt Creek near Dewright, OK	07230800	210	1960-63 1966-67
Ti Creek near Blanco, OK	07231965	4.82	1980-81
Brushy Creek near Haileyville, OK	07231975	139	1978-83
Peaceable Creek near Haileyville, OK	07231990	134	1978-83
Gaines Creek near Krebs, OK	07232000	588	1943-63
Blue Creek near Blocker, OK	07232010	12.1	1976-83
Deer Creek near McAlester, OK	07232024	38.3	1979-80
Coldwater Creek near Hardesty, OK	07233000	1,967	1940-64
Beaver River near Hardesty, OK	07233210	5,029	1978-86
Wolf Creek near Shattuck, OK	07235500	1,183	1938-46
Wolf Creek near Fargo, OK	07236000	1,624	1943-76
Bent Creek near Seiling, OK	07237800	139	1967-70

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
North Canadian River near Watonga, OK	07239200	12,692	1980-83
North Canadian River near Oklahoma City, OK	07241500	13,354	1939-53 1960-61
Tecumseh Creek at Tecumseh, OK	07241750	2.38	1991-92
North Canadian River at NE 36th Street at Oklahoma City	07241503	13,356	1989-91
Wewoka Creek near Wetumka, OK	07242100	396	1960-64 1967
Bellcow Creek at Chandler, OK	07242500	46.0	1949-55
Deep Fork near Dewar, OK	07244000	2,307	1938-50
North Canadian River near Eufaula, OK	07244500	17,657	1960-62
Taloka Creek near Stigler, OK	07245030	20.1	1979-81
Sallisaw Creek near Sallisaw, OK	07245500	182	1943-76
Sans Bois Creek near Keota, OK	07246000	346	1939-42
Arkansas River near Sallisaw, OK	07246500	147,757	1948-70
Coal Creek near Spiro, OK	07246615	15.4	1979-82
Fourche Maline near Wilburton, OK	07247450	56.2	1978-81
Red Oak Creek near Red Oak, OK	07247550	12.8	1978-82
Poteau River near Wister, OK	07248500	993	1938-87
Caston Creek at Wister, OK	07248600	72.9	1979-82
Morris Creek at Howe, OK	07248620	19.4	1979-81
Sugarloaf Creek near Monroe, OK	07248700	53.6	1979-81
Poteau River at Poteau, OK	07249000	1,240	1938-45
Brazil Creek near Walls, OK	07249080	69.1	1979-81 1984-85
Owl Creek near McCurtain, OK	07249100	27.9	1978-81

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations are discontinued surface-water-quality discontinued stations. Stations with one year's record or less are not included. information regarding these stations may be obtained from the District Office at address given on back of title page of this report.

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Beaver Creek near Kaw City, OK	07148126		1949, 1954-55, 1961
Arkansas River at Kaw City, OK	07148128	8670	1948-51, 1961
Arkansas River near Ponca City, OK	07148140	46530	1977-82, 1987-90
Salt Fork Arkansas River near Winchester, OK	07148350	856	1959-62, 1975-77, 1985-90
Greenwood Creek near Winchester, OK	07148360	41.2	1987-88
Salt Fork Arkansas River near Alva, OK	07148400	1009	1938-54, 1962, 1977-79, 1985-90
Salt Fork Arkansas River near Ingersoll, OK	07148450	1140	1961-62, 1973-80
Salt Fork Arkansas River near Cherokee, OK	07149500	2439	1941-49
Cottonwood Canyon Creek near Cherokee, OK	07149704		1944-45
Salt Fork Arkansas River near Jet, OK	07150500	3202	1924, 1938-63, 1965, 1968-90
Salt Fork Arkansas River near Pond Creek, OK	07150597		1951,1962
Pond Creek near Lamont, OK	07150700		1951-55, 1958, 1962
Deer Creek near Tonkawa, OK	07150900	150	1958,1962
Salt Fork Arkansas River at Tonkawa, OK	07151000	4528	1943-45, 1948, 1951-64, 1968-79, 1985-90
Chikaskia River near Braman, OK	07151900	1510	1976-77
Chikaskia River near Blackwell, OK	07152000	1859	1906, 1938, 1943-45, 1952-53, 1955-56, 1959-64, 1975-80, 1985-90

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Chikaskia River near Tonkawa, OK	07152050		1948, 1952, 1960-63
Salt Fork Arkansas River near Marland, OK	07152200		1959-63
Bois D Arc Creek near Ponca City, OK	07152250	100	1952, 1959-63
Salt Fork Arkansas River near White Eagle, OK	07152260		1977-80
Red Rock Creek near Red Rock, OK	07152350		1951-58, 1961-63
Salt Creek near Shidler, OK	07152400		1954-55, 1958, 1961-63
Black Bear Creek at Pawnee, OK	07153000	576	1944-50, 1952-53, 1955-65, 1967-71, 1977-80, 1985-90
Cimarron River near Kenton, OK	07154500	1106	1952-53, 1955-56, 1959-63, 1967-68, 1977, 1982, 1987-90
Cimarron River Ab Ute Creek near Boise City, OK	07155000	1955	1938-48, 1950
Cimarron River near Forgan, OK	07156900	8536	1967-68, 1970-71, 1974, 1987-90
Cimarron River near Mocane, OK	07157000	8670	1942-49, 1952-53, 1955-56, 1959-66, 1977-78
Cimarron River near Englewood, Ks	07157580	10096	1938-42, 1982-87
Buffalo Creek near Lovedale, OK	07157960	408	1917, 1973-80, 1987-90
Cimarron River at Freedom, OK	07157980	12706	1953, 1973-80
Cimarron River near Waynoka, OK	07158000	13334	1938-53, 1955-56, 1959-63, 1968-79, 1985-90

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Main Creek near Waynoka, OK 23N-16W-03 DDD	07158010	89.7	1986, 1988
Eagle Chief Creek at Cleo Springs, OK 22N-12W-02	07158105	480	1986, 1988, 1991
Salt Creek near Hitchcock, OK	07158150	44.4	1968-70
Salt Creek near Okeene, OK	07158400	196	1973-80, 1986, 1988
Preacher Creek near Dover, OK 18N-08W-13 BBB	07158500	14.5	1952-53, 1986-89
Turkey Creek near Drummond, OK	07159000	248	1947-48, 1952-53, 1955-56, 1976
Cimarron River near Dover, OK	07159100	15713	1953, 1973-80, 1986-90
Turkey Creek near Dover, OK	07159203		1961-62
Deer Creek Abv Waste Water Trmt Fac near Edmond, OK	07159630		1983-84
Bluff Ck Ab Bethany/Warr Ac Swg Trmt Plt near Edmond OK	07159639		1983-84
Deer Creek Blw Waste Wtr Trmt Fac near Edmond, OK	07159645		1983-84
Cottonwood Creek near Navina, OK	07159720	247	1977-80, 1982-89
Cottonwood Creek near Seward, OK	07159750	320	1973-82, 1989-91
Cottonwood Creek near Guthrie, OK	07159800	366	1953, 1955-56, 1960-61
Cimarron River near Guthrie, OK	07160000	16892	1905, 1930-31, 1938-57, 1959-71, 1973-80, 1986-90
Skeleton Creek near Lovell, OK	07160500	410	1950-55, 1975-80, 1985-90
Cimarron River near Ripley, OK	07161450	17979	1987-90
Stillwater Creek at Stillwater, OK	07162000	168	1954-55
Council Creek near Stillwater, OK	07163000	31	1986-90
Cimarron River at Oilton, OK	07163500	18669	1938, 1942, 1944-45, 1981

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Cimarron River at Mannford, OK	07164000	18849	1939-52, 1959-63
Arkansas River at Sand Springs near Tulsa, OK	07164400	74615	1905, 1946-77, 1980
Polecat Creek Blw Heyburn Res near Heyburn, OK	07165500	123	1944-69, 1971-79
Polecat Creek near Jenks, OK	07165510		1959-63
Arkansas River at Bixby, OK	07165520		1948-49
Snake Creek near Leonard, OK	07165559		1960-61
Arkansas River near Haskell, OK	07165570	75473	1972-83, 1986-88
Cane Creek near Jamesville, OK	07165581		1960-61
Arkansas River near Tullahassee, OK	07165600	75815	1969-72
Arkansas River at Muskogee, OK	07165610		1956, 1958, 1961-63, 1969-70
Verdigris River near S Coffeyville, OK	07170950		1952-53, 1974-78
Verdigris River near Lenapah, OK	07171000	3639	1940-83, 1985-87, 1989-90
California Creek near Nowata, OK	07171080		1952-53, 1959
Verdigris River near Nowata, OK	07171100		1952-53
East Fork Big Creek near Hollow, OK	07171105	14.4	1979-80, 1982-83
Big Creek near Nowata, OK	07171220		1952-53, 1959, 1981
Salt Creek near Alluwe, OK	07171230		1952-53, 1959
Lightning Creek near Alluwe, OK	07171240		1952-53, 1959
Verdigris River near Talala, OK	07171260		1952-53
Verdigris River near Oologah, OK	07171400	4339	1961-83, 1986, 1988-89
Verdigris River Ab Caney River near Claremore, OK	07171405		1941, 1945, 1948, 1952-55, 1959, 1961, 1978

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Sweetwater Creek near Claremore, OK	07171490		1980-83
Verdigris River near Sageeyah, OK	07171500	4402	1938, 1940-45, 1961
Caney River near Hulah, OK	07173000	733	1938, 1940-83, 1986
Little Caney River near Copan, OK	07174000	424	1976-77, 1979
Cotton Creek near Copan, OK	07174150		1967-68
Little Caney River Blw Cotton Cr, near Copan, OK	07174200	502	1944-81, 1983, 1986
Caney River Above Coon Creek at Bartlesville, OK	07174400	1392	1985-86, 1989-90
Caney River at Bartlesville, OK	07174500	1465	1944-45, 1947, 1949-51, 1966-68, 1978-82
Sand Creek at Okesa, OK	07174600	139	1951-55, 1960-78, 1980-83, 1985-86, 1989-90
Caney River near Ochelata, OK	07174700	1753	1959-61
Double Creek SWS 5 near Ramona, OK	07175000	2.39	1957-59, 1964-65, 1967-69
Caney River near Collinsville, OK	07175550	2046	1949-53, 1959
Verdigris River near Claremore, OK	07176000	6534	1944, 1947-54, 1977-81, 1985-87
Bird Creek at Pawhuska, OK	07176320		1944-46
Bird Creek near Barnsdall, OK	07176350		1949-53
Birch Creek near Barnsdall, OK	07176455		1964-66, 1978, 1980-81, 1983
Birch Creek Blw Birch Lake near Barnsdall, OK	07176465	66	1989-90
Bird Creek at Avant, OK	07176500	364	1945-55, 1957-81, 1983, 1986, 1989-90

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Candy Creek near Wolco, OK	07176800	30.6	1978-80
Bird Creek near Skiatook, OK	07176910		1948-50, 1952-53
Hominy Creek near Hominy, OK	07176950		1949-53, 1955
Hominy Creek near Skiatook, OK	07177000	340	1944-55, 1957-71, 1977-78, 1980-81, 1983, 1986
Hominy C Bl Skiatook Lk near Skiatook, OK	07177410	354	1988-89
Bird Creek at 66th Street near Tulsa, OK	07177600	967	1988-90
Flat Rock Creek at Cincinnati Ave at Tulsa, OK	07177650	8.2	1988-89
Flat Rock Creek at Us Hwy 75 at Tulsa, OK	07177700	22.6	1988-90
Bird Creek near Owasso, OK	07178000	1022	1948-50, 1987-90
Bird Creek near Catoosa, OK	07178050	1080	1963-90
Verdigris River near Inola, OK	07178600	7911	1940-71, 1976-79
Verdigris River (Newt Graham L&D) near Inola, OK	07178620	7911	1971-86
Verdigris River near Okay, OK	07178670	1959-63	
Neosho River near Commerce, OK	07185000	5876	1944-54, 1959-73, 1975-83, 1985-89
Spring River near Quapaw, OK	07188000	2510	1944-64, 1975-80, 1986, 1988-89
Neosho River near Langley, OK	07190500	10335	1944-47, 1949-51, 1956-59, 1975-80, 1988
Big Cabin Creek near Welch, OK	07190590	28.1	1979-83
Big Cabin Creek Tributary Blw Wolfe Ck near Welch, OK	07190597		1980-83
West Fork Big Cabin Creek near Centralia, OK	07190620	13.1	1979-83
Middle Fork Big Cabin Creek near Centralia, OK	07190622		1979-80
Middle Fork Big Cabin Creek near Pyramid Corners, OK	07190625	13.4	1979-83
Big Cabin Creek near Vinita, OK	07190650		1944, 1949-51, 1980
Little Cabin Creek near Vinita, OK	07190850		1948-51

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Big Cabin Creek near Big Cabin, OK	07191000	450	1948, 951-60, 1964-71, 1975-77, 1985-89
Spavinaw Creek near Sycamore, OK	07191220	133	1972-77, 1980-88
Spavinaw Creek near Jay, OK	07191223		1958-61
Spavinaw Creek near Spavinaw, OK	07191310		1944, 1948-51
Salina Creek near Salina, OK	07191350		1948-53, 1958-59
Neosho River near Chouteau, OK	07191500	11534	1921, 1940-48, 1950-58, 1960, 1975-80
Pryor Creek near Pryor, OK	07192000	229	1942-44, 1948-58, 1960-63
Pryor Creek at Elliot St Br near Pryor, OK	07192030		1947, 1966-71
Pryor Creek at Hwy 69a near Pryor, OK	07192050		1962-63
Pryor Creek Blw Sulfur Creek near Pryor, OK	07192060		1966-74
Neosho River near Wagoner, OK	07192500	12307	1930-31, 1938-50
Arkansas River near Muskogee, OK	07194500	96674	1943-71, 1976-80
Bayou Manard near Fort Gibson, OK	07194512		1960-61
Greenleaf Creek near Braggs, OK	07194545		1951-55
Illinois River at Savoy, Ar	07194800	167	1968, 1974-91
Illinois River near Silo, Ar	07195400	509	1978-79, 1981, 1983-91
Illinois River South Of Siloam Springs, Ar	07195430		1972-81
Flint Creek at Springtown, Ar	07195800	14.2	1975-79
Flint Creek North Of Siloam Springs, Ar	07195850		1972-81
Tahlequah Creek at Tahlequah, OK	07196510	13.4	1976-77
Dirty Creek near Warner, OK	07198500	227	1940-46, 1960-61, 1977
South Fork near Porum, OK	07198800		1979-82

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Canadian River near Roll, OK	07228200	23615	1950, 1953, 1961-63, 1974, 1976-77
Canadian River near Taloga, OK	07228250		1938-45
Deer Creek at Hydro, OK	07228400	274	1959-63, 1978-80, 1989
Canadian River at Bridgeport, OK	07228500	25,276	1949-61 1964 1970-92
Canadian River near Union City, OK	07228700		1953, 1973
Canadian River Trib near Newcastle, OK	07228960	3.32	1938-45
Canadian River near Noble, OK	07229100	25911	1963-75
Canadian River at Purcell, OK	07229200	25939	1953, 1959-63, 1974-80, 1985-90
Walnut Creek at Purcell, OK	07229300	202	1949-50, 1952-53, 1959-61, 1973, 1975-77, 1985-90
Canadian Sandy Creek near Ada, OK	07229427		1986-88
Elm Creek near Moore, OK	07229441		1959-61
Little River Abv Lake Thunderbird near Norman, OK	07229460		1984-85
Little River near Norman, OK	07229500	120	1953, 1956, 1960-61
Clear Creek near Norman, OK	07229601		1960-61
Hog Creek near Stella, OK	07229801		1959-61
Little River Blw Lk Thunderbird near Norman, OK	07230000	257	1953-65, 1975-80, 1985-90
Little River near Tecumseh, OK	07230500	456	1944-64, 1967-70, 1972-75, 1986-90
Little River near Harjo, OK	07230531		1960-61
Little River near Maud, OK	07230558		1960-61
Little River near Bowlegs, OK	07230597		1960-61, 1983-88

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Salt Creek near Pearson, OK	07230700		1959-61
Salt Creek near St Louis, OK	07230731		1959-61
Salt Creek near Dewright, OK	07230800	210	1959-63
Little River near Sasakwa	07231000	865	1951-92
Pit Creek near Gowen, OK	07231958	5.74	1990-91
Ti Creek near Blanco, OK	07231965	4.82	1980-81
Brushy Creek near Haileyville, OK	07231975	139	1978-81
Peaceable Creek near Haileyville, OK	07231990	134	1978-82
Gaines Creek near Krebs, OK	07232000	588	1944-47, 1949-55, 1959-62
Blue Creek Tributary A near Blocker, OK	07232008		1978-81
Blue Creek Tributary B near Blocker, OK	07232009	0.22	1975-80
Blue Creek near Blocker, OK	07232010	12.1	1975-81
Deer Creek near Mcalester, OK	07232024	38.3	1978-81
Coal Creek near Mcalester, OK	07232027		1960-61
Mathuldy Creek near Crowder, OK	07232029	5.41	1975-81
Rock Creek near Crowder, OK	07232031		1960-61
Gaines Creek near Canadian, OK	07232050		1959-62
Beaver River near Guymon, OK	07232500	2139	1937-65, 1967-77, 1988, 1990
Beaver River near Hooker, OK	07232630	3017	1972-73, 1975, 1977, 1979
Coldwater Creek near Hardesty, OK	07233000	1967	1939-64
Beaver River near Hardesty, OK	07233210	5029	1938-39, 1979-82
Palo Duro Creek near Range, OK	07233700	1745	1953-54, 1959-62
Clear Creek near Elmwood, OK	07234100	170	1987-90
Kiowa Creek near Slapout, OK	07234200	371	1953-54, 1959-60, 1980
Clear Creek near May, OK	07234300	109	1953-54, 1960
Beaver River near Fort Supply, OK	07234500	9615	1939-51, 1957, 1976
Wolf Creek near Shattuck, OK	07235500	1183	1938-46

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Wolf Creek near Fargo, OK	07236000	1624	1941-64, 1967-68, 1971-72, 1976, 1978
Wolf Creek near Fort Supply, OK	07237000	1739	1938-63, 1971, 1973, 1979, 1987-90
North Canadian River near Seiling, OK	07238000	12261	1943-44, 1946-72, 1974-83, 1987-90
North Canadian River at Canton, OK	07239000	12484	1938-68, 1971-80, 1986-90
North Canadian River near Watonga, OK	07239200	12692	1943-44, 1949-51, 1954-57, 1959, 1963, 1965
North Canadian R Blw Weavers Ck near Watonga, OK	07239300	12736	1985-90
North Canadian River near Yukon, OK	07239700	13183	1952-53, 1974, 1988-89
Lake Hefner Canal near OK City, OK	07240000		1979, 1988
North Canadian River near OK City, OK	07241500	13354	1940, 1942, 1944-50, 1952, 1959-63, 1973, 1975
North Canadian River at NE 36th St at OKC, OK	07241503	13356	1988-91
North Canadian River near Jones, OK	07241530		1973, 1982
North Canadian River near Shawnee, OK	07241700		1973, 1979-80
Wewoka Creek at Wewoka, OK	07242050		1961-63
Little Wewoka Creek near Wetumka, OK	07242080		1960-63, 1978
Grief Creek near Wetumka, OK	07242090		1961-63
Wewoka Creek near Wetumka, OK	07242100	396	1926, 1950-64, 1984

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Fish Creek near Wetumka, OK	07242109		1960-61
North Canadian River near Pierce, OK	07242190	17712	1959-63
Deep Fork at Portland Ave, OK City, OK	07242200	2.98	1979-80
Deep Fork at Eastern Ave, OK City, OK	07242220	28.2	1973-74
Deep Fork near Witcher, OK	07242250		1959, 1973
Deep Fork at Witcher, OK	07242300		1960-62, 1975-76
Deep Fork near Arcadia, OK	07242350	105	1907, 1969-89
Deep Fork at Warwick, OK	07242380	532	1985-90
Deep Fork near Chandler, OK	07242400		1959-62, 1980
Bellcow Creek at Chandler, OK	07242500	46	1948-50, 1953-54, 1979-80
Deep Fork near Stroud, OK	07242900		1979, 1991
Dry Creek near Kendrick, OK	07243000	69	1960, 1965-68, 1970-71, 1973-74, 1979, 1985-89
Little Deep Fork near Edna, OK	07243450		1951-57, 1960-62
Deep Fork near Dewar, OK	07244000	2307	1938-51, 1960-65, 1979
Deep Fork near Pierce, OK	07244200		1959-63
North Canadian River near Eufaula, OK	07244500	17657	1952-53, 1959-61
Canadian River near Whitefield, OK	07245000	47576	1900, 1938-90
Taloka Creek at Stigler, OK	07245020	3.98	1921, 1974, 1978-81
Taloka Creek Trib near Stigler, OK	07245025		1978-81
Taloka Creek near Stigler, OK	07245030	20.1	1978-81
Jackson Creek near Stigler, OK	07245040		1980-81
Little Vian Creek near Vian, OK	07245119		1958-60
Sallisaw Creek near Sallisaw, OK	07245500	182	1959-63, 1976-77
Sans Bois Creek near Kinta, OK	07245703		1960-61
Mule Creek at Sr 31 near McCurtain, OK	07245980	3.64	1981-82

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Mule Creek, Upper Gage, near McCurtain, OK	07245990	6.45	1980-83
East Pond Outlet to Mule Creek near McCurtain, OK	07245991		1980-83
Mule Creek, Middle Gage, near McCurtain, OK	07245992	6.49	1981-83
Mule Creek, Lower Gage, near McCurtain, OK	07245994	6.74	1980-83
Sans Bois Creek near Keota, OK	07246000	346	1938-42, 1958-63
Arkansas River near Sallisaw, OK	07246500	147757	1943-72
Cache Creek near Cowlington, OK	07246600	20.6	1958-61
Coal Creek near Spiro, OK	07246615	15.4	1910, 1978-81
Poteau River East Of Waldron, Ar	07246940	15	1983-90
Poteau River Northwest Of Waldron, Ar	07246950	46.1	1983-90
Poteau River South Of Bates, Ar	07247012		1972-83
Poteau River at Hontubby	07247025	301	1992
Fourche Maline near Wilburton, OK	07247450	56.2	1978-81
Red Oak Creek near Red Oak, OK	07247550	12.8	1978-81
Poteau River near Wister, OK	07248500	993	1938-40, 1942, 1944-50, 1954-60, 1975-80, 1986
Caston Creek at Wister, OK	07248600	72.9	1975, 1977-81
Morris Creek at Howe, OK	07248620	19.4	1908, 1978-81
Sugarloaf Creek near Monroe, OK	07248700	53.6	1978-81
Poteau River at Poteau, OK	07249000	1240	1938, 1940-42, 1944
Brazil Creek near Red Oak, OK	07249060	2.74	1978-81
Rock Creek near Red Oak, OK	07249070	12	1978-81
Brazil Creek near Lodi, OK	07249073		1980-81
Brazil Creek near Walls, OK	07249080	69.1	1978-81, 1984-86
Owl Creek near McCurtain, OK	07249100	27.9	1978-81
Brazil Creek near Panama, OK	07249200		1959-61
James Fork near Williams, OK	07249410	198	1976-81
Poteau River near Panama, OK	07249413	1767	1989-91
Coal Creek Tributary near Bokoshe, OKla.	07249415	1.26	1976-79
Coal Creek near Panama, OK	07249419	6.67	1976-79
Holi-tuska Creek near Panama, OK	07249422	4.39	1978-81

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Poteau River near Braden, OK	07249438		1958-59, 1961-63
Poteau River near Fort Smith, Ar	07249440		1972-79
Lee Creek near Short, OK	07249800	236	1958-61, 1975-77
Little Lee Creek near Short, OK	07249900		1960, 1977-79
Arkansas River at L&d #13 near Van Buren, Ar	07250550	150547	1975-77
08N-06E-26 DDA 1	350756096380501		1978, 1980
08N-06E-23 AAD 1	350924096380401		1978, 1980
09N-05E-23 BBB 1	351440096452001		1974-75
09N-06E-13 DDA 1	351455096370401		1978-79
09N-05E-16 ADD 1	351518096464001		1978-79
09N-06E-17 BBA 1	351538096421101		1978-79
09N-06E-09 CDC 1	351540096405801		1978-79
09N-06E-10 DAA 1	351601096391301		1978-79
09N-06E-04 BCA 1	351706096410801		1978-79
09N-06E-03 AAB 1	351723096392301		1978-79
Squirrel Creek near Shawnee, OK	351815096544301		1983-84
North Canadian River at Shawnee Bridge	351857096553001		1983-84
North Canadian River East of Shawnee, OK	351959096520901		1983-84
North Canadian River Above Lake Eufaula, OK	352305095531001		1983-84
N Canadian River near Prague, OK	352359096401201		1983-84
North Canadian River West of Okemah, OK	352546096242701		1983-84
North Canadian River at 63rd St Bridge, OK City, OK	353211097222501		1983-84
Sallisaw Creek at Bunch, OK	354035094452001		1958-59
Bear Creek near Fallis, OK	354512097075301		1953-55
Eagle Creek near Hectorville, OK	355032095580401		1907, 1979
Tributary to Campbell Creek near Cashion, OK	355032097431501	3.15	1986, 1988
Campbell Creek near Cashion, OK	355032097432301	22.6	1986-88
Pawnee Creek near Crescent, OK	355125097371501	13.1	1986, 1988
Gar Creek near Guthrie, OK	355217097315601	10.6	1986-88
Cox Creek near Crescent, OK	355217097361901	7.47	1986, 1988
Kingfisher Creek near Kingfisher, OK	355342097541001	501	1986-88
Bird Creek near Kingfisher, OK	355415097464801	8.5	1986-88
Trail Creek near Kingfisher, OK	355421097521601	16.1	1986-87

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
Baron Fork near Baron, OK	355510094371001		1958-59
East Fork Sooner Creek near Crescent, OK	355540097440701	11.2	1986-88
West Fork Sooner Creek near Crescent, OK	355540097442301	9.79	1986-88
Treaty Creek near Loyal, OK	355810097590501	6.86	1986,1988
Turkey Creek at Dover, OK	355842097551201	428	1986-88
Cooper Creek near Dover, OK	355902097594501	116	1986-88
Ballard Creek at Ballard, OK	360540094352001		1958-59
Indian Creek near Ringwood, OK	361723098175701	75.4	1986-89
Sand Creek near Fairview, OK	361835098252601	41.8	1986-88
Gypsum Creek near Fairview, OK	361901098260701	13.8	1986, 1988
Cherokee Creek near Sycamore, OK	361919094394501		1980-81
Spavinaw Creek near Colcord, OK	361923094410301		1980-81
Spavinaw Creek near Jay, OK	362059094470601		1980-81
Beaty Creek near Sycamore, OK	362119094463001		1980-81
Cheyenne Creek near Orienta, OK	362137098370501	38.8	1986, 1988
Cottonwood Creek at Orienta, OK	362150098282301	54.3	1986, 1988
Barney Creek near Orienta, OK	362414098420201	41.1	1986, 1988
Griever Creek near Waynoka, OK	362446098470001	88.8	1986, 1988
West Creek near Waynoka, OK	362933098554201	31.9	1986, 1988
24N-23E-08 B1 OWRB 24R, Well on Monkey	363324094502501		1980-81
Sand Creek near Belva, OK	363436098590301	54.1	1986, 1988
Chimney Creek near Belva, OK	363731099015301	27.5	1986, 1988
Doe Creek near Freedom, OK	363823099065201	14.2	1986, 1988
Long Creek near Freedom, OK	364244099070801	53.1	1986, 1988
Anderson Creek near Freedom, OK	364521099053901	34.5	1986, 1988
27N-23E-05 BDA 1 OWRB 22B, Neosho R near I-44	365108094511801		1980-82
27N-23E-06 AAD 1 WRB 22a, Neosho R Ab Tar C	365112094514401		1980-82
27N-23E-05 BBB 1 OWRB 22, Tar C Ab Neosho R	365118094513201		1981-82
28N-23E-30 Ddd 1 OWRB 21, Tar C at Hwy 10	365215094514001		1980-81
28N-23E-30 Ddb 1 OWRB 20, Tar C at Central	365230094514301		1980-82, 1984
28N-23E-30 Aac 1 Tar C at Rockdale Blvd	365255094514301		1984-85

Discontinued surface-water-quality stations

Station name	Station number	Drainage area (mi2)	Period of record
ARKANSAS RIVER BASIN			
28N-23E-19 Abb 1 OWRB 16, Tar C at 22nd Ave	365359094520401		1980-81, 1984-86
28N-23E-18 Abb 1 OWRB 14b, Tar C Blw Spring	365451094520401		1981-82
28N-22E-07 CAA 1 OWRB 14a, Weir Blw Site 14	365522094521301		1981, 1984
28N-23E-09 BCC 1 OWRB 15, Garrett C	365523094503201		1980, 1985
28N-23E-07 BBD 1 OWRB 13, Cactus Mine Disch	365533094522801		1979-83
28N-23E-05 CCC 1 OWRB 5, Tar C near Commerce	365544094513201		1980, 1984-85
29N-23E-31 DCD 1 OWRB 10, Tar C at Hwy 66	365637094511201		1980-82, 1984-85
29N-23E-32 BCA 3 Tar C Below Mine Trib	365710094504401		1984-85
29N-23E-32 BCA 1 Mine Trib at Tar C, South	365714094504401		1983-85
29N-23E-32 BBD 2 Mine Trib Pond	365715094504301		1984-85
29N-23E-32 BBD 3 Outflow from Mine Trib Pd	365715094504302		1984-85
29N-23E-32 BAC 1 Mine Trib S of Rr Culvert	365720094503801		1983-85
29N-23E-32 BAB 1 1132 M from Rr Borehole	365723094503511		1984-85
29N-23E-32 BAB 3 138 M from Rr Borehole	365723094503513		1984-85
29N-23E-32 BAB 20 Mine Trib, N of Rr Culvert	365723094503520		1984-85
29N-23E-29 CDC 3 Lavrion Tailings Pond/col	365730094503301		1984-85
29N-23E-29 CCD 1 OWRB 4t, Tailings Runoff	365730094504601		1980-81, 1985
29N-23E-29 CCD 3 OWRB Site 4 Tar C at Lytl	365732094504400		1980-82
29N-23E-29 CCD 2 OWRB Site 4a Tar C Ab Lyt	365732094504401		1980-82
29N-23E-29 CAC 2 Lytle C 400 M Ab Site 4	365744094503200		1981, 1985
29N-23E-29 CAC 1 Collapse W of Lytle C	365744094503201		1984-85
29N-23E-29 BCA 1 Tar C Above Mine Disch	365807094504301		1984-85
29N-23E-29 ABD 1 Lytle C Above Mine Disch	365811094501301		1984-85
29N-23E-18 AAC 1 OWRB 7, Tar C at State Ln	365956094510701		1980-82, 1984-85
34S-23E-35 DDC 1 Tar C at Rt 166	370153094511101		1984-85

WATER RESOURCES DATA - OKLAHOMA, 1993
VOLUME 1
ARKANSAS RIVER BASIN

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Oklahoma each water year (Oct. 1 to Sept. 30). These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Oklahoma."

Volumes 1-3 of this report includes records on both surface water and ground water in the State. Volumes 1 and 2 contain: (1) Discharge records for 135 streamflow-gaging stations, and 23 partial-record or miscellaneous streamflow stations, (2) stage and content records for 30 lakes and reservoirs, (3) water-quality records for 58 streamflow-gaging stations; (4) water-level records for 28 observation wells. Volume 3 contains statewide miscellaneous water-quality.

This series of annual reports for Oklahoma began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to include, in one volume, data on quantity and quality of surface water levels. Data on ground-water levels were added to this format from 1975-79 and 1990 to present.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Oklahoma were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface Water Supply of the United States, Parts 7A and 7B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 under the title "Ground-Water Levels in the United States," and 1980 to 1989 under the title "Ground-Water Levels in Observation Wells in Oklahoma." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report OK-93-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

COOPERATION

The U.S. Geological Survey and organizations of the State of Oklahoma have had cooperative agreements for the systematic collection of streamflow and ground-water records since 1935, and for water-quality records since 1941. Organizations that assisted in collecting the data through cooperative agreement with the Survey are:

Oklahoma Water Resources Board, Patty Eaton, Executive Director.

Oklahoma Geological Survey, Charles J. Mankin, Director.

Oklahoma Department of Environmental Quality, Mark S. Coleman, Executive Director.

Oklahoma City Water and Wastewater Utilities, James D. Couch, Director.

The following Federal agencies assisted in the data collection program by providing funds or services:

Corps of Engineers, U.S. Army

Bureau of Reclamation, U.S. Department of Interior

Bureau of Land Management, U.S. Department of Interior

Assistance in the form of funds or services was rendered by the following organizations through the **Oklahoma Water Resources Board: Grand River Dam Authority; Central Oklahoma Master Conservancy District; Fort Cobb Reservoir Master Conservancy District; Lugert-Altus Irrigation District; Foss Reservoir Master Conservancy District; Mountain Park Master Conservancy District; Oklahoma Gas and Electric Company; the cities of Ada, Lawton, Oklahoma City**, and **Tulsa.**

Organizations that supplied data are acknowledged in the station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Large variations in streamflow characteize hydrologic conditions in Oklahoma. In the extreme southeastern part of the State, mean annual precipitation exceeds 52 inches and mean annual runoff exceeds 20 inches.

In the southeast, stream channels are deeply incised in mountainous terrain, and streamflow generally is perennial. In the extreme northwestern part of the Panhandle, mean annual precipitation is less than 16 inches and mean annual runoff is less than 0.1 inch. In northwestern Oklahoma, streams generally have shallow, poorly-defined channels and ephemeral flow.

Precipitation data from monthly reports of the Oklahoma Climatological Survey, averaged over the State, indicated that monthly precipitation was far below normal during October, and July of the water year. Monthly totals were above normal in November through February, April, May, and September.

In the last 100 years, the 1992-1993 winter total (December-February) was the second wettest and the spring total (March-May) was the 13th wettest due to an extremely wet May. March, June, and August totals were about average.

However, precipitation was not spread uniformly across the State. Oklahoma had very dry conditions during October; the Panhandle of the State averaged less than 0.10 inch of precipitation. In November through February, heavy rain fell almost continuously across the state, with totals over 200 percent of normal, except the northwest and southeast.

In the northern part of the state precipitation fell as snow and sleet, Laverne received 56 inches of snow to set a new seasonal record during the 1992-1993 winter. The entire State had a very wet May with the heaviest rainfall in the southwest, central, north-central, and northeast parts of the state. Local heavy rains caused flooding that took the lives of five people, four in Oklahoma City. September was above-average month for the eastern half of the state with heavy rains producing flooding in northeast Oklahoma.

A comparison of daily, monthly, and annual streamflow for the 1993 water year with the period of record at eight selected stations (fig. 1-8) reflected about average conditions in western Oklahoma; and above-average streamflow for the year over the rest of the State caused by high flows in winter and spring, and in September in the eastern two-thirds of the State. These stations were selected at representative locations within Oklahoma. Three locations are affected to some degree by regulation: Arkansas River at Ralston, the Washita River near Dickson, and North Canadian River at Woodward.

Drought effects during the 1993 water year were minimal for the State. Streamflow was below normal in streams during October and November in northwestern Oklahoma (fig. 1) and about normal the rest of the water year. For the rest of the State, streamflow was far above average from November through February and May. In north-central and northeastern Oklahoma, it was a record water year for high mean-annual flows (fig. 2-4). In north-central Oklahoma flows also were high from June through August; and in the northeast flows also were high in September. In central Oklahoma, streamflow also was high during September with record high mean-monthly flows during November and December(fig. 5). In southwestern Oklahoma, streamflow also was far above normal during April, with record high mean-monthly flows occurring from November through January and in May (fig. 6). Record high mean-monthly flows occurred in February and May in the south-central part of the State (fig. 7) and just medium-high flows in the southeast (fig. 8). Overall the streamflow was normal in the northwest; and far above normal in the rest of the State, with all annual peak flows in the medium to high flow range.

The worst flooding occurred during May across the eastern three-quarters of the State and during September in the northeastern part of the State. A slow moving storm moved through the State May 5-10. Several creeks in southern Oklahoma City flooded on May 8 in response to almost 7 inches of rain forcing evacuation of over 1,000 homes and four deaths on Twin, Brock, and Lightning Creeks. Flooding was reported along the Cimarron, Deep Fork, Neosho, Illinois, Arkansas, Poteau, Caney, North Canadian, Chickaskia, Salt Fork of the Arkansas, North Fork of the Red and

Washita Rivers. Over 2,700 residences were damaged and a total of 43 counties were declared eligible for emergency assistance from the federal government. Heavy rains on September 24 and 25 produced serious flooding along the Spring and Neosho Rivers in Ottawa County. About 500 structures had to be evacuated, including 300 in Miami, Oklahoma.

The following table presents a comparison of streamflow for the 1993 water year with streamflow for the period of record at the eight selected stations:

STATION IDENTIFICATION		Statistics of discharge during 1993 water year (cubic feet per second) Maximum instantaneous	Minimum mean daily	Average	Statistics of discharge during period of record (cubic feet per second) Maximum instantaneous	Minimum mean daily	Average
	ARKANSAS RIVER BASIN						
07152500	Arkansas River at Ralston	139,000	597	16,160	211,000	14	4,826
					(Prior to regulation 1926-75)		
					174,000	52	5,747
					(Since regulation by Kaw Lake 1977-93)		
07185000	Neosho River near Commerce	75,600	81	11,140	267,000	0	3,748
						(1940-93)	
07197000	Baron Fork at Eldon	19,700	41	734	50,600	1.8	323
						(1949-93)	
07231500	Canadian River at Calvin	93,400	106	4,694	174,000	0	1,788
					(1906, 1939-42, 1945-1993)		
07237500	North Canadian River at Woodward	550	3.4	91.6	42,000	0	194
					(Prior to regulation 1939-78)		
					3,090	0	102
					(Since regulation by Optima Lake 1979-93)		
	RED RIVER BASIN						
07304500	Elk Creek near Hobart	23,600	9.4	329	28,000	0	91.5
						(1950-93)	
07331000	Washita River near Dickson	56,500	387	5,017	98,000	0	1,573
					(Prior to regulation 1929-58)		
					118,000	0.10	1,750
					(Since regulation by Fort Cobb Reservoir 1962-93)		
07332500	Blue River near Blue	34,100	27	617	65,200	0	323
						(1937-93)	

The average discharge streamflow statistic for the 1993 water year also illustrates normal runoff conditions in northwestern Oklahoma, above-normal runoff conditions for the rest of the State.

Conservation storage in six selected reservoirs in the State, with a combined conservation storage capacity of 8,014,000 acre-feet, remained about the same. Conservation storage increased slightly from 98 percent at the start of the water year to 105 percent at the end of the water year.

The following table presents a comparison of conservation storage capacity for the start and end of the 1993 water year for the six selected reservoirs:

STATION IDENTIFICATION		Conservation Storage Capacity			
		Start of 1993 WY		End of 1993 WY	
		(acre-feet)	(percent)	(acre-feet)	(percent)
		ARKANSAS RIVER BASIN			
07164200	Keystone Lake near Sand Springs	553,200	84	577,800	87
07190000	Lake O' the Cherokees at Langely	1,639,000	110	2,035,000	136
07197500	Tenkiller Ferry Lake near Gore	647,600	103	660,500	105
07244800	Eufaula Lake near Brooken	2,337,000	101	2,374,000	103
		RED RIVER BASIN			
07302500	Lake Altus at Lugert	105,200	79	79,590	60
07331500	Lake Texoma near Denison	2,569,000	94	2,652,000	97
	Total/Average	7,851,000	98	8,378,890	105

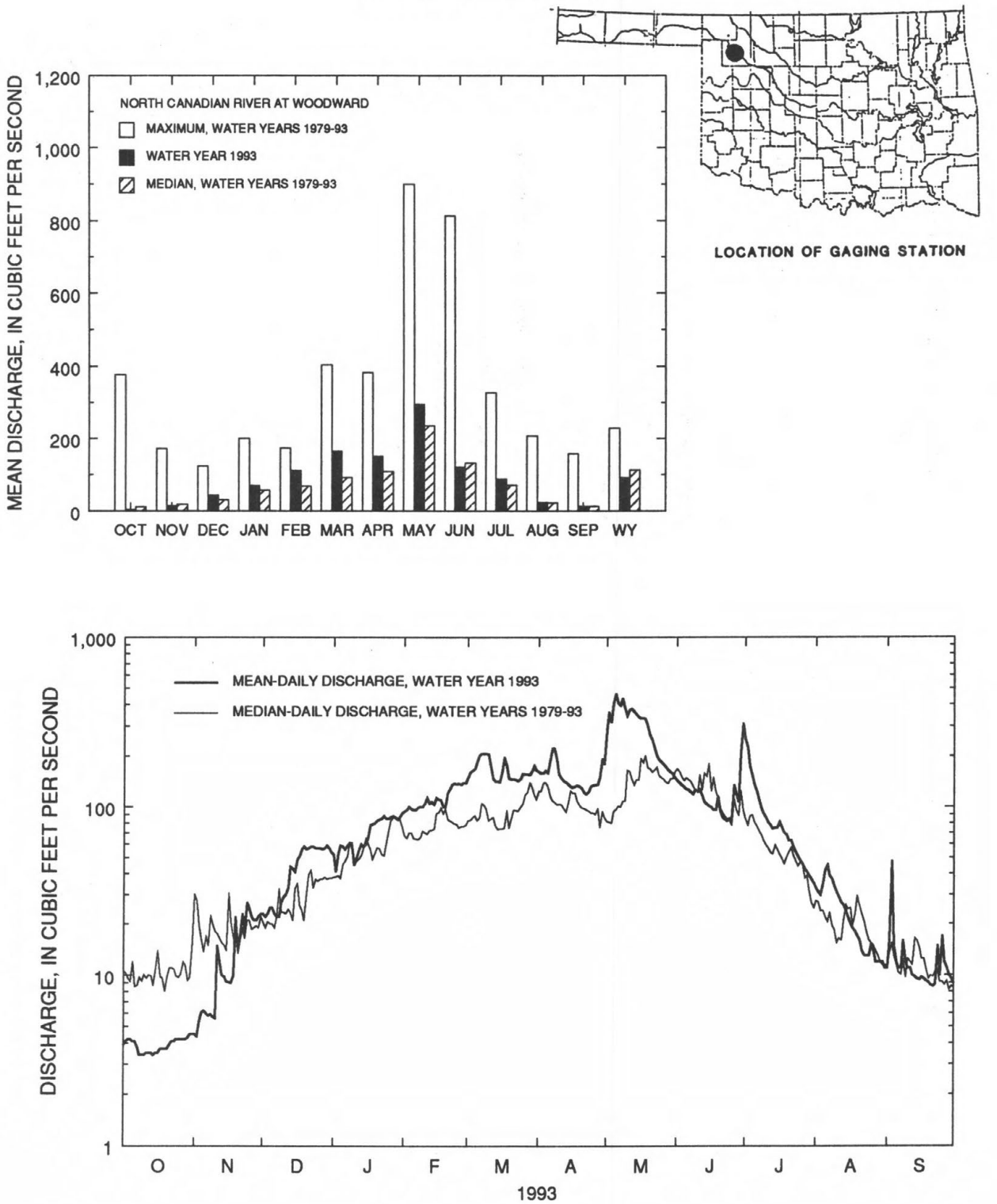
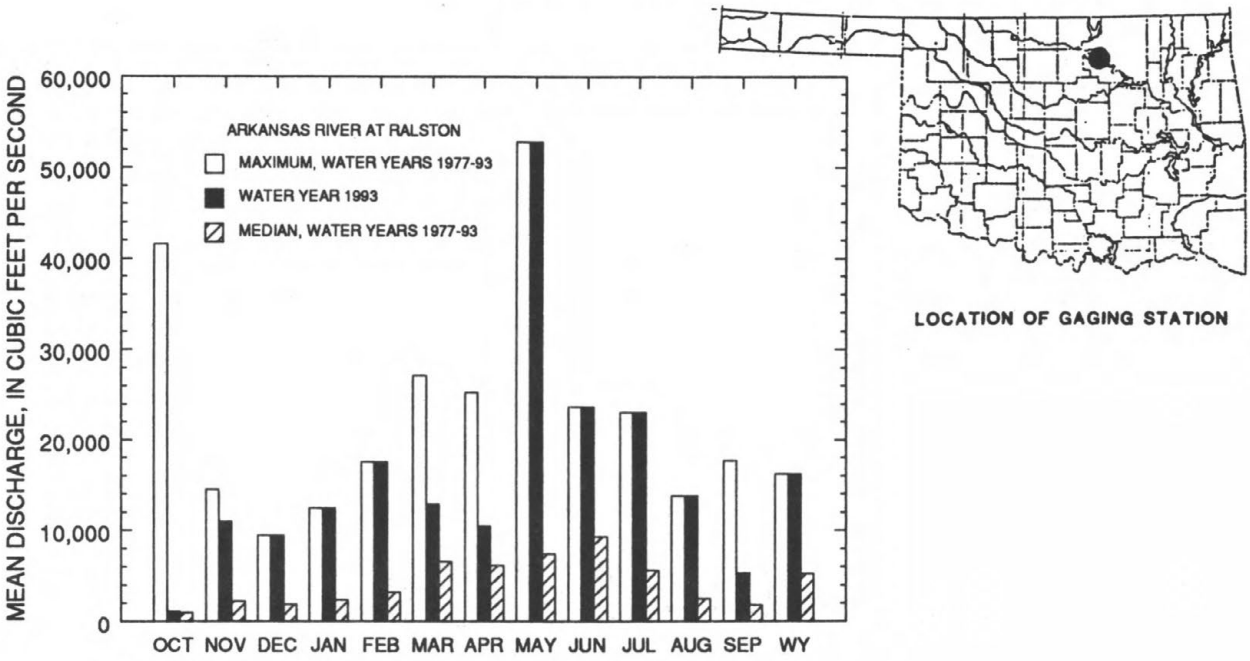


Figure 1.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for North Canadian River at Woodward, Oklahoma.



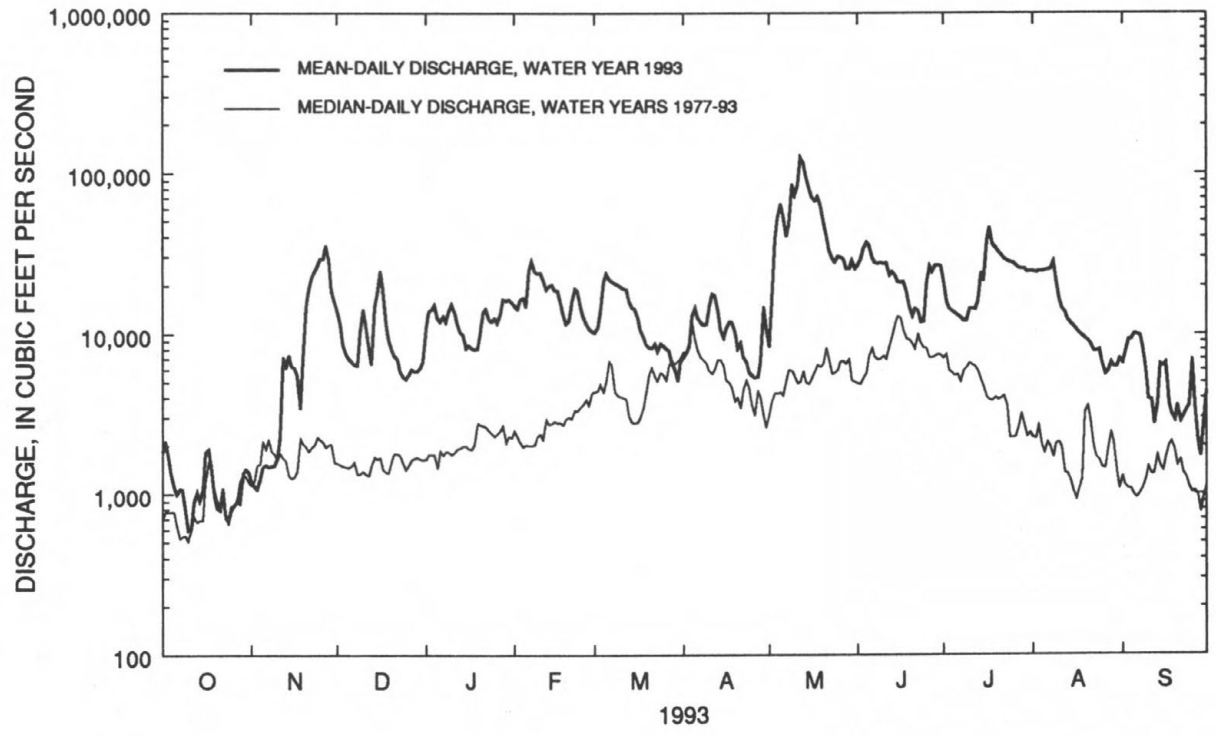
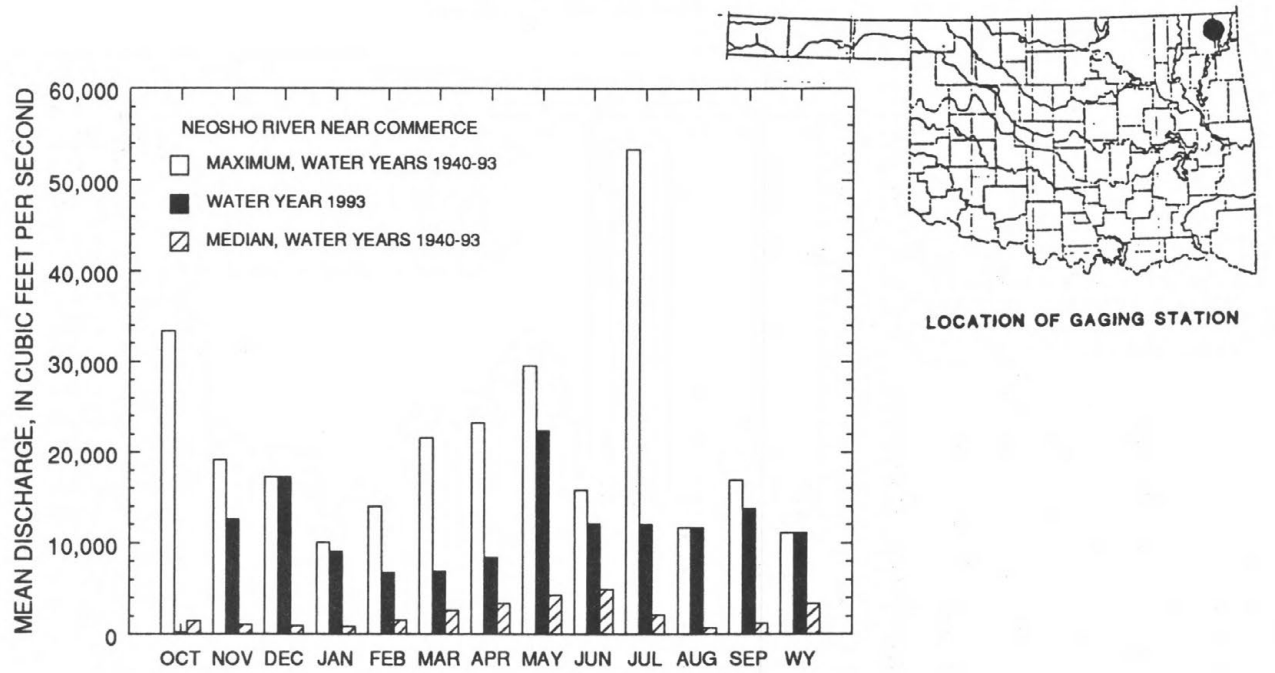


Figure 2.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Arkansas River at Ralston, Oklahoma.



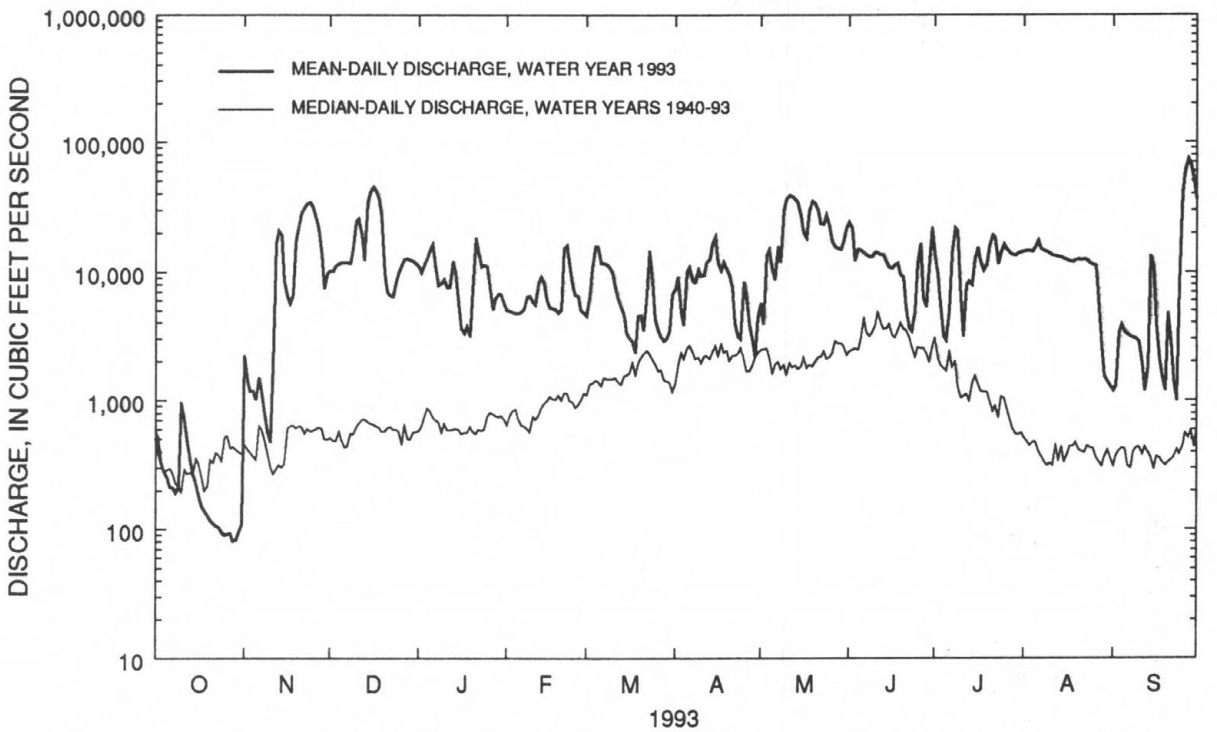


Figure 3.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Neosho River near Commerce, Oklahoma.

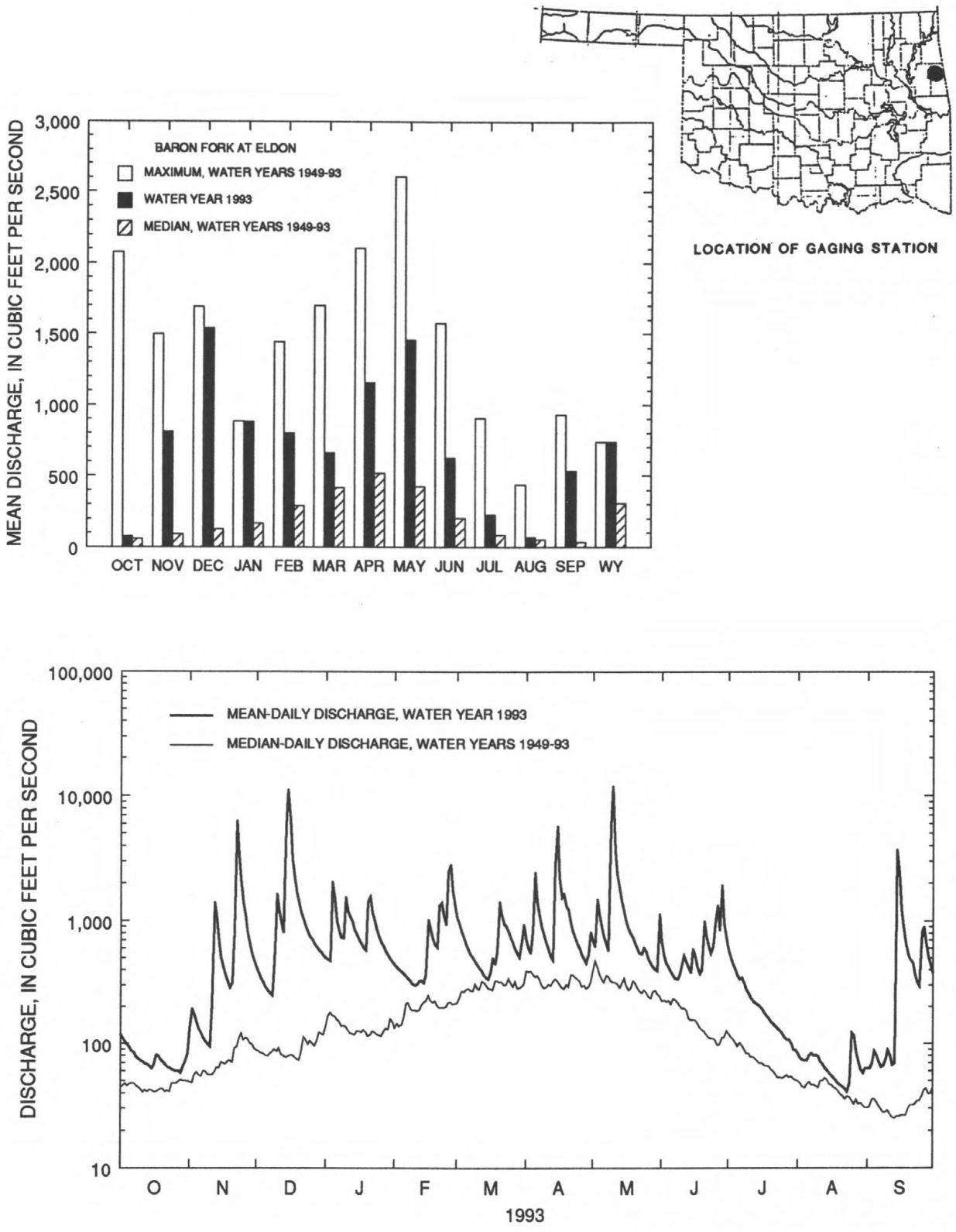
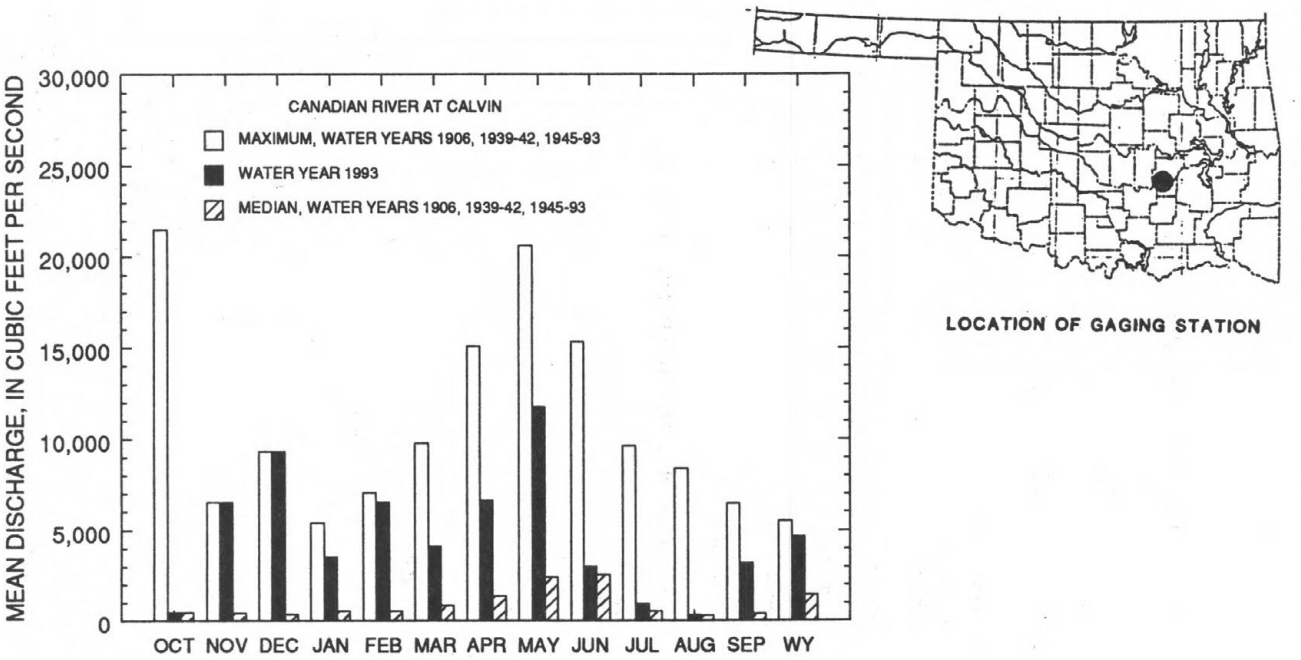


Figure 4.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Baron Fork at Eldon, Oklahoma.



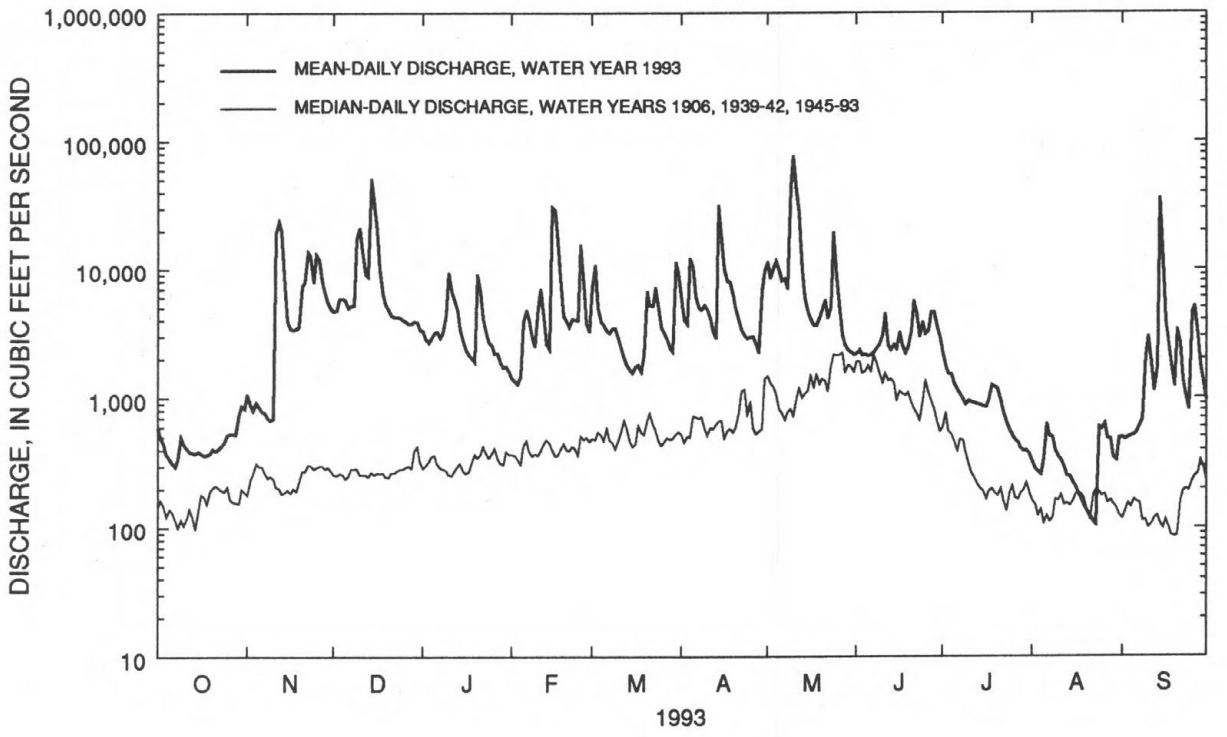


Figure 5.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Canadian River at Calvin, Oklahoma.

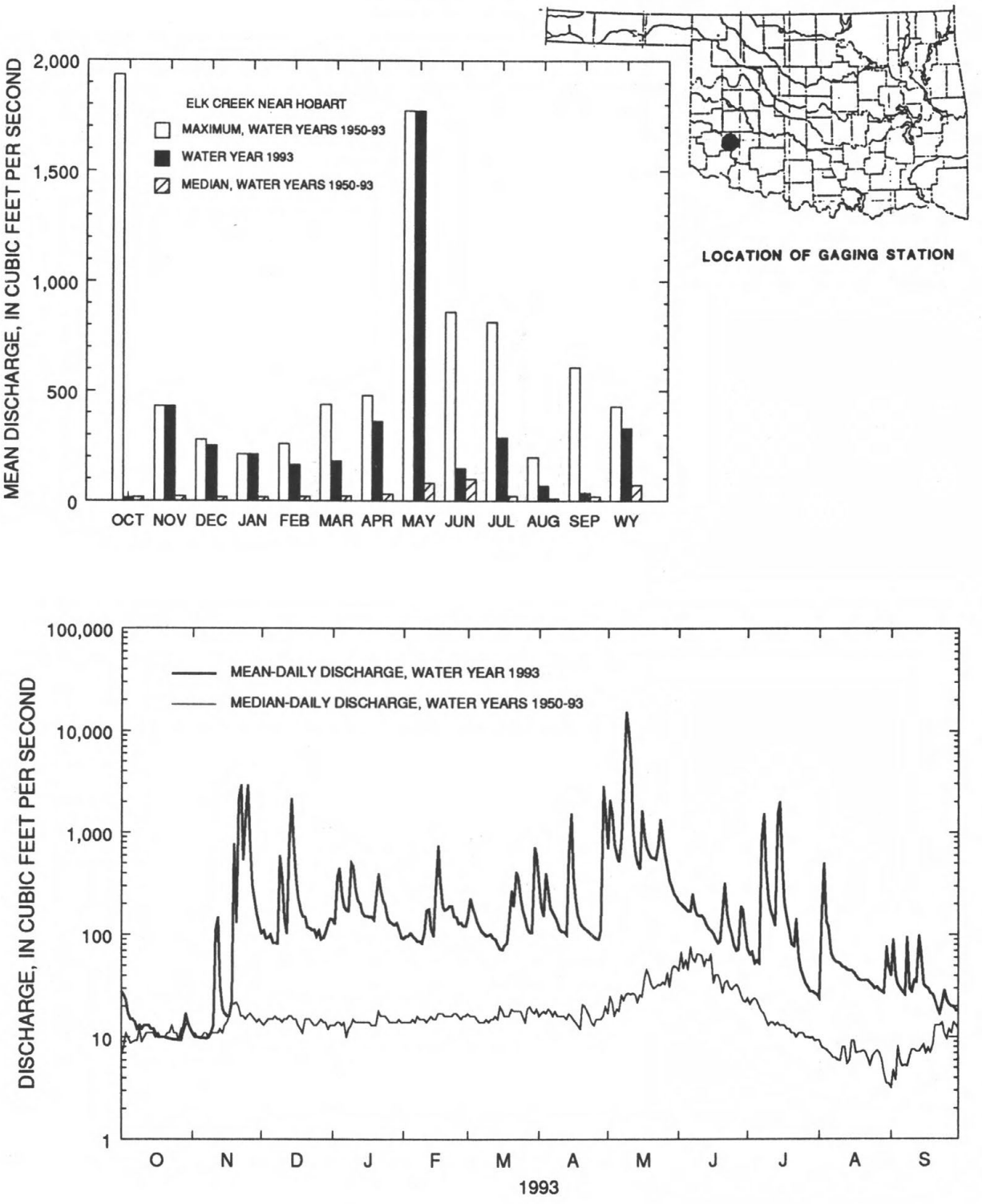


Figure 6.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Elk Creek near Hobart, Oklahoma.

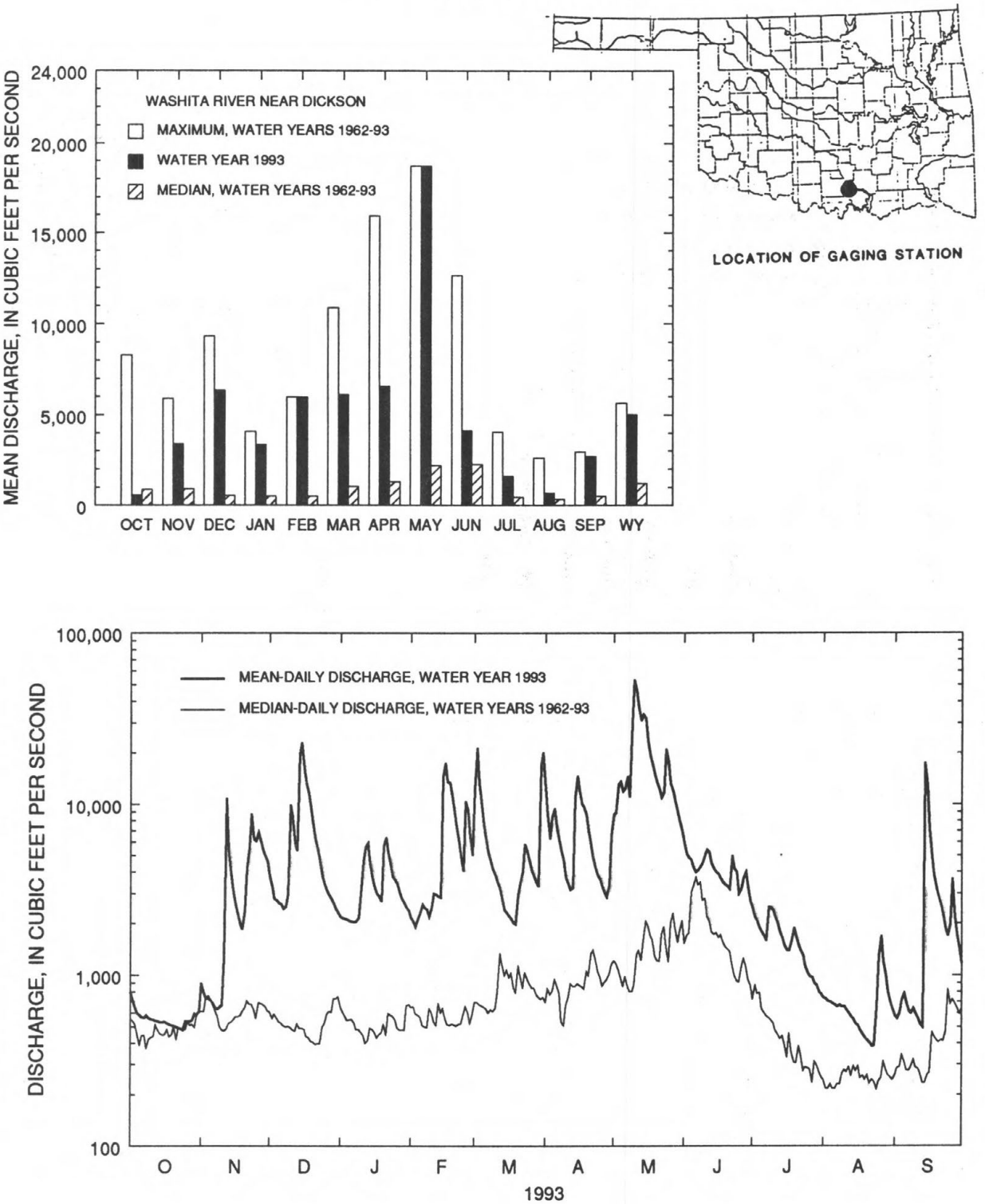


Figure 7.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Washita River near Dickson, Oklahoma.

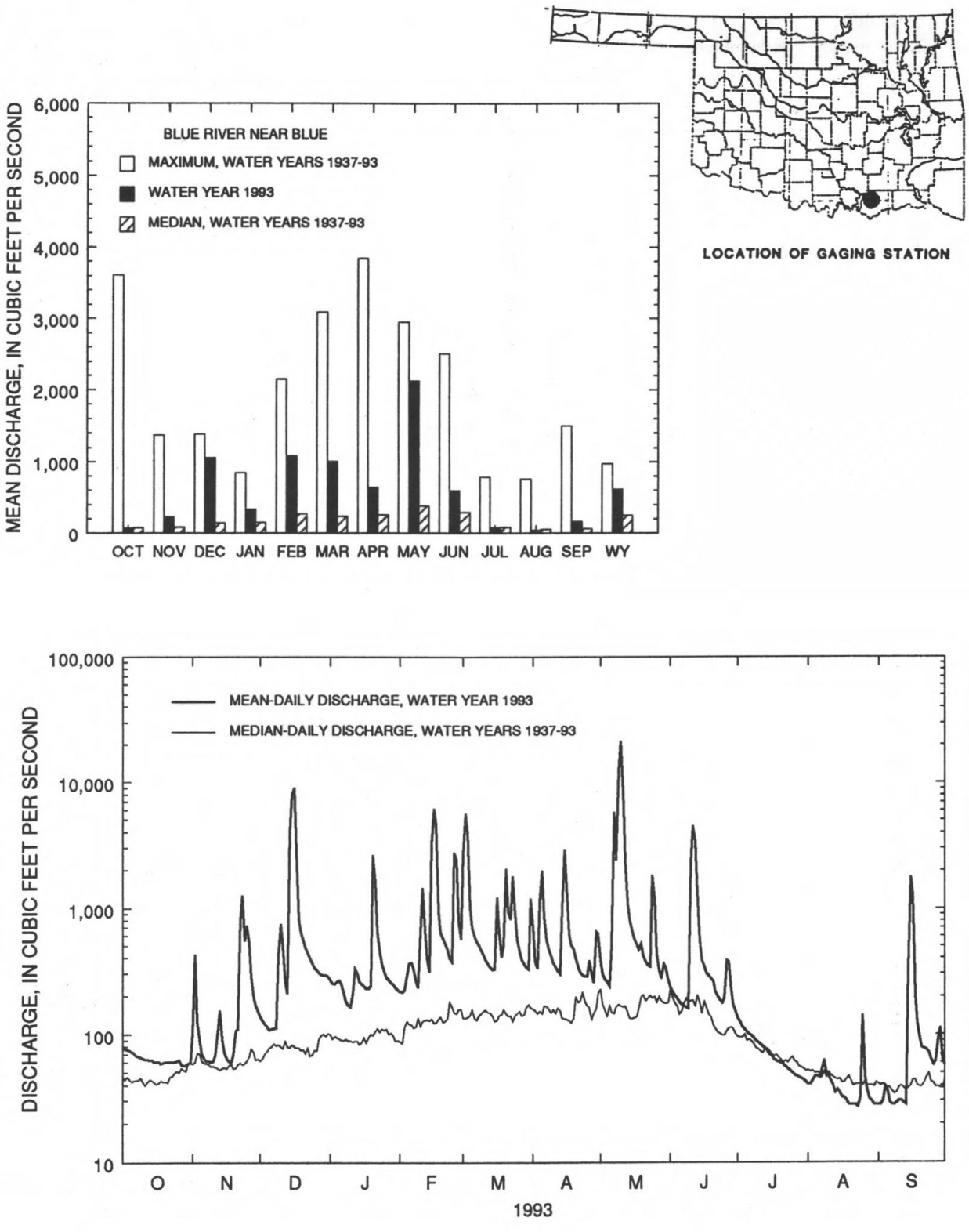


Figure 8.--Comparison of daily, monthly, and annual discharges for water year 1993 and period of record for Blue River near Blue, Oklahoma.

Chemical Quality of Streamflow

The concentrations of selected dissolved chemical constituents measured at surface-water sampling stations in the State during the 1993 water year were generally within the ranges measured during previous years. The minimum values for the selected constituents for most stations were larger for the 1993 water year than the minimum values for the 1970 through 1990 water years. The maximum values for these same constituents were smaller for most stations for the 1993 water year than the maximum values for the 1970 through 1990 water years. Concentrations of dissolved solids, chloride, sulfate, and suspended sediment are shown in the following graphs for sampling sites on selected principal streams (fig. 9) in the State. Maximum and minimum concentrations of these constituents for the 1993 water year are compared to maximum and minimum concentrations for the 1970 through 1990 water years.

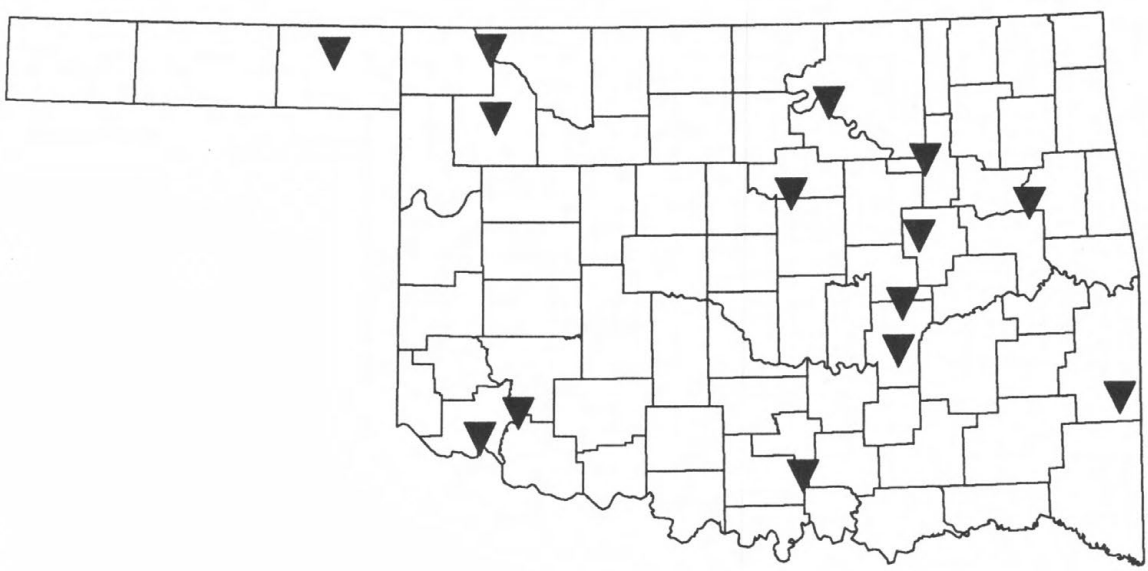
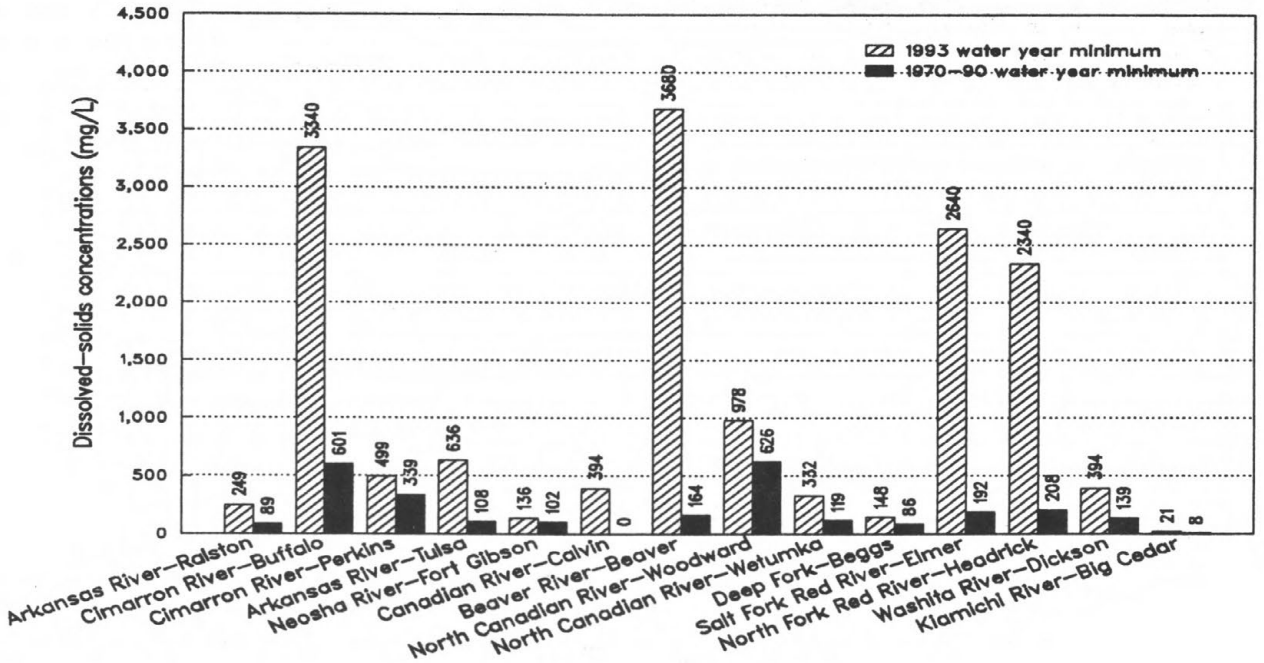


Figure 9.—Location of water-quality stations on selected principal streams.

The maximum dissolved-solids concentration measured in these streams in 1993 was 16,500 milligrams per liter (mg/L) in the Cimarron River near Buffalo. Dissolved-solids concentrations, in mg/L, are shown in the following graphs:



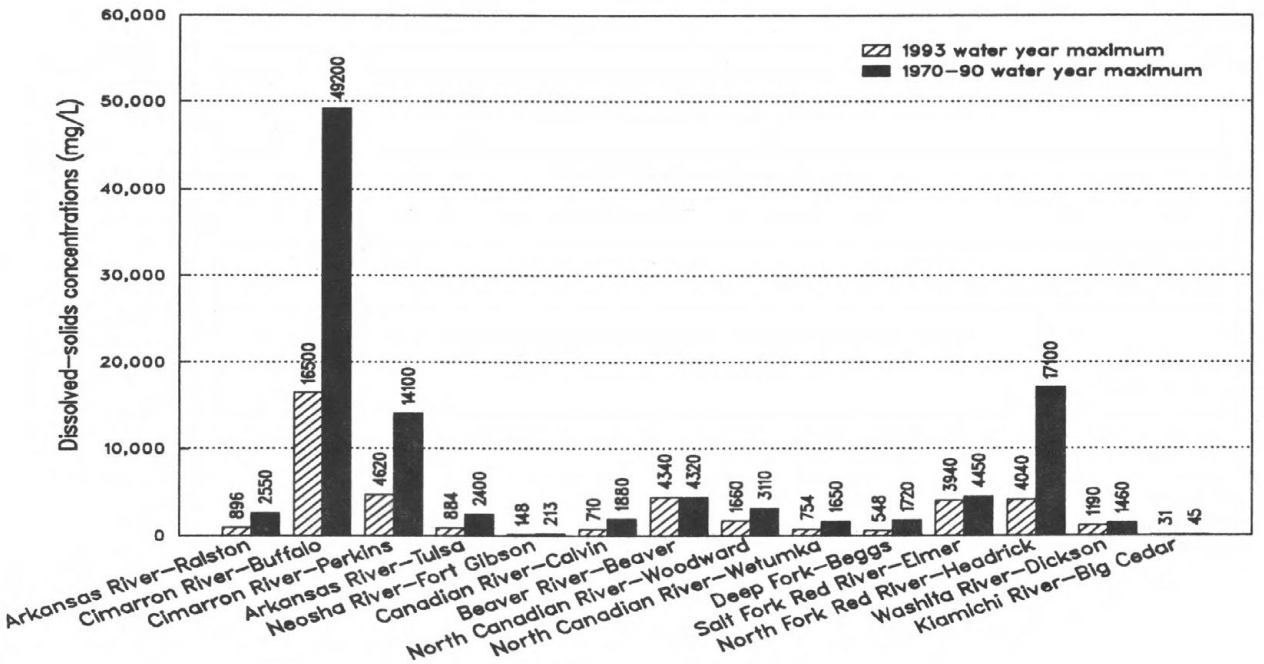


Figure 10.—Comparisons of minimum and maximum dissolved-solids concentrations, in milligrams per liter (mg/L) for water year 1993 and water years 1970-90.

The maximum dissolved-chloride concentration measured at the selected stations in 1993 was 9,900 mg/L in the Cimarron River near Buffalo. Dissolved-chloride concentrations, in mg/L, are shown in the following graphs:

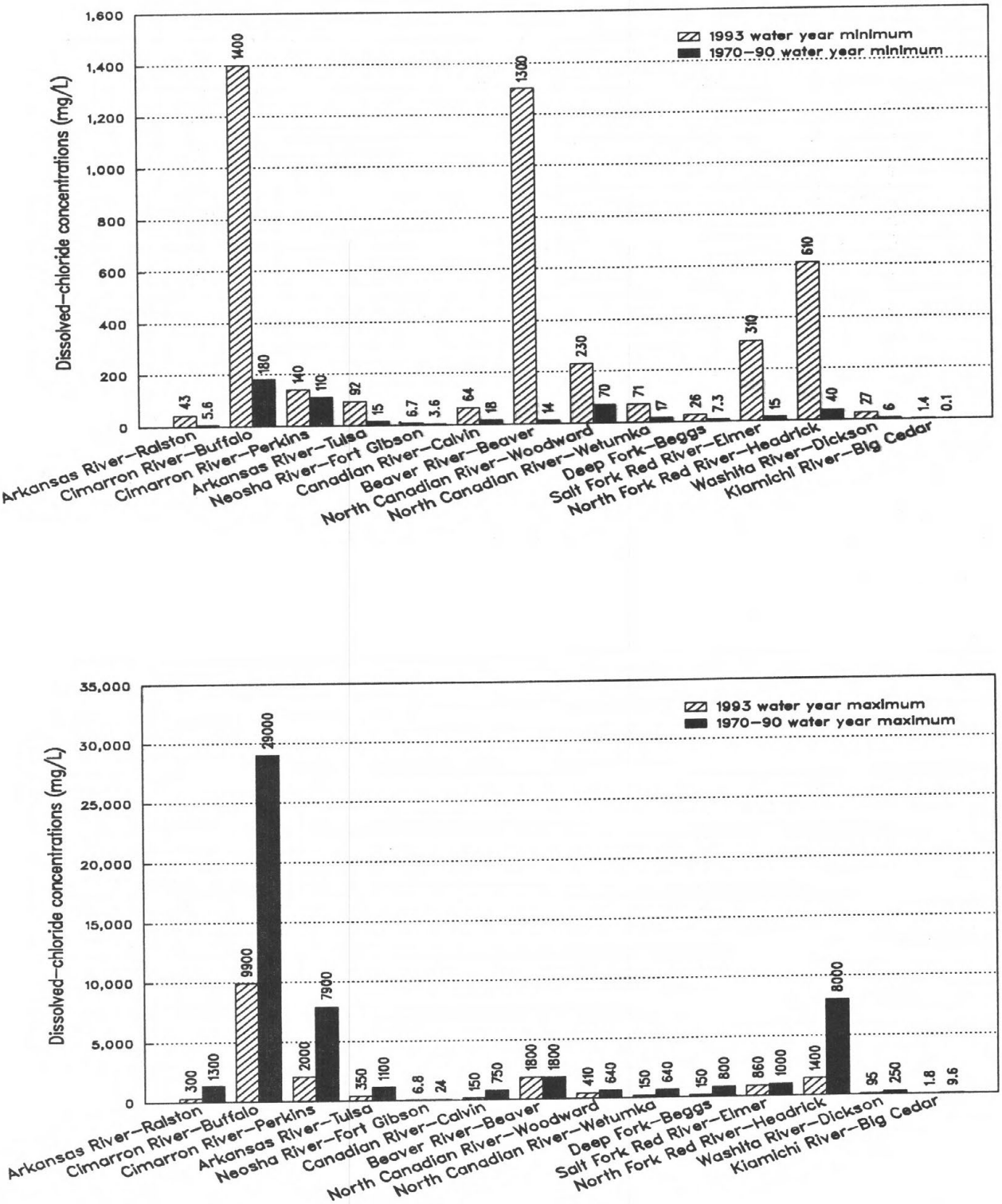


Figure 11.—Comparisons of minimum and maximum dissolved-chloride concentrations, in milligrams per liter (mg/L) for water year 1993 and water years 1970-90.

The maximum dissolved-sulfate concentration measured at the selected stations in 1993 was 1,600 mg/L in the Salt Fork Red River near Elmer. Dissolved-sulfate concentrations, in mg/L, are shown in the following graphs:

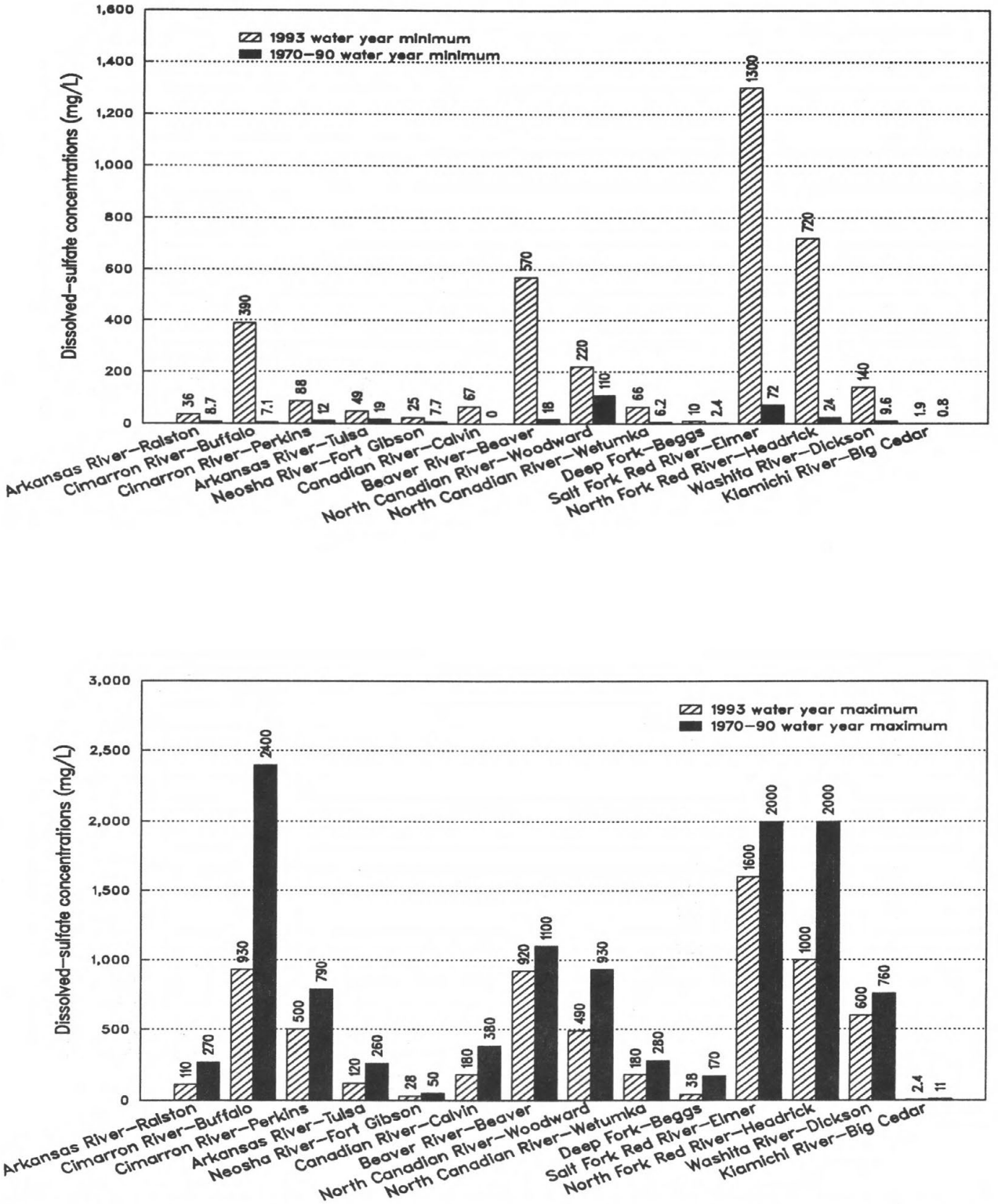


Figure 12.—Comparisons of minimum and maximum dissolved-sulfate concentrations, in milligrams per liter (mg/L) for water year 1993 and water years 1970-90.

The maximum suspended-sediment concentration measured at the selected stations in 1993 was 7,610 mg/L in the Washita River near Dickson. Suspended-sediment concentrations, in mg/L, are shown in the following graphs:

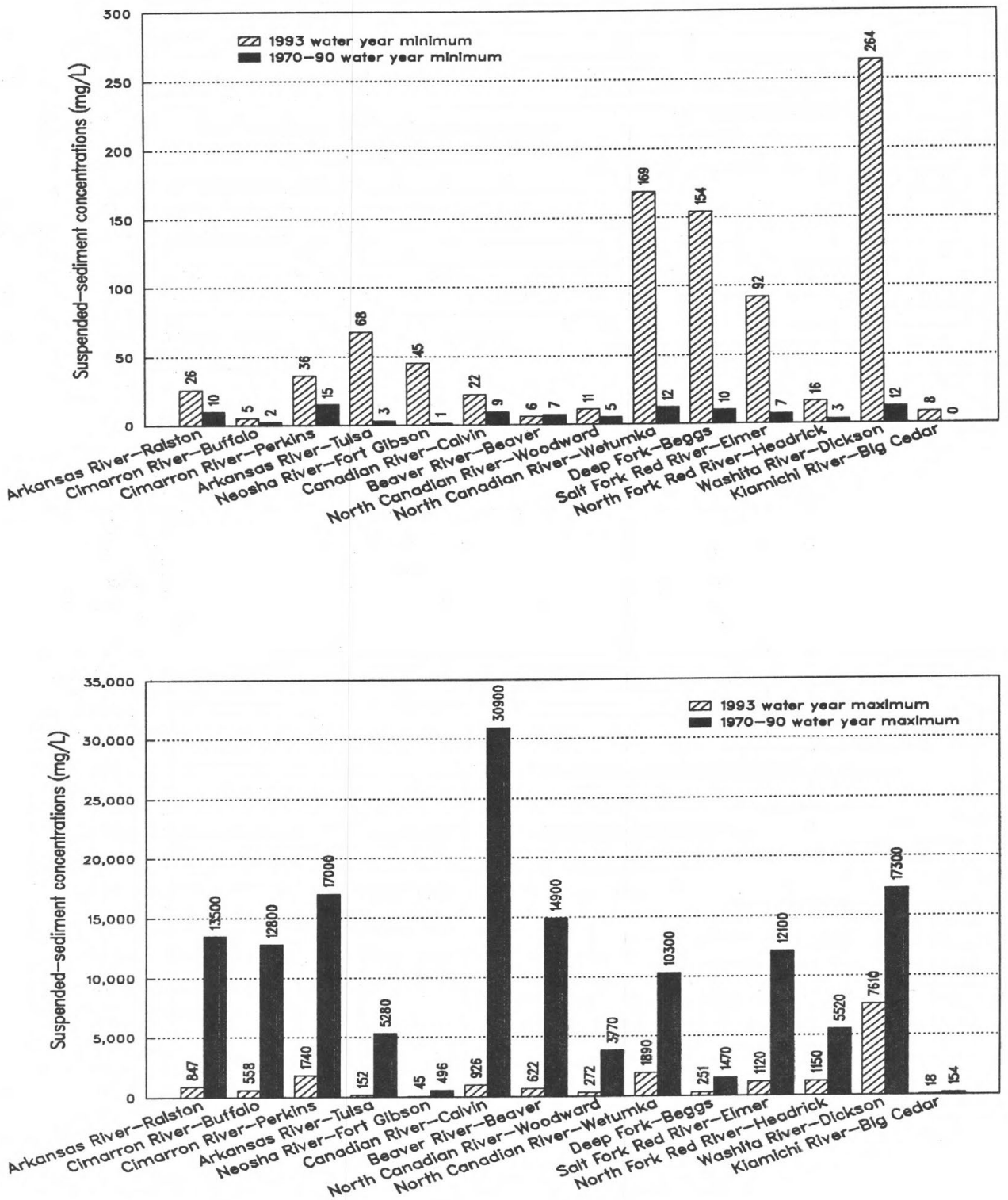


Figure 13.—Comparisons of minimum and maximum suspended-sediment concentrations, in milligrams per liter (mg/L) for water year 1993 and water years 1970-90.

Ground Water

Ground-water levels are measured annually at more than 700 sites statewide during January to March. An additional 28 sites are part of a network of sites that are measured quarterly, monthly, or are equipped with continuous recorders.

Figures 14-18 show 3-year hydrographs for five of the continuous recorder sites throughout the State. The hydrograph of the Idabel GW Well (McCurtain County) (fig. 14) is representative of seasonal variations in water levels in a shallow well in an irrigated area.

The hydrographs of the Texhoma GW Well (Texas County) (fig. 15) and the Sharon GW well (Woodward County) (fig. 16) are indicative of the long-term decline of water levels in the Ogallala aquifer. The Texhoma well was the only reporting well that recorded a new low water level of record. The Sharon well had averaged a water-level decline of nearly one foot per year for the last five years until a reversal this water year.

Conversely, the Taloga GW well (Dewey County) (fig. 17) hydrograph shows recovering water levels in the Rush Springs aquifer for the last three years. The Taloga well was one of 11 wells that recorded a new highest water level of record.

The hydrograph for the Fittstown GW well (Pontotoc County) (fig. 18) indicates water levels that respond rapidly to precipitation and slowly recede. Water levels are elevated after above-normal precipitation in this area for the past two years.

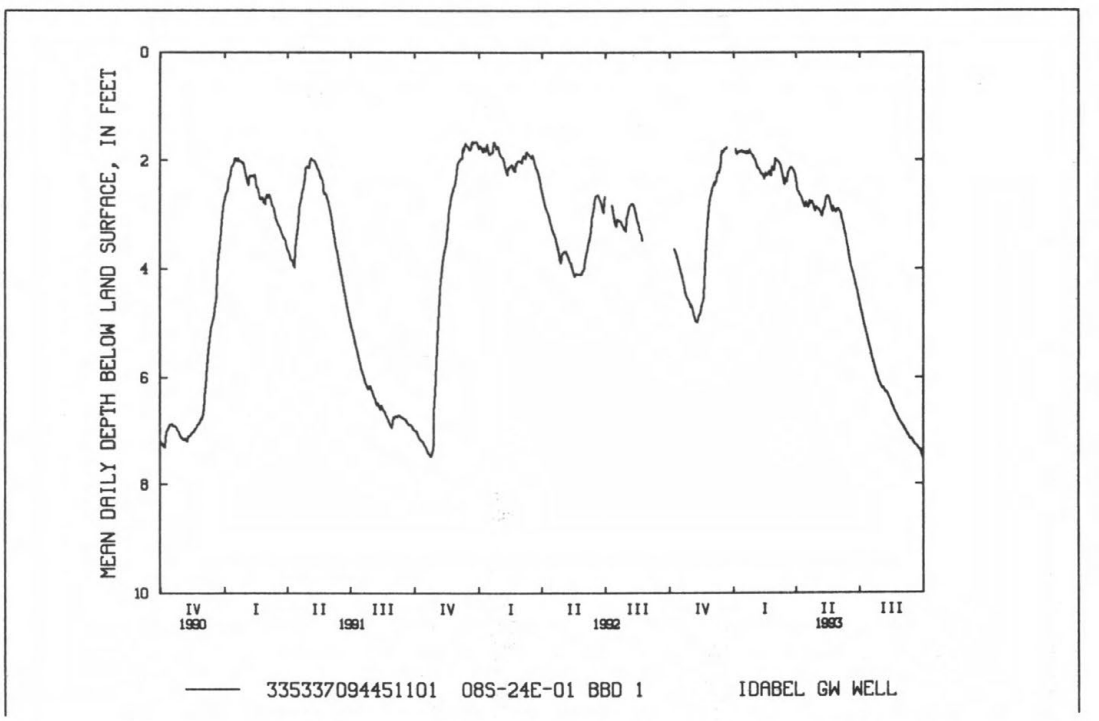


Figure14.—Hydrograph for well 08S-24E-01 BBD 1 (Idabel GW Well, 335337094451101) for water years 1991-93.

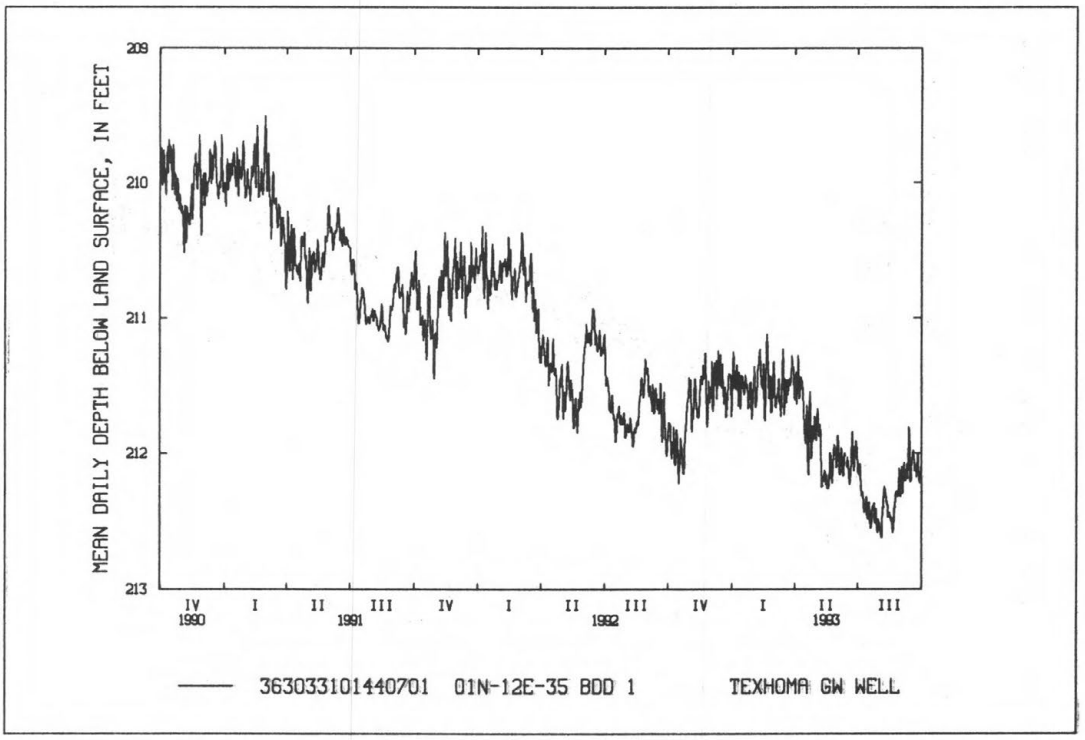


Figure 15.—Hydrograph for well 01N-12E-35 BDD 1 (Texhoma GW Well, 363033101440701) for water years 1991-93.

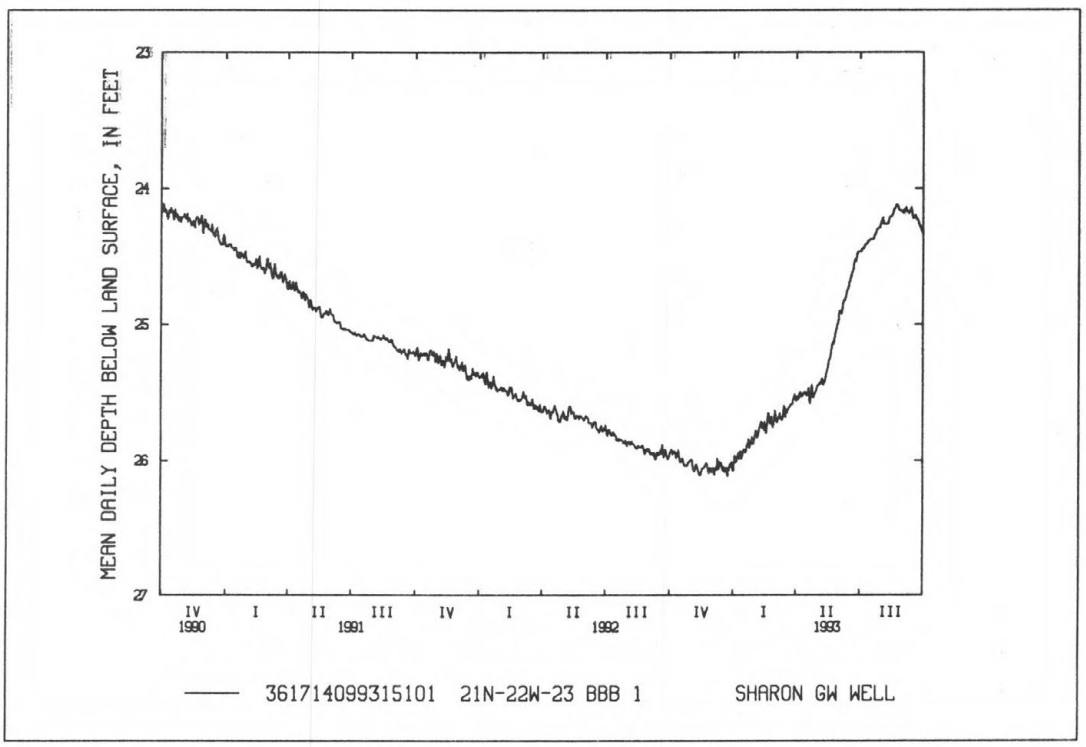


Figure 16.—Hydrograph for well 21N-22W-23 BBB 1 (Sharon GW Well, 361714099315101) for water years 1991-93.

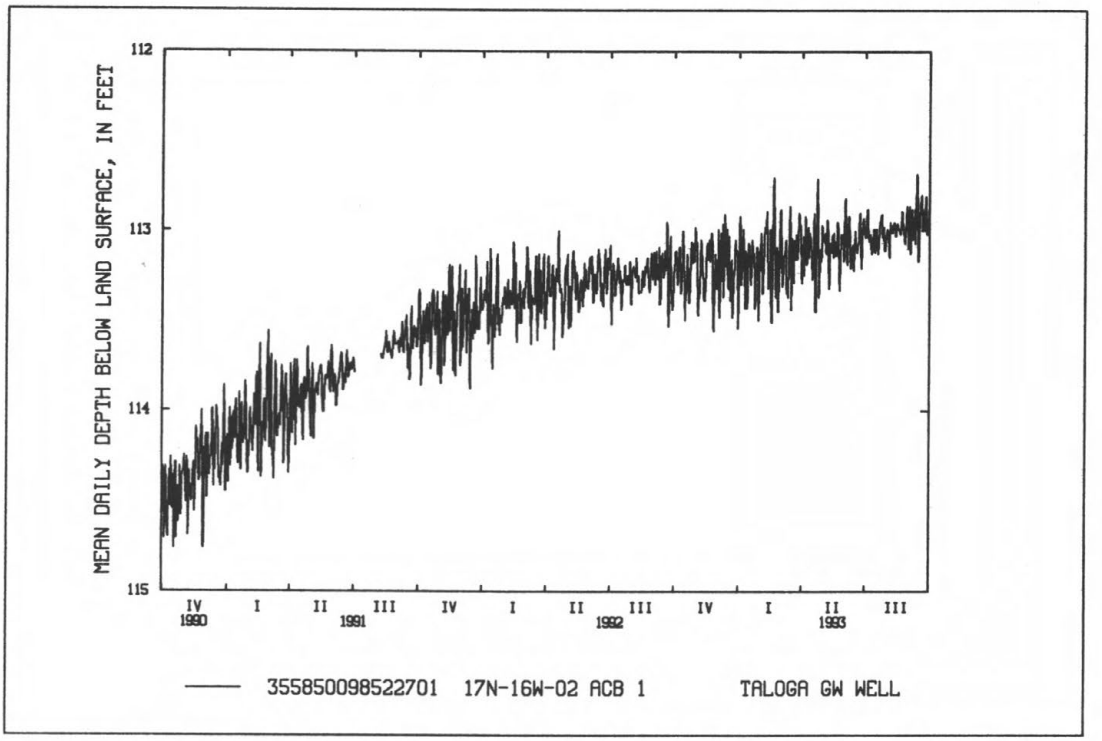


Figure 17.—Hydrograph for well 17N-16W-02 ACB 1 (Taloga GW Well, 355850098522701) for water years 1991-93.

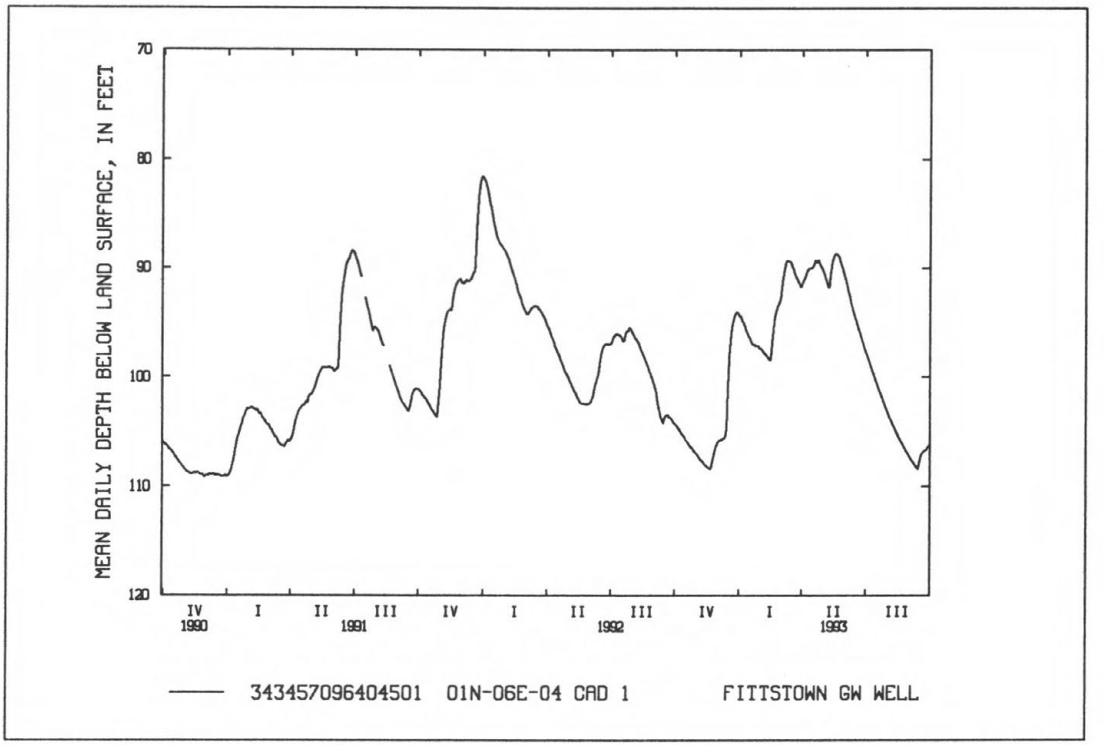


Figure 18.—Hydrograph for well 01N-06E-04 CAD 1 (Fittstown GW Well, 343457096404501) for water years 1991-93.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in respresentative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1993 water year that began Oct. 1, 1992, and ended Sept. 30, 1993. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface water and water levels for ground water. The locations of the stations where the data were collected are shown in figures 19-22. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

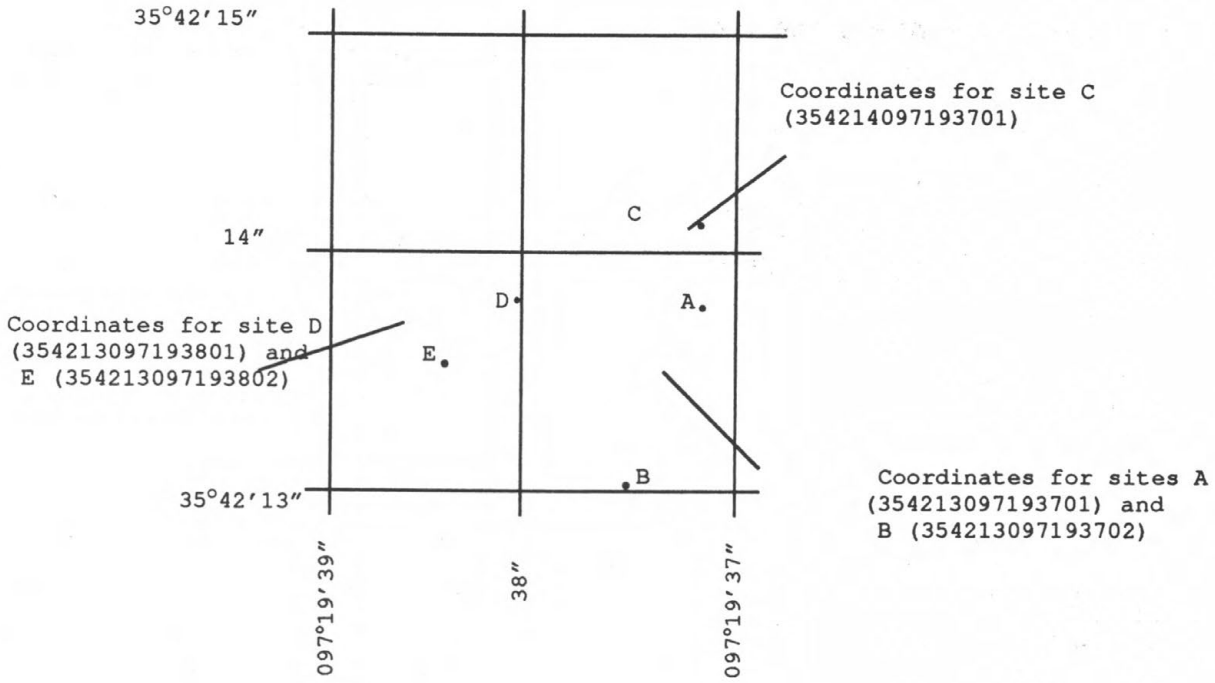
Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water wells sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Oklahoma, for surface-water stations where only miscellaneous measurements are made.

Downstream Order System

Since Oct. 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete number for each station, such as 07152500, which appears just to the left of the station name, includes the two-digit Part number "07" plus the up to 13-digit downstream-order number "152500." The Part number designates the major river basin; for example, part "07" is the Lower Mississippi River



System for numbering miscellaneous and ground-water sites (latitude and longitude)

basin.

Latitude-Longitude System

The identification numbers for wells and springs are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and has no locational significance. In instances where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure above.)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharge may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Location of all complete-record, crest-stage partial-record, and low-flow partial-record stations for which data are given in this report are shown in figures 19, 21.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals or with electronic data loggers. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. It is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow-over-dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information.

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data

reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a program to reformat the annual water-data report to most current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of five parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; a summary statistics table that includes statistical data of annual daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and a hydrograph

Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for most stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period or record and the current year; and possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet workds and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need

revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the PEAK DISCHARGES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data Table of Daily Mean Values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"); or in inches (line headed "IN.") or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed MAX), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS ____-____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary Statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all the station record within the specified water years, inclusive, including complete months of record for partial water year, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data also

are given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnote.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-fow frequency analysis of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT)is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches(INCHES) indicates the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded by 10 percent of the flow for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded by 50 percent of the flow for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow for the designated period.

Hydrograph

A hydrograph for the current year follows the table for most stations. Streamflow hydrographs are semi-log plot of mean daily values with no flow days showing as blanks. Lake hydrographs are retangular plot of 2400-hour readings.

Data collected at partial-record stations follow the information for continuous-record sites. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called miscellaneous sites.

Identifying Estimated Discharge

Estimated daily-discharge values published in the water-discharge tables of

annual State data reports are identified by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated."

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of the true; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft3/s; to the nearest tenth between 1.0 and 10 ft3/s; to whole numbers between 10 and 1,000 ft3/s; and to 3 significant figures for more than 1,000 ft3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of these sites as well as an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Oklahoma District office. Also, most of the daily mean discharges are in computer-readable form.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 20.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscel-

laneous sites.

On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed in this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey District Office whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

Suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratories in Arvada, Colo. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

In March 1989 the National Water-Quality Laboratory discovered a bias in the

turbidimetic method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, and water temperature then follow in sequence.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (nonideal colony count)
L	Biological organism count less than 0.5 percent (organisms may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentra-

tions for a number of trace elements are within the range of 10's and 100's of nanograms per liter (ngL). Present data above the µg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey will begin using new trace-element protocols in the near future.

Records of Ground-Water Levels

Only water-level data from a national network of osbervation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Oklahoma are shown in figure 22.

Although, in this report, records of water levels are presented for fewer than 100 wells, records are obtained through cooperative efforts of many Federal, State, and local agencies for several hundred observation wells throughout Oklahoma and are placed in computer storage. Information about the availability of the data in the water-level file may be obtained from the District chief, Oklahoma District. (See address on back of front page.)

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability. Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape or punched tape of the water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of mean daily water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; the distance and direction from a geographic point of reference.

AQUIFER.--This entry designates by name the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It is used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be

noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

An abbreviated table of mean daily water levels follows the station description for each well equipped with a digital recorder. For wells with no recorder, actual measurements are listed. Water levels are reported in feet below land-surface datum. A rectangular hydrograph of mean daily water levels for the last three years follows the table for recorder wells. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by blanks in place of the water level.

ACCESS TO WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National WATer Data STOrage and REtrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

* Station Header File - contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
* Daily Values File - Contains more than 220 million daily values of streamflows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
* Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
* Water-Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of of both surface and ground water.
* Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data include site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disc; and as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports also will be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

DEFINITIONS OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorphyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Aroclor is the registered trade mark for a group of polychlorinated biphenyls which were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific four-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C + 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C ± 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35oC ± 1.0oC on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area of volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500oC for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m3), and periphyton and benthic organisms in grams per square meter (g/m2).

Dry mass refers to the mass of residue present after drying in an oven at 105oC for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the

number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloro-platinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic foot per second (ft3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile [(ft3/s)/mi2] or CFSM is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 m membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO3).

HWM is a high-water mark or flood mark.

Hydrologic Benchmark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area

representing part of all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Micrograms per gram (µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentrations of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve

Gravel.... 2.0 - 64.0 Sieve

The particle-site distribution given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly know as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen release (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/m3.time)] for periphyton and macrophytes and [mg C/(m3.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method, and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O/(m3.time)] for periphyton and macrophytes and [mg O/m3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Recoverable from bottom material is the amount of a given constituent that is

in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sea Level is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "National Geodetic Vertical Datum of 1929 (NGVD of 1929)," "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf or Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of

the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and the volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	*Hexagenia*
Species	*hexagenia limbata*

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of

individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determines all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period, Oct. 1 through Sept. 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending Sept. 30, 1986, is called the "1986 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. Water temperature--influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficken, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy,* G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. *Application of seismic-refraction techniques to hydrologic studies,* by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L.M. McCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

2-E2. *Borehole geophysics applied to ground-water investigations,* by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells,* by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods,* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS-TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3. Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel in streams by dye tracing,* by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

3-A10. *Discharge ratings at gaging stations,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. *Fluorometric procedures for dye tracing,* by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS- - TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. *Computation of continuous records of streamflow,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge,* by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. *Measurement of discharge using tracers,* by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. *Acoustic velocity meter systems,* by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. *Determination of stream reaeration coefficients by use of tracers,* by F. A. Kilpatrick, R. E. Rathburn, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

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3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction,* by G. D. Bennett: USGS- - TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. *Regression modeling of ground-water flow,* by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R. L.

Cooley. USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction,* by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. *The principle of superposition and its application in ground-water hydraulics,* by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 90 pages.

3-C1. *Fluvial sediment concepts,* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment,* by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. Computation of fluvial-sediment discharge, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology,* by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

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4-B3. *Regional analyses of streamflow characteristics,* by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

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5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

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5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

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6-A1. *A modular three-dimensional finite-difference ground-water flow model,* by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.

6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.

6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water- problems, Part 3: Design philosophy and programming details,* by L. J. Torak. USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in*

ground water, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

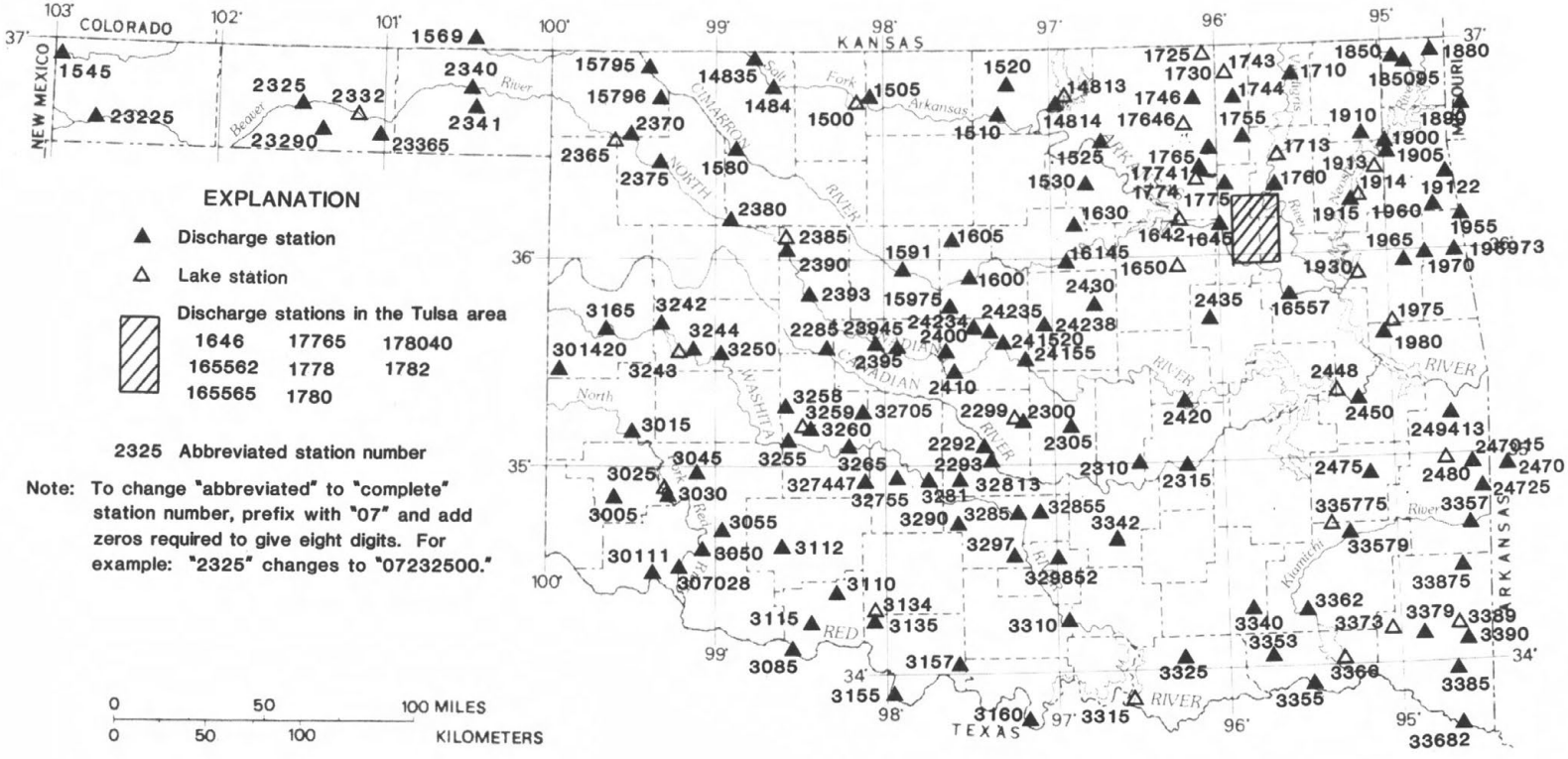


Figure 19.--Locations of continuous-record surface-water stations, water year 1993.

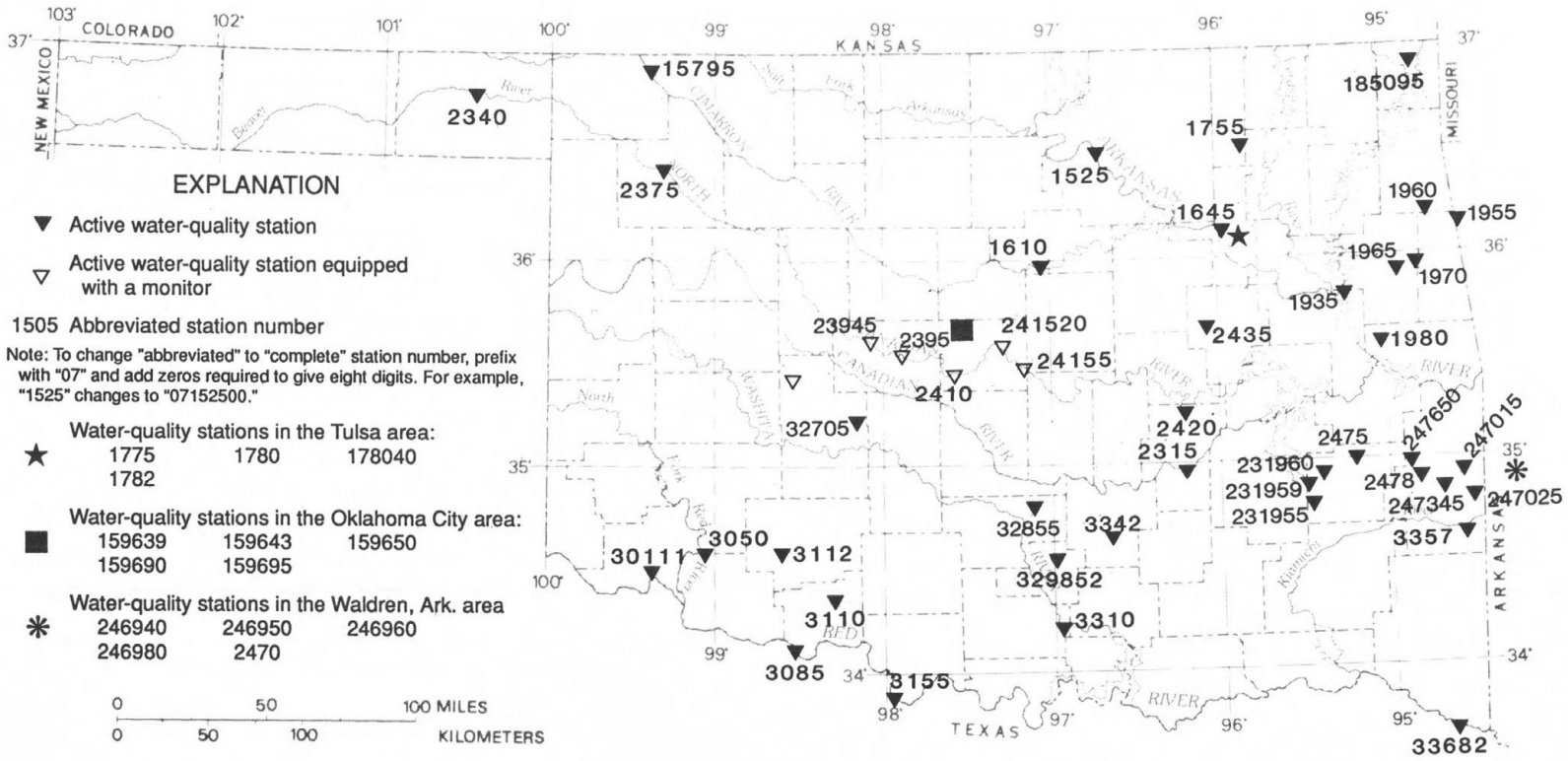


Figure 20.--Locations of water-quality stations, water year 1993.

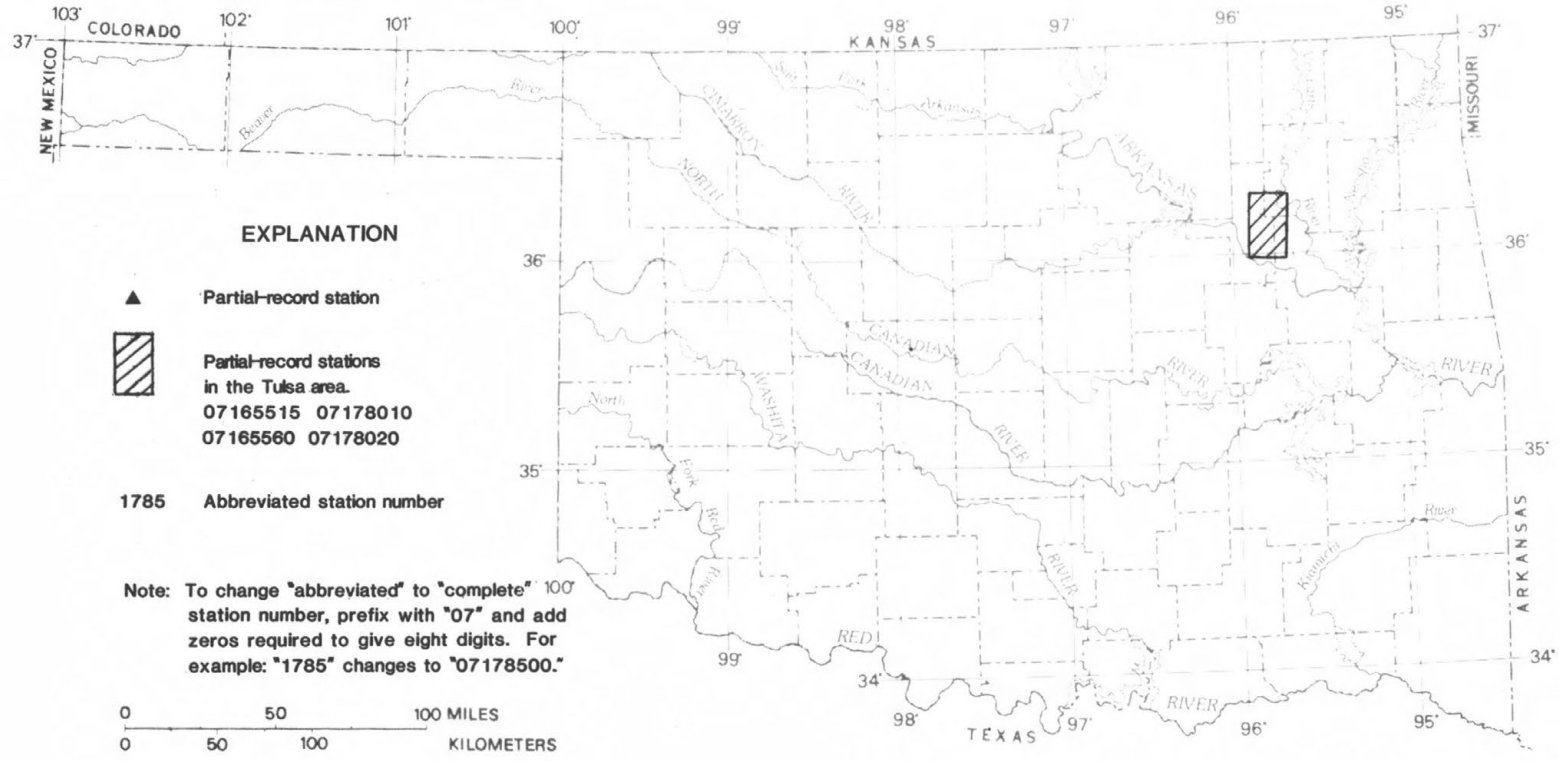


Figure 21.—Locations of partial-record stations, water year 1993.

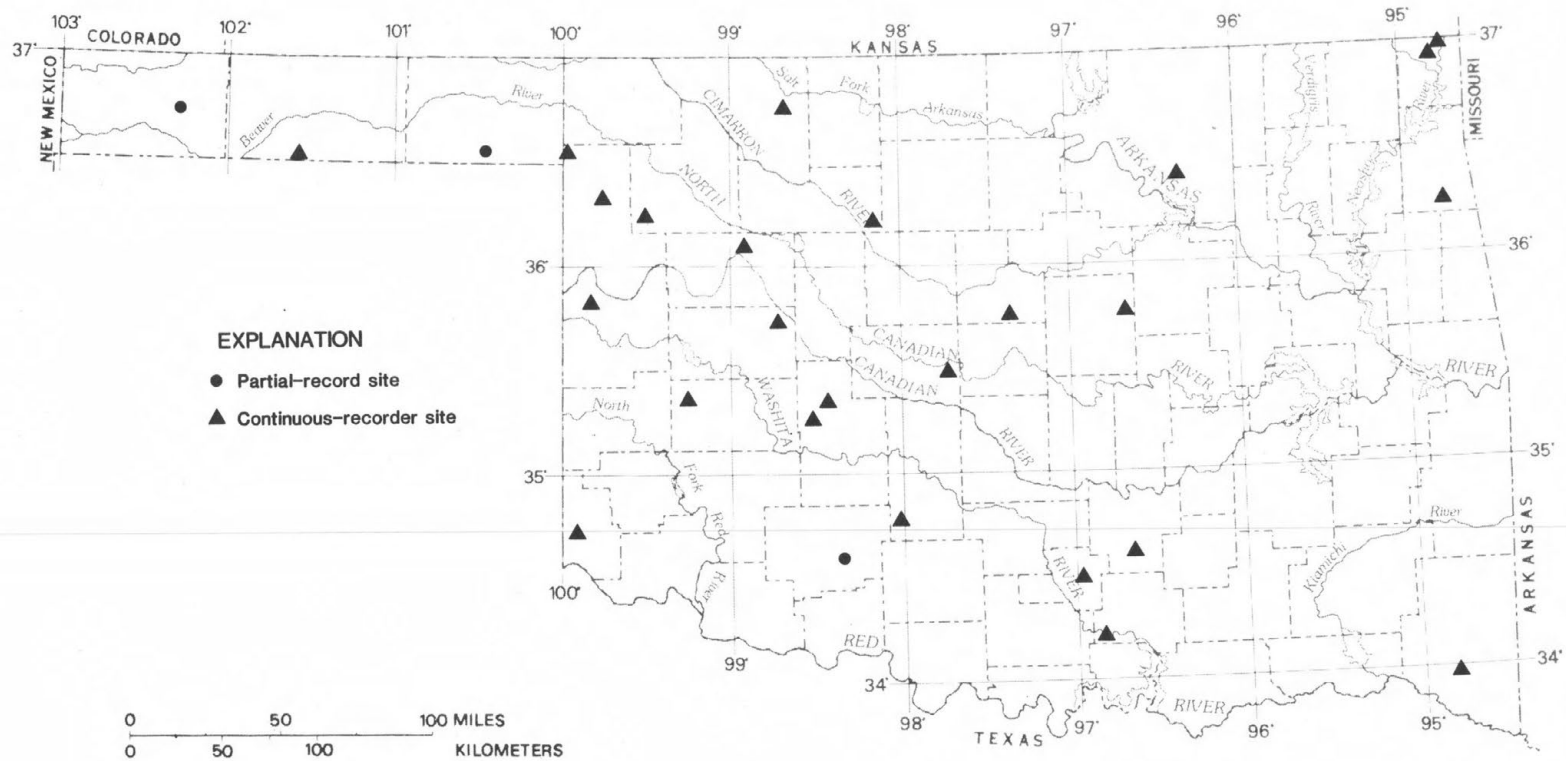


Figure 22.--Locations of network ground-water wells, water year 1993.

07148130 KAW LAKE NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'58", long 96°55'18", in NE 1/4 SE 1/4 sec.25, T.26 N., R.3 E., Osage County, Hydrologic Unit 11060001, 1,700 ft east of centerline of spillway on dam on Arkansas River, about 8 mi east of Ponca City, and at mile 653.7.

DRAINAGE AREA.--46,530 mi^2, of which 7,607 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1976 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to July 8, 1976 nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by a rolled, earth dam. Spillway is concrete, gravity ogee-weir type controlled by eight 50-foot taintor gates. Outlet works consist of two sluice gates. Regulated storage began April 22, 1976; conservation pool first filled July 6, 1976. Capacity, 1,327,000 acre-ft, at elevation 1,044.5 ft, top of flood control pool, 406,500 acre-ft, at elevation 1,010.0 ft, top of conservation pool, and 234,100 acre-ft, at elevation 997.5 ft, crest of controlled spillway. Dead storage 76,360 acre-ft below elevation 978.0 ft. Figures given herein represent total contents. Reservoir is designed for flood control, water-quality control, recreation, fish and wildlife, water supply, and power generation. Revised capacity table, based on 1986 resurvey, used since Oct. 1, 1991. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,434,000 acre-ft, May. 13, 1993, elevation, 1,047.12 ft; minimum since conservation pool first filled, 223,100 acre-ft, Mar. 25, 1977, elevation, 995.06 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,434,000 acre-ft, May 13, elevation, 1,047.12 ft; minimum, 400,400 acre-ft, Oct. 1, 2, elevation, 1,009.63 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

1,006	342,800	1,030	849,800
1,012	441,400	1,036	1,028,000
1,018	559,500	1,042	1,231,000
1,024	694,600	1,048	1,471,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY OBSERVATION AT 24:00 VALUES

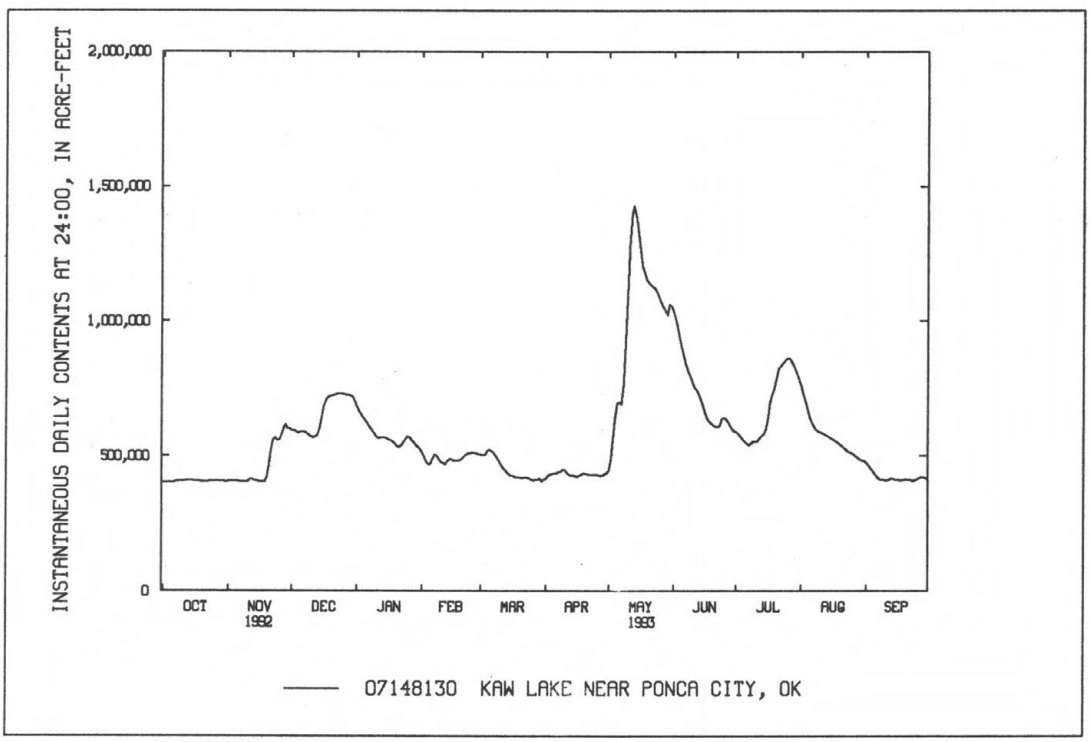
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400400	405700	593200	681800	511800	504900	414700	446000	1037000	587600	759800	473700
2	400900	405400	594700	664700	495200	502100	427100	488500	1006000	580200	728700	464900
3	401000	405900	589300	651800	477100	503500	430500	567700	974500	569800	701200	454100
4	401200	405500	583200	640300	467000	518500	433100	643500	932000	560700	670800	443600
5	401400	405000	588400	630300	471800	522900	434600	694400	896800	553000	644600	432600
6	402400	404500	588000	617900	489300	518900	435600	700500	865900	544700	622600	422100
7	405500	404200	587600	607100	504100	512000	440100	691700	835800	538600	608200	414500
8	404700	402700	583200	594200	499900	501300	441400	762100	812400	545700	596600	410100
9	405500	402400	576400	585400	487400	488900	448300	920000	795900	553200	590300	410600
10	406500	404400	570400	572800	476900	476400	448200	1104000	775300	551900	586900	408700
11	407200	413600	567500	565200	472900	462700	437800	1291000	752400	554000	582600	410100
12	408600	412600	570000	566200	468300	453000	429200	1402000	745300	565600	579400	412000
13	408100	408400	575800	566600	481000	443900	426600	1431000	728200	574500	575600	416700
14	407600	407900	598800	567700	488300	434000	426100	1392000	707900	580200	570400	414000
15	406900	404900	641000	563900	487200	428200	425200	1332000	685000	598400	565200	410600
16	405000	403000	682100	560500	482500	426800	422600	1263000	658800	635300	561100	410400
17	405200	403900	704700	556500	482100	422200	427800	1203000	637500	697100	555900	409200
18	405200	402900	716500	552300	481700	420900	430500	1180000	625800	728200	550300	409400
19	404500	419600	721200	544900	484100	420200	435600	1155000	618600	750000	544200	411300
20	403900	466600	723700	535200	489700	419000	432100	1144000	612400	788000	537800	412600
21	404200	522300	726200	532700	497300	417100	430600	1135000	608000	824400	532100	410400
22	404700	559500	729200	537600	505100	420700	429900	1128000	606500	833700	524800	409900
23	405000	566400	731200	548600	509400	418800	430100	1122000	611100	843500	517500	406500
24	405700	557600	730900	560500	510600	416500	430800	1109000	637100	853400	513300	408400
25	405700	559500	730400	570900	512700	412500	430300	1090000	641200	862000	509800	412600
26	406500	579000	728200	569600	510800	409200	428400	1070000	635700	864200	504900	417200
27	405200	603200	726500	558400	508800	409900	425700	1053000	623500	856500	498300	421200
28	405000	615500	725000	549800	506600	411100	427800	1039000	610600	841900	492200	420900
29	405900	599900	722200	539500	---	416400	432900	1025000	597100	824700	485600	417900
30	404700	599700	719000	532500	---	404900	436000	1062000	590300	805700	481600	413000
31	404000	---	701000	524600	---	412600	---	1055000	---	783300	480600	---

07148130 KAW LAKE NEAR PONCA CITY, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	408600	615500	731200	681800	512700	522900	448300	1431000	1037000	864200	759800	473700
MIN	400400	402400	567500	524600	467000	404900	414700	446000	590300	538600	480600	406500
(‡)	1009.85	1019.88	1024.26	1016.31	1015.42	1010.36	1011.70	1036.85	1019.45	1027.52	1014.09	1010.38
(‡‡)	+2,800	+195,700	+101,300	-176,400	-18,000	-94,000	+23,400	+619,000	-464,700	+193,000	-302,700	-67,600

CAL YR 1992 MAX 731200 MIN 363200 (‡‡) +277,200
WTR YR 1993 MAX 1431000 MIN 400400 (‡‡) +11,800

(‡) ELEVATION, IN FEET AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07148140 ARKANSAS RIVER NEAR PONCA CITY, OK

LOCATION.--Lat 36°41'36", long 96°55'48", in NW 1/4 NE 1/4 sec.36, T.26 N., R.3 E., Kay County, Hydrologic Unit 11060001, 3,000 ft downstream from Kaw Lake, 8 mi east of Ponca City, and at mile 653.1.

DRAINAGE AREA.--46,530 mi^2, of which 7,607 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1976 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 923.656 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1987, gage at site 3,000 ft upstream at National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Kaw Lake. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	812	395	5590	9850	8920	5070	2590	2540	17300	8510	18800	5460
2	417	520	3340	9890	10300	6740	3340	2940	23000	8480	18900	7000
3	298	721	3260	9940	10800	9570	5780	5010	28200	8460	19100	6960
4	288	788	3220	8110	8930	11000	5780	7660	27800	8430	18900	7200
5	343	802	3230	7720	9810	12300	5760	9950	24800	8370	17700	7070
6	378	809	3260	8700	14000	12300	5750	13400	20600	8340	15100	6970
7	118	802	3450	8120	14200	12300	5770	15900	20500	7900	11200	5400
8	108	795	5940	7670	15300	12200	5960	12100	20400	8080	9660	3960
9	154	569	7620	7680	16500	12200	7770	859	20200	8340	7520	1990
10	330	407	6030	7680	14700	11900	10500	1250	20100	9490	6240	1740
11	335	719	4290	5940	11200	11700	10500	19600	18400	9460	6170	454
12	331	4320	2430	3770	11100	9700	8160	43500	16200	9400	5800	498
13	541	8830	2460	2690	11100	8490	5210	53000	16000	9510	5710	2110
14	1320	8050	3420	2420	10900	8490	3990	60000	15600	9520	5920	2910
15	1330	8060	3300	4120	11000	7100	3940	61800	15400	13500	5850	3510
16	1030	5150	3480	4200	9550	5860	4490	60400	16000	19400	5700	1460
17	309	1380	3510	4170	7100	4790	3100	57400	15300	20200	5710	2000
18	253	2970	3510	4090	5980	4290	3040	48900	10400	20400	5760	981
19	296	3940	3520	5570	5240	4120	2730	34200	8300	20800	5730	1080
20	572	7350	3500	6850	4210	4110	4130	24100	8230	20500	5490	1230
21	148	8260	3520	5460	4230	4130	3010	18500	7710	19900	5010	2490
22	159	15500	2600	2700	4530	2690	3040	16700	6800	19900	5330	2150
23	320	22000	2600	2610	5060	4130	2550	16400	6230	19900	5560	2470
24	343	18000	2630	2560	5030	4300	2550	18400	9340	20000	4190	862
25	328	10500	3450	3210	5070	4310	2570	20300	14600	19600	3530	415
26	309	7380	3700	6070	5050	4160	2890	20200	16500	19000	4020	329
27	576	7360	3620	9210	5070	2550	3110	18100	16500	19000	5010	718
28	584	7330	3640	9060	5080	2510	3290	15700	16400	19500	4610	2420
29	590	7350	4040	8960	---	681	2590	15400	16300	18900	4770	2980
30	479	7360	4990	9040	---	3020	2560	15300	12400	18500	4840	3960
31	391	---	8090	9040	---	3680	---	15100	---	19000	4860	---
TOTAL	13790	168417	121240	197100	249960	210391	136450	724609	485510	450290	252690	88777
MEAN	445	5614	3911	6358	8927	6787	4548	23370	16180	14530	8151	2959
MAX	1330	22000	8090	9940	16500	12300	10500	61800	28200	20800	19100	7200
MIN	108	395	2430	2420	4210	681	2550	859	6230	7900	3530	329
AC-FT	27350	334100	240500	390900	495800	417300	270600	1437000	963000	893200	501200	176100

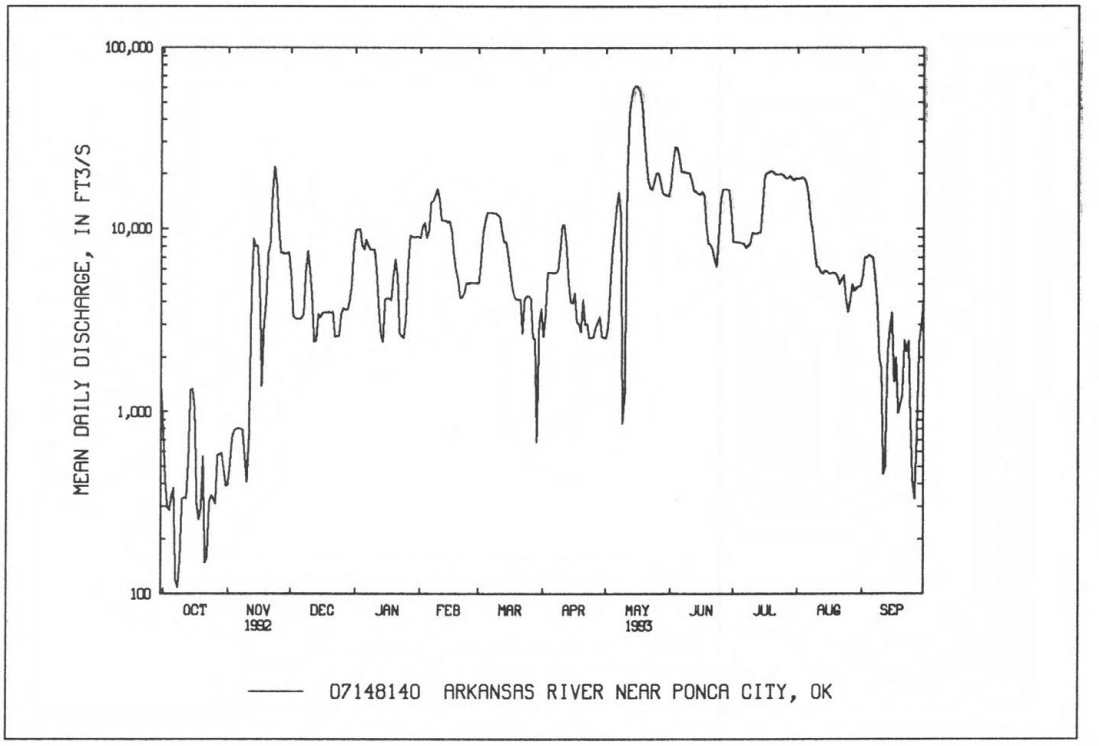
07148140 ARKANSAS RIVER NEAR PONCA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2533	2297	1538	1941	1996	3930	5061	4495	5781	4221	2097	2198
MAX	18950	8092	5417	6358	8927	15310	16510	23370	16180	14530	8151	12340
(WY)	1987	1980	1986	1993	1993	1987	1984	1993	1993	1993	1993	1989
MIN	43.6	131	205	400	301	185	157	722	933	425	222	169
(WY)	1992	1991	1991	1977	1981	1989	1981	1992	1988	1980	1984	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1977-93	
ANNUAL TOTAL	857901		3099224			
ANNUAL MEAN	2344		8491		3176	
HIGHEST ANNUAL MEAN					8491	1993
LOWEST ANNUAL MEAN					648	1991
HIGHEST DAILY MEAN	22000	Nov 23	61800	May 15	61800	May 15 1993
LOWEST DAILY MEAN	24	Mar 2	108	Oct 8	[a].00	May 13 1979
ANNUAL SEVEN-DAY MINIMUM	122	Mar 12	241	Oct 3	.00	Sep 14 1986
INSTANTANEOUS PEAK FLOW			62900	May 14	62900	May 14 1993
INSTANTANEOUS PEAK STAGE			20.11	May 14	20.11	May 14 1993
ANNUAL RUNOFF (AC-FT)	1702000		6147000		2301000	
10 PERCENT EXCEEDS	5200		19000		8340	
50 PERCENT EXCEEDS	1420		5770		1400	
90 PERCENT EXCEEDS	319		703		166	

[a]Also occurred Sept. 14-24, 1986, Oct. 1-4,1986.



07148350 SALT FORK ARKANSAS RIVER NEAR WINCHESTER, OK

LOCATION.--Lat 36°57'42", long 98°46'55", in NE 1/4 SE 1/4 sec.26, T.29 N., R.15 W., Woods County, Hydrologic Unit 11060002, near left bank on downstream side of pier of county road bridge, 1.0 mi northeast of Winchester, 2.5 mi upstream from Greenleaf Creek (formerly Greenwood Creek), 4.9 mi downstream from Yellowstone Creek, 5.0 mi downstream from State line, 19.0 mi northwest of Alva, and at mile 156.2.

DRAINAGE AREA.--856 mi^2.

PERIOD OF RECORD.--October 1959 to September 1993 (discontinued). Monthly discharge only for some periods, published in WSP 1731.

REVISED RECORDS.--WSP 1731: Drainage area. WSP 1921: 1960.

GAGE.--Water-stage recorder. Datum of gage is 1,410.05 ft above sea level. Prior to Oct. 1, 1978, at datum .45 ft lower.

REMARKS.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1957 reached a stage of 15.4 ft, from information provided by county engineer, discharge not determined.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	18	56	e61	99	164	166	314	200	120	39	8.2
2	2.7	19	54	e52	98	365	140	997	177	98	35	9.1
3	2.7	23	54	e59	102	303	139	897	305	82	37	10
4	2.7	24	52	81	96	221	238	539	333	73	37	7.8
5	2.6	22	54	69	94	188	230	391	255	64	300	5.8
6	2.7	21	62	61	94	171	192	316	203	59	282	5.8
7	4.5	21	59	64	93	160	346	275	181	326	137	6.6
8	6.0	20	56	64	91	152	251	560	162	199	137	7.9
9	5.4	20	61	60	91	145	195	1430	146	81	124	8.4
10	5.9	19	64	58	98	136	171	1170	132	61	120	6.6
11	6.6	20	63	e56	176	135	158	781	128	55	93	5.6
12	6.0	26	60	e59	250	143	149	664	125	397	78	3.8
13	6.3	28	70	e52	187	143	145	532	113	123	70	3.3
14	5.7	25	92	e46	151	141	138	409	102	1920	62	3.3
15	5.9	24	95	e61	161	136	133	334	101	775	53	3.6
16	6.1	23	91	84	149	129	128	944	103	740	47	4.0
17	6.8	22	82	83	e110	120	137	873	95	398	40	3.7
18	8.1	24	78	93	e93	125	163	2160	94	211	35	3.8
19	9.5	35	84	83	e106	139	146	814	214	167	32	3.7
20	11	39	81	93	186	135	126	547	261	139	30	3.2
21	12	42	79	82	292	118	118	409	215	125	28	3.0
22	12	50	76	95	280	113	118	343	151	115	23	2.4
23	12	50	73	158	211	112	117	301	129	103	23	2.3
24	12	91	69	142	176	109	118	263	113	92	22	4.6
25	11	193	69	123	169	104	115	274	99	81	19	11
26	12	109	67	118	155	101	110	309	89	72	14	11
27	12	78	64	120	146	100	103	265	103	65	12	11
28	13	68	65	119	143	101	114	221	255	61	11	9.1
29	15	62	66	107	---	111	135	200	253	55	9.8	6.8
30	16	60	64	96	---	467	129	418	162	51	8.5	6.2
31	19	---	56	96	---	263	---	282	---	44	8.3	---
TOTAL	255.9	1276	2116	2595	4097	5050	4668	18232	4999	6952	1966.6	181.6
MEAN	8.25	42.5	68.3	83.7	146	163	156	588	167	224	63.4	6.05
MAX	19	193	95	158	292	467	346	2160	333	1920	300	11
MIN	2.6	18	52	46	91	100	103	200	89	44	8.3	2.3
AC-FT	508	2530	4200	5150	8130	10020	9260	36160	9920	13790	3900	360

e Estimated

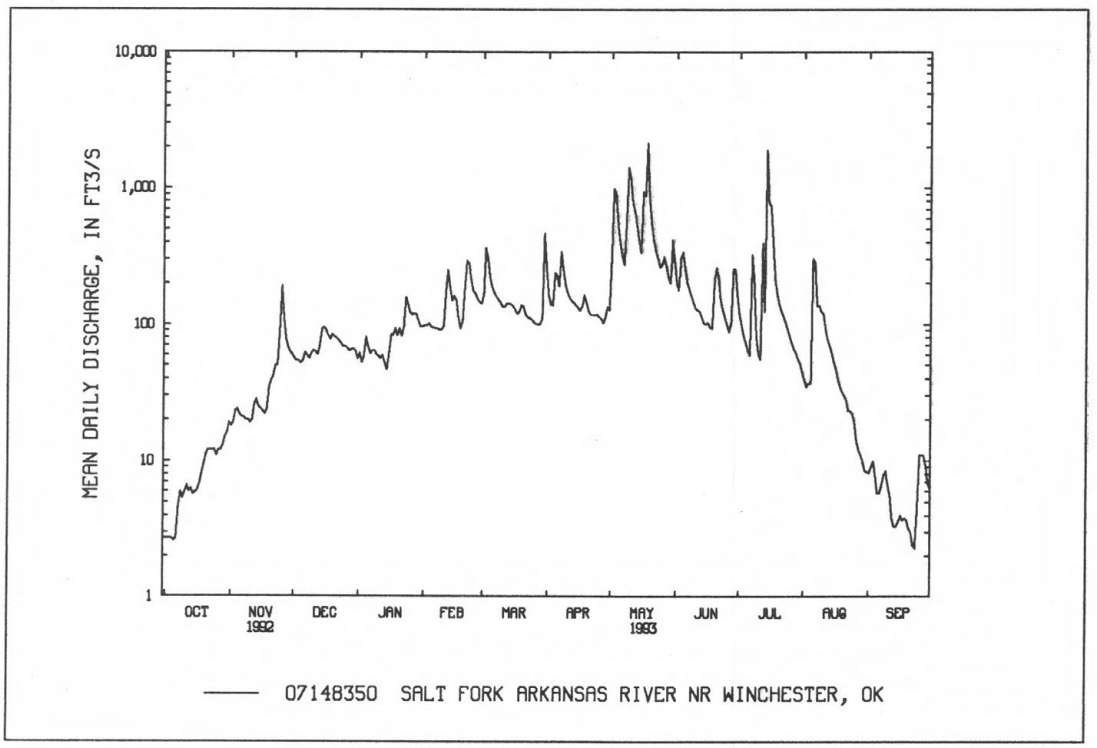
07148350 SALT FORK ARKANSAS RIVER NEAR WINCHESTER, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	87.7	48.1	42.3	45.7	61.5	130	128	168	203	85.9	76.2	74.9
MAX	569	165	110	98.7	208	1171	818	588	1026	507	560	547
(WY)	1974	1982	1974	1988	1960	1973	1973	1993	1965	1982	1961	1969
MIN	.036	.062	.051	1.50	11.3	10.2	11.5	3.91	1.71	.000	.050	.021
(WY)	1967	1967	1967	1979	1967	1967	1964	1963	1966	1964	1978	1970

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1960-93	
ANNUAL TOTAL	24316.8		52389.1			
ANNUAL MEAN	66.4		144		96.0	
HIGHEST ANNUAL MEAN					244	1973
LOWEST ANNUAL MEAN					12.9	1964
HIGHEST DAILY MEAN	2230	Aug 4	2160	May 18	12100	Aug 19 1961
LOWEST DAILY MEAN	2.6	Oct 5	2.3	Sep 23	.00	at times
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 29	2.9	Oct 1	.00	Jun 27 1964
INSTANTANEOUS PEAK FLOW			4180	Jul 14	[a]52000	Aug 19 1961
INSTANTANEOUS PEAK STAGE			10.48	Jul 14	13.95	Aug 19 1961
ANNUAL RUNOFF (AC-FT)	48230		103900		69540	
10 PERCENT EXCEEDS	97		300		161	
50 PERCENT EXCEEDS	41		93		34	
90 PERCENT EXCEEDS	9.2		6.8		.35	

[a]From rating curve extended above 17,400 ft^3/s.



07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK

LOCATION.--Lat 36°48'54", long 98°38'52", in SW 1/4 SW 1/4 sec.18, T.27 N., R.13 W., Woods County, Hydrologic Unit 11060002, at bridge on U.S. Highway 281, 1.0 mi northeast of Alva, 23.0 mi upstream from Medicine Lodge River, and at mile 141.0.

DRAINAGE AREA.--1,009 mi^2.

PERIOD OF RECORD.--April 1904 to December 1905 (gage heights only), October 1937 to September 1951, monthly discharge only for some periods, published in WSP 1311, October 1979 to current year. Occasional low-flow measurements water years 1952-54, 1977-79.

GAGE.--Water stage recorder. Datum of gage is 1,292.04 ft above sea level. April 1904 to December 1905, chain gage at site 0.8 mi upstream at different datum, and February 1938 to September 1951, water stage recorder at present site and at datum 5.00 ft higher.

REMARKS.--No estimated daily discharge. Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	19	82	89	134	198	289	1190	276	156	64	27
2	7.5	21	79	67	134	505	234	1600	239	136	59	33
3	7.9	28	79	81	134	442	215	1480	307	107	57	37
4	7.9	27	79	98	126	332	339	831	390	89	57	30
5	7.9	26	76	100	114	271	361	589	328	78	924	26
6	7.6	26	70	90	111	239	296	467	263	84	659	23
7	18	26	85	85	117	220	358	407	229	509	257	23
8	22	26	82	85	114	205	410	691	199	469	195	30
9	12	27	81	74	113	197	283	2240	171	163	170	32
10	7.0	27	81	60	120	190	254	2000	156	108	165	28
11	6.9	39	81	66	158	177	232	1090	156	88	139	25
12	6.9	31	81	82	273	172	214	926	151	835	122	23
13	6.9	33	84	91	259	173	206	751	149	341	107	22
14	6.9	34	100	75	197	168	201	587	136	2050	94	20
15	6.9	34	107	65	193	166	192	483	128	1120	83	20
16	6.9	32	106	95	215	163	184	1480	119	757	72	20
17	7.9	32	112	103	186	150	182	1050	125	643	66	20
18	7.9	35	111	107	164	140	202	2430	124	350	63	19
19	8.0	59	110	97	161	150	209	1120	213	265	58	19
20	9.7	47	109	101	226	164	187	764	317	224	55	19
21	11	50	100	110	389	161	164	592	262	196	52	19
22	12	59	94	115	357	159	154	488	193	181	48	18
23	12	59	92	185	297	154	148	429	153	157	47	18
24	12	170	90	208	244	148	143	375	130	140	49	18
25	12	480	87	125	223	146	132	351	111	126	46	33
26	12	201	87	134	213	141	124	424	97	109	39	36
27	12	135	87	144	195	136	120	371	107	96	34	25
28	12	109	87	145	188	132	128	316	271	86	33	23
29	13	100	87	144	---	142	156	285	315	79	32	20
30	14	91	87	134	---	448	170	356	216	75	29	18
31	16	---	84	133	---	536	---	375	---	69	28	---
TOTAL	319.6	2083	2777	3288	5355	6725	6487	26538	6031	9886	3903	724
MEAN	10.3	69.4	89.6	106	191	217	216	856	201	319	126	24.1
MAX	22	480	112	208	389	536	410	2430	390	2050	924	37
MIN	6.9	19	70	60	111	132	120	285	97	69	28	18
AC-FT	634	4130	5510	6520	10620	13340	12870	52640	11960	19610	7740	1440

07148400 SALT FORK ARKANSAS RIVER NEAR ALVA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)

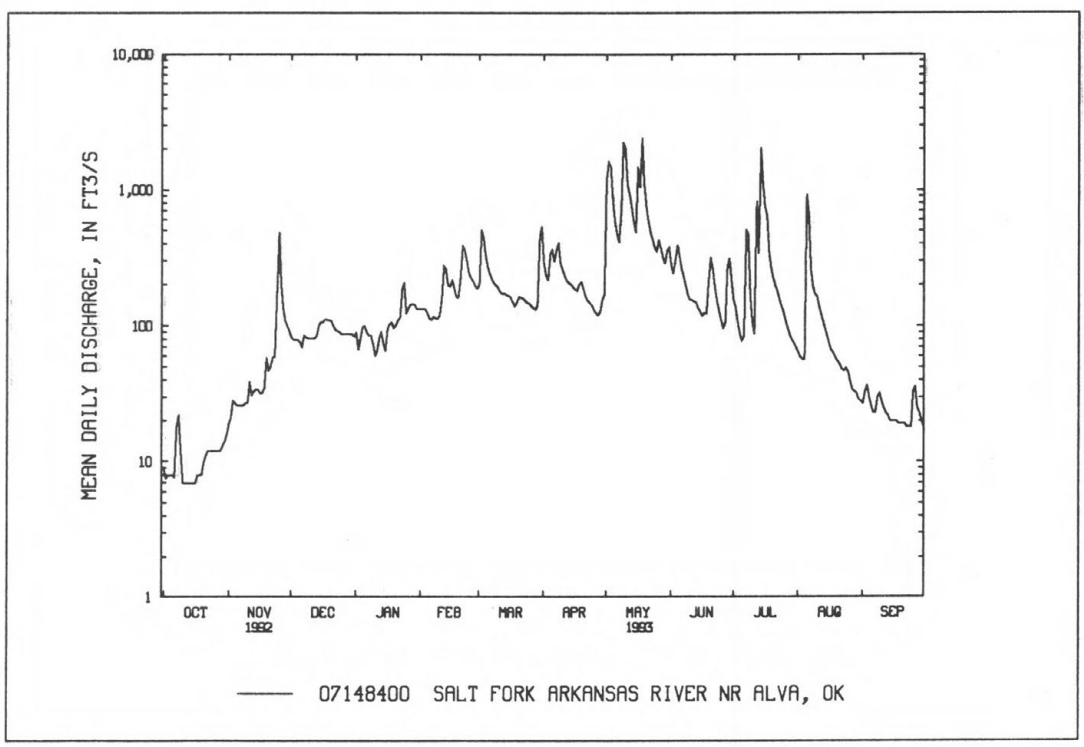
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	115	76.4	60.4	68.7	88.0	160	174	274	273	132	69.3	60.4
MAX	620	211	114	121	227	822	362	856	689	411	197	259
(WY)	1986	1982	1987	1988	1987	1987	1988	1993	1989	1982	1992	1989
MIN	2.35	.95	14.8	15.3	17.4	29.2	22.5	27.1	51.0	5.17	2.66	.94
(WY)	1992	1981	1981	1981	1981	1981	1981	1992	1984	1984	1980	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1980-93	
ANNUAL TOTAL	32190.5		74116.6			
ANNUAL MEAN	88.0		203		[a]129	
HIGHEST ANNUAL MEAN					271	1987
LOWEST ANNUAL MEAN					59.3	1984
HIGHEST DAILY MEAN	1270	Jul 14	2430	May 18	7880	Mar 24 1987
LOWEST DAILY MEAN	6.9	Oct 11	6.9	Oct 11-16	[b].43	Aug 24 1984
ANNUAL SEVEN-DAY MINIMUM	6.9	Oct 10	6.9	Oct 10	.48	Aug 18 1984
INSTANTANEOUS PEAK FLOW			4920	Jul 14	[c]12800	Oct 10 1985
INSTANTANEOUS PEAK STAGE			12.57	Jul 14	15.24	Oct 10 1985
ANNUAL RUNOFF (AC-FT)	63850		147000		93800	
10 PERCENT EXCEEDS	157		426		257	
50 PERCENT EXCEEDS	44		117		64	
90 PERCENT EXCEEDS	12		19		5.0	

[a]Average discharge, water years 1938-51, 158 ft^3/s.

[b]No flow in several years 1939-48.

[c]Maximum discharge for period of record 27,000 ft^3/s, Oct. 23, 1941, from rating curve extended above 13,000 ft^3/s.



07150000 GREAT SALT PLAINS LAKE NEAR JET, OK

LOCATION.--Lat 36°44'40", long 98°08'08", in NW 1/4 SE 1/4 sec.11, T.26 N., R.9 W., Alfalfa County, Hydrologic Unit 11060004, at right end of Great Salt Plains Dam on Salt Fork Arkansas River, 4.5 mi upstream from Wagon Creek, 5.5 mi northeast of Jet, and at mile 103.3.

DRAINAGE AREA.--3,200 mi^2, of which 8 mi^2 is probably noncontributing.

PERIOD OF RECORD.--July 1941 to September 1993 (discontinued). Prior to October 1970, published as Great Salt Plains Reservoir near Jet.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam. Outlet works consist of a 310-foot uncontrolled concrete spillway containing a series of three weirs to form a cascade. Storage began in June 1941; conservation pool was first filled Oct. 21, 1941. Capacity, 257,700 acre-ft at elevation 1,138.5 ft, crest of upper weir, and 31,420 acre-ft at elevation 1,125.0 ft, crest of intermediate weir and conservation pool. Reservoir is used for flood control and as a wildlife refuge. Figures given herein represent total contents. Revised capacity table, based on survey in 1971, used since Oct. 1, 1972. U.S. Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 189,400 acre-ft, July 2, 1951, elevation, 1,134.38 ft; minimum, 17,180 acre-ft, Sept. 6, 1973, elevation, 1,123.16 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 160,100 acre-ft, May 12, elevation 1,133.90 ft; minimum, 27,270 acre-ft, Oct. 16, elevation 1,124.49 ft, affected by seiche.

Capacity table (elevation, in feet, and contents, in acre-ft):

1,124	23,280	1,130	90,350
1,126	40,700	1,132	123,400
1,128	62,940	1,134	162,100

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

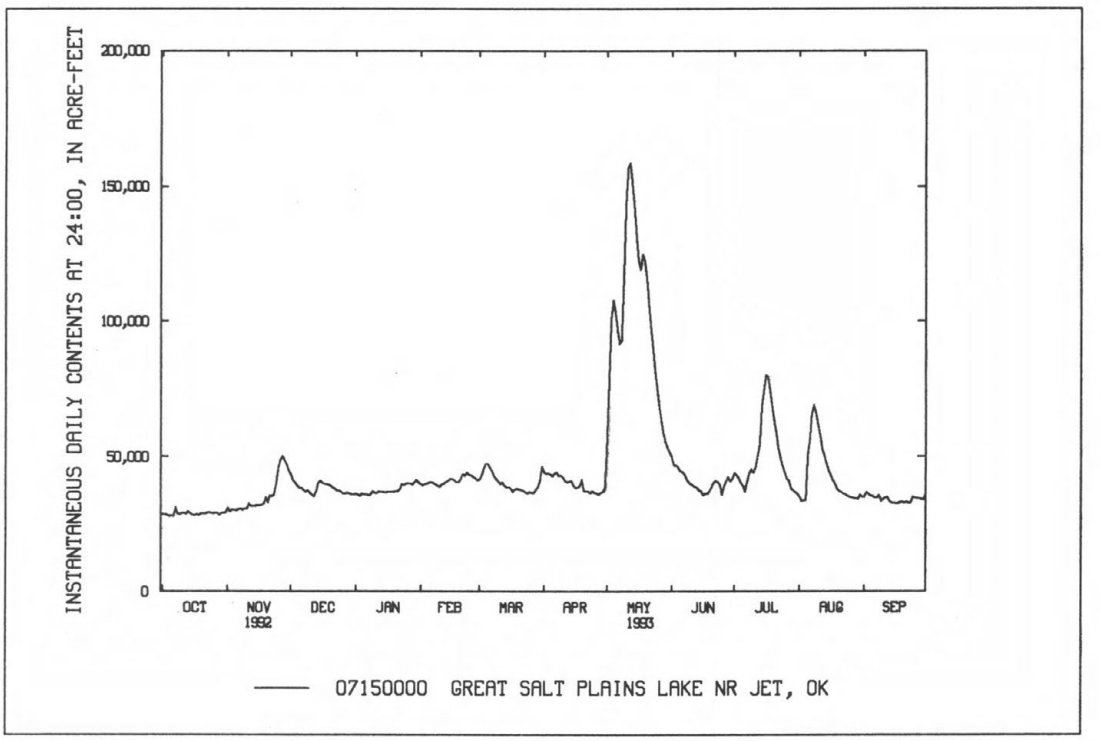
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28650	31180	43420	36250	39860	41430	44260	55300	50030	43950	35320	35220
2	28820	29630	41120	35970	39490	42900	43740	77410	46780	43220	33740	36990
3	28490	30520	40420	35600	39860	45520	43840	101000	46990	42060	33830	36150
4	28080	30360	39310	36430	40050	47510	43530	107900	46040	40510	33930	35690
5	28330	30200	38470	36060	40420	47410	42800	103500	44680	39310	50970	35410
6	28080	30610	38380	36150	40610	46040	43840	96530	44470	37360	56470	34950
7	31180	30930	37730	35870	40240	44680	44260	91780	43630	40610	65810	34850
8	28900	30440	37080	35970	39770	42800	42900	92730	41960	43840	68670	35780
9	28800	30940	37640	37270	39310	41750	43110	116900	40610	45310	66070	33550
10	29090	30770	36710	36710	38940	41010	42380	143800	39960	44260	61530	34390
11	29220	32810	36060	36520	39770	39860	41010	157300	39490	45940	57770	34950
12	28820	31790	35320	37170	39960	40510	40610	158700	38840	50240	52830	35040
13	29950	31700	37170	36990	40700	39220	40910	151600	38750	54120	50450	33460
14	28980	31790	40330	36900	41010	38750	41010	142400	37540	68410	47410	33090
15	28570	32260	41120	36800	41850	38750	39400	131800	37360	74280	45000	33000
16	28330	32070	40420	36900	41750	38470	38470	122400	35780	79850	43110	32810
17	28730	32260	39960	36900	41430	37080	38570	119300	36430	79280	41330	32810
18	28410	32530	39770	36990	40610	38010	39220	125100	36250	74150	40050	33280
19	28980	35040	39680	37080	40510	38190	41330	122500	37270	68280	38190	33460
20	29060	33460	39210	37360	41640	38010	37450	115800	38840	62700	37270	33000
21	28900	35690	38570	37360	43630	37730	37170	105900	40510	58590	36990	33370
22	29300	35410	38190	38010	43010	37540	37170	97010	41010	53060	36340	33090
23	29380	36060	37540	39860	44160	36990	36520	89200	40700	49610	36060	33090
24	29220	40240	37450	39490	43320	36430	37360	80860	39680	46670	35600	35220
25	29060	46250	37080	40050	43220	36990	36710	74410	35970	44160	35220	34850
26	29220	48980	36250	40140	42590	36800	36430	68280	39120	41850	34950	34760
27	29220	50130	36430	40050	42060	36520	36060	63200	41010	41220	34760	34670
28	28490	48660	36710	39680	41330	37730	36710	58590	42380	38290	34580	34390
29	29220	47090	36430	40610	---	38750	37080	55300	40910	37640	34480	34110
30	29140	44680	36060	41430	---	41120	38660	53300	41750	36900	35970	35870
31	29470	---	36150	40510	---	46570	---	51530	---	36340	35220	---

07150000 GREAT SALT PLAINS LAKE NEAR JET, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	31180	50130	43420	41430	44160	47510	44260	158700	50030	79850	68670	36990
MIN	28080	29630	35320	35600	38940	36430	36060	51530	35780	36340	33740	32810
(‡)	1124.76	1126.38	1125.51	1125.98	1126.06	1126.56	1125.78	1127.03	1126.10	1125.53	1125.41	1125.48
(‡‡)	+650	+15,210	-8,530	+4,360	+820	+5,240	-7,910	+12,870	-9,780	-5,410	-1,120	+650

CAL YR 1992 MAX 55060 MIN 28080 (‡‡) +460
WTR YR 1993 MAX 158700 MIN 28080 (‡‡) +7,050

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK

LOCATION.--Lat 36°45'09", long 98°07'43", in NE 1/4 NE 1/4 sec.11, T.26 N., R.9 W., Alfalfa County, Hydrologic Unit 11060004, near center of span on downstream side of bridge on State Highway 38, 0.6 mi downstream from Great Salt Plains Dam, 4 mi upstream from Wagon Creek, 6.7 mi northeast of Jet, and at mile 102.7.

DRAINAGE AREA.--3,202 mi^2, of which 8 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to September 1993 (discontinued).

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,092.20 ft above sea level. Prior to Mar. 17, 1938, nonrecording gage at site 2.5 mi upstream at datum 13.46 ft higher. Mar. 17, 1938 to Apr. 26, 1953, water-stage recorder at site 200 ft upstream, datum 5.00 ft higher prior to Oct. 1, 1950.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since June 1941 by Great Salt Plains Lake (station 07150000). U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	11	1360	332	923	997	1390	1720	2080	1150	368	220
2	14	9.7	1160	342	812	1130	1480	3450	1850	1340	305	233
3	14	9.5	1020	372	788	1330	1390	5120	1720	1240	250	325
4	14	9.5	833	382	864	1720	1340	6270	1620	1050	242	295
5	14	8.1	732	340	895	1850	1300	6370	1470	905	1030	264
6	14	8.6	707	343	944	1780	1260	5960	1390	708	2400	197
7	28	8.7	607	329	922	1620	1380	5430	1340	791	3040	187
8	56	14	511	307	881	1430	1320	5340	1160	1260	3550	196
9	13	14	510	450	814	1290	1280	6220	1000	1430	3500	200
10	13	16	500	504	711	1170	1250	7720	951	1480	3220	147
11	14	19	404	383	857	1010	1150	8730	884	1360	2910	200
12	14	46	377	442	904	1050	1030	8980	797	1780	2510	202
13	15	23	469	472	944	985	1040	8830	758	2310	2100	150
14	8.5	30	764	438	1010	900	919	8470	631	3130	1830	75
15	2.4	35	971	425	971	850	942	7980	564	3730	1520	58
16	6.5	43	982	428	1140	762	824	7510	568	4150	1250	50
17	12	40	961	445	1070	651	727	7070	499	4310	1050	46
18	12	57	945	457	989	678	731	7280	424	4090	892	42
19	10	207	874	458	931	781	890	7300	502	3740	721	71
20	6.6	215	798	495	997	735	714	7060	621	3350	539	63
21	9.8	175	742	511	1220	739	614	6470	853	3010	426	73
22	12	363	682	521	1290	713	649	5880	976	2610	406	105
23	12	275	591	637	1340	647	558	5280	959	2170	308	34
24	14	393	562	795	1300	614	452	4750	913	1800	267	46
25	13	1250	486	851	1330	571	510	4290	788	1470	257	162
26	14	1650	471	873	1230	582	476	3850	800	1230	226	161
27	13	1990	431	887	1160	551	443	3450	934	1050	190	155
28	12	1980	411	821	1070	557	470	3080	976	791	168	107
29	12	1800	419	888	---	554	538	2770	1040	659	175	82
30	11	1600	369	993	---	863	520	2540	1050	593	176	194
31	11	---	345	986	---	1250	---	2260	---	530	213	---
TOTAL	432.8	12300.1	20994	16907	28307	30360	27587	177430	30118	59217	36039	4340
MEAN	14.0	410	677	545	1011	979	920	5724	1004	1910	1163	145
MAX	56	1990	1360	993	1340	1850	1480	8980	2080	4310	3550	325
MIN	2.4	8.1	345	307	711	551	443	1720	424	530	168	34
AC-FT	858	24400	41640	33540	56150	60220	54720	351900	59740	117500	71480	8610

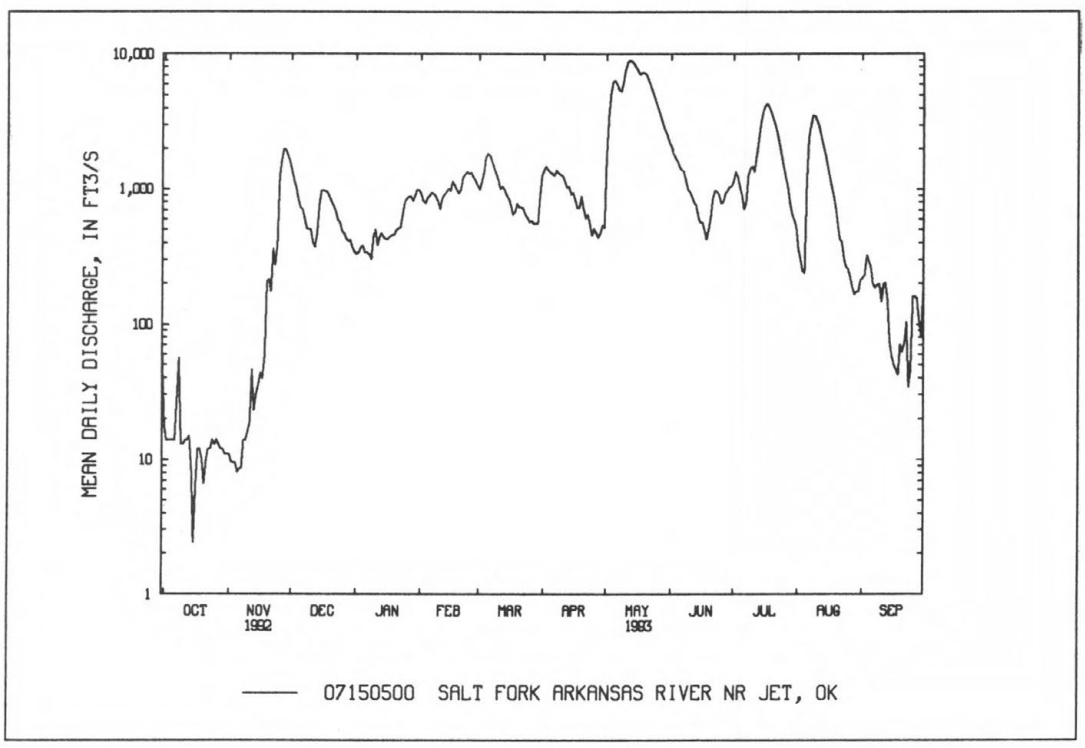
07150500 SALT FORK ARKANSAS RIVER NEAR JET, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	354	257	171	178	270	427	594	864	806	468	242	255
MAX	2945	1465	677	596	2498	2721	4714	5724	4333	4479	2286	2176
(WY)	1974	1982	1993	1988	1949	1973	1973	1993	1949	1951	1948	1949
MIN	3.10	.41	1.20	.94	.78	.38	1.52	5.24	3.72	5.66	5.57	2.91
(WY)	1957	1955	1977	1955	1955	1955	1955	1956	1956	1966	1970	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1942-93	
ANNUAL TOTAL	154035.9		444031.9			
ANNUAL MEAN	421		1217		407	
HIGHEST ANNUAL MEAN					1429	1949
LOWEST ANNUAL MEAN					36.8	1956
HIGHEST DAILY MEAN	2570	Aug 8	8980	May 12	10500	Apr 2 1973
LOWEST DAILY MEAN	2.4	Oct 15	2.4	Oct 15	.00	[a]Dec 14 1943
ANNUAL SEVEN-DAY MINIMUM	8.3	Oct 14	8.3	Oct 14	.07	Oct 31 1954
INSTANTANEOUS PEAK FLOW			9010	May 12	25900	May 19 1938
INSTANTANEOUS PEAK STAGE			10.17	May 12	[b]13.80	May 19 1938
ANNUAL RUNOFF (AC-FT)	305500		880700		295200	
10 PERCENT EXCEEDS	1160		3100		966	
50 PERCENT EXCEEDS	201		758		144	
90 PERCENT EXCEEDS	15		15		5.3	

[a]No flow at times in 1939-41, 1944, 1955-56.
[b]Present datum.



07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK

LOCATION.--Lat 36°40'19", long 97°18'33", in NW 1/4 SE 1/4 sec.4, T.25 N., R.1 W., Kay County, Hydrologic Unit 11060004, on left bank near end of bridge on U.S. Highway 77 in Tonkawa, 4 mi downstream from Thompson Creek, 7.8 mi upstream from Chikaskia River, and at mile 33.8.

DRAINAGE AREA.--4,528 mi^2, of which 8 mi^2 is probably noncontributing.

PERIOD OF RECORD.--September 1903 to October 1905 (gage heights only), October 1935 to current year. Monthly discharge only for some periods, published as Arkansas River (Salt Fork) near Tonkawa 1903-4 and as "near Tonkawa" 1905.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 930.22 ft above sea level. September 1903 to October 1905, nonrecording gage near present site at different datum. Jan. 2, 1936 to Jan. 22, 1939, nonrecording gage, and Jan. 23, 1939 to June 20, 1960, water-stage recorder at site 100 ft upstream at same datum.

REMARKS.--Records fair. Some regulation since June 1941 by Great Salt Plains Lake, 69.5 mi upstream (station 07150000). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923, reached a stage of 26.8 ft, from information by U.S. Army Corps of Engineers.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharges of 11,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
May 3	1400	25,500	21.65	May 19	0600	16,000	19.29
May 10	1300	45,500	24.40	July 16	0930	12,100	16.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	77	2310	703	1440	1580	2060	3410	3300	2490	1050	689
2	188	79	2030	679	1360	1830	1950	16300	3000	1950	957	556
3	128	81	1800	687	1280	2420	1890	e22000	2940	1940	812	667
4	117	85	1530	798	1240	2910	1850	e15000	3090	1830	738	712
5	111	83	1370	855	4360	2620	1790	e12000	3050	1650	1200	677
6	107	80	1220	794	4550	2550	1720	e10000	2700	1460	5470	609
7	105	77	1110	729	3490	2400	1660	9570	2380	1290	9310	559
8	109	76	1070	704	2220	2230	1650	18300	2190	1820	6140	507
9	107	76	1040	745	1670	2020	1840	29600	2020	3080	4860	483
10	115	74	1070	881	1480	1780	1690	e38000	2070	2130	4480	475
11	121	155	1010	980	1500	1620	1630	e32000	1840	2010	4100	471
12	101	213	906	1320	1860	1440	1530	e17000	2740	2550	3690	427
13	98	139	859	2400	2180	1310	1360	e15000	1700	3560	3300	474
14	95	112	3440	2010	1730	1340	1310	e13000	e1500	4490	2890	551
15	90	103	7450	1350	1620	1270	1690	11500	e1300	9270	2580	470
16	86	89	4950	1090	1740	1200	1360	10400	e1100	11600	2250	380
17	85	86	3240	1120	1820	1150	1510	9950	e1000	9080	1960	328
18	83	103	2150	1400	1880	1030	1670	13300	e1200	7130	1690	314
19	83	1130	1560	1200	1700	1010	1250	14300	e1700	5590	1480	297
20	85	1480	1420	1170	2380	1150	1110	15400	2100	4840	1320	287
21	86	908	1280	2440	6370	1190	1140	11900	2420	4270	1180	287
22	85	1480	1180	3520	5700	1190	919	8960	1950	3810	945	291
23	82	2270	1100	4210	3550	1330	838	7830	1620	3370	833	270
24	82	1240	1010	4300	2600	1200	837	7170	1640	2950	785	303
25	80	5570	924	3310	2090	1030	761	6470	1460	2540	693	341
26	78	9150	875	2740	1860	941	678	5810	1350	2200	633	316
27	78	6810	818	2190	1820	892	692	5190	2240	1900	601	376
29	83	3350	746	1830	---	818	1420	4100	2630	1460	524	386
30	87	2610	730	1600	---	878	1010	4000	2900	1240	491	339
31	82	---	728	1470	---	1510	---	3950	---	1140	915	---

e Estimated

07151000 SALT FORK ARKANSAS RIVER AT TONKAWA, OK—Continued

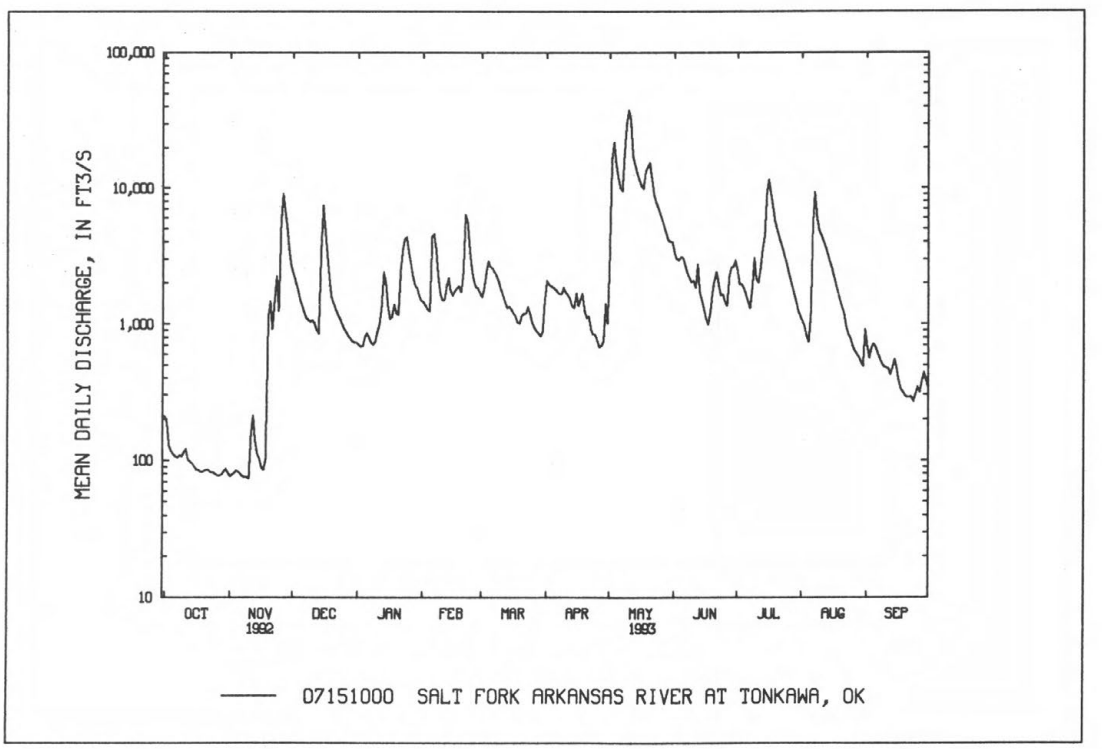
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	3125	42766	51711	51125	67160	46698	41567	396010	63710	106300	68444	13285
MEAN	101	1426	1668	1649	2399	1506	1386	12770	2124	3429	2208	443
MAX	209	9150	7450	4300	6370	2910	2060	38000	3300	11600	9310	712
MIN	78	74	728	679	1240	818	678	3410	1000	1140	491	270
AC-FT	6200	84830	102600	101400	133200	92630	82450	785500	126400	210800	135800	26350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	880	624	344	349	537	932	1183	1684	1425	881	527	599
MAX	9412	4431	1809	1649	5171	6188	7916	12770	7539	8821	3777	3448
(WY)	1987	1975	1945	1993	1949	1973	1973	1993	1957	1951	1992	1949
MIN	.64	4.82	3.56	7.52	10.9	10.6	13.6	8.78	7.92	5.69	5.50	.000
(WY)	1957	1955	1955	1957	1957	1955	1955	1956	1956	1954	1956	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1942-93	
ANNUAL TOTAL	384383		951901			
ANNUAL MEAN	1050		2608		831	
HIGHEST ANNUAL MEAN					3260	1987
LOWEST ANNUAL MEAN					95.5	1954
HIGHEST DAILY MEAN	15800	Aug 6	38000	May 10	57800	Oct 12 1973
LOWEST DAILY MEAN	74	Nov 10	74	Nov 10	[a].00	Aug 31 1956
ANNUAL SEVEN-DAY MINIMUM	79	Nov 4	79	Nov 4	.00	Aug 31 1956
INSTANTANEOUS PEAK FLOW			45500	May 10	97300	Oct 11 1973
INSTANTANEOUS PEAK STAGE			[b]25.51	May 11	28.98	Oct 11 1973
ANNUAL RUNOFF (AC-FT)	762400		1888000		602200	
10 PERCENT EXCEEDS	2520		5630		1860	
50 PERCENT EXCEEDS	290		1440		232	
90 PERCENT EXCEEDS	106		107		31	

[a]No flow also Sept. 1 to Oct. 12, 14-16, 1956.
[b]Backwater from Chickaskia River.



07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK

LOCATION.--Lat 36°48'41", long 97°16'37" , in NE 1/4 NW 1/4 sec.23, T.27 N., R.1 W., Kay County Hydrologic Unit 11060005, near left bank on downstream side of State Highway 11 bridge at northeast edge of Blackwell, 0.1 mi downstream from Bitter Creek, and at mile 28.3.

DRAINAGE AREA.--1,859 mi^2.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 967.41 ft above sea level. See WSP 1921 for history of changes prior to April, 1952.

REMARKS.--Records good. Some regulation at low flow by Lake Blackwell, capacity 3,600 acre-ft, 12.6 mi upstream from station. Small diversion made from reservoir for municipal supply of city of Blackwell. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1923, reached a stage of about 34 ft, present site and datum, from information provided by local residents, discharge 100,000 ft^3/s.

PEAK DISCHAGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,000 ft^3/s.

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 20	0900	9,110	23.07	May 10	1800	53,300	34.31
Nov. 26	0800	17,900	29.36	June 29	1200	9,330	23.32
Dec. 15	0800	9,660	23.66	July 12	2300	11,900	25.74
Feb. 5	1100	9,110	23.07	July 15	1400	18,000	29.37
May 3	1500	31,700	32.47				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	89	737	223	681	556	1860	5110	1920	1010	243	172
2	92	95	613	212	596	1410	996	20500	958	639	225	153
3	65	107	529	307	554	5650	698	30200	1220	494	219	237
4	61	108	467	405	2030	2810	605	18400	1030	414	214	199
5	60	110	441	399	7990	1550	611	3630	730	371	259	193
6	41	108	418	330	2990	1100	683	2180	648	352	391	167
7	10	106	397	285	1490	878	599	1810	596	319	1240	148
8	86	104	399	275	1050	772	955	9910	608	344	648	151
9	178	103	402	305	853	689	1390	30200	692	451	696	149
10	235	105	409	300	770	626	839	49300	627	330	523	143
11	149	128	421	314	1550	579	668	37900	904	287	390	131
12	114	129	395	500	3310	560	546	13400	3130	6440	331	125
13	93	142	437	630	2150	547	478	7030	1240	8180	300	143
14	84	234	4300	533	1190	554	465	3350	527	4790	283	169
15	79	190	8550	388	1010	540	474	2470	430	16000	267	145
16	72	152	2660	404	944	528	457	1950	410	6390	266	129
17	68	133	1140	453	822	499	514	1730	358	2190	246	126
18	69	141	770	431	753	480	957	4240	328	1530	228	125
19	70	2090	617	376	707	469	1220	4890	1210	1040	217	123
20	73	7530	529	485	1120	481	713	1820	3020	841	212	121
21	76	2170	463	1290	3810	490	523	1400	1270	707	204	117
22	79	1600	411	1920	3550	499	425	1230	625	598	200	117
23	80	2470	383	3290	1910	476	379	1110	456	524	146	117
24	77	1050	349	4500	1160	459	367	1050	2130	462	174	113
25	75	8150	325	2400	895	409	351	1100	1260	416	172	188
26	75	15600	292	2000	759	398	330	922	523	370	168	175
27	73	3490	296	1790	686	382	313	846	666	336	165	154
28	73	1420	286	2030	630	372	368	781	4010	312	161	145
29	82	1040	293	2010	---	383	1100	731	8030	291	157	133
30	81	883	297	1540	---	427	911	1300	3050	273	159	124
31	81	---	293	860	---	1320	---	5780	---	255	297	---

07152000 CHIKASKIA RIVER NEAR BLACKWELL, OK—Continued

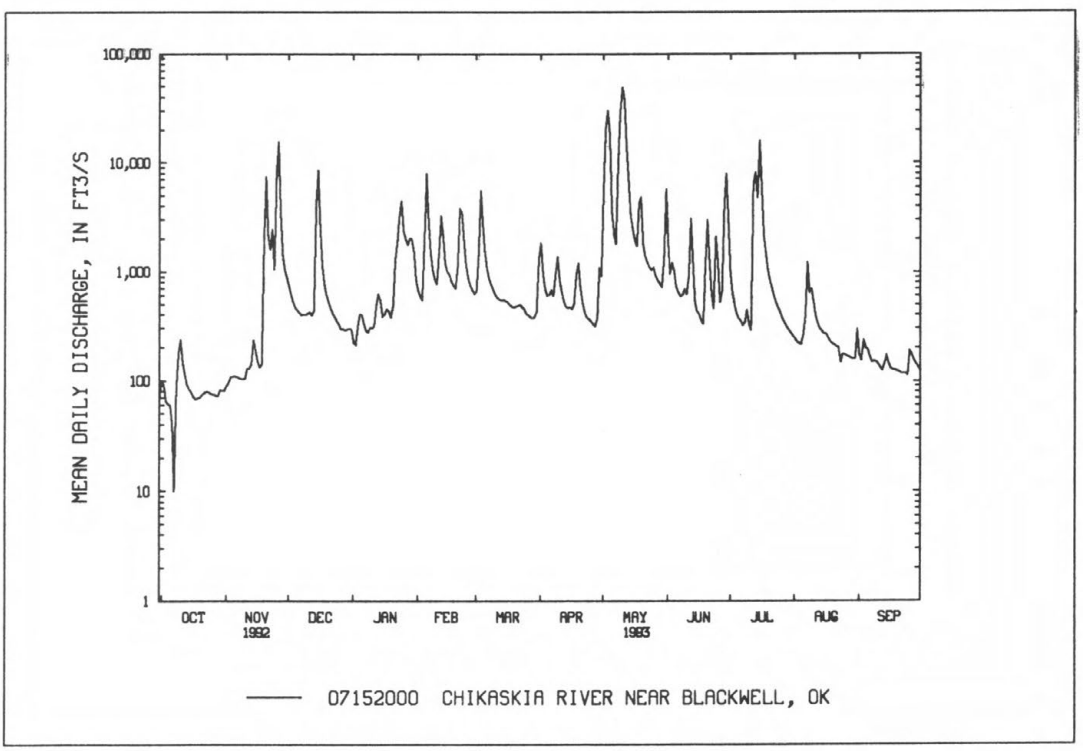
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	2651	49777	28319	31185	45960	26993	20795	266270	42606	56956	9401	4432
MEAN	85.5	1659	914	1006	1641	871	693	8589	1420	1837	303	148
MAX	235	15600	8550	4500	7990	5650	1860	49300	8030	16000	1240	237
MIN	10	89	286	212	554	372	313	731	328	255	146	113
AC-FT	5260	98730	56170	61860	91160	53540	41250	528100	84510	113000	18650	8790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	545	406	233	233	354	622	732	1058	963	479	305	456
MAX	5244	4486	1649	1659	3732	4561	4748	8589	5093	5129	2426	3395
(WY)	1960	1965	1945	1949	1949	1973	1944	1993	1951	1951	1948	1973
MIN	.90	1.08	1.34	4.35	10.3	30.7	29.4	27.1	26.1	6.17	.55	.64
(WY)	1957	1955	1955	1957	1957	1957	1955	1956	1972	1954	1936	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1936-93	
ANNUAL TOTAL	234730		585345			
ANNUAL MEAN	641		1604		537	
HIGHEST ANNUAL MEAN					1732	1987
LOWEST ANNUAL MEAN					71.0	1954
HIGHEST DAILY MEAN	15600	Nov 26	49300	May 10	69500	Jun 22 1942
LOWEST DAILY MEAN	10	Oct 7	10	Oct 7	[a].00	Jul 18 1954
ANNUAL SEVEN-DAY MINIMUM	59	Oct 2	59	Oct 2	.00	Aug 12 1954
INSTANTANEOUS PEAK FLOW			53300	May 10	85000	Jun 22 1942
INSTANTANEOUS PEAK STAGE			34.31	May 10	34.31	May 10 1993
ANNUAL RUNOFF (AC-FT)	465600		161000		388900	
10 PERCENT EXCEEDS	1260		3080		800	
50 PERCENT EXCEEDS	155		476		128	
90 PERCENT EXCEEDS	86		109		19	

[a]No flow at times in 1954 and 1956.



07152500 ARKANSAS RIVER AT RALSTON, OK

LOCATION.--Lat 36°30'15", long 96°43'41", in NE 1/4 NE 1/4 sec.2, T.23 N., R.5 E., Pawnee County, Hydrologic Unit 11060006, on right upstream abutment of bridge on State Highway 18 at Ralston, 2 mi downstream from Salt Creek, 2 mi upstream from Grayhorse Creek, and at mile 594.0. Prior to Feb. 10, 1988, gage was near left bank on downstream side of pier of bridge.

DRAINAGE AREA.--54,465 mi^2, of which 7,615 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1922 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 776.70 ft above sea level. Oct. 1, 1925 to Nov. 13, 1935, nonrecording gage at site of former highway bridge 1,200 ft downstream at same datum. Nov. 14, 1935 to Feb. 23, 1939, nonrecording gage near left bank on downstream side of bridge at same datum. Feb. 24, 1939 to Feb. 10, 1988, gage was near left bank on downstream side of pier of bridge at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since April 1976 by Kaw Lake (station 07148130) 59.7 mi upstream; some regulation by Great Salt Plains Lake (station 07150000) since 1941. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 11, 1923, reached a stage of 23.8 ft, referred to outside gage on basis of stages observed in 1923 and 1944 at site 1,200 ft downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1840	1200	14200	10900	15100	10300	7220	8400	26600	21500	24400	6660
2	2150	1120	11600	13900	14500	11100	7620	16500	29100	15900	24000	7730
3	1720	1080	8590	14300	16400	13800	8490	38800	33800	14400	24500	9290
4	1340	1260	7560	15300	16900	21100	12900	53200	37200	13900	24400	9320
5	1110	1490	7090	12600	14800	23700	14700	64600	35400	13500	24700	10100
6	1000	1530	6780	12000	25000	22000	12700	54500	29700	13100	25000	9980
7	1080	1490	6490	13000	28400	21200	11900	40200	27500	12700	25200	9860
8	1070	1510	6390	12000	24400	20700	11500	47400	27200	12100	28000	8310
9	783	1520	10300	14200	23800	20400	11600	85900	27500	12100	21600	6030
10	597	1690	14300	15400	24000	19800	14800	73600	27300	14400	16400	3930
11	613	2290	11400	13800	21800	19300	17900	84700	27600	14400	14600	3880
12	889	7260	8180	11700	19100	19100	17600	127000	23200	14300	13600	2730
13	1030	6180	6520	10300	20000	16100	14100	117000	24300	16100	12400	3650
14	914	7440	14900	9980	20300	14700	10600	96300	22900	24000	11700	6540
15	1060	6350	17800	8240	18900	14500	9590	80700	21100	21300	11300	6340
16	1840	6200	24700	8500	18800	12700	11000	71300	20900	37900	10700	6620
17	1920	5530	19100	8200	16100	10700	12000	67700	21100	45700	10200	3680
18	1500	3450	11600	8100	13200	9630	11900	72200	18200	35600	9780	3150
19	983	6950	9310	8130	11700	8650	10400	62100	15000	34200	9410	2910
20	817	14800	7980	10100	12300	8310	8170	50600	13000	32300	9080	3600
21	794	18900	7370	13800	15700	8210	8840	40800	14400	30400	8670	2840
22	1090	22400	7030	14500	19200	8770	7220	33000	14000	29100	7870	3070
23	715	24300	5900	12400	18800	7850	6800	29500	11900	28400	7890	3370
24	688	26600	5450	12000	15000	8740	5800	27900	12000	27900	7970	3590
25	829	29100	5260	12600	12900	8520	5540	30200	20300	27500	6570	7070
26	850	29100	5630	11800	11700	8180	5390	30000	26300	26500	5640	3580
27	906	35400	6080	13400	10900	7920	5440	29200	24200	25700	5790	2100
28	883	29000	5910	16400	10500	6580	6780	25400	26700	25300	6730	1730
29	1350	18800	5900	16100	---	6150	14800	25300	26500	25500	6330	2970
30	1440	15800	6210	16400	---	5150	11100	28600	26400	24300	6330	4410
31	1370	---	6800	15800	---	6750	---	25500	---	24400	7010	---
TOTAL	35171	329740	292330	385850	490200	400610	314400	1638100	711300	714400	427770	159040
MEAN	1135	10990	9430	12450	17510	12920	10480	52840	23710	23050	13800	5301
MAX	2150	35400	24700	16400	28400	23700	17900	127000	37200	45700	28000	10100
MIN	597	1080	5260	8100	10500	5150	5390	8400	11900	12100	5640	1730
AC-FT	69760	654000	579800	765300	972300	794600	623600	3249000	1411000	1417000	848500	315500

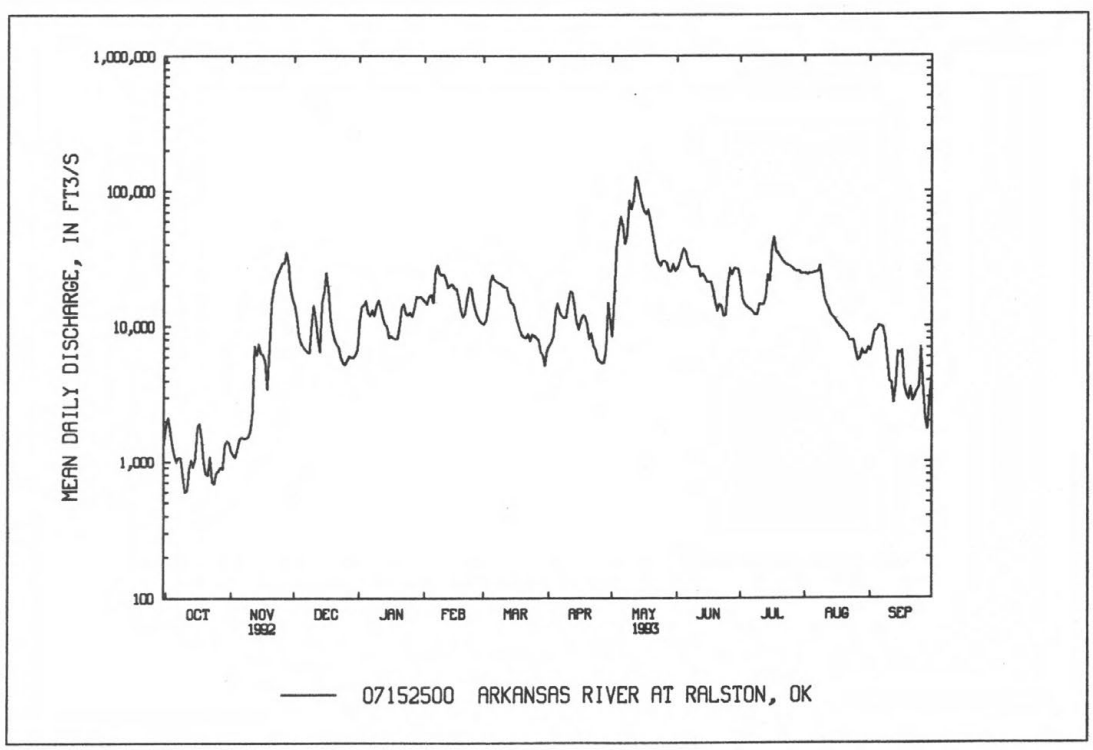
07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4989	4205	2931	3459	4156	7849	8495	9614	9707	6239	3561	3725
MAX	41580	14500	9430	12450	17510	27120	25290	52840	23710	23050	13800	17660
(WY)	1987	1980	1993	1993	1993	1987	1984	1993	1993	1993	1993	1989
MIN	161	251	453	500	487	402	305	2041	2139	908	390	205
(WY)	1992	1981	1983	1977	1981	1981	1981	1992	1988	1991	1978	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1977-93	
ANNUAL TOTAL	2027129		5898911			
ANNUAL MEAN	5539		16160		[a]5747	
HIGHEST ANNUAL MEAN					16160	1993
LOWEST ANNUAL MEAN					1292	1981
HIGHEST DAILY MEAN	35400	Nov 27	127000	May 12	170000	Oct 4 1986
LOWEST DAILY MEAN	597	Oct 10	597	Oct 10	[b]52	Sep 18 1978
ANNUAL SEVEN-DAY MINIMUM	788	May 6	826	Oct 20	103	Oct 19 1991
INSTANTANEOUS PEAK FLOW			139000	May 12	[c]174000	Oct 4 1986
INSTANTANEOUS PEAK STAGE			19.76	May 12	[d]22.20	Oct 4 1986
ANNUAL RUNOFF (AC-FT)	4021000		11700000		4164000	
10 PERCENT EXCEEDS	14300		29100		14300	
50 PERCENT EXCEEDS	3370		12000		2640	
90 PERCENT EXCEEDS	965		1710		419	

[a]Prior to regulation by Kaw Lake, water years 1926-75, 4,826 ft^3/s.
[b]Minimum daily discharge for period of record, 14 ft^3/s, Oct. 12, 1956.
[c]Maximum for period of record, 211,000 ft^3/s, Oct. 13, 1973.
[d]Maximum for period of record, 22.98 ft, Oct. 13, 1973.



07152500 ARKANSAS RIVER AT RALSTON, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1950 to September 1963, May 1965 to September 1993 (discontinued).
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1950 to September 1963, July 1968 to May 1989.
WATER TEMPERATURE: January 1950 to September 1963, July 1968 to May 1989.
INSTRUMENTATION.--Water-quality monitor, July 1968 to September 1980.
REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,510 microsiemens, Sept. 14, 1955; minimum daily, 157 microsiemens, Nov. 21, 1979.
WATER TEMPERATURE: Maximum daily, 37.0°C, July 28, 1956; minimum daily, -0.5°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
21...	1030	1028	80020	755	1520	8.4	19.5	16.5	5.0	750	8.3	87
MAR												
08...	1200	1028	80020	20200	595	8.1	20.0	8.5	29	743	11.5	101
APR												
07...	1000	1028	80020	12500	856	7.9	13.0	10.5	32	737	11.1	103
JUN												
01...	1045	1028	80020	26700	421	8.0	23.5	20.5	61	740	7.8	89
AUG												
11...	1300	1028	80020	14600	1190	7.8	35.0	28.5	130	744	7.2	96

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT												
21...	K33	40	270	83	73	20	200	61	5	6.6	204	9
MAR												
08...	K7	K8	160	30	49	9.7	49	39	2	4.5.	162	0
APR												
07...	1100	--	210	55	61	14	85	46	3	4.6	189	0
JUN												
01...	240	320	130	31	40	7.4	32	34	1	4.8	122	0
AUG												
11...	340	140	200	97	58	14	160	62	5	8.0	129	0

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)
OCT												
21...	181	100	300	0.40	6.7	896	819	1.22	1830	0.270	0.280	1.2
MAR												
08...	133	44	73	0.20	9.5	338	325	0.46	18400	1.26	1.26	5.6
APR												
07...	155	73	130	0.20	9.9	487	475	0.66	16400	0.980	0.980	4.3
JUN												
01...	100	36	43	0.20	9.9	249	236	0.34	18000	0.490	0.490	2.2
AUG												
11...	106	110	220	0.30	9.9	664	647	0.90	26200	0.430	--	--

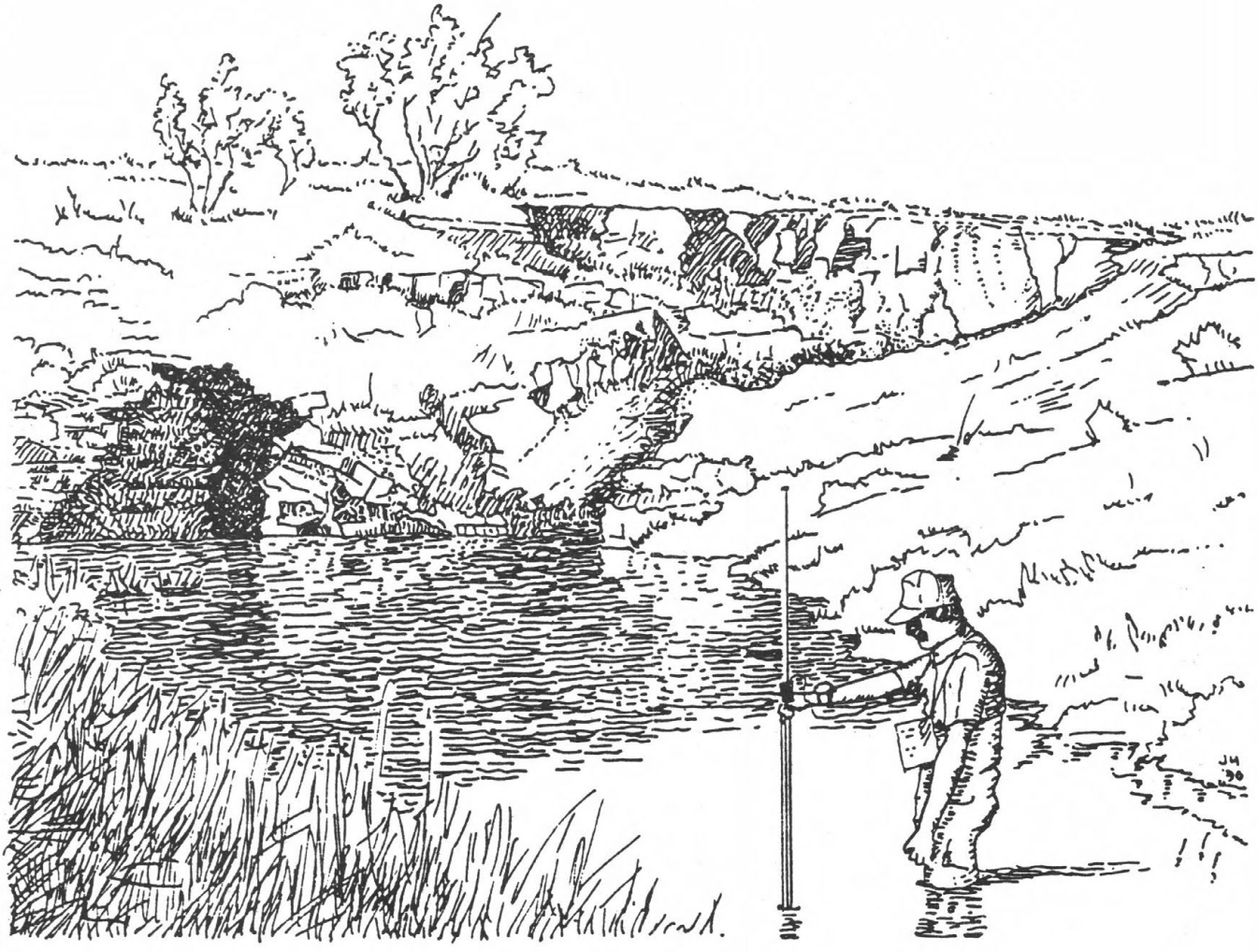
DATE	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)
OCT												
21...	0.020	0.07	0.290	0.300	0.030	0.030	0.04	0.04	0.37	0.40	0.69	3.1
MAR												
08...	0.040	0.13	--	1.30	--	0.100	--	0.13	0.60	0.70	2.0	--
APR												
07...	0.020	0.07	--	1.00	--	0.040	--	0.05	0.66	0.70	1.7	--
JUN												
01...	0.020	0.07	--	0.510	--	0.030	--	0.04	0.57	0.60	1.1	--
AUG												
11...	<0.010	--	--	0.430	--	0.020	--	0.03	1.1	1.1	1.5	--

DATE	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT											
21...	0.120	0.25	0.080	0.080	0.080	0.25	0.04	<10	130	<3	<3
MAR											
08...	0.200	--	0.150	--	0.140	0.43	--	20	96	<3	18
APR											
07...	0.240	--	0.120	--	0.100	0.31	--	--	--	--	--
JUN											
01...	0.200	--	0.140	--	0.120	0.37	--	<10	80	<3	24
AUG											
11...	0.330	--	0.240	--	0.160	0.49	--	20	130	<3	8

07152500 ARKANSAS RIVER AT RALSTON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
21...	17	16	<10	2	<1	<1.0	830	<6	26	53	85
MAR											
08...	4	5	<10	1	<1	<1.0	470	<6	847	46200	15
APR											
07...	--	--	--	--	--	--	--	--	169	5700	97
JUN											
01...	5	4	10	1	<1	<1.0	320	<6	287	20700	69
AUG											
11...	12	1	<10	2	<1	<1.0	440	9	310	12200	96



Measuring runoff into a sinkhole in the Blaine aquifer

07153000 BLACK BEAR CREEK AT PAWNEE, OK

LOCATION.--Lat 36°20'37", long 96°47'57", on east line of SE 1/4 NE 1/4 sec.31, T.22 N., R.5 E., Pawnee County, Hydrologic Unit 11060006, on downstream side of left pier of bridge on State Highway 18 in north Pawnee, 300 ft downstream from Skedee Creek, and at mile 23.4.

DRAINAGE AREA.--576 mi^2.

PERIOD OF RECORD.--July 1944 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 802.73 ft, sea level (levels by U.S. Army Corps of Engineers). Prior to Sept. 21, 1944, nonrecording gage at present site and datum except for Aug. 27, 1953 to Apr. 29, 1954, nonrecording gage at site 500 ft downstream at same datum.

REMARKS.--Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 19, 1943, reached a stage of 28.19 ft, from floodmark, discharge 17,800 ft^3/s.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 22	1600	5,240	13.26	Apr. 29	0500	5,520	13.78
Dec. 14	1800	4,230	11.39	May 10	1600	12,300	23.23

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	44	471	126	155	291	455	2290	411	603	12	70
2	26	32	384	123	146	584	280	2780	322	484	11	47
3	24	26	309	242	139	571	210	3450	323	376	10	95
4	23	24	261	400	139	425	974	2910	346	283	9.4	53
5	22	24	221	340	186	326	1790	1750	309	223	1280	31
6	21	23	211	242	233	271	903	1590	254	166	1870	25
7	23	24	236	198	200	231	560	1560	219	134	637	19
8	29	23	234	174	170	202	406	3360	200	125	370	17
9	23	21	1390	1520	155	184	294	8790	190	202	246	16
10	24	23	2000	2760	299	168	236	11300	192	157	186	17
11	27	301	1010	1410	718	145	196	10700	172	120	139	21
12	25	970	641	983	450	139	167	7720	166	124	109	18
13	20	499	564	812	321	135	148	4700	164	101	89	195
14	16	253	3110	622	243	127	278	3410	140	419	70	2000
15	17	162	3390	489	311	122	1790	2850	126	218	56	1310
16	18	119	1980	431	613	124	1510	2570	115	101	44	494
17	17	95	1200	356	517	117	1490	2300	105	86	37	301
18	16	80	863	308	346	112	2060	2890	102	97	28	198
19	16	810	634	278	330	140	1080	2720	96	91	24	139
20	17	2570	496	748	1390	185	700	1900	102	58	21	165
21	17	1190	407	1480	1860	168	497	e1000	109	46	18	104
22	20	3740	343	1090	1260	264	390	e780	92	38	17	68
23	24	3650	291	858	810	448	319	e560	82	32	23	51
24	30	2210	244	606	571	313	270	e480	72	29	31	41
25	30	3180	223	442	537	231	230	e400	314	24	21	82
26	25	3000	208	341	514	184	197	e340	624	22	18	80
27	24	1740	184	278	371	155	172	e1040	1330	20	17	63
28	23	1120	173	239	299	140	1610	e1500	1290	18	17	47
29	64	822	163	207	---	153	5140	1980	930	16	16	38
30	43	607	160	176	---	458	4240	800	762	15	18	31
31	61	---	152	162	---	696	---	e500	---	14	238	---
TOTAL	793	27382	22153	18441	13283	7809	28592	90920	9659	4442	5682.4	5836
MEAN	25.6	913	715	595	474	252	953	2933	322	143	183	195
MAX	64	3740	3390	2760	1860	696	5140	11300	1330	603	1870	2000
MIN	16	21	152	123	139	112	148	340	72	14	9.4	16
AC-FT	1570	54310	43940	36580	26350	15490	56710	180300	19160	8810	11270	11580

e Estimated

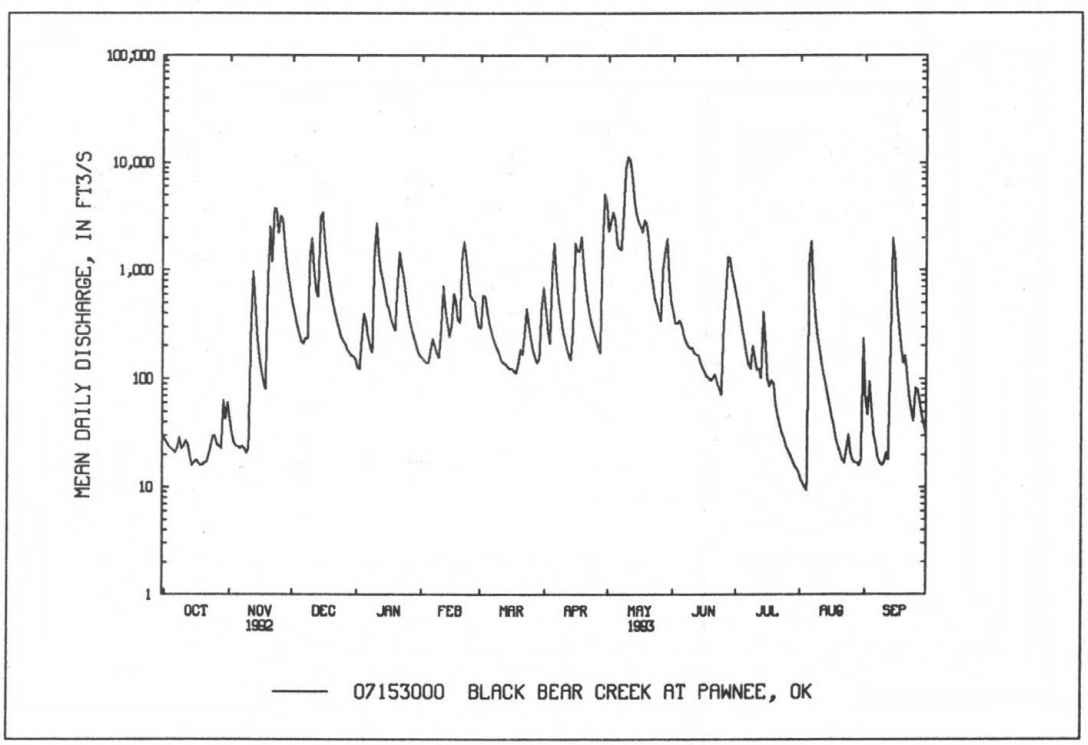
07153000 BLACK BEAR CREEK AT PAWNEE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	229	149	84.5	67.1	114	248	260	474	325	156	102	181
MAX	4025	2359	715	595	1013	1607	1291	2933	2181	932	1592	1354
(WY)	1987	1975	1993	1993	1987	1990	1947	1993	1957	1959	1992	1945
MIN	.000	.000	.023	.37	.73	.90	1.14	2.28	4.68	.30	.000	.000
(WY)	1955	1955	1967	1957	1968	1954	1955	1956	1966	1954	1954	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1945-93	
ANNUAL TOTAL	139065.1		234992.4			
ANNUAL MEAN	380		644		199	
HIGHEST ANNUAL MEAN					835	1987
LOWEST ANNUAL MEAN					23.1	1954
HIGHEST DAILY MEAN	10200	Aug 6	11300	May 10	25400	Oct 3 1959
LOWEST DAILY MEAN	4.5	May 12	9.4	Aug 4	[a].00	Jul 17 1954
ANNUAL SEVEN-DAY MINIMUM	6.0	May 6	12	Jul 29	.00	Jul 17 1954
qINSTANTANEOUS PEAK FLOW			12300	May 10	30200	Oct 3 1959
INSTANTANEOUS PEAK STAGE			23.23	May 10	31.43	Oct 3 1959
ANNUAL RUNOFF (AC-FT)	275800		466100		144500	
10 PERCENT EXCEEDS	1020		1790		357	
50 PERCENT EXCEEDS	40		211		13	
90 PERCENT EXCEEDS	13		22		.87	

[a]No flow at times many years.



07154500 CIMARRON RIVER NEAR KENTON, OK

LOCATION.--Lat 36°55'36", long 102°57'31", in SW 1/4 sec.4, T.5 N., R.1 E., Cimarron County, Hydrologic Unit 11040001, near right bank on downstream side of pier of county road bridge, 1.5 mi upstream from North Carrizo Creek, 1.7 mi northeast of Kenton, 2.2 mi downstream from Carrizozo Creek, and at mile 594.0.

DRAINAGE AREA.--1,106 mi^2, of which 68 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1904 to July 1905 (gage heights only), October 1950 to current year.

REVISED RECORDS.--WSP 1711: 1956 (M).

GAGE.--Water-stage recorder. Datum of gage is 4,262.08 ft above sea level. April 1904 to July 1905 nonrecording gage at site 0.9 mi upstream at different datum. Oct. 1, 1950 to Sept. 19, 1967, water-stage recorder at same site and at datum 5.00 ft higher.

REMARKS.--Records fair. Extensive diversions for irrigation upstream from station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)

No peak greater than base discharge.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.00	.65	1.4	1.3	1.1	.32	.18	.10	.00	.00	.00
2	.01	.00	.71	1.5	1.3	1.0	.39	.28	.04	.00	.00	.00
3	.01	.00	.78	1.5	1.2	.72	.62	.35	.02	.00	.00	.00
4	.00	.21	.76	1.5	1.1	.70	1.4	.23	.01	.00	.00	.00
5	.00	.36	.85	1.5	1.0	.70	1.1	.16	.00	.00	.00	.00
6	.00	.36	e.84	1.4	1.1	.66	.91	.13	.00	.00	.00	.00
7	.00	.40	e.86	1.4	1.0	.66	.79	.11	.00	.00	.00	.00
8	.00	.42	e.88	1.5	1.0	.64	14	.10	.00	.00	.00	.00
9	.00	.40	e.90	1.6	1.0	.61	5.1	.36	.00	.00	.00	.00
10	.00	.40	e1.0	1.4	1.2	.61	.36	.76	.00	.00	.00	.00
11	.00	.51	e1.1	1.4	1.2	.34	.27	.37	.00	.00	.00	.00
12	.00	.51	1.1	1.5	1.0	.50	.33	.22	.00	.00	.00	.00
13	.00	.48	1.1	1.4	1.0	.63	.37	.14	.00	.00	.00	.00
14	.00	.46	e1.0	1.3	.95	.61	.26	.11	.00	.00	.00	.00
15	.00	.47	e1.0	1.4	1.2	.60	.35	.13	.00	.00	.00	.00
16	.00	.49	1.1	1.4	1.1	.30	.48	.11	.00	.00	.00	.00
17	.00	.51	1.1	1.5	1.0	.31	.33	.10	.00	.00	.00	.00
18	.00	.48	1.1	1.5	1.0	.58	.43	.08	.00	.00	.00	.00
19	.00	.47	1.1	1.6	1.1	.41	.29	.07	65	.00	.00	.00
20	.00	.51	1.1	1.5	1.1	.27	.44	.07	1.1	.00	.00	.00
21	.00	.67	1.2	1.5	.94	.52	.42	.05	.17	.00	.00	.00
22	.00	.53	1.2	1.5	.89	.60	.30	.05	.07	.00	.00	.00
23	.00	.51	1.2	1.5	.76	.60	.26	.04	.02	.00	.00	.00
24	.00	.60	1.2	1.4	.76	.44	.23	.05	.00	.00	.00	.00
25	.00	.57	1.3	1.4	.74	.26	.26	.82	.00	.00	.00	.00
26	.00	.56	1.3	1.3	.75	.22	.22	.23	.00	.00	.00	.00
27	.00	.58	1.3	1.3	.71	.25	.16	.19	.00	.00	.00	.00
28	.00	.61	1.4	1.3	.72	.25	.13	.13	.00	.00	.00	.00
29	.00	.63	1.5	1.2	---	.27	.14	.13	.00	.00	.00	.00
30	.00	.64	1.4	1.3	---	.53	.12	.16	.00	.00	.00	.00
31	.00	---	1.4	1.3	---	.66	---	.15	---	.00	.00	---
TOTAL	0.03	13.34	33.43	44.2	28.12	16.55	30.78	6.06	66.53	0.00	0.00	0.00
MEAN	.001	.44	1.08	1.43	1.00	.53	1.03	.20	2.22	.000	.000	.000
MAX	.01	.67	1.5	1.6	1.3	1.1	14	.82	65	.00	.00	.00
MIN	.00	.00	.65	1.2	.71	.22	.12	.04	.00	.00	.00	.00
AC-FT	.06	26	66	88	56	33	61	12	132	.00	.00	.00

e Estimated

07154500 CIMARRON RIVER NEAR KENTON, OK--Continued

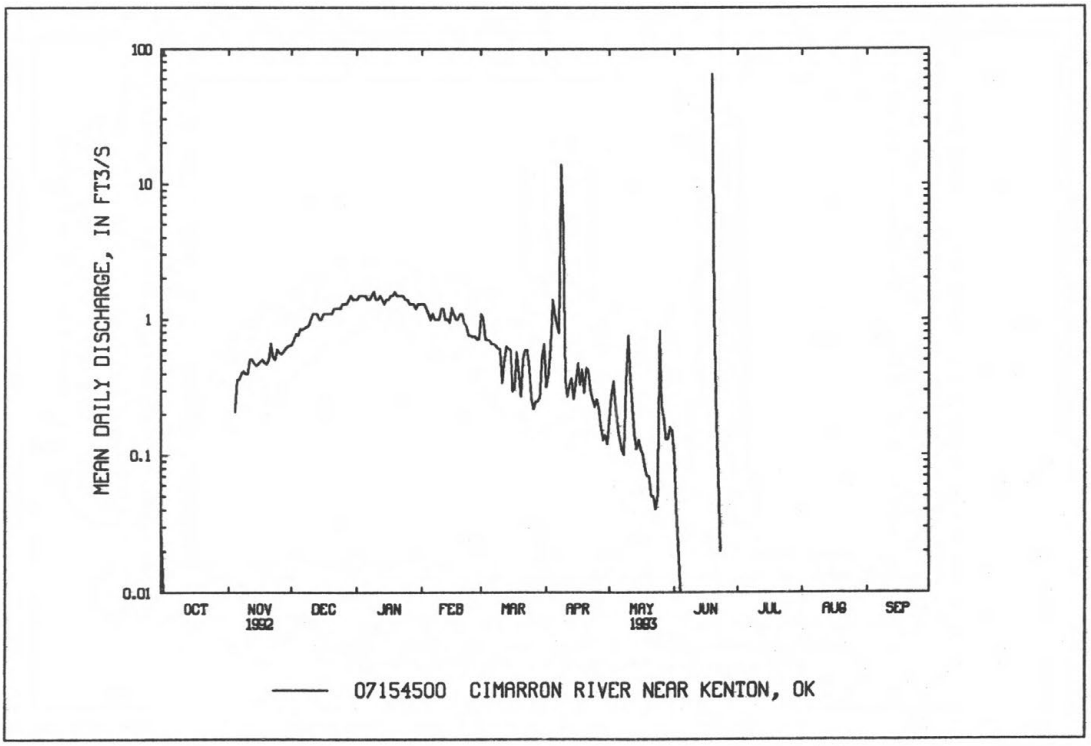
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.5	2.09	2.24	2.13	1.86	1.54	6.18	35.1	35.9	34.6	55.4	29.3
MAX	334	12.1	9.59	8.07	6.76	4.42	116	525	514	204	406	235
(WY)	1966	1966	1966	1988	1966	1958	1977	1955	1965	1958	1965	1963
MIN	.000	.000	.000	.000	.027	.012	.000	.029	.000	.000	.000	.000
(WY)	1965	1965	1965	1965	1976	1976	1965	1975	1954	1993	1972	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1951-93	
ANNUAL TOTAL	1513.66		239.04			
ANNUAL MEAN	4.14		.65		18.3	
HIGHEST ANNUAL MEAN					95.2	1965
LOWEST ANNUAL MEAN					.65	1993
HIGHEST DAILY MEAN	539	Jul 23	65	Jun 19	11000	Jun 17 1965
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	most years
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 4	.00	Oct 4	.00	Jun 14 1952
INSTANTANEOUS PEAK FLOW			430	Jun 19	[a]43400	Oct 17 1965
INSTANTANEOUS PEAK STAGE			9.01	Jun 19	[b]22.32	Oct 17 1965
ANNUAL RUNOFF (AC-FT)	3000		474		13240	
10 PERCENT EXCEEDS	1.3		1.3		8.2	
50 PERCENT EXCEEDS	.29		.22		1.0	
90 PERCENT EXCEEDS	.00		.00		.00	

[a]From rating curve extended above 7,000 ft^3/s, on basis of contracted-opening measurement of peak flow.

[b]Present datum.



07156900 CIMARRON RIVER NEAR FORGAN, OK

LOCATION.--Lat 37°00'40", long 100°29'29", in SE 1/4 SE 1/4 sec.8, T.35 S., R.29 W., Meade County, KS, Hydrologic Unit 11040006, on downstream side of bridge on Kansas State Highway 23, 0.8 mi north of Oklahoma-Kansas State Line, 7.8 mi north of Forgan, and at mile 375.7.

DRAINAGE AREA.--8,536 mi^2, of which 4,316 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1965 to September 1986, October 1987 to current year.

REVISED RECORDS.--WDR OK-91-1 gage datum.

GAGE.--Water-stage recorder. Datum of gage is 2,320.05 ft above sea level.

REMARKS.--Records fair except for estimated winter periods which are poor. Natural flow affected by irrigational development.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
No peak greater than base discharge.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	28	e49	e40	48	57	51	62	37	38	34	30
2	27	28	e50	45	46	64	51	66	37	36	32	30
3	27	32	48	44	45	59	52	57	156	35	33	30
4	26	29	51	43	44	52	53	48	47	34	37	28
5	26	28	e50	40	42	49	50	43	41	33	38	27
6	26	27	e46	39	41	49	50	41	39	34	37	29
7	28	27	e42	38	41	48	51	41	39	32	36	29
8	29	28	e46	38	40	48	50	42	38	30	34	29
9	32	28	51	e50	40	49	50	42	36	30	34	28
10	32	28	53	e45	e44	50	50	41	35	39	34	27
11	31	30	53	e40	e45	51	50	42	36	36	33	26
12	31	30	52	e40	e46	56	50	41	35	36	34	27
13	31	29	52	e35	e45	55	51	41	36	36	35	28
14	30	29	e54	e34	e46	56	53	38	93	59	33	30
15	30	29	e48	e32	e52	54	53	38	57	43	32	30
16	30	29	e44	e30	e46	52	51	42	46	39	30	29
17	30	31	e44	e34	e40	50	50	42	41	36	29	29
18	29	34	e45	e35	e40	51	49	40	45	35	30	28
19	35	44	48	e42	e46	51	49	41	62	36	30	28
20	35	44	46	e49	55	50	49	42	118	37	30	28
21	35	50	44	e47	62	51	48	40	103	66	30	28
22	32	47	40	48	57	51	47	39	55	45	30	27
23	33	46	37	53	56	50	47	39	45	43	31	28
24	34	66	40	49	55	49	46	37	42	41	31	29
25	35	e69	41	47	55	54	45	37	39	40	29	30
26	32	e60	34	46	53	52	44	38	39	38	28	29
27	30	e55	31	48	51	52	44	37	38	35	30	29
28	30	e59	32	48	49	52	74	37	38	35	32	29
29	30	e52	34	49	---	51	55	36	36	33	28	28
30	29	e50	36	47	---	54	50	35	38	32	29	27
31	29	---	e36	46	---	52	---	34	---	33	31	---
TOTAL	941	1166	1377	1321	1330	1619	1513	1299	1547	1175	994	854
MEAN	30.4	38.9	44.4	42.6	47.5	52.2	50.4	41.9	51.6	37.9	32.1	28.5
MAX	35	69	54	53	62	64	74	66	156	66	38	30
MIN	26	27	31	30	40	48	44	34	35	30	28	26
AC-FT	1870	2310	2730	2620	2640	3210	3000	2580	3070	2330	1970	1690

e Estimated

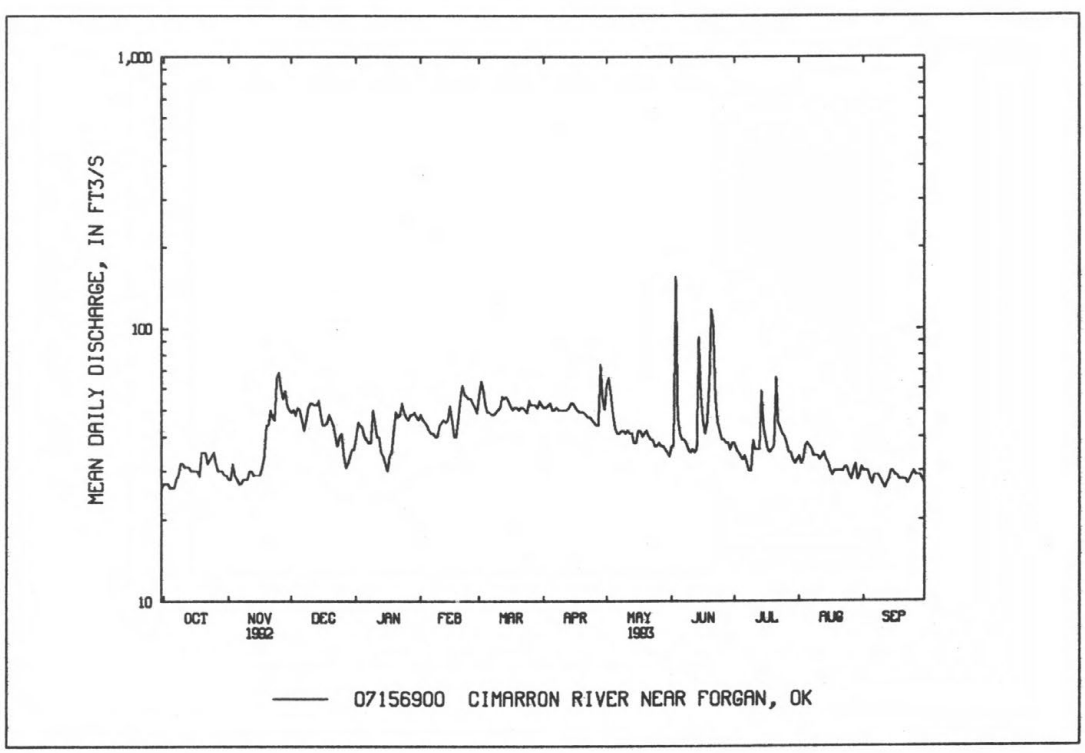
07156900 CIMARRON RIVER NEAR FORGAN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	75.9	57.9	59.8	59.0	64.0	62.8	76.7	80.6	67.8	52.0	55.1	51.8
MAX	751	114	102	110	167	111	376	476	364	211	208	210
(WY)	1966	1972	1973	1967	1978	1973	1976	1977	1978	1967	1972	1966
MIN	26.1	32.3	30.7	38.8	41.8	44.2	38.3	23.8	22.0	20.5	19.1	22.0
(WY)	1992	1988	1990	1988	1988	1992	1986	1986	1986	1991	1983	1990

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	13759		15136			
ANNUAL MEAN	37.6		41.5		63.6	
HIGHEST ANNUAL MEAN					145	1966
LOWEST ANNUAL MEAN					35.4	1991
HIGHEST DAILY MEAN	94	Jun 28	156	Jun 3	7490	Oct 20 1965
LOWEST DAILY MEAN	25	Sep 12	26	Oct 4	[a]13	Jun 19 1988
ANNUAL SEVEN-DAY MINIMUM	26	Sep 9	27	Oct 1	15	Jul 13 1986
INSTANTANEOUS PEAK FLOW			423	Jun 3	21200	Oct 20 1965
INSTANTANEOUS PEAK STAGE			[b]3.97	Nov 30	8.10	Oct 20 1965
ANNUAL RUNOFF (AC-FT)	27290		30020		46080	
10 PERCENT EXCEEDS	47		53		87	
50 PERCENT EXCEEDS	37		40		50	
90 PERCENT EXCEEDS	27		29		28	

[a]Also occurred June 20, 1988, and Aug. 2, 1991.
[b]Occurred during ice jam.



ARKANSAS RIVER BASIN

07157950 CIMARRON RIVER NEAR BUFFALO, OK

LOCATION.--Lat 36°51'07", long 99°18'54", in SE 1/4 NE 1/4 sec.2, T.27 N., R.20 W., Harper County, Hydrologic Unit 11050001, near left bank on downstream side of pier of U.S. Highway 64, 0.5 mi downstream from Keno Creek, 17.0 mi northeast of Buffalo, and at mile 289.1.
DRAINAGE AREA.--12,004 mi^2, of which 4,813 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1960 to current year.
GAGE.--Water-stage recorder. Datum of gage is 1,599.67 ft above sea level. Prior to Oct. 1, 1979, at site 6.9 mi upstream at elevation 1,650 ft.
REMARKS.--Records poor.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
May 2	0230	5,350	8.43	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.08	68	e10	186	221	161	1010	100	e45	e21	e2.0
2	.28	4.7	90	e7.0	161	352	142	4070	95	e40	e23	e2.9
3	.55	e20	133	116	160	447	149	1390	196	e35	e20	e3.0
4	.36	11	e135	e146	153	356	175	781	397	e33	e30	e2.0
5	.29	2.9	e140	e128	142	325	205	507	482	e32	e50	e1.4
6	.23	2.9	e120	105	133	273	208	361	240	e31	e35	e2.0
7	.04	3.2	118	102	125	226	217	285	175	e30	e25	3.6
8	.00	3.2	86	103	114	198	199	312	147	e29	e20	14
9	.03	3.8	100	84	110	174	187	307	117	e29	e17	e2.0
10	.00	3.8	e142	e15	135	157	162	279	101	e28	e14	e.40
11	.00	e30	e153	e30	e256	162	135	269	117	e28	e12	e.10
12	.00	e10	e136	e65	e385	189	128	242	86	e27	e11	e.05
13	.00	4.7	e164	e45	310	194	115	235	76	e27	e10	e.04
14	.00	4.5	e180	e50	338	208	104	222	71	33	e9.5	e.04
15	.00	5.6	e145	e80	405	192	107	202	70	1260	e9.0	e.03
16	.00	5.2	107	98	335	186	108	230	72	922	e8.0	e.03
17	.01	7.4	117	93	e140	166	143	205	104	453	7.0	e.03
18	.01	20	e146	91	e125	157	124	208	95	258	e6.5	e.04
19	.02	89	e163	95	e150	161	130	203	185	176	e6.0	e.04
20	.02	51	144	102	299	154	104	182	264	137	e5.0	e.03
21	.00	112	125	104	e421	138	98	154	413	126	e4.0	e.03
22	.00	121	117	120	e360	142	87	144	233	101	e4.0	e.02
23	.00	84	101	198	328	134	88	137	e159	88	e3.5	e.05
24	.00	151	82	213	247	134	88	146	e112	e70	e3.0	e10
25	.00	126	80	242	228	130	77	198	e81	e60	e2.2	e30
26	.00	43	74	251	198	120	69	159	e60	e50	e2.0	e4.0
27	e.01	23	75	274	192	116	65	140	e80	e40	e1.7	e1.0
28	e.01	16	71	277	177	121	95	119	e120	e34	e1.4	e.45
29	e.02	12	74	e270	---	128	172	105	e130	e26	e1.2	e.20
30	e.03	27	73	e250	---	165	251	104	e60	e22	e1.1	e.10
31	.05	---	53	231	---	170	---	102	---	e20	e1.0	---
TOTAL	2.16	997.98	3512	3995.0	6313	5996	4093	13008	4638	4290	364.1	79.58
MEAN	.070	33.3	113	129	225	193	136	420	155	138	11.7	2.65
MAX	.55	151	180	277	421	447	251	4070	482	1260	50	30
MIN	.00	.08	53	7.0	110	116	65	102	60	20	1.0	.02
AC-FT	4.3	1980	6970	7920	12520	11890	8120	25800	9200	8510	722	158

e Estimated

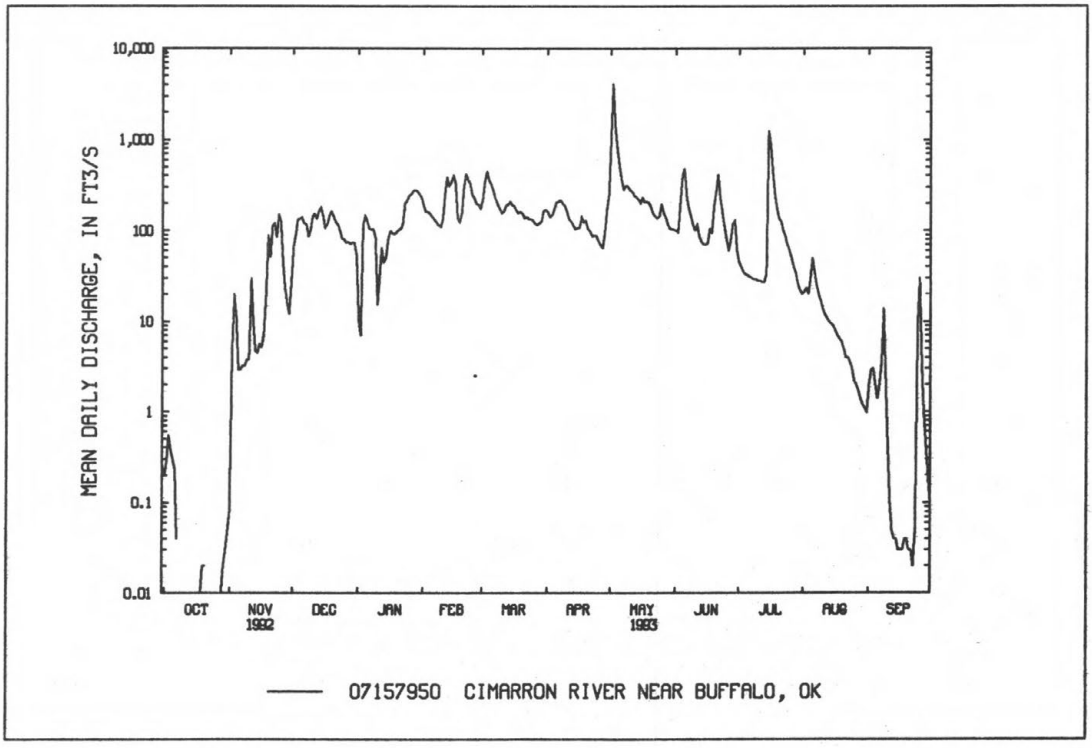
07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	93.2	82.3	85.3	93.5	121	187	152	212	238	92.9	85.7	130
MAX	788	482	270	155	225	1848	1304	851	1227	461	476	1100
(WY)	1966	1972	1974	1964	1993	1973	1973	1987	1965	1962	1968	1973
MIN	.000	.47	8.61	31.2	40.2	26.1	8.69	4.45	6.70	.21	.000	.000
(WY)	1981	1981	1981	1981	1981	1992	1981	1992	1966	1991	1976	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1960-93	
ANNUAL TOTAL	16226.17		47288.82			
ANNUAL MEAN	44.3		130		131	
HIGHEST ANNUAL MEAN					430	1973
LOWEST ANNUAL MEAN					23.6	1991
HIGHEST DAILY MEAN	909	Jun 30	4070	May 2	12500	Sep 26 1973
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 10	.00	Oct 10	.00	Jul 19 1960
INSTANTANEOUS PEAK FLOW			5350	May 2	26400	Sep 26 1973
INSTANTANEOUS PEAK STAGE			8.43	May 2	[a]5.57	Sep 26 1973
ANNUAL RUNOFF (AC-FT)	32180		93800		95250	
10 PERCENT EXCEEDS	95		257		238	
50 PERCENT EXCEEDS	24		98		58	
90 PERCENT EXCEEDS	.34		.05		.04	

[a]Site and datum then in use.



07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1961-63, 1968 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1968 to January 1982.
WATER TEMPERATURE: July 1968 to January 1982.
INSTRUMENTATION.--Water-quality monitor from March 1969 to September 1979.
REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
FEB											
09...	1015	4.00	5.5	731	1028	1028	111	4.98	10100	11.8	8.5
09...	1017	9.00	5.5	731	1028	1028	111	4.98	10100	11.8	8.5
09...	1019	14.0	5.5	731	1028	1028	111	4.98	10100	11.8	8.5
09...	1021	19.0	5.5	731	1028	1028	111	4.98	10100	11.8	8.5
09...	1023	24.0	5.5	731	1028	1028	111	4.98	10100	11.8	8.5
09...	1025	29.0	5.5	731	1028	1028	111	4.98	10100	11.8	8.5
09...	1027	34.0	5.5	731	1028	1028	111	4.98	10200	11.8	8.5
09...	1029	39.0	5.5	731	1028	1028	111	4.98	10200	11.8	8.5
09...	1031	44.0	6.0	731	1028	1028	111	4.98	10300	11.8	8.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
10...	1030	1028	80020	3.8	30300	8.0	12.5	11.5	2.7	734	11.9	127
FEB												
09...	1000	1028	80020	111	10100	8.5	3.5	5.5	8.6	731	11.8	101
MAY												
18...	1100	1028	80020	209	13500	8.3	20.5	20.0	6.9	734	8.4	101
JUL												
14...	1100	1028	80020	32	5580	8.2	23.0	23.0	1.7	734	8.4	104

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
NOV												
10...	140	42	1100	980	290	100	6600	93	85	10	194	0
FEB												
09...	K1	K18	1000	760	150	150	1800	80	25	7.6	256	16
MAY												
18...	73	K16	700	480	160	73	2600	89	43	8.7	272	0
JUL												
14...	680	890	630	500	150	62	930	75	16	41	167	0

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
NOV											
10...	159	930	9900	0.80	9.2	16500	17900	22.4	171	--	--
FEB											
09...	236	390	2800	0.90	18	5490	5460	7.47	1650	0.220	0.220
MAY											
18...	223	540	3900	1.3	13	7770	7430	10.6	4380	--	--
JUL											
14...	137	490	1400	0.90	16	3340	3170	4.54	292	--	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)
NOV											
10...	--	0.020	0.020	0.07	<0.050	<0.050	0.020	0.020	0.03	0.03	--
FEB											
09...	0.97	--	0.040	0.13	--	0.260	--	0.030	--	0.04	0.27
MAY											
18...	--	--	<0.010	--	--	<0.050	--	0.030	--	0.04	--
JUL											
14...	--	--	<0.010	--	--	<0.050	--	0.030	--	0.04	0.67

07157950 CIMARRON RIVER NEAR BUFFALO, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	IRON, DISSOLVED (UG/L AS FE) (01046)
NOV											
10...	<0.20	--	<0.010	<0.010	<0.010	<0.010	--	<10	200	<1	10
FEB											
09...	0.30	0.56	0.030	0.010	--	<0.010	--	<10	<100	<1	10
MAY											
18...	<0.20	--	<0.010	<0.010	--	<0.010	--	<10	200	1	<10
JUL											
14...	0.70	0.70	0.050	<0.010	--	0.010	0.03	10	200	<1	<10

DATE	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV											
10...	60	250	5	<1	<1	<1.0	4300	150	5	0.05	78
FEB											
09...	60	20	7	1	2	<1.0	2800	38	79	24	78
MAY											
18...	60	30	5	2	1	<1.0	3000	42	34	19	74
JUL											
14...	60	30	5	<1	<1	<1.0	2400	27	--	--	--

07157960 BUFFALO CREEK NEAR LOVEDALE, OK

LOCATION.--Lat 36°46'14", long 99°22'00", in SW 1/4 SW 1/4 sec.33, T.27 N., R.20 W., Harper County, Hydrologic Unit 11050001, near center of channel on downstream side of pier of bridge on State Highway 34, 1.2 mi east of Lovedale, 1.3 mi upstream from Sleeping Bear Creek, and at mile 7.6.
DRAINAGE AREA.--408 mi^2.
PERIOD OF RECORD.--August 1966 to September 1993 (discontinued).
GAGE.--Water-stage recorder. Datum of gage is 1,602.56 ft above sea level.
REMARKS.--Records fair, except for periods of estimated record, which are poor.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
May 1	0845	3,460	12.15	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	1.1	4.7	9.3	15	19	2240	10	13	.83	.55
2	.00	.00	1.2	6.6	9.1	28	18	641	11	11	1.4	.48
3	.00	.01	1.4	7.6	8.9	32	17	241	21	8.9	1.8	.46
4	.00	.02	1.5	7.5	8.3	31	18	142	27	7.5	3.2	.43
5	.00	.04	1.7	7.2	8.1	29	20	100	29	6.7	7.3	.36
6	.00	.22	1.8	7.3	7.9	27	22	79	27	6.2	6.0	.38
7	.00	.20	1.8	7.9	7.8	19	23	67	25	5.8	5.3	.40
8	.00	.21	1.9	7.7	7.7	16	22	94	23	5.3	4.2	.47
9	.00	.24	2.5	5.4	7.7	16	20	70	22	4.6	3.7	.47
10	.00	.22	2.8	7.7	8.1	14	18	63	22	4.3	3.2	.41
11	.00	.31	3.2	8.3	29	15	15	57	28	4.2	3.1	.37
12	.00	.33	4.2	7.9	17	17	14	68	41	4.3	2.8	.20
13	.00	.33	5.3	7.3	10	18	13	56	47	3.9	2.5	.13
14	.00	.31	6.2	7.4	8.8	19	13	44	32	4.0	1.9	.14
15	.00	.29	8.1	7.8	10	20	12	37	29	4.3	1.3	.17
16	.00	.31	8.5	8.0	10	19	12	33	26	4.2	.84	.16
17	.00	.35	7.9	7.4	14	17	13	31	24	3.4	.63	.15
18	.00	.41	7.1	8.3	11	16	15	29	23	2.9	.58	.15
19	.00	.93	7.3	8.0	9.9	17	15	26	29	2.8	.54	.12
20	.00	.75	6.8	8.7	8.6	16	12	23	34	2.5	.53	.11
21	.00	.76	7.3	8.8	20	16	11	21	34	2.9	.47	.08
22	.00	1.0	6.5	12	18	16	9.9	19	26	2.6	.42	.05
23	.00	1.0	5.8	12	14	15	9.3	18	22	2.2	.40	.05
24	.00	1.4	5.2	16	13	15	8.6	16	17	1.9	.59	.11
25	.00	2.0	5.9	20	13	15	7.5	16	13	1.5	.75	.52
26	.00	1.7	5.0	20	12	13	6.9	16	12	1.4	.65	.73
27	.00	1.6	5.2	14	13	13	6.7	14	27	1.2	.66	.53
28	.00	1.5	5.7	13	12	13	7.8	13	32	1.2	.61	.37
29	.00	1.4	6.0	12	---	13	10	12	24	1.2	.52	.29
30	.00	1.3	6.2	11	---	18	12	11	17	1.1	.54	.36
31	.00	---	5.6	10	---	19	---	10	---	.88	.61	---
TOTAL	0.02	19.14	146.7	297.5	326.2	567	420.7	4307	754	127.88	57.87	9.20
MEAN	.001	.64	4.73	9.60	11.6	18.3	14.0	139	25.1	4.13	1.87	.31
MAX	.02	2.0	8.5	20	29	32	23	2240	47	13	7.3	.73
MIN	.00	.00	1.1	4.7	7.7	13	6.7	10	10	.88	.40	.05
AC-FT	.04	38	291	590	647	1120	834	8540	1500	254	115	18

07157960 BUFFALO CREEK NEAR LOVEDALE, OK--Continued

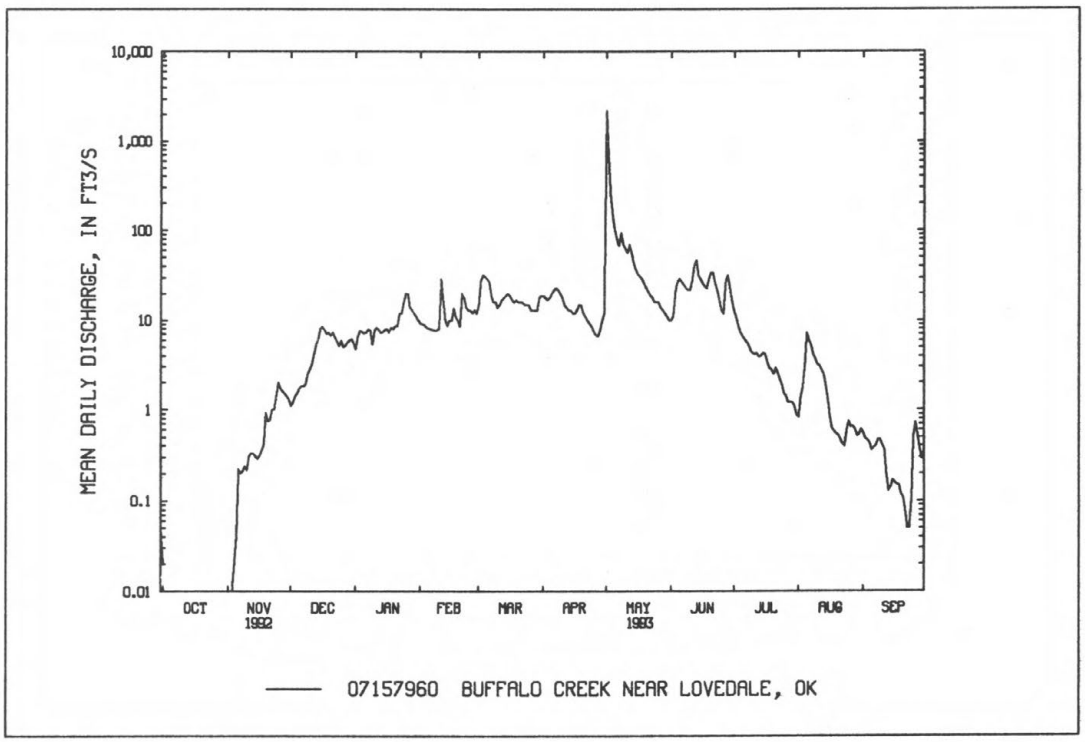
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.2	5.88	5.47	5.33	6.20	15.2	16.3	34.0	19.8	9.87	18.6	10.1
MAX	123	20.9	35.4	20.1	21.2	118	64.2	149	125	89.6	144	138
(WY)	1986	1972	1974	1988	1987	1987	1985	1979	1987	1979	1967	1974
MIN	.000	.000	.000	.000	.87	.40	.24	.000	.000	.000	.000	.000
(WY)	1971	1971	1971	1971	1981	1972	1972	1971	1967	1969	1970	1970

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	1875.19		7033.21			
ANNUAL MEAN	5.12		19.3		13.0	
HIGHEST ANNUAL MEAN					43.1	1987
LOWEST ANNUAL MEAN					.78	1971
HIGHEST DAILY MEAN	239	Sep 2	2240	May 1	3830	Aug 9 1967
LOWEST DAILY MEAN	.00	Oct 2	.00	[a]Oct 2	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 2	.00	Oct 2	.00	Oct 11 1966
INSTANTANEOUS PEAK FLOW			3460	May 1	[b]15800	Aug 9 1967
INSTANTANEOUS PEAK STAGE			12.15	May 1	16.17	May 10 1979
ANNUAL RUNOFF (AC-FT)	3720		13950		9430	
10 PERCENT EXCEEDS	8.2		27		21	
50 PERCENT EXCEEDS	3.7		7.3		2.1	
90 PERCENT EXCEEDS	.03		.05		.00	

[a]Ocurred Oct. 2 to Nov. 2.

[b]From rating curve extended above 7,000 ft^3/s on basis of slope-area determination of peak flow.



07158000 CIMARRON RIVER NEAR WAYNOKA, OK

LOCATION.--Lat 36°31'02", long 98°52'45", in NW 1/4 NE 1/4 sec.35, T.24 N., R.16 W., Woods County, Hydrologic Unit 11050001, near left bank on downstream side of bridge on U.S. Highway 281, 4.0 mi south of Waynoka, and at mile 247.0.

DRAINAGE AREA.--13,334 mi^2, of which 4,830 mi^2 is probably noncontributing.

PERIOD OF RECORD.--September 1903 to December 1905 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 1,367.35 ft above sea level. September 1903 to December 1905, nonrecording gage at the Atchison, Topeka and Santa Fe Railway Co. bridge 5 mi upstream at different datum. Feb. 4 to Mar. 3, 1938, nonrecording gage and Mar. 4, 1938, to Oct. 24, 1956, water-stage recorder, on former highway bridge 50 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation above station. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of about 14 ft occurred probably in 1914.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
May 1	1800	15,400	9.93	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	78	90	215	338	191	9940	280	248	48	2.4
2	.00	.00	74	73	203	635	176	12000	266	211	45	4.4
3	.00	.00	88	102	203	592	179	6130	339	177	43	10
4	.00	.00	101	142	193	582	229	2670	480	154	56	12
5	.00	.47	121	152	170	505	239	1580	444	134	108	5.3
6	.00	.78	158	195	162	446	223	1110	607	120	242	3.1
7	.00	.00	147	178	161	388	265	855	417	111	153	3.6
8	.00	.00	116	175	156	332	294	2100	316	98	103	6.3
9	.00	.00	115	178	148	286	244	4670	268	82	102	6.1
10	.00	.00	130	205	151	250	228	4180	227	70	85	4.9
11	.00	3.9	109	186	216	223	210	2040	260	63	66	2.7
12	.00	6.6	147	178	337	244	184	1810	395	87	58	1.4
13	.00	7.9	169	180	465	246	170	1240	223	131	51	.83
14	.00	12	242	132	419	237	158	971	199	137	39	.69
15	.00	8.2	208	117	469	254	151	796	185	179	27	1.0
16	.00	5.8	216	135	517	255	148	780	174	726	18	1.1
17	.00	5.6	173	196	397	243	148	986	152	816	13	1.0
18	.00	12	160	206	311	238	173	4420	167	484	11	1.1
19	.00	46	208	188	260	245	165	1510	300	375	9.4	1.2
20	.00	62	199	183	368	234	144	960	481	301	8.0	1.1
21	.00	53	174	199	517	211	130	776	314	265	6.7	.77
22	.00	77	156	224	542	200	125	643	422	274	5.4	.50
23	.00	88	143	304	509	187	123	574	317	209	4.1	2.4
24	.00	125	136	327	435	176	123	508	258	175	3.7	3.0
25	.00	578	128	281	390	166	121	487	253	150	3.5	23
26	.00	311	123	270	363	158	115	726	219	139	2.5	51
27	.00	192	116	269	324	148	110	509	500	117	2.0	24
28	.00	131	118	265	317	140	125	411	564	93	2.1	12
29	.00	108	120	260	---	162	172	365	312	78	1.8	7.3
30	.00	92	115	243	---	340	169	355	273	67	1.6	5.3
31	.00	---	109	225	---	290	---	309	---	57	3.4	---
TOTAL	0.00	1926.25	4397	6058	8918	8951	5232	66411	9612	6328	1322.2	199.49
MEAN	.000	64.2	142	195	318	289	174	2142	320	204	42.7	6.65
MAX	.00	578	242	327	542	635	294	12000	607	816	242	51
MIN	.00	.00	74	73	148	140	110	309	152	57	1.6	.50
AC-FT	.00	3820	8720	12020	17690	17750	10380	131700	19070	12550	2620	396

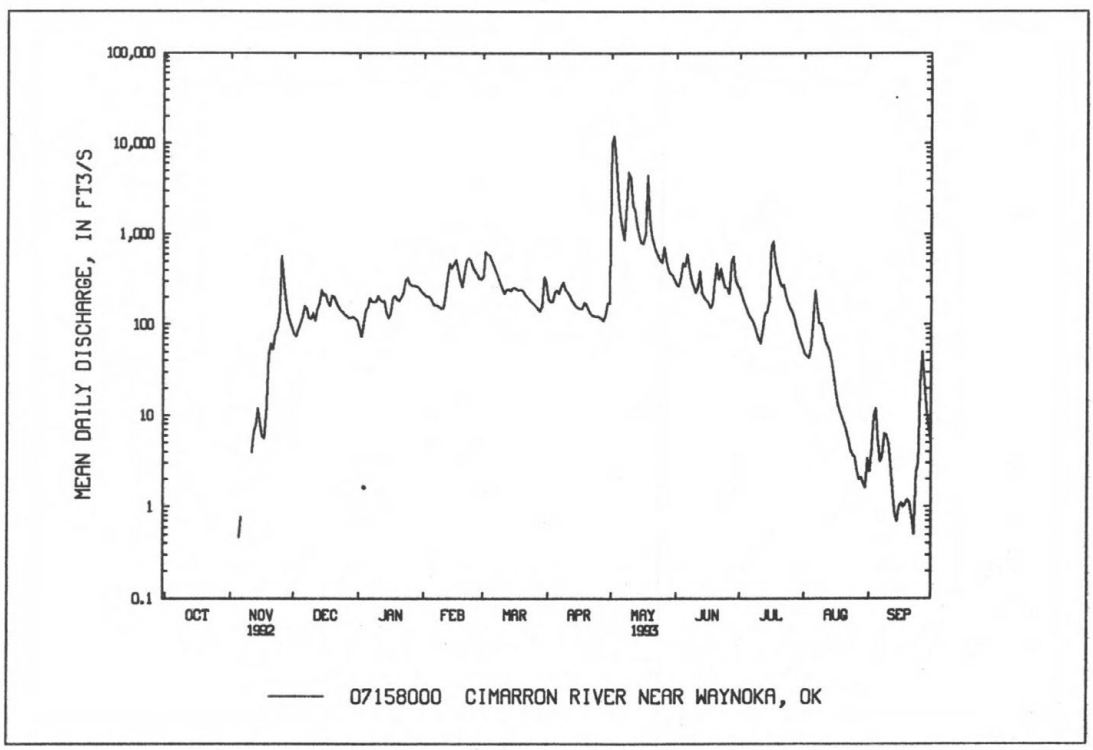
07158000 CIMARRON RIVER NEAR WAYNOKA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	225	119	112	125	180	240	363	828	617	350	228	262
MAX	2644	587	493	290	1011	2196	2944	5673	3674	3826	2507	1475
(WY)	1942	1947	1974	1974	1949	1973	1942	1957	1957	1950	1950	1973
MIN	.000	.000	1.98	2.65	30.1	12.6	6.00	10.6	.60	.008	.000	.000
(WY)	1940	1981	1955	1940	1957	1955	1956	1967	1966	1974	1970	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1938-93	
ANNUAL TOTAL	30166.42		119354.94			
ANNUAL MEAN	82.4		327		305	
HIGHEST ANNUAL MEAN					1081	1957
LOWEST ANNUAL MEAN					43.2	1991
HIGHEST DAILY MEAN	764	Jul 1	12000	May 2	51600	May 16 1957
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	most years
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 15	.00	Oct 1	.00	Sep 3 1939
INSTANTANEOUS PEAK FLOW			15400	May 1	[a]94500	May 16 1957
INSTANTANEOUS PEAK STAGE			9.93	May 1	15.10	May 16 1957
ANNUAL RUNOFF (AC-FT)	59840		236700		220800	
10 PERCENT EXCEEDS	180		509		464	
50 PERCENT EXCEEDS	63		156		85	
90 PERCENT EXCEEDS	.00		.00		.30	

[a]From rating curve extended above 45,000 ft^3/s on basis of contracted-opening measurement of peak flow.



ARKANSAS RIVER BASIN

07159100 CIMARRON RIVER NEAR DOVER, OK

LOCATION.--Lat 35°57'06" long 97°54'51", in SW 1/4 NE 1/4 sec.14, T.17 N., R.7 W., Kingfisher County, Hydrologic Unit 11050002, near right bank on downstream bridge on U.S. Highway 81, 1.0 mi downstream from Turkey Creek, 2.0 mi south of Dover, 2.5 mi upstream from Kingfisher Creek, and at mile 160.6.

DRAINAGE AREA.--15,713 mi^2, of which 4,926 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 999.19 ft above sea level.

REMARKS.--Records fair. Several unpublished observations of water temperature, specific conductance, and pH were made during the year and are available at the District Office. U.S. Army Corps of Engineers' telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 25	1900	19,100	17.77	May 10	0700	63,500	22.49
Dec. 15	0400	14,900	17.07	May 20	0300	22,900	18.31
May 3	0800	47,000	21.95				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	73	637	315	460	712	3480	1400	2050	1290	271	128
2	73	72	550	321	439	824	1660	21700	1800	1060	256	137
3	71	74	495	360	421	1090	1170	40800	1630	1080	248	149
4	71	76	453	421	1360	2800	1090	18600	1640	960	237	151
5	70	77	432	382	2140	1940	1320	9470	2030	832	235	175
6	67	76	437	359	1040	1520	1220	6160	1950	748	344	179
7	65	75	457	354	675	1340	1280	4250	1720	737	1280	161
8	65	76	463	346	542	1210	1120	14100	1780	5450	756	179
9	70	77	835	1350	476	1100	1050	36400	1640	4340	493	178
10	69	75	1820	2840	456	999	1110	51200	1650	2720	370	169
11	66	88	860	913	737	905	973	29400	1630	1660	303	158
12	65	130	607	766	696	845	873	18300	1480	1760	270	155
13	64	123	590	938	587	803	800	13000	1340	3850	250	152
14	60	109	6980	785	657	786	1150	8420	1420	6400	388	145
15	59	96	10900	598	809	819	4050	6320	1240	7280	303	139
16	58	91	2950	523	969	803	1520	4700	1130	4620	224	136
17	58	91	1290	477	854	776	1020	4200	1070	1760	197	133
18	60	92	928	513	773	757	958	9830	1020	1150	181	130
19	62	291	746	543	671	793	830	16200	1660	1250	165	128
20	62	1010	635	568	1750	811	739	16400	2330	909	155	124
21	63	612	605	864	6050	784	688	6030	2300	753	148	123
22	63	1180	562	1300	5170	824	636	4120	1880	645	139	e110
23	62	1910	499	1310	2780	937	592	3380	1420	565	130	e105
24	60	1090	455	1360	1390	813	570	2940	1330	514	127	e100
25	60	13800	420	1960	1090	737	548	2630	1300	479	120	145
26	60	13600	398	1070	957	675	519	2470	1100	423	116	146
27	59	7860	415	782	822	637	489	2750	1060	381	111	135
28	62	2120	358	696	762	600	494	2740	1080	350	109	145
29	79	1080	338	629	---	578	3600	2250	2020	328	108	147
30	81	795	326	536	---	776	3170	2110	2270	311	102	136
31	78	---	323	485	---	2280	---	2110	---	291	102	---
TOTAL	2039	46919	37764	24664	35533	31274	38719	364380	47970	54896	8238	4298
MEAN	65.8	1564	1218	796	1269	1009	1291	11750	1599	1771	266	143
MAX	81	13800	10900	2840	6050	2800	4050	51200	2330	7280	1280	179
MIN	58	72	323	315	421	578	489	1400	1020	291	102	100
AC-FT	4040	93060	74900	48920	70480	62030	76800	722700	95150	108900	16340	8530

e Estimated

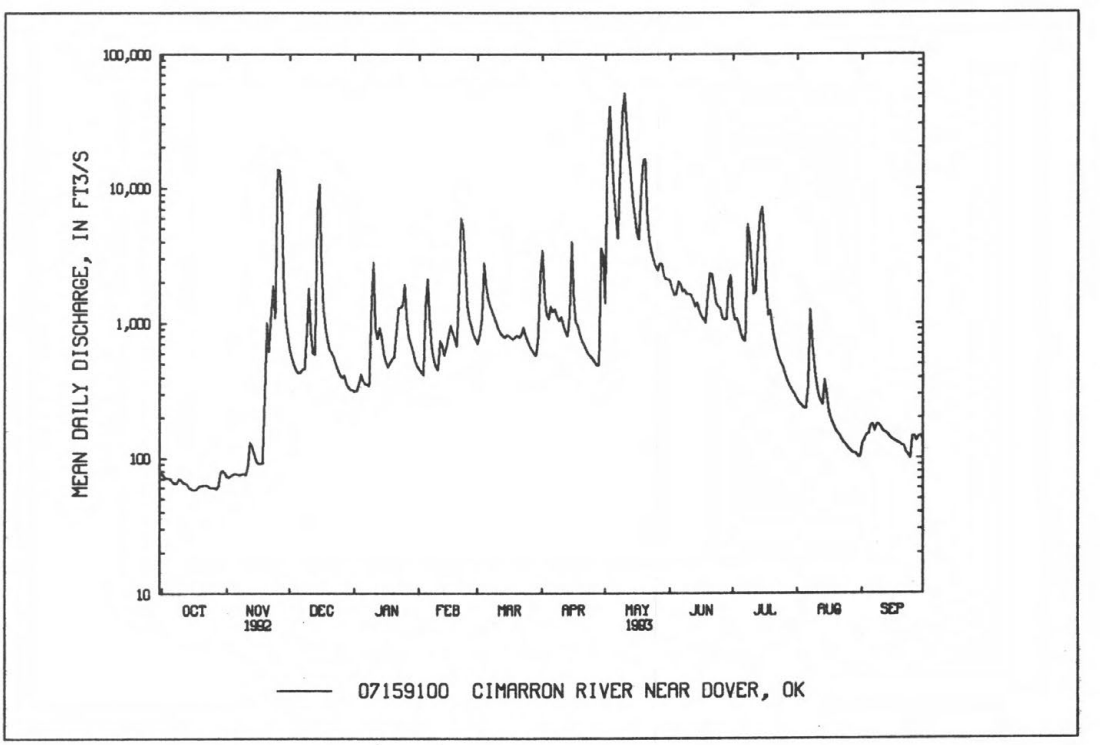
07159100 CIMARRON RIVER NEAR DOVER, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	894	753	396	361	531	1109	939	2580	1379	548	421	598
MAX	9071	3381	1218	1068	2410	4283	4218	11750	3795	2002	1489	1996
(WY)	1987	1975	1993	1988	1987	1987	1988	1993	1975	1987	1989	1974
MIN	40.2	45.1	70.2	61.8	75.6	77.4	60.7	173	207	45.3	29.5	13.8
(WY)	1985	1985	1977	1977	1981	1977	1981	1992	1984	1974	1984	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1974-93	
ANNUAL TOTAL	232184		696694			
ANNUAL MEAN	634		1909		878	
HIGHEST ANNUAL MEAN					2804	1987
LOWEST ANNUAL MEAN					265	1991
HIGHEST DAILY MEAN	13800	Nov 25	51200	May 10	80200	Oct 3 1986
LOWEST DAILY MEAN	58	Oct 16	58	Oct 16	4.3	Sep 23 1980
ANNUAL SEVEN-DAY MINIMUM	60	Oct 14	60	Oct 14	7.5	Sep 19 1980
INSTANTANEOUS PEAK FLOW			63500	May 10	123000	Oct 3 1986
INSTANTANEOUS PEAK STAGE			22.49	May 10	[a]26.10	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	460500		1382000		636000	
10 PERCENT EXCEEDS	1140		3530		1780	
50 PERCENT EXCEEDS	234		696		261	
90 PERCENT EXCEEDS	77		77		55	

[a]From high-water mark.



07159639 BLUFF CREEK ABOVE BETHANY AND WARR ACRES SEWAGE TREATMENT PLANT NEAR EDMOND, OK

LOCATION.--Lat 35°40'02", long 97°35'45", in NE 1/4, NW 1/4, sec 26, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at county road bridge 0.4 mi upstream of Deer Creek and 0.6 mi west of State Highway 74.

PERIOD OF RECORD.--November 1983 to September 1984; August 1993 to September 1993.

REMARKS.--Samples were collected monthly during summer months and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
AUG												
31...	1330	1028	80020	15	506	7.7	18.0	22.0	740	5.6	66	118
SEP												
22...	1400	1028	80020	9.1	698	8.2	32.5	24.5	735	7.2	90	210

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DISYSTON TOTAL (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALATHION, TOTAL (UG/L) (39530)	METHYL PARATHION, TOTAL (UG/L) (39600)	PARATHION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRITHION (UG/L) (39786)
AUG												
31...	0	97	0.02	<0.01	0.42	<0.01	<0.01	0.08	<0.01	<0.01	<0.01	<0.01
SEP												
22...	0	172	0.01	<0.01	0.15	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

07159643 DEER CREEK BELOW BLUFF CREEK AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°40'56", long 97°35'26", in NE 1/4, NW 1/4, sec 23, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, 0.3 mi upstream of County Road and 0.5 mi downstream of confluence of Bluff Creek.

PERIOD OF RECORD.--August 1993 to September 1993.

REMARKS.--Samples were collected monthly during summer months and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
AUG												
31...	1415	1028	80020	72	414	7.9	18.5	21.0	740	5.5	63	102
SEP												
22...	1300	1028	80020	35	977	8.0	33.5	24.5	735	6.2	77	290

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DISYSTON TOTAL (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALATHION, TOTAL (UG/L) (39530)	METHYL PARATHION, TOTAL (UG/L) (39600)	PARATHION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRITHION (UG/L) (39786)
AUG												
31...	0	84	0.02	<0.01	0.24	<0.01	<0.01	0.04	<0.01	<0.01	<0.01	<0.01
SEP												
22...	0	238	0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

07159650 DEER CREEK AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°41'24", long 97°35'06", in SW 1/4, NW 1/4, sec 13, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on State Highway 74, 0.4 mi south of Logan County line.

PERIOD OF RECORD.--August 1993 to September 1993.

REMARKS.--Samples were collected monthly during summer months and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
AUG												
31...	1530	1028	80020	73	485	7.7	19.5	21.5	739	6.5	76	110
SEP												
22...	1130	1028	80020	51	1000	7.8	32.0	24.0	735	6.3	78	242

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DISYSTON TOTAL (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALATHION, TOTAL (UG/L) (39530)	METHYL PARATHION, TOTAL (UG/L) (39600)	PARATHION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRITHION (UG/L) (39786)
AUG												
31...	0	90	--	--	--	--	--	--	--	--	--	--
SEP												
22...	0	198	0.02	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

07159690 CHISHOLM CREEK AT EDMOND, OK

LOCATION.--Lat 35°38'03", long 97°31'56", in SE 1/4, SE 1/4, sec 17, T.14 N., R.3 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on Western Avenue, 2.8 mi south of Logan County line.

PERIOD OF RECORD.--August 1993 to September 1993.

REMARKS.--Samples were collected monthly during summer months and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
AUG 31...	1045	1028	80020	10	509	7.8	18.0	23.0	740	4.7	56	148
SEP 21...	1215	1028	80020	4.0	236	7.7	32.5	23.0	736	4.2	51	92

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DISYSTON TOTAL (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALATHION, TOTAL (UG/L) (39530)	METHYL PARATHION, TOTAL (UG/L) (39600)	PARATHION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRITHION (UG/L) (39786)
AUG 31...	0	121	0.03	<0.01	0.10	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
SEP 21...	0	75	0.01	<0.01	0.10	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01

07159695 CHISHOLM CREEK NEAR EDMOND, OK

LOCATION.--Lat 35°43'32", long 97°31'37", in NW 1/4, NW 1/4, sec 4, T.14 N., R.3 W., Oklahoma County, Hydrologic Unit 11050002, at county road bridge 0.2 mi east of Western Avenue on the Logan County line.

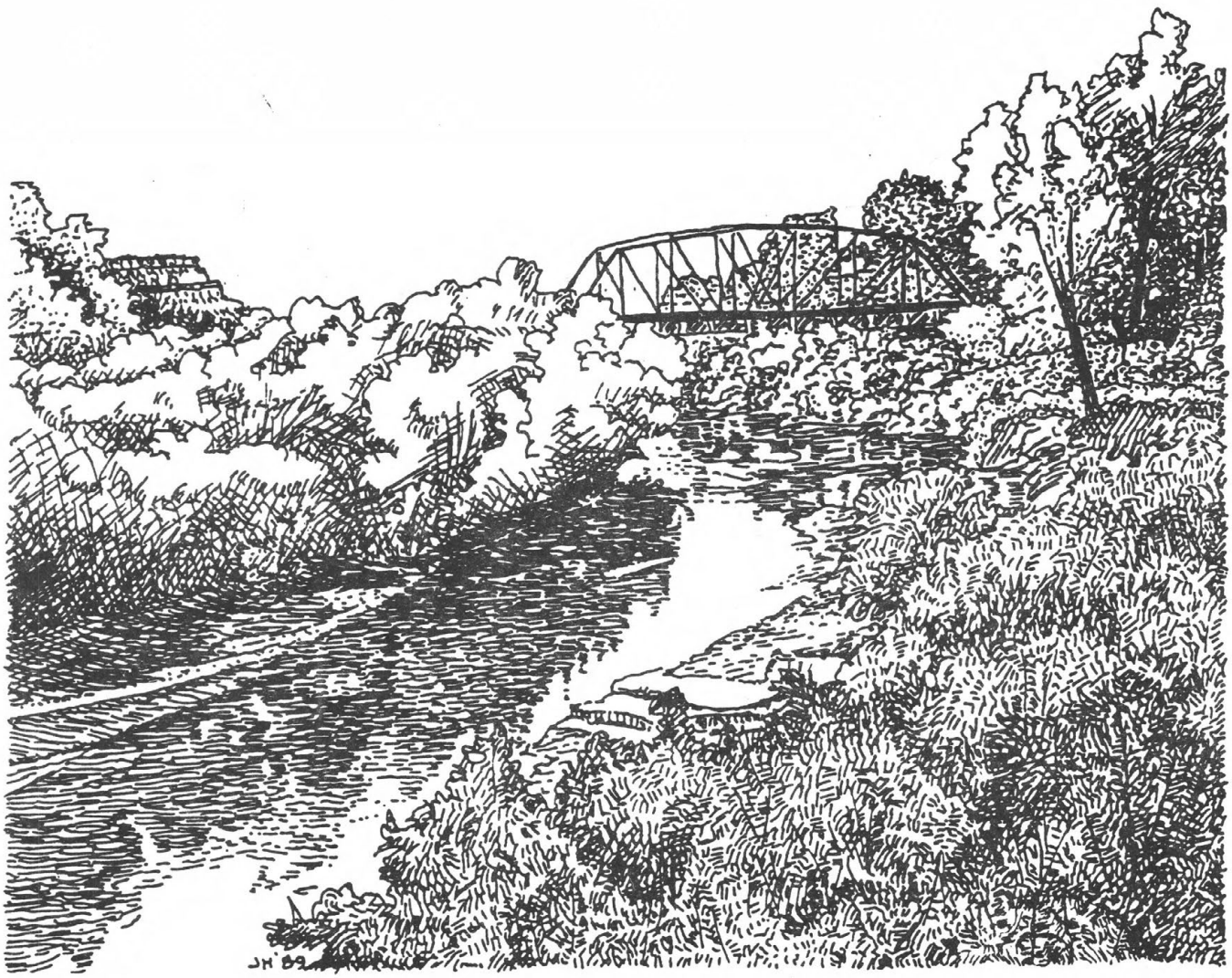
PERIOD OF RECORD.--August 1993 to September 1993.

REMARKS.--Samples were collected monthly during summer months and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
AUG												
31...	0900	1028	80020	26	981	7.9	17.0	24.0	741	5.6	69	157
SEP												
21...	1030	1028	80020	7.7	535	7.6	28.5	28.5	737	4.7	63	127

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DISYSTON TOTAL (UG/L) (39011)	ETHION, TOTAL (UG/L) (39398)	MALATHION, TOTAL (UG/L) (39530)	METHYL PARATHION, TOTAL (UG/L) (39600)	PARATHION, TOTAL (UG/L) (39540)	PHORATE TOTAL (UG/L) (39023)	TOTAL TRITHION (UG/L) (39786)
AUG												
31...	0	129	0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SEP												
21...	0	104	0.01	<0.01	0.10	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01



ARKANSAS RIVER BASIN

07159750 COTTONWOOD CREEK NEAR SEWARD, OK

LOCATION.--Lat 35°48'49", long 97°28'40", in SW 1/4 sec.36, T.16 N., R.3 W., Logan County, Hydrologic Unit 11050002, on downstream left bank, 1.2 mi north of Seward, 6.5 mi southwest of Guthrie, and at mile 16.2 on Broadway Road.

DRAINAGE AREA.--320 mi^2.

PERIOD OF RECORD.--March 1973 to September, 1982, November 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 936.49 ft sea level. March 1973 to September 1982 gage at site 0.9 mi upstream at datum 10 ft higher.

REMARKS.--Records fair. Low flow sustained by part of sewage effluent from Oklahoma City. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Apr. 29	2100	3,960	24.33	May 9	0100	46,100	32.74
May 2	2400	5,600	26.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY MEAN VALUES

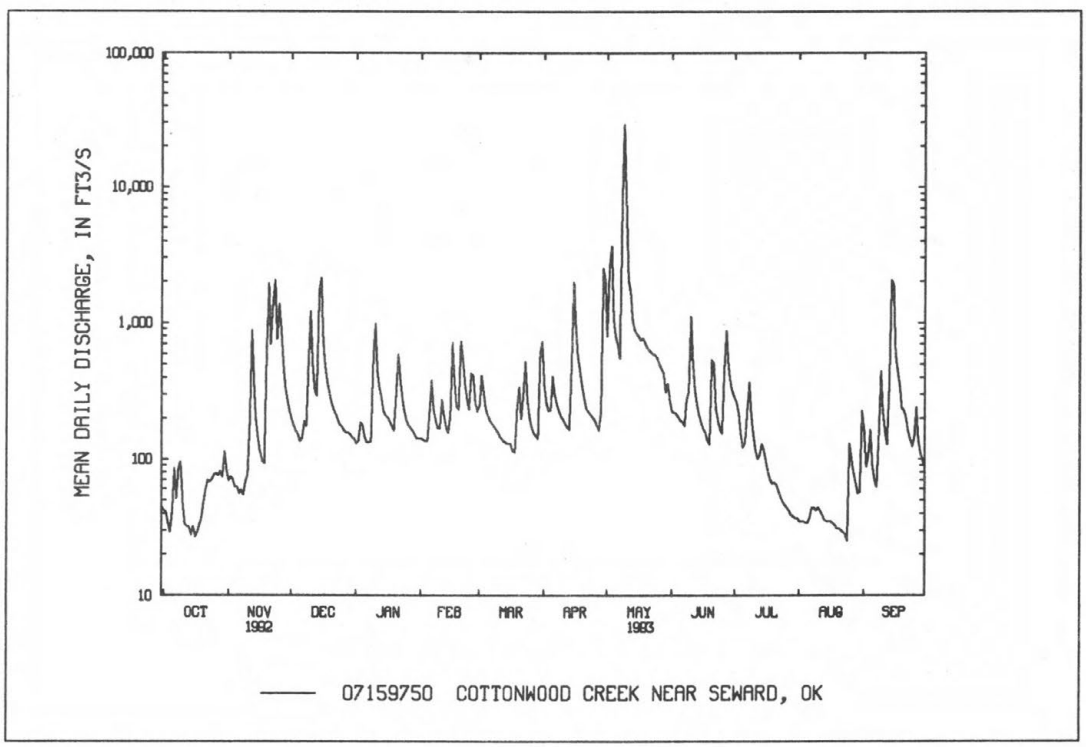
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	70	198	131	143	247	353	802	225	282	35	168
2	41	74	178	138	140	415	261	2620	222	262	35	88
3	34	71	163	187	136	303	229	3680	217	215	35	106
4	29	62	153	181	136	237	231	1080	205	153	34	167
5	42	62	136	148	222	211	411	794	194	124	34	90
6	86	56	143	134	383	194	301	697	189	133	37	70
7	51	59	189	134	235	184	254	556	180	227	44	62
8	86	55	176	136	194	175	229	7900	276	370	44	146
9	96	68	522	544	171	166	207	29300	315	208	42	448
10	48	77	1220	988	170	157	198	7280	1120	154	44	221
11	33	184	499	450	275	145	184	2040	508	118	42	160
12	32	887	327	341	213	140	173	1690	318	101	39	129
13	32	361	293	284	174	135	167	1070	252	107	36	342
14	28	196	1740	225	157	132	511	897	213	130	35	2060
15	32	142	2120	210	209	131	1990	835	187	117	35	1890
16	27	113	765	203	724	131	932	797	169	98	35	586
17	29	97	487	192	374	115	584	750	158	81	34	451
18	33	94	370	175	245	113	453	773	137	71	33	348
19	38	633	310	165	234	237	351	719	130	66	31	238
20	49	1950	261	306	738	342	283	667	538	67	31	231
21	60	703	234	591	560	199	238	635	512	65	30	204
22	70	1400	216	388	362	302	226	612	240	59	29	162
23	68	2060	198	283	276	528	215	595	194	53	28	141
24	71	755	180	227	233	270	205	584	168	49	25	126
25	77	1370	175	194	426	205	196	556	155	46	131	143
26	78	889	164	179	415	174	181	500	460	44	102	242
27	76	506	157	170	261	157	167	465	877	42	80	138
28	81	338	157	163	229	149	221	430	497	39	67	111
29	74	271	153	153	---	143	2510	311	363	38	56	98
30	114	227	145	142	---	601	2070	363	312	37	57	88
31	83	---	142	142	---	741	---	270	---	37	230	---
TOTAL	1740	13830	12171	7904	8035	7379	14531	70268	9531	3593	1570	9454
MEAN	56.1	461	393	255	287	238	484	2267	318	116	50.6	315
MAX	114	2060	2120	988	738	741	2510	29300	1120	370	230	2060
MIN	27	55	136	131	136	113	167	270	130	37	25	62
AC-FT	3450	27430	24140	15680	15940	14640	28820	139400	18900	7130	3110	18750

07159750 COTTONWOOD CREEK NEAR SEWARD, OK--Continued

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1993, BY WATER YEAR (WY)												
MEAN	79.3	192	117	91.6	119	233	181	603	317	100	63.8	79.9
MAX	267	1218	570	265	336	1591	803	2267	811	467	231	315
(WY)	1975	1975	1992	1975	1975	1990	1990	1993	1992	1975	1975	1993
MIN	12.0	15.2	17.6	17.6	22.7	19.8	22.1	42.5	24.9	18.2	8.58	17.4
(WY)	1977	1977	1977	1978	1977	1977	1978	1981	1976	1976	1976	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1974-93	
ANNUAL TOTAL	87751		160006			
ANNUAL MEAN	240		438		166	
HIGHEST ANNUAL MEAN					438	1993
LOWEST ANNUAL MEAN					42.9	1981
HIGHEST DAILY MEAN	2640	Jun 19	29300	May 9	29300	May 9 1993
LOWEST DAILY MEAN	22	May 9	25	Aug 24	6.1	[a]Aug 15 1976
ANNUAL SEVEN-DAY MINIMUM	30	Oct 11	30	Aug 18	6.7	Aug 11 1976
INSTANTANEOUS PEAK FLOW			46100	May 9	46100	May 9 1993
INSTANTANEOUS PEAK STAGE			32.74	May 9	32.74	May 9 1993
ANNUAL RUNOFF (AC-FT)	174100		317400		120400	
10 PERCENT EXCEEDS	612		745		337	
50 PERCENT EXCEEDS	107		184		47	
90 PERCENT EXCEEDS	52		42		17	

[a]Also occurred om Aug. 22, 23, 1976.



07160000 CIMARRON RIVER NEAR GUTHRIE, OK

LOCATION.--Lat 35°55'14", long 97°25'32", near center of east line of sec.29, T.17 N., R.2 W, Logan County, Hydrologic Unit 11050002, on downstream side left bank of State Highway 77 bridge, 1.6 mi downstream from Cottonwood Creek, 2.5 mi north of Guthrie, 6.1 mi upstream from Skeleton Creek, and at mile 121.4.

DRAINAGE AREA.--16,892 mi^2, of which 4,926 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to September 1976, October 1983 to current year. Monthly discharge only for some periods, published in WSP's 1311 and 1731.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 896.50 ft above sea level (U.S. Army Corps of Engineers' bench mark). Prior to Mar. 19, 1939, nonrecording gage at railway bridge 1,200 ft upstream at datum 4.00 ft higher. From Mar. 19, 1939, to Sept. 21, 1967, the datum was 4.00 ft higher, from Sept. 21, 1967, to Sept. 30, 1976, the datum was 2.00 ft higher at recording gage 125 ft upstream from railway bridge. From Sept. 14, 1967, to Sept. 30, 1976, supplementary water-stage recorder at present site and datum.

REMARKS.--Records fair. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s.

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 26	0700	20,400	10.23	May 10	0100	93,100	17.73
Dec. 15	1600	20,500	10.26	May 20	1600	28,100	10.43
Apr. 30	0900	23,700	10.84	June 27	1300	16,600	8.20
May 3	2100	57,000	14.29				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	243	1670	1030	1380	1830	4230	6790	3320	3800	e445	478
2	192	222	1460	1000	1330	2030	3670	13100	3060	2530	e420	329
3	190	214	1300	1040	1300	2210	2160	44000	2760	1990	e385	366
4	185	211	1190	1230	1270	2420	1930	39600	2560	1700	e365	420
5	181	210	1100	1320	2770	3520	2250	23100	2440	1440	e350	398
6	196	210	1060	1160	4090	2420	2310	16400	2810	1340	e700	348
7	208	213	1070	1070	2520	2030	1950	12400	2680	1250	e820	335
8	212	199	1130	1050	1790	1850	1890	26100	2510	1600	1600	348
9	204	199	1700	1770	1530	1720	1670	79800	2780	6990	1280	770
10	202	208	5140	8010	1420	1600	1560	90200	3290	4970	800	629
11	189	517	4250	6170	1490	1490	1540	51400	3660	3370	e620	472
12	181	1720	2130	2990	1920	1380	1400	31700	2770	2140	e520	380
13	176	1300	1740	2410	1750	1310	1290	25000	2350	2430	e455	1710
14	166	684	6140	2470	1530	1250	1810	18200	2090	5170	e420	6540
15	168	489	18700	2080	1730	1230	9340	14100	2060	8910	e600	6110
16	167	395	11500	1800	2840	1280	9780	11700	1850	9260	e490	2420
17	164	341	5340	1690	2920	1270	3860	9980	1700	5790	e390	1480
18	165	314	3240	1580	2260	1250	2620	13000	1580	3010	356	1140
19	166	2070	2510	1600	2000	1280	2160	19800	1520	2210	330	794
20	166	8930	2020	1780	3100	1660	1750	25200	2180	2110	318	662
21	166	4690	1780	2650	6280	1520	1490	14700	4140	1640	301	616
22	165	5010	1680	3520	8220	1510	1330	8930	3250	1370	284	496
23	165	8680	1570	3270	5870	2120	1240	7170	2610	1160	271	438
24	165	4640	1420	2870	3770	1910	1170	6200	2150	1000	275	404
25	164	8300	1330	2750	2720	1570	1120	5500	4370	891	289	455
26	166	18800	1250	3150	2670	1400	1070	4850	7140	e770	314	586
27	165	11100	1180	2190	2150	1290	993	4440	12400	e690	271	591
28	168	6290	1140	1850	1890	1210	1120	4620	5940	e630	258	483
29	232	2950	1120	1720	---	1150	7900	4280	3950	e575	247	406
30	251	2020	1120	1590	---	1770	19800	3750	4350	e530	243	375
31	261	---	1100	1440	---	3360	---	3600	---	e490	297	---
TOTAL	5741	91369	89080	70250	74510	53840	96403	639610	100270	81756	14714	30979
MEAN	185	3046	2874	2266	2661	1737	3213	20630	3342	2637	475	1033
MAX	261	18800	18700	8010	8220	3520	19800	90200	12400	9260	1600	6540
MIN	164	199	1060	1000	1270	1150	993	3600	1520	490	243	329
AC-FT	11390	181200	176700	139300	147800	106800	191200	1269000	198900	162200	29190	61450

e Estimated

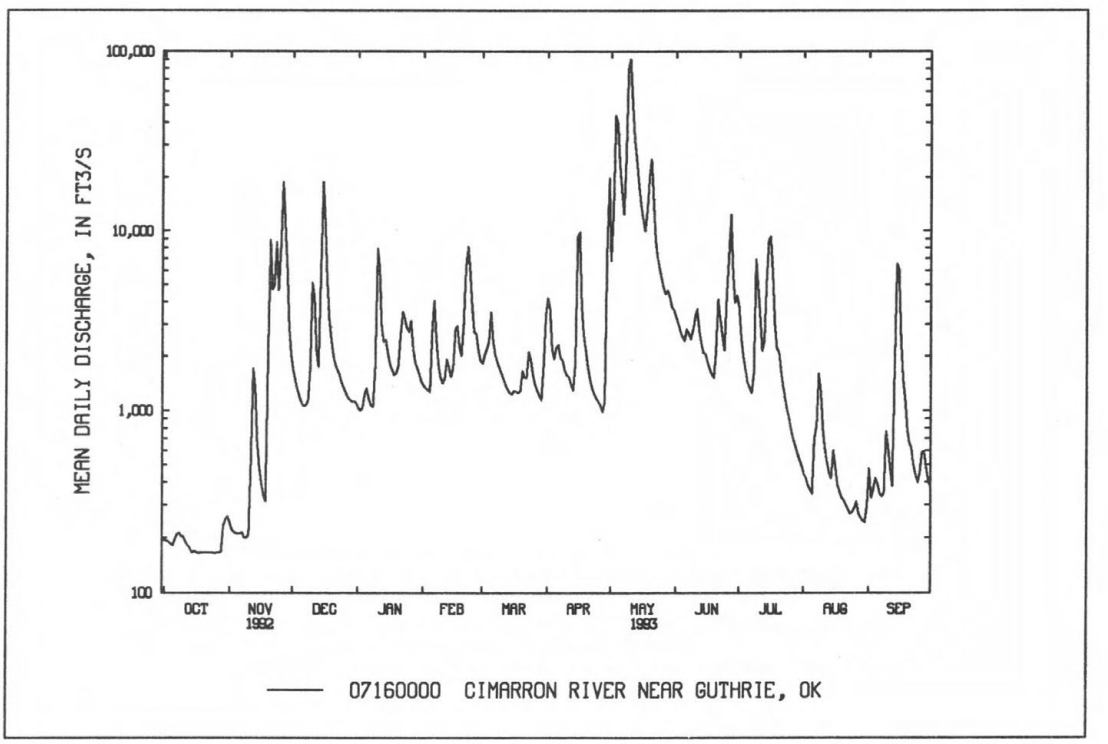
07160000 CIMARRON RIVER NEAR GUTHRIE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1116	680	439	426	599	1027	1381	2594	1988	870	564	881
MAX	13800	6145	2874	2266	4063	6337	8184	20630	11780	4220	4100	3988
(WY)	1987	1975	1993	1993	1987	1987	1942	1993	1957	1950	1950	1989
MIN	.79	.70	1.39	6.38	21.7	24.7	66.5	63.0	58.6	9.58	26.1	8.03
(WY)	1953	1955	1955	1940	1957	1955	1956	1971	1953	1954	1943	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1938-93	
ANNUAL TOTAL	473485		1348522			
ANNUAL MEAN	1294		3695		1042	
HIGHEST ANNUAL MEAN					3901	1987
LOWEST ANNUAL MEAN					192	1953
HIGHEST DAILY MEAN	18800	Nov 26	90200	May 10	112000	May 17 1957
LOWEST DAILY MEAN	164	Oct 17	164	Oct 17	[a].30	Oct 20 1939
ANNUAL SEVEN-DAY MINIMUM	165	Oct 21	165	Oct 21	.39	Oct 19 1939
INSTANTANEOUS PEAK FLOW			93100	May 10	158000	May 17 1957
INSTANTANEOUS PEAK STAGE			17.73	May 10	18.58	May 17 1957
ANNUAL RUNOFF (AC-FT)	939200		2675000		755000	
10 PERCENT EXCEEDS	2950		7940		2030	
50 PERCENT EXCEEDS	521		1600		303	
90 PERCENT EXCEEDS	208		219		48	

[a]Oct. 20-22, Nov. 2, 1939.



07160500 SKELETON CREEK NEAR LOVELL, OK

LOCATION.--Lat 36°03'36", long 97°35'05", in NW 1/4 SW 1/4 sec.1, T.18 N., R.4 W., Logan County, Hydrologic Unit 11050002, near right bank on downstream side of pier of bridge on State Highway 74, 2 mi upstream from Otter Creek, 2.8 mi east of Lovell, and at mile 14.6.

DRAINAGE AREA.--410 mi^2.

PERIOD OF RECORD.--October 1949 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 909.76 ft above sea level (Oklahoma State Highway Department datum). Prior to Dec. 5, 1949, nonrecording gage at site 60 ft downstream at datum 4.70 ft higher. Prior to Oct. 1, 1979, gage at present site and datum 5.00 ft higher.

REMARKS.--Records poor.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Jan. 10	0500	2,610	14.13	May 9	1000	30,300	35.47
Apr. 15	1830	2,400	13.48	May 18	2130	3,160	16.22
Apr. 29	0800	5,600	21.17	June 25	0100	6,030	21.88
May 3	1300	12,900	29.58				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e22	e56	e175	e120	143	168	201	479	165	181	e31	e170
2	e20	e60	e150	e130	143	249	130	3420	141	139	e31	e70
3	e18	e58	e130	e180	145	313	115	10300	138	112	e30	e80
4	e17	e52	e120	e180	153	218	251	2480	342	95	e30	e250
5	e36	e52	e110	e130	431	176	677	456	197	84	e30	e90
6	e90	e48	e130	e120	274	162	285	325	143	87	454	e60
7	e45	e52	e190	e117	206	149	187	279	123	88	203	e54
8	e88	e48	e160	e120	167	138	163	4660	113	972	80	e100
9	e98	e60	e540	503	152	135	138	25000	158	475	52	e600
10	e38	e70	e1020	2000	157	129	122	18700	214	172	46	e200
11	e30	e210	e450	542	237	119	110	4750	309	107	e38	e100
12	e35	e880	e300	414	236	114	100	2020	136	88	35	e80
13	e28	e300	e260	658	177	116	88	1040	103	192	e32	e300
14	e25	e190	e1750	403	149	116	569	674	84	122	e31	e2000
15	e29	e140	e2200	278	185	114	2140	537	74	500	e31	e700
16	e24	e110	e700	247	308	114	903	451	70	244	e30	e350
17	e26	e92	e450	239	235	111	384	416	70	122	e29	e250
18	e28	e80	e340	226	170	110	714	2610	65	87	e28	e180
19	e33	e400	e270	192	206	163	307	1910	196	77	e28	e150
20	e36	e1900	e240	262	613	166	184	535	213	67	e27	e130
21	e34	e520	e210	709	1450	131	136	390	98	62	e26	e100
22	27	e1600	190	1080	686	150	121	336	67	56	e25	e90
23	e30	e2000	173	620	294	278	112	307	55	55	e24	e80
24	e32	e780	e170	337	214	178	108	284	706	48	e22	e70
25	e33	e1350	e160	230	211	138	105	256	2430	e40	e200	e90
26	e35	e600	e150	201	204	126	96	235	1780	e38	e100	e300
27	e34	e390	e148	185	167	115	88	216	1460	e35	e60	e130
28	e35	e300	146	179	160	107	250	199	707	e34	e54	e90
29	e30	e240	e140	164	---	104	4290	187	943	e33	e47	e80
30	e120	e210	e130	149	---	183	1730	188	324	e30	e44	e70
31	e76	---	e128	142	---	379	---	172	---	e32	e350	---
TOTAL	1252	12848	11430	11057	7873	4969	14804	83812	11624	4474	2248	7014
MEAN	40.4	428	369	357	281	160	493	2704	387	144	72.5	234
MAX	120	2000	2200	2000	1450	379	4290	25000	2430	972	454	2000
MIN	17	48	110	117	143	104	88	172	55	30	22	54
AC-FT	2480	25480	22670	21930	15620	9860	29360	166200	23060	8870	4460	13910

e Estimated

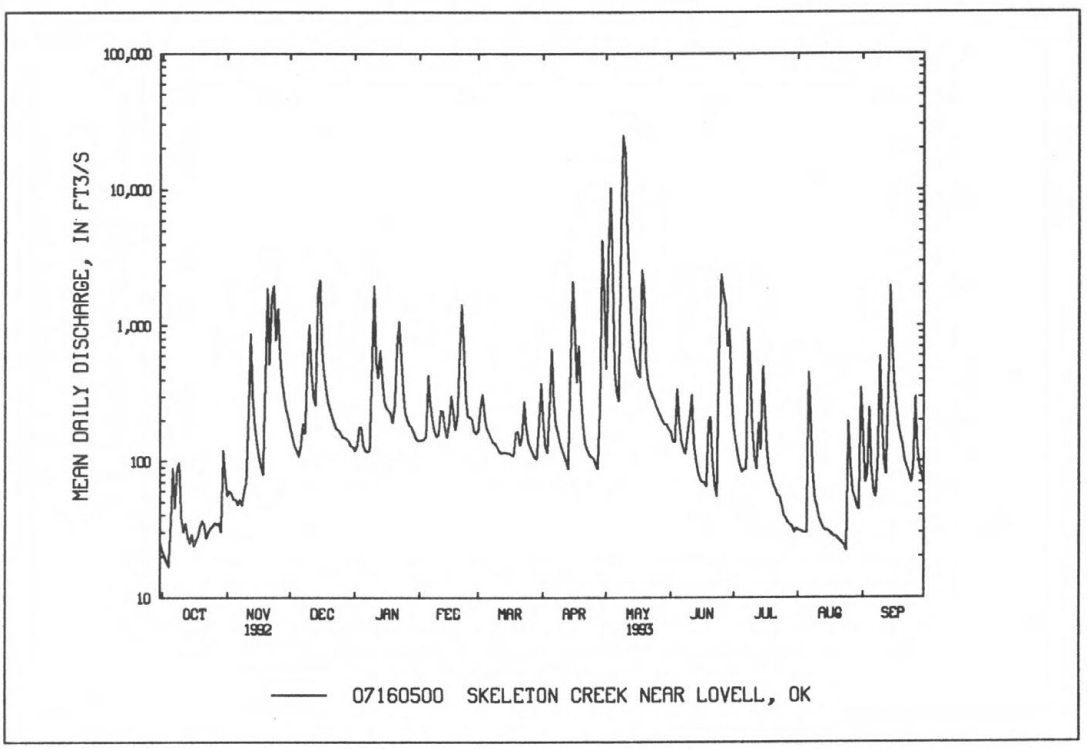
07160500 SKELETON CREEK NEAR LOVELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	104	51.9	50.0	72.4	130	132	396	225	104	74.1	137
MAX	2450	1285	369	357	667	811	847	2850	1390	739	966	1046
(WY)	1987	1975	1993	1993	1975	1974	1988	1957	1957	1950	1992	1961
MIN	.40	1.34	2.13	3.23	3.81	2.55	2.80	4.72	8.41	.34	3.45	.40
(WY)	1953	1955	1955	1953	1953	1955	1955	1971	1959	1954	1971	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1950-93	
ANNUAL TOTAL	86017.4		173405			
ANNUAL MEAN	235		475		138	
HIGHEST ANNUAL MEAN					501	1987
LOWEST ANNUAL MEAN					16.9	1953
HIGHEST DAILY MEAN	8470	Aug 12	25000	May 9	39200	May 16 1957
LOWEST DAILY MEAN	6.8	May 6	17	Oct 4	.00	[a]Sep 23 1953
ANNUAL SEVEN-DAY MINIMUM	8.9	May 4	26	Aug 18	.00	Sep 23 1953
INSTANTANEOUS PEAK FLOW			30300	May 9	[b]75200	May 16 1957
INSTANTANEOUS PEAK STAGE			35.47	May 9	35.47	May 9 1993
ANNUAL RUNOFF (AC-FT)	170600		343900		99900	
10 PERCENT EXCEEDS	437		706		181	
50 PERCENT EXCEEDS	48		150		15	
90 PERCENT EXCEEDS	23		33		3.8	

[a]No flow at times in 1953, 54, 56.
[b]Gage height 34.58 ft.



07161000 CIMARRON RIVER AT PERKINS, OK

(National stream-quality accounting network station)

LOCATION.--Lat 35°57'27" long 97°01'54", in SW 1/4 SW 1/4 sec.7, T.17 N., R.3 E., Payne County, Hydrologic Unit 11050003, on right bank at downstream side of bridge on U.S. Highway 177, 1.0 mi south of Perkins, 1.5 mi upstream from Dugout Creek, 4.0 mi downstream from Wildhorse Creek, and at mile 87.3.

DRAINAGE AREA.--17,852 mi^2 of which 4,926 mi^2 is probably noncontributing.

PERIOD OF RECORD.--May 1950, October 1952 to September 1963, June 1965 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1952 to September 1963, June 1965 to January 1982.

WATER TEMPERATURE: October 1962 to September 1963, June 1965 to January 1982.

INSTRUMENTATION.--Water-quality monitor from April 1969 to September 1980.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUN										
28...	1215	25.0	737	1028	1028	9700	12.48	830	5.0	7.8
28...	1218	25.0	737	1028	1028	9700	12.48	834	5.1	7.8
28...	1221	25.0	737	1028	1028	9700	12.48	834	5.1	7.8
28...	1224	25.0	737	1028	1028	9700	12.48	834	5.1	7.8
28...	1227	25.0	737	1028	1028	9700	12.48	845	5.1	7.8
28...	1230	25.0	737	1028	1028	9700	12.48	848	5.0	7.8
28...	1233	25.0	737	1028	1028	9700	12.48	845	5.0	7.8
28...	1236	25.0	737	1028	1028	9700	12.48	848	5.0	7.8
28...	1239	25.0	737	1028	1028	9700	12.48	850	5.0	7.8
28...	1242	25.0	737	1028	1028	9700	12.48	849	5.1	7.8
28...	1245	25.0	737	1028	1028	9700	12.48	846	5.0	7.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
20...	1130	1028	80020	238	4200	8.8	21.5	15.0	13	742	12.3	127
MAR												
03...	1030	1028	80020	3280	4720	8.3	4.5	6.0	56	735	11.3	96
APR												
06...	1000	1028	80020	4140	3330	8.2	9.5	9.5	130	740	10.6	97
JUN												
28...	1200	1028	80020	9700	867	7.7	29.5	25.0	520	737	4.9	61
AUG												
18...	1045	1028	80020	479	7890	8.2	39.5	29.0	150	739	5.8	80

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT												
20...	K16	38	480	230	110	49	750	77	15	5.2	246	27
MAR												
03...	130	230	620	360	150	60	740	72	13	5.1	323	0
APR												
06...	3100	670	490	260	120	47	520	68	10	27	283	0
JUN												
28...	5600	2700	150	58	42	12	110	60	4	6.0	118	0
AUG												
18...	25	25	630	460	150	61	1500	84	26	7.5	205	0

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
OCT												
20...	246	290	1100	0.50	2.7	2580	2460	3.51	1660	--	--	--
MAR												
03...	278	400	1100	0.50	12	2720	2640	3.70	24100	1.68	1.68	7.4
APR												
06...	232	310	820	0.40	10	1970	2000	2.68	22000	1.18	1.18	5.2
JUN												
28...	97	88	140	0.30	8.9	499	469	0.68	13100	0.600	0.600	2.7
AUG												
18...	168	500	2000	0.50	10	4620	4330	6.28	5980	--	--	--

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)
OCT												
20...	<0.010	0.010	0.03	<0.050	<0.050	0.040	0.020	0.05	0.03	1.4	1.4	1.4
MAR												
03...	--	0.020	0.07	--	1.70	--	0.040	--	0.05	0.56	0.60	2.3
APR												
06...	--	0.020	0.07	--	1.20	--	0.040	--	0.05	0.66	0.70	1.9
JUN												
28...	--	0.020	0.07	--	0.620	--	0.060	--	0.08	1.5	1.6	2.2
AUG												
18...	--	<0.010	--	--	<0.050	--	0.030	--	0.04	0.67	0.70	0.70

DATE	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	IRON, DISSOLVED (UG/L AS FE) (01046)
OCT											
20...	0.320	0.40	0.090	0.130	0.080	0.25	0.19	<10	200	<1	<10
MAR											
03...	0.200	--	0.100	--	0.100	0.31	--	<10	200	<1	<10
APR											
06...	0.130	--	0.100	--	0.070	0.21	--	--	--	--	--
JUN											
28...	0.610	--	0.160	--	0.130	0.40	--	10	88	<3	9
AUG											
18...	0.130	--	0.090	--	0.030	0.09	--	80	400	1	30

07161000 CIMARRON RIVER AT PERKINS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
20...	30	30	4	1	<1	<1.0	1600	28	36	23	77
MAR											
03...	30	10	2	1	2	<1.0	2000	18	154	1360	82
APR											
06...	--	--	--	--	--	--	--	--	647	7240	94
JUN											
28...	7	1	<10	2	<1	<1.0	420	11	1740	45600	95
AUG											
18...	30	70	2	1	2	<1.0	1900	47	1110	1440	100

ARKANSAS RIVER BASIN

07161450 CIMARRON RIVER NEAR RIPLEY, OK

LOCATION.--Lat 35°59'09", long 96°54'43", in SE 1/4 SE 1/4 sec.31, T.18 N., R.4 E., Payne County, Hydrologic Unit 11050003, on right bank at downstream side of bridge on State Highway 33, 2.2 mi upstream from Stillwater Creek, 2.5 mi south of Ripley, 2.8 mi downstream from Sand Creek, 7.0 mi east of Perkins, and at mile 79.2.

DRAINAGE AREA.--17,979 mi^2 of which 4,926 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 795.86 ft above sea level.

REMARKS.--Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 16,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 26	1800	21,500	17.49	May 4	0900	65,700	22.29
Dec. 15	2000	20,500	17.18	May 10	0600	141,000	28.36
Apr. 16	1100	17,000	16.63	May 21	0800	27,400	18.11
Apr. 29	0700	34,500	19.57	June 27	0200	19,600	16.51

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	394	2880	1740	1880	2560	4390	18400	4110	4800	689	416
2	309	342	2410	1680	1810	2760	4710	19800	3820	3770	664	552
3	306	297	2090	1680	1780	2880	3850	41900	3760	2760	637	590
4	303	265	1880	1950	1760	3000	3540	55600	3370	2230	627	524
5	292	254	1730	2170	1780	3030	5340	20800	3160	1940	638	506
6	278	251	1630	2180	3820	3780	4250	15000	3080	1820	673	554
7	279	259	1580	1860	4810	2820	3220	11200	3300	1710	882	488
8	329	249	1570	1740	3110	2460	2630	24900	3210	1510	1090	533
9	308	242	3610	3310	2330	2240	2410	102000	3100	3300	1630	494
10	291	248	6350	9070	2310	2080	2140	137000	4820	6790	1600	623
11	285	534	7740	11300	2440	1910	1980	99200	4350	4500	1140	778
12	276	3180	4630	7030	2340	1810	1910	43500	4320	e3400	924	586
13	260	2090	3090	4620	2670	1700	1750	30400	3220	3100	740	559
14	246	1650	9290	4000	2360	1600	2040	21700	2750	2880	e700	4250
15	235	928	18200	3550	2310	1540	8530	15900	2480	5080	e680	7130
16	226	663	16300	2850	3070	1540	15400	12800	2400	8980	e670	5610
17	223	531	8910	2450	4150	1540	9040	10700	2190	7380	e660	2730
18	222	450	6040	2280	3770	1530	6550	19000	2020	4690	654	1830
19	221	735	4750	2140	3240	1550	4770	20200	1920	2860	572	1470
20	226	6230	3830	3100	5290	1630	3340	20900	2050	2310	530	1350
21	231	10600	3170	3690	6970	1950	2610	22800	2800	2130	504	999
22	227	9930	2810	4860	10300	2130	2190	12100	4220	1720	474	903
23	228	10500	2620	6130	8960	2160	1970	9030	3340	1460	459	845
24	235	10300	2410	4760	6610	2660	1870	7660	2730	1260	443	744
25	240	8490	2270	3580	5580	2320	1750	6760	5640	1110	435	753
26	232	18200	2160	3350	3850	1860	1640	6060	10700	1000	424	775
27	221	15000	2010	3560	3370	1650	1540	5450	16900	928	450	812
28	216	9400	1900	2640	2790	1530	3750	5070	13000	871	436	897
29	381	6100	1840	2310	---	1450	27200	5390	6220	809	404	769
30	400	3780	1810	2160	---	2210	21800	4870	5160	763	388	685
31	335	---	1790	2020	---	3570	---	4370	---	719	413	---
TOTAL	8395	122092	133300	109760	105460	67450	158110	830460	134140	88580	21230	39755
MEAN	271	4070	4300	3541	3766	2176	5270	26790	4471	2857	685	1325
MAX	400	18200	18200	11300	10300	3780	27200	137000	16900	8980	1630	7130
MIN	216	242	1570	1680	1760	1450	1540	4370	1920	719	388	416
AC-FT	16650	242200	264400	217700	209200	133800	313600	1647000	266100	175700	42110	78850

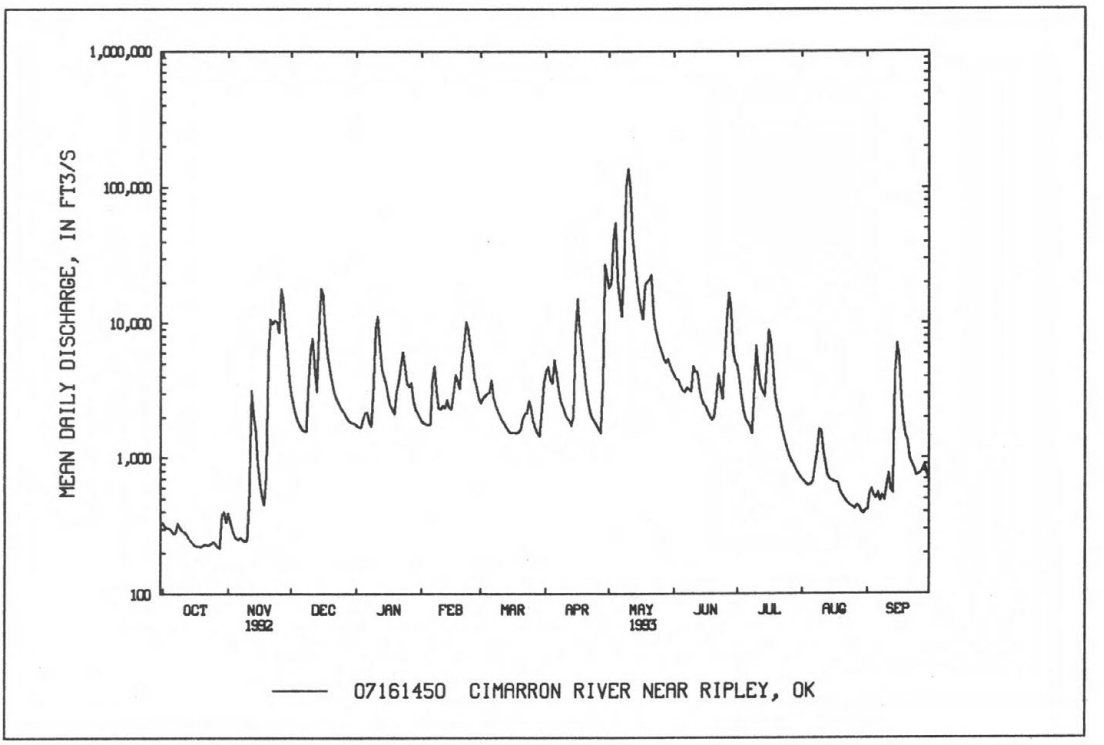
e Estimated

07161450 CIMARRON RIVER NEAR RIPLEY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	557	1278	1940	1599	1253	3575	3773	6157	3515	1480	1270	1897
MAX	939	4070	4300	3541	3766	9824	7456	26790	7176	2973	3587	4554
(WY)	1990	1993	1993	1993	1993	1990	1988	1993	1989	1989	1989	1989
MIN	193	238	233	287	244	234	402	593	967	251	209	263
(WY)	1991	1991	1991	1991	1991	1991	1991	1992	1991	1990	1991	1990

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1988-93	
ANNUAL TOTAL	757240		1818732			
ANNUAL MEAN	2069		4983		2363	
HIGHEST ANNUAL MEAN					4983	1993
LOWEST ANNUAL MEAN					437	1991
HIGHEST DAILY MEAN	18200	Nov 26	137000	May 10	137000	May 10 1993
LOWEST DAILY MEAN	179	May 9	216	Oct 28	84	Oct 23 1991
ANNUAL SEVEN-DAY MINIMUM	225	Oct 16	225	Oct 16	87	Oct 19 1991
INSTANTANEOUS PEAK FLOW			141000	May 10	141000	May 10 1993
INSTANTANEOUS PEAK STAGE			28.36	May 10	28.36	May 10 1993
ANNUAL RUNOFF (AC-FT)	1502000		3607000		1712000	
10 PERCENT EXCEEDS	6300		10300		5240	
50 PERCENT EXCEEDS	800		2210		733	
90 PERCENT EXCEEDS	293		335		225	



07163000 COUNCIL CREEK NEAR STILLWATER, OK

LOCATION.--Lat 36°06'58", long 96°52'03", in NE 1/4 NW 1/4 sec.22, T.19 N., R.4 E., Payne County, Hydrologic Unit 11050003, on right bank downstream side of bridge on State Highway 51, 10.0 mi east of Stillwater, and at mile 10.0.
DRAINAGE AREA.--31 mi^2.
PERIOD OF RECORD.--March 1934 to September 1993 (discontinued).
REVISED RECORDS.--WSP 1211: Drainage area.
GAGE.--Water-stage recorder. Datum of gage is 828.28 ft above sea level. Prior to May 4, 1934, nonrecording gage at same site and datum. Prior to Nov. 9, 1982, gage 200 ft upstream at 10.00 ft higher datum.
REMARKS.--Records good.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 27, 1912, reached a stage of 16.6 ft at gage, based on floodmarks set by local resident at site 900 ft downstream.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s.

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 11	2100	2,090	14.65	Apr. 4	1445	1,410	12.68
Nov. 22	1015	3,120	17.20	Apr. 28	2115	4,580	20.06
Nov. 24	2215	1,260	12.20	May 8	2030	6,610	23.45
Dec. 14	1015	2,420	15.51	May 11	1745	1,870	14.06

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.1	e14	7.5	10	47	25	34	8.3	1.5	.48	.31
2	1.1	2.4	e12	9.2	10	95	16	297	6.8	1.4	.42	.30
3	1.1	2.7	e10	27	10	39	13	106	6.2	1.2	.43	.42
4	1.1	2.7	9.8	52	10	24	506	40	5.3	1.1	.39	.36
5	1.2	2.6	11	20	37	20	119	23	5.0	1.1	18	.30
6	1.1	2.5	15	14	24	16	37	17	4.8	1.1	12	.24
7	1.3	2.6	28	13	15	15	24	15	4.6	1.1	1.2	.17
8	1.6	2.7	21	12	12	14	18	2170	6.0	1.2	.75	.14
9	e1.4	2.7	475	373	10	14	14	1520	16	1.0	.65	.17
10	e1.2	3.3	91	74	215	13	13	218	21	.93	.60	.14
11	e1.1	437	35	30	92	12	12	846	6.0	.92	.60	.11
12	e1.0	136	27	40	35	12	11	449	4.7	4.0	.45	.08
13	e.98	14	188	23	21	11	10	83	4.1	1.7	.39	.30
14	e.96	5.7	951	16	17	11	123	36	3.4	32	.36	8.0
15	e.92	4.1	107	15	64	12	143	25	3.3	7.3	.31	1.6
16	e.90	3.8	40	15	90	12	27	18	3.1	1.7	.31	.36
17	e.88	3.5	26	13	34	11	244	18	2.9	1.1	.27	.25
18	e.87	3.4	22	12	19	10	70	337	5.2	.93	.20	.21
19	e.86	279	19	21	118	13	29	31	14	.79	.21	.18
20	e.84	95	14	252	271	13	16	15	4.1	.76	.17	.17
21	e.82	21	13	107	98	13	12	11	2.9	.76	.20	.20
22	e.80	1150	13	35	30	75	11	8.7	2.5	.76	.19	.10
23	e.78	104	11	24	21	31	11	7.8	2.3	.75	.13	.04
24	e.76	253	9.4	17	18	18	11	7.0	2.0	.76	.10	.04
25	e.75	321	33	14	141	14	10	5.6	1.8	.69	.15	.21
26	e.74	e100	19	14	43	12	9.3	4.7	1.7	.65	.16	.22
27	e.72	e33	14	13	23	12	9.3	4.3	6.0	e.60	.12	.25
28	e.71	e25	12	13	20	12	1110	3.8	4.1	.56	.12	.22
29	8.0	e20	12	11	---	12	863	333	2.0	.60	.11	.15
30	5.3	e17	12	9.3	---	273	66	50	1.6	.60	.07	.12
31	2.5	---	10	10	---	99	---	13	---	.54	.20	---
TOTAL	43.49	3051.8	2274.2	1306.0	1508	985	3582.6	6746.9	161.7	70.10	39.74	15.36
MEAN	1.40	102	73.4	42.1	53.9	31.8	119	218	5.39	2.26	1.28	.51
MAX	8.0	1150	951	373	271	273	1110	2170	21	32	18	8.0
MIN	.71	2.1	9.4	7.5	10	10	9.3	3.8	1.6	.54	.07	.04
AC-FT	86	6050	4510	2590	2990	1950	7110	13380	321	139	79	30

e Estimated

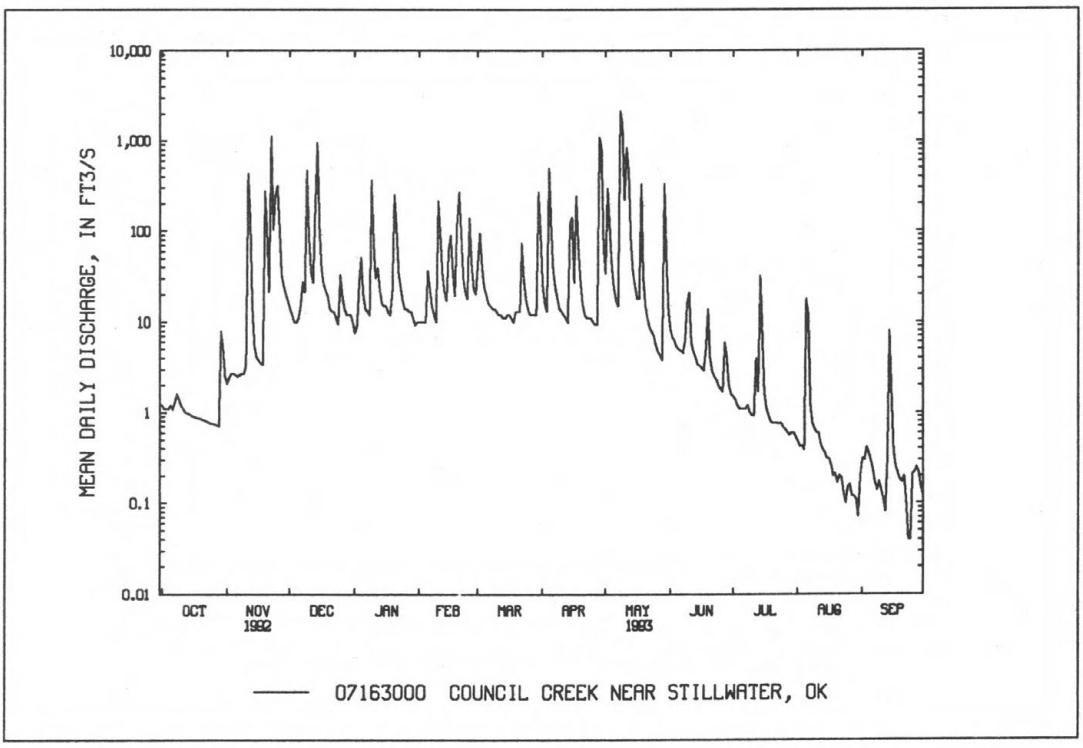
07163000 COUNCIL CREEK NEAR STILLWATER, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.7	10.8	6.16	4.64	9.17	15.0	19.0	28.8	18.9	8.24	6.13	10.7
MAX	429	186	73.4	42.1	122	133	158	218	95.8	110	129	113
(WY)	1960	1975	1993	1993	1985	1990	1942	1993	1957	1959	1942	1959
MIN	.000	.000	.000	.000	.000	.000	.000	.001	.037	.000	.000	.000
(WY)	1939	1937	1940	1940	1955	1940	1955	1940	1954	1934	1936	1939

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1934-93	
ANNUAL TOTAL	11451.49		19784.89			
ANNUAL MEAN	31.3		54.2		12.9	
HIGHEST ANNUAL MEAN					54.2	1993
LOWEST ANNUAL MEAN					.68	1956
HIGHEST DAILY MEAN	1210	Aug 5	2170	May 8	11000	Oct 2 1959
LOWEST DAILY MEAN	.71	Oct 28	.04	Sep 23-24	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.75	Oct 22	.12	Aug 24	.00	May 17 1934
INSTANTANEOUS PEAK FLOW			6610	May 8	[a]25000	Oct 2 1959
INSTANTANEOUS PEAK STAGE			23.45	May 8	[b]18.90	Oct 2 1959
ANNUAL RUNOFF (AC-FT)	22710		39240		9310	
10 PERCENT EXCEEDS	28		99		9.2	
50 PERCENT EXCEEDS	2.9		10		.50	
90 PERCENT EXCEEDS	1.1		.29		.00	

[a]From rating curve extended above 2,500 ft^3/s on basis of slope-area measurement.
[b]From floodmark, at former site and datum.



07164200 KEYSTONE LAKE NEAR SAND SPRINGS, OK

LOCATION.--Lat 36°09'05", long 96°15'05", in SW 1/4 SE 1/4 sec.4, T.19 N., R.10 E., Tulsa County, Hydrologic Unit 11160006, in stair tower of intake structure near left end of Keystone Dam on Arkansas River, 8.5 mi west of Sand Springs, and at mile 538.8.

DRAINAGE AREA.--74,506 mi^2, of which 12,541 mi^2 is probably noncontributing.

PERIOD OF RECORD.--September 1964 to September 1993 (discontinued). Prior to October 1970, published as Keystone Reservoir near Sand Springs.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Nov. 1, 1964, nonrecording gage nearby at same datum.

REMARKS.--Reservoir is formed by rolled-fill earth dam. Spillway is concrete ogee-type weir controlled by 18 40-foot taintor gates. Outlet works consist of nine sluices. Regulated storage began Sept. 11, 1964; power pool was first filled Nov. 20, 1964. Capacity, 1,738,000 acre-ft, at elevation 754.0 ft, top of flood control pool, 557,600 acre-ft, at elevation 723.0 ft, top of power pool, 260,900 acre-ft, at elevation 706.0 ft, minimum power pool. Figures given herein represent total contents. Reservoir is designed for flood control, power development, and conservation. Revised capacity table, based on survey in 1977, used since Oct. 1, 1983.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,886,000 acre-ft, Nov. 6, 1974, elevation, 754.86 ft; maximum elevation, 756.49 ft, May 14, 1993; minimum since power pool was first filled, 297,800 acre-ft, Jan. 19, 1965, elevation, 705.07 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,876,000 acre-ft, May 14, elevation 756.49 ft; minimum, 535,800 acre-ft, Sept. 23, elevation, 722.06 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

720	490,500	745	1,296,000
725	606,700	750	1,530,000
730	745,800	755	1,793,000
735	907,200	759	2,055,000
740	1,088,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

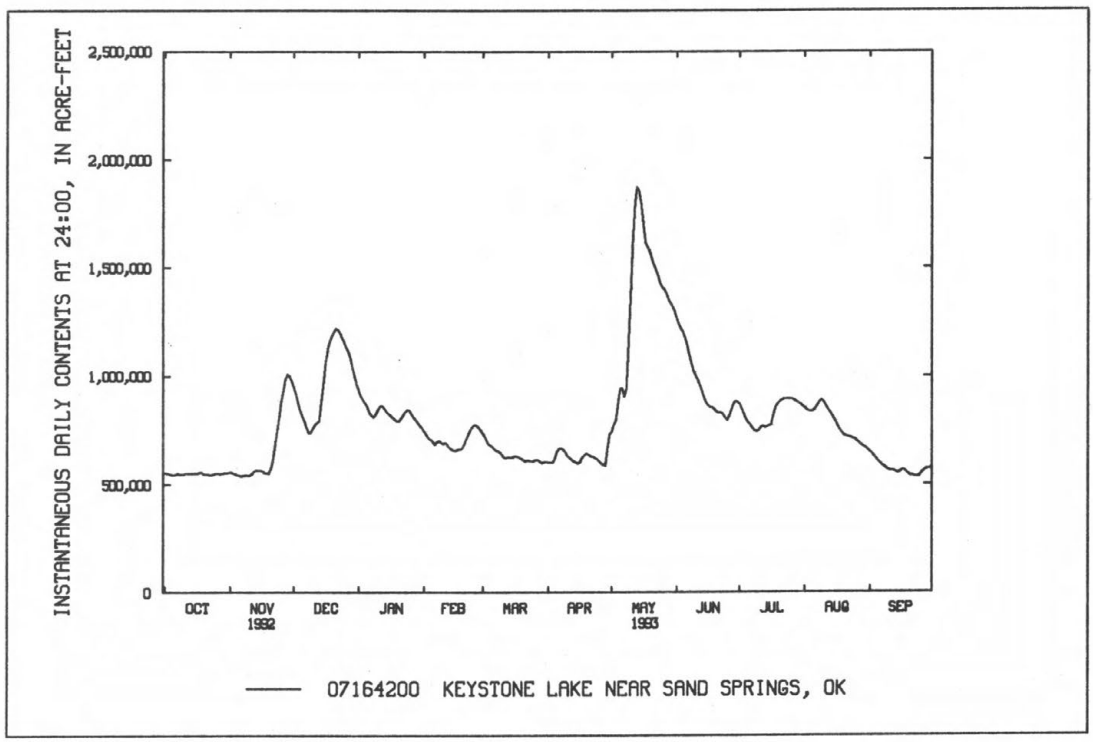
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	555700	559000	948800	929300	746200	734900	602400	744100	1266000	869300	851700	649600
2	552000	554400	916500	905500	730400	717700	601200	775800	1238000	845400	842400	639400
3	549700	550200	878700	886800	715000	696000	601400	793700	1217000	823000	837200	627500
4	546500	546500	842700	875600	707000	684300	619900	873600	1202000	799600	835200	615500
5	545800	543500	817200	857700	700300	678800	651800	941100	1175000	784900	838800	603700
6	548100	539500	791200	831700	684600	669300	666800	943200	1139000	774300	849000	593400
7	551600	542500	763900	818100	695200	659000	669000	904500	1096000	760500	864000	585400
8	548800	545100	739600	811000	703500	655300	663500	940400	1057000	748000	879400	579800
9	548300	543700	739900	823600	695200	650400	650700	1165000	1025000	745300	888200	568900
10	550000	543700	757500	843400	688500	638300	632900	1379000	1001000	749500	878000	566000
11	551600	551600	775800	860000	693700	625600	623600	1626000	980400	764500	861300	562200
12	550700	562200	784600	863600	684000	623000	615800	1807000	954800	770000	845700	562900
13	551800	567700	792400	851700	672400	626900	607500	1875000	927600	763000	831700	559500
14	551300	567500	875300	837200	663700	624300	602900	1857000	898400	767500	815500	553000
15	553000	567000	959400	826800	659300	625900	596900	1795000	874600	771500	799000	556700
16	552000	562900	1052000	818800	656300	632400	604200	1702000	862300	775200	780500	565800
17	555500	557100	1120000	808800	662600	629500	624100	1616000	855300	822000	761700	566000
18	559000	553900	1161000	799300	663700	626900	634300	1595000	852000	853400	745000	556700
19	549000	552700	1186000	791800	666500	622000	644000	1579000	844400	870300	733400	548800
20	548600	575700	1206000	791800	684600	615000	637800	1543000	835200	879700	722700	540500
21	547600	610800	1220000	805000	711000	608000	631900	1514000	829100	887500	720900	541800
22	546900	679600	1215000	819400	731900	610100	629000	1490000	831000	892200	717100	537700
23	546900	744400	1201000	835200	753800	610100	623800	1465000	823900	893600	714700	535800
24	549300	806200	1177000	844100	766600	606900	617600	1430000	806800	893900	709800	537900
25	551100	882400	1157000	842100	776700	608800	608000	1409000	796500	893600	706400	549300
26	550700	932100	1132000	825200	772700	614700	597700	1399000	817800	891200	697800	560200
27	550200	986500	1111000	809700	762000	614200	590700	1380000	844400	885100	689400	567200
28	550700	1009000	1080000	798700	748900	607500	588400	1354000	870600	879700	680700	572300
29	554600	1000000	1038000	786100	---	600400	667900	1336000	881100	873600	672900	573300
30	554600	977100	999100	773000	---	603900	731600	1322000	878300	868000	668500	577800
31	558300	---	960900	760500	---	605700	---	1296000	---	859000	659800	---

07164200 KEYSTONE LAKE NEAR SAND SPRINGS, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	559000	1009000	1220000	929300	776700	734900	731600	1875000	1266000	893900	888200	649600
MIN	545800	539500	739600	760500	656300	600400	588400	744100	796500	745300	659800	535800
(‡)	723.03	737.00	736.54	730.48	730.10	724.96	729.52	745.00	734.15	733.57	727.01	723.84
(‡‡)	+5,1000	+418,800	-16,200	-200,400	-11,600	-143,200	+125,900	+564,400	-417,700	-19,300	-199,200	-82,000

CAL YR 1992 MAX 1220000 MIN 525000 (‡‡) +279,400
WTR YR 1993 MAX 1875000 MIN 535800 (‡‡) +24,600

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, ION ACRE-FEET



07164500 ARKANSAS RIVER AT TULSA, OK

LOCATION.--Lat 36°08'26", long 96°00'22", in NE 1/4 SW 1/4 sec.11, T.19 N., R.12 E., Tulsa County, Hydrologic Unit 11110101, at right abutment on downstream side of 11th Street bridge in Tulsa, 10.1 mi upstream from Polecat Creek, 15.1 mi downstream from Keystone Dam, and at mile 523.7.

DRAINAGE AREA.--74,615 mi^2, of which 12,541 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1925 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are published in reports of the National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 615.23 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Feb. 2, 1939, nonrecording gage and Feb. 2, 1939 to Sept. 30, 1952, water-stage recorder at datum 3.00 ft higher.

REMARKS.--No estimated daily discharges. Records fair below 5.0 ft gage height and good above. Except for 109 mi^2 intervening area, flow completely regulated by Keystone Lake (station 07164200) since September 1964. Prior to September 1964, minor regulation by John Martin Lake in Colorado and by Great Salt Plains Lake (station 07150000). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1904, 22.8 ft, June 13, 1923, present datum, from reports of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	688	2100	34500	26000	23600	21300	12600	32500	40300	31900	27700	11800
2	1610	3320	33800	25700	23700	23100	12700	34800	42700	32100	27800	12000
3	2350	2870	33300	25700	23500	27100	12900	52300	42500	27200	26600	13000
4	2830	2140	31700	24300	23500	26600	13400	64300	43800	26700	24700	14400
5	2400	1190	23700	22800	24000	27600	13300	72100	48000	24200	25100	14500
6	568	2120	23300	25500	26400	29800	13700	81000	47800	17900	22300	14000
7	341	1970	23000	23000	26300	29500	17500	82100	47500	20400	18400	13300
8	781	111	22600	17900	24800	26300	18000	84300	47200	19600	18400	12400
9	622	1340	20500	15800	27000	23700	20000	102000	46800	13800	19400	11900
10	970	1810	18700	15400	30100	26900	23600	119000	45000	11900	23300	9960
11	100	1650	12300	17000	26900	26500	23400	123000	39100	11800	23300	3990
12	84	2030	12100	21600	27000	24000	23400	132000	39000	13100	22700	4490
13	885	7020	12600	21600	26900	16400	23100	141000	38800	19300	19100	6560
14	245	7810	11600	21400	26600	16500	21500	148000	38500	21000	19000	7960
15	1120	7650	197	19400	26600	15700	18500	148000	35000	22600	19000	11600
16	416	7660	146	15700	25000	11700	18900	145000	28200	28900	19000	5920
17	434	7560	106	15700	19800	12900	22400	137000	24300	29300	19000	10600
18	92	8180	128	15600	17600	13300	22200	112000	23300	29700	18100	9460
19	4800	6080	1360	15800	16700	13300	19300	99500	19300	29700	14200	9990
20	806	3770	1290	16500	13400	13300	17000	93700	19400	29700	13600	10700
21	883	5650	1430	15600	13200	13400	16400	79200	16500	28500	8840	5180
22	994	11800	10000	11700	13200	14300	12600	59600	12900	28000	8310	4320
23	1120	12000	13700	11600	17400	13700	12700	49300	14700	28000	7800	5620
24	1020	12700	18400	11500	20000	13600	12800	49000	19000	28000	8210	4360
25	132	6390	18600	13800	22600	10800	12800	45300	19000	28000	8250	1060
26	89	18000	18600	24000	21600	9160	12600	36800	19000	28000	8610	86
27	944	22400	18400	22100	21400	8820	11200	40600	19100	28100	8200	1780
28	858	35300	21100	24100	21300	12700	8950	40400	23700	27900	9630	84
29	779	35700	28700	24100	---	12800	10300	40000	28300	27900	9710	232
30	647	35100	28400	23900	---	13700	21400	39900	31600	27800	9480	1330
31	1070	---	27400	23800	---	12800	---	39700	---	27800	9620	---
TOTAL	30678	273421	521657	608600	630100	561280	499150	2523400	960300	768800	517360	232582
MEAN	990	9114	16830	19630	22500	18110	16640	81400	32010	24800	16690	7753
MAX	4800	35700	34500	26000	30100	29800	23600	148000	48000	32100	27800	14500
MIN	84	111	106	11500	13200	8820	8950	32500	12900	11800	7800	84
AC-FT	60850	542300	1035000	1207000	1250000	1113000	990100	5005000	1905000	1525000	1026000	461300

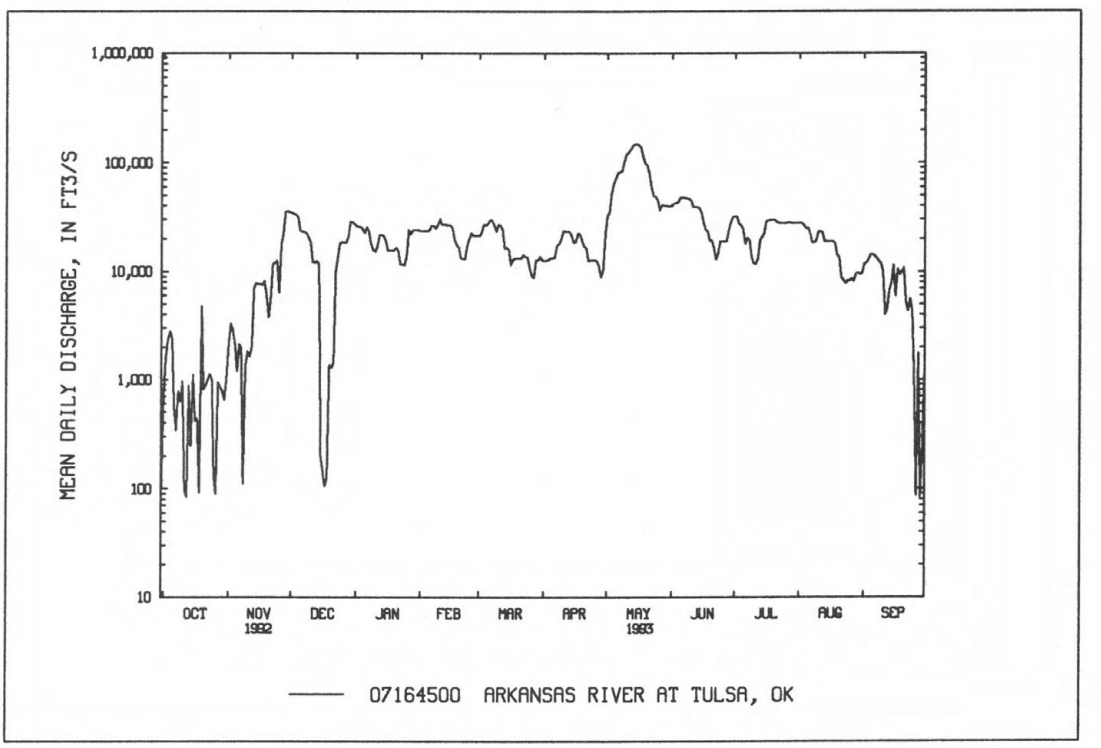
07164500 ARKANSAS RIVER AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7663	6738	4689	5036	5444	10360	11880	13550	13480	8222	4625	5573
MAX	72720	39390	16830	19630	22500	42890	44460	81400	38930	24800	16690	23280
(WY)	1987	1975	1993	1993	1993	1987	1973	1993	1975	1993	1993	1989
MIN	491	457	582	483	494	490	557	881	2595	1314	1129	1219
(WY)	1965	1983	1983	1967	1967	1977	1981	1967	1966	1991	1980	1970

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1965-93	
ANNUAL TOTAL	2906253		8127328			
ANNUAL MEAN	7941		22270		[a]8111	
HIGHEST ANNUAL MEAN					22840	1987
LOWEST ANNUAL MEAN					1813	1991
HIGHEST DAILY MEAN	35700	Nov 29	148000	May 14	261000	Oct 5 1986
LOWEST DAILY MEAN	84	May 31	84	Oct 12, Sep 28	[b]33	Feb 25 1977
ANNUAL SEVEN-DAY MINIMUM	468	Oct 12	468	Oct 12	277	Oct 20 1982
INSTANTANEOUS PEAK FLOW			149000	May 14	307000	Oct 5 1986
INSTANTANEOUS PEAK STAGE			17.48	May 14	25.21	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	5765000		16120000		5876000	
10 PERCENT EXCEEDS	21700		39900		21100	
50 PERCENT EXCEEDS	4810		18400		3910	
90 PERCENT EXCEEDS	834		1250		630	

[a]Prior to regulation 1926-64, 6,554 ft^3/s.
[b]Minimum for period of record 27 ft^3/s, Oct. 12, 13, 1956.



07164500 ARKANSAS RIVER AT TULSA, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1977 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: March 1977 to July 1985, October 1987 to current year.
WATER TEMPERATURE: March 1977 to July 1985, October 1987 to current year.
INSTRUMENTATION.--Water-quality monitor since March 1977.
REMARKS.--Interruptions in daily record were due to malfunctions of the recording instrument. Prior to September 1985, once-daily observer's readings were published. Water-quality monitor records for these periods are available upon request at the District office. Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 7,820 microsiemens, Feb. 16, 1978; minimum, 450 microsiemens, Apr. 26, 27, 28, 1990, Dec. 20, 1992.
WATER TEMPERATURE: Maximum, 33.5°C, Aug. 27, 1990, July 7, 1991; minimum, 0.0°C on many days during winter periods.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,190 microsiemens, Mar. 25; minimum, 530 microsiemens, May 8.
WATER TEMPERATURE: Maximum, 31.5°C, July 30; minimum, 2.0°C, Jan. 25.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
DEC											
03...	1330	60.0	8.0	--	1028	1028	31800	8.23	764	--	--
03...	1335	180	8.0	--	1028	1028	31800	8.23	763	--	--
03...	1342	300	8.0	--	1028	1028	31800	8.23	768	--	--
03...	1346	420	8.0	--	1028	1028	31800	8.23	768	--	--
03...	1355	540	8.0	--	1028	1028	31800	8.23	772	--	--
03...	1357	660	8.0	--	1028	1028	31800	8.23	781	--	--
03...	1408	780	8.0	--	1028	1028	31800	8.23	787	--	--
03...	1411	900	8.0	--	1028	1028	31800	8.23	790	--	--
03...	1413	1020	8.0	--	1028	1028	31800	8.23	791	--	--
03...	1420	1140	8.0	--	1028	1028	31800	8.23	792	--	--
MAR											
04...	1230	1130	5.5	750	1028	1028	25500	7.64	1230	12.3	8.2
04...	1245	1030	5.5	750	1028	1028	25500	7.64	1230	12.2	8.3
04...	1250	930	5.5	750	1028	1028	25500	7.64	1250	12.3	8.3
04...	1300	830	5.5	750	1028	1028	25500	7.64	1240	12.3	8.3
04...	1310	730	5.5	750	1028	1028	25500	7.64	1230	12.1	8.3
04...	1320	630	5.5	750	1028	1028	25500	7.64	1230	12.2	8.3
04...	1335	530	5.5	750	1028	1028	25500	7.64	1230	12.2	8.3
04...	1340	430	5.5	750	1028	1028	25500	7.64	1230	12.2	8.3
04...	1350	330	5.5	750	1028	1028	25500	7.64	1230	12.2	8.3
04...	1400	230	5.5	750	1028	1028	25500	7.64	1200	12.2	8.3
04...	1415	130	5.5	750	1028	1028	25500	7.64	1210	12.2	8.2
04...	1430	30.0	5.5	750	1028	1028	25500	7.64	1220	12.2	8.2
JUN											
04...	0752	30.0	20.5	--	1028	1028	42300	9.05	842	--	--
04...	0756	230	20.5	--	1028	1028	42300	9.05	847	--	--
04...	0759	430	20.5	--	1028	1028	42300	9.05	854	--	--
04...	0801	630	20.5	--	1028	1028	42300	9.05	856	--	--
04...	0804	830	20.5	--	1028	1028	42300	9.05	858	--	--
04...	0807	1030	20.5	--	1028	1028	42300	9.05	853	--	--
04...	0810	1130	20.5	--	1028	1028	42300	9.05	863	--	--

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
07...	1130	1028	80020	98	1630	8.2	23.0	20.5	4.5	745	9.6	110
MAR												
04...	1330	1028	80020	25500	1230	8.3	7.5	5.5	14	750	12.2	99
APR												
14...	1400	1028	80020	20700	1370	8.3	6.5	12.0	13	735	10.0	97
JUN												
17...	1415	1028	80020	24500	1070	8.1	32.0	25.5	27	750	8.2	102
AUG												
09...	1230	1028	80020	18500	610	8.0	27.0	32.0	53	750	11.2	156

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT												
07...	43	K23	210	66	59	16	220	68	7	12	181	0
MAR												
04...	75	55	220	87	59	18	150	59	4	4.1	165	0
APR												
14...	K28	96	250	96	65	21	160	58	4	4.5	187	0
JUN												
17...	K38	K12	240	120	67	18	130	53	4	5.1	144	0
AUG												
09...	K26	K28	140	37	40	8.9	64	49	2	6.8	121	0

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
OCT												
07...	148	110	350	1.3	7.6	884	870	1.20	234	0.760	0.780	3.5
MAR												
04...	135	98	240	0.20	8.7	660	666	0.90	45400	1.28	1.28	5.7
APR												
14...	153	73	240	0.10	7.2	772	668	1.05	43100	0.880	0.880	3.9
JUN												
17...	118	120	180	0.30	12	636	607	0.86	42100	0.600	--	--
AUG												
09...	99	49	92	0.20	10	--	335	0.45	16700	0.780	--	--

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT											
07...	0.020	0.010	0.03	0.780	0.790	0.070	0.060	0.09	0.08	0.53	0.60
MAR											
04...	--	0.020	0.07	--	1.30	--	0.080	--	0.10	0.72	0.80
APR											
14...	--	0.020	0.07	--	0.900	--	0.070	--	0.09	0.53	0.60
JUN											
17...	--	<0.010	--	--	0.600	--	0.020	--	0.03	0.38	0.40
AUG											
09...	--	<0.010	--	--	0.780	--	0.030	--	0.04	0.37	0.40

DATE	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, DISSOLVED (UG/L AS SB) (01095)
OCT											
07...	1.4	6.1	0.240	0.58	0.180	0.190	0.170	0.52	0.05	<10	--
MAR											
04...	2.1	--	0.150	--	0.110	--	0.090	0.28	--	20	--
APR											
14...	1.5	--	0.100	--	0.080	--	0.070	0.21	--	20	--
JUN											
17...	1.0	--	0.120	--	0.110	--	0.100	0.31	--	<10	--
AUG											
09...	1.2	--	0.230	--	0.170	--	0.160	0.49	--	50	<1

DATE	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT											
07...	--	140	--	--	--	<3	--	4	--	6	48
MAR											
04...	--	99	--	--	--	<3	--	9	--	7	2
APR											
14...	--	110	--	--	--	<3	--	16	--	11	3
JUN											
17...	--	120	--	--	--	<3	--	11	--	11	13
AUG											
09...	3	91	<1	<1.0	1	<1	3	--	<1	--	3

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
07...	<10	2	<1	<1.0	590	<6	--	--	--	--	--
MAR											
04...	<10	1	<1	<1.0	540	<6	--	--	152	10500	86
APR											
14...	<10	2	<1	<1.0	620	<6	--	--	139	7770	95
JUN											
17...	<10	2	<1	<1.0	610	<6	--	--	68	4500	92
AUG											
09...	2	2	--	<1.0	--	--	4	1.0	--	--	--

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1390	1330	1370	1520	1180	1370	781	691	754	1040	961	1000
2	1650	1380	1450	1480	1410	1430	771	731	755	1060	1000	1030
3	1660	1590	1620	1460	1420	1430	791	731	760	1140	1030	1080
4	1660	1610	1630	1470	1440	1460	781	661	711	1050	921	964
5	1660	1590	1610	1450	1420	1440	671	651	664	1070	941	1010
6	1650	1610	1630	1440	1420	1430	681	651	667	1110	1040	1060
7	1620	1500	1600	1430	1410	1420	671	631	649	1200	1080	1120
8	1710	1620	1690	1450	1410	1430	811	641	722	1340	1130	1180
9	1630	1480	1510	1510	1420	1450	851	691	753	1410	1210	1320
10	1520	1480	1510	1490	1390	1470	821	781	794	1410	1280	1350
11	1530	1520	1520	1410	1090	1320	1080	821	977	1430	1140	1360
12	1520	1440	1500	1380	751	973	1240	1080	1140	1150	1070	1120
13	1520	1480	1510	1420	1360	1400	1370	1110	1280	1140	1060	1090
14	1520	1490	1510	1430	1390	1420	---	---	---	1110	1080	1100
15	1500	1490	1500	1460	1400	1430	---	---	---	1310	1100	1150
16	1500	1470	1490	1490	1430	1460	---	---	---	1320	1300	1310
17	1480	1460	1470	1490	1450	1470	---	---	---	1340	1270	1300
18	1470	1440	1460	1480	1450	1470	---	---	---	1330	1220	1270
19	1460	1430	1450	1510	1430	1470	---	---	---	1260	1210	1240
20	1450	1440	1450	1500	1390	1450	---	---	---	1240	1040	1130
21	1450	1440	1440	1450	1380	1400	1410	1350	1400	1260	1160	1190
22	1450	1440	1440	1410	1090	1210	1420	1160	1340	1630	1260	1550
23	---	---	---	1290	1140	1240	1160	1080	1120	1710	1610	1660
24	---	---	---	1300	1150	1270	1100	1020	1070	1670	1450	1570
25	---	---	---	1260	831	1050	1110	1040	1070	1710	1190	1630
26	---	---	---	1300	1220	1270	1070	1000	1050	1190	1060	1130
27	---	---	---	1240	1120	1170	1120	1050	1100	1520	1050	1160
28	---	---	---	1130	961	1050	1120	1080	1100	1150	1090	1130
29	1520	1390	1490	981	871	942	1140	1050	1110	1270	1100	1170
30	1550	1460	1500	871	731	814	1080	1010	1050	1230	1140	1180
31	1550	1390	1530	---	---	---	1040	961	992	1150	1090	1120
MONTH	---	---	---	1520	731	1320	---	---	---	1710	921	1220

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1160	1080	1120	1410	1240	1290	1420	1210	1270	1760	1580	1670
2	1260	1120	1180	1410	1160	1270	1510	1280	1400	1590	1220	1450
3	1220	1160	1190	1190	1130	1160	1640	1500	1550	1220	1100	1140
4	1190	1140	1160	1210	1140	1160	1640	1310	1490	1140	1000	1050
5	1200	1150	1170	1220	1160	1180	1570	1320	1440	1000	831	930
6	1200	1160	1170	1260	1210	1230	1780	1570	1660	991	881	939
7	1270	1190	1220	1290	1200	1240	1810	1680	1750	881	791	838
8	1580	1230	1310	1340	1230	1290	1820	1560	1650	851	530	752
9	1350	1240	1290	1320	1210	1300	1640	1500	1590	851	530	756
10	1350	1250	1290	1240	1190	1220	1590	1500	1560	1110	811	998
11	1340	1240	1280	1300	1210	1260	1540	1390	1460	1110	791	953
12	1250	1180	1210	1430	1190	1250	1500	1330	1440	---	---	---
13	1210	1150	1190	1560	1430	1490	1520	1320	1410	---	---	---
14	1150	1120	1140	1580	1460	1540	1390	1150	1300	---	---	---
15	1160	1120	1140	1910	1480	1620	1290	1150	1230	---	---	---
16	1160	1080	1110	1940	1860	1890	1340	1210	1300	---	---	---
17	1170	1150	1160	1900	1730	1800	1380	1180	1300	---	---	---
18	1210	1160	1180	---	---	---	1780	1330	1510	---	---	---
19	1380	1200	1250	---	---	---	2070	1680	1930	---	---	---
20	1590	1380	1520	---	---	---	1680	1400	1490	---	---	---
21	1540	1320	1430	---	---	---	1720	1470	1610	---	---	---
22	1540	1340	1490	1920	1500	1700	1820	1600	1720	---	---	---
23	1440	1280	1340	1860	1610	1780	1880	1580	1730	---	---	---
24	1340	1280	1300	2010	1860	1950	1800	1450	1610	---	---	---
25	1290	1100	1160	2190	1960	2070	1590	1360	1470	---	---	---
26	1200	1140	1180	2150	1880	2040	1550	1380	1450	---	---	---
27	1250	1190	1210	2180	2000	2120	1650	1470	1540	---	---	---
28	1290	1230	1260	---	---	---	1660	1470	1560	---	---	---
29	---	---	---	---	---	---	1540	1330	1440	---	---	---
30	---	---	---	1960	1470	1630	1630	1320	1410	---	---	---
31	---	---	---	1630	1440	1530	---	---	---	---	---	---
MONTH	1590	1080	1240	---	---	---	2070	1150	1510	---	---	---

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	1210	1030	1080	891	831	864	---	---	---
2	---	---	---	1140	1080	1110	841	821	830	---	---	---
3	---	---	---	---	---	---	861	831	844	1190	1000	1090
4	862	801	832	---	---	---	881	831	852	1080	971	1030
5	861	821	839	971	911	938	871	811	832	1140	1010	1100
6	841	801	822	---	---	---	811	751	783	1160	1110	1140
7	841	811	824	---	---	---	771	731	753	1170	1110	1130
8	871	781	823	931	871	899	761	661	706	1140	1100	1130
9	851	761	808	961	851	920	661	611	637	1200	1090	1140
10	861	781	817	931	861	907	621	601	606	1160	1090	1130
11	981	861	904	961	921	939	601	581	595	1280	1100	1150
12	1040	961	1000	1010	911	956	651	581	610	1380	1210	1250
13	1070	1010	1040	1060	1000	1030	671	641	651	1370	1070	1250
14	1070	871	1010	1070	971	1030	781	661	701	1070	881	970
15	1080	1020	1050	1080	1010	1040	811	751	774	1000	971	992
16	1190	1020	1080	1200	1080	1130	871	791	815	1010	991	994
17	1190	1070	1120	1200	1090	1160	931	851	895	1040	1000	1020
18	1300	1120	1170	1240	1130	1160	1010	911	941	1140	1010	1050
19	1390	1240	1310	1180	1080	1120	1160	1010	1080	1300	1140	1220
20	1300	1230	1270	1130	1090	1110	1160	1050	1120	1220	1130	1180
21	1310	1220	1260	1090	1030	1060	1250	1100	1170	1270	1150	1190
22	1310	1240	1280	1060	991	1030	1250	1120	1190	1260	1220	1240
23	1350	1260	1310	1030	941	1010	1220	1100	1170	1260	1160	1240
24	1450	1290	1350	1040	931	999	1140	1010	1080	1160	1140	1140
25	1330	1050	1170	1020	961	989	1060	991	1020	1140	1070	1120
26	1240	1090	1170	991	941	960	1120	1040	1070	1110	1080	1100
27	1200	1110	1150	961	901	953	1130	1080	1100	1100	1060	1070
28	1300	1160	1240	961	831	920	1140	1080	1100	1090	1070	1080
29	1380	1180	1280	931	911	922	1230	1110	1180	1110	1070	1090
30	1260	1070	1130	911	831	896	1200	1040	1160	1080	1050	1070
31	---	---	---	901	831	881	1080	931	999	---	---	---
MONTH	---	---	---	---	---	---	1250	581	907	---	---	---

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.0	19.5	21.0	18.0	14.5	16.5	8.5	7.5	8.0	4.5	4.0	4.5
2	23.5	20.0	21.5	17.0	14.0	15.5	8.0	7.5	7.5	5.0	4.5	5.0
3	23.5	20.0	21.5	16.5	12.5	14.5	8.0	7.0	7.5	5.5	5.0	5.5
4	23.5	20.0	21.5	14.0	11.0	12.5	7.5	6.5	7.0	5.5	4.5	5.0
5	23.5	20.0	21.5	13.0	11.0	12.0	6.5	6.0	6.0	5.0	4.0	4.5
6	22.5	20.5	21.5	13.5	11.0	12.5	6.5	6.0	6.5	5.0	4.5	4.5
7	22.0	18.0	20.5	14.0	12.5	13.5	6.5	5.5	6.0	5.5	4.5	5.0
8	18.0	14.5	15.5	13.0	11.5	12.0	6.5	5.5	6.0	5.0	4.5	4.5
9	18.0	15.0	16.5	14.5	11.5	12.5	6.0	5.5	5.5	4.5	4.0	4.5
10	19.5	17.5	18.5	16.0	14.5	15.0	6.5	5.0	5.5	4.0	4.0	4.0
11	21.0	17.0	18.5	15.5	14.0	15.0	6.0	4.5	5.5	4.5	4.0	4.0
12	21.5	17.0	19.0	14.0	11.5	12.5	6.0	4.5	5.5	4.5	3.5	4.5
13	21.0	18.5	20.0	14.0	12.0	13.0	6.0	5.0	5.5	4.5	3.0	3.5
14	22.0	20.0	21.0	14.5	12.0	13.0	7.5	6.0	6.5	3.5	3.5	3.5
15	21.0	18.0	19.0	14.5	12.0	13.0	---	---	---	4.5	3.5	4.0
16	18.0	15.5	16.5	14.5	12.5	13.5	---	---	---	5.0	3.5	4.0
17	16.5	14.5	15.5	14.0	12.5	13.5	---	---	---	4.0	3.0	3.5
18	17.0	14.0	15.5	14.0	13.0	13.5	---	---	---	3.5	2.5	3.0
19	18.5	13.5	16.5	14.0	13.0	13.5	---	---	---	3.0	2.5	2.5
20	19.0	16.5	17.5	13.0	12.0	12.5	---	---	---	3.5	2.5	3.0
21	20.5	18.0	19.0	12.5	11.5	12.0	6.5	4.0	5.5	4.5	3.0	3.5
22	20.5	18.5	19.5	11.5	9.5	10.0	5.5	4.5	5.0	4.5	2.5	3.5
23	---	---	---	12.0	10.5	11.0	6.0	4.5	5.0	4.0	3.5	3.5
24	---	---	---	11.5	11.0	11.0	5.0	4.0	4.5	4.0	2.5	3.5
25	---	---	---	11.0	9.0	10.0	5.0	4.5	5.0	4.5	2.0	3.5
26	---	---	---	10.0	9.5	10.0	5.5	4.0	4.5	4.5	3.0	3.5
27	---	---	---	11.0	9.5	10.0	5.5	4.5	5.0	5.0	3.0	4.0
28	---	---	---	10.5	9.0	10.0	5.5	5.0	5.5	5.0	3.0	4.0
29	18.0	16.0	17.0	10.0	8.5	9.0	6.5	5.5	6.0	4.0	2.5	3.5
30	16.0	14.5	15.5	9.0	8.0	8.5	7.0	6.0	6.5	4.5	3.0	3.5
31	18.0	14.5	16.0	---	---	---	6.0	4.5	5.0	5.0	3.5	4.0
MONTH	---	---	---	18.0	8.0	12.4	---	---	---	5.5	2.0	4.0

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5.5	3.5	4.5	5.5	5.0	5.0	9.5	8.5	9.0	18.5	16.5	17.5
2	6.0	4.0	4.5	6.0	5.0	5.5	12.0	8.5	10.0	18.0	17.0	17.5
3	5.0	4.5	5.0	5.5	5.0	5.0	10.5	9.5	10.0	18.0	17.5	17.5
4	5.5	5.0	5.0	5.5	5.0	5.0	10.0	9.5	9.5	19.0	17.5	18.0
5	5.0	5.0	5.0	6.5	4.5	5.5	11.5	9.5	10.5	18.5	17.5	18.0
6	6.5	4.5	5.5	6.5	4.5	5.5	12.5	10.0	11.0	18.0	17.5	18.0
7	7.0	4.5	5.5	7.0	5.0	6.0	12.5	11.0	11.5	18.0	17.5	18.0
8	7.5	5.0	6.0	8.5	5.5	6.5	12.0	10.5	11.0	18.0	17.5	17.5
9	7.5	5.5	6.5	9.0	6.0	7.0	13.5	10.0	11.5	18.0	17.5	18.0
10	6.5	6.0	6.5	8.0	6.5	7.5	13.5	11.0	12.0	18.5	18.0	18.0
11	7.5	6.5	7.0	7.5	6.5	7.0	14.0	11.5	12.5	18.0	17.0	17.5
12	7.0	6.0	6.5	7.5	6.5	7.0	13.5	10.5	12.0	---	---	---
13	7.5	6.0	6.5	8.0	6.0	7.0	13.0	11.5	12.5	---	---	---
14	7.5	6.0	7.0	9.0	6.0	7.5	12.5	11.0	12.0	---	---	---
15	7.0	5.5	6.0	8.0	7.0	7.5	11.5	11.0	11.0	---	---	---
16	7.0	5.5	6.0	10.5	8.0	9.0	14.0	11.0	12.0	---	---	---
17	6.0	5.0	5.5	9.0	6.5	7.5	13.0	12.0	12.0	---	---	---
18	7.0	4.5	5.5	7.0	6.5	7.0	14.5	12.0	13.0	---	---	---
19	7.5	5.0	6.0	7.5	7.0	7.5	15.5	13.0	14.0	---	---	---
20	8.5	5.5	7.0	7.5	7.5	7.5	14.5	12.0	13.0	---	---	---
21	8.0	6.0	7.0	8.5	7.0	8.0	14.5	12.0	13.5	---	---	---
22	7.0	5.0	6.0	9.5	8.0	8.5	15.5	12.0	13.5	---	---	---
23	6.0	5.0	5.5	10.0	7.0	8.5	15.0	12.5	14.0	---	---	---
24	5.0	4.0	4.5	10.5	7.5	9.0	15.5	14.0	14.5	---	---	---
25	5.0	4.0	4.5	9.5	7.5	8.5	16.5	13.5	15.0	---	---	---
26	5.5	3.5	4.5	11.0	7.5	9.0	17.5	13.5	15.5	---	---	---
27	6.0	3.5	4.5	11.5	8.5	10.0	17.5	14.0	15.5	---	---	---
28	5.0	4.5	5.0	11.5	8.5	10.0	16.0	14.5	15.0	---	---	---
29	---	---	---	11.0	9.0	10.0	17.5	14.5	16.0	---	---	---
30	---	---	---	13.0	10.0	11.5	17.0	14.5	16.0	---	---	---
31	---	---	---	10.5	9.0	9.5	---	---	---	---	---	---
MONTH	8.5	3.5	5.7	13.0	4.5	7.6	17.5	8.5	12.6	---	---	---

07164500 ARKANSAS RIVER AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	28.0	26.5	27.0	31.0	28.5	29.5	29.0	26.5	27.5
2	---	---	---	28.5	26.5	27.5	30.0	28.5	29.0	29.5	27.0	28.0
3	---	---	---	29.0	26.5	27.5	30.5	28.5	29.0	28.0	25.5	27.0
4	22.5	21.0	21.5	27.5	26.0	27.0	29.0	27.5	28.5	29.0	25.5	27.0
5	22.5	21.0	21.5	28.0	26.5	27.0	28.0	27.5	28.0	28.5	25.5	27.0
6	23.0	21.5	22.0	28.0	27.0	27.5	28.5	27.0	27.5	28.0	25.5	26.5
7	22.5	21.5	22.0	27.5	26.0	27.0	30.0	26.5	28.0	27.0	25.0	26.0
8	23.0	22.0	22.5	29.5	26.5	27.5	28.0	27.0	27.5	26.5	24.5	25.0
9	23.0	22.0	22.5	29.5	26.0	28.0	29.0	26.5	27.5	27.5	24.0	25.5
10	23.5	22.0	22.5	29.5	26.5	28.0	29.0	26.5	27.5	26.5	24.5	25.5
11	24.0	22.5	23.0	30.0	26.0	28.0	29.0	26.5	27.5	26.0	23.5	25.0
12	24.5	22.5	23.5	28.5	26.0	27.5	28.5	26.5	27.5	27.0	24.0	25.5
13	25.0	23.0	23.5	28.5	27.0	27.5	29.5	26.5	28.0	26.0	24.5	25.0
14	25.0	23.0	24.0	27.5	26.5	27.0	29.5	26.5	28.0	24.5	20.0	22.0
15	25.5	23.0	24.0	29.5	27.0	28.0	29.5	26.5	28.0	24.5	21.5	23.0
16	26.0	23.5	24.5	29.5	27.0	28.0	29.5	27.0	28.0	24.5	20.5	22.5
17	26.5	23.5	25.0	30.0	27.0	28.5	30.0	27.0	28.5	24.5	21.5	23.0
18	26.0	24.0	25.0	30.0	27.5	28.5	30.0	27.0	28.5	24.5	21.5	23.0
19	26.0	24.0	25.0	29.5	27.5	28.5	30.0	27.0	28.5	24.0	21.0	22.5
20	26.5	24.0	25.5	30.0	28.0	29.0	30.5	27.0	28.5	24.5	21.5	22.5
21	26.5	24.0	25.0	30.5	28.0	29.0	31.0	27.5	29.0	26.0	21.5	23.5
22	27.5	24.0	25.5	30.0	27.5	29.0	30.0	27.0	28.5	27.0	22.5	24.5
23	26.5	24.5	25.5	30.5	28.0	29.0	29.0	27.0	28.0	24.5	22.5	23.5
24	27.5	24.5	26.0	30.5	28.0	29.0	29.5	26.5	28.0	23.0	21.5	22.0
25	27.0	25.0	26.0	30.0	27.5	29.0	30.0	27.0	28.5	23.0	21.0	22.0
26	27.0	25.0	26.0	30.5	28.0	29.0	30.5	27.0	28.5	22.5	20.0	21.0
27	28.5	25.0	26.5	30.5	28.0	29.0	30.0	27.0	28.5	22.0	19.0	20.5
28	28.5	25.5	27.0	31.0	26.5	29.0	30.0	27.5	29.0	23.5	20.0	21.5
29	28.5	26.0	27.0	31.0	28.5	29.5	30.5	27.5	29.0	22.0	19.0	20.5
30	28.5	26.0	27.0	31.5	28.5	29.5	29.5	27.5	28.5	22.0	19.0	20.5
31	---	---	---	31.5	28.5	30.0	28.0	26.0	27.0	---	---	---
MONTH	---	---	---	31.5	26.0	28.2	31.0	26.0	28.2	29.5	19.0	23.9

07164600 JOE CREEK AT 61ST STREET AT TULSA, OK

LOCATION.--Lat 36°04'32", long 95°57'37", in SE 1/4 SE 1/4 sec.31, T.19 N., R.13 E., Tulsa County, Hydrologic Unit 11110101, at right upstream abutment of 61st Street bridge, .2 mi west of Lewis Avenue, 4 mi north of Jenks and at mile 2.1.

DRAINAGE AREA.--12.2 mi^2.

PERIOD OF RECORD.--March 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.96 ft above sea level.

REMARKS.--Records fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--23,000 ft^3/s, May 26, 1984, slope-area measurement at 71st Street, gage height undetermined at 61st Street.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	218	3.5	12	3.7	26	5.5	7.6	3.2	4.5	1.5	.95
2	e.60	3.4	3.5	5.9	3.5	17	5.6	199	7.0	4.7	1.4	70
3	e1.0	4.8	3.5	11	3.6	7.5	7.9	20	14	5.1	2.0	71
4	e1.2	2.5	2.6	8.3	6.7	7.3	171	5.6	6.1	5.5	2.0	1.2
5	e1.1	2.3	5.2	4.0	7.4	6.0	16	4.8	3.0	6.1	123	1.2
6	e1.5	2.3	8.3	3.6	3.2	5.3	13	99	3.5	18	4.9	.90
7	e10	2.3	4.5	3.5	4.7	5.2	17	6.4	4.2	13	2.0	.90
8	e2.0	2.6	3.9	3.2	3.6	5.2	8.4	506	175	5.4	1.1	240
9	e1.8	2.7	302	171	3.5	4.7	6.4	444	59	6.0	1.2	1.7
10	e1.6	20	14	12	22	4.0	6.3	48	6.4	5.7	1.2	.90
11	e1.4	313	7.2	22	5.0	3.6	4.8	231	3.5	4.8	1.2	1.1
12	e1.2	18	6.1	14	5.1	3.4	5.0	52	3.5	6.0	2.4	1.2
13	e1.0	4.0	253	8.0	3.5	5.5	5.8	16	3.3	4.9	1.4	306
14	e.80	3.3	598	7.3	3.6	5.5	193	8.4	3.0	86	1.7	304
15	.60	3.0	62	6.4	91	17	31	6.1	4.1	2.9	1.8	2.3
16	.60	3.0	19	6.3	44	5.0	9.2	4.9	3.8	2.0	1.4	1.2
17	.60	3.0	10	5.5	15	4.7	247	11	4.4	1.9	1.5	1.1
18	.60	3.0	7.9	19	23	36	21	64	3.9	22	1.7	1.5
19	.86	50	7.1	93	41	37	12	4.2	34	13	1.4	167
20	1.1	41	5.9	125	62	8.5	7.5	3.9	6.8	2.0	1.2	14
21	1.1	55	5.8	14	21	4.8	6.5	4.6	3.5	1.7	.78	1.5
22	1.1	279	5.6	10	7.8	237	6.9	4.0	4.1	1.6	1.7	1.4
23	1.2	40	5.3	7.4	6.3	13	6.8	8.2	8.0	1.2	6.3	1.0
24	5.8	123	5.7	5.6	172	8.8	6.2	3.8	5.2	1.0	3.1	1.0
25	1.5	42	26	5.0	161	6.5	5.3	3.2	6.4	2.0	1.5	79
26	1.1	7.9	7.0	5.0	17	5.6	5.0	3.0	3.9	2.1	1.5	1.3
27	1.1	5.9	4.7	5.8	10	5.6	5.5	4.0	4.4	1.4	1.5	1.1
28	1.3	5.3	4.0	4.8	10	5.6	29	3.5	5.2	.90	1.7	.95
29	94	4.4	4.6	6.1	---	5.1	142	3.5	4.5	1.0	4.9	.96
30	1.4	3.5	4.4	7.1	---	120	8.4	3.5	4.6	1.2	95	1.2
31	53	---	3.8	3.9	---	7.8	---	2.8	---	1.6	29	---
TOTAL	192.76	1268.2	1404.1	615.7	760.2	634.2	1015.0	1786.0	401.5	235.20	302.98	1277.56
MEAN	6.22	42.3	45.3	19.9	27.1	20.5	33.8	57.6	13.4	7.59	9.77	42.6
MAX	94	313	598	171	172	237	247	506	175	86	123	306
MIN	.60	2.3	2.6	3.2	3.2	3.4	4.8	2.8	3.0	.90	.78	.90
AC-FT	382	2520	2790	1220	1510	1260	2010	3540	796	467	601	2530
CFSM	.51	3.47	3.71	1.63	2.23	1.68	2.77	4.72	1.10	.62	.80	3.49
IN.	.59	3.87	4.28	1.88	2.32	1.93	3.09	5.45	1.22	.72	.92	3.90

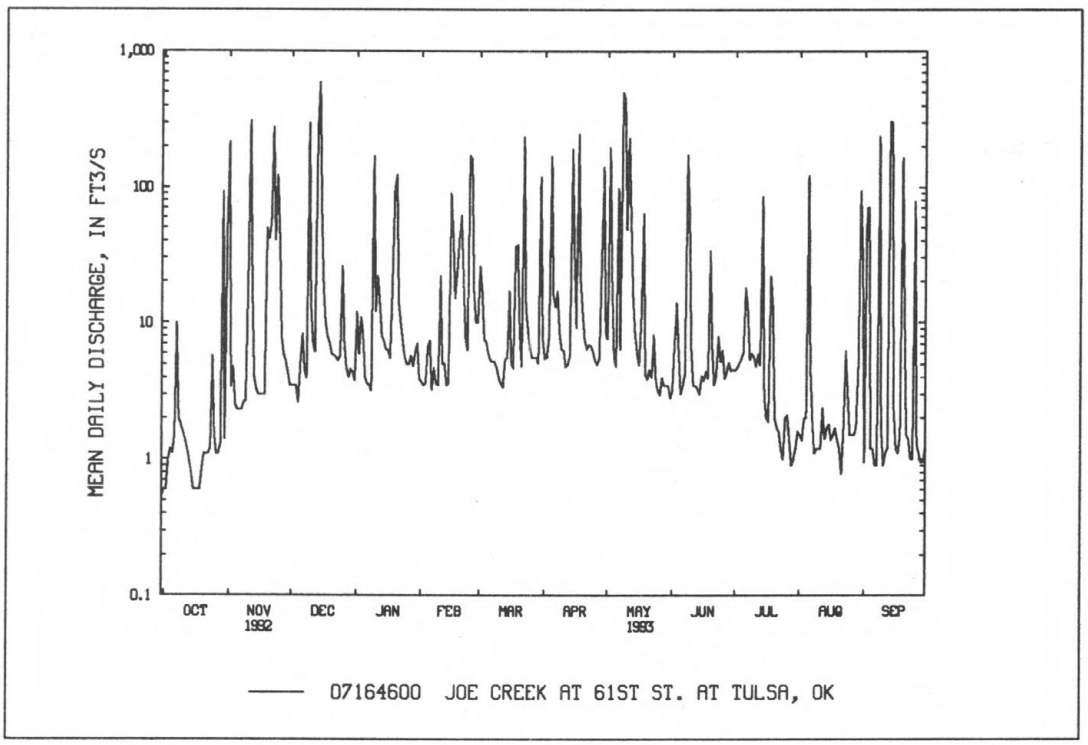
e Estimated

07164600 JOE CREEK AT 61ST STREET AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.2	18.6	19.4	12.3	16.1	24.6	26.7	36.7	23.2	7.84	15.4	26.0
MAX	32.5	42.3	45.3	19.9	29.1	56.2	42.6	57.6	51.7	13.9	33.2	42.6
(WY)	1992	1993	1993	1993	1990	1990	1992	1993	1992	1992	1989	1993
MIN	3.38	2.02	2.36	5.19	2.71	7.94	2.85	13.9	9.48	3.22	4.59	10.6
(WY)	1989	1990	1990	1992	1991	1992	1989	1989	1990	1990	1990	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1989-93	
ANNUAL TOTAL	9207.30		9893.40			
ANNUAL MEAN	25.2		27.1		19.9	
HIGHEST ANNUAL MEAN					27.1	1993
LOWEST ANNUAL MEAN					14.3	1991
HIGHEST DAILY MEAN	764	May 11	598	Dec 14	906	Aug 20 1989
LOWEST DAILY MEAN	.54	Sep 30	.60	Oct 1,2,15-18	.51	Aug 9 1989
ANNUAL SEVEN-DAY MINIMUM	.72	Oct 13	.72	Oct 13	.72	Oct 13 1992
INSTANTANEOUS PEAK FLOW			5030	Oct 31	7990	Aug 20 1989
INSTANTANEOUS PEAK STAGE			5.82	Oct 31	7.81	Aug 20 1989
ANNUAL RUNOFF (AC-FT)	18260		19620		14420	
ANNUAL RUNOFF (CFSM)	2.06		2.22		1.63	
ANNUAL RUNOFF (INCHES)	28.07		30.17		22.17	
10 PERCENT EXCEEDS	53		66		40	
50 PERCENT EXCEEDS	3.5		5.1		3.0	
90 PERCENT EXCEEDS	.90		1.2		1.2	



07165000 HEYBURN LAKE NEAR HEYBURN, OK

LOCATION.--Lat 35°56'49", long 96°17'54", in SE 1/4 SE 1/4 sec.13, T.17 N., R.9 E., Creek County, Hydrologic Unit 11110101, at intake structure at right abutment of Heyburn Dam on Polecat Creek, 2.5 mi northwest of Heyburn, 3.5 mi upstream from bridge on U.S. Highway 66, 11.0 mi southwest of Sapulpa, and at mile 48.6.

DRAINAGE AREA.--123 mi^2.

PERIOD OF RECORD.--October 1950 to September 1993 (discontinued). Prior to October 1970, published as Heyburn Reservoir near Heyburn.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of an 8-foot, 3-inch diameter concrete conduit extending from an uncontrolled concrete drop inlet at the upstream side of dam at a concrete stilling basin near downstream toe of dam and three, 36-inch gated lowflow pipes which drain into the conduit below the drop inlet. Spillway is 200-foot channel in a natural saddle about 1,000 ft west of right abutment. Storage began Sept. 29, 1950; conservation pool was first filled Mar. 10, 1951. Capacity, 147,600 acre-ft, at elevation 802.0 ft maximum pool, 55,400 acre-ft, at elevation 784.0 ft, spillway crest and top of flood control pool, and 7,105 acre-ft, at elevation 761.5, conservation pool. Dead storage, 293 acre-ft, below elevation 740.0 ft, invert of lowflow sluices. Reservoir was designed for flood control and conservation. Figures given herein represent total contents. Revised capacity table, based on survey in 1978, used since Oct. 1, 1984.

COOPERATION.--Records provided and computed by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 32,210 acre-ft, Nov. 4, 1974, elevation, 776.85 ft; minimum since conservation pool was first filled, 4,070 acre-ft, May 8, 9, 1981, elevation 757.95 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 24,000 acre-ft, May 9, elevation, 773.23 ft; minimum, 6,270 acre-ft, Aug. 30, elevation 760.49 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

760	5,880	770	17,820
765	10,770	775	27,970

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

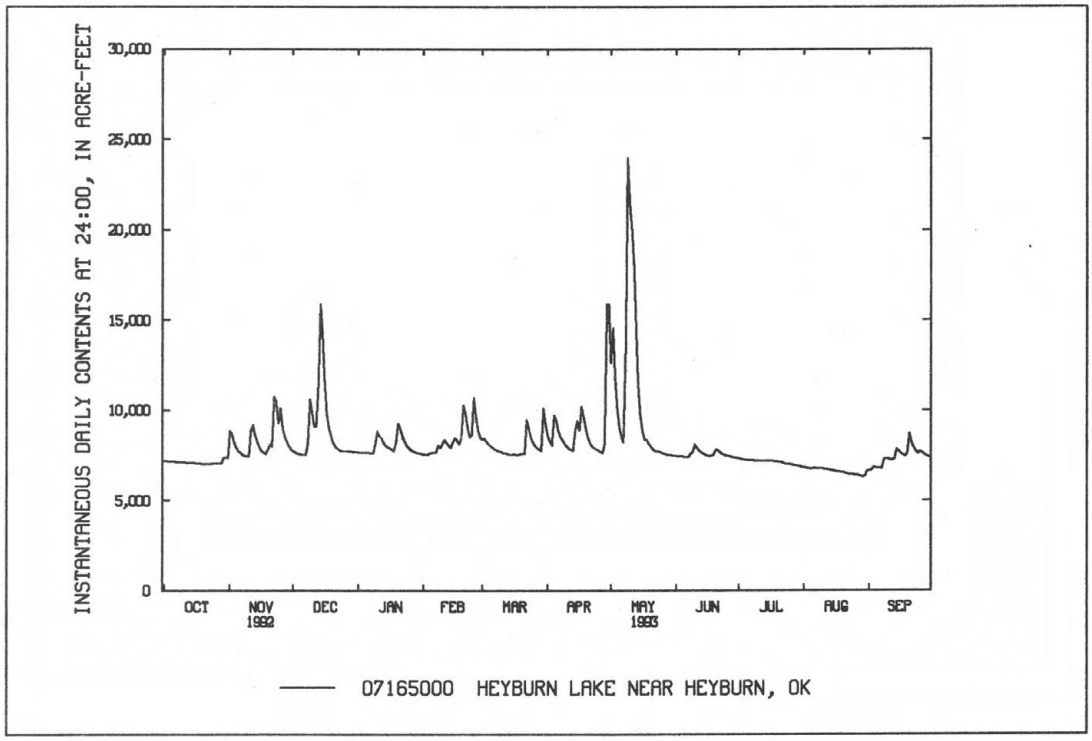
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7170	8820	7720	7660	7540	8370	8610	12600	7440	7310	6820	6630
2	7160	8710	7670	7650	7520	8420	8260	14600	7410	7290	6790	6670
3	7150	8220	7580	7660	7520	8250	8080	11800	7430	7260	6750	6810
4	7150	7930	7550	7650	7590	8100	9710	10100	7430	7240	6730	6810
5	7140	7730	7520	7640	7630	7980	9470	9070	7400	7230	6760	6790
6	7130	7630	7520	7630	7630	7910	8870	8520	7380	7220	6770	6780
7	7110	7520	7520	7610	7630	7810	8520	8200	7380	7210	6760	6760
8	7110	7460	8190	7590	8050	7750	8350	13300	7570	7200	6750	7260
9	7100	7420	10600	8110	7910	7720	8140	24000	7670	7180	6740	7300
10	7100	7420	9960	8790	8130	7690	7980	21400	8080	7170	6740	7290
11	7090	8870	9110	8570	8340	7620	7880	20000	7910	7180	6720	7240
12	7090	9160	9100	8460	8190	7600	7800	17800	7760	7170	6700	7220
13	7070	8590	11300	8210	8030	7560	7750	14400	7660	7170	6680	7290
14	7060	8270	15900	8040	7920	7520	8890	11300	7580	7180	6640	7830
15	7060	7960	14200	7950	8240	7520	9430	9670	7520	7180	6630	7720
16	7040	7730	11700	7880	8450	7540	8870	8840	7460	7180	6600	7590
17	7030	7650	9870	7810	8320	7520	10200	8370	7440	7170	6570	7490
18	7020	7560	9050	7740	8130	7510	9650	8360	7470	7150	6560	7430
19	7010	7820	8600	8230	8480	7550	9040	8140	7520	7140	6530	7570
20	7010	8090	8200	9260	10300	7560	8520	7970	7830	7120	6520	8730
21	7010	7990	7980	8980	9850	7560	8210	7820	7770	7100	6480	8200
22	7010	10700	7880	8570	9040	9480	7990	7720	7680	7080	6440	7920
23	7010	10500	7780	8300	8520	9000	7890	7720	7560	7020	6440	7720
24	7040	9270	7730	8030	8620	8520	7820	7700	7510	7000	6440	7580
25	7040	10100	7730	7910	10700	8230	7760	7640	7460	6990	6400	7690
26	7050	9030	7730	7790	9630	8020	7690	7590	7450	6970	6400	7640
27	7050	8560	7730	7720	8870	7890	7620	7540	7410	6950	6380	7530
28	7050	8280	7720	7670	8480	7810	8130	7510	7380	6940	6320	7460
29	7350	8010	7700	7630	---	7750	15900	7490	7360	6890	6290	7410
30	7370	7830	7680	7600	---	10100	15900	7490	7330	6880	6330	7340
31	7340	---	7670	7570	---	9240	---	7460	---	6840	6620	---

07165000 HEYBURN LAKE NEAR HEYBURN, OK--Continued

MAX	7370	10700	15900	9260	10700	10100	15900	24000	8080	7310	6820	8730
MIN	7010	7420	7520	7570	7520	7510	7620	7460	7330	6840	6290	6630
(‡)	761.76	762.29	762.12	762.02	762.96	763.67	768.80	761.90	761.75	761.19	760.93	761.76
(‡‡)	+170	+490	-160	-100	+910	+760	+6,660	-8,440	-130	-490	-220	+720

CAL YR 1992 MAX 16820 MIN 7010 (‡‡) +20
WTR YR 1993 MAX 24000 MIN 6290 (‡‡) +170

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07165562 HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK

LOCATION.--Lat 36°01'01", long 95°50'55", in NW 1/4 NW 1/4 sec.29, T.18 N., R.14 E., Tulsa County, Hydrologic Unit 11110101, near right downstream abutment of 101st Street South bridge, 1.0 mi downstream from right by unnamed tributary, 2.0 mi upstream from Little Haikey Creek, and at mile 6.4.

DRAINAGE AREA.--17.8 mi^2.

PERIOD OF RECORD.--January 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 617.82 ft above sea level.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	177	e5.4	.88	1.1	e20	e20	4.8	e1.5	.00	.00	1.8
2	.00	9.0	e3.9	3.2	.96	e16	e18	103	e1.4	.00	.00	.01
3	.00	4.3	e3.5	3.8	.99	e12	e17	102	e7.0	.00	.00	125
4	.00	e3.0	e3.3	18	1.5	e10	e100	13	e4.0	.00	.00	2.4
5	.00	e2.2	e3.3	4.6	7.0	8.5	e23	4.5	e2.1	.00	7.6	.00
6	.00	e1.7	4.2	1.5	2.0	5.6	e13	169	e1.5	.00	9.6	.00
7	.00	1.4	4.0	1.1	.74	4.5	e16	22	e1.7	.00	.00	.00
8	7.5	1.3	2.2	.88	.31	3.5	e11	143	79	.00	.00	291
9	4.4	1.5	502	239	.45	2.6	7.2	745	18	.00	.00	17
10	.69	4.3	51	46	6.1	2.4	5.4	124	27	.00	.00	1.8
11	.21	234	11	28	12	e2.2	3.6	279	e7.0	.00	.00	.03
12	.00	136	5.9	74	19	e2.0	2.7	150	e3.5	.00	.00	.00
13	.00	13	311	14	2.7	2.6	2.3	46	e2.0	.00	.00	182
14	.00	6.2	678	7.0	.54	2.2	116	21	e1.5	15	.00	638
15	.00	4.5	158	6.8	129	4.7	e50	14	e1.0	7.3	.00	9.6
16	.00	e3.3	67	5.1	118	21	e35	9.3	e.75	.00	.00	.01
17	.00	e2.8	21	3.3	31	3.0	e170	8.3	e.55	.00	.00	.00
18	.00	e2.4	11	13	8.4	41	63	76	e.45	3.1	.00	.00
19	.00	14	8.3	29	69	e60	28	13	e2.5	.08	.00	21
20	.00	71	6.7	297	191	e20	16	5.6	24	.00	.00	228
21	.00	22	4.8	40	69	e12	7.8	5.3	e3.3	.00	.00	7.8
22	.00	308	4.9	15	14	e200	5.9	3.8	e.70	.00	.00	1.6
23	.00	110	3.5	9.0	6.4	e50	3.9	4.1	e.25	.00	.00	.69
24	.00	81	2.4	5.2	45	e18	3.4	5.1	e.14	.00	.00	e.40
25	.00	149	33	3.4	274	e10	2.1	e3.5	e.06	.11	.00	94
26	.00	26	7.8	2.7	42	e8.0	1.6	e3.0	e.04	3.1	.00	6.7
27	.00	14	3.1	2.2	19	e7.0	1.7	e2.5	e.02	.00	.00	e.40
28	.00	11	2.7	1.6	e13	e6.5	3.4	e2.2	e.01	.00	.00	e.50
29	81	8.8	2.9	1.3	---	e6.0	132	e2.0	e.01	.00	.00	e.36
30	8.1	7.6	3.5	.80	---	e70	15	e1.9	.00	.00	.00	e.25
31	3.2	---	2.0	1.0	---	e22	---	e1.7	---	.00	135	---
TOTAL	105.10	1430.3	1931.3	878.36	1084.19	653.3	894.0	2087.6	190.98	28.69	152.20	1630.35
MEAN	3.39	47.7	62.3	28.3	38.7	21.1	29.8	67.3	6.37	.93	4.91	54.3
MAX	81	308	678	297	274	200	170	745	79	15	135	638
MIN	.00	1.3	2.0	.80	.31	2.0	1.6	1.7	.00	.00	.00	.00
AC-FT	208	2840	3830	1740	2150	1300	1770	4140	379	57	302	3230
CFSM	.19	2.68	3.50	1.59	2.18	1.18	1.67	3.78	.36	.05	.28	3.05
IN.	.22	2.99	4.04	1.84	2.27	1.37	1.87	4.36	.40	.06	.32	3.41

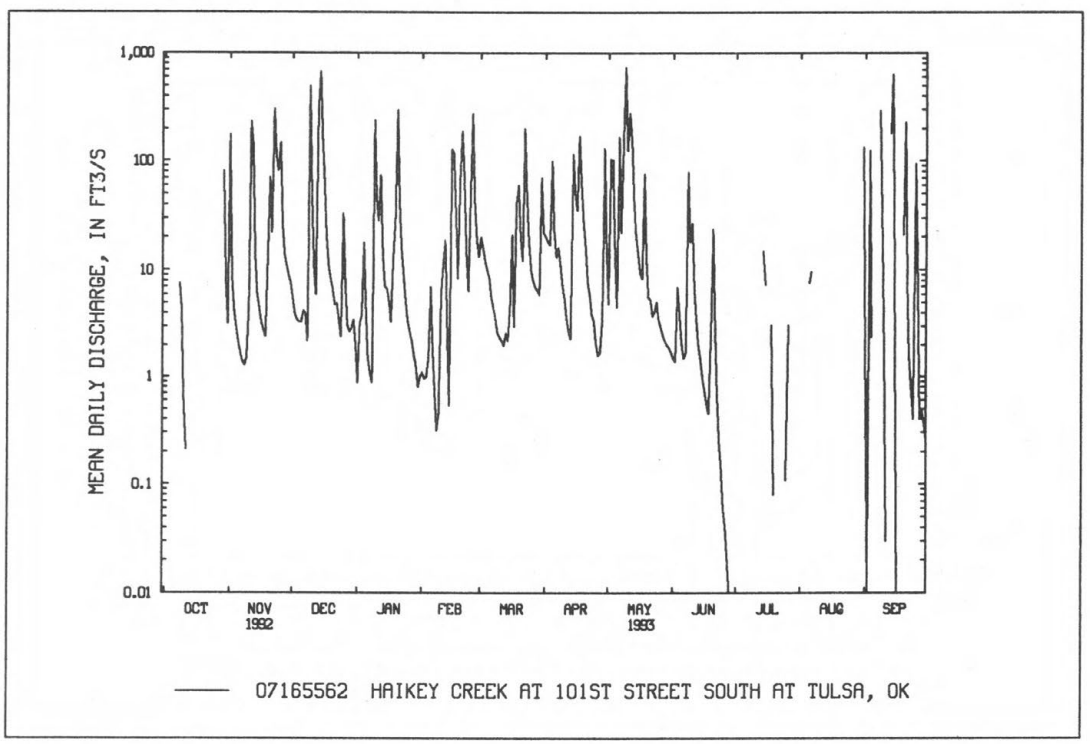
e Estimated

07165562 HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.7	20.6	27.6	16.7	21.7	38.7	35.9	32.6	28.5	6.97	15.8	26.7
MAX	47.0	47.7	62.3	28.3	38.7	120	82.3	67.3	75.9	19.2	49.6	54.3
(WY)	1992	1993	1993	1993	1993	1990	1990	1993	1992	1992	1989	1993
MIN	.74	.76	1.67	7.16	1.67	6.22	5.07	14.0	3.63	.47	.36	10.7
(WY)	1989	1990	1990	1992	1991	1991	1989	1989	1990	1990	1991	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1989-93	
ANNUAL TOTAL	10977.66		11066.37			
ANNUAL MEAN	30.0		30.3		23.7	
HIGHEST ANNUAL MEAN					31.0	1992
LOWEST ANNUAL MEAN					11.0	1991
HIGHEST DAILY MEAN	678	Dec 14	745	May 9	1620	Mar 14 1990
LOWEST DAILY MEAN	.00	Jul 8	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 8	.00	Oct 1	.00	Oct 12 1988
INSTANTANEOUS PEAK FLOW			1220	Sep 14	5890	Aug 20 1989
INSTANTANEOUS PEAK STAGE			14.53	Sep 14	17.28	Aug 20 1989
ANNUAL RUNOFF (AC-FT)	21770		21950		17160	
ANNUAL RUNOFF (CFSM)	1.69		1.70		1.33	
ANNUAL RUNOFF (INCHES)	22.94		23.13		18.08	
10 PERCENT EXCEEDS	64		86		37	
50 PERCENT EXCEEDS	6.3		3.4		2.8	
90 PERCENT EXCEEDS	.00		.00		.00	



07165565 LITTLE HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK

LOCATION.--Lat 36°01'03", long 95°51'38", in SE 1/4 SW 1/4 sec.19, T.18 N., R.14 E., Tulsa County, Hydrologic Unit 11110101, near right upstream abutment of 101st Street South bridge, and at mile 2.0.

DRAINAGE AREA.--5.45 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

REVISED RECORDS.--WDR OK-92-1: 1988, 89 (M).

GAGE.--Water-stage recorder. Datum of gage is 626.21 ft above sea level.

REMARKS.--Records poor.

REVISIONS.--The maximum discharge for the water years 1988 and 1989 have been revised to 773 ft^3/s, Mar. 29, 1988, gage height 13.51 ft and 1,380 ft^3/s, Aug. 20, 1989, gage height 16.20 ft, superseding figures published in reports for 1988 and 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	65	1.2	e.80	e1.0	7.0	6.9	2.9	e.58	.02	.01	e1.5
2	.01	1.4	1.2	2.1	e.9	6.7	6.5	44	e.53	.00	.02	e.10
3	.04	1.4	1.1	2.2	e.9	3.6	6.6	9.1	e3.0	.00	.00	e20
4	.07	.96	1.1	3.2	1.3	3.4	56	4.0	e1.0	.00	.00	e1.0
5	.08	.63	1.2	1.8	1.9	3.0	9.7	3.2	e.45	.00	11	e.10
6	.17	.57	1.7	e1.3	1.5	2.8	5.6	64	e.40	.56	2.0	e.01
7	3.9	.55	1.3	e.80	e.50	2.7	5.1	5.2	e.48	.04	.10	e.00
8	.93	.50	1.1	e.60	e.2	e2.1	4.8	180	e.90	.01	.01	e40
9	.06	.59	124	56	e.3	e2.0	3.9	318	8.3	.00	.01	e4.5
10	.01	1.1	7.4	6.2	3.7	e1.8	3.4	23	1.1	.04	.01	e.80
11	.01	138	3.5	6.8	2.9	e1.6	3.3	64	.32	.02	e.02	e.20
12	.02	17	2.8	6.6	3.1	e1.4	3.1	23	.45	.03	e.03	e.01
13	.04	1.8	99	3.2	1.8	e1.5	3.1	5.0	.32	.03	e.00	e30
14	.03	1.2	282	2.8	e.3	e1.4	56	2.7	.24	4.3	e.00	e300
15	.03	.97	37	2.7	20	6.8	13	1.9	.16	.52	e.00	e4.0
16	.03	.84	9.3	2.6	13	4.2	4.9	1.4	.16	.16	e.00	e.01
17	.03	.83	5.0	2.2	4.1	2.8	91	1.8	.16	.06	e.00	e.00
18	.03	.78	3.9	3.4	2.6	9.6	9.6	11	.16	.46	e.00	e.00
19	.04	4.6	3.3	18	15	25	5.6	1.8	.20	3.1	e.00	e4.0
20	.11	17	2.6	65	35	5.9	3.7	1.1	3.9	.19	e.00	e30
21	.18	8.3	2.6	5.2	8.6	4.1	3.3	.96	.21	.07	e.00	e4.0
22	.14	114	2.1	3.0	3.8	130	2.9	.97	.16	.03	e.00	e1.0
23	.12	11	1.9	2.5	2.9	11	2.9	1.5	.12	.01	e.00	e.50
24	.13	34	1.8	2.0	35	8.5	2.6	.99	.27	.00	e.00	e.30
25	.38	18	6.5	1.8	105	7.0	2.5	.90	.12	.91	e.00	e10
26	.22	3.0	2.5	1.7	7.6	6.4	2.3	.83	.06	.32	e.00	e4.0
27	.19	2.1	2.0	1.7	4.6	5.9	2.3	.81	.08	.03	e.00	e.10
28	.16	1.6	1.9	e1.2	4.1	6.0	3.4	.79	.07	.00	e.00	e.20
29	24	1.5	2.1	e.90	---	5.6	33	.75	.06	.00	e.00	e.10
30	1.2	1.3	2.0	e.6	---	42	4.2	e.70	.05	.00	e.00	e.07
31	.70	---	1.6	e.9	---	8.2	---	e.63	---	.01	e30	---
TOTAL	33.07	450.52	616.7	209.80	281.60	330.0	361.2	776.93	24.01	10.92	43.21	456.50
MEAN	1.07	15.0	19.9	6.77	10.1	10.6	12.0	25.1	.80	.35	1.39	15.2
MAX	24	138	282	65	105	130	91	318	8.3	4.3	30	300
MIN	.01	.50	1.1	.60	.20	1.4	2.3	.63	.05	.00	.00	.00
AC-FT	66	894	1220	416	559	655	716	1540	48	22	86	905
CFSM	.20	2.76	3.65	1.24	1.85	1.95	2.21	4.60	.15	.06	.26	2.79
IN.	.23	3.08	4.21	1.43	1.92	2.25	2.47	5.30	.16	.07	.29	3.12

e Estimated

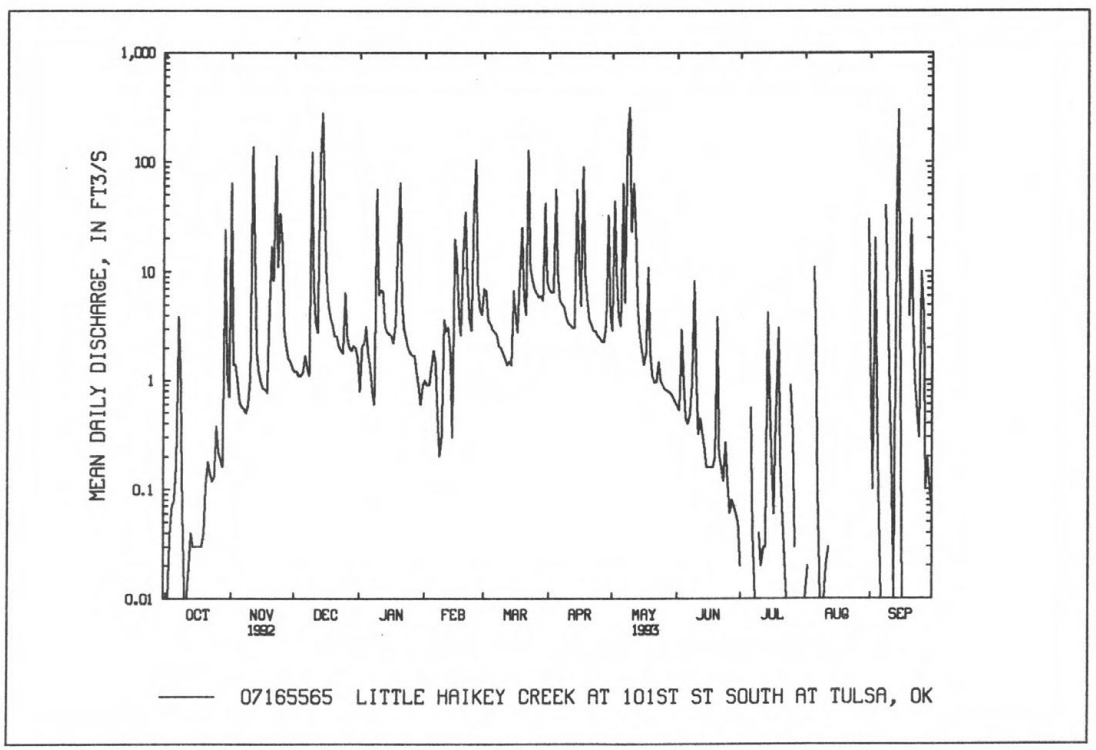
07165565 LITTLE HAIKEY CREEK AT 101ST STREET SOUTH AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.90	6.04	9.36	3.60	4.72	12.2	8.26	9.20	5.64	2.17	3.32	7.52
MAX	11.8	15.0	19.9	6.77	10.1	28.3	17.8	25.1	18.1	4.74	9.62	15.2
(WY)	1992	1993	1993	1993	1993	1990	1990	1993	1992	1992	1992	1993
MIN	.12	.27	.40	1.89	.37	1.61	1.44	3.00	.15	.042	.26	2.02
(WY)	1989	1990	1990	1992	1991	1991	1989	1988	1988	1990	1988	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1988-93	
ANNUAL TOTAL	2930.49		3594.46			
ANNUAL MEAN	8.01		9.85		6.24	
HIGHEST ANNUAL MEAN					9.85	1993
LOWEST ANNUAL MEAN					2.73	1991
HIGHEST DAILY MEAN	282	Dec 14	318	May 9	374	Mar 14 1990
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.02	Oct 10	.00	Aug 13	.00	Sep 5 1988
INSTANTANEOUS PEAK FLOW			719	Sep 14	1380	Aug 20 1989
INSTANTANEOUS PEAK STAGE			[a]13.20	Sep 14	16.20	Aug 20 1989
ANNUAL RUNOFF (AC-FT)	5810		7130		4520	
ANNUAL RUNOFF (CFSM)	1.47		1.81		1.15	
ANNUAL RUNOFF (INCHES)	20.00		24.53		15.57	
10 PERCENT EXCEEDS	9.4		18		9.4	
50 PERCENT EXCEEDS	1.5		1.4		.81	
90 PERCENT EXCEEDS	.17		.01		.00	

[a]From high-water mark.



07165570 ARKANSAS RIVER NEAR HASKELL, OK

LOCATION.--Lat 35°49'15", long 95°38'19", in SW 1/4 NW 1/4 sec.32, T.16 N., R.16 E., Wagoner County, Hydrologic Unit 11110101, near left, downstream abutment of old bridge downstream from State Highway 104, 2.0 mi east of Haskell, 23.5 mi upstream from Verdigris River, and at mile 483.7.

DRAINAGE AREA.--75,473 mi^2, of which 12,541 mi^2 probably is noncontributing.

PERIOD OF RECORD.--June 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 530.00 ft above sea level.

REMARKS.--Records fair. Except for 858 mi^2 intervening area, flow regulated by Keystone Lake (station 07164200) 55.1 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	887	2430	32500	27800	24600	23000	14500	31000	e46600	34000	28800	12300
2	1040	3770	31800	26900	24400	23900	13500	34300	48500	34100	28400	13400
3	1740	4360	32000	26700	24500	28300	13200	45500	48200	32300	28300	14000
4	2950	e3000	31400	26600	24200	28200	14500	61400	47900	28700	25900	14700
5	3340	e2200	26600	23500	24400	27600	20400	64700	53600	28700	25400	15200
6	2730	e1460	23300	25300	26100	30200	15800	75700	e53400	24900	25800	15200
7	1120	2750	23000	26600	27600	30700	16300	77700	e53200	21700	21800	14900
8	299	2540	22600	21500	27600	30300	18700	80800	e53000	22000	20400	14500
9	e1100	699	25500	18900	24900	24500	19300	120000	e52800	20500	20400	13700
10	e1230	899	28700	20400	32300	25700	21400	129000	52500	16500	22400	13000
11	e1350	5270	20100	17900	30200	26800	23100	122000	45000	15300	24200	9370
12	e250	11900	14800	21500	29300	26200	23000	133000	43800	15000	24200	7410
13	e230	8000	15200	23800	29300	20600	23100	141000	43200	17800	22400	7380
14	e1360	9000	30700	23200	29200	17100	23800	146000	42000	21900	20700	18400
15	e400	8930	28000	22700	30000	17300	24000	145000	41400	23000	20500	14700
16	e2000	8580	11600	18900	30900	15500	20600	145000	35500	26100	20500	11600
17	e500	8740	5760	17000	26500	12700	21100	142000	30200	30000	20400	9250
18	e1260	8730	4120	17100	22000	13700	27500	125000	29100	30400	20300	11400
19	419	8780	3130	17000	20200	14400	23700	106000	26800	31100	18500	11100
20	e5780	8590	3630	22000	19700	14600	18700	103000	25200	31500	16700	15500
21	e1600	7170	3660	21800	21600	13900	17500	91500	24500	31000	15100	12800
22	1360	11700	4010	17200	18000	16000	15500	73600	20300	29900	12200	7690
23	1180	21500	12700	14000	17800	20400	13500	59600	19100	29600	11900	7580
24	1350	16700	17000	13400	20800	15600	13600	57900	22300	29600	11300	7560
25	1260	17600	20500	13100	30800	13400	13200	57400	23600	29500	11900	6330
26	530	14400	20200	19100	30000	11700	13000	46800	23400	29500	11100	4250
27	342	19900	20100	25500	24700	9140	12900	47900	23400	29300	11900	2420
28	842	28500	20000	23200	23400	11200	11100	48200	23300	29200	11300	3160
29	1090	33400	25800	25000	---	13200	13800	47600	29400	29100	11900	2160
30	1340	32900	30100	25100	---	15700	19900	e46600	32400	29000	11900	1870
31	984	---	29200	24900	---	18300	---	e47000	---	28900	12300	---
TOTAL	41863	314398	617710	667600	715000	609840	540200	2652200	1113600	830100	588800	312830
MEAN	1350	10480	19930	21540	25540	19670	18010	85550	37120	26780	18990	10430
MAX	5780	33400	32500	27800	32300	30700	27500	146000	53600	34100	28800	18400
MIN	230	699	3130	13100	17800	9140	11100	31000	19100	15000	11100	1870
AC-FT	83040	623600	1225000	1324000	1418000	1210000	1071000	5261000	2209000	1647000	1168000	620500

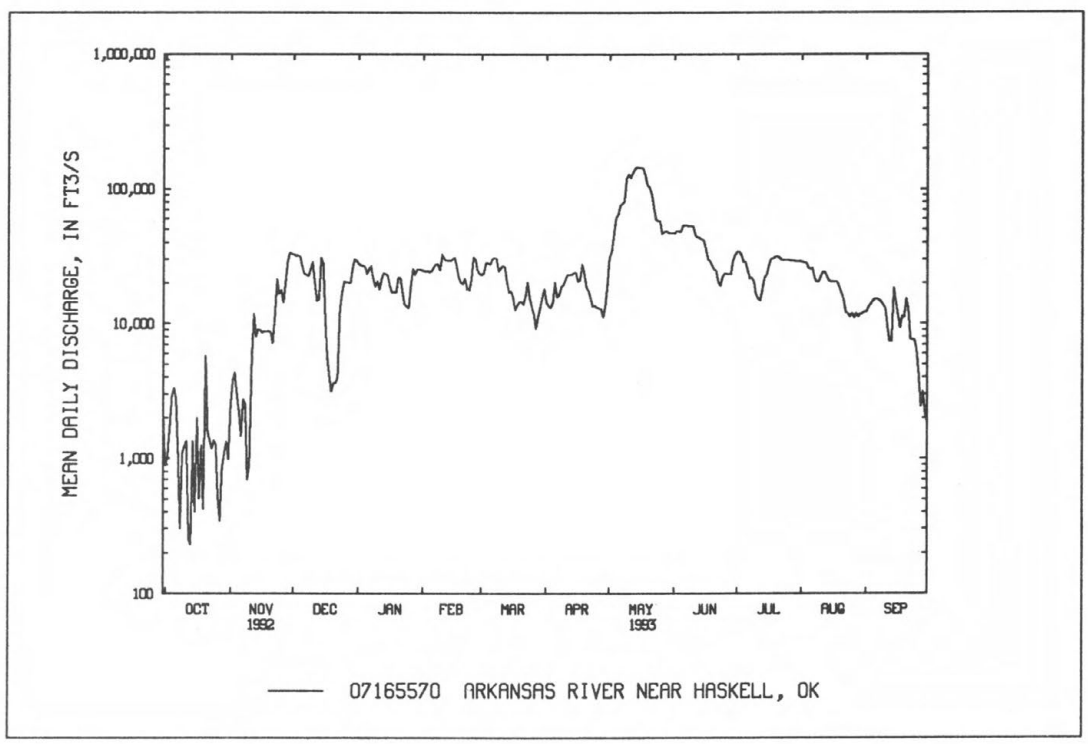
e Estimated

07165570 ARKANSAS RIVER NEAR HASKELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9797	8090	5866	6530	7607	14300	15180	17300	16420	9199	5269	5751
MAX	75500	42220	19930	21540	25540	50990	46910	85550	40940	26780	18990	23690
(WY)	1987	1975	1993	1993	1993	1987	1973	1993	1975	1993	1993	1989
MIN	576	646	802	567	549	722	638	2472	5074	1671	1171	1108
(WY)	1979	1981	1981	1981	1977	1977	1977	1981	1988	1991	1984	1983

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1973-93	
ANNUAL TOTAL	3285041		9004141			
ANNUAL MEAN	8976		24670		10110	
HIGHEST ANNUAL MEAN					25440	1987
LOWEST ANNUAL MEAN					2097	1981
HIGHEST DAILY MEAN	33400	Nov 29	146000	May 14	243000	Oct 5 1986
LOWEST DAILY MEAN	230	Oct 13	230	Oct 13	87	Sep 13 1988
ANNUAL SEVEN-DAY MINIMUM	797	Oct 7	797	Oct 7	369	Feb 25 1977
INSTANTANEOUS PEAK FLOW			150000	May 14	259000	Oct 5 1986
INSTANTANEOUS PEAK STAGE			19.28	May 14	22.82	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	6516000		17860000		7328000	
10 PERCENT EXCEEDS	22000		46700		25300	
50 PERCENT EXCEEDS	6070		20500		5540	
90 PERCENT EXCEEDS	1390		2650		760	



07171000 VERDIGRIS RIVER NEAR LENAPAH, OK

LOCATION.--Lat 36°51'04", long 95°35'09", NE 1/4, SW 1/4, sec.3, T.27 N., R.16 E., Nowata County, Hydrologic Unit 11070103, on right bank on downstream side of county road bridge, 2.8 mi east of Lenapah, 4.5 mi upstream from Cedar Creek, and at mile 144.6.

DRAINAGE AREA.--3,639 mi^2.

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 977: 1942 (M). WSP 1117: drainage area.

GAGE.--Water-stage recorder. Datum of gage is 644.90 ft above sea level.

REMARKS.--Records good. Some regulation since April 1949 by Fall River Reservoir in Kansas. Flow regulated since 1960 by Toronto Lake in Kansas. Flow has been further regulated since 1966 by Elk Reservoir in Kansas. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	466	9410	8370	7040	e3500	7580	3610	11000	1920	1580	99
2	1320	858	8710	8240	6240	e4750	6610	3650	8070	1590	1820	86
3	1160	946	8010	8320	5470	7340	4480	7170	7790	1380	1740	110
4	762	1090	8190	9200	5160	9110	3940	5480	7710	1300	1700	274
5	392	1660	8080	11400	4290	8430	8220	6500	7790	1250	1950	178
6	265	1390	7970	8820	2720	7620	5170	9570	8080	3630	2540	150
7	217	1140	7920	6260	1480	4810	3980	11600	8890	6930	1060	146
8	174	1310	7840	5690	1450	3160	3430	13900	8640	4340	648	129
9	236	1290	12600	6080	1410	3000	3720	36200	9230	3640	526	112
10	244	1320	19100	6600	1970	3820	3310	39100	11300	3760	482	96
11	216	2180	14000	6200	3070	4420	2800	35400	7590	2330	471	67
12	194	12600	9480	7800	7160	3450	2310	28100	7940	6170	422	54
13	157	9310	15500	10700	8120	1930	2240	e5000	8740	2270	337	65
14	132	5720	34400	7520	6280	1420	3600	e2000	8830	1740	302	5100
15	115	4370	37600	6140	5740	1380	3510	e4500	8510	3440	245	2780
16	101	4390	34100	5620	5690	1370	3070	8460	8400	3570	226	1370
17	91	5090	e20000	6150	5590	1370	5030	10200	8620	2290	194	632
18	84	7190	e4800	6300	3380	1290	5100	29600	8910	1830	155	368
19	111	15400	e3500	5760	2240	2610	2690	34700	8640	2310	133	414
20	131	20100	e4500	11200	2680	2440	2450	e8000	10200	4130	121	1240
21	129	20900	e5200	15300	9560	1950	2280	e2000	8910	6120	107	981
22	126	20000	5550	11100	7820	3010	2080	e1500	8060	6150	86	510
23	125	22800	5450	8980	6560	3910	1690	e2500	8580	5640	77	532
24	118	21600	5250	8430	7650	3810	1420	e3000	10400	4890	71	1640
25	93	22500	5020	6100	9020	3340	2160	e2100	12700	4370	68	26000
26	77	19800	4850	5630	8070	2260	1380	e4000	13900	3520	61	29800
27	69	16200	4590	6630	e5400	1950	1100	7920	5070	2170	53	24800
28	65	9970	4420	7160	e3350	3150	1000	8750	2940	3520	48	9890
29	71	9700	6660	7520	---	7010	1360	8610	2670	3050	42	1590
30	95	9720	9190	7370	---	5960	3370	12700	2350	1860	39	1100
31	162	---	9030	7140	---	6570	---	17700	---	1200	54	---
TOTAL	8552	271010	340920	243730	144610	120140	101080	373520	250460	102310	17358	110313
MEAN	276	9034	11000	7862	5165	3875	3369	12050	8349	3300	560	3677
MAX	1320	22800	37600	15300	9560	9110	8220	39100	13900	6930	2540	29800
MIN	65	466	3500	5620	1410	1290	1000	1500	2350	1200	39	54
AC-FT	16960	537500	676200	483400	286800	238300	200500	740900	496800	202900	34430	218800

e Estimated

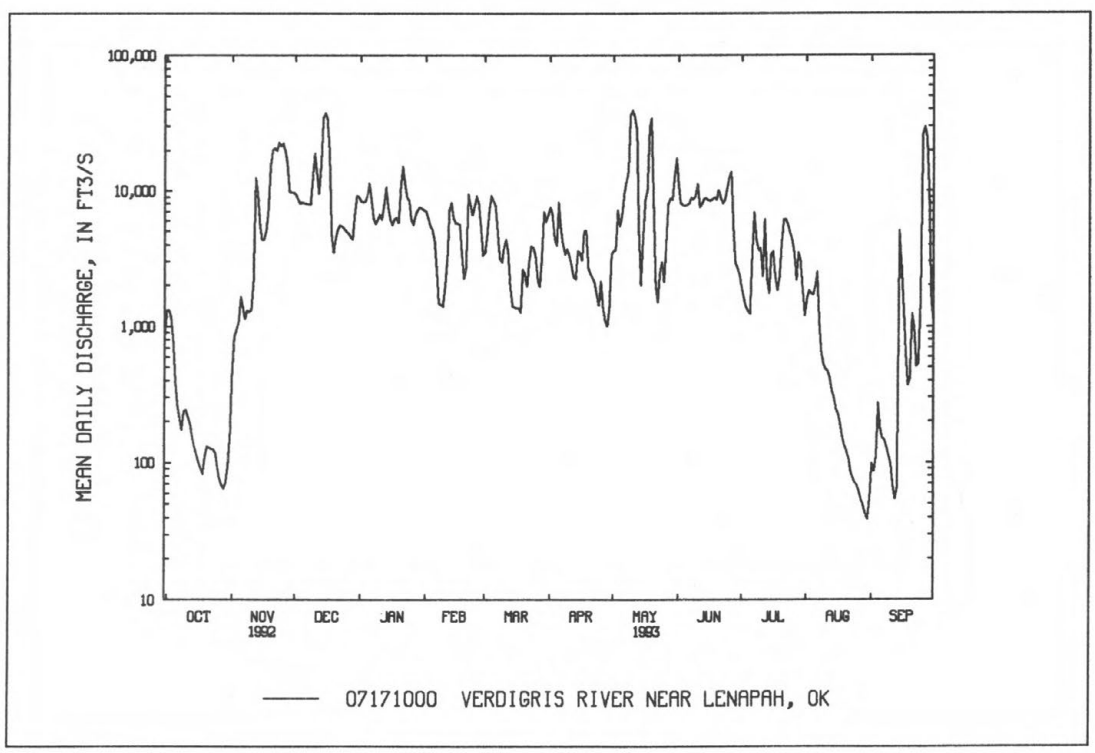
07171000 VERDIGRIS RIVER NEAR LENAPAH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2474	2959	2096	1832	2309	4525	3985	3828	4947	2198	896	1240
MAX	27970	15440	11000	7998	8983	17130	16300	12050	12500	13920	5364	5614
(WY)	1987	1975	1993	1973	1985	1973	1988	1993	1969	1976	1985	1989
MIN	15.5	20.0	29.2	17.6	20.0	19.7	30.2	366	84.3	17.9	16.1	9.99
(WY)	1981	1981	1967	1981	1981	1981	1981	1992	1972	1980	1983	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1967-93	
ANNUAL TOTAL	1361147		2084003			
ANNUAL MEAN	3719		5710		[a]2772	
HIGHEST ANNUAL MEAN					5906	1987
LOWEST ANNUAL MEAN					329	1981
HIGHEST DAILY MEAN	37600	Dec 15	39100	May 10	76200	Oct 5 1986
LOWEST DAILY MEAN	65	Oct 28	39	Aug 30	[b]5.5	Sep 30 1980
ANNUAL SEVEN-DAY MINIMUM	84	Oct 24	52	Aug 25	5.7	Sep 26 1980
INSTANTANEOUS PEAK FLOW			39500	May 10	[c]78400	Jul 4 1976
INSTANTANEOUS PEAK STAGE			33.24	May 10	[d]38.60	Jul 4 1976
ANNUAL RUNOFF (AC-FT)	2700000		4134000		2008000	
10 PERCENT EXCEEDS	9710		11200		8570	
50 PERCENT EXCEEDS	1300		3820		661	
90 PERCENT EXCEEDS	187		130		40	

[a]Prior to regulation, water years 1939-49, 2,599 ft^3/s.
[b]Minimum daily discharge for period of record, no flow at times in 1939, 1940, and 1956.
[c]Maximum discharge for period of record, 137,000 ft^3/s, May 20, 1943.
[d]Maximum gage height for period of record, 40.44 ft, May 20, 1943 (from floodmarks.)



07171300 OOLOGAH LAKE NEAR OOLOGAH, OK

LOCATION.--Lat 36°25'23", long 95°40'44", in NE 1/4 NW 1/4 sec.2, T.22 N., R.15 E., Rogers County, Hydrologic Unit 11070103, in control tower 1,000 ft from left end of dam on Verdigris River, 2.0 mi southeast of Oologah, and at mile 90.3.

DRAINAGE AREA.--4,339 mi^2.

PERIOD OF RECORD.--May 1963 to September 1993 (discontinued). Prior to October 1970, published as Oologah Reservoir near Oologah.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam. Spillway is concrete ogee-type weir controlled by 7 tainter gates. Storage began May 15, 1963, conservation pool was first filled Apr. 4, 1964. Capacity 1,519,000 acre-ft at elevation 661.0 ft, top of flood control pool, 553,400 acre-ft at elevation 638.0 ft, conservation pool. Dead storage 9,260 acre-ft below elevation 592.0 ft. Figures given herein represent total contents. Reservoir is used for flood control and conservation. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,751,000 acre-ft, Oct. 9, 1986, elevation, 664.90 ft; minimum since conservation pool first filled 33,750 acre-ft, Aug. 28, and Oct. 27, 1969, elevation, 602.87 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,417,000 acre-ft, May 20, elevation, 658.55 ft; minimum, 541,300 acre-ft, Sept. 12, elevation, 637.64 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

635	469,400	655	1,203,000
640	614,100	660	1,462,000
645	782,400	665	1,757,000
650	978,000		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

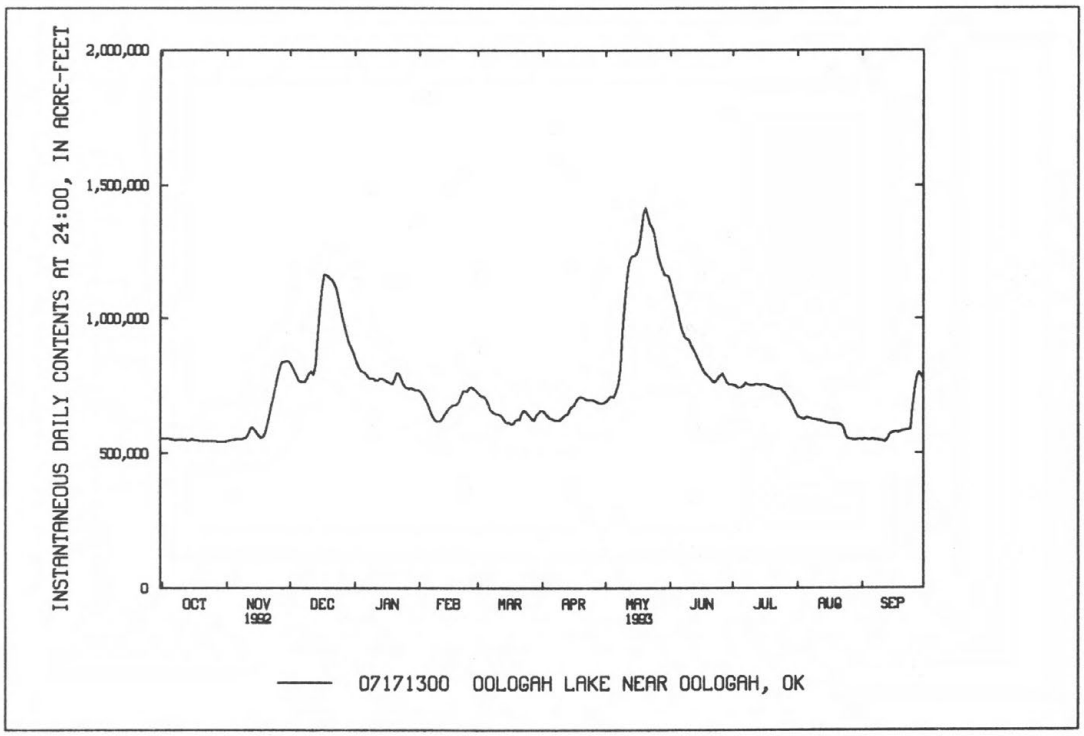
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	554100	544700	833700	854100	732900	725100	659500	692400	1135000	755100	638000	550400
2	554100	547400	819600	831000	725100	717100	652900	698800	1102000	753200	633900	554100
3	554400	549200	804400	814600	712800	711700	642100	709600	1073000	746200	631200	551900
4	554100	549500	788900	804400	697800	710700	633900	712100	1045000	744300	627800	550700
5	552900	552500	769500	802400	683500	701000	630600	710300	1008000	745400	634600	550700
6	551000	553500	765600	797300	663000	681800	627200	731800	973400	750600	634300	554100
7	548600	552200	765600	785900	643100	661600	623500	753200	947700	762600	632600	551000
8	550100	552900	764900	777500	628900	654700	623500	808300	930600	757300	629200	549200
9	549500	556300	780100	778600	620100	649200	623800	943500	924400	754000	627500	548900
10	550700	558900	796200	776700	618400	647800	631600	1046000	920600	755100	626200	548300
11	549800	573400	802800	769800	620400	645800	639000	1139000	901000	753600	623100	545000
12	549200	593700	793100	771400	630600	642400	644100	1207000	885500	758800	623100	543500
13	546200	598000	825900	777500	644100	631900	647800	1229000	870900	756900	620400	554100
14	547700	587800	930200	777500	655400	620400	665800	1235000	853700	754300	618000	571500
15	554400	577900	1029000	773700	666800	613400	675200	1237000	836900	756900	613700	577500
16	549200	565500	1104000	767900	674100	615700	679700	1247000	820400	755800	613100	579800
17	548000	558200	1164000	765600	680700	608200	696300	1276000	805600	754700	612400	581300
18	547400	559500	1164000	760300	680700	612100	706400	1334000	794600	750300	610800	579400
19	545000	576600	1158000	757300	682800	624500	711000	1394000	788200	746200	611400	580700
20	545600	607800	1150000	774400	695600	627500	708900	1414000	779800	744300	611100	584800
21	545000	641700	1143000	798100	716400	627200	705300	1388000	771400	741400	608500	585500
22	545300	681800	1130000	796900	733200	649200	699600	1355000	764100	740600	606500	588100
23	545300	713200	1111000	780100	732100	660600	699600	1344000	768700	739900	594000	587500
24	545300	751400	1073000	759500	730700	656100	698800	1324000	782400	739200	568000	593400
25	546500	788900	1035000	747300	743600	646100	698800	1281000	789300	729200	554400	672400
26	545300	819600	998900	743200	746900	637000	696000	1237000	796600	722500	553200	738100
27	543200	838100	966600	739900	740300	627500	691700	1208000	781300	709900	551900	783200
28	544100	840100	937300	743200	733200	623800	688800	1186000	765300	701400	549800	800900
29	544100	841300	909900	738800	---	642400	687000	1165000	757300	688100	549200	792000
30	543200	841700	894000	735800	---	650200	688800	1162000	755800	671400	552200	775600
31	543200	---	875300	734700	---	659500	---	1159000	---	653600	552500	---

07171300 OOLOGAH LAKE NEAR OOLOGAH, OK--Continued

MAX	554400	841700	1164000	854100	746900	725100	711000	1414000	1135000	762600	638000	800900
MIN	543200	544700	764900	734700	618400	608200	623500	692400	755800	653600	549200	543500
(‡)	637.70	646.16	647.00	643.37	643.33	641.26	642.10	653.50	643.94	641.09	638.01	644.46
(‡‡)	-12,200	+298,500	+33,600	-140,600	-1,500	-73,700	+29,300	+470,200	-403,200	-102,200	-101,100	+223,100

CAL YR 1992 MAX 1164000 MIN 543200 (‡‡) +232,600
WTR YR 1993 MAX 1414000 MIN 543200 (‡‡) +220,200

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07172500 HULAH LAKE NEAR HULAH, OK

LOCATION.--Lat 36°55'39", long 96°05'18", in SW 1/4 SE 1/4 sec.2, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, in stair tower at right end of Hulah Dam on Caney River, 0.5 mi downstream from Hickory Creek, 2.0 mi west of Hulah, 15.7 mi upstream from Little Caney River, and at mile 96.2.

DRAINAGE AREA.--732 mi^2.

PERIOD OF RECORD.--April 1950 to September 1993 (discontinued). Prior to October 1970, published as Hulah Reservoir near Hulah.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Feb. 15, 1951, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by an earth dam. Spillway is 472-foot concrete ogee-type weir controlled by 10 taintor gates. Outlet works consist of nine rectangular sluices, two 24-inch gated pipes, and one 10-inch water-supply pipe. Closure for diversion made Feb. 6, 1950; regulated storage began Oct. 25, 1950; conservation pool was first filled Sept. 24, 1951. Capacity, 289,000 acre-ft, at elevation 765.0 ft, top of taintor gates, 61,360 acre-ft, at elevation 740.0 ft, crest of spillway, and 31,120 acre-ft, at elevation 733.0 ft, conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, conservation, and municipal water supply. Revised capacity table, based on survey in 1973, used since Oct. 1, 1977. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 350,100 acre-ft, Oct. 3, 1986, elevation, 769.41 ft; minimum since conservation pool was first filled, 11,250 acre-ft, Mar. 20, 1957, elevation, 723.22 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 184,300 acre-ft, May 18, elevation 756.00 ft; minimum, 28,220 acre-ft, Nov. 9, elevation 732.15 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

725	9,940	745	90,970
730	21,400	750	128,700
735	38,680	755	174,200
740	61,360	760	227,400

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

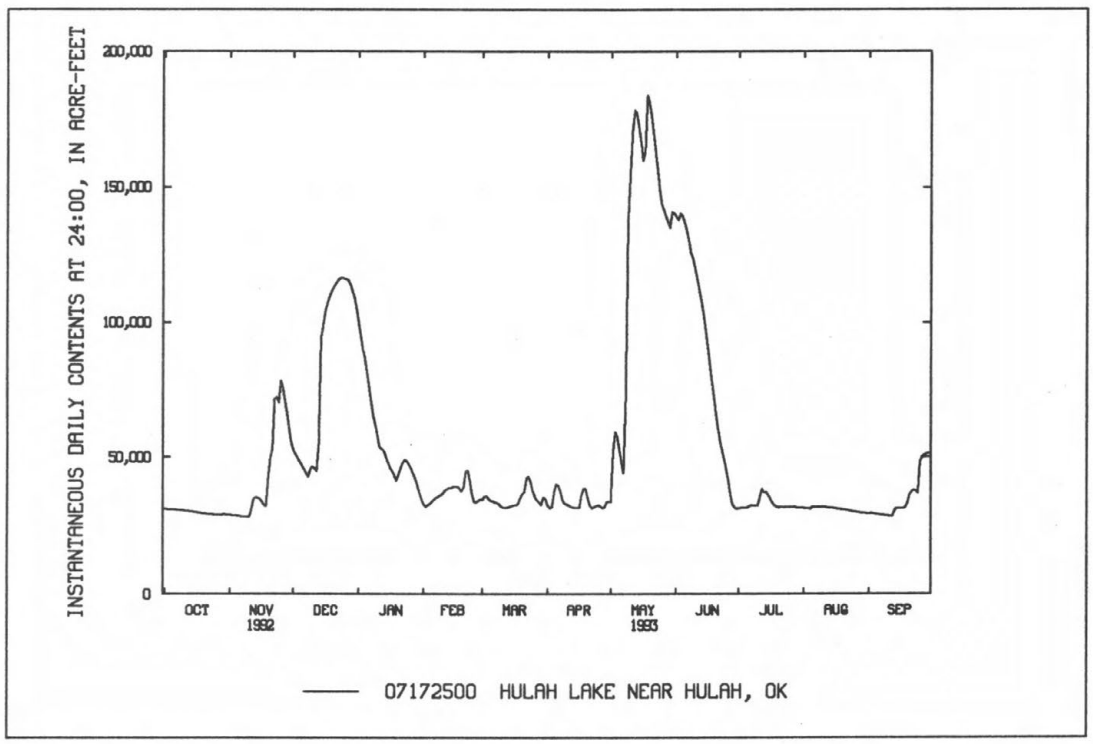
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31050	29080	52580	99650	32770	34500	32440	33690	139300	31300	31520	29430
2	31020	28800	50950	94470	32000	35690	31520	52100	138000	31490	31380	29670
3	30950	28770	49730	89700	32480	35840	31850	59400	140400	31520	31340	29430
4	30840	28740	48330	86750	33000	34830	37050	57490	139500	31520	31120	29320
5	30810	28490	47060	81640	33880	34100	40070	52910	136900	31520	31780	29220
6	30810	28420	45600	76210	34610	33910	39740	48010	134000	32150	31780	29080
7	30770	28390	44180	70630	35180	33510	37750	44010	130000	32440	31850	29010
8	30770	28250	42810	65490	35650	33400	34470	71690	125700	32330	31820	28910
9	30600	28220	45600	61940	36080	32810	33140	138200	123400	32410	31820	28770
10	30530	28220	46590	57890	36580	32080	32850	155800	119900	32370	31820	28700
11	30430	31020	46030	53770	37630	31490	32480	171600	116000	35420	31820	28530
12	30360	34580	45090	53050	38210	31490	32000	178300	111900	38330	31710	28460
13	30190	35420	54820	52480	38720	31710	31710	177100	107800	37050	31670	30670
14	30120	35220	94050	50270	38720	31930	31710	172300	103500	37200	31600	31450
15	29980	34800	99000	48190	39210	32220	31520	166600	97570	36150	31490	31340
16	29880	33910	104000	46120	39250	32440	31600	159900	91360	34800	31340	31340
17	29740	32520	106900	45000	39290	32480	36000	163600	84710	33400	31230	31340
18	29600	32150	109500	43320	38720	33000	38410	184000	78400	32330	31120	31670
19	29500	42810	111300	41460	37550	34990	38520	181300	72600	31890	30980	33030
20	29430	50040	112900	43490	38920	36540	35340	176300	66440	31710	30840	36120
21	29290	52820	114200	45860	44830	37280	32440	169700	60760	31850	30780	37360
22	29290	71520	115400	47920	45170	42360	31520	162900	56010	31890	30570	38020
23	29220	72310	116200	48960	41340	42940	31740	156100	52290	31780	30460	37750
24	29080	70630	116600	48640	36780	40970	32180	149000	49010	31780	30290	37010
25	29080	78400	116200	47420	33800	37750	32480	143900	45170	31820	30120	48330
26	29050	75620	115900	45860	33510	35610	32150	141700	41170	31820	30050	50040
27	28910	71190	115500	44050	34100	34280	31520	139500	36000	31780	29940	50810
28	28910	65910	113900	42030	34650	33620	31740	137300	32880	31740	29810	51270
29	29180	60350	111600	39900	---	32700	33660	135400	31670	31670	29700	51450
30	29050	55200	109100	37160	---	35340	33660	140800	31230	31670	29740	51310
31	28940	---	104800	34800	---	34830	---	140500	---	31630	29500	---

07172500 HULAH LAKE NEAR HULAH, OK--Continued

MAX	31050	78400	116600	99650	45170	42940	40070	184000	140400	38330	31850	51450
MIN	28910	28220	42810	34800	32000	31490	31520	33690	31230	31300	29500	28460
(‡)	732.36	738.75	746.96	733.99	733.95	734.00	733.68	751.37	733.02	733.13	732.52	737.93
(‡‡)	-2,180	+26,260	+49,600	-70,000	-150	+180	-1,170	+106,840	-109,270	+400	-2,130	+21,810

CAL YR 1992 MAX 116600 MIN 28220 (‡‡) +71,620
WTR YR 1993 MAX 184000 MIN 28220 (‡‡) +20,190

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07173000 CANEY RIVER NEAR HULAH, OK

LOCATION.--Lat 36°55'37", long 96°05'06", in SW 1/4 SE 1/4 sec.2, T.28 N., R.11 E., Osage County, Hydrologic Unit 11070106, on left bank 1,200 ft downstream from Hulah Dam, 2.1 mi upstream from Opossum Creek, 2.5 mi west of Hulah, and at mile 95.9.

DRAINAGE AREA.--733 mi^2.

PERIOD OF RECORD.--October 1937 to September 1993 (discontinued).

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 694.00 ft above sea level. Prior to Feb. 18, 1939, nonrecording gage. Feb. 18, 1939 to Sept. 30, 1948, waterstage recorder at county road bridge, 0.2 mi upstream at datum 9.04 ft lower. Oct. 1, 1948 to Sept. 30, 1972, at site 0.6 mi downstream at datum 12.04 ft lower. Oct. 1, 1972, to Sept. 30, 1989, at same site and datum 5.00 ft higher.

REMARKS.--Records poor. Flow completely regulated since February 1950 by Hulah Lake (station 07172500). About 5 to 9 ft?/s is diverted from gage pool for municipal water supply by the city of Bartlesville.

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 40.2 ft occurred at original site and datum, date unknown, from floodmark, information provided by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	18	1690	2990	1160	1020	1460	623	1190	e22	25	19
2	9.0	18	1110	2970	569	1410	787	616	1030	e19	25	20
3	8.7	18	970	2910	190	1410	302	1910	1050	e18	24	19
4	8.8	17	976	3040	200	1410	302	3650	1380	e18	22	19
5	17	17	993	3450	208	990	297	3890	1770	e18	21	19
6	18	17	982	3360	207	670	830	4030	1840	e17	22	19
7	19	17	979	3290	208	674	1410	3710	2090	e35	19	19
8	17	17	964	3030	208	497	2040	2180	2490	85	19	19
9	17	17	961	2970	206	664	1150	103	2490	85	19	18
10	18	17	968	2960	205	652	560	77	2510	85	20	19
11	18	19	962	2990	184	569	564	62	2470	89	19	19
12	18	18	953	2590	310	371	556	1340	2450	319	19	22
13	18	185	963	1840	378	242	468	3400	2440	723	19	26
14	19	343	426	1770	378	248	400	5070	2420	710	19	253
15	19	347	92	1590	378	248	396	5070	2910	706	19	233
16	19	464	87	1370	378	254	358	5000	3240	709	19	16
17	19	547	68	1390	378	246	317	3220	3160	707	19	16
18	19	536	69	1440	756	245	319	1180	3110	703	19	16
19	18	526	59	1550	1090	246	779	4260	3060	703	19	16
20	18	549	47	1560	1100	252	1780	4540	3020	421	19	14
21	19	556	50	1570	1140	251	1760	4500	2660	221	19	14
22	19	932	55	1570	1880	345	696	4470	2330	220	23	15
23	19	1840	55	1570	3050	653	307	4460	2280	156	22	254
24	19	2650	402	1550	3010	1470	237	4410	2280	77	18	424
25	18	2530	634	1540	2550	1860	233	3510	2250	77	18	17
26	19	3190	636	1500	1070	1260	485	1670	2180	78	18	15
27	18	3120	638	1470	462	854	503	1390	2130	50	18	13
28	18	3060	1190	1450	463	845	383	1390	e1550	23	17	13
29	19	2990	1570	1410	---	853	773	1340	e650	25	17	74
30	18	2730	1550	1380	---	1460	818	1340	e260	26	18	184
31	18	---	2260	1380	---	1920	---	1280	---	25	20	---
TOTAL	530.1	27305	23359	65450	22316	24089	21270	83691	64690	7170	614	1844
MEAN	17.1	910	754	2111	797	777	709	2700	2156	231	19.8	61.5
MAX	19	3190	2260	3450	3050	1920	2040	5070	3240	723	25	424
MIN	8.6	17	47	1370	184	242	233	62	260	17	17	13
AC-FT	1050	54160	46330	129800	44260	47780	42190	166000	128300	14220	1220	3660

e Estimated

07173000 CANEY RIVER NEAR HULAH, OK--Continued

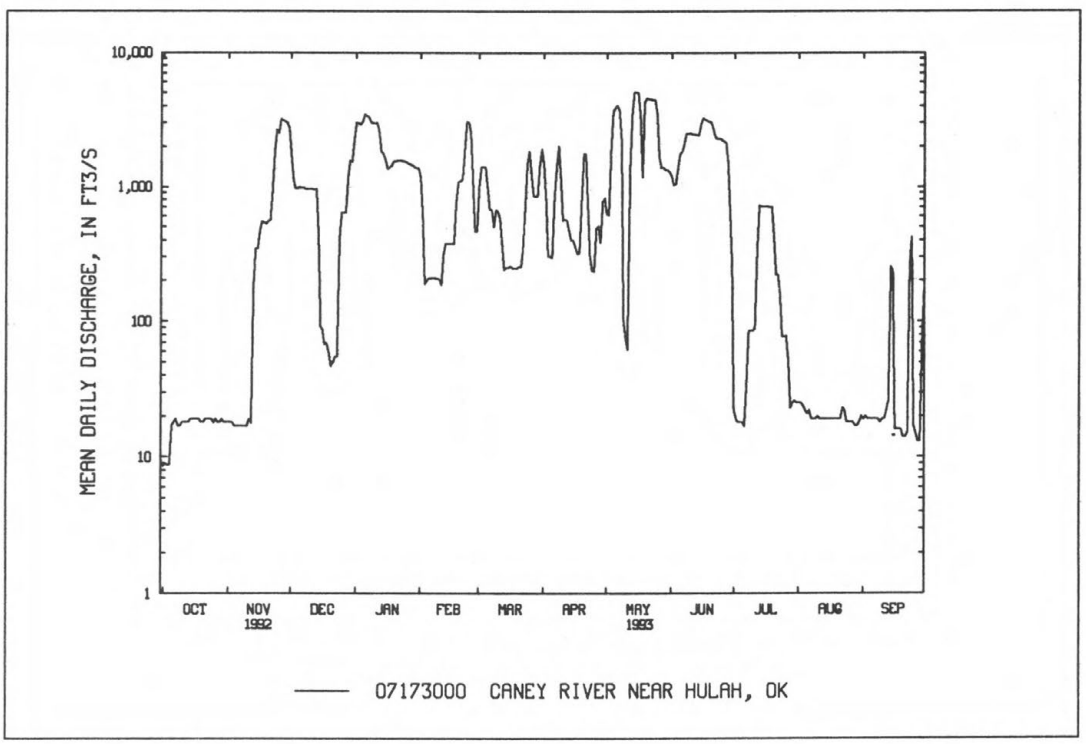
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	405	367	294	259	222	577	640	680	727	411	95.3	162
MAX	7673	2476	1416	2111	1643	3031	2740	2869	3240	2922	1384	2055
(WY)	1987	1962	1987	1993	1975	1987	1988	1973	1982	1957	1959	1989
MIN	2.94	5.36	1.40	.38	5.14	.47	1.92	3.31	1.06	2.83	2.64	5.29
(WY)	1988	1981	1981	1951	1981	1981	1953	1981	1981	1984	1984	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1951-93	
ANNUAL TOTAL	111918.7		342328.1			
ANNUAL MEAN	306		938		[a]404	
HIGHEST ANNUAL MEAN					1512	1987
LOWEST ANNUAL MEAN					5.10	1981
HIGHEST DAILY MEAN	3190	Nov 26	5070	May 14	54300	Oct 4 1986
LOWEST DAILY MEAN	8.6	Oct 1	8.6	Oct 1	.00	Feb 14 1962
ANNUAL SEVEN-DAY MINIMUM	9.3	Sep 19	13	Oct 1	.08	Dec 25 1980
INSTANTANEOUS PEAK FLOW			5120	May 14	[b]58000	Oct 3 1986
INSTANTANEOUS PEAK STAGE			11.38	May 14	26.80	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	222000		679000		292500	
10 PERCENT EXCEEDS	1110		2960		1290	
50 PERCENT EXCEEDS	63		424		24	
90 PERCENT EXCEEDS	13		18		7.4	

[a]Prior to regulation by Hulah Lake, water years 1938-50, 413 ft^3/s.

[b]Maximum discharge for period of record, from rating curve extended above 7,000 ft^3/s on basis of relating stage to release records at maximum and lower stages.



07174300 COPAN LAKE NEAR COPAN, OK

LOCATION.--Lat 36°53'13", long 95°57'10", in NW 1/4, NW 1/4 sec.29, T.28 N., R.13 E., Washington County, Hydrologic Unit 11070106, 600 ft northwest of project office, 1.5 mi southwest of Copan and at mile 7.4.

DRAINAGE AREA.--505 mi^2.

PERIOD OF RECORD.--April 1983 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam. Spillway is concrete ogee-type weir controlled by 4 tainter gates. A 36-inch diameter low-flow pipe and a 12-inch diameter future water-supply pipe extend through the spillway. Storage began Apr. 1, 1983, conservation pool was first filled Apr. 23, 1983. Capacity 227,700 acre-feet at elevation 732.0 ft, top of flood control pool; 43,400 acre-ft at elevation, 710.0 ft, top of conservation pool. Dead storage 600 acre-ft below elevation 687.5 ft. Figures given herein represent total contents. Reservoir is used for flood control, water conservation, and future water supply. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 278,700 acre-ft, Oct. 4, 1986, elevation, 735.35 ft; minimum since conservation pool first filled, 30,830 acre-ft, Oct. 14, 1983, elevation, 707.17 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 146,200 acre-ft, May 20, elevation, 724.80 ft; minimum, 40,030 acre-ft, Nov. 10, elevation, 709.28 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

705	22,830	725	148,400
710	43,400	730	203,200
715	71,170	735	273,200
720	105,900	740	359,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

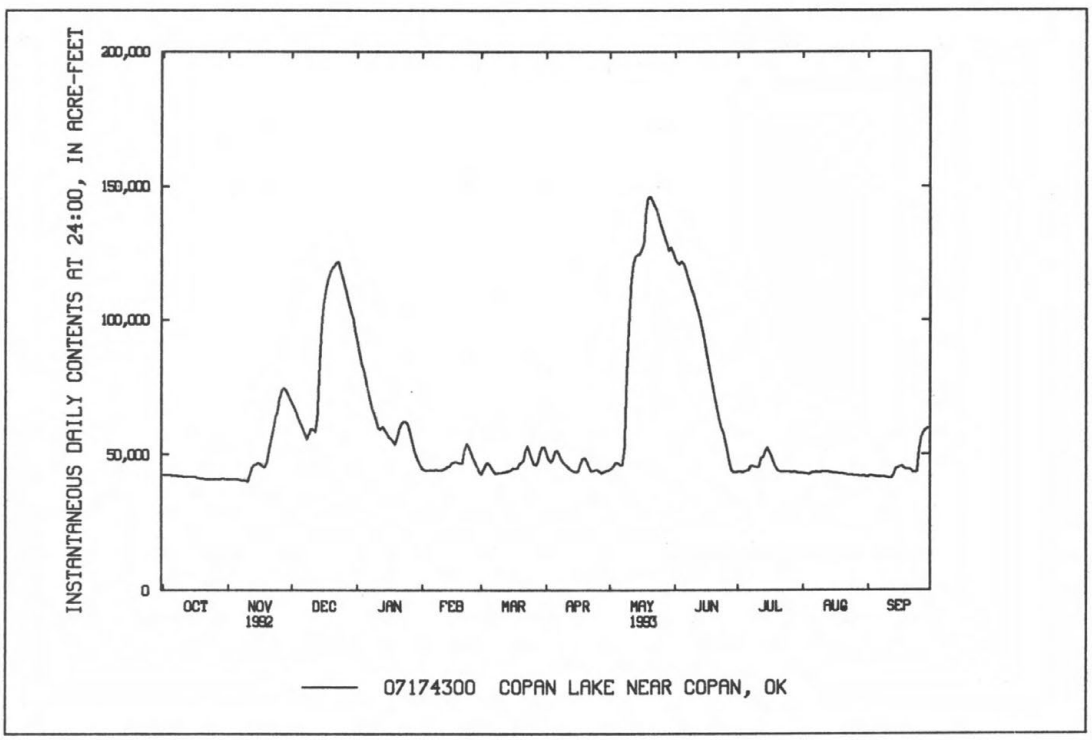
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42620	40880	68730	91660	44710	42760	50360	44510	122900	43820	43130	41910
2	42480	40970	67080	87340	44310	44410	48160	45010	121400	43760	43090	42330
3	42480	40970	65310	83350	44060	46210	47260	46060	120900	43420	42940	42150
4	42430	40970	63030	81080	44260	46910	48260	47110	121900	43760	42710	41960
5	42380	40830	61280	77490	44310	46210	51100	46760	121100	44060	43420	41910
6	42330	40690	59530	73730	44260	44910	51470	46060	118800	44260	43420	41910
7	42290	40410	57570	70380	44310	43560	49990	46060	115900	45810	43620	41770
8	42100	40310	55680	66960	44310	42940	48060	52260	113600	45810	43560	41680
9	42050	40310	57570	64780	44160	43180	46910	79220	111000	45560	43520	41680
10	41960	40030	59410	62500	44260	43140	46210	98370	109000	45360	43620	41490
11	41860	42480	59180	59650	44560	43370	45560	113900	105700	45510	43620	41300
12	41860	45310	58290	59240	44910	43420	44760	121100	103100	48780	43760	41350
13	41680	46160	64310	60170	45510	43660	44110	123600	99860	49040	43620	42620
14	41720	46410	83350	59020	45710	43920	43660	124500	96200	51410	43520	44910
15	41770	46910	98220	57740	46860	44260	43560	124400	92380	52520	43320	45210
16	41770	46460	106100	56400	47110	45010	43860	126200	87680	50990	43270	45560
17	41300	45710	111300	55790	47360	44810	46410	128500	83280	49200	43180	45760
18	41300	45360	115000	54790	47010	44910	48410	140400	78750	47010	43040	44910
19	41060	46910	117500	53680	46760	46210	48930	145500	74810	45210	42900	44560
20	41020	51470	119300	56130	46710	47010	47710	146200	70810	44110	42940	44760
21	40970	55020	120200	59530	51780	47660	45560	145000	66900	43760	42710	44510
22	40920	58790	121400	61160	53850	51360	43960	143000	62970	43660	42570	43560
23	40880	63550	121700	62040	52840	52940	43920	141600	59820	43720	42380	43420
24	40880	65680	118600	62040	50940	50890	44310	138800	58130	43660	42520	43820
25	40830	70750	115600	61160	48880	48510	44410	135900	54630	43760	42380	51730
26	40920	73540	112400	58290	47210	46410	43820	133400	50990	43560	42330	56290
27	40780	74240	109300	55130	45510	46010	43130	130900	46660	43560	42240	58020
28	40830	73730	106000	51990	43560	47560	43560	128600	44110	43660	42100	59070
29	41210	72130	102900	49670	---	50890	43920	125900	43420	43420	42000	59530
30	41020	70260	100600	47710	---	52730	44110	127000	43420	43230	42330	59700
31	40830	---	95550	46160	---	52730	---	125200	---	43230	41770	---

07174300 COPAN LAKE NEAR COPAN, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	42620	74240	121700	91660	53850	52940	51470	146200	122900	52520	43760	59700
MIN	40780	40030	55680	46160	43560	42760	43130	44510	43420	43230	41770	41300
(‡)	709.45	714.85	718.61	710.55	710.03	711.82	710.14	722.42	710.00	709.96	709.65	713.08
(‡‡)	-1,790	+29,430	+25,290	-49,390	-2,600	+9,170	-8,620	+81,090	-81,780	-190	-1,460	+17,930

CAL YR 1992 MAX 121700 MIN 40030 (‡‡) +51,690
WTR YR 1993 MAX 146200 MIN 40030 (‡‡) +17,080

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENT, IN ACRE-FEET



07174400 CANEY RIVER ABOVE COON CREEK AT BARTLESVILLE, OK

LOCATION.--Lat 36°45'20", long 95°58'19", in NE 1/4 NE 1/4 sec.12, T.26 N, R.12 E, Washington County, Hydrologic Unit 11070106, at right bank in city of Bartlesville water intake tower, 0.2 mi upstream from State Highway 123 bridge and low-water dam, 0.5 mi downstream from Atchison, Topeka, and Santa Fe railroad bridge, 1.0 mi upstream from confluence with Coon Creek, 2.7 mi downstream from confluence with Butler Creek, 5.0 mi upstream from confluence with Sand Creek, and at mile 69.2.

DRAINAGE AREA.--1,392 mi^2.

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 653.33 ft above sea level.

REMARKS.--Records fair. Considerable regulation by Hulah Lake (station 07172500) 27.0 mi upstream, and Copan Lake (station 07174300) 12.0 mi upstream. Diversion at gage for municipal water supply by the city of Bartlesville. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	e28	4080	4940	2680	1870	4850	936	3170	156	40	38
2	24	e28	2760	5130	1750	2320	4050	931	2400	53	40	35
3	24	e28	2260	5130	689	2130	1910	1340	2300	41	40	40
4	24	e28	2200	5150	433	2030	1860	4240	2460	42	38	33
5	24	e28	2200	5350	427	2260	2830	4890	3510	33	71	33
6	25	e28	2200	5410	428	1930	1980	5070	3740	61	83	33
7	33	e28	2170	5370	434	1860	3120	5070	3760	96	54	33
8	40	e28	2150	5260	434	1720	3650	5430	4890	197	46	35
9	37	e28	2870	5110	434	965	3630	14200	5270	164	45	35
10	34	e28	2800	5120	434	1030	1550	8770	5610	152	45	35
11	34	140	2340	4930	458	1030	1350	1670	5180	177	45	35
12	34	421	2210	5070	508	714	1330	1350	5040	860	45	35
13	34	104	3030	4370	726	378	1280	5460	4950	1980	45	41
14	34	446	6860	3770	748	289	965	6480	4850	1790	48	101
15	34	585	3300	3550	764	289	954	6980	5080	1950	52	725
16	e32	637	826	3050	795	293	635	6430	6360	1660	49	212
17	e32	1220	597	2980	801	368	1000	5740	6460	1770	45	32
18	e32	1290	392	2960	878	400	1270	3610	6410	1700	46	104
19	e31	1360	198	2920	1550	761	746	5200	6340	1650	45	701
20	e31	1590	126	3810	1870	636	2360	7160	6250	1460	45	234
21	e30	1470	90	3940	3050	500	3750	7200	6090	424	49	45
22	e28	1890	82	3460	2290	1120	2790	7100	5270	292	52	273
23	e28	3740	154	3180	4410	1830	1110	7140	5110	178	49	328
24	e28	5220	1090	3040	4940	2360	348	7120	5060	113	56	499
25	e28	5300	2290	3000	5020	3930	269	6850	4920	73	52	5390
26	e28	5270	2360	3670	4270	3770	389	4470	4800	72	42	449
27	e28	5300	2350	3760	2220	1950	1450	3010	4690	72	41	141
28	e28	5240	2450	3730	1960	1740	576	2880	4440	64	33	91
29	e32	5180	3290	3550	---	2970	615	2880	1700	40	30	77
30	e33	5130	3420	2860	---	3550	1440	3640	727	38	33	241
31	e31	---	3560	2760	---	5010	---	3430	---	38	43	---
TOTAL	939	51813	66705	126330	45401	52003	54057	156677	136837	17396	1447	10104
MEAN	30.3	1727	2152	4075	1621	1678	1802	5054	4561	561	46.7	337
MAX	40	5300	6860	5410	5020	5010	4850	14200	6460	1980	83	5390
MIN	24	28	82	2760	427	289	269	931	727	33	30	32
AC-FT	1860	102800	132300	250600	90050	103100	107200	310800	271400	34500	2870	20040

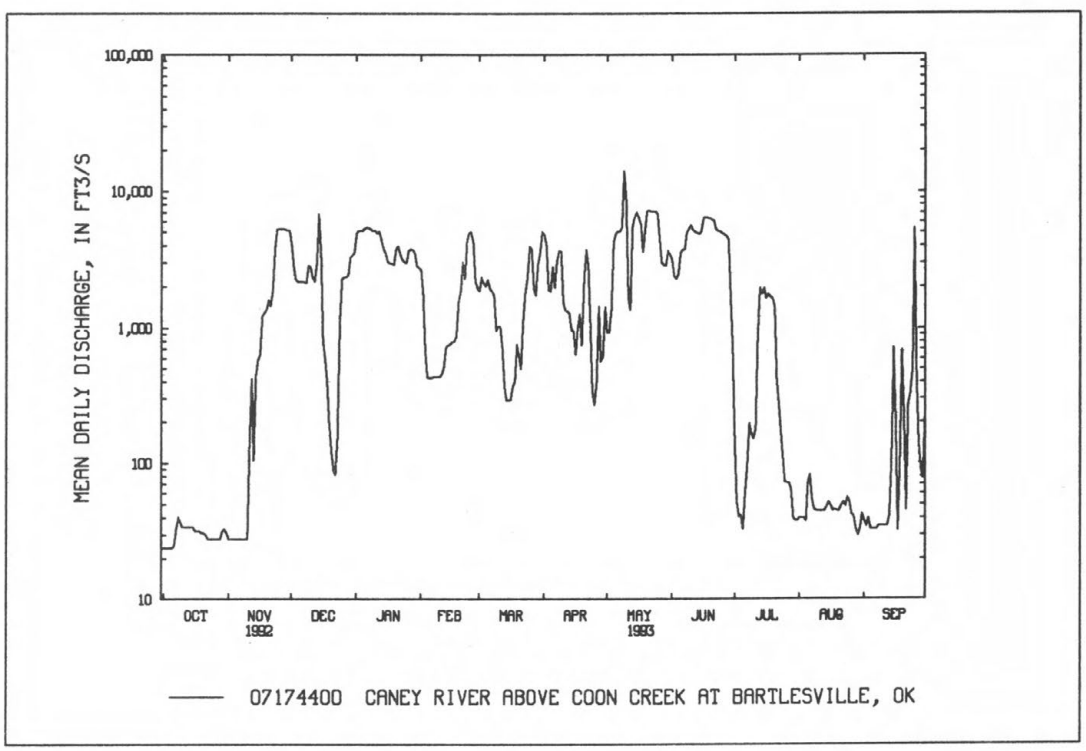
e Estimated

07174400 CANEY RIVER ABOVE COON CREEK AT BARTLESVILLE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2189	1166	1141	1160	861	1832	1814	1773	2548	875	156	584
MAX	14800	3096	2663	4075	2721	4606	5185	5054	4561	2899	511	2635
(WY)	1987	1987	1987	1993	1987	1990	1988	1993	1993	1989	1986	1989
MIN	13.2	44.9	27.7	27.4	29.1	29.4	175	139	49.9	29.4	22.5	12.8
(WY)	1988	1992	1991	1991	1991	1991	1991	1992	1988	1988	1988	1987

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1986-93	
ANNUAL TOTAL	252883		719709			
ANNUAL MEAN	691		1972		1343	
HIGHEST ANNUAL MEAN					2888	1987
LOWEST ANNUAL MEAN					204	1991
HIGHEST DAILY MEAN	6860	Dec 14	14200	May 9	64900	Oct 5 1986
LOWEST DAILY MEAN	23	Sep 25	24	Oct 1-5	6.6	Oct 5-10 1987
ANNUAL SEVEN-DAY MINIMUM	24	Sep 29	25	Oct 1	6.7	Oct 4 1987
INSTANTANEOUS PEAK FLOW			15100	May 9	94500	Oct 4 1986
INSTANTANEOUS PEAK STAGE			16.54	May 9	27.70	Oct 4 1986
ANNUAL RUNOFF (AC-FT)	501600		1428000		973000	
10 PERCENT EXCEEDS	2390		5180		4110	
50 PERCENT EXCEEDS	144		1120		246	
90 PERCENT EXCEEDS	28		33		24	



07174600 SAND CREEK AT OKESA, OK

LOCATION.--Lat 36°43'10", long 96°07'56", in SW 1/4 NW 1/4 sec.21, T.26 N., R.11 E., Osage County, Hydrologic Unit 11070106, on downstream side of left abutment of county road bridge, 0.5 mi northeast of Okesa, 9 mi southwest of Bartlesville, and at mile 17.2.

DRAINAGE AREA.--139 mi^2.

PERIOD OF RECORD.--October 1959 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 689.20 ft above sea level. Prior to May 25, 1960, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 22	1930	4,270	12.56	May 9	0245	20,200	24.29
Dec. 14	1615	7,740	16.06	May 18	0830	5,060	13.46
May 2	1400	3,940	12.16	Sept. 25	0400	9,990	17.89

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.5	53	33	39	132	256	85	96	18	4.3	2.7
2	1.4	2.6	46	31	39	384	155	2440	53	16	4.0	3.1
3	1.3	3.1	40	83	38	290	119	948	283	13	3.6	5.0
4	1.0	3.4	36	268	36	162	668	310	255	12	3.1	5.0
5	.87	3.4	34	165	63	117	918	180	77	10	3.8	4.9
6	.72	3.4	33	89	131	91	294	207	43	9.2	4.7	4.4
7	.72	3.4	32	69	85	79	188	195	33	9.3	5.0	4.0
8	.75	3.2	33	65	64	69	150	5470	29	8.9	5.2	3.5
9	.67	2.5	492	545	51	61	117	12000	31	8.2	4.6	3.1
10	.67	2.3	431	407	46	54	92	1060	102	7.7	4.3	2.9
11	.84	6.7	159	188	79	48	77	2160	95	53	4.3	2.8
12	.91	639	97	432	244	47	66	1020	49	1470	5.0	2.5
13	.99	150	678	503	143	47	58	384	33	249	5.3	2.6
14	.99	79	4370	179	86	47	64	205	27	252	4.8	4.4
15	.99	49	792	124	87	46	93	143	24	228	4.1	7.7
16	1.2	34	299	107	130	44	85	112	21	83	3.6	7.6
17	1.5	29	175	106	128	43	766	137	19	38	3.2	5.6
18	1.7	27	126	116	102	74	574	2130	18	24	3.0	4.5
19	1.7	446	102	85	103	361	237	368	115	19	3.0	5.1
20	1.7	759	85	529	576	253	141	181	136	19	3.0	46
21	1.7	182	70	666	1390	140	88	122	50	18	3.0	72
22	1.7	1310	61	486	434	613	68	88	29	16	2.7	24
23	1.6	732	53	233	211	427	58	87	23	13	2.4	15
24	1.6	209	46	153	149	191	54	78	207	11	2.3	112
25	1.6	912	38	104	359	131	48	63	91	9.5	2.0	4460
26	1.6	330	36	83	367	97	40	45	39	8.5	1.9	284
27	1.6	152	34	74	179	81	36	36	27	7.2	1.9	93
28	1.5	101	32	67	142	76	95	31	25	6.4	1.9	46
29	1.8	78	32	59	---	213	300	28	29	5.9	1.9	30
30	2.0	64	32	47	---	1080	147	692	21	5.1	2.0	24
31	2.2	---	33	40	---	898	---	315	---	4.7	2.4	---
TOTAL	41.12	6318.5	8580	6136	5501	6396	6052	31320	2080	2652.6	106.3	5287.4
MEAN	1.33	211	277	198	196	206	202	1010	69.3	85.6	3.43	176
MAX	2.2	1310	4370	666	1390	1080	918	12000	283	1470	5.3	4460
MIN	.67	2.3	32	31	36	43	36	28	18	4.7	1.9	2.5
AC-FT	82	12530	17020	12170	10910	12690	12000	62120	4130	5260	211	10490

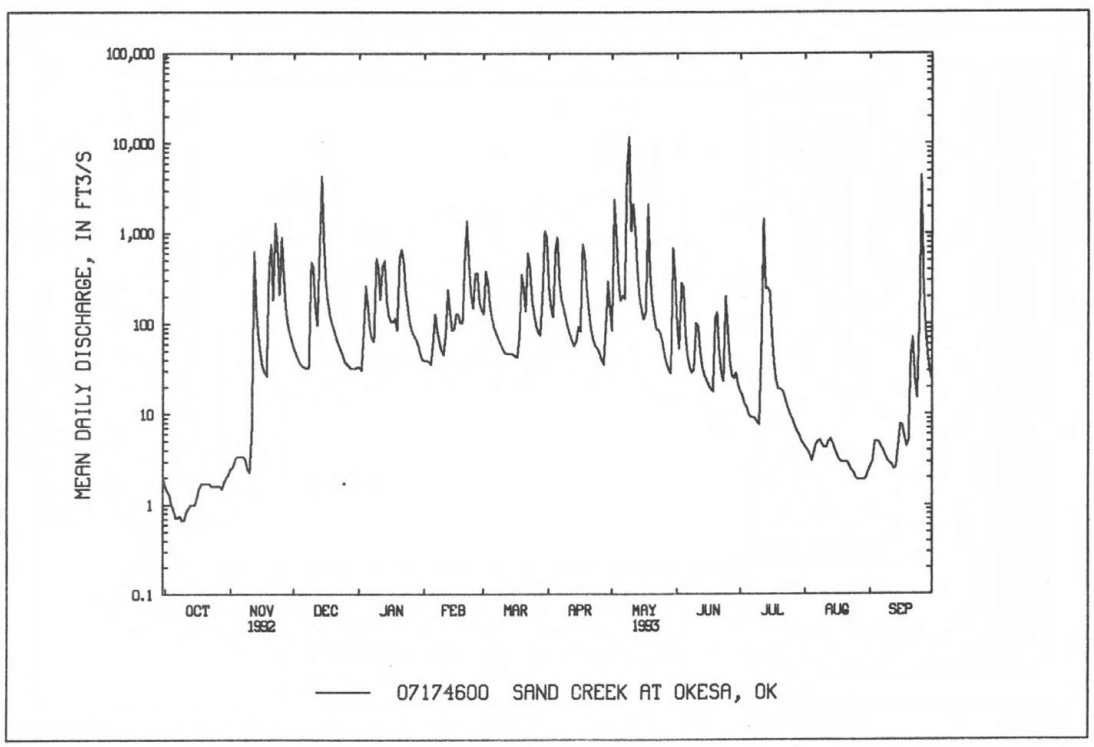
07174600 SAND CREEK AT OKESA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.5	91.3	61.7	49.7	82.3	163	136	171	105	26.8	17.5	67.4
MAX	565	467	277	256	518	858	512	1010	833	286	228	570
(WY)	1987	1975	1993	1973	1987	1974	1988	1993	1985	1976	1961	1986
MIN	.000	.000	.000	.000	.000	.026	.69	1.85	.63	.000	.000	.000
(WY)	1964	1964	1964	1964	1964	1964	1981	1971	1963	1963	1963	1963

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1960-93	
ANNUAL TOTAL	30187.92		80470.92			
ANNUAL MEAN	82.5		220		86.1	
HIGHEST ANNUAL MEAN					220	1993
LOWEST ANNUAL MEAN					5.52	1981
HIGHEST DAILY MEAN	4370	Dec 14	12000	May 9	13200	Mar 10 1974
LOWEST DAILY MEAN	.67	Oct 9	.67	Oct 9,10	[a].00	Sep 17 1960
ANNUAL SEVEN-DAY MINIMUM	.75	Oct 5	.75	Oct 5	.00	Sep 17 1960
INSTANTANEOUS PEAK FLOW			20200	May 9	20200	May 9 1993
INSTANTANEOUS PEAK STAGE			24.29	May 9	[b]28.60	Mar 10 1974
ANNUAL RUNOFF (AC-FT)	59880		159600		62400	
10 PERCENT EXCEEDS	153		433		130	
50 PERCENT EXCEEDS	17		49		8.9	
90 PERCENT EXCEEDS	2.6		2.1		.00	

[a]No flow at times in many years.
[b]From flood marks.



07175500 CANEY RIVER NEAR RAMONA, OK

LOCATION.--Lat 36°30'32", long 95°50'30", in NE 1/4 NW 1/4 sec.5, T.23 N., R.14 E., Washington County, Hydrologic Unit 11070106, on left bank near downstream abutment of county road bridge, 1 mi upstream from Buck Creek, 2.2 mi downstream from Double Creek, 4.5 mi southeast of Ramona, and at mile 32.0.

DRAINAGE AREA.--1,955 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1945 to current year. Monthly discharge only for some periods, published in WSP 1311. Previous reports have included Caney River near Collinsville from Oct. 1935 to Feb. 1939; this record has been separated from Ramona.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1939.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft above sea level. Sept. 1, 1945, to Feb. 15, 1946, nonrecording gage at present site and datum.

REMARKS.--No estimated daily discharge. Records good. Flow regulated since February 1950 by Hulah Lake (station 07172500), and since April 1983 by Copan Lake (station 07174300). U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	41	5020	3500	2870	2380	7170	1420	4240	726	82	94
2	30	33	3520	5550	2550	2580	5330	1120	3370	250	77	70
3	31	30	2450	5840	1520	3380	3650	4510	2810	148	74	90
4	31	30	2120	6010	577	2730	2240	3450	3440	124	71	100
5	30	31	2070	6290	430	2500	6540	4850	3370	119	83	71
6	30	30	2070	6380	465	2460	4730	5490	3870	122	149	66
7	30	31	2050	6290	529	2080	3010	6070	3870	132	126	62
8	32	31	2030	6140	478	1990	3580	6790	4070	195	95	68
9	47	33	4490	6690	438	1490	3930	21600	4870	302	82	60
10	47	34	6620	8780	413	1020	3010	32900	5960	242	75	59
11	43	63	3820	7330	451	1010	1520	24200	5750	220	77	58
12	43	654	2630	6520	966	938	1360	15000	5160	1440	84	58
13	42	1010	3980	6960	1080	598	1300	10500	4940	4750	74	67
14	43	335	11600	5380	983	333	1470	8620	4790	2710	67	166
15	40	497	14200	4230	939	286	2090	8580	4690	3240	73	301
16	36	513	12400	3760	1180	282	1460	8570	5190	2410	68	740
17	33	663	5210	3330	1290	279	2000	7840	6000	2000	73	233
18	32	1080	1790	3260	1120	681	5640	9440	6120	1920	66	87
19	35	1150	1030	3210	1340	3210	2560	9400	6120	1830	59	210
20	37	2160	671	6760	2820	2590	1710	7630	6090	1770	62	849
21	34	2250	473	8810	7740	1310	3080	7940	6010	1310	61	385
22	35	2670	363	6600	6990	2630	3470	7820	5570	487	60	192
23	32	6360	290	4680	3950	5350	2150	7900	5110	381	63	407
24	30	6110	427	3800	5250	3220	852	8170	6600	265	55	402
25	29	7520	1740	3420	7360	3430	1000	7710	5410	183	54	7660
26	30	7840	2700	3490	8080	4280	464	6780	4810	132	63	12000
27	33	6460	2720	4000	5210	3480	727	4320	4560	119	60	4440
28	31	5790	2680	4000	2730	1970	1110	3320	4400	117	58	747
29	39	5520	3020	3880	---	3810	845	3230	3600	109	63	383
30	39	5380	3660	3460	---	5030	1310	3700	1460	90	64	255
31	44	---	3630	2960	---	7750	---	6100	---	83	83	---
TOTAL	1098	64349	111474	161310	69749	75077	79308	264970	142250	27926	2301	30380
MEAN	35.4	2145	3596	5204	2491	2422	2644	8547	4742	901	74.2	1013
MAX	47	7840	14200	8810	8080	7750	7170	32900	6600	4750	149	12000
MIN	29	30	290	2960	413	279	464	1120	1460	83	54	58
AC-FT	2180	127600	221100	320000	138300	148900	157300	525600	282200	55390	4560	60260

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

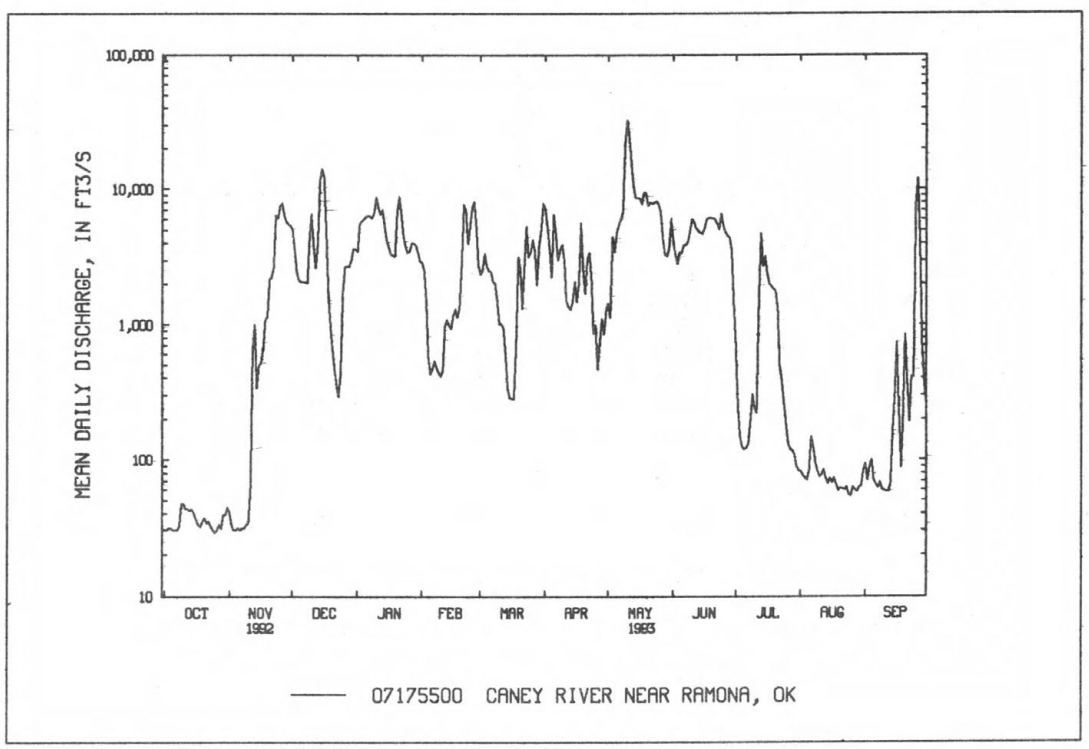
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2552	1513	1618	1380	1414	3275	3021	2614	3007	997	202	821
MAX	19540	4390	3596	5204	4208	7228	6989	8547	5098	2892	792	3178
(WY)	1987	1987	1993	1993	1987	1990	1988	1993	1985	1989	1986	1989
MIN	35.4	98.2	76.1	134	81.0	71.9	452	222	70.1	30.2	34.9	48.7
(WY)	1993	1991	1991	1984	1991	1991	1992	1992	1988	1984	1984	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1984-93	
ANNUAL TOTAL	374139		1030192			
ANNUAL MEAN	1022		2822		[a]1869	
HIGHEST ANNUAL MEAN					3887	1987
LOWEST ANNUAL MEAN					370	1991
HIGHEST DAILY MEAN	14200	Dec 15	32900	May 10	71700	Oct5 1986
LOWEST DAILY MEAN	29	Oct 25	29	Oct 25	[b]13	Sep 16 1984
ANNUAL SEVEN-DAY MINIMUM	30	Oct 1	30	Oct 1	16	Jul 31 1984
INSTANTANEOUS PEAK FLOW			35300	May 10	85600	Oct 5 1986
INSTANTANEOUS PEAK STAGE			28.94	May 10	31.16	Oct 5 1986
ANNUAL RUNOFF (AC-FT)	742100		2043000		1354000	
10 PERCENT EXCEEDS	2870		6770		5290	
50 PERCENT EXCEEDS	276		1770		464	
90 PERCENT EXCEEDS	39		43		42	

[a]Average discharge since regulation by Hulah Lake and before regulation by Copan Lake, 32 years (water years 1951-82), 925 ft^3/s.

[b]No flow Sept. 11 to Nov. 3, 1956.



07175500 CANEY RIVER NEAR RAMONA, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952-53, 1955-62, 1965 to September 1993 (discontinued).
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1966 to April 1982.
WATER TEMPERATURE: October 1966 to April 1982.
REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
OCT											
20...	1121	4.00	15.0	753	1028	1028	39	2.88	616	11.2	--
20...	1122	12.0	15.0	753	1028	1028	39	2.88	620	11.2	--
20...	1124	20.0	15.0	753	1028	1028	39	2.88	620	11.3	--
20...	1125	28.0	15.0	753	1028	1028	39	2.88	621	11.2	--
20...	1127	36.0	15.0	753	1028	1028	39	2.88	621	11.2	--
20...	1128	44.0	15.0	753	1028	1028	39	2.88	621	11.2	--
20...	1129	52.0	15.0	753	1028	1028	39	2.88	621	11.1	--
MAR											
03...	1730	100	7.5	745	1028	1028	3260	12.00	410	12.6	8.1
03...	1731	90.0	7.5	745	1028	1028	3260	12.00	408	12.8	8.2
03...	1732	80.0	7.5	745	1028	1028	3260	12.00	412	12.8	8.2
03...	1733	70.0	7.5	745	1028	1028	3260	12.00	410	12.8	8.2
03...	1734	60.0	7.5	745	1028	1028	3260	12.00	411	12.8	8.2
03...	1735	50.0	7.5	745	1028	1028	3260	12.00	411	12.9	8.2
03...	1736	40.0	7.5	745	1028	1028	3260	12.00	411	12.8	8.2
03...	1737	30.0	7.5	745	1028	1028	3260	12.00	411	12.8	8.2
03...	1738	20.0	7.5	745	1028	1028	3260	12.00	412	12.8	8.1
03...	1739	10.0	7.5	745	1028	1028	3260	12.00	410	12.9	8.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
20...	1130	1028	80020	39	621	*7.6	20.0	15.0	0.40	753	11.2	113
DEC												
01...	1500	1028	80020	4980	279	8.0	13.0	6.0	47	750	12.2	100
MAR												
03...	1700	1028	80020	3260	411	8.2	7.5	5.5	34	745	12.8	104
APR												
13...	1600	1028	80020	1300	405	8.2	15.0	20.5	54	740	9.9	113
JUN												
15...	1615	1028	80020	4510	260	8.2	30.0	24.0	35	750	8.0	97
AUG												
10...	1230	1028	80020	70	616	8.0	30.0	26.5	21	750	9.6	122

*PH, LAB (STANDARD UNITS)

07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT												
20...	74	790	190	--	61	9.6	43	32	1	4.8	--	--
DEC												
01...	230	180	110	12	35	5.5	11	17	0.5	3.2	119	0
MAR												
03...	180	340	140	40	45	7.8	22	25	0.8	1.9	128	0
APR												
13...	120	92	150	27	46	7.3	23	25	0.8	2.0	144	0
JUN												
15...	73	460	120	--	39	5.2	9.2	14	0.4	2.4	--	--
AUG												
10...	200	250	210	73	67	10	44	31	1	3.2	165	0

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
OCT												
20...	--	26	89	0.30	4.2	364	334	0.50	38.6	0.660	0.640	2.8
DEC												
01...	97	15	16	0.20	7.2	166	153	0.23	2230	0.180	0.180	0.80
MAR												
03...	105	29	38	0.10	7.6	233	216	0.32	2050	0.210	--	--
APR												
13...	118	27	35	0.20	7.0	226	220	0.31	793	0.250	0.250	1.1
JUN												
15...	--	11	11	0.20	8.5	140	150	0.19	1700	0.220	--	--
AUG												
10...	136	25	84	0.30	8.7	365	328	0.50	69.4	0.990	0.990	4.4

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT											
20...	0.020	0.020	0.07	0.680	0.660	0.030	0.030	0.04	0.04	1.1	1.1
DEC											
01...	0.020	0.020	0.07	0.200	0.200	0.050	0.030	0.06	0.04	0.45	0.50
MAR											
03...	--	<0.010	--	--	0.210	--	0.030	--	0.04	0.47	0.50
APR											
13...	--	0.010	0.03	--	0.260	--	0.030	--	0.04	0.67	0.70
JUN											
15...	--	<0.010	--	--	0.220	--	0.020	--	0.03	0.28	0.30
AUG											
10...	--	0.010	0.03	--	1.00	--	0.030	--	0.04	0.27	0.30

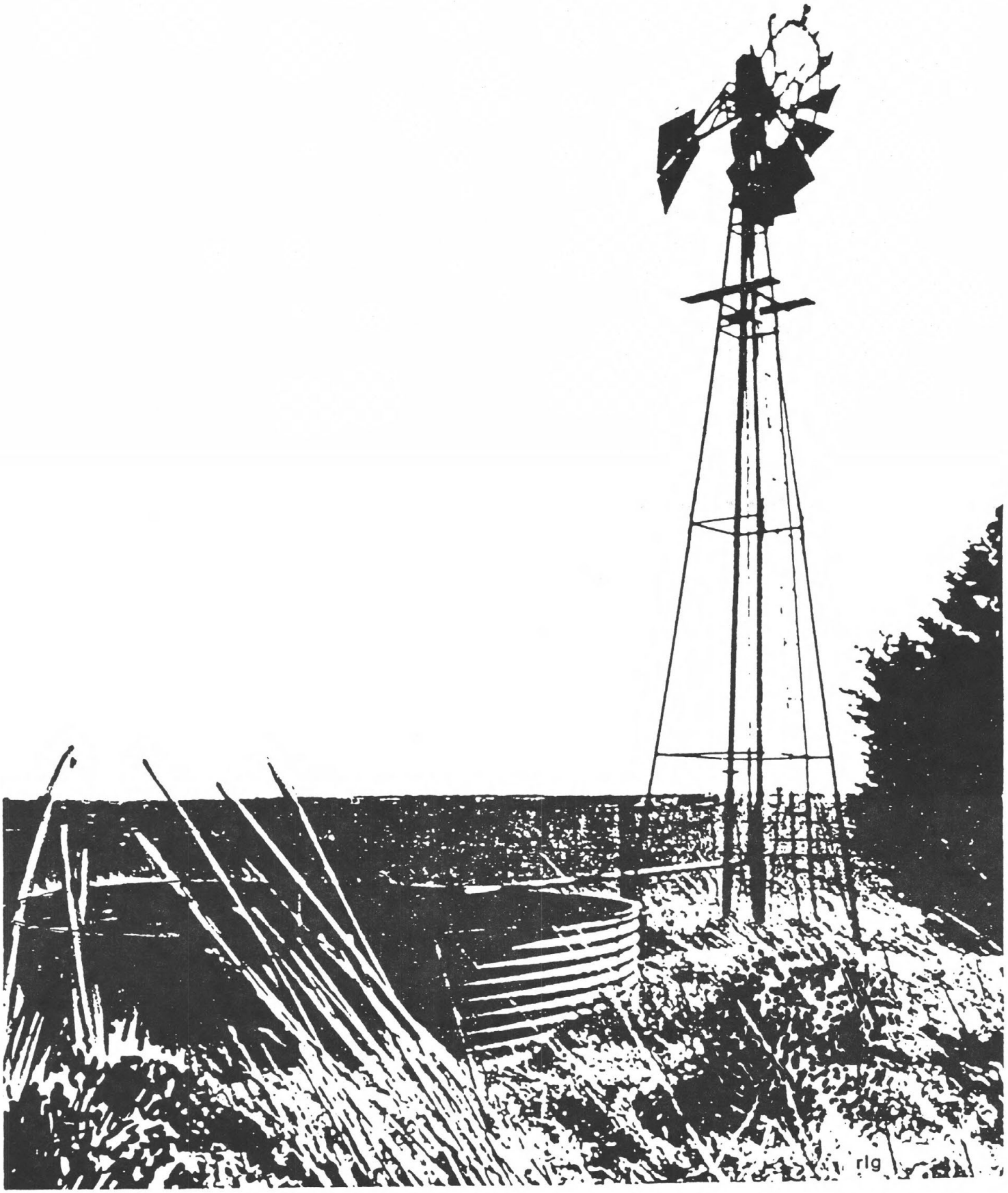
07175500 CANEY RIVER NEAR RAMONA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, DISSOLVED (UG/L AS SB) (01095)
OCT 20...	1.8	7.9	0.270	0.40	0.120	0.130	0.120	0.37	0.14	<10	--
DEC 01...	0.70	3.1	0.140	0.12	0.030	0.040	0.030	0.09	0.10	--	--
MAR 03...	0.71	--	0.100	--	0.030	--	0.010	0.03	--	40	--
APR 13...	0.96	--	0.100	--	0.030	--	0.020	0.06	--	20	--
JUN 15...	0.52	--	0.050	--	0.030	--	0.020	0.06	--	10	--
AUG 10...	1.3	--	0.040	--	0.040	--	0.020	0.06	--	7	<1

DATE	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT 20...	--	93	--	--	--	<3	--	7	--	6	9
DEC 01...	--	--	--	--	--	--	--	--	--	--	--
MAR 03...	--	49	--	--	--	<3	--	40	--	<4	19
APR 13...	--	60	--	--	--	<3	--	15	--	4	18
JUN 15...	--	46	--	--	--	<3	--	35	--	<4	2
AUG 10...	1	120	<1	<1.0	1	<1	2	--	<1	--	10

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 20...	<10	1	<1	<1.0	490	<6	--	--	48	5.1	98
DEC 01...	--	--	--	--	--	--	--	--	165	2220	88
MAR 03...	<10	<1	<1	<1.0	340	<6	--	--	121	1070	94
APR 13...	<10	<1	<1	<1.0	360	<6	--	--	121	425	91
JUN 15...	<10	<1	<1	<1.0	230	<6	--	--	149	1810	83
AUG 10...	2	3	--	<1.0	--	--	2	1.0	--	--	--


rlg

07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK

LOCATION.--Lat 36°18'26", long 95°41'52", NE 1/4 NW 1/4 sec.15, T.21 N., R.15 E., Rogers County, Hydrologic Unit 11070105, on left bank on downstream side of bridge on State Highway 20, 2.3 mi downstream from Caney River, 4.5 mi west of Claremore, 12.4 mi upstream from Bird Creek, and at mile 76.0.

DRAINAGE AREA.--6,534 mi^2.

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 538.62 ft above sea level. Prior to Feb. 24, 1939, and May 17 to Aug. 24, 1967, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some regulation since 1949 by dams in Kansas, and since February 1950 by Hulah Lake (station 07172500). Flow regulated since May 1963 by Oologah Lake (station 07171300), 14.3 mi upstream from station, and since April 1983 by Copan Lake (station 07174300). U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1580	881	17100	20500	10900	10300	14100	4370	22600	4230	9220	123
2	1290	362	18900	21200	12000	10700	14300	4650	25500	2900	6230	132
3	763	176	17800	21700	13800	13100	15900	6740	25100	2570	1900	153
4	754	133	17500	20600	12900	13000	14600	9590	25700	2460	1880	125
5	748	117	17100	16800	12300	14500	16500	9590	25800	2440	1920	146
6	655	109	14400	17100	12200	16900	16200	10900	25600	3510	1920	122
7	415	105	10200	17700	12200	16600	11000	11200	25700	3640	1960	114
8	275	103	10800	16600	10300	13300	9580	11900	22600	6850	1930	98
9	126	105	16700	16100	6950	7120	7300	21100	20500	6040	1700	e88
10	e120	244	18800	17800	4070	6640	4040	20200	22700	5130	880	e85
11	e116	1600	17200	17300	4060	6810	2640	26900	22600	5070	1170	e80
12	e114	5180	17000	15800	4090	6810	2310	26600	21400	5550	1150	e75
13	112	9110	19100	14600	3790	6610	2360	19500	21000	8480	1140	101
14	103	10400	23000	14200	3670	6280	4170	12600	21400	8540	1140	606
15	101	10000	15300	12900	3670	5430	5670	e12100	20700	7850	1140	444
16	99	10200	14000	12600	3960	3860	4420	e8500	20600	7140	868	547
17	98	9440	11800	12100	4070	3580	6630	8080	21200	6080	208	695
18	98	7250	7020	12000	3870	3260	9770	11100	21000	5930	121	252
19	98	7530	11200	11700	3760	6420	7520	15400	19700	5810	107	120
20	99	8280	6710	15200	5050	6220	5790	14600	19700	6490	101	526
21	99	10700	7790	17000	9040	4700	6620	19200	19600	8680	101	909
22	100	14300	11500	18100	10400	6570	6980	22900	18100	7940	101	376
23	99	16300	13700	22700	10400	9410	5640	22600	11700	7450	3860	254
24	99	15800	18500	21500	14300	12300	4740	22900	12200	7350	11900	1290
25	96	12600	22300	18100	17800	11400	5060	27500	14900	7240	8130	8160
26	92	13000	23000	11400	15900	11500	4030	28800	14800	7150	446	15100
27	95	13700	22700	11600	14500	10100	3760	27100	17400	7080	349	14200
28	94	15800	21800	11800	11400	8730	4060	20900	16300	7510	112	7790
29	121	15400	19900	11800	---	8340	3720	20000	10700	9040	99	6440
30	116	15200	20200	11600	---	11200	3890	19900	5740	9320	114	6980
31	116	---	20600	11100	---	12300	---	20700	---	9270	155	---
TOTAL	8891	224125	503620	491200	251350	283990	223300	518120	592540	194740	62052	66131
MEAN	287	7471	16250	15850	8977	9161	7443	16710	19750	6282	2002	2204
MAX	1580	16300	23000	22700	17800	16900	16500	28800	25800	9320	11900	15100
MIN	92	103	6710	11100	3670	3260	2310	4370	5740	2440	99	75
AC-FT	17640	444600	998900	974300	498600	563300	442900	1028000	1175000	386300	123100	131200

e Estimated

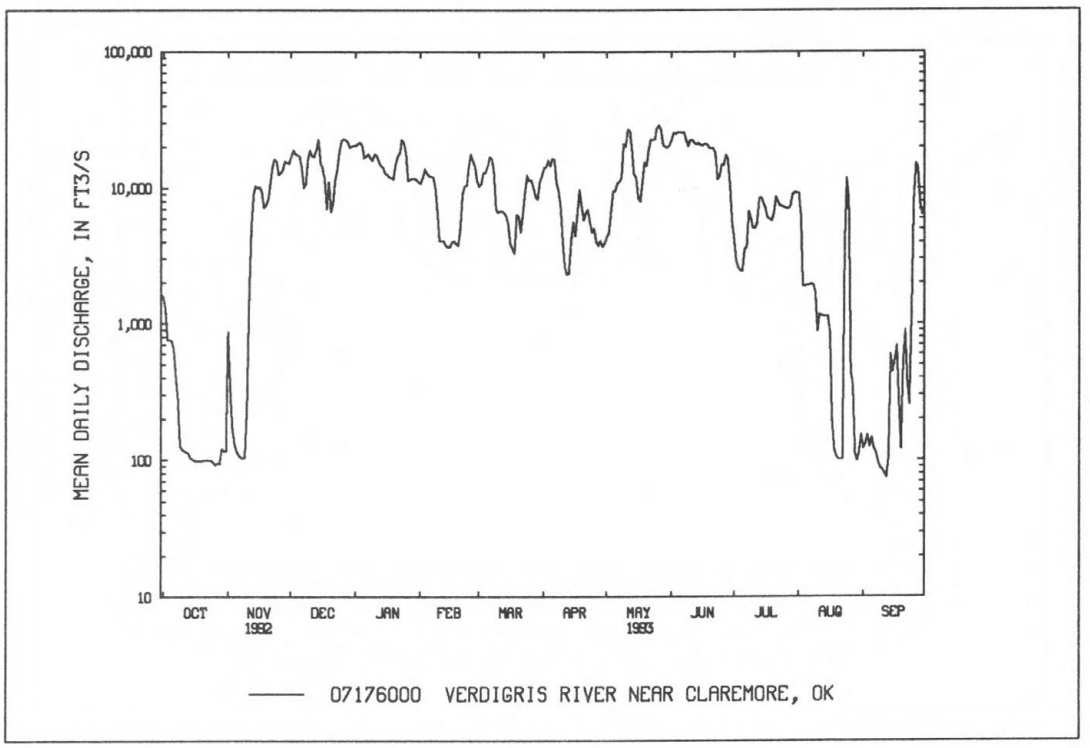
07176000 VERDIGRIS RIVER NEAR CLAREMORE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3447	4510	3736	3613	3374	6767	7775	6147	7701	3970	1158	1533
MAX	47570	23150	16250	15850	11470	23920	25200	23480	19750	19960	7053	7538
(WY)	1987	1975	1993	1993	1975	1985	1988	1973	1993	1976	1992	1989
MIN	24.1	18.0	47.4	37.9	31.3	23.2	107	87.2	84.0	42.5	52.7	57.4
(WY)	1967	1967	1979	1981	1967	1967	1971	1971	1972	1966	1965	1979

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1965-93	
ANNUAL TOTAL	1772473		3420059			
ANNUAL MEAN	4843		9370		[a]4476	
HIGHEST ANNUAL MEAN					10870	1987
LOWEST ANNUAL MEAN					365	1981
HIGHEST DAILY MEAN	23000	Dec 14	28800	May 26	77700	Oct 13 1986
LOWEST DAILY MEAN	92	Oct 26	75	Sep 12	[b]6.2	Jul 17 1966
ANNUAL SEVEN-DAY MINIMUM	96	Oct 22	92	Sep7	8.6	Jul 12 1966
INSTANTANEOUS PEAK FLOW			29400	May 25	[c]78400	Oct 12 1986
INSTANTANEOUS PEAK STAGE			25.95	May 25	[d]44.99	Oct 12 1986
ANNUAL RUNOFF (AC-FT)	3516000		6784000		3243000	
10 PERCENT EXCEEDS	13700		20600		13300	
50 PERCENT EXCEEDS	2690		8280		1110	
90 PERCENT EXCEEDS	208		116		60	

[a]Prior to regulation by Oologah Lake, water years 1936-62, 3,723 ft^3/s.
[b]No flow at times in 1936, 1939, 1940, 1956.
[c]Maximum for period of record, 182,000 ft^3/s, May 21, 1943.
[d]Maximum for period of record, 55.05 ft, May 21, 1943.



07176460 BIRCH LAKE NEAR BARNSDALL, OK

LOCATION.--Lat 36°32'05", long 96°09'53", in NW 1/4 NE 1/4 sec.30, T.24 N., R.11 E., Osage County, Hydrologic Unit 11070107, 450 ft north of dam on Birch Creek, 1.5 mi south of Barnsdall and at mile 0.8.

DRAINAGE AREA.--66.0 mi^2.

PERIOD OF RECORD.--March 1977 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to May 31, 1977 nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam with uncontrolled concrete spillway. Storage began Mar. 18, 1977; conservation pool was first filled Mar. 23, 1978. The outlet work is a gated intake structure. Capacity, 59,030 acre-ft at elevation 774.0 ft, crest of uncontrolled spillway and 19,220 acre-ft at elevation 750.5 ft, top of conservation pool. Dead storage, 3,420 acre-ft below elevation 730.0 ft. Figures given herein represent total contents, based on 1989 resurvey, used since Oct. 1, 1991. Reservoir is used for flood control, water supply, water quality, recreation, and fish and wildlife.

COOPERATION.--Record provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 47,400 acre-ft, Oct. 6, 1986, elevation, 769.04 ft; minimum since conservation pool was first filled, 13,080 acre-ft, Oct. 26-29, 1977, elevation, 744.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 40,200 acre-ft, May 19, elevation, 765.02 ft; minimum, 16,600 acre-ft, Sept. 12, elevation, 748.11 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

735	5,860	755	24,720
740	9,190	760	31,750
745	13,490	765	40,200
750	18,650	770	50,050

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

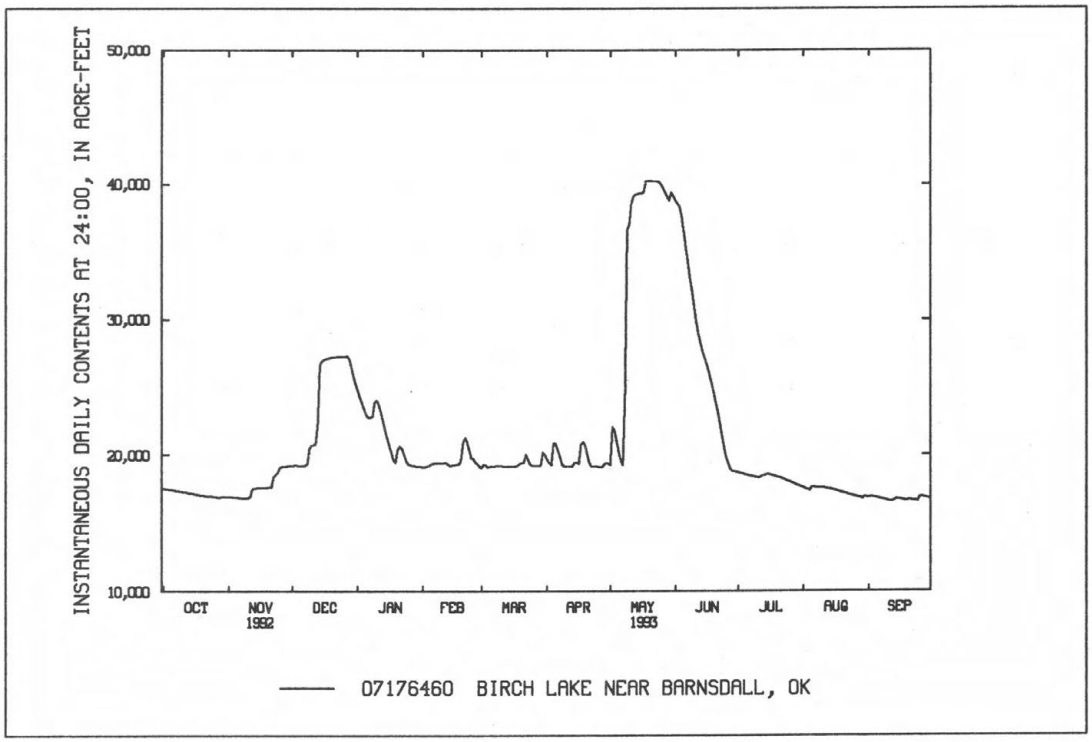
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17540	16920	19220	24750	19130	19060	19680	19280	38800	18700	17610	16870
2	17510	16920	19240	24250	19130	19290	19410	22070	38550	18650	17530	16920
3	17480	16910	19240	23850	19180	19240	19290	21830	38350	18610	17460	16910
4	17460	16890	19220	23450	19220	19120	20860	21050	37600	18560	17390	16880
5	17440	16870	19220	23000	19320	19140	20880	20210	36420	18520	17660	16850
6	17400	16860	19220	22780	19370	19170	20400	19570	35270	18480	17650	16800
7	17360	16850	19230	22780	19410	19190	19920	19260	34150	18450	17610	16760
8	17340	16850	19320	22830	19420	19200	19340	24720	33010	18410	17590	16730
9	17320	16840	20470	23880	19400	19210	19140	36680	32080	18380	17580	16690
10	17280	16850	20710	24040	19380	19210	19170	37040	30840	18340	17620	16640
11	17260	16950	20760	23770	19420	19190	19170	38570	29730	18330	17590	16600
12	17250	17520	20810	23190	19430	19190	19180	39090	28790	18440	17540	16590
13	17190	17550	22340	22520	19320	19180	19180	39230	28130	18460	17510	16680
14	17210	17580	26630	21860	19200	19180	19430	39280	27530	18560	17480	16770
15	17170	17580	26880	21280	19240	19180	19460	39320	27040	18580	17440	16750
16	17120	17600	27000	20710	19260	19180	19360	39320	26540	18550	17400	16730
17	17090	17590	27060	20210	19300	19170	20740	39430	25980	18500	17350	16700
18	17060	17590	27100	19650	19300	19220	20970	40220	25370	18450	17300	16650
19	17030	17620	27150	19430	19540	19350	20740	40240	24680	18400	17250	16660
20	17010	17640	27180	20390	20850	19410	20060	40240	23990	18360	17210	16710
21	17000	17660	27190	20650	21280	19450	19420	40200	23320	18310	17180	16690
22	16990	18370	27230	20490	20980	20030	19160	40200	22450	18240	17110	16660
23	16980	18540	27230	20090	20390	19680	19170	40200	21570	18200	17070	16630
24	16960	18710	27230	19620	19780	19320	19160	40180	20690	18110	17030	16620
25	16950	19090	27230	19330	19740	19210	19140	40040	19880	18050	16980	16930
26	16920	19140	27230	19250	19450	19220	19120	39770	19430	18000	16930	16940
27	16900	19180	27270	19220	19340	19200	19100	39430	19000	17930	16900	16910
28	16910	19190	27050	19210	19140	19200	19290	39110	18810	17860	16870	16870
29	16920	19200	26480	19170	---	19210	19410	38840	18780	17790	16810	16820
30	16920	19220	25800	19160	---	20190	19360	39380	18740	17730	16950	16800
31	16920	---	25250	19140	---	20020	---	39120	---	17660	16910	---

07176460 BIRCH LAKE NEAR BARNSDALL, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	17540	19220	27270	24750	21280	20190	20970	40240	38800	18700	17660	16940
MIN	16900	16840	19220	19140	19130	19060	19100	19260	18740	17660	16810	16590
(‡)	748.42	750.50	755.40	750.43	750.43	751.19	750.62	764.40	750.08	749.11	748.41	748.31
(‡‡)	-640	+2,300	+6,030	-6,110	0	+880	-660	+19,760	-20,380	-1,080	-750	-110

CAL YR 1992 MAX 27270 MIN 16840 (‡‡) +6,040
WTR YR 1993 MAX 40240 MIN 16590 (‡‡) -760

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07176500 BIRD CREEK NEAR AVANT, OK

LOCATION.--Lat 36°29'12", long 96°03'50", in SW 1/4 NW 1/4 sec.7, T.23 N., R.12 E., Osage County, Hydrologic Unit 11070107, 150 ft upstream from county road bridge at Avant, 2.4 mi upstream from Candy Creek, and at mile 54.2.

DRAINAGE AREA.--364 mi^2.

PERIOD OF RECORD.--August 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 651.28 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated since 1958 by Bluestem Lake. Some regulation since March 1977 by Birch Lake (station 07176460), located on Birch Creek, 12.1 mi upstream. Small diversions upstream for municipal water supply for the cities of Pawhuska and Barnsdall. U.S. Army Corps of Engineers satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	1600	14,700	16.38	May 9	1300	27,500	28.03
May 2	1900	8,570	11.01				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	22	126	463	154	424	1170	236	667	88	45	30
2	34	16	106	456	137	588	716	4430	433	81	47	30
3	24	14	94	526	136	734	454	2660	459	77	47	52
4	20	12	83	854	136	546	1480	1370	842	73	44	62
5	20	20	73	777	178	310	2610	929	890	75	73	40
6	16	25	73	496	382	246	1100	1060	815	84	94	33
7	16	27	70	227	278	217	762	636	768	77	62	29
8	16	26	77	203	215	194	630	5910	740	79	54	28
9	12	25	1450	1420	207	179	432	25900	771	79	50	27
10	10	26	1070	1490	203	166	180	6450	998	74	47	27
11	10	75	384	769	241	152	151	3190	901	76	48	27
12	10	1250	237	1200	549	149	127	2590	586	1250	48	28
13	11	289	1260	1470	516	153	113	1100	545	1720	42	38
14	13	118	9500	941	361	160	228	573	486	484	39	113
15	13	69	3030	787	363	156	562	398	346	792	39	105
16	13	49	1100	646	529	149	368	307	346	280	39	65
17	13	40	624	600	476	141	1680	250	338	172	39	49
18	13	35	423	597	368	187	1740	2450	378	124	39	40
19	13	37	324	535	383	642	750	1030	611	97	36	34
20	14	1550	271	2010	1640	486	685	475	720	95	33	108
21	16	545	229	1930	3200	313	541	314	565	87	33	217
22	17	1360	199	1260	1310	1320	374	237	572	70	31	84
23	16	2140	182	919	1020	1400	133	227	668	64	27	50
24	16	678	166	728	849	814	276	208	726	58	25	41
25	16	1700	153	553	1750	448	223	191	693	55	24	2910
26	16	910	141	337	1390	286	124	264	350	52	23	709
27	16	405	139	255	662	242	108	264	332	52	23	195
28	15	255	187	220	513	221	109	253	282	49	23	108
29	22	188	519	200	---	430	697	252	109	48	23	75
30	25	151	530	177	---	1920	422	1650	98	44	36	60
31	24	---	515	163	---	2710	---	1690	---	44	86	---
TOTAL	533	12057	23335	23209	18146	16083	18945	67494	17035	6500	1319	5414
MEAN	17.2	402	753	749	648	519	631	2177	568	210	42.5	180
MAX	43	2140	9500	2010	3200	2710	2610	25900	998	1720	94	2910
MIN	10	12	70	163	136	141	108	191	98	44	23	27
AC-FT	1060	23920	46280	46040	35990	31900	37580	133900	33790	12890	2620	10740

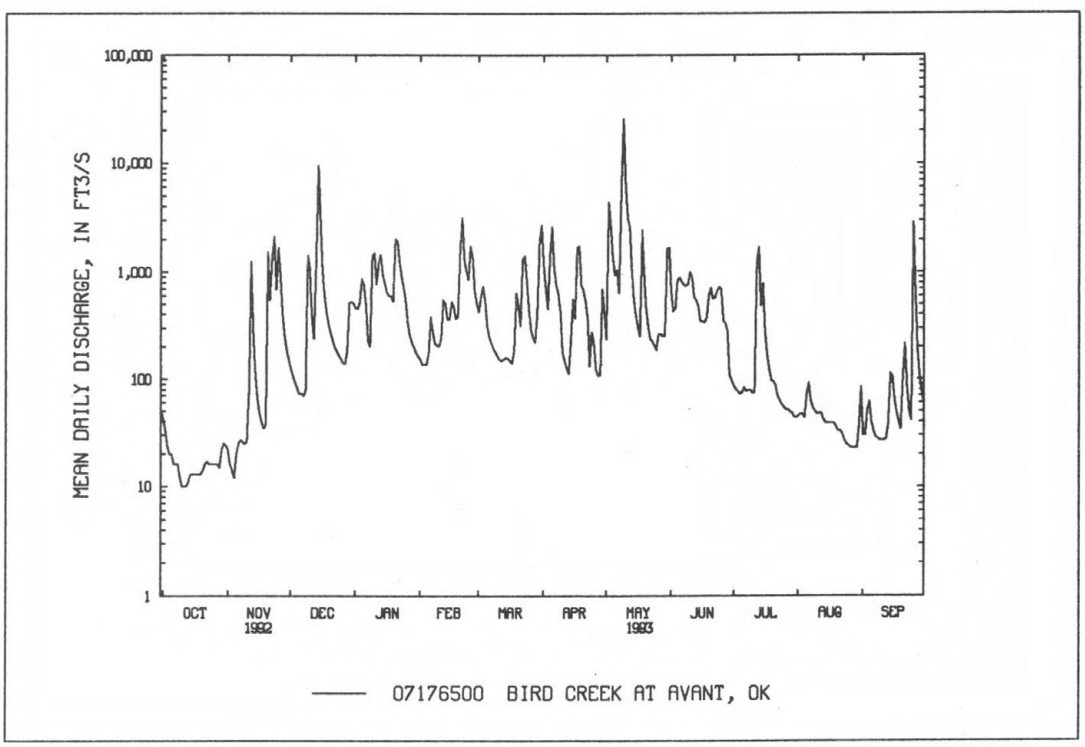
07176500 BIRD CREEK NEAR AVANT, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	181	200	138	116	183	371	338	505	386	137	76.0	170
MAX	1940	1677	863	827	1376	2264	1235	2266	2648	832	980	1585
(WY)	1987	1975	1972	1973	1985	1990	1973	1957	1957	1959	1950	1961
MIN	.000	.000	.000	.000	.000	.000	.000	.000	1.07	.000	.000	.000
(WY)	1949	1953	1953	1953	1957	1956	1956	1956	1963	1954	1952	1952

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1946-93	
ANNUAL TOTAL	86711.9		210070			
ANNUAL MEAN	237		576		233	
HIGHEST ANNUAL MEAN					639	1975
LOWEST ANNUAL MEAN					5.50	1956
HIGHEST DAILY MEAN	9500	Dec 14	25900	May 9	28500	Mar 11 1974
LOWEST DAILY MEAN	9.0	Aug 22	10	Oct 10-12	.00	at times
ANNUAL SEVEN-DAY MINIMUM	10	Aug 20	11	Oct 9	.00	Jul 19 1946
INSTANTANEOUS PEAK FLOW			27500	May 9	[a]32400	Oct 2 1959
INSTANTANEOUS PEAK STAGE			28.03	May 9	32.03	Mar 11 1974
ANNUAL RUNOFF (AC-FT)	172000		416700		169000	
10 PERCENT EXCEEDS	531		1340		420	
50 PERCENT EXCEEDS	55		208		19	
90 PERCENT EXCEEDS	16		24		.00	

[a]Gage height, 31.40 ft.



07177400 SKIATOOK LAKE NEAR SKIATOOK, OK

LOCATION.--Lat 36°21'02", long 96°05'18", in NE 1/4 SE 1/4 sec.26, T.22 N., R.11 E., Osage County, Hydrologic Unit 11070107, near right end of dam, 5.0 mi west of Skiatook and at mile 14.3.

DRAINAGE AREA.--354 mi^2.

PERIOD OF RECORD.--October 1984 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by rolled earthfill dam. Spillway is a concrete uncontrolled structure in right abutment. Outlet works consists of a controlled intake structure with a 10-foot, 6-inch diameter tunnel, a 2-foot, 6-inch by 5-foot low-flow sluice and a 36-inch water-supply pipe. Regulated storage began Oct. 31, 1984. Conservation pool was first filled Aug. 20, 1989. Capacity, 893,000 acre-ft, at elevation 750.8 ft, maximum pool; 513,500 acre-ft at elevation 729.0 ft, top of flood control pool; 331,200 acre-ft, at elevation 714.0 ft, top of conservation pool; 11,800 acre-ft, at elevation 657.0 ft, top of inactive pool. Figures given herein represent total contents. Reservoir is designed for flood control, water supply, water quality, recreation and conservation. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 438,200 acre-ft, May 24, 1993, elevation 724.20 ft; minimum since conservation pool was first filled, 290,500 acre-ft, Sept. 19, 1990.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 438,200 acre-ft, May 24, elevation 724.20 ft; minimum, 293,100 acre-ft, Nov. 9, elevation 711.06 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

700	197,600	715	333,000
705	237,800	720	387,600
710	282,800	725	448,200

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

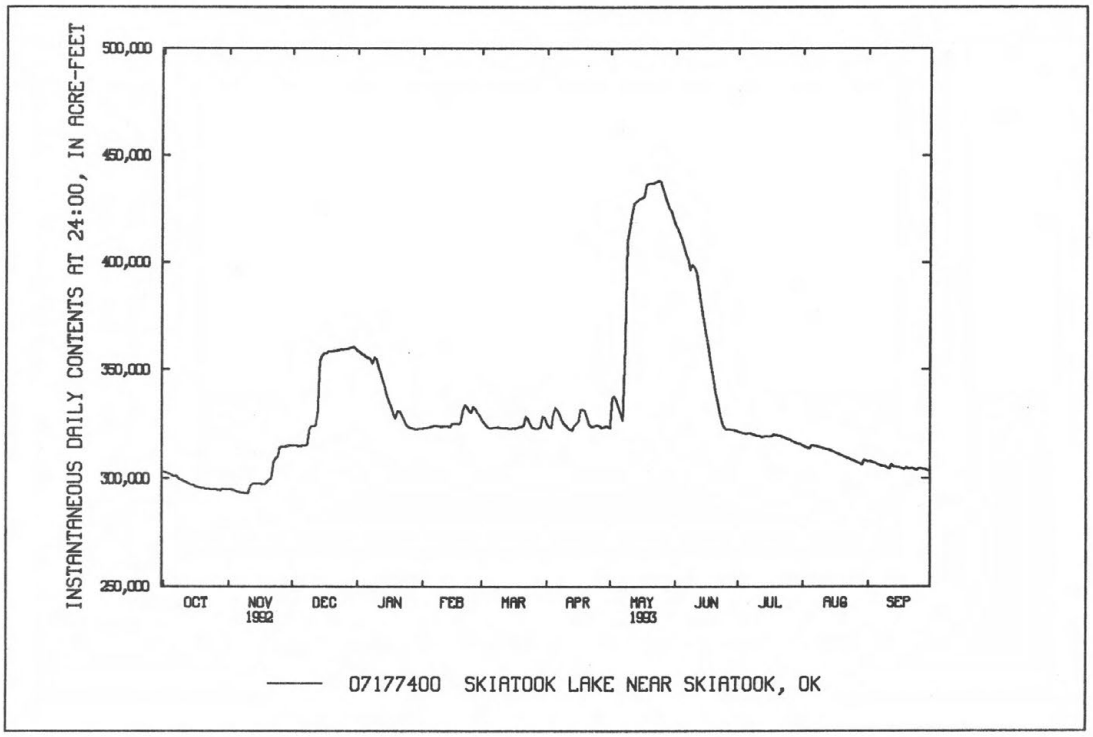
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303000	295100	315000	358700	322900	326900	325100	323200	417600	321500	315000	307800
2	302700	294900	315000	358100	323100	325800	323600	337100	415900	321100	314400	307900
3	302300	294700	315000	357200	323200	324500	323200	337800	413400	320900	314100	307500
4	301800	294300	314800	356800	323400	323500	329700	335500	410700	320700	313600	307100
5	301300	293800	314900	355800	323700	323000	332300	332300	407000	320500	315100	306700
6	300900	293600	315000	355400	324000	323100	331200	329700	403700	320800	315000	306100
7	301100	293500	315000	354900	324400	323400	329400	326600	401300	320600	314800	305900
8	299800	293300	315600	352900	324100	323400	326700	358500	396700	320200	314700	305500
9	299500	293300	322500	355500	324000	323600	325200	410100	398800	319900	314300	305500
10	298900	293300	324000	354800	323700	323200	324300	415800	397700	319600	314000	304800
11	298500	296500	324000	351200	324100	323100	323100	422600	395300	319600	313700	304500
12	298000	297500	324400	348200	324000	323100	322400	427300	388800	319100	313400	306500
13	297600	297600	330600	344800	324000	323100	322100	428400	382000	319100	313200	305400
14	297100	297600	354100	341700	323700	322900	324300	429100	376000	319400	312900	305300
15	297000	297600	356600	337600	325200	322700	325300	429900	370200	319400	312500	305100
16	296300	297500	357400	335000	325200	323200	326300	430100	364600	319200	312000	304900
17	296100	297400	357500	332800	325300	322900	331800	430700	358800	319200	311500	304600
18	295900	297400	358500	329700	325000	323100	331600	436200	352000	320100	311100	304200
19	295500	298600	358400	327700	325600	323700	331100	436700	346600	319900	310700	305000
20	295500	299400	358400	330900	331100	323900	328000	436900	340300	319700	310200	304500
21	295300	300100	358700	330900	333800	324300	324900	436900	336200	319600	309800	304600
22	295300	307400	358800	329100	332900	328400	323700	437200	331100	319100	309200	304700
23	295100	309000	359000	327300	331000	327400	323700	437700	326900	318800	309100	304000
24	295000	310000	359500	324900	330300	325300	324300	438200	323900	318200	308400	303900
25	295000	314300	359400	323700	332800	323400	324500	437700	322600	317900	308200	304700
26	294900	314500	359500	323200	331900	323000	324100	434200	322400	317600	307600	304600
27	294600	314700	359600	323000	330200	322900	323100	431100	322500	317000	307300	304200
28	294500	314700	360000	322800	329100	323000	323500	428100	322300	316500	306700	304000
29	295200	315000	360300	322500	---	323500	324100	425300	322100	316100	306300	303600
30	294900	315000	360600	322700	---	328300	323700	424100	322000	315900	308500	303400
31	295100	---	360000	322900	---	328100	---	420500	---	315600	308000	---

07177400 SKIATOOK LAKE NEAR SKIATOOK, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	303000	315000	360600	358700	333800	328400	332300	438200	417600	321500	315100	307900
MIN	294500	293300	314800	322500	322900	322700	322100	323200	322000	315600	306300	303400
(‡)	711.26	713.24	717.54	714.02	714.62	714.52	714.09	722.77	713.93	713.30	712.55	712.10
(‡‡)	-8,100	+19,900	+45,000	-37,100	+6,200	-1,000	-4,400	+96,800	-98,500	-6,400	-7,600	-4,600

CAL YR 1992 MAX 364600 MIN 293300 (‡‡) +34,100
WTR YR 1993 MAX 438200 MIN 293300 (‡‡) +200

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07177410 HOMINY CREEK BELOW SKIATOOK LAKE NEAR SKIATOOK, OK

LOCATION.--Lat 36°21'09", long 96°05'18", in NE 1/4 SE 1/4 sec.26, T.22 N., R.11 E., Osage County, Hydrologic Unit 11070107, located 300 ft downstream from Skiatook Lake stilling basin on the left bank of outlet channel, 1.6 mi above Quapaw Creek, about 5.0 mi west of Skiatook, and at mile 14.0.

DRAINAGE AREA.--354 mi^2.

PERIOD OF RECORD.--October 1984 to September 1993 (discontinued). Published as Hominy Creek near Skiatook, October 1984 to September 1986.

GAGE.--Water-stage recorder. Datum of gage is 610.00 ft above sea level.

REMARKS.--Records fair. Flow regulated by Skiatook Lake (07177400) since October 1984.

COOPERATION.--Gage height record and three discharge measurements provided by U.S. Army Corps of Engineers; records computed by U.S. Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	40	e2.0	339	2.5	967	1260	239	1390	87	88	48
2	96	39	e2.0	515	2.5	972	847	242	1110	88	79	111
3	144	40	e2.0	515	2.6	965	257	520	1170	87	77	111
4	188	40	e2.0	513	2.6	628	257	1230	1400	93	88	111
5	173	e40	2.0	513	2.6	205	638	1580	1630	101	85	112
6	159	e40	2.0	215	2.5	75	1010	1570	1630	60	63	111
7	159	41	2.0	e400	2.6	75	1130	1340	1680	59	42	110
8	159	39	2.1	e1000	112	76	1200	e766	1820	86	42	94
9	160	39	e3.0	e1450	205	75	804	e5.0	1750	86	126	95
10	160	41	3.7	e1450	205	76	521	e5.0	999	86	132	106
11	159	41	3.7	e1700	205	76	521	e5.0	2200	87	94	106
12	159	20	3.5	e1770	204	62	438	5.2	2680	60	93	106
13	155	2.3	e3.5	1770	204	38	175	4.9	2660	25	100	107
14	150	2.1	e3.5	1750	204	38	89	4.9	2790	24	113	58
15	104	2.3	3.1	1540	204	38	402	5.0	2930	24	113	25
16	44	2.0	2.8	1360	205	39	542	5.1	2920	24	113	27
17	44	2.1	2.8	1350	206	39	514	5.2	2900	23	113	74
18	45	1.9	2.7	1350	205	40	523	4.7	2890	24	113	106
19	49	e2.0	2.6	1350	272	39	779	4.7	2880	23	113	107
20	53	2.0	2.7	1350	375	39	1100	4.9	2870	54	114	64
21	48	e2.0	2.7	1350	374	38	1190	4.6	2860	59	114	25
22	45	e2.0	2.7	1230	674	211	867	4.4	2540	48	112	25
23	46	e2.0	2.5	1070	975	897	256	3.9	2080	92	113	24
24	45	e2.0	2.6	1060	975	1210	60	3.8	1430	119	113	120
25	44	e2.0	2.9	678	e975	918	60	587	503	119	112	107
26	46	e2.0	2.4	267	e975	306	408	1420	33	94	113	106
27	e43	e2.0	2.3	200	975	89	284	1410	33	69	113	64
28	41	e2.0	2.3	148	969	89	89	1500	33	73	114	58
29	41	e2.0	2.2	62	---	89	210	1560	33	75	114	80
30	41	e2.0	2.2	2.2	---	334	293	1550	56	80	113	80
31	41	---	89	2.3	---	1010	---	1540	---	88	45	---
TOTAL	2925	496.7	167.5	28269.5	9715.9	9753	16724	17130.3	51900	2117	3077	2478
MEAN	94.4	16.6	5.40	912	347	315	557	553	1730	68.3	99.3	82.6
MAX	188	41	89	1770	975	1210	1260	1580	2930	119	132	120
MIN	41	1.9	2.0	2.2	2.5	38	60	3.8	33	23	42	24
AC-FT	5800	985	332	56070	19270	19350	33170	33980	102900	4200	6100	4920

e Estimated

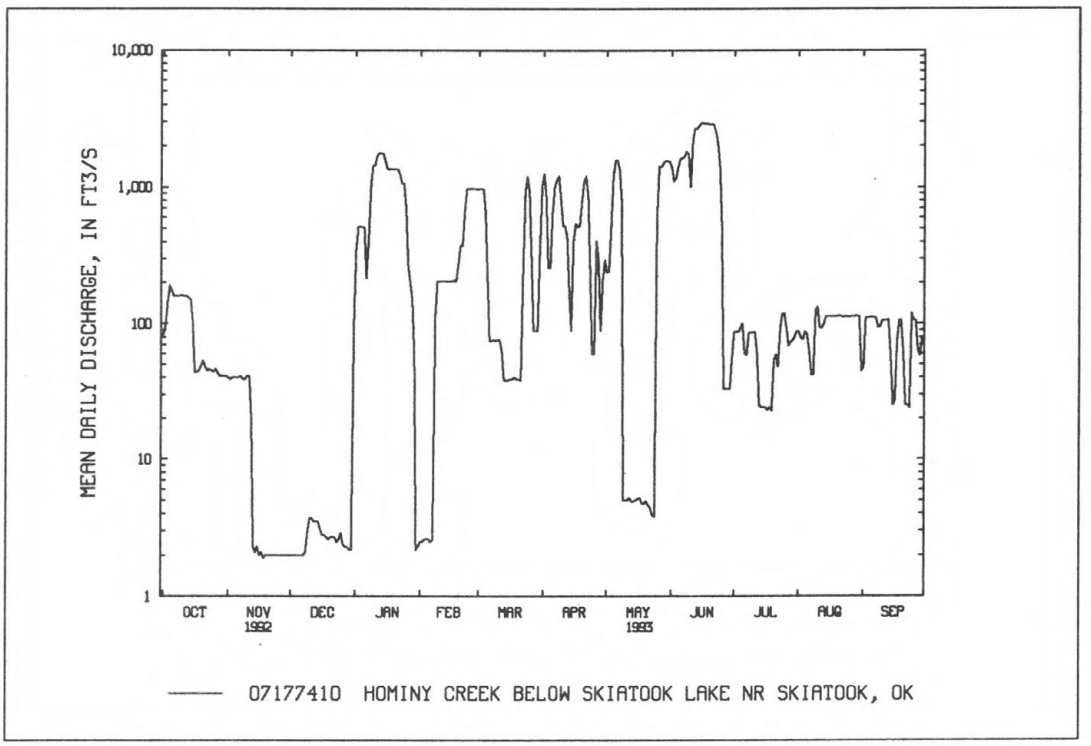
07177410 HOMINY CREEK BELOW SKIATOOK LAKE NEAR SKIATOOK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	86.3	36.2	91.4	272	191	491	451	402	732	152	113	109
MAX	94.4	52.1	275	912	347	1576	1094	914	1730	287	126	136
(WY)	1993	1990	1992	1993	1993	1990	1990	1990	1993	1992	1990	1990
MIN	75.4	16.6	5.40	19.3	51.2	22.8	54.3	36.6	53.2	68.3	99.3	82.6
(WY)	1992	1993	1993	1990	1991	1992	1991	1991	1991	1993	1993	1993

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1990-93	
ANNUAL TOTAL	64912.6		144753.9			
ANNUAL MEAN	177		397		260	
HIGHEST ANNUAL MEAN					397	1993
LOWEST ANNUAL MEAN					70.7	1991
HIGHEST DAILY MEAN	2490	Jun 27	2930	Jun 15	3130	Mar 22 1990
LOWEST DAILY MEAN	1.9	Nov 18	1.9	Nov 18	[a].10	Nov 1 1991
ANNUAL SEVEN-DAY MINIMUM	2.0	Nov 18	2.0	Nov 18	1.7	Jan 23 1990
INSTANTANEOUS PEAK FLOW			2950	Jun 14	[b]3140	Mar 22 1990
INSTANTANEOUS PEAK STAGE			21.24	May 8	[c]21.24	May 8 1993
ANNUAL RUNOFF (AC-FT)	128800		287100		188600	
10 PERCENT EXCEEDS	562		1370		838	
50 PERCENT EXCEEDS	84		94		87	
90 PERCENT EXCEEDS	2.7		2.5		2.5	

[a]Minimum daily discharge for period of record, .03 ft^3/s, Nov. 10-14, 1984, and Feb. 22-24, 1986.
[b]Maximum discharge for period of record, 4,330 ft^3/s, Oct. 29, 1986, gage height 22.80 ft.
[c]Backwater from Quapaw and/or Bird Creeks. Maximum stage for period of record, 25.44 ft, April 30, 1985, (backwater).



07177500 BIRD CREEK NEAR SPERRY, OK

LOCATION.--Lat 36°16'42", long 95°57'14", in NW 1/4 NW 1/4 sec.29, T.21 N., R.13 E., Tulsa County, Hydrologic Unit 11070107, near downstream side of right abutment of county road bridge, 1.5 mi upstream from Delaware Creek, 2.4 mi downstream from Hominy Creek, 2.5 mi southeast of Sperry, and at mile 25.0.

DRAINAGE AREA.--905 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1921: 1943.

GAGE.--Water-stage recorder. Datum of gage is 579.43 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Flow slightly regulated since March 1977 by Birch Lake (station 07176460). Flow slightly regulated since October 1984 by Skiatook Lake (station 07177400). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1915 reached a stage similar to flood of Oct. 31, 1941, 30.14 ft, from information provided by local residents.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 15	0100	11,500	24.01	May 10	0700	30,600	29.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	193	195	1040	177	1520	3050	698	2540	192	158	131
2	132	66	172	1040	169	1540	2010	1660	1630	190	156	157
3	144	54	145	1060	154	1790	897	6160	1500	183	141	217
4	209	51	113	1240	156	1500	1510	3120	1870	176	149	219
5	206	51	104	1360	162	812	4960	2860	2360	186	187	203
6	175	48	103	1050	278	429	2840	3140	2380	433	229	184
7	175	51	102	522	371	370	2090	2960	2320	167	155	174
8	172	61	107	1150	274	334	2060	2670	2500	184	119	173
9	173	63	2330	2430	468	307	1750	17400	3110	178	131	137
10	172	64	2600	4530	467	281	1030	27500	3970	169	258	161
11	169	116	825	2620	479	260	911	13100	2980	168	157	161
12	168	1190	446	3010	761	249	841	7140	3450	800	157	158
13	170	799	1060	3360	920	209	571	2610	3300	2140	154	181
14	169	248	8450	2980	714	206	688	1050	3290	916	166	447
15	157	158	10600	2580	686	208	1780	692	3420	1060	168	292
16	62	88	3740	2110	944	202	1380	544	3350	567	166	173
17	50	71	983	2030	970	190	2400	441	3330	308	166	130
18	51	73	617	2030	779	259	4450	1940	3320	219	165	185
19	51	72	429	2010	762	1160	1800	2760	3420	181	165	180
20	63	991	327	4890	1850	858	1880	808	3640	150	165	510
21	64	1000	270	5010	5230	561	1900	537	3560	196	165	267
22	58	1180	225	3080	2750	2230	1660	402	3320	158	163	236
23	58	4040	195	2210	2120	3300	878	412	2870	149	159	136
24	61	1330	171	1880	1890	2340	337	438	2310	208	157	162
25	e59	1670	181	1590	4390	1740	1460	404	1630	205	155	1850
26	e58	1800	177	830	3580	1000	614	1600	544	198	148	2970
27	e58	762	154	655	2010	439	818	1680	382	147	147	549
28	61	443	143	447	1610	387	313	1700	366	143	149	246
29	74	288	299	385	---	378	623	1820	259	149	149	213
30	60	226	460	221	---	2110	1050	1820	155	147	156	183
31	61	---	478	191	---	4100	---	4490	---	156	589	---

e Estimated

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

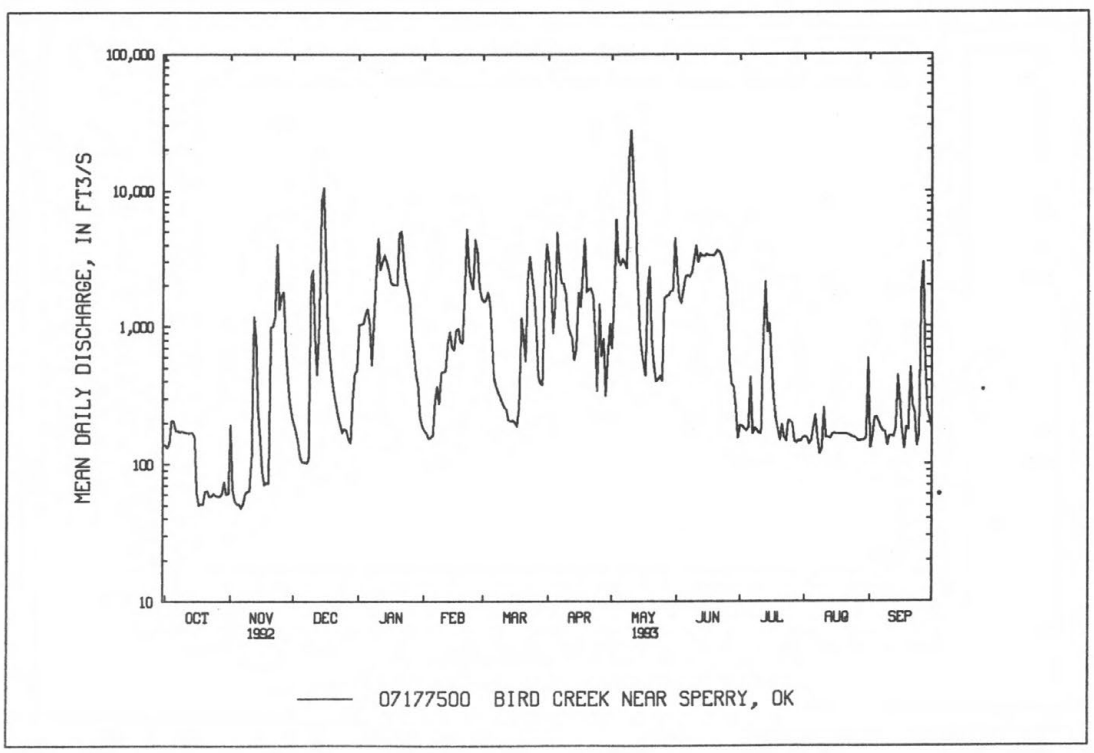
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	3479	17247	36201	59541	35121	31269	48551	114556	73076	10423	5449	10985
MEAN	112	575	1168	1921	1254	1009	1618	3695	2436	336	176	366
MAX	209	4040	10600	5010	5230	4100	4960	27500	3970	2140	589	2970
MIN	50	48	102	191	154	190	313	402	155	143	119	130
AC-FT	6900	34210	71800	118100	69660	62020	96300	227200	144900	20670	10810	21790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	173	299	605	630	699	1543	1181	1661	1675	282	176	225
MAX	251	575	1168	1921	1254	4949	2212	3695	2510	467	207	366
(WY)	1990	1993	1993	1993	1993	1990	1990	1993	1992	1992	1992	1993
MIN	112	109	61.9	161	81.2	80.4	393	231	512	155	156	150
(WY)	1993	1991	1990	1991	1991	1991	1992	1992	1990	1990	1990	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1990-93	
ANNUAL TOTAL	207111		445898			
ANNUAL MEAN	566		1222		[a]762	
HIGHEST ANNUAL MEAN					1222	1993
LOWEST ANNUAL MEAN					282	1991
HIGHEST DAILY MEAN	10600	Dec 15	27500	May 10	27500	May 10 1993
LOWEST DAILY MEAN	48	Nov 6	48	Nov 6	[b]45	Dec 25 1989
ANNUAL SEVEN-DAY MINIMUM	54	Nov 3	54	Nov 3	46	Dec 23 1989
INSTANTANEOUS PEAK FLOW			30600	May 10	[c]30600	May 10 1993
INSTANTANEOUS PEAK STAGE			29.88	May 10	[d]29.88	May 10 1993
ANNUAL RUNOFF (AC-FT)	410800		884400		552000	
10 PERCENT EXCEEDS	1430		3090		2140	
50 PERCENT EXCEEDS	175		429		174	
90 PERCENT EXCEEDS	73		126		73	

[a]Prior to regulation, water years 1939-84, 484 ft^3/s.
[b]No flow at times in 1939, 1954-57, 1964-66, 1970.
[c]Maximum discharge for period of record, 90,000 ft^3/s, Oct. 3, 1959, from rating curve extended.
[d]Maximum gage height for period of record, 32.60 ft, Oct. 3, 1959.



07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1987 to current year.
pH: April 1987 to current year.
WATER TEMPERATURE: April 1987 to current year.
DISSOLVED OXYGEN: April 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1987.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, greater than 2,000 microsiemens, Nov. 1, 1992; minimum, 80 microsiemens, Aug. 20, 1989.
pH: Maximum, 8.6 units, Aug. 27, 1988, Mar. 5, 1991; minimum, 5.7 units Sept. 2, 1987.
WATER TEMPERATURE: Maximum, 35.5°C, July 14-16, 1988; minimum, 0.0°C, several days in winter months.
DISSOLVED OXYGEN: Maximum, 15.4 mg/l, Dec. 16, 1992; minimum, 2.0 mg/l, June 29, 1987.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, greater than 2,000 microsiemens, Nov. 1; minimum, 122 microsiemens, Dec. 14, 15.
pH: Maximum, 8.3 units, Nov. 1; minimum, 6.8 units, July 13, 14.
WATER TEMPERATURE: Maximum, 32.5°C, July 24; minimum, 2.0°C, Jan. 20.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 15.4 mg/l, Dec. 15, 16; minimum recorded, 3.7 mg/l, Sept. 1.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	380	374	377	>2000	426	700	292	280	286	461	293	310
2	380	376	379	494	456	475	307	292	299	301	295	299
3	378	340	358	462	446	453	322	307	315	308	301	304
4	342	318	327	452	434	443	331	324	329	322	308	314
5	320	316	319	436	432	434	340	331	336	347	308	327
6	324	316	322	463	438	451	367	340	355	368	341	346
7	324	320	322	466	460	464	401	369	383	404	318	378
8	334	320	328	491	463	482	427	401	412	319	302	314
9	330	324	328	489	473	479	467	200	319	363	279	309
10	328	324	327	652	489	571	268	227	244	381	261	306
11	328	322	325	932	490	584	316	230	265	299	267	283
12	328	322	325	1510	312	547	360	320	348	313	276	297
13	328	324	326	371	331	351	397	246	333	274	251	262
14	328	324	326	409	372	396	232	122	171	265	255	258
15	334	328	332	423	409	415	147	122	134	268	263	265
16	360	334	341	451	423	437	199	133	170	272	268	270
17	396	360	383	490	455	473	233	201	218	272	266	269
18	412	392	397	516	492	505	267	233	249	279	268	274
19	442	414	425	534	516	530	302	267	281	279	275	277
20	442	408	426	1920	316	508	313	297	304	300	208	244
21	408	390	399	476	315	409	331	315	325	250	221	235
22	412	402	407	456	244	336	353	331	343	276	246	259
23	416	406	410	334	210	274	382	355	368	302	282	292
24	420	412	417	250	200	206	405	374	384	282	276	279
25	418	414	416	272	204	224	529	391	415	278	274	277
26	418	412	414	290	242	259	548	428	460	292	280	287
27	416	410	414	302	282	293	441	430	434	302	288	293
28	416	412	414	282	278	281	466	443	455	314	302	308
29	420	402	406	276	272	275	472	418	445	322	314	317
30	601	426	505	280	272	277	436	391	419	358	324	341
31	484	442	475	---	---	---	397	299	312	388	352	365
MONTH	601	316	376	2000	200	418	548	122	326	461	208	295

> Actual value is known to be greater than the value shown

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	394	378	387	302	270	281	272	260	269	372	351	364
2	412	394	402	320	304	314	270	260	265	370	165	334
3	430	416	423	322	304	315	290	268	281	293	174	229
4	432	418	426	338	316	322	376	250	297	274	247	262
5	458	432	447	350	328	337	260	214	232	286	276	281
6	470	432	459	374	354	363	264	254	261	301	284	292
7	430	418	423	392	366	376	274	262	269	295	282	286
8	478	426	449	408	394	401	278	272	275	289	203	276
9	555	376	414	428	408	417	288	274	279	178	123	135
10	380	376	379	436	426	432	294	284	289	134	123	128
11	400	380	392	430	426	429	298	294	296	215	136	171
12	466	402	436	430	426	428	308	298	301	220	194	204
13	430	404	413	466	430	443	354	310	324	278	220	245
14	424	408	419	476	456	464	679	288	393	307	282	296
15	440	398	407	476	464	469	316	264	291	344	306	324
16	450	376	400	523	472	492	306	292	298	378	346	361
17	376	352	360	488	478	482	328	222	279	408	380	394
18	356	350	353	739	470	505	274	200	245	695	270	383
19	406	358	371	581	338	409	306	282	298	328	258	294
20	394	274	340	420	360	375	292	278	288	346	278	318
21	278	214	235	426	378	406	278	276	277	361	314	339
22	264	242	252	412	214	333	286	276	280	420	371	398
23	264	254	259	296	200	268	308	282	290	496	425	441
24	294	260	267	288	278	284	388	310	338	501	453	480
25	292	212	234	300	288	293	416	178	264	558	405	489
26	264	216	240	330	298	306	299	278	286	370	355	360
27	258	242	253	372	334	356	330	295	306	363	358	360
28	270	258	264	376	364	369	370	332	354	358	336	351
29	---	---	---	404	378	398	410	370	391	334	322	327
30	---	---	---	480	242	331	372	351	361	324	317	321
31	---	---	---	304	258	288	---	---	---	391	298	329
MONTH	555	212	361	739	200	377	679	178	296	695	123	315

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	298	279	289	388	350	368	373	358	362	358	276	311
2	281	274	279	378	346	359	362	358	361	384	316	351
3	288	270	280	352	348	350	377	358	364	356	300	321
4	306	279	289	350	346	348	379	356	365	396	302	338
5	318	283	298	348	344	346	396	339	357	382	326	341
6	309	267	285	380	232	326	443	350	377	328	316	322
7	298	277	284	332	234	289	364	346	349	316	314	315
8	292	260	277	332	286	311	418	364	396	324	306	313
9	288	186	258	384	348	365	414	379	386	334	316	325
10	254	178	209	416	370	397	383	304	326	334	320	327
11	254	242	248	378	374	376	373	312	345	322	318	321
12	258	251	255	653	244	397	385	352	367	326	320	324
13	255	246	252	346	150	245	385	350	367	328	316	324
14	251	246	248	290	162	221	379	341	351	392	284	338
15	257	248	253	269	191	220	381	339	357	370	298	322
16	259	255	257	239	198	212	387	343	354	344	316	328
17	263	257	260	271	241	258	389	348	361	352	336	342
18	262	257	260	300	271	286	393	352	362	368	316	342
19	265	258	262	335	302	316	---	---	---	318	308	316
20	256	248	253	339	327	332	---	---	---	326	200	237
21	268	250	259	368	339	349	---	---	---	404	226	320
22	262	256	260	356	335	342	---	---	---	418	344	375
23	256	250	253	371	354	362	---	---	---	372	368	370
24	310	250	265	368	329	347	---	---	---	384	358	376
25	454	240	264	337	329	333	---	---	---	384	164	283
26	288	238	258	339	329	333	---	---	---	184	140	170
27	304	290	299	360	333	346	338	336	337	218	188	206
28	326	294	310	379	360	367	340	336	337	266	216	235
29	342	312	322	377	366	369	340	336	337	286	236	261
30	366	344	356	381	364	371	338	314	331	284	264	271
31	---	---	---	371	360	366	346	168	243	---	---	---
MONTH	454	178	271	653	150	329	---	---	---	418	140	311

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.0	7.8	7.9	8.3	7.9	8.0	7.9	7.8	7.9	8.0	7.8	8.0
2	8.0	7.8	7.9	7.9	7.6	7.7	8.1	7.9	7.9	8.0	8.0	8.0
3	8.0	7.8	7.9	8.0	7.6	7.7	8.0	8.0	8.0	8.0	8.0	8.0
4	8.0	7.8	7.9	8.1	7.7	7.9	8.0	8.0	8.0	8.1	8.0	8.0
5	7.9	7.7	7.8	8.1	7.9	8.0	8.0	8.0	8.0	8.1	8.1	8.1
6	7.8	7.7	7.7	8.0	7.6	7.9	8.0	8.0	8.0	8.1	8.0	8.1
7	7.9	7.7	7.8	7.7	7.5	7.6	8.1	8.0	8.1	8.0	7.8	8.0
8	7.9	7.8	7.8	7.7	7.5	7.6	8.2	8.1	8.1	7.9	7.9	7.9
9	7.9	7.7	7.8	7.6	7.4	7.5	8.1	7.7	7.9	7.9	7.8	7.9
10	---	---	---	7.6	7.3	7.4	8.0	7.9	8.0	8.0	7.8	7.9
11	---	---	---	7.5	7.3	7.5	8.1	8.0	8.0	7.9	7.9	7.9
12	---	---	---	7.4	7.2	7.3	8.2	8.1	8.1	7.9	7.9	7.9
13	---	---	---	7.7	7.5	7.6	8.1	7.9	8.1	8.0	7.9	7.9
14	---	---	---	7.8	7.7	7.7	8.0	7.6	7.8	8.0	8.0	8.0
15	7.9	7.7	7.8	7.8	7.7	7.7	7.8	7.6	7.7	8.0	8.0	8.0
16	7.9	7.5	7.8	7.7	7.7	7.7	7.9	7.6	7.8	8.0	8.0	8.0
17	7.6	7.5	7.6	7.7	7.5	7.7	7.9	7.9	7.9	8.0	8.0	8.0
18	7.9	7.5	7.7	7.7	7.5	7.5	7.9	7.9	7.9	8.0	8.0	8.0
19	8.2	7.6	7.9	7.7	7.6	7.6	8.0	7.9	7.9	8.0	8.0	8.0
20	8.0	7.8	7.9	7.6	7.2	7.4	8.0	8.0	8.0	8.0	7.8	7.8
21	8.0	7.8	7.8	7.8	7.3	7.5	8.0	8.0	8.0	7.9	7.8	7.9
22	8.0	7.8	7.8	7.8	7.6	7.7	8.0	8.0	8.0	8.0	7.9	7.9
23	7.9	7.8	7.9	7.7	7.5	7.6	8.0	8.0	8.0	8.0	8.0	8.0
24	7.9	7.6	7.8	7.8	7.6	7.7	8.0	8.0	8.0	8.0	7.9	8.0
25	7.8	7.6	7.7	7.7	7.4	7.7	8.0	8.0	8.0	7.9	7.9	7.9
26	7.7	7.5	7.6	7.8	7.6	7.7	8.0	8.0	8.0	7.9	7.9	7.9
27	7.7	7.5	7.6	7.8	7.7	7.7	8.0	8.0	8.0	7.9	7.8	7.9
28	8.0	7.7	7.8	7.8	7.8	7.8	8.0	8.0	8.0	7.8	7.8	7.8
29	8.1	7.8	7.9	7.9	7.8	7.8	8.1	8.0	8.0	7.9	7.8	7.9
30	7.9	7.7	7.8	7.9	7.9	7.9	8.2	8.1	8.1	7.9	7.8	7.8
31	8.1	7.7	7.9	---	---	---	8.1	7.9	8.0	7.8	7.8	7.8
MAX	---	---	---	8.3	7.9	8.0	8.2	8.1	8.1	8.1	8.1	8.1
MIN	---	---	---	7.4	7.2	7.3	7.8	7.6	7.7	7.8	7.8	7.8

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.8	7.8	7.8	7.9	7.9	7.9	7.8	7.7	7.8	7.7	7.6	7.6
2	7.9	7.8	7.8	7.9	7.9	7.9	7.8	7.8	7.8	7.7	7.1	7.6
3	7.8	7.8	7.8	8.0	7.9	7.9	7.8	7.7	7.8	7.8	7.2	7.6
4	7.8	7.8	7.8	8.0	7.9	8.0	7.8	7.6	7.7	7.9	7.8	7.9
5	7.9	7.8	7.8	7.9	7.9	7.9	7.7	7.6	7.7	7.9	7.9	7.9
6	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.7	7.8	7.9	7.8	7.8
7	8.1	7.9	8.0	7.9	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
8	8.1	8.0	8.0	7.9	7.8	7.9	7.9	7.8	7.8	7.8	7.4	7.8
9	8.0	7.9	8.0	7.9	7.8	7.9	7.8	7.7	7.8	---	---	---
10	8.0	8.0	8.0	8.0	7.9	7.9	7.8	7.7	7.8	---	---	---
11	8.1	8.0	8.0	8.0	7.9	7.9	7.8	7.7	7.8	---	---	---
12	8.1	8.0	8.0	8.1	7.9	8.0	7.8	7.7	7.8	---	---	---
13	8.1	8.0	8.0	8.1	7.9	8.0	7.8	7.7	7.7	---	---	---
14	8.1	8.1	8.1	8.1	7.9	8.0	7.7	7.5	7.7	7.6	7.5	7.6
15	8.1	8.0	8.0	8.0	8.0	8.0	7.7	7.6	7.7	7.6	7.6	7.6
16	8.0	8.0	8.0	8.1	7.9	8.0	7.8	7.7	7.7	7.6	7.5	7.6
17	8.0	8.0	8.0	8.1	7.9	8.0	7.7	7.5	7.7	7.5	7.4	7.5
18	8.0	8.0	8.0	8.1	7.9	8.0	7.6	7.4	7.6	---	---	---
19	8.0	8.0	8.0	7.9	7.8	7.8	7.8	7.7	7.7	7.7	7.5	7.7
20	8.0	7.8	7.9	7.9	7.8	7.9	7.8	7.7	7.8	7.6	7.5	7.5
21	7.8	7.7	7.7	7.9	7.8	7.8	7.7	7.7	7.7	7.5	7.4	7.5
22	7.9	7.8	7.9	7.8	7.5	7.7	7.7	7.7	7.7	7.5	7.5	7.5
23	7.9	7.9	7.9	7.8	7.6	7.7	7.7	7.6	7.7	7.6	7.5	7.6
24	7.9	7.9	7.9	7.8	7.8	7.8	7.6	7.5	7.5	7.6	7.5	7.6
25	7.8	7.7	7.8	7.8	7.8	7.8	7.5	7.3	7.4	7.6	7.3	7.6
26	7.8	7.7	7.8	7.8	7.8	7.8	7.6	7.4	7.4	7.5	7.4	7.5
27	7.9	7.8	7.9	7.8	7.7	7.8	7.6	7.5	7.6	7.5	7.5	7.5
28	7.9	7.8	7.9	7.8	7.7	7.7	7.5	7.5	7.5	7.5	7.4	7.4
29	---	---	---	7.9	7.7	7.8	7.6	7.5	7.5	7.4	7.4	7.4
30	---	---	---	7.8	7.4	7.6	7.7	7.6	7.6	7.4	7.3	7.4
31	---	---	---	7.8	7.6	7.7	---	---	---	7.5	7.2	7.4
MAX	8.1	8.1	8.1	8.1	8.0	8.0	7.9	7.8	7.8	---	---	---
MIN	7.8	7.7	7.7	7.8	7.4	7.6	7.5	7.3	7.4	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.4	7.3	7.3	7.0	6.9	6.9	7.6	7.4	7.5	7.5	7.1	7.3
2	7.3	7.3	7.3	7.1	6.9	7.0	7.6	7.4	7.5	7.6	7.1	7.3
3	7.4	7.3	7.3	7.2	7.0	7.1	7.4	7.2	7.3	7.6	7.5	7.6
4	7.4	7.3	7.4	7.2	7.2	7.2	7.6	7.3	7.4	7.8	7.5	7.6
5	7.4	7.4	7.4	7.2	7.2	7.2	7.6	7.5	7.5	7.9	7.7	7.7
6	7.4	7.3	7.4	7.4	7.1	7.2	7.6	7.5	7.6	7.8	7.6	7.6
7	7.4	7.3	7.3	7.2	7.0	7.1	7.6	7.4	7.5	7.7	7.5	7.6
8	7.4	7.3	7.3	7.2	7.0	7.1	7.4	7.3	7.4	7.6	7.5	7.5
9	7.5	7.2	7.3	7.2	7.2	7.2	7.5	7.3	7.4	7.6	7.4	7.4
10	7.3	7.1	7.2	7.3	7.2	7.3	7.5	7.3	7.4	7.8	7.5	7.6
11	7.4	7.3	7.4	7.3	7.2	7.3	7.7	7.4	7.5	7.8	7.6	7.7
12	7.3	7.3	7.3	7.3	6.9	7.3	7.7	7.5	7.5	7.9	7.5	7.7
13	7.3	7.3	7.3	7.3	6.8	7.1	7.7	7.4	7.5	8.0	7.7	7.7
14	7.3	7.2	7.3	7.2	6.8	7.1	7.7	7.5	7.5	7.9	7.7	7.8
15	7.2	7.2	7.2	7.3	7.2	7.2	7.6	7.4	7.5	7.9	7.8	7.8
16	7.2	7.2	7.2	7.3	7.2	7.2	7.6	7.4	7.5	7.8	7.7	7.7
17	7.2	7.2	7.2	7.3	7.2	7.2	7.6	7.4	7.5	7.7	7.5	7.6
18	7.3	7.2	7.2	7.3	7.1	7.2	7.6	7.5	7.5	7.6	7.5	7.5
19	7.3	7.2	7.2	7.2	7.2	7.2	7.6	7.5	7.5	7.7	7.4	7.5
20	7.3	7.2	7.2	7.3	7.2	7.3	7.7	7.5	7.5	7.7	7.3	7.5
21	7.3	7.1	7.2	7.4	7.3	7.3	7.6	7.5	7.5	7.6	7.3	7.3
22	7.1	7.0	7.1	7.4	7.3	7.4	7.7	7.5	7.5	7.7	7.5	7.6
23	7.1	7.0	7.0	7.5	7.4	7.4	7.6	7.5	7.5	7.5	7.4	7.5
24	7.1	7.0	7.1	7.5	7.4	7.4	7.6	7.5	7.6	7.9	7.3	7.4
25	7.1	7.0	7.1	7.5	7.4	7.5	7.7	7.5	7.5	7.8	7.1	7.6
26	7.2	7.0	7.1	7.5	7.4	7.5	7.9	7.5	7.6	7.6	7.2	7.4
27	---	---	---	7.5	7.3	7.4	7.9	7.7	7.7	7.7	7.6	7.7
28	---	---	---	7.4	7.2	7.3	7.9	7.6	7.7	7.6	7.4	7.6
29	---	---	---	7.5	7.3	7.4	7.8	7.6	7.7	7.4	7.3	7.3
30	---	---	---	7.5	7.3	7.4	7.9	7.6	7.7	7.4	7.2	7.3
31	---	---	---	7.5	7.4	7.4	7.7	7.2	7.4	---	---	---
MAX	---	---	---	7.5	7.4	7.5	7.9	7.7	7.7	8.0	7.8	7.8
MIN	---	---	---	7.0	6.8	6.9	7.4	7.2	7.3	7.4	7.1	7.3

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	19.0	19.5	17.0	16.5	17.0	6.0	5.0	5.5	6.5	6.0	6.5
2	20.5	19.5	20.0	16.0	15.0	15.5	6.5	5.0	5.5	6.5	6.0	6.0
3	21.0	19.5	20.5	15.0	13.5	14.5	7.0	5.5	6.0	7.0	6.5	6.5
4	22.0	20.0	21.0	13.5	11.5	12.5	7.0	6.0	6.5	7.0	6.5	7.0
5	22.0	21.0	21.5	11.5	10.0	10.5	6.5	5.0	5.5	6.0	5.5	6.0
6	22.0	20.5	21.5	10.0	9.5	9.5	5.0	4.5	4.5	5.5	4.0	5.0
7	21.5	20.5	21.5	10.0	8.5	9.5	4.5	3.5	4.0	6.0	4.0	4.5
8	20.5	18.5	19.5	10.5	9.5	10.0	4.0	3.5	4.0	6.0	5.5	6.0
9	18.5	17.5	18.0	11.5	10.0	11.0	5.0	4.5	4.5	6.0	4.0	5.5
10	19.5	18.5	19.0	13.5	11.5	12.5	5.5	5.0	5.5	4.0	3.5	4.0
11	19.0	18.0	18.5	14.0	13.0	13.5	6.0	5.0	5.5	5.0	4.0	4.5
12	20.0	18.5	19.0	12.5	11.5	12.0	6.0	5.5	6.0	5.0	4.5	5.0
13	20.0	19.0	19.5	12.0	10.5	11.5	7.5	6.0	7.0	4.5	4.0	4.5
14	20.5	19.5	20.0	11.0	10.0	10.5	8.5	7.5	8.0	4.5	4.0	4.5
15	20.5	19.0	19.5	11.0	10.0	10.5	8.5	7.5	8.0	5.0	4.5	5.0
16	19.0	17.5	18.0	11.0	10.5	11.0	7.5	6.5	7.0	5.5	4.5	5.0
17	17.0	16.0	16.5	12.0	11.0	11.5	6.5	6.0	6.5	5.5	5.0	5.0
18	16.0	15.0	15.5	12.5	11.5	12.0	6.5	6.0	6.0	5.0	4.5	5.0
19	15.5	14.0	15.0	13.5	12.5	13.0	7.0	6.5	6.5	4.5	4.5	4.5
20	16.0	14.5	15.0	13.0	12.0	12.5	6.5	6.0	6.5	4.5	2.0	3.0
21	18.0	16.0	17.0	12.0	11.5	12.0	6.5	5.5	6.0	4.0	3.0	3.0
22	19.5	17.5	18.5	11.5	7.0	9.0	6.0	5.5	5.5	5.0	3.5	4.0
23	20.0	18.5	19.0	9.5	7.0	8.5	6.0	5.0	5.5	5.5	5.0	5.0
24	20.0	19.0	19.5	8.0	7.5	7.5	5.0	4.0	4.5	5.5	5.0	5.0
25	20.0	18.5	19.0	8.5	8.0	8.0	4.5	4.0	4.5	5.5	4.5	5.0
26	19.5	18.0	18.5	8.5	7.0	8.0	4.0	3.0	3.5	5.0	4.0	4.5
27	18.5	17.5	18.0	7.0	6.5	7.0	4.5	3.0	3.5	5.5	4.5	5.0
28	18.0	16.0	17.0	6.5	6.0	6.5	5.5	4.0	4.5	6.5	5.0	6.0
29	17.5	16.0	16.5	6.5	5.5	6.0	8.0	5.5	6.5	6.0	5.0	5.5
30	16.0	15.5	16.0	6.0	5.5	6.0	9.5	8.0	8.5	5.0	4.0	4.5
31	16.5	15.0	15.5	---	---	---	9.0	6.5	8.0	5.5	4.0	4.5
MONTH	22.0	14.0	18.5	17.0	5.5	10.6	9.5	3.0	5.8	7.0	2.0	5.0

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.5	4.5	5.0	5.5	5.0	5.5	11.0	9.5	10.0	17.0	15.5	16.5
2	7.0	5.0	6.0	6.0	5.5	5.5	10.0	8.5	9.5	18.0	15.5	16.5
3	7.5	6.5	7.0	6.0	5.5	6.0	10.0	9.5	10.0	16.5	15.0	16.0
4	7.5	7.0	7.0	6.0	5.5	6.0	9.5	9.0	9.5	15.5	14.5	15.0
5	7.5	7.0	7.5	7.0	5.5	6.0	9.0	8.5	9.0	15.0	14.5	15.0
6	8.0	6.5	7.5	8.5	6.5	7.0	9.5	8.5	9.0	16.5	14.5	15.5
7	8.5	7.0	7.5	10.0	7.5	8.5	9.5	9.0	9.5	16.5	15.5	15.5
8	8.5	7.0	8.0	11.0	8.5	9.5	9.5	9.0	9.5	17.0	15.0	16.0
9	9.0	7.5	8.0	12.0	9.5	11.0	11.0	9.0	10.0	17.0	16.0	16.5
10	8.5	8.0	8.5	12.0	10.5	11.0	12.0	10.0	11.0	16.0	15.0	15.5
11	8.5	8.0	8.5	11.0	9.0	10.0	12.5	11.0	11.5	15.5	15.0	15.5
12	8.5	7.5	8.0	9.0	7.5	8.0	12.0	10.5	11.5	16.0	15.0	15.5
13	7.5	7.0	7.5	7.5	6.0	7.0	13.5	11.5	12.0	17.5	16.0	16.5
14	7.5	6.5	7.0	8.0	5.5	6.5	13.5	11.0	13.0	19.0	17.0	18.0
15	7.0	4.5	5.5	7.5	6.5	7.0	11.0	10.5	10.5	21.0	18.5	19.5
16	4.5	3.5	4.0	10.5	7.5	8.5	11.5	10.0	11.0	21.5	20.0	21.0
17	4.0	3.5	4.0	9.5	8.5	9.0	12.0	11.0	11.5	22.0	21.0	21.5
18	3.5	2.5	3.0	9.0	6.5	8.0	13.0	11.5	12.0	21.5	20.0	20.5
19	5.0	3.5	4.0	6.0	5.0	5.5	14.0	13.0	13.5	20.5	18.5	19.5
20	6.5	4.0	4.5	6.5	6.0	6.5	13.5	12.5	13.0	19.5	18.0	19.0
21	6.5	6.0	6.0	7.5	6.5	7.0	13.0	11.5	12.5	19.0	18.5	19.0
22	6.5	6.0	6.0	10.0	8.0	9.0	13.5	11.5	12.5	18.5	18.0	18.5
23	6.0	5.5	6.0	10.0	8.5	9.0	14.5	12.5	13.0	19.5	18.5	19.0
24	5.5	4.5	5.0	9.0	8.0	8.5	16.5	14.5	15.5	21.0	19.0	20.0
25	4.5	3.5	4.0	9.0	7.5	8.0	17.5	16.0	16.5	22.5	20.0	21.0
26	4.5	3.5	4.0	10.0	7.5	8.5	19.0	14.5	17.0	16.5	14.0	15.0
27	5.0	4.0	4.5	13.5	10.5	11.5	16.5	13.0	14.5	16.0	14.5	15.0
28	5.0	5.0	5.0	14.5	12.0	13.0	17.5	16.5	17.0	15.5	14.5	15.0
29	---	---	---	14.5	13.5	14.0	18.5	16.5	17.5	15.5	14.5	15.0
30	---	---	---	15.5	14.0	14.5	17.5	15.5	16.0	16.0	14.5	15.0
31	---	---	---	14.5	11.5	13.0	---	---	---	20.5	16.5	19.0
MONTH	9.0	2.5	6.0	15.5	5.0	8.6	19.0	8.5	12.3	22.5	14.0	17.3

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	17.5	16.0	17.0	29.0	27.0	28.0	32.0	30.5	31.0	25.0	24.5	24.5
2	17.0	16.0	16.5	30.0	27.5	28.5	32.0	29.5	30.5	26.5	24.5	25.5
3	16.5	16.0	16.5	29.5	28.0	29.0	29.5	28.5	29.0	27.0	25.5	26.5
4	18.5	16.0	17.0	29.0	27.0	27.5	29.5	27.5	28.0	26.5	24.0	25.5
5	17.5	16.0	17.0	27.5	26.0	26.5	28.0	25.0	26.5	26.5	24.5	25.5
6	17.0	16.5	17.0	27.5	26.0	26.5	25.0	24.5	24.5	26.5	25.0	26.0
7	17.0	16.5	17.0	26.0	25.5	26.0	25.5	23.0	24.5	26.0	24.5	25.0
8	17.0	16.5	16.5	28.0	25.5	26.5	26.0	24.5	25.0	25.0	23.5	24.0
9	19.0	16.0	17.0	29.5	26.5	28.0	28.0	25.0	26.0	24.5	22.5	23.5
10	20.5	17.5	19.5	30.0	27.5	28.5	29.5	26.5	28.0	25.0	23.5	24.0
11	17.5	17.0	17.5	29.5	28.0	29.0	30.5	28.0	29.0	25.0	23.0	24.0
12	17.5	16.5	17.0	29.5	25.5	27.5	30.5	29.0	30.0	26.0	24.0	25.0
13	18.0	16.5	17.0	27.0	25.0	26.0	31.0	29.0	30.0	26.5	25.0	25.5
14	17.5	16.5	17.0	27.0	25.0	25.5	31.0	29.5	30.5	25.0	20.0	22.0
15	17.0	16.5	17.0	27.0	25.5	26.0	31.0	29.0	30.0	20.5	18.5	19.5
16	17.5	16.5	17.0	29.0	26.5	27.5	31.0	29.0	30.0	20.0	18.5	19.0
17	18.0	16.5	17.5	30.5	27.5	28.5	31.5	29.5	30.5	20.5	18.5	19.5
18	18.0	17.0	17.5	31.0	28.5	29.5	31.5	29.5	30.5	22.0	19.0	20.5
19	18.5	17.0	17.5	30.5	29.0	29.5	31.0	29.5	30.5	23.5	21.0	22.0
20	19.0	17.5	18.0	31.5	29.0	30.0	31.0	29.0	30.0	23.0	21.5	22.0
21	18.0	17.5	18.0	31.5	29.5	30.5	31.0	29.5	30.5	23.5	21.0	22.0
22	18.5	17.5	18.0	32.0	29.5	31.0	31.0	29.5	30.5	25.5	23.5	24.0
23	19.0	18.0	18.5	32.0	30.0	31.0	31.0	29.5	30.0	25.5	24.5	25.0
24	21.0	18.0	19.0	32.5	30.0	31.0	30.0	28.5	29.0	24.5	23.0	23.5
25	24.0	20.5	21.5	32.0	30.0	31.0	30.0	28.0	29.0	23.0	21.0	22.0
26	25.5	24.0	24.5	32.0	29.5	31.0	30.0	28.0	29.0	20.5	20.0	20.5
27	27.0	24.5	25.5	31.5	29.5	30.5	30.0	28.5	29.0	20.5	19.0	19.5
28	28.0	26.0	27.0	31.5	29.5	30.5	30.0	28.5	29.5	20.5	19.0	19.5
29	28.0	26.5	27.0	32.0	30.0	31.0	30.0	28.0	29.0	20.5	19.0	19.5
30	29.0	26.5	27.5	32.0	30.0	31.0	30.0	28.0	29.0	21.0	19.0	20.0
31	---	---	---	32.0	30.0	31.0	28.5	23.5	25.0	---	---	---
MONTH	29.0	16.0	19.0	32.5	25.0	28.8	32.0	23.0	28.8	27.0	18.5	22.8
YEAR	32.5	2.0	15.4									

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.2	8.8	9.3	10.6	8.5	9.2	11.5	10.9	11.1	12.1	11.1	11.9
2	9.7	8.8	9.2	8.9	8.5	8.7	12.0	11.2	11.8	12.2	12.1	12.1
3	9.7	8.7	9.2	9.3	8.6	8.9	12.1	11.9	12.0	12.1	11.8	11.9
4	9.6	8.7	9.1	9.9	9.0	9.4	11.9	11.4	11.6	12.0	11.7	11.8
5	10.2	8.8	9.4	10.3	9.5	9.9	11.4	11.0	11.2	12.3	12.0	12.2
6	10.2	9.1	9.6	10.4	9.8	10.1	11.0	10.9	10.9	12.5	12.2	12.3
7	10.1	9.3	9.7	10.7	9.7	10.2	11.0	10.8	10.9	12.6	11.4	12.3
8	10.9	9.4	10.0	10.7	10.2	10.4	11.0	10.8	10.9	11.9	11.6	11.7
9	11.4	10.2	10.7	10.6	10.1	10.4	10.9	9.8	10.3	12.4	11.9	12.1
10	11.3	10.6	10.9	10.5	9.8	10.2	10.2	10.1	10.2	13.4	12.4	13.1
11	11.5	10.6	11.0	10.2	9.7	9.9	10.2	10.2	10.2	13.4	13.1	13.2
12	10.9	9.4	10.0	10.2	9.3	9.6	10.2	10.1	10.2	13.4	13.1	13.3
13	9.4	8.4	8.8	10.0	9.6	9.9	10.1	9.6	9.9	13.8	13.3	13.6
14	8.4	7.6	7.8	10.3	10.0	10.2	11.7	9.5	10.1	14.0	13.6	13.7
15	7.9	6.8	7.5	10.5	10.2	10.3	15.4	11.7	14.1	13.6	13.3	13.5
16	6.9	6.5	6.7	10.7	10.2	10.5	16.3	12.9	13.9	13.5	13.2	13.3
17	7.2	6.0	6.7	10.7	10.4	10.6	12.9	12.4	12.7	13.3	13.2	13.2
18	---	---	---	10.5	10.1	10.3	12.6	12.0	12.3	13.4	13.2	13.3
19	---	---	---	10.1	9.4	9.8	12.0	11.7	11.9	13.4	13.3	13.4
20	---	---	---	10.0	9.2	9.6	11.9	11.7	11.8	13.8	13.4	13.6
21	---	---	---	10.2	10.0	10.1	11.9	11.7	11.9	13.6	13.4	13.5
22	---	---	---	10.4	10.0	10.2	12.3	11.7	11.9	---	---	---
23	---	---	---	10.5	9.7	10.2	12.4	12.1	12.2	---	---	---
24	---	---	---	10.5	10.5	10.5	12.6	12.3	12.5	---	---	---
25	---	---	---	11.0	10.4	10.7	12.7	12.4	12.6	---	---	---
26	---	---	---	11.2	10.9	11.1	12.8	12.6	12.7	---	---	---
27	---	---	---	11.4	11.0	11.3	12.8	12.6	12.7	---	---	---
28	---	---	---	11.3	11.1	11.2	12.7	12.4	12.5	---	---	---
29	9.4	8.5	9.2	11.3	11.0	11.1	12.4	11.6	12.0	---	---	---
30	9.5	9.3	9.4	11.1	11.0	11.1	11.6	11.1	11.5	---	---	---
31	10.3	9.4	9.9	---	---	---	11.7	11.1	11.3	---	---	---
MONTH	---	---	---	11.4	8.5	10.2	16.3	9.5	11.7	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	FEBRUARY MAX	FEBRUARY MIN	FEBRUARY MEAN	MARCH MAX	MARCH MIN	MARCH MEAN	APRIL MAX	APRIL MIN	APRIL MEAN	MAY MAX	MAY MIN	MAY MEAN
1	---	---	---	---	---	---	---	---	---	9.3	8.7	8.9
2	---	---	---	12.8	12.6	12.7	12.4	11.6	12.2	9.3	6.8	8.4
3	---	---	---	13.1	12.7	12.9	11.6	11.2	11.3	8.8	6.9	7.7
4	---	---	---	13.2	12.7	13.1	11.6	11.4	11.5	10.2	8.8	9.7
5	---	---	---	13.0	12.6	12.8	12.3	11.3	11.8	10.8	10.0	10.3
6	---	---	---	12.6	12.1	12.4	12.5	12.2	12.4	10.7	9.0	10.0
7	---	---	---	12.3	11.7	12.0	12.5	12.1	12.3	9.5	8.8	9.3
8	---	---	---	12.1	11.4	11.8	12.4	12.3	12.3	8.9	7.6	8.7
9	---	---	---	11.9	11.2	11.5	12.6	11.5	12.3	7.6	6.4	6.9
10	---	---	---	12.2	11.1	11.5	12.3	11.3	11.7	7.7	6.7	7.1
11	---	---	---	12.4	11.2	11.7	11.9	11.3	11.5	7.6	6.1	6.8
12	---	---	---	13.2	11.6	12.3	12.0	11.4	11.7	9.3	7.6	8.4
13	---	---	---	13.5	12.2	12.8	11.7	11.2	11.5	8.9	8.6	8.7
14	---	---	---	13.6	12.4	12.9	---	---	---	8.9	8.1	8.5
15	---	---	---	13.0	12.2	12.5	---	---	---	8.2	7.6	7.9
16	---	---	---	13.2	11.9	12.5	---	---	---	7.7	6.9	7.4
17	---	---	---	13.1	11.4	12.3	---	---	---	7.1	6.4	6.8
18	---	---	---	12.5	11.1	11.9	---	---	---	7.6	6.5	7.0
19	---	---	---	12.8	12.2	12.4	---	---	---	---	---	---
20	---	---	---	12.6	11.8	12.4	---	---	---	---	---	---
21	---	---	---	12.4	11.7	12.1	---	---	---	---	---	---
22	---	---	---	12.0	10.7	11.3	---	---	---	8.6	8.1	8.3
23	---	---	---	12.5	11.1	11.7	11.8	10.5	11.2	8.3	7.7	8.0
24	---	---	---	12.6	12.1	12.4	10.5	9.8	10.1	8.2	7.6	7.9
25	---	---	---	12.8	11.8	12.4	9.9	7.9	9.0	8.4	7.5	7.9
26	---	---	---	12.5	11.5	12.1	10.5	8.5	9.1	---	---	---
27	---	---	---	11.5	10.9	11.2	12.0	8.9	10.7	---	---	---
28	---	---	---	11.2	10.4	10.8	8.9	7.7	8.2	---	---	---
29	---	---	---	10.9	9.3	10.3	8.9	7.5	8.2	---	---	---
30	---	---	---	10.1	9.2	9.7	9.5	8.6	9.3	---	---	---
31	---	---	---	10.2	9.6	10.0	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07177500 BIRD CREEK NEAR SPERRY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	6.1	5.1	5.7	4.4	3.7	4.0
2	---	---	---	---	---	---	6.1	5.1	5.6	5.8	4.0	4.8
3	---	---	---	---	---	---	6.4	5.3	5.7	6.0	5.3	5.5
4	---	---	---	---	---	---	6.6	5.5	6.1	6.6	5.0	5.7
5	---	---	---	---	---	---	6.6	5.7	6.0	6.8	5.2	5.9
6	---	---	---	---	---	---	6.3	5.7	6.0	7.1	5.5	6.2
7	---	---	---	---	---	---	6.4	6.1	6.2	7.0	5.9	6.3
8	---	---	---	---	---	---	6.4	6.0	6.2	7.0	6.0	6.3
9	---	---	---	---	---	---	6.9	5.9	6.3	7.7	6.1	6.7
10	---	---	---	---	---	---	7.1	6.2	6.6	7.9	6.2	7.0
11	---	---	---	---	---	---	7.2	5.9	6.5	7.9	6.3	7.1
12	---	---	---	---	---	---	7.2	5.7	6.4	7.8	6.2	6.9
13	---	---	---	---	---	---	6.9	5.6	6.3	7.5	5.6	6.2
14	---	---	---	6.8	6.4	6.7	6.9	5.5	6.2	7.2	6.1	6.6
15	---	---	---	6.8	6.3	6.6	6.7	5.6	6.2	7.7	6.8	7.4
16	---	---	---	6.8	6.5	6.7	6.5	5.5	6.0	7.5	6.9	7.2
17	---	---	---	6.6	6.0	6.3	6.5	5.4	5.9	7.5	6.7	7.1
18	---	---	---	6.1	5.8	5.9	6.6	5.5	6.0	7.7	6.7	7.1
19	---	---	---	5.8	5.6	5.7	6.6	5.5	6.0	7.4	6.4	6.9
20	---	---	---	5.7	5.5	5.6	6.6	5.5	6.0	7.1	5.5	5.9
21	9.3	8.6	8.8	5.9	5.5	5.6	6.6	5.5	6.0	5.9	5.3	5.6
22	8.8	8.1	8.4	6.0	5.4	5.7	6.6	5.4	5.9	6.4	5.8	6.1
23	8.6	8.3	8.4	5.9	5.2	5.6	6.5	5.4	5.8	6.1	4.9	5.5
24	8.4	8.1	8.3	6.1	5.2	5.6	7.0	5.6	6.1	6.7	5.2	5.7
25	---	---	---	6.1	5.3	5.6	7.5	6.1	6.7	---	---	---
26	---	---	---	6.3	5.3	5.8	7.5	6.4	6.7	---	---	---
27	---	---	---	6.0	5.3	5.7	7.1	5.6	6.3	---	---	---
28	---	---	---	6.0	5.2	5.6	7.0	5.6	6.2	---	---	---
29	---	---	---	6.0	5.2	5.7	6.7	5.5	6.2	---	---	---
30	---	---	---	6.0	5.2	5.6	6.7	5.4	5.9	---	---	---
31	---	---	---	6.2	5.2	5.7	6.0	3.9	4.5	---	---	---
MONTH	---	---	---	---	---	---	7.5	3.9	6.1	---	---	---

07177650 FLAT ROCK CREEK AT CINCINNATI AVENUE AT TULSA, OK.

LOCATION.--Lat 36°12'55", long 95°59'42", in SE 1/4 NE 1/4 sec.14, T.20 N., R.12 E., Tulsa County, Hydrologic Unit 11070107, near right upstream abutment of Cincinnati Avenue bridge, 0.5 mi north of Cincinnati Avenue-36th Street North intersection, 2.0 mi south of Turley, and at mile 5.6.

DRAINAGE AREA.--8.2 mi^2.

PERIOD OF RECORD.--December 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 615.56 ft above sea level.

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Ggae Height (ft)
May 8	2030	2,840	11.52	June 9	1900	1,080	8.39

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	6.6	1.5	2.9	3.9	11	6.8	3.3	.54	.53	.00	e1.6
2	.12	.87	1.4	3.6	3.8	15	5.4	3.4	.55	.27	.00	e5.0
3	.14	.39	1.2	5.2	3.5	10	5.0	5.2	1.0	.23	.00	e12
4	.14	.23	1.1	8.1	3.5	8.4	51	3.3	.67	.24	.00	e.10
5	.10	.17	1.6	5.4	5.8	7.6	20	2.3	.42	.25	1.3	e.00
6	.03	.16	2.0	4.3	5.4	6.8	9.7	45	.29	.44	.25	e.00
7	.11	.13	2.0	3.9	4.7	6.3	6.8	7.0	.22	.38	.12	e.00
8	.07	.14	106	3.6	4.0	5.8	6.5	400	.48	.30	.05	e40
9	.05	.09	22	35	3.9	5.7	5.3	253	92	.27	.04	e1.0
10	.01	.07	8.2	17	4.1	5.0	4.3	18	14	.26	.03	e.02
11	.01	38	7.4	11	5.8	4.7	3.3	38	4.8	.31	.02	e.00
12	.03	12	5.7	13	9.1	4.5	3.0	23	2.5	.32	.01	e.00
13	.01	2.6	64	7.7	6.2	4.1	2.9	11	1.6	.27	.00	e20
14	.00	1.5	161	6.4	5.0	3.9	54	5.8	1.1	1.1	.00	e80
15	.00	.95	23	6.3	14	4.1	31	4.5	.96	.31	.00	e7.0
16	.00	.62	13	6.7	18	4.7	9.0	3.0	.80	.19	.00	e.30
17	.00	.50	8.5	5.7	12	4.2	77	2.6	.62	.13	e.00	e.20
18	.03	.46	6.7	9.5	9.1	6.7	14	20	.58	.46	e.00	e.15
19	.05	2.4	5.7	9.1	17	12	7.6	5.3	.61	.41	e.00	e23
20	.05	5.9	4.9	70	59	8.6	4.5	3.1	1.7	.95	e.00	e1.0
21	.03	5.3	4.4	22	27	7.1	3.1	2.3	.89	.08	e.00	e.20
22	.04	73	3.8	12	12	62	2.6	1.9	.66	.02	e.00	e.13
23	.08	13	3.4	9.9	9.1	12	2.4	1.8	.83	.03	e1.0	e.09
24	.15	45	2.8	7.4	21	7.3	15	1.4	.86	.06	e.10	e.08
25	e.10	20	8.3	6.1	100	5.4	12	1.2	.60	.06	e.00	e4.0
26	e.07	5.0	5.9	5.8	18	4.2	4.5	1.1	.45	.03	e.00	e.13
27	e.06	3.5	4.9	5.4	12	3.6	3.0	1.0	.40	.00	e.00	e.10
28	e.08	2.5	4.3	5.4	9.9	3.6	2.4	1.0	.36	.00	e.00	e.09
29	.89	2.1	4.3	4.5	---	3.9	7.6	.98	.30	.00	e.00	e.08
30	.23	1.7	4.3	3.9	---	30	4.9	.85	.93	.00	e7.0	e.07
31	1.0	---	3.6	3.9	---	10	---	.76	---	.00	e12	---
TOTAL	3.80	244.88	496.9	320.7	406.8	288.2	384.6	871.09	131.72	7.90	21.92	196.34
MEAN	.12	8.16	16.0	10.3	14.5	9.30	12.8	28.1	4.39	.25	.71	6.54
MAX	1.0	73	161	70	100	62	77	400	92	1.1	12	80
MIN	.00	.07	1.1	2.9	3.5	3.6	2.4	.76	.22	.00	.00	.00
AC-FT	7.5	486	986	636	807	572	763	1730	261	16	43	389
CFSM	.01	1.00	1.95	1.26	1.77	1.13	1.56	3.43	.54	.03	.09	.80
IN.	.02	1.11	2.25	1.45	1.85	1.31	1.74	3.95	.60	.04	.10	.89

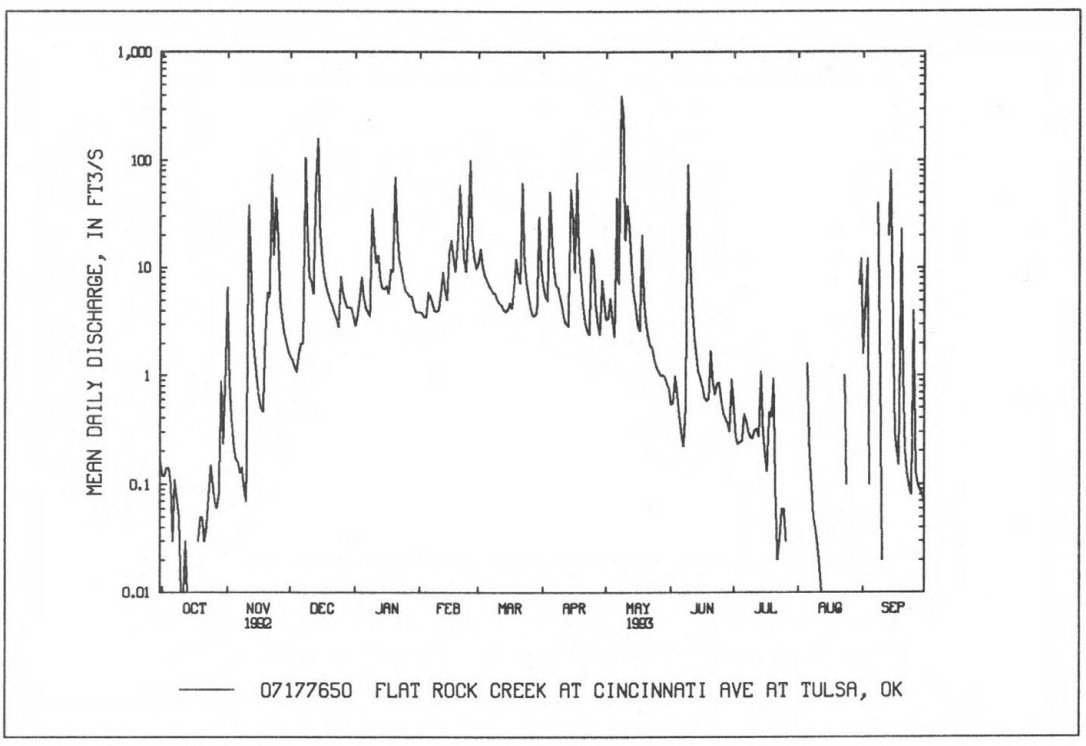
e Estimated

07177650 FLAT ROCK CREEK AT CINCINNATI AVENUE AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.45	3.60	5.95	4.50	7.22	12.2	7.08	11.1	7.01	1.28	2.99	1.55
MAX	1.13	8.16	16.0	10.3	14.5	34.4	15.9	28.1	24.0	5.08	13.6	6.54
(WY)	1992	1993	1993	1993	1993	1990	1990	1993	1992	1989	1989	1993
MIN	.12	.11	.64	1.38	.30	.37	1.15	.82	.80	.044	.031	.051
(WY)	1993	1990	1991	1990	1991	1991	1989	1989	1990	1991	1990	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1989-93	
ANNUAL TOTAL	1958.68		3374.85			
ANNUAL MEAN	5.35		9.25		5.40	
HIGHEST ANNUAL MEAN					9.25	1993
LOWEST ANNUAL MEAN					.81	1991
HIGHEST DAILY MEAN	189	Jun 29	400	May 8	400	May 8 1993
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 15	.00	Jul 27	.00	Oct 14 1988
INSTANTANEOUS PEAK FLOW			2840	May 8	2840	May 8 1993
INSTANTANEOUS PEAK STAGE			11.52	May 8	11.52	May 8 1993
ANNUAL RUNOFF (AC-FT)	3890		6690		3910	
ANNUAL RUNOFF (CFSM)	.65		1.13		.66	
ANNUAL RUNOFF (INCHES)	8.89		15.31		8.95	
10 PERCENT EXCEEDS	8.6		18		8.8	
50 PERCENT EXCEEDS	1.1		2.8		.55	
90 PERCENT EXCEEDS	.00		.01		.00	



07177800 COAL CREEK AT TULSA, OK

LOCATION.--Lat 36°11'40", long 95°54'50", in SE 1/4 SW 1/4 sec.22, T.20 N., R.13 E., Tulsa County, Hydrologic Unit 11070107, near right downstream abutment of bridge on State Highway 11, .2 mile Northwest of intersection of SH 11 and Apache Street in Tulsa, and at mile 4.1.

DRAINAGE AREA.--7.53 mi^2.

PERIOD OF RECORD.--January 29, 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 596.84 ft above sea level.

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 1	0045	1,280	10.71	May 8	2045	1,440	11.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	76	1.2	5.1	1.8	11	4.0	2.1	e1.2	.07	.00	.05
2	.31	.79	e1.0	4.9	1.3	8.6	3.4	25	e1.1	.06	.00	12
3	.32	.26	e.90	6.4	1.2	5.4	3.7	5.8	e6.0	.04	.44	12
4	.35	.18	e.80	6.6	4.4	4.9	47	3.6	2.7	.06	.12	.05
5	.36	.16	e3.0	e3.2	4.5	e4.0	12	2.5	1.6	.10	29	.00
6	.34	.14	e4.0	e2.4	1.5	e3.4	6.4	15	1.1	3.4	.74	.00
7	4.7	.12	e2.5	e2.0	1.3	e3.0	4.8	1.7	1.5	.16	.05	.00
8	.95	.10	e2.0	e1.7	1.3	e2.7	3.9	199	33	.18	.02	22
9	.24	.10	104	53	3.3	e2.5	3.4	179	44	.03	.03	.11
10	.29	2.0	16	10	8.5	e2.4	3.0	46	6.2	.40	.03	.02
11	.25	88	7.8	11	4.6	e2.2	2.4	62	3.7	.03	.02	.00
12	.28	11	5.7	8.4	4.4	e2.1	2.3	39	2.9	.09	.01	.00
13	.31	2.3	80	5.4	1.6	e1.9	3.7	21	e2.2	.06	.00	74
14	.33	.72	242	5.9	1.4	e1.8	53	13	e1.8	35	.00	61
15	.35	.38	44	5.2	27	e2.3	22	10	e1.2	1.3	.00	1.4
16	.36	.26	21	4.8	17	e2.1	8.6	7.3	e.90	.08	.54	.21
17	.39	.25	12	5.3	5.2	e2.0	61	15	e.70	.05	.03	.13
18	.46	1.6	9.1	14	4.4	e7.0	17	35	e.60	7.1	.00	.10
19	.51	23	7.5	26	13	10	10	7.5	17	5.4	.00	33
20	.60	23	5.6	51	23	5.1	6.3	e4.5	3.1	.35	.00	5.3
21	.37	19	5.3	15	20	4.6	e4.5	e4.1	.26	.10	.06	.23
22	.42	88	4.9	11	6.9	77	e3.7	e3.8	1.5	.06	.03	.16
23	.57	27	4.4	7.1	5.0	14	e3.2	e3.4	1.6	.06	1.1	.12
24	.68	44	3.9	5.5	36	8.2	17	e2.6	.56	.02	.10	.12
25	.69	28	15	5.1	55	6.3	4.8	e2.1	.22	.04	.00	13
26	.35	8.0	4.6	4.8	15	5.3	2.2	e2.0	.14	.01	.00	.17
27	.33	4.7	4.3	4.4	8.9	4.5	3.4	e1.9	.13	.00	.00	.12
28	.37	3.5	4.1	4.1	6.7	3.6	9.2	e1.7	.26	.00	.00	.14
29	14	2.6	4.8	3.4	---	3.0	27	e1.6	.14	.00	.00	.10
30	.44	1.5	4.1	2.7	---	38	4.1	e1.5	.09	.00	10	.09
31	4.1	---	3.4	2.2	---	5.1	---	e1.4	---	.00	5.6	---
TOTAL	34.31	456.66	628.90	297.6	284.2	254.0	357.0	720.1	137.40	54.25	47.92	235.62
MEAN	1.11	15.2	20.3	9.60	10.1	8.19	11.9	23.2	4.58	1.75	1.55	7.85
MAX	14	88	242	53	55	77	61	199	44	35	29	74
MIN	.24	.10	.80	1.7	1.2	1.8	2.2	1.4	.09	.00	.00	.00
AC-FT	68	906	1250	590	564	504	708	1430	273	108	95	467
CFSM	.15	2.02	2.69	1.27	1.35	1.09	1.58	3.08	.61	.23	.21	1.04
IN.	.17	2.26	3.11	1.47	1.40	1.25	1.76	3.56	.68	.27	.24	1.16

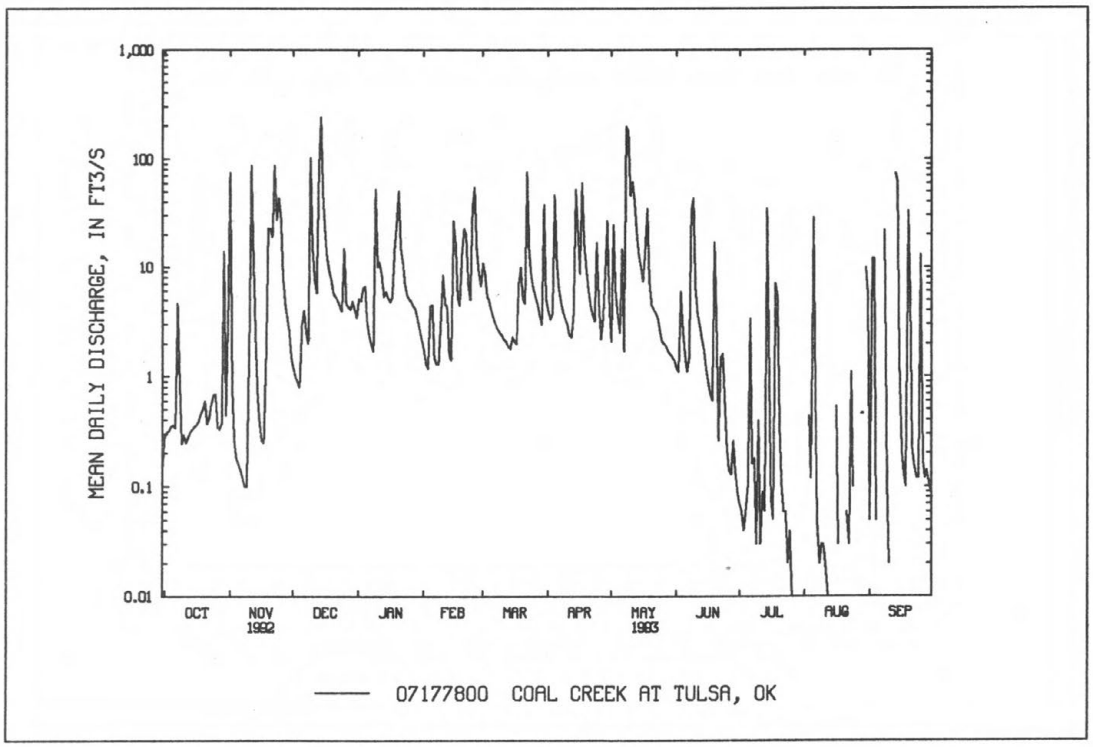
e Estimated

07177800 COAL CREEK AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.06	7.83	9.95	6.91	7.03	11.3	9.28	13.5	7.91	2.77	5.13	6.01
MAX	8.17	15.2	20.3	9.60	12.2	33.2	16.8	23.2	14.0	8.11	18.7	7.85
(WY)	1992	1993	1993	1993	1990	1990	1990	1993	1992	1989	1989	1993
MIN	1.11	2.24	3.93	2.24	2.64	1.71	1.62	6.69	2.20	.29	.75	1.91
(WY)	1993	1990	1991	1992	1991	1992	1989	1989	1990	1991	1991	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1989-93	
ANNUAL TOTAL	2617.24		3507.96			
ANNUAL MEAN	7.15		9.61		7.73	
HIGHEST ANNUAL MEAN					9.81	1990
LOWEST ANNUAL MEAN					4.30	1991
HIGHEST DAILY MEAN	242	Dec 14	242	Dec 14	508	Aug 20 1989
LOWEST DAILY MEAN	.10	Nov 8	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.15	Nov 3	.00	Jul 27	.00	Jul 30 1991
INSTANTANEOUS PEAK FLOW			1440	May 8	2930	Aug 20 1989
INSTANTANEOUS PEAK STAGE			11.01	May 8	13.11	Aug 20 1989
ANNUAL RUNOFF (AC-FT)	5190		6960		5600	
ANNUAL RUNOFF (CFSM)	.95		1.28		1.03	
ANNUAL RUNOFF (INCHES)	12.93		17.33		13.95	
10 PERCENT EXCEEDS	16		24		16	
50 PERCENT EXCEEDS	1.1		2.6		1.7	
90 PERCENT EXCEEDS	.27		.04		.26	



07178000 BIRD CREEK NEAR OWASSO, OK

LOCATION.--Lat 36°14'54", long 95°52'01" (revised), in NW 1/4 NW 1/4 sec.6, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at bridge on Mingo Road 1.4 mi upstream from Mingo Creek, 1.5 mi downstream from Coal Creek, 2 mi southwest of Owasso, and at mile 14.1.
DRAINAGE AREA.--1022 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1935 to March 1939, April 1987 to current year.
REVISED RECORDS.--WSP 1311: Drainage area.
GAGE.--Water-stage recorder. Datum of gage is 560.17 ft above sea level. Prior to Oct. 1, 1939, gage at same site and datum 1.14 ft lower.
REMARKS.--Records good. U.S. Geological Survey satellite telemeter at station.
EXTREMES OUTSIDE PERIOD OF RECORD.--Peak stages, 34.0 ft, Oct. 25, 1908; 28.5 ft, Apr. 15, 1927; 26.3 ft, Apr. 15, 1929; 26.2 ft, June 1935, from information provided by U.S. Army Corps of Engineers.
EXTREMES FOR CURRENT YEAR.--Peak discharges greater than a base discharge of 9,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	1700	14,100	20.52	May 11	0400	31,700	26.94

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	616	234	1090	218	1860	3190	869	3000	201	185	256
2	138	159	198	1210	208	1880	2450	1220	2080	217	184	144
3	148	91	171	1240	193	2120	1160	6160	1850	208	174	295
4	210	82	148	1400	191	1910	1740	3490	2090	199	169	246
5	226	72	134	1610	212	1090	4890	3060	2610	200	283	226
6	197	66	135	1340	283	573	3190	3290	2680	406	298	190
7	193	65	136	612	437	470	2540	3280	2620	268	226	185
8	202	69	131	1170	321	421	2500	3190	2770	189	154	382
9	193	76	2840	2620	476	388	2280	e14800	3130	203	141	252
10	193	90	3180	4540	523	355	1290	e21700	6010	198	275	174
11	194	365	1140	2810	536	323	1050	29600	3060	192	213	166
12	197	1620	600	2970	713	307	982	17900	3430	482	190	161
13	199	1130	1230	3200	966	275	732	6990	3340	2270	187	251
14	194	351	11000	3030	780	260	932	1930	3290	1510	193	1610
15	191	194	13300	2770	779	260	2670	1040	3410	1160	203	670
16	128	131	6820	2370	1090	267	1990	768	3380	808	197	266
17	74	96	1340	2270	1120	250	2890	610	3370	417	198	167
18	73	82	811	2290	884	311	5130	1730	3360	290	198	181
19	72	89	593	2260	835	1310	2460	3380	3440	280	196	190
20	72	863	459	5420	2000	1180	2350	1190	3590	205	193	907
21	73	1220	387	5410	4810	747	2370	697	3590	218	191	348
22	68	1730	328	e3900	3210	3080	2170	524	3430	210	191	315
23	64	3870	290	e2730	2370	3680	1240	456	3050	181	189	173
24	65	1830	256	e2230	2190	2690	519	559	2730	222	186	118
25	67	2150	288	e2000	5410	2230	2070	424	2190	238	183	920
26	64	2140	300	950	3850	1320	730	1650	817	235	178	3480
27	64	878	260	739	2430	567	1040	2020	436	198	171	742
28	62	524	236	526	1970	480	422	2010	404	171	157	318
29	140	371	312	457	---	444	608	2140	347	175	156	219
30	88	283	561	292	---	2320	1320	2140	197	177	170	195
31	73	---	565	235	---	3670	---	4170	---	178	925	---
TOTAL	4063	21303	48383	65691	39005	37038	58905	142987	79701	12106	6754	13747
MEAN	131	710	1561	2119	1393	1195	1963	4612	2657	391	218	458
MAX	226	3870	13300	5420	5410	3680	5130	29600	6010	2270	925	3480
MIN	62	65	131	235	191	250	422	424	197	171	141	118
AC-FT	8060	42250	95970	130300	77370	73460	116800	283600	158100	24010	13400	27270

e Estimated

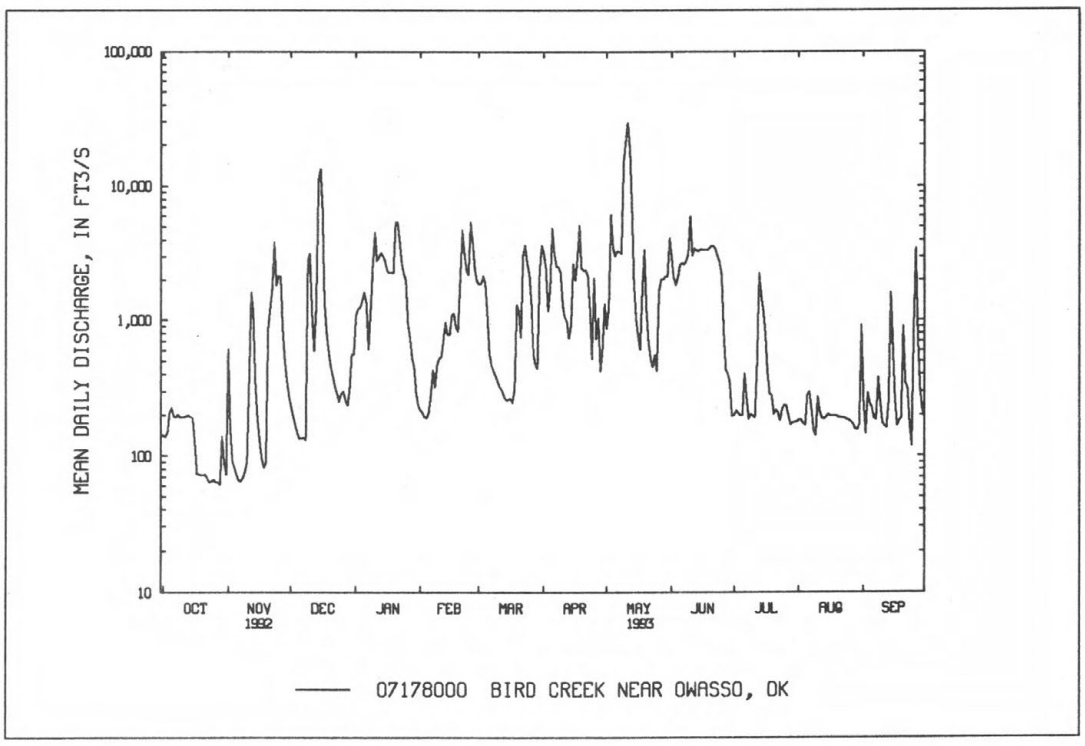
07178000 BIRD CREEK NEAR OWASSO, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	211	380	784	728	786	1840	1418	2010	1855	331	207	272
MAX	307	710	1561	2119	1393	5861	2662	4612	2918	562	242	458
(WY)	1990	1993	1993	1993	1993	1990	1990	1993	1992	1992	1992	1993
MIN	131	151	85.7	199	94.5	91.9	522	349	537	181	176	165
(WY)	1993	1991	1990	1991	1991	1991	1992	1992	1990	1991	1991	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1990-93	
ANNUAL TOTAL	256075		529683			
ANNUAL MEAN	700		1451		902	
HIGHEST ANNUAL MEAN					1451	1993
LOWEST ANNUAL MEAN					306	1991
HIGHEST DAILY MEAN	13300	Dec 15	29600	May 11	29600	May 11 1993
LOWEST DAILY MEAN	62	Oct 28	62	Oct 28	[a]61	Oct 19 1990
ANNUAL SEVEN-DAY MINIMUM	65	Oct 22	65	Oct 22	65	Oct 22 1992
INSTANTANEOUS PEAK FLOW			31700	May 11	31700	May 11 1993
INSTANTANEOUS PEAK STAGE			26.94	May 11	26.94	May 11 1993
ANNUAL RUNOFF (AC-FT)	507900		1051000		653300	
10 PERCENT EXCEEDS	1840		3310		2620	
50 PERCENT EXCEEDS	227		523		209	
90 PERCENT EXCEEDS	131		143		90	

[a]Minimim daily discharge for period of record, 2.0 ft^3/s, July 31, Aug. 1, 13-16, 1936, and July 5, 1937.



07178000 BIRD CREEK NEAR OWASSO, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--May 1987 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1987 to current year.
pH: May 1987 to current year.
WATER TEMPERATURE: May 1987 to current year.
DISSOLVED OXYGEN: May 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1987.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,850 microsiemens, Nov. 3, 1992; minimum, 48 microsiemens, July 18, 1989.
pH: Maximum, 8.9 units, May 17, 1988; minimum, 5.5 units June 14, 15, 1987.
WATER TEMPERATURE: Maximum, 35.0°C, Aug. 2, 3, 1987; minimum, 0.0°C, several days during winter periods.
DISSOLVED OXYGEN: Maximum, 16.3 mg/l, Jan. 17, 1988; minimum, 1.3 mg/l Aug. 14, 1987.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,850 microsiemens, Nov. 3; minimum, 114 microsiemens, Dec. 15.
pH: Maximum, 8.4 units, Feb. 8, 9, 14, 15; minimum, 6.9 units, July 13.
WATER TEMPERATURE: Maximum, 32.0°C on several days; minimum, 3.0°C, Feb. 18, 19.
DISSOLVED OXYGEN: Maximum, 15.6 mg/l, Feb. 23; minimum, 2.6 mg/l, Sept. 25.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	424	396	403	472	166	347	332	320	324	420	302	332
2	402	382	393	547	478	506	334	330	333	320	306	313
3	398	384	392	1850	509	1210	352	336	344	320	312	318
4	398	384	393	1700	715	1120	368	354	360	350	320	337
5	382	336	356	707	657	688	392	368	381	350	324	333
6	350	328	334	653	527	583	404	392	398	358	352	356
7	342	324	330	527	509	515	426	400	412	404	360	383
8	340	328	333	511	503	506	515	430	480	416	324	357
9	354	336	344	503	478	495	641	192	388	366	300	328
10	352	338	344	464	424	433	256	218	238	376	286	325
11	346	336	340	456	372	424	272	246	257	294	270	281
12	346	332	339	877	248	460	350	276	311	316	292	304
13	332	324	329	448	314	363	460	314	373	292	272	281
14	332	326	328	364	340	349	286	116	192	288	274	282
15	350	322	332	388	360	376	144	114	128	298	288	292
16	374	324	339	398	388	392	198	134	166	302	300	301
17	378	324	342	424	398	407	244	200	223	302	298	300
18	340	324	329	420	410	415	278	244	261	312	298	307
19	356	314	329	430	420	424	310	278	294	308	300	305
20	338	320	328	965	302	455	348	312	329	382	214	278
21	382	334	350	442	316	361	372	346	356	256	214	228
22	408	366	378	454	274	402	380	370	375	278	254	265
23	484	394	419	308	228	270	398	380	388	316	276	300
24	486	448	465	272	224	234	420	398	408	306	292	299
25	484	436	455	298	214	245	430	412	418	298	290	293
26	478	436	448	274	224	252	515	450	474	322	300	311
27	464	438	448	320	276	302	569	501	532	330	318	326
28	460	430	452	320	308	312	517	464	490	358	330	341
29	460	414	435	318	310	314	494	474	484	368	354	362
30	434	426	431	320	316	319	486	422	454	384	368	373
31	466	330	429	---	---	---	448	344	420	426	384	403
MONTH	486	314	376	1850	166	449	641	114	355	426	214	317

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	444	430	440	314	296	302	298	272	280	384	376	380
2	470	446	463	350	314	335	274	266	270	376	320	366
3	486	470	478	350	326	335	304	278	290	306	172	226
4	515	486	496	336	330	335	372	278	323	264	246	258
5	523	517	519	366	338	357	252	214	235	278	264	272
6	587	525	568	402	356	376	270	226	260	334	276	290
7	569	492	532	434	404	419	282	268	275	284	274	280
8	490	484	486	446	420	430	286	280	283	306	208	285
9	555	492	515	460	446	454	292	284	287	198	120	144
10	486	416	428	494	460	470	306	294	302	130	118	122
11	448	418	434	494	486	489	314	306	310	188	124	142
12	492	440	462	484	480	482	322	314	317	202	182	191
13	496	444	471	484	480	482	346	320	333	260	190	223
14	460	438	449	515	482	500	531	344	379	314	264	290
15	474	444	454	529	513	521	472	274	312	352	314	331
16	525	456	493	537	519	526	310	286	301	390	354	372
17	484	400	440	561	543	551	344	222	300	420	392	406
18	398	386	392	563	545	553	266	202	240	511	344	424
19	422	388	402	717	412	534	318	258	297	328	270	307
20	501	360	420	424	404	412	304	292	300	320	284	298
21	338	224	256	450	404	423	290	284	287	370	320	351
22	280	224	265	454	218	380	294	286	289	400	370	387
23	276	258	268	300	220	263	314	294	304	420	398	415
24	284	272	276	294	286	290	356	310	328	468	420	438
25	356	218	264	310	296	302	414	212	303	478	450	468
26	268	224	237	328	312	321	314	278	294	501	310	376
27	286	264	274	396	326	363	314	298	305	318	316	316
28	296	284	289	418	396	410	374	314	341	316	312	314
29	---	---	---	436	418	429	444	376	403	308	296	301
30	---	---	---	476	270	376	418	364	387	292	282	289
31	---	---	---	318	260	291	---	---	---	362	264	304
MONTH	587	218	410	717	218	410	531	202	304	511	118	309

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	286	274	281	471	388	413	402	398	401	224	206	216
2	288	278	284	495	450	467	400	386	394	308	228	261
3	300	286	292	460	419	439	388	384	386	374	302	335
4	306	278	295	423	416	420	388	384	386	346	300	326
5	292	274	284	425	419	421	390	372	384	346	322	330
6	288	268	276	420	370	409	390	262	336	394	348	372
7	270	268	269	432	370	404	454	378	410	364	346	355
8	278	266	272	406	304	345	402	382	397	348	216	311
9	308	260	274	412	343	361	386	378	382	416	252	346
10	312	194	228	425	379	397	448	386	414	464	318	373
11	262	238	258	446	411	427	408	334	373	340	320	329
12	272	262	267	587	415	432	348	330	336	340	334	338
13	274	270	271	535	200	328	382	350	369	336	280	322
14	272	266	270	308	165	194	386	380	382	386	164	258
15	270	254	264	297	205	255	390	384	387	290	240	252
16	272	254	265	245	234	238	392	366	378	310	288	297
17	270	264	268	265	236	247	368	364	367	328	306	316
18	270	252	264	299	267	284	386	366	370	340	320	328
19	272	254	265	372	297	315	380	368	373	364	340	352
20	270	256	265	372	336	347	392	368	379	400	178	282
21	280	258	270	390	354	376	390	368	379	304	182	225
22	278	272	275	406	378	385	384	364	375	406	306	347
23	276	264	269	410	394	402	386	356	373	436	346	385
24	320	266	280	416	396	407	382	362	369	438	372	413
25	370	262	282	414	374	401	388	362	367	398	236	363
26	288	282	286	372	362	365	374	362	365	262	144	189
27	344	288	315	372	364	367	386	360	365	214	198	203
28	358	346	354	380	364	374	362	358	360	234	214	224
29	382	350	364	398	378	387	358	356	358	242	236	240
30	384	378	380	408	400	404	358	350	357	284	244	261
31	---	---	---	406	402	404	719	202	316	---	---	---
MONTH	384	194	283	587	165	368	719	202	374	464	144	305
YEAR	1850	114	355									

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.8	7.6	7.7	8.0	7.6	7.8	8.1	8.0	8.1	7.9	7.6	7.8
2	7.8	7.6	7.7	7.7	7.5	7.6	8.1	8.0	8.1	7.9	7.8	7.9
3	7.9	7.7	7.8	7.6	7.4	7.5	8.1	8.0	8.0	8.0	7.9	8.0
4	7.9	7.8	7.8	7.5	7.4	7.5	8.1	8.0	8.0	8.1	7.8	8.0
5	7.9	7.7	7.8	7.7	7.4	7.5	8.0	8.0	8.0	---	---	---
6	7.9	7.7	7.7	7.8	7.7	7.7	8.1	8.0	8.0	---	---	---
7	7.8	7.7	7.7	7.8	7.7	7.8	8.0	8.0	8.0	---	---	---
8	7.8	7.7	7.7	7.8	7.7	7.8	8.0	8.0	8.0	---	---	---
9	7.8	7.6	7.7	7.9	7.8	7.8	8.1	7.8	8.0	8.1	7.8	8.0
10	7.9	7.6	7.7	7.9	7.8	7.8	8.1	7.8	8.0	8.1	7.8	8.0
11	7.9	7.7	7.8	7.9	7.7	7.9	8.1	8.0	8.0	8.0	7.9	7.9
12	7.9	7.4	7.8	7.9	7.4	7.6	8.1	8.0	8.1	8.0	8.0	8.0
13	---	---	---	7.6	7.4	7.5	8.1	8.0	8.1	8.0	8.0	8.0
14	---	---	---	7.6	7.6	7.6	8.0	7.5	7.8	8.1	8.0	8.0
15	8.0	7.8	7.9	7.7	7.6	7.7	7.7	7.5	7.6	8.1	8.0	8.0
16	7.9	7.8	7.8	7.7	7.6	7.7	7.8	7.5	7.6	8.1	8.0	8.0
17	7.9	7.8	7.8	7.6	7.5	7.6	7.9	7.8	7.9	8.1	8.0	8.1
18	7.9	7.7	7.8	7.5	7.5	7.5	7.9	7.9	7.9	8.1	8.1	8.1
19	7.9	7.8	7.8	7.6	7.5	7.6	7.9	7.9	7.9	8.1	8.1	8.1
20	8.0	7.8	7.8	7.7	7.5	7.6	7.9	7.9	7.9	8.1	7.8	7.9
21	7.9	7.7	7.8	7.9	7.5	7.6	8.1	7.9	7.9	8.1	7.8	7.9
22	7.9	7.7	7.8	7.9	7.6	7.8	8.1	8.1	8.1	8.2	8.1	8.1
23	7.8	7.7	7.7	7.9	7.6	7.8	8.1	8.1	8.1	8.3	8.2	8.3
24	7.7	7.6	7.7	8.0	7.9	8.0	8.2	8.1	8.1	8.3	8.3	8.3
25	7.6	7.4	7.6	8.1	7.9	8.0	8.2	8.1	8.2	8.3	8.2	8.3
26	---	---	---	8.2	8.0	8.1	8.2	8.2	8.2	8.2	8.1	8.2
27	---	---	---	8.3	8.2	8.2	8.2	8.1	8.2	8.2	8.1	8.2
28	---	---	---	8.2	8.2	8.2	8.1	8.1	8.1	8.1	8.1	8.1
29	7.7	7.7	7.7	8.2	8.2	8.2	8.1	8.1	8.1	8.1	8.0	8.0
30	7.8	7.7	7.7	8.2	8.1	8.1	8.2	8.1	8.1	8.1	7.9	8.0
31	7.7	7.5	7.7	---	---	---	8.1	7.9	8.0	8.0	7.8	7.9
MAX	---	---	---	8.3	8.2	8.2	8.2	8.2	8.2	---	---	---
MIN	---	---	---	7.5	7.4	7.5	7.7	7.5	7.6	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	FEBRUARY MAX	FEBRUARY MIN	FEBRUARY MEDIAN	MARCH MAX	MARCH MIN	MARCH MEDIAN	APRIL MAX	APRIL MIN	APRIL MEDIAN	MAY MAX	MAY MIN	MAY MEDIAN
1	7.9	7.7	7.8	7.9	7.9	7.9	8.0	7.8	7.9	---	---	---
2	7.9	7.7	7.8	7.9	7.8	7.8	8.1	8.0	8.1	---	---	---
3	8.0	7.8	7.9	7.9	7.8	7.9	8.1	8.1	8.1	---	---	---
4	8.2	8.0	8.1	7.9	7.8	7.9	8.1	7.9	8.1	---	---	---
5	8.2	8.1	8.2	8.0	7.8	7.9	8.0	7.9	8.0	---	---	---
6	8.1	7.7	7.9	8.0	8.0	8.0	8.1	7.8	8.0	7.9	7.8	7.8
7	7.9	7.7	7.8	8.1	7.9	8.0	7.7	7.6	7.6	7.8	7.8	7.8
8	8.4	7.8	7.9	7.9	7.8	7.9	---	---	---	7.9	7.7	7.8
9	8.4	8.3	8.3	7.9	7.8	7.9	---	---	---	7.7	7.2	7.4
10	8.3	8.2	8.2	8.0	7.8	7.9	---	---	---	7.4	7.2	7.3
11	8.3	8.2	8.2	8.1	7.9	8.0	---	---	---	7.4	7.4	7.4
12	8.3	8.2	8.3	8.2	7.8	8.0	---	---	---	7.5	7.4	7.5
13	8.3	8.3	8.3	7.9	7.6	7.7	8.0	8.0	8.0	7.5	7.4	7.4
14	8.4	8.3	8.4	7.8	7.6	7.8	8.0	7.9	8.0	7.6	7.5	7.6
15	8.4	8.3	8.4	7.8	7.6	7.7	7.9	7.8	7.8	7.6	7.6	7.6
16	8.3	8.2	8.3	---	---	---	7.8	7.2	7.6	7.6	7.6	7.6
17	8.3	8.2	8.3	---	---	---	8.0	7.2	7.9	7.6	7.6	7.6
18	8.3	8.2	8.3	---	---	---	7.7	7.5	7.6	7.6	7.5	7.6
19	8.3	8.2	8.3	7.9	7.8	7.9	7.8	7.6	7.8	7.7	7.5	7.6
20	8.3	8.1	8.2	7.9	7.8	7.9	7.9	7.8	7.9	7.6	7.4	7.5
21	---	---	---	8.0	7.9	8.0	7.9	7.7	7.7	7.5	7.4	7.5
22	---	---	---	---	---	---	7.7	7.7	7.7	7.5	7.5	7.5
23	---	---	---	7.7	7.3	7.5	---	---	---	7.5	7.5	7.5
24	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
25	8.2	8.0	8.0	---	---	---	---	---	---	7.6	7.5	7.6
26	8.0	7.9	7.9	---	---	---	---	---	---	7.6	7.4	7.5
27	8.0	8.0	8.0	---	---	---	---	---	---	7.6	7.5	7.6
28	8.0	7.9	7.9	---	---	---	---	---	---	7.6	7.5	7.6
29	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
30	---	---	---	---	---	---	---	---	---	7.6	7.5	7.5
31	---	---	---	---	---	---	---	---	---	7.6	7.3	7.5
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.6	7.5	7.5	7.3	7.2	7.2	7.5	7.3	7.4	7.1	7.1	7.1
2	7.5	7.5	7.5	7.3	7.2	7.2	7.5	7.4	7.4	7.3	7.1	7.2
3	7.6	7.5	7.5	7.4	7.2	7.3	7.5	7.4	7.5	7.5	7.3	7.4
4	7.5	7.5	7.5	7.3	7.2	7.3	7.6	7.4	7.5	7.4	7.3	7.4
5	7.5	7.5	7.5	7.3	7.2	7.2	7.5	7.4	7.5	7.4	7.2	7.3
6	7.5	7.4	7.4	7.2	7.2	7.2	7.5	7.3	7.4	7.5	7.3	7.4
7	7.4	7.4	7.4	7.4	7.2	7.3	7.5	7.4	7.5	7.6	7.4	7.5
8	7.5	7.4	7.4	7.3	7.0	7.1	7.5	7.5	7.5	7.5	7.3	7.5
9	7.5	7.4	7.4	7.1	7.1	7.1	7.5	7.4	7.5	7.4	7.3	7.4
10	7.4	7.2	7.2	7.2	7.1	7.2	7.5	7.4	7.4	7.4	7.2	7.3
11	7.4	7.3	7.4	7.3	7.2	7.2	7.5	7.5	7.5	7.5	7.3	7.4
12	7.4	7.4	7.4	7.4	7.2	7.3	7.5	7.4	7.5	7.5	7.4	7.5
13	7.4	7.3	7.3	7.4	6.9	7.2	7.6	7.4	7.5	7.5	7.4	7.4
14	7.3	7.3	7.3	7.2	7.0	7.1	7.6	7.4	7.5	7.5	7.3	7.5
15	7.3	7.3	7.3	7.4	7.2	7.4	7.7	7.4	7.5	7.4	7.3	7.4
16	7.3	7.2	7.2	7.4	7.3	7.3	7.6	7.4	7.5	7.5	7.4	7.5
17	7.2	7.1	7.2	---	---	---	7.5	7.4	7.4	7.6	7.5	7.5
18	7.2	7.2	7.2	---	---	---	7.5	7.4	7.4	7.5	7.5	7.5
19	7.3	7.2	7.2	---	---	---	7.6	7.4	7.4	7.6	7.5	7.6
20	7.2	7.2	7.2	7.3	7.2	7.3	7.5	7.4	7.5	7.6	7.2	7.5
21	7.2	7.1	7.2	7.3	7.1	7.3	7.6	7.4	7.5	7.3	7.2	7.2
22	7.2	7.1	7.2	7.4	7.2	7.3	7.6	7.4	7.5	7.4	7.2	7.3
23	7.1	7.1	7.1	7.4	7.3	7.4	7.5	7.4	7.5	7.5	7.4	7.4
24	7.2	7.1	7.1	7.4	7.3	7.4	7.5	7.4	7.5	7.4	7.4	7.4
25	7.2	7.1	7.2	7.5	7.4	7.4	7.5	7.4	7.4	7.7	7.0	7.4
26	7.2	7.1	7.2	7.5	7.4	7.4	7.6	7.4	7.5	7.4	7.0	7.2
27	7.2	7.1	7.2	7.5	7.4	7.4	7.6	7.4	7.4	7.6	7.4	7.5
28	7.3	7.2	7.2	7.5	7.4	7.4	7.6	7.5	7.5	7.6	7.3	7.4
29	7.4	7.2	7.2	7.4	7.2	7.3	7.6	7.5	7.5	7.3	7.2	7.3
30	7.4	7.3	7.3	7.5	7.2	7.3	7.6	7.5	7.5	7.3	7.2	7.2
31	---	---	---	7.5	7.3	7.4	7.5	7.0	7.1	---	---	---
MAX	7.6	7.5	7.5	---	---	---	7.7	7.5	7.5	7.7	7.5	7.6
MIN	7.1	7.1	7.1	---	---	---	7.5	7.0	7.1	7.1	7.0	7.1

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.5	18.0	19.5	16.0	15.5	16.0	6.5	5.5	6.0	7.0	5.5	6.0
2	21.0	18.5	19.5	16.0	15.0	15.0	7.0	6.0	6.0	6.0	5.5	6.0
3	20.5	19.0	19.5	15.0	13.5	14.5	7.0	6.0	6.5	7.0	6.0	6.5
4	20.5	18.0	19.5	13.5	12.0	12.5	7.0	6.0	6.5	7.0	6.5	7.0
5	21.0	18.5	20.0	13.0	11.5	12.0	6.5	5.5	6.0	6.5	5.5	6.0
6	21.0	19.0	20.0	11.5	10.0	11.0	6.0	5.0	5.5	5.5	5.0	5.5
7	20.0	18.0	19.5	12.0	10.0	11.0	5.0	3.5	4.0	5.5	5.0	5.5
8	19.5	17.5	18.5	10.5	10.0	10.5	5.0	4.0	4.5	6.5	5.0	5.5
9	18.0	16.5	17.5	11.0	10.0	10.5	6.0	4.5	5.5	6.5	5.5	6.0
10	17.5	16.5	17.0	12.5	11.0	12.0	6.0	4.0	5.0	---	---	---
11	17.0	16.5	17.0	13.5	12.0	12.5	6.0	5.5	6.0	---	---	---
12	---	---	---	13.5	11.5	12.5	6.5	6.0	6.5	---	---	---
13	19.0	17.5	18.0	12.0	11.0	11.5	8.5	6.5	7.0	---	---	---
14	20.5	17.5	19.5	11.5	11.0	11.0	---	---	---	7.0	6.5	6.5
15	20.0	19.5	19.5	11.5	10.0	11.0	---	---	---	7.5	7.0	7.5
16	19.5	18.0	18.5	12.0	10.5	11.5	8.5	6.5	7.5	8.0	7.0	7.5
17	18.0	17.0	17.5	12.0	11.0	11.5	6.5	6.0	6.0	7.5	7.5	7.5
18	18.0	16.5	17.0	12.5	11.5	12.0	6.0	5.5	6.0	7.5	7.0	7.0
19	17.0	15.0	16.0	13.0	12.0	12.5	6.5	6.0	6.5	7.0	6.5	7.0
20	18.0	15.5	16.5	13.0	12.0	12.5	6.5	6.0	6.5	---	---	---
21	18.5	16.0	17.0	12.5	11.5	11.5	6.5	5.5	6.0	---	---	---
22	19.0	16.0	17.5	11.0	6.5	9.0	6.0	5.5	5.5	4.5	4.0	4.0
23	19.0	16.5	17.5	9.5	6.0	7.5	6.0	5.0	5.5	5.0	4.5	4.5
24	19.0	16.5	17.5	8.0	7.0	7.5	5.5	4.5	5.0	5.0	4.5	5.0
25	19.5	17.0	18.0	8.5	7.5	8.0	5.0	4.5	5.0	5.0	4.5	4.5
26	---	---	---	8.5	7.5	8.0	4.5	4.0	4.5	4.5	3.5	4.5
27	19.0	17.0	18.0	7.5	7.0	7.5	4.5	3.5	4.0	5.0	4.0	4.5
28	18.5	16.5	17.5	7.0	6.5	7.0	5.0	4.0	4.5	6.0	5.0	5.5
29	17.0	16.5	17.0	7.0	6.0	6.5	7.5	5.5	6.0	6.0	5.0	5.5
30	16.5	15.5	16.0	7.0	5.5	6.5	9.5	7.5	8.5	5.5	4.0	4.5
31	16.5	15.5	16.0	---	---	---	9.0	7.0	8.5	5.5	4.0	4.5
MONTH	---	---	---	16.0	5.5	10.7	---	---	---	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	6.0	4.5	5.0	6.5	6.0	6.0	11.5	9.5	10.5	18.0	16.5	17.5
2	6.5	4.5	5.5	6.5	6.5	6.5	9.5	9.0	9.5	18.5	17.0	18.0
3	6.5	5.5	6.0	6.5	6.5	6.5	10.0	9.5	10.0	18.5	16.5	17.0
4	7.0	6.5	6.5	6.5	6.5	6.5	10.0	9.0	9.5	16.5	15.5	16.0
5	7.5	7.0	7.0	6.5	6.0	6.5	9.0	8.5	9.0	16.5	15.0	15.5
6	8.5	7.0	7.5	7.5	6.0	6.5	9.5	8.5	9.0	16.5	15.0	15.5
7	8.5	7.0	7.5	8.5	7.0	7.5	10.0	9.5	10.0	17.0	15.5	16.5
8	9.0	6.5	8.0	11.0	8.0	9.5	10.0	10.0	10.0	16.5	15.0	16.0
9	9.0	8.5	9.0	11.5	10.0	11.0	11.0	9.5	10.0	17.0	16.5	17.0
10	9.0	8.5	9.0	---	---	---	12.5	11.0	11.5	16.5	16.0	16.0
11	9.0	9.0	9.0	---	---	---	13.0	12.5	13.0	16.0	15.5	15.5
12	9.0	8.0	8.5	9.5	9.0	9.5	13.0	12.5	13.0	16.0	15.0	16.0
13	8.0	6.5	7.5	9.5	8.0	8.5	13.5	12.5	13.0	18.0	16.0	17.0
14	7.5	5.5	6.5	9.0	7.5	8.0	13.0	12.0	13.0	19.0	16.0	18.0
15	7.0	4.0	6.0	8.0	7.5	8.0	12.0	10.5	11.0	20.5	18.5	19.5
16	4.5	3.5	4.0	9.5	8.0	8.5	12.0	10.5	11.0	21.5	20.5	21.0
17	4.0	3.5	4.0	---	---	---	12.0	11.5	12.0	22.0	21.0	21.5
18	3.5	3.0	3.0	---	---	---	13.0	12.0	12.5	21.5	20.0	21.0
19	4.5	3.0	3.5	6.5	5.5	6.0	15.0	13.0	14.5	---	---	---
20	5.0	4.0	4.5	6.5	5.5	6.0	14.5	12.5	13.5	20.5	19.0	20.0
21	6.5	5.0	5.5	7.5	6.5	7.0	13.5	12.5	13.0	20.0	18.5	19.0
22	7.0	5.5	6.5	---	---	---	13.5	12.0	13.0	19.0	18.5	19.0
23	6.5	5.5	6.0	---	---	---	14.0	13.5	14.0	19.5	18.5	19.0
24	6.0	6.0	6.0	---	---	---	16.0	14.0	15.0	21.0	19.0	20.0
25	5.0	4.0	4.5	---	---	---	18.0	16.0	17.0	22.5	20.5	21.5
26	5.5	5.0	5.0	---	---	---	19.0	17.5	18.5	22.0	15.5	18.5
27	6.0	5.0	5.5	---	---	---	19.0	15.5	16.5	16.0	15.0	15.5
28	6.0	6.0	6.0	---	---	---	17.0	16.0	16.5	17.0	15.5	16.5
29	---	---	---	---	---	---	18.5	17.0	18.0	17.0	16.0	16.5
30	---	---	---	---	---	---	18.5	16.5	17.5	17.0	16.0	16.5
31	---	---	---	---	---	---	---	---	---	20.5	16.5	19.0
MONTH	9.0	3.0	6.2	---	---	---	19.0	8.5	12.8	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.5	17.0	17.5	29.5	28.0	28.5	32.0	30.5	31.0	24.5	23.0	23.5
2	17.5	17.0	17.0	30.5	28.0	29.0	31.0	30.0	30.5	26.0	24.0	24.5
3	17.5	16.5	17.0	30.5	28.0	29.0	30.0	29.0	29.5	26.0	24.5	25.0
4	18.5	16.5	17.0	29.0	28.0	28.5	29.0	28.0	28.5	26.0	24.5	25.0
5	18.5	16.5	17.5	28.5	27.0	27.5	28.0	25.5	27.0	26.0	24.5	25.0
6	18.0	17.0	17.5	27.5	26.5	27.0	25.5	23.0	24.0	26.0	24.5	25.0
7	17.5	17.0	17.5	27.5	26.5	27.0	25.5	23.5	24.5	25.5	24.0	24.5
8	17.5	17.0	17.0	28.0	26.0	27.0	25.0	24.0	24.5	24.5	22.0	23.5
9	19.0	16.5	17.0	29.0	26.5	27.5	26.5	24.5	25.5	23.5	21.5	22.5
10	21.0	18.5	20.0	30.0	27.0	28.5	27.5	25.5	26.5	24.0	22.0	22.5
11	21.0	17.5	18.5	30.5	28.0	29.0	29.5	27.0	28.0	24.5	22.5	23.0
12	18.0	17.0	17.5	29.0	27.5	28.5	30.5	28.0	29.0	25.0	23.0	24.0
13	18.0	17.0	17.5	28.0	25.0	26.5	31.0	28.5	30.0	24.5	24.0	24.5
14	18.0	17.0	17.5	25.5	24.5	25.0	31.5	29.5	30.5	24.0	19.5	21.0
15	18.0	17.0	17.5	26.5	25.5	26.0	32.0	29.5	30.5	19.5	18.5	19.0
16	18.0	17.0	17.5	27.5	26.0	26.5	31.5	29.5	30.5	20.0	18.5	19.0
17	18.0	17.0	17.5	29.0	27.0	28.0	31.5	29.5	30.5	20.5	18.5	19.5
18	18.0	17.5	18.0	29.5	28.0	28.5	31.5	29.5	30.5	21.0	19.0	20.0
19	18.5	17.5	18.0	30.0	28.5	29.0	31.5	29.5	30.5	22.0	20.0	21.0
20	18.5	18.0	18.5	31.0	28.5	29.5	31.5	29.0	30.0	22.0	21.0	21.5
21	19.0	18.0	18.5	31.0	29.0	30.0	31.0	29.5	30.0	22.5	21.0	21.5
22	19.0	18.0	18.5	32.0	29.5	30.5	31.0	29.0	30.0	24.0	22.0	23.0
23	19.5	18.5	19.0	32.0	29.5	30.5	30.5	29.5	29.5	24.5	23.5	24.0
24	20.0	19.0	19.5	32.0	30.0	30.5	29.5	28.0	29.0	24.0	23.5	23.5
25	22.0	20.0	21.5	31.5	30.0	30.5	30.0	28.0	29.0	23.5	20.5	22.5
26	25.0	22.0	24.0	31.5	29.5	30.5	30.0	28.0	29.0	21.5	20.0	20.5
27	27.0	25.0	26.0	32.0	29.5	30.5	30.0	28.0	29.0	20.0	19.0	19.5
28	28.0	26.0	27.0	31.5	29.5	30.5	30.0	28.5	29.5	20.5	19.0	19.5
29	29.0	27.0	28.0	31.5	29.5	30.5	30.0	28.5	29.0	20.5	19.0	19.5
30	29.5	27.5	28.5	32.0	30.0	31.0	29.5	28.5	29.0	20.5	19.0	19.5
31	---	---	---	32.0	30.0	31.0	28.5	23.5	25.5	---	---	---
MONTH	29.5	16.5	19.4	32.0	24.5	28.8	32.0	23.0	28.7	26.0	18.5	22.2

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	7.3	5.1	6.7	11.5	11.2	11.3	11.9	10.8	11.4
2	---	---	---	6.9	5.8	6.4	11.4	11.3	11.3	12.1	11.7	11.9
3	8.9	7.9	8.2	5.8	5.6	5.7	11.4	11.2	11.3	12.1	11.4	11.6
4	9.0	7.8	8.2	5.7	5.4	5.5	11.4	11.1	11.3	12.0	11.3	11.4
5	8.7	7.8	8.1	6.6	5.5	6.0	11.3	11.0	11.2	12.5	11.5	11.9
6	8.8	7.7	8.0	7.4	6.6	7.0	11.3	11.1	11.2	12.3	11.9	12.0
7	8.6	7.6	8.0	8.1	7.2	7.7	11.6	11.2	11.4	11.9	11.8	11.9
8	8.6	7.7	8.0	8.5	7.8	8.1	11.7	11.5	11.6	12.0	11.4	11.7
9	8.7	7.6	8.1	8.9	8.4	8.6	11.8	11.1	11.5	12.9	11.6	11.9
10	9.1	7.9	8.4	9.1	8.6	9.0	12.1	11.3	11.6	12.8	12.2	12.5
11	9.1	8.1	8.5	8.9	8.1	8.7	11.8	11.6	11.6	12.8	12.3	12.5
12	8.9	7.9	8.2	8.7	7.9	8.3	11.6	11.5	11.5	12.5	12.3	12.4
13	8.9	7.9	8.3	9.4	8.4	8.9	11.5	10.9	11.3	12.8	12.5	12.7
14	8.6	7.5	8.0	9.7	9.4	9.5	11.6	10.2	10.7	13.1	12.8	12.9
15	7.9	7.2	7.5	9.6	9.3	9.5	10.8	10.2	10.5	13.1	12.7	12.9
16	8.3	7.2	7.6	9.6	9.0	9.3	---	---	---	12.7	12.5	12.6
17	8.3	7.3	7.7	9.0	8.6	8.8	---	---	---	12.8	12.5	12.7
18	8.4	7.3	7.7	8.7	8.3	8.5	---	---	---	13.0	12.8	12.9
19	8.7	7.5	8.0	8.3	7.8	8.1	---	---	---	13.1	12.9	13.0
20	9.2	7.7	8.2	8.7	7.5	7.9	---	---	---	13.8	13.0	13.2
21	9.1	7.7	8.2	9.2	8.1	8.9	---	---	---	13.0	12.6	12.7
22	9.6	7.6	8.3	10.6	9.2	9.8	13.3	11.8	12.1	13.0	12.3	12.5
23	8.9	7.4	8.0	11.7	8.9	10.2	12.9	11.8	12.0	12.3	12.0	12.2
24	9.2	7.2	7.7	10.7	10.4	10.6	12.1	11.9	12.0	12.2	12.0	12.1
25	8.3	7.0	7.5	10.6	10.3	10.5	12.1	12.0	12.1	12.5	12.1	12.2
26	7.8	6.7	7.1	10.8	10.6	10.7	12.8	11.9	12.1	12.2	12.0	12.1
27	9.0	6.6	7.1	11.2	10.8	11.0	12.7	12.1	12.4	12.0	11.9	11.9
28	8.7	6.7	7.3	11.4	11.2	10.7	13.1	11.7	12.2	11.9	11.7	11.8
29	7.1	6.6	6.8	11.4	11.2	11.3	11.8	11.1	11.6	11.8	11.6	11.7
30	7.2	6.6	6.9	11.5	11.2	11.3	11.0	10.5	10.8	12.0	11.8	11.9
31	6.9	4.3	5.7	---	---	---	11.2	10.3	10.5	12.2	11.8	12.0
MONTH	---	---	---	11.7	5.1	8.8	---	---	---	13.8	10.8	12.2

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	12.1	11.9	12.0	14.8	14.2	14.6	12.4	11.0	11.7	10.3	9.7	10.0
2	12.0	11.6	11.8	14.2	13.5	13.8	13.4	12.4	12.9	10.0	7.3	9.4
3	---	---	---	13.7	13.3	13.4	12.8	11.8	12.2	---	---	---
4	---	---	---	13.5	13.4	13.4	12.2	12.0	12.1	---	---	---
5	---	---	---	13.5	13.3	13.4	12.6	12.0	12.2	---	---	---
6	---	---	---	13.5	12.9	13.2	13.2	12.5	12.7	---	---	---
7	---	---	---	13.0	12.6	12.8	12.5	12.1	12.3	---	---	---
8	---	---	---	12.6	12.1	12.4	12.5	12.1	12.2	---	---	---
9	12.1	11.3	11.8	12.2	11.7	12.0	12.5	12.0	12.3	---	---	---
10	11.8	11.3	11.6	12.2	11.4	11.8	12.1	11.3	11.6	---	---	---
11	12.0	11.6	11.8	12.1	11.3	11.7	11.5	11.3	11.4	---	---	---
12	12.3	11.8	12.0	12.8	11.5	12.1	11.9	11.0	11.3	---	---	---
13	12.8	12.2	12.5	13.4	12.1	12.8	11.3	11.0	11.2	---	---	---
14	13.1	12.8	13.0	13.6	12.5	13.0	11.0	10.2	10.8	---	---	---
15	13.3	12.9	13.0	13.1	12.4	12.8	11.9	10.6	11.3	---	---	---
16	14.2	13.3	13.8	13.2	12.1	12.6	12.3	11.9	12.1	---	---	---
17	14.5	14.2	14.3	13.2	12.0	12.6	12.0	11.2	11.6	---	---	---
18	15.0	14.5	14.8	12.2	11.7	12.0	11.4	11.0	11.2	---	---	---
19	15.0	14.4	14.8	12.7	11.7	12.3	11.3	10.8	11.0	---	---	---
20	14.5	13.9	14.2	12.7	12.3	12.5	11.8	11.0	11.4	---	---	---
21	13.9	13.3	13.6	12.3	12.1	12.2	12.2	11.8	12.1	---	---	---
22	14.7	13.7	14.0	12.2	10.7	11.5	12.3	11.9	12.1	8.0	7.8	7.9
23	15.6	13.7	14.7	11.7	10.9	11.2	11.8	10.9	11.3	8.1	7.7	7.9
24	14.6	13.7	14.2	12.3	11.7	12.1	11.0	9.6	10.5	9.7	8.1	8.9
25	15.5	14.5	15.1	12.4	12.0	12.3	9.7	7.2	8.4	---	---	---
26	15.4	15.0	15.1	12.3	11.7	12.0	9.5	8.0	8.8	---	---	---
27	15.1	15.0	15.0	11.9	10.8	11.5	11.5	9.4	10.7	---	---	---
28	15.3	14.8	15.0	11.2	10.7	10.9	11.2	9.8	10.6	10.4	8.5	9.3
29	---	---	---	10.8	10.1	10.5	10.1	9.4	9.8	8.8	8.3	8.5
30	---	---	---	10.1	9.3	9.7	10.0	9.2	9.6	8.3	8.1	8.2
31	---	---	---	11.0	9.6	10.2	---	---	---	---	---	---
MONTH	---	---	---	14.8	9.3	12.2	13.4	7.2	11.3	---	---	---

07178000 BIRD CREEK NEAR OWASSO, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	6.3	5.6	5.9	6.2	5.3	5.7	3.9	3.6	3.8
2	---	---	---	6.3	5.5	5.9	6.1	5.4	5.7	4.6	3.6	3.9
3	9.0	8.7	8.9	6.7	5.7	6.1	6.4	5.6	5.9	5.6	4.5	5.0
4	8.9	8.6	8.8	6.5	5.8	6.1	6.7	5.7	6.1	6.0	4.6	5.4
5	9.1	8.6	8.9	6.4	5.8	6.0	6.3	5.9	6.1	5.9	5.3	5.6
6	9.0	8.9	9.0	6.3	5.8	6.0	6.2	3.8	5.2	6.9	5.7	6.2
7	9.0	8.9	9.0	6.3	5.8	6.1	6.8	6.0	6.3	6.6	5.8	6.1
8	9.0	8.8	8.9	5.8	5.0	5.3	6.4	5.9	6.2	6.1	4.6	5.6
9	9.0	7.8	8.8	5.2	4.9	5.1	6.5	5.7	6.0	6.0	5.3	5.6
10	7.9	6.6	6.9	5.5	5.1	5.3	6.1	5.6	5.9	6.0	5.2	5.5
11	8.7	7.0	8.4	5.8	5.3	5.5	6.7	5.9	6.2	6.7	5.7	6.2
12	9.0	8.7	8.9	6.1	5.3	5.6	6.5	5.7	6.0	6.9	6.2	6.4
13	8.9	8.8	8.9	6.0	4.8	5.3	6.8	5.6	6.1	6.3	5.9	6.1
14	9.0	8.8	8.9	5.6	4.6	5.3	6.9	5.6	6.1	6.9	5.5	6.3
15	9.0	8.9	8.9	5.7	3.7	5.3	7.1	5.6	6.1	6.8	6.4	6.7
16	9.0	8.9	8.9	5.7	5.4	5.6	6.8	5.5	6.0	6.8	6.5	6.7
17	8.9	8.8	8.8	5.7	5.4	5.5	6.5	5.4	5.8	6.7	6.2	6.5
18	8.9	8.8	8.8	5.4	5.2	5.3	6.4	5.4	5.7	6.5	6.0	6.2
19	8.8	8.7	8.8	5.3	5.0	5.0	6.6	5.4	5.8	6.6	6.0	6.2
20	8.7	8.6	8.6	4.8	3.7	4.4	6.6	5.4	5.9	6.4	4.8	5.8
21	8.6	8.5	8.5	5.0	4.6	4.8	6.4	5.4	5.8	5.5	5.0	5.3
22	8.5	8.4	8.5	5.4	5.0	5.2	6.5	5.4	5.8	5.4	5.0	5.2
23	8.4	8.3	8.4	5.6	5.0	5.2	6.1	5.3	5.6	5.4	5.0	5.2
24	8.3	8.0	8.2	5.6	5.0	5.2	6.2	5.3	5.7	5.5	4.9	5.1
25	8.0	7.5	7.7	5.9	5.3	5.6	6.5	5.3	5.8	6.5	2.6	5.3
26	7.7	6.6	7.0	6.1	5.4	5.7	6.8	5.6	6.0	6.0	3.6	5.1
27	6.7	6.5	6.6	6.3	5.4	5.8	6.9	5.6	6.1	6.8	6.0	6.5
28	6.5	6.3	6.4	6.2	5.4	5.7	6.8	5.6	6.1	7.0	6.8	7.0
29	6.5	6.1	6.3	6.2	5.3	5.7	6.6	5.5	6.0	6.9	6.8	6.9
30	6.4	5.9	6.1	6.3	5.4	5.8	6.5	5.5	5.9	7.0	6.8	6.9
31	---	---	---	6.2	5.2	5.6	6.0	3.6	4.7	---	---	---
MONTH	---	---	---	6.7	3.7	5.5	7.1	3.6	5.9	7.0	2.6	5.8

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK

LOCATION.--Lat 36°13'14", long 95°51'30", in SW 1/4 SE 1/4 sec.7, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, near left downstream abutment of 46th Street North bridge, 0.1 mi downstream from small left bank tributary, 0.2 mi upstream from small right bank tributary, 9.0 mi northeast of downtown Tulsa post office, and at mile 1.9.

DRAINAGE AREA.--59.9 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--April 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 562.60 ft above sea level (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records good. U.S. Geological Survey satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	1330	5,960	18.20*	May 9	0030	8,930	20.91

*in backwater, discharge from peak at auxiliary gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	733	26	23	21	89	38	42	8.7	9.4	2.2	11
2	2.3	23	26	45	20	114	32	203	8.8	5.4	3.3	8.5
3	1.5	10	22	40	18	63	30	289	62	3.9	7.5	330
4	1.1	16	18	74	36	49	610	64	21	3.5	20	13
5	1.0	6.1	20	35	52	47	171	44	13	5.8	208	5.7
6	1.4	4.5	44	28	27	38	70	538	10	32	44	3.4
7	27	4.0	34	26	22	34	53	78	8.4	11	7.4	3.3
8	81	3.4	28	25	21	35	62	1040	349	7.3	3.8	592
9	5.6	3.3	1270	664	19	30	41	4110	225	3.1	3.0	27
10	1.9	33	182	140	50	26	34	e900	233	2.1	2.7	7.9
11	1.1	718	73	78	42	24	29	e1000	33	2.1	2.7	4.3
12	1.0	513	53	130	39	24	26	407	21	2.6	2.3	2.8
13	.79	39	818	57	22	21	27	149	15	2.6	2.1	535
14	.76	22	3120	46	18	20	640	76	11	116	2.4	1580
15	.80	15	488	46	262	25	294	58	10	43	1.9	63
16	.67	12	216	41	262	53	74	44	8.8	6.5	4.9	23
17	.64	11	93	35	81	20	910	60	9.9	2.8	2.3	14
18	.71	11	66	94	42	102	208	394	14	3.2	2.4	11
19	.72	68	56	87	145	164	85	63	122	78	1.7	35
20	.67	250	48	906	299	59	52	42	45	9.2	1.8	431
21	.69	91	44	128	248	32	40	37	16	5.0	3.9	25
22	.72	1240	40	75	68	1130	36	33	11	3.4	3.2	15
23	1.3	320	35	58	53	140	32	39	19	4.5	2.4	10
24	1.3	340	31	46	178	72	165	34	16	3.5	5.3	8.4
25	4.4	465	106	39	1200	52	169	24	11	4.6	3.9	192
26	5.3	84	43	37	140	42	43	21	8.1	8.8	2.1	27
27	1.5	53	35	33	78	37	34	21	6.3	6.4	1.6	13
28	1.7	42	32	29	62	34	39	17	5.7	2.6	1.6	9.1
29	226	34	35	24	---	31	418	15	5.2	2.0	1.6	7.2
30	18	29	35	22	---	376	70	16	16	1.8	3.6	7.1
31	7.9	---	27	22	---	58	---	12	---	2.4	342	---
TOTAL	402.37	5193.3	7164	3133	3525	3041	4532	9870	1342.9	394.5	697.6	4014.7
MEAN	13.0	173	231	101	126	98.1	151	318	44.8	12.7	22.5	134
MAX	226	1240	3120	906	1200	1130	910	4110	349	116	342	1580
MIN	.64	3.3	18	22	18	20	26	12	5.2	1.8	1.6	2.8
AC-FT	798	10300	14210	6210	6990	6030	8990	19580	2660	782	1380	7960
CFSM	.22	2.89	3.86	1.69	2.10	1.64	2.52	5.32	.75	.21	.38	2.23
IN.	.25	3.23	4.45	1.95	2.19	1.89	2.81	6.13	.83	.24	.43	2.49

e Estimated

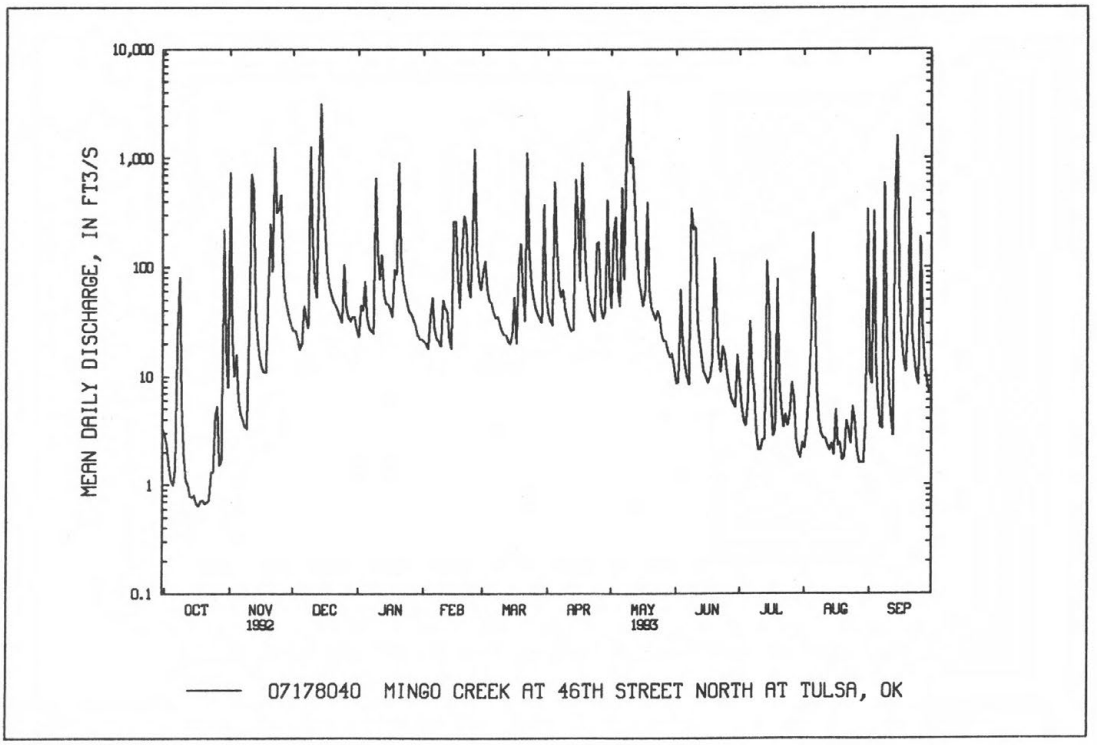
07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.5	81.4	133	70.2	66.2	136	107	129	82.3	30.1	48.9	80.1
MAX	80.6	173	302	101	128	288	242	318	204	63.7	166	134
(WY)	1992	1993	1988	1993	1989	1988	1990	1993	1992	1988	1989	1993
MIN	13.0	5.50	4.31	31.1	11.0	16.4	16.0	32.7	6.23	4.69	5.80	23.1
(WY)	1993	1990	1990	1992	1991	1991	1989	1988	1988	1991	1991	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1988-93	
ANNUAL TOTAL	30906.47		43310.37			
ANNUAL MEAN	84.4		119		83.0	
HIGHEST ANNUAL MEAN					119	1993
LOWEST ANNUAL MEAN					43.4	1991
HIGHEST DAILY MEAN	3120	Dec 14	[a]4110	May 9	4110	May 9 1993
LOWEST DAILY MEAN	.64	Oct 17	.64	Oct 17	.64	Oct 17 1992
ANNUAL SEVEN-DAY MINIMUM	.69	Oct 16	.69	Oct 16	.69	Oct 16 1992
INSTANTANEOUS PEAK FLOW			8930	May 9	9920	Aug 20 1989
INSTANTANEOUS PEAK STAGE			20.91	May 9	[b]21.92	Aug 20 1989
ANNUAL RUNOFF (AC-FT)	61300		85910		60090	
ANNUAL RUNOFF (CFSM)	1.41		1.98		1.38	
ANNUAL RUNOFF (INCHES)	19.19		26.90		18.82	
10 PERCENT EXCEEDS	195		291		163	
50 PERCENT EXCEEDS	16		29		14	
90 PERCENT EXCEEDS	2.3		2.3		2.5	

[a]Some backwater discharge computed form auxiliary gage.
[b]From high-water mark.



07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--May 1987 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1987 to current year.

pH: May 1987 to current year.

WATER TEMPERATURE: May 1987 to current year.

DISSOLVED OXYGEN: May 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since May 1987.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,560 microsiemens, May 13, 1990; minimum, 60 microsiemens, Aug. 20, 1989.

pH: Maximum, 9.4 units, Jan. 14, 1989; minimum, 5.9 units, Oct. 25, 1988.

WATER TEMPERATURE: Maximum, 34.0°C, July 5, 1990; minimum, 0.0°C, several days during winter months.

DISSOLVED OXYGEN: Maximum, 16.8 mg/l, Dec. 19, 1988; minimum, 0.2 mg/l, Aug. 24, 1990.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,100 microsiemens, Dec. 7; minimum, 100 microsiemens, May 8.

pH: Maximum, 8.4 units, several days; minimum, 6.7 units, June 22.

WATER TEMPERATURE: Maximum, 32.5°C, July 23, 24; minimum, 0°C, Feb. 18.

DISSOLVED OXYGEN: Maximum, 16.2 mg/l, Jan. 31; minimum, 2.1 mg/l, July 17.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	720	680	701	710	680	687
2	---	---	---	---	---	---	720	700	709	---	---	---
3	---	---	---	610	390	462	730	710	713	---	---	---
4	---	---	---	480	430	455	730	710	720	---	---	---
5	---	---	---	490	440	466	740	710	727	680	660	675
6	---	---	---	530	490	513	780	690	731	690	670	681
7	---	---	---	580	530	554	1100	780	1010	680	660	667
8	---	---	---	---	---	---	1070	1000	1050	700	670	682
9	---	---	---	---	---	---	1000	210	327	700	230	414
10	---	---	---	---	---	---	570	330	434	480	330	407
11	---	---	---	---	---	---	630	490	545	600	480	538
12	---	---	---	---	---	---	740	580	616	650	540	596
13	---	---	---	---	---	---	650	180	414	590	550	569
14	---	---	---	---	---	---	250	130	182	650	590	616
15	---	---	---	---	---	---	410	250	359	750	640	675
16	---	---	---	---	---	---	490	350	421	760	740	749
17	---	---	---	---	---	---	560	490	528	770	710	749
18	---	---	---	---	---	---	630	570	597	730	620	679
19	---	---	---	---	---	---	680	620	643	760	570	727
20	---	---	---	590	390	462	670	650	659	540	250	337
21	---	---	---	480	360	437	680	660	673	540	420	484
22	---	---	---	360	150	221	700	680	691	730	550	609
23	---	---	---	660	260	387	710	690	697	710	620	652
24	---	---	---	500	230	412	710	690	700	670	640	661
25	---	---	---	420	230	328	700	490	582	680	670	677
26	---	---	---	520	420	477	560	520	542	700	680	692
27	---	---	---	610	520	568	590	530	559	---	---	---
28	---	---	---	650	610	629	730	580	623	---	---	---
29	---	---	---	690	640	664	---	---	---	710	680	696
30	---	---	---	680	670	676	---	---	---	700	680	685
31	---	---	---	---	---	---	700	690	709	730	690	656
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	700	690	693	650	620	636	590	520	549	530	480	511
2	---	---	---	650	560	581	630	590	612	570	220	505
3	---	---	---	590	560	574	640	620	634	440	250	357
4	---	---	---	630	580	603	640	200	417	540	450	499
5	---	---	---	640	610	623	460	310	384	600	540	575
6	---	---	---	640	630	633	550	470	511	600	170	352
7	---	---	---	670	630	647	600	560	580	500	370	438
8	---	---	---	670	630	651	610	570	596	550	100	455
9	---	---	---	670	640	657	600	580	591	250	110	172
10	---	---	---	670	630	651	630	590	618	430	270	352
11	---	---	---	680	640	656	640	610	631	510	260	441
12	600	510	552	680	660	674	650	610	628	470	210	333
13	630	570	599	690	680	684	660	630	642	550	490	516
14	640	610	620	700	690	692	660	220	404	620	560	591
15	640	350	480	720	680	694	440	280	372	660	610	638
16	630	450	498	730	640	692	540	450	495	670	650	660
17	660	630	644	630	610	619	550	170	359	700	470	631
18	670	630	645	630	400	567	480	290	397	500	240	350
19	690	460	651	410	370	391	560	480	526	510	410	464
20	---	---	---	450	390	424	580	560	577	570	510	543
21	---	---	---	480	440	466	610	580	594	610	570	592
22	---	---	---	520	160	312	630	600	614	650	590	622
23	---	---	---	498	322	419	630	610	622	660	620	637
24	610	300	576	595	509	556	640	200	554	670	640	655
25	370	190	260	631	585	611	480	300	403	650	640	645
26	500	370	435	656	631	641	550	480	524	650	640	641
27	580	510	548	670	647	660	600	550	575	650	630	645
28	620	580	604	686	651	672	600	570	580	650	630	640
29	---	---	---	701	666	684	600	220	351	640	620	631
30	---	---	---	692	246	412	480	370	428	650	620	635
31	---	---	---	510	439	486	---	---	---	660	640	650
MONTH	---	---	---	730	160	589	660	170	526	700	100	528

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	680	650	667	617	531	569	550	520	532	298	260	280
2	680	660	674	646	617	632	550	531	540	328	294	319
3	680	360	581	617	569	591	533	517	523	270	164	199
4	540	520	530	578	559	567	609	553	588	260	220	237
5	560	520	532	559	530	545	585	174	404	278	262	271
6	590	570	586	620	500	552	302	214	276	290	280	286
7	590	570	580	680	610	645	320	302	311	300	288	294
8	580	160	325	610	510	561	332	318	327	298	126	196
9	410	200	340	520	510	512	346	332	338	288	210	254
10	400	210	327	520	510	515	360	344	351	306	290	299
11	480	410	447	530	510	521	370	356	362	324	306	316
12	520	480	496	530	520	521	378	368	371	334	322	327
13	560	520	538	540	520	529	384	376	379	342	140	244
14	580	560	570	540	190	429	390	380	383	274	124	174
15	610	590	599	350	210	284	396	388	391	404	282	352
16	630	610	623	380	340	364	408	396	401	478	408	441
17	640	620	630	400	370	385	430	410	418	519	478	495
18	650	570	619	410	240	393	444	430	436	547	519	532
19	620	250	482	410	150	305	450	444	447	555	474	548
20	440	260	333	330	300	312	456	448	449	330	146	239
21	540	440	499	330	320	326	507	460	482	444	336	392
22	600	540	569	330	310	319	529	488	516	507	446	476
23	610	210	546	320	310	315	531	517	525	553	511	533
24	500	470	488	420	310	334	513	474	494	581	556	568
25	517	350	475	330	210	307	529	472	500	587	224	381
26	540	514	527	370	290	327	557	529	539	432	358	399
27	578	540	555	410	370	395	577	559	568	494	434	463
28	607	560	583	460	410	435	585	577	579	531	498	517
29	627	598	612	470	450	456	591	585	586	563	531	550
30	609	531	577	480	460	472	593	370	584	581	553	564
31	---	---	---	530	490	503	274	158	220	---	---	---
MONTH	680	160	530	680	150	449	609	158	446	587	124	378

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.0	7.8	7.9	---	---	---	8.1	8.0	8.0	---	---	---
2	8.1	7.9	8.0	---	---	---	8.0	7.8	7.9	---	---	---
3	8.2	7.9	8.1	---	---	---	7.9	7.7	7.8	---	---	---
4	---	---	---	---	---	---	7.9	7.7	7.8	---	---	---
5	---	---	---	---	---	---	7.7	7.7	7.7	---	---	---
6	---	---	---	8.0	7.7	7.8	8.0	7.7	7.8	8.1	8.1	8.1
7	8.2	7.8	8.0	7.9	7.8	7.9	7.8	7.6	7.6	8.3	8.1	8.1
8	8.2	7.6	7.9	7.9	7.8	7.9	7.6	7.6	7.6	8.2	8.1	8.1
9	8.0	7.4	7.8	7.9	7.9	7.9	8.3	7.6	8.2	8.2	7.9	8.0
10	7.9	7.6	7.8	7.9	7.8	7.9	8.3	8.1	8.2	8.1	8.0	8.0
11	7.9	7.5	7.8	8.2	7.6	7.8	8.4	8.3	8.3	8.2	8.1	8.1
12	7.9	7.5	7.8	8.1	7.8	7.9	8.4	8.3	8.3	8.3	8.1	8.1
13	7.9	7.5	7.8	7.9	7.9	7.9	8.4	8.1	8.3	8.1	8.0	8.0
14	8.1	7.7	7.9	8.0	7.9	8.0	8.3	8.1	8.2	8.0	7.9	8.0
15	8.2	7.9	8.1	8.1	8.0	8.0	8.3	8.1	8.2	8.1	8.0	8.0
16	8.3	8.1	8.2	8.1	8.0	8.0	8.3	8.2	8.3	8.1	8.0	8.0
17	---	---	---	8.1	7.9	8.0	8.4	8.3	8.3	8.1	7.9	8.0
18	---	---	---	8.0	7.9	7.9	8.4	8.3	8.3	8.2	7.8	8.0
19	8.0	7.8	7.9	8.0	7.8	7.9	8.3	8.2	8.3	8.1	7.7	7.8
20	7.9	7.7	7.7	8.0	7.9	7.9	8.3	8.2	8.3	8.1	7.9	8.0
21	7.9	7.7	7.7	8.1	7.7	7.8	8.3	8.2	8.2	8.2	8.0	8.1
22	7.7	7.6	7.7	8.1	7.9	7.9	8.3	8.1	8.2	8.2	8.1	8.2
23	7.7	7.6	7.6	8.1	7.9	8.1	8.2	8.1	8.1	8.2	8.1	8.1
24	7.7	7.6	7.6	8.1	7.9	8.1	8.2	8.1	8.1	8.3	8.1	8.2
25	7.6	7.5	7.5	8.0	7.9	8.0	8.2	8.0	8.2	8.3	8.1	8.2
26	7.5	7.3	7.4	8.1	8.0	8.1	8.1	7.8	7.9	8.3	8.1	8.2
27	7.3	7.2	7.3	8.2	8.1	8.1	8.0	7.8	7.9	8.2	8.0	8.1
28	7.2	7.1	7.2	8.3	8.1	8.2	7.9	7.8	7.8	8.2	8.0	8.0
29	8.2	7.1	8.0	8.2	8.2	8.2	---	---	---	8.0	7.8	7.9
30	7.9	7.8	7.9	8.2	8.1	8.1	---	---	---	7.9	7.9	7.9
31	8.0	7.7	7.8	---	---	---	---	---	---	7.9	7.8	7.9
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.9	7.8	7.8	8.3	8.2	8.3	8.1	7.9	7.9	7.6	7.2	7.4
2	7.9	7.7	7.8	8.3	8.1	8.2	8.2	7.8	8.0	7.6	7.1	7.2
3	7.8	7.7	7.7	8.2	8.0	8.1	8.1	7.7	7.9	7.7	7.4	7.6
4	7.8	7.6	7.7	8.2	7.9	8.0	8.2	7.6	7.9	7.8	7.5	7.7
5	7.8	7.7	7.7	8.1	7.9	8.0	8.1	7.9	8.0	7.5	7.0	7.2
6	8.0	7.7	7.8	8.1	7.8	7.9	8.1	7.9	8.0	7.8	6.9	7.6
7	8.1	7.9	8.0	7.9	7.7	7.8	8.0	7.8	7.9	7.6	7.4	7.6
8	8.3	8.0	8.1	7.9	7.7	7.8	8.1	7.7	7.8	7.8	7.3	7.3
9	8.2	8.0	8.0	7.8	7.6	7.7	7.9	7.7	7.7	7.8	7.4	7.6
10	8.2	7.9	8.0	7.8	7.6	7.7	7.9	7.7	7.7	7.6	7.3	7.4
11	8.1	7.7	7.8	7.8	7.6	7.7	7.9	7.7	7.8	7.7	7.4	7.5
12	8.0	7.7	7.8	7.9	7.7	7.7	7.9	7.7	7.8	7.7	7.5	7.6
13	8.0	7.8	7.9	8.0	7.7	7.8	7.9	7.7	7.8	7.7	7.6	7.6
14	8.1	7.9	8.0	7.9	7.8	7.8	8.1	7.7	7.9	7.6	7.3	7.5
15	8.2	7.9	8.0	8.0	7.8	7.8	8.3	7.9	8.1	7.4	7.2	7.3
16	8.2	8.0	8.0	8.1	7.6	7.8	8.3	8.0	8.2	7.3	7.2	7.2
17	8.2	7.9	8.0	7.7	7.6	7.6	8.3	8.0	8.2	7.6	7.3	7.4
18	8.3	7.9	8.0	8.0	7.6	7.6	8.4	8.2	8.3	7.7	7.4	7.6
19	8.3	8.1	8.1	7.9	7.8	7.8	8.2	8.0	8.2	7.7	7.4	7.6
20	8.3	8.0	8.1	7.8	7.6	7.7	8.1	7.9	8.0	7.7	7.6	7.6
21	8.2	7.9	8.0	7.7	7.6	7.6	8.3	7.9	8.1	7.8	7.6	7.7
22	8.3	8.1	8.2	8.2	7.6	8.0	8.3	8.0	8.1	7.8	7.7	7.7
23	8.4	8.1	8.2	8.1	8.0	8.1	8.1	7.9	8.0	---	---	---
24	8.4	8.0	8.2	8.2	8.0	8.1	8.2	7.8	7.9	---	---	---
25	8.1	7.9	7.9	8.1	7.9	7.9	8.0	7.7	7.8	---	---	---
26	8.2	8.0	8.1	8.0	7.8	7.9	7.8	7.6	7.7	8.2	8.0	8.0
27	8.3	8.2	8.2	8.0	7.7	7.8	7.7	7.6	7.6	8.1	7.9	8.0
28	8.3	8.2	8.2	7.9	7.7	7.8	8.0	7.5	7.6	8.1	7.8	8.0
29	---	---	---	7.9	7.6	7.7	8.0	7.8	7.9	8.1	7.7	7.9
30	---	---	---	8.2	7.6	8.1	7.9	7.6	7.7	8.0	7.6	7.8
31	---	---	---	8.0	7.8	7.9	---	---	---	7.7	7.5	7.6
MAX	8.4	8.2	8.2	8.3	8.2	8.3	8.4	8.2	8.3	---	---	---
MIN	7.8	7.6	7.7	7.7	7.6	7.6	7.7	7.5	7.6	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.7	7.3	7.5	---	---	---	7.7	7.5	7.6	---	---	---
2	7.9	7.4	7.7	---	---	---	7.6	7.2	7.5	---	---	---
3	7.7	7.3	7.5	---	---	---	7.6	7.2	7.5	---	---	---
4	7.7	7.6	7.6	---	---	---	7.6	7.5	7.5	7.6	7.5	7.6
5	7.7	7.6	7.7	---	---	---	8.0	7.4	7.8	7.7	7.5	7.6
6	7.8	7.6	7.7	---	---	---	---	---	---	7.8	7.3	7.6
7	7.7	7.6	7.7	---	---	---	---	---	---	7.8	7.5	7.7
8	8.2	7.4	7.7	---	---	---	---	---	---	8.3	7.6	7.7
9	7.7	7.3	7.4	7.0	6.8	6.8	---	---	---	7.7	7.4	7.6
10	7.7	7.3	7.4	7.0	6.8	6.9	---	---	---	7.4	7.2	7.3
11	7.5	7.3	7.4	7.2	7.0	7.1	---	---	---	7.4	7.1	7.2
12	7.6	7.4	7.5	7.2	7.1	7.1	---	---	---	7.5	7.2	7.3
13	7.7	7.5	7.6	7.1	7.0	7.1	---	---	---	7.9	7.3	7.5
14	7.7	7.5	7.6	7.9	7.0	7.2	---	---	---	8.1	7.9	7.9
15	7.6	7.5	7.5	7.8	7.1	7.2	---	---	---	---	---	---
16	7.5	7.2	7.5	7.2	7.1	7.1	---	---	---	---	---	---
17	7.4	7.1	7.2	7.2	7.1	7.1	---	---	---	7.6	7.4	7.5
18	7.2	6.9	7.1	7.4	7.1	7.2	---	---	---	7.6	7.3	7.4
19	7.2	6.8	6.9	7.4	7.0	7.2	---	---	---	7.7	7.4	7.6
20	7.1	6.9	7.0	7.2	7.0	7.1	---	---	---	---	---	---
21	6.9	6.8	6.8	7.3	7.1	7.2	---	---	---	---	---	---
22	7.0	6.7	6.8	7.3	7.1	7.2	---	---	---	8.0	7.8	7.9
23	7.3	6.9	7.0	7.3	7.1	7.2	---	---	---	7.9	7.7	7.8
24	7.6	7.3	7.4	7.3	7.2	7.3	---	---	---	7.7	7.5	7.6
25	7.8	7.5	7.7	7.4	7.1	7.3	---	---	---	7.6	7.2	7.5
26	7.6	7.4	7.5	7.6	7.2	7.3	---	---	---	---	---	---
27	7.5	7.4	7.4	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	7.6	7.2	7.3	---	---	---	7.7	7.6	7.7
30	---	---	---	7.6	7.3	7.4	---	---	---	7.6	7.5	7.6
31	---	---	---	7.8	7.4	7.6	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	17.5	19.0	16.5	15.0	16.0	6.0	5.0	5.5	6.5	4.0	5.0
2	21.5	18.0	19.5	15.0	13.5	14.0	6.0	5.0	5.5	4.0	2.5	3.0
3	21.5	17.5	19.5	14.0	11.0	13.0	7.0	5.0	6.0	8.5	4.0	6.0
4	21.5	17.5	19.5	11.0	8.5	9.5	6.5	5.5	6.0	9.0	7.0	8.5
5	22.0	18.0	20.0	9.5	8.0	9.0	5.0	3.0	4.0	6.5	4.5	5.5
6	21.5	18.0	20.0	9.0	8.0	8.5	3.0	2.0	2.5	5.0	3.5	4.0
7	21.0	17.5	19.5	9.5	8.0	9.0	3.0	1.5	2.5	5.5	4.0	5.0
8	18.0	15.0	16.0	9.5	9.0	9.5	3.5	2.0	2.5	5.5	5.0	5.5
9	16.0	13.5	15.0	12.0	9.5	10.5	5.5	3.5	5.0	5.5	4.0	4.5
10	17.0	15.0	15.5	14.5	11.5	12.5	7.5	5.0	6.0	4.0	2.5	3.0
11	17.0	14.0	15.5	16.0	14.5	15.5	7.5	6.0	6.5	3.5	2.5	3.0
12	18.5	15.0	16.5	15.0	11.0	13.0	8.0	5.5	7.0	5.5	4.0	5.0
13	19.5	15.5	17.5	11.5	10.0	11.0	9.0	7.5	8.0	4.5	2.0	3.5
14	21.0	17.0	19.0	10.0	8.5	9.5	9.0	8.0	8.5	3.0	1.5	2.0
15	19.0	17.0	18.0	11.5	8.5	10.0	8.5	5.0	7.0	4.0	2.0	3.0
16	---	---	---	12.5	10.0	11.0	7.0	4.5	5.5	6.0	3.0	4.5
17	---	---	---	13.0	11.5	12.0	7.0	5.0	6.0	5.5	3.5	4.5
18	---	---	---	14.0	12.5	13.5	6.0	4.5	5.5	4.5	2.5	3.0
19	---	---	---	16.0	13.5	14.5	8.5	5.5	7.5	2.5	2.0	2.5
20	16.5	13.0	14.5	16.0	12.0	13.5	7.0	5.0	6.0	4.5	2.0	3.0
21	18.5	15.0	16.5	12.0	10.0	11.5	7.0	4.5	5.5	6.0	4.5	5.0
22	19.0	16.0	17.5	10.0	3.0	5.5	8.0	5.5	6.5	7.0	5.5	6.5
23	20.0	16.5	18.5	10.5	5.0	7.0	7.0	5.5	6.5	8.0	5.5	7.0
24	20.0	18.5	19.0	10.0	9.0	9.5	6.5	4.0	5.0	7.0	5.5	6.0
25	19.5	17.0	18.0	9.0	7.5	8.0	5.5	3.5	5.0	6.5	3.0	5.0
26	18.5	17.0	18.0	7.0	5.0	6.0	5.0	3.5	4.5	6.5	3.5	5.0
27	18.0	15.5	17.0	6.0	4.5	5.0	6.0	2.5	4.0	8.0	4.5	6.0
28	17.0	14.0	15.5	7.0	4.0	5.5	8.0	5.5	6.5	8.0	6.5	7.5
29	16.5	15.0	16.0	7.0	3.5	5.0	12.5	8.0	10.0	8.0	5.0	6.0
30	15.0	14.5	14.5	6.5	4.5	5.5	15.5	12.5	14.0	6.0	4.5	5.0
31	17.0	14.0	15.5	---	---	---	14.0	7.0	10.0	6.0	3.5	5.0
MONTH	---	---	---	16.5	3.0	10.1	15.5	1.5	6.1	9.0	1.5	4.8

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.5	5.0	6.0	7.5	5.5	6.5	11.5	9.0	10.0	21.5	16.5	19.0
2	8.5	6.0	7.0	8.5	7.0	7.5	11.0	7.5	9.5	20.5	18.0	19.0
3	9.0	7.5	8.5	8.5	7.0	8.0	11.0	9.5	10.0	18.0	16.5	17.0
4	9.0	8.0	8.5	7.5	6.5	7.0	11.5	8.5	9.5	20.5	16.0	18.0
5	9.0	8.0	8.5	9.0	5.5	7.0	9.0	7.5	8.5	23.5	18.0	20.5
6	9.0	6.5	8.0	11.0	5.5	8.5	11.5	9.0	10.5	23.0	19.0	21.5
7	9.5	7.5	8.5	12.0	8.0	10.0	14.0	11.0	13.0	23.0	22.0	22.5
8	10.5	7.5	9.0	14.0	9.5	12.0	13.5	11.5	13.0	22.5	16.5	21.0
9	11.0	8.0	9.5	14.5	11.0	13.0	15.5	10.0	12.5	16.5	16.0	16.5
10	11.0	10.0	10.5	14.5	12.0	13.0	18.0	11.5	15.0	16.5	15.0	15.5
11	11.0	10.5	10.5	12.5	9.0	11.0	18.0	15.0	17.0	17.0	15.0	15.5
12	10.5	8.0	9.0	8.5	6.5	8.0	18.5	17.0	17.5	19.5	15.5	17.0
13	7.5	6.0	7.0	7.0	4.5	6.0	18.0	17.0	17.5	19.5	17.0	18.0
14	7.5	5.5	6.5	8.0	4.0	6.0	17.0	9.5	12.5	20.5	18.5	19.0
15	6.5	1.5	4.0	7.0	6.0	6.5	9.5	8.5	9.0	24.0	18.0	21.5
16	4.0	.5	1.5	12.0	7.0	9.5	13.0	8.5	10.5	25.0	20.0	22.5
17	3.0	.5	2.0	10.5	8.0	8.5	13.5	11.5	12.0	23.5	20.5	22.5
18	2.0	.0	1.0	8.5	4.5	7.0	16.5	11.0	13.0	20.5	19.0	19.5
19	7.0	.5	3.0	6.5	4.5	5.5	18.5	16.0	17.5	19.5	18.0	19.0
20	11.0	3.5	6.0	7.5	6.5	7.0	17.5	14.0	16.0	21.0	16.5	18.5
21	11.0	8.5	9.5	9.0	7.0	8.0	17.5	11.5	14.5	19.5	17.0	18.0
22	8.5	5.0	7.0	12.5	8.5	10.5	17.5	12.0	15.0	19.0	17.5	18.0
23	7.0	5.0	6.0	12.0	9.0	10.5	18.0	14.5	16.5	19.5	18.5	19.0
24	4.5	2.0	4.0	15.0	12.5	13.5	18.0	15.0	17.0	23.0	18.5	20.5
25	3.5	1.5	2.5	15.0	12.5	13.5	18.5	14.5	16.5	22.5	20.5	21.5
26	3.5	1.5	2.5	15.5	10.0	12.5	21.0	15.5	18.0	24.0	20.5	22.0
27	5.0	3.0	4.0	17.0	11.0	14.0	20.5	17.0	19.0	24.5	21.0	22.5
28	6.0	4.0	5.5	18.0	14.0	16.0	20.0	17.5	18.5	24.0	21.5	23.0
29	---	---	---	18.0	15.5	17.0	20.0	16.0	18.0	24.5	22.5	23.5
30	---	---	---	18.5	15.0	17.0	19.5	17.5	18.5	25.5	23.0	24.0
31	---	---	---	18.0	11.5	15.0	---	---	---	24.5	22.0	23.5
MONTH	11.0	.0	6.3	18.5	4.0	10.2	21.0	7.5	14.2	25.5	15.0	20.0

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	21.0	23.0	29.0	27.0	28.0	---	---	---	24.5	23.0	23.5
2	25.0	21.5	23.5	29.5	27.5	28.5	---	---	---	27.0	24.0	25.5
3	24.0	21.0	23.0	30.0	27.0	28.5	29.5	26.5	28.0	24.5	23.0	24.0
4	24.0	22.0	23.0	27.5	26.0	27.0	27.5	25.5	26.5	25.0	21.5	23.5
5	24.5	21.0	23.0	27.5	26.0	26.5	26.5	23.0	24.5	25.5	23.0	24.5
6	26.0	23.0	24.5	27.0	25.5	26.5	23.5	22.5	23.0	25.5	23.5	25.0
7	25.5	24.5	25.0	26.5	25.5	26.0	26.0	21.5	24.0	24.5	23.0	24.0
8	24.5	21.5	23.0	29.0	25.0	27.0	26.5	24.5	25.5	23.5	20.5	21.5
9	25.5	20.5	23.0	29.5	26.5	28.0	---	---	---	23.0	19.5	21.0
10	22.0	20.0	21.0	29.0	27.0	28.0	---	---	---	22.5	21.0	22.0
11	24.0	21.0	22.5	29.0	27.0	28.0	32.0	29.0	30.0	23.5	20.5	22.0
12	25.5	23.0	24.5	28.0	26.5	27.5	32.0	29.5	30.5	25.5	22.5	23.5
13	27.5	23.5	25.5	28.5	26.5	27.5	32.0	29.0	30.5	24.5	23.5	24.5
14	28.5	25.5	27.0	27.5	26.0	26.5	32.5	30.0	31.0	23.0	16.5	18.0
15	28.5	25.5	27.0	29.0	26.0	27.5	31.5	29.5	30.5	18.0	16.0	17.0
16	---	---	---	30.5	27.0	28.5	32.0	29.0	31.0	19.5	15.0	17.0
17	---	---	---	30.0	27.5	28.5	32.0	29.5	31.0	20.0	18.0	19.0
18	---	---	---	29.5	26.0	28.5	31.5	29.5	30.5	21.0	18.0	19.5
19	---	---	---	29.0	25.5	27.5	30.5	28.5	29.5	22.5	20.0	21.0
20	---	---	---	30.0	27.5	29.0	30.0	28.0	29.0	22.5	21.5	22.0
21	---	---	---	31.0	28.5	30.0	32.0	29.0	30.5	25.5	20.5	23.0
22	---	---	---	32.0	28.5	30.0	32.0	29.0	30.5	26.5	24.0	25.5
23	---	---	---	32.5	29.0	30.5	30.0	28.5	29.5	25.5	24.0	25.0
24	---	---	---	32.5	30.0	31.0	28.5	27.0	28.0	23.5	22.5	23.0
25	---	---	---	31.0	29.5	30.0	30.0	27.5	28.5	23.0	20.0	21.0
26	27.0	26.0	26.5	32.0	29.0	30.5	29.5	27.0	28.0	21.5	19.5	20.5
27	29.0	25.5	27.5	---	---	---	29.0	27.0	28.0	20.5	18.5	19.5
28	29.0	27.0	28.0	---	---	---	29.0	27.0	28.0	20.5	18.0	19.5
29	29.5	27.5	28.5	---	---	---	29.0	27.0	28.0	20.0	18.0	19.0
30	29.5	27.5	28.5	---	---	---	28.5	26.0	27.5	20.5	18.0	19.5
31	---	---	---	---	---	---	26.0	23.5	24.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	27.0	15.0	21.8

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.1	5.9	6.8	8.5	7.5	8.0	11.4	10.3	10.9	---	---	---
2	8.9	6.2	7.1	7.9	7.4	7.6	11.5	10.4	11.0	---	---	---
3	9.1	6.0	7.1	8.2	7.4	7.8	11.4	10.6	11.0	---	---	---
4	8.9	6.0	7.0	9.4	8.1	8.9	11.7	10.6	11.0	---	---	---
5	8.2	5.9	7.0	9.5	8.9	9.2	11.7	10.9	11.2	---	---	---
6	8.9	5.3	6.9	9.2	8.4	8.9	12.3	11.1	11.7	---	---	---
7	9.0	6.2	7.4	9.6	8.8	9.2	11.9	11.1	11.4	14.3	11.9	12.9
8	7.2	6.0	6.8	9.8	8.9	9.3	11.9	10.8	11.2	13.0	11.7	12.2
9	6.1	5.5	5.8	9.9	8.9	9.5	11.7	11.0	11.4	12.3	11.3	12.0
10	6.6	5.2	5.7	8.9	7.0	8.0	11.6	10.4	11.1	12.9	12.3	12.6
11	7.2	5.5	6.1	9.0	6.9	8.3	11.3	10.2	10.6	13.0	12.5	12.8
12	7.5	5.4	6.1	9.5	9.0	9.3	10.8	10.0	10.3	12.7	11.7	11.9
13	6.9	4.9	5.7	9.7	9.2	9.4	10.8	9.9	10.3	13.3	11.8	12.5
14	6.9	4.3	5.3	10.3	9.4	9.8	10.5	9.8	10.2	13.7	12.6	13.1
15	5.5	3.7	4.5	10.1	9.2	9.8	11.0	9.8	10.2	13.9	12.5	13.1
16	---	---	---	10.0	9.1	9.5	11.2	10.2	10.8	13.7	11.7	12.5
17	---	---	---	9.7	8.3	9.1	11.2	10.1	10.5	14.0	11.1	12.5
18	---	---	---	9.3	8.0	8.5	11.4	10.2	10.6	12.9	11.6	12.1
19	---	---	---	8.4	7.4	7.9	11.0	9.5	9.9	13.1	11.5	12.1
20	6.6	5.5	6.1	9.4	8.0	9.0	11.0	9.5	10.0	13.4	12.3	12.9
21	6.6	5.4	6.0	10.2	8.7	9.1	10.7	9.6	10.3	12.6	11.8	12.2
22	6.4	5.0	5.7	12.5	10.2	11.8	11.8	9.4	10.2	13.0	11.4	12.0
23	6.6	4.7	5.2	11.7	10.2	11.2	12.7	10.2	11.3	12.1	11.3	11.7
24	6.2	4.4	5.1	10.5	10.1	10.2	12.0	10.4	11.1	14.0	11.3	12.4
25	6.1	4.3	5.2	10.8	10.3	10.6	12.7	10.9	11.8	15.1	12.0	13.3
26	---	---	---	11.3	10.8	11.1	11.6	10.7	11.1	15.3	11.9	13.4
27	---	---	---	11.8	11.1	11.4	12.3	10.9	11.5	15.7	11.5	13.4
28	---	---	---	11.4	10.9	11.3	12.7	10.8	11.8	15.6	11.0	13.2
29	---	---	---	11.8	10.6	11.2	11.7	9.8	10.8	15.5	11.1	13.3
30	7.3	6.8	7.0	11.8	10.6	11.1	---	---	---	15.9	12.5	14.1
31	7.4	6.6	6.9	---	---	---	---	---	---	16.2	13.3	14.6
MONTH	---	---	---	12.5	6.9	9.5	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	15.8	13.0	14.2	13.2	12.0	12.7	12.1	9.6	10.9	9.1	6.7	7.8
2	15.2	12.3	13.5	12.0	11.2	11.7	13.9	11.0	12.3	8.0	5.9	6.9
3	14.8	11.6	12.9	13.0	11.2	11.9	12.8	10.7	11.6	8.7	8.0	8.3
4	12.6	10.7	11.7	14.1	10.2	12.2	11.8	10.1	11.2	9.5	7.7	8.5
5	10.9	10.0	10.5	14.5	11.1	12.6	12.0	11.4	11.7	8.4	6.6	7.5
6	12.8	9.3	10.9	16.1	10.1	12.4	12.5	10.8	11.5	8.1	6.2	7.4
7	13.5	10.3	11.7	16.1	10.2	13.0	11.7	10.0	10.6	7.7	6.6	7.1
8	14.0	10.9	12.1	15.3	10.3	12.4	11.8	10.0	10.6	8.7	6.1	6.9
9	14.1	10.4	11.8	14.2	9.5	11.6	---	---	---	9.5	8.4	8.9
10	11.6	9.8	10.4	13.9	9.2	11.4	---	---	---	8.9	8.8	8.9
11	9.8	8.1	8.8	13.2	9.8	11.3	---	---	---	9.2	8.6	8.8
12	11.1	8.2	9.4	14.4	10.9	12.4	---	---	---	9.0	8.1	8.8
13	12.8	9.7	11.0	15.4	12.1	13.4	---	---	---	8.8	7.9	8.3
14	14.6	11.2	12.6	15.4	12.2	13.4	10.4	7.2	9.2	8.5	7.5	7.9
15	13.3	11.3	12.3	13.3	11.4	12.3	11.1	10.4	10.7	7.8	7.0	7.4
16	14.1	13.0	13.6	12.3	9.5	11.1	11.6	9.7	10.7	7.8	6.6	7.1
17	14.2	12.9	13.4	12.3	8.9	10.4	9.8	8.6	9.4	8.1	6.2	7.1
18	15.1	13.4	14.1	12.7	9.9	11.0	---	---	---	8.2	7.0	7.8
19	14.7	11.9	13.8	12.3	11.8	12.1	---	---	---	8.9	7.6	8.3
20	13.0	10.3	12.2	---	---	---	---	---	---	---	---	---
21	11.7	9.7	10.8	---	---	---	---	---	---	---	---	---
22	13.9	11.7	12.6	---	---	---	13.0	9.1	11.2	---	---	---
23	14.7	11.4	13.0	11.8	10.4	11.1	11.5	8.3	9.6	---	---	---
24	14.7	9.9	12.2	11.9	9.5	10.5	10.7	7.5	8.7	---	---	---
25	14.1	13.3	13.7	11.8	9.3	10.3	8.7	6.9	7.9	---	---	---
26	14.6	13.4	14.0	13.8	9.9	11.5	9.4	6.7	7.8	8.6	6.2	7.1
27	14.7	12.9	13.7	14.4	9.6	11.5	10.0	6.1	7.7	8.8	6.1	7.3
28	13.9	12.3	13.1	13.4	7.1	9.9	8.0	5.7	6.9	8.0	5.5	6.5
29	---	---	---	12.1	7.0	9.0	8.6	6.2	7.8	8.0	5.2	6.4
30	---	---	---	---	---	---	8.4	6.5	7.4	8.2	5.6	6.6
31	---	---	---	---	---	---	---	---	---	8.0	5.3	6.5
MONTH	15.8	8.1	12.3	---	---	---	---	---	---	---	---	---

07178040 MINGO CREEK AT 46TH STREET NORTH AT TULSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.4	5.1	6.6	6.8	4.7	5.5	9.1	4.3	5.7	4.7	4.1	4.3
2	7.9	5.1	6.4	7.6	4.0	5.7	---	---	---	6.6	3.9	4.7
3	7.1	4.1	5.6	8.0	4.2	5.8	---	---	---	---	---	---
4	5.1	3.1	4.1	7.2	4.6	5.7	---	---	---	---	---	---
5	6.6	3.5	4.9	6.8	4.4	5.4	---	---	---	---	---	---
6	6.8	4.3	5.5	5.5	3.9	4.9	---	---	---	---	---	---
7	5.7	3.9	4.7	3.9	2.9	3.3	---	---	---	---	---	---
8	7.2	4.0	5.7	4.5	2.4	3.4	---	---	---	---	---	---
9	7.7	4.8	5.7	4.4	2.3	3.0	---	---	---	6.1	5.6	5.8
10	7.4	5.3	6.1	4.3	2.3	3.2	---	---	---	6.1	5.2	5.6
11	6.1	5.1	5.6	3.9	2.3	2.9	5.9	2.8	4.2	6.7	5.0	5.9
12	5.9	4.6	5.2	4.7	2.7	3.6	5.9	3.2	4.2	6.8	4.7	5.6
13	6.7	4.7	5.5	4.9	2.7	3.8	5.5	2.9	4.0	6.4	4.8	5.7
14	7.2	4.5	5.8	6.1	2.9	4.3	6.2	3.1	4.2	---	---	---
15	7.5	4.6	6.0	4.9	3.6	4.1	5.1	2.9	3.9	---	---	---
16	8.0	4.5	6.2	4.9	3.0	3.9	6.0	2.6	4.2	---	---	---
17	8.3	4.5	6.2	4.7	2.1	3.5	6.4	3.0	4.2	---	---	---
18	8.5	4.9	6.4	7.4	2.4	3.7	5.0	3.2	4.1	---	---	---
19	7.8	4.8	5.6	7.4	3.5	4.3	4.7	2.9	3.7	---	---	---
20	5.9	4.5	5.2	4.2	3.1	3.6	5.4	2.8	4.1	---	---	---
21	6.5	4.5	5.3	5.0	2.8	3.9	6.4	3.4	4.8	---	---	---
22	7.1	4.1	5.4	5.5	3.1	3.9	6.4	3.5	4.7	7.1	5.4	6.1
23	8.4	4.2	5.8	7.1	3.3	4.4	5.6	3.5	4.3	6.9	5.4	6.1
24	7.3	4.6	5.6	6.7	3.6	4.8	5.1	3.6	4.2	7.0	5.3	6.1
25	8.6	4.5	6.3	6.5	3.6	4.6	6.1	3.6	4.7	7.4	5.9	6.6
26	8.4	5.2	6.5	6.3	3.5	4.8	5.3	3.9	4.4	---	---	---
27	8.9	5.1	6.8	7.3	4.1	5.6	5.4	3.7	4.4	---	---	---
28	8.0	5.1	6.4	8.3	4.1	5.6	6.8	3.6	5.1	7.8	7.0	7.5
29	7.7	5.2	6.3	8.7	4.3	6.2	5.6	4.0	4.8	8.5	6.4	7.4
30	6.7	5.0	6.1	8.0	4.1	5.5	5.6	3.0	4.3	8.6	6.4	7.5
31	---	---	---	9.7	4.2	6.1	5.3	3.4	4.4	---	---	---
MONTH	8.9	3.1	5.8	9.7	2.1	4.5	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK

LOCATION.--Lat 36°13'23", long 95°49'09", in SE 1/4 SE 1/4 sec.9, T.20 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, near left downstream abutment of bridge, 2.3 mi downstream from Elm Creek, 5 mi northwest of Catoosa High School, and at mile 9.5.

DRAINAGE AREA.--1,103 mi^2

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 545.00 ft above sea level.

REMARKS.--Records fair. U.S. Geological Survey's satellite telemeter at station. Some regulation by Skiatook Lake (station 07177400).

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than 9,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	1700	16,000	26.45	June 10	0500	9,330	19.42
May 11	1000	27,400	33.22				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	1410	297	1060	252	1960	3740	1070	3210	258	209	372
2	171	275	244	1260	237	2030	2520	1220	2020	270	215	194
3	177	136	205	1280	213	2220	1280	6970	1820	252	198	711
4	240	124	174	1500	223	2010	2290	4250	2030	236	222	333
5	272	98	148	1680	291	1200	5820	3360	2610	240	542	297
6	238	85	177	1460	315	684	4030	4150	2700	474	421	244
7	231	80	181	697	461	550	2760	3950	2630	346	276	240
8	368	80	169	1160	358	494	2690	3380	3180	239	181	1100
9	235	103	4150	3330	477	450	2450	18400	3410	248	169	408
10	229	169	4050	e5050	555	408	1480	21100	6850	233	314	246
11	228	842	1330	3340	597	376	1220	25900	3370	225	248	226
12	235	2730	729	3200	732	357	1150	18100	3870	506	215	211
13	240	1480	1840	e3300	979	320	916	8010	3740	2390	212	714
14	226	523	12800	e3100	802	297	1660	2220	3660	1790	216	4020
15	219	295	e14300	e2900	1010	298	3570	1220	3830	1350	225	1070
16	164	197	e7790	e2600	1410	363	2260	907	3760	861	226	432
17	83	143	1710	e2450	1240	301	3710	772	3730	465	226	274
18	80	119	1100	e2400	954	473	6330	2370	3720	329	222	262
19	81	187	778	2480	953	1490	2850	3860	3940	406	e222	268
20	78	1140	581	6210	2200	1300	2410	1280	4100	250	e220	1470
21	78	1510	495	6650	5190	840	2450	807	4070	259	e218	511
22	74	3190	425	4240	3920	3960	2270	641	3860	248	e218	442
23	70	4790	377	2930	2500	4580	1440	571	3330	210	e215	262
24	72	2440	335	2430	2300	2960	819	671	2960	258	e212	188
25	71	2730	444	2210	6700	2330	2720	528	2220	275	206	1000
26	79	2330	414	1250	4520	1400	990	1600	922	278	201	4410
27	72	992	349	911	2750	672	1210	1980	512	236	198	969
28	70	622	314	606	2090	557	604	1960	477	195	197	449
29	415	450	354	505	---	509	1110	2080	421	192	193	316
30	149	350	620	346	---	2700	1480	2090	259	189	208	280
31	93	---	608	274	---	4330	---	4450	---	202	1320	---
TOTAL	5213	29620	57488	72809	44229	42419	70229	149867	87211	13910	8365	21919
MEAN	168	987	1854	2349	1580	1368	2341	4834	2907	449	270	731
MAX	415	4790	14300	6650	6700	4580	6330	25900	6850	2390	1320	4410
MIN	70	80	148	274	213	297	604	528	259	189	169	188
AC-FT	10340	58750	114000	144400	87730	84140	139300	297300	173000	27590	16590	43480

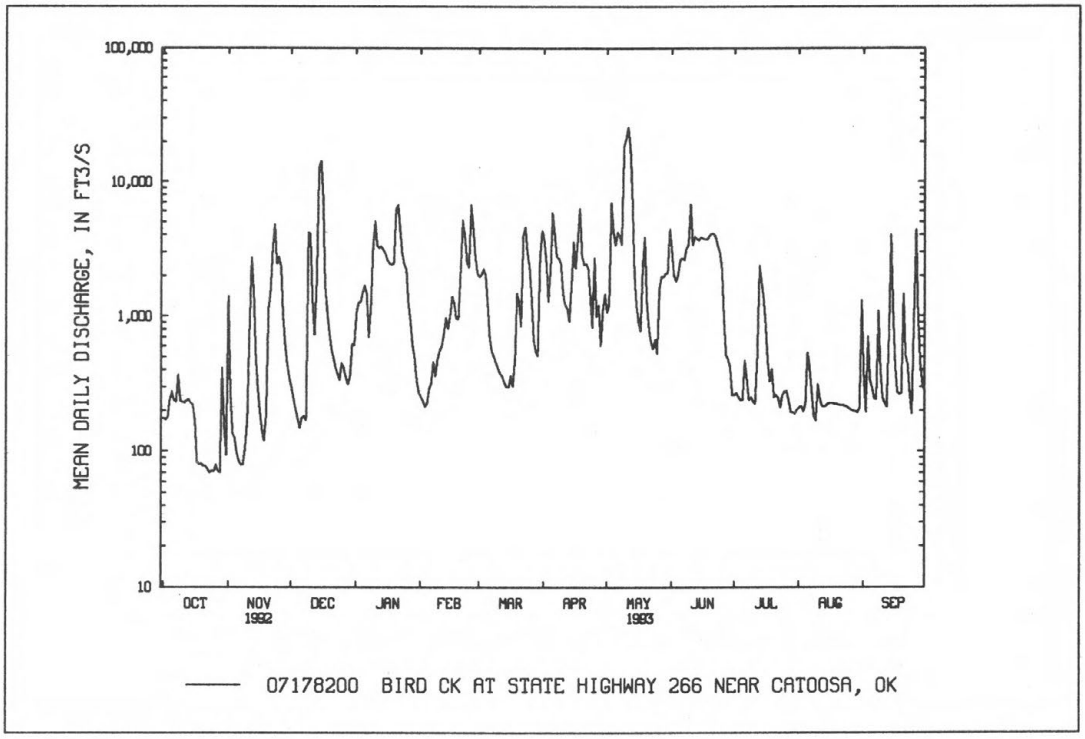
e Estimated

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	305	546	963	903	958	2042	1699	2252	2116	382	261	411
MAX	414	987	1854	2349	1580	6393	3071	4834	3355	649	340	731
(WY)	1992	1993	1993	1993	1993	1990	1990	1993	1992	1992	1992	1993
MIN	168	226	152	367	144	151	641	526	627	214	208	221
(WY)	1993	1991	1990	1991	1991	1991	1991	1992	1990	1991	1991	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1990-93	
ANNUAL TOTAL	316677		603279			
ANNUAL MEAN	865		1653		1069	
HIGHEST ANNUAL MEAN					1653	1993
LOWEST ANNUAL MEAN					418	1991
HIGHEST DAILY MEAN	14300	Dec 15	25900	May 11	25900	May 11 1993
LOWEST DAILY MEAN	70	Oct 23	70	Oct 23	70	Oct 23 1992
ANNUAL SEVEN-DAY MINIMUM	73	Oct 22	73	Oct 22	73	Oct 22 1992
INSTANTANEOUS PEAK FLOW			27400	May 11	27400	May 11 1993
INSTANTANEOUS PEAK STAGE			33.22	May 11	33.22	May 11 1993
ANNUAL RUNOFF (AC-FT)	628100		1197000		774700	
10 PERCENT EXCEEDS	2410		3890		2820	
50 PERCENT EXCEEDS	297		622		287	
90 PERCENT EXCEEDS	168		188		147	



07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--AUGUST 1988 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1988 to current year.
pH: August 1988 to current year.
WATER TEMPERATURE: August 1988 to current year.
DISSOLVED OXYGEN: August 1988 to current year.
INSTRUMENTATION.--Water-quality monitor since August 1988.
REMARKS.--Interruptions in record were due to malfunction of the recording instrument.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,300 microsiemens, Nov. 4, 1992; minimum, 56 microsiemens, July 18, 1989.
pH: Maximum, 9.4 units, July 17, 1989; minimum, 6.0 units, May 12, 1991.
WATER TEMPERATURE: Maximum, 32°C, Aug. 1, 1993; minimum, 1.5°C, Dec. 23, 1989, Jan.20, 1993.
DISSOLVED OXYGEN: Maximum, 14.4 mg/l, Jan. 20, 1992; minimum, 2.6 mg/l, Apr. 18, 1991.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum 1,300 microsiemens, Nov. 4; minimum 120 microsiemens, Dec. 15, May 10.
pH: Maximum 8.3 units, on several days; minimum 6.8 units, July 14.
WATER TEMPERATURE: Maximum 32.0°C, Aug. 1; minimum 3.5°C, Jan. 18, 19.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record) 12.9 mg/L, Jan. 14, 20; minimum recorded, 3.6 mg/L, Aug. 31.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	OCTOBER MAX	OCTOBER MIN	OCTOBER MEAN	NOVEMBER MAX	NOVEMBER MIN	NOVEMBER MEAN	DECEMBER MAX	DECEMBER MIN	DECEMBER MEAN	JANUARY MAX	JANUARY MIN	JANUARY MEAN
1	464	442	456	409	199	279	441	421	430	427	302	359
2	474	444	464	539	414	491	459	432	445	346	332	338
3	468	436	455	571	521	530	479	450	463	344	326	336
4	468	426	451	1300	583	1030	491	468	481	---	---	---
5	444	404	428	1210	699	936	497	475	488	---	---	---
6	410	374	396	713	666	682	563	502	522	---	---	---
7	406	374	395	667	601	636	581	544	559	---	---	---
8	416	348	380	595	573	587	638	585	612	476	372	419
9	416	376	393	587	533	568	639	207	385	414	318	352
10	416	382	401	573	474	533	252	209	233	384	302	343
11	418	374	403	533	248	392	270	243	254	327	294	310
12	408	382	399	743	226	415	333	269	297	350	325	340
13	408	374	397	444	328	379	379	249	326	324	294	306
14	398	370	390	410	380	398	261	125	184	312	294	302
15	402	372	393	458	410	424	150	120	133	327	310	316
16	402	376	392	482	458	468	216	145	137	334	326	330
17	450	386	427	505	482	496	---	---	---	332	326	329
18	468	424	450	537	505	527	---	---	---	354	328	345
19	462	422	445	623	519	550	---	---	---	414	330	338
20	452	420	440	611	354	472	---	---	---	422	230	286
21	464	432	450	435	322	364	434	358	397	266	228	240
22	478	438	462	454	260	329	486	428	457	356	272	293
23	519	462	490	316	244	280	474	450	459	410	323	365
24	527	488	509	328	264	276	493	462	480	333	316	322
25	551	513	530	296	240	263	537	480	503	332	311	321
26	553	519	538	299	244	271	513	466	487	384	336	363
27	549	501	523	369	302	332	573	501	538	404	378	389
28	551	513	532	383	366	374	565	527	542	430	400	413
29	569	352	459	407	379	389	535	507	525	450	426	439
30	445	374	420	425	403	412	511	448	479	498	450	467
31	492	404	477	---	---	---	478	443	465	529	490	504
MONTH	569	348	443	1300	199	469	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	559	529	539	350	318	329	290	270	278	412	384	402
2	581	551	561	368	348	359	278	268	273	414	370	404
3	595	569	581	368	340	353	318	282	302	370	182	241
4	601	570	585	358	348	352	334	270	316	276	248	265
5	600	572	587	408	358	387	296	208	237	290	272	279
6	613	570	584	454	404	421	252	212	238	308	266	291
7	607	548	579	486	448	462	260	250	254	284	272	280
8	548	519	531	488	464	480	264	254	260	310	196	288
9	547	523	536	511	488	502	314	258	286	196	128	147
10	572	455	497	519	505	514	342	316	332	130	120	125
11	506	464	482	541	511	533	352	334	342	172	122	135
12	504	468	478	557	525	537	354	336	348	196	172	182
13	502	471	489	545	525	535	388	354	367	266	180	214
14	476	451	463	561	531	543	408	312	373	342	266	308
15	512	434	473	577	553	564	388	286	311	392	342	366
16	510	434	483	603	571	585	328	302	317	428	390	409
17	493	435	466	593	577	583	346	246	301	470	428	449
18	435	411	421	595	519	574	254	208	235	472	352	410
19	505	423	440	607	400	502	316	248	290	378	274	317
20	492	364	424	448	410	419	308	294	301	352	314	329
21	378	220	266	462	414	434	294	280	287	408	352	380
22	294	222	263	444	246	352	296	280	287	454	408	426
23	306	252	276	308	230	267	354	296	323	472	446	458
24	286	268	274	306	296	303	410	332	379	484	450	463
25	292	226	255	330	308	318	374	240	302	519	484	503
26	274	234	247	360	330	345	356	300	327	521	320	410
27	308	274	291	430	362	395	352	320	334	328	320	323
28	318	304	310	464	434	447	418	348	382	324	314	320
29	---	---	---	476	452	466	478	330	408	320	304	310
30	---	---	---	486	268	385	426	380	403	312	286	305
31	---	---	---	296	256	280	---	---	---	346	278	309
MONTH	613	220	442	607	230	436	478	208	313	521	120	324

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	288	268	281	501	472	492	482	452	469	318	256	280
2	294	272	286	535	494	518	472	452	465	358	318	342
3	326	288	304	529	505	515	474	452	465	390	256	326
4	310	284	302	513	474	493	486	470	476	400	352	380
5	290	270	282	498	474	490	482	310	438	400	364	386
6	288	264	276	496	442	476	400	328	367	444	390	404
7	270	262	267	490	424	446	505	354	431	454	414	439
8	278	252	266	515	458	493	505	456	477	428	230	324
9	276	240	266	476	428	445	486	446	470	408	276	343
10	280	188	220	478	456	465	496	434	464	509	408	453
11	296	234	255	484	456	469	496	452	471	446	386	413
12	266	254	260	519	446	490	462	398	432	418	392	410
13	268	260	264	505	252	350	452	416	430	416	238	359
14	278	262	273	288	188	226	456	436	452	356	164	227
15	278	274	276	324	236	284	456	434	450	332	282	300
16	280	272	277	282	238	269	460	438	455	392	324	368
17	282	272	276	318	276	290	452	428	444	426	392	411
18	278	272	275	370	318	335	---	---	---	444	400	423
19	300	270	279	388	356	375	---	---	---	438	400	419
20	278	264	272	438	380	416	---	---	---	450	246	316
21	286	262	273	456	424	441	---	---	---	316	246	272
22	288	276	281	476	448	464	---	---	---	408	298	330
23	282	272	276	498	474	485	---	---	---	442	406	421
24	330	272	290	498	456	480	444	414	434	478	442	459
25	340	274	287	482	456	473	442	416	432	480	322	419
26	378	310	327	464	418	443	446	410	433	324	152	206
27	382	336	351	452	432	438	458	420	440	256	220	238
28	414	382	398	458	432	451	448	416	434	318	256	284
29	444	394	414	470	450	462	448	412	433	338	308	324
30	484	444	464	480	458	472	446	420	433	358	324	340
31	---	---	---	494	466	480	432	232	317	---	---	---
MONTH	484	188	294	535	188	433	---	---	---	509	152	354

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	7.8	7.7	7.8	8.3	7.7	7.9	8.2	8.2	8.2	---	---	---
2	7.8	7.7	7.7	7.8	7.7	7.8	8.2	8.2	8.2	---	---	---
3	7.8	7.7	7.8	7.8	7.7	7.8	8.2	8.2	8.2	---	---	---
4	7.8	7.7	7.7	7.8	7.7	7.8	8.2	8.1	8.2	---	---	---
5	7.8	7.7	7.8	7.8	7.7	7.8	8.2	8.2	8.2	---	---	---
6	7.8	7.7	7.7	7.7	7.7	7.7	8.3	8.2	8.2	---	---	---
7	7.8	7.7	7.7	7.6	7.5	7.6	8.3	8.2	8.3	8.1	8.0	8.1
8	7.8	7.7	7.8	7.7	7.7	7.7	8.2	8.2	8.2	8.2	8.1	8.1
9	7.7	7.7	7.7	7.8	7.7	7.7	8.3	7.9	8.2	8.2	8.0	8.1
10	7.8	7.7	7.7	7.9	7.8	7.8	8.0	8.0	8.0	8.2	8.0	8.1
11	7.7	7.7	7.7	8.0	7.8	7.9	8.0	8.0	8.0	8.2	8.1	8.1
12	7.7	7.7	7.7	8.1	7.7	7.9	8.1	8.0	8.1	8.2	8.2	8.2
13	7.7	7.6	7.7	7.9	7.8	7.9	8.3	8.1	8.2	8.2	8.2	8.2
14	7.8	7.7	7.7	7.9	7.9	7.9	8.2	7.9	8.1	8.2	8.2	8.2
15	7.7	7.7	7.7	7.9	7.9	7.9	---	---	---	8.3	8.2	8.3
16	7.8	7.6	7.8	7.9	7.9	7.9	---	---	---	8.3	8.2	8.3
17	7.8	7.7	7.7	7.9	7.8	7.8	---	---	---	8.3	8.2	8.3
18	7.7	7.6	7.6	7.8	7.8	7.8	---	---	---	8.3	8.3	8.3
19	7.7	7.6	7.7	7.9	7.7	7.8	---	---	---	8.3	8.3	8.3
20	7.7	7.6	7.7	8.0	7.8	7.9	---	---	---	8.3	8.0	8.1
21	7.7	7.6	7.7	8.0	7.8	7.9	---	---	---	8.2	8.0	8.1
22	7.7	7.7	7.7	8.1	8.0	8.0	---	---	---	8.2	8.2	8.2
23	7.7	7.5	7.6	8.0	7.8	7.9	---	---	---	7.9	7.8	7.9
24	7.6	7.5	7.6	8.2	7.9	8.0	---	---	---	7.9	7.9	7.9
25	7.6	7.5	7.6	8.2	8.1	8.1	---	---	---	8.0	7.9	7.9
26	7.7	7.6	7.7	8.2	8.1	8.2	---	---	---	7.9	7.8	7.8
27	7.7	7.7	7.7	8.2	8.1	8.2	---	---	---	7.8	7.8	7.8
28	7.7	7.6	7.7	8.2	8.2	8.2	---	---	---	7.8	7.8	7.8
29	8.0	7.7	7.8	8.2	8.2	8.2	---	---	---	7.8	7.8	7.8
30	7.8	7.7	7.7	8.2	8.2	8.2	---	---	---	7.8	7.8	7.8
31	7.7	7.7	7.7	---	---	---	---	---	---	7.8	7.8	7.8
MAX	8.0	7.7	7.8	8.3	8.2	8.2	---	---	---	---	---	---
MIN	7.6	7.5	7.6	7.6	7.5	7.6	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.8	7.8	7.8	8.1	7.9	8.0	7.8	7.7	7.7	7.7	7.6	7.6
2	7.8	7.8	7.8	8.1	8.0	8.0	7.8	7.7	7.7	7.7	7.5	7.6
3	7.8	7.8	7.8	8.1	8.0	8.1	7.8	7.7	7.8	7.5	7.1	7.4
4	8.0	7.8	7.9	8.2	8.1	8.1	8.0	7.7	7.7	7.5	7.4	7.5
5	8.0	8.0	8.0	8.1	7.9	8.1	7.8	7.6	7.7	7.6	7.5	7.6
6	8.0	7.9	8.0	8.0	8.0	8.0	7.8	7.7	7.8	7.6	7.5	7.6
7	8.1	8.0	8.0	8.0	7.9	8.0	7.8	7.7	7.7	7.6	7.5	7.5
8	8.1	8.0	8.1	8.1	7.9	8.0	7.8	7.7	7.7	7.6	7.5	7.6
9	8.2	8.0	8.1	8.0	8.0	8.0	7.8	7.6	7.7	7.7	7.1	7.2
10	8.1	8.0	8.0	8.0	7.9	7.9	7.8	7.7	7.7	7.1	7.0	7.0
11	8.1	8.0	8.0	8.0	7.8	7.8	7.8	7.7	7.7	7.1	6.9	7.0
12	8.1	8.0	8.0	8.0	7.7	7.9	7.8	7.7	7.7	7.2	7.1	7.1
13	8.1	8.1	8.1	8.0	7.9	7.9	7.8	7.7	7.8	7.2	7.0	7.0
14	8.2	8.1	8.1	8.0	7.9	8.0	7.9	7.8	7.8	7.4	7.2	7.4
15	8.2	8.1	8.1	8.0	7.8	7.9	7.8	7.7	7.7	7.5	7.4	7.4
16	8.1	8.1	8.1	7.9	7.8	7.9	7.9	7.8	7.8	7.5	7.4	7.5
17	8.1	8.0	8.1	7.9	7.7	7.8	7.9	7.6	7.8	7.5	7.5	7.5
18	8.0	8.0	8.0	7.9	7.7	7.7	7.7	7.5	7.6	7.6	7.4	7.5
19	8.1	8.0	8.0	7.9	7.7	7.8	7.9	7.6	7.7	7.5	7.3	7.5
20	8.1	7.8	7.9	7.8	7.7	7.8	7.9	7.8	7.9	7.6	7.5	7.5
21	8.0	7.7	7.8	7.8	7.7	7.7	7.9	7.8	7.9	7.6	7.6	7.6
22	8.0	7.8	7.9	7.8	7.5	7.7	7.8	7.7	7.8	7.6	7.5	7.6
23	8.0	7.8	8.0	7.7	7.5	7.6	7.8	7.7	7.7	7.6	7.5	7.5
24	8.1	7.9	8.0	7.8	7.7	7.7	7.7	7.6	7.7	7.6	7.5	7.5
25	8.2	7.7	7.8	7.8	7.8	7.8	7.7	7.5	7.6	7.6	7.5	7.5
26	7.9	7.8	7.8	7.8	7.7	7.8	7.6	7.6	7.6	7.6	7.3	7.5
27	8.0	7.9	7.9	7.8	7.7	7.7	7.7	7.6	7.6	7.4	7.4	7.4
28	8.0	7.9	7.9	7.7	7.6	7.7	7.6	7.5	7.6	7.4	7.3	7.3
29	---	---	---	7.7	7.6	7.7	7.6	7.5	7.5	7.4	7.3	7.3
30	---	---	---	7.7	7.5	7.6	7.6	7.5	7.6	7.3	7.2	7.3
31	---	---	---	7.7	7.5	7.7	---	---	---	7.5	7.1	7.3
MAX	8.2	8.1	8.1	8.2	8.1	8.1	8.0	7.8	7.9	7.7	7.6	7.6
MIN	7.8	7.7	7.8	7.7	7.5	7.6	7.6	7.5	7.5	7.1	6.9	7.0

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.6	7.3	7.4	7.0	7.0	7.0	7.5	7.4	7.5	7.2	7.1	7.2
2	7.5	7.3	7.4	7.1	6.9	7.0	7.5	7.4	7.5	7.3	7.2	7.2
3	7.4	7.3	7.4	7.1	7.0	7.1	7.5	7.4	7.4	7.6	7.3	7.4
4	7.6	7.4	7.4	7.2	7.1	7.1	7.5	7.4	7.5	7.5	7.4	7.4
5	7.6	7.5	7.5	7.2	7.1	7.2	7.7	7.4	7.6	7.5	7.4	7.5
6	7.5	7.3	7.4	7.2	7.1	7.1	7.5	7.4	7.5	7.6	7.5	7.5
7	7.4	7.2	7.3	7.3	7.2	7.2	7.6	7.4	7.4	7.6	7.5	7.6
8	7.6	7.1	7.3	7.3	7.1	7.2	7.6	7.4	7.6	7.9	7.5	7.6
9	7.4	7.1	7.3	7.1	7.1	7.1	7.7	7.5	7.6	7.5	7.3	7.3
10	7.4	7.0	7.1	7.1	7.1	7.1	7.6	7.4	7.5	7.4	7.2	7.3
11	7.5	7.1	7.3	7.2	7.1	7.1	7.6	7.5	7.5	7.4	7.3	7.3
12	7.3	7.3	7.3	7.3	7.1	7.2	7.5	7.4	7.5	7.5	7.3	7.4
13	7.3	7.2	7.3	7.3	6.9	7.2	7.5	7.4	7.4	7.8	7.5	7.5
14	7.4	7.3	7.4	7.1	6.8	6.9	7.6	7.5	7.5	7.8	7.5	7.7
15	7.4	7.3	7.3	7.2	7.0	7.1	7.7	7.6	7.6	7.5	7.4	7.5
16	7.3	7.2	7.2	7.2	7.1	7.1	7.8	7.6	7.7	7.6	7.5	7.5
17	7.2	7.1	7.2	7.2	7.1	7.1	7.8	7.6	7.6	7.5	7.4	7.5
18	7.2	7.1	7.1	7.2	7.1	7.1	---	---	---	7.6	7.3	7.4
19	7.2	7.1	7.2	7.3	7.2	7.2	---	---	---	7.5	7.3	7.4
20	7.1	7.1	7.1	7.2	7.1	7.2	---	---	---	7.8	7.3	7.5
21	7.1	7.0	7.1	7.2	7.1	7.2	---	---	---	7.3	7.3	7.3
22	7.1	7.1	7.1	7.3	7.1	7.3	---	---	---	7.3	7.2	7.3
23	7.1	7.0	7.1	7.4	7.2	7.3	---	---	---	7.5	7.3	7.3
24	7.1	7.0	7.0	7.4	7.3	7.4	7.6	7.5	7.6	7.5	7.4	7.4
25	7.1	6.9	7.0	7.5	7.3	7.4	7.6	7.5	7.6	7.6	7.2	7.5
26	7.1	7.1	7.1	7.5	7.3	7.4	7.7	7.6	7.6	7.2	6.9	7.1
27	7.1	7.0	7.1	7.5	7.3	7.4	7.6	7.5	7.5	7.4	7.2	7.2
28	7.1	7.1	7.1	7.6	7.5	7.5	7.6	7.5	7.5	7.4	7.3	7.4
29	7.1	7.1	7.1	7.6	7.5	7.5	7.6	7.5	7.6	7.4	7.3	7.4
30	7.1	7.0	7.1	7.6	7.5	7.5	7.6	7.5	7.6	7.5	7.4	7.4
31	---	---	---	7.6	7.4	7.5	7.8	7.1	7.5	---	---	---
MAX	7.6	7.5	7.5	7.6	7.5	7.5	---	---	---	7.9	7.5	7.7
MIN	7.1	6.9	7.0	7.0	6.8	6.9	---	---	---	7.2	6.9	7.1

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.0	19.5	20.0	17.0	13.5	14.5	7.5	6.5	7.0	7.5	6.0	6.5
2	20.0	19.5	20.0	13.5	13.0	13.5	7.5	6.5	7.0	6.5	6.0	6.0
3	20.0	19.5	20.0	13.5	12.5	13.5	8.0	7.0	7.0	7.0	6.5	6.5
4	20.5	19.5	20.0	12.5	10.5	12.0	8.0	7.0	7.5	7.5	7.0	7.5
5	21.0	19.5	20.0	12.5	10.5	11.5	7.5	6.0	6.5	7.0	6.0	6.5
6	21.5	20.5	21.0	12.5	11.5	12.0	6.5	6.0	6.0	6.0	5.5	6.0
7	21.0	20.5	21.0	12.5	11.5	12.0	6.5	5.0	5.5	6.0	5.5	6.0
8	20.5	18.0	18.5	13.0	11.5	12.5	6.0	5.0	5.5	5.5	4.5	5.0
9	18.5	17.5	18.0	13.0	12.0	12.5	6.5	3.0	4.5	5.5	4.0	5.0
10	18.5	18.0	18.0	14.0	13.0	13.5	5.5	5.0	5.0	4.0	3.0	3.5
11	18.5	17.5	18.0	14.5	13.5	14.0	6.0	5.0	5.5	4.0	3.0	3.5
12	19.0	18.5	18.5	14.0	12.5	13.5	6.5	5.5	6.0	4.5	4.0	4.5
13	20.0	18.5	19.0	12.5	12.0	12.0	7.5	6.5	7.0	4.0	3.5	3.5
14	20.5	19.5	20.0	12.5	11.5	12.0	7.5	7.0	7.5	3.5	3.5	3.5
15	20.5	19.5	20.0	12.5	11.5	12.0	7.5	7.0	7.5	4.0	3.5	4.0
16	19.5	18.0	19.0	13.0	12.5	12.5	7.0	6.0	6.5	4.5	3.5	4.0
17	18.0	17.5	17.5	14.0	13.0	13.5	6.0	3.5	5.5	4.5	4.0	4.5
18	17.5	16.5	17.0	14.5	13.5	14.5	6.5	5.5	6.0	4.5	3.5	4.0
19	17.0	16.5	17.0	15.0	14.5	15.0	---	---	---	3.5	3.5	3.5
20	18.0	16.0	17.0	14.5	13.0	13.5	7.0	6.0	6.5	3.5	1.5	2.0
21	19.0	17.5	18.5	12.5	12.0	12.5	7.0	6.5	6.5	4.0	2.0	3.0
22	19.5	18.5	19.0	12.0	6.5	8.5	7.0	6.5	6.5	7.5	4.0	4.5
23	20.0	19.0	19.5	10.0	5.5	8.5	7.0	6.5	6.5	8.5	6.5	7.0
24	20.0	19.5	19.5	8.5	7.5	8.5	7.0	5.5	6.0	6.5	6.5	6.5
25	20.0	19.0	19.5	8.5	7.5	8.0	6.5	6.0	6.0	6.5	4.0	5.5
26	19.5	18.5	19.0	7.5	7.5	7.5	6.0	5.0	5.5	5.5	4.5	5.0
27	19.0	18.5	19.0	7.5	7.0	7.0	8.5	5.0	6.5	6.0	4.5	5.0
28	18.5	17.5	18.0	7.5	6.5	7.0	7.5	6.0	6.5	7.5	5.5	6.5
29	18.0	16.0	17.0	7.5	6.5	6.5	9.0	7.5	8.0	7.0	5.5	6.0
30	16.5	16.0	16.5	7.5	6.5	7.0	10.0	8.5	9.0	6.5	5.0	5.5
31	17.0	16.0	16.5	---	---	---	10.0	7.5	8.5	7.5	5.5	6.0
MONTH	21.5	16.0	18.8	17.0	5.5	11.4	---	---	---	8.5	1.5	5.0

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	7.5	6.0	6.5	6.0	5.0	5.5	12.0	10.0	11.0	18.5	17.0	17.5
2	8.0	6.5	7.0	6.5	6.0	6.0	10.0	9.0	9.5	18.5	17.5	18.0
3	8.5	7.5	8.0	6.5	6.0	6.0	10.5	10.0	10.0	18.5	16.5	17.0
4	8.5	8.0	8.5	6.0	6.0	6.0	10.5	9.5	10.0	16.5	15.5	16.0
5	9.0	8.5	9.0	7.0	3.5	6.0	9.0	8.5	9.0	16.5	15.5	16.0
6	9.5	8.0	8.5	---	---	---	9.5	8.5	9.0	17.5	16.0	16.5
7	9.5	7.5	8.5	---	---	---	10.5	9.5	10.0	17.5	17.0	17.5
8	10.0	8.0	8.5	---	---	---	10.5	10.0	10.0	17.5	17.0	17.0
9	10.0	8.5	9.5	---	---	---	11.0	9.5	10.5	17.0	16.5	16.5
10	9.5	9.0	9.5	---	---	---	13.0	11.0	12.0	---	---	---
11	10.0	9.5	10.0	---	---	---	14.0	12.5	13.0	---	---	---
12	9.5	8.0	9.0	9.5	9.0	9.5	14.0	13.0	13.5	---	---	---
13	8.5	7.5	8.0	9.0	7.5	8.5	14.0	12.5	13.0	---	---	---
14	8.0	7.0	7.5	9.0	6.5	7.5	14.0	11.5	13.0	---	---	---
15	7.5	4.0	6.0	9.0	7.0	8.0	11.5	10.0	10.5	---	---	---
16	---	---	---	10.5	8.0	9.0	11.5	10.0	10.5	---	---	---
17	---	---	---	10.5	8.5	9.0	12.5	11.5	12.0	---	---	---
18	---	---	---	9.0	6.5	8.0	13.0	11.5	12.0	---	---	---
19	---	---	---	6.5	5.5	6.0	15.0	13.0	14.0	---	---	---
20	6.0	4.0	4.5	7.0	6.0	6.5	14.5	13.5	14.0	---	---	---
21	6.5	5.5	6.0	8.0	6.5	7.0	13.5	12.5	13.0	19.0	18.5	19.0
22	6.5	5.5	6.0	10.5	8.0	9.0	13.5	12.0	13.0	19.0	18.0	18.5
23	6.0	5.5	6.0	10.0	9.5	9.5	14.5	13.5	14.0	19.5	18.5	19.0
24	5.5	4.5	5.0	9.5	8.5	9.5	16.0	14.5	15.0	21.5	18.5	20.0
25	3.5	3.0	3.0	9.5	8.5	9.0	18.0	16.0	17.0	22.0	20.0	21.0
26	4.0	3.5	3.5	10.0	8.5	9.5	19.5	17.5	18.0	22.0	15.5	19.0
27	4.5	3.5	4.0	12.5	9.5	11.0	18.5	16.0	17.5	16.5	15.5	16.0
28	5.5	4.5	5.0	15.0	12.0	13.0	17.0	16.0	16.5	16.0	15.5	16.0
29	---	---	---	15.5	13.5	14.5	19.0	17.0	17.5	16.0	15.5	15.5
30	---	---	---	16.0	14.5	15.5	18.5	17.0	18.0	16.0	16.0	15.5
31	---	---	---	15.5	12.5	14.0	---	---	---	20.5	15.0	17.5
MONTH	---	---	---	---	---	---	19.5	8.5	12.9	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.0	17.0	17.5	28.5	27.0	28.0	32.0	30.5	31.5	25.0	24.0	24.5
2	17.5	16.5	17.0	29.0	27.5	28.0	31.5	30.0	30.5	26.5	25.0	25.5
3	17.5	16.5	17.0	29.0	27.5	28.5	30.0	28.5	29.5	26.5	24.5	25.5
4	18.0	16.5	17.0	28.5	27.0	27.5	29.0	28.0	28.5	26.5	24.0	25.5
5	18.0	16.5	17.0	27.5	26.5	27.0	28.5	24.5	26.5	26.5	24.5	25.5
6	17.5	17.0	17.0	27.5	26.5	27.0	24.5	24.0	24.5	26.5	25.0	25.5
7	17.5	17.0	17.0	27.0	26.0	26.5	26.0	23.5	24.5	26.0	24.5	25.0
8	18.5	17.0	17.5	28.0	26.0	27.0	26.0	25.0	25.5	25.0	22.0	23.5
9	18.5	16.5	17.0	28.5	26.5	27.5	27.0	25.5	26.0	24.0	21.5	22.5
10	20.5	18.5	19.5	29.0	27.5	28.0	28.5	26.5	27.5	24.0	23.0	23.5
11	20.5	17.5	18.5	29.0	28.0	28.5	29.5	27.5	28.5	24.0	23.0	23.5
12	17.5	17.0	17.5	29.0	27.5	28.5	30.0	29.0	29.5	25.5	24.0	24.5
13	17.5	17.0	17.0	28.0	25.5	27.0	30.5	29.5	30.0	26.0	24.5	25.0
14	18.0	17.0	17.5	27.0	25.0	25.5	31.5	30.0	30.5	24.5	18.5	20.5
15	18.0	17.0	17.5	27.5	25.5	26.5	31.5	30.0	31.0	20.0	19.0	19.5
16	18.0	17.0	17.5	28.0	26.5	27.0	31.5	30.0	31.0	20.5	18.5	19.5
17	18.0	17.0	17.5	29.5	27.0	28.0	31.5	30.0	30.5	21.0	19.5	20.0
18	18.0	17.5	18.0	30.0	28.0	29.0	---	---	---	22.0	20.5	21.0
19	19.0	17.5	18.0	30.0	28.0	29.0	---	---	---	22.5	21.0	21.5
20	19.0	18.0	18.5	29.5	28.0	29.0	---	---	---	23.0	22.0	22.0
21	19.0	18.0	18.5	30.5	29.0	29.5	---	---	---	24.0	21.5	22.0
22	19.0	18.0	18.5	30.5	28.5	29.5	---	---	---	25.0	22.5	23.5
23	19.5	18.5	19.0	30.5	29.5	30.0	---	---	---	25.0	24.5	24.5
24	20.5	19.0	19.5	31.0	29.5	30.0	29.5	28.5	29.0	24.5	23.5	24.0
25	22.0	20.0	21.0	31.0	29.5	30.0	29.5	28.5	29.5	24.0	21.5	23.0
26	24.5	22.0	23.0	31.0	29.0	30.0	30.0	29.0	29.5	21.5	20.5	21.0
27	27.0	24.0	25.0	31.0	29.0	29.5	30.0	29.0	29.5	20.5	19.5	20.0
28	27.5	25.5	26.5	30.5	29.0	30.0	30.0	29.0	29.5	21.5	19.5	20.5
29	28.5	26.5	27.0	30.5	29.5	30.0	30.0	29.0	30.0	21.0	20.0	20.5
30	28.5	27.0	28.0	31.0	29.5	30.5	30.0	29.0	29.5	21.5	19.5	20.5
31	---	---	---	31.5	30.0	31.0	29.5	24.5	26.5	---	---	---
MONTH	28.5	16.5	19.2	31.5	25.0	28.5	---	---	---	26.5	18.5	22.8

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.6	8.2	8.4	7.6	6.6	7.1	11.2	11.0	11.1	---	---	---
2	8.6	8.2	8.4	7.6	7.3	7.4	11.2	10.9	11.0	---	---	---
3	8.5	8.3	8.4	7.3	6.7	6.9	11.0	10.8	10.9	---	---	---
4	8.8	8.1	8.5	7.4	6.8	7.1	10.8	10.5	10.7	---	---	---
5	8.8	8.1	8.4	7.7	7.4	7.5	10.9	10.8	10.8	---	---	---
6	8.6	7.8	8.1	7.8	7.5	7.7	11.0	10.9	10.9	---	---	---
7	8.4	7.9	8.1	8.2	7.6	7.9	11.3	10.9	11.1	---	---	---
8	8.4	6.9	7.6	8.1	7.9	8.0	11.2	11.0	11.1	11.9	11.6	11.8
9	8.6	8.0	8.2	8.1	7.9	8.0	11.9	10.5	11.4	12.3	11.8	12.0
10	8.5	7.9	8.3	8.6	8.1	8.3	12.0	10.9	11.5	12.6	12.3	12.4
11	8.7	8.2	8.4	8.8	7.5	8.3	11.6	10.6	11.1	12.6	12.5	12.6
12	8.7	7.7	8.2	9.0	8.3	8.6	10.6	10.2	10.4	12.5	12.5	12.5
13	8.3	7.6	8.0	9.5	8.4	9.1	10.3	10.0	10.2	12.8	12.5	12.6
14	8.1	7.6	7.8	9.7	9.5	9.6	---	---	---	12.9	12.7	12.8
15	7.9	7.3	7.6	9.5	9.4	9.4	---	---	---	12.8	12.6	12.7
16	7.7	7.4	7.7	9.4	9.0	9.2	---	---	---	12.6	12.4	12.5
17	8.1	7.5	7.8	9.0	8.4	8.7	---	---	---	12.4	12.3	12.4
18	8.0	7.4	7.7	8.4	7.9	8.2	---	---	---	12.5	12.1	12.3
19	8.1	7.4	7.7	8.0	7.8	7.9	---	---	---	12.5	12.3	12.4
20	8.0	7.5	7.8	8.6	7.7	8.1	---	---	---	12.9	12.4	12.7
21	7.9	7.4	7.6	9.3	8.2	8.8	---	---	---	---	---	---
22	7.7	7.1	7.4	10.9	9.2	10.1	---	---	---	---	---	---
23	7.1	6.7	6.8	10.5	9.2	9.9	---	---	---	---	---	---
24	7.5	6.7	7.0	10.8	10.3	10.5	---	---	---	---	---	---
25	7.0	6.5	6.7	10.8	10.4	10.6	---	---	---	---	---	---
26	7.2.	6.4	6.8	11.2	10.7	10.9	---	---	---	11.6	11.1	11.3
27	7.4	6.4	6.7	11.4	11.0	11.3	---	---	---	11.2	10.5	10.8
28	7.3	6.6	7.0	11.4	11.2	11.4	---	---	---	10.5	10.2	10.4
29	7.2	6.9	7.1	11.4	11.1	11.3	---	---	---	10.4	10.2	10.3
30	7.0	6.6	6.7	11.3	11.1	11.2	---	---	---	10.7	10.4	10.6
31	7.4	6.7	7.1	---	---	---	---	---	---	10.7	10.4	10.5
MONTH	8.8	6.4	7.7	11.4	6.6	9.0	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	FEBRUARY MAX	FEBRUARY MIN	FEBRUARY MEAN	MARCH MAX	MARCH MIN	MARCH MEAN	APRIL MAX	APRIL MIN	APRIL MEAN	MAY MAX	MAY MIN	MAY MEAN
1	10.4	10.2	10.3	---	---	---	11.6	10.5	11.0	9.2	8.7	8.9
2	10.3	10.1	10.2	---	---	---	12.1	11.6	11.9	9.0	8.6	8.7
3	10.2	9.9	10.0	---	---	---	12.0	11.2	11.6	8.7	5.8	7.2
4	---	---	---	---	---	---	11.5	11.2	11.3	9.1	8.0	8.7
5	---	---	---	---	---	---	12.0	11.4	11.7	9.6	8.8	9.3
6	---	---	---	---	---	---	---	---	---	9.5	8.0	9.1
7	---	---	---	---	---	---	---	---	---	8.8	8.2	8.5
8	---	---	---	---	---	---	---	---	---	8.7	6.8	8.2
9	---	---	---	---	---	---	11.0	10.8	10.9	6.5	4.8	5.5
10	---	---	---	---	---	---	10.8	10.1	10.4	4.7	4.4	4.6
11	---	---	---	---	---	---	10.3	9.9	10.1	5.2	4.4	4.6
12	11.7	11.2	11.5	---	---	---	10.2	9.9	10.0	6.0	4.9	5.5
13	11.6	10.8	11.2	---	---	---	10.0	9.7	9.9	6.6	4.4	5.5
14	11.5	10.9	11.2	---	---	---	9.7	8.8	9.4	---	---	---
15	11.8	11.3	11.5	---	---	---	9.9	9.3	9.6	---	---	---
16	12.0	11.1	11.6	---	---	---	10.5	9.9	10.3	7.6	6.6	7.2
17	12.2	11.4	11.8	---	---	---	10.3	9.5	9.9	9.0	7.1	7.7
18	12.3	11.5	11.8	---	---	---	9.6	9.4	9.6	9.1	6.9	7.7
19	---	---	---	---	---	---	9.6	9.3	9.4	7.3	6.9	7.1
20	---	---	---	---	---	---	9.9	9.4	9.7	7.7	7.3	7.6
21	---	---	---	---	---	---	10.4	9.9	10.2	7.8	7.7	7.7
22	---	---	---	11.5	11.0	11.3	10.6	10.1	10.4	7.8	7.7	7.8
23	---	---	---	11.7	11.0	11.4	10.2	9.5	9.9	7.8	7.7	7.7
24	---	---	---	12.4	11.7	12.2	9.5	8.2	9.2	7.9	7.6	7.7
25	---	---	---	12.5	12.1	12.3	8.4	6.3	7.4	7.7	7.4	7.6
26	---	---	---	12.3	12.0	12.2	7.9	7.3	7.6	9.2	7.3	8.1
27	---	---	---	12.1	11.4	11.9	9.3	7.8	8.6	9.3	9.1	9.2
28	---	---	---	11.4	10.8	11.0	9.1	8.5	8.8	9.3	9.1	9.2
29	---	---	---	11.0	10.4	10.6	8.5	6.9	8.0	9.4	9.2	9.2
30	---	---	---	10.7	9.2	9.7	8.9	8.1	8.4	9.3	9.1	9.2
31	---	---	---	10.5	9.3	10.0	---	---	---	9.4	7.7	8.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07178200 BIRD CREEK AT STATE HIGHWAY 266 NEAR CATOOSA, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.5	8.3	9.0	6.1	5.6	5.8	6.9	5.6	6.1	4.7	4.5	4.6
2	9.4	9.1	9.3	6.2	5.6	5.9	6.5	5.2	5.6	5.4	4.6	4.9
3	9.1	8.7	8.9	6.3	5.6	6.0	5.7	3.7	4.8	5.9	5.3	5.6
4	9.1	8.6	8.9	6.2	5.7	6.0	6.2	5.2	5.8	6.4	5.2	5.7
5	9.1	8.6	8.9	6.1	5.7	5.9	6.6	5.2	6.0	6.4	5.8	6.0
6	9.0	8.8	8.9	6.0	5.5	5.8	5.8	4.8	5.4	7.0	5.8	6.3
7	9.0	8.9	8.9	5.9	5.7	5.8	6.7	5.4	6.2	7.0	6.0	6.5
8	9.0	7.6	8.7	5.7	5.5	5.7	6.6	5.8	6.1	6.8	5.5	6.4
9	9.0	8.4	8.8	5.5	5.2	5.4	6.5	5.7	6.1	6.2	5.7	6.0
10	---	---	---	5.5	5.2	5.3	6.3	5.5	6.0	6.2	5.9	6.1
11	---	---	---	5.6	5.3	5.5	5.8	5.3	5.6	6.4	6.0	6.2
12	---	---	---	6.0	5.2	5.5	5.8	5.1	5.3	6.5	6.1	6.3
13	---	---	---	5.8	4.8	5.3	5.6	4.9	5.3	6.5	5.8	6.1
14	---	---	---	5.6	4.7	5.2	6.3	5.4	5.7	---	---	---
15	---	---	---	5.9	4.2	5.3	6.4	5.5	5.9	---	---	---
16	---	---	---	5.9	5.3	5.6	6.5	5.5	5.9	7.7	7.4	7.6
17	---	---	---	5.8	5.5	5.7	6.3	5.3	5.7	7.4	6.7	6.9
18	---	---	---	5.9	5.6	5.8	---	---	---	6.7	6.3	6.5
19	---	---	---	6.2	5.6	5.8	---	---	---	6.5	6.1	6.3
20	---	---	---	6.0	5.2	5.6	---	---	---	6.5	5.2	5.9
21	---	---	---	6.3	5.5	5.9	---	---	---	5.8	5.5	5.7
22	---	---	---	6.4	5.7	6.0	---	---	---	5.7	5.4	5.6
23	---	---	---	6.3	5.7	6.0	---	---	---	5.6	5.2	5.3
24	---	---	---	6.7	5.7	6.2	6.9	6.1	6.5	5.7	5.3	5.5
25	8.0	7.1	7.6	7.0	5.8	6.3	7.3	6.3	6.7	6.3	3.8	5.9
26	7.1	6.3	6.7	7.5	6.2	6.8	7.2	6.2	6.6	6.2	3.8	5.1
27	6.6	6.2	6.3	6.8	6.1	6.5	6.9	5.9	6.3	6.5	6.1	6.4
28	6.4	6.0	6.2	6.9	6.2	6.5	6.5	5.7	6.1	---	---	---
29	6.4	5.9	6.1	6.9	6.1	6.5	6.6	5.7	6.0	7.8	7.5	7.7
30	6.2	5.7	5.9	7.1	6.2	6.5	6.4	5.6	5.9	7.8	7.4	7.6
31	---	---	---	7.3	5.9	6.5	6.4	3.6	4.9	---	---	---
MONTH	---	---	---	7.5	4.2	5.9	---	---	---	---	---	--

07185000 NEOSHO RIVER NEAR COMMERCE, OK

LOCATION.--Lat 36°55'43", long 94°57'26", in SW 1/4 SE 1/4 sec.5, T.28 N., R.22 E., Ottawa County, Hydrologic Unit 11070206, on downstream side of right pier of county road bridge, 1.3 mi upstream from Mud Creek, 2.2 mi downstream from Four Mile Creek, 4.5 mi west of Commerce, and at mile 153.4.

DRAINAGE AREA.--5,876 mi^2.

PERIOD OF RECORD.--June 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft above sea level (U.S. Army Corps of Engineers' datum). Since February 1989, supplementary water-stage recorder 1000 ft to the left at same datum used when flow exceeds 21 ft GH.

REMARKS.--Records good. Flow regulated to some extent since 1963 by John Redmond Reservoir in Kansas, 190 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 13	2000	21,400	14.86	June 2	0200	25,100	16.79
Nov. 24	0800	34,700	19.52	June 30	1300	22,900	15.75
Dec. 16	1300	45,600	20.93	July 9	0100	23,000	15.80
Apr. 15	0400	20,700	14.52	Sept. 27	1600	75,600	24.09
May 11	1700	39,500	20.24				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	515	2240	10200	11100	5060	4610	7420	5730	24400	13900	14500	e1200
2	e400	1440	10200	9990	4950	6540	9260	3940	21900	9580	14700	e1300
3	e320	1180	11200	11600	4890	10800	4870	13500	12300	5640	14600	3380
4	e280	1180	11600	12800	4790	15800	3880	15000	15000	3160	14500	3890
5	e250	1020	11900	15000	4760	15800	10000	10500	14800	2940	15400	3430
6	e215	1510	11900	16400	4870	11700	10900	8770	14100	4870	17500	3250
7	210	1180	11900	10600	5160	11700	8670	15900	13700	13700	15200	3160
8	193	792	11700	7900	6460	11500	8300	12000	13200	22000	14700	3090
9	216	583	14900	8210	6520	10900	10500	29800	13200	20600	14400	3010
10	976	473	24500	8790	5850	9900	9310	36300	14300	6310	13900	2860
11	708	1910	25700	7610	5590	7790	9540	38900	14100	3140	13500	1940
12	500	16600	19600	7670	8310	6140	12000	38100	13700	7920	13300	e1200
13	352	20900	12400	12100	9160	5430	12600	36300	13600	8480	13200	1820
14	272	19400	34200	9960	8170	4690	16600	34400	12000	8020	13100	13400
15	226	8640	41200	5710	6050	3330	18800	27200	10900	12600	12800	11300
16	184	6440	45200	3640	5280	3060	11900	20200	10700	15500	12500	3970
17	151	5740	42400	3320	5230	2890	10400	18300	11400	12100	12200	2080
18	139	6700	36900	3740	5100	2360	12000	29700	11700	10300	12000	1560
19	127	17000	26900	3160	4850	4540	10600	e35000	9550	11500	12500	e1200
20	119	23200	9900	7260	5090	4640	9620	e34000	9080	15800	12600	4820
21	111	28700	7070	18500	15100	3490	7640	30200	5220	19300	12400	2880
22	107	31600	6530	14500	16000	6720	3950	23700	3680	18400	12600	1440
23	103	34100	6470	11100	11400	14600	3140	23500	3450	11600	12400	e990
24	96	34300	8380	11300	7700	8650	3020	27600	4900	14000	11800	7970
25	90	31800	9870	11100	6630	4310	8410	23000	11700	16400	11500	41100
26	91	26100	11400	7700	6500	3490	6720	17400	16600	15200	11200	60300
27	93	22000	12600	5120	5000	3130	3900	15700	6310	14100	6180	74200
28	81	13600	12700	6230	4840	2900	3080	15300	5360	13700	2600	67000
29	83	7500	12400	6790	---	3000	2190	14900	10700	13500	1540	50200
30	94	9880	12100	6640	---	3490	4440	17300	22100	13900	e1400	36000
31	109	---	11700	5580	---	6780	---	22200	---	14300	e1300	---
TOTAL	7411	377708	535620	281120	189310	214680	253660	694340	363650	372460	362020	413940
MEAN	239	12590	17280	9068	6761	6925	8455	22400	12120	12010	11680	13800
MAX	976	34300	45200	18500	16000	15800	18800	38900	24400	22000	17500	74200
MIN	81	473	6470	3160	4760	2360	2190	3940	3450	2940	1300	990
AC-FT	14700	749200	1062000	557600	375500	425800	503100	1377000	721300	738800	718100	821000

e Estimated

07185000 NEOSHO RIVER NEAR COMMERCE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

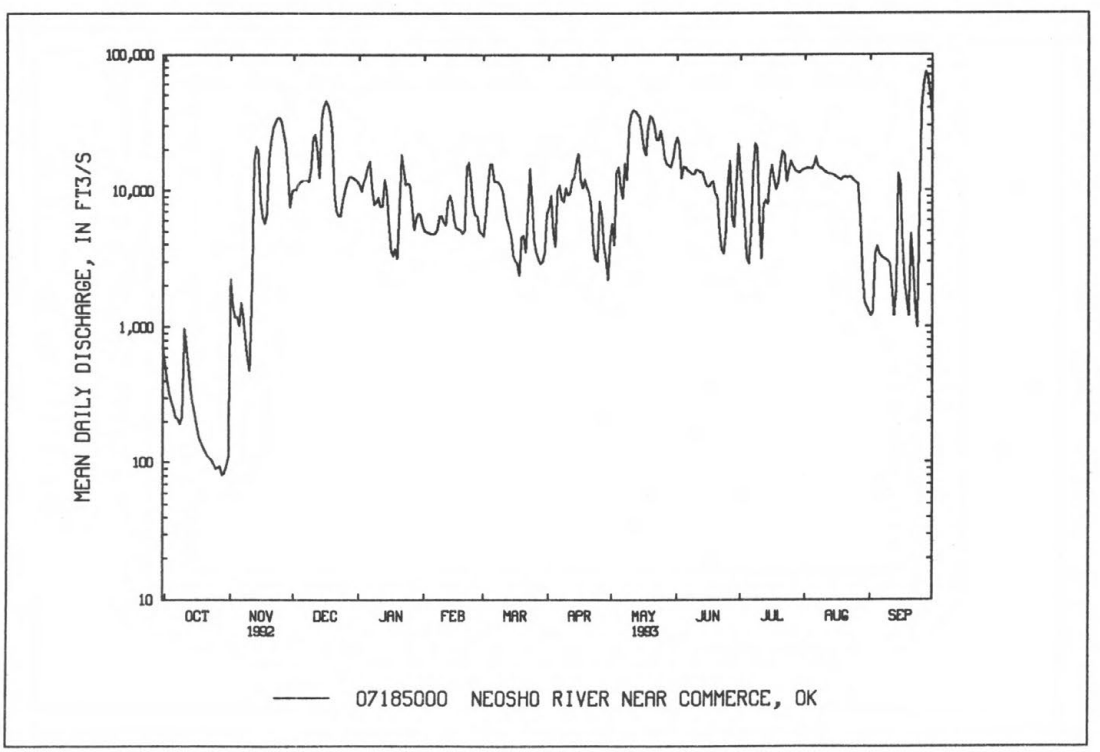
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3340	3135	2155	1933	2540	4458	5469	5749	6431	5131	1741	2881
MAX	33400	19190	17280	10090	13980	21630	23270	29560	15820	53350	11680	16930
(WY)	1987	1986	1993	1973	1985	1973	1945	1961	1982	1951	1993	1951
MIN	.000	1.60	6.33	8.60	24.9	11.9	62.6	395	289	21.1	.000	1.52
(WY)	1957	1940	1940	1957	1954	1956	1981	1956	1980	1954	1954	1953

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1940-93	
ANNUAL TOTAL	2183604		4065919			
ANNUAL MEAN	5966		11140		3748	
HIGHEST ANNUAL MEAN					11140	1993
LOWEST ANNUAL MEAN					246	1953
HIGHEST DAILY MEAN	45200	Dec 16	74200	Sep 27	251000	Jul 15 1951
LOWEST DAILY MEAN	81	Oct 28	81	Oct 28	[a].00	at times
ANNUAL SEVEN-DAY MINIMUM	90	Oct 24	90	Oct 24	.00	Sep 27 1953
INSTANTANEOUS PEAK FLOW			75600	Sep 27	[b]267000	Jul 15 1951
INSTANTANEOUS PEAK STAGE			24.09	Sep 27	[c]34.03	Jul 16 1951
ANNUAL RUNOFF (AC-FT)	4331000		8065000		2715000	
10 PERCENT EXCEEDS	19700		23100		11200	
50 PERCENT EXCEEDS	1580		9870		906	
90 PERCENT EXCEEDS	184		1120		54	

[a]In 1953-54 and 1956.

[b]Computed by flood-routing methods from hydrograph defined at Miami, mile 144.2, by several discharge measurements, gage-height record, and by comparison with computed inflow into Lake O' the Cherokees.

[c]From floodmark.



07185095 TAR CREEK AT 22ND STREET BRIDGE AT MIAMI, OK

LOCATION.--Lat 36°54'00", long 94°52'05", in NW 1/4 NE 1/4 sec.19, T.28 N., R.23 E., Ottawa County, Hydrologic Unit 11070206, near downstream left abutment of 22nd Street bridge in Miami, 0.5 mi east of intersection of Main and 22nd Street.
DRAINAGE AREA.--44.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1984 to September 1993 (discontinued).
REVISED RECORDS.--WDR OK-89-1: 1985 (M).
GAGE.--Water-stage recorder. Datum of gage is 762.23 ft above sea level.
REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	409	e28	18	15	97	66	18	57	80	2.9	2.0
2	4.2	230	e24	20	14	101	58	18	26	30	2.9	2.0
3	4.6	71	e20	24	12	116	53	52	e220	19	2.6	9.7
4	4.5	66	e19	125	12	80	116	58	e350	13	2.2	4.0
5	3.2	43	e18	97	14	60	285	27	e150	17	e200	3.1
6	3.1	28	e17	45	13	47	e112	21	62	e700	e400	2.5
7	3.7	22	e16	34	15	39	44	21	32	e600	146	2.0
8	15	18	e20	30	15	36	34	37	25	e300	46	2.3
9	8.9	16	e1000	288	14	34	29	2500	41	146	23	2.4
10	6.2	17	e400	e410	14	32	25	e1800	e1000	53	17	2.1
11	e5.2	394	e200	125	51	32	19	e850	e300	25	12	1.9
12	e4.6	1420	e150	201	138	32	19	e380	104	e300	8.3	1.8
13	e3.9	212	e2000	155	82	31	19	e140	52	e120	6.8	38
14	e3.5	77	e2500	64	42	32	32	73	26	e800	5.2	e2200
15	e3.2	45	e1500	43	42	32	184	37	20	e300	4.3	e1000
16	e3.1	33	551	37	52	38	118	33	17	e120	3.7	119
17	e3.0	27	218	32	50	36	158	e310	13	48	3.0	43
18	e2.9	35	118	31	44	67	245	e850	14	23	2.3	21
19	e2.7	244	79	28	47	496	119	e250	17	25	1.8	35
20	e2.6	414	64	506	188	363	51	122	32	24	1.7	e185
21	e2.5	391	53	463	474	163	32	59	31	20	1.5	119
22	e2.3	1150	42	142	158	556	27	38	20	14	1.3	38
23	e2.2	698	35	77	71	589	25	e470	17	9.6	1.3	20
24	e2.1	150	28	48	48	213	24	e250	e200	7.7	1.3	e700
25	e2.1	212	27	36	248	132	337	109	e400	6.2	1.7	e8200
26	e6.0	e120	24	29	269	e100	109	51	e150	5.3	1.7	e2000
27	e4.0	e80	23	27	190	e78	34	31	65	4.5	1.5	294
28	e3.4	e55	21	23	138	e57	24	23	24	3.8	1.5	133
29	e5.0	e40	22	17	---	44	22	22	e150	2.9	1.5	61
30	e4.0	e32	22	15	---	61	19	e250	e120	2.9	1.5	40
31	e3.7	---	20	16	---	69	---	e150	---	2.6	1.8	---
TOTAL	130.0	6749	9259	3206	2470	3863	2439	9050	3735	3822.5	908.3	15281.8
MEAN	4.19	225	299	103	88.2	125	81.3	292	124	123	29.3	509
MAX	15	1420	2500	506	474	589	337	2500	1000	800	400	8200
MIN	2.1	16	16	15	12	31	19	18	13	2.6	1.3	1.8
AC-FT	258	13390	18370	6360	4900	7660	4840	17950	7410	7580	1800	30310

e Estimated

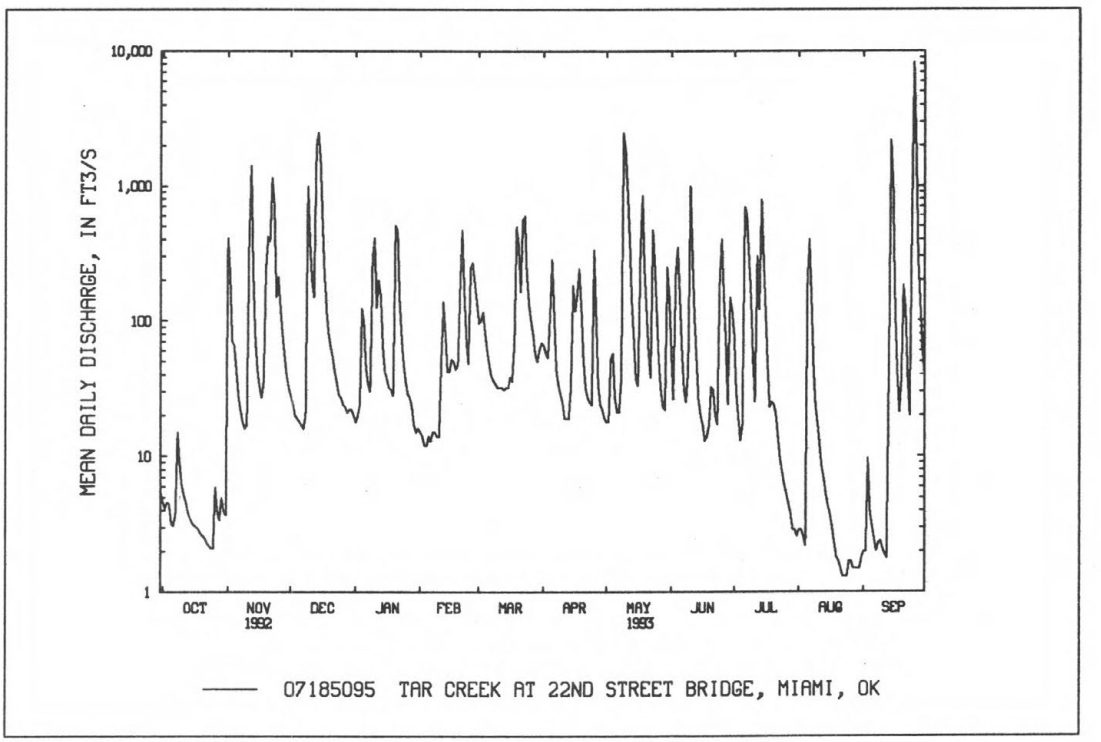
07185095 TAR CREEK AT 22ND STREET BRIDGE AT MIAMI, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	43.9	120	88.4	50.7	80.5	104	71.3	87.0	50.5	32.2	17.4	92.3
MAX	241	373	299	103	239	284	128	292	152	123	59.8	509
(WY)	1987	1986	1993	1993	1985	1990	1990	1993	1990	1993	1985	1993
MIN	3.65	3.63	2.68	8.32	16.0	10.8	16.1	4.13	3.24	2.37	1.47	2.45
(WY)	1990	1990	1990	1986	1991	1992	1989	1988	1988	1986	1988	1991

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1985-93	
ANNUAL TOTAL	24002.7		60913.6			
ANNUAL MEAN	65.6		167		69.6	
HIGHEST ANNUAL MEAN					167	1993
LOWEST ANNUAL MEAN					22.9	1991
HIGHEST DAILY MEAN	2500	Dec 14	8200	Sep 25	8200	Sep 25 1993
LOWEST DAILY MEAN	2.1	Aug 30	1.3	Aug 22	[a].37	Oct 1 1984
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 25	1.5	Aug 21	.57	Jul 20 1986
INSTANTANEOUS PEAK FLOW			12400	Sep 25	12400	Sep 25 1993
INSTANTANEOUS PEAK STAGE			14.70	Sep 25	[b]14.70	Sep 25 1993
ANNUAL RUNOFF (AC-FT)	47610		120800		50430	
10 PERCENT EXCEEDS	114		384		136	
50 PERCENT EXCEEDS	9.9		34		12	
90 PERCENT EXCEEDS	3.3		2.9		2.6	

[a]Minimum daily for period of record, 0.07 ft^3/s Aug. 15, 1984.
[b]From floodmark.



07185095 TAR CREEK AT 22ND STREET BRIDGE AT MIAMI, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1988 to May 1989, September 1989 to December 1992 (discontinued).
REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
06...	1145	1028	80020	3.4	1980	6.9	22.0	18.0	2.9	750	9.1	98
DEC												
08...	1100	1028	80020	16	*1600	7.5	11.0	4.0	69	760	8.5	65

DATE	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)
OCT												
06...	1300	400	64	38	6	0.5	5.8	1200	16	1.1	13	1900
DEC												
08...	920	290	47	24	5	0.3	4.1	910	11	0.20	11	1410

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
OCT												
06...	1780	2.58	17.3	0.150	0.150	0.66	0.020	0.07	0.170	0.120	0.15	<0.010
DEC												
08...	1360	1.92	59.8	0.130	0.130	0.58	0.030	0.10	0.160	0.290	0.37	0.010

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)
OCT											
06...	--	<10	<1	<1	29	<2	180	5.0	4	<20	50
DEC											
08...	0.03	70	1	<1	25	<0.5	90	16	5	<5	--

*SPECIFIC CONDUCTANCE, LAB (µS/CM)

07185095 TAR CREEK AT 22ND STREET BRIDGE AT MIAMI, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)
OCT 06...	50	1	<30	570	26	2	<30	68	1400	1500	<0.10
DEC 08...	100	<1	<10	--	18000	<1	<10	36	--	1100	<0.10

DATE	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT 06...	<0.1	<30	350	350	<1	<1	<3.0	480	<18	11000	12000
DEC 08...	<0.1	<10	--	310	<1	--	<1.0	320	<6	14000	14000

07188000 SPRING RIVER NEAR QUAPAW, OK

LOCATION.--Lat 36°56'04", long 94°44'49", in NE 1/4 SW 1/4 sec.5, T.28 N., R.24 E., Ottawa County, Hydrologic Unit 11070207, near downstream right abutment of county road bridge, 0.1 mi upstream from Rock Creek, 3.0 mi southeast of Quapaw, and at mile 13.9. Records include flow of Rock Creek.

DRAINAGE AREA.--2,510 mi^2, includes that of Rock Creek.

PERIOD OF RECORD.--July 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 746.25 ft above sea level. Nonrecording gage on right bank at same datum used May 20 to Nov. 16, 1943.

REMARKS.--Records good. Occasional releases from floodgates at old Riverton Hydroelectric plant, 15 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge 18,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 13	1100	24,600	17.96	June 26	1800	26,300	18.48
Nov. 23	2000	47,500	24.11	June 29	1500	24,600	17.96
Dec. 16	0100	55,200	25.82	July 7	2300	30,300	19.68
May 9	1800	20,400	16.61	Sept. 14	1300	18,300	15.84
May 18	1900	36,900	21.50	Sept. 26	1000	230,000	46.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	3570	3560	2780	2360	6460	3330	2190	3790	5970	1420	664
2	971	1940	3250	2670	2300	6890	3350	2100	3130	8400	1440	679
3	915	e1530	2990	2660	2200	6690	3260	2810	2770	6150	1560	948
4	864	1640	2770	4320	2140	5440	2950	3310	2990	4190	1380	946
5	906	1610	2590	6420	2250	4180	4680	2470	4880	3260	5670	822
6	747	1420	2420	5170	2490	3590	5520	2150	4240	10800	10700	746
7	724	1220	2230	3840	2370	3210	4330	1970	3070	20700	4430	695
8	784	1060	2170	3210	2180	2940	3650	1900	2820	23800	2720	680
9	805	961	5690	3510	2030	2730	3430	16100	3750	12000	2100	679
10	765	833	13000	4740	1950	2550	3170	16800	8760	5820	1910	664
11	705	3770	8870	4590	2390	2400	2850	10200	9720	4600	1730	641
12	671	22200	5490	6010	4860	2140	2640	6320	7050	4840	1660	612
13	638	22900	4500	9590	3730	1960	2470	5580	7560	3720	1470	938
14	e620	11700	37600	6740	2910	2030	2510	4610	4770	3820	1290	14100
15	541	5520	51900	4520	2570	1960	7510	4110	3690	10700	1250	13600
16	528	3510	53500	3660	2480	1970	7330	4020	3190	4830	1180	6920
17	504	2990	42500	3470	2490	2000	5240	4190	2880	3270	1120	3170
18	489	6720	23300	3630	2360	2140	4220	25900	4140	2830	1090	2130
19	473	e16800	11100	3180	2270	e3490	3900	32500	6540	2940	1050	1900
20	463	e18200	7940	6990	2700	4780	3550	17300	9940	6400	920	3500
21	456	20300	6500	16700	11800	4710	3160	8930	10400	3740	900	3880
22	447	31700	5630	10600	10600	7640	2870	6030	9430	3040	899	2730
23	437	45000	4930	6880	6260	13900	2700	9020	4750	2500	868	1910
24	428	41000	4400	4700	4160	8050	2600	12200	6680	2320	839	12600
25	418	24800	3980	3920	3900	5380	6870	6870	15400	2070	830	72400
26	410	12600	3690	3490	4400	3930	5830	4640	24500	1660	814	210000
27	404	12200	3450	3220	4770	3450	3760	3560	17500	1710	781	115000
28	395	5400	3270	3020	5560	3160	2850	2980	7250	1630	757	49700
29	400	4470	3160	2760	---	2960	2500	2670	15700	1550	736	18200
30	425	3950	3050	2590	---	2840	2290	3600	13700	1510	735	10100
31	453	---	2890	2460	---	3090	---	5370	---	1460	658	---
TOTAL	18956	331514	332320	152040	102480	128660	115320	232400	224990	172230	54907	551554
MEAN	611	11050	10720	4905	3660	4150	3844	7497	7500	5556	1771	18390
MAX	1170	45000	53500	16700	11800	13900	7510	32500	24500	23800	10700	210000
MIN	395	833	2170	2460	1950	1960	2290	1900	2770	1460	658	612
AC-FT	37600	657600	659200	301600	203300	255200	228700	461000	446300	341600	108900	1094000
CFSM	.24	4.40	4.27	1.95	1.46	1.65	1.53	2.99	2.99	2.21	.71	7.32
IN.	.28	4.91	4.93	2.25	1.52	1.91	1.71	3.44	3.33	2.55	.81	8.17

e Estimated

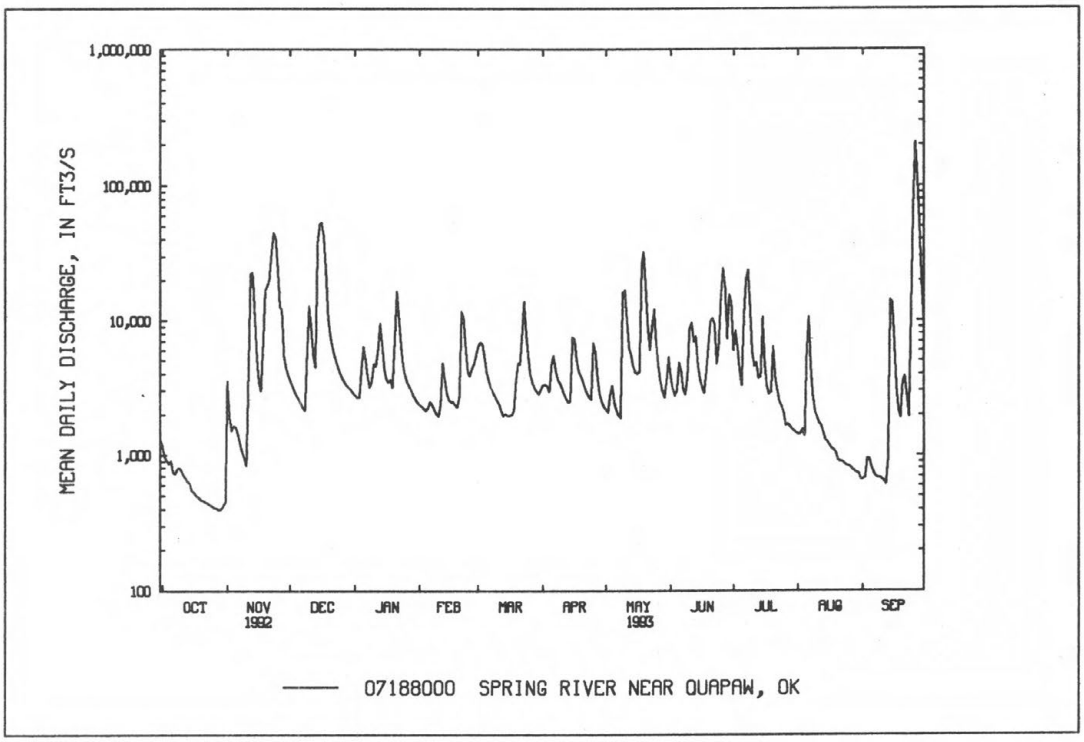
07188000 SPRING RIVER NEAR QUAPAW, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1664	2220	1751	1533	2096	2969	3234	3444	2901	1797	815	1513
MAX	14880	14810	10720	6495	13300	12050	15100	26940	12140	10140	8622	18390
(WY)	1987	1986	1993	1973	1985	1973	1945	1943	1957	1976	1950	1993
MIN	75.8	111	116	116	129	123	169	481	233	34.3	29.3	76.0
(WY)	1957	1954	1964	1964	1954	1954	1954	1964	1954	1954	1954	1953

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1940-93	
ANNUAL TOTAL	1339137		2417371			
ANNUAL MEAN	3659		6623		2159	
HIGHEST ANNUAL MEAN					6623	1993
LOWEST ANNUAL MEAN					191	1954
HIGHEST DAILY MEAN	53500	Dec 16	210000	Sep 26	210000	Sep 26 1993
LOWEST DAILY MEAN	306	Aug 29	395	Oct 28	5.8	Jul 8 1954
ANNUAL SEVEN-DAY MINIMUM	323	Aug 29	411	Oct 24	7.3	Sep 12 1954
INSTANTANEOUS PEAK FLOW			230000	Sep 26	230000	Sep 26 1993
INSTANTANEOUS PEAK STAGE			46.60	Sep 26	[a]46.60	Sep 26 1993
ANNUAL RUNOFF (AC-FT)	2656000		4795000		1564000	
ANNUAL RUNOFF (CFSM)	1.46		2.64		.86	
ANNUAL RUNOFF (INCHES)	19.85		35.83		11.68	
10 PERCENT EXCEEDS	8390		12800		4300	
50 PERCENT EXCEEDS	1100		3260		821	
90 PERCENT EXCEEDS	504		762		200	

[a]From floodmark.



07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'53", long 94°35'12", in NE 1/4 NE 1/4 sec.22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, near right abutment of bridge on State Highway 43, 0.8 mi downstream from Blackfoot Branch, 2.8 mi upstream from Buffalo Creek, 3.0 mi southeast of Tiff City, and at mile 15.8.
DRAINAGE AREA.--872 mi^2.
PERIOD OF RECORD.--October 1939 to current year.
REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.
GAGE.--Water stage recorder. Datum of gage is 750.61 ft above sea level (levels by U.S. Army Corps of Engineers). Sept. 6, 1960 to Aug. 25, 1961, at site 100 ft downstream.
REMARKS.--Records fair. U.S. Army Corps of Engineers' satellite telemeter at station.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 23	0030	17,200	15.61	June 30	0100	10,700	12.09
Dec. 16	0230	27,900	19.45	July 6	2330	36,500	21.14
May 10	2200	9,660	11.45	Sept. 14	2400	17,800	15.89
June 10	1900	10,100	11.70	Sept. 26	0130	18,200	16.10

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	331	243	1140	926	923	2600	1400	943	1240	3470	500	137
2	313	331	1080	878	852	2190	1270	956	1000	2360	481	143
3	292	354	1000	843	794	1970	1190	1010	1000	1820	431	171
4	273	337	931	1040	751	1740	1210	967	1450	1490	402	190
5	256	332	852	2250	726	1560	2170	935	2180	1240	455	188
6	233	300	757	2130	659	1400	2990	881	1520	12800	704	166
7	214	292	664	1830	632	1290	2710	827	1240	16300	727	151
8	204	282	610	1600	586	1220	2270	787	1200	5710	618	151
9	198	259	742	1610	559	1120	1930	3160	2030	3780	713	220
10	188	246	2330	2920	542	1040	1650	8480	6960	2780	691	228
11	181	318	2720	3270	578	975	1490	7660	6280	2210	602	154
12	170	3550	2170	2720	804	918	1330	4530	3790	1850	535	138
13	158	4160	1990	2250	881	868	1210	3140	2580	1660	479	147
14	146	2310	14100	1920	874	829	1270	2380	1960	1520	430	7500
15	136	1620	21000	1680	882	794	3010	1920	1590	1700	400	10000
16	133	1260	20800	1510	900	815	3940	1670	1300	1510	362	3540
17	127	1040	8880	1360	841	832	3160	3330	1140	1310	329	2250
18	127	873	5910	1270	784	831	3640	5200	1020	1170	298	1640
19	121	762	4460	1170	752	1560	3900	3770	1020	1050	273	1290
20	113	859	3460	1720	764	5480	3190	2780	2080	1040	250	1140
21	107	4580	2750	3260	1560	4340	2480	2230	2130	956	235	1100
22	104	11400	2290	3320	3050	3210	2030	1790	1580	909	220	873
23	97	10800	1970	2760	2830	2910	1780	1530	1340	881	201	742
24	86	4930	1730	2280	2280	2480	1600	1360	1170	815	185	733
25	82	3350	1550	1900	3110	2170	1450	1140	1390	753	169	8390
26	117	2420	1460	1650	5830	1880	1310	989	5630	698	154	11000
27	130	1910	1330	1480	4540	1680	1200	851	2830	642	154	4790
28	114	1610	1240	1330	3270	1520	1100	744	1920	603	149	3420
29	132	1420	1170	1200	---	1390	1050	e700	5160	562	146	2510
30	146	1280	1100	1100	---	1340	1000	e800	7550	529	137	1810
31	151	---	1010	999	---	1330	---	e1000	---	502	138	---
TOTAL	5180	63428	113196	56176	41554	54282	59930	68460	73280	74620	11568	64912
MEAN	167	2114	3651	1812	1484	1751	1998	2208	2443	2407	373	2164
MAX	331	11400	21000	3320	5830	5480	3940	8480	7550	16300	727	11000
MIN	82	243	610	843	542	794	1000	700	1000	502	137	137
AC-FT	10270	125800	224500	111400	82420	107700	118900	135800	145400	148000	22950	128800
CFSM	.19	2.42	4.19	2.08	1.70	2.01	2.29	2.53	2.80	2.76	.43	2.48
IN.	.22	2.71	4.83	2.40	1.77	2.32	2.56	2.92	3.13	3.18	.49	2.77

e Estimated

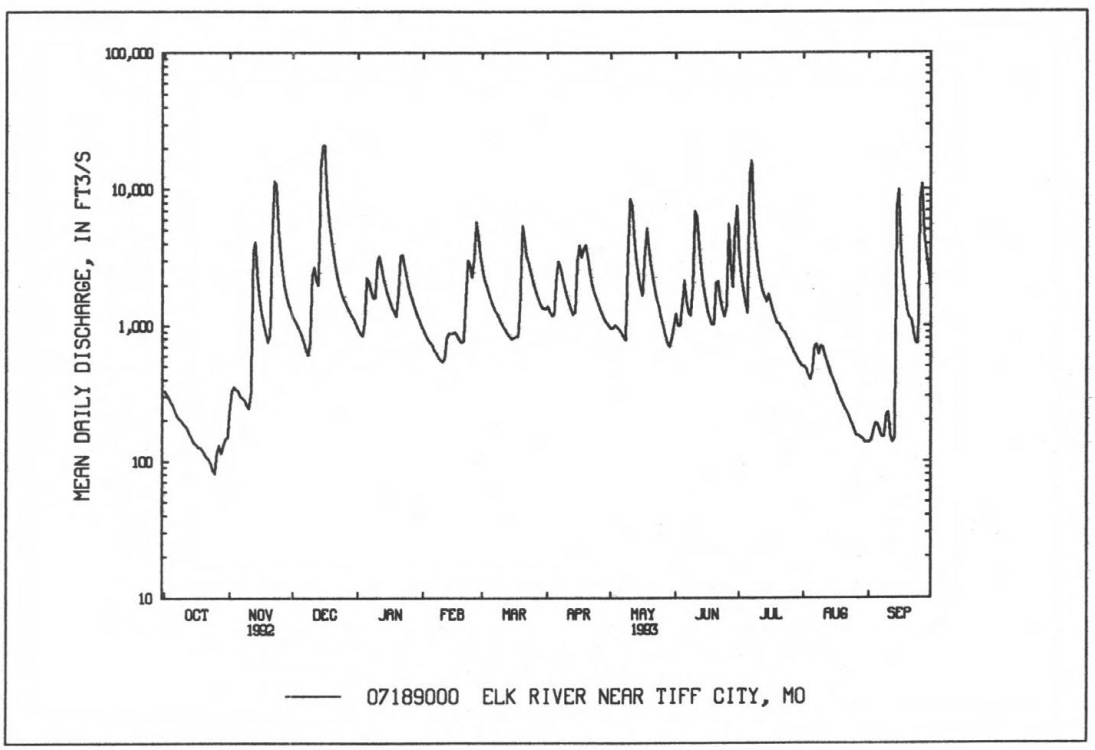
07189000 ELK RIVER NEAR TIFF CITY, MO--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	431	704	777	678	864	1309	1625	1542	947	488	272	307
MAX	2938	4094	3651	2509	2971	5020	6119	8964	4160	2565	2418	2164
(WY)	1942	1975	1993	1985	1951	1945	1945	1943	1974	1976	1950	1993
MIN	25.7	49.8	58.5	55.9	70.7	75.7	145	227	78.6	14.3	12.0	30.9
(WY)	1957	1964	1964	1964	1954	1956	1956	1964	1954	1954	1954	1953

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1940-93	
ANNUAL TOTAL	370708		686586			
ANNUAL MEAN	1013		1881		828	
HIGHEST ANNUAL MEAN					1881	1993
LOWEST ANNUAL MEAN					135	1954
HIGHEST DAILY MEAN	21000	Dec 15	21000	Dec 15	68600	Apr 19 1941
LOWEST DAILY MEAN	82	Oct 25	82	Oct 25	5.1	Sep 5 1954
ANNUAL SEVEN-DAY MINIMUM	101	Oct 20	101	Oct 20	5.6	Sep 2 1954
INSTANTANEOUS PEAK FLOW			36500	Jul 6	[a]137000	Apr 19 1941
INSTANTANEOUS PEAK STAGE			21.14	Jul 6	[b]28.40	Apr 19 1941
ANNUAL RUNOFF (AC-FT)	735300		1362000		599700	
ANNUAL RUNOFF (CFSM)	1.16		2.16		.95	
ANNUAL RUNOFF (INCHES)	15.81		29.29		12.90	
10 PERCENT EXCEEDS	1980		3770		1730	
50 PERCENT EXCEEDS	404		1190		336	
90 PERCENT EXCEEDS	172		177		84	

[a]From rating curve extended above 60,000 ft^3/s on basis of slope-area measurement of peak flow.
[b]From flood mark.



07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK

LOCATION.--Lat 36°28'07", long 95°02'28", in SW 1/4 SW 1/4 sec.14, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070206, on upstream side of pier at intake structure near right end of Pensacola Dam on Neosho River at Langley, 9.9 mi upstream from Big Cabin Creek, and at mile 77.0.

DRAINAGE AREA.--10,298 mi^2.

PERIOD OF RECORD.--March 1940 to current year. Prior to October 1940, published as Grand Lake at Langley.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above sea level (U.S. Army Corps of Engineers' benchmark). Prior to Nov. 14, 1941, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by multiple-arch concrete dam, with tops of taintor-type spillway gates at gage height 755.0 ft. Storage began Mr. 21, 1940; power-pool was first filled Apr. 19, 1941. Capacity between gage heights 682.0 ft, sill of powerhouse penstock, and 745.0 ft, maximum power pool is 1,492,000 acre-ft. Capacity between gage heights 745.0 ft and 755.0 ft is 525,200 acre-ft, and is reserved for flood control. Dead storage below gage height 662.0 ft is 682.0 ft is 180,200 acre-ft. Figures given herein represent total contents. Reservoir is utilized for power development and flood control. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 2,213,000 acre-ft, May 25, 1957, gage height, 755.27 ft; minimum since power-pool was first filled, 642,900 acre-ft, Sept. 28, 1954, gage height, 713.41 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,168,000 acre-ft, Sept. 28, gage height, 754.52 ft; minimum, 1,537,000 acre-ft, Sept. 13, gage height, 742.01.

Capacity table (elevation, in feet, and contents, in acre-ft):

730	1,086,000	745	1,672,000
735	1,257,000	750	1,917,000
740	1,425,000	755	2,197,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

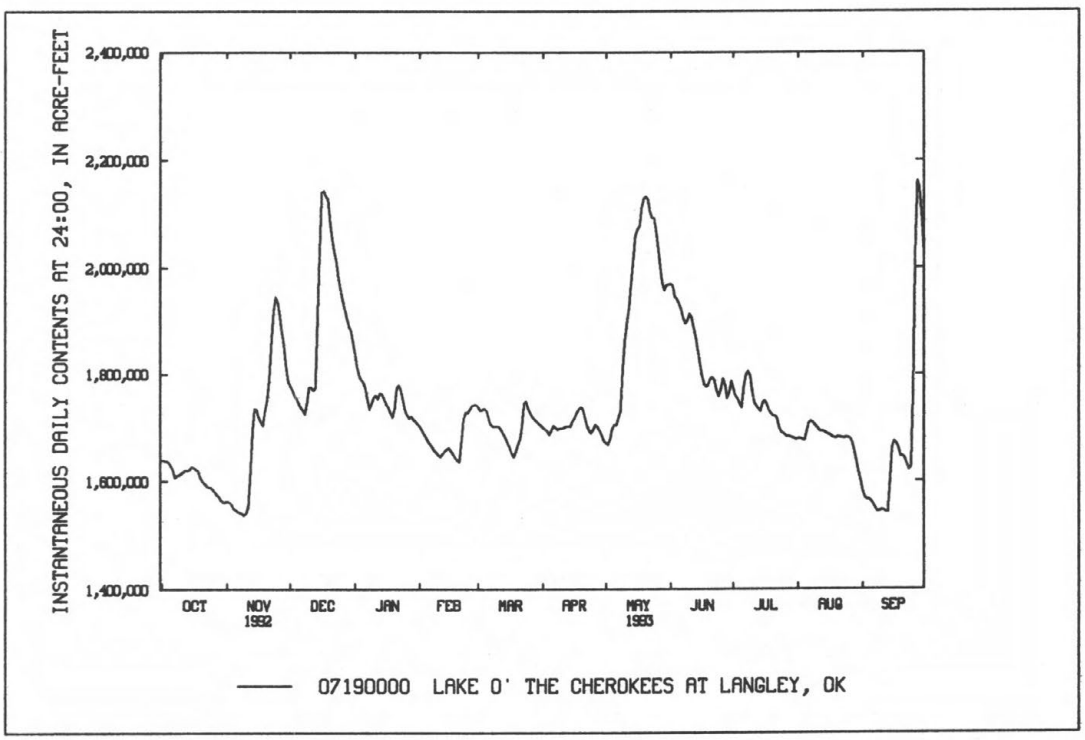
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640000	1563000	1778000	1837000	1703000	1739000	1700000	1672000	1970000	1773000	1679000	1581000
2	1639000	1562000	1771000	1813000	1696000	1732000	1697000	1669000	1967000	1759000	1680000	1569000
3	1639000	1558000	1761000	1797000	1689000	1733000	1694000	1679000	1946000	1753000	1678000	1566000
4	1636000	1549000	1754000	1789000	1682000	1736000	1688000	1698000	1941000	1745000	1677000	1566000
5	1629000	1547000	1746000	1785000	1675000	1732000	1695000	1706000	1932000	1736000	1691000	1563000
6	1622000	1544000	1738000	1775000	1670000	1718000	1704000	1705000	1922000	1777000	1708000	1557000
7	1607000	1542000	1733000	1752000	1664000	1706000	1700000	1718000	1905000	1799000	1712000	1549000
8	1611000	1541000	1726000	1736000	1658000	1703000	1697000	1731000	1895000	1805000	1710000	1544000
9	1612000	1537000	1747000	1745000	1654000	1702000	1699000	1809000	1900000	1798000	1705000	1544000
10	1615000	1541000	1776000	1757000	1649000	1703000	1699000	1863000	1913000	1770000	1701000	1547000
11	1618000	1554000	1776000	1760000	1646000	1702000	1700000	1897000	1907000	1747000	1695000	1546000
12	1621000	1617000	1770000	1754000	1652000	1696000	1703000	1925000	1887000	1740000	1693000	1542000
13	1620000	1695000	1774000	1765000	1657000	1689000	1703000	1969000	1869000	1735000	1693000	1542000
14	1622000	1735000	1906000	1763000	1660000	1681000	1702000	2015000	1846000	1730000	1691000	1602000
15	1628000	1734000	2036000	1753000	1663000	1672000	1712000	2060000	1821000	1746000	1688000	1664000
16	1626000	1719000	2141000	1744000	1657000	1665000	1718000	2072000	1797000	1750000	1687000	1675000
17	1622000	1711000	2144000	1738000	1651000	1653000	1726000	2077000	1781000	1744000	1684000	1671000
18	1620000	1705000	2134000	1728000	1645000	1646000	1734000	2113000	1776000	1732000	1681000	1662000
19	1607000	1733000	2128000	1720000	1640000	1655000	1738000	2130000	1780000	1726000	1680000	1647000
20	1601000	1753000	2086000	1736000	1637000	1669000	1735000	2133000	1791000	1722000	1683000	1647000
21	1596000	1791000	2053000	1775000	1676000	1678000	1719000	2128000	1794000	1722000	1682000	1643000
22	1592000	1858000	2031000	1779000	1717000	1702000	1704000	2104000	1787000	1717000	1681000	1632000
23	1589000	1917000	2012000	1771000	1729000	1746000	1695000	2093000	1769000	1700000	1680000	1621000
24	1588000	1945000	1983000	1753000	1727000	1749000	1690000	2092000	1758000	1691000	1682000	1626000
25	1585000	1936000	1961000	1733000	1734000	1735000	1697000	2068000	1772000	1689000	1681000	1759000
26	1581000	1911000	1940000	1724000	1741000	1727000	1706000	2036000	1792000	1685000	1680000	2030000
27	1575000	1880000	1923000	1718000	1742000	1720000	1702000	2001000	1780000	1683000	1672000	2163000
28	1572000	1855000	1906000	1721000	1743000	1716000	1695000	1971000	1755000	1683000	1655000	2150000
29	1565000	1816000	1891000	1716000	---	1712000	1686000	1959000	1764000	1681000	1636000	2099000
30	1562000	1787000	1882000	1712000	---	1708000	1676000	1967000	1787000	1680000	1617000	2035000
31	1562000	---	1860000	1708000	---	1705000	---	1968000	---	1678000	1601000	---

07190000 LAKE O' THE CHEROKEES AT LANGLEY, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	1640000	1945000	2144000	1837000	1743000	1749000	1738000	2133000	1970000	1805000	1712000	2163000
MIN	1562000	1537000	1726000	1708000	1637000	1646000	1676000	1669000	1755000	1678000	1601000	1542000
(‡)	742.57	747.40	748.88	745.76	746.49	745.71	745.09	750.96	747.40	745.12	743.43	752.20
(‡‡)	-77,000	+225,000	+73,000	-152,000	+35,000	-38,000	-29,000	+292,000	-181,000	-109,000	-77,000	+434,000

CAL YR 1992 MAX 2144000 MIN 1470000 (‡‡) +297,000
WTR YR 1993 MAX 2163000 MIN 1537000 (‡‡) +396,000

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07190500 NEOSHO RIVER NEAR LANGLEY, OK

LOCATION.--Lat 36°26'20", long 95°02'54", in SW 1/4, SE 1/4 sec.27, T.23 N., R.21 E., Mayes County, Hydrologic Unit 11070209, in concrete stilling well on left bank, 0.5 mi upstream from bridge on State Highway 82, 1.5 mi south of Langley, 3.6 mi downstream from Pensacola Dam, 6.3 mi upstream from Big Cabin Creek, and at mile 73.4.

DRAINAGE AREA.--10,335 mi^2.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 607.65 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Feb. 16, 1940, nonrecording gage at site 0.1 mi upstream at same datum. Feb. 10, 1954 to Sept. 30, 1963, water-stage recorder at site 0.5 mi downstream at same datum. Auxiliary water-stage recorders at sites 2.0 and 3.0 mi upstream at same datum.

REMARKS.--Records fair. Low flow values of 25 ft^3/s consist of estimated base flow (since July 1964). Flow regulated since 1940 by Lake O' The Cherokees (station 0719000).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1320	5730	19700	26200	12800	19100	18000	12500	23200	38400	18200	11200
2	e1590	7440	19700	25900	12800	23000	17900	12600	26300	31900	18300	9880
3	e1630	5430	19800	25400	12800	22800	14700	12900	28000	19800	18400	5910
4	2180	7860	19500	24900	12800	24300	14700	12700	27500	15400	18400	4930
5	4990	4200	19800	27200	e11700	27600	15400	12500	25100	15300	18500	5950
6	5210	4300	19700	31800	12200	27000	18800	12500	23000	25100	20400	7390
7	4400	2970	19500	32000	12200	26000	21500	13600	25000	47900	21900	7600
8	2420	3090	19400	23700	12700	20800	19700	14900	24700	54400	21900	7330
9	e25	3400	19400	15800	12600	17000	17000	25700	26300	47000	21600	3640
10	25	1150	28400	15600	12500	15800	16900	40800	32000	35500	21300	2760
11	25	6780	42400	18000	12600	14200	15900	43200	36000	26800	20400	2840
12	e150	11100	37700	21200	12700	11800	15800	38900	35200	20500	18900	3130
13	25	13200	36400	22500	12700	12400	18300	27700	34400	20200	18200	7050
14	25	20700	49700	24100	12700	12500	22800	20300	33400	19800	16900	11100
15	25	21500	69900	20200	12700	12500	27900	15200	30800	20900	16900	11200
16	e380	19700	80700	15800	12700	12700	25200	18800	28000	22800	16800	11200
17	e2700	15600	113000	15700	12500	12400	21400	22200	26900	22800	16700	11200
18	1990	14200	89100	15000	12600	12300	20100	35500	22400	22300	16700	11400
19	6140	18600	60600	13100	12600	12400	20300	58500	18400	21900	15900	11200
20	3960	28800	42400	14000	12600	12400	22100	56700	18400	25600	14700	11100
21	2940	36000	29200	23600	12500	12500	24800	43800	20100	28400	14600	11100
22	2890	47500	23500	31900	14300	12600	19800	40300	21600	28200	14400	11100
23	1920	68300	22700	31700	20200	17700	14600	33100	21100	26000	14200	10900
24	1730	76000	26700	30900	19900	25500	12600	37000	19700	22600	14200	17100
25	2480	76500	25600	30100	18000	23700	12600	38600	23900	22400	14300	58600
26	3840	63900	25300	21800	18300	16800	12600	34500	39500	22400	14000	117000
27	2780	48300	24800	14800	18400	14600	12600	31600	40200	20100	12500	154000
28	2460	35600	24500	13000	17300	12500	12500	29700	31800	18500	12400	155000
29	4590	33700	24600	12900	---	12400	12500	21000	24400	18400	12300	123000
30	2740	27900	24300	13000	---	12500	12500	19400	36600	18400	12300	94600
31	2200	---	25000	12900	---	14200	---	23100	---	18300	11500	---
TOTAL	69780	729450	1103000	664700	390400	524000	531500	859800	823900	798000	517700	910410
MEAN	2251	24310	35580	21440	13940	16900	17720	27740	27460	25740	16700	30350
MAX	6140	76500	113000	32000	20200	27600	27900	58500	40200	54400	21900	155000
MIN	25	1150	19400	12900	11700	11800	12500	12500	18400	15300	11500	2760
AC-FT	138400	1447000	2188000	1318000	774400	1039000	1054000	1705000	1634000	1583000	1027000	1806000

e Estimated

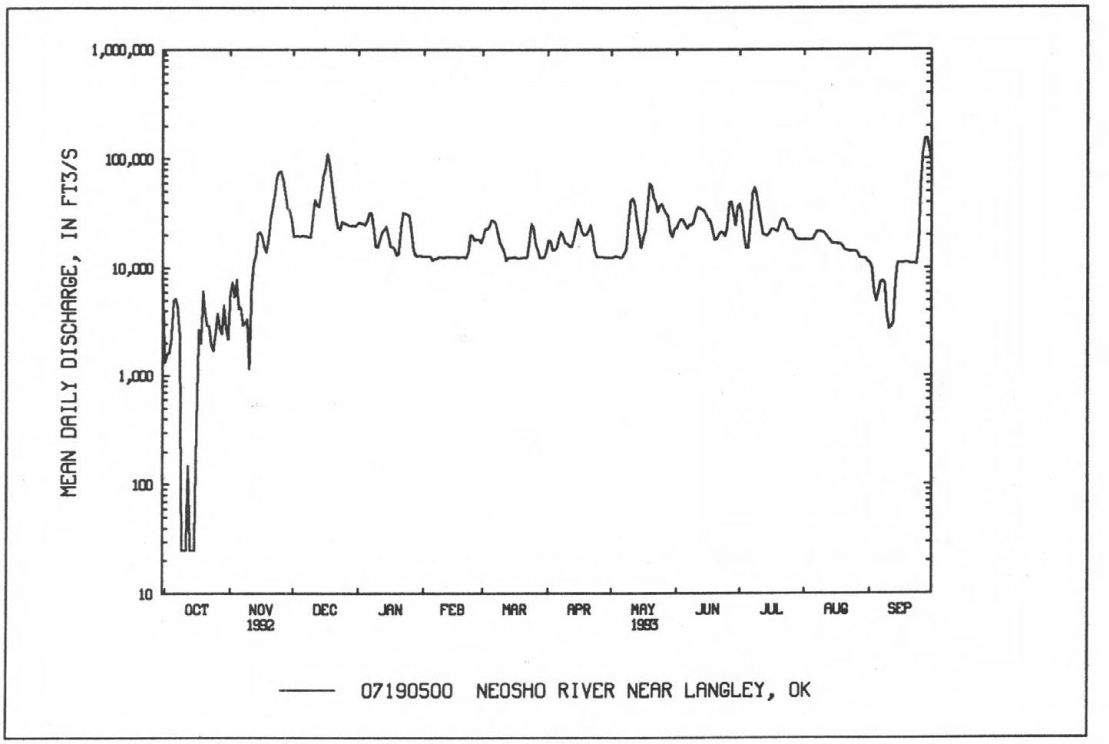
07190500 NEOSHO RIVER NEAR LANGLEY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6073	6569	5572	4820	5969	8456	10960	11320	10800	9092	4433	5398
MAX	51120	38870	35580	21440	23460	33250	50780	77710	32490	67920	20910	30350
(WY)	1987	1986	1993	1993	1949	1973	1945	1943	1957	1951	1950	1993
MIN	37.5	63.0	40.9	144	243	321	38.1	71.4	33.1	26.5	25.6	77.1
(WY)	1981	1957	1981	1954	1981	1967	1971	1940	1940	1940	1940	1953

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1940-93	
ANNUAL TOTAL	4157644		7922640			
ANNUAL MEAN	11360		21710		7456	
HIGHEST ANNUAL MEAN					21710	1993
LOWEST ANNUAL MEAN					210	1940
HIGHEST DAILY MEAN	113000	Dec 17	155000	Sep 28	287000	May 20 1943
LOWEST DAILY MEAN	25	Jan 25	25	Oct 9-11,13-15	[a]9.0	Mar 25 1940
ANNUAL SEVEN-DAY MINIMUM	34	May 17	43	Oct 9	15	Apr 11 1971
INSTANTANEOUS PEAK FLOW			170000	Sep 27	[b]300000	May 20 1943
INSTANTANEOUS PEAK STAGE			34.26	Sep 27	[c]45.50	May 20 1943
ANNUAL RUNOFF (AC-FT)	8247000		15710000		5401000	
10 PERCENT EXCEEDS	28400		36800		16500	
50 PERCENT EXCEEDS	6580		18400		3800	
90 PERCENT EXCEEDS	208		4360		98	

[a]Caused by closure of Pensacola Dam.
[b]From computation of outflow from Lake O' the Cherokees.
[c]From floodmark.



07191000 BIG CABIN CREEK NEAR BIG CABIN, OK

LOCATION.--Lat 36°34'06", long 95°09'07", in NE 1/4, NE 1/4 sec.15, T.24 N., R.20 E., Craig County, Hydrologic Unit 11070209, near downsstream side of right bank end of county road bridge, 4.9 mi northeast of Big Cabin, 0.9 mi downstream from White Oak Creek, 6.8 mi upstsream from Mustang Creek, and at mile 13.0.
DRAINAGE AREA.--450 mi^2.
PERIOD OF RECORD.--October 1947 to current year.
REVISED RECORDS.--WSP 1117: Drainage area.
GAGE.--Water-stage recorder. Datum of gage is 622.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Sept. 30, 1972, water-stage recorder at site 4.5 mi downstream at same datum.
REMARKS.--No estimate daily discharges. Records good. Low flow sustained in part by sewage from city of Vinita. U.S. Army Corps of Engineer's satellite telemeter at station.
EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 34.96 ft at former site; discharge, 63,000 ft^3/s, by slope-area measurement of peak flow.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 12	1000	9,770	29.82	Mar. 22	2345	9,790	29.84
Nov. 22	2300	11,400	31.57	May 9	2200	25,200	40.27
Dec. 9	2345	10,400	30.48	May 18	1700	9,280	29.37
Dec. 14	2045	32,100	42.62	Sept. 26	0530	24,300	39.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	427	191	139	130	415	482	109	541	42	5.0	4.7
2	14	431	166	131	124	480	324	279	233	35	4.6	5.7
3	11	146	146	184	117	623	254	7400	468	31	3.6	9.7
4	8.4	129	128	434	111	416	920	1510	3660	27	3.1	13
5	6.8	92	112	389	114	297	2730	439	2190	24	7.4	12
6	6.3	69	106	220	122	240	776	730	390	3250	319	11
7	6.1	58	109	176	120	203	445	1860	222	1760	142	11
8	6.7	48	111	160	109	177	328	1010	331	1510	54	15
9	7.0	40	5240	2760	101	154	295	19100	1060	314	34	18
10	6.6	39	6570	5610	95	136	235	18800	4710	128	25	16
11	6.1	767	894	868	642	116	186	2380	794	72	18	15
12	5.6	8420	484	1020	1770	104	153	1180	525	224	13	14
13	5.2	1750	3850	900	643	95	138	981	274	187	9.3	26
14	4.7	399	25400	415	341	89	368	557	168	110	8.7	3170
15	4.1	234	23400	302	329	89	2780	346	120	1600	8.8	1620
16	3.5	165	6200	281	630	103	826	246	91	419	8.0	284
17	3.2	129	1790	245	566	106	1790	3920	76	157	6.3	125
18	3.2	109	845	218	374	524	3780	8020	152	81	5.0	73
19	3.0	160	569	200	361	6250	859	3310	687	55	4.1	50
20	2.8	2170	451	5280	1590	2710	441	611	1210	50	3.8	40
21	2.8	2750	364	4840	6040	745	274	383	277	647	3.9	105
22	2.9	7830	303	1070	1240	4120	213	266	134	471	4.1	58
23	3.0	7910	260	605	520	5280	184	653	85	101	4.0	39
24	3.0	1440	216	411	363	818	164	1100	188	50	4.0	96
25	3.0	3100	199	288	4950	481	282	351	1490	34	4.1	11200
26	3.1	1320	190	238	2530	332	298	204	681	26	3.9	20200
27	3.5	550	167	213	726	264	175	143	210	20	3.7	2120
28	4.1	369	158	191	498	230	133	111	110	15	3.6	380
29	5.1	280	161	167	---	2730	120	90	73	11	3.5	234
30	7.4	227	178	144	---	1930	121	761	55	8.2	3.4	165
31	11	---	169	131	---	1270	---	4670	---	5.9	3.8	---
TOTAL	179.2	41558	79127	28230	25256	31527	20074	81520	21205	11465.1	724.7	40130.1
MEAN	5.78	1385	2552	911	902	1017	669	2630	707	370	23.4	1338
MAX	16	8420	25400	5610	6040	6250	3780	19100	4710	3250	319	20200
MIN	2.8	39	106	131	95	89	120	90	55	5.9	3.1	4.7
AC-FT	355	82430	156900	55990	50100	62530	39820	161700	42060	22740	1440	79600
CFSM	.01	3.08	5.67	2.02	2.00	2.26	1.49	5.84	1.57	.82	.05	2.97
IN.	.01	3.44	6.54	2.33	2.09	2.61	1.66	6.74	1.75	.95	.06	3.32

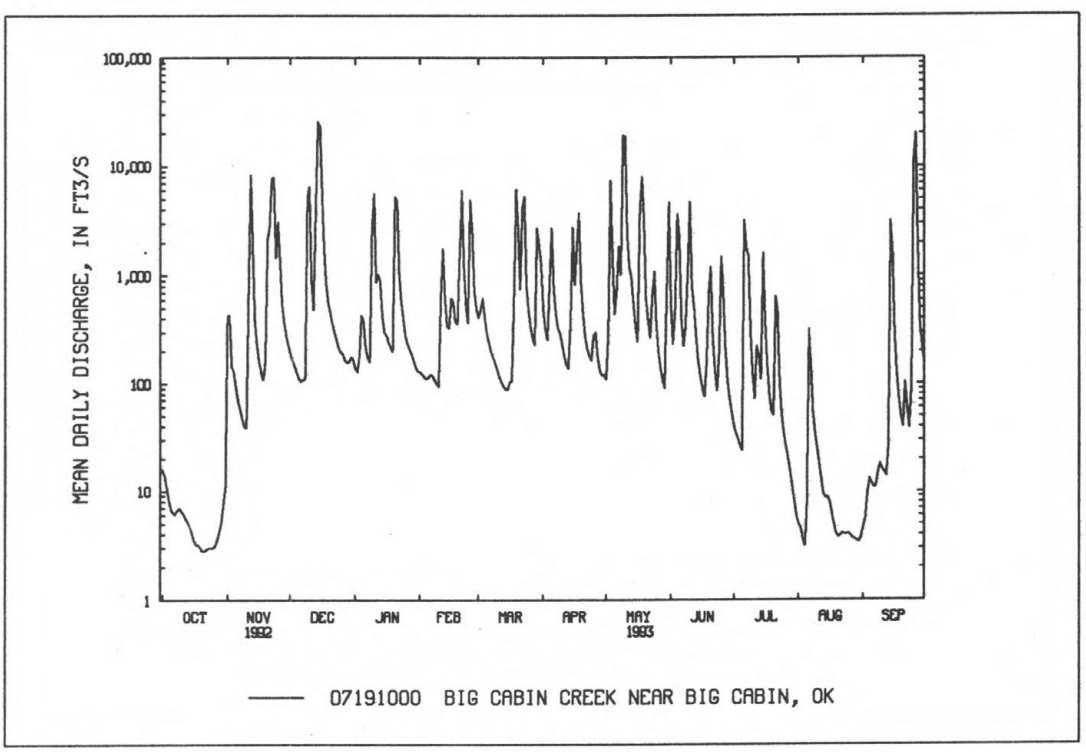
07191000 BIG CABIN CREEK NEAR BIG CABIN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	270	389	310	225	320	582	454	588	418	226	93.0	229
MAX	4250	2844	2552	1157	2940	2621	1931	3580	2817	1947	1757	1891
(WY)	1960	1986	1993	1973	1985	1990	1983	1961	1948	1958	1948	1961
MIN	.22	.89	1.52	1.29	1.50	1.37	29.9	20.3	2.47	.53	.41	.22
(WY)	1957	1956	1956	1954	1954	1956	1954	1963	1988	1954	1954	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1948-93	
ANNUAL TOTAL	174679.74		380996.1			
ANNUAL MEAN	477		1044		342	
HIGHEST ANNUAL MEAN					1044	1993
LOWEST ANNUAL MEAN					37.9	1956
HIGHEST DAILY MEAN	25400	Dec 14	25400	Dec 14	46300	Oct 3 1959
LOWEST DAILY MEAN	.94	Sep 5	2.8	Oct 20, 21	.10	Oct 4 1954
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 31	2.9	Oct 19	.11	Sep 11 1956
INSTANTANEOUS PEAK FLOW			32100	Dec 14	[a]52000	Oct 3 1959
INSTANTANEOUS PEAK STAGE			42.62	Dec 14	46.65	Feb 23 1985
ANNUAL RUNOFF (AC-FT)	346500		755700		247700	
ANNUAL RUNOFF (CFSM)	1.06		2.32		.76	
ANNUAL RUNOFF (INCHES)	14.44		31.50		10.32	
10 PERCENT EXCEEDS	552		2730		498	
50 PERCENT EXCEEDS	55		191		31	
90 PERCENT EXCEEDS	6.1		5.4		1.6	

[a]Gage height, 34.55 ft at former site.



07191220 SPAVINAW CREEK NEAR SYCAMORE, OK

LOCATION.--Lat 36°20'07", long 94°38'27", in NE 1/4 NW 1/4 sec.4, T.21 N., R.25 E., Delaware County, Hydrologic Unit 11070209, on right bank 1.8 mi upstream from Cherokee Creek, 4.8 mi northeast of Row, 6.5 mi southeast of Sycamore, and at mile 35.0.

DRAINAGE AREA.--133 mi^2.

PERIOD OF RECORD.--October 1961 to current year.

REVISED RECORDS.--WSP 2121: 1965 (M).

GAGE.--Water-stage recorder. Elevation of gage is 875 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--According to local residents, a flood of approximately the same magnitude as the July 27, 1975 flood occurred in the early 1880's.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s.

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	1130	5,340	11.64	Sept. 14	1315	4,360	10.64

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

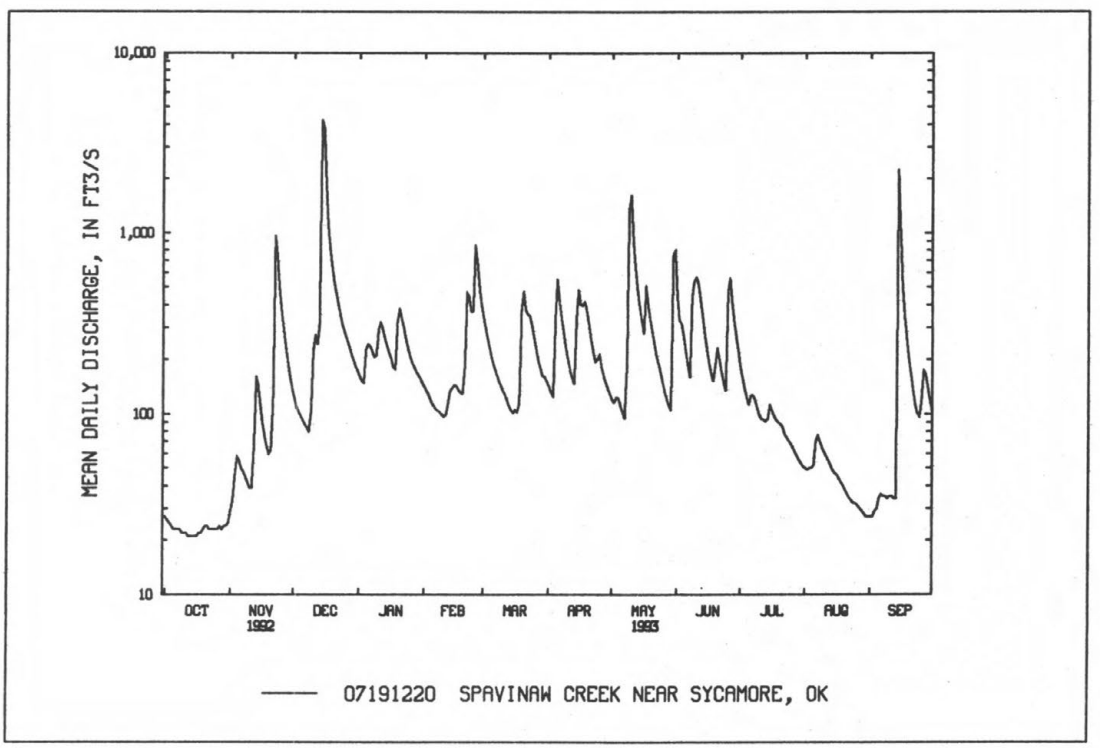
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	29	124	163	141	338	143	120	446	183	50	27
2	26	33	110	153	134	292	132	116	331	159	49	27
3	25	45	104	149	127	255	126	124	313	139	50	29
4	24	58	98	225	118	225	342	123	269	124	50	30
5	23	55	93	243	112	200	557	111	221	113	52	34
6	23	50	88	238	108	182	423	102	186	127	71	36
7	23	48	84	223	105	168	340	95	160	128	76	35
8	23	45	80	207	103	155	279	186	443	120	70	35
9	22	42	102	212	100	145	232	1360	540	108	65	34
10	22	39	222	292	97	136	200	1620	568	99	61	35
11	22	39	275	320	99	129	176	904	523	94	58	35
12	21	66	243	295	113	120	159	635	425	93	55	34
13	21	162	320	264	134	111	147	490	341	91	52	34
14	21	146	4230	238	139	105	338	393	277	94	49	2250
15	21	113	3820	219	145	102	486	327	230	113	47	1060
16	21	89	2010	203	144	106	400	276	194	105	46	508
17	22	76	1110	182	136	103	397	511	169	98	44	342
18	22	66	811	177	132	115	417	394	152	93	42	258
19	23	60	645	320	130	378	369	334	186	90	40	202
20	24	63	526	384	183	478	308	283	233	88	38	168
21	24	118	453	337	468	376	256	243	201	85	36	136
22	23	967	398	298	446	355	220	209	172	78	34	113
23	23	740	345	261	367	349	195	189	150	74	33	101
24	23	483	305	231	371	308	201	170	135	71	32	97
25	23	367	279	209	855	264	213	151	469	68	32	118
26	23	291	256	194	680	227	181	134	564	65	31	175
27	24	234	236	182	491	197	162	122	408	61	30	167
28	23	193	217	172	395	180	149	112	322	58	29	141
29	24	161	200	165	---	163	138	105	266	55	28	119
30	24	140	186	157	---	162	129	747	223	53	27	103
31	25	---	174	148	---	152	---	807	---	51	27	---
TOTAL	715	5018	18144	7061	6573	6576	7815	11493	9117	2978	1404	6483
MEAN	23.1	167	585	228	235	212	260	371	304	96.1	45.3	216
MAX	27	967	4230	384	855	478	557	1620	568	183	76	2250
MIN	21	29	80	148	97	102	126	95	135	51	27	27
AC-FT	1420	9950	35990	14010	13040	13040	15500	22800	18080	5910	2780	12860
CFSM	.17	1.26	4.40	1.71	1.77	1.59	1.96	2.79	2.28	.72	.34	1.62
IN.	.20	1.40	5.07	1.97	1.84	1.84	2.19	3.21	2.55	.83	.39	1.81

07191220 SPAVINAW CREEK NEAR SYCAMORE, OK—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1993, BY WATER YEAR (WY)

MEAN	60.3	113	134	104	118	187	206	147	143	62.9	30.7	54.7
MAX	382	683	585	297	301	563	600	550	880	483	78.5	248
(WY)	1987	1974	1993	1973	1985	1973	1973	1990	1974	1975	1975	1986
MIN	4.84	8.56	10.5	9.34	12.4	12.7	21.7	19.0	14.5	10.1	6.27	5.75
(WY)	1964	1964	1967	1981	1964	1967	1981	1967	1972	1966	1980	1963

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1962-93	
ANNUAL TOTAL	47655		83377			
ANNUAL MEAN	130		228		113	
HIGHEST ANNUAL MEAN					265	1974
LOWEST ANNUAL MEAN					18.0	1967
HIGHEST DAILY MEAN	4230	Dec 14	4230	Dec 14	11700	Jul 27 1975
LOWEST DAILY MEAN	21	Oct 12	21	Oct 12-16	1.3	Aug 9 1964
ANNUAL SEVEN-DAY MINIMUM	21	Oct 10	21	Oct 10	1.6	Aug 3 1964
INSTANTANEOUS PEAK FLOW			5340	Dec 14	39800	Jul 27 1975
INSTANTANEOUS PEAK STAGE			11.64	Dec 14	22.07	Jul 27 1975
INSTANTANEOUS LOW FLOW			21	Oct 11-17	1.2	Aug 9 1964
ANNUAL RUNOFF (AC-FT)	94520		165400		82000	
ANNUAL RUNOFF (CFSM)	.98		1.72		.85	
ANNUAL RUNOFF (INCHES)	13.33		23.32		11.56	
10 PERCENT EXCEEDS	256		444		231	
50 PERCENT EXCEEDS	56		141		53	
90 PERCENT EXCEEDS	28		29		14	



07191300 SPAVINAW LAKE AT SPAVINAW, OK

LOCATION.--Lat 36°22'59", long 95°02'52", in SW 1/4 SE 1/4 sec.15, T.22 N., R.21 E., Mayes County, Hydrologic Unit 11070209, right of intake tower on face of dam on Spavinaw Creek at Spavinaw, and at mile 5.5.

DRAINAGE AREA.--386 mi^2 (U.S. Army Corps of Engineers).

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam with uncontrolled concrete spillway. Much of Tulsa municipal-water supply is drawn from lake. Levels are maintained in Spavinaw Lake by releases from Lake Eucha. Storage began 1924; conservation pool first filled November 1924. Capacity 41,200 acre-ft at elevation 682 ft. Dead storage, 15,300 acre-ft at elevation 662 ft. Figures given herein represent total contents. Reservoir is used for water supply, recreation, and fish and wildlife. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 39,400 acre-ft, Dec. 14, 1992, elevation 683.30 ft; minimum, 25,900 acre-ft, Nov. 23, 1991, elevation, 677.15 ft.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.--Flood of April 1942 reached a stage of 689.13 ft, contents unknown.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 39,400 acre-ft, Dec. 14, elevation 683.30 ft; minimum, 28,700 acre-ft, Oct. 1, elevation 678.81 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

676	24,300	679	28,960
677	25,400	680	30,600
678	27,690	685	46,500

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

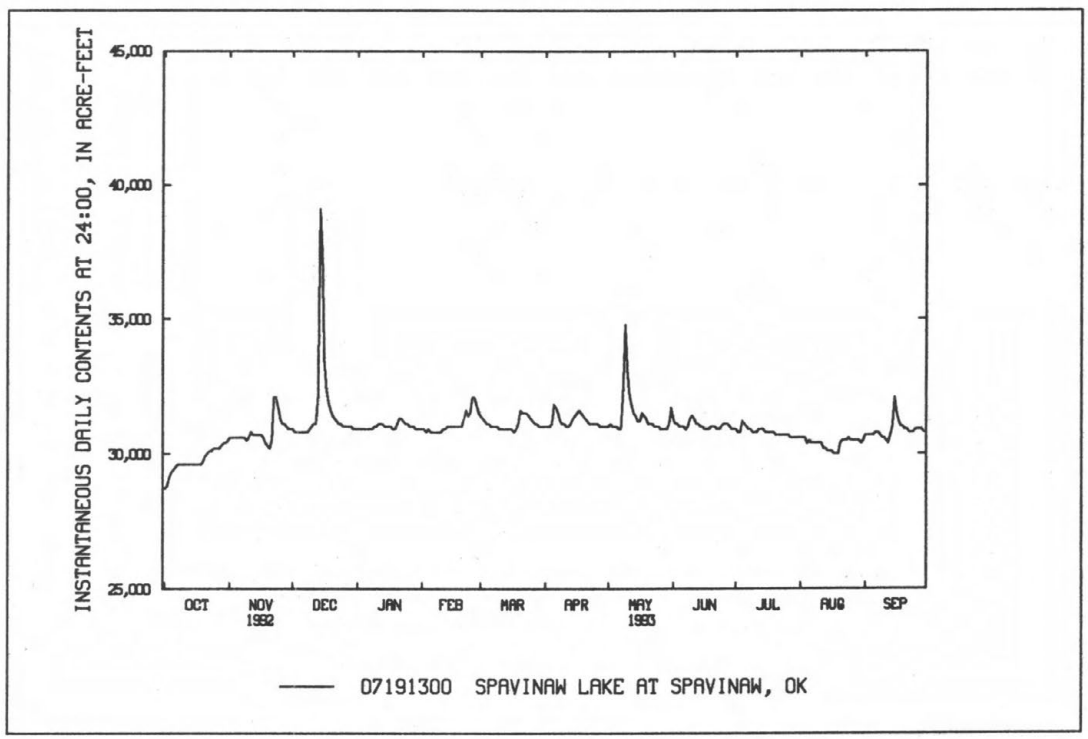
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28700	30600	30900	30900	30900	31400	31000	31000	31300	30900	30600	30700
2	28800	30600	30800	30900	30900	31300	31000	31100	31100	30800	30600	30700
3	29100	30600	30800	30900	30800	31200	31000	31000	31100	30800	30600	30700
4	29300	30600	30800	30900	30900	31100	31100	31000	31000	31200	30400	30700
5	29400	30600	30800	30900	30800	31100	31800	31000	31000	31100	30500	30700
6	29500	30600	30800	30900	30800	31000	31700	30900	31000	31000	30400	30800
7	29600	30600	30800	30900	30800	31000	31500	30900	30900	30900	30400	30800
8	29600	30600	30800	30900	30800	31000	31200	32400	31000	30900	30400	30700
9	29600	30500	30900	31000	30800	31000	31100	34800	31300	30800	30400	30600
10	29600	30600	31000	31000	30800	30900	31100	33100	31400	30800	30400	30600
11	29600	30800	31100	31100	30900	30900	31000	32200	31300	30800	30400	30500
12	29600	30700	31100	31100	30900	30900	31000	31800	31100	30900	30200	30400
13	29600	30700	32100	31100	31000	30900	31100	31500	31100	30900	30200	30700
14	29600	30700	39100	31000	31000	30900	31300	31400	31000	30900	30100	31000
15	29600	30700	37400	31000	31000	30900	31400	31200	31000	30800	30100	32100
16	29600	30700	33500	31000	31000	30900	31500	31200	30900	30800	30100	31500
17	29600	30600	32400	31000	31000	30800	31600	31500	30900	30800	30000	31200
18	29600	30400	31900	30900	31000	30900	31500	31400	30900	30800	30000	31000
19	29700	30300	31600	30900	31000	31100	31400	31300	31000	30800	30000	31000
20	29900	30200	31400	31100	31000	31600	31300	31100	31000	30700	30400	30900
21	30000	30500	31300	31300	31300	31500	31200	31100	31000	30700	30500	30900
22	30100	32100	31200	31300	31600	31500	31100	31100	30900	30700	30500	30800
23	30100	32100	31100	31200	31400	31500	31100	31000	30900	30700	30500	30800
24	30200	31700	31100	31100	31500	31400	31100	31000	31000	30700	30600	30800
25	30200	31300	31000	31100	32100	31300	31100	31000	31100	30700	30500	30900
26	30200	31100	31000	31000	32100	31200	31100	30900	31100	30700	30500	30900
27	30200	31100	31000	31000	31800	31100	31000	30900	31100	30600	30500	30900
28	30300	31000	31000	31000	31500	31100	31000	30900	31000	30600	30500	30900
29	30400	30900	31000	30900	---	31000	31000	30900	30900	30600	30500	30800
30	30400	30900	30900	30900	---	31000	31000	31100	30900	30600	30400	30800
31	30500	---	30900	30900	---	31000	---	31700	---	30600	30500	---

07191300 SPAVINAW LAKE AT SPAVINAW, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	922200	924400	981500	961100	871400	964400	936300	973400	931200	954600	941700	925800
MEAN	29700	30800	31700	31000	31100	31100	31200	31400	31000	30800	30400	30900
MAX	30500	32100	39100	31300	32100	31600	31800	34800	31400	31200	30600	32100
MIN	28700	30200	30800	30900	30800	30800	31000	30900	30900	30600	30000	30400
(‡)	679.93	680.30	680.29	680.28	680.72	680.38	680.36	680.82	680.28	680.00	679.92	680.22
(‡‡)	+1,800	+400	0	0	+600	-500	0	+700	-800	-300	-100	+300

CAL YR 1992 TOTAL 11222900 MEAN 30700 MAX 39100 MIN 28700 (‡‡) 0
WTR YR 1993 TOTAL 11288000 MEAN 30900 MAX 39100 MIN 28700 (‡‡) +2,100

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07191400 LAKE HUDSON NEAR LOCUST GROVE, OK

LOCATION.--Lat 36°13'48", long 95°10'55", in SE 1/4 NW 1/4 sec.9, T.20 N., R. 20 E., Mayes County, Hydrologic Unit 11070209, at left side of Robert S. Kerr dam on Neosho River, 2.0 mi northwest of Locust Grove, 3.5 mi downstream from Saline Creek, and at mile 47.3.

DRAINAGE AREA.--11,534 mi^2.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Remote-controlled indicator and nonrecording gage. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam and concrete spillway controlled by seventeen 22-foot taintor gates. Storage began Nov. 12, 1963; power pool first filled June 12, 1964. Capacity, 444,500 acre-ft at elevation 636.0 ft, top of taintor gages, 200,300 acre-ft at elevation 619.0 ft, power pool, and 48,630 acre-ft at elevation 599.0 ft, top of spillway crest. Figures given herein represent total contents. Reservoir was designed for flood control and power development. U.S. Army Corps of Engineers' satellite telemeter at station.

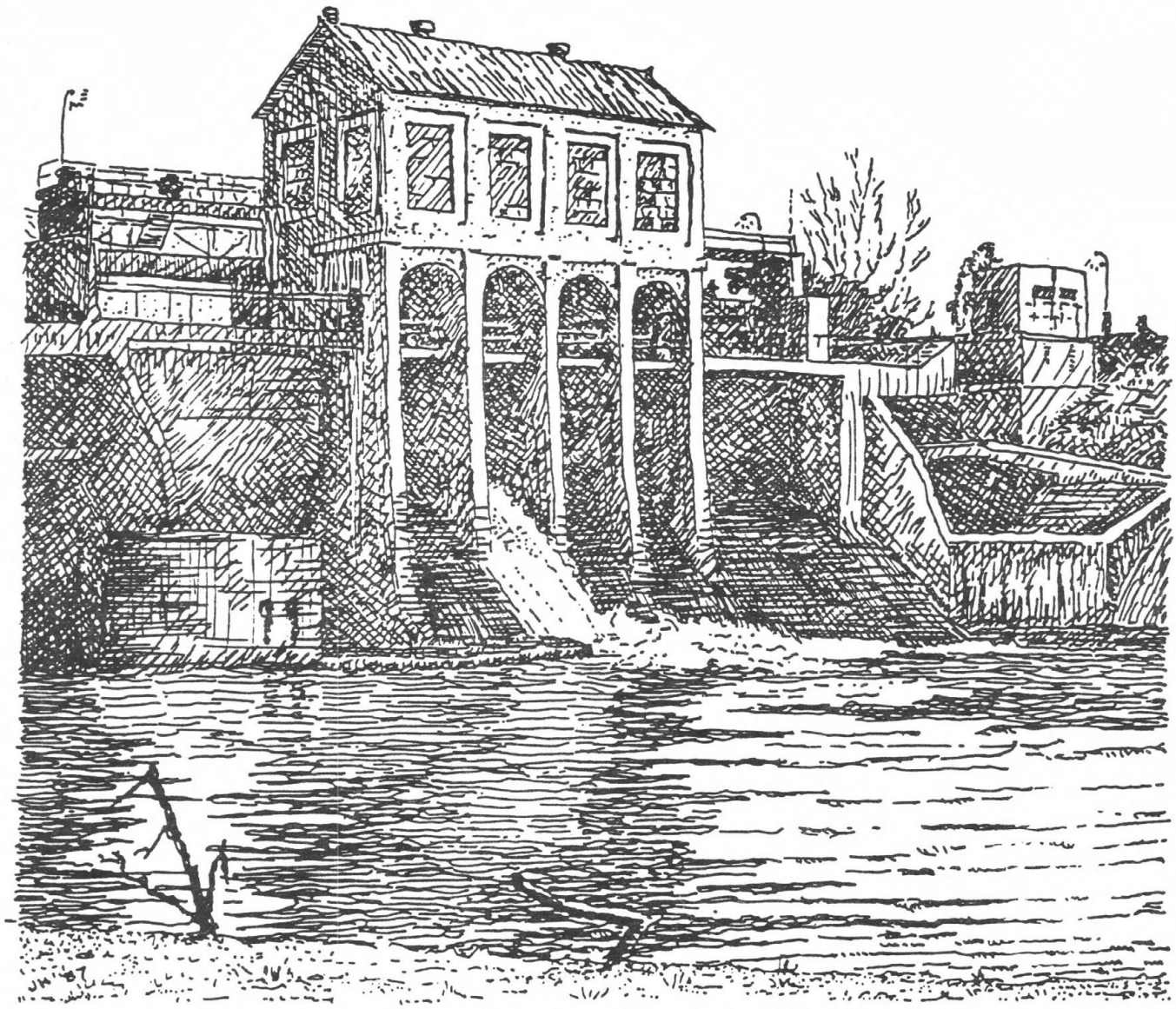
COOPERATION.--Records provided by Grand River Dam Authority.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 443,600 acre-ft, Oct. 4, 1986, elevation, 635.95 ft; minimum since power pool first filled, 153,200 acre-ft, Mar. 24, 1988, elevation, 614.31 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 427,400 acre-ft, Dec. 16, elevation, 635.07 ft; minimum, 192,400 acre-ft, Sept. 24, elevation, 618.26 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	619.27	203,300	-
Oct. 31	619.46	205,400	+2,100
Nov. 30	624.18	261,400	+56,000
Dec. 31	626.00	285,200	+23,800
CAL YR 92	-	-	+55,900
Jan. 31	618.98	200,100	-85,100
Feb. 28	619.71	208,200	+8,100
Mar. 31	619.16	202,100	-6,100
Apr. 30	619.41	204,800	+2,700
May 31	629.54	335,600	+130,800
June 30	622.23	237,300	-98,300
July 31	619.73	208,400	-28,900
Aug. 31	620.05	211,900	+3,500
Sept. 30	622.89	245,300	+33,400
WTR YR 93	-	-	+42,000



Spillway at Lake Overholser near Oklahoma City

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK

LOCATION.--Lat 36°13'46", long 95°10'57", in SE 1/4 NW 1/4 sec.9, T.20 N., R.20 E., Mayes County, Hydrologic Unit 11070209, on left bank, 100 ft downstream from Robert S. Kerr Dam, 2.2 mi northwest of Locust Grove, 10.0 mi northeast of Chouteau, and at mile 47.2.

DRAINAGE AREA.--11,534 mi^2.

PERIOD OF RECORD.--October 1937 to September 1950, October 1963 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WDR OK-86-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 554.00 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Apr. 3, 1941, nonrecording gage at bridge on State Highway 33, 8.2 mi downstream, at datum 17.63 ft lower. Apr. 3, 1941 to Sept. 30, 1950, and Oct. 1963 to Apr. 6, 1964, at site 2.5 mi downstream, at datum 2.17 ft lower. Supplemental water-stage recorder Oct. 4, 1963, to July 10, 1973, at site 8.2 mi downstream.

REMARKS.--Records poor. Some regulation since 1940 by Lake O' The Cherokees (station 07190000), and completely regulated since 1963 by Lake Hudson (station 07191400).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	6860	24400	e30000	11200	e17600	e17500	e14100	e28200	35600	17900	e10900
2	756	7760	21500	e30000	e12200	e20800	e14500	e13300	e32200	29000	15500	e14000
3	1660	6030	21000	e30000	e12700	e20800	e14600	e21000	e34100	18500	18100	e3700
4	1660	7860	19400	e29500	e11000	e20800	e16300	e15100	e33000	16600	15900	e6150
5	5630	4640	19300	e29500	e13000	e22800	e20300	e13700	e31000	16100	18600	e7360
6	5540	3440	19300	e29500	e11100	e21700	e16800	e14600	e29500	23900	14600	e10100
7	3610	4310	18600	e30000	e12200	e21100	e20600	e13900	e38000	41900	16800	e6570
8	2890	2400	18000	e27000	e12900	e19900	e20400	e17900	e21900	49400	e19900	e9840
9	427	3740	19400	17000	e12400	e13400	e15500	e30700	e39400	46200	e18100	e2750
10	202	437	27600	16800	e13000	e17100	e17500	e44000	e33400	35600	e18400	e4070
11	237	6850	34300	20500	e12400	e14700	e16400	e45500	e37600	30500	e20200	e1720
12	271	12400	30600	26200	e15400	e11000	e15500	e42300	e37700	17900	e15900	e5150
13	240	13400	31300	23200	e12800	e13700	e18100	e26200	e37300	14200	e16200	e5980
14	770	16200	e49000	20800	e13700	e11300	e20500	e18300	e34800	18500	e13100	e14100
15	879	16400	e79000	18800	e13700	e13800	e20500	e18400	e33000	19700	e14700	e13600
16	196	16800	e101000	16700	e13400	e11700	e21800	e20100	e30200	18900	e13700	e14400
17	193	16100	e116000	16600	e13700	e14200	e23600	e22200	e29900	22500	e15600	e16000
18	249	16200	e99200	16600	e13400	e10700	e23900	e44700	e25100	19800	e17900	e15000
19	7130	16100	e80000	16500	e11700	e18900	e23500	e69300	19000	21700	e14600	e13600
20	4650	18600	e55000	17200	e12600	e12400	e23100	e57800	18800	22800	e16800	e12200
21	1360	24300	e45000	23800	e15100	e12400	e22600	e47600	19600	26900	e16400	e11600
22	4490	36000	e38000	28600	e16200	e17800	e19000	e50100	21600	25600	e13500	e12300
23	357	e56000	e36000	32800	e18400	e23400	e14200	e45500	21900	23600	e14000	e8860
24	192	e65000	e34000	32900	e21100	e24100	e15600	e45100	17900	22300	e14500	e19200
25	2300	e70000	e33000	31800	e22000	e22200	e15800	e44300	24800	22700	e14500	e53700
26	4150	e62000	e32500	23100	e23300	e18000	e13400	e41600	34800	20900	e12000	e100000
27	3650	e51000	e32000	16800	e19600	e16600	e14500	e38300	34600	16500	e11800	e136000
28	3330	e40000	e31000	16700	e16400	e18100	e12400	e35900	31500	21600	e11100	e130000
29	3530	e35000	e30000	16400	---	e18000	e14200	e28400	27400	15700	e13200	e107000
30	2110	e29000	e28000	13200	---	e14400	e12100	e28400	25800	16500	e9280	e88000
31	2150	---	e29000	13100	---	e19200	---	e28000	---	13800	e6650	---
TOTAL	66679	664827	1252400	711600	406600	532600	534700	996300	884000	745400	469430	853850
MEAN	2151	22160	40400	22950	14520	17180	17820	32140	29470	24050	15140	28460
MAX	7130	70000	116000	32900	23300	24100	23900	69300	39400	49400	20200	136000
MIN	192	437	18000	13100	11000	10700	12100	13300	17900	13800	6650	1720
AC-FT	132300	1319000	2484000	1411000	806500	1056000	1061000	1976000	1753000	1479000	931100	1694000

e Estimated

07191500 NEOSHO RIVER NEAR CHOUTEAU, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1993, BY WATER YEAR (WY)

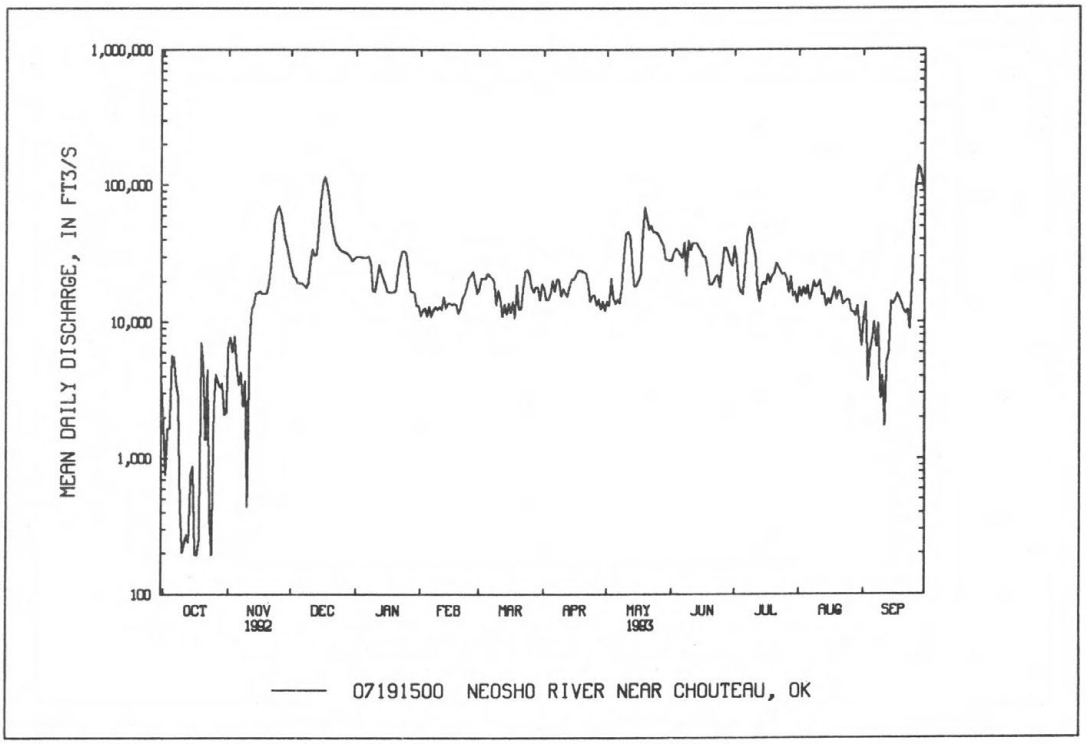
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5823	8891	8672	6937	7816	12400	13530	10850	12810	8649	4578	5079
MAX	59840	40780	40400	23350	23640	39260	46000	39060	30920	28710	15140	28460
(WY)	1987	1986	1993	1973	1985	1973	1973	1990	1974	1976	1993	1993
MIN	169	83.3	87.5	189	79.4	75.8	160	122	735	1067	603	591
(WY)	1964	1964	1964	1981	1964	1964	1971	1964	1972	1991	1991	1983

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1964-93	
ANNUAL TOTAL	4281240		8118386			
ANNUAL MEAN	11700		22240		[a]8830	
HIGHEST ANNUAL MEAN					22240	1993
LOWEST ANNUAL MEAN					1924	1981
HIGHEST DAILY MEAN	116000	Dec 17	136000	Sep 27	136000	Sep 27 1993
LOWEST DAILY MEAN	170	Jan 26	192	Oct 24	[b]12	Nov 13 1963
ANNUAL SEVEN-DAY MINIMUM	313	May 6	398	Oct 11	45	Feb 21 1964
INSTANTANEOUS PEAK FLOW			136000	Sep 27	[c]136000	Sep 27 1993
INSTANTANEOUS PEAK STAGE			33.12	Dec 17	34.38	Feb 25 1985
ANNUAL RUNOFF (AC-FT)	8492000		16100000		6397000	
10 PERCENT EXCEEDS	30200		38700		21500	
50 PERCENT EXCEEDS	7340		18000		4760	
90 PERCENT EXCEEDS	272		4580		170	

[a]Since regulation by Lake Hudson.

[b]Minimum daily for period of record, caused by closure of Robert S. Kerr Dam.

[c]Maximum discharge for period of record, 400,000 ft^3/s, May 20, 1943, gage height 45.00 ft, site and datum then in use, from rating curve extended above 140,000 ft^3/s on basis of slope-area measurement of peak flow.



07193000 FORT GIBSON LAKE NEAR FORT GIBSON, OK

LOCATION.--Lat 35°52'12", long 95°13'38", in NE 1/4 NW 1/4 sec.18, T.16 N., R.20 E., Cherokee County, Hydrologic Unit 11070209, in control tower near left end of Fort Gibson Dam on Neosho River, 4.0 mi north of Fort Gibson, and at mile 7.7.

DRAINAGE AREA.--12,492 mi^2.

PERIOD OF RECORD.--October 1949 to September 1993 (discontinued). Prior to October 1970, published as Fort Gibson Reservoir near Fort Gibson.

REVISED RECORDS.--WSP 1731: 1950 (M).

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Jan. 13, 1950, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by concrete-gravity and earth-fill dam. Spillway is concrete ogee-type weir controlled by thirty 40-foot taintor gates; outlet works consists of ten, 5-foot, 8-inch by 7-foot sluice gates. Regulated storage began Sept. 5, 1949; power pool was first maintained in 1953. Capacity, 1,284,000 acre-ft at elevation 582.0 ft, flood control pool, 365,200 acre-ft at elevation 554.0 ft (maximum power pool), and 311,300 acre-ft at elevation 551.0 ft (minimum power pool). Figures given herein represent total contents. Reservoir was designed for flood control and power development. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,286,000 acre-ft, Oct. 5, 1986, elevation, 582.04 ft; minimum since first use of power pool, 303,800 acre-ft, May 26, 1955, elevation, 550.56 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,236,000 acre-ft, Dec. 18, elevation, 581.04 ft; minimum, 354,700 acre-ft, Sept. 1, elevation 553.44.

Capacity table (elevation, in feet, and contents, in acre-ft):

550	294,600	570	777,000
555	384,500	575	964,000
560	492,600	580	1,186,000
565	622,100	581.5	1,259,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

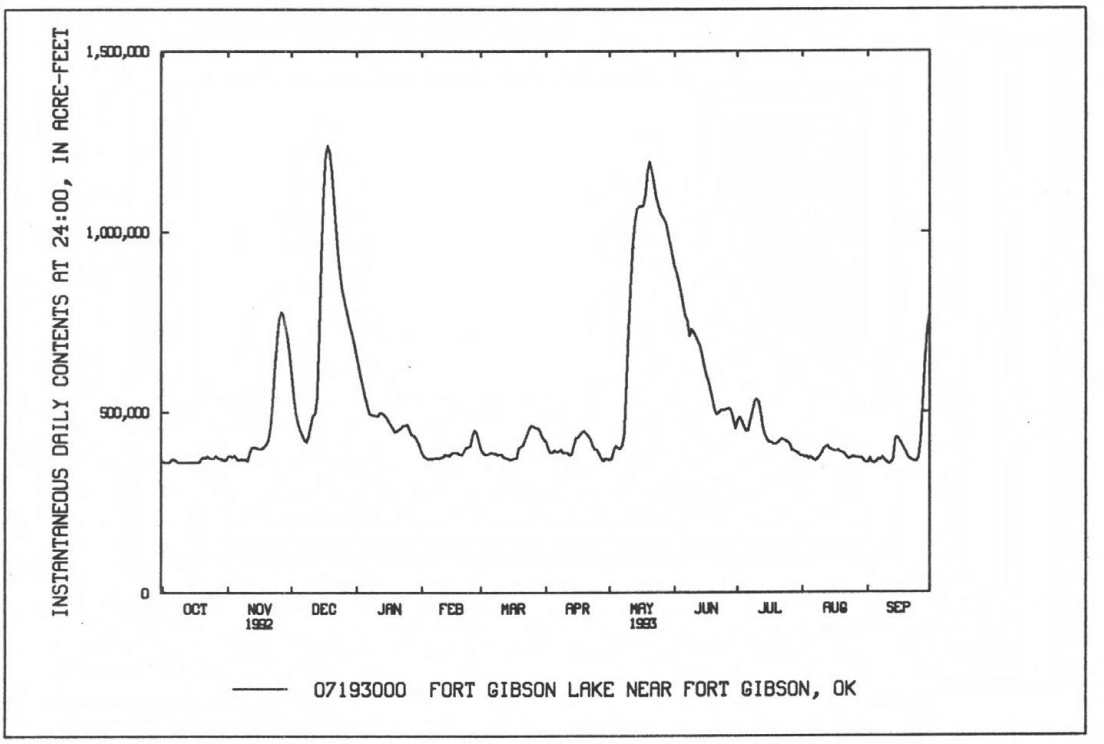
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	363300	378900	599300	650000	386700	396300	416800	368900	903000	475700	379500	358700
2	360300	378500	539100	620700	376400	387300	397500	370800	884800	485400	374700	372300
3	361500	375200	496400	593000	373500	382600	386700	394300	861300	474300	376600	359400
4	361500	379900	468500	566200	369100	381600	387700	406800	830700	459500	370400	357300
5	368700	370600	450600	540300	371800	385300	394700	400500	800000	447000	374800	361600
6	369400	367500	436000	516600	370600	387300	388700	398100	767500	447400	370000	369400
7	366000	369600	422700	496000	372300	384500	390900	406400	754800	475900	364800	367100
8	361800	368700	417500	492100	372900	385300	396500	438800	710700	502200	369600	374800
9	360700	369100	434700	491400	372300	380600	386500	588100	729900	528600	375800	365800
10	360900	365200	463400	489800	374300	383300	387300	736000	722500	535100	385100	360900
11	360900	385500	490500	488700	375400	381800	387500	859800	710700	530300	397100	355100
12	361300	402100	494300	498400	382600	374700	380600	967200	697000	498800	402500	358700
13	360900	402700	537100	497200	380400	373100	382400	1027000	682400	459300	405300	369300
14	360200	401500	715100	492100	379300	370800	406200	1062000	660200	436600	396700	427600
15	361500	399100	935800	485400	385300	368900	427800	1068000	630200	424800	395300	428900
16	361500	398700	1088000	475400	387900	368700	429100	1070000	603800	415600	391300	419300
17	361500	399500	1208000	465400	388500	372500	437100	1071000	586800	416200	390500	408900
18	361500	404900	1236000	456600	386700	371400	444600	1101000	561500	410100	393900	398900
19	370600	411600	1220000	445300	382200	399300	447900	1163000	535400	410600	388300	389300
20	375800	425400	1165000	447000	381400	404100	440100	1192000	507000	413700	386700	374500
21	372900	460200	1087000	451500	393300	408100	433400	1169000	493100	420200	383300	369100
22	378300	537800	1010000	454800	401700	423700	423300	1138000	497900	424800	374800	366000
23	372900	630200	938200	462200	403500	437900	406000	1100000	504600	423300	370000	363100
24	371200	702600	881500	463100	406600	454600	396700	1076000	504600	419100	372700	363700
25	372300	760800	837200	465100	434000	462000	396300	1056000	505600	416200	377000	372700
26	378700	779600	809700	451500	449500	459500	385100	1044000	508700	408500	373100	426300
27	373700	770200	782700	437100	442000	455700	372700	1034000	510600	392500	374100	540300
28	371800	736400	754100	435100	418100	455100	365200	1021000	502200	392100	371000	650900
29	370000	706300	731200	428900	---	448100	371200	990000	478400	388700	373300	732500
30	366200	659900	710000	417000	---	431400	369400	961900	456000	384300	366400	768100
31	368900	---	681700	404500	---	423300	---	932600	---	379300	359600	---

07193000 FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	378700	779600	1236000	650000	449500	462000	447900	1192000	903000	535100	405300	768100
MIN	360200	365200	417500	404500	369100	368700	365200	368900	456000	379300	359600	355100
(‡)	554.19	566.30	567.03	556.00	556.65	556.90	554.22	574.22	558.40	554.73	553.70	569.72
(‡‡)	+2,200	+291,100	+21,800	-227,200	+13,600	+5,200	-53,900	+563,200	-476,600	-76,700	-19,700	+408,500

CAL YR 1992 MAX 1236000 MIN 352300 (‡‡) +283,200
WTR YR 1993 MAX 1236000 MIN 355100 (‡‡) +401,400

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK
(National stream-quality accounting network station)

LOCATION.--Lat 35°51'10", long 95°13'44", in NW 1/4 NW 1/4 sec.19, T.16 N., R.20 E., Cherokee County, Hydrologic Unit 11070209, on left bank 1.1 mi downstream from Fort Gibson Dam, 3.5 mi north of Fort Gibson, and at mile 6.6.

DRAINAGE AREA.--12,495 mi^2.

PERIOD OF RECORD.--Water years 1952 to December 1992 (discontinued).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1951 to September 1963, October 1973 to January 1982.
WATER TEMPERATURE: October 1951 to September 1963, October 1973 to January 1982.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
OCT											
06...	1230	1028	80020	6380	248	7.9	21.0	4.5	8.0	90	K3
DEC											
02...	1215	1028	80020	53900	248	8.0	10.5	12	11.8	106	89

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT											
06...	K12	96	15	31	4.4	6.5	12	0.3	3.9	81	0
DEC											
02...	49	110	21	34	5.2	6.3	11	0.3	4.1	86	0

DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)
OCT										
06...	99	81	25	6.7	0.20	4.3	136	132	2340	0.18
DEC										
02...	104	85	28	6.8	0.10	6.3	148	145	21500	0.20

07193500 NEOSHO RIVER BELOW FORT GIBSON LAKE NEAR FORT GIBSON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT										
06...	0.310	--	<0.010	<0.010	0.310	0.320	<0.010	<0.010	0.50	0.50
DEC										
02...	0.590	0.570	0.010	0.020	0.600	0.590	0.030	0.020	0.27	0.30

DATE	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)
OCT										
06...	0.81	0.090	0.060	0.060	0.050	<10	51	<3	6	<4
DEC										
02...	0.90	0.090	0.070	0.060	0.060	--	--	--	--	--

DATE	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
06...	1	<10	2	<1	<1.0	150	<6	--	--	--
DEC										
02...	--	--	--	--	--	--	--	45	6510	95

07195500 ILLINOIS RIVER NEAR WATTS, OK

LOCATION.--Lat 36°07'48", long 94°34'19", in NW 1/4 NE 1/4 sec.18, T.19 N., R.26 E., Adair County, Hydrologic Unit 11110103, near right bank on downstream side of pier of bridge on U.S. Highway 59, 1.5 mi north of Watts, 4.5 mi downstream from Cincinnati Creek, and at mile 106.2.
DRAINAGE AREA.--635 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1955 to current year.
GAGE.--Water-stage recorder. Datum of gage is 893.78 ft above sea level.
REMARKS.--No estimated daily discharges. Records fair. Since July 2, 1957, small diversion for municipal water supply for the city of Siloam Springs, Ark., upstream from station. U.S. Army Corps of Engineers' satellite telemeter at station.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 22	2100	13,400	16.07	Apr. 15	0800	13,500	16.13
Dec. 15	2400	23,400	20.79	May 10	1700	15,600	17.49
Jan. 4	1900	6,540	10.71	June 26	0400	7,990	11.99
Feb. 25	2100	8,670	12.56	Sept. 15	0300	11,000	14.34

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	810	761	816	686	1660	1200	1270	993	863	249	180
2	225	1130	702	779	663	1510	1030	1110	817	753	240	181
3	207	658	650	766	642	1380	930	3030	934	681	232	226
4	192	501	610	3460	621	1250	1570	2000	1080	615	234	302
5	189	407	575	2640	620	1140	4090	1410	801	565	248	209
6	181	351	566	1690	599	1040	2400	1160	704	538	351	176
7	177	310	545	1390	569	959	1790	1020	644	576	320	164
8	170	285	525	1230	553	894	1510	914	662	513	269	321
9	173	262	1290	1360	540	841	1310	7020	863	474	881	632
10	179	247	3030	2830	524	798	1150	13700	972	447	465	348
11	175	843	1790	1880	550	754	1040	6250	1160	426	353	262
12	165	2890	1370	1710	822	714	940	3310	926	405	310	224
13	159	1850	1190	1530	755	680	888	2500	805	400	276	234
14	156	1140	11000	1280	638	648	2880	1920	758	394	256	6490
15	158	867	16000	1160	704	633	8630	1590	903	399	236	6220
16	262	702	13900	1070	1420	711	3240	1380	740	385	211	2050
17	332	608	4950	988	1220	780	2220	1240	651	370	205	1300
18	239	538	3310	921	948	712	2330	1280	606	351	197	982
19	202	491	2550	884	844	1580	1890	1150	1000	336	187	794
20	185	843	1960	2210	950	3680	1950	1030	1950	333	180	727
21	182	2840	1640	2340	3450	2160	1500	947	1220	333	176	660
22	177	8580	1450	1620	2740	1720	1270	884	949	338	173	566
23	179	5810	1310	1360	1910	1590	1150	847	813	433	173	503
24	178	2620	1170	1210	1550	1360	1070	939	747	334	261	572
25	174	1850	1100	1070	5670	1210	1600	873	2120	305	405	1900
26	169	1460	1050	981	5110	1080	1300	773	4550	285	242	1840
27	172	1200	976	915	2620	995	1090	717	1800	276	201	1310
28	173	1040	921	861	1980	919	974	672	1450	269	186	1020
29	194	922	892	806	---	872	1230	647	1130	264	176	831
30	224	829	865	754	---	1090	1680	720	1090	259	168	705
31	233	---	840	714	---	1650	---	1480	---	255	172	---
TOTAL	6013	42884	79488	43225	39898	37010	55852	63783	33838	13175	8233	31929
MEAN	194	1429	2564	1394	1425	1194	1862	2058	1128	425	266	1064
MAX	332	8580	16000	3460	5670	3680	8630	13700	4550	863	881	6490
MIN	156	247	525	714	524	633	888	647	606	255	168	164
AC-FT	11930	85060	157700	85740	79140	73410	110800	126500	67120	26130	16330	63330
CFSM	.31	2.25	4.04	2.20	2.24	1.88	2.93	3.24	1.78	.67	.42	1.68
IN.	.35	2.51	4.66	2.53	2.34	2.17	3.27	3.74	1.98	.77	.48	1.87

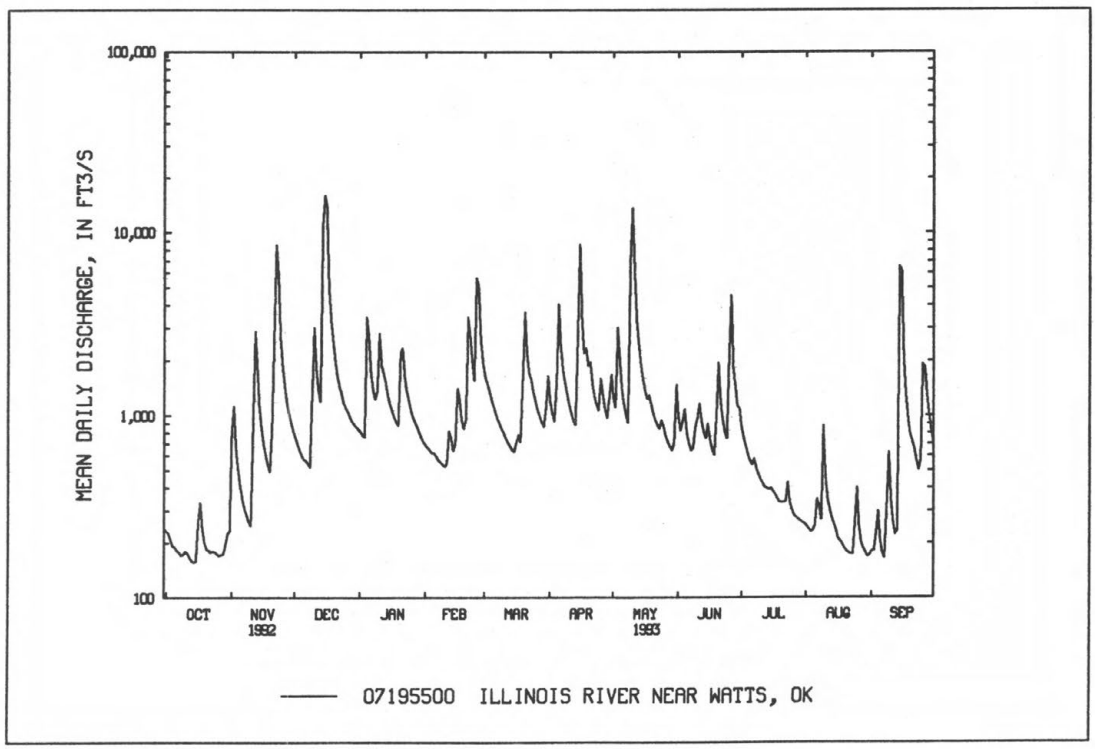
07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	371	633	689	537	675	967	1040	1013	655	349	242	295
MAX	2734	3087	2786	1658	1818	2934	3347	4286	3225	1807	1172	1393
(WY)	1987	1974	1988	1969	1975	1973	1957	1961	1974	1958	1961	1986
MIN	20.9	65.6	60.4	61.4	75.1	114	176	144	113	50.7	33.2	14.9
(WY)	1957	1964	1956	1956	1964	1956	1963	1977	1963	1964	1956	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1956-93	
ANNUAL TOTAL	278238		455328			
ANNUAL MEAN	760		1247		621	
HIGHEST ANNUAL MEAN					1247	1993
LOWEST ANNUAL MEAN					151	1964
HIGHEST DAILY MEAN	16000	Dec 15	16000	Dec 15	34500	Oct1 1986
LOWEST DAILY MEAN	156	Oct 14	156	Oct 14	10	Sep 19 1956
ANNUAL SEVEN-DAY MINIMUM	166	Oct 9	166	Oct 9	11	Sep 22 1956
INSTANTANEOUS PEAK FLOW			23400	Dec 15	[a]68000	Jul 25 1960
INSTANTANEOUS PEAK STAGE			20.79	Dec 15	25.96	Jul 25 1960
INSTANTANEOUS LOW FLOW			151	Oct 14,15	8.6	[b]Oct 26 1955
ANNUAL RUNOFF (AC-FT)	551900		903100		450200	
ANNUAL RUNOFF (CFSM)	1.20		1.96		.98	
ANNUAL RUNOFF (INCHES)	16.30		26.67		13.30	
10 PERCENT EXCEEDS	1250		2330		1240	
50 PERCENT EXCEEDS	405		841		281	
90 PERCENT EXCEEDS	201		199		91	

[a]From rating curve extended above 51,000 ft^3/s.
[b]Also occurred Sept. 19 and Oct. 14, 1956.



07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1989 to current year.
REMARKS.--Samples were collected bi-monthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS TOTAL (MG/L AS CACO3) (00900)
OCT											
07...	1041	1028	80020	185	325	8.0	17.0	--	10.0	107	--
DEC											
09...	1257	1028	80020	1510	264	7.9	7.0	3.6	14.2	122	120
MAR											
09...	1100	1028	80020	841	233	7.9	11.0	--	11.7	110	--
JUN											
30...	1030	1028	80020	1120	236	8.0	23.0	6.8	6.8	81	99
AUG											
04...	1440	1028	80020	242	288	7.6	26.5	14	7.8	99	120
SEP											
02...	1400	1028	80020	177	301	7.3	25.0	15	8.7	109	120
09...	1230	1028	80020	645	262	7.3	21.0	27	8.4	97	100
14...	1330	1028	80020	9100	137	7.0	19.0	450	8.0	88	52

DATE	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)
OCT											
07...	--	--	--	--	--	--	--	--	0	150	123
DEC											
09...	36	44	1.9	6.7	11	0.3	2.7	100	0	100	82
MAR											
09...	--	--	--	--	--	--	--	--	0	112	92
JUN											
30...	5	37	1.7	5.9	11	0.3	3.0	91	0	115	94
AUG											
04...	14	45	1.8	10	15	0.4	3.3	112	0	129	106
SEP											
02...	11	47	1.8	11	16	0.4	2.1	115	0	139	114
09...	11	39	1.6	11	18	0.5	3.6	98	0	114	94
14...	9	19	1.2	3.3	11	0.2	4.4	59	0	53	43

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)
OCT											
07...	--	--	--	--	--	--	--	--	1.80	--	<0.010
DEC											
09...	10	--	0.10	7.4	180	--	--	--	3.19	3.08	0.010
MAR											
09...	--	--	--	--	--	--	--	--	2.78	2.78	--
JUN											
30...	6.9	7.0	0.10	10	130	139	393	0.18	2.40	--	--
AUG											
04...	8.5	11	<0.10	9.8	174	163	114	0.24	2.10	--	--
SEP											
02...	10	13	<0.10	10	174	172	83.2	0.24	1.90	--	--
09...	10	12	<0.10	8.3	154	151	268	0.21	2.00	--	--
14...	5.7	4.5	<0.10	6.0	82	79	2010	0.11	1.78	1.78	--

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT											
07...	<0.010	1.80	1.80	0.040	0.040	--	--	<0.20	--	--	0.220
DEC											
09...	0.020	3.20	3.10	0.050	0.040	0.15	--	0.20	3.4	--	0.140
MAR											
09...	0.020	--	2.80	--	0.030	0.17	--	0.20	3.0	--	0.090
JUN											
30...	<0.010	--	2.40	--	0.030	--	--	<0.20	--	<0.20	0.140
AUG											
04...	<0.010	--	2.10	--	0.050	0.25	0.25	0.30	2.4	0.30	0.250
SEP											
02...	<0.010	--	1.90	--	0.060	--	--	<0.20	--	<0.20	0.180
09...	<0.010	--	2.00	--	0.050	0.35	--	0.40	2.4	<0.20	0.300
14...	0.020	--	1.80	--	0.090	0.51	0.41	0.60	2.4	0.50	0.400

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	BORON, DIS-SOLVED (UG/L AS B) (01020)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)
OCT											
07...	0.210	0.190	0.170	--	--	--	--	--	--	--	--
DEC											
09...	0.090	0.100	0.090	20	<1	43	<0.5	<1.0	5	<3	<10
MAR											
09...	0.060	--	0.060	--	--	--	--	--	--	--	--
JUN											
30...	0.130	--	0.120	30	1	48	0.6	<1.0	<5	<3	<10
AUG											
04...	0.210	--	0.190	20	1	51	<0.5	<1.0	<5	<3	<10
SEP											
02...	0.190	--	0.180	30	<1	52	<0.5	<1.0	<5	<3	<10
09...	0.250	--	0.240	40	1	44	<0.5	<1.0	<5	<3	<10
14...	0.310	--	0.320	20	<1	29	<0.5	<1.0	<5	<3	<10

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT											
07...	--	--	--	--	--	--	--	--	--	--	--
DEC											
09...	<3	<10	<4	97	0.2	<10	<10	<1.0	50	<6	<3
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
30...	7	<10	<4	32	<0.1	<10	<10	<1.0	47	<6	<3
AUG											
04...	<3	<10	<4	53	1.6	<10	<10	<1.0	52	<6	5
SEP											
02...	<3	<10	<4	63	<0.1	<10	<10	<1.0	52	<6	<3
09...	15	<10	<4	30	<0.1	<10	<10	1.0	43	<6	<3
14...	34	<10	<4	83	0.3	<10	<10	<1.0	26	<6	5

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PCB, TOTAL (UG/L) (39516)	ALDRIN, TOTAL (UG/L) (39330)	CHLORDANE, TOTAL (UG/L) (39350)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)	DISYSTON TOTAL (UG/L) (39011)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--
DEC 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--
JUN 30...	<0.1	<0.010	<0.1	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.01
AUG 04...	<0.1	<0.010	<0.1	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.010	<0.01
SEP 02...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--

DATE	ENDOSULFAN, TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L (82614)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALATHION, TOTAL (UG/L) (39530)	METHOXYCHLOR, TOTAL (UG/L) (39480)	METHYL PARATHION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)
OCT 07...	--	--	--	--	--	--	--	--	--	--	--
DEC 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--
JUN 30...	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01
AUG 04...	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.01
SEP 02...	--	--	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--

07195500 ILLINOIS RIVER NEAR WATTS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L) (39250)	PARATHION, TOTAL (UG/L) (39540)	PERTHANE TOTAL (UG/L) (39034)	PHORATE TOTAL (UG/L) (39023)	SILVEX, TOTAL (UG/L) (39760)	TOTAL TRITHION (UG/L) (39786)	TOXAPHENE, TOTAL (UG/L) (39400)	2, 4-DP TOTAL (UG/L) (82183)	2,4-D, TOTAL (UG/L) (39730)	2,4,5-T TOTAL (UG/L) (39740)
OCT										
07...	--	--	--	--	--	--	--	--	--	--
DEC										
09...	--	--	--	--	--	--	--	--	--	--
MAR										
09...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	<0.10	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01	<0.01	<0.01
AUG										
04...	<0.10	<0.01	<0.1	<0.01	--	<0.01	<1	--	--	--
SEP										
02...	--	--	--	--	<0.01	--	--	<0.01	<0.01	<0.01
09...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK

WATER-QUALITY RECORDS

LOCATION.--Lat 36°12'06", long 94°36'18", in NE 1/4 NE 1/4 sec.23, T.20 N, R.25 E., Delaware County, Hydrologic Unit 11110103, at county road bridge, 1.4 mi upstream from Flint Creek and 2.5 mi northwest of West Siloam Springs.

DRAINAGE AREA.--18.9 mi^2.

PERIOD OF RECORD.--May 1991 to current year.

REMARKS.--Samples were collected bi-monthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

COOPERATION.--Samples were collected by the Oklahoma Conversation Commission from May 1991 to July 1992 and were analyzed by the U.S. Geological Survey, National Water Quality Laboratory.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)
OCT											
06...	1735	1028	80020	8.3	466	8.1	24.5	19.5	--	735	9.6
DEC											
08...	1450	1028	80020	16	328	7.9	6.0	9.0	--	745	14.4
FEB											
10...	1120	1028	80020	15	338	8.0	10.0	10.0	--	735	11.3
JUN											
30...	1515	1028	80020	23	299	7.7	30.5	24.5	0.20	745	7.7
AUG											
04...	1830	1028	80020	10	444	7.3	31.0	26.0	0.30	747	7.0
SEP											
03...	1300	1028	80020	9.5	487	7.3	28.5	24.0	0.20	744	8.2
14...	1600	1028	80020	520	138	7.0	12.0	16.5	32	740	8.2

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
OCT											
06...	109	--	--	--	--	--	--	--	--	--	125
DEC											
08...	128	--	--	--	--	--	--	--	--	--	116
FEB											
10...	104	--	--	--	--	--	--	--	--	--	112
JUN											
30...	95	4.4	110	20	42	2.0	13	19	0.5	5.6	114
AUG											
04...	88	6.5	140	41	52	2.4	30	30	1	9.2	120
SEP											
03...	100	8.7	140	48	51	2.6	35	34	1	6.1	110
14...	87	2.6	48	9	17	1.3	3.8	13	0.2	5.0	47

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT											
06...	0	103	--	--	--	--	--	--	--	--	7.40
DEC											
08...	0	95	--	--	--	--	--	--	--	--	4.98
FEB											
10...	0	92	--	--	--	--	--	--	--	--	5.77
JUN											
30...	0	94	9.6	20	0.10	9.4	184	178	0.25	11.5	4.20
AUG											
04...	0	98	15	46	0.20	9.9	262	254	0.36	7.29	6.30
SEP											
03...	0	90	17	65	0.20	10	291	278	0.40	7.42	8.40
14...	0	38	6.2	6.0	<0.10	5.9	80	79	0.11	112	1.88

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
OCT											
06...	--	--	<0.010	<0.010	--	7.40	7.40	0.010	0.010	0.01	0.01
DEC											
08...	4.98	22	<0.010	0.020	0.07	5.00	5.00	<0.010	<0.010	--	--
FEB											
10...	5.77	26	--	0.030	0.10	--	5.80	--	0.020	--	0.03
JUN											
30...	--	--	--	<0.010	--	--	4.20	--	0.020	--	0.03
AUG											
04...	--	--	--	<0.010	--	--	6.30	--	0.030	--	0.04
SEP											
03...	--	--	--	<0.010	--	--	8.40	--	0.030	--	0.04
14...	1.88	8.3	--	0.020	0.07	--	1.90	--	0.130	--	0.17

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
OCT											
06...	0.29	--	0.30	--	7.7	34	0.870	2.51	0.840	0.820	0.830
DEC											
08...	0.20	--	0.20	--	5.2	23	0.580	1.56	0.550	0.510	0.520
FEB											
10...	0.28	--	0.30	--	6.1	--	0.460	--	0.460	--	0.450
JUN											
30...	--	0.18	<0.20	0.20	--	--	0.360	--	0.370	--	0.370
AUG											
04...	0.17	0.17	0.20	0.20	6.5	--	0.720	--	0.730	--	0.630
SEP											
03...	0.27	0.27	0.30	0.30	8.7	--	0.770	--	0.750	--	--
14...	0.57	0.57	0.70	0.70	2.6	--	0.680	--	0.650	--	0.660

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)
OCT											
06...	2.5	0.05	--	--	--	--	--	--	--	--	--
DEC											
08...	1.6	0.07	--	--	--	--	--	--	--	--	--
FEB											
10...	1.4	--	--	--	--	--	--	--	--	--	--
JUN											
30...	1.1	--	1	54	<0.5	40	<1.0	<5	<3	<10	13
AUG											
04...	1.9	--	1	59	<0.5	60	<1.0	<5	<3	<10	<3
SEP											
03...	--	--	1	59	<0.5	80	<1.0	<5	<3	<10	8
14...	2.0	--	1	29	<0.5	30	<1.0	<5	<3	<10	95

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
DEC										
08...	--	--	--	--	--	--	--	--	--	--
FEB										
10...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	<10	<4	3	<0.1	<10	<10	<1.0	58	<6	<3
AUG										
04...	<10	5	1	0.1	<10	<10	<1.0	67	<6	5
SEP										
03...	<10	7	1	<0.1	<10	<10	4.0	70	<6	8
14...	<10	<4	10	0.6	<10	<10	<1.0	28	<6	4

DATE	PCB, TOTAL (UG/L) (39516)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLOR-DANE, TOTAL (UG/L) (39350)	CHLOR-DYRIFOS TOTAL RECOVER (UG/L) (38932)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DI-AZINON, TOTAL (UG/L) (39570)
OCT											
06...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
30...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
AUG											
04...	--	--	--	--	--	<0.01	--	--	--	--	--
SEP											
03...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
14...	--	--	--	--	--	<0.01	--	--	--	--	--

DATE	DI-ELDRIN TOTAL (UG/L) (39380)	DI-SYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDO-SULFAN, TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DY-FONATE) WATER WHOLE TOT.REC (UG/L (82614)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)
OCT											
06...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
10...	--	--	--	--	--	--	--	--	--	--	--
JUN											
30...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	0.010	<0.01
AUG											
04...	--	--	<0.01	--	--	--	--	--	--	--	--
SEP											
03...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01
14...	--	--	<0.01	--	--	--	--	--	--	--	--

07195865 SAGER CREEK NEAR WEST SILOAM SPRINGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)	PHORATE TOTAL (UG/L) (39023)	SILVEX, TOTAL (UG/L) (39760)	2,4,5-T TOTAL (UG/L) (39740)	TOX-APHENE, TOTAL (UG/L) (39400)	TOTAL TRI-THION (UG/L) (39786)
OCT										
06...	--	--	--	--	--	--	--	--	--	--
DEC										
08...	--	--	--	--	--	--	--	--	--	--
FEB										
10...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01
AUG										
04...	--	--	--	--	--	--	<0.01	<0.01	--	--
SEP										
03...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01
14...	--	--	--	--	--	--	<0.01	<0.01	--	--

07196000 FLINT CREEK NEAR KANSAS, OK

LOCATION.--Lat 36°11'11", long 94°42'24", in SW 1/4 NW 1/4 sec.25, T.20 N., R.24 E., Delaware County, Hydrologic Unit 11110103, upstream from bridge on U.S. Highway 412, at left bank 6.0 mi southeast of Kansas, 6.0 mi downstream from Sager Creek, and at mile 2.2.

DRAINAGE AREA.--110 mi^2.

PERIOD OF RECORD.--August 1955 to September 1976, April 1979 to Septermber 1990, October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.59 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Small diversion above station for irrigation. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	0400	5,790	9.77	May 10	0030	3,100	8.69

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e38	e170	118	153	123	298	159	161	347	164	51	38
2	e37	245	108	143	120	262	145	150	250	149	48	36
3	e34	148	98	143	120	234	135	187	228	136	45	39
4	e33	106	89	223	118	207	378	157	201	120	42	38
5	e32	87	82	227	117	187	672	143	172	111	49	35
6	31	72	78	212	113	169	425	134	150	108	66	32
7	e31	e60	76	199	110	157	327	125	135	105	53	31
8	e30	50	77	185	108	149	273	136	379	99	47	38
9	e31	47	249	203	106	136	231	1720	433	94	45	47
10	e32	46	469	311	105	135	199	1990	350	89	45	42
11	e31	96	310	268	106	120	178	843	322	84	43	37
12	e30	215	235	250	112	111	162	578	262	82	42	33
13	e28	181	283	225	109	106	150	456	218	82	41	34
14	e27	142	4290	202	106	101	410	371	190	80	40	1340
15	e28	113	3550	189	127	101	585	311	178	81	38	550
16	e80	95	1680	175	137	112	387	268	161	78	36	287
17	e100	83	971	164	136	105	340	249	152	75	35	201
18	e55	73	713	156	130	106	395	249	144	68	34	153
19	e40	69	577	146	127	272	333	217	161	66	34	122
20	e33	119	469	331	143	375	283	195	208	67	34	109
21	e32	252	405	334	557	288	237	179	184	67	34	93
22	e31	1560	361	280	411	273	208	165	165	66	32	82
23	e30	719	320	246	318	308	188	160	149	63	31	74
24	e30	444	281	222	267	262	196	154	129	60	33	74
25	e29	325	261	198	1050	234	548	142	738	56	34	96
26	e29	251	235	181	675	203	303	133	566	58	33	93
27	e29	201	215	166	451	174	238	126	343	57	32	83
28	30	168	201	155	352	164	203	120	266	56	31	74
29	32	145	193	144	---	154	204	118	220	56	29	69
30	35	128	181	132	---	199	184	148	190	54	29	64
31	34	---	175	126	---	179	---	942	---	52	32	---
TOTAL	1122	6410	17350	6289	6454	5881	8676	11027	7591	2583	1218	4044
MEAN	36.2	214	560	203	230	190	289	356	253	83.3	39.3	135
MAX	100	1560	4290	334	1050	375	672	1990	738	164	66	1340
MIN	27	46	76	126	105	101	135	118	129	52	29	31
AC-FT	2230	12710	34410	12470	12800	11660	17210	21870	15060	5120	2420	8020
CFSM	.33	1.94	5.09	1.84	2.10	1.72	2.63	3.23	2.30	.76	.36	1.23
IN.	.38	2.17	5.87	2.13	2.18	1.99	2.93	3.73	2.57	.87	.41	1.37

e Estimated

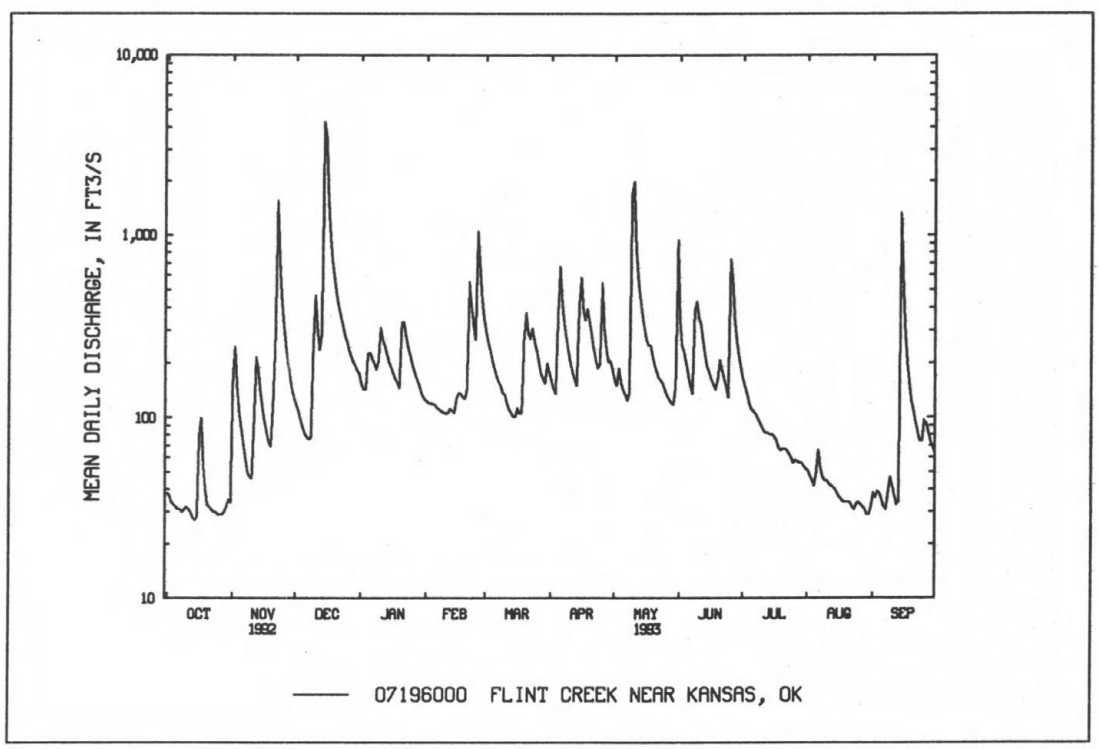
07196000 FLINT CREEK NEAR KANSAS, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	80.8	132	138	108	119	177	191	191	145	61.5	47.0	64.3
MAX	415	850	624	385	331	593	577	783	1066	262	369	416
(WY)	1987	1974	1985	1969	1968	1973	1973	1961	1974	1958	1961	1986
MIN	.73	9.87	11.4	10.3	16.4	11.5	13.0	37.5	25.1	11.7	4.84	1.27
(WY)	1957	1956	1956	1956	1956	1956	1956	1964	1972	1980	1956	1956

SUMMARY STATISTICS	1993 WATER YEAR		WATER YEARS 1956-93	
ANNUAL TOTAL	78645			
ANNUAL MEAN	215		122	
HIGHEST ANNUAL MEAN			296	1974
LOWEST ANNUAL MEAN			22.3	1956
HIGHEST DAILY MEAN	4290	Dec 14	14500	Nov 24 1973
LOWEST DAILY MEAN	27	Oct 14	.60	Oct 11-13 1956
ANNUAL SEVEN-DAY MINIMUM	30	Oct 9	.66	Oct 7 1956
INSTANTANEOUS PEAK FLOW	5790	Dec 14	[a]44400	Jun 8 1974
INSTANTANEOUS PEAK STAGE	9.77	Dec 14	19.42	Jun 8 1974
ANNUAL RUNOFF (AC-FT)	156000		88150	
ANNUAL RUNOFF (CFSM)	1.96		1.11	
ANNUAL RUNOFF (INCHES)	26.60		15.03	
10 PERCENT EXCEEDS	378		245	
50 PERCENT EXCEEDS	143		55	
90 PERCENT EXCEEDS	34		17	

[a]Based on contracted opening measurement.



07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955-61, 1963, 1975-80, July 1991 to current year.
REMARKS.--Samples were collected bi-monthly and specific conductance, pH, water temperature, alkalinity,and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)
OCT										
06...	1405	1028	80020	30	303	8.1	26.0	20.5	740	10.0
DEC										
08...	1057	1028	80020	80	246	7.8	1.5	8.0	743	13.3
FEB										
10...	1405	1028	80020	99	240	8.1	11.5	10.0	735	11.7
JUN										
30...	1700	1028	80020	184	221	7.8	31.0	25.0	740	7.9
AUG										
04...	1130	1028	80020	43	262	7.6	25.5	24.5	751	8.9
SEP										
03...	1630	1028	80020	39	288	7.3	27.0	26.5	746	8.3
14...	1800	1028	80020	1810	154	7.1	12.5	18.0	740	8.1

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
OCT										
06...	115	--	137	0	113	1.70	--	--	<0.010	<0.010
DEC										
08...	115	--	105	0	86	3.09	--	--	0.010	<0.010
FEB										
10...	108	--	102	0	83	2.28	2.28	10	--	0.020
JUN										
30...	99	--	105	0	86	1.90	--	--	--	<0.010
AUG										
04...	108	--	113	0	93	1.40	--	--	--	<0.010
SEP										
03...	106	--	115	0	94	1.50	--	--	--	<0.010
14...	88	2.7	56	0	46	2.09	2.09	9.3	--	0.010

07196000 FLINT CREEK NEAR KANSAS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT										
06...	--	1.70	1.70	<0.010	<0.010	--	--	--	--	<0.20
DEC										
08...	--	3.10	3.10	0.010	<0.010	0.01	--	--	--	<0.20
FEB										
10...	0.07	--	2.30	--	0.020	--	0.03	--	--	<0.20
JUN										
30...	--	--	1.90	--	0.020	--	0.03	--	--	<0.20
AUG										
04...	--	--	1.40	--	0.030	--	0.04	--	--	<0.20
SEP										
03...	--	--	1.50	--	0.030	--	0.04	--	--	<0.20
14...	0.03	--	2.10	--	0.070	--	0.09	0.93	0.53	1.0

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)
OCT									
06...	--	--	0.120	0.37	0.120	0.120	0.120	0.37	0.0
DEC									
08...	--	--	0.120	0.37	0.100	0.120	0.110	0.34	0.0
FEB									
10...	--	--	0.090	--	0.070	--	0.080	0.25	--
JUN									
30...	<0.20	--	0.100	--	0.120	--	0.100	0.31	--
AUG									
04...	<0.20	--	0.120	--	0.120	--	0.100	0.31	--
SEP									
03...	<0.20	--	0.110	--	0.120	--	0.110	0.34	--
14...	0.60	3.1	0.460	--	0.350	--	0.340	1.0	--

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK

LOCATION.--Lat 35°55'22", long 94°55'24", in SE 1/4 NE 1/4 sec.26, T.17 N., R.22 E., Cherokee County, Hydrologic Unit 11110103, near center of channel on downstream side of pier of bridge, 0.2 mi downstream from U.S. Highway 62, 2.2 mi northeast of Tahlequah, 6.5 mi upstream from Baron Fork, and at mile 55.8.
DRAINAGE AREA.--959 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1935 to current year. Monthly discharge only for some periods, published in WSP 1311.
REVISED RECORDS.--WSP 1117: Drainage area.
GAGE.--Water-stage recorder. Datum of gage is 664.14 ft, U.S. Army Corps of Engineers datum. Prior to Feb. 23, 1939, nonrecording gage.
REMARKS.--Records good. U.S. Army Corps of Engineers' satellite telemeter at station.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1916 reached a stage of about 26 ft.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 23	2200	14,100	13.04	Apr. 16	0700	13,000	12.17
Dec. 16	2100	28,500	16.96	May 11	0100	20,800	14.81
Feb. 26	1700	11,400	11.51	Sept. 15	2400	11,600	11.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323	590	1240	1410	1200	3220	2120	2140	1990	1480	400	255
2	308	1560	1130	1370	1150	2740	1790	1820	1540	1290	389	254
3	299	1610	1040	1310	1120	2440	1610	1820	1320	1180	378	281
4	289	1130	970	1330	1090	2190	1590	3620	1340	e1080	364	283
5	271	880	915	4050	1070	1990	3940	2540	1420	e980	355	305
6	257	712	872	3250	1040	1820	5570	1990	1230	e900	365	313
7	250	610	827	2400	1010	1670	3650	1710	1130	842	399	292
8	240	537	769	2060	968	1540	2830	1540	1080	823	437	285
9	234	484	873	1930	945	1450	2360	6680	1260	791	426	292
10	227	443	2640	2390	922	1350	2040	17600	1430	759	703	533
11	225	510	3760	3580	915	1290	1800	18400	1540	719	673	522
12	225	1130	2600	2820	923	1230	1620	8490	1640	687	532	413
13	225	3210	2110	2600	1100	1170	1490	5040	1430	669	464	366
14	212	2380	8570	2320	1170	1120	1580	3790	1290	659	420	1230
15	205	1670	22400	2040	1170	1080	5690	2980	1220	661	391	9300
16	205	1320	25500	1860	1290	1090	9630	2500	1270	640	366	6640
17	206	1090	17200	1710	1860	1100	4570	2180	1180	620	341	2840
18	293	944	7070	1600	1790	1140	3640	2040	1100	604	318	1800
19	300	851	5080	1490	1550	1210	3530	1970	1030	580	304	e1600
20	269	814	3980	1640	1460	3000	2940	1770	1370	557	294	1280
21	252	1440	3200	3330	2200	4340	2780	1600	2100	545	281	1120
22	241	5800	2750	3230	5310	3150	2270	1470	1620	541	272	986
23	233	11900	2450	2570	4150	2780	1980	1420	1390	527	262	859
24	228	7400	2190	2210	3120	2560	1790	1360	1330	543	260	772
25	228	3710	2010	1980	3680	2240	2240	1360	1180	532	262	762
26	227	2690	1880	1770	8620	1990	2760	1300	3830	498	368	1920
27	225	2120	1760	1630	6770	1800	2160	1210	4520	470	372	2010
28	225	1770	1650	1510	4140	1630	1810	1140	2460	451	319	1540
29	232	1550	1570	1410	---	1510	1660	1090	1970	431	285	1250
30	239	1370	1520	1330	---	1500	1900	1060	1600	418	267	1060
31	241	---	1460	1260	---	1720	---	1450	---	407	270	---
TOTAL	7634	62225	131986	65390	61733	59060	85340	105080	48810	21884	11537	41363
MEAN	246	2074	4258	2109	2205	1905	2845	3390	1627	706	372	1379
MAX	323	11900	25500	4050	8620	4340	9630	18400	4520	1480	703	9300
MIN	205	443	769	1260	915	1080	1490	1060	1030	407	260	254
AC-FT	15140	123400	261800	129700	122400	117100	169300	208400	96810	43410	22880	82040
CFSM	.26	2.16	4.44	2.20	2.30	1.99	2.97	3.53	1.70	.74	.39	1.44
IN.	.30	2.41	5.12	2.54	2.39	2.29	3.31	4.08	1.89	.85	.45	1.60

e Estimated

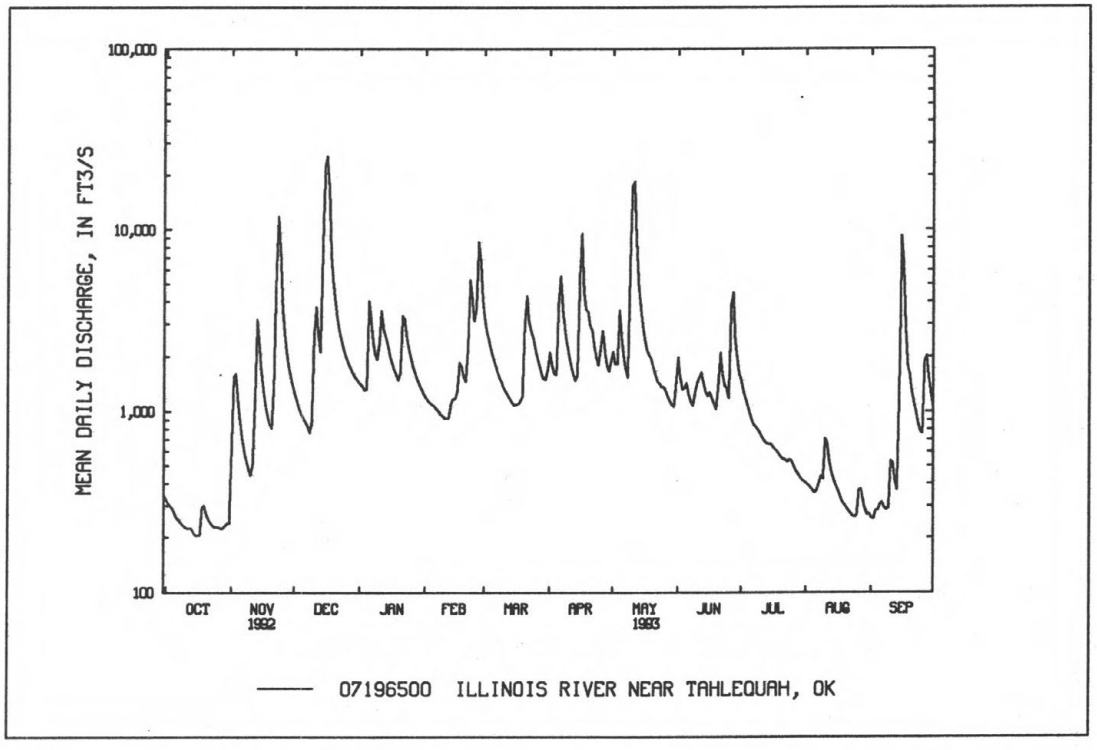
07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	544	874	903	818	1112	1429	1601	1685	1011	480	360	363
MAX	5222	4659	4258	2916	4661	6695	6864	8397	5993	2491	3907	1913
(WY)	1987	1974	1993	1937	1938	1945	1945	1950	1974	1958	1948	1974
MIN	7.05	75.3	77.5	74.0	113	147	151	189	80.1	22.9	10.5	3.15
(WY)	1957	1964	1956	1956	1964	1940	1954	1936	1936	1954	1936	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1936-93	
ANNUAL TOTAL	441594		702042			
ANNUAL MEAN	1207		1923		932	
HIGHEST ANNUAL MEAN					1980	1974
LOWEST ANNUAL MEAN					193	1954
HIGHEST DAILY MEAN	25500	Dec 16	25500	Dec 16	90400	May 11 1950
LOWEST DAILY MEAN	205	Oct 15	205	Oct 15	.10	Oct 10 1956
ANNUAL SEVEN-DAY MINIMUM	215	Oct 11	215	Oct 11	.14	Oct 8 1956
INSTANTANEOUS PEAK FLOW			28500	Dec 16	[a]150000	May 10 1950
INSTANTANEOUS PEAK STAGE			16.96	Dec 16	27.94	May 10 1950
ANNUAL RUNOFF (AC-FT)	875900		1393000		675500	
ANNUAL RUNOFF (CFSM)	1.26		2.01		.97	
ANNUAL RUNOFF (INCHES)	17.13		27.23		13.21	
10 PERCENT EXCEEDS	2130		3640		1930	
50 PERCENT EXCEEDS	649		1330		401	
90 PERCENT EXCEEDS	297		284		113	

[a]From rating curve extended above 77,000 ft^3/s, on basis of slope-area measurement of peak flow.



07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-61, 1975-79, 1989 to current year.

REMARKS.--Samples were collected on a bimonthly schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
14...	1230	1028	80020	203	265	8.0	23.0	19.0	--	745	9.6	106
DEC												
08...	1400	1028	80020	760	242	8.1	8.0	7.0	2.4	750	12.3	103
FEB												
22...	1800	1028	80020	5110	169	7.8	4.0	8.0	--	745	11.4	98
APR												
29...	1100	1028	80020	1680	189	7.9	--	18.0	3.8	745	5.6	61
JUN												
23...	1000	1028	80020	1300	205	8.2	--	13.0	--	740	5.1	50
SEP												
01...	0930	1028	80020	253	270	7.6	26.0	24.0	1.8	744	6.2	76
14...	1510	1028	80020	1140	199	7.5	13.0	22.0	8.7	754	7.3	84
22...	0945	1028	80020	997	232	7.7	--	21.0	3.1	746	7.2	83

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	134
DEC												
08...	--	--	--	110	--	41	2.0	6.3	11	0.3	2.6	--
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	66
APR												
29...	--	1100	310	87	14	32	1.6	--	--	--	2.3	89
JUN												
23...	--	150	460	--	--	--	--	--	--	--	--	113
SEP												
01...	--	80	170	110	9	41	1.9	8.1	13	0.3	3.2	124
14...	1.2	--	--	79	--	29	1.6	6.0	14	0.3	2.9	--
22...	--	580	250	100	15	37	1.8	5.8	11	0.3	2.5	103

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT												
14...	0	110	--	--	--	--	--	--	--	--	0.720	0.740
DEC												
08...	--	--	9.4	8.1	<0.10	8.0	141	144	0.19	289	2.68	2.67
FEB												
22...	0	54	--	--	--	--	--	--	--	--	1.38	1.38
APR												
29...	0	73	7.4	--	<0.10	5.8	144	--	0.20	653	1.70	--
JUN												
23...	0	92	--	--	--	--	--	--	--	--	1.50	--
SEP												
01...	0	102	9.6	11	<0.10	9.9	147	150	0.20	100	0.990	--
14...	--	--	8.1	8.0	<0.10	7.7	114	--	--	--	0.960	--
22...	0	85	8.6	7.3	<0.10	9.5	133	134	0.18	358	2.40	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT											
14...	3.3	<0.010	0.020	0.07	0.740	0.760	<0.010	0.010	--	0.01	--
DEC											
08...	12	0.020	0.030	0.10	2.70	2.70	0.010	<0.010	0.01	--	--
FEB											
22...	6.1	--	0.020	0.07	--	1.40	--	0.030	--	0.04	0.27
APR											
29...	--	--	<0.010	--	--	1.70	--	0.010	--	0.01	0.29
JUN											
23...	--	--	<0.010	--	--	1.50	--	0.030	--	0.04	0.27
SEP											
01...	--	--	<0.010	--	--	0.990	--	0.030	--	0.04	--
14...	--	--	<0.010	--	--	0.960	--	0.030	--	0.04	0.17
22...	--	--	<0.010	--	--	2.40	--	0.020	--	0.03	--

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)
OCT											
14...	--	<0.20	--	--	0.070	0.15	0.060	0.050	0.050	0.15	0.02
DEC											
08...	--	<0.20	--	--	0.100	0.28	0.080	0.090	0.080	0.25	0.01
FEB											
22...	--	0.30	--	1.7	0.140	--	0.090	--	0.090	0.28	--
APR											
29...	--	0.30	<0.20	2.0	0.080	--	0.060	--	0.060	0.18	--
JUN											
23...	--	0.30	<0.20	1.8	0.130	--	0.110	--	0.120	0.37	--
SEP											
01...	--	<0.20	<0.20	--	0.090	--	0.090	--	0.080	0.25	--
14...	0.17	0.20	0.20	1.2	0.110	--	0.100	--	0.100	0.31	--
22...	--	<0.20	<0.20	--	0.090	--	0.100	--	0.100	0.31	--

DATE	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	<1	37	<0.5	20	<1.0	<5	<3	<10	<3	<10	<4
FEB											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
29...	<1	36	<0.5	20	<1.0	<5	<3	<10	10	<10	<4
JUN											
23...	--	--	--	--	--	--	--	--	--	--	--
SEP											
01...	<1	46	<0.5	40	3.0	<5	<3	<10	5	<10	<4
14...	<1	34	<0.5	20	<1.0	<5	<3	<10	29	<10	<4
22...	<1	44	<0.5	30	<1.0	<5	<3	<10	6	<10	<4

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	4	<0.1	<10	<10	--	<1.0	48	<6	<3	--	--
FEB											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
29...	6	<0.1	<10	<10	<1	<1.0	40	<6	5	1.5	0.1
JUN											
23...	--	--	--	--	--	--	--	--	--	1.6	0.3
SEP											
01...	8	0.1	<10	<10	<1	2.0	49	<6	<3	0.9	0.2
14...	7	<0.1	<10	<10	--	<1.0	37	<6	4	--	--
22...	5	<0.1	<10	<10	<1	<1.0	44	<6	<3	1.0	0.2

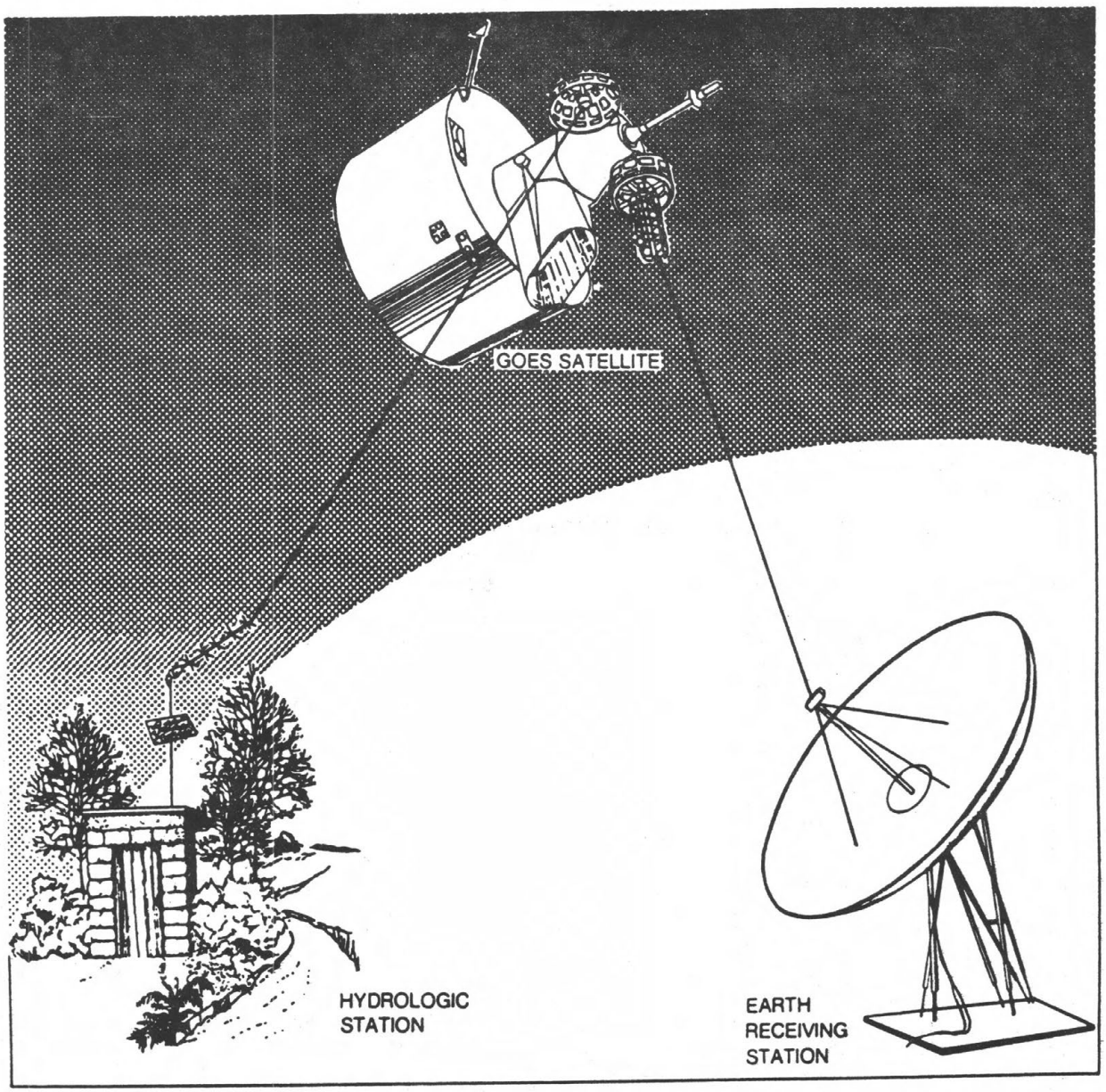
DATE	PCB, TOTAL (UG/L) (39516)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L) (39250)	ALDRIN, TOTAL (UG/L) (39330)	CHLORDANE, TOTAL (UG/L) (39350)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
29...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
JUN											
23...	<0.1	<0.10	<0.010	<0.1	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01	<0.01
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	DIELDRIN TOTAL (UG/L) (39380)	DISYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDOSULFAN, TOTAL (UG/L) (39388)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	FONOFOS (DYFONATE) WATER WHOLE TOT.REC (UG/L (82614)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALATHION, TOTAL (UG/L) (39530)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
FEB											
22...	--	--	--	--	--	--	--	--	--	--	--
APR											
29...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01
JUN											
23...	<0.010	<0.01	<0.01	<0.010	<0.010	<0.01	<0.01	<0.010	<0.010	<0.010	<0.01
SEP											
01...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--

07196500 ILLINOIS RIVER NEAR TAHLEQUAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)	PHORATE TOTAL (UG/L) (39023)	SILVEX, TOTAL (UG/L) (39760)	2,4,5-T TOTAL (UG/L) (39740)	TOX-APHENE, TOTAL (UG/L) (39400)	TOTAL TRI-THION (UG/L) (39786)
OCT										
14...	--	--	--	--	--	--	--	--	--	--
DEC										
08...	--	--	--	--	--	--	--	--	--	--
FEB										
22...	--	--	--	--	--	--	--	--	--	--
APR										
29...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01
JUN										
23...	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	<0.01	<1	<0.01
SEP										
01...	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--



Geostationary Operational Earth Satellite (GOES) Data-Collection System

07196973 PEACHEATER CREEK AT CHRISTIE, OK

LOCATION.--Lat 35°57'17", long 94°41'46", in SW 1/4 NE 1/4 sec.13, T.17 N., R.24 E., Adair County, Hydrologic Unit 11110103, on the left downstream wingwall of bridge on U.S. Highway 62, .4 mi upstream from Baron Fork, 9.1 mi west of Westville, and 19.3 mi east of Tahlequah.
DRAINAGE AREA.--25.0 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1992 to current year.
GAGE.--Water-stage recorder. Datum of gage is 810.72 ft above sea level.
REMARKS.--Records fair.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1930 reached a stage of about 20.8 ft at present site and datum; information supplied by local resident.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 22	(HWM)	934	7.71	May 10	0030	1,600	8.62
Dec. 15	1515	855	7.58	Sept. 14	1000	537	6.92

MEAN DAILY DISCHARGES FOR SEPTEMBER 1992.--

Sept. 1 .... e6.0	Sept. 2 ..... e5.8	Sept. 3 .....e5.6	Sept. 4 .....5.3
5 ..... 5.0	6 ..... 4.8	7 .....4.5	8 .....4.3
9 ..... 4.1	10 ..... 8.1	11 .....5.4	12 .....4.7
13 ..... 4.4	14 ..... 4.0	15 .....3.8	16 .....3.5
17 ..... 3.3	18 ..... 3.1	19 .....3.8	20 .....4.2
21 ..... 6.6	22 25	23 14	24 12
25 11	26 10	27 .....9.2	28 .....8.2
29 ..... 7.1	30 ..... 6.1	31 ....---	

TOTAL 202.9 MEAN 6.76 MAX 25 MIN 3.1 AC-FT 402

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	e17	e35	44	37	82	43	54	19	33	5.3	3.9
2	4.8	e23	e31	42	34	73	41	63	18	29	5.2	3.8
3	4.2	e14	e28	41	33	66	40	125	18	25	5.2	4.3
4	3.9	e10	e25	57	32	61	58	103	16	22	5.1	3.0
5	3.6	e8.0	e23	54	30	57	85	80	15	19	5.6	2.6
6	3.3	e6.8	e22	54	29	53	79	68	14	17	5.7	2.4
7	3.1	e5.7	20	52	29	49	73	60	13	16	5.3	2.3
8	2.9	e5.0	19	50	27	46	65	55	15	15	5.1	3.7
9	2.9	e4.6	41	59	26	44	60	531	15	14	5.1	3.0
10	2.8	e4.4	80	83	26	42	54	678	18	13	4.9	2.5
11	2.8	e8.0	76	81	27	39	48	249	16	12	4.7	2.1
12	2.5	e15	64	79	37	37	44	169	15	12	4.5	1.9
13	2.4	e13	59	72	37	35	42	130	14	11	4.4	5.6
14	2.2	e10	389	67	36	33	114	108	13	11	4.3	287
15	2.3	e8.0	588	62	e45	33	141	91	12	11	4.1	154
16	3.1	e6.7	324	57	e50	35	115	80	11	11	4.0	84
17	2.7	e5.5	201	53	e48	33	96	71	11	11	3.8	47
18	2.5	e4.9	156	49	e46	32	89	66	11	11	3.7	29
19	2.4	e4.8	130	45	e43	45	80	58	101	10	3.6	21
20	2.3	e10	113	72	e42	60	73	52	149	10	3.4	18
21	2.3	e28	101	77	e140	61	66	47	96	10	3.3	13
22	2.3	e200	91	76	120	64	61	41	72	9.4	3.2	10
23	2.2	e170	84	73	108	65	57	46	58	8.4	3.3	9.0
24	2.2	e120	77	67	93	62	53	39	47	7.9	4.6	15
25	2.3	e93	71	61	201	59	50	34	e300	7.3	4.1	23
26	2.4	e75	65	57	173	55	45	30	e200	6.9	4.1	24
27	2.5	e60	61	52	123	51	43	27	e95	6.5	3.9	22
28	2.3	e52	57	48	96	47	41	24	e60	6.2	3.7	19
29	3.3	e46	54	44	---	43	56	23	44	5.9	3.6	15
30	3.1	e40	50	41	---	47	54	24	38	5.7	3.6	12
31	e2.9	---	47	39	---	43	---	22	---	5.5	4.0	---

e Estimated

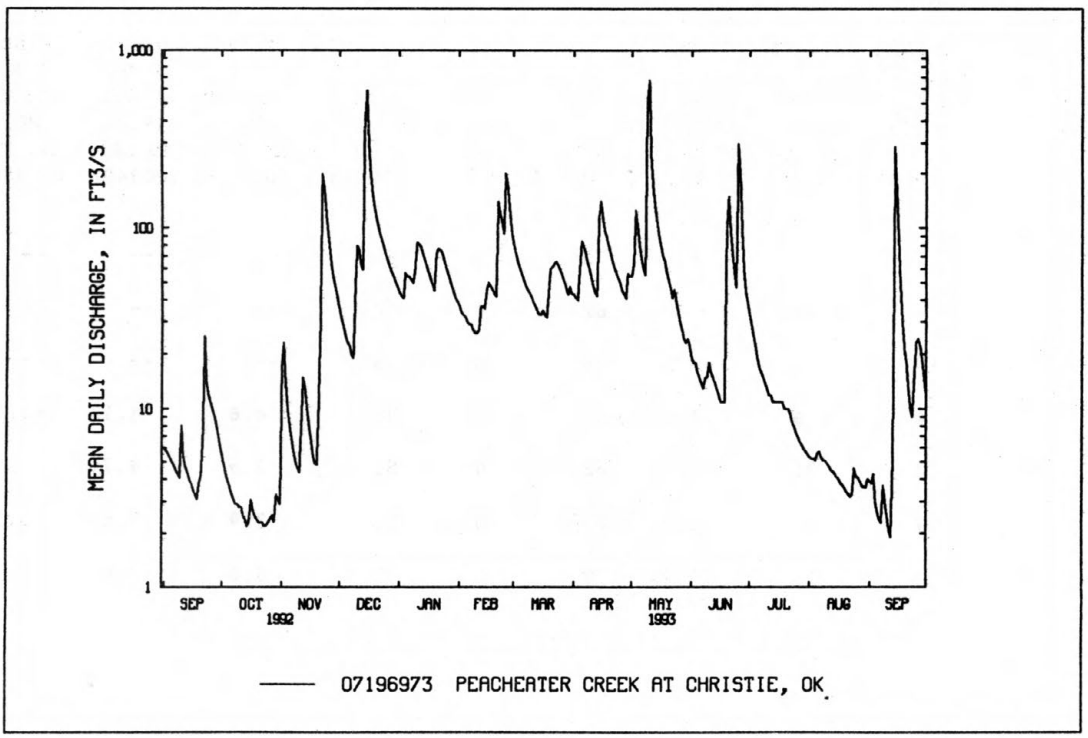
07196973 PEACHEATER CREEK AT CHRISTIE, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	89.9	1068.4	3182	1808	1768	1552	1966	3248	1524	392.7	134.4	843.1
MEAN	2.90	35.6	103	58.3	63.1	50.1	65.5	105	50.8	12.7	4.34	28.1
MAX	5.4	200	588	83	201	82	141	678	300	33	5.7	287
MIN	2.2	4.4	19	39	26	32	40	22	11	5.5	3.2	1.9
AC-FT	178	2120	6310	3590	3510	3080	3900	6440	3020	779	267	1670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.90	35.6	103	58.3	63.1	50.1	65.5	105	50.8	12.7	4.34	28.1
MAX	2.90	35.6	103	58.3	63.1	50.1	65.5	105	50.8	12.7	4.34	28.1
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MIN	2.90	35.6	103	58.3	63.1	50.1	65.5	105	50.8	12.7	4.34	28.1
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS	1993 WATER YEAR	
ANNUAL TOTAL	17576.5	
ANNUAL MEAN	48.2	
HIGHEST DAILY MEAN	678	May 10
LOWEST DAILY MEAN	1.9	Sep 12
ANNUAL SEVEN-DAY MINIMUM	2.3	Oct 19
INSTANTANEOUS PEAK FLOW	1600	May 10
INSTANTANEOUS PEAK STAGE	8.62	May 10
ANNUAL RUNOFF (AC-FT)	34860	
10 PERCENT EXCEEDS	96	
50 PERCENT EXCEEDS	33	
90 PERCENT EXCEEDS	3.3	



07196973 PEACHEATER CREEK AT CHRISTIE OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1991 to September 1993 (discontinued).

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

COOPERATION.--Samples were collected by the Oklahoma Conversation Commission from August 1991 to September 1993 and were analyzed by U.S. Geological Survey's National Water Quality Laboratory.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT											
13...	1430	1028	80020	2.5	162	7.8	28.0	18.5	740	8.7	96
DEC											
07...	1330	1028	80020	20	144	7.6	5.5	10.5	750	11.2	102
FEB											
22...	1400	1028	80020	120	124	7.9	5.5	9.5	745	11.4	102
APR											
20...	1515	1028	80020	72	130	7.6	15.0	14.0	745	9.9	98
JUN											
29...	1730	1028	80020	44	--	7.7	28.0	21.0	740	8.0	93
JUL											
20...	1415	1028	80020	10	151	7.6	32.0	25.5	740	5.6	71
SEP											
14...	1615	1028	80020	310	116	7.0	15.0	18.5	751	8.0	87

DATE	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
OCT											
13...	--	--	--	--	73	0	60	--	--	--	--
DEC											
07...	--	--	--	--	62	0	50	--	--	--	--
FEB											
22...	--	--	--	--	36	0	29	--	--	--	--
APR											
20...	52	14	19	1.1	46	0	38	4.6	4.1	<0.10	<1
JUN											
29...	58	7	21	1.3	62	0	51	3.8	4.7	<0.10	8
JUL											
20...	63	9	23	1.3	65	0	53	3.9	5.6	<0.10	--
SEP											
14...	45	14	16	1.2	38	0	31	4.6	3.8	0.10	59

07196973 PEACHEATER CREEK AT CHRISTIE OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)
OCT											
13...	1.50	--	--	<0.010	<0.010	--	1.50	1.50	0.030	0.020	0.04
DEC											
07...	2.89	2.89	13	0.010	0.010	0.03	2.90	2.90	0.010	<0.010	0.01
FEB											
22...	2.09	2.09	9.3	--	0.010	0.03	--	2.10	--	0.020	--
APR											
20...	2.20	--	--	--	--	--	--	2.20	--	--	--
JUN											
29...	2.10	--	--	--	--	--	--	2.10	--	--	--
JUL											
20...	2.00	--	--	--	--	--	--	2.00	--	--	--
SEP											
14...	3.10	--	--	--	--	--	--	3.10	--	--	--

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	PHOS-PHORUS ORGANIC TOTAL (MG/L AS P) (00670)
OCT											
13...	0.03	--	<0.20	--	0.040	0.06	0.040	0.020	0.020	0.06	0.02
DEC											
07...	--	--	<0.20	--	0.020	0.06	<0.010	0.020	0.020	0.06	--
FEB											
22...	0.03	--	<0.20	--	0.030	--	0.030	--	0.030	0.09	--
APR											
20...	--	--	<0.20	--	0.020	--	--	--	0.020	0.06	--
JUN											
29...	--	--	<0.20	--	0.030	--	--	--	0.030	0.09	--
JUL											
20...	--	--	<0.20	--	0.040	--	--	--	0.040	0.12	--
SEP											
14...	--	0.60	0.60	3.7	0.280	--	--	--	0.200	0.61	--

07197000 BARON FORK AT ELDON, OK

LOCATION.--Lat 35°55'16", long 94°50'18", in NE 1/4 SE 1/4 sec.27, T.17 N., R.23 E., Cherokee County, Hydrologic Unit 11110103, on downstream left abutment of bridge on State Highway 51, 0.4 mi southeast of Eldon, 6.0 mi downstream from Tyner Creek, and at mile 8.8.
DRAINAGE AREA.--307 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1948 to current year. Prior to October 1970 published as Barren Fork at Eldon.
REVISED RECORDS.--WDR OK-93-1: 1990 (M).
GAGE.--Water-stage recorder. Datum of gage is 701.14 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Dec. 14, 1948, nonrecording gage at same site and datum.
REMARKS.--No estimated daily discharges. Records good. U.S. Army Corps of Engineers' satellite telemeter at station.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 15, 1945, reached a stage of 23.8 ft, from information provided by local resident.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 22	1445	10,700	14.31	May 10	0745	19,700	17.92
Dec. 15	2000	17,400	17.10	Sept. 14	1830	7,370	12.48
Apr. 15	0045	15,800	16.49				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	132	419	501	441	1060	707	692	681	587	83	63
2	111	194	377	484	420	947	609	617	521	502	76	63
3	104	174	342	471	403	828	547	1480	455	448	74	69
4	98	149	314	2060	389	736	823	1140	421	404	73	87
5	93	133	289	1480	376	653	2440	891	388	362	73	80
6	87	122	272	999	358	585	1420	755	360	334	81	72
7	85	112	260	830	342	538	1090	652	340	344	83	65
8	79	104	247	737	327	503	915	576	335	311	80	66
9	75	99	467	730	309	471	780	5740	360	278	81	74
10	73	95	1640	1540	300	439	675	11900	447	256	79	89
11	71	210	1220	1170	304	416	588	3610	524	237	72	80
12	69	1400	961	1070	323	391	525	2350	460	222	68	67
13	68	1100	805	981	331	363	482	1810	418	214	64	69
14	66	675	5700	843	315	346	2810	1460	378	208	61	3700
15	63	502	11200	769	369	336	5700	1190	593	202	58	2420
16	67	421	6530	710	1030	384	2210	998	514	191	55	1220
17	81	363	3120	652	875	502	1540	871	422	179	53	850
18	80	320	2190	605	724	442	1630	800	373	168	50	659
19	74	287	1690	581	645	558	1300	741	399	159	48	529
20	71	314	1370	1420	614	1410	1230	665	995	150	46	487
21	68	833	1160	1560	1320	1130	974	594	766	144	45	453
22	65	6340	1020	1170	1390	953	827	547	618	139	43	373
23	64	3350	909	987	1110	919	741	539	543	132	41	315
24	62	1940	810	853	937	828	660	608	621	127	48	296
25	61	1390	746	745	2470	747	598	564	946	121	123	824
26	60	1040	709	676	2840	665	536	494	1330	112	116	898
27	60	791	656	624	1770	596	489	450	844	108	86	633
28	58	641	613	570	1310	541	456	422	1930	108	71	509
29	66	538	578	530	---	507	540	403	965	100	62	433
30	72	470	552	493	---	687	826	394	723	90	58	374
31	83	---	523	463	---	945	---	1140	---	88	63	---
TOTAL	2353	24239	47689	27304	22342	20426	34668	45093	18670	7025	2114	15917
MEAN	75.9	808	1538	881	798	659	1156	1455	622	227	68.2	531
MAX	119	6340	11200	2060	2840	1410	5700	11900	1930	587	123	3700
MIN	58	95	247	463	300	336	456	394	335	88	41	63
AC-FT	4670	48080	94590	54160	44320	40510	68760	89440	37030	13930	4190	31570
CFSM	.25	2.63	5.01	2.87	2.60	2.15	3.76	4.74	2.03	.74	.22	1.73
IN.	.29	2.94	5.78	3.31	2.71	2.48	4.20	5.46	2.26	.85	.26	1.93

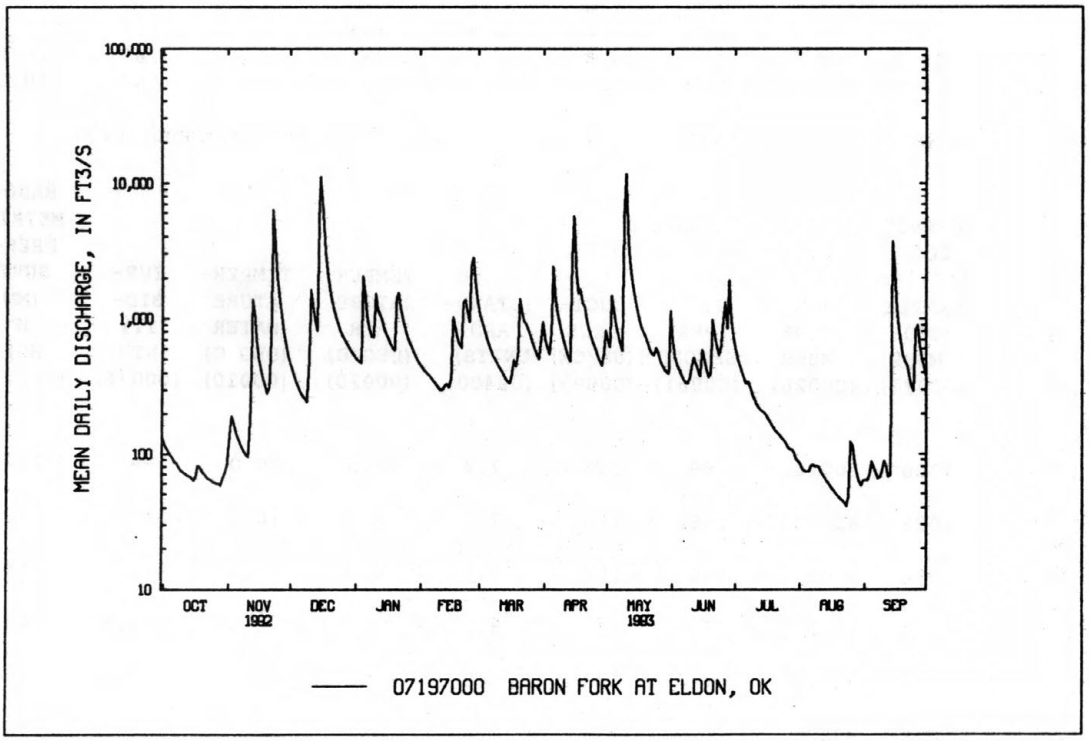
07197000 BARON FORK AT ELDON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	172	296	315	279	384	528	587	660	327	148	74.8	117
MAX	2077	1499	1692	977	1441	1702	2105	2605	1575	903	437	927
(WY)	1987	1975	1988	1991	1951	1973	1957	1957	1957	1958	1992	1970
MIN	1.96	10.4	14.0	14.6	24.6	43.3	81.0	62.5	25.0	8.75	3.80	3.10
(WY)	1957	1964	1964	1964	1964	1967	1954	1977	1977	1954	1954	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1949-93	
ANNUAL TOTAL	160968		267840			
ANNUAL MEAN	440		734		323	
HIGHEST ANNUAL MEAN					734	1993
LOWEST ANNUAL MEAN					55.7	1963
HIGHEST DAILY MEAN	11200	Dec 15	11900	May 10	34300	Oct 1 1986
LOWEST DAILY MEAN	58	Oct 28	41	Aug 23	1.8	[a]Oct 7 1956
ANNUAL SEVEN-DAY MINIMUM	61	Oct 22	46	Aug 18	1.8	Oct 21 1956
INSTANTANEOUS PEAK FLOW			19700	May 10	[b]50600	May 3 1990
INSTANTANEOUS PEAK STAGE			17.92	May 10	25.91	May 3 1990
ANNUAL RUNOFF (AC-FT)	319300		531300		234300	
ANNUAL RUNOFF (CFSM)	1.43		2.39		1.05	
ANNUAL RUNOFF (INCHES)	19.50		32.45		14.31	
10 PERCENT EXCEEDS	821		1400		700	
50 PERCENT EXCEEDS	201		484		116	
90 PERCENT EXCEEDS	97		69		20	

[a]Also occurred Oct. 8, 21-28, 1956.
[b]Revised, formerly published as 57,600.



07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1958-60, 1991 to current year.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
APR											
28...	1452	101	16.5	748	1028	1028	461	5.62	169	10.1	8.2
28...	1454	96.0	16.5	748	1028	1028	461	5.62	170	10.1	8.2
28...	1456	91.0	16.5	748	1028	1028	461	5.62	169	10.1	8.2
28...	1458	86.0	16.5	748	1028	1028	461	5.62	168	10.1	8.1
28...	1500	81.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1502	76.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1504	71.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1506	66.0	16.5	748	1028	1028	461	5.62	166	10.0	8.2
28...	1508	61.0	16.5	748	1028	1028	461	5.62	165	10.1	8.2
28...	1510	56.0	16.5	748	1028	1028	461	5.62	166	10.1	8.2
28...	1512	51.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1514	46.0	16.5	748	1028	1028	461	5.62	166	10.1	8.2
28...	1516	41.0	16.5	748	1028	1028	461	5.62	166	10.0	8.2
28...	1518	36.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1520	31.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1522	26.0	16.5	748	1028	1028	461	5.62	167	10.0	8.2
28...	1524	21.0	16.5	748	1028	1028	461	5.61	166	10.1	8.2
28...	1526	16.0	16.5	748	1028	1028	461	5.62	167	10.1	8.2
28...	1528	11.0	16.5	748	1028	1028	461	5.62	167	10.0	8.3
28...	1530	6.00	16.5	748	1028	1028	461	5.62	167	10.0	8.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)
OCT											
13...	1730	1028	80020	69	196	7.9	28.5	20.0	--	740	9.9
DEC											
07...	1630	1028	80020	258	186	7.7	8.0	10.0	--	750	10.9
FEB											
22...	1645	1028	80020	1340	156	7.9	6.0	10.5	--	745	11.5
APR											
28...	1600	1028	80020	461	167	8.2	18.5	16.5	0.80	748	10.1
JUN											
30...	0845	1028	80020	746	173	7.8	27.5	22.0	1.2	745	7.2
AUG											
31...	1600	1028	80020	62	195	7.6	24.0	25.0	0.30	745	8.6
SEP											
14...	1236	1028	80020	4530	*114	7.6	14.5	19.0	390	750	7.8

*SPECIFIC CONDUCTANCE, LAB (µS/CM)

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
OCT 13...	112	--	--	--	--	--	--	--	--	--	101
DEC 07...	98	--	--	--	--	--	--	--	--	--	83
FEB 22...	105	--	--	--	--	--	--	--	--	--	67
APR 28...	105	--	76	14	28	1.4	2.6	7	0.1	1.6	75
JUN 30...	84	--	79	6	29	1.5	2.5	6	0.1	2.2	89
AUG 31...	107	0.72	87	7	32	1.6	2.8	6	0.1	2.0	97
SEP 14...	85	1.9	47	--	17	0.99	1.7	7	0.1	3.0	--

DATE	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT 13...	0	82	--	--	--	--	--	--	--	--	0.710
DEC 07...	0	68	--	--	--	--	--	--	--	--	1.98
FEB 22...	0	55	--	--	--	--	--	--	--	--	1.28
APR 28...	0	61	5.6	3.6	<0.10	6.3	92	91	0.13	115	1.20
JUN 30...	0	73	4.9	3.2	<0.10	9.0	96	101	0.13	193	1.10
AUG 31...	0	79	4.8	4.7	<0.10	10	106	108	0.14	17.8	0.490
SEP 14...	--	--	4.1	2.6	<0.10	6.6	62	67	0.08	758	1.59

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
OCT											
13...	--	--	<0.010	<0.010	--	0.710	0.740	0.020	0.020	0.03	0.03
DEC											
07...	1.98	8.8	<0.010	0.020	0.07	2.00	2.00	0.010	0.020	0.01	0.03
FEB											
22...	1.28	5.7	--	0.020	0.07	--	1.30	--	0.030	--	0.04
APR											
28...	--	--	--	<0.010	--	--	1.20	--	0.010	--	0.01
JUN											
30...	--	--	--	<0.010	--	--	1.10	--	0.020	--	0.03
AUG											
31...	0.490	2.2	--	0.030	0.10	--	0.520	--	0.040	--	0.05
SEP											
14...	1.59	7.0	--	0.010	0.03	--	1.60	--	0.040	--	0.05

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
OCT											
13...	--	--	<0.20	--	--	0.030	0.06	0.030	0.020	0.020	0.06
DEC											
07...	--	--	<0.20	--	--	0.030	0.09	0.010	0.030	0.030	0.09
FEB											
22...	--	--	<0.20	--	--	0.040	--	0.030	--	0.030	0.09
APR											
28...	--	--	<0.20	<0.20	--	0.030	--	0.030	--	0.020	0.06
JUN											
30...	--	--	<0.20	<0.20	--	0.050	--	0.050	--	0.050	0.15
AUG											
31...	--	0.16	<0.20	0.20	--	0.030	--	0.040	--	0.020	0.06
SEP											
14...	0.36	0.26	0.40	0.30	2.0	0.230	--	0.170	--	0.170	0.52

07197000 BARON FORK AT ELDON, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	BORON, DISSOLVED (UG/L AS B) (01020)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)
OCT 13...	0.01	--	--	--	--	--	--	--	--	--
DEC 07...	0.0	--	--	--	--	--	--	--	--	--
FEB 22...	--	--	--	--	--	--	--	--	--	--
APR 28...	--	<1	27	<0.5	20	2.0	<5	<3	<10	5
JUN 30...	--	2	32	<0.5	20	<1.0	<5	<3	<10	9
AUG 31...	--	<1	32	<0.5	20	<1.0	<5	<3	<10	<3
SEP 14...	--	<1	22	<0.5	20	<1.0	<5	<3	<10	78

DATE	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
OCT 13...	--	--	--	--	--	--	--	--	--	--
DEC 07...	--	--	--	--	--	--	--	--	--	--
FEB 22...	--	--	--	--	--	--	--	--	--	--
APR 28...	<10	<4	4	<0.1	<10	<10	<1.0	36	<6	7
JUN 30...	<10	<4	9	<0.1	<10	<10	1.0	39	<6	4
AUG 31...	<10	<4	6	<0.1	<10	<10	<1.0	40	<6	<3
SEP 14...	<10	<4	12	<0.1	<10	<10	<1.0	23	<6	<3

07197500 TENKILLER FERRY LAKE NEAR GORE, OK

LOCATION.--Lat 35°35'48", long 95°02'57", in SE 1/4 SW 1/4 sec.14, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, at gage tower on right bank, 0.6 mi upstream from Tenkiller Ferry Dam on Illinois River, 6.0 mi northeast of Gore, and at mile 12.8.

DRAINAGE AREA.--1,610 mi^2.

PERIOD OF RECORD.--July 1952 to September 1993 (discontinued). Prior to October 1970, published as Tenkiller Ferry Reservoir near Gore.

GAGE.--Water-stage recorder. Datum of gage is sea level. Prior to Apr. 5, 1953, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earth dam. Spillway consists of 590 ft concrete modified ogee-type weir in right abutment controlled by ten taintor gates. Outlet works consist of a 19-foot diameter tunnel in right abutment controlled by two vertical lift gates. A similar tunnel conducts water to two hydroelectric turbines. Closure was made for diversion in July 1950 and regulated storage began in July 1952; conservation pool was first filled Apr. 9, 1953. Capacity, 1,231,000 acre-ft at elevation 667.0 ft, flood-control pool, 791,900 acre-ft at elevation, 642.0 ft, spillway crest, 628,700 acre-ft at elevation 630.0 ft, maximum power pool, and 283,100 acre-ft at elevation 594.5 ft, conservation and minimum power pool. Figures given herein represent total contents. Reservoir is used for flood control and for power development. U.S. Army Corps of Engineers' satellite telemeter at station.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,218,000 acre-ft, June 5, 1957, elevation, 666.36 ft; minimum since conservation pool was first filled, 305,700 acre-ft, Oct. 21, 1954, elevation, 597.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,021,000 acre-ft, Dec. 21, elevation 656.13 ft; minimum, 647,300 acre-ft, Oct. 1, elevation 631.48 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

630	628,700	642	791,900
634	680,300	646	852,000
638	734,700	650	915,600

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

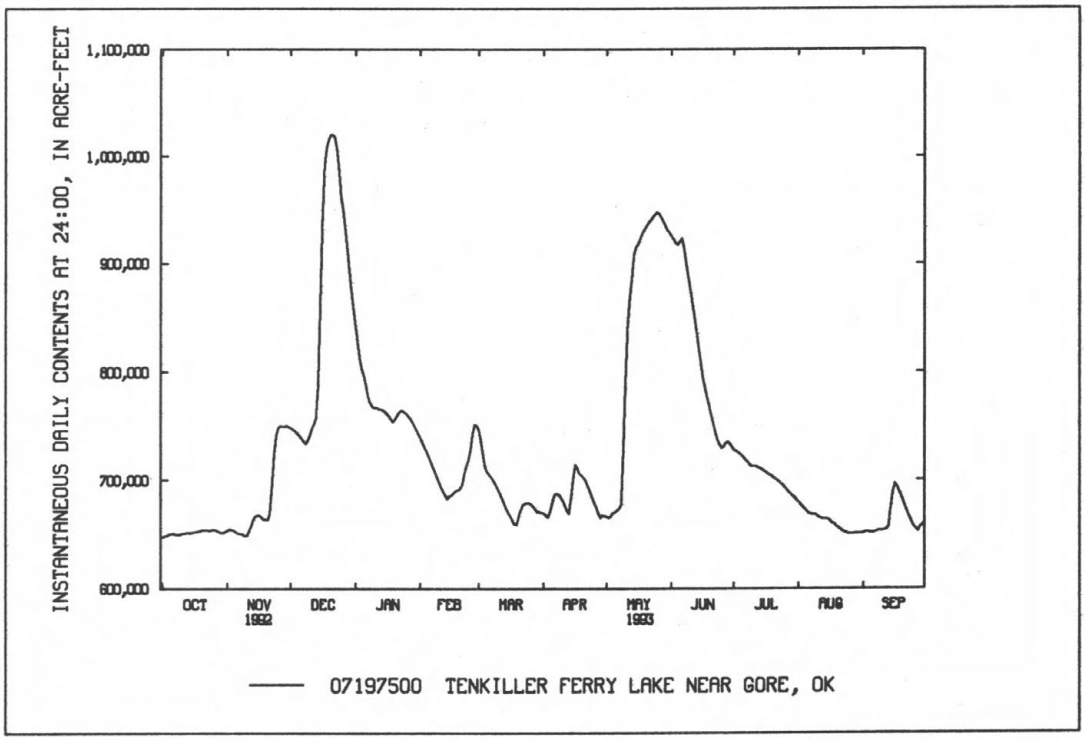
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	647300	653400	748700	840900	739600	746700	669400	666300	925600	727300	679300	651000
2	648200	654900	747100	825400	734800	736500	667500	665100	922700	726500	676900	651900
3	648700	653800	746000	811200	730700	723300	665600	666300	919100	725200	674800	651900
4	649800	653400	743600	802300	726400	712300	670600	669600	917300	723600	672800	651700
5	650400	651900	741800	796600	721900	707000	678100	670200	920400	721800	670700	651700
6	651100	650700	738900	787200	717300	704900	686100	672300	923200	719500	668800	651700
7	649600	650400	736200	777300	712500	702300	687400	673200	914300	717600	668400	652000
8	649800	650200	733600	771900	707600	699300	686800	677200	901300	715200	668100	653200
9	649900	648600	736200	768500	702700	695800	684600	728200	888500	712900	668100	653100
10	650400	648200	740800	766900	698000	691800	681300	792800	877400	712600	666500	653200
11	650800	652400	747500	767400	693400	687900	677200	842800	864000	712700	665100	653700
12	651200	656800	751400	766300	689500	683400	672300	869600	851200	711900	664300	654100
13	651300	663100	757600	765700	685900	678700	668900	884900	837200	710800	663800	656700
14	651100	666300	787300	765100	682700	673900	682800	908200	823400	710000	663700	674300
15	651500	667200	864600	763700	685300	669800	700700	915400	810100	708700	663700	688300
16	651900	667300	938600	761700	685900	666800	713700	918100	795400	707300	662200	696500
17	652300	665800	990100	759200	688000	662700	711600	923100	786600	706000	660000	693900
18	652800	663900	1007000	756400	690000	659200	705800	928000	777500	704500	660000	689500
19	653200	663000	1015000	753900	690600	658800	704200	931500	769600	703500	657200	685300
20	653700	663100	1020000	756800	691800	665600	702300	934900	761000	701800	655800	680000
21	654000	668900	1020000	760600	695400	672300	699200	938100	753000	700400	654500	674800
22	653700	693400	1018000	763100	705100	676500	694600	940300	744700	698900	652700	670100
23	653300	722500	1007000	764600	712900	678200	689700	943300	737200	697300	651700	665200
24	653800	740800	987600	763700	717900	678900	684600	945800	732900	695600	651300	660400
25	654200	748700	961900	762400	726600	678700	679400	947800	729300	693800	650000	657000
26	653800	750300	949600	760300	743500	677400	675200	947000	730400	691300	650400	654900
27	653200	749600	931200	757600	751500	675700	669800	943300	734000	689100	650300	652500
28	652100	749700	911900	755000	750700	673200	665400	939300	735000	686800	650700	656300
29	651200	750300	892100	751100	---	670600	667300	935200	733400	685000	650700	658200
30	651600	749400	873500	747300	---	670700	666800	931000	730700	683600	650600	660500
31	652400	---	856400	743300	---	669800	---	928500	---	681200	650700	---

07197500 TENKILLER FERRY LAKE NEAR GORE, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	654200	750300	1020000	840900	751500	746700	713700	947800	925600	727300	679300	696500
MIN	647300	648200	733600	743300	682700	658800	665400	665100	729300	681200	650000	651000
(‡)	631.87	639.06	646.28	638.62	639.15	633.20	632.97	650.78	637.71	634.07	631.74	632.49
(‡‡)	+4,800	+97,000	+107,000	-113,100	+7,400	-80,900	-3,000	+261,700	-197,800	-49,500	-30,500	+9,800

CAL YR 1992 MAX 1020000 MIN 641100 (‡‡) +141,400
WTR YR 1993 MAX 1020000 MIN 647300 (‡‡) +12,900

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07198000 ILLINOIS RIVER NEAR GORE, OK

LOCATION.--Lat 35°34'23", long 95°04'07", in NE 1/4 SW 1/4 sec.27, T.13 N., R.21 E., Sequoyah County, Hydrologic Unit 11110103, on right bank 4.2 mi downstream from Tenkiller Ferry Dam, 4.5 mi northeast of Gore, and at mile 8.5.

DRAINAGE AREA.--1,626 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1924 to April 1926, April 1939 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 468.00 ft above sea level. See WSP 1921 for history of changes prior to Feb. 19, 1952. Feb. 19, 1952 to Aug. 15, 1989, gage at same site and datum 5.00 ft higher.

REMARKS.--Records good. Except for 16 mi^3 intervening area, flow completely regulated since July 1952 by Tenkiller Ferry Lake (station 07197500). U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	578	36	2200	9650	3650	7450	3880	3910	3410	3710	1220	47
2	34	962	2700	9660	3860	9460	3900	3920	3380	1740	1240	44
3	23	2340	2490	9660	3680	10800	3900	3580	3370	1740	1220	373
4	21	1590	2670	8450	3650	9300	4370	3800	2820	1740	1100	213
5	21	1720	2810	8400	3660	6130	4080	3800	84	1730	1370	191
6	20	1390	2980	9620	3640	3940	4460	2610	70	1940	1300	194
7	677	721	2830	8780	3650	3910	5290	2070	5330	1830	370	46
8	490	753	2720	5970	3660	3880	5240	2020	8260	1780	347	306
9	52	1370	2840	5130	3690	3940	5250	929	8330	1880	464	289
10	22	1050	2860	5150	3710	3960	5230	377	8430	803	1150	289
11	21	1730	2770	5130	3710	3950	5240	198	8380	658	1160	25
12	20	1980	2700	5110	3190	4010	5220	180	9060	931	658	83
13	20	2380	2630	4380	3180	4020	4490	160	9060	1130	521	130
14	469	2240	3230	3800	3190	3990	4530	120	9040	1160	343	2470
15	273	2190	1180	3750	3560	4020	4870	881	9040	1210	151	4250
16	31	2180	257	3830	3210	4010	7310	3250	7840	1200	905	4910
17	21	2840	770	3850	2630	3970	9800	885	6090	1200	1240	5450
18	20	2680	2270	3840	2010	4010	9000	810	5850	1210	735	5410
19	19	2320	3910	3840	2290	3920	e7600	833	6660	1180	711	5310
20	19	2430	3840	4090	2070	1460	e6200	800	6710	1200	743	5400
21	212	2590	4810	3920	2250	3120	e6050	840	6630	976	607	4700
22	413	3150	5810	3810	2150	3120	6000	764	6340	972	792	3910
23	573	4260	9130	3790	2000	3850	5960	847	5960	991	691	3920
24	33	3530	13000	3740	2700	3840	5970	816	4300	1100	434	3930
25	21	2220	12900	3730	4450	3830	6000	816	3720	1100	689	3940
26	613	4190	12700	3750	5440	3840	5970	1900	3720	1590	100	3950
27	546	4240	12600	3790	6240	3800	5990	3370	3750	1390	328	3970
28	714	3230	12500	3780	7110	3840	4800	3400	3700	1420	78	571
29	1380	2590	12500	3880	---	3830	4070	3420	3680	1170	80	710
30	61	2840	12400	3790	---	3930	3970	3410	3680	1180	475	184
31	38	---	11200	3800	---	3890	---	3450	---	1310	102	---
TOTAL	7455	67742	170207	163870	98230	141020	164640	58166	166694	43171	21324	65215
MEAN	240	2258	5491	5286	3508	4549	5488	1876	5556	1393	688	2174
MAX	1380	4260	13000	9660	7110	10800	9800	3920	9060	3710	1370	5450
MIN	19	36	257	3730	2000	1460	3880	120	70	658	78	25
AC-FT	14790	134400	337600	325000	194800	279700	326600	115400	330600	85630	42300	129400

e Estimated

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

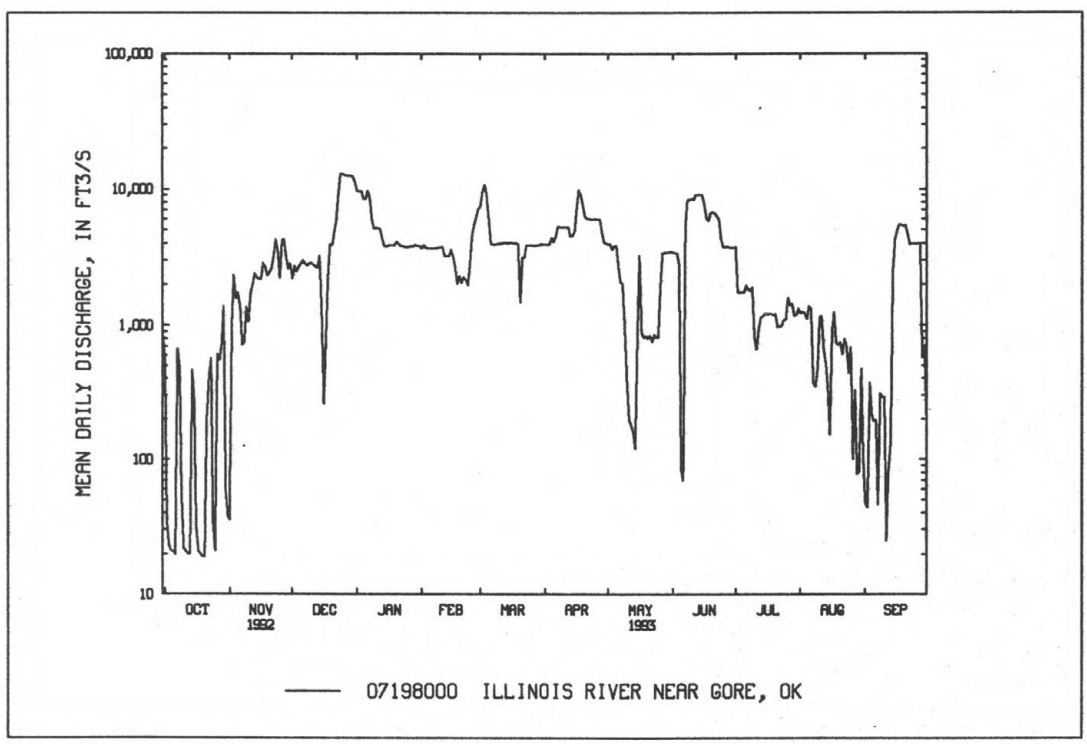
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	793	1167	1682	1629	1646	1899	2682	2320	1846	1261	864	682
MAX	8165	4538	9652	5869	5740	5137	8340	10940	7177	8046	2358	2174
(WY)	1987	1992	1974	1988	1969	1975	1990	1990	1957	1957	1961	1993
MIN	74.4	56.0	55.5	27.7	57.1	60.9	70.0	105	141	84.9	81.4	80.7
(WY)	1981	1984	1981	1965	1981	1981	1980	1981	1963	1988	1963	1963

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1954-93	
ANNUAL TOTAL	693318		1167734			
ANNUAL MEAN	1894		3199		1538	
HIGHEST ANNUAL MEAN					3199	1993
LOWEST ANNUAL MEAN					280	1964
HIGHEST DAILY MEAN	13000	Dec 24	13000	Dec 24	15800	May 6 1957
LOWEST DAILY MEAN	19	Oct 19	19	Oct 19-20	2.1	Sep 16 1959
ANNUAL SEVEN-DAY MINIMUM	85	Oct 15	85	Oct 15	3.5	Feb 2 1965
INSTANTANEOUS PEAK FLOW			13100	Dec 23	[a]18100	Jun 9 1957
INSTANTANEOUS PEAK STAGE			16.88	Dec 23	[b]18.70	Jun 9 1957
ANNUAL RUNOFF (AC-FT)	1375000		2316000		1114000	
10 PERCENT EXCEEDS	3800		6640		3620	
50 PERCENT EXCEEDS	1370		3120		921	
90 PERCENT EXCEEDS	43		182		80	

[a]Maximum discharge, 180,000 ft^3/s, May 11, 1950, from rating curve extended above 42,000 ft^3/s by velocity-area.

[b]Maximum gage height, 34.6 ft, May 11, 1950, from floodmark, present site, and datum.



07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1948, 1952, 1954 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1947 to September 1948, October 1953 to September 1963.

WATER TEMPERATURE: October 1947 to September 1948, October 1953 to September 1963, October 1992 to September 1993.

REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Prior to October 1992 records of continuous water temperature were collected 4.2 mi upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily 396 microsiemens, Aug. 12, 1956; minimum daily 123 microsiemens, July 14, 1957.

WATER TEMPERATURE: Maximum 24.0°C, Sept. 28-30, Oct. 1, 2, 1958, Aug. 29, 1993; minimum 4.5°C several days in winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum 24.0°C, Aug. 29; minimum 4.5°C, Feb. 13, 1993.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUN											
09...	0940	20.0	17.0	751	1028	1028	8200	14.56	184	8.8	7.3
09...	0945	40.0	17.0	751	1028	1028	8200	14.56	182	8.7	7.6
09...	0950	60.0	17.0	751	1028	1028	8200	14.56	183	8.8	7.6
09...	0955	80.0	17.5	751	1028	1028	8200	14.56	183	8.8	7.7
09...	1000	100	17.5	751	1028	1028	8200	14.56	184	8.9	7.7
09...	1005	120	17.5	751	1028	1028	8200	14.56	185	9.0	7.7
09...	1010	140	17.5	751	1028	1028	8200	14.56	185	9.0	7.7
09...	1015	160	18.0	751	1028	1028	8200	14.56	185	9.0	7.7
09...	1020	180	18.0	751	1028	1028	8200	14.56	184	9.0	7.7
09...	1025	200	18.0	751	1028	1028	8200	14.56	185	9.0	7.7
09...	1031	220	18.0	751	1028	1028	8200	14.56	184	9.0	7.7
09...	1035	240	18.0	751	1028	1028	8200	14.56	184	9.0	7.7
09...	1045	280	18.0	751	1028	1028	8200	14.56	184	9.0	7.7
09...	1050	300	18.0	751	1028	1028	8200	14.56	185	9.2	7.7
AUG											
10...	1035	10.0	18.0	756	1028	1028	398	8.28	187	9.8	7.3
10...	1040	20.0	18.0	756	1028	1028	398	8.28	185	9.8	7.3
10...	1045	30.0	18.0	756	1028	1028	398	8.28	185	9.8	7.3
10...	1050	40.0	18.0	756	1028	1028	398	8.28	184	9.7	7.3
10...	1055	50.0	18.0	756	1028	1028	398	8.28	185	9.7	7.2
10...	1100	60.0	17.5	756	1028	1028	398	8.28	183	9.6	7.2
10...	1105	70.0	18.0	756	1028	1028	398	8.28	185	9.6	7.2
10...	1110	80.0	18.0	756	1028	1028	398	8.28	183	9.6	7.2
10...	1115	90.0	18.0	756	1028	1028	398	8.28	183	9.5	7.3

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
06...	1500	1028	80020	20	301	8.1	25.0	21.0	2.2	755	9.6	109
DEC												
16...	1345	1028	80020	190	166	7.3	9.0	9.0	--	750	11.1	98
FEB												
09...	1430	1028	80020	3660	165	7.7	20.0	7.5	8.3	750	11.1	95
MAR												
31...	1015	1028	80020	3870	174	8.0	11.5	8.0	--	742	11.7	101
JUN												
09...	1030	1028	80020	8200	184	7.5	24.5	17.0	100	751	8.8	93
AUG												
10...	1130	1028	80020	398	184	7.3	29.5	18.0	2.0	756	9.5	102

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLVED FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT											
06...	--	110	6	39	2.6	17	25	0.7	2.8	124	0
DEC											
16...	--	--	--	--	--	--	--	--	--	55	0
FEB											
09...	--	66	1	24	1.4	3.5	10	0.2	2.5	79	0
MAR											
31...	1.5	--	--	--	--	--	--	--	--	83	0
JUN											
09...	--	76	13	28	1.5	3.4	9	0.2	2.3	77	0
AUG											
10...	1.2	82	13	30	1.6	3.8	9	0.2	2.4	84	0

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)
OCT											
06...	102	4.9	32	<0.10	176	161	0.24	9.27	0.130	0.130	0.58
DEC											
16...	45	--	--	--	--	--	--	--	0.310	0.310	1.4
FEB											
09...	65	7.0	5.0	<0.10	95	87	0.13	939	0.940	0.940	4.2
MAR											
31...	68	--	--	--	--	--	--	--	1.28	1.28	5.7
JUN											
09...	63	7.3	4.9	<0.10	107	90	0.15	2370	1.09	1.09	4.8
AUG											
10...	69	5.8	4.8	0.10	100	93	0.14	107	0.730	0.730	3.2

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)
OCT											
06...	0.020	0.030	0.10	0.150	0.160	0.600	0.610	0.77	0.79	0.50	--
DEC											
16...	0.040	0.040	0.13	0.350	0.350	0.020	0.020	0.03	0.03	0.18	--
FEB											
09...	--	0.020	0.07	--	0.960	--	0.010	--	0.01	0.19	--
MAR											
31...	--	0.020	0.07	--	1.30	--	0.010	--	0.01	0.19	0.19
JUN											
09...	--	0.010	0.03	--	1.10	--	0.040	--	0.05	--	--
AUG											
10...	--	0.020	0.07	--	0.750	--	0.170	--	0.22	0.33	0.33

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)
OCT											
06...	1.1	--	1.2	5.5	0.120	0.21	0.030	0.070	0.020	0.06	0.05
DEC											
16...	0.20	--	0.55	2.4	--	0.09	0.060	0.030	0.020	0.06	--
FEB											
09...	0.20	<0.20	1.2	--	0.070	--	0.050	--	0.060	0.18	--
MAR											
31...	0.20	0.20	1.5	--	0.060	--	0.030	--	0.050	0.15	--
JUN											
09...	<0.20	<0.20	--	--	--	--	0.100	--	0.050	0.15	--
AUG											
10...	0.50	0.50	1.2	--	0.120	--	0.060	--	0.050	0.15	--

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.5	18.5	19.5	18.5	15.5	17.5	14.5	12.0	14.0	9.5	9.0	9.0
2	21.0	18.0	19.5	19.5	14.0	17.0	14.5	12.0	13.5	9.0	9.0	9.0
3	21.0	16.5	19.0	19.0	17.5	18.5	14.0	12.0	13.5	9.0	9.0	9.0
4	21.5	16.5	19.0	18.5	15.5	17.5	14.0	12.5	13.0	11.5	9.0	9.5
5	21.5	16.5	19.0	18.5	15.0	17.5	14.0	11.0	13.0	9.0	9.0	9.0
6	21.5	17.0	19.5	---	---	---	13.5	11.0	12.5	9.0	9.0	9.0
7	21.5	17.5	19.0	---	---	---	13.5	11.5	12.5	11.0	9.0	9.0
8	20.5	17.5	18.5	---	---	---	13.0	11.0	12.5	11.0	8.5	9.0
9	21.0	16.5	18.5	---	---	---	13.0	11.0	12.0	9.0	8.5	8.5
10	23.0	16.0	18.0	17.5	16.0	17.0	13.0	9.5	12.0	8.5	8.5	8.5
11	22.0	14.5	17.5	17.5	17.0	17.5	12.5	10.0	12.0	8.5	8.5	8.5
12	20.5	15.0	17.5	17.5	15.5	17.0	12.5	11.0	12.0	8.5	8.5	8.5
13	21.5	16.0	19.0	17.5	14.5	16.5	12.5	10.5	12.0	10.5	8.0	8.5
14	22.0	17.5	19.5	17.0	14.5	16.5	12.5	9.0	11.0	8.5	8.0	8.0
15	21.0	19.0	19.5	17.0	15.5	16.5	12.5	9.5	11.0	8.0	8.0	8.0
16	21.0	16.5	18.5	17.0	15.0	16.5	12.5	11.0	12.0	8.0	8.0	8.0
17	20.0	15.0	17.0	16.5	15.5	16.5	13.0	10.0	12.0	8.0	8.0	8.0
18	20.5	15.0	17.0	16.5	16.0	16.5	12.0	10.0	11.0	8.0	8.0	8.0
19	18.5	13.5	16.0	16.5	16.0	16.0	---	---	---	8.0	8.0	8.0
20	17.5	14.5	16.0	16.5	15.5	16.0	10.5	10.0	10.0	8.0	7.5	7.5
21	20.5	16.0	18.0	16.0	14.5	16.0	10.0	10.0	10.0	8.0	7.5	8.0
22	22.5	17.5	19.5	15.5	12.5	14.5	10.0	10.0	10.0	8.0	7.5	8.0
23	23.0	18.0	19.5	15.5	15.0	15.5	10.0	10.0	10.0	8.0	7.5	7.5
24	21.0	18.0	19.5	15.5	15.0	15.5	10.0	10.0	10.0	8.0	7.5	7.5
25	22.0	16.5	19.0	15.5	13.0	15.0	10.0	9.5	10.0	8.0	7.5	7.5
26	20.0	17.0	18.5	15.0	14.5	14.5	9.5	9.5	9.5	8.0	7.5	7.5
27	23.0	17.5	19.5	14.5	14.5	14.5	9.5	9.5	9.5	8.0	7.5	7.5
28	21.5	17.0	19.0	14.5	14.0	14.5	9.5	9.5	9.5	7.5	7.5	7.5
29	20.0	18.0	19.0	15.0	12.0	14.5	9.5	9.5	9.5	7.5	7.5	7.5
30	19.0	16.5	18.0	15.0	12.5	14.0	9.5	9.5	9.5	7.5	7.5	7.5
31	19.5	16.0	17.5	---	---	---	11.5	9.5	9.5	8.0	7.5	7.5
MONTH	23.0	13.5	18.5	---	---	---	---	---	---	11.5	7.5	8.2

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

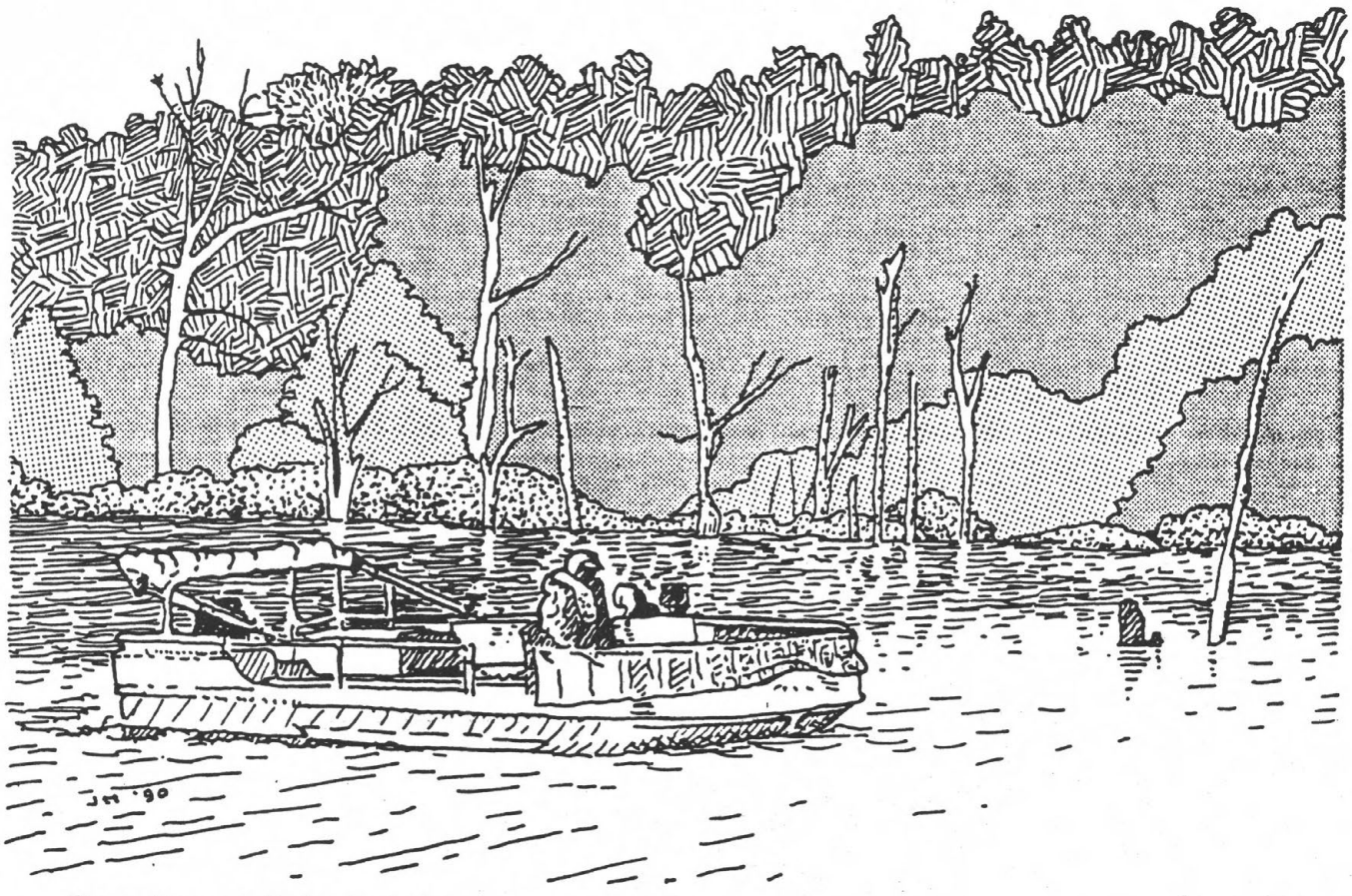
WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.0	7.5	8.0	6.5	6.5	6.5	8.5	8.0	8.5	11.0	10.5	11.0
2	7.5	7.5	7.5	6.5	6.5	6.5	8.5	8.0	8.0	11.0	10.5	11.0
3	7.5	7.5	7.5	6.5	6.5	6.5	8.0	8.0	8.0	12.5	10.5	11.0
4	7.5	7.5	7.5	9.0	6.5	7.0	9.0	8.0	8.5	11.0	10.5	11.0
5	7.5	7.5	7.5	10.0	6.5	7.5	9.0	8.5	8.5	11.5	11.0	11.0
6	8.0	7.5	7.5	7.0	6.5	7.0	9.0	8.5	8.5	12.5	11.0	11.5
7	8.0	7.5	7.5	7.0	6.5	7.0	9.0	8.5	9.0	11.0	10.5	11.0
8	8.0	7.5	7.5	7.5	6.5	7.0	9.0	9.0	9.0	13.5	11.0	12.0
9	8.0	7.5	7.5	7.5	7.0	7.0	9.5	9.0	9.0	15.5	13.5	15.0
10	7.5	7.5	7.5	7.5	7.0	7.5	9.5	8.5	9.0	14.0	13.5	13.5
11	11.5	7.5	7.5	7.5	7.0	7.5	9.5	9.0	9.0	13.5	13.5	13.5
12	11.5	7.5	8.0	7.5	7.0	7.5	9.5	9.0	9.0	14.0	13.5	13.5
13	11.0	7.5	8.0	7.5	7.0	7.0	11.0	9.0	9.5	14.0	13.5	14.0
14	11.0	7.5	8.0	7.5	7.0	7.0	10.5	9.0	9.5	14.5	13.5	14.0
15	11.0	7.0	7.5	7.0	7.0	7.0	10.0	9.5	9.5	16.5	12.5	14.0
16	10.5	7.0	7.5	7.5	7.0	7.0	10.0	9.5	10.0	14.5	12.0	12.0
17	10.5	7.0	8.0	---	---	---	10.0	10.0	10.0	14.5	12.0	13.5
18	10.0	4.5	8.0	---	---	---	10.5	10.0	10.0	14.5	12.0	13.0
19	9.5	6.0	8.0	---	---	---	12.5	10.0	10.5	14.0	11.5	12.5
20	9.5	6.5	8.0	10.5	7.5	9.0	10.0	10.0	10.0	14.0	11.5	12.5
21	10.0	7.0	8.0	10.5	7.0	7.5	10.5	10.0	10.0	14.0	11.5	12.5
22	9.5	6.5	8.0	---	---	---	10.5	10.0	10.5	14.0	11.5	12.5
23	9.5	6.0	8.0	8.0	7.5	7.5	11.0	10.5	10.5	14.0	11.5	12.5
24	---	---	---	8.0	7.5	7.5	10.5	10.0	10.0	14.0	12.0	12.5
25	6.5	6.5	6.5	8.0	7.5	7.5	11.0	10.0	10.5	14.0	12.0	13.0
26	7.0	6.5	6.5	8.5	7.5	8.0	11.0	10.5	11.0	13.0	12.0	12.5
27	6.5	6.5	6.5	8.5	7.5	8.0	11.0	11.0	11.0	12.5	11.5	12.0
28	6.5	6.5	6.5	8.5	7.5	8.0	12.0	10.5	11.0	12.5	12.0	12.0
29	---	---	---	8.5	8.0	8.0	11.0	10.5	10.5	---	---	---
30	---	---	---	8.5	8.0	8.0	11.0	10.5	11.0	---	---	---
31	---	---	---	8.0	8.0	8.0	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	12.5	8.0	9.6	---	---	---

07198000 ILLINOIS RIVER NEAR GORE, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.0	12.0	12.5	16.0	15.5	15.5	---	---	---	22.5	19.0	20.0
2	13.0	12.5	12.5	16.0	15.5	15.5	---	---	---	23.0	20.0	21.0
3	13.0	12.5	12.5	16.0	15.0	15.5	---	---	---	23.0	19.0	20.0
4	15.0	12.5	13.0	16.0	15.5	15.5	---	---	---	22.5	17.5	19.5
5	---	---	---	16.0	15.5	15.5	---	---	---	22.5	18.0	19.0
6	---	---	---	16.5	15.5	16.0	---	---	---	22.5	18.0	19.5
7	18.0	13.5	15.5	17.0	16.0	16.5	---	---	---	22.0	19.0	20.0
8	16.5	15.5	16.0	17.0	16.0	16.5	---	---	---	20.0	18.0	19.5
9	17.0	16.0	16.5	16.5	16.5	16.5	---	---	---	20.0	18.0	19.0
10	---	---	---	17.0	16.5	16.5	---	---	---	22.0	18.0	19.5
11	17.0	14.5	16.0	17.0	16.0	16.5	---	---	---	21.0	17.5	19.5
12	15.0	14.5	14.5	20.5	16.5	17.0	18.5	17.0	17.5	23.5	19.0	21.0
13	---	---	---	19.0	16.5	17.5	20.5	17.0	18.0	22.0	19.5	20.5
14	15.0	14.5	15.0	18.5	16.5	17.0	22.5	17.5	19.0	20.0	17.5	19.0
15	15.0	14.5	15.0	20.0	16.5	17.5	22.0	18.5	19.5	19.0	18.5	18.5
16	15.0	14.5	15.0	19.5	17.0	17.5	19.5	18.0	18.5	19.0	18.5	18.5
17	15.5	14.5	15.0	19.0	17.0	17.5	20.0	18.0	18.5	19.5	18.5	19.0
18	15.0	14.5	14.5	19.0	17.0	17.5	20.5	17.5	18.5	19.5	19.0	19.0
19	15.0	14.5	15.0	19.5	17.0	17.5	19.0	17.5	18.5	19.5	19.0	19.0
20	15.0	15.0	15.0	19.5	17.0	17.5	19.0	17.5	18.5	19.5	19.0	19.5
21	15.5	15.0	15.0	18.0	16.5	17.5	19.0	18.0	18.5	19.5	19.0	19.5
22	15.5	15.0	15.0	17.5	16.5	17.0	22.0	18.0	19.0	20.0	19.5	19.5
23	15.5	15.0	15.5	17.5	16.5	17.0	19.5	18.5	19.0	20.0	19.5	19.5
24	15.5	15.0	15.0	17.5	16.5	17.0	20.0	18.0	19.0	20.0	19.5	20.0
25	15.0	15.0	15.0	17.5	16.5	17.0	20.5	18.0	19.0	20.0	20.0	20.0
26	15.5	15.0	15.0	17.5	16.0	17.0	20.0	18.5	19.0	20.5	20.0	20.0
27	15.5	15.0	15.5	18.0	17.0	17.5	23.5	19.0	20.5	20.5	20.0	20.0
28	15.5	15.0	15.5	19.0	17.0	17.5	21.0	19.0	19.5	21.0	19.0	19.5
29	16.0	15.5	15.5	21.0	17.5	18.0	24.0	20.0	21.0	20.5	18.5	19.5
30	16.0	15.5	15.5	---	---	---	23.0	18.5	20.5	21.0	18.5	19.5
31	---	---	---	---	---	---	21.0	19.0	19.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	23.5	17.5	19.6



Sampling on Eufaula Lake

07228500 CANADIAN RIVER AT BRIDGEPORT, OK

LOCATION.--Lat 35°32'37", long 98°19'03", SE 1/4 NW 1/4 sec.1, T.12 N., R.11 W., Caddo County, Hydrologic Unit 11090202, on downstream side of pier near center of bridge on U.S. Highway 281, 3.3 mi east of Bridgeport, 1.6 mi downstream from Lumpmouth Creek, and at mile 263.3.

DRAINAGE AREA.--25,276 mi?, of which 4,801 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1944 to September 1964; October 1969 to current year.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,360.00 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 1, 1947, at site 3.8 mi upstream at datum 24.25 ft higher. Oct. 1, 1947 to Sept. 30, 1948, nonrecording gage and Oct. 1, 1948, to September 1964, Oct. 1, 1969, to Dec. 17, 1980, at site 4.0 mi upstream and at datum 24.25 ft higher.

REMARKS.--Records poor. Flow regulated since October 1964 by Lake Meredith (station 07227900) located in Texas.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1914 reached a stage of about 19.4 ft, a higher stage probably occurred during flood in October 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e25	e25	202	e280	331	349	454	708	354	e225	e47	e17
2	e24	e24	187	e300	e320	349	393	2790	340	e210	e45	e30
3	e25	e25	179	316	e310	392	353	2540	330	e190	e40	e25
4	e24	e24	171	375	335	443	388	1520	317	e180	e38	e22
5	e23	e23	167	443	377	484	418	751	306	e170	e35	e19
6	e24	e22	173	305	364	495	498	547	295	e160	e33	e17
7	e25	e23	178	276	345	432	597	509	287	e157	e30	e16
8	e24	e22	182	262	328	406	467	5890	304	e152	e28	e40
9	e24	e23	317	443	319	375	393	31400	298	e148	e26	e90
10	e25	e25	356	799	366	357	350	14400	295	e142	e25	e63
11	e24	35	326	e450	434	345	316	2760	290	e140	e24	e50
12	e23	64	290	e381	441	345	285	1500	282	e130	e22	e40
13	e24	e40	586	356	428	366	271	e1100	280	e150	e21	e35
14	24	e35	1840	368	420	357	438	e1000	271	e225	e20	e70
15	e23	e31	1030	362	465	345	639	e900	267	e180	e19	e54
16	e22	e30	530	322	500	344	424	e800	264	e160	e18	e35
17	e21	e28	e450	295	513	338	367	e700	290	e140	e17	e31
18	e21	e27	e400	285	485	344	327	e650	249	e135	e16	e29
19	e20	152	e385	322	466	394	301	e600	187	126	e16	e26
20	e19	136	e370	305	726	383	292	e520	279	e118	e15	e24
21	e19	117	359	350	906	372	275	e460	457	e108	e14	e21
22	e20	188	370	339	701	407	263	e400	531	e103	e13	e20
23	e21	132	373	311	542	411	253	1460	356	e97	e12	e19
24	e20	294	365	381	494	382	248	e1100	310	e88	e30	e23
25	e20	813	e310	368	456	379	243	e700	392	e80	e20	e49
26	e21	450	e300	375	405	391	240	e500	317	e74	e18	e43
27	e20	335	e310	362	374	386	236	437	481	e66	e16	e36
28	35	289	e305	362	352	350	242	419	e350	e64	e15	e30
29	49	255	e310	375	---	347	3470	463	e280	e60	e14	e26
30	e35	224	e300	356	---	374	1920	492	e250	e55	e13	e24
31	e27	---	e285	339	---	481	---	390	---	e50	e20	---
TOTAL	751	3911	11906	11163	12503	11923	15361	78406	9509	4083	720	1024
MEAN	24.2	130	384	360	447	385	512	2529	317	132	23.2	34.1
MAX	49	813	1840	799	906	495	3470	31400	531	225	47	90
MIN	19	22	167	262	310	338	236	390	187	50	12	16
AC-FT	1490	7760	23620	22140	24800	23650	30470	155500	18860	8100	1430	2030

e Estimated

07228500 CANADIAN RIVER AT BRIDGEPORT, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1993, BY WATER YEAR (WY)

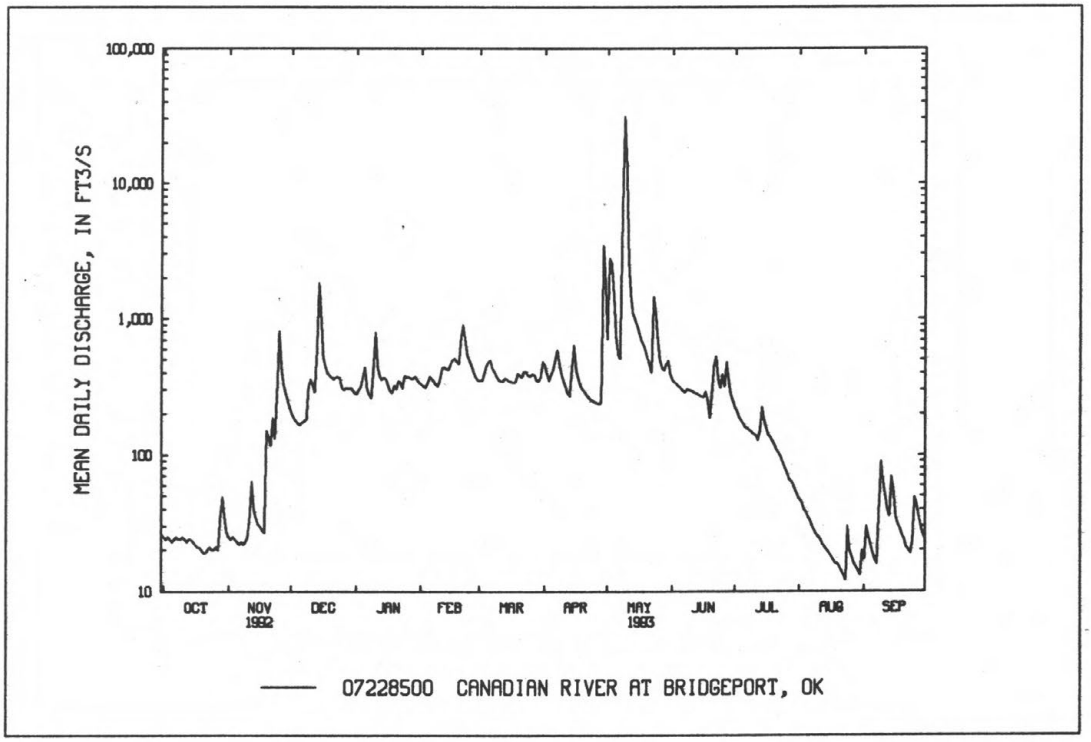
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	209	206	159	211	226	435	336	847	506	118	115	157
MAX	2412	1525	651	1162	462	1907	1005	4188	2212	500	1036	1170
(WY)	1987	1975	1988	1988	1975	1973	1973	1987	1983	1979	1974	1986
MIN	7.01	17.5	16.2	22.5	36.8	60.8	20.5	13.4	12.9	3.18	.14	1.14
(WY)	1979	1971	1979	1979	1981	1977	1971	1971	1970	1970	1970	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1970-93	
ANNUAL TOTAL	83910		161260			
ANNUAL MEAN	229		442		[a]294	
HIGHEST ANNUAL MEAN					1018	1987
LOWEST ANNUAL MEAN					70.2	1981
HIGHEST DAILY MEAN	4230	Jul 21	31400	May 9	42100	May 29 1987
LOWEST DAILY MEAN	19	Oct 20	12	Aug 23	.00	at times
ANNUAL SEVEN-DAY MINIMUM	20	Oct 19	15	Aug 17	.00	Aug 3 1970
INSTANTANEOUS PEAK FLOW			51200	May 9	[b]86100	May 17 1982
INSTANTANEOUS PEAK STAGE			17.32	May 9	[c]17.55	May 17 1982
ANNUAL RUNOFF (AC-FT)	166400		319900		213200	
10 PERCENT EXCEEDS	400		524		467	
50 PERCENT EXCEEDS	195		289		93	
90 PERCENT EXCEEDS	25		22		10	

[a]Prior to regulation, water years 1945-64, 469 ft^3/s.

[b]Maximum discharge for period of record, 150,000 ft^3/s, June 23, 1948, from rating curve extended above 50,000 ft^3/s.

[c]Maximum gage height for period of record, 38.85 (present datum) ft June 23, 1948, from flood mark.



07229200 CANADIAN RIVER AT PURCELL, OK

LOCATION.--Lat 35°00'50", long 97°20'50", in NW 1/4 sec.7, T.6 N., R.1 W., Cleveland County, Hydrologic Uni 11090202, near left bank on downstream side of pier of U.S. Highway 77, 0.5 mi east of Purcell, 1.0 mi upstream from Walnut Creek, and at mile 184.9.

DRAINAGE AREA.--25,939 mi^2, of which 4,801 mi^2 probably is noncontributing.

PERIOD OF RECORD.--October 1959 to June 1961, October 1979 to September 1983, October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,017.14 ft above sea level.

REMARKS.--Records poor. Flow regulated since October 1964 by Lake Meredith (station 07227900) located in Texas. U.S. Army Corps of Engineers' satellite telemeter located at site.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1904 reached a stage of 14.18 ft and flood in 1914 reached a stage of 12.98 ft, from information by the Atchison, Topeka, and Santa Fe Railway Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e100	480	296	525	742	2040	823	3440	e840	e420	e115	e150
2	91	292	338	453	825	2550	1030	2830	e800	e400	e140	e200
3	89	230	378	575	907	2340	902	5950	e760	e390	e120	e220
4	90	203	424	625	1100	1160	853	5310	e700	e370	e110	e150
5	92	162	479	465	1590	1430	1130	3520	e680	e350	e140	e120
6	91	189	574	927	2150	1160	1070	1200	e660	e330	e170	e110
7	111	182	569	1120	1310	1320	1130	e400	e640	e400	e150	e100
8	99	195	638	1060	1140	1070	1470	3010	e660	e350	e130	e150
9	89	215	3090	2020	1140	794	1220	61300	e1650	e320	e120	e120
10	88	227	4460	3570	1480	680	969	44400	e1000	e300	e110	e100
11	90	1450	2560	1940	e1400	533	854	37300	e700	e280	e100	e90
12	93	1260	1990	1650	e1300	459	728	13600	e620	e260	e95	e85
13	99	703	1660	1470	e1200	454	613	6970	e560	e250	e85	e250
14	93	391	8020	e1300	1100	604	830	5100	526	e270	e76	e3000
15	90	347	6880	1150	4390	706	3590	4470	e500	e260	e70	e1000
16	82	299	3830	1120	4700	735	1510	3620	e520	e240	67	e600
17	83	239	2350	1000	1510	690	599	3130	e500	e230	e64	e400
18	e82	203	1650	1120	526	688	e450	3070	e600	e280	e60	e300
19	e81	1720	1360	1270	246	1480	e425	3000	e740	e260	e56	e320
20	e81	3870	1180	e1600	289	1910	e420	3200	800	e250	e54	e250
21	e80	1260	1050	e2500	1470	985	e410	3230	e600	e230	e52	e230
22	e80	2120	875	e1800	1830	963	e400	3060	e540	e220	e50	e210
23	e79	1620	743	e1300	1570	1750	e390	5270	e500	e210	e58	e190
24	e79	634	681	e1180	1240	1320	e390	3650	e470	e200	e250	e170
25	e78	4640	636	1090	2300	855	e380	2370	e1490	e190	e150	e250
26	e78	2700	511	936	2330	577	e370	e1600	e800	e180	e130	e170
27	e77	818	562	869	1790	655	e360	e1300	e600	e170	e120	e130
28	80	430	642	902	1700	717	e350	e1100	e540	e160	e110	e120
29	264	270	763	711	---	868	1620	e1000	e480	e140	e100	e115
30	181	266	724	728	---	2910	4540	e940	e460	e130	e150	e110
31	180	---	574	763	---	1460	---	e900	---	e120	e250	---
TOTAL	3070	27615	50487	37739	43275	35863	29826	239240	20936	8160	3452	9410
MEAN	99.0	920	1629	1217	1546	1157	994	7717	698	263	111	314
MAX	264	4640	8020	3570	4700	2910	4540	61300	1650	420	250	3000
MIN	77	162	296	453	246	454	350	400	460	120	50	85
AC-FT	6090	54770	100100	74860	85840	71130	59160	474500	41530	16190	6850	18660

e Estimated

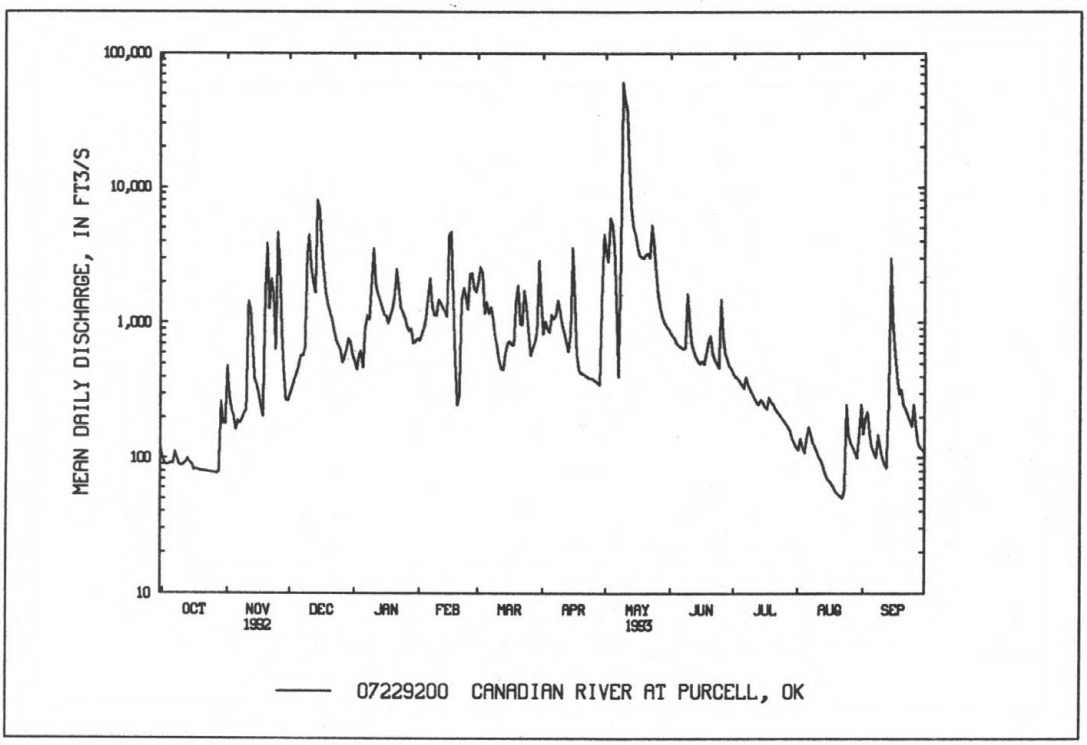
07229200 CANADIAN RIVER AT PURCELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	801	513	732	642	631	1006	740	2392	1306	363	199	406
MAX	7083	2648	2602	2055	1865	2638	2219	7717	5863	1216	758	993
(WY)	1987	1987	1992	1987	1987	1990	1990	1993	1989	1987	1992	1988
MIN	2.84	11.9	106	23.7	21.3	113	38.1	73.1	309	41.4	2.00	2.54
(WY)	1981	1981	1983	1981	1981	1981	1981	1981	1988	1980	1980	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1980-93	
ANNUAL TOTAL	235357		509073			
ANNUAL MEAN	643		1395		813	
HIGHEST ANNUAL MEAN					2287	1987
LOWEST ANNUAL MEAN					117	1981
HIGHEST DAILY MEAN	8020	Dec 14	61300	May 9	71000	May 29 1987
LOWEST DAILY MEAN	77	Oct 27	50	Aug 22	[a].00	Aug 2 1980
ANNUAL SEVEN-DAY MINIMUM	79	Oct 21	56	Aug 17	.00	Aug 6 1980
INSTANTANEOUS PEAK FLOW			84100	May 9	102000	May 29 1987
INSTANTANEOUS PEAK STAGE			14.42	May 9	[b]14.75	May 29 1987
ANNUAL RUNOFF (AC-FT)	466800		1010000		588900	
10 PERCENT EXCEEDS	1210		2750		1480	
50 PERCENT EXCEEDS	430		599		301	
90 PERCENT EXCEEDS	152		93		31	

[a]No flow at times in 1980.
[b]From high-water mark.



07229300 WALNUT CREEK AT PURCELL, OK

LOCATION.--Lat 34°59'56", long 97°22'00", NW 1/4 NW 1/4 sec.13, T.6 N., R.2 W., McClain County, Hydrologic Unit 11090202, on downstream side of right bank pier of bridge on U.S. Highway 77, at south edge of Purcell, and at mile 1.0.

DRAINAGE AREA.--202 mi^2.

PERIOD OF RECORD.--Water years 1951-55, 1958-65 (occasional low-flow measurements). October 1965 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1,014.57 ft above sea level. Prior to Oct. 1, 1984, datum 3.00 ft higher.

REMARKS.--Records fair.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s.

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	1145	4,320	12.08	May 2	0930	3,620	11.54
Feb. 15	1315	7,430	14.15	May 9	1445	16,800	18.64
Mar. 30	0145	4,030	11.87	May 23	1315	20,500	19.72
Apr. 29	0930	3,790	11.68				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	58	169	110	222	403	230	294	e180	48	e18	17
2	36	50	161	122	216	356	215	1800	e160	46	e18	19
3	36	46	159	136	213	236	202	708	e150	43	e17	24
4	35	45	157	135	240	208	217	368	e140	42	30	20
5	34	43	161	130	408	206	230	333	e130	43	e23	16
6	33	e40	173	130	334	202	211	325	e125	40	e22	14
7	34	e38	181	130	288	191	205	378	e120	43	e21	12
8	34	e36	175	130	258	182	190	1310	e130	43	e20	391
9	33	e34	1740	661	250	180	177	12300	e250	38	e20	48
10	32	e35	529	357	508	167	170	3050	e150	37	e19	25
11	32	577	234	243	436	164	165	1920	e130	36	e19	20
12	34	162	177	283	330	170	165	1470	e120	36	e19	19
13	34	79	304	202	309	176	165	1020	e110	40	e18	74
14	34	77	2650	204	301	175	355	830	e105	44	e18	532
15	33	79	602	206	3900	174	390	736	e98	45	e17	50
16	33	80	273	200	822	181	263	672	e93	42	17	40
17	32	78	180	189	244	170	244	630	88	40	16	36
18	34	73	171	177	160	170	232	615	83	41	16	33
19	35	295	166	233	157	328	221	581	104	39	16	32
20	34	175	162	709	145	259	202	522	403	37	14	51
21	33	148	162	373	139	215	191	491	109	36	14	38
22	33	752	150	262	126	306	193	471	73	30	13	34
23	33	227	143	250	118	270	188	8280	66	27	14	32
24	35	311	131	238	132	218	197	1250	61	25	47	e30
25	35	465	131	237	293	197	193	e500	59	e23	25	44
26	36	240	124	238	187	183	183	e400	63	e22	18	40
27	36	209	126	239	152	180	172	e350	65	e21	17	35
28	36	191	124	237	154	180	174	e300	54	e20	16	e32
29	90	181	124	222	---	188	1260	e260	55	e20	15	e30
30	48	172	122	225	---	1900	426	e220	49	e19	16	e28
31	41	---	112	227	---	336	---	e200	---	e19	17	---
TOTAL	1134	4996	9973	7435	11042	8471	7626	42584	3523	1085	590	1816
MEAN	36.6	167	322	240	394	273	254	1374	117	35.0	19.0	60.5
MAX	90	752	2650	709	3900	1900	1260	12300	403	48	47	532
MIN	32	34	112	110	118	164	165	200	49	19	13	12
AC-FT	2250	9910	19780	14750	21900	16800	15130	84470	6990	2150	1170	3600

e Estimated

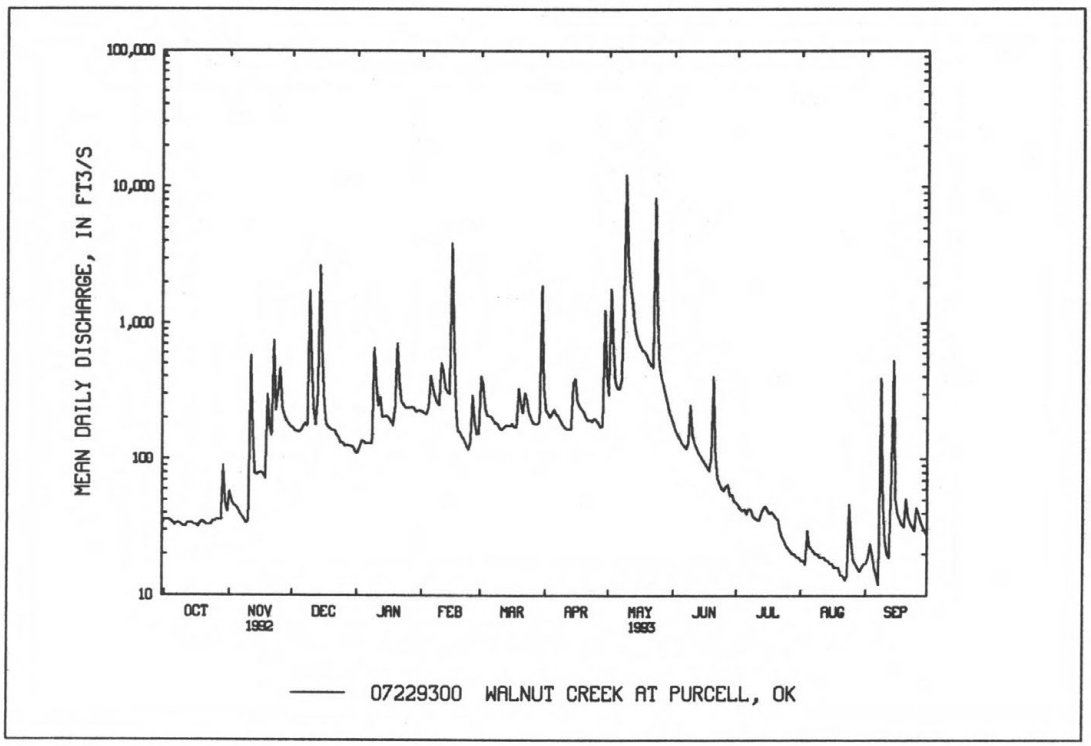
07229300 WALNUT CREEK AT PURCELL, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	104	47.6	65.0	50.2	82.5	106	107	217	117	48.9	24.5	47.3
MAX	1399	236	386	240	707	619	453	1374	696	293	99.6	305
(WY)	1984	1987	1985	1993	1985	1985	1990	1993	1989	1987	1992	1970
MIN	.30	2.78	2.62	3.87	1.72	3.25	7.47	5.05	5.92	1.00	.24	.28
(WY)	1979	1979	1967	1967	1967	1967	1981	1981	1972	1978	1978	1978

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	52665		100275			
ANNUAL MEAN	144		275		84.8	
HIGHEST ANNUAL MEAN					275	1993
LOWEST ANNUAL MEAN					11.9	1981
HIGHEST DAILY MEAN	4070	Jul 27	12300	May 9	31400	Oct 20 1983
LOWEST DAILY MEAN	32	Oct 10	12	Sep 7	.00	[a]Jun 3 1966
ANNUAL SEVEN-DAY MINIMUM	33	Oct 5	15	Aug 17	.00	Jul 2 1966
INSTANTANEOUS PEAK FLOW			20500	May 23	[b]67700	Oct 20 1983
INSTANTANEOUS PEAK STAGE			19.72	May 23	21.40	Oct 20 1983
ANNUAL RUNOFF (AC-FT)	104500		198900		61460	
10 PERCENT EXCEEDS	193		430		127	
50 PERCENT EXCEEDS	77		145		23	
90 PERCENT EXCEEDS	37		20		2.2	

[a]No flow at times in 1966-67 and 1984.
[b]From rating curve extended above 20,000 ft^3/s on basis of contracted opening at peak.



07229900 LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'24", long 97°13'02", in NW 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit 11090203, near center of dam on Little River, just downstream from Hog Creek, 13 mi east of Norman, and at mile 96.4.

DRAINAGE AREA.--256 mi^2.

PERIOD OF RECORD.--March 1965 to current year.

GAGE.--Nonrecording gage at outlet structure and at pump house. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam. Regulated storage began Mar. 1, 1965; minimum conservation pool first filled September 1965. Capacity, 196,200 acre-ft at elevation 1,049.4 ft, crest of drop inlet; 119,600 acre-ft at elevation 1,039.0 ft, top of conservation pool; 13,640 acre-ft at elevation 1,010.0 ft, minimum conservation pool. Dead storage, 13,500 acre-ft below elevation 997.0 ft, sill of gated outlet. Figures given herein represent total contents. Reservoir is used for flood control, irrigation (inactive), and municipal water supplies diverted to Del City, Midwest City, and Norman. U.S. Army Corps of Engineers satellite telemeter at station.

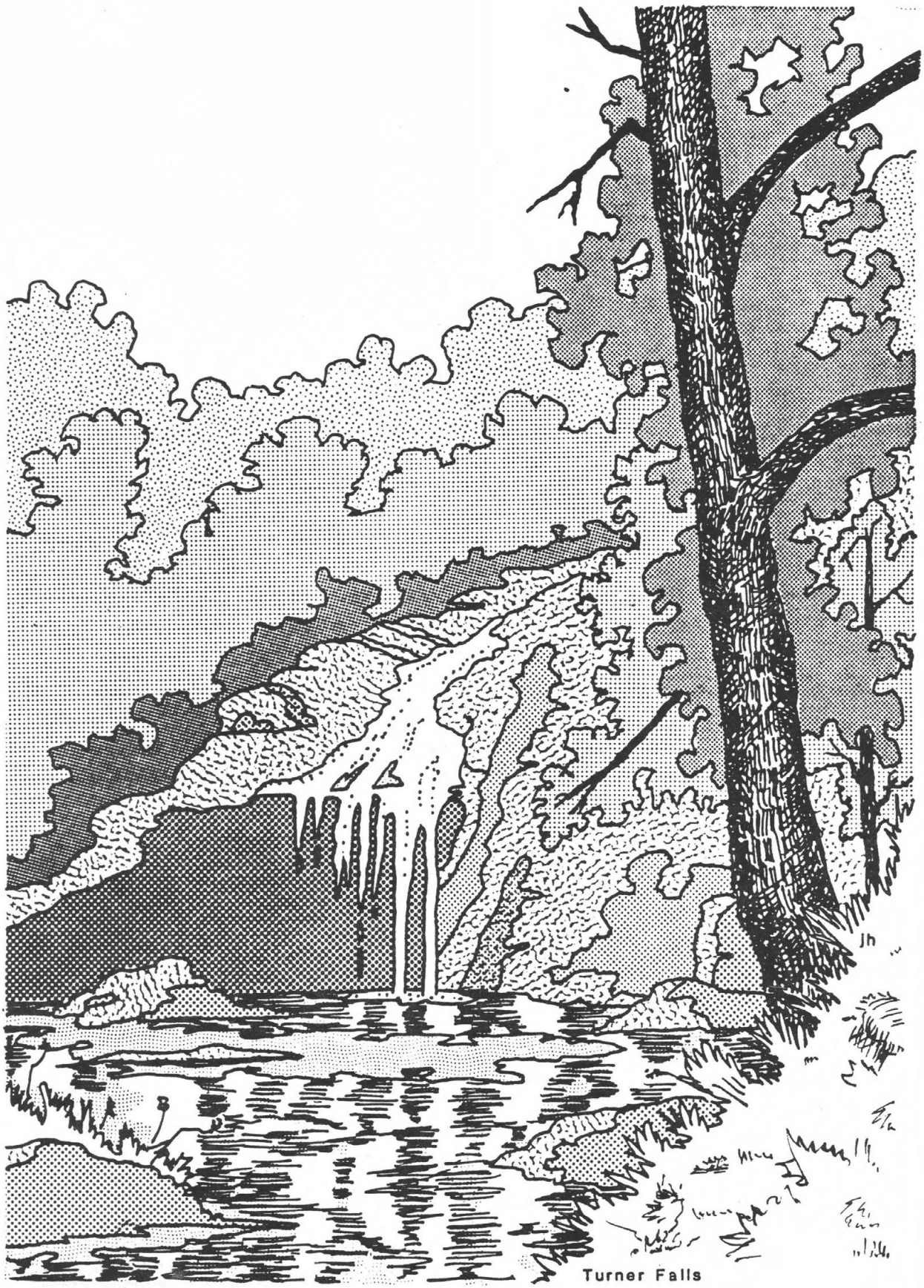
COOPERATION.--Elevations and data on diversions furnished by Central Oklahoma Master Conservancy District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 187,400 acre-ft, May 5, 1990, elevation, 1,048.38 ft; minimum since conservation pool first reached, 15,370 acre-ft, Nov. 30, 1965, elevation, 1,011.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 152,200 acre-ft, May 13, elevation, 1,034.90 ft; minimum, 110,900 acre-ft, Aug. 23 elevation, 1,037.53 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Diversions (acre-feet)
Sept. 30	1038.87	118,800	-	-
Oct. 31	1038.57	117,000	-1,800	1,585
Nov. 30	1040.08	126,200	+9,200	1,141
Dec. 31	1039.04	119,800	-6,400	1,073
CAL YR 92	-	-	-11,900	-
Jan. 31	1039.07	120,000	+200	989
Feb. 28	1039.20	120,800	+800	960
Mar. 31	1039.85	124,700	+3,900	1,088
Apr. 30	1039.35	121,700	-3,000	1,167
May 31	1041.13	133,100	+11,400	1,287
June 30	1039.01	119,700	-13,400	1,582
July 31	1038.26	115,200	-4,500	2,408
Aug. 31	1037.64	111,500	-3,700	2,315
Sept. 30	1038.43	116,200	+4,700	1,602
WTR YR 93	-	-	-2,600	-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Turner Falls

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK

LOCATION.--Lat 35°13'18", long 97°12'49", in NE 1/4 SE 1/4 sec.29, T.9 N., R.1 E., Cleveland County, Hydrologic Unit, 11090203, at right bank of outlet channel, 170 ft upstream from State Highway 9, 1,200 ft downstream from Lake Thunderbird, 1.0 mi upstream from Prairie Creek, 13.0 mi east of Norman, and at mile 96.2.

DRAINAGE AREA.--257 mi^2.

PERIOD OF RECORD.--October 1952 to current year. Prior to October 1964, published as Little River below Hog Creek near Norman.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 965.62 ft above sea level. Prior to Nov. 28, 1956, nonrecording gage 800 ft downstream at same datum. Nov. 28, 1956 to Oct. 14, 1964, water-stage recorder at site 800 ft downstream at same datum. Oct. 15, 1964 to Sept. 1, 1965, nonrecording gage at site 170 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Lake Thunderbird since March 1965 (station 07229900). In prior years, occasional small diversions above station for irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.2	533	1.3	1.1	180	505	199	754	1.2	1.1	1.2
2	1.3	1.1	772	1.3	1.1	170	503	262	751	1.2	1.1	1.2
3	1.2	1.1	763	1.3	1.1	427	503	285	748	1.2	1.1	1.2
4	1.1	1.1	509	1.2	110	513	304	318	746	1.2	1.1	1.0
5	1.1	1.1	292	1.3	254	380	167	476	741	1.2	1.1	1.0
6	1.1	1.1	291	1.2	301	297	417	515	738	1.2	1.1	1.0
7	1.1	1.1	292	1.2	300	296	500	516	580	1.2	1.1	.99
8	1.1	1.1	218	110	300	220	434	313	481	1.1	1.1	1.7
9	1.1	1.1	63	89	300	172	166	6.8	269	1.1	1.1	1.0
10	1.2	1.8	110	1.3	216	82	1.8	1.4	100	1.1	1.1	.98
11	1.1	1.9	243	1.3	163	1.3	1.8	168	162	1.1	1.1	.98
12	1.2	1.1	285	176	240	1.3	1.8	309	162	1.0	1.1	.99
13	1.1	162	218	428	298	1.3	1.7	561	162	1.1	1.1	1.1
14	1.1	292	2.5	506	298	1.3	1.9	815	163	1.1	1.0	1.4
15	1.1	291	1.6	504	136	1.3	268	811	165	1.0	1.1	.98
16	1.1	291	224	503	89	1.3	392	810	165	1.1	1.1	.98
17	1.1	291	617	503	364	1.3	302	806	79	1.1	1.1	.98
18	1.1	240	764	501	671	1.3	302	802	1.3	1.1	1.1	.98
19	1.1	174	763	374	763	157	302	897	1.3	1.1	1.1	1.1
20	1.1	175	757	295	758	297	221	953	1.5	1.1	1.1	1.0
21	1.1	108	757	355	758	295	68	945	163	1.1	1.1	.96
22	1.2	1.5	752	397	755	295	1.7	935	280	1.1	1.1	.97
23	1.2	133	750	398	753	422	1.8	187	279	1.1	1.2	.97
24	1.2	288	594	398	461	505	1.7	1.2	278	1.1	1.2	.96
25	1.2	289	500	332	1.2	504	1.7	267	206	1.1	1.0	1.1
26	1.1	289	499	214	176	262	1.7	668	156	1.1	1.1	.97
27	1.1	288	498	162	302	1.7	1.7	767	156	1.1	1.1	.98
28	1.1	288	497	162	302	1.7	1.8	764	156	1.1	1.1	.96
29	1.2	288	365	67	---	1.7	1.9	762	65	1.1	1.1	.98
30	1.1	287	284	1.1	---	3.0	31	760	1.2	1.1	1.2	.98
31	1.2	---	133	1.1	---	237	---	757	---	1.1	1.2	---
TOTAL	35.5	4190.3	13347.1	6487.6	9072.5	5729.5	5408.0	16637.4	8710.3	34.6	34.3	31.59
MEAN	1.15	140	431	209	324	185	180	537	290	1.12	1.11	1.05
MAX	1.4	292	772	506	763	513	505	953	754	1.2	1.2	1.7
MIN	1.1	1.1	1.6	1.1	1.1	1.3	1.7	1.2	1.2	1.0	1.0	.96
AC-FT	70	8310	26470	12870	18000	11360	10730	33000	17280	69	68	63

07230000 LITTLE RIVER BELOW LAKE THUNDERBIRD NEAR NORMAN, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.8	49.4	41.4	43.3	42.0	86.0	91.1	120	133	29.3	16.3	6.26
MAX	489	626	431	438	324	548	625	936	512	323	266	96.5
(WY)	1987	1984	1993	1985	1993	1985	1985	1990	1975	1989	1992	1989
MIN	.16	.18	.16	.17	.18	.18	.25	.20	.21	.19	.22	.20
(WY)	1966	1967	1966	1966	1967	1966	1966	1966	1967	1967	1967	1966

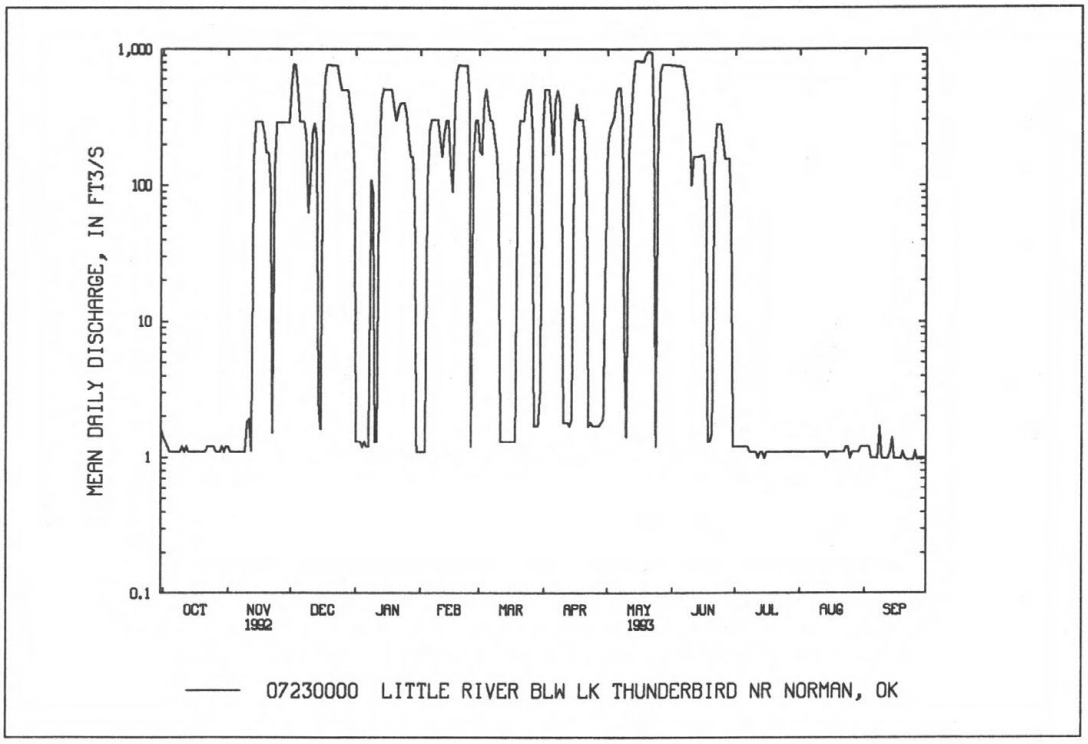
SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	56678.06		69718.69			
ANNUAL MEAN	155		191		[a]57.8	
HIGHEST ANNUAL MEAN					251	1985
LOWEST ANNUAL MEAN					.22	1966
HIGHEST DAILY MEAN	1010	Jan 1	953	May 20	1280	May 14 1990
LOWEST DAILY MEAN	.58	Jan 15	.96	Sep 21,24,28	[b].10	Oct 1 1965
ANNUAL SEVEN-DAY MINIMUM	.68	Jan 9	.99	Sep 21	.10	Oct 19 1965
INSTANTANEOUS PEAK FLOW			961	May 19	[c]1450	May 10 1990
INSTANTANEOUS PEAK STAGE			6.34	May 19	[d]8.62	Oct 26 1983
ANNUAL RUNOFF (AC-FT)	112400		138300		41870	
10 PERCENT EXCEEDS	514		603		238	
50 PERCENT EXCEEDS	2.2		2.5		.60	
90 PERCENT EXCEEDS	.83		1.1		.30	

[a]Prior to regulation, water years 1953-64, 58.9 ft3/s.

[b]No flow at times in 1954-56, 1964.

[c]Maximum discharge for period of record 34,600 ft3/s May 25, 1957, from rating curve extended above 15,000 ft3/s.

[d]From high-water mark. Maximum gage height for period of record 28.85 ft May 25, 1957, from high-water mark.



07230500 LITTLE RIVER NEAR TECUMSEH, OK

LOCATION.--Lat 35°10'21", long 96°55'54", NE 1/4 NE 1/4 sec.13, T.8 N., R.3 E., Pottawatomie County, Hydrologic Unit 11090203, on downstream side of center pier of bridge on U.S. Highway 177, 1.5 mi downstream from Dance Creek, 5.0 mi south of Tecumseh, and at mile 77.2.

DRAINAGE AREA.--456 mi^2.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 898.52 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records fair. Flow regulated or diverted since 1965 by Lake Thunderbird, 19.2 mi upstream (station 07229900). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1932 reached a stage of 25.58 ft, from floodmark. pt. 16, gage height, 15.49 ft; minimum daily discharge, 4.9 ft^3/s, Aug. 26, 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e21	44	651	e290	e90	787	801	456	1080	37	11	12
2	e21	43	829	e200	e50	492	727	507	1060	33	12	10
3	e20	33	825	e160	e40	681	726	585	1050	30	11	21
4	e21	27	666	e140	115	720	880	502	1040	28	12	14
5	e20	26	377	e130	619	537	618	790	1030	28	11	9.5
6	e20	26	429	e120	477	491	713	892	1020	27	12	8.3
7	e21	26	440	107	462	531	829	927	923	26	12	8.1
8	e22	27	368	141	476	485	765	892	739	25	11	562
9	e25	29	3030	694	519	304	e500	4630	710	23	12	181
10	e24	34	973	284	829	e250	e400	2990	e500	22	12	87
11	e23	1270	594	237	550	e190	e150	1050	e350	21	9.7	63
12	e22	656	601	346	454	e120	e70	1070	e250	20	9.1	53
13	e21	328	879	509	576	e60	e50	975	e220	20	8.6	48
14	e20	584	3130	607	546	e45	524	1230	211	22	8.3	509
15	19	560	992	605	3090	e40	644	1150	242	22	8.1	162
16	18	543	570	603	1090	e38	725	1130	212	20	8.2	81
17	25	539	876	592	628	e35	719	1110	196	18	8.1	63
18	20	523	1000	586	837	e33	650	1110	128	32	8.0	58
19	20	651	1000	643	1000	188	e600	1120	162	28	8.0	56
20	20	597	1010	1030	1010	575	e540	1150	1190	18	8.0	246
21	23	548	986	583	1000	515	e300	1100	400	16	8.0	84
22	21	1140	890	549	959	717	e150	1090	462	16	7.9	71
23	21	430	853	515	935	653	e70	3170	416	15	8.0	69
24	23	980	757	496	757	929	e40	1390	393	14	20	70
25	24	888	620	459	767	926	e30	770	379	13	14	343
26	24	516	602	388	360	745	e25	1120	e250	14	8.9	154
27	23	557	603	249	511	e250	e22	1160	e240	12	7.9	96
28	22	602	593	232	526	e80	e19	1090	e230	12	7.8	76
29	62	576	514	209	---	e50	e16	1120	e200	11	7.8	e60
30	47	550	374	e170	---	3070	103	1110	e60	11	7.8	e50
31	31	---	346	e130	---	784	---	1090	---	11	10	---
TOTAL	744	13353	26378	12004	19273	15321	12406	38476	15343	645	308.2	3324.9
MEAN	24.0	445	851	387	688	494	414	1241	511	20.8	9.94	111
MAX	62	1270	3130	1030	3090	3070	880	4630	1190	37	20	562
MIN	18	26	346	107	40	33	16	456	60	11	7.8	8.1
AC-FT	1480	26490	52320	23810	38230	30390	24610	76320	30430	1280	611	6590

e Estimated

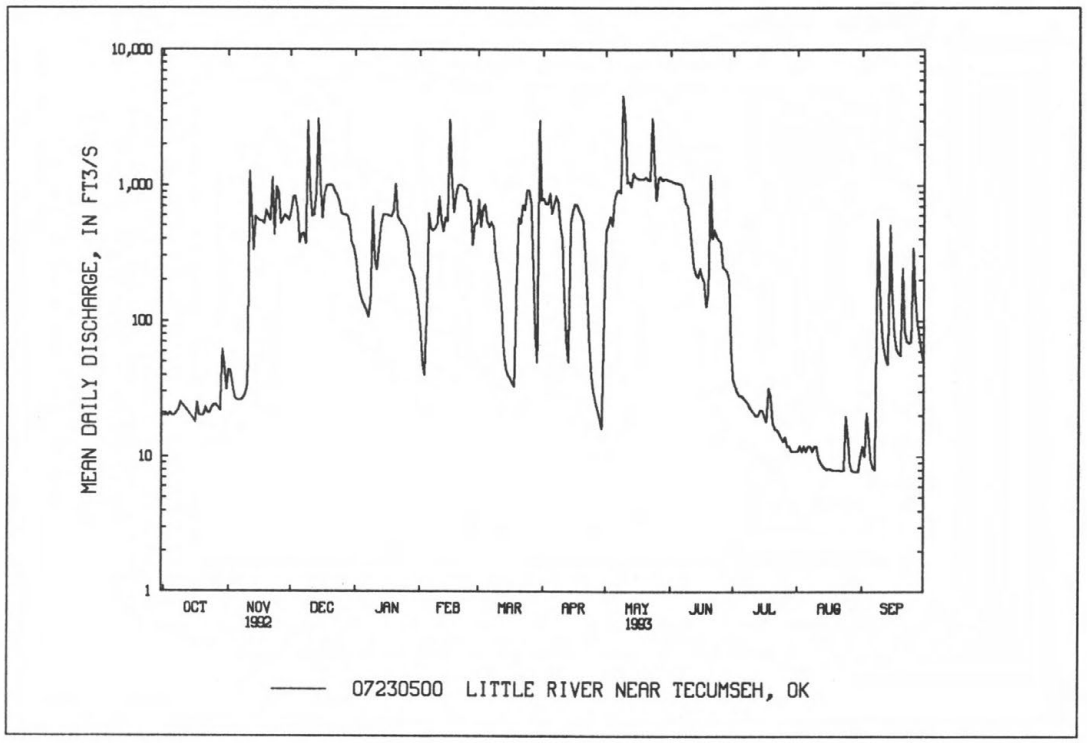
07230500 LITTLE RIVER NEAR TECUMSEH, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	124	112	109	98.6	123	200	250	338	266	62.6	39.3	58.7
MAX	898	628	851	844	783	1086	1265	1687	676	505	493	477
(WY)	1984	1984	1993	1985	1985	1990	1990	1990	1985	1989	1992	1970
MIN	.009	2.27	2.12	2.74	2.45	4.49	5.55	9.25	5.53	1.38	.000	.22
(WY)	1979	1981	1979	1981	1967	1966	1981	1981	1972	1967	1972	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	131081		157576.1			
ANNUAL MEAN	358		432		[a]148	
HIGHEST ANNUAL MEAN					511	1985
LOWEST ANNUAL MEAN					9.34	1981
HIGHEST DAILY MEAN	5450	May 11	4630	May 9	9740	May 3 1990
LOWEST DAILY MEAN	18	Oct 16	7.8	Aug 28	.00	at times
ANNUAL SEVEN-DAY MINIMUM	20	Oct 14	8.0	Aug 17	.00	Jun 23 1966
INSTANTANEOUS PEAK FLOW			5510	May 9	32400	May 25 1957
INSTANTANEOUS PEAK STAGE			16.30	May 9	19.68	May 18 1949
ANNUAL RUNOFF (AC-FT)	260000		312600		107400	
10 PERCENT EXCEEDS	840		1010		499	
50 PERCENT EXCEEDS	204		250		16	
90 PERCENT EXCEEDS	27		12		1.3	

[a]Prior to regulation, water years 1944-64, 149 ft^3/s.



07231000 LITTLE RIVER NEAR SASAKWA, OK

LOCATION.--Lat 34°59'02", long 96°33'01", NE 1/4 sec.22, T.6 N., R.7 E., Seminole County, Hydrologic Unit 11090203, near left abutment on downstream side of county road bridge, 2.8 mi northwest of Sasakwa, 8.7 mi downstream from Salt Creek, and at mile 24.1.
DRAINAGE AREA.--865 mi^2.
PERIOD OF RECORD.--September 1942 to current year. Monthly discharge only for some periods, published in WSP 1311.
REVISED RECORDS.--WSP 1117: Drainage area.
GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 744.34 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Apr. 11, 1946, nonrecording gage at same site and datum. Prior to Oct. 1, 1979, gage at same site and datum, 5.00 ft higher.
REMARKS.--Records poor. Flow regulated by Lake Thunderbird (station 07229900) 72.3 mi upstream since March 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	71	753	581	303	1790	2270	683	1170	122	16	16
2	53	64	891	343	288	2300	1380	723	1110	94	16	13
3	51	65	1090	326	275	1400	1160	789	1080	81	17	25
4	49	61	1070	362	369	1260	2580	828	1050	73	21	29
5	48	53	897	354	1110	1220	2260	716	1040	68	39	33
6	46	48	678	312	1160	1020	1310	865	1020	67	64	25
7	45	46	744	294	896	880	1180	1080	1010	64	33	15
8	52	47	705	283	792	828	1170	1310	870	61	25	238
9	56	48	3270	930	730	761	1040	6500	869	58	23	776
10	46	49	4400	1850	1410	613	790	6490	818	55	21	242
11	41	4160	3970	978	2070	541	532	6270	438	52	19	86
12	44	12300	1970	1090	1200	385	426	5390	402	49	17	49
13	43	9520	1640	959	876	331	730	3230	356	47	14	305
14	46	2120	8610	954	855	315	2610	1990	345	47	9.7	5960
15	45	1390	8110	1000	6180	315	2250	1690	594	51	7.9	2210
16	42	1120	6550	965	7340	329	1410	1530	388	51	7.0	864
17	38	997	2770	924	5740	318	1280	1410	315	48	6.6	466
18	36	903	1810	895	2630	287	1480	1340	275	43	6.3	289
19	41	898	1670	912	1760	473	1120	1290	309	39	6.3	190
20	37	1380	1520	2870	1650	926	954	1260	1170	49	6.3	997
21	38	1030	1410	2220	1520	838	821	1270	1100	47	6.3	631
22	40	2370	1320	1390	1400	1070	625	1240	550	37	6.3	261
23	43	2330	1300	1150	1300	1480	456	1890	555	32	6.3	149
24	44	1360	1240	1020	1300	1040	408	3230	478	30	38	114
25	47	2960	1120	911	3920	1040	393	3390	434	27	38	1770
26	48	1980	999	813	2330	970	365	2080	384	24	33	1410
27	46	1140	976	673	1290	814	325	1470	277	22	25	612
28	42	971	963	537	1150	438	297	1400	258	22	15	333
29	165	875	955	498	---	368	1250	1320	238	22	8.9	210
30	98	804	863	442	---	1600	1010	1260	220	21	7.9	143
31	81	---	689	327	---	2170	---	1240	---	17	10	---
TOTAL	1606	51160	64953	27163	51844	28120	33882	65174	19123	1520	569.8	18461
MEAN	51.8	1705	2095	876	1852	907	1129	2102	637	49.0	18.4	615
MAX	165	12300	8610	2870	7340	2300	2610	6500	1170	122	64	5960
MIN	36	46	678	283	275	287	297	683	220	17	6.3	13
AC-FT	3190	101500	128800	53880	102800	55780	67200	129300	37930	3010	1130	36620

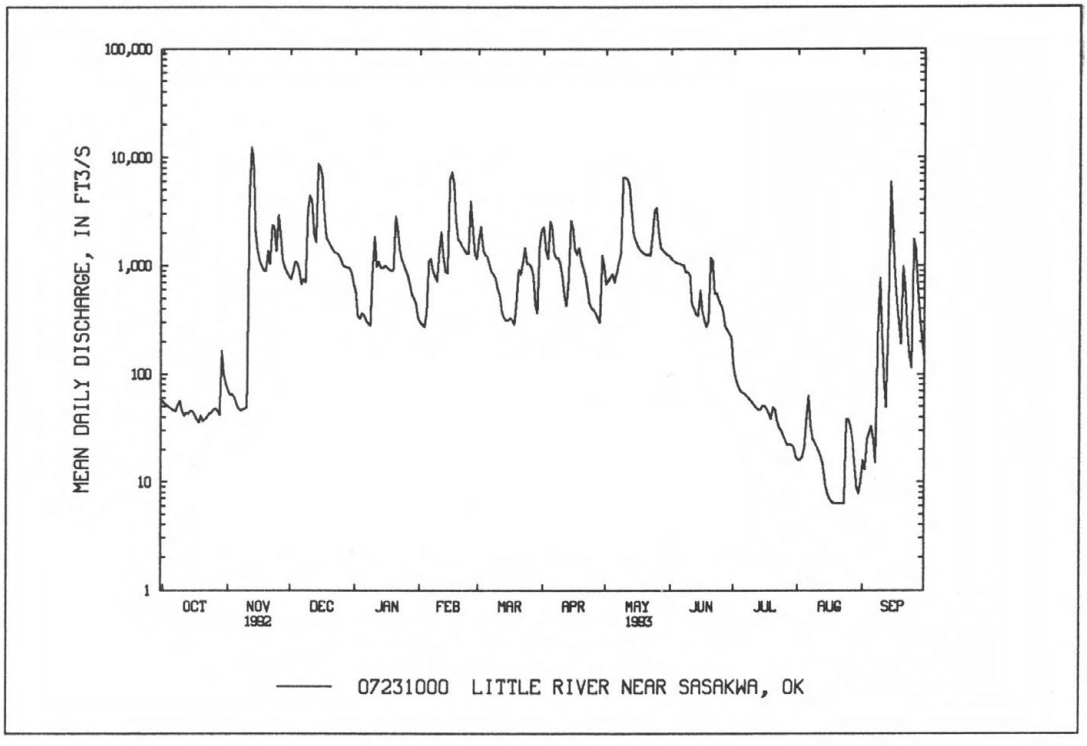
07231000 LITTLE RIVER NEAR SASAKWA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	287	319	294	221	350	512	617	858	638	124	75.1	139
MAX	2523	1705	2095	1307	1852	2618	3591	2762	1814	684	904	753
(WY)	1971	1993	1993	1985	1993	1990	1990	1990	1982	1989	1992	1970
MIN	.000	.009	.30	1.69	1.80	7.39	17.2	30.7	11.2	2.00	.004	.005
(WY)	1979	1981	1979	1967	1967	1967	1981	1981	1966	1967	1980	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	347133		363575.8			
ANNUAL MEAN	948		996		[a]369	
HIGHEST ANNUAL MEAN					996	1993
LOWEST ANNUAL MEAN					19.0	1981
HIGHEST DAILY MEAN	12300	Nov 12	12300	Nov 12	15600	May 1 1985
LOWEST DAILY MEAN	36	Oct 18	6.3	Aug 18-23	.00	many years
ANNUAL SEVEN-DAY MINIMUM	39	Oct 16	6.3	Aug 17	.00	Nov 23 1965
INSTANTANEOUS PEAK FLOW			15400	Nov 12	[b]18500	May 1 1985
INSTANTANEOUS PEAK STAGE			29.53	Nov 12	[c]31.73	May 1 1985
ANNUAL RUNOFF (AC-FT)	688500		721200		267300	
10 PERCENT EXCEEDS	2230		2190		1000	
50 PERCENT EXCEEDS	458		678		47	
90 PERCENT EXCEEDS	60		26		.80	

[a]Prior to regulation, water year 1943-64, 410 ft^3/s.
[b]Maximum discharge for period of record 44,600 ft^3/s, May 11, 1950.
[c]Maximum gage height for period of record 33.48 ft, May 11, 1950.



07231500 CANADIAN RIVER AT CALVIN, OK

LOCATION.--Lat 34°58'40", long 96°14'36", in NW 1/4 SW 1/4 sec.22, T.6 N., R.10 E., Hughes County, Hydrologic Unit 11090202, on downstream left bank at north end of bridge on U.S. Highway 75, 0.5 mi northeast of Calvin, 2.6 mi upstream from Shawnee Creek, 8.4 mi downstream from Little River, and at mile 94.1.

DRAINAGE AREA.--27,952 mi^2, of which 4,801 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1905 to December 1908 (gage heights and discharge measurements only, except for period July 1905 to December 1906), October 1938 to September 1942, July 1944 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1904 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1391: 1941.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 682.72 ft above sea level. January 1905 to December 1908, nonrecording gage at site 0.7 mi upstream at datum 4.00 ft higher. Oct. 1, 1938 to Aug. 12, 1944, nonrecording gage at site 0.2 mi downstream and at same datum. Aug. 13, 1944 to July 31,1977, water-stage recorder at site 0.2 mi downstream and datum 2.00 ft higher. Aug. 1, 1977 to Nov. 15, 1988, water-stage recorder 0.2 mi downstream and at present datum.

REMARKS.--Records fair. Occasional slight regulation by dams in New Mexico and Texas since 1964; Lake Thunderbird (station 07229900) since March 1965. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 25,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 11	1830	61,000	12.59	Apr. 14	0600	41,800	10.39
Dec. 9	2300	29,000	8.49	May 10	1000	93,400	15.32
Dec. 14	1300	68,800	12.47	May 24	0100	35,700	9.70
Feb. 15	1400	51,600	11.59	Sept. 14	0700	58,400	12.33
Mar. 30	2100	25,600	8.03				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e600	1070	4690	3310	1420	7250	5750	11500	2210	2300	323	493
2	e500	898	4760	2910	1360	10800	4050	8440	2350	1760	287	477
3	e450	805	5850	2700	1290	5080	3750	10200	2150	1540	269	498
4	e370	920	5890	2890	1490	3930	12300	11600	2170	1520	258	509
5	343	869	5720	3200	3930	3680	10400	9780	2110	1290	341	514
6	e320	791	4980	3280	4810	3340	6160	8060	2160	1150	631	542
7	e300	e776	5180	2960	4000	3220	4990	8420	2260	1080	509	620
8	e340	698	5260	3200	2940	3490	4800	6960	2430	969	494	679
9	e500	682	17400	4420	2510	3490	5190	44800	2570	896	394	2090
10	e450	695	21100	9360	5010	2930	4900	76600	3070	942	352	3020
11	e410	19200	14000	6760	7020	2490	4160	40100	4480	e927	330	1820
12	e390	23800	9210	5780	4280	2060	3320	27900	2560	e912	293	1120
13	e380	19900	8790	4840	2670	1820	2900	9850	2340	e897	251	1710
14	376	7340	51100	3430	2410	1660	31600	5960	2570	e882	248	35700
15	390	3970	35100	2760	30500	1570	17000	4640	2400	e867	226	11300
16	377	3440	20500	2410	28800	1770	10100	4090	3250	e852	204	3920
17	364	3400	10100	2170	16700	1800	8010	3650	2550	e950	183	2550
18	367	3450	6370	2060	7290	1610	7900	3650	2220	e1250	164	1780
19	377	3610	5360	1920	4350	2170	6270	4170	2470	e1200	146	1210
20	409	7380	4810	9110	3920	6720	4850	4780	3290	1160	132	3390
21	392	7970	4390	6660	3590	5230	4010	5730	5640	947	121	2630
22	408	13600	4260	4160	4080	5140	3360	4170	4390	777	111	1360
23	431	12700	4270	3200	4050	7200	3070	5030	2960	644	106	997
24	459	7930	4190	2750	3990	4910	2910	19600	3880	575	594	810
25	519	13000	4060	2560	15600	3560	2960	8590	3140	510	577	4550
26	530	11800	3920	2220	7690	3170	3000	5280	3350	473	634	5110
27	530	8230	3760	2230	3790	2880	2630	3060	4620	453	492	3010
28	525	6450	3760	1910	3280	2430	2250	2590	4600	409	479	1780
29	739	5560	3930	1720	---	2300	6710	2350	3610	389	345	1260
30	878	4950	3890	1760	---	11400	9620	2290	2980	393	333	955
31	834	---	3390	1620	---	9460	---	2170	---	368	492	---

e Estimated

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

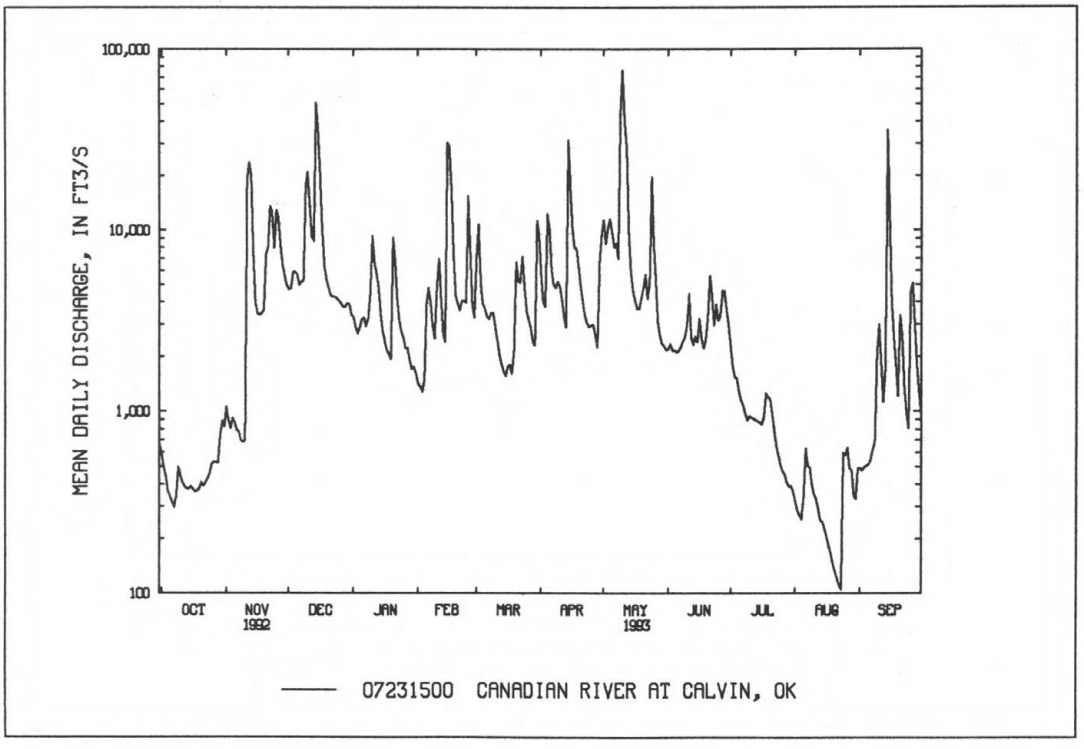
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	14258	195884	289990	110260	182770	128560	198920	366010	90780	29282	10319	96404
MEAN	460	6529	9355	3557	6527	4147	6631	11810	3026	945	333	3213
MAX	878	23800	51100	9360	30500	11400	31600	76600	5640	2300	634	35700
MIN	300	682	3390	1620	1290	1570	2250	2170	2110	368	106	477
AC-FT	28280	388500	575200	218700	362500	255000	394600	726000	180100	58080	20470	191200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1723	1121	1030	831	1240	1783	2480	4501	3279	1389	801	1230
MAX	21530	6529	9355	5429	7059	9793	15110	20640	15350	9669	8398	6467
(WY)	1942	1993	1993	1985	1985	1985	1990	1990	1941	1950	1906	1941
MIN	.10	3.82	7.76	16.4	23.4	20.9	45.7	195	33.7	10.8	.068	.000
(WY)	1957	1967	1967	1940	1967	1967	1956	1966	1966	1966	1980	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1906-93	
ANNUAL TOTAL	1338110		1713437			
ANNUAL MEAN	3656		4694		1788	
HIGHEST ANNUAL MEAN					5513	1942
LOWEST ANNUAL MEAN					184	1981
HIGHEST DAILY MEAN	51100	Dec 14	76600	May 10	140000	May 29 1987
LOWEST DAILY MEAN	300	Oct 7	106	Aug 23	.00	Sep 10 1939
ANNUAL SEVEN-DAY MINIMUM	375	Oct 2	138	Aug 17	.00	Sep 10 1939
INSTANTANEOUS PEAK FLOW			93400	May 10	174000	May 11 1950
INSTANTANEOUS PEAK STAGE			15.32	May 10	[a]21.00	Aug 7 1906
ANNUAL RUNOFF (AC-FT)	2654000		3399000		1296000	
10 PERCENT EXCEEDS	7860		9810		4060	
50 PERCENT EXCEEDS	2280		2910		359	
90 PERCENT EXCEEDS	697		391		22	

[a]From floodmark, site and datum then in use.



07231500 CANADIAN RIVER AT CALVIN, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1944, December 1950 to February 1953, October 1959 to April 1961, July 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1965 to January 1982.
WATER TEMPERATURE: July 1965 to January 1982.

REMARKS.--Samples were collected bimonthly. Specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field. Data for low level inorganic analysis collected Aug. 17 are available upon request at the Oklahoma District office.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
20...	1303	30.0	32.5	750	1028	1028	909	2.43	1190	8.4	8.3
20...	1306	60.0	32.5	750	1028	1028	909	2.43	1190	8.2	8.3
20...	1309	90.0	32.5	750	1028	1028	909	2.43	1190	8.3	8.4
20...	1310	120	32.5	750	1028	1028	909	2.43	1190	--	8.4
20...	1312	150	32.5	750	1028	1028	909	2.43	1190	--	8.4
20...	1315	180	32.5	750	1028	1028	909	2.43	1190	--	8.4
20...	1318	210	32.5	750	1028	1028	909	2.43	1190	--	8.4
20...	1321	240	32.5	750	1028	1028	909	2.43	1190	--	8.4
20...	1324	270	32.5	750	1028	1028	909	2.43	1190	--	8.4
20...	1327	300	33.0	750	1028	1028	909	2.43	1190	--	8.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
05...	1400	1028	80020	343	*1040	8.5	31.0	27.0	16	747	8.3	107
FEB												
08...	1415	1028	80020	2770	960	8.3	23.0	11.5	140	743	10.9	103
APR												
19...	1030	1028	80020	6650	676	8.2	23.5	18.0	280	731	9.5	104
JUN												
08...	0940	1028	80020	2130	836	8.2	26.0	23.5	89	740	7.8	95
AUG												
17...	1045	1028	80020	179	1170	8.3	36.5	29.0	6.2	744	7.4	99

* SPECIFIC CONDUCTANCE, LAB (US/CM)

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT												
05...	K24	K32	290	44	58	34	98	42	3	4.0	274	10
FEB												
08...	620	820	320	87	78	29	71	33	2	3.5	278	0
APR												
19...	1100	970	230	52	59	21	47	30	1	3.0	222	0
JUN												
08...	K75	220	310	110	72	32	59	29	1	3.5	242	0
AUG												
17...	K12	K10	320	130	62	41	110	42	3	4.2	234	0

DATE	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)
OCT											
05...	240	92	150	0.40	6.6	590	589	0.80	546	--	--
FEB											
08...	228	120	100	0.30	10	577	553	0.78	4320	0.590	0.590
APR											
19...	182	67	64	0.30	9.8	394	382	0.54	7070	0.320	0.320
JUN											
08...	198	140	83	0.30	10	547	520	0.74	3150	0.085	--
AUG											
17...	192	180	130	0.40	12	710	656	0.97	343	--	--

DATE	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT											
05...	--	0.010	<0.010	--	<0.050	<0.050	0.030	0.010	0.04	0.01	0.77
FEB											
08...	2.6	--	0.040	0.13	--	0.630	--	0.070	--	0.09	0.93
APR											
19...	1.4	--	0.010	0.03	--	0.330	--	0.040	--	0.05	0.46
JUN											
08...	--	--	<0.010	--	--	0.085	--	0.020	--	0.03	0.18
AUG											
17...	--	--	<0.010	--	--	<0.050	--	0.020	--	0.03	0.38

07231500 CANADIAN RIVER AT CALVIN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, DISSOLVED (UG/L AS SB) (01095)
OCT 05...	0.80	0.80	0.180	0.09	0.030	0.030	0.010	0.03	0.15	<10	--
FEB 08...	1.0	1.6	0.260	--	0.070	--	0.070	0.21	--	20	--
APR 19...	0.50	0.83	0.080	--	0.090	--	0.050	0.15	--	--	--
JUN 08...	0.20	0.29	0.060	--	0.080	--	0.030	0.09	--	<10	--
AUG 17...	0.40	0.40	0.060	--	0.020	--	<0.010	--	--	7	<1

DATE	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
OCT 05...	--	230	--	--	--	<3	--	<3	--	13	5
FEB 08...	--	260	--	--	--	<3	--	11	--	12	14
APR 19...	--	--	--	--	--	--	--	--	--	--	--
JUN 08...	--	290	--	--	--	<3	--	<3	--	12	2
AUG 17...	5	260	<1	<1.0	<1	<1	5	<3	<1	17	2

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 05...	<10	1	<1	<1.0	680	6	--	--	121	112	79
FEB 08...	<10	<1	<1	<1.0	740	<6	--	--	819	6130	55
APR 19...	--	--	--	--	--	--	--	--	926	16600	53
JUN 08...	<10	1	<1	<1.0	730	6	--	--	--	--	--
AUG 17...	4	3	<1	<1.0	940	8	2	2.0	22	11	80

07231955 GAINES CREEK NEAR HIGGINS, OK

LOCATION.--Lat 34°48'57", long 95°28'46", in NE 1/4 SE 1/4, sec. 14, T.4 N., R.17 E., Latimer County, Hydrologic Unit 11090204, 1.0 mi downstream from Beaver Creek, 3.0 mi west of Higgins.

DRAINAGE AREA.--152 mi^2.

PERIOD OF RECORD.--Water years 1978-1980, 1990 to June 1993 (discontinued).

REMARKS.--Samples were collected on a six week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Samples were analyzed by the Oklahoma State Department of Health.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)
OCT												
29...	0830	1028	84042	2.6	115	6.9	17.5	17.0	742	5.2	55	8.0
NOV												
23...	1230	1028	84042	--	48	6.6	15.0	10.5	742	10.1	93	3.0
JAN												
27...	1330	1028	84042	81	55	6.8	20.0	6.5	751	11.5	95	3.0
MAR												
10...	1400	1028	84042	56	64	7.2	16.0	13.5	753	9.8	95	4.0
MAY												
19...	1615	1028	84042	48	70	6.6	28.0	21.5	743	7.6	89	5.0
JUN												
29...	1230	1028	84042	20	81	7.0	34.0	28.5	745	5.1	67	6.0

DATE	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
OCT											
29...	4.0	48	0	39	<5	<10	1000	<45	240	<0.50	<5
NOV											
23...	2.0	10	0	8	<5	11	3300	<45	110	<0.50	40
JAN											
27...	2.0	14	0	11	<5	<10	1600	<45	85	<0.50	<5
MAR											
10...	2.0	16	0	13	<5	<10	1600	<45	92	<0.50	<5
MAY											
19...	2.0	23	0	19	<5	<10	1900	<45	130	<0.50	<5
JUN											
29...	3.0	27	0	22	<5	<10	2100	<45	160	<0.50	<5

07231959 PIT CREEK NEAR HARTSHORNE, OK

LOCATION.--Lat 34°50'51", long 95°30'12", in SW 1/4 NE 1/4, sec. 3, T.4 N., R.17 E., Latimer County, Hydrologic Unit 11090204, 3.0 mi east of Hartshorne.

DRAINAGE AREA.--8.95 mi^2.

PERIOD OF RECORD.--1991 to June 1993 (discontinued).

REMARKS.--Samples were collected on a six week schedule and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field. Samples were analyzed by the Oklahoma State Department of Health.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)
OCT												
29...	1030	1028	84042	0.18	1940	3.2	19.0	16.5	742	4.7	50	82
NOV												
23...	1445	1028	84042	30	352	4.9	15.5	10.5	740	9.4	87	18
JAN												
27...	1100	1028	84042	5.9	623	3.8	14.0	4.5	754	11.2	88	27
MAR												
10...	1515	1028	84042	3.3	718	3.6	17.5	13.0	753	8.8	85	47
MAY												
19...	1700	1028	84042	3.6	591	3.8	22.5	19.0	743	7.1	79	74
JUN												
29...	1400	1028	84042	2.5	653	3.5	31.5	25.5	745	5.5	69	48

DATE	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
OCT											
29...	98	--	--	--	<5	<10	28000	<45	9200	<0.50	470
NOV											
23...	12	4	0	3	<5	<10	12000	<45	1400	<0.50	100
JAN											
27...	23	--	--	--	<5	<10	14000	<45	2600	<0.50	150
MAR											
10...	19	--	--	--	<5	<10	5900	<45	2500	<0.50	130
MAY											
19...	22	--	--	--	<5	<10	11000	<45	3300	<0.50	240
JUN											
29...	15	--	--	--	<5	<10	3600	<45	2400	<0.50	120

07231960 GAINES CREEK NEAR GOWEN, OK

LOCATION.--Lat 34°53'43", long 95°26'13", in NE 1/4 NE 1/4, sec. 19, T.5 N., R.18 E., Latimer County, Hydrologic Unit 11090204, 1.1 mi upstream from Beaver Creek, 2.4 mi northeast of Gowen.

DRAINAGE AREA.--182 mi^2.

PERIOD OF RECORD.--1990 to June 1993 (discontinued).

REMARKS.--Samples were collected on a six week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Samples were analyzed by the Oklahoma State Department of Health.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)
OCT												
29...	1130	1028	84042	5.6	176	6.8	19.5	17.0	742	3.3	35	12
NOV												
24...	0930	1028	84042	847	67	6.5	9.0	10.5	741	9.5	88	4.0
JAN												
28...	0945	1028	84042	102	98	7.0	10.5	6.0	750	11.2	91	7.0
MAR												
11...	0830	1028	84042	72	110	6.7	8.5	10.5	756	9.4	85	7.0
MAY												
20...	1000	1028	84042	54	120	6.9	20.5	20.0	748	6.0	67	8.0
JUN												
29...	1530	1028	84042	27	110	6.8	34.5	29.5	745	4.3	58	9.0

DATE	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)
OCT											
29...	7.0	49	0	40	<5	<10	1100	<45	1000	<0.50	<5
NOV											
24...	2.0	12	0	10	<5	<10	3000	<45	150	<0.50	30
JAN											
28...	3.0	19	0	16	<5	<10	1900	<45	280	<0.50	40
MAR											
11...	3.0	23	0	19	<5	<10	2000	<45	250	<0.50	<5
MAY											
20...	3.0	23	0	19	<5	<10	2000	<45	330	<0.50	5
JUN											
29...	3.0	23	0	19	<5	<10	2400	<45	420	<0.50	<5

07232250 BEAVER RIVER NEAR FELT, OK

LOCATION.--Lat 36°37'47", long 102°40'52", NE 1/4 NE 1/4 sec.24, T.2 N., R.3 E., Cimarron County, Hydrologic Unit 11100101, on downstream side of pier of bridge on U.S. Highway 64, 8.0 miles northeast of Felt, 11.0 miles southwest of Boise City, and at mile 754.9.

DRAINAGE AREA.--879 mi^2.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage 4,246.05 ft above sea level.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--13 years, 0.66 ft^3/s, 464 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,160 ft^3/s, Aug. 13, 1981, gage height, 10.96 ft. on the basis of step-backwater measurement at gage site; no flow most days.

EXTREMES FOR CURRENT YEAR.--No flow all year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

CAL YR 1992 TOTAL 0 MEAN 0 MAX 0 MIN .00 AC-FT 0
WTR YR 1993 TOTAL 0.00 MEAN .000 MAX .00 MIN .00 AC-FT .00

Old gage, Council Creek at Stillwater, Oklahoma

07232500 BEAVER RIVER NEAR GUYMON, OK

(Headwater of the North Canadian River)

LOCATION.--Lat 36°43'17", long 101°29'21", SW 1/4 SW 1/4 sec.18, T.3 N., R.15 E., Texas County, Hydrologic Unit 11100101, near right bank on downstream side of roadway on U.S. Highway 64 at Dry Sand Draw, 1.2 mi upstream from Goff Creek, 2.5 mi north of Guymon, and at mile 650.7.

DRAINAGE AREA.--2,139 mi^2, which includes that of Dry Sand Draw, and of which 964 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to September 1993 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Prior to October 1970, published as North Canadian River near Guymon.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,970.69 ft above sea level.

REMARKS.--No estimated daily discharges. Records good. Natural flow affected by irrigation development. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.7	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.87	.19	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.64	.18	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	1.2	.07	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	1.6	.00	.00	.00	.00	.01
6	.00	.00	.00	.00	.00	.00	1.3	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.96	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.53	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.38	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.37	.00	.00	63	.00	.00
11	.00	.00	.00	.00	.00	.00	.19	.00	.00	38	.00	.00
12	.00	.00	.00	.00	.00	.00	.18	.00	.00	3.2	.00	.00
13	.00	.00	.00	.00	.00	.00	.16	.00	.00	.15	.00	.00
14	.00	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.11	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.10	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.09	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.12	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.07	.10	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.1	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	2.9	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	4.00	10.71	0.54	0.00	104.35	0.00	0.02
MEAN	.000	.000	.000	.000	.000	.13	.36	.017	.000	3.37	.000	.001
MAX	.00	.00	.00	.00	.00	2.9	1.7	.19	.00	63	.00	.01
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	7.9	21	1.1	.00	207	.00	.04

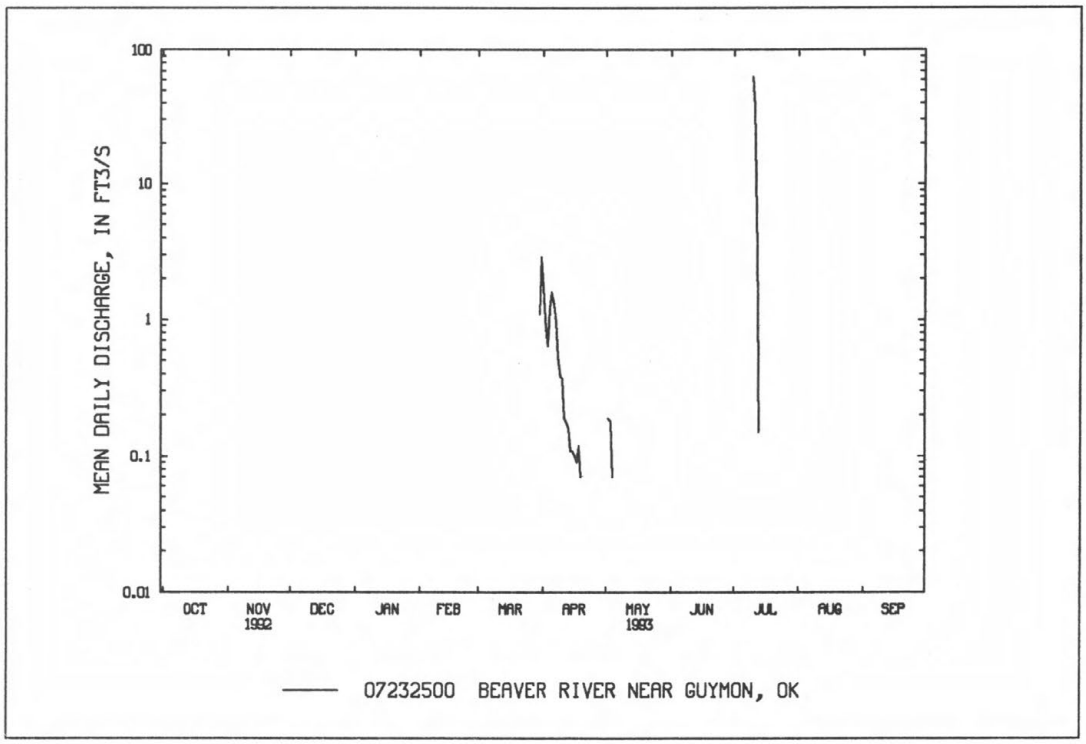
07232500 BEAVER RIVER NEAR GUYMON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.3	5.79	5.21	5.87	6.74	7.24	14.9	36.8	40.4	30.9	27.6	33.3
MAX	226	89.0	13.8	12.7	15.3	25.5	330	418	370	270	296	826
(WY)	1966	1972	1951	1942	1940	1939	1942	1955	1964	1941	1946	1941
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1976	1979	1981	1981	1984	1987	1987	1986	1984	1974	1972	1972

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1938-93	
ANNUAL TOTAL	40.94		119.62			
ANNUAL MEAN	.11		.33		18.9	
HIGHEST ANNUAL MEAN					138	1941
LOWEST ANNUAL MEAN					.000	1991
HIGHEST DAILY MEAN	24	Jun 9	63	Jul 10	14700	Sep 23 1941
LOWEST DAILY MEAN	.00	most days	.00	most days	.00	most years
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Aug 5 1938
INSTANTANEOUS PEAK FLOW			210	Jul 10	55400	Jun 15 1964
INSTANTANEOUS PEAK STAGE			7.70	Jul 10	[a]13.82	Sep 23 1941
ANNUAL RUNOFF (AC-FT)	81		237		13670	
10 PERCENT EXCEEDS	.00		.00		13	
50 PERCENT EXCEEDS	.00		.00		3.0	
90 PERCENT EXCEEDS	.00		.00		.00	

[a]From flood mark.



07232900 COLDWATER CREEK NEAR GUYMON, OK

LOCATION.--Lat 36°34'19", long 101°22'52", NW 1/4 NW 1/4 sec.7, T.1 N., R.16 E., Texas County, Hydrologic Unit 11100103, near left bank on downstream side of pier of bridge on county road, 0.3 mi downstream from Frisco Creek, 4.0 mi east and 7.5 mi south of Guymon, and at mile 18.0.

DRAINAGE AREA.--1,903 mi^2, of which 1,178 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,870.83 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair. Natural flow affected by flood retarding structures and irrigation development.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Aug. 12	2145	1,200	12.70	No other peaks greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

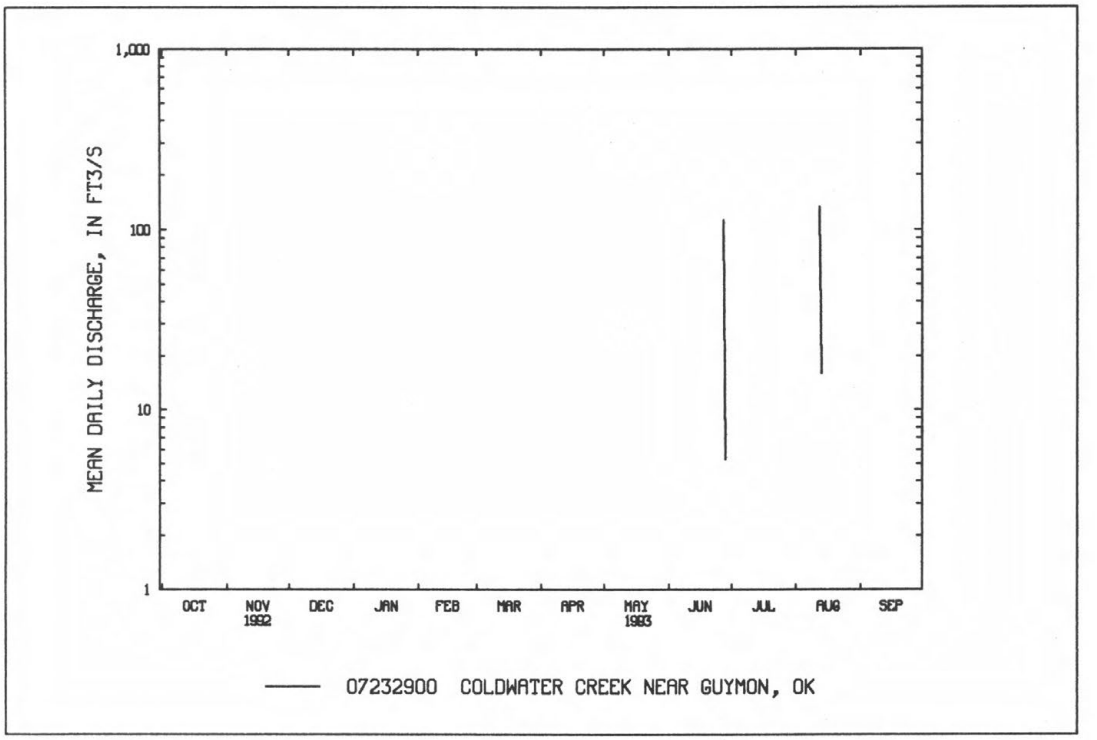
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	133	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	16	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	113	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	5.3	.00	.00	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	118.30	0.00	149.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.000	3.94	.000	4.81	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.00	113	.00	133	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	.00	235	.00	296	.00

07232900 COLDWATER CREEK NEAR GUYMON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.62	.000	.000	.000	.000	.000	4.05	11.8	6.79	.024	1.01	2.30
MAX	21.0	.000	.000	.000	.000	.000	52.7	86.0	42.3	.31	6.90	27.5
(WY)	1986	1981	1981	1981	1981	1981	1990	1989	1991	1981	1992	1985
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1981	1981	1981	1981	1981	1981	1981	1981	1981	1982	1983	1981

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1981-93	
ANNUAL TOTAL	381.16		267.30			
ANNUAL MEAN	1.04		.73		2.31	
HIGHEST ANNUAL MEAN					8.37	1982
LOWEST ANNUAL MEAN					.000	1983
HIGHEST DAILY MEAN	180	Aug 18	133	Aug 12	1500	May 18 1989
LOWEST DAILY MEAN	.00	most days	.00	most days	.00	each year
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1	.00	Oct 1	.00	Oct 1 1980
INSTANTANEOUS PEAK FLOW			1200	Aug 12	5800	Jun 20 1982
INSTANTANEOUS PEAK STAGE			12.70	Aug 12	14.34	Jun 20 1982
ANNUAL RUNOFF (AC-FT)	756		530		1670	
10 PERCENT EXCEEDS	.00		.00		.00	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	



07233200 OPTIMA LAKE NEAR HARDESTY, OK

LOCATION.--Lat 36°39'23", long 101°08'13", in NE 1/4 NE 1/4 sec.8, T.2 N., R.18 E., Texas County, Hydrologic Unit 11100102, in control tower for dam on Beaver River, 4.5 mi northeast of Hardesty, and at mile 623.2.

DRAINAGE AREA.--5,029 mi^2, of which 2,688 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1978 to September 1993 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by earth dam having a concrete gate tower with a 12- by 16-foot 5-inch oblong conduit. Discharges are controlled by two drum-hoist operated tractor-type service gates and a 36-inch low-flow control pipe. Closure for storage was made Oct. 2, 1978. Capacity, 618,500 acre-ft at elevation 2,814.2 ft, maximum pool; 382,500 acre-ft at elevation 2,796.0 ft, uncontrolled spillway crest; 229,500 acre-ft at elevation 2,779.0 ft, top of flood-control pool; 129,000 acre-ft at elevation 2,763.5 ft, top of conservation pool. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, and water supply. Capacity table based on original survey.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 7,610 acre-ft, May 30 to June 2, 1980, elevation, 2,722.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 666 acre-ft, Apr. 4-6, May 1-13, elevation, 2,712.60 ft; minimum, 270 acre-ft, Sept. 2-23, 29, 30, elevation, 2,710.40 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

2,710	219	2,716	1,890
2,712	526	2,718	3,110
2,714	1,060	2,720	4,730

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

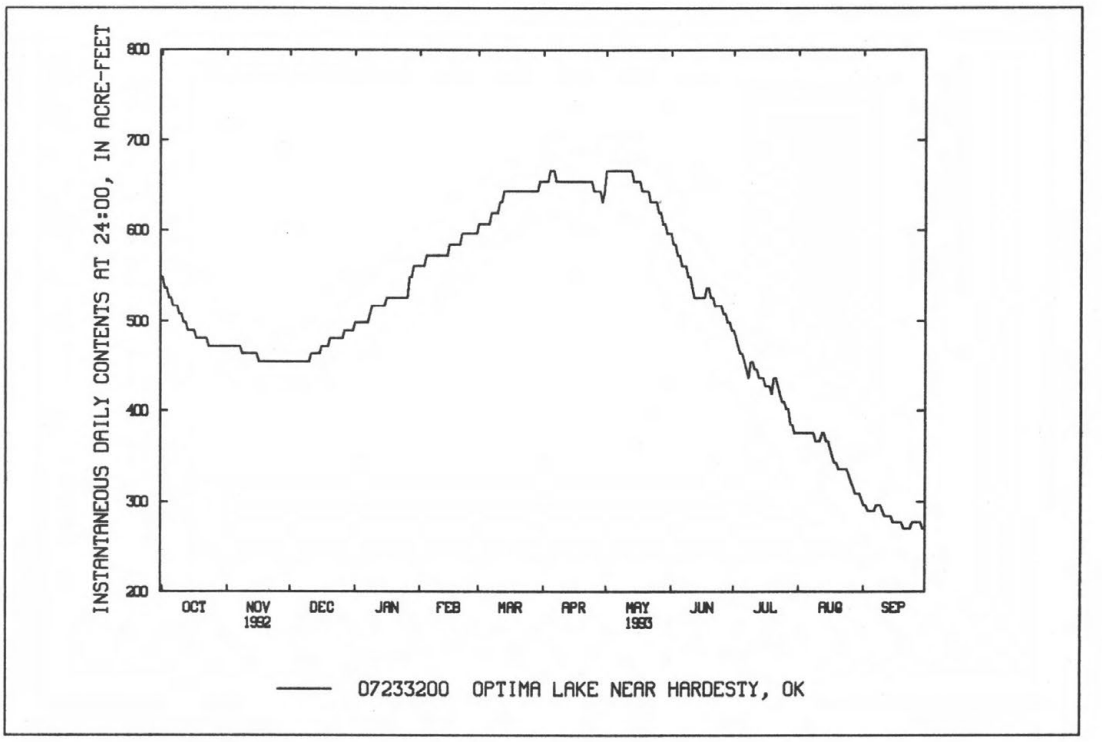
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	549	472	455	499	561	607	654	666	596	490	375	296
2	537	472	455	499	561	607	654	666	584	481	375	296
3	537	472	455	499	561	607	654	666	584	472	375	290
4	526	472	455	499	572	607	666	666	572	464	375	290
5	526	472	455	499	572	607	666	666	572	464	375	290
6	517	472	455	499	572	607	666	666	561	455	375	290
7	517	472	455	499	572	619	654	666	561	446	375	296
8	517	464	455	508	572	619	654	666	561	437	375	296
9	508	464	455	517	572	619	654	666	549	455	366	296
10	508	464	455	517	572	619	654	666	549	455	366	290
11	499	464	464	517	572	631	654	666	537	446	366	284
12	499	464	464	517	572	631	654	666	526	446	375	284
13	490	464	464	517	572	643	654	666	526	437	375	284
14	490	464	464	517	572	643	654	654	526	437	366	284
15	490	464	464	517	584	643	654	654	526	437	366	277
16	490	455	472	526	584	643	654	654	526	428	357	277
17	481	455	472	526	584	643	654	654	526	428	349	277
18	481	455	472	526	584	643	654	643	537	428	342	277
19	481	455	472	526	584	643	654	643	537	419	342	277
20	481	455	481	526	584	643	654	643	526	437	335	270
21	481	455	481	526	596	643	654	643	526	437	335	270
22	481	455	481	526	596	643	654	631	517	428	335	270
23	472	455	481	526	596	643	654	631	517	419	335	270
24	472	455	481	526	596	643	654	631	517	410	335	277
25	472	455	481	526	596	643	643	631	517	410	329	277
26	472	455	481	526	596	643	643	619	508	402	322	277
27	472	455	490	549	596	643	643	619	508	402	316	277
28	472	455	490	549	596	643	643	607	499	384	309	277
29	472	455	490	561	---	643	631	607	499	384	309	270
30	472	455	490	561	---	654	643	596	490	375	309	270
31	472	---	490	561	---	654	---	596	---	375	303	---

07233200 OPTIMA LAKE NEAR HARDESTY, OK--Continued

MAX	549	472	490	561	596	654	666	666	596	490	375	296
MIN	472	455	455	499	561	607	631	596	490	375	303	270
(‡)	2711.70	2711.60	2711.80	2712.15	2712.30	2712.55	2712.50	2712.30	2711.80	2711.15	2710.65	2710.40
(‡‡)	-77	-17	+35	+71	+35	+58	-11	-47	-106	-115	-72	-33

CAL YR 1992 MAX 954 MIN 455 (++) -374
WTR YR 1993 MAX 666 MIN 270 (++) -279

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07233650 PALO DURO CREEK AT RANGE, OK

LOCATION.--Lat 36°32'38", long 101°04'50", SE 1/4 SE 1/4 sec.14, T.1 N., R.18 E., Texas County, Hydrologic Unit 11100104, on downstream side of pier of county road bridge, 3.4 mi upstream from Hackberry Creek, 11.0 mi southeast of Hardesty, and at mile 14.9.

DRAINAGE AREA.--1,513 mi^2, of which 687 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage 2,679.77 ft above sea level.

REMARKS.--Records poor. Flow regulated since April 1991 by Palo Duro Reservoir, 18 mi upstream. Natural flow also affected by local irrigation withdrawals.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.86	1.2	1.2	1.5	1.8	1.4	1.9	.83	.41	.01	.05
2	.15	.87	1.2	1.2	1.6	1.8	1.2	1.8	.74	.24	.01	.05
3	.15	.93	1.1	1.2	1.6	1.8	1.4	1.6	.74	.25	.01	.03
4	.15	.93	1.1	1.2	1.5	1.7	1.8	1.5	.68	.16	.01	.02
5	.15	.97	1.2	1.2	1.6	1.7	1.7	1.5	.70	.15	.01	.01
6	.16	.95	1.2	1.2	1.6	1.7	1.6	1.4	.70	.14	.02	.04
7	.19	.98	1.1	1.2	1.6	1.8	1.5	1.4	.59	.17	.02	.06
8	.21	.97	1.2	1.3	1.6	1.8	1.4	1.3	.52	.16	.02	.20
9	.22	.94	1.2	e1.2	1.6	1.8	1.5	1.3	.41	.08	.02	.20
10	.23	.91	1.2	1.3	1.6	1.8	1.3	1.3	.39	.70	.01	.10
11	.22	.93	1.1	1.3	1.7	1.8	1.6	1.3	.59	.51	.01	.07
12	.24	.93	1.1	1.3	1.6	1.8	1.9	1.4	.50	.36	6.4	.05
13	.25	.94	1.2	1.3	1.7	1.8	2.0	1.3	.35	.22	1.7	.03
14	.30	.94	1.2	1.3	1.7	1.8	2.0	1.3	.47	.12	.39	.02
15	.32	.91	1.1	1.3	1.8	1.8	2.0	1.2	.58	.11	.29	.04
16	.36	.96	1.1	1.4	1.7	1.8	2.0	1.2	.40	.22	.21	.03
17	.47	.97	1.1	1.4	1.7	1.7	2.0	1.2	.36	.11	.20	.01
18	.48	.97	1.1	1.4	1.7	1.7	2.0	1.1	.73	.05	.11	.07
19	.54	.99	1.1	e1.4	1.8	1.7	2.1	1.1	.96	.04	.12	.12
20	.62	.99	1.1	1.5	1.8	1.6	2.0	1.0	.84	.03	.21	.07
21	.69	1.0	1.1	1.5	1.9	1.6	1.9	1.0	.76	.07	.14	.05
22	.68	1.0	1.1	1.6	1.7	1.6	1.9	1.1	.98	.06	.08	.03
23	.69	1.0	1.1	1.6	1.7	1.5	1.8	1.0	.69	.04	.11	.03
24	.69	1.1	1.1	1.6	1.7	1.5	1.8	.89	.53	.05	.13	.05
25	.72	1.1	1.1	1.6	1.7	1.4	1.7	1.0	.62	.03	.10	.11
26	.75	1.1	1.1	1.6	1.7	1.3	1.7	1.0	1.1	.02	.12	.07
27	.76	1.1	1.1	1.6	1.7	1.2	1.6	.90	.83	.01	.05	.09
28	.77	1.2	1.1	1.6	1.7	1.4	1.6	.84	.52	.01	.04	.08
29	.79	1.2	1.1	1.5	---	1.3	1.5	.75	.57	.01	.04	.06
30	.82	1.2	1.2	1.5	---	1.7	1.5	.78	.33	.01	.04	.07
31	.81	---	1.1	1.6	---	1.6	---	.76	---	.01	.05	---
TOTAL	13.73	29.84	35.1	43.1	46.8	51.3	51.4	37.12	19.01	4.55	10.68	1.91
MEAN	.44	.99	1.13	1.39	1.67	1.65	1.71	1.20	.63	.15	.34	.064
MAX	.82	1.2	1.2	1.6	1.9	1.8	2.1	1.9	1.1	.70	6.4	.20
MIN	.15	.86	1.1	1.2	1.5	1.2	1.2	.75	.33	.01	.01	.01
AC-FT	27	59	70	85	93	102	102	74	38	9.0	21	3.8

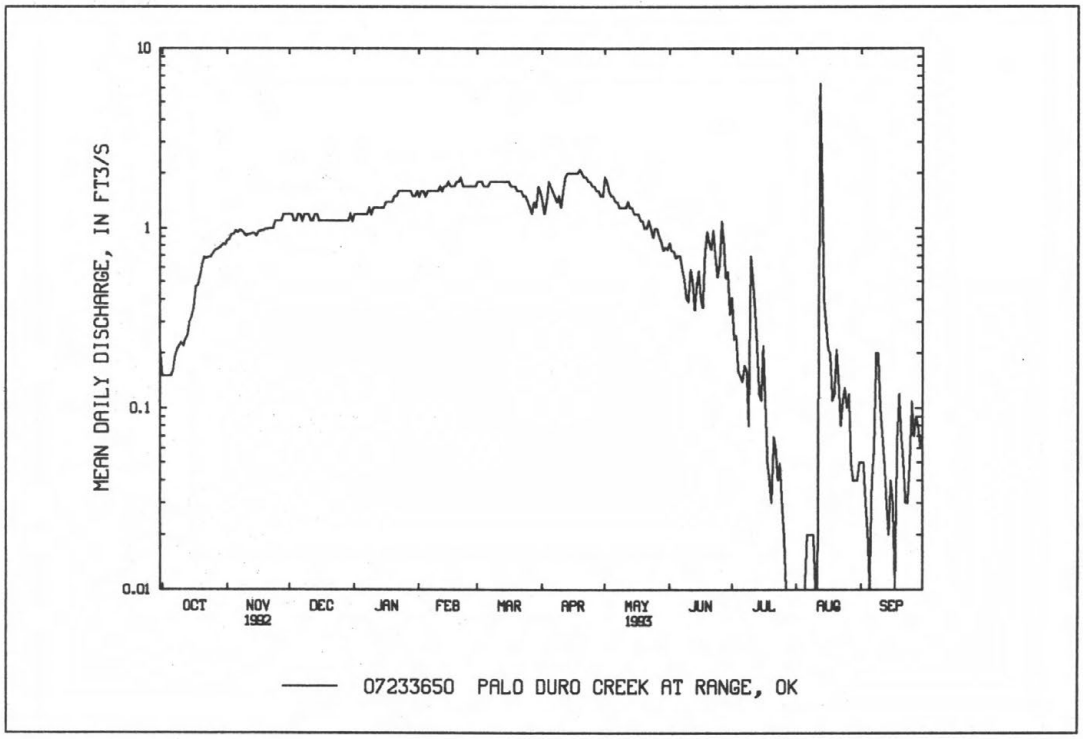
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.39	.92	1.12	1.45	1.57	1.50	1.53	1.28	1.03	.49	.35	.10
MAX	.44	.99	1.13	1.50	1.67	1.65	1.71	1.37	1.43	.84	.35	.14
(WY)	1993	1993	1993	1992	1993	1993	1993	1992	1992	1992	1992	1992
MIN	.34	.84	1.11	1.39	1.48	1.35	1.35	1.20	.63	.15	.34	.064
(WY)	1992	1992	1992	1993	1992	1992	1992	1993	1993	1993	1993	1993

e Estimated

07233650 PALO DURO CREEK AT RANGE, OK--Continued

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1992-93	
ANNUAL TOTAL	376.95		344.54			
ANNUAL MEAN	1.03		.94		.97	
HIGHEST ANNUAL MEAN					1.01	1992
LOWEST ANNUAL MEAN					.94	1993
HIGHEST DAILY MEAN	2.0	Apr 17	6.4	Aug 12	6.4	Aug 12 1993
LOWEST DAILY MEAN	.10	Aug 9	.01	at times	.01	at times
ANNUAL SEVEN-DAY MINIMUM	.12	Sep 16	.01	Jul 27	.01	Jul 27 1993
INSTANTANEOUS PEAK FLOW			71	Aug 12	71	Aug 12 1993
INSTANTANEOUS PEAK STAGE			10.00	Aug 12	10.00	Aug 12 1993
ANNUAL RUNOFF (AC-FT)	748		683		706	
10 PERCENT EXCEEDS	1.5		1.7		1.6	
50 PERCENT EXCEEDS	1.2		1.0		1.1	
90 PERCENT EXCEEDS	.18		.05		.11	



ARKANSAS RIVER BASIN

07234000 BEAVER RIVER AT BEAVER, OK

(Headwater of the North Canadian River)

LOCATION.--Lat 36°49'20", long 100°31'08", SW 1/4 sec.7, T.4 N., R.24 E., Beaver County, Hydrologic Unit 11100102, near right bank on downstream side of pier of bridge on U.S. Highway 270 at Beaver, 1.1 mi downstream from Home Creek, 5.0 mi upstream from Clear Creek, and at mile 576.0.

DRAINAGE AREA.--7,955 mi^2, of which 4,270 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1904 to December 1905 (gage heights only), October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Beaver Creek at Beaver 1904-5, and October 1937 to September 1970 as North Canadian River at Beaver.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 2,368.16 ft, sea level (levels by U.S. Army Corps of Engineers). Mar. 29, 1904 to Dec. 31, 1905, nonrecording gage at same vicinity at different datum. Mar. 1, 1938 to Sept. 30, 1946, water-stage recorder at present site at datum 3.0 ft higher.

REMARKS.--Records good. Natural flow affected by irrigation development. Regulation by Optima Lake (station 07233200) 47.0 mi upstream, since Oct. 1978, and regulation by Palo Duro Reservoir since May 1991. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.25	e.37	e3.5	17	32	19	347	11	8.5	.22	.21
2	.17	.22	e.38	e3.6	17	39	19	150	11	7.7	.22	.20
3	.17	.32	e.38	e4.0	16	38	19	65	11	6.6	.29	.17
4	.17	.26	e.39	e5.0	16	35	20	51	11	5.8	.39	.20
5	.17	.26	e.38	e6.0	15	34	21	44	11	4.9	.35	.21
6	.17	.26	e.40	7.3	15	32	21	37	11	4.6	.31	.22
7	.17	.26	e.30	7.3	15	31	21	33	9.3	3.9	.29	.22
8	.18	.26	e.30	6.9	15	30	19	29	8.4	3.0	.24	.25
9	.17	.25	e.31	2.7	14	29	18	26	7.3	2.3	.24	.22
10	.18	.22	e.35	e3.0	16	27	17	24	7.8	3.9	.22	.21
11	.18	.27	e2.0	e3.5	e18	27	16	23	7.2	2.1	.22	.19
12	.18	.26	3.2	e4.0	e18	28	15	23	6.2	1.7	.20	.17
13	.18	.30	4.5	e4.0	e20	28	15	22	5.6	2.0	.26	.17
14	.17	.31	1.1	e3.5	20	30	14	21	8.2	3.8	.25	.17
15	.18	.31	e1.5	e4.0	23	30	14	19	8.1	2.5	.22	.17
16	.19	.31	e1.8	e5.0	e12	30	14	18	8.7	1.9	.22	.16
17	.20	.33	e2.0	e6.0	e12	28	14	18	9.3	1.1	.24	.16
18	.20	.38	e2.5	e6.0	e15	28	13	18	11	.79	.22	.17
19	.21	.41	e3.0	e5.0	28	29	13	17	12	.81	.20	.17
20	.20	.36	e2.5	e6.0	31	26	12	16	12	.94	.20	.14
21	.20	.38	e2.8	8.8	34	25	12	15	12	4.7	.20	.14
22	.21	.42	e3.0	12	34	25	12	15	11	2.3	.16	.14
23	.20	.42	e3.2	15	32	24	12	14	10	1.5	.17	.14
24	.22	.38	e4.0	e12	31	23	12	13	8.6	.92	.18	.15
25	.22	e.38	e6.2	e14	31	22	11	13	11	.48	.20	.21
26	.22	e.37	e5.9	16	28	21	11	13	12	.36	.19	.16
27	.22	e.37	e6.0	17	28	21	11	12	11	.32	.21	.16
28	.22	e.36	6.5	18	27	22	13	11	11	.31	.27	.14
29	.22	e.36	6.7	17	---	21	19	11	10	.28	.25	.12
30	.22	e.36	6.7	17	---	22	14	11	9.1	.24	.21	.13
31	.24	---	4.3	17	---	20	---	11	---	.23	.21	---
TOTAL	6.00	9.60	82.96	260.1	598	857	461	1140	292.8	80.48	7.25	5.27
MEAN	.19	.32	2.68	8.39	21.4	27.6	15.4	36.8	9.76	2.60	.23	.18
MAX	.24	.42	6.7	18	34	39	21	347	12	8.5	.39	.25
MIN	.17	.22	.30	2.7	12	20	11	11	5.6	.23	.16	.12
AC-FT	12	19	165	516	1190	1700	914	2260	581	160	14	10

e Estimated

07234000 BEAVER RIVER AT BEAVER, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

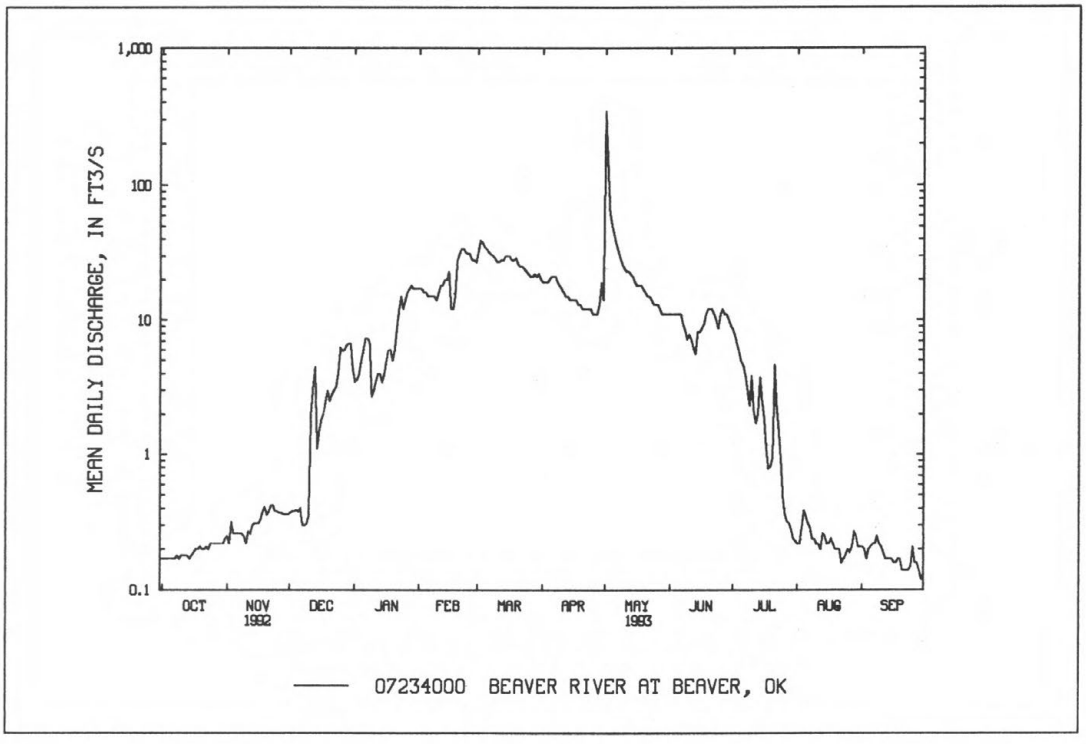
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	10.2	2.15	2.61	3.95	6.47	10.8	17.4	62.7	78.2	19.3	4.71	13.8
MAX	130	11.6	13.7	17.2	21.4	27.6	83.8	295	362	79.4	25.9	78.5
(WY)	1986	1988	1988	1988	1993	1993	1990	1989	1989	1979	1982	1981
MIN	.000	.000	.000	.040	.11	.11	.029	.093	.000	.000	.000	.000
(WY)	1980	1981	1981	1981	1981	1981	1981	1981	1981	1981	1981	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1979-93	
ANNUAL TOTAL	2190.71		3800.46			
ANNUAL MEAN	5.99		10.4		[a]19.4	
HIGHEST ANNUAL MEAN					64.0	1989
LOWEST ANNUAL MEAN					2.25	1984
HIGHEST DAILY MEAN	210	Jul 14	347	May 1	3880	May 31 1980
LOWEST DAILY MEAN	.17	Sep 28	.12	Sep 29	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.17	Sep 28	.15	Sep 18	.00	Oct 1 1978
INSTANTANEOUS PEAK FLOW			662	May 1	[b]5510	Jun 10 1983
INSTANTANEOUS PEAK STAGE			6.32	May 1	[c]10.50	Jun 10 1983
ANNUAL RUNOFF (AC-FT)	4350		7540		14030	
10 PERCENT EXCEEDS	10		27		29	
50 PERCENT EXCEEDS	3.3		4.7		.74	
90 PERCENT EXCEEDS	.22		.18		.00	

[a]Prior to regulation, water years 1938-78, 103 ft^3/s.

[b]Maximum discharge for period of record, 70,000 ft^3/s, Oct. 8, 1946, from slope-area measurement of peak flow in overflow section and extension of rating curve for main channel above 42,000 ft^3/s.

[c]Maximum gage height for period of record, 14.55 ft, Oct. 8, 1946.



07234000 BEAVER RIVER AT BEAVER, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1958-59, 1962-63, 1968 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1967 to January 1982.
WATER TEMPERATURE: October 1967 to January 1982.
REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
09...	1330	1028	80020	0.26	6260	8.0	19.5	10.5	4.0	708	12.5	123
FEB												
08...	1300	1028	80020	14	6260	8.3	8.5	7.5	4.6	713	11.8	108
MAY												
17...	1300	1028	80020	18	7000	8.2	21.5	20.0	2.2	711	10.3	125
JUL												
13...	1000	1028	80020	1.6	6830	8.0	26.0	21.5	1.1	710	8.0	100

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)
NOV											
09...	210	120	1400	1100	310	150	820	56	10	9.0	310
FEB											
08...	K18	K19	940	680	210	100	1000	70	14	8.9	322
MAY											
17...	67	67	1000	780	220	110	1100	70	15	9.9	276
JUL											
13...	410	330	1300	1000	280	140	1000	62	12	--	298

DATE	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
NOV											
09...	0	254	920	1300	0.80	23	3680	3690	5.00	2.58	0.031
FEB											
08...	0	264	570	1600	1.3	21	3730	3670	5.07	140	0.021
MAY											
17...	0	226	670	1800	1.7	12	4310	4060	5.86	209	--
JUL											
13...	0	244	800	1700	1.1	23	4340	4150	5.90	18.7	0.077

07234000 BEAVER RIVER AT BEAVER, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
NOV 09...	0.031	0.14	<0.010	0.020	0.07	<0.050	0.051	0.020	0.030	0.03	0.04
FEB 08...	0.021	0.09	--	0.030	0.10	--	0.051	--	0.020	--	0.03
MAY 17...	--	--	--	<0.010	--	--	<0.050	--	0.020	--	0.03
JUL 13...	--	--	--	<0.010	--	--	0.077	--	0.030	--	0.04

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	IRON, DISSOLVED (UG/L AS FE) (01046)
NOV 09...	0.38	0.40	0.45	0.020	<0.010	<0.010	<0.010	<10	<100	<1	<10
FEB 08...	0.28	0.30	0.35	0.020	<0.010	--	<0.010	<10	<100	<1	20
MAY 17...	0.28	0.30	0.30	<0.010	<0.010	--	<0.010	<10	200	<1	<10
JUL 13...	0.47	0.50	0.58	0.030	<0.010	--	<0.010	<10	200	<1	<10

DATE	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV 09...	120	160	7	<1	<1	<1.0	4300	28	6	0.00	63
FEB 08...	140	60	6	1	<1	<1.0	4100	24	26	0.98	55
MAY 17...	160	40	4	1	<1	<1.0	4300	31	7	0.34	48
JUL 13...	140	260	5	<1	<1	<1.0	4900	33	--	--	--

07234100 CLEAR CREEK NEAR ELMWOOD, OK

LOCATION.--Lat 36°38'42", long 100°30'07", SW 1/4 SW 1/4 sec.8, T.2 N., R.24 E., Beaver County, Hydrologic Unit 11100201, on downstream side of pier of county road bridge, 2.0 mi north, 1.2 mi east of Elmwood, and at mile 16.9.

DRAINAGE AREA.--170 mi^2.

PERIOD OF RECORD.--October 1965 to September 1993 (discontinued).

REVISED RECORDS.--WSP 2121: 1966. WRD OK-90-1: 1989 (M).

GAGE.--Water-stage recorder. Datum of gage is 2,541.26 ft above sea level.

REMARKS.--Records poor. Low flows sustained by nearby springs; natural flows affected by diversion ponds and occasional diversion for irrigation.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Sept. 19	0030	2,700	9.22	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	e1.8	2.3	2.1	2.1	2.3	1.5	29	2.4	1.9	.63	2.2
2	.98	e2.0	2.2	2.3	2.0	2.2	1.5	5.3	2.4	1.8	.64	1.6
3	.97	e2.1	2.2	2.2	1.9	2.1	1.6	3.5	2.4	1.7	.73	1.5
4	.95	e2.0	2.0	2.2	1.9	2.1	1.6	3.0	2.5	1.5	.84	1.3
5	.94	e1.9	2.0	2.2	2.0	2.0	1.4	3.0	2.4	1.5	.92	1.2
6	.96	e2.0	2.0	2.2	2.0	2.0	1.5	3.1	2.4	1.5	1.1	1.5
7	1.0	e1.9	2.0	2.2	2.0	2.0	1.5	3.4	2.4	1.3	1.2	1.5
8	e1.0	e1.8	2.1	2.3	2.1	2.0	1.4	3.4	2.4	1.1	1.3	2.5
9	e1.0	e1.8	2.2	2.4	2.1	2.1	1.4	3.1	2.3	1.0	1.3	2.0
10	e1.0	e1.9	2.2	2.4	2.1	2.0	1.4	3.1	2.4	1.2	1.5	1.9
11	e1.1	e1.8	2.1	2.3	2.1	2.0	1.4	3.1	2.4	1.1	1.6	1.9
12	e1.0	e1.9	2.2	2.2	1.6	2.0	1.5	3.0	2.3	1.1	2.0	1.7
13	e.98	e2.0	2.3	2.1	1.6	1.9	1.5	2.9	2.3	1.1	2.1	1.6
14	e.97	e2.0	2.2	2.1	2.0	1.9	1.5	2.8	2.8	1.1	2.2	1.6
15	e1.0	e1.9	2.1	2.0	2.2	1.8	1.4	2.8	2.5	1.2	2.2	1.4
16	e1.1	e2.0	2.1	2.1	2.0	1.7	1.4	3.0	2.2	1.1	1.9	1.1
17	e1.2	2.1	2.0	2.1	2.0	1.7	1.5	2.9	2.2	1.0	1.9	1.2
18	e1.1	2.4	2.0	2.6	1.9	1.7	1.4	2.9	2.5	.92	1.9	192
19	e1.1	2.4	2.0	2.7	1.9	1.7	1.4	2.8	2.9	.82	1.9	555
20	e1.0	2.3	2.1	2.5	1.9	1.7	1.3	2.6	2.4	.75	2.1	25
21	e1.0	2.4	2.0	2.2	1.7	1.7	1.3	2.5	2.2	.92	2.1	6.1
22	e1.1	2.4	2.1	2.3	2.2	1.8	1.4	2.5	2.1	.78	2.3	4.4
23	e1.1	2.4	2.0	2.5	2.2	1.7	1.4	2.4	2.0	.73	2.3	3.7
24	e1.2	2.6	2.2	2.5	2.0	1.7	1.3	2.6	1.9	.66	2.1	4.0
25	e1.2	2.6	2.1	2.4	1.9	1.7	1.3	2.5	2.3	.66	2.0	3.8
26	e1.2	2.5	2.0	2.4	1.9	1.7	1.2	2.5	3.0	.66	1.9	3.2
27	e1.3	2.2	2.0	2.2	2.5	1.7	1.2	2.4	2.5	.63	1.8	2.6
28	e1.4	2.2	2.0	2.4	2.1	1.6	1.3	2.4	2.3	.63	2.2	2.2
29	e1.5	2.2	2.0	2.2	---	1.8	1.3	2.4	2.1	.69	2.2	1.9
30	e1.6	2.3	2.0	2.2	---	1.7	1.2	2.5	2.0	.66	2.4	1.7
31	e1.7	---	1.9	2.1	---	1.7	---	2.4	---	.63	2.5	---
TOTAL	34.65	63.8	64.6	70.6	55.9	57.7	42.0	115.8	70.9	32.34	53.76	833.3
MEAN	1.12	2.13	2.08	2.28	2.00	1.86	1.40	3.74	2.36	1.04	1.73	27.8
MAX	1.7	2.6	2.3	2.7	2.5	2.3	1.6	29	3.0	1.9	2.5	555
MIN	.94	1.8	1.9	2.0	1.6	1.6	1.2	2.4	1.9	.63	.63	1.1
AC-FT	69	127	128	140	111	114	83	230	141	64	107	1650

e Estimated

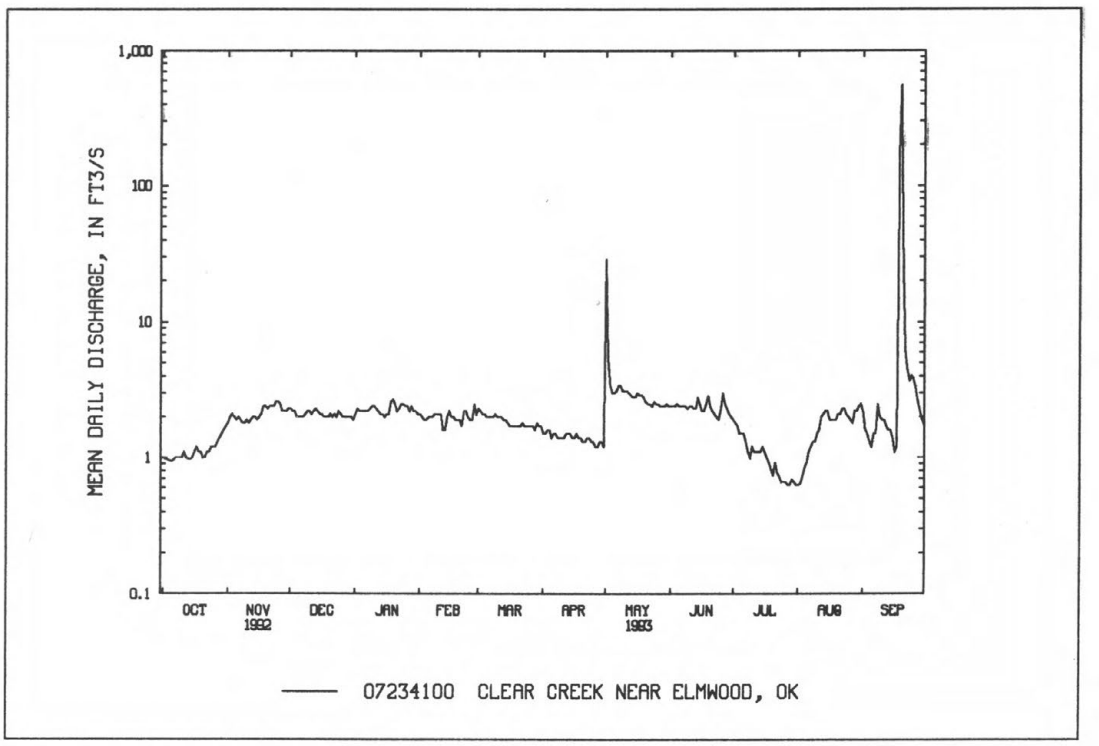
07234100 CLEAR CREEK NEAR ELMWOOD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.64	5.08	2.47	2.42	2.45	3.20	3.41	13.9	12.3	9.02	10.1	5.18
MAX	193	77.9	3.71	3.27	3.36	22.2	16.7	289	123	80.7	79.3	34.0
(WY)	1969	1972	1972	1977	1969	1973	1973	1989	1968	1992	1967	1981
MIN	1.09	1.56	1.57	1.52	1.67	1.68	1.40	1.17	.92	.91	.62	.31
(WY)	1991	1980	1986	1981	1981	1967	1993	1967	1966	1980	1976	1980

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1966-93	
ANNUAL TOTAL	3070.32		1495.35			
ANNUAL MEAN	8.39		4.10		6.54	
HIGHEST ANNUAL MEAN					30.0	1989
LOWEST ANNUAL MEAN					1.67	1984
HIGHEST DAILY MEAN	937	Jul 18	555	Sep 19	6660	May 17 1989
LOWEST DAILY MEAN	.93	Sep 26	.63	Jul 27	[a].00	Jul 24 1974
ANNUAL SEVEN-DAY MINIMUM	.97	Sep 30	.64	Jul 27	.01	Sep 18 1980
INSTANTANEOUS PEAK FLOW			2700	Sep 19	[b]20000	Oct 16 1969
INSTANTANEOUS PEAK STAGE			9.22	Sep 19	14.17	May 17 1989
ANNUAL RUNOFF (AC-FT)	6090		2970		4740	
10 PERCENT EXCEEDS	2.3		2.6		3.4	
50 PERCENT EXCEEDS	1.7		2.0		2.1	
90 PERCENT EXCEEDS	1.1		1.0		1.1	

[a]At times during diversion for irrigation.
[b]From rating curve extended above 12,500 ft3/s, on basis of slope-area measurement at 13.15 ft.



07236500 FORT SUPPLY LAKE NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°33'14", long 99°34'16", in NE 1/4 SE 1/4 sec.17, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, in control tower at left end of Fort Supply Dam on Wolf Creek, 1.5 mi south of Fort Supply and at mile 5.5.

DRAINAGE AREA.--1,735 mi^2, of which 241 mi^2 is probably noncontributing.

PERIOD OF RECORD.--June 1942 to September 1993 (discontinued). Prior to October 1970, published as Fort Supply Reservoir near Fort Supply.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage at sea level.

REMARKS.--Reservoir is formed by an earth dam. Outlet works consist of a 540-foot uncontrolled gravity-type concrete weir, one 36-inch diameter gated bypass, and one 18-foot oval-shaped conduit controlled by three vertical-lift sluice gates. Regulated storage began May 4, 1942; conservation pool first filled in June 1942. Capacity, 100,700 acre-ft at elevation 2,028.0 ft, crest of spillway, 13,890 acre-ft at elevation 2,004.0 ft, conservation pool designated in 1965. No storage below elevation 1,987.0 ft. Figures given herein represent total contents. Reservoir is used for flood control and conservation. Revised capacity table, based on survey in 1969, used since Oct. 1, 1972. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 99,500 acre-ft, June 25, 1957, elevation, 2,026.97 ft; no contents at times November 1942 to January 1943.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,860 acre-ft, May 11, elevation, 2,004.50 ft; minimum, 12,220 acre-ft, Nov. 4, elevation 2,003.08 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

2,002	10,430	2,005	15,830
2,003	12,080	2,006	17,890
2,004	13,890	2,007	20,100

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

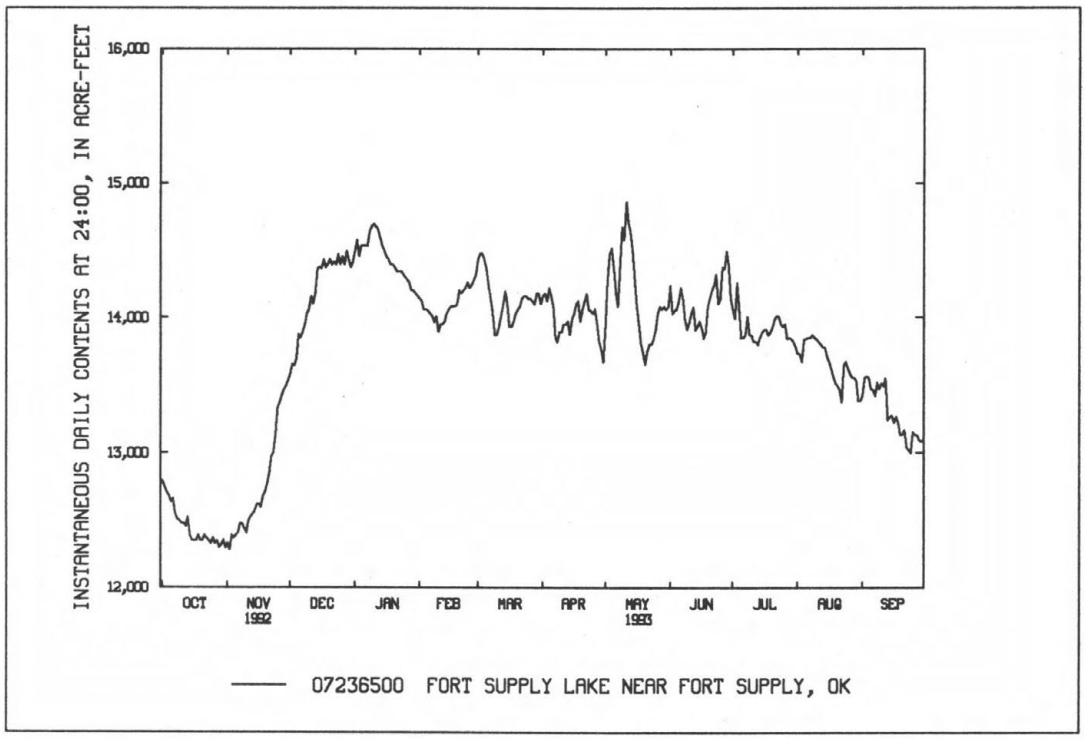
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12790	12330	13580	14490	14140	14430	14160	13930	14240	14060	13730	13420
2	12750	12280	13650	14570	14120	14470	14180	14280	14030	13990	13730	13550
3	12710	12390	13640	14450	14060	14470	14120	14470	14050	14260	13670	13560
4	12680	12370	13690	14530	14060	14430	14220	14510	14060	14080	13840	13550
5	12640	12390	13870	14530	14050	14360	14160	14370	14120	13850	13840	13470
6	12660	12410	13850	14530	14030	14240	14080	14180	14220	13850	13850	13460
7	12550	12480	13890	14530	14010	14140	13850	14080	14140	13870	13850	13420
8	12510	12480	13950	14630	13970	14030	13820	14380	13990	14010	13870	13510
9	12500	12440	14030	14670	14010	13870	13890	14670	13910	13870	13850	13470
10	12480	12410	14060	14690	13890	13870	13890	14570	13960	13870	13840	13510
11	12480	12500	14160	14670	13950	13930	13950	14860	14030	13820	13820	13490
12	12460	12530	14100	14650	13950	14010	13950	14700	14080	13820	13800	13550
13	12530	12550	14180	14590	13970	14100	13970	14630	13910	13800	13780	13240
14	12390	12570	14360	14530	14030	14200	13870	14490	13930	13850	13780	13260
15	12350	12620	14370	14490	14060	14100	13990	14280	13970	13890	13710	13270
16	12350	12620	14360	14450	14080	13930	14030	14080	13930	13910	13670	13220
17	12350	12600	14430	14430	14080	13930	14100	13950	13850	13910	13620	13260
18	12390	12680	14370	14390	14080	13970	14120	13800	13890	13870	13560	13220
19	12350	12710	14390	14390	14100	14030	13970	13740	14080	13890	13510	13130
20	12350	12770	14430	14370	14200	14060	14060	13650	14140	13930	13490	13130
21	12390	12840	14390	14340	14180	14080	14120	13750	14200	13990	13460	13170
22	12370	12970	14410	14340	14200	14140	14180	13800	14240	14010	13370	13040
23	12350	13000	14390	14340	14220	14160	14060	13800	14320	14010	13650	13020
24	12330	13130	14470	14320	14260	14160	14050	13840	14100	13950	13670	13000
25	12370	13330	14390	14300	14220	14140	14030	13910	14140	13930	13620	13150
26	12330	13370	14450	14280	14240	14140	14060	14030	14370	13950	13580	13130
27	12350	13420	14390	14260	14280	14120	13950	14080	14360	13840	13550	13130
28	12300	13460	14490	14200	14320	14100	13820	14060	14490	13850	13550	13090
29	12320	13490	14430	14200	---	14180	13760	14080	14390	13840	13530	13080
30	12350	13530	14370	14180	---	14180	13670	14060	14140	13820	13380	13090
31	12300	---	14410	14160	---	14100	---	14080	---	13780	13380	---

07236500 FORT SUPPLY LAKE NEAR FORT SUPPLY, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	12790	13530	14490	14690	14320	14470	14220	14860	14490	14260	13870	13560
MIN	12300	12280	13580	14160	13890	13870	13670	13650	13850	13780	13370	13000
(‡)	2003.12	203.80	2004.27	2004.14	2004.22	2004.11	2003.88	2004.10	2004.13	2003.94	2003.72	2003.56
(‡‡)	-500	+1,230	+880	-250	+160	-220	-430	+410	+60	-360	-400	-290

CAL YR 1992 MAX 15090 MIN 12280 (‡‡) +170
WTR YR 1993 MAX 14860 MIN 12280 (‡‡) +290

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07237000 WOLF CREEK NEAR FORT SUPPLY, OK

LOCATION.--Lat 36°34'00", long 99°33'05", SE 1/4 SE 1/4 sec.9, T.24 N., R.22 W., Woodward County, Hydrologic Unit 11100203, on left bank on downstream side of U.S. Highway 270, 1.0 mi southeast of Fort Supply, 1.6 mi downstream from Fort Supply Dam, and at mile 3.9.

DRAINAGE AREA.--1,739 mi^2, of which 241 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to September 1993 (discontinued). Prior to October 1, 1941, published as "Near Supply".

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,958.38 ft above sea level (levels by U.S. Army Corps of Engineers). See WSP 1921 for history of changes prior to Sept. 30, 1962.

REMARKS.--Records fair. Flow completely regulated since May 1942 by Fort Supply Lake (station 07236500).

EXTREMES OUTSIDE PERIOD OF RECORD.--A stage of 19.6 ft, present datum, was reached prior to October 1937, from information provided by Oklahoma State Highway Department.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.2	1.5	33	58	47	59	81	39	82	1.4	2.4
2	1.2	1.2	1.5	33	59	52	59	59	39	24	1.5	1.7
3	1.2	1.4	1.4	33	58	57	59	80	39	23	1.4	1.6
4	1.3	1.2	1.6	32	58	86	59	186	39	22	2.6	1.7
5	3.5	1.1	1.8	32	58	111	98	193	39	21	2.1	1.6
6	1.7	1.1	1.8	37	58	112	139	191	39	13	1.9	1.7
7	3.8	1.0	1.7	37	58	111	139	172	48	3.1	1.7	1.7
8	3.9	.99	1.7	36	58	111	87	137	58	2.3	1.7	4.2
9	1.7	1.1	1.7	36	58	111	41	135	58	2.1	2.2	2.5
10	1.3	3.9	11	36	59	66	41	164	49	1.9	2.3	1.9
11	1.2	1.2	24	50	58	31	41	191	40	1.9	1.7	1.8
12	1.2	.75	23	64	54	30	40	191	39	3.2	1.7	1.8
13	1.3	.86	23	64	46	29	40	190	39	2.1	1.6	3.3
14	1.6	1.1	28	66	46	29	40	189	39	1.9	1.6	2.5
15	1.4	1.2	36	65	46	66	40	189	39	1.8	1.6	2.0
16	1.2	1.3	35	64	48	109	40	188	38	1.7	3.1	1.8
17	1.1	1.7	35	64	47	72	40	189	37	1.8	2.0	1.8
18	1.1	4.9	35	63	47	39	40	163	27	1.6	1.5	1.7
19	3.6	3.0	35	64	47	39	39	121	12	1.6	1.5	1.9
20	1.8	1.0	35	61	47	39	34	105	10	1.6	1.4	1.7
21	1.5	1.5	34	61	46	38	33	76	9.8	1.7	1.3	1.6
22	1.6	1.9	33	60	46	39	41	47	19	1.5	1.4	3.7
23	1.6	1.7	34	60	46	48	48	45	30	1.5	2.2	2.2
24	1.8	2.4	33	60	46	60	47	44	30	1.5	2.8	1.6
25	1.6	3.1	33	60	46	60	47	44	32	2.8	2.0	1.8
26	1.6	1.9	33	60	46	60	47	38	34	1.9	2.8	1.6
27	1.7	1.5	33	60	47	60	72	41	32	1.6	2.3	1.5
28	1.5	1.4	33	60	47	60	108	41	52	1.7	1.8	1.7
29	1.4	1.3	33	59	---	60	88	40	98	1.8	1.6	1.5
30	1.3	1.4	33	59	---	60	93	40	104	1.6	1.5	1.5
31	1.1	---	33	58	---	60	---	40	---	1.5	3.1	---
TOTAL	53.1	49.30	699.7	1627	1438	1952	1799	3610	1207.8	232.7	59.3	60.0
MEAN	1.71	1.64	22.6	52.5	51.4	63.0	60.0	116	40.3	7.51	1.91	2.00
MAX	3.9	4.9	36	66	59	112	139	193	104	82	3.1	4.2
MIN	1.1	.75	1.4	32	46	29	33	38	9.8	1.5	1.3	1.5
AC-FT	105	98	1390	3230	2850	3870	3570	7160	2400	462	118	119

07237000 WOLF CREEK NEAR FORT SUPPLY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1993, BY WATER YEAR (WY)

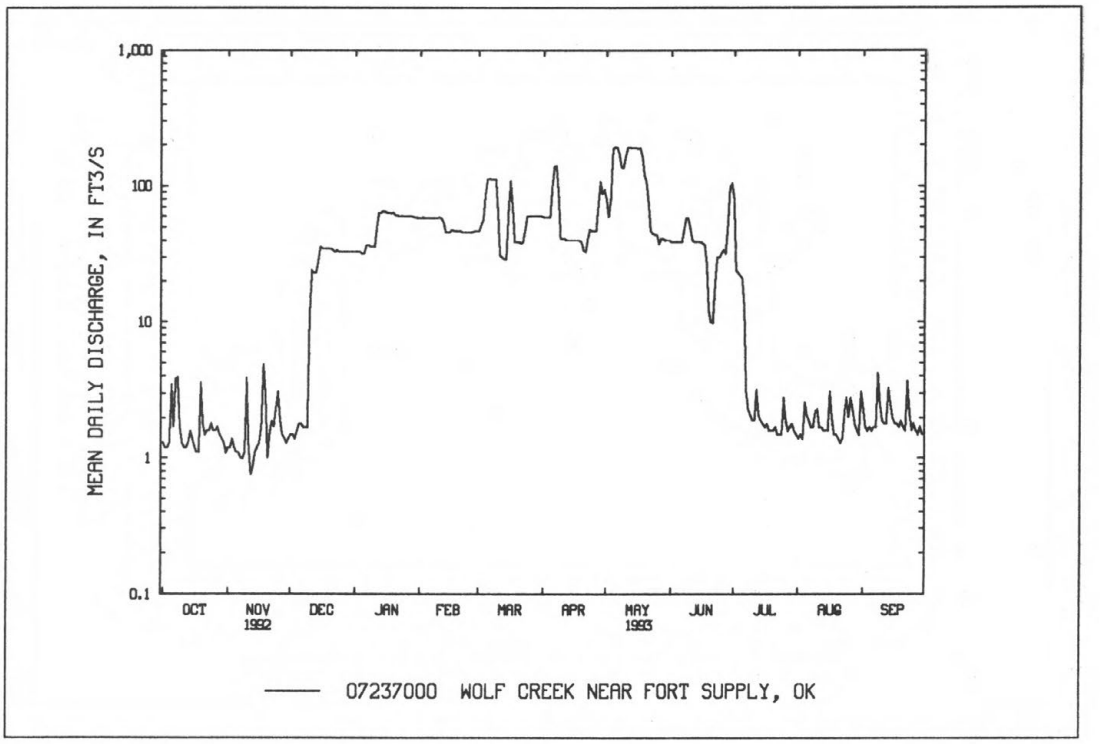
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	36.9	22.1	26.3	33.6	42.9	46.2	58.0	122	119	67.1	30.6	31.2
MAX	272	160	79.6	96.8	152	187	251	993	1016	1017	718	1057
(WY)	1945	1972	1943	1945	1949	1987	1957	1957	1951	1957	1950	1950
MIN	.000	.070	.35	.20	.097	.000	.50	1.97	.50	.39	.000	.000
(WY)	1955	1948	1944	1948	1948	1943	1955	1943	1956	1964	1946	1947

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1943-93	
ANNUAL TOTAL	6806.80		12787.90			
ANNUAL MEAN	18.6		35.0		[a]53.1	
HIGHEST ANNUAL MEAN					288	1957
LOWEST ANNUAL MEAN					3.61	1956
HIGHEST DAILY MEAN	132	May 29	193	May 5	4550	May 20 1957
LOWEST DAILY MEAN	.75	Nov 12	.75	Nov 12	.00	at times
ANNUAL SEVEN-DAY MINIMUM	1.1	Nov 3	1.1	Nov 3	.00	Feb 5 1943
INSTANTANEOUS PEAK FLOW			194	May 4,5	[b]5020	May 19 1957
INSTANTANEOUS PEAK STAGE			6.23	May 4,5	[c]13.11	Apr 24 1944
ANNUAL RUNOFF (AC-FT)	13500		25360		38440	
10 PERCENT EXCEEDS	48		78		95	
50 PERCENT EXCEEDS	6.8		33		6.3	
90 PERCENT EXCEEDS	1.3		1.4		.70	

[a]Prior to regulation, water years 1938-42, 104 ft^3/s.

[b]Maximum discharge for period of record, 14,200 ft^3/s, June 24, 1939, from rating curve extended above 8,000 ft^3/s.

[c]Maximum gage height for period of record 15.80 ft, present datum, Aug. 8, 1940.



07237500 NORTH CANADIAN RIVER AT WOODWARD, OK

LOCATION.--Lat 36°26'12", long 99°16'41", SW 1/4 SW 1/4 sec.30, T.23 N., R.19 W., Woodward County, Hydrologic Unit 11100301, on downstream side of pier of bridge on State Highway 412 (formerly State Highway 15), 275 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, 6.0 mi east of Woodward, 7.2 mi upstream from Indian Creek, 27.5 mi downstream from Wolf Creek, and at mile 460.2.

DRAINAGE AREA.--11,589 mi^2, of which 4,812 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to September 1905 (gage heights only), October 1905 to June 1906, October 1938 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Canadian River (North Fork) near Woodward 1903-06. Gage-height records collected in this vicinity since 1919 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 1,829.95 ft above sea level. Prior to July 1906, nonrecording gage at railway bridge 275 ft upstream at different datum. Oct. 1, 1938 to Oct. 26, 1943, nonrecording gage and Oct. 27, 1943 to July 12, 1951, water-stage recorder, at site 7.8 mi upstream at datum 37.01 ft higher than present datum.

REMARKS.--Records good. Some regulation since May 1942 by Fort Supply Lake (station 07236500) on Wolf Creek, 33.0 mi upstream. Flow regulated since October 1978 by Optima Lake (station 07233200), 163.0 mi upstream, and by Palo Duro reservoir since May 1991. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1923, reached a stage of 11.0 ft, site and datum then in use; from reports of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.5	23	52	94	148	161	282	143	254	33	11
2	4.1	4.4	22	41	96	160	157	361	138	225	31	16
3	4.2	5.3	23	e53	100	163	157	315	134	174	30	48
4	4.2	6.1	25	59	97	168	163	406	131	152	35	15
5	4.1	6.2	25	58	96	184	159	465	127	135	42	12
6	4.1	6.0	23	56	96	203	185	411	125	123	45	11
7	3.8	5.8	22	59	99	206	221	397	122	111	39	11
8	3.4	5.9	22	61	100	207	223	436	119	98	37	16
9	3.4	5.7	27	58	100	206	190	379	125	91	34	12
10	3.4	5.6	29	45	105	205	155	345	123	86	31	11
11	3.5	15	30	e50	113	175	147	371	126	81	29	11
12	3.5	12	33	e55	105	146	142	377	116	78	27	10
13	3.5	10	44	e60	107	141	139	365	107	74	26	9.8
14	3.4	9.8	43	e58	103	141	136	351	103	75	24	9.5
15	3.5	9.2	41	e60	113	140	132	338	101	75	22	9.4
16	3.5	9.1	49	e65	111	163	130	334	99	81	20	9.7
17	3.7	9.0	51	e78	e110	196	132	332	96	76	19	9.5
18	3.7	10	56	e79	e100	173	133	331	96	70	18	9.3
19	3.7	22	58	e80	e100	147	132	301	115	68	17	9.1
20	3.7	14	56	e83	121	145	129	266	94	63	16	8.8
21	3.9	17	57	e84	126	145	121	248	87	63	14	8.6
22	4.1	23	58	e85	135	144	119	226	84	58	13	8.9
23	4.1	18	58	e88	137	142	122	201	82	54	13	15
24	4.2	27	57	85	136	146	132	190	85	51	13	9.9
25	4.2	25	57	85	137	156	133	184	84	48	15	17
26	4.2	22	57	87	135	155	134	178	134	46	14	12
27	4.2	21	56	88	138	155	135	171	120	43	12	11
28	4.2	21	57	86	138	154	148	165	106	41	12	10
29	4.3	22	59	84	---	161	192	160	209	39	12	9.5
30	4.5	23	57	87	---	175	178	156	310	37	12	8.9
31	4.5	---	54	92	---	164	---	148	---	35	11	---

e Estimated

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

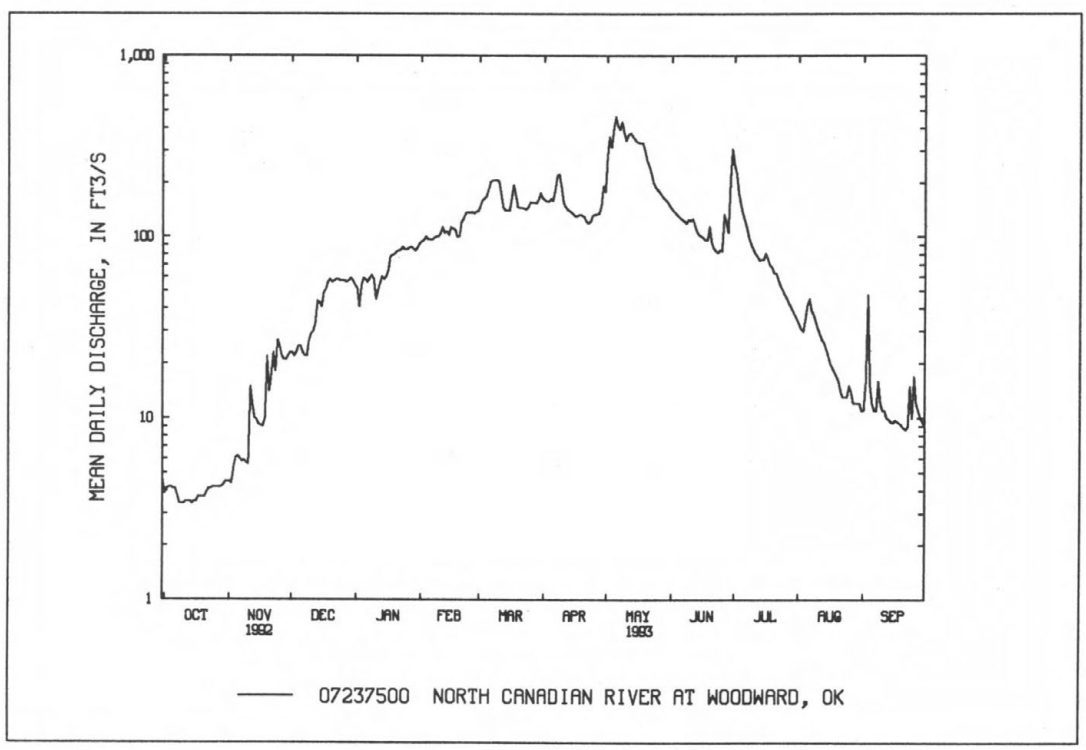
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	120.7	394.6	1329	2161	3148	5114	4537	9190	3641	2705	716	369.9
MEAN	3.89	13.2	42.9	69.7	112	165	151	296	121	87.3	23.1	12.3
MAX	4.5	27	59	92	138	207	223	465	310	254	45	48
MIN	3.4	4.4	22	41	94	140	119	148	82	35	11	8.6
AC-FT	239	783	2640	4290	6240	10140	9000	18230	7220	5370	1420	734

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.7	49.6	50.0	69.7	83.8	134	145	255	221	93.6	39.0	29.5
MAX	377	173	125	200	174	404	382	900	814	328	207	158
(WY)	1986	1986	1986	1988	1987	1987	1988	1979	1989	1989	1989	1989
MIN	2.33	5.75	8.78	11.0	12.6	47.8	34.7	32.0	16.1	4.24	1.73	.95
(WY)	1992	1985	1984	1981	1981	1992	1981	1992	1981	1981	1991	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1979-93	
ANNUAL TOTAL	13444.5		33426.2			
ANNUAL MEAN	36.7		91.6		[a]102	
HIGHEST ANNUAL MEAN					228	1989
LOWEST ANNUAL MEAN					16.9	1981
HIGHEST DAILY MEAN	152	Jun 1	465	May 5	2950	May 23 1989
LOWEST DAILY MEAN	3.4	Oct 8	3.4	Oct 8-10,14	.00	at times
ANNUAL SEVEN-DAY MINIMUM	3.4	Oct 8	3.4	Oct 8	.13	Sep 9 1984
INSTANTANEOUS PEAK FLOW			550	May 7	[b]3090	May 23 1989
INSTANTANEOUS PEAK STAGE			6.15	May 7	[c]10.72	May 23 1989
ANNUAL RUNOFF (AC-FT)	26670		66300		74080	
10 PERCENT EXCEEDS	75		191		225	
50 PERCENT EXCEEDS	31		70		57	
90 PERCENT EXCEEDS	4.6		5.8		5.8	

[a]Prior to regulation 1939-78, 194 ft3/s.
[b]Maximum discharge for period of record 42,000 ft3/s, Oct. 10, 1946.
[c]Maximum gage height for period of record 9.80 ft, Oct. 10, 1946, site and datum then in use.



07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1958-59, 1961-63, 1975 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1974 to January 1982.
WATER TEMPERATURE: October 1974 to January 1982.
REMARKS.--Samples were collected bimonthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
FEB											
09...	1345	5.00	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1350	10.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1355	15.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1358	20.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1402	25.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1405	30.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1408	35.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1412	40.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1415	45.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1420	50.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5
09...	1425	55.0	9.5	723	1028	1028	100	3.50	1910	12.1	8.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
10...	1400	1028	80020	6.3	2650	8.8	16.0	17.0	3.9	732	18.4	200
JAN												
05...	1200	1028	80020	59	1560	8.4	4.5	1.5	8.6	731	13.4	100
FEB												
09...	1400	1028	80020	100	1910	8.5	16.5	9.5	6.1	723	12.1	112
MAY												
18...	1430	1028	80020	326	1750	8.2	24.0	23.0	21	728	8.1	100
JUL												
12...	1300	1028	80020	78	2200	8.3	28.5	26.0	3.5	726	9.7	127

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
NOV												
10...	45	100	670	480	190	47	310	50	5	4.7	195	16
JAN												
05...	42	57	420	200	110	35	160	45	3	4.5	263	0
FEB												
09...	K10	K23	460	240	120	39	230	52	5	4.8	265	0
MAY												
18...	140	210	390	190	100	34	200	52	4	5.4	241	0
JUL												
12...	76	38	550	340	140	48	230	47	4	6.2	255	0

DATE	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
NOV												
10...	186	490	410	0.60	18	1660	1590	2.26	28.2	1.29	1.39	6.2
JAN												
05...	216	260	230	0.70	24	978	956	1.33	156	0.490	0.490	2.2
FEB												
09...	217	260	370	0.70	22	1150	1180	1.56	310	0.290	0.290	1.3
MAY												
18...	198	220	310	0.70	17	1050	1010	1.43	924	0.095	--	--
JUL												
12...	209	360	360	0.90	23	1340	1300	1.82	282	0.180	0.180	0.80

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)
NOV												
10...	0.210	0.210	0.69	--	1.60	--	0.440	0.49	0.57	0.82	1.2	2.7
JAN												
05...	--	0.040	0.13	--	0.530	--	0.160	--	0.21	0.54	0.70	1.2
FEB												
09...	--	0.050	0.16	--	0.340	--	0.150	--	0.19	0.35	0.50	0.84
MAY												
18...	--	<0.010	--	--	0.095	--	0.030	--	0.04	0.67	0.70	0.80
JUL												
12...	--	0.010	0.03	--	0.190	--	0.030	--	0.04	0.47	0.50	0.69

07237500 NORTH CANADIAN RIVER AT WOODWARD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	IRON, DISSOLVED (UG/L AS FE) (01046)
NOV												
10...	12	0.170	0.28	0.090	0.090	0.080	0.25	0.08	<10	<100	<1	<10
JAN												
05...	--	0.150	--	0.080	--	0.070	0.21	--	--	--	--	--
FEB												
09...	--	0.070	--	0.050	--	0.050	0.15	--	<10	160	<3	5
MAY												
18...	--	0.120	--	0.040	--	0.030	0.09	--	<10	170	<3	20
JUL												
12...	--	0.100	--	0.010	--	0.010	0.03	--	<10	300	<1	<10

DATE	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV											
10...	50	100	7	<1	<1	<1.0	1400	10	11	0.19	64
JAN											
05...	--	--	--	--	--	--	--	--	39	6.2	64
FEB											
09...	48	13	<10	<1	<1	<1.0	1300	<6	52	14	88
MAY											
18...	47	5	10	<1	<1	<1.0	1200	9	272	239	96
JUL											
12...	50	<10	8	<1	<1	<1.0	1600	12	31	6.5	75

Discharge from air shaft pipe, Tar Creek area, northeastern Oklahoma

07238000 NORTH CANADIAN RIVER NEAR SEILING, OK

LOCATION.--Lat 36°11'00", long 98°55'15", in NW 1/4 sec.28, T.20 N., R.16 W., Major County, Hydrologic Unit 11100301, near center of span on downstream side of pier of bridge on U.S. Highway 60, 2.0 mi upstream from Seiling Creek, 2.2 mi north of Seiling, 2.8 mi downstream from Deep Creek, and at mile 422.6.

DRAINAGE AREA.--12,261 mi^2, of which 4,847 mi is probably noncontributing.

PERIOD OF RECORD.--July 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,675.53 ft above sea level. July 1, 1946 to Aug. 17, 1964, at site 60 ft downstream and prior to Oct. 1, 1954, at datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records good. Some regulation since May 1942 by Fort Supply Lake. Minor regulation since October 1978 by Optima Lake. Some regulation since May 1991 by Palo Duro Reservior. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	12	60	93	135	181	226	331	222	359	48	24
2	4.3	13	60	93	136	206	209	2110	217	309	46	22
3	4.2	14	60	98	136	226	203	1530	209	280	45	22
4	4.0	14	60	109	139	216	233	781	206	241	44	31
5	3.6	15	58	109	138	209	249	673	201	208	51	27
6	3.5	16	72	106	138	215	231	660	196	189	60	22
7	3.8	16	65	104	138	231	239	583	191	176	64	22
8	4.2	17	62	105	138	235	269	964	186	160	58	28
9	4.7	18	67	116	138	236	266	2550	181	138	55	32
10	5.3	18	73	114	143	235	240	1600	184	126	49	26
11	5.7	18	75	108	163	233	207	782	191	117	46	22
12	5.5	19	71	111	157	213	193	724	207	111	42	18
13	5.4	20	92	110	150	186	186	643	188	109	41	16
14	4.9	22	96	111	153	180	182	582	174	110	39	17
15	5.1	21	101	117	158	179	179	537	171	114	35	19
16	5.7	22	90	127	156	179	173	514	168	111	33	19
17	6.4	22	90	133	148	185	168	536	158	112	30	18
18	7.6	24	96	137	145	218	167	1330	153	106	28	16
19	8.0	32	105	131	151	208	169	770	472	100	27	15
20	8.6	30	105	131	176	188	163	744	528	97	25	14
21	8.9	36	102	138	211	184	161	502	249	98	24	13
22	8.8	39	99	153	206	187	158	421	202	94	22	12
23	8.5	40	98	166	188	186	155	372	178	85	20	11
24	8.7	55	96	152	182	186	155	326	160	78	21	14
25	9.1	99	97	141	180	183	157	305	150	73	19	21
26	9.6	95	96	138	176	190	154	293	267	68	18	21
27	9.8	74	97	138	175	189	153	279	573	63	17	22
28	11	67	97	138	176	189	156	260	366	61	17	20
29	11	64	97	135	---	194	232	248	257	58	16	18
30	11	62	97	132	---	231	232	242	256	54	16	16
31	12	---	96	133	---	260	---	231	---	51	23	---
TOTAL	213.6	1014	2630	3827	4430	6338	5865	22423	7061	4056	1079	598
MEAN	6.89	33.8	84.8	123	158	204	195	723	235	131	34.8	19.9
MAX	12	99	105	166	211	260	269	2550	573	359	64	32
MIN	3.5	12	58	93	135	179	153	231	150	51	16	11
AC-FT	424	2010	5220	7590	8790	12570	11630	44480	14010	8050	2140	1190

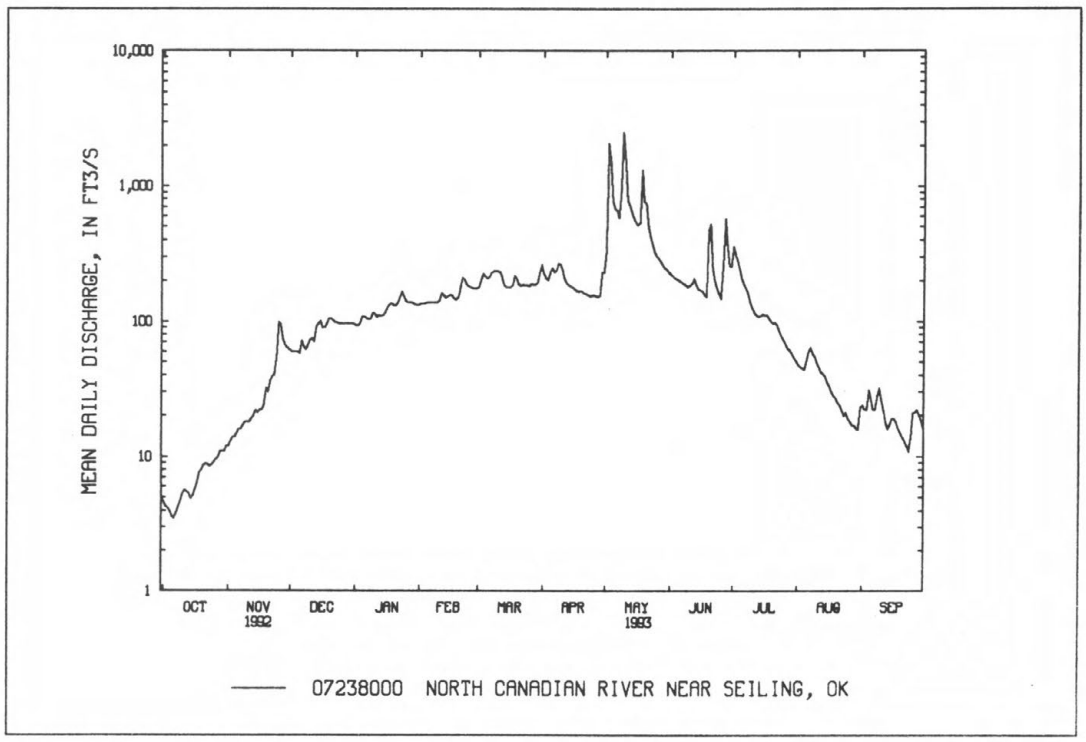
07238000 NORTH CANADIAN RIVER NEAR SEILING, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.4	89.1	83.1	104	128	196	198	386	300	131	53.3	44.5
MAX	430	324	179	263	300	567	511	984	982	380	271	244
(WY)	1986	1987	1986	1988	1987	1987	1988	1979	1989	1989	1989	1989
MIN	2.73	10.6	24.5	30.5	36.7	78.5	57.3	44.8	18.8	8.13	1.23	.074
(WY)	1992	1985	1979	1981	1981	1981	1981	1981	1981	1991	1984	1984

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1979-93	
ANNUAL TOTAL	22547.5		59534.6			
ANNUAL MEAN	61.6		163		[a]150	
HIGHEST ANNUAL MEAN					299	1987
LOWEST ANNUAL MEAN					29.4	1981
HIGHEST DAILY MEAN	450	Jun 10	2550	May 9	2680	May 17 1982
LOWEST DAILY MEAN	3.5	Oct 6	3.5	Oct 6	.00	Sep 16 1980
ANNUAL SEVEN-DAY MINIMUM	3.9	Oct 2	3.9	Oct 2	.00	Sep 16 1980
INSTANTANEOUS PEAK FLOW			3630	May 9	[b]6360	May 27 1980
INSTANTANEOUS PEAK STAGE			12.96	May 9	[c]12.98	May 27 1980
ANNUAL RUNOFF (AC-FT)	44720		118100		108600	
10 PERCENT EXCEEDS	100		266		326	
50 PERCENT EXCEEDS	62		111		84	
90 PERCENT EXCEEDS	9.4		14		9.3	

[a]Prior to regulation, water years 1947-78, 215 ft^3/s.
[b]Maximum discharge for period of record, 33,000 ft^3/s, May 19, 1951.
[c]Maximum gage height for period record, 16.00 ft, Oct. 11, 1946, present datum.



07238500 CANTON LAKE NEAR CANTON, OK

LOCATION.--Lat 36°04'54", long 98°36'01", in SE 1/4 NE 1/4 sec.32, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, near right end of Canton Dam on North Canadian River, 2.0 mi northwest of Canton, and at mile 394.3.

DRAINAGE AREA.--12,483 mi^2, of which 4,883 mi^2 is probably noncontributing.

PERIOD OF RECORD.--April 1948 to September 1993 (discontinued). Prior to October 1970, published as Canton Reservoir near Canton.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by an earth dam. The outlet works consists of a concrete gravity, chute-type weir spillway controlled by 16 taintor gates with net length of 640 ft, three sluice gates and two 24-inch valved pipes. Regulated storage began Apr. 15, 1948; conservation pool was first filled July 4, 1948. Capacity, 377,100 acre-ft at elevation 1,638.0 ft (flood-control pool), 111,300 acre-ft at elevation 1,615.4 ft. (Normal water-supply pool), 93,180 acre-ft at elevation 1,613.0 ft (crest of spillway), and 14,140 acre-ft at elevation 1,596.5 ft (bottom of conservation pool). Figures given herein represent total contents. Reservoir was designed for flood control, irrigation, and conservation, but owing to a lack of facilities, it is not being used for irrigation at this time. Revised capacity table, based on survey in 1980, used since Oct. 1, 1981. U.S. Army Corps of Engineers' satellite telemeter at site.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 258,600 acre-ft, May 25, 1951, elevation, 1,628.05 ft; minimum since conservation pool was first filled, 867 acre-ft, May 5, 1955, elevation, 1,585.66 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 151,100 acre-ft, May 20, elevation, 1,619.98 ft; minimum, 70,360 acre-ft, Nov. 8, 9, 16, elevation, 1,609.60 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

1,609	66,710	1,615	108,200
1,611	79,350	1,617	124,400
1,613	93,180	1,620	151.300

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74780	71550	74080	79090	87230	97710	111100	112900	137200	113000	109700	105300
2	74720	71670	73890	78950	87440	98230	111400	114300	136300	112700	109300	105900
3	74590	71360	74270	79820	88000	98720	112300	116100	135100	111500	109300	105500
4	74400	71170	74080	79620	88210	99200	112800	119100	133700	111200	109000	105200
5	74210	70980	74270	79820	88420	99570	112700	120200	131900	111200	109200	105200
6	74010	71050	74530	79950	88680	100000	112800	120500	130400	108600	109000	105100
7	74210	70670	74530	80420	88910	100400	112400	121800	128700	111000	108900	104800
8	73690	70420	74460	80550	89330	100800	112000	123700	127600	110900	108700	105000
9	73670	70690	74780	81360	89540	101400	111800	128500	126500	111100	108700	104900
10	73500	70920	74850	81290	90180	101700	112000	133800	125200	111000	108600	104600
11	73310	71170	74720	81290	90750	102300	111800	138500	123700	111100	108500	104300
12	73240	70860	75040	81830	90820	102900	111900	140600	122300	111200	108500	104000
13	72670	70800	76200	81830	91180	103000	112000	141900	121000	112000	108300	104700
14	73050	70800	76330	81960	91610	103200	112300	143100	119800	112800	108100	103900
15	72990	70670	76400	82090	92770	103600	111700	144200	118500	112800	107900	103600
16	72670	70420	76460	82430	92880	104300	111400	145400	117000	112600	107700	103400
17	72480	70730	76460	82700	93030	104300	111400	147700	115800	112300	107500	103300
18	72420	71170	76660	e83040	93100	104900	110900	149400	114600	112200	107300	103000
19	72300	71480	76860	e83380	93470	105300	111700	151000	114600	112100	107100	103100
20	72300	71480	76920	e83720	94200	105700	110900	150900	114100	111900	106900	102900
21	72110	72610	77250	84060	94560	106200	110800	150100	113900	111600	106600	102700
22	72110	71860	77380	84130	94850	106700	110500	149400	113000	111300	106200	102800
23	72110	72050	77710	84950	95220	107100	110700	148500	111600	110900	106200	102600
24	72110	73760	77120	85090	95580	107400	111100	147500	111600	110700	106800	102600
25	71980	73630	77770	85300	96160	107800	111400	146400	111400	110700	106500	102700
26	71920	73690	77840	85640	96310	108100	111600	145100	112100	110500	106300	102600
27	71800	73760	78040	85840	96670	108500	111700	143800	112700	110300	106200	102400
28	71980	73820	78040	86600	97040	108900	113000	142700	113200	110300	105900	102300
29	71800	73890	78500	86470	---	109700	112700	141700	113200	110200	105600	102000
30	71610	73890	79150	86600	---	110500	112700	140700	112300	110100	106100	101500
31	71800	---	78950	86950	---	111000	---	139000	---	109800	105600	---

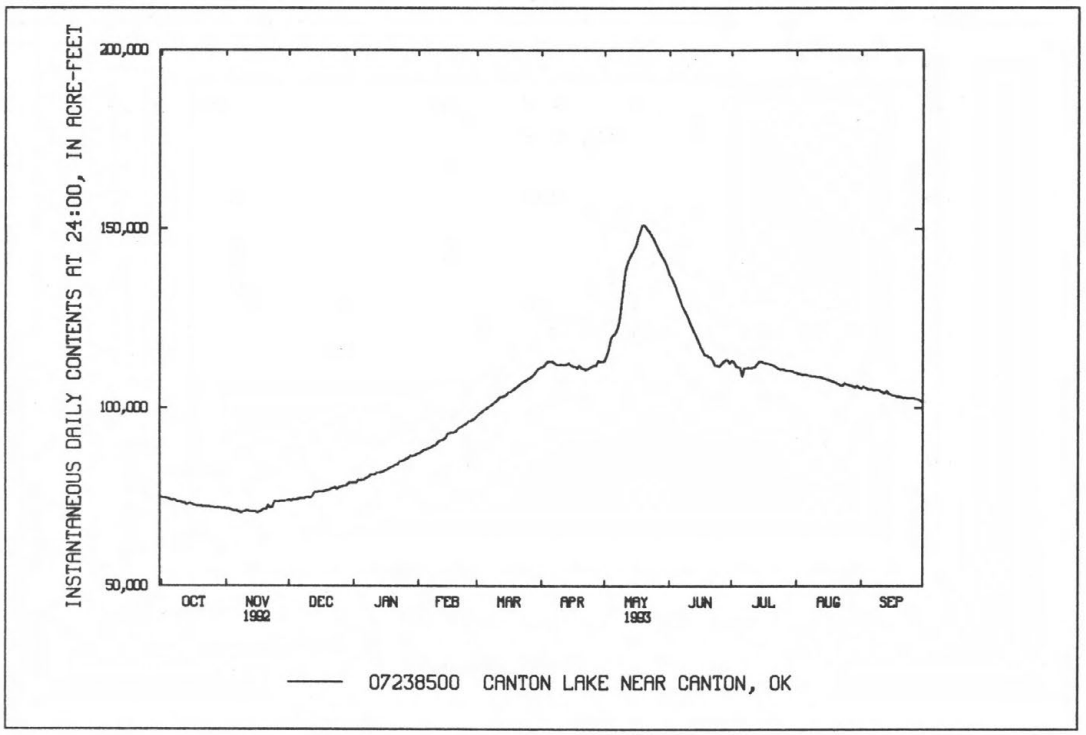
e Estimated

07238500 CANTON LAKE NEAR CANTON, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	74780	73890	79150	86950	97040	111000	113000	151000	137200	113000	109700	105900
MIN	71610	70420	73890	78950	87230	97710	110500	112900	111400	108600	105600	101500
(‡)	1609.83	1610.16	1610.94	1612.12	1613.53	1615.36	1615.58	1618.67	1615.53	1615.21	1614.66	1614.13
(‡‡)	-3,110	+2,090	+5,060	+8,000	+10,090	+13,960	+1,700	+26,300	-26,700	-2,500	-4,200	-4,100

CAL YR 1992 MAX 81020 MIN 62400 (‡‡) +14,300
WTR YR 1993 MAX 151000 MIN 70420 (‡‡) +26,590

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07239000 NORTH CANADIAN RIVER AT CANTON, OK

LOCATION.--Lat 36°04'37", long 98°35'47", in NE 1/4 SW 1/4 sec.33, T.19 N., R.13 W., Blaine County, Hydrologic Unit 11100301, on right bank 2,700 ft downstream from Canton Lake, 1.5 mi northwest of Canton, 4.8 mi upstream from Minnehaha Creek, and at mile 393.8.

DRAINAGE AREA.--12,484 mi^2, of which 4,883 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1937 to September 1993 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected in this vicinity since 1914 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,562.50 ft above sea level. Oct. 1, 1937 to Jan. 5, 1955, water-stage recorder at site 2.5 mi downstream at datum 1.91 ft lower prior to Oct. 1, 1950 and at datum 6.91 ft lower thereafter.

REMARKS.--Records good. Flow partly regulated by Fort Supply Lake for period May 1942 to April 1948 and completely regulated thereafter by Canton Lake. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 13, 1923, reached a stage of 16.8 ft, at site 300 ft upstream from former site at datum 1.91 ft lower than present datum, from reports of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	14	14	17	16	18	15	374	882	356	29	26
2	13	15	14	18	16	18	15	237	868	356	28	26
3	12	14	13	18	16	18	14	27	859	350	27	26
4	14	13	13	17	16	17	15	92	900	341	27	26
5	14	13	14	17	17	17	184	434	921	329	27	26
6	12	13	14	16	17	17	370	635	903	189	27	26
7	14	13	14	16	17	17	373	641	889	89	27	26
8	15	13	14	16	16	17	371	228	875	90	27	26
9	15	13	14	17	16	16	286	55	895	53	26	26
10	15	13	14	17	16	14	226	e31	911	27	27	26
11	15	12	14	17	16	15	226	e59	895	27	27	26
12	15	11	14	16	16	16	226	e86	878	27	27	26
13	15	12	15	15	16	17	224	86	862	28	27	26
14	14	13	15	15	16	17	223	85	848	28	26	26
15	13	13	15	15	18	17	218	80	828	86	27	26
16	13	13	15	15	17	17	215	45	805	126	26	26
17	13	15	15	15	17	18	214	94	784	126	26	26
18	12	14	16	15	17	18	213	49	709	126	26	26
19	12	15	15	15	17	19	216	312	539	126	26	26
20	12	14	15	16	18	18	183	857	529	126	26	24
21	13	15	15	16	18	17	159	975	523	126	25	25
22	11	14	15	16	18	18	147	975	631	126	25	25
23	13	13	15	15	17	15	74	972	718	78	25	24
24	13	16	14	15	18	16	34	969	369	28	26	23
25	14	15	14	16	18	19	33	961	103	28	25	24
26	14	14	14	16	18	20	32	952	102	28	25	25
27	13	13	15	16	18	19	33	940	99	28	25	25
28	11	13	16	16	18	18	31	931	129	33	25	25
29	12	13	17	16	---	19	123	924	264	31	25	25
30	12	14	17	16	---	17	292	912	356	30	25	26
31	13	---	17	16	---	16	---	901	---	30	26	---
TOTAL	412	406	456	497	474	535	4985	14919	19874	3572	813	765
MEAN	13.3	13.5	14.7	16.0	16.9	17.3	166	481	662	115	26.2	25.5
MAX	15	16	17	18	18	20	373	975	921	356	29	26
MIN	11	11	13	15	16	14	14	27	99	27	25	23
AC-FT	817	805	904	986	940	1060	9890	29590	39420	7090	1610	1520

e Estimated

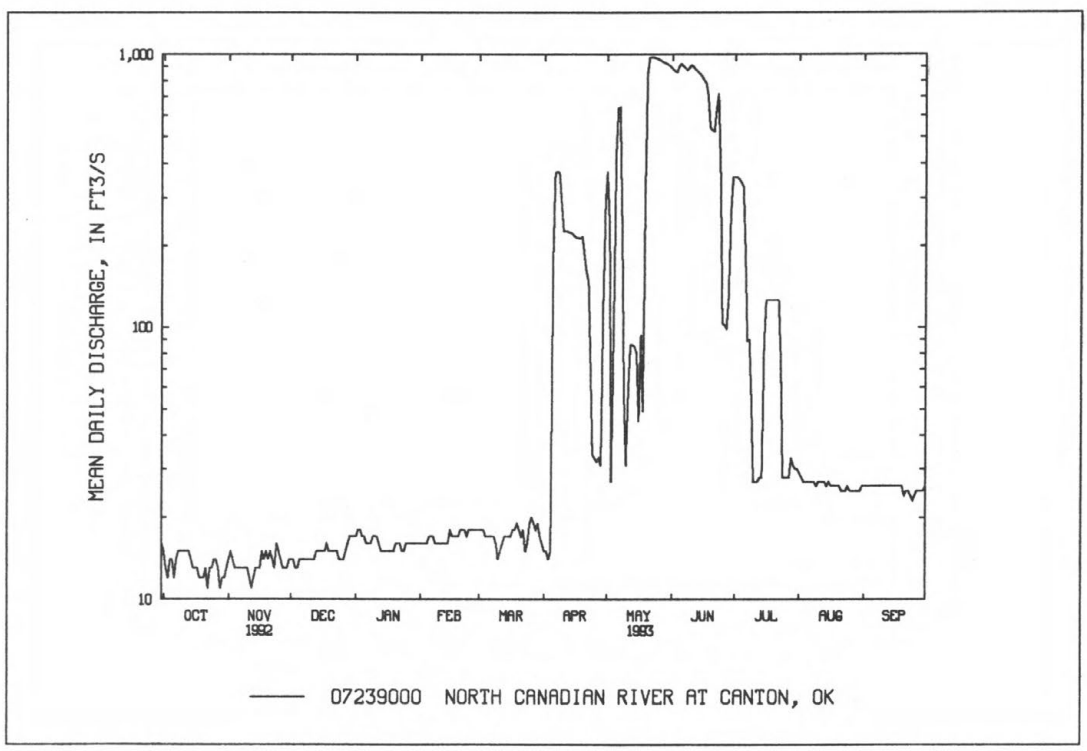
07239000 NORTH CANADIAN RIVER AT CANTON, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.7	74.5	63.9	59.3	85.6	121	165	203	398	270	166	172
MAX	1155	558	566	284	406	513	683	1187	3259	2781	2713	2881
(WY)	1951	1975	1978	1976	1960	1988	1973	1949	1949	1951	1950	1950
MIN	.006	.27	.31	.40	.72	.35	.59	2.52	5.28	2.07	.34	.34
(WY)	1949	1955	1955	1955	1955	1955	1955	1971	1970	1954	1954	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1949-93	
ANNUAL TOTAL	10092.6		47708			
ANNUAL MEAN	27.6		131		[a]156	
HIGHEST ANNUAL MEAN					782	1951
LOWEST ANNUAL MEAN					27.2	1985
HIGHEST DAILY MEAN	267	Jan 12	975	May 21,22	3940	Jun 10 1949
LOWEST DAILY MEAN	9.0	Apr 13	11	at times	[b].00	Oct 2 1948
ANNUAL SEVEN-DAY MINIMUM	10	Apr 8	12	Oct 16	.00	Oct 2 1948
INSTANTANEOUS PEAK FLOW			976	May 20-22	[c]4020	Jun 11 1949
INSTANTANEOUS PEAK STAGE			8.14	May 20-22	[d]9.86	Jun 11 1949
ANNUAL RUNOFF (AC-FT)	20020		94630		112800	
10 PERCENT EXCEEDS	18		525		477	
50 PERCENT EXCEEDS	15		19		13	
90 PERCENT EXCEEDS	12		13		2.8	

[a]Prior to regulation, water years 1938-48, 256 ft^3/s.
[b]Minimum daily discharge for period of record, no flow at times in 1938-49, 1954-55.
[c]Maximum discharge for period of record, 24,8000 ft3/s, Oct. 12, 1946.
[d]Maximum gage height for period of record, 12.83 ft, at former site and datum.



07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK

LOCATION.--Lat 35°48'43", long 98°25'14", NE 1/4, NE 1/4, sec.1, T.15 N., R.12 W., Blaine County, Hydrologic Unit 11100301, near right abutment on downstream side of U.S. Highway 281, 2.0 mi south of intersection of U.S. Highway 281 and State Highway 33 and at mile 361.2.

DRAINAGE AREA.--12,736 mi^2, of which 4,899 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,453.60 ft above sea level (Oklahoma State Highway Department benchmark).

REMARKS.--No estimated daily discharges. Records good. Considerable regulation by Canton Lake (07238500) 33 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

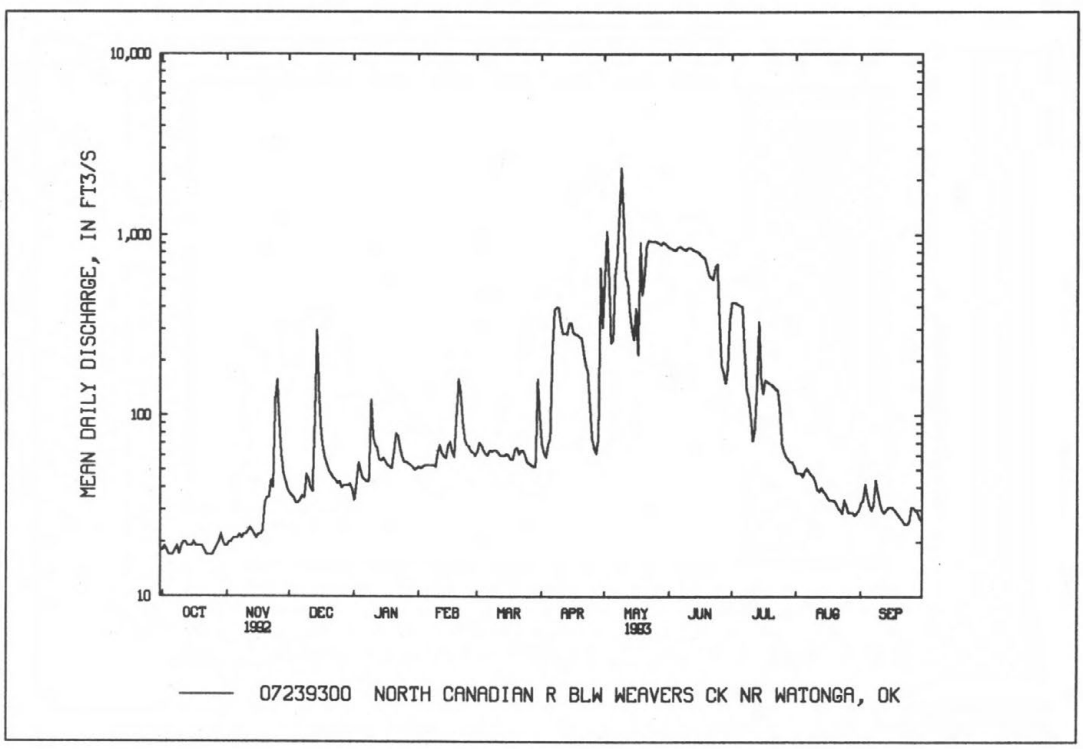
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	19	37	34	52	63	69	561	853	422	48	33
2	19	20	36	42	51	70	62	1060	844	425	48	34
3	18	20	35	55	52	68	59	597	829	422	48	42
4	17	21	33	50	53	64	69	252	824	413	46	36
5	17	21	33	45	53	61	75	260	851	406	49	32
6	17	21	34	44	53	60	228	608	863	403	51	30
7	18	22	36	43	53	64	387	767	851	228	49	32
8	19	21	35	43	53	63	399	1350	834	139	47	44
9	17	22	47	123	52	64	398	2360	825	125	46	38
10	19	22	45	77	62	64	323	1230	853	100	43	33
11	20	23	40	68	68	62	284	587	852	72	39	30
12	20	24	38	66	62	60	284	549	836	84	38	29
13	19	23	95	57	59	60	282	383	819	149	40	30
14	19	22	298	56	58	60	325	303	811	333	38	31
15	19	21	135	58	68	61	327	260	801	156	37	31
16	20	22	83	55	71	60	288	396	777	132	35	31
17	19	22	65	53	62	57	281	215	759	157	34	30
18	19	23	57	52	59	57	278	909	744	153	34	29
19	19	33	53	51	100	65	272	465	675	150	34	28
20	19	35	49	62	159	66	267	587	602	148	33	27
21	18	35	47	79	135	61	220	877	581	144	31	26
22	17	44	45	77	91	64	189	936	572	140	30	25
23	17	40	44	66	73	64	173	926	668	138	29	25
24	17	124	42	59	68	60	114	923	691	110	34	26
25	17	158	43	55	67	55	75	927	339	69	32	31
26	18	91	40	55	63	54	66	916	188	63	29	31
27	19	60	41	54	62	53	62	901	171	59	29	30
28	20	48	41	53	60	52	74	887	151	57	29	29
29	22	43	41	52	---	52	659	912	181	55	28	27
30	20	39	42	50	---	159	306	895	343	55	29	26
31	19	---	39	51	---	100	---	873	---	52	30	---
TOTAL	576	1139	1749	1785	1919	2023	6895	23672	19988	5559	1167	926
MEAN	18.6	38.0	56.4	57.6	68.5	65.3	230	764	666	179	37.6	30.9
MAX	22	158	298	123	159	159	659	2360	863	425	51	44
MIN	17	19	33	34	51	52	59	215	151	52	28	25
AC-FT	1140	2260	3470	3540	3810	4010	13680	46950	39650	11030	2310	1840

07239300 NORTH CANADIAN RIVER BELOW WEAVERS CREEK NEAR WATONGA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	103	100	102	126	153	205	275	258	333	219	180	128
MAX	604	437	278	382	479	597	746	764	944	895	610	666
(WY)	1987	1987	1987	1988	1987	1988	1987	1993	1987	1989	1984	1986
MIN	10.2	9.97	13.4	11.4	14.0	24.2	24.2	10.4	18.8	10.1	25.5	9.48
(WY)	1985	1985	1985	1985	1985	1985	1985	1985	1985	1985	1992	1985

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1984-93	
ANNUAL TOTAL	17921		67398			
ANNUAL MEAN	49.0		185		182	
HIGHEST ANNUAL MEAN					443	1987
LOWEST ANNUAL MEAN					32.1	1985
HIGHEST DAILY MEAN	352	Jun 11	2360	May 9	7540	Oct 3 1986
LOWEST DAILY MEAN	16	Sep 18	17	several days	5.0	Sep 26,27 1985
ANNUAL SEVEN-DAY MINIMUM	17	Sep 17	18	Oct 3	5.5	Sep 14 1985
INSTANTANEOUS PEAK FLOW			3720	May 9	9740	Oct 3 1986
INSTANTANEOUS PEAK STAGE			16.64	May 9	19.24	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	35550		133700		131600	
10 PERCENT EXCEEDS	97		681		597	
50 PERCENT EXCEEDS	33		57		46	
90 PERCENT EXCEEDS	19		21		14	



07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK

LOCATION.--Lat 35°37'01", long 98°03'54", in NW 1/4 SW 1/4 of sec.9, T.13 N., R.8 W., Canadian County, Hydrologic Unit 11100301, near left bank on downstream side of county road bridge, 1 mi north and 3 mi east of Calumet, and at mile 320.7.

DRAINAGE AREA.--12,962 mi^2, of which 4,899 is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,326.89 ft above sea level.

REMARKS.--Records poor. Some regulation by Canton Lake (station 07238500). U.S. Geological Survey's satellite telemeter located at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	22	146	90	75	101	180	835	e1000	392	79	e34
2	19	20	129	89	76	112	112	1830	e998	483	77	e34
3	19	20	118	93	75	127	91	2330	1000	476	74	e38
4	19	20	110	140	90	119	86	1340	968	464	73	e45
5	18	20	104	142	156	103	91	864	e1020	456	70	e39
6	18	20	101	117	174	96	104	676	e1020	454	73	e38
7	18	21	98	113	129	92	187	1060	1030	492	75	37
8	18	22	101	107	101	91	346	2440	e1020	578	73	e37
9	18	22	189	406	88	89	383	7230	e1020	307	69	e36
10	18	22	381	571	84	89	398	8430	e1030	231	66	e35
11	18	28	224	319	94	86	342	6430	e1020	190	62	e35
12	18	46	165	237	111	83	287	e4100	e1030	147	59	e40
13	18	35	166	203	97	81	279	e1200	e1020	163	e54	75
14	18	29	1050	174	86	80	341	e880	e990	332	e52	88
15	17	27	850	138	90	79	872	e700	980	693	e50	65
16	18	25	475	128	112	81	632	e980	e970	353	e47	e52
17	18	25	314	126	133	80	437	1150	e960	223	e45	46
18	18	26	245	116	133	79	365	493	e910	220	e44	e43
19	18	109	202	105	190	81	337	1270	e905	205	e42	e41
20	19	164	177	105	e620	99	306	586	e880	194	e41	e39
21	18	109	158	223	e620	102	296	740	e770	185	e39	e38
22	18	133	142	281	420	96	e276	e1000	e720	178	e38	e37
23	18	154	130	216	199	130	e242	1450	e790	173	e37	e35
24	17	168	117	157	146	115	e233	e1640	849	166	37	e34
25	16	922	110	119	130	93	e207	e1400	1930	151	e36	e33
26	17	665	106	104	122	83	e155	e1170	987	112	e36	e32
27	17	294	104	95	108	79	e135	1050	779	99	e35	e32
28	17	220	98	90	104	76	127	e1040	462	92	e35	e31
29	21	203	98	87	---	74	e1060	e1300	341	89	e34	e31
30	24	168	97	81	---	112	1390	e1400	297	83	e34	e30
31	24	---	94	76	---	224	---	e1200	---	81	e34	---
TOTAL	571	3759	6599	5048	4563	3032	10297	58214	27696	8462	1620	1230
MEAN	18.4	125	213	163	163	97.8	343	1878	923	273	52.3	41.0
MAX	24	922	1050	571	620	224	1390	8430	1930	693	79	88
MIN	16	20	94	76	75	74	86	493	297	81	34	30
AC-FT	1130	7460	13090	10010	9050	6010	20420	115500	54940	16780	3210	2440

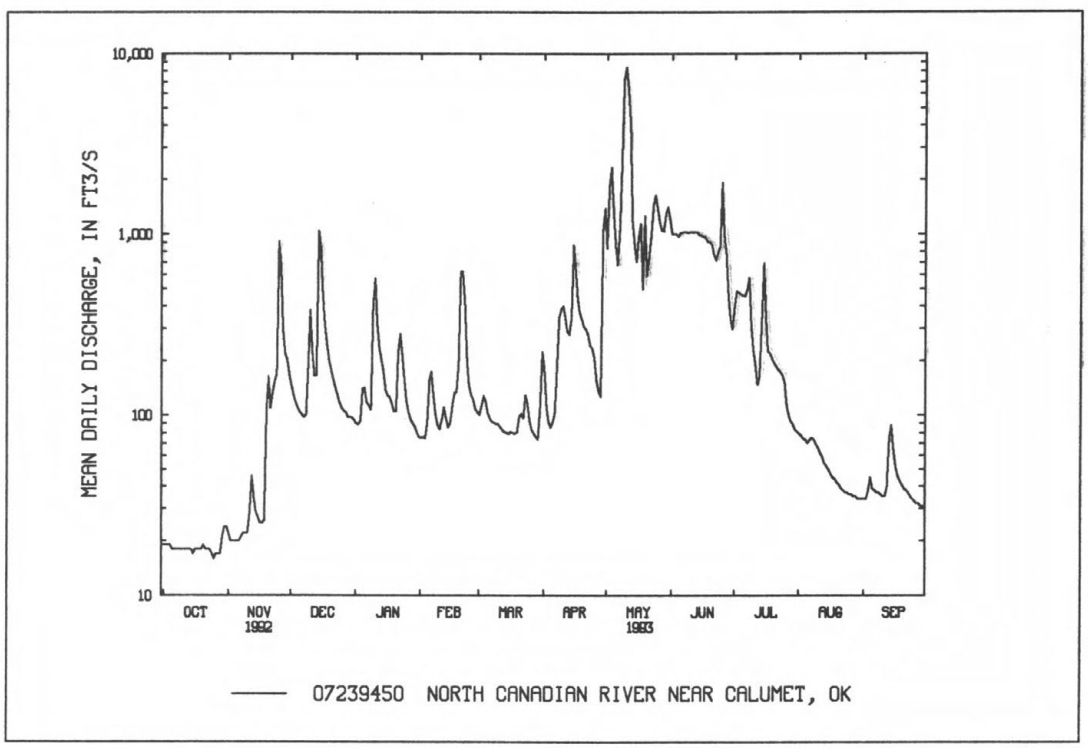
e Estimated

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	65.5	80.5	120	127	141	209	257	603	548	260	180	159
MAX	155	136	213	275	334	716	703	1878	957	860	518	535
(WY)	1990	1990	1993	1990	1990	1990	1990	1993	1989	1989	1989	1989
MIN	18.4	27.9	28.5	35.0	28.8	28.8	32.6	38.5	169	38.8	49.8	26.3
(WY)	1993	1991	1991	1989	1991	1991	1991	1992	1992	1991	1990	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1989-93	
ANNUAL TOTAL	33767		131091			
ANNUAL MEAN	92.3		359		230	
HIGHEST ANNUAL MEAN					359	1993
LOWEST ANNUAL MEAN					85.3	1992
HIGHEST DAILY MEAN	1050	Dec 14	8430	May 10	8430	May 10 1993
LOWEST DAILY MEAN	16	Oct 25	16	Oct 25	14	Aug 10-13 1991
ANNUAL SEVEN-DAY MINIMUM	17	Oct 22	17	Oct 22	15	Aug 8 1991
INSTANTANEOUS PEAK FLOW			9310	May 10	9310	May 10 1993
INSTANTANEOUS PEAK STAGE			19.60	May 10	19.60	May 10 1993
ANNUAL RUNOFF (AC-FT)	66980		260000		166300	
10 PERCENT EXCEEDS	186		1000		689	
50 PERCENT EXCEEDS	61		111		79	
90 PERCENT EXCEEDS	20		22		27	



07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--August 1988 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

pH: October 1988 to current year.

WATER TEMPERATURE: October 1988 to current year.

DISSOLVED OXYGEN: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1988.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments. Samples were collected monthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,930 microsiemens, Oct. 21,1991; minimum, 153 microsiemens, Mar. 11, 1990.

pH: Maximum, 9.4 units, Sept. 25, 1989; minimum, 7.1 units, Nov. 6, 1988.

WATER TEMPERATURE: Maximum, 39.0°C, July 2, 1990; minimum, 0.0°C, several days during winter period.

DISSOLVED OXYGEN: Maximum, 15.0 mg/l, March 23, 1989; minimum, 3.1 mg/l, July 15, 1989.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,870 microsiements, Oct. 8; minimum, 205 microsiemens, Dec. 15.

pH: Maximum, 8.9 units, Sept. 28; minimum, 7.5 units, May 9.

WATER TEMPERATURE: Maximum 34°C, July 30; minimum, 0.5°C, Jan. 10, 11, 13, Feb. 16. 17.

DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 14.2 mg/l, Jan. 23; minimum recorded, 3.5 mg/l, April 30.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
MAY											
07...	1200	8.00	20.0	724	1028	1028	1110	9.15	1470	7.6	8.1
07...	1204	16.0	20.0	724	1028	1028	1120	9.16	1470	7.6	8.0
07...	1208	24.0	20.0	724	1028	1028	1120	9.17	1470	7.6	8.0
07...	1212	32.0	20.0	724	1028	1028	1120	9.18	1470	7.5	8.1
07...	1216	40.0	20.0	724	1028	1028	1130	9.19	1470	7.5	8.1
07...	1220	48.0	20.0	724	1028	1028	1130	9.20	1470	7.5	8.0
07...	1224	56.0	20.0	724	1028	1028	1140	9.21	1470	7.4	8.0
07...	1228	64.0	20.0	724	1028	1028	1140	9.22	1470	7.4	8.0
07...	1232	72.0	20.0	724	1028	1028	1150	9.23	1470	7.4	8.0
07...	1236	80.0	20.0	724	1028	1028	1150	9.24	1480	7.4	8.0

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV												
17...	1000	1028	80020	25	1560	8.4	14.5	12.5	3.9	730	9.6	95
DEC												
08...	0930	1028	80020	98	1660	8.5	-0.5	2.5	6.4	740	11.8	90
JAN												
06...	1015	1028	80020	117	1560	8.5	0.5	3.0	7.7	735	12.7	98
FEB												
23...	1200	1028	80020	219	1070	8.0	1.5	6.0	53	735	11.3	95
MAR												
16...	1130	1028	80020	78	1660	8.4	19.0	12.0	4.7	726	11.0	108
APR												
13...	1030	1028	80020	282	1710	8.3	11.5	16.5	55	723	8.4	91
MAY												
18...	1050	1028	80020	490	1070	8.0	21.0	21.5	62	730	6.8	81
JUN												
15...	0930	1028	80020	980	1610	8.2	23.5	24.5	42	735	7.2	90
JUL												
13...	1015	1028	80020	135	1610	8.3	22.5	25.0	12	729	6.8	86
AUG												
24...	0900	1028	80020	37	1680	8.2	22.5	22.5	2.6	725	7.8	95
SEP												
07...	1230	1028	80020	37	1450	8.0	21.5	22.5	1.8	735	9.8	118

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
NOV												
17...	--	0.5	240	290	430	170	96	46	160	44	3	5.5
DEC												
08...	1.1	2.1	230	180	--	--	--	--	--	--	--	--
JAN												
06...	1.2	0.7	270	K2000	--	--	--	--	--	--	--	--
FEB												
23...	1.0	0.6	380	430	320	91	77	32	94	38	2	5.7
MAR												
16...	0.49	0.9	--	K19	--	--	--	--	--	--	--	--
APR												
13...	--	--	300	100	--	--	--	--	--	--	--	--
MAY												
18...	0.92	2.5	1300	3300	--	--	--	--	--	--	--	--
JUN												
15...	0.58	--	74	4400	450	260	110	43	160	43	3	6.2
JUL												
13...	--	9.1	200	350	--	--	--	--	--	--	--	--
AUG												
24...	--	--	140	350	470	250	100	53	180	45	4	5.9
SEP												
07...	--	1.7	65	110	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
NOV												
17...	305	9	264	300	190	0.70	2.8	974	962	1.32	65.7	6
DEC												
08...	393	7	334	--	--	--	--	--	--	--	--	19
JAN												
06...	368	10	318	--	--	--	--	--	--	--	--	--
FEB												
23...	285	0	233	210	91	0.40	9.8	652	663	0.89	386	43
MAR												
16...	385	6	325	--	--	--	--	--	--	--	--	15
APR												
13...	245	0	201	--	--	--	--	--	--	--	--	201
MAY												
18...	287	0	235	--	--	--	--	--	--	--	--	162
JUN												
15...	238	0	195	310	220	0.60	9.5	--	979	1.33	2590	442
JUL												
13...	317	0	260	--	--	--	--	--	--	--	--	84
AUG												
24...	268	0	220	370	200	0.70	5.8	1090	1050	1.48	109	7
SEP												
07...	249	0	205	--	--	--	--	--	--	--	--	12

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)
NOV											
17...	--	--	--	0.020	0.07	<0.050	0.030	0.04	0.27	0.30	0.090
DEC											
08...	0.470	0.470	2.1	0.060	0.20	0.530	0.310	0.40	0.29	0.60	0.130
JAN											
06...	0.530	0.530	2.3	0.040	0.13	0.570	0.160	0.21	0.44	0.60	0.120
FEB											
23...	0.470	0.470	2.1	0.030	0.10	0.500	0.080	0.10	0.42	0.50	0.110
MAR											
16...	0.180	0.180	0.80	0.010	0.03	0.190	0.030	0.04	0.27	0.30	0.070
APR											
13...	--	--	--	<0.010	--	<0.050	0.010	0.01	0.39	0.40	0.020
MAY											
18...	0.300	0.300	1.3	0.020	0.07	0.320	0.070	0.09	0.53	0.60	0.140
JUN											
15...	0.180	--	--	<0.010	--	0.180	0.040	0.05	0.36	0.40	0.060
JUL											
13...	--	--	--	<0.010	--	<0.050	0.030	0.04	0.37	0.40	<0.010
AUG											
24...	--	--	--	<0.010	--	<0.050	0.020	0.03	0.38	0.40	0.020
SEP											
07...	--	--	--	<0.010	--	<0.050	0.060	0.08	0.44	0.50	0.050

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)
NOV											
17...	0.090	0.28	2	120	<0.5	<1.0	<5	<3	<10	12	<10
DEC											
08...	0.150	0.46	--	--	--	--	--	--	--	--	--
JAN											
06...	0.120	0.37	--	--	--	--	--	--	--	--	--
FEB											
23...	0.100	0.31	2	99	<0.5	<1.0	<5	<3	<10	6	<10
MAR											
16...	0.050	0.15	--	--	--	--	--	--	--	--	--
APR											
13...	0.030	0.09	--	--	--	--	--	--	--	--	--
MAY											
18...	0.130	0.40	--	--	--	--	--	--	--	--	--
JUN											
15...	0.040	0.12	4	150	<0.5	<1.0	<5	<3	<10	12	<10
JUL											
13...	<0.010	--	--	--	--	--	--	--	--	--	--
AUG											
24...	0.020	0.06	5	110	0.6	<1.0	<5	<3	<10	<3	<10
SEP											
07...	0.030	0.09	--	--	--	--	--	--	--	--	--

DATE	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
NOV											
17...	42	16	<0.1	<10	<10	<1	<1.0	1200	<6	<3	6.5
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	21	5	--	<10	<10	<1	<1.0	670	<6	3	--
MAR											
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
13...	--	--	--	--	--	--	--	--	--	--	--
MAY											
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	38	3	--	<10	<10	<1	<1.0	1200	9	9	--
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
24...	54	18	--	<10	<10	<1	1.0	1300	<6	8	--
SEP											
07...	--	--	--	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	BROM-ACIL WATER WHLREC (UG/L (30234)	BUTA-CHLOR WATER WHLREC (UG/L (30235)	BUTYL-ATE WATER WHLREC (UG/L (30236)	CARBO-IN ATER HOLE RECOV-ERABLE (UG/L (30245)	CYCLO-ATE ATER HOLE RECOV-ERABLE (UG/L (30254)	DIPHEN-AMID WATER WHOLE RECOV-ERABLE (UG/L) (30255)	PCB, TOTAL (UG/L) (39516)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39519)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L) (39250)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39251)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)
NOV												
17...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20	<0.20
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20	<0.20
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20	<0.20
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
24...	1.2	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<1	<0.10	<1.0	<0.20	<0.20
SEP												
07...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PROPA-CHLOR WATER WHOLE RECOV. (UG/L) (30295)	TER-BACIL WATER WHOLE RECOV. (UG/L) (30311)	VER-NOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALA-CHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL (UG/L) (39330)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG) (39333)	AME-TRYNE TOTAL (82184)	ATRA-ZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRA-ZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	CHLOR-DANE, TOTAL (UG/L) (39350)
NOV												
17...	<0.10	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1	<0.20	<0.20	<0.1
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	<0.10	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1	<0.20	<0.20	<0.1
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	<0.10	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	<0.1	<0.20	<0.20	<0.1
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
24...	<0.10	<0.10	<0.20	<0.10	<0.10	<0.001	<0.1	<0.10	0.1	<0.20	<0.20	<0.1
SEP												
07...	--	--	--	--	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG) (39351)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)	CYANAZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG) (39363)	DDE, TOTAL (UG/L) (39365)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG) (39368)	DDT, TOTAL (UG/L) (39370)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG) (39373)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)
NOV 17...	<1.0	<0.01	<0.20	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01
DEC 08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	<1.0	<0.01	<0.20	0.39	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<1.0	<0.01	<0.20	0.03	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	<1.0	<0.01	<0.20	<0.01	<0.001	<0.1	<0.001	<0.1	<0.001	<0.1	<0.01	<0.01
SEP 07...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DIELDRIN TOTAL (UG/L) (39380)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) (39383)	DISYSTON TOTAL (UG/L) (39011)	ENDO-2, 4-DP TOTAL (UG/L) (82183)	ENDOSULFAN, TOTAL (UG/L) (39388)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG) (39389)	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG) (39393)	ETHION, TOTAL (UG/L) (39398)	HEPTACHLOR, TOTAL (UG/L) (39410)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG) (39413)	HEPTACHLOR EPOXIDE TOTAL (UG/L) (39420)
NOV 17...	<0.001	0.1	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001
DEC 08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	<0.001	0.1	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001
MAR 16...	--	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.001	<0.1	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	<0.001	<0.1	<0.01	<0.01	<0.001	<0.1	<0.001	<0.1	<0.01	<0.001	<0.1	<0.001
SEP 07...	--	--	--	--	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	LINDANE TOTAL (UG/L) (39340)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG) (39343)	MALATHION, TOTAL (UG/L) (39530)	METHOXYCHLOR, TOTAL (UG/L) (39480)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	METHYL PARATHION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG) (39758)	PARATHION, TOTAL (UG/L) (39540)	PERTHANE TOTAL (UG/L) (39034)	PERTHANE IN BOTTOM MATERIAL (UG/KG) (81886)
NOV												
17...	<0.1	<0.001	<0.1	<0.01	<0.01	<0.1	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	<0.1	<0.001	<0.1	<0.01	<0.01	<0.1	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	<0.1	<0.001	<0.1	<0.01	<0.01	<0.1	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
24...	<0.1	<0.001	<0.1	<0.01	<0.01	<0.1	<0.01	<0.01	<0.1	<0.01	<0.1	<1.00
SEP												
07...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (UG/L) (39023)	PROMETONE TOTAL (UG/L) (39056)	PROMETRYNE TOTAL (UG/L) (39057)	PROPAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMAZINE TOTAL (UG/L) (39055)	SIMETRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TOXAPHENE, TOTAL (UG/L) (39400)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG) (39403)	TRIFLURALIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRITHION (UG/L) (39786)
NOV												
17...	<0.01	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	<0.01	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	<0.01	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
24...	<0.01	0.30	<0.10	<0.10	<0.01	0.10	<0.10	<0.01	<1	<10	<0.10	<0.01
SEP												
07...	--	--	--	--	--	--	--	--	--	--	--	--

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1840	1750	1790	1500	1460	1480	1290	1170	1230	1520	1460	1500
2	1830	1740	1790	1570	1500	1530	1390	1300	1340	---	---	---
3	1830	1740	1790	1680	1580	1630	1450	1390	1420	---	---	---
4	1830	1720	1780	1730	1670	1700	1540	1460	1500	---	---	---
5	1800	1710	1760	1760	1660	1710	1580	1550	1560	---	---	---
6	1780	1710	1750	1720	1670	1690	1610	1570	1590	---	---	---
7	1840	1760	1790	---	---	---	1660	1610	1630	---	---	---
8	1870	1770	1820	---	---	---	1670	1580	1640	---	---	---
9	1840	1770	1810	1660	1630	1650	1570	1090	1450	---	---	---
10	1810	1720	1770	1690	1590	1640	1030	795	870	---	---	---
11	1820	1720	1770	1750	1200	1520	1020	866	915	---	---	---
12	1790	1700	1740	1440	891	1130	1250	1030	1150	---	---	---
13	1760	1670	1720	1350	974	1170	1300	1250	1290	---	---	---
14	1760	1690	1730	1420	1320	1360	---	---	---	---	---	---
15	1780	1710	1750	1530	1370	1440	336	205	235	---	---	---
16	1830	1770	1800	1590	1500	1540	500	344	400	---	---	---
17	1860	1770	1820	1580	1540	1560	754	510	614	---	---	---
18	1830	1730	1790	1620	1360	1570	---	---	---	---	---	---
19	1800	1730	1770	1320	454	930	---	---	---	---	---	---
20	1770	1660	1720	749	422	590	---	---	---	---	---	---
21	1730	1660	1700	747	639	685	---	---	---	---	---	---
22	1710	1640	1680	871	751	816	---	---	---	---	---	---
23	1700	1620	1660	913	844	873	---	---	---	1110	928	1020
24	1700	1620	1650	---	---	---	---	---	---	1330	1120	1240
25	1700	1610	1660	---	---	---	---	---	---	1500	1350	1430
26	1700	1650	1670	---	---	---	---	---	---	1570	1490	1520
27	1730	1650	1690	---	---	---	---	---	---	1610	1570	1590
28	1720	1490	1640	776	600	689	---	---	---	1620	1600	1610
29	1590	1500	1540	969	783	864	1520	1460	1480	1650	1620	1640
30	1720	1350	1520	1160	979	1060	1460	1350	1400	1650	1610	1640
31	1670	1470	1560	---	---	---	1520	1380	1450	1640	1600	1620
MONTH	1870	1350	1720	---	---	---	---	---	---	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1640	1610	1630	---	---	---	---	---	---	1150	724	879
2	1630	1580	1610	---	---	---	---	---	---	1350	650	1020
3	1580	1540	1570	---	---	---	---	---	---	750	615	674
4	1550	1390	1530	---	---	---	---	---	---	965	760	860
5	1390	910	1230	1440	1390	1410	---	---	---	1130	971	1050
6	1290	947	1170	1480	1450	1460	---	---	---	1320	1130	1220
7	---	---	---	1520	1490	1500	---	---	---	1570	1330	1440
8	1520	1410	1460	1530	1500	1520	---	---	---	1570	366	983
9	1510	1480	1490	1530	1480	1510	---	---	---	466	365	415
10	1500	1440	1470	1510	1480	1500	---	---	---	375	320	349
11	1510	1440	1470	1550	1490	1520	---	---	---	497	368	423
12	1530	1370	1450	1590	1550	1560	---	---	---	819	506	668
13	1450	1390	1410	1620	1580	1600	---	---	---	1100	790	942
14	1440	1390	1420	1640	1590	1610	1740	1400	1640	1350	1110	1240
15	1430	1340	1380	1630	1610	1620	1400	1040	1190	1360	1250	1310
16	1400	1330	1370	1610	1570	1600	1370	1060	1160	1400	866	1230
17	1340	1300	1320	1630	1590	1610	1590	1390	1490	866	574	663
18	---	---	---	1600	1570	1580	1640	1590	1620	1080	752	939
19	---	---	---	1580	1550	1560	1690	1640	1670	1080	466	661
20	---	---	---	1600	1540	1580	1710	1690	1700	651	496	574
21	---	---	---	1540	1460	1480	1740	1710	1730	963	664	784
22	---	---	---	1470	1400	1430	1760	1740	1750	1210	983	1120
23	---	---	---	1520	1120	1450	1760	1740	1750	1250	1110	1220
24	---	---	---	1470	1380	1410	1770	1750	1760	1060	860	932
25	---	---	---	1410	1370	1390	1770	1750	1760	1230	1030	1150
26	---	---	---	1420	1390	1410	1800	1760	1780	1280	1230	1260
27	---	---	---	1440	1420	1430	1810	1780	1790	1410	1280	1300
28	---	---	---	1460	1440	1450	1790	1680	1760	1340	1310	1330
29	---	---	---	---	---	---	1630	472	922	---	---	---
30	---	---	---	---	---	---	722	455	596	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1400	1270	1310	1580	1520	1540	1730	1660	1700	1590	1550	1570
2	1540	1400	1460	1580	1490	1540	1740	1670	1710	1600	1400	1550
3	1570	1540	1550	1600	1560	1580	1740	1700	1720	1550	1360	1450
4	---	---	---	1620	1570	1590	1720	1690	1710	1600	1480	1550
5	---	---	---	1660	1590	1620	1700	1670	1680	1500	1420	1470
6	---	---	---	1680	1620	1640	1680	1590	1620	1500	1380	1460
7	1650	1640	1640	1650	1430	1560	1620	1560	1600	1480	1380	1430
8	1670	1510	1650	1440	1040	1150	1570	1500	1520	1500	1330	1440
9	1670	1650	1660	1320	1150	1250	1560	1510	1540	1550	1360	1510
10	1670	1630	1660	1480	1290	1410	1720	1540	1580	1390	1190	1290
11	1680	1660	1670	1610	1440	1540	1630	1580	1610	1470	1220	1360
12	1680	1630	1660	1630	1520	1590	1670	1570	1620	1510	1340	1430
13	1670	1640	1660	1650	1560	1610	1700	1620	1660	1460	795	1090
14	1700	1640	1670	1630	633	902	1720	1650	1690	1010	870	946
15	1690	1600	1640	1050	472	678	1730	1680	1700	1300	944	1130
16	1630	1590	1610	751	550	635	1740	1680	1700	1430	236	1220
17	1640	1580	1610	1160	751	999	1720	1650	1690	1510	1430	1470
18	1640	1610	1620	1470	1150	1340	1740	1700	1720	1560	1510	1530
19	1630	1580	1610	1540	1430	1500	1750	1710	1730	1600	1560	1580
20	1620	1570	1590	1590	1510	1550	1760	1710	1740	1600	1590	1600
21	1610	1570	1590	1630	1560	1590	1750	1680	1710	1610	1590	1600
22	1620	1560	1600	1660	1610	1640	1760	1680	1720	1630	1610	1620
23	1620	1540	1580	1670	1630	1650	1730	1700	1710	1630	1600	1610
24	1660	1430	1600	1670	1630	1660	1720	1620	1670	1620	1600	1610
25	1430	595	875	1680	1640	1660	1660	1600	1630	1620	1460	1500
26	---	---	---	1710	1660	1680	1660	1590	1630	1500	1450	1480
27	---	---	---	1750	1690	1720	1660	1580	1620	1450	1350	1400
28	---	---	---	1770	1730	1740	1650	1580	1630	1420	1340	1380
29	---	---	---	1750	1710	1730	1680	1650	1660	1470	1420	1440
30	1540	1420	1480	1760	1710	1740	1680	1450	1610	1510	1450	1480
31	---	---	---	1760	1710	1730	1570	1440	1490	---	---	---
MONTH	---	---	---	1770	472	1480	1760	1440	1660	1630	236	1440

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.8	8.6	8.6	8.1	7.8	8.0	8.6	8.5	8.5	8.5	8.4	8.5
2	8.8	8.6	8.7	8.1	8.0	8.1	8.6	8.6	8.6	8.4	8.4	8.4
3	8.8	8.6	8.7	8.3	8.0	8.1	8.6	8.6	8.6	8.5	8.4	8.4
4	8.8	8.6	8.6	8.5	8.3	8.4	8.6	8.6	8.6	8.5	8.5	8.5
5	8.8	8.6	8.7	8.5	8.5	8.5	8.6	8.6	8.6	8.5	8.5	8.5
6	8.8	8.6	8.6	8.5	8.4	8.5	8.6	8.6	8.6	8.6	8.4	8.5
7	8.8	8.5	8.6	---	---	---	8.6	8.6	8.6	8.6	8.5	8.5
8	8.8	8.6	8.6	---	---	---	8.6	8.6	8.6	8.6	8.5	8.5
9	8.7	8.6	8.6	---	---	---	8.6	8.3	8.6	8.5	8.0	8.5
10	8.7	8.6	8.6	---	---	---	8.3	8.2	8.3	8.1	7.9	8.0
11	8.7	8.5	8.6	8.5	8.3	8.4	8.4	8.3	8.3	8.2	8.0	8.2
12	8.6	8.6	8.6	8.3	8.0	8.1	8.5	8.4	8.4	8.3	8.2	8.3
13	8.6	8.4	8.5	8.3	8.1	8.2	8.5	8.5	8.5	8.4	8.3	8.4
14	8.6	8.4	8.5	8.5	8.3	8.4	---	---	---	8.4	8.4	8.4
15	8.6	8.4	8.5	8.5	8.3	8.4	---	---	---	8.4	8.4	8.4
16	8.6	8.4	8.5	8.6	8.4	8.5	8.2	8.1	8.1	8.4	8.4	8.4
17	8.6	8.5	8.5	8.6	8.3	8.5	8.3	8.2	8.3	8.4	8.3	8.4
18	8.6	8.5	8.5	8.5	8.4	8.4	8.4	8.3	8.4	8.3	8.3	8.3
19	8.6	8.4	8.5	8.4	7.8	8.1	---	---	---	8.3	8.3	8.3
20	8.6	8.4	8.5	8.0	7.8	8.0	---	---	---	8.3	8.3	8.3
21	8.6	8.4	8.5	8.1	8.0	8.0	8.6	8.5	8.5	8.4	8.2	8.3
22	8.5	8.4	8.5	8.1	8.0	8.1	8.6	8.5	8.5	8.4	8.2	8.4
23	8.6	8.3	8.4	8.3	8.1	8.2	8.6	8.6	8.6	8.4	8.3	8.4
24	8.6	8.4	8.5	---	---	---	8.6	8.6	8.6	8.4	8.3	8.3
25	8.6	8.4	8.5	---	---	---	8.6	8.6	8.6	8.4	8.3	8.4
26	8.4	8.2	8.3	---	---	---	8.6	8.6	8.6	8.4	8.4	8.4
27	8.3	8.0	8.2	---	---	---	8.6	8.6	8.6	8.4	8.4	8.4
28	8.1	7.7	8.0	8.4	8.3	8.3	8.6	8.4	8.6	8.4	8.4	8.4
29	8.5	7.7	8.3	8.5	8.4	8.4	8.5	8.5	8.5	8.5	8.4	8.4
30	8.4	8.2	8.3	8.5	8.5	8.5	8.6	8.5	8.5	8.5	8.3	8.3
31	8.3	7.8	8.2	---	---	---	8.6	8.5	8.6	8.3	8.3	8.3
MAX	8.8	8.6	8.7	---	---	---	---	---	---	8.6	8.5	8.5
MIN	8.1	7.7	8.0	---	---	---	---	---	---	8.1	7.9	8.0

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.3	8.3	8.3	---	---	---	8.3	8.1	8.1	8.1	7.8	7.9
2	8.4	8.3	8.3	---	---	---	8.6	8.3	8.5	8.2	7.8	7.9
3	8.3	8.3	8.3	---	---	---	8.7	8.6	8.6	7.9	7.8	7.9
4	8.3	8.2	8.3	---	---	---	8.6	8.6	8.6	8.1	7.9	8.0
5	8.3	8.2	8.2	8.4	8.3	8.3	8.6	8.6	8.6	8.2	8.1	8.2
6	8.2	8.2	8.2	8.3	8.3	8.3	8.6	8.5	8.6	8.1	8.1	8.1
7	---	---	---	8.3	8.2	8.3	8.5	8.2	8.4	8.2	8.0	8.1
8	8.3	8.2	8.3	8.3	8.3	8.3	8.2	8.1	8.2	8.2	7.5	7.7
9	8.3	8.3	8.3	8.4	8.3	8.3	---	---	---	7.6	7.4	7.5
10	8.3	8.2	8.3	8.5	8.4	8.4	---	---	---	7.8	7.6	7.7
11	8.3	8.2	8.2	8.5	8.4	8.5	---	---	---	7.8	7.8	7.8
12	8.3	8.2	8.3	8.6	8.5	8.5	---	---	---	8.1	7.8	8.0
13	8.2	8.2	8.2	8.6	8.4	8.5	---	---	---	8.2	8.1	8.1
14	8.2	8.2	8.2	8.5	8.4	8.4	8.4	8.2	8.3	8.2	8.1	8.1
15	8.2	8.2	8.2	8.5	8.4	8.4	8.2	7.9	8.0	8.2	8.1	8.1
16	8.2	8.2	8.2	8.5	8.3	8.4	8.2	7.7	7.9	8.2	7.8	8.1
17	8.2	8.0	8.2	8.5	8.5	8.5	8.4	8.3	8.4	7.9	7.6	7.8
18	---	---	---	8.5	8.4	8.5	8.4	8.4	8.4	8.1	7.9	8.0
19	---	---	---	8.5	8.4	8.4	8.4	8.3	8.4	8.1	7.7	7.8
20	---	---	---	8.5	8.4	8.4	8.4	8.3	8.3	8.0	7.8	7.9
21	---	---	---	8.4	8.4	8.4	8.3	8.2	8.3	8.1	8.0	8.1
22	---	---	---	8.4	8.3	8.3	8.3	8.1	8.2	8.1	8.1	8.1
23	---	---	---	8.6	8.4	8.4	8.3	8.1	8.2	8.1	7.8	8.1
24	---	---	---	8.6	8.6	8.6	8.2	8.1	8.2	8.1	7.8	7.9
25	---	---	---	8.7	8.5	8.6	8.3	8.1	8.2	8.1	8.0	8.1
26	---	---	---	8.6	8.6	8.6	8.2	8.2	8.2	8.1	8.1	8.1
27	---	---	---	8.6	8.6	8.6	8.3	8.2	8.2	8.2	8.1	8.1
28	---	---	---	8.6	8.5	8.5	8.5	8.2	8.3	8.3	8.1	8.2
29	---	---	---	8.6	8.4	8.5	8.5	7.9	8.0	---	---	---
30	---	---	---	8.4	8.2	8.4	8.0	7.7	7.8	---	---	---
31	---	---	---	8.3	8.1	8.2	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.3	8.2	8.3	8.5	8.1	8.3	8.5	8.2	8.3	8.1	8.0	8.1
2	8.4	8.3	8.4	8.6	8.3	8.4	8.5	8.2	8.3	8.0	7.9	8.0
3	---	---	---	8.7	8.4	8.5	8.4	8.3	8.3	8.0	7.9	7.9
4	---	---	---	8.7	8.5	8.5	8.5	8.2	8.4	8.0	8.0	8.0
5	---	---	---	8.7	8.4	8.5	8.5	8.3	8.4	8.0	7.9	8.0
6	---	---	---	8.7	8.4	8.5	8.6	8.3	8.4	8.1	7.9	8.0
7	8.4	8.3	8.3	8.6	8.5	8.5	8.5	8.4	8.5	8.0	7.9	8.0
8	8.3	8.3	8.3	8.5	8.2	8.3	8.6	8.3	8.4	8.3	7.9	8.0
9	8.3	8.3	8.3	8.6	8.3	8.5	8.6	8.3	8.4	8.3	8.1	8.2
10	8.3	8.3	8.3	8.7	8.2	8.5	8.6	8.4	8.5	8.3	8.0	8.1
11	8.4	8.3	8.3	8.6	8.2	8.4	8.5	8.3	8.4	8.3	8.1	8.2
12	8.4	8.3	8.3	8.6	8.2	8.4	8.5	8.3	8.4	8.3	8.1	8.2
13	8.3	8.2	8.3	8.6	8.2	8.3	8.5	8.3	8.4	8.2	7.9	8.0
14	8.2	8.2	8.2	8.3	8.1	8.1	8.5	8.3	8.4	8.1	8.0	8.1
15	8.2	8.2	8.2	8.3	8.0	8.1	8.5	8.3	8.4	8.4	8.1	8.2
16	8.3	8.2	8.2	8.3	8.1	8.2	8.5	8.3	8.4	8.4	8.3	8.3
17	8.3	8.2	8.3	8.8	8.3	8.5	8.5	8.3	8.4	8.6	8.4	8.4
18	8.3	8.2	8.2	8.6	8.3	8.5	8.4	8.2	8.3	8.6	8.4	8.4
19	8.2	8.2	8.2	8.5	8.3	8.4	8.3	8.1	8.2	8.6	8.3	8.4
20	8.2	8.2	8.2	8.5	8.2	8.3	8.5	8.2	8.3	8.6	8.3	8.4
21	8.3	8.2	8.2	8.5	8.1	8.3	8.5	8.3	8.4	8.6	8.3	8.4
22	8.4	8.2	8.3	8.5	8.2	8.3	8.5	8.3	8.4	8.7	8.3	8.5
23	8.4	8.2	8.3	8.5	8.2	8.3	8.4	8.2	8.3	8.7	8.3	8.5
24	8.4	8.2	8.3	8.5	8.2	8.3	8.5	8.2	8.3	8.7	8.3	8.5
25	8.1	7.4	7.6	8.4	8.2	8.3	8.4	8.1	8.3	8.7	8.3	8.5
26	---	---	---	8.4	8.1	8.3	8.1	8.0	8.1	8.7	8.4	8.6
27	---	---	---	8.4	8.2	8.3	8.0	7.9	8.0	8.8	8.6	8.7
28	---	---	---	8.4	8.2	8.3	8.1	7.9	7.9	8.9	8.6	8.7
29	---	---	---	8.4	8.1	8.3	8.1	7.9	8.0	8.8	8.6	8.7
30	---	---	---	8.4	8.2	8.3	8.0	7.9	7.9	8.7	8.4	8.5
31	---	---	---	8.4	8.2	8.3	8.1	7.9	8.0	---	---	---
MAX	---	---	---	8.8	8.5	8.5	8.6	8.4	8.5	8.9	8.6	8.7
MIN	---	---	---	8.3	8.0	8.1	8.0	7.9	7.9	8.0	7.9	7.9

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	15.0	19.0	16.0	11.0	13.5	7.0	3.5	5.0	2.5	1.0	1.5
2	24.0	15.0	19.5	15.5	8.5	12.0	7.0	4.0	5.0	3.5	1.0	2.0
3	24.0	15.0	19.5	13.0	8.5	11.5	7.0	4.5	5.5	7.5	3.5	6.0
4	24.5	15.0	20.0	11.5	5.5	8.0	5.5	3.5	4.5	7.5	5.0	6.5
5	23.0	16.0	19.5	11.5	4.0	8.0	3.5	1.0	2.0	4.5	3.5	4.0
6	23.5	16.5	20.0	10.0	7.0	8.5	4.5	.5	2.5	4.5	3.5	4.0
7	18.5	16.5	17.5	---	---	---	4.5	1.5	3.0	5.5	4.5	5.0
8	16.5	9.0	12.5	---	---	---	4.5	2.0	3.5	5.5	4.5	5.0
9	18.5	10.0	14.0	15.0	11.5	13.5	6.0	4.5	5.5	4.5	2.0	3.5
10	21.0	12.0	16.0	20.5	15.5	18.0	6.5	4.5	5.5	2.0	.5	1.0
11	21.0	12.0	16.0	15.5	10.5	12.5	6.0	4.5	5.5	1.5	.5	1.0
12	21.5	14.0	17.5	12.0	8.0	10.0	8.5	5.5	7.0	3.5	1.5	2.5
13	24.0	15.0	19.0	12.5	6.5	9.5	8.5	8.5	8.5	2.5	.5	1.5
14	22.5	15.0	18.5	13.5	7.0	10.0	---	---	---	1.5	1.0	1.0
15	19.5	14.5	17.0	14.5	7.5	11.0	---	---	---	3.0	1.5	2.5
16	17.0	11.0	14.0	15.5	8.5	12.0	3.0	2.0	3.0	6.0	3.0	4.0
17	16.0	10.0	12.5	15.5	11.5	13.5	4.0	2.5	3.5	5.0	4.0	4.5
18	18.5	10.0	14.0	15.5	12.5	14.0	6.0	3.0	4.0	4.0	2.0	3.0
19	18.0	11.5	14.5	14.0	10.5	12.0	---	---	---	2.0	1.5	1.5
20	22.5	13.5	17.0	10.5	10.0	10.0	---	---	---	3.5	1.5	2.5
21	23.0	16.0	19.0	10.0	6.5	9.0	6.0	3.5	5.0	5.0	3.0	4.0
22	23.0	16.0	19.5	6.5	5.0	6.0	7.5	4.5	6.0	6.0	3.0	4.5
23	22.0	16.5	19.0	7.5	5.0	6.5	7.5	5.0	6.0	7.5	5.0	6.0
24	22.5	15.0	18.5	---	---	---	5.5	3.0	4.5	5.5	3.5	4.5
25	22.0	15.0	18.5	---	---	---	6.0	3.5	4.5	6.0	3.0	4.5
26	19.0	13.5	17.0	---	---	---	5.0	2.0	3.5	7.0	3.5	5.0
27	19.5	12.5	15.5	---	---	---	6.5	3.5	5.5	8.5	4.5	6.5
28	19.5	13.0	16.0	4.0	1.0	2.5	8.5	5.0	6.5	8.5	6.0	7.0
29	17.5	13.0	15.5	5.5	2.5	4.0	13.0	9.0	11.0	6.5	3.5	5.0
30	14.0	12.0	13.0	6.0	3.0	4.5	15.0	12.0	13.0	7.0	3.5	5.0
31	18.0	12.0	15.0	---	---	---	11.5	3.0	6.5	9.0	4.5	6.5
MONTH	24.5	9.0	16.9	---	---	---	---	---	---	9.0	.5	3.9

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.0	5.5	7.5	---	---	---	13.0	10.0	11.0	22.0	19.5	20.5
2	9.5	6.0	8.0	---	---	---	13.5	8.5	11.0	20.5	14.0	17.0
3	9.0	8.0	8.5	---	---	---	13.0	11.0	12.0	16.5	13.5	15.0
4	8.0	6.5	7.5	---	---	---	12.0	9.5	11.0	20.5	16.5	18.0
5	6.5	5.5	6.0	10.0	5.0	7.5	11.0	9.0	10.0	21.0	20.0	20.5
6	8.0	4.5	6.0	11.0	7.0	8.5	10.5	9.0	10.0	20.0	19.0	19.5
7	---	---	---	13.0	7.0	10.0	15.5	10.5	13.0	20.5	19.0	20.0
8	11.0	7.0	9.0	15.5	9.5	12.0	14.5	12.5	13.5	20.5	16.5	18.5
9	12.0	8.5	10.0	16.0	11.0	13.5	17.5	12.0	14.0	16.5	15.5	16.0
10	12.0	10.5	11.0	14.5	11.0	12.5	17.5	13.5	15.0	16.0	14.5	15.0
11	10.0	5.5	8.0	11.5	8.5	10.5	19.0	15.0	17.0	15.5	14.5	15.0
12	7.0	4.0	5.5	8.5	5.5	7.5	21.5	17.0	19.0	17.0	15.0	16.0
13	8.0	5.0	6.0	8.5	3.5	6.0	19.5	17.0	18.0	20.0	17.0	18.5
14	7.0	5.0	6.0	11.0	4.0	7.5	17.5	10.5	14.0	22.0	18.5	20.0
15	5.0	2.5	3.5	10.0	7.0	9.0	11.0	9.0	10.0	24.0	20.5	22.0
16	3.0	.5	2.0	15.0	10.0	12.0	13.5	10.0	11.5	23.5	22.0	22.5
17	1.5	.5	.5	11.0	7.5	9.0	16.0	13.0	14.5	24.0	21.0	22.5
18	---	---	---	8.5	7.0	7.5	18.5	14.0	16.5	23.5	22.0	22.5
19	---	---	---	9.5	6.5	8.0	20.5	17.0	18.5	22.5	20.0	21.0
20	---	---	---	11.0	8.5	9.5	18.5	15.0	16.5	21.5	20.0	20.5
21	---	---	---	11.5	9.0	10.0	18.5	14.5	16.5	21.5	19.5	20.5
22	---	---	---	15.0	10.5	12.5	19.0	14.5	17.0	21.5	19.5	20.5
23	---	---	---	15.5	10.5	13.0	17.5	15.5	16.5	21.5	20.5	21.0
24	---	---	---	18.5	12.0	15.0	20.5	15.5	18.0	22.5	20.0	21.5
25	---	---	---	17.0	13.0	15.0	22.5	17.0	19.5	22.5	21.5	22.0
26	---	---	---	17.5	11.0	14.5	23.0	17.0	20.0	23.0	20.5	22.0
27	---	---	---	18.0	12.0	15.0	23.0	17.0	20.0	24.0	21.5	23.0
28	---	---	---	20.5	14.0	17.0	20.5	18.0	18.5	24.5	22.5	23.5
29	---	---	---	21.5	16.5	18.5	18.5	16.0	17.5	---	---	---
30	---	---	---	19.0	16.0	17.5	21.0	18.5	20.0	---	---	---
31	---	---	---	16.0	13.0	14.5	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	23.0	8.5	15.3	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	27.5	25.5	27.0	29.0	25.5	27.0	26.0	20.0	22.0
2	25.5	22.0	23.5	28.5	25.0	26.5	30.0	24.5	27.0	29.0	21.5	24.5
3	25.5	24.0	25.0	27.5	25.5	26.5	30.5	23.5	26.5	28.5	20.0	24.0
4	---	---	---	26.5	24.0	25.5	26.5	22.5	24.5	29.0	19.5	24.0
5	---	---	---	27.5	24.5	26.0	24.0	22.0	23.0	29.0	20.5	24.5
6	---	---	---	27.0	25.0	26.0	24.0	20.0	21.5	24.5	21.0	22.5
7	25.0	24.0	24.5	26.5	24.5	25.5	28.0	19.5	23.5	28.0	20.0	23.0
8	25.5	23.5	24.0	28.0	25.0	26.0	29.5	23.0	25.5	25.0	20.0	22.5
9	25.0	23.5	24.5	29.0	24.5	26.5	29.5	24.0	26.0	27.5	18.5	22.5
10	24.0	23.0	23.5	30.0	25.5	27.5	32.0	24.0	27.5	27.5	21.0	24.0
11	25.5	23.5	24.5	30.0	25.0	27.5	32.5	25.0	28.5	27.5	19.5	23.0
12	26.5	24.5	25.0	30.0	24.5	27.0	33.5	23.0	28.0	28.5	20.5	24.0
13	26.0	24.5	25.0	30.0	24.5	27.5	33.5	25.0	29.0	24.5	19.5	23.0
14	26.5	25.0	26.0	27.5	25.0	26.0	32.5	25.0	28.5	21.0	15.5	18.0
15	26.5	24.5	25.5	26.0	23.5	25.0	32.0	24.0	28.0	23.0	14.5	18.0
16	26.5	24.5	25.5	29.5	25.0	27.0	33.0	24.0	28.0	23.5	15.0	18.5
17	27.0	25.5	26.0	30.5	25.5	28.0	32.5	24.5	28.0	25.0	16.5	20.5
18	26.5	25.0	26.0	31.5	26.0	28.5	32.5	24.0	28.0	25.5	18.0	21.0
19	26.5	24.5	25.5	32.0	27.0	29.5	31.5	24.5	28.0	28.0	20.0	23.5
20	27.0	24.5	25.5	32.0	27.0	29.5	33.0	24.0	28.0	28.5	20.5	24.0
21	28.0	25.0	26.5	31.5	27.5	29.5	32.0	24.0	28.0	29.5	20.5	24.5
22	28.0	26.0	27.0	31.0	26.5	29.0	31.5	24.0	27.5	30.0	22.0	25.5
23	29.0	26.5	28.0	31.0	26.0	28.5	29.5	23.5	25.5	25.5	21.0	23.0
24	28.5	26.0	27.5	31.0	25.5	28.0	31.0	22.0	26.0	24.5	19.5	21.5
25	---	---	---	31.5	25.5	28.0	32.0	23.5	27.5	26.0	19.0	22.0
26	---	---	---	32.0	25.5	28.5	32.5	23.5	27.5	22.0	18.5	20.5
27	---	---	---	30.5	24.0	27.0	32.5	24.0	28.0	24.0	15.5	19.5
28	---	---	---	33.0	25.0	28.5	32.0	24.0	27.5	25.5	17.0	21.0
29	---	---	---	33.0	26.5	29.5	32.0	24.0	27.5	24.0	17.0	20.0
30	29.0	25.0	27.0	34.0	26.5	30.0	32.0	23.0	26.5	24.0	16.5	20.0
31	---	---	---	33.0	26.5	29.5	23.5	20.0	21.0	---	---	---
MONTH	---	---	---	34.0	23.5	27.6	33.5	19.5	26.7	29.0	14.5	22.2

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	10.6	6.4	7.6	7.7	5.8	6.8	12.2	11.4	11.7	11.1	9.6	10.3
2	9.3	6.3	7.6	9.0	6.6	7.7	12.1	11.4	11.6	11.6	9.8	10.5
3	9.4	6.4	7.6	8.7	6.5	7.7	11.9	11.3	11.6	9.8	8.6	9.2
4	10.4	6.5	8.0	9.5	7.8	8.6	12.1	11.3	11.7	---	---	---
5	9.7	6.6	8.2	9.6	7.8	8.7	12.7	12.1	12.5	---	---	---
6	9.5	6.3	7.6	---	---	---	12.6	11.9	12.3	---	---	---
7	8.7	6.4	7.5	---	---	---	12.5	11.8	12.1	---	---	---
8	9.7	7.6	8.5	---	---	---	12.3	11.6	12.0	---	---	---
9	9.6	7.2	8.3	---	---	---	11.6	10.7	11.3	---	---	---
10	9.9	7.2	8.1	---	---	---	---	---	---	---	---	---
11	9.7	6.7	8.1	---	---	---	---	---	---	---	---	---
12	9.3	6.1	7.7	---	---	---	---	---	---	---	---	---
13	8.4	5.8	6.9	---	---	---	---	---	---	---	---	---
14	8.2	5.8	6.8	---	---	---	---	---	---	---	---	---
15	8.7	5.9	7.1	---	---	---	---	---	---	---	---	---
16	9.0	6.4	7.7	---	---	---	---	---	---	---	---	---
17	9.2	7.1	8.1	---	---	---	---	---	---	---	---	---
18	9.1	6.7	7.9	---	---	---	---	---	---	---	---	---
19	8.7	6.5	7.5	---	---	---	---	---	---	---	---	---
20	8.6	5.7	7.1	---	---	---	---	---	---	---	---	---
21	8.3	5.7	6.6	---	---	---	---	---	---	---	---	---
22	8.2	5.7	6.7	---	---	---	---	---	---	---	---	---
23	8.4	5.5	6.7	---	---	---	---	---	---	14.2	11.8	13.0
24	8.4	5.6	6.7	---	---	---	---	---	---	13.1	11.6	12.3
25	8.3	5.7	6.8	---	---	---	---	---	---	12.8	11.0	11.7
26	7.6	5.7	6.7	---	---	---	---	---	---	11.8	10.4	11.1
27	9.1	6.3	7.3	---	---	---	---	---	---	11.0	9.7	10.4
28	9.2	5.6	7.0	12.8	12.1	12.4	---	---	---	10.1	9.5	9.8
29	8.5	5.5	7.1	12.6	11.8	12.2	9.7	8.2	9.1	11.0	9.7	10.6
30	9.2	7.3	7.9	12.2	11.6	11.9	8.3	7.6	8.0	11.5	10.3	10.9
31	8.7	5.8	7.5	---	---	---	9.7	7.7	8.8	11.0	9.7	10.4
MONTH	10.6	5.5	7.4	---	---	---	---	---	---	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

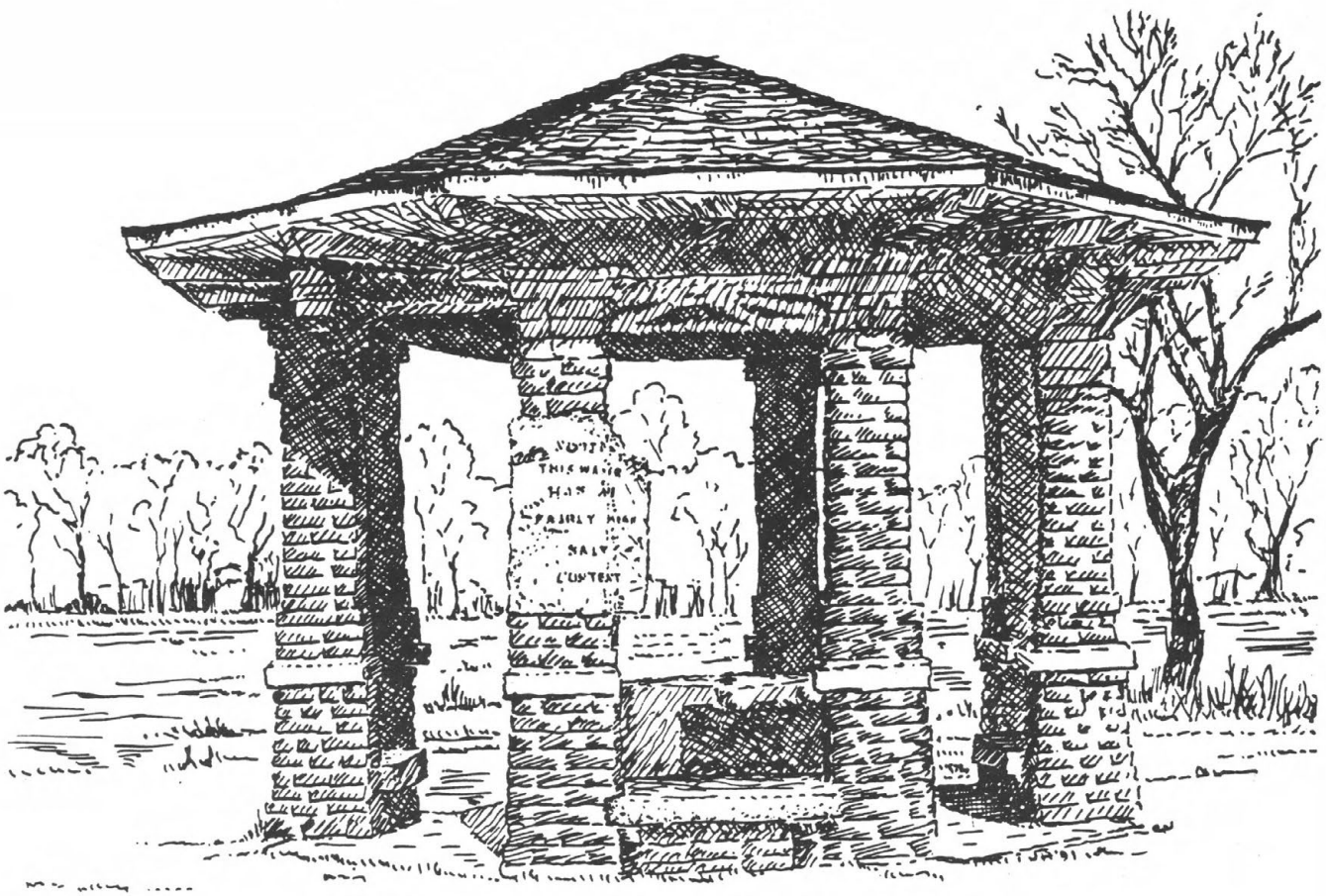
OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.6	9.4	9.9	---	---	---	---	---	---	5.5	4.7	5.1
2	---	---	---	---	---	---	---	---	---	5.9	5.3	5.6
3	---	---	---	---	---	---	12.4	10.9	11.7	8.2	5.8	6.1
4	---	---	---	---	---	---	12.7	11.3	12.0	7.7	6.0	6.4
5	---	---	---	---	---	---	13.8	12.1	12.9	7.2	6.0	6.2
6	---	---	---	---	---	---	12.9	11.3	12.3	7.3	6.4	6.9
7	---	---	---	---	---	---	11.5	8.5	10.4	7.9	6.0	6.4
8	---	---	---	---	---	---	9.7	8.5	9.2	5.5	4.9	5.2
9	---	---	---	---	---	---	11.7	9.1	10.2	6.0	4.8	5.4
10	---	---	---	---	---	---	11.8	10.5	11.3	6.6	5.7	6.1
11	---	---	---	---	---	---	11.7	9.8	10.9	6.5	6.2	6.3
12	---	---	---	---	---	---	11.2	9.2	10.1	9.1	6.1	6.5
13	---	---	---	---	---	---	10.1	8.7	9.4	7.0	6.4	6.7
14	---	---	---	---	---	---	9.9	8.6	9.4	7.8	6.5	6.9
15	---	---	---	---	---	---	---	---	---	8.2	6.8	7.4
16	---	---	---	---	---	---	---	---	---	8.7	5.5	7.3
17	---	---	---	---	---	---	10.9	9.9	10.4	6.2	5.1	5.4
18	---	---	---	---	---	---	10.8	8.9	10.0	7.5	6.2	6.8
19	---	---	---	---	---	---	10.8	8.6	9.4	6.8	5.7	6.2
20	---	---	---	---	---	---	10.8	9.0	9.9	7.3	6.4	7.0
21	---	---	---	---	---	---	10.6	8.9	9.8	7.8	7.2	7.5
22	---	---	---	---	---	---	10.5	8.6	9.5	7.9	7.4	7.6
23	---	---	---	---	---	---	10.6	8.5	9.5	8.6	6.6	7.3
24	---	---	---	---	---	---	10.9	8.3	9.7	8.4	6.5	7.1
25	---	---	---	---	---	---	10.2	7.6	9.0	8.1	6.9	7.2
26	---	---	---	---	---	---	12.4	7.6	9.0	7.9	7.2	7.5
27	---	---	---	---	---	---	11.2	7.5	8.7	7.7	7.0	7.4
28	---	---	---	---	---	---	9.1	7.3	8.2	8.0	7.0	7.4
29	---	---	---	---	---	---	7.4	3.6	5.1	---	---	---
30	---	---	---	---	---	---	6.0	3.5	4.1	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239450 NORTH CANADIAN RIVER NEAR CALUMET, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.5	6.9	7.2	9.7	5.8	7.6	---	---	---	10.0	6.5	7.9
2	7.8	6.8	7.3	9.4	6.3	7.5	---	---	---	9.5	6.2	7.5
3	7.9	6.5	7.1	10.0	6.4	7.9	---	---	---	9.7	6.2	7.7
4	---	---	---	10.5	6.7	8.3	---	---	---	10.1	6.1	7.9
5	---	---	---	10.2	6.7	8.2	---	---	---	9.9	6.1	7.6
6	---	---	---	9.7	6.6	7.9	---	---	---	9.6	6.1	7.6
7	7.2	6.3	6.7	9.0	6.5	7.4	---	---	---	10.0	6.1	7.8
8	7.2	6.7	7.0	6.9	5.7	6.4	---	---	---	9.9	6.0	7.7
9	7.6	6.6	6.8	10.3	5.9	7.7	---	---	---	9.7	6.4	7.9
10	7.5	6.8	7.1	12.3	5.9	8.6	---	---	---	9.9	6.0	7.7
11	8.0	6.9	7.4	12.0	6.1	8.5	10.0	6.4	7.9	9.1	5.6	7.1
12	8.6	7.0	7.7	11.9	5.8	8.1	9.9	6.3	7.9	7.9	4.7	6.3
13	7.6	7.0	7.3	10.3	5.2	7.2	10.1	6.5	8.0	6.1	4.4	5.0
14	8.1	7.0	7.5	5.9	3.9	5.0	10.2	6.5	8.1	6.7	4.9	6.2
15	8.0	7.2	7.6	5.8	4.7	5.2	10.5	6.7	8.3	7.6	6.2	6.8
16	8.7	7.3	7.9	6.5	5.6	6.1	10.9	6.8	8.5	8.4	6.0	7.2
17	8.9	6.9	7.8	12.0	6.2	8.6	10.9	6.9	8.5	8.1	5.9	7.0
18	8.4	7.1	7.7	11.1	6.4	8.4	11.0	6.9	8.5	8.3	5.8	7.0
19	8.2	7.0	7.6	10.9	6.3	8.3	9.6	6.7	7.9	8.0	5.4	6.5
20	8.5	7.0	7.7	10.8	6.3	8.3	10.7	6.6	8.3	8.5	5.4	6.6
21	9.4	7.0	8.0	10.0	6.2	7.8	11.4	6.6	8.8	8.4	5.3	6.5
22	9.2	7.2	8.3	10.0	5.8	7.6	11.4	7.2	8.9	8.2	5.3	6.4
23	9.5	6.5	7.9	10.0	6.1	7.7	11.2	7.2	8.6	8.5	5.3	6.5
24	9.5	6.3	7.7	10.0	6.3	7.9	11.4	6.8	8.8	8.6	5.6	6.6
25	7.1	5.0	5.5	9.9	6.2	7.8	11.2	6.4	8.5	8.5	5.6	6.7
26	7.0	5.3	5.8	9.8	5.9	7.6	10.6	5.9	8.0	8.2	5.6	6.7
27	---	---	---	9.3	5.3	7.3	10.5	5.8	7.6	8.8	6.1	7.2
28	---	---	---	---	---	---	9.8	5.7	7.3	9.1	6.0	7.2
29	---	---	---	---	---	---	9.5	5.6	7.1	9.3	6.2	7.4
30	11.0	6.1	8.1	---	---	---	9.3	5.6	6.9	9.1	6.4	7.5
31	---	---	---	---	---	---	9.3	5.8	7.4	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	10.1	4.4	7.1



Pavilion at Mineral Wells Park, Guthrie, Oklahoma

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK

LOCATION.--Lat 35°33'47", long 97°57'26", sec.33, T.13 N., R.7 W., Canadian County, Hydrologic Unit 11100301, near left downstream end of bridge on new U.S. Highway 81, 2.0 mi north of courthouse in El Reno, 2.3 mi downstream from Target Creek, and at mile 307.3.

DRAINAGE AREA.--13,042 mi^2 of which 4,899 mi^2 is probably noncontributing.

PERIOD OF RECORD.--October 1902 to April 1908, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311. Gage-height records collected at site 1.1 mi upstream February 1914 to March 1934 and at site 0.1 mi upstream thereafter are contained in reports of National Weather Service. Published as Canadian River (North Fork) near El Reno 1902-4.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,295.00 ft above sea level. October 1902 to April 1908, nonrecording gage at site about 450 ft upstream at different datum. October 1937 to September 1988, gage at site 500 ft upstream and datum 4.02 ft higher.

REMARKS.--Records poor. Some regulation by Fort Supply Lake (station 07236500) for period May 1942 to April 1948 and by Canton Lake (station 07238500) thereafter. U.S. Geological Survey's satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 15, 1923, reached an elevation of 1,326.3 ft above mean sea level at railroad bridge 1.1 mi above station, from reports of National Weather Service.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	29	136	115	135	172	266	727	e1160	460	96	e43
2	18	26	123	115	133	181	174	e1920	1090	560	94	e44
3	18	26	114	116	132	196	148	e2450	1060	551	90	64
4	18	25	107	136	139	187	142	e1410	1030	539	88	e54
5	18	25	104	144	207	170	145	e907	1020	527	86	e51
6	17	26	102	133	251	159	159	e710	1030	521	86	e47
7	17	26	101	127	205	151	193	618	1050	609	86	e45
8	17	26	101	125	173	147	353	3440	1050	e450	86	e44
9	18	26	298	364	155	144	382	10200	1030	e365	84	e41
10	18	28	482	503	150	141	387	13300	1020	e300	78	e39
11	18	121	247	382	159	136	357	8780	1040	e255	72	e38
12	18	358	165	292	181	134	304	5120	1040	226	66	e35
13	19	96	204	250	165	130	298	2000	1020	203	64	616
14	18	60	e1100	228	151	126	466	1260	998	386	61	531
15	18	45	e890	198	168	125	938	950	988	616	e58	161
16	18	38	488	184	232	125	607	912	979	514	e57	99
17	19	35	324	180	224	124	443	1470	951	317	e56	77
18	19	34	238	174	203	123	385	916	920	297	e56	65
19	21	795	196	167	202	137	358	1330	912	283	e55	e56
20	21	518	173	168	654	161	329	932	885	267	e54	e52
21	21	210	159	278	655	164	311	819	774	256	e54	48
22	22	374	149	369	442	179	290	1080	726	247	e54	e48
23	22	301	143	292	281	223	255	1270	699	239	e53	e48
24	21	353	136	226	221	189	245	1730	774	232	e51	e48
25	22	912	131	191	203	157	218	e1300	2520	220	e49	e47
26	21	464	127	173	192	139	163	e1190	1920	166	e49	e47
27	21	366	139	161	179	129	142	e1150	1360	135	e48	e46
28	23	234	123	154	171	124	134	e1110	732	124	e46	e46
29	58	183	122	148	---	122	1120	e1150	516	119	e45	e45
30	37	154	120	141	---	163	1460	e1530	422	113	e45	e44
31	33	---	117	137	---	256	---	e1300	---	107	e44	---
TOTAL	668	5914	7159	6371	6363	4814	11172	72981	30716	10204	2011	2669
MEAN	21.5	197	231	206	227	155	372	2354	1024	329	64.9	89.0
MAX	58	912	1100	503	655	256	1460	13300	2520	616	96	616
MIN	17	25	101	115	132	122	134	618	422	107	44	35
AC-FT	1320	11730	14200	12640	12620	9550	22160	144800	60930	20240	3990	5290

e Estimated

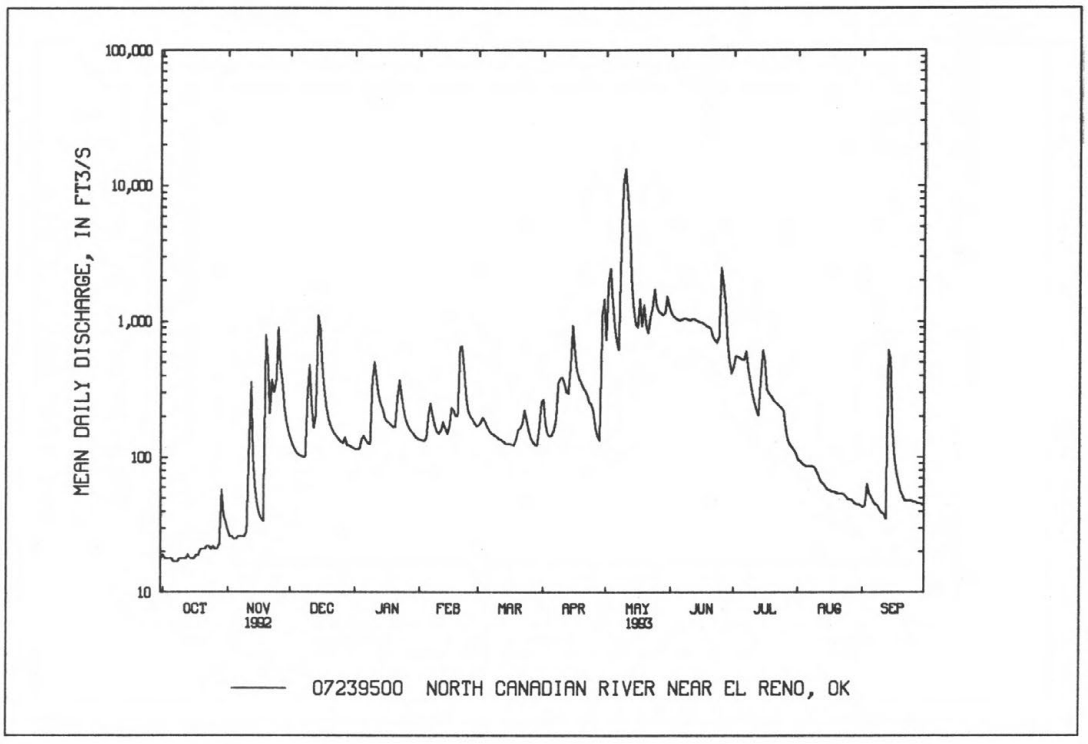
07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	179	112	84.3	86.2	113	184	223	400	495	284	168	206
MAX	1904	883	489	558	551	892	1027	2354	3121	2597	2460	2786
(WY)	1987	1975	1978	1988	1960	1990	1988	1993	1949	1951	1950	1950
MIN	.000	.000	.000	.000	.000	.000	.000	8.00	.17	.73	.000	.000
(WY)	1953	1955	1955	1955	1955	1955	1955	1953	1953	1952	1954	1952

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1949-93	
ANNUAL TOTAL	40823		161042			
ANNUAL MEAN	112		441		[a]212	
HIGHEST ANNUAL MEAN					807	1951
LOWEST ANNUAL MEAN					31.8	1953
HIGHEST DAILY MEAN	1100	Dec 14	13300	May 10	13300	May 10 1993
LOWEST DAILY MEAN	17	Sep 27	17	Oct 6	.00	most years
ANNUAL SEVEN-DAY MINIMUM	18	Sep 24	18	Oct 2	.00	Jul 3 1952
INSTANTANEOUS PEAK FLOW			14600	May 10	15000	Oct 28 1941
INSTANTANEOUS PEAK STAGE			21.41	May 10	[b]22.22	Sep 21 1965
ANNUAL RUNOFF (AC-FT)	80970		319400		153300	
10 PERCENT EXCEEDS	235		1030		601	
50 PERCENT EXCEEDS	76		165		44	
90 PERCENT EXCEEDS	21		27		1.6	

[a]Prior to regulation, 1903-07, 1938-48, 264 ft^3/s.
[b]Present datum.



07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1944-45, 1950-51, 1953, 1955-57, 1974-79, October 1991 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1954 to September 1957, May 1974 to September 1975, October 1991 to current year.

WATER TEMPERATURE: October 1954 to September 1957, May 1974 to September 1975, October 1991 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1991.

REMARKS.--Interruptions in record were due to malfunction of the recording instruments, and extended periods of minimum discharge, which inhibited probe operation.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 2,200 microsiemens, July 25, 1974, Oct. 11, 1978; minimum, 173 microsiemens, Nov. 12, 1993.

WATER TEMPERATURE: Maximum, 34.0°C, June 18, 1992; minimum, 0.0°C, during winter months.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	1510	1440	1490	1190	1060	1120	---	---	---
2	---	---	---	1460	1410	1440	1270	1190	1230	---	---	---
3	---	---	---	1490	1430	1450	1330	1270	1300	---	---	---
4	---	---	---	1550	1490	1510	1400	1330	1370	---	---	---
5	---	---	---	1560	1500	1540	1410	1390	1400	---	---	---
6	1760	1720	1740	1550	1530	1540	1450	1410	1430	---	---	---
7	1740	1640	1710	---	---	---	1500	1450	1470	---	---	---
8	1730	1700	1720	---	---	---	1520	1490	1510	---	---	---
9	1730	1690	1710	1540	1530	1540	1490	739	1110	---	---	---
10	1720	1700	1710	1550	1480	1530	944	839	870	---	---	---
11	1710	1680	1700	1570	305	1220	930	839	886	---	---	---
12	1710	1700	1700	385	176	276	1130	930	1030	---	---	---
13	1720	1700	1710	306	270	297	1180	686	1100	---	---	---
14	1720	1700	1710	415	306	343	---	---	---	---	---	---
15	1710	1700	1700	448	415	433	---	---	---	---	---	---
16	1700	1690	1700	507	448	472	---	---	---	---	---	---
17	1710	1700	1710	553	507	529	---	---	---	---	---	---
18	1710	1690	1700	565	547	557	---	---	---	---	---	---
19	1700	1680	1690	---	---	---	---	---	---	---	---	---
20	1700	1690	1690	---	---	---	---	---	---	---	---	---
21	1690	1660	1680	---	---	---	---	---	---	---	---	---
22	1680	1660	1670	---	---	---	---	---	---	1340	1100	1190
23	1670	1650	1660	---	---	---	---	---	---	1160	1070	1110
24	1660	1630	1650	---	---	---	---	---	---	1310	1160	1240
25	1660	1630	1640	---	---	---	---	---	---	1450	1310	1380
26	1660	1620	1630	---	---	---	---	---	---	1530	1450	1490
27	1630	1620	1620	---	---	---	1560	1550	1550	1600	1530	1570
28	1630	1390	1580	---	---	---	1560	1540	1550	1630	1600	1620
29	1440	884	1130	905	773	835	1550	1450	1490	1650	1630	1640
30	1410	1030	1270	1060	905	986	---	---	---	1660	1650	1660
31	1450	1360	1400	---	---	---	---	---	---	1660	1650	1660
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1670	1660	1670	---	---	---	1270	977	1090	---	---	---
2	1680	1670	1680	---	---	---	1240	990	1120	---	---	---
3	1670	1660	1670	---	---	---	1400	1240	1340	---	---	---
4	1680	1600	1650	---	---	---	1440	1400	1410	---	---	---
5	1610	1380	1520	---	---	---	1490	1440	1470	---	---	---
6	1560	1240	1360	---	---	---	1490	1400	1460	---	---	---
7	1530	1430	1480	---	---	---	1400	1350	1380	---	---	---
8	1610	1560	1590	---	---	---	1600	1320	1490	---	---	---
9	1640	1600	1630	---	---	---	1610	1590	1600	---	---	---
10	1630	1550	1590	1620	1590	1600	1610	1590	1600	---	---	---
11	1650	1570	1630	---	---	---	1620	1510	1580	---	---	---
12	1660	1590	1630	---	---	---	1510	1440	1470	---	---	---
13	1600	1570	1580	---	---	---	1460	1430	1450	---	---	---
14	1600	1570	1580	---	---	---	1450	1080	1330	---	---	---
15	1570	1470	1530	---	---	---	---	---	---	1360	1170	1280
16	---	---	---	---	---	---	---	---	---	1500	1360	1420
17	---	---	---	---	---	---	---	---	---	1430	816	949
18	---	---	---	---	---	---	---	---	---	1220	837	1040
19	---	---	---	---	---	---	---	---	---	1330	605	991
20	---	---	---	---	---	---	---	---	---	759	598	662
21	---	---	---	---	---	---	---	---	---	1170	759	913
22	---	---	---	---	---	---	---	---	---	1450	1170	1340
23	---	---	---	---	---	---	---	---	---	1510	1210	1450
24	---	---	---	1550	1460	1510	---	---	---	1210	949	1090
25	---	---	---	1470	1440	1450	---	---	---	1400	1170	1320
26	---	---	---	1440	1430	1440	---	---	---	1460	1370	1400
27	---	---	---	1470	1440	1460	---	---	---	1540	1420	1480
28	---	---	---	1490	1460	1470	---	---	---	1590	1460	1520
29	---	---	---	1510	1480	1490	---	---	---	1590	1520	1540
30	---	---	---	1510	1480	1500	---	---	---	1540	1160	1280
31	---	---	---	1490	1270	1380	---	---	---	1410	1220	1330
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1550	1410	1470	1510	1440	1490	---	---	---	---	---	---
2	1550	1400	1520	1570	1490	1540	---	---	---	---	---	---
3	1600	1550	1570	1590	1500	1540	---	---	---	---	---	---
4	1610	1570	1590	1580	1530	1560	---	---	---	---	---	---
5	1650	1590	1600	1580	1550	1570	---	---	---	---	---	---
6	1630	1580	1610	1580	1540	1560	---	---	---	---	---	---
7	1640	1540	1620	1550	1430	1500	1740	1720	1730	---	---	---
8	1650	1590	1630	1440	1080	1250	1740	1690	1710	---	---	---
9	1640	1590	1620	1320	1070	1210	1730	1670	1700	1750	445	1490
10	---	---	---	1420	1320	1360	1730	1710	1720	---	---	---
11	---	---	---	1520	1400	1450	1710	1630	1670	---	---	---
12	1670	1600	1660	1500	730	1280	---	---	---	---	---	---
13	1660	1640	1640	1110	710	783	---	---	---	---	---	---
14	1670	1610	1650	1580	710	1150	---	---	---	---	---	---
15	1670	1600	1640	1010	510	777	---	---	---	---	---	---
16	1660	1570	1630	740	510	622	---	---	---	---	---	---
17	1650	1550	1590	1040	680	841	---	---	---	---	---	---
18	1670	1580	1630	1310	1040	1180	---	---	---	---	---	---
19	1660	1580	1620	1530	1310	1430	---	---	---	---	---	---
20	1660	1620	1640	1560	1520	1540	---	---	---	---	---	---
21	1660	1620	1650	1580	1550	1560	---	---	---	---	---	---
22	1700	1630	1670	1610	1570	1590	---	---	---	1600	1510	1570
23	1700	1680	1690	1620	1590	1610	---	---	---	1610	1590	1600
24	1730	1410	1680	1630	1610	1620	---	---	---	1620	1590	1610
25	1460	532	817	1640	1610	1620	---	---	---	1620	1480	1530
26	985	483	745	---	---	---	---	---	---	1560	1530	1540
27	---	---	---	---	---	---	---	---	---	1550	1460	1520
28	---	---	---	---	---	---	---	---	---	1460	1400	1430
29	---	---	---	---	---	---	---	---	---	1450	1390	1420
30	---	---	---	---	---	---	---	---	---	1470	1450	1460
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.0	16.5	20.5	15.5	12.0	14.0	7.0	3.0	4.5	4.0	1.5	2.0
2	25.0	17.0	20.5	13.0	9.5	11.5	5.5	3.5	4.5	3.5	1.5	2.5
3	25.0	17.0	20.5	12.5	10.0	11.5	6.5	4.0	5.0	8.0	3.5	6.0
4	25.0	16.5	20.5	10.0	7.0	8.0	6.0	4.0	5.0	8.0	5.5	6.5
5	26.0	17.5	21.5	8.0	5.5	7.0	4.0	1.5	2.0	5.5	3.5	4.0
6	---	---	---	8.0	7.0	7.5	4.0	1.0	2.5	4.5	3.5	4.0
7	19.5	12.0	17.0	8.5	5.5	7.0	4.5	2.0	3.0	6.0	4.5	5.0
8	15.5	9.0	12.5	9.5	7.0	8.0	4.5	2.5	3.5	6.0	5.0	5.5
9	17.0	10.0	13.5	---	---	---	7.5	4.0	5.5	---	---	---
10	19.5	12.0	15.5	---	---	---	7.0	4.5	6.0	---	---	---
11	20.0	11.5	15.5	15.0	8.0	11.5	6.0	3.5	5.0	---	---	---
12	22.0	15.0	18.5	9.5	6.5	8.0	8.0	4.5	6.0	---	---	---
13	24.0	15.0	19.0	9.0	5.5	7.5	8.5	7.0	8.0	---	---	---
14	23.0	16.0	19.0	10.0	6.5	8.0	8.0	3.5	5.5	---	---	---
15	20.0	14.0	16.5	11.5	7.0	9.0	4.5	2.5	3.5	---	---	---
16	17.0	11.0	13.5	12.5	8.0	10.0	4.5	2.5	3.0	---	---	---
17	15.0	9.5	11.5	13.5	10.5	12.0	4.5	3.0	3.5	---	---	---
18	17.0	9.0	12.5	14.0	12.0	13.0	6.0	2.5	4.5	---	---	---
19	17.0	11.0	13.5	13.5	9.5	11.0	7.0	5.0	6.0	---	---	---
20	21.5	13.0	16.5	10.0	8.5	9.0	6.5	4.0	5.0	---	---	---
21	22.5	15.5	18.5	9.0	6.0	8.0	6.5	3.5	5.0	---	---	---
22	23.0	16.0	19.0	6.0	3.5	4.5	7.5	4.5	6.0	7.0	5.0	6.0
23	22.5	16.0	19.0	8.0	4.5	6.5	7.0	4.5	6.0	8.5	6.0	7.0
24	23.5	17.0	19.5	9.0	7.5	8.0	5.5	3.0	4.5	7.0	4.5	5.5
25	22.0	15.0	18.0	---	---	---	5.5	4.0	4.5	6.5	3.5	5.0
26	18.5	15.5	17.0	---	---	---	4.0	2.0	3.0	7.5	4.0	6.0
27	19.0	12.0	15.0	---	---	---	5.5	3.5	4.5	9.0	5.0	7.5
28	19.0	12.5	15.5	---	---	---	9.5	5.0	7.0	9.5	7.0	8.5
29	17.0	12.5	14.5	---	---	---	14.0	9.5	12.0	8.0	4.5	6.0
30	13.0	11.5	12.5	5.0	2.5	4.0	15.5	13.5	14.5	7.5	4.5	6.0
31	16.0	12.0	13.5	---	---	---	13.5	4.0	7.5	9.5	5.0	7.5
MONTH	---	---	---	---	---	---	15.5	1.0	5.4	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.5	6.5	8.5	6.0	5.0	5.5	13.5	10.0	11.0	21.0	18.0	19.0
2	10.0	6.5	8.5	7.0	6.0	6.5	13.5	7.5	10.5	19.5	13.5	16.0
3	10.5	9.0	9.5	8.0	5.5	7.0	12.5	10.5	11.5	15.0	12.0	13.5
4	9.5	7.5	8.5	7.5	6.0	7.0	11.5	9.0	10.5	19.0	14.0	16.0
5	7.5	6.5	7.0	9.5	5.0	7.0	10.0	8.0	9.0	21.0	18.0	19.0
6	8.5	5.0	7.0	10.5	7.0	8.5	9.5	8.0	9.0	20.0	17.5	19.0
7	10.5	6.0	8.5	12.5	7.0	10.0	17.0	9.5	13.0	21.0	19.0	20.0
8	12.0	7.5	10.0	15.5	9.5	12.5	14.5	12.0	13.0	---	---	---
9	13.0	9.0	11.0	15.0	11.5	13.5	16.0	11.0	13.5	---	---	---
10	13.5	12.0	12.5	14.5	12.0	13.0	17.5	13.0	15.0	---	---	---
11	12.5	6.0	9.5	13.0	10.0	11.0	19.0	15.0	17.0	---	---	---
12	7.5	4.5	6.0	10.0	7.0	8.0	22.5	17.0	19.5	---	---	---
13	8.5	5.0	6.5	8.0	4.5	6.5	20.5	17.5	18.5	---	---	---
14	8.0	5.5	6.5	9.5	5.0	7.5	17.5	8.5	13.0	---	---	---
15	6.0	2.5	3.5	9.5	7.5	8.5	11.0	6.5	8.0	---	---	---
16	2.5	.0	1.5	16.0	9.5	12.5	13.0	7.5	10.5	---	---	---
17	1.5	.0	.5	12.5	8.0	9.5	15.5	11.5	13.0	---	---	---
18	1.5	.0	1.0	9.0	6.5	7.0	18.5	12.0	15.0	---	---	---
19	---	---	---	8.5	6.0	7.5	21.5	16.0	18.5	---	---	---
20	---	---	---	10.5	8.0	9.0	19.5	14.0	16.5	---	---	---
21	---	---	---	11.5	9.0	10.0	18.5	14.0	16.0	---	---	---
22	---	---	---	15.5	10.5	12.5	18.5	13.5	16.5	---	---	---
23	---	---	---	15.0	10.0	12.5	17.5	14.5	16.0	---	---	---
24	---	---	---	18.0	11.5	14.5	21.0	15.0	17.5	---	---	---
25	---	---	---	16.5	12.5	14.5	22.5	16.5	19.5	---	---	---
26	---	---	---	17.0	10.5	14.0	23.0	16.5	20.0	---	---	---
27	4.5	3.0	4.0	18.0	11.5	15.0	23.0	17.0	20.0	---	---	---
28	5.0	4.5	4.5	21.0	14.0	17.5	20.5	16.5	18.0	---	---	---
29	---	---	---	21.0	16.5	19.0	17.5	14.0	15.5	---	---	---
30	---	---	---	19.5	16.0	18.0	20.5	16.5	18.5	---	---	---
31	---	---	---	16.0	13.5	14.5	---	---	---	---	---	---
MONTH	---	---	---	21.0	4.5	11.0	23.0	6.5	14.8	---	---	---

07239500 NORTH CANADIAN RIVER NEAR EL RENO, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	30.5	27.5	28.5	---	---	---	---	---	---
2	---	---	---	30.0	27.0	28.0	---	---	---	---	---	---
3	---	---	---	30.0	27.0	28.0	---	---	---	---	---	---
4	---	---	---	29.0	25.5	27.0	---	---	---	---	---	---
5	---	---	---	28.0	25.5	26.5	---	---	---	---	---	---
6	---	---	---	28.0	26.5	27.5	---	---	---	---	---	---
7	---	---	---	28.0	25.5	26.5	---	---	---	---	---	---
8	---	---	---	29.0	25.5	27.0	---	---	---	---	---	---
9	---	---	---	30.0	26.0	27.5	---	---	---	---	---	---
10	---	---	---	31.0	26.0	28.5	---	---	---	26.5	20.5	23.0
11	---	---	---	30.5	25.5	28.0	---	---	---	26.5	19.5	23.0
12	---	---	---	30.5	25.5	28.0	---	---	---	27.0	21.0	24.0
13	---	---	---	30.0	25.5	28.0	---	---	---	24.0	21.5	22.5
14	---	---	---	28.5	26.0	27.0	---	---	---	21.5	16.0	17.5
15	---	---	---	27.0	25.0	26.0	---	---	---	19.0	15.5	17.5
16	---	---	---	29.5	25.5	27.0	---	---	---	20.5	16.0	18.0
17	---	---	---	31.0	26.0	28.5	---	---	---	21.5	17.0	19.5
18	---	---	---	31.5	26.5	29.0	---	---	---	22.0	19.0	20.5
19	---	---	---	32.0	27.5	29.5	---	---	---	23.5	20.5	22.0
20	---	---	---	32.5	27.5	30.0	---	---	---	---	---	---
21	---	---	---	32.0	27.5	30.0	---	---	---	---	---	---
22	---	---	---	31.5	27.0	29.0	---	---	---	28.0	23.0	25.5
23	---	---	---	31.0	26.0	28.5	---	---	---	26.0	22.5	24.0
24	---	---	---	31.0	25.5	28.0	---	---	---	23.5	21.0	22.0
25	25.0	22.5	24.0	---	---	---	---	---	---	24.5	20.5	22.5
26	25.0	22.5	24.0	---	---	---	---	---	---	22.5	19.5	21.0
27	28.0	24.0	23.0	---	---	---	---	---	---	22.5	17.0	19.5
28	29.5	26.5	28.0	---	---	---	---	---	---	23.5	18.5	21.0
29	30.0	26.5	28.0	---	---	---	---	---	---	23.0	19.0	21.0
30	30.5	27.5	29.0	---	---	---	---	---	---	23.0	18.5	21.0
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07240000 LAKE HEFNER CANAL NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'11", long 97°37'11", in SW 1/4 SW 1/4 sec.34, T.13 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, attached to left wing wall just downstream from outlet of inverted siphon, 2,600 ft upstream from Lake Hefner, 3.0 mi northeast of Bethany, and 7.6 mi northwest of the State Capitol in Oklahoma City.

PERIOD OF RECORD.--March 1944 to current year.

REVISED RECORDS.--WDR OK-80-1: 1968-80 (Datum).

GAGE.--Water stage recorder and concrete control. Datum of gage is 1,196.06 ft above sea level. Prior to Apr. 8, 1947, nonrecording gage at site 2.7 mi upstream at different datum. Apr. 8, 1947, to Apr. 30, 1950, water-stage recorder at site 3.0 mi upstream at different datum. May 1, 1950 to May 19, 1954, Apr. 26, 1957 to Feb. 19, 1968, at present site and datum 4.90 ft higher. May 20, 1954,to Apr. 25, 1957, water-stage recorder and concrete control at site 2,500 ft downstream at datum 2.10 ft higher than present datum.

REMARKS.--Records good. Use of canal began in March 1944. Canal diverts water from North Canadian River just upstream from Lake Overholser (station 07240500) and delivers water to Lake Hefner, capacity, 80,600 acre-ft, for municipal water supply of Oklahoma City. Subsequent to April 1950, small ground-water seepage, when head gates are closed, included in records.

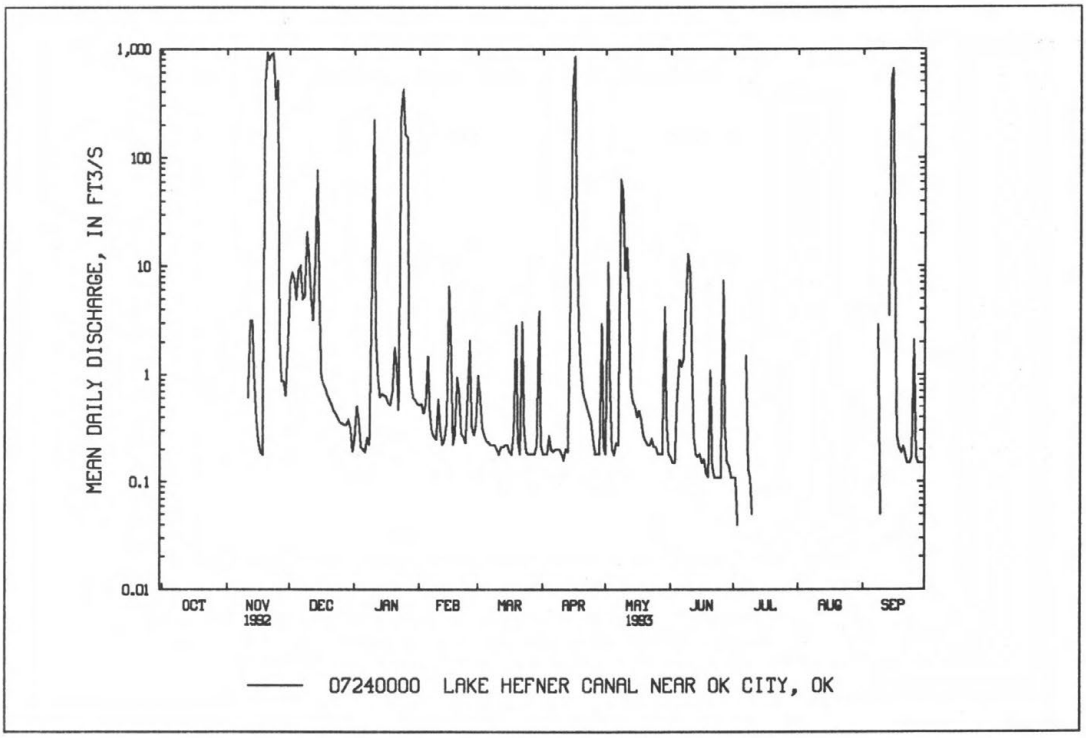
EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,500 ft^3/s, May 28, 1955; no flow at times in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	6.9	.26	.52	.99	.18	.18	.17	.11	.00	.00
2	.00	.00	8.7	.51	.53	.63	.18	11	.15	.11	.00	.00
3	.00	.00	7.7	.38	.43	.32	.18	.88	.15	.04	.00	.00
4	.00	.00	4.9	.21	.54	.27	.27	.20	.61	.00	.00	.00
5	.00	.00	9.2	.20	1.5	.24	.20	.18	1.4	.00	.00	.00
6	.00	.00	10	.19	.44	.23	.19	.23	1.2	.00	.00	.00
7	.00	.00	5.0	.26	.29	.22	.20	.22	1.4	1.5	.00	.00
8	.00	.00	5.3	.22	.26	.22	.20	64	4.4	.13	.00	2.9
9	.00	.00	21	6.0	.25	.22	.20	49	13	.11	.00	.05
10	.00	.00	13	223	.59	.20	.18	9.1	9.1	.05	.00	.00
11	.00	.61	5.1	2.4	.30	.18	.16	15	1.4	.00	.00	.00
12	.00	3.2	3.2	1.0	.22	.21	.20	3.8	.26	.00	.00	.00
13	.00	3.2	11	.62	.25	.21	.19	.74	.18	.00	.00	3.5
14	.00	.94	78	.66	.35	.22	6.7	.55	.17	.00	.00	511
15	.00	.40	4.8	.64	6.5	.22	451	.50	.18	.00	.00	652
16	.00	.24	.98	.62	1.8	.19	864	.40	.15	.00	.00	3.3
17	.00	.19	e.82	.54	.22	.18	24	.46	.16	.00	.00	.27
18	.00	.18	.74	.52	.28	.29	2.8	.37	.12	.00	.00	.21
19	.00	474	.64	.69	.95	2.9	1.2	.27	.11	.00	.00	.19
20	.00	934	e.58	1.8	.66	.24	.71	.24	1.1	.00	.00	.21
21	.00	804	e.52	1.2	.28	.18	.59	.22	.14	.00	.00	.18
22	.00	898	e.46	.47	.26	3.1	.50	.22	.11	.00	.00	.15
23	.00	917	e.43	261	.23	.31	.43	.25	.11	.00	.00	.15
24	.00	338	e.39	423	.63	.19	.37	.21	.11	.00	.00	.17
25	.00	511	.36	165	2.1	.18	.25	.21	.11	.00	.00	2.1
26	.00	2.2	e.35	154	.33	.18	.18	.18	7.4	.00	.00	.17
27	.00	.87	e.34	1.7	.27	.18	.18	.18	.31	.00	.00	.15
28	.00	.87	.34	.83	.34	.18	.18	.18	.15	.00	.00	.15
29	.00	.63	.38	.61	---	.22	3.0	4.2	.14	.00	.00	.15
30	.00	2.0	.32	.58	---	3.9	.21	.39	.11	.00	.00	.15
31	.00	---	.19	.53	---	.22	---	.18	---	.00	.00	---
TOTAL	0.00	4891.53	201.64	1249.64	21.32	17.22	1358.83	163.74	44.10	2.05	0.00	1177.15
MEAN	.000	163	6.50	40.3	.76	.56	45.3	5.28	1.47	.066	.000	39.2
MAX	.00	934	78	423	6.5	3.9	864	64	13	1.5	.00	652
MIN	.00	.00	.19	.19	.22	.18	.16	.18	.11	.00	.00	.00
AC-FT	.00	9700	400	2480	42	34	2700	325	87	4.1	.00	2330

CAL YR 1992 TOTAL 10903.28 MEAN 29.8 MAX 934 MIN .00 AC-FT 21630
WTR YR 1993 TOTAL 9127.22 MEAN 25.0 MAX 934 MIN .00 AC-FT 18100

e Estimated


MEAN DAILY DISCHARGE, IN FT3/S
1,000
100
10
1
0.1
0.01
OCT
NOV
1992
DEC
JAN
FEB
MAR
APR
MAY
1993
JUN
JUL
AUG
SEP
07240000 LAKE HEFNER CANAL NEAR OK CITY, OK

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK

LOCATION.--Lat 35°28'43", long 97°39'47", in NE 1/4 of NW 1/4 of sec.31, T. 12N., R. 4W, Oklahoma County, Hydrologic Unit 11100301, on left downstream side of bridge on NW 10th Street, 0.5 mi downstream from Lake Overholser, 2.4 mi upstream from Mustang Creek, 9.1 mi southwest of State Capitol of Oklahoma, and at river mile 281.0.

DRAINAGE AREA.--13,222 mi^2, of which 4,899 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to September 1968, October 1969 to September 1972, October 1973 to September 1987, October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,194.66 ft above sea level. Prior to Oct. 1, 1961, at datum 10.00 ft higher. Prior to March 24, 1971, gage located at current site. March 25, 1971, to Sept. 30, 1987, gage located 200 ft upstream.

REMARKS.--Records fair. Flow regulated by Canton Lake (station 07238500) and Lake Overholser (station 07240500). Diversions upstream from station into Lake Overholser and Lake Hefner Canal (station 07240000). U.S. Geological Survey's satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	48	225	208	211	314	206	1320	1400	672	140	132
2	32	47	274	150	174	398	317	1840	996	545	140	190
3	32	46	227	246	168	382	153	2580	1300	619	142	222
4	32	46	251	400	167	305	223	2470	1090	671	140	192
5	32	45	211	196	388	247	280	1210	1120	645	139	77
6	40	44	200	198	627	207	297	902	1130	579	142	47
7	43	44	120	294	342	216	198	756	1180	894	138	26
8	33	44	119	217	259	223	298	3800	1350	851	138	60
9	33	40	789	429	274	221	443	9650	1260	668	137	109
10	33	34	1270	1150	261	181	459	13300	1630	390	136	66
11	33	35	665	780	268	157	430	e10400	1270	334	122	199
12	33	33	422	585	255	184	364	e7600	1220	375	111	295
13	33	26	442	442	252	171	347	e4700	1180	369	110	61
14	32	24	2450	388	248	132	541	e2900	1110	357	109	79
15	32	34	2840	306	328	131	1050	e1950	1090	430	109	19
16	31	77	1250	261	791	132	313	e1900	1030	595	109	e13
17	31	78	892	305	395	161	613	e1810	1030	494	109	e16
18	31	78	638	264	285	176	606	1760	1030	332	106	e18
19	31	152	550	224	329	285	463	1520	995	277	74	25
20	31	70	380	304	769	425	450	e1240	1480	276	53	112
21	31	36	451	640	880	192	395	e1130	1690	264	53	114
22	31	107	396	636	649	200	358	e1410	880	261	53	114
23	32	35	282	71	482	383	314	e1510	829	257	52	111
24	32	71	239	11	353	360	306	1980	888	226	120	103
25	32	2150	326	6.9	478	293	257	e1570	1320	231	172	71
26	32	1780	308	162	438	171	242	e1620	2820	226	72	72
27	32	949	206	272	254	107	178	e1500	2860	232	14	63
28	33	664	206	178	254	144	139	e1500	1460	175	e8.0	63
29	45	477	244	159	---	169	362	e1510	993	114	e12	62
30	89	147	274	162	---	244	1270	e1450	715	115	e15	63
31	81	---	313	202	---	98	---	1780	---	125	53	---
TOTAL	1129	7461	17460	9846.9	10579	7009	11872	90568	38346	12599	3028.0	2794
MEAN	36.4	249	563	318	378	226	396	2922	1278	406	97.7	93.1
MAX	89	2150	2840	1150	880	425	1270	13300	2860	894	172	295
MIN	31	24	119	6.9	167	98	139	756	715	114	8.0	13
AC-FT	2240	14800	34630	19530	20980	13900	23550	179600	76060	24990	6010	5540

e Estimated

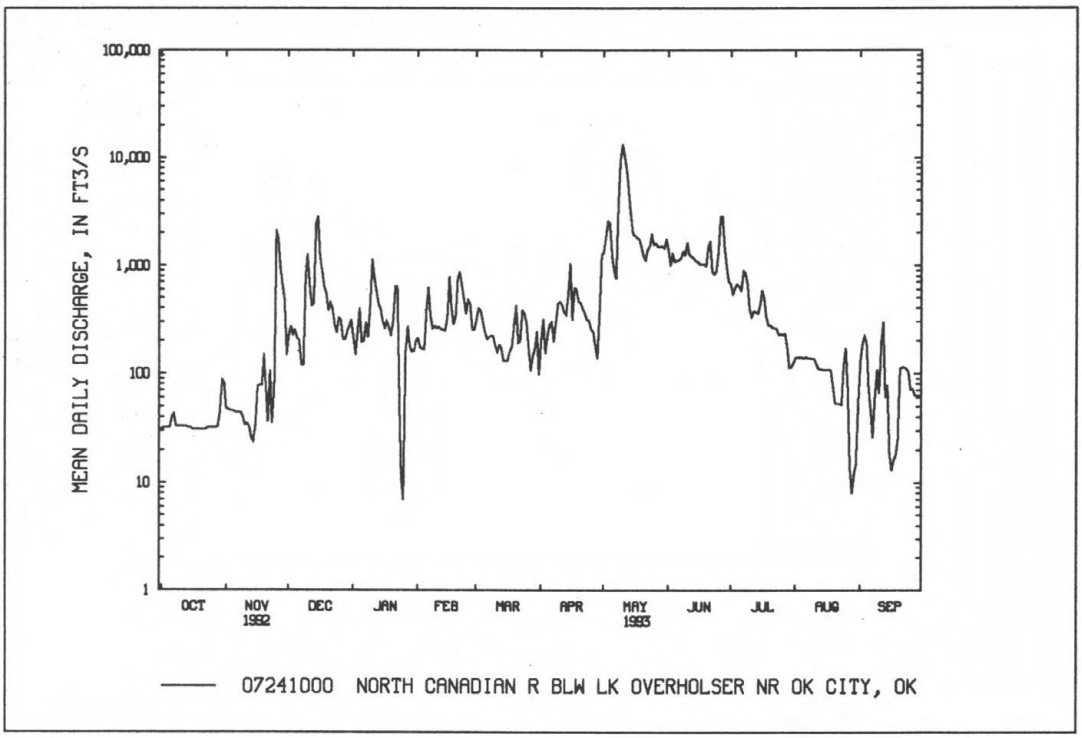
07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	175	111	78.8	68.8	103	140	103	311	376	157	81.8	98.4
MAX	2426	1489	563	515	668	1487	538	2922	2180	1749	884	826
(WY)	1987	1975	1993	1987	1987	1990	1987	1993	1957	1957	1957	1989
MIN	.000	.000	.016	.045	.061	.000	.027	.45	.013	.039	.000	.000
(WY)	1953	1955	1957	1955	1955	1954	1954	1956	1953	1954	1953	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1953-93	
ANNUAL TOTAL	68397.0		212691.9			
ANNUAL MEAN	187		583		150	
HIGHEST ANNUAL MEAN					749	1987
LOWEST ANNUAL MEAN					.42	1954
HIGHEST DAILY MEAN	2840	Dec 15	13300	May 10	13300	May 10 1993
LOWEST DAILY MEAN	6.6	Aug 28	6.9	Jan 25	.00	[a]Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	31	Aug 27	31	Oct 16	.00	Oct 1 1952
INSTANTANEOUS PEAK FLOW			13900	May 10	18700	May 28 1987
INSTANTANEOUS PEAK STAGE			25.39	May 10	[b]29.85	May 28 1987
INSTANTANEOUS LOW FLOW			6.9	Jan 25		
ANNUAL RUNOFF (AC-FT)	135700		421900		109000	
10 PERCENT EXCEEDS	381		1370		393	
50 PERCENT EXCEEDS	104		248		8.0	
90 PERCENT EXCEEDS	33		33		.40	

[a]No flow at times in 1952-57.
[b]From high-water mark.



07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--August 1988 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1988 to current year.
pH: October 1988 to June 1991.
WATER TEMPERATURE: October 1988 to current year.
DISSOLVED OXYGEN: October 1988 to current year.
INSTRUMENTATION.--Water-quality monitor since October 1988.
REMARKS.--Interruptions in record were due to malfunction of the recording instrument and insufficient flow for probes to function properly. Samples were collected monthly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 2,050 microsiemens, Nov. 19, 1991; minimum, 108 microsiemens, Sept. 13, 1989.
pH: Maximum, 8.9 units, Oct. 27, 1989, Nov. 27, 1989, Sept. 15, 17, 1990; minimum, 6.2 units, Aug. 8, 1989.
WATER TEMPERATURE: Maximum, 33.5°C, July 27, 1992; minimum, 0.0°C, several days during December 1990.
DISSOLVED OXYGEN: Maximum, 17.5 mg/l, Oct. 12, 1992; minimum, 2.3 mg/l, Apr. 20, 1990.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
14...	0930	1028	80020	33	1500	--	22.5	17.0	17	730	9.5	103
NOV												
17...	0830	1028	80020	78	1110	8.3	14.5	11.0	13	730	12.5	119
DEC												
08...	0800	1028	80020	117	1340	8.4	-0.5	3.5	4.5	740	13.8	107
JAN												
06...	1300	1028	80020	212	1570	8.2	7.0	4.5	7.5	735	9.9	80
FEB												
19...	1300	1028	80020	365	1400	8.2	14.0	1.5	11	735	14.8	110
MAR												
17...	0930	1028	80020	174	1560	8.7	0.0	8.5	17	726	10.7	97
APR												
13...	1330	1028	80020	347	1660	8.4	13.0	19.0	16	726	8.8	101
MAY												
18...	1230	1028	80020	1900	772	7.9	25.5	22.0	130	732	7.7	92
JUN												
15...	1140	1028	80020	1090	1590	8.2	27.0	26.5	28	735	7.4	96
JUL												
13...	1300	1028	80020	369	1420	7.9	28.5	27.5	21	731	7.8	104
AUG												
24...	1400	1028	80020	176	1330	8.2	31.0	27.0	14	728	7.9	104
SEP												
07...	1500	1028	80020	26	1130	8.3	28.5	26.5	1.4	736	12.4	160

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
OCT												
14...	0.51	2.9	350	520	--	--	--	--	--	--	--	--
NOV												
17...	1.3	1.4	K800	250	310	90	72	31	110	43	3	7.4
DEC												
08...	1.5	0.2	130	84	--	--	--	--	--	--	--	--
JAN												
06...	1.7	1.5	530	350	--	--	--	--	--	--	--	--
FEB												
19...	1.4	0.6	200	K76	400	--	96	38	120	39	3	5.1
MAR												
17...	0.94	2.1	1000	180	--	--	--	--	--	--	--	--
APR												
13...	0.63	--	75	K28	--	--	--	--	--	--	--	--
MAY												
18...	1.2	2.5	1700	6300	--	--	--	--	--	--	--	--
JUN												
15...	0.58	--	440	150	450	240	110	43	150	42	3	6.5
JUL												
13...	2.5	7.4	300	88	--	--	--	--	--	--	--	--
AUG												
24...	0.83	1.2	>1200	K2800	390	150	84	44	140	43	3	5.5
SEP												
07...	0.99	2.5	1000	500	--	--	--	--	--	--	--	--

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	41
NOV												
17...	266	0	218	190	110	0.50	8.2	684	665	0.93	144	34
DEC												
08...	375	6	317	--	--	--	--	--	--	--	--	9
JAN												
06...	407	0	334	--	--	--	--	--	--	--	--	17
FEB												
19...	297	0	244	260	110	0.40	10	830	790	1.13	818	20
MAR												
17...	400	17	356	--	--	--	--	--	--	--	--	33
APR												
13...	277	0	227	--	--	--	--	--	--	--	--	41
MAY												
18...	211	0	173	--	--	--	--	--	--	--	--	278
JUN												
15...	255	0	209	310	210	0.60	10	1010	968	1.37	2970	78
JUL												
13...	312	0	256	--	--	--	--	--	--	--	--	56
AUG												
24...	293	0	240	260	130	0.60	15	852	826	1.16	405	42
SEP												
07...	296	0	243	--	--	--	--	--	--	--	--	31

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS NO3) (71851)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
OCT											
14...	0.100	0.100	0.44	0.010	0.03	0.110	0.040	0.05	0.36	0.40	0.330
NOV											
17...	0.530	0.530	2.3	0.060	0.20	0.590	0.240	0.31	0.46	0.70	0.300
DEC											
08...	0.630	0.630	2.8	0.060	0.20	0.690	0.430	0.55	0.37	0.80	0.170
JAN											
06...	0.730	0.730	3.2	0.060	0.20	0.790	0.560	0.72	0.34	0.90	0.190
FEB											
19...	0.600	0.600	2.7	0.030	0.10	0.630	0.240	0.31	0.56	0.80	0.130
MAR											
17...	0.500	0.500	2.2	0.040	0.13	0.540	0.110	0.14	0.29	0.40	0.090
APR											
13...	0.110	0.110	0.49	0.020	0.07	0.130	0.060	0.08	0.44	0.50	0.060
MAY											
18...	0.400	0.400	1.8	0.030	0.10	0.430	0.170	0.22	0.63	0.80	0.140
JUN											
15...	0.170	0.170	0.75	0.010	0.03	0.180	0.050	0.06	0.35	0.40	0.090
JUL											
13...	1.77	1.77	7.8	0.030	0.10	1.80	0.030	0.04	0.67	0.70	0.910
AUG											
24...	0.130	--	--	<0.010	--	0.130	0.180	0.23	0.52	0.70	0.200
SEP											
07...	0.330	0.330	1.5	0.060	0.20	0.390	0.130	0.17	0.47	0.60	0.140

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
OCT											
14...	0.360	1.1	--	--	--	--	--	--	--	--	--
NOV											
17...	0.280	0.86	4	99	<0.5	<1.0	<5	<3	<10	5	<10
DEC											
08...	0.190	0.58	--	--	--	--	--	--	--	--	--
JAN											
06...	0.200	0.61	--	--	--	--	--	--	--	--	--
FEB											
19...	0.110	0.34	3	94	<0.5	1.0	<5	<3	<10	24	<10
MAR											
17...	0.090	0.28	--	--	--	--	--	--	--	--	--
APR											
13...	0.070	0.21	--	--	--	--	--	--	--	--	--
MAY											
18...	0.130	0.40	--	--	--	--	--	--	--	--	--
JUN											
15...	0.070	0.21	4	150	<0.5	<1.0	<5	<3	<10	4	<10
JUL											
13...	0.690	2.1	--	--	--	--	--	--	--	--	--
AUG											
24...	0.160	0.49	7	98	0.6	<1.0	<5	<3	<10	5	<10
SEP											
07...	0.130	0.40	--	--	--	--	--	--	--	--	--

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	29	9	<0.1	<10	<10	<1	<1.0	800	8	<3	5.8
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	23	41	--	10	<10	<1	<1.0	880	<6	7	--
MAR 17...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	37	9	--	<10	<10	<1	<1.0	1100	10	12	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 24...	46	40	--	<10	<10	<1	1.0	1100	10	10	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1510	1450	1480	1250	1120	1170	---	---	---	1470	1450	1460
2	1500	1480	1500	1120	1050	1080	---	---	---	1490	1470	1480
3	1520	1490	1510	1060	1030	1050	---	---	---	1510	1490	1500
4	1520	1500	1510	1090	1050	1070	---	---	---	1510	1430	1470
5	1530	1510	1520	1110	1070	1090	---	---	---	1510	1480	1500
6	1560	1520	1540	1250	1100	1210	---	---	---	1550	1510	1530
7	1550	1250	1480	1270	1220	1240	---	---	---	1550	1500	1520
8	1530	1420	1510	1280	1240	1260	---	---	---	1500	1490	1500
9	1530	1520	1530	1310	1240	1270	---	---	---	---	---	---
10	1530	1510	1520	1300	1060	1240	---	---	---	---	---	---
11	1540	1510	1530	1200	679	1050	---	---	---	---	---	---
12	1530	1500	1520	1010	714	887	---	---	---	---	---	---
13	1530	1490	1510	1100	1000	1050	---	---	---	---	---	---
14	1500	1450	1480	1170	1080	1130	---	---	---	---	---	---
15	1480	1430	1460	1230	1040	1150	---	---	---	---	---	---
16	1460	1440	1450	1220	1100	1160	---	---	---	---	---	---
17	1460	1450	1450	1150	879	1020	---	---	---	---	---	---
18	1460	1440	1450	---	---	---	---	---	---	---	---	---
19	1460	1440	1450	---	---	---	---	---	---	---	---	---
20	1470	1440	1460	---	---	---	---	---	---	---	---	---
21	1490	1450	1470	---	---	---	---	---	---	---	---	---
22	1500	1480	1490	---	---	---	---	---	---	---	---	---
23	1490	1470	1480	---	---	---	---	---	---	---	---	---
24	1490	1450	1480	---	---	---	1280	1220	1250	---	---	---
25	1520	1480	1500	---	---	---	1320	1280	1300	---	---	---
26	1530	1480	1510	---	---	---	1340	1320	1330	---	---	---
27	1480	1440	1470	---	---	---	1390	1340	1370	---	---	---
28	1480	1380	1460	---	---	---	1420	1390	1410	---	---	---
29	1460	1390	1440	---	---	---	1450	1420	1440	---	---	---
30	1470	1430	1450	---	---	---	1450	1390	1450	---	---	---
31	1460	1240	1340	---	---	---	1450	1350	1390	---	---	---
MONTH	1560	1240	1480	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	1320	1290	1310	1230	961	1040	900	771	864
2	---	---	---	1310	1230	1280	1380	1170	1270	866	737	805
3	1540	1520	1540	1250	1210	1220	1170	1020	1090	764	629	672
4	1540	1510	1540	1390	1250	1320	1210	1010	1080	693	622	655
5	1510	1280	1420	1420	1390	1410	1310	1210	1280	847	693	759
6	1290	1080	1150	1440	1410	1420	1380	1310	1350	952	847	898
7	1120	1110	1120	1470	1430	1450	1440	1370	1400	1080	952	1020
8	---	---	---	1490	1460	1480	1440	1400	1420	---	---	---
9	---	---	---	1510	1480	1490	1620	1400	1510	---	---	---
10	---	---	---	1520	1500	1510	1660	1620	1650	---	---	---
11	---	---	---	1530	1520	1520	1680	1650	1670	---	---	---
12	---	---	---	1540	1470	1530	1690	1630	1670	---	---	---
13	---	---	---	1530	1510	1520	1680	1640	1670	---	---	---
14	---	---	---	1530	1520	1530	1680	1210	1520	623	487	556
15	---	---	---	1540	1530	1540	1240	742	882	803	623	713
16	---	---	---	1550	1540	1550	---	---	---	962	803	882
17	---	---	---	1560	1540	1550	1150	968	1060	1130	861	1010
18	---	---	---	1560	1530	1540	1280	1170	1200	861	768	797
19	---	---	---	1530	1200	1380	1430	1260	1340	961	490	726
20	---	---	---	1360	974	1110	1500	1270	1440	---	---	---
21	---	---	---	1320	1140	1260	1560	1500	1540	---	---	---
22	---	---	---	1360	979	1240	1590	1560	1580	---	---	---
23	---	---	---	1290	952	1080	1610	1590	1600	---	---	---
24	---	---	---	1280	1010	1200	1610	1600	1610	---	---	---
25	---	---	---	1370	1280	1320	1610	1590	1600	---	---	---
26	1040	983	998	1370	1330	1350	1610	1590	1600	---	---	---
27	1170	998	1090	1370	1330	1350	1600	1570	1580	---	---	---
28	1290	1170	1240	1400	1360	1380	1580	1570	1580	---	---	---
29	---	---	---	1430	1090	1400	1580	854	1390	---	---	---
30	---	---	---	1420	1170	1300	895	600	795	---	---	---
31	---	---	---	1260	1020	1150	---	---	---	---	---	---
MONTH	---	---	---	1560	952	1380	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	1240	1140	1190	1580	1510	1570	1470	1410	1420
2	---	---	---	1380	1240	1320	1630	1490	1590	1490	1390	1450
3	---	---	---	1520	1380	1470	1640	1510	1610	1420	1290	1380
4	---	---	---	1520	1460	1490	1620	1410	1560	1360	1250	1310
5	1610	1590	1600	1540	1460	1510	1610	1490	1570	1400	1190	1350
6	1620	1600	1610	1570	1500	1540	1590	1310	1450	1370	1150	1250
7	1610	1590	1600	1520	1050	1330	1500	1360	1450	---	---	---
8	1590	1480	1530	1240	970	1130	1490	1400	1450	---	---	---
9	1530	1200	1450	1280	1100	1210	1510	1360	1460	1160	961	1060
10	1390	1020	1180	1120	1000	1080	1530	1420	1510	1080	854	964
11	1530	1320	1450	1180	1110	1130	1560	1480	1540	937	852	891
12	1580	1520	1560	1370	1180	1290	1570	1500	1560	1230	891	1100
13	1590	1570	1580	1420	1370	1390	1570	1550	1560	---	---	---
14	1600	1570	1590	1430	1400	1410	1580	1560	1570	---	---	---
15	1620	1590	1610	1480	1360	1420	1590	1570	1580	---	---	---
16	1640	1610	1620	1360	667	947	1600	1590	1590	---	---	---
17	1630	1610	1620	801	638	714	1600	1590	1600	---	---	---
18	1630	1620	1620	815	709	746	1610	1590	1600	---	---	---
19	1640	1610	1630	1050	815	890	1620	1570	1600	---	---	---
20	1620	644	1080	1270	1050	1150	1600	1580	1590	703	591	639
21	1210	747	991	1370	1260	1320	1600	1580	1590	1020	691	856
22	1420	1210	1350	1440	1370	1400	1600	1580	1590	1190	1000	1100
23	1540	1420	1490	1470	1440	1460	1610	1580	1600	1250	1140	1170
24	1570	1540	1560	1490	1440	1480	1600	1160	1460	1300	1200	1230
25	1620	757	1400	1520	1490	1500	1500	1260	1400	1280	1030	1210
26	838	638	760	1540	1520	1520	---	---	---	1270	1060	1200
27	688	499	582	1540	1530	1530	---	---	---	1330	1220	1270
28	726	483	604	1550	1490	1520	---	---	---	1310	1250	1280
29	937	726	831	1550	1480	1520	---	---	---	1330	1240	1280
30	1120	937	1030	1560	1460	1540	---	---	---	1330	1250	1290
31	---	---	---	1570	1550	1560	---	---	---	---	---	---
MONTH	---	---	---	1570	638	1310	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	15.5	13.5	14.5	3.5	.5	2.5	---	---	---
2	---	---	---	14.5	12.5	13.5	---	---	---	---	---	---
3	---	---	---	13.0	11.0	12.5	---	---	---	---	---	---
4	---	---	---	11.0	9.5	10.0	---	---	---	---	---	---
5	---	---	---	10.5	7.5	9.0	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	19.5	15.5	18.0	---	---	---	---	---	---	---	---	---
8	15.5	11.0	14.5	---	---	---	---	---	---	---	---	---
9	---	---	---	12.0	9.0	10.5	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	16.0	14.0	15.0	---	---	---	---	---	---	---	---	---
13	18.0	14.0	15.0	---	---	---	---	---	---	---	---	---
14	17.0	13.5	15.0	---	---	---	---	---	---	---	---	---
15	17.0	14.5	16.0	---	---	---	---	---	---	---	---	---
16	17.0	14.5	16.0	11.5	10.0	10.5	---	---	---	---	---	---
17	15.5	13.5	15.0	11.0	10.0	10.5	---	---	---	---	---	---
18	15.0	12.5	13.5	11.5	10.0	10.5	---	---	---	---	---	---
19	14.5	10.5	13.0	11.5	10.5	10.5	---	---	---	---	---	---
20	---	---	---	10.5	9.0	10.0	---	---	---	---	---	---
21	---	---	---	9.0	5.5	8.0	---	---	---	---	---	---
22	---	---	---	6.0	3.0	4.0	---	---	---	---	---	---
23	---	---	---	8.0	3.0	5.5	---	---	---	---	---	---
24	---	---	---	8.0	6.0	7.0	---	---	---	---	---	---
25	17.5	16.5	17.0	6.5	4.5	5.5	---	---	---	---	---	---
26	18.5	17.0	17.5	5.5	2.0	3.5	---	---	---	---	---	---
27	18.0	17.0	17.5	3.0	1.0	2.0	---	---	---	---	---	---
28	17.5	17.0	17.0	2.0	1.0	1.5	---	---	---	---	---	---
29	17.5	16.5	17.0	2.5	.5	1.5	---	---	---	7.0	6.0	6.5
30	16.5	15.5	16.0	3.0	.5	2.0	---	---	---	7.0	6.0	6.0
31	16.0	15.0	15.5	---	---	---	---	---	---	6.5	5.5	6.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.5	6.0	7.5	---	---	---	9.5	7.0	8.0	18.0	16.5	17.0
2	8.5	7.5	8.0	---	---	---	8.5	6.0	7.5	17.5	15.5	16.5
3	9.0	8.5	8.5	---	---	---	6.5	5.5	6.0	15.5	14.0	14.5
4	9.0	9.0	9.0	---	---	---	7.0	5.5	6.0	17.0	14.5	15.5
5	9.0	7.5	8.5	7.0	5.0	6.0	7.0	5.0	6.0	18.0	17.0	17.5
6	7.5	6.5	7.0	7.5	6.0	7.0	6.5	5.0	5.5	18.0	17.0	18.0
7	---	---	---	9.5	7.0	8.0	7.5	4.5	6.0	18.5	18.0	18.0
8	---	---	---	12.5	8.0	10.0	11.0	6.5	8.0	---	---	---
9	---	---	---	13.5	10.0	12.0	9.5	8.0	9.0	---	---	---
10	---	---	---	13.0	11.5	12.5	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	7.0	4.5	6.0	---	---	---	---	---	---	20.5	18.0	19.0
15	4.5	2.0	3.5	---	---	---	---	---	---	22.0	19.5	20.5
16	---	---	---	10.5	7.0	9.0	---	---	---	22.5	21.5	22.0
17	---	---	---	10.5	8.5	9.5	---	---	---	23.5	22.0	22.5
18	---	---	---	10.5	8.0	9.5	---	---	---	22.5	21.5	22.0
19	---	---	---	8.5	7.0	7.5	---	---	---	22.0	20.5	21.5
20	---	---	---	8.0	6.5	7.0	---	---	---	21.0	19.5	20.5
21	---	---	---	9.0	8.0	8.5	---	---	---	20.5	18.5	20.0
22	---	---	---	10.5	9.0	9.5	---	---	---	20.5	19.0	19.5
23	---	---	---	11.5	10.0	11.0	---	---	---	20.0	19.5	20.0
24	---	---	---	16.0	10.5	13.0	---	---	---	21.5	20.0	20.5
25	---	---	---	16.0	12.5	14.5	---	---	---	21.5	20.5	21.0
26	---	---	---	14.5	10.0	12.5	---	---	---	22.0	20.5	21.5
27	---	---	---	12.5	11.5	12.0	---	---	---	23.0	21.5	22.0
28	---	---	---	14.0	12.0	13.0	18.5	17.5	18.0	23.0	22.0	22.5
29	---	---	---	16.5	12.5	13.5	18.0	16.0	17.5	23.5	22.5	23.0
30	---	---	---	16.5	14.0	15.5	17.0	16.0	16.5	24.0	23.0	23.5
31	---	---	---	14.0	9.5	12.5	---	---	---	24.5	23.0	23.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.0	23.0	23.5	---	---	---	29.0	28.0	28.5	---	---	---
2	24.0	22.0	23.0	27.5	26.5	27.0	30.0	27.5	28.5	---	---	---
3	25.0	23.0	24.0	27.5	26.0	26.5	29.0	27.0	28.0	27.0	25.0	26.0
4	27.0	24.0	25.5	26.0	25.5	26.0	28.5	26.5	27.0	27.0	25.0	26.0
5	26.5	25.0	26.0	26.0	25.0	25.5	27.0	26.0	26.5	28.0	24.5	25.5
6	26.5	26.0	26.5	26.0	25.0	25.5	26.0	24.5	25.0	27.5	24.0	25.5
7	27.0	26.5	27.0	25.5	24.5	25.0	25.5	23.0	24.0	---	---	---
8	27.0	25.0	26.0	26.0	24.5	25.0	24.5	22.5	23.5	26.0	22.5	24.0
9	27.0	24.5	26.0	27.0	25.5	26.0	26.0	23.5	24.5	26.5	24.5	25.5
10	26.5	24.0	25.5	28.5	26.0	27.0	27.0	24.5	25.5	26.5	23.5	25.0
11	27.0	24.5	25.5	27.0	25.5	26.5	28.0	25.5	26.5	26.0	24.0	25.0
12	25.5	25.0	25.5	27.5	26.5	27.0	28.5	26.0	27.0	27.5	25.0	26.0
13	26.5	25.5	26.0	28.0	27.0	27.5	29.0	26.5	27.5	28.0	22.5	26.0
14	27.0	26.0	26.5	27.5	26.5	27.0	29.0	27.0	28.0	---	---	---
15	27.5	26.5	27.0	27.0	26.0	26.5	29.5	27.5	28.5	---	---	---
16	---	---	---	27.0	25.5	26.5	29.5	27.5	28.5	---	---	---
17	---	---	---	28.0	26.5	27.5	29.5	27.5	28.0	---	---	---
18	---	---	---	28.5	27.0	27.5	29.5	27.5	28.5	---	---	---
19	---	---	---	29.5	27.5	28.0	29.0	27.5	28.0	---	---	---
20	---	---	---	29.5	28.0	28.5	30.5	27.0	28.0	27.5	22.5	24.5
21	---	---	---	29.5	28.5	29.0	30.5	27.0	28.0	27.5	23.0	25.0
22	---	---	---	29.5	28.5	29.0	29.5	26.5	27.5	29.5	25.5	27.0
23	---	---	---	29.0	28.0	28.5	29.0	26.0	27.0	29.5	26.5	27.0
24	---	---	---	29.0	27.5	28.0	26.5	24.5	25.5	29.0	26.5	27.0
25	---	---	---	28.5	27.0	28.0	25.5	24.5	25.0	29.0	25.0	26.5
26	---	---	---	28.5	27.5	28.0	---	---	---	27.0	24.0	25.5
27	---	---	---	28.0	27.0	27.5	---	---	---	27.0	22.5	24.5
28	---	---	---	28.5	27.0	27.5	---	---	---	27.0	22.0	24.0
29	---	---	---	29.0	27.0	28.0	---	---	---	26.0	22.0	23.5
30	---	---	---	29.5	26.5	28.0	---	---	---	26.0	21.5	23.0
31	---	---	---	29.5	27.5	28.5	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.0	8.5	10.8	---	---	---	---	---	---	---	---	---
2	13.9	9.2	11.8	---	---	---	---	---	---	---	---	---
3	14.1	11.1	12.4	14.1	11.9	12.8	---	---	---	---	---	---
4	14.4	11.6	13.0	15.4	13.1	14.1	---	---	---	---	---	---
5	14.6	11.2	12.7	15.5	12.4	14.0	---	---	---	---	---	---
6	13.2	8.5	11.0	14.7	12.2	13.0	---	---	---	---	---	---
7	9.6	7.8	8.5	14.9	12.2	13.3	---	---	---	---	---	---
8	11.1	8.7	9.5	14.5	12.0	13.1	---	---	---	---	---	---
9	11.7	8.8	9.9	---	---	---	---	---	---	---	---	---
10	15.4	8.9	11.9	---	---	---	---	---	---	---	---	---
11	15.7	11.2	13.1	---	---	---	---	---	---	---	---	---
12	17.5	12.5	14.5	---	---	---	---	---	---	---	---	---
13	15.8	12.3	14.0	---	---	---	---	---	---	---	---	---
14	14.7	9.6	12.3	---	---	---	---	---	---	---	---	---
15	14.7	9.3	11.4	---	---	---	---	---	---	---	---	---
16	15.1	9.1	11.7	12.1	11.0	11.5	---	---	---	---	---	---
17	14.1	9.9	11.6	12.2	11.2	11.8	---	---	---	---	---	---
18	14.0	9.0	11.3	11.5	10.9	11.1	---	---	---	---	---	---
19	12.6	8.1	10.2	11.2	8.8	10.1	---	---	---	---	---	---
20	12.5	7.9	9.6	10.4	8.8	9.9	---	---	---	---	---	---
21	---	---	---	11.9	8.4	9.8	---	---	---	---	---	---
22	---	---	---	15.3	11.5	13.6	---	---	---	---	---	---
23	---	---	---	14.2	10.0	12.1	---	---	---	---	---	---
24	---	---	---	12.9	10.0	10.8	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	12.8	10.3	11.1
27	---	---	---	---	---	---	---	---	---	11.4	10.7	11.1
28	---	---	---	---	---	---	---	---	---	11.0	10.7	10.8
29	---	---	---	---	---	---	---	---	---	11.3	10.8	11.1
30	---	---	---	---	---	---	---	---	---	11.5	11.2	11.4
31	---	---	---	---	---	---	---	---	---	11.7	11.4	11.5
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

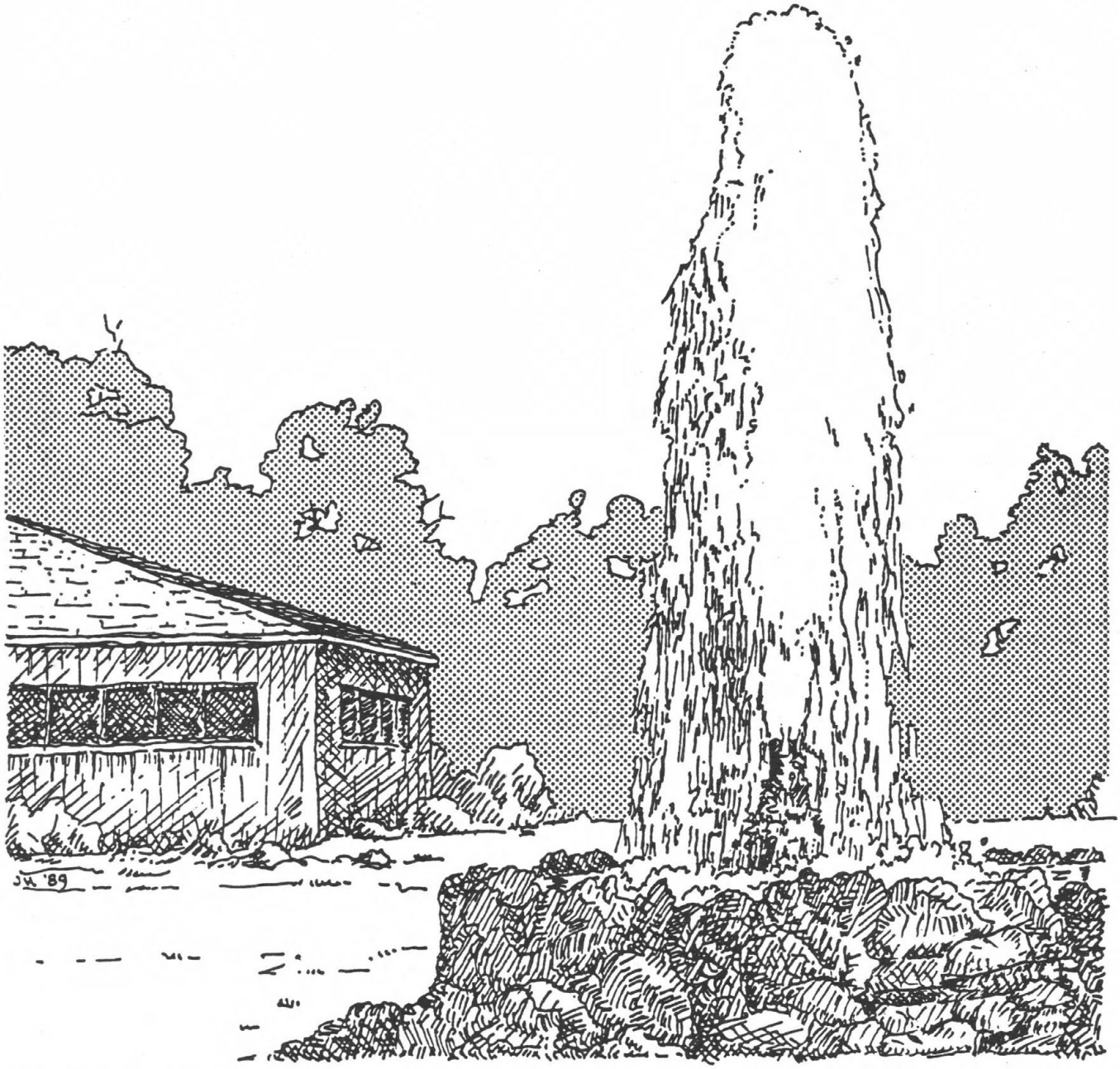
OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	11.7	10.8	11.3	---	---	---	9.9	9.2	9.6	9.5	8.6	9.2
2	11.6	10.9	11.2	---	---	---	10.4	9.9	10.1	9.5	9.1	9.3
3	11.1	10.6	10.9	---	---	---	10.4	9.9	10.0	9.3	9.2	9.3
4	10.8	10.6	10.7	---	---	---	10.1	9.7	9.9	9.2	7.7	8.9
5	11.1	10.6	10.8	11.5	11.0	11.3	10.5	10.0	10.2	8.3	7.1	7.7
6	11.4	11.0	11.2	11.4	10.6	11.0	10.5	10.1	10.3	8.3	6.8	7.7
7	---	---	---	11.2	10.4	10.8	10.5	9.8	10.1	8.3	6.8	7.7
8	10.4	9.8	10.1	11.0	9.9	10.5	10.3	9.5	9.9	---	---	---
9	---	---	---	10.8	9.6	10.2	9.9	9.5	9.8	---	---	---
10	---	---	---	10.9	9.7	10.1	9.6	9.3	9.5	---	---	---
11	---	---	---	10.9	9.7	10.2	9.4	9.0	9.2	---	---	---
12	---	---	---	11.4	10.1	10.7	9.3	8.7	9.0	---	---	---
13	10.6	10.0	10.3	12.2	10.9	11.5	9.2	8.7	8.9	---	---	---
14	10.5	10.0	10.2	12.6	11.3	11.8	10.0	9.0	9.4	---	---	---
15	10.9	10.0	10.2	11.8	10.9	11.2	10.7	10.0	10.5	---	---	---
16	---	---	---	11.8	10.5	11.0	10.7	8.3	9.9	---	---	---
17	---	---	---	11.9	10.5	11.0	10.3	9.7	9.9	---	---	---
18	---	---	---	10.9	10.4	10.7	9.7	8.9	9.4	---	---	---
19	---	---	---	11.4	10.6	11.0	9.2	8.7	8.9	---	---	---
20	---	---	---	11.2	10.9	11.0	9.5	9.0	9.3	---	---	---
21	---	---	---	10.9	10.3	10.6	9.7	9.3	9.4	---	---	---
22	---	---	---	10.6	10.2	10.3	9.7	9.1	9.3	---	---	---
23	---	---	---	10.4	10.0	10.2	9.3	8.9	9.1	---	---	---
24	---	---	---	10.1	9.6	9.9	9.3	8.8	9.0	---	---	---
25	---	---	---	10.1	9.4	9.6	9.6	8.6	9.1	---	---	---
26	---	---	---	10.6	9.2	9.8	9.7	8.5	9.0	---	---	---
27	---	---	---	10.3	9.2	9.6	9.5	8.2	8.8	---	---	---
28	---	---	---	10.4	9.1	9.6	9.0	8.2	8.5	---	---	---
29	---	---	---	10.0	8.7	9.3	8.9	8.3	8.6	---	---	---
30	---	---	---	9.6	8.5	8.9	9.5	7.7	8.8	---	---	---
31	---	---	---	9.8	8.6	9.2	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	10.7	7.7	9.4	---	---	---

07241000 NORTH CANADIAN RIVER BELOW LAKE OVERHOLSER NEAR OKLAHOMA CITY, OK --Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	8.1	7.0	7.6	7.2	6.1	6.5	---	---	---
2	---	---	---	8.3	7.5	7.8	7.9	5.8	6.7	---	---	---
3	---	---	---	8.3	7.5	7.9	7.3	5.7	6.3	7.9	6.7	7.1
4	---	---	---	8.3	7.7	7.9	7.2	5.6	6.2	7.8	6.4	7.0
5	---	---	---	8.2	7.7	7.9	6.6	5.6	5.9	9.9	5.8	7.4
6	---	---	---	8.1	7.6	7.8	7.0	5.6	6.1	10.2	5.8	7.2
7	---	---	---	7.9	7.7	7.8	6.8	5.6	6.1	---	---	---
8	---	---	---	7.9	7.5	7.7	6.6	5.1	5.8	---	---	---
9	---	---	---	7.9	7.5	7.7	6.1	4.6	5.3	8.1	6.6	7.1
10	---	---	---	8.1	6.8	7.5	5.6	4.5	4.9	8.9	6.4	7.2
11	---	---	---	7.7	6.8	7.2	5.3	4.1	4.7	7.2	6.4	6.7
12	---	---	---	8.0	6.9	7.4	5.3	3.9	4.5	6.7	5.7	6.4
13	---	---	---	7.8	6.8	7.2	5.3	3.7	4.3	5.9	5.1	5.5
14	---	---	---	7.8	6.8	7.2	4.8	3.5	4.0	7.7	5.7	6.6
15	7.3	7.0	7.1	7.7	6.8	7.3	4.7	3.5	3.9	8.3	6.4	7.6
16	7.2	7.0	7.1	7.5	7.2	7.3	5.2	3.6	4.3	---	---	---
17	7.3	7.0	7.2	7.2	6.9	7.1	5.7	4.1	4.7	---	---	---
18	7.4	7.1	7.2	7.4	6.8	7.1	5.6	4.1	4.6	---	---	---
19	7.5	7.1	7.3	7.8	6.7	7.2	4.7	3.7	4.2	---	---	---
20	7.4	7.1	7.3	7.7	6.5	7.0	5.8	3.6	4.4	8.9	8.0	8.4
21	7.4	7.0	7.2	7.3	6.2	6.7	6.1	3.5	4.4	9.1	6.7	7.9
22	7.4	7.0	7.2	7.2	6.2	6.6	5.8	3.5	4.3	8.8	6.7	7.4
23	7.6	7.1	7.3	7.1	6.2	6.6	---	---	---	9.6	7.3	7.9
24	7.6	7.1	7.3	7.3	6.2	6.6	---	---	---	9.8	7.2	8.0
25	7.8	7.1	7.4	7.2	6.3	6.6	---	---	---	10.0	7.2	8.1
26	7.8	7.5	7.6	7.3	6.3	6.7	---	---	---	9.7	7.3	8.3
27	7.9	7.1	7.5	7.4	6.3	6.7	---	---	---	10.2	7.8	8.6
28	7.1	4.5	6.5	7.6	6.2	6.8	---	---	---	10.6	6.1	8.7
29	7.3	6.9	7.1	7.5	6.2	6.8	---	---	---	10.9	7.7	8.8
30	7.7	7.0	7.3	7.2	6.0	6.5	---	---	---	10.4	7.6	8.6
31	---	---	---	7.3	6.1	6.5	---	---	---	---	---	---
MONTH	---	---	---	8.3	6.0	7.2	---	---	---	---	---	---



Vendome Well, Chickasaw National Recreation Area, in the 1930's

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK

LOCATION.--Lat 35°33'56", long 97°22'01", in SW 1/4 SW 1/4 sec.25, T.13 N., R.2 W., Oklahoma County, Hydrologic Unit 11100302, on right downstream abutment of county road bridge, 3.8 mi downstream from Crutcho Creek, 4.0 mi west of Jones, and at mile 252.7.

DRAINAGE AREA.--13,413 mi^2, of which 4,899 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,109.40 ft above sea level.

REMARKS.--Records poor. Flow regulated by Canton Lake (station 07238500) and by Lake Overholser (station 07240500) where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained in part by sewage effluent from Oklahoma City. U.S. Geological Survey telemeter located at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	360	e210	e350	e290	e500	e420	1120	1720	705	198	161
2	e79	e120	e250	e320	e300	e600	e370	2880	1530	595	203	192
3	e78	e110	e280	e310	e290	e500	e400	2690	1140	502	197	415
4	e77	e91	e230	e420	e280	e450	e390	2600	1520	613	320	270
5	e75	e88	e270	e330	e340	e390	e400	1700	1190	625	224	219
6	e75	e81	e300	264	e700	e360	e390	1050	1300	583	405	153
7	e78	e78	e280	e300	e750	e320	e380	798	1290	768	229	137
8	e78	e78	172	e360	e600	e330	353	4470	1550	900	207	1110
9	e75	77	1450	e700	e500	e340	e470	22700	1780	633	203	324
10	e73	e85	1600	e1400	e530	336	e500	13400	2040	591	199	172
11	e71	751	988	e1300	568	e320	e470	13400	1740	263	194	136
12	e71	682	557	e950	415	e290	e450	11000	1290	326	184	228
13	e70	148	589	e750	e370	e290	434	9190	1310	410	177	297
14	71	112	3190	e600	e350	e280	964	5580	1250	432	175	1630
15	e71	e80	3420	e540	e700	e270	1710	3220	1210	356	172	285
16	e70	82	2270	e500	1400	257	1060	2500	1170	451	168	138
17	e70	109	e1200	e470	1060	e260	795	2230	1120	568	168	114
18	e70	e110	e1000	e420	470	e270	664	2580	1090	456	166	103
19	e70	960	e790	e410	378	e600	698	2100	1080	402	164	95
20	e69	719	e620	e900	e700	e700	566	1830	2630	302	146	242
21	e69	288	e550	e860	e980	e600	540	1690	1990	288	133	173
22	e68	1770	e580	822	e1000	1360	509	1540	1370	284	129	155
23	e69	486	457	e610	e850	e650	449	1750	881	277	137	149
24	e68	341	e420	e350	e660	568	432	1930	1020	271	430	149
25	e68	1350	e410	e200	e850	e490	420	2370	949	255	244	395
26	e67	2420	e420	e200	782	e400	379	1890	2770	252	214	167
27	66	1290	e400	e250	421	e320	368	1600	2880	252	149	128
28	e66	e800	e380	e330	e400	e270	315	1820	2020	252	116	116
29	525	e580	e370	e300	---	e260	822	1710	1170	212	109	111
30	158	e370	367	e290	---	e600	977	1740	715	189	111	110
31	171	---	e380	e280	---	e650	---	1880	---	186	225	---
TOTAL	2862	14616	24400	16086	16934	13831	17095	126958	44715	13199	6096	8074
MEAN	92.3	487	787	519	605	446	570	4095	1490	426	197	269
MAX	525	2420	3420	1400	1400	1360	1710	22700	2880	900	430	1630
MIN	66	77	172	200	280	257	315	798	715	186	109	95
AC-FT	5680	28990	48400	31910	33590	27430	33910	251800	88690	26180	12090	16010

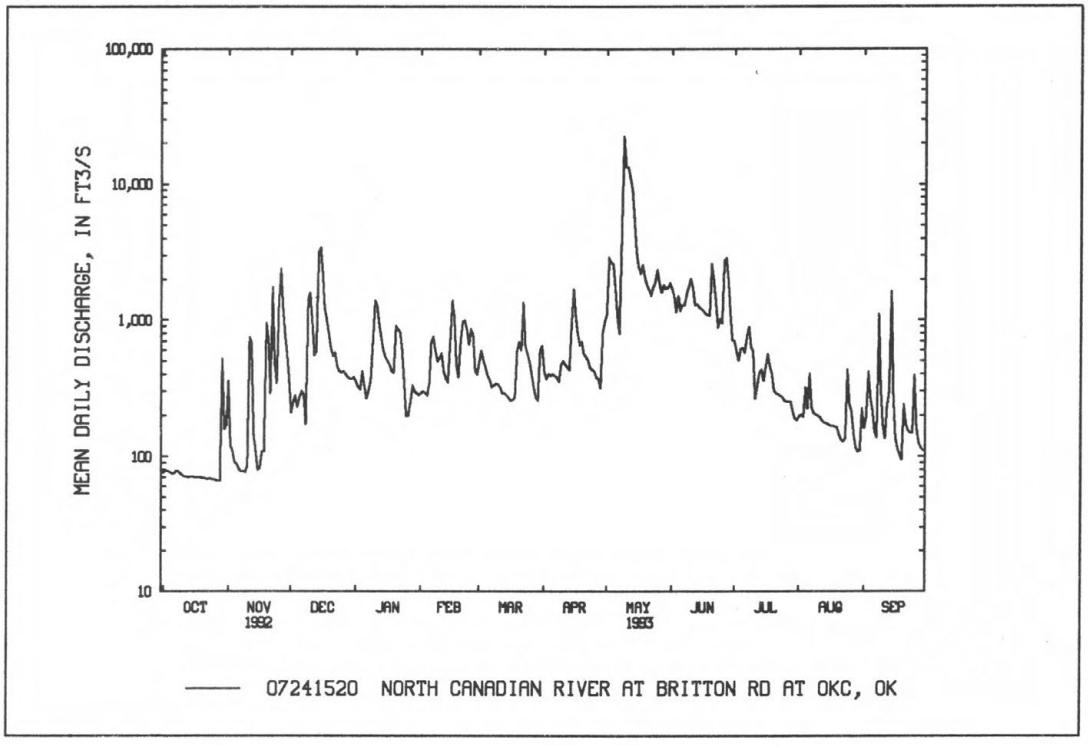
e Estimated

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	189	263	436	292	357	610	387	1324	1279	399	358	574
MAX	410	487	968	519	605	1993	786	4095	3631	1044	966	1350
(WY)	1990	1993	1992	1993	1993	1990	1990	1993	1989	1989	1989	1989
MIN	92.3	123	109	108	95.5	116	121	227	198	95.8	151	242
(WY)	1993	1991	1989	1991	1991	1991	1991	1992	1991	1991	1990	1992

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1989-93	
ANNUAL TOTAL	130386		304866			
ANNUAL MEAN	356		835		539	
HIGHEST ANNUAL MEAN					835	1993
LOWEST ANNUAL MEAN					167	1991
HIGHEST DAILY MEAN	3420	Dec 15	22700	May 9	22700	May 9 1993
LOWEST DAILY MEAN	66	Oct 27	66	Oct 27	28	Jul 28 1991
ANNUAL SEVEN-DAY MINIMUM	67	Oct 22	67	Oct 22	32	Jul 22 1991
INSTANTANEOUS PEAK FLOW			38100	May 9	38100	May 9 1993
INSTANTANEOUS PEAK STAGE			24.80	May 9	24.80	May 9 1993
ANNUAL RUNOFF (AC-FT)	258600		604700		390800	
10 PERCENT EXCEEDS	690		1730		1100	
50 PERCENT EXCEEDS	249		400		224	
90 PERCENT EXCEEDS	83		90		75	



07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--August 1988 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1988 to current year
pH: October 1988 to June 1991 (discontinued).
WATER TEMPERATURE: October 1988 to current year.
DISSOLVED OXYGEN: October 1988 to current year.

INSTRUMENTATION.--Water quality monitor since October 1988.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument, and the sensors being impeded by shallow depths and excessive sand movement. Samples were collected monthly and specific conductance, pH, water temperature, and dissolved oxygen were determined in the field.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum 2,630 microsiemens, July 18, 1990; minimum 117 microsiemens, Sept. 6, 1992.
pH: Maximum 9.1 units, June 27, 1991; minimum 6.3 units, Aug. 8, 1989.
WATER TEMPERATURE: Maximum 34.0°C, July 8, 1991; minimum recorded, 0.0°C, several days during winter period.
DISSOLVED OXYGEN: Maximum 19.3 mg/l, Sept. 5, 1992; minimum 1.0 mg/l, Aug. 4, 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
14...	0930	1028	80020	69	1730	8.1	20.0	18.0	4.2	725	7.2	80
NOV												
17...	0915	1028	80020	116	1330	8.2	15.0	13.0	15	732	8.6	85
DEC												
08...	0845	1028	80020	336	1200	8.1	-0.5	3.5	4.0	737	11.3	88
JAN												
06...	0930	1028	80020	264	1460	8.2	1.5	4.5	7.0	738	10.8	87
FEB												
18...	1100	1028	80020	475	1060	8.0	-7.5	0.5	35	749	14.8	105
MAR												
16...	0830	1028	80020	E180	1490	8.2	15.5	10.5	9.3	735	10.9	102
APR												
13...	0830	1028	80020	437	1640	8.3	12.5	16.5	30	733	8.4	90
MAY												
18...	0900	1028	80020	2920	1060	8.1	18.0	22.0	140	729	8.2	98
JUN												
15...	0730	1028	80020	1250	1550	8.2	22.5	26.0	58	735	6.5	83
JUL												
13...	1130	1028	80020	556	1660	8.1	24.0	25.5	32	730	5.5	71
AUG												
25...	0830	1028	80020	253	747	7.8	24.0	25.0	58	732	5.1	64
SEP												
07...	1015	1028	80020	125	1420	8.1	18.5	21.5	2.7	736	8.5	100

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLVFLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
OCT												
14...	2.1	2.4	390	110	--	--	--	--	--	--	--	--
NOV												
17...	2.1	1.6	570	220	370	78	91	35	130	43	3	7.3
DEC												
08...	3.9	3.9	1200	490	--	--	--	--	--	--	--	--
JAN												
06...	3.0	4.4	530	760	--	--	--	--	--	--	--	--
FEB												
18...	2.0	1.4	3400	1200	310	--	77	28	89	38	2	5.3
MAR												
16...	1.4	2.6	--	840	--	--	--	--	--	--	--	--
APR												
13...	1.1	--	530	540	--	--	--	--	--	--	--	--
MAY												
18...	1.2	3.1	1000	1700	--	--	--	--	--	--	--	--
JUN												
15...	0.70	--	530	390	--	--	--	--	--	--	--	6.0
JUL												
13...	--	9.0	3000	4500	--	--	--	--	--	--	--	--
AUG												
25...	1.4	2.6	K1000	1700	200	60	52	18	67	41	2	5.0
SEP												
07...	1.8	3.7	480	190	--	--	--	--	--	--	--	--

DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
OCT												
14...	395	0	324	--	--	--	--	--	--	--	--	26
NOV												
17...	359	0	294	170	170	0.60	13	822	803	1.12	257	12
DEC												
08...	326	0	267	--	--	--	--	--	--	--	--	26
JAN												
06...	411	0	337	--	--	--	--	--	--	--	--	38
FEB												
18...	--	--	--	160	100	0.30	10	622	602	0.85	798	42
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	27
APR												
13...	295	0	242	--	--	--	--	--	--	--	--	112
MAY												
18...	281	0	230	--	--	--	--	--	--	--	--	454
JUN												
15...	256	0	210	--	--	0.60	--	972	--	--	--	421
JUL												
13...	289	0	237	--	--	--	--	--	--	--	--	140
AUG												
25...	176	0	144	83	90	0.40	9.3	422	417	0.57	288	162
SEP												
07...	332	0	272	--	--	--	--	--	--	--	--	33

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)
OCT											
14...	1.25	1.25	5.5	0.050	0.16	1.30	0.190	0.24	0.61	0.80	1.00
NOV											
17...	1.23	1.23	5.4	0.070	0.23	1.30	0.240	0.31	0.56	0.80	0.610
DEC											
08...	1.23	1.23	5.4	0.070	0.23	1.30	0.520	0.67	2.1	2.6	0.340
JAN											
06...	1.32	1.32	5.8	0.080	0.26	1.40	0.590	0.76	1.0	1.6	0.330
FEB											
18...	1.16	1.16	5.1	0.040	0.13	1.20	0.300	0.39	0.50	0.80	0.250
MAR											
16...	0.960	0.960	4.2	0.040	0.13	1.00	0.070	0.09	0.33	0.40	0.220
APR											
13...	0.580	0.580	2.6	0.020	0.07	0.600	0.030	0.04	0.47	0.50	0.180
MAY											
18...	0.580	0.580	2.6	0.030	0.10	0.610	0.090	0.12	0.51	0.60	0.170
JUN											
15...	0.290	0.290	1.3	0.010	0.03	0.300	0.050	0.06	0.35	0.40	0.120
JUL											
13...	--	--	--	<0.010	--	<0.050	0.030	0.04	0.37	0.40	0.060
AUG											
25...	0.870	0.870	3.9	0.030	0.10	0.900	0.110	0.14	0.39	0.50	0.260
SEP											
07...	1.28	1.28	5.7	0.020	0.07	1.30	0.040	0.05	0.46	0.50	0.450

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)
OCT											
14...	0.990	3.0	--	--	--	--	--	--	--	--	--
NOV											
17...	0.580	1.8	3	250	<0.5	<1.0	<5	<3	<10	6	<10
DEC											
08...	0.310	0.95	--	--	--	--	--	--	--	--	--
JAN											
06...	0.350	1.1	--	--	--	--	--	--	--	--	--
FEB											
18...	0.230	0.71	2	140	0.7	<1.0	<5	<3	<10	11	10
MAR											
16...	0.230	0.71	--	--	--	--	--	--	--	--	--
APR											
13...	0.190	0.58	--	--	--	--	--	--	--	--	--
MAY											
18...	0.150	0.46	--	--	--	--	--	--	--	--	--
JUN											
15...	0.110	0.34	5	--	--	--	--	--	--	--	--
JUL											
13...	0.040	0.12	--	--	--	--	--	--	--	--	--
AUG											
25...	0.220	0.67	4	150	0.6	<1.0	<5	<3	<10	8	<10
SEP											
07...	0.440	1.3	--	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	35	34	<0.1	<10	<10	<1	<1.0	1100	<6	<3	6.7
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	15	33	--	10	<10	<1	4.0	720	<6	<3	--
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	<1	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	21	12	--	<10	<10	<1	<1.0	640	8	8	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

DATE	BROM-ACIL WATER WHLREC (UG/L (30234)	BUTA-CHLOR WATER WHLREC (UG/L (30235)	BUTYL-ATE WATER WHLREC (UG/L (30236)	CARBO-IN WATER WHOLE RECOV-ERABLE (UG/L (30245)	CYCLO-ATE WATER WHOLE RECOV-ERABLE (UG/L (30254)	DIPHEN-AMID WATER WHOLE RECOV-ERABLE (UG/L) (30255)	PCB, TOTAL (UG/L) (39516)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L) (39250)	HEXAZI-NONE WATER WHOLE RECOV-ERABLE (UG/L) (30264)	METOLA-CHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRI-BUZIN WATER WHOLE TOT.REC (UG/L) (82611)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	0.50	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	--	--	--	--	--	--	--	--	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PROPACHLOR WATER WHOLE RECOV. (UG/L) (30295)	TERBACIL WATER WHOLE RECOV. (UG/L) (30311)	VERNOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALACHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL (UG/L) (39330)	AMETRYNE TOTAL (82184)	ATRAZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRAZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	CHLORDANE, TOTAL (UG/L) (39350)	DYRIFOS TOTAL RECOVER (UG/L) (38932)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
NOV											
17...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	<0.1	<0.20	<0.20	<0.1	<0.01
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
18...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	0.1	<0.20	<0.20	<0.1	<0.01
MAR											
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
13...	--	--	--	--	--	--	--	--	--	--	--
MAY											
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	<0.1	<0.20	<0.20	<0.1	<0.01
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	--	--	--	--	--	--	--	--	--	--	--
SEP											
07...	--	--	--	--	--	--	--	--	--	--	0.01

DATE	CYANAZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)	DISYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDOSULFAN, TOTAL (UG/L) (39388)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
NOV											
17...	<0.20	0.02	<0.001	<0.001	<0.001	<0.01	0.04	<0.001	<0.01	<0.01	<0.001
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
18...	<0.20	0.09	<0.001	<0.001	<0.001	<0.01	0.01	0.001	<0.01	0.03	<0.001
MAR											
16...	--	--	--	--	--	--	--	--	--	--	--
APR											
13...	--	--	--	--	--	--	--	--	--	--	--
MAY											
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	<0.20	0.02	<0.001	<0.001	<0.001	<0.01	0.03	<0.001	<0.01	<0.01	<0.001
JUL											
13...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	--	0.14	--	--	--	--	--	--	--	<0.01	--
SEP											
07...	--	--	--	--	--	<0.01	0.04	--	<0.01	--	--

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<0.001	<0.01	<0.001	<0.001	0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.001	<0.01	<0.001	<0.001	0.003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.001	<0.01	<0.001	<0.001	0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	--	<0.01	--	--	--	<0.01	--	<0.01	--	<0.01	--

DATE	PHORATE TOTAL (UG/L) (39023)	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TOX-APHENE, TOTAL (UG/L) (39400)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI-THION (UG/L) (39786)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	0.02	<0.20	<0.10	<0.10	<0.01	0.20	<0.10	<0.01	<1	<0.10	<0.01
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.01	<0.20	<0.10	<0.10	<0.01	0.10	<0.10	<0.01	<1	<0.10	<0.01
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.01	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<0.10	<0.01
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	<0.01	--	--	<0.01	--	--	--
SEP 07...	<0.01	--	--	--	--	--	--	--	--	--	<0.01

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1960	1830	1900	1420	456	769	---	---	---	1460	1350	1400
2	1970	1830	1890	1180	690	945	---	---	---	1830	1460	1580
3	1840	1720	1770	1280	1180	1240	---	---	---	1890	1470	1600
4	1810	1740	1780	1310	1270	1290	---	---	---	1500	1430	1470
5	1800	1730	1770	1330	1290	1310	---	---	---	1450	1360	1420
6	1840	1740	1800	1360	1330	1350	---	---	---	1520	1430	1470
7	1860	1700	1790	---	---	---	---	---	---	1550	1500	1520
8	1790	1710	1750	---	---	---	---	---	---	1540	1490	1510
9	1740	1680	1710	1460	1420	1440	1240	168	464	1490	483	944
10	1800	1700	1750	1470	1100	1440	344	168	272	737	256	473
11	1750	1700	1730	1100	270	489	302	261	285	---	---	---
12	1760	1700	1720	376	224	295	314	295	304	---	---	---
13	1760	1590	1720	751	376	536	332	314	326	---	---	---
14	1820	1720	1770	1130	751	967	---	---	---	---	---	---
15	1780	1700	1750	1420	1130	1290	456	417	438	---	---	---
16	1740	1670	1700	1490	1350	1440	449	419	436	---	---	---
17	1810	1690	1760	1560	1330	1430	568	449	525	---	---	---
18	1790	1730	1760	1610	1560	1590	722	568	650	---	---	---
19	1760	1720	1740	1610	266	932	864	722	791	---	---	---
20	1780	1730	1760	434	288	336	1030	864	941	---	---	---
21	1780	1720	1760	791	434	515	1090	1000	1040	---	---	---
22	1820	1660	1740	607	209	310	1190	1090	1140	---	---	---
23	1870	1680	1750	402	270	322	1260	1180	1210	1160	1100	1140
24	1720	1610	1670	761	402	567	1350	1250	1310	1420	1160	1240
25	1680	1600	1640	573	312	405	1430	1350	1390	1500	1170	1350
26	1700	1610	1650	---	---	---	1480	1430	1450	1580	1500	1530
27	1730	1620	1680	---	---	---	1500	1450	1480	1660	1190	1420
28	1670	1600	1650	---	---	---	1510	1470	1490	---	---	---
29	1600	407	646	---	---	---	1540	1490	1520	---	---	---
30	1320	703	961	---	---	---	1530	1440	1470	---	---	---
31	1420	1320	1390	---	---	---	1490	1390	1470	1500	1480	1490
MONTH	1970	407	1670	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1520	1490	1510	1010	898	968	915	708	812	935	683	849
2	1530	1510	1520	1010	895	952	937	878	893	922	173	377
3	1530	1510	1520	1190	1010	1100	1040	1000	1020	---	---	---
4	1570	1470	1520	1290	1190	1250	1020	900	960	---	---	---
5	1570	883	1140	1410	1290	1370	932	859	889	---	---	---
6	1250	970	1130	1450	1400	1420	986	932	970	888	759	819
7	---	---	---	1460	1430	1450	1100	986	1040	952	866	915
8	---	---	---	1460	1440	1450	1230	1100	1150	1000	219	720
9	---	---	---	1490	1440	1460	1260	1200	1220	307	217	256
10	---	---	---	1500	1470	1480	1410	1200	1300	428	307	372
11	---	---	---	1520	1490	1500	1460	1370	1420	383	337	362
12	---	---	---	1520	1500	1510	1630	1420	1520	383	344	361
13	---	---	---	1520	1480	1500	1620	1450	1520	490	353	406
14	---	---	---	1520	1500	1510	1610	830	1270	608	479	542
15	---	---	---	1530	1500	1520	1010	764	859	792	608	686
16	---	---	---	1520	1490	1500	---	---	---	926	789	851
17	920	710	750	1550	1510	1530	---	---	---	1030	855	940
18	976	791	900	1540	1400	1490	1100	876	982	1160	910	1030
19	1110	976	1060	1420	280	700	1280	1100	1190	947	805	846
20	1120	1010	1070	---	---	---	1390	1280	1340	933	779	858
21	1100	852	991	---	---	---	1480	1330	1420	866	731	805
22	903	820	875	---	---	---	1540	1480	1520	1080	852	921
23	822	810	818	---	---	---	1570	1540	1560	1290	957	1110
24	852	817	833	---	---	---	1600	1570	1590	1430	1290	1350
25	856	708	749	1300	1090	1230	1610	1590	1600	1430	654	980
26	910	747	848	1380	1300	1340	1620	1600	1610	---	---	---
27	937	910	922	1430	1370	1400	1620	1590	1600	---	---	---
28	959	937	951	1430	1370	1410	1600	1570	1580	1470	1450	1460
29	---	---	---	1380	1290	1350	1580	627	989	---	---	---
30	---	---	---	1290	444	720	1290	717	1040	---	---	---
31	---	---	---	686	478	581	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	1450	1340	1400	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	1390	1140	1300	---	---	---
6	---	---	---	---	---	---	1320	503	900	---	---	---
7	---	---	---	---	---	---	1280	762	1060	---	---	---
8	---	---	---	---	---	---	1360	1270	1330	---	---	---
9	1480	344	1290	---	---	---	1390	1310	1360	---	---	---
10	---	---	---	---	---	---	1410	1310	1370	---	---	---
11	---	---	---	---	---	---	1440	1350	1400	---	---	---
12	1540	1200	1400	---	---	---	1490	1400	1450	---	---	---
13	1940	1540	1730	---	---	---	---	---	---	---	---	---
14	2010	1730	1860	---	---	---	---	---	---	---	---	---
15	1740	1550	1640	---	---	---	---	---	---	---	---	---
16	1620	1500	1600	---	---	---	---	---	---	---	---	---
17	1620	1480	1590	---	---	---	---	---	---	---	---	---
18	1620	1560	1610	---	---	---	---	---	---	1350	1180	1270
19	1620	1550	1610	---	---	---	---	---	---	1450	1350	1390
20	1620	327	799	---	---	---	---	---	---	1380	431	876
21	---	---	---	---	---	---	---	---	---	873	720	818
22	---	---	---	---	---	---	---	---	---	1020	873	943
23	---	---	---	---	---	---	---	---	---	1140	1030	1080
24	---	---	---	---	---	---	---	---	---	1190	1140	1170
25	---	---	---	---	---	---	---	---	---	1190	472	807
26	---	---	---	---	---	---	---	---	---	1050	565	794
27	---	---	---	---	---	---	---	---	---	1200	1050	1150
28	---	---	---	---	---	---	---	---	---	1290	1180	1240
29	---	---	---	---	---	---	---	---	---	1330	1270	1290
30	---	---	---	---	---	---	---	---	---	1340	1290	1310
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.5	17.5	20.0	18.0	13.0	15.5	7.0	2.0	5.5	---	---	---
2	23.0	18.0	20.5	14.5	11.0	13.0	6.5	4.5	5.5	---	---	---
3	23.0	18.0	20.5	14.0	9.0	12.0	7.5	5.0	6.0	---	---	---
4	23.0	18.0	20.5	9.0	7.0	8.0	7.5	4.0	5.5	---	---	---
5	23.5	19.0	21.5	9.5	5.5	7.5	4.0	1.5	2.0	---	---	---
6	23.0	19.0	21.5	10.0	8.0	9.0	5.0	1.5	3.5	---	---	---
7	21.5	15.0	19.0	---	---	---	4.5	2.5	4.0	---	---	---
8	15.5	12.0	14.0	---	---	---	5.0	3.0	4.0	5.5	3.5	5.0
9	17.5	12.0	15.0	14.0	10.0	12.0	5.5	4.5	5.0	5.0	3.5	4.5
10	19.5	15.0	17.0	18.5	14.0	16.5	5.5	4.0	5.0	3.5	.5	1.5
11	19.5	14.5	17.0	17.0	11.5	14.5	5.5	4.0	4.5	2.5	1.0	1.5
12	21.0	17.5	19.0	11.5	9.0	10.0	7.5	5.0	6.0	4.0	2.0	3.0
13	22.5	17.5	20.0	11.0	7.5	9.5	8.0	7.5	8.0	2.5	1.5	2.0
14	22.0	17.5	19.5	12.5	8.5	10.5	---	---	---	2.5	1.0	1.5
15	20.5	17.0	18.0	---	---	---	---	---	---	4.0	2.0	3.0
16	17.0	14.5	15.5	---	---	---	---	---	---	6.0	3.0	4.5
17	14.5	13.0	13.5	14.0	12.5	13.5	---	---	---	5.5	4.0	4.5
18	16.5	12.0	14.0	15.0	13.5	14.0	---	---	---	4.0	2.0	3.0
19	16.0	11.0	13.5	15.0	11.5	13.5	---	---	---	2.5	1.5	2.0
20	19.5	13.5	16.5	11.5	10.0	10.5	---	---	---	3.5	1.0	2.5
21	---	---	---	10.0	7.0	9.0	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	3.5	.5	2.0
24	---	---	---	---	---	---	5.5	2.5	4.0	---	---	---
25	20.5	17.0	19.0	---	---	---	5.5	4.0	4.5	---	---	---
26	21.0	15.5	18.0	---	---	---	---	---	---	---	---	---
27	19.5	16.0	18.0	4.0	2.0	3.0	---	---	---	4.5	1.0	3.0
28	19.0	15.0	17.0	4.5	2.0	3.5	4.5	2.0	3.0	---	---	---
29	18.5	14.5	16.5	5.0	2.5	4.0	8.0	4.5	6.5	---	---	---
30	14.5	13.5	14.0	5.5	3.0	4.5	---	---	---	---	---	---
31	18.0	13.5	15.5	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.5	3.5	4.5	---	---	---	12.0	9.0	9.5	20.5	18.0	19.0
2	5.5	1.5	4.0	---	---	---	14.5	8.0	11.5	20.0	17.0	17.5
3	5.5	4.5	5.0	---	---	---	13.5	11.5	12.5	17.0	16.0	16.5
4	5.0	3.5	4.5	---	---	---	12.0	10.0	11.0	19.0	16.0	17.0
5	3.5	2.5	3.0	---	---	---	12.0	9.5	10.5	20.0	18.0	19.0
6	4.5	1.0	3.0	---	---	---	11.5	10.0	11.0	20.0	18.5	19.0
7	---	---	---	---	---	---	16.5	11.0	13.5	22.5	19.0	20.5
8	---	---	---	---	---	---	15.5	11.5	12.5	21.5	15.5	19.0
9	---	---	---	---	---	---	17.0	10.0	13.0	16.0	15.5	16.0
10	---	---	---	---	---	---	18.0	13.5	15.5	16.0	15.5	16.0
11	---	---	---	13.0	10.0	11.5	19.0	15.0	17.0	15.5	15.0	15.5
12	---	---	---	10.0	6.5	8.5	21.5	16.5	18.5	16.5	15.5	16.0
13	---	---	---	9.0	4.5	7.0	20.0	16.5	17.5	18.5	16.0	17.0
14	---	---	---	11.5	5.5	9.0	17.0	11.0	13.5	20.5	17.5	19.0
15	---	---	---	10.0	8.0	9.0	11.0	9.5	10.0	23.0	19.0	21.0
16	---	---	---	16.0	10.0	13.0	13.5	9.0	11.0	23.5	20.5	22.0
17	---	---	---	13.0	7.5	9.5	14.0	12.5	13.0	24.0	21.0	22.5
18	---	---	---	9.0	7.5	8.0	18.0	12.5	15.0	24.0	21.5	22.5
19	---	---	---	9.0	8.0	8.5	20.0	16.5	18.0	23.0	19.5	21.5
20	---	---	---	10.5	9.0	9.5	18.5	13.5	16.0	22.5	19.0	20.5
21	---	---	---	11.0	10.5	10.5	18.0	14.0	16.0	21.5	19.0	20.5
22	---	---	---	12.5	11.0	11.5	18.5	14.5	16.5	21.0	18.5	20.0
23	---	---	---	12.5	12.0	12.5	17.5	15.0	16.5	21.0	20.0	20.5
24	---	---	---	16.5	12.5	14.5	21.0	16.5	18.5	24.0	20.0	21.5
25	---	---	---	16.5	13.0	14.5	21.5	16.5	19.0	24.0	21.5	22.5
26	---	---	---	17.0	12.0	14.5	22.5	17.0	20.0	23.5	21.5	22.5
27	---	---	---	18.5	13.0	16.0	22.0	17.5	20.0	25.0	22.5	23.5
28	---	---	---	19.5	14.5	17.0	21.0	18.0	19.0	24.5	22.0	23.0
29	---	---	---	19.0	16.5	17.5	19.5	17.0	18.0	---	---	---
30	---	---	---	18.0	16.0	17.0	21.0	17.5	19.0	---	---	---
31	---	---	---	16.0	12.0	13.5	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	22.5	8.0	15.1	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	22.0	23.5	---	---	---	---	---	---	24.5	20.5	22.5
2	25.5	21.5	23.5	---	---	---	---	---	---	26.5	23.5	24.5
3	25.0	23.0	24.0	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	25.5	22.5	24.0	---	---	---
6	---	---	---	---	---	---	24.5	21.5	23.0	---	---	---
7	---	---	---	---	---	---	28.0	21.0	24.5	---	---	---
8	---	---	---	28.5	25.0	26.5	27.5	23.5	25.5	23.5	20.0	22.0
9	---	---	---	29.0	25.0	27.0	30.0	24.5	27.0	25.0	19.0	22.0
10	---	---	---	29.5	25.0	27.5	31.5	25.5	28.0	25.0	21.0	23.5
11	25.5	23.0	24.5	28.5	23.5	25.5	32.5	26.0	29.0	24.0	22.5	23.0
12	26.5	23.5	25.0	28.0	22.0	24.5	32.5	25.5	28.5	23.5	22.5	23.0
13	26.5	24.0	25.0	26.5	23.5	24.5	32.5	26.5	29.5	24.5	20.5	23.5
14	28.0	24.5	26.0	27.0	23.5	24.5	32.0	26.0	29.0	21.0	16.0	18.0
15	29.5	26.0	27.5	30.5	23.5	27.0	32.0	25.0	28.5	20.0	15.0	17.5
16	29.0	26.0	27.5	31.0	26.5	29.0	32.0	25.0	28.5	21.5	16.0	19.0
17	28.5	26.0	27.5	30.5	26.5	28.5	32.0	25.5	28.5	23.0	17.5	20.5
18	28.0	26.0	27.0	---	---	---	32.0	25.5	28.5	24.0	18.5	21.5
19	27.5	25.0	26.5	---	---	---	31.5	26.5	29.0	25.0	20.5	22.5
20	26.5	23.5	25.0	---	---	---	32.5	25.5	29.0	26.0	21.5	23.5
21	26.5	24.0	25.5	---	---	---	32.5	25.5	29.0	27.0	22.0	24.5
22	28.0	25.0	26.5	---	---	---	31.0	25.0	28.0	28.0	23.0	25.5
23	---	---	---	---	---	---	29.5	24.5	26.5	26.0	23.0	24.5
24	---	---	---	---	---	---	26.0	23.0	24.5	23.5	20.5	22.0
25	---	---	---	---	---	---	30.5	24.5	27.5	23.0	20.0	21.0
26	---	---	---	---	---	---	31.5	25.0	28.0	21.5	19.0	20.0
27	---	---	---	---	---	---	31.5	25.5	28.5	22.0	16.0	19.0
28	---	---	---	---	---	---	31.0	23.5	27.5	23.5	17.5	20.5
29	---	---	---	---	---	---	31.5	24.0	27.5	22.0	17.5	20.0
30	---	---	---	---	---	---	32.0	22.5	27.5	22.5	18.0	20.0
31	---	---	---	---	---	---	25.5	21.5	23.0	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	6.9	4.1	5.4	---	---	---	12.2	11.6	11.9
2	14.2	5.3	9.0	8.8	6.3	7.2	---	---	---	11.7	10.8	11.3
3	13.9	5.3	8.9	8.3	6.8	7.6	---	---	---	10.8	9.6	10.3
4	13.7	5.3	8.9	9.4	8.1	8.8	---	---	---	11.1	9.3	10.2
5	13.4	5.1	8.7	---	---	---	---	---	---	11.5	10.8	11.2
6	12.9	5.1	8.3	---	---	---	---	---	---	10.9	10.1	10.6
7	10.1	5.0	7.5	---	---	---	---	---	---	10.8	10.0	10.4
8	11.0	6.9	8.9	---	---	---	---	---	---	10.8	10.2	10.5
9	13.5	7.1	9.4	10.0	7.7	8.4	---	---	---	10.8	9.6	10.4
10	12.5	6.2	8.9	8.3	4.3	7.2	---	---	---	---	---	---
11	15.0	6.5	10.1	6.7	4.0	5.3	---	---	---	---	---	---
12	14.2	9.0	11.4	7.7	6.4	7.2	---	---	---	---	---	---
13	13.9	7.3	10.1	6.6	6.1	6.4	---	---	---	---	---	---
14	11.8	6.1	8.5	---	---	---	---	---	---	---	---	---
15	11.7	4.6	7.2	---	---	---	---	---	---	---	---	---
16	10.7	5.7	7.9	---	---	---	11.5	11.1	11.3	10.7	9.6	10.2
17	10.7	6.4	8.2	9.2	7.6	8.4	11.6	11.5	11.5	11.9	9.6	11.4
18	12.3	6.3	8.4	9.5	7.9	8.5	11.7	10.8	11.5	12.1	11.4	11.8
19	10.5	5.6	7.7	8.4	6.0	7.5	11.0	10.6	10.8	12.5	11.4	12.2
20	10.5	5.6	7.5	9.9	8.4	9.5	11.3	10.8	11.1	12.3	11.2	12.0
21	---	---	---	10.2	9.6	9.9	11.2	10.6	11.0	11.7	11.2	11.5
22	---	---	---	---	---	---	11.1	10.4	10.8	11.7	10.9	11.4
23	---	---	---	---	---	---	11.0	10.4	10.7	11.0	10.1	10.7
24	---	---	---	---	---	---	11.7	10.6	11.2	11.3	10.1	10.7
25	---	---	---	---	---	---	11.2	10.9	11.1	10.9	10.1	10.6
26	---	---	---	---	---	---	12.0	11.1	11.6	10.6	9.8	10.2
27	---	---	---	---	---	---	11.3	10.8	11.0	11.0	9.7	10.4
28	12.6	6.5	8.1	---	---	---	10.8	9.9	10.5	---	---	---
29	6.8	2.1	4.2	---	---	---	9.9	8.8	9.5	---	---	---
30	7.6	5.2	6.7	---	---	---	9.2	8.7	8.9	---	---	---
31	9.4	6.9	8.0	---	---	---	11.7	8.7	10.3	11.0	9.9	10.6
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

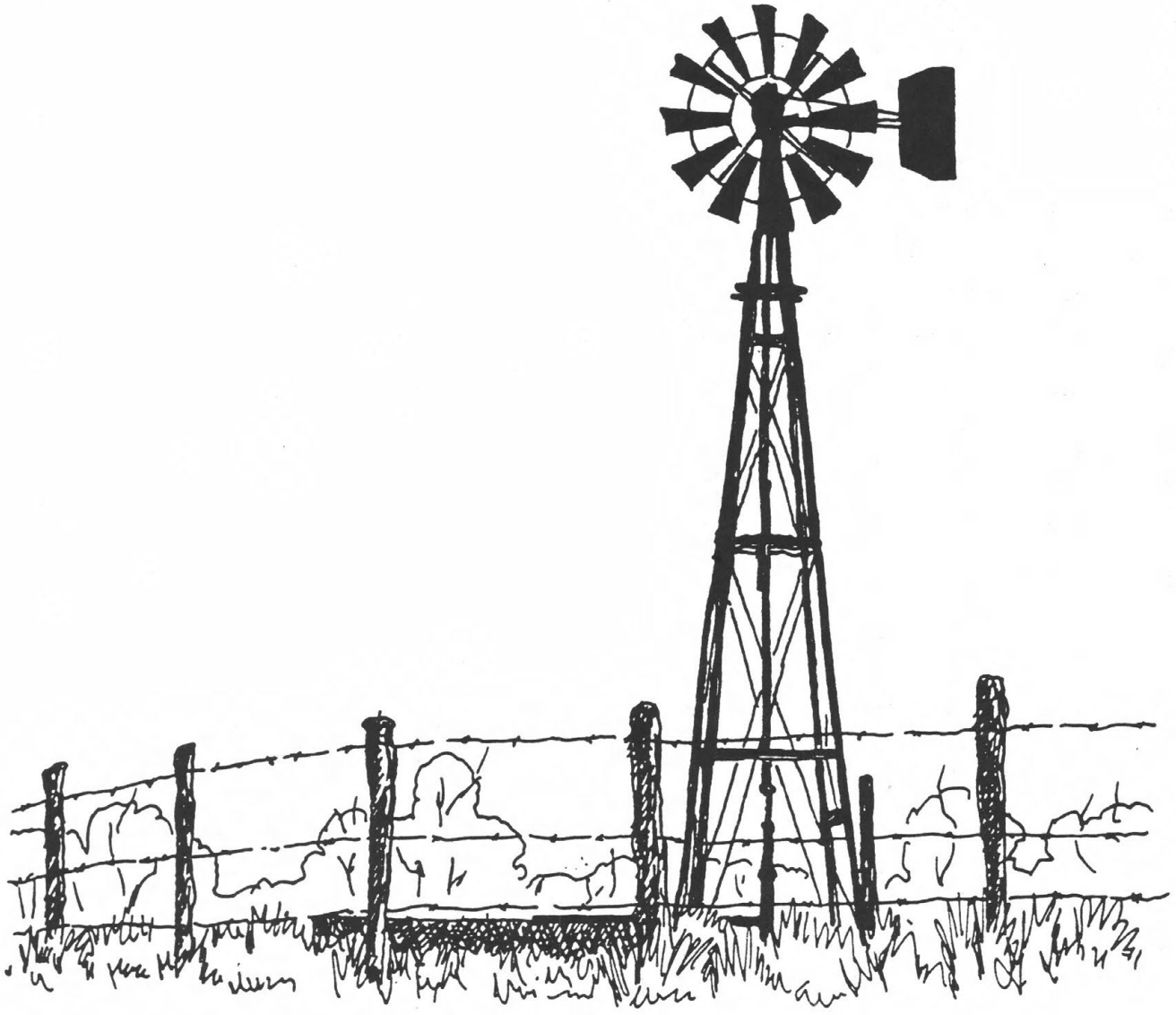
OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.1	9.8	10.3	10.8	10.1	10.4	9.8	7.9	8.8	---	---	---
2	11.0	9.8	10.4	10.6	10.1	10.4	12.6	8.8	10.7	---	---	---
3	10.5	9.6	10.0	11.0	10.5	10.7	11.4	7.9	10.5	---	---	---
4	9.9	9.6	9.7	10.8	10.5	10.6	9.0	7.9	8.4	---	---	---
5	9.9	9.0	9.7	11.6	10.1	10.9	9.0	7.1	8.2	---	---	---
6	---	---	---	10.7	9.8	10.3	9.6	8.0	8.7	---	---	---
7	---	---	---	10.8	9.3	10.2	8.6	7.0	8.1	---	---	---
8	---	---	---	11.0	9.2	10.0	9.1	6.9	8.0	---	---	---
9	---	---	---	14.2	9.1	12.0	9.5	7.1	8.3	---	---	---
10	---	---	---	12.9	9.1	10.6	8.4	6.6	7.4	---	---	---
11	---	---	---	13.0	9.7	11.4	12.1	6.2	10.0	---	---	---
12	---	---	---	14.0	10.4	12.2	11.7	7.1	9.8	---	---	---
13	---	---	---	14.0	11.3	12.7	12.2	8.1	9.9	---	---	---
14	---	---	---	16.2	11.0	13.6	9.6	3.9	6.5	---	---	---
15	---	---	---	13.7	10.9	12.3	6.6	5.3	6.0	---	---	---
16	---	---	---	14.2	8.9	11.5	---	---	---	---	---	---
17	12.5	11.6	12.3	12.4	8.8	10.6	---	---	---	---	---	---
18	12.4	11.7	12.0	11.5	9.5	10.3	7.8	5.3	6.7	---	---	---
19	11.8	10.4	11.4	---	---	---	8.2	6.7	7.3	---	---	---
20	10.9	9.5	10.3	---	---	---	9.7	6.9	8.3	---	---	---
21	9.9	9.7	9.8	---	---	---	10.1	7.4	8.6	---	---	---
22	10.5	9.8	10.2	---	---	---	10.6	7.1	8.7	---	---	---
23	10.8	10.1	10.5	---	---	---	10.1	6.8	8.3	---	---	---
24	11.2	10.4	10.8	---	---	---	10.4	6.7	8.2	---	---	---
25	10.9	10.4	10.6	13.6	7.2	9.5	---	---	---	---	---	---
26	11.8	10.9	11.4	13.7	7.3	9.4	---	---	---	---	---	---
27	12.2	11.0	11.5	13.7	7.2	9.9	---	---	---	---	---	---
28	11.2	10.8	11.0	13.6	6.8	9.3	---	---	---	9.8	6.5	6.9
29	---	---	---	16.8	9.0	12.1	---	---	---	---	---	---
30	---	---	---	10.6	7.5	9.0	---	---	---	---	---	---
31	---	---	---	9.0	6.1	7.4	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241520 NORTH CANADIAN RIVER AT BRITTON ROAD AT OKLAHOMA CITY, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.4	6.1	6.2	---	---	---	---	---	---	---	---	---
2	9.1	5.9	6.5	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	7.9	1.0	4.4	---	---	---
5	---	---	---	---	---	---	12.1	5.8	8.1	---	---	---
6	---	---	---	---	---	---	6.8	4.3	5.7	---	---	---
7	---	---	---	---	---	---	11.5	6.0	8.2	---	---	---
8	---	---	---	---	---	---	15.1	5.9	9.3	---	---	---
9	---	---	---	---	---	---	18.0	5.9	12.0	---	---	---
10	---	---	---	---	---	---	16.7	5.2	9.8	---	---	---
11	---	---	---	---	---	---	15.7	4.9	9.1	---	---	---
12	---	---	---	---	---	---	15.2	4.9	8.8	---	---	---
13	---	---	---	---	---	---	15.3	4.7	8.9	---	---	---
14	---	---	---	---	---	---	13.9	4.6	8.1	7.1	5.0	6.5
15	---	---	---	13.4	7.3	10.4	13.2	4.4	7.8	7.6	6.9	7.3
16	8.2	6.4	7.2	12.0	5.7	8.3	12.3	4.2	7.2	7.7	6.8	7.3
17	8.5	5.7	7.2	9.5	6.2	7.7	11.6	3.9	6.8	8.3	6.6	7.4
18	9.6	6.5	7.9	9.3	6.3	7.3	12.0	3.6	6.9	9.9	6.6	7.9
19	9.2	6.3	7.6	10.3	5.3	7.4	10.9	3.5	6.3	11.7	6.4	8.5
20	7.5	5.2	6.3	11.3	5.6	7.7	12.0	3.4	6.7	7.7	4.5	5.9
21	---	---	---	11.2	4.3	7.1	12.9	3.1	7.1	9.6	6.5	7.7
22	---	---	---	10.5	4.3	6.9	13.3	3.1	7.4	12.7	6.4	8.6
23	---	---	---	10.8	4.4	7.0	11.9	3.3	6.3	15.4	6.4	10.9
24	---	---	---	10.5	4.4	6.8	---	---	---	13.6	6.8	9.3
25	---	---	---	10.8	4.4	7.6	---	---	---	7.8	5.1	6.2
26	---	---	---	10.4	4.1	6.6	15.9	5.0	8.9	9.4	6.2	7.6
27	---	---	---	9.4	4.0	6.2	---	---	---	11.5	7.6	9.2
28	---	---	---	---	---	---	---	---	---	12.1	7.4	9.3
29	---	---	---	---	---	---	---	---	---	12.3	7.4	9.4
30	---	---	---	---	---	---	---	---	---	13.2	7.6	9.8
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---



07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

LOCATION.--Lat 35°30'01", long 97°11'37", in SW 1/4 NW 1/4 sec.22, T.12 N., R.1 E., Oklahoma County, Hydrologic Unit 11100302, on left bank downstream side county road bridge, 2.2 mi northwest of Harrah, 3.8 mi downstream from Choctaw Creek, and at mile 230.0.

DRAINAGE AREA.--13,501 mi^2, of which 4,899 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,055.69 ft above sea level. June 19, 1981 to May 31, 1987, gage 0.8 mi downstream at same datum.

REMARKS.--Records poor. Flow regulated by Canton Lake (station 07238500) and by Lake Overholser (station 07240500) where diversions are made into Lake Hefner Canal (station 07240000). Low flow sustained in part by sewage effluent from Oklahoma City. U.S. Geological Survey's satellite telemeter located at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	179	455	472	501	317	640	513	1390	e1840	950	e340	220
2	174	379	454	487	348	987	403	2240	e1640	e820	e347	183
3	183	229	506	483	324	779	547	3030	e1230	e716	e339	301
4	180	202	487	490	311	666	431	2850	e1630	e840	e492	483
5	172	200	475	606	473	570	538	2490	e1290	e852	e373	290
6	173	195	506	497	888	492	500	1550	e1400	e806	e548	213
7	175	189	628	380	861	428	491	1370	e1400	e1030	e285	151
8	185	182	491	504	635	411	416	2010	1660	e1190	e259	723
9	183	182	1340	908	476	417	408	16300	e1880	e865	260	1150
10	173	196	2210	1580	517	395	563	18000	e2140	e814	e249	370
11	164	559	1510	1440	950	362	610	14900	e1850	e422	e244	261
12	158	1220	1020	1200	577	307	585	13600	e1390	e499	e234	227
13	160	495	861	964	479	312	540	10100	e1410	e603	e227	385
14	160	269	3180	747	431	322	588	6630	e1340	e628	e225	1450
15	156	219	3960	658	804	266	1630	3500	1300	e536	e222	1120
16	158	180	2670	575	1940	275	1400	2050	e1260	e655	225	442
17	149	202	1610	505	1250	261	800	e2550	e1210	e789	e218	337
18	140	240	1280	482	760	261	970	e2450	e1180	e659	e216	326
19	142	575	983	477	635	1240	877	e2220	e1170	e592	e214	313
20	142	1560	882	1040	807	1360	725	e1930	e2770	e468	e196	343
21	139	573	646	966	1070	808	647	e1780	e2100	e450	e183	499
22	140	900	681	985	1180	809	589	e1640	e1470	e446	e179	416
23	140	1330	654	931	931	1180	547	e1860	e950	e438	e187	394
24	145	615	578	461	734	746	518	2040	e1100	e431	e532	383
25	142	1190	539	305	1120	656	485	e2470	e1020	e412	300	435
26	144	2290	528	221	981	564	437	e2000	e2860	e409	e266	620
27	146	1730	562	218	786	448	395	e1710	e3150	e408	214	291
28	145	1100	485	447	569	310	369	e1920	e2320	e409	153	261
29	477	863	480	382	---	304	655	e1820	e1510	e359	126	237
30	468	779	483	322	---	919	960	e1850	e1000	e328	120	226
31	271	---	493	315	---	1180	---	e1980	---	e325	189	---
TOTAL	5663	19298	31654	20077	21154	18675	19137	132230	48470	19149	8162	13050
MEAN	183	643	1021	648	755	602	638	4265	1616	618	263	435
MAX	477	2290	3960	1580	1940	1360	1630	18000	3150	1190	548	1450
MIN	139	180	454	218	311	261	369	1370	950	325	120	151
AC-FT	11230	38280	62790	39820	41960	37040	37960	262300	96140	37980	16190	25880

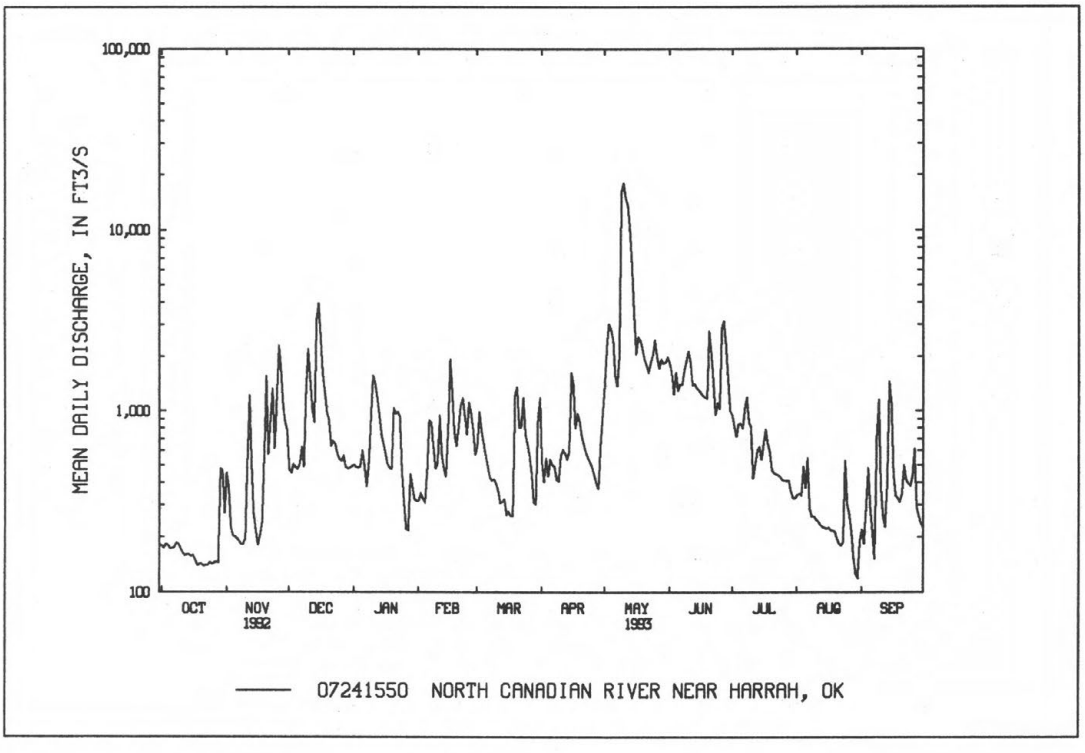
e Estimated

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	427	361	294	278	336	526	481	959	846	340	222	312
MAX	3634	1627	1209	907	1293	2596	2312	4265	4041	1154	1228	1699
(WY)	1987	1975	1992	1988	1987	1990	1988	1993	1989	1989	1989	1989
MIN	71.3	56.7	68.1	58.3	61.1	76.1	76.6	79.5	75.5	87.7	54.5	64.0
(WY)	1970	1970	1977	1970	1970	1971	1971	1971	1972	1970	1972	1972

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1969-93	
ANNUAL TOTAL	187674		356719			
ANNUAL MEAN	513		977		449	
HIGHEST ANNUAL MEAN					1322	1987
LOWEST ANNUAL MEAN					93.0	1972
HIGHEST DAILY MEAN	3960	Dec 15	18000	May 10	20000	May 29 1987
LOWEST DAILY MEAN	135	Apr 15	120	Aug 30	28	Aug 8 1972
ANNUAL SEVEN-DAY MINIMUM	141	Oct 18	141	Oct 18	31	Jul 30 1972
INSTANTANEOUS PEAK FLOW			25500	May 9	27200	May 29 1987
INSTANTANEOUS PEAK STAGE			21.90	May 9	19.60	May 29 1987
ANNUAL RUNOFF (AC-FT)	372300		707600		325100	
10 PERCENT EXCEEDS	1000		1850		998	
50 PERCENT EXCEEDS	385		532		191	
90 PERCENT EXCEEDS	182		183		68	



07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1968 to current year.
pH: October 1988 to current year.
WATER TEMPERATURE: October 1968 to current year.
DISSOLVED OXYGEN: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1988.

REMARKS.--Interruptions in record were due to malfunction of the recording instrument and extended periods of excessive movement of sand impeding streamflow from passing by the sensors. Samples were collected monthly and specific conductance, pH, water temperature, dissolved oxygen, and alkalinity were determined in the field. Biological samples analyzed by The University of Iowa Hygenic Laboratory.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily (observed), 4,700 microsiemens, Sept. 25, 1980; minimum recorded, 125 microsiemens, Apr. 21, 1990.
pH: Maximum, 9.4 units, May 3, 4, 5, 6, 7, 8, 15, July 7, 1992; minimum, 6.9 units, Apr. 27, 1990.
WATER TEMPERATURE: Maximum daily (observed), 36.0°C, July 11, 1982; minimum, 0.0°C on several days during winter periods.
DISSOLVED OXYGEN: Maximum, 20.1 mg/l, July 12, 1991; minimum, 1.0 mg/l, July 3, 1991.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
14...	1145	1028	80020	160	1370	8.1	25.0	19.0	7.5	727	8.3	94
NOV												
17...	1100	1028	80020	180	1090	8.1	17.0	14.5	6.1	733	8.5	87
DEC												
08...	1000	1028	80020	474	1080	8.0	2.0	5.0	23	738	10.8	88
JAN												
06...	1130	1028	80020	503	1330	8.1	4.0	5.5	25	739	10.9	90
FEB												
23...	0930	1028	80020	1040	909	8.2	0.0	7.0	110	740	10.7	91
MAR												
16...	1000	1028	80020	269	1310	8.0	17.5	11.0	14	735	12.0	113
APR												
13...	1000	1028	80020	550	1500	8.2	15.0	17.5	44	734	8.3	90
MAY												
18...	1045	1028	80020	2930	897	7.8	18.5	21.5	170	731	6.5	77
JUN												
15...	0930	1028	80020	1250	1480	8.3	26.0	26.0	66	736	7.1	91
JUL												
13...	1000	1028	80020	E603	1170	8.2	25.0	26.0	53	731	6.0	78
AUG												
25...	1330	1028	80020	E300	635	7.8	34.5	27.5	190	734	5.3	70
SEP												
07...	1200	1028	80020	151	1160	8.6	21.0	23.0	24	737	11.7	142

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L) (00310)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
OCT 14...	3.9	2.2	K1600	67	--	--	--	--	--	--	--	--
NOV 17...	5.7	1.2	760	590	270	48	68	24	110	46	3	8.7
DEC 08...	--	4.8	1100	460	--	--	--	--	--	--	--	--
JAN 06...	3.0	1.2	1300	350	--	--	--	--	--	--	--	--
FEB 23...	2.6	0.9	2900	1700	260	78	64	24	81	40	2	5.0
MAR 16...	3.0	2.1	--	230	410	--	98	40	140	--	3	--
APR 13...	1.6	--	2000	370	420	180	100	42	150	--	3	--
MAY 18...	1.6	2.5	K1200	1800	--	--	--	--	--	--	--	--
JUN 15...	1.2	--	570	220	440	230	110	39	140	41	3	6.9
JUL 13...	0.78	8.8	290	270	310	85	77	29	110	--	3	--
AUG 25...	1.9	3.2	K640	1100	150	43	39	13	66	48	2	5.3
SEP 07...	2.8	2.7	2600	150	300	96	70	31	120	--	3	--

DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)
OCT 14...	326	0	267	--	--	--	--	786	--	--	--	17
NOV 17...	270	0	221	81	160	0.70	13	632	625	0.86	307	5
DEC 08...	281	0	230	--	--	--	--	652	--	--	--	22
JAN 06...	366	0	300	--	--	--	--	818	--	--	--	52
FEB 23...	221	0	181	160	88	0.40	8.6	549	551	0.75	1540	70
MAR 16...	--	--	--	--	--	--	11	836	--	--	--	37
APR 13...	293	0	240	--	--	--	9.0	946	--	--	--	132
MAY 18...	266	0	218	--	--	--	--	567	--	--	--	816
JUN 15...	254	0	208	260	190	0.60	10	934	886	1.27	3150	500
JUL 13...	278	0	228	--	--	--	12	722	--	--	--	403
AUG 25...	133	0	109	55	87	0.40	7.7	361	347	0.49	--	290
SEP 07...	218	17	206	--	--	--	11	710	--	--	--	72

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
OCT												
14...	1.30	1.30	5.8	0.100	0.33	1.40	1.80	2.3	0.70	2.5	2.60	2.40
NOV												
17...	4.70	4.70	21	0.100	0.33	4.80	0.290	0.37	0.61	0.90	1.50	1.50
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	1.93	1.93	8.5	0.070	0.23	2.00	0.330	0.42	0.67	1.0	0.360	0.370
FEB												
23...	1.96	1.96	8.7	0.040	0.13	2.00	0.100	0.13	0.50	0.60	0.350	0.350
MAR												
16...	2.59	2.59	11	0.010	0.03	2.60	0.010	0.01	0.39	0.40	0.450	0.470
APR												
13...	1.07	1.07	4.7	0.030	0.10	1.10	0.070	0.09	0.43	0.50	0.530	0.560
MAY												
18...	0.970	0.970	4.3	0.030	0.10	1.00	0.080	0.10	0.52	0.60	0.240	0.220
JUN												
15...	0.650	--	--	<0.010	--	0.650	0.030	0.04	0.57	0.60	0.230	0.200
JUL												
13...	0.260	0.260	1.2	0.020	0.07	0.280	0.060	0.08	0.44	0.50	0.140	0.100
AUG												
25...	1.24	1.24	5.5	0.060	0.20	1.30	0.190	0.24	0.41	0.60	0.390	0.340
SEP												
07...	2.26	2.26	10	0.040	0.13	2.30	0.030	0.04	0.47	0.50	0.450	0.440

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)
OCT											
14...	7.4	--	--	--	--	--	--	--	--	--	--
NOV											
17...	4.6	3	180	<0.5	1.0	<5	<3	<10	12	10	23
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	1.1	--	--	--	--	--	--	--	--	--	--
FEB											
23...	1.1	3	120	<0.5	<1.0	<5	<3	<10	26	<10	13
MAR											
16...	1.4	3	170	<0.5	<1.0	<5	<3	<10	7	30	30
APR											
13...	1.7	3	170	<0.5	<1.0	<5	<3	<10	5	<10	34
MAY											
18...	0.67	--	--	--	--	--	--	--	--	--	--
JUN											
15...	0.61	4	180	<0.5	<1.0	<5	<3	<10	<3	<10	34
JUL											
13...	0.31	6	160	<0.5	<1.0	<5	<3	<10	8	10	26
AUG											
25...	1.0	4	93	0.6	<1.0	<5	<3	<10	20	<10	17
SEP											
07...	1.3	5	130	<0.5	<1.0	<5	<3	<10	11	<10	35

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	PHENOLS TOTAL (UG/L) (32730)
OCT											
14...	--	--	--	--	--	--	--	--	--	--	--
NOV											
17...	20	<0.1	<10	<10	<1	<1.0	860	<6	6	1.9	--
DEC											
08...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	--	--	--	--	--	--	--	--	--	--
FEB											
23...	5	--	<10	<10	<1	<1.0	680	<6	<3	--	--
MAR											
16...	22	0.2	<10	<10	<1	<1.0	1200	<6	<3	--	<1
APR											
13...	7	<0.1	<10	<10	<1	2.0	1200	7	4	--	<1
MAY											
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
15...	2	--	<10	<10	<1	<1.0	1100	11	<3	--	--
JUL											
13...	2	<0.1	<10	<10	<1	1.0	940	13	6	--	<1
AUG											
25...	2	--	<10	<10	<1	2.0	550	9	14	--	--
SEP											
07...	1	<0.1	<10	<10	--	2.0	930	9	4	--	<1

DATE	BROMACIL WATER WHLREC (UG/L (30234)	BUTACHLOR WATER WHLREC (UG/L (30235)	BUTYLATE WATER WHLREC (UG/L (30236)	CARBOIN WATER WHOLE RECOVERABLE (UG/L (30245)	CYCLOATE WATER WHOLE RECOVERABLE (UG/L (30254)	DIPHENAMID WATER WHOLE RECOVERABLE (UG/L) (30255)	PCB, TOTAL (UG/L) (39516)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L) (39250)	HEXAZINONE WATER WHOLE RECOVERABLE (UG/L) (30264)	METOLACHLOR WATER WHOLE TOT.REC (UG/L) (82612)	METRIBUZIN WATER WHOLE TOT.REC (UG/L) (82611)	PHENOLS TOTAL (UG/L) (32730)
OCT												
14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
17...	0.40	<0.10	<0.10	<0.20	0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10	--
DEC												
08...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
06...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
23...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10	--
MAR												
16...	--	--	--	--	--	--	--	--	--	--	--	<1
APR												
13...	--	--	--	--	--	--	--	--	--	--	--	<1
MAY												
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10	--
JUL												
13...	--	--	--	--	--	--	--	--	--	--	--	<1
AUG												
25...	<0.20	<0.10	<0.10	<0.20	<0.10	<0.10	<0.1	<0.10	<0.20	<0.20	<0.10	--
SEP												
07...	--	--	--	--	--	--	--	--	--	--	--	<1

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PROPACHLOR WATER WHOLE RECOV. (UG/L) (30295)	TERBACIL WATER WHOLE RECOV. (UG/L) (30311)	VERNOLATE WATER WHOLE RECOV. (UG/L) (30324)	ALACHLOR TOTAL RECOVER (UG/L) (77825)	ALDRIN, TOTAL (UG/L) (39330)	AMETRYNE TOTAL (82184)	ATRAZINE WATER UNFLTRD REC (UG/L) (39630)	DEETHYL ATRAZINE, WATER, WHOLE, TOTAL (UG/L) (75981)	DE-ISO PROPYL ATRAZIN WATER, WHOLE, TOTAL (UG/L) (75980)	CHLORDANE, TOTAL (UG/L) (39350)	CHLORDYRIFOS TOTAL RECOVER (UG/L) (38932)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	0.1	<0.20	<0.20	<0.1	0.02
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	0.1	<0.20	<0.20	<0.1	<0.01
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	<0.1	<0.20	<0.20	<0.1	<0.01
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	<0.10	<0.20	<0.10	<0.10	<0.001	<0.10	<0.1	<0.20	<0.20	<0.1	0.02
SEP 07...	--	--	--	--	--	--	--	--	--	--	0.01

DATE	CYANAZINE TOTAL (UG/L) (81757)	2,4-D, TOTAL (UG/L) (39730)	DDD, TOTAL (UG/L) (39360)	DDE, TOTAL (UG/L) (39365)	DDT, TOTAL (UG/L) (39370)	DEF TOTAL (UG/L) (39040)	DIAZINON, TOTAL (UG/L) (39570)	DIELDRIN TOTAL (UG/L) (39380)	DISYSTON TOTAL (UG/L) (39011)	2, 4-DP TOTAL (UG/L) (82183)	ENDOSULFAN, TOTAL (UG/L) (39388)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<0.20	0.04	<0.001	<0.001	<0.001	<0.01	0.13	<0.001	<0.01	0.03	<0.001
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	<0.20	<0.01	<0.001	<0.001	<0.001	<0.01	0.02	0.002	<0.01	<0.01	<0.001
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.20	0.03	<0.001	<0.001	<0.001	<0.01	0.05	0.002	<0.01	<0.01	<0.001
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	<0.20	0.14	<0.001	<0.001	<0.001	<0.01	0.11	<0.001	<0.01	<0.01	<0.001
SEP 07...	--	--	--	--	--	<0.01	0.10	--	<0.01	--	--

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ENDRIN WATER UNFLTRD REC (UG/L) (39390)	ETHION, TOTAL (UG/L) (39398)	HEPTA-CHLOR, TOTAL (UG/L) (39410)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L) (39420)	LINDANE TOTAL (UG/L) (39340)	MALA-THION, TOTAL (UG/L) (39530)	METH-OXY-CHLOR, TOTAL (UG/L) (39480)	METHYL PARA-THION, TOTAL (UG/L) (39600)	MIREX, TOTAL (UG/L) (39755)	PARA-THION, TOTAL (UG/L) (39540)	PER-THANE TOTAL (UG/L) (39034)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<0.001	<0.01	<0.001	<0.001	0.030	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	<0.001	<0.01	<0.001	0.001	0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.001	<0.01	<0.001	<0.001	0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	<0.001	<0.01	<0.001	<0.001	0.010	0.05	<0.01	<0.01	<0.01	<0.01	<0.1
SEP 07...	--	<0.01	--	--	--	<0.01	--	<0.01	--	<0.01	--

DATE	PHORATE TOTAL (UG/L) (39023)	PROME-TONE TOTAL (UG/L) (39056)	PROME-TRYNE TOTAL (UG/L) (39057)	PRO-PAZINE TOTAL (UG/L) (39024)	SILVEX, TOTAL (UG/L) (39760)	SIMA-ZINE TOTAL (UG/L) (39055)	SIME-TRYNE TOTAL (UG/L) (39054)	2,4,5-T TOTAL (UG/L) (39740)	TOX-APHENE, TOTAL (UG/L) (39400)	TRI-FLURA-LIN TOTAL RECOVER (UG/L) (39030)	TOTAL TRI-THION (UG/L) (39786)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	0.02	<0.20	<0.10	<0.10	<0.01	0.20	<0.10	<0.01	<1	0.10	<0.01
DEC 08...	--	--	--	--	--	--	--	--	--	--	--
JAN 06...	--	--	--	--	--	--	--	--	--	--	--
FEB 23...	<0.01	<0.20	<0.10	<0.10	<0.01	0.10	<0.10	<0.01	<1	<0.10	<0.01
MAR 16...	--	--	--	--	--	--	--	--	--	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--	--
MAY 18...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	<0.01	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<0.10	<0.01
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	<0.01	<0.20	<0.10	<0.10	<0.01	<0.10	<0.10	<0.01	<1	<0.10	<0.01
SEP 07...	<0.01	--	--	--	--	--	--	--	--	--	<0.01

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	1310	1240	1270	1190	953	1060	827	695	743	1390	1200	1320
2	1330	1230	1280	953	645	722	937	827	893	1290	1160	1230
3	1340	1250	1290	1030	771	912	954	898	922	1550	1270	1380
4	1310	1180	1250	1090	1030	1060	1000	920	966	1530	1280	1340
5	1290	1210	1250	1100	1080	1090	1040	986	1020	1380	1270	1350
6	1280	1220	1250	1100	1090	1100	1060	986	1010	1310	1220	1280
7	1310	1260	1280	---	---	---	1470	1060	1200	1350	1210	1260
8	1630	1310	1390	---	---	---	1180	1020	1070	1390	1340	1370
9	1440	1340	1400	---	---	---	1020	381	734	1350	607	1120
10	1380	1300	1330	---	---	---	826	234	432	---	---	---
11	1380	1330	1350	1280	444	971	667	203	258	---	---	---
12	1380	1350	1370	549	297	399	827	219	343	---	---	---
13	1390	1320	1360	600	349	472	820	307	384	---	---	---
14	1420	1370	1390	781	600	688	776	164	393	---	---	---
15	1430	1370	1410	949	781	860	439	358	396	---	---	---
16	1430	1370	1410	1050	949	989	428	370	409	---	---	---
17	1430	1370	1400	---	---	---	486	428	447	---	---	---
18	1380	1320	1360	---	---	---	544	486	512	---	---	---
19	1410	1350	1380	---	---	---	687	508	599	---	---	---
20	1370	1320	1340	488	312	350	784	687	740	---	---	---
21	1390	1360	1370	522	380	450	917	784	848	---	---	---
22	1410	1360	1380	559	244	434	1000	914	949	---	---	---
23	1410	1330	1370	324	246	288	1060	997	1030	---	---	---
24	1450	1360	1390	397	324	351	1100	1060	1090	---	---	---
25	1450	1320	1380	656	363	465	1150	1100	1130	---	---	---
26	1400	1340	1370	485	129	342	1220	1150	1180	---	---	---
27	1400	1340	1370	468	432	453	1260	1220	1250	---	---	---
28	1410	1360	1380	534	446	482	1270	1240	1250	---	---	---
29	1440	606	1160	627	534	590	1290	1260	1270	---	---	---
30	776	569	649	695	627	664	1340	1280	1300	---	---	---
31	1030	776	892	---	---	---	1350	1330	1340	---	---	---
MONTH	1630	569	1310	---	---	---	1470	164	842	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	1020	939	994	974	769	862	1090	488	683
2	---	---	---	1030	864	930	1240	974	1080	720	495	620
3	---	---	---	1050	891	986	1220	1040	1100	646	529	584
4	---	---	---	1080	1050	1070	1220	1060	1140	659	583	609
5	---	---	---	1120	1060	1090	1100	992	1050	656	600	630
6	---	---	---	1190	1120	1150	1070	985	1040	722	646	683
7	---	---	---	1230	1190	1210	---	---	---	793	712	759
8	---	---	---	1250	1230	1240	---	---	---	778	483	724
9	---	---	---	1270	1250	1260	---	---	---	---	---	---
10	---	---	---	1270	1260	1270	---	---	---	---	---	---
11	---	---	---	1290	1270	1280	---	---	---	---	---	---
12	---	---	---	1310	1290	1300	---	---	---	---	---	---
13	---	---	---	1310	1300	1310	---	---	---	---	---	---
14	---	---	---	1310	1300	1310	1430	1260	1370	---	---	---
15	---	---	---	1310	1310	1310	1340	539	727	---	---	---
16	---	---	---	1330	1310	1310	742	256	635	---	---	---
17	---	---	---	1390	1330	1350	686	605	623	---	---	---
18	---	---	---	1370	1330	1350	742	686	704	---	---	---
19	---	---	---	1330	417	990	871	715	800	---	---	---
20	---	---	---	517	336	395	961	871	923	---	---	---
21	---	---	---	710	441	624	1020	961	995	---	---	---
22	---	---	---	726	649	686	---	---	---	---	---	---
23	---	---	---	726	451	530	---	---	---	---	---	---
24	935	361	843	940	556	804	---	---	---	---	---	---
25	893	270	656	1110	912	991	---	---	---	1320	1130	1250
26	935	705	817	1200	1110	1170	---	---	---	1140	1010	1070
27	983	935	961	1230	1200	1220	1400	1340	1390	1270	1100	1200
28	993	959	980	1220	1200	1210	1400	1320	1380	1370	1140	1320
29	---	---	---	1260	1210	1240	1330	871	1130	---	---	---
30	---	---	---	1220	631	1010	1020	610	796	---	---	---
31	---	---	---	769	550	633	---	---	---	---	---	---
MONTH	---	------	1390 336	1070	---	---	---	---	---	---		

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	1220	1150	1190	---	---	---	1280	1260	1270	981	693	839
2	1300	1180	1240	1160	1070	1120	1310	1270	1290	1180	917	1050
3	1320	1300	1310	1210	1150	1180	1310	1290	1290	1200	976	1090
4	---	---	---	1310	1210	1250	---	---	---	1020	769	881
5	---	---	---	1360	1310	1340	---	---	---	1160	908	1060
6	---	---	---	1360	1320	1340	---	---	---	1180	930	1090
7	---	---	---	---	---	---	---	---	---	1130	925	1050
8	1440	1290	1390	---	---	---	---	---	---	1100	275	811
9	1360	405	1100	---	---	---	---	---	---	427	253	340
10	1330	339	868	---	---	---	---	---	---	693	407	528
11	1130	850	1020	---	---	---	---	---	---	930	661	818
12	1280	1040	1190	---	---	---	---	---	---	1050	852	939
13	1380	1280	1340	---	---	---	---	---	---	1030	868	949
14	1460	1380	1410	---	---	---	---	---	---	880	181	591
15	---	---	---	---	---	---	---	---	---	592	271	362
16	---	---	---	---	---	---	---	---	---	633	448	547
17	---	---	---	---	---	---	---	---	---	764	633	702
18	---	---	---	---	---	---	---	---	---	912	764	835
19	---	---	---	1210	583	853	---	---	---	948	912	927
20	---	---	---	1150	720	985	---	---	---	1050	921	949
21	---	---	---	1100	1000	1030	---	---	---	1080	578	738
22	---	---	---	1230	1100	1180	---	---	---	792	697	752
23	1150	969	1080	1290	1230	1280	---	---	---	869	792	831
24	1310	1150	1230	1280	1090	1220	---	---	---	897	869	883
25	1350	1300	1330	1250	1150	1210	---	---	---	952	900	917
26	1430	808	1280	1280	1140	1210	---	---	---	926	518	618
27	---	---	---	1260	1160	1230	---	---	---	889	630	745
28	---	---	---	1340	1230	1290	---	---	---	1020	889	969
29	---	---	---	1360	1300	1330	---	---	---	1650	997	1080
30	---	---	---	1340	1270	1300	---	---	---	1540	1090	1140
31	---	---	---	1280	1240	1260	1200	874	1090	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	1650	181	834

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.6	8.2	8.4	8.1	7.9	8.0	8.1	8.0	8.0	8.1	8.0	8.1
2	8.7	8.2	8.4	7.9	7.8	7.9	8.1	8.0	8.0	8.1	8.0	8.0
3	8.7	8.2	8.4	8.1	7.9	8.0	8.1	8.0	8.0	8.0	8.0	8.0
4	8.6	8.2	8.4	8.1	8.0	8.1	8.1	8.1	8.1	8.1	7.9	8.0
5	8.6	8.2	8.4	8.1	8.1	8.1	8.1	8.0	8.0	8.1	8.0	8.1
6	8.4	8.1	8.2	8.1	8.0	8.0	8.1	8.0	8.0	8.1	8.0	8.1
7	8.4	8.0	8.2	---	---	---	8.1	8.0	8.1	8.1	8.0	8.0
8	8.3	7.9	8.2	---	---	---	8.0	7.9	8.0	8.1	8.0	8.1
9	8.3	8.1	8.2	---	---	---	8.1	7.8	8.0	8.0	7.8	8.0
10	8.3	8.1	8.2	---	---	---	8.0	7.8	7.8	---	---	---
11	8.3	8.1	8.2	8.1	7.8	8.0	7.9	7.6	7.7	---	---	---
12	8.3	8.2	8.3	8.0	7.8	8.0	8.0	7.6	7.7	---	---	---
13	8.3	8.1	8.2	8.0	7.7	7.8	8.0	7.4	7.5	---	---	---
14	8.4	8.0	8.1	7.8	7.6	7.7	8.0	7.4	7.8	---	---	---
15	8.3	8.0	8.1	7.6	7.5	7.6	7.9	7.8	7.9	---	---	---
16	8.2	8.0	8.1	7.7	7.6	7.7	7.9	7.8	7.9	---	---	---
17	8.1	8.0	8.1	8.1	7.7	8.0	7.9	7.6	7.9	---	---	---
18	8.1	8.0	8.0	8.1	7.9	8.0	7.7	7.6	7.7	---	---	---
19	8.1	7.9	8.0	8.1	7.7	8.0	7.8	7.6	7.7	---	---	---
20	8.2	8.0	8.1	7.9	7.6	7.8	8.1	7.7	8.0	---	---	---
21	8.2	8.0	8.1	7.8	7.7	7.7	8.1	8.0	8.1	---	---	---
22	8.2	8.0	8.1	7.9	7.5	7.8	8.1	8.0	8.1	---	---	---
23	8.2	8.0	8.0	7.9	7.7	7.8	8.1	8.1	8.1	---	---	---
24	8.1	7.9	8.0	7.8	7.6	7.7	8.1	8.1	8.1	---	---	---
25	8.1	7.9	8.0	7.8	7.4	7.6	8.1	8.0	8.1	---	---	---
26	8.1	8.0	8.0	7.9	7.4	7.8	8.1	8.0	8.1	---	---	---
27	8.0	7.9	8.0	7.9	7.9	7.9	8.1	8.0	8.1	---	---	---
28	8.0	7.8	7.9	7.9	7.8	7.9	8.0	8.0	8.0	---	---	---
29	8.0	7.8	7.9	8.0	7.9	7.9	8.2	7.9	8.0	---	---	---
30	7.8	7.8	7.8	8.0	8.0	8.0	8.2	8.1	8.2	---	---	---
31	8.0	7.8	7.9	---	---	---	8.2	8.1	8.1	---	---	---
MAX	8.7	8.2	8.4	---	---	---	8.2	8.1	8.2	---	---	---
MIN	7.8	7.8	7.8	---	---	---	7.7	7.4	7.5	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	8.1	8.1	8.1	8.2	8.1	8.1	8.4	8.0	8.1
2	---	---	---	8.2	8.0	8.1	8.3	8.1	8.2	8.3	7.8	8.2
3	---	---	---	8.3	8.2	8.2	8.3	8.2	8.2	8.2	7.9	8.1
4	---	---	---	8.3	8.2	8.2	8.3	8.1	8.2	8.2	7.8	8.1
5	---	---	---	8.3	8.1	8.3	8.2	8.1	8.1	8.2	8.0	8.1
6	---	---	---	8.4	8.2	8.3	8.3	8.1	8.2	8.2	8.0	8.1
7	---	---	---	8.4	8.1	8.3	8.4	8.3	8.3	8.3	7.9	8.2
8	---	---	---	8.4	8.2	8.3	8.3	8.2	8.3	8.4	7.9	8.2
9	---	---	---	---	---	---	8.5	8.4	8.5	8.1	7.8	7.9
10	---	---	---	---	---	---	8.6	8.4	8.5	8.2	7.8	8.1
11	---	---	---	---	---	---	8.5	8.4	8.5	8.1	7.8	7.9
12	---	---	---	---	---	---	8.5	8.3	8.4	8.2	7.7	7.9
13	---	---	---	---	---	---	8.5	8.3	8.4	8.1	7.9	8.1
14	---	---	---	---	---	---	8.4	8.2	8.3	8.2	7.8	8.1
15	---	---	---	---	---	---	8.3	8.0	8.1	8.4	8.2	8.3
16	---	---	---	---	---	---	8.1	7.9	8.1	8.2	7.9	8.0
17	---	---	---	---	---	---	8.3	8.0	8.2	8.6	7.7	8.4
18	---	---	---	---	---	---	8.3	8.1	8.2	8.7	7.8	8.2
19	---	---	---	---	---	---	8.4	8.2	8.3	---	---	---
20	---	---	---	8.2	8.0	8.1	8.5	8.4	8.4	---	---	---
21	---	---	---	8.3	8.2	8.3	8.6	8.4	8.4	---	---	---
22	8.4	8.0	8.1	8.3	8.2	8.3	8.6	8.3	8.4	---	---	---
23	8.4	8.2	8.3	8.2	7.9	8.1	8.6	8.4	8.5	---	---	---
24	8.2	7.9	8.2	8.3	8.0	8.2	8.6	8.2	8.3	---	---	---
25	8.1	7.9	8.0	8.3	8.1	8.2	8.5	8.1	8.2	8.2	8.0	8.2
26	8.2	8.0	8.1	8.5	8.2	8.3	8.8	8.3	8.6	8.2	8.1	8.2
27	8.2	8.1	8.2	8.6	8.3	8.5	8.9	8.5	8.7	8.3	8.1	8.2
28	8.2	8.1	8.1	8.7	8.3	8.5	8.8	8.5	8.6	8.3	8.1	8.2
29	---	---	---	8.5	8.2	8.4	8.5	8.1	8.4	8.3	8.2	8.3
30	---	---	---	8.5	7.9	8.3	8.4	7.9	8.2	8.3	8.2	8.3
31	---	---	---	8.1	7.9	8.0	---	---	---	8.4	8.2	8.3
MAX	---	---	---	---	---	---	8.9	8.5	8.7	---	---	---
MIN	---	---	---	---	---	---	8.1	7.9	8.1	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.3	8.2	8.2	---	---	---	---	---	---	---	---	---
2	8.3	8.2	8.3	---	---	---	---	---	---	---	---	---
3	8.3	8.2	8.3	---	---	---	---	---	---	---	---	---
4	8.5	8.4	8.5	---	---	---	---	---	---	---	---	---
5	8.5	8.4	8.5	---	---	---	---	---	---	---	---	---
6	8.5	8.4	8.5	---	---	---	---	---	---	---	---	---
7	8.5	8.4	8.5	---	---	---	---	---	---	---	---	---
8	8.5	7.8	8.3	---	---	---	---	---	---	---	---	---
9	8.3	8.0	8.1	---	---	---	---	---	---	---	---	---
10	8.0	7.6	7.9	---	---	---	---	---	---	---	---	---
11	8.1	7.8	8.1	---	---	---	---	---	---	---	---	---
12	8.2	7.8	8.1	---	---	---	---	---	---	---	---	---
13	8.3	8.1	8.2	---	---	---	---	---	---	8.2	7.7	7.8
14	8.3	8.1	8.2	---	---	---	---	---	---	8.0	7.7	7.8
15	8.3	8.0	8.2	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	8.0	7.7	7.9
19	---	---	---	---	---	---	---	---	---	8.3	7.8	7.9
20	---	---	---	8.8	8.1	8.4	---	---	---	8.2	7.6	7.9
21	---	---	---	9.1	8.4	8.7	---	---	---	---	---	---
22	---	---	---	9.1	8.4	8.9	---	---	---	---	---	---
23	---	---	---	8.9	8.3	8.8	---	---	---	---	---	---
24	---	---	---	8.9	8.3	8.7	---	---	---	8.1	7.5	7.7
25	---	---	---	8.9	8.2	8.7	---	---	---	8.1	7.5	7.9
26	---	---	---	8.9	8.2	8.6	---	---	---	7.9	7.4	7.6
27	---	---	---	---	---	---	---	---	---	7.9	7.6	7.8
28	---	---	---	---	---	---	---	---	---	8.2	7.9	7.9
29	---	---	---	---	---	---	---	---	---	8.5	8.0	8.2
30	---	---	---	---	---	---	---	---	---	8.3	8.0	8.2
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.0	18.5	20.5	18.0	15.5	16.5	7.5	5.0	6.0	6.0	3.5	4.0
2	23.0	18.5	21.0	16.5	13.5	15.0	8.5	6.0	7.0	5.5	3.5	4.5
3	23.0	18.5	21.0	15.5	12.0	14.0	8.0	6.0	7.0	9.5	5.5	7.5
4	23.5	19.0	21.0	12.0	9.5	10.5	8.0	6.0	6.5	9.5	7.5	8.5
5	23.5	19.0	21.5	12.0	8.0	10.0	6.0	3.5	4.5	7.5	5.5	6.0
6	23.5	19.5	21.5	---	---	---	5.5	3.0	4.0	7.0	5.0	6.0
7	21.5	16.5	20.0	---	---	---	6.0	4.0	5.0	8.5	6.5	7.5
8	17.0	13.5	15.5	---	---	---	6.5	4.5	5.5	8.5	7.0	7.5
9	18.5	13.5	16.0	---	---	---	6.5	5.5	6.0	7.0	4.5	6.0
10	20.5	16.0	18.0	---	---	---	6.0	5.0	5.5	4.5	3.5	4.0
11	20.5	16.0	18.0	18.0	14.5	16.5	6.0	5.5	5.5	3.5	3.0	3.5
12	21.5	18.0	20.0	14.5	11.5	13.0	8.5	6.0	7.0	4.5	3.5	4.0
13	23.0	18.5	20.5	13.0	10.5	11.5	9.0	8.0	8.5	4.5	4.0	4.0
14	22.5	18.5	20.0	14.0	10.5	12.5	8.5	5.5	7.0	4.5	4.0	4.5
15	21.0	18.0	19.5	15.0	11.5	13.0	5.5	4.5	5.0	5.5	4.5	5.0
16	19.0	16.0	17.5	15.0	12.0	13.5	4.5	4.0	4.0	6.5	5.5	5.5
17	16.5	15.0	16.0	15.0	13.5	14.5	4.5	4.0	4.0	6.5	6.0	6.5
18	18.0	13.5	16.0	15.5	14.5	15.0	5.5	4.0	4.5	6.5	6.0	6.5
19	17.5	15.0	16.5	15.5	13.0	14.0	7.0	5.5	6.5	6.0	5.5	6.0
20	19.5	16.0	17.5	13.0	11.5	12.0	6.5	5.0	5.5	5.5	4.0	5.0
21	22.0	18.0	20.0	11.5	9.5	11.0	7.0	5.0	6.0	6.0	4.0	5.0
22	22.0	18.5	20.5	9.5	5.5	7.5	8.5	6.0	7.0	6.5	5.5	6.0
23	22.5	18.5	20.5	8.0	5.5	6.5	8.0	6.5	7.5	7.5	6.0	7.0
24	22.0	20.0	21.0	9.5	8.0	9.0	7.0	5.0	6.0	7.5	6.5	7.0
25	21.5	18.0	20.0	9.5	7.5	8.5	7.0	6.0	6.5	7.5	6.0	6.5
26	21.5	19.0	20.0	7.5	5.0	6.0	6.0	4.5	5.5	7.5	5.0	6.5
27	20.5	17.0	19.0	5.0	4.0	4.5	6.5	4.5	5.5	8.0	5.0	6.5
28	20.0	16.0	18.0	5.5	3.5	4.5	9.5	6.5	7.5	8.5	7.0	7.5
29	19.0	16.5	18.0	6.5	4.5	5.5	14.0	9.5	12.0	8.5	6.5	7.0
30	16.5	15.5	16.0	6.5	4.5	5.5	15.5	14.0	14.5	7.5	5.5	6.5
31	18.5	15.0	16.5	---	---	---	14.5	6.0	9.5	8.5	5.5	7.0
MONTH	23.5	13.5	18.9	---	---	---	15.5	3.0	6.5	9.5	3.0	6.0

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	9.0	6.0	7.5	7.5	7.0	7.0	12.5	10.0	11.0	20.5	19.0	20.0
2	9.5	7.5	8.5	8.0	7.5	7.5	13.0	8.5	11.0	20.0	16.5	18.5
3	9.0	8.0	8.5	8.0	7.0	7.5	12.5	11.5	12.0	17.0	16.0	16.5
4	9.0	8.0	8.5	8.0	7.0	7.5	12.0	10.5	11.0	19.0	17.0	17.5
5	8.5	8.0	8.5	10.0	6.5	8.5	11.5	9.5	10.5	20.0	19.0	19.5
6	8.5	7.5	8.0	10.5	8.0	9.5	---	---	---	20.0	19.5	20.0
7	---	---	---	12.5	8.5	10.5	---	---	---	21.5	19.5	20.5
8	10.0	8.5	9.0	14.5	10.0	12.5	---	---	---	21.5	17.5	20.0
9	10.5	9.5	10.0	15.0	12.0	13.5	---	---	---	17.5	16.0	16.5
10	10.5	10.5	10.5	14.0	12.0	13.0	17.5	13.0	15.0	17.0	16.0	16.5
11	11.0	9.5	10.0	12.5	10.5	11.0	18.5	15.0	16.5	17.0	16.0	16.5
12	9.5	8.0	8.5	10.5	7.5	9.0	20.0	16.5	18.0	18.0	16.0	17.0
13	8.5	7.5	8.0	9.0	5.5	7.0	19.0	17.0	18.0	19.0	17.0	18.0
14	8.5	8.0	8.5	10.5	6.0	8.0	17.5	12.0	14.5	20.5	18.5	19.5
15	8.5	3.5	6.5	9.5	8.0	9.0	12.0	11.0	11.0	22.0	20.5	21.5
16	4.0	2.5	3.5	13.5	9.5	11.5	13.0	10.0	11.5	23.5	21.5	22.5
17	4.0	1.5	2.5	11.5	8.0	9.5	14.5	12.5	13.5	24.0	22.0	23.0
18	3.5	.5	2.0	9.0	8.0	8.0	17.5	12.5	15.0	24.0	22.0	23.0
19	7.0	2.5	4.5	8.5	7.5	8.0	19.5	16.5	18.0	---	---	---
20	10.5	6.0	8.0	9.0	8.0	8.5	18.5	15.5	16.5	---	---	---
21	10.5	8.5	9.5	11.0	9.0	10.0	18.0	14.0	16.0	---	---	---
22	8.5	7.5	8.0	13.5	10.5	12.0	18.5	15.0	16.5	---	---	---
23	9.0	7.0	8.0	13.0	10.5	12.0	17.5	15.5	16.5	---	---	---
24	7.5	5.5	6.5	15.5	12.0	13.5	20.0	16.5	18.0	---	---	---
25	6.0	5.5	5.5	16.0	13.0	14.5	21.0	17.5	19.5	22.0	21.0	21.5
26	6.5	4.5	5.5	16.0	12.5	14.0	21.5	17.5	19.5	23.0	20.5	21.5
27	7.0	5.0	6.0	17.0	13.0	15.0	21.5	18.0	20.0	24.0	21.5	22.5
28	7.0	6.5	7.0	18.0	14.5	16.0	20.5	19.0	19.5	---	---	---
29	---	---	---	18.0	16.0	17.0	20.0	17.5	19.0	---	---	---
30	---	---	---	17.5	15.5	16.5	21.0	17.5	19.5	---	---	---
31	---	---	---	16.0	12.5	14.0	---	---	---	---	---	---
MONTH	---	---	---	18.0	5.5	11.0	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	30.5	27.0	28.5	25.5	21.0	22.5
2	25.0	22.0	23.5	29.0	25.0	27.0	29.5	26.5	28.0	29.0	23.0	25.5
3	25.5	23.5	24.5	28.5	25.0	26.5	29.5	25.5	27.5	27.5	22.5	25.0
4	---	---	---	26.0	23.5	25.0	29.0	25.0	27.0	27.0	21.5	24.5
5	---	---	---	27.0	23.5	25.5	27.0	24.0	25.5	27.5	22.5	25.0
6	---	---	---	---	---	---	---	---	---	26.5	23.0	24.5
7	---	---	---	---	---	---	---	---	---	27.0	20.5	24.5
8	24.5	22.5	23.5	---	---	---	---	---	---	25.5	21.0	22.5
9	25.0	23.0	24.0	---	---	---	---	---	---	24.0	20.0	22.0
10	23.5	22.0	22.5	---	---	---	---	---	---	26.0	22.0	24.0
11	25.5	23.5	24.5	---	---	---	---	---	---	27.0	22.0	24.5
12	26.5	24.0	25.0	---	---	---	---	---	---	27.5	23.0	25.0
13	25.5	24.5	25.0	---	---	---	---	---	---	26.0	20.5	23.5
14	27.5	25.0	26.5	---	---	---	---	---	---	22.5	16.5	18.5
15	29.0	25.5	27.0	---	---	---	---	---	---	20.0	16.5	18.0
16	29.0	26.0	27.5	---	---	---	---	---	---	22.0	16.5	19.5
17	28.0	26.0	27.0	---	---	---	---	---	---	24.0	18.5	21.0
18	28.0	26.0	27.0	---	---	---	---	---	---	25.0	19.5	22.0
19	27.0	25.5	26.0	---	---	---	---	---	---	26.5	21.5	24.0
20	26.0	24.5	25.0	32.0	27.0	29.5	---	---	---	28.0	22.5	25.0
21	26.5	24.0	25.0	31.5	27.5	29.5	---	---	---	28.5	23.0	26.0
22	27.5	25.0	26.5	30.5	26.5	28.5	---	---	---	29.5	25.0	27.5
23	29.5	26.0	27.5	30.5	26.0	28.5	---	---	---	28.0	25.5	26.5
24	29.0	26.0	27.5	31.0	26.0	28.5	---	---	---	26.5	23.5	25.0
25	28.0	25.5	27.0	30.0	25.5	27.5	---	---	---	---	---	---
26	---	---	---	31.0	26.5	28.5	---	---	---	---	---	---
27	---	---	---	30.0	25.0	28.0	---	---	---	---	---	---
28	---	---	---	31.5	26.0	28.5	---	---	---	---	---	---
29	---	---	---	33.5	28.0	30.5	---	---	---	---	---	---
30	---	---	---	33.0	28.0	30.5	---	---	---	---	---	---
31	---	---	---	32.5	28.0	30.5	25.5	21.0	22.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.7	5.2	7.2	6.9	5.0	6.2	10.9	10.2	10.5	---	---	---
2	11.0	5.5	7.9	6.6	4.6	5.9	10.3	9.9	10.1	---	---	---
3	11.5	5.7	8.1	---	---	---	10.5	10.0	10.3	---	---	---
4	12.1	6.0	8.4	---	---	---	10.7	10.0	10.4	---	---	---
5	11.4	6.2	8.4	---	---	---	11.4	10.6	11.0	---	---	---
6	10.8	6.0	7.9	---	---	---	11.7	11.0	11.4	---	---	---
7	9.2	5.7	7.3	---	---	---	11.3	10.7	11.0	10.2	9.5	9.9
8	9.3	6.9	7.9	---	---	---	11.0	10.5	10.8	10.1	9.5	9.8
9	8.7	7.1	7.9	---	---	---	---	---	---	10.5	9.4	10.1
10	8.6	6.5	7.3	---	---	---	---	---	---	---	---	---
11	9.0	6.5	7.5	6.9	4.5	6.0	---	---	---	---	---	---
12	9.8	7.0	8.3	7.5	5.6	6.3	---	---	---	---	---	---
13	9.6	6.6	7.8	8.2	7.5	7.9	---	---	---	---	---	---
14	11.0	6.3	8.1	8.3	7.8	8.0	---	---	---	---	---	---
15	11.0	6.3	8.1	8.3	7.7	8.0	---	---	---	---	---	---
16	10.1	6.9	8.3	8.5	7.7	8.1	---	---	---	---	---	---
17	9.6	7.5	8.3	8.6	7.7	8.2	---	---	---	---	---	---
18	9.6	7.5	8.3	8.6	7.7	8.1	---	---	---	---	---	---
19	9.5	6.9	8.0	8.6	5.6	7.8	---	---	---	---	---	---
20	9.3	6.9	7.9	8.4	5.8	7.1	10.6	9.0	9.9	---	---	---
21	9.1	6.1	7.3	9.1	7.9	8.6	11.1	10.3	10.7	---	---	---
22	9.7	6.5	7.7	9.9	8.0	8.9	10.5	9.9	10.3	---	---	---
23	9.3	6.0	7.3	10.2	9.8	10.0	10.4	10.0	10.2	---	---	---
24	8.5	5.4	6.7	9.8	8.9	9.2	11.1	10.3	10.7	---	---	---
25	8.5	5.8	6.8	9.1	6.3	7.7	10.6	8.8	10.0	---	---	---
26	8.3	5.6	6.7	---	---	---	8.8	5.6	7.2	---	---	---
27	8.3	5.9	6.9	11.2	9.8	10.8	6.2	4.1	5.2	---	---	---
28	8.3	5.6	6.8	11.3	9.9	10.4	8.7	6.0	7.0	---	---	---
29	6.2	1.5	4.5	11.0	10.0	10.6	9.5	7.1	8.3	---	---	---
30	5.4	2.2	3.9	11.2	10.9	11.1	---	---	---	---	---	---
31	6.6	5.3	6.0	---	---	---	---	---	---	---	---	---
MONTH	12.1	1.5	7.4	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	11.3	10.9	11.1	9.5	8.3	9.0	7.9	6.1	6.9
2	---	---	---	10.9	10.5	10.7	10.7	9.3	9.9	7.9	6.0	7.1
3	---	---	---	11.3	10.9	11.1	9.3	9.0	9.2	8.1	6.9	7.6
4	---	---	---	11.4	11.1	11.3	9.7	9.0	9.4	8.1	7.8	8.0
5	---	---	---	11.7	11.1	11.4	9.9	9.4	9.6	8.0	7.5	7.7
6	---	---	---	12.3	10.8	11.4	10.0	9.3	9.6	7.7	7.5	7.6
7	---	---	---	11.6	10.6	11.1	10.4	8.3	9.3	7.8	5.8	7.3
8	---	---	---	11.7	10.3	10.9	---	---	---	7.7	6.5	7.4
9	---	---	---	12.6	9.7	11.0	---	---	---	---	---	---
10	---	---	---	14.5	10.2	11.9	12.1	9.1	10.2	---	---	---
11	---	---	---	14.6	10.2	12.3	11.4	8.8	10.0	---	---	---
12	---	---	---	14.6	11.0	12.6	12.0	9.1	10.2	---	---	---
13	---	---	---	14.2	11.7	12.8	12.2	8.8	10.5	---	---	---
14	---	---	---	14.4	11.6	12.7	10.9	9.1	10.0	---	---	---
15	---	---	---	13.5	10.3	11.8	9.7	7.6	8.6	---	---	---
16	---	---	---	16.5	9.6	12.3	9.7	8.0	9.3	---	---	---
17	---	---	---	14.9	9.9	12.0	9.5	8.7	9.2	---	---	---
18	---	---	---	12.3	9.5	11.0	9.3	8.4	8.9	---	---	---
19	---	---	---	11.5	8.7	10.3	9.1	8.3	8.7	---	---	---
20	---	---	---	10.4	8.7	10.0	10.9	8.6	9.6	---	---	---
21	---	---	---	10.7	10.1	10.4	11.8	9.3	10.4	---	---	---
22	---	---	---	10.4	9.1	10.1	12.0	9.2	10.4	---	---	---
23	---	---	---	9.4	8.5	9.0	11.7	8.3	10.0	---	---	---
24	---	---	---	9.7	8.9	9.3	12.9	8.6	10.4	---	---	---
25	11.3	7.3	10.6	9.2	8.6	8.9	14.1	8.2	10.8	---	---	---
26	11.9	11.0	11.5	11.2	8.7	9.8	16.3	8.4	11.8	---	---	---
27	12.0	11.5	11.9	12.3	8.7	10.3	18.5	8.6	13.0	---	---	---
28	11.5	11.2	11.3	15.6	8.4	11.1	13.5	8.1	10.8	---	---	---
29	---	---	---	13.1	8.0	10.1	10.0	5.1	8.4	---	---	---
30	---	---	---	10.8	5.3	8.2	8.2	4.8	6.8	---	---	---
31	---	---	---	8.3	5.6	7.2	---	---	---	---	---	---
MONTH	---	---	---	16.5	5.3	10.8	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	10.2	6.2	8.0	---	---	---	9.0	5.2	6.7
2	---	---	---	12.4	6.4	8.9	---	---	---	11.4	2.9	7.2
3	---	---	---	12.7	6.2	9.2	---	---	---	14.4	5.3	9.8
4	---	---	---	11.9	6.3	8.6	---	---	---	---	---	---
5	---	---	---	11.7	6.5	8.5	---	---	---	10.4	4.3	6.6
6	---	---	---	11.0	6.3	8.3	---	---	---	11.5	3.5	7.5
7	---	---	---	---	---	---	---	---	---	12.8	3.7	7.2
8	---	---	---	---	---	---	---	---	---	6.0	1.5	4.0
9	---	---	---	---	---	---	---	---	---	3.9	2.6	3.5
10	---	---	---	---	---	---	---	---	---	5.4	3.6	4.6
11	---	---	---	---	---	---	---	---	---	11.1	4.8	7.4
12	---	---	---	---	---	---	---	---	---	12.6	5.4	8.3
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	9.2	6.5	7.7	---	---	---	---	---	---	---	---	---
16	9.1	6.4	7.6	---	---	---	---	---	---	---	---	---
17	8.6	6.5	7.5	---	---	---	---	---	---	---	---	---
18	9.5	6.6	7.8	---	---	---	---	---	---	9.9	6.8	8.1
19	9.2	6.7	7.8	---	---	---	---	---	---	13.9	6.8	9.6
20	7.6	4.0	5.8	11.3	5.1	7.6	---	---	---	16.4	6.6	10.2
21	6.1	4.7	5.4	---	---	---	---	---	---	8.3	5.7	7.0
22	6.4	5.6	6.0	---	---	---	---	---	---	13.1	6.2	8.8
23	9.5	6.1	7.5	---	---	---	---	---	---	14.3	5.9	9.0
24	11.1	6.3	8.3	---	---	---	---	---	---	16.1	6.3	10.0
25	9.2	6.2	7.5	---	---	---	---	---	---	12.5	6.1	8.6
26	7.1	5.4	6.4	---	---	---	---	---	---	7.1	4.7	6.1
27	5.5	3.3	4.4	---	---	---	---	---	---	9.4	6.7	7.9
28	5.6	5.1	5.4	---	---	---	---	---	---	12.1	7.0	8.8
29	6.0	4.7	5.4	---	---	---	---	---	---	12.4	6.7	9.0
30	8.2	6.0	6.9	---	---	---	---	---	---	12.0	6.7	8.8
31	---	---	---	---	---	---	9.2	5.2	6.8	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	OCT 14, 92		NOV 17, 92		DEC 08, 92		JAN 06, 93		FEB 27, 93	
TIME	1145		1100		1000		1130		0930	
TOTAL CELLS/ML	25000		10000		15000		12000		26000	
	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...OOCYSTACEAE										
....ANKISTRODESMUS	2300	9	390	4	--	2700	23	3100	12	
....CHLORELLA	770	3	--	--	--	--				
...SCENEDESMACEAE										
....SCENEDESMUS	4600	18	770	8	770	5	1200	10	1500	6
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	1500	15	1200	8	--	--			
..ZYGNEMATALES										
...DESMIDIACEAE										
....CLOSTERIUM	13000	52	--	--	--	--				
CHRYSOPHYTA (YELLOW-GREEN ALGAE)										
.BACILLARIOPHYCEAE										
..PENNALES										
.. NAVICULACEAE										
....NAVICULA	3100	12	390	4	1900	13	770	6	2300	9
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	1300	5	6900	69	11000	73	7300	61	19000	73

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

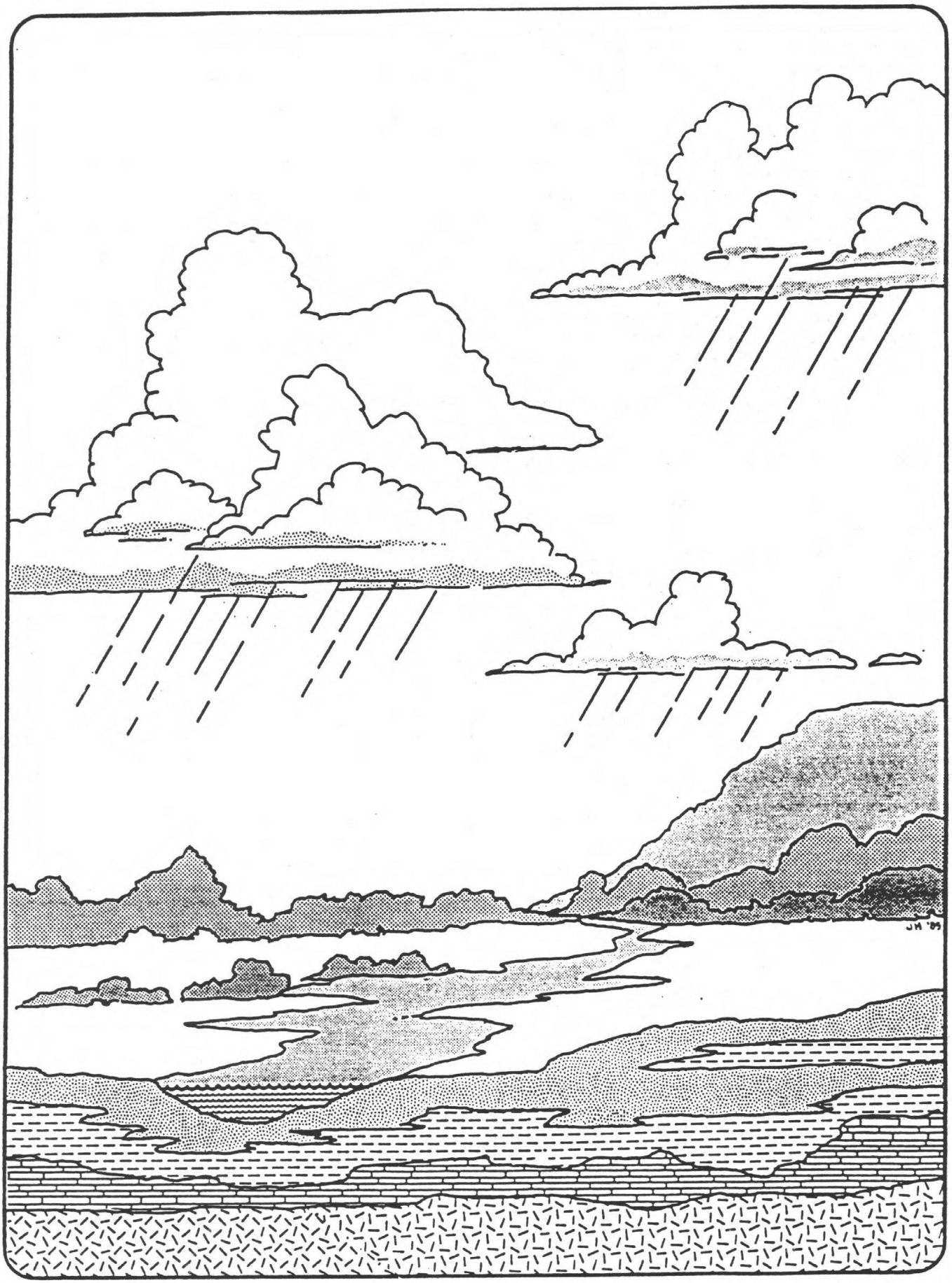
PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MAR 16, 93		APR 13, 93		MAY 18, 93		JUN 15, 93		JUL 13, 93	
TIME	1000		1000		1045		0930		1000	
TOTAL CELLS/ML	35000		52000		12000		43000		27000	
	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...COELASTRACEAE										
....COELASTRUM	--	--	--	--	1200	4				
...HYDRODICTYACEAE										
....PEDIASTRUM	--	--	--	--	1500	6				
...OOCYSTACEAE										
....ANKISTRODESMUS	9200	26	27000	52	2700	23	5800	13	6200	23
....CHLORELLA	3500	10	1900	4	--	--	2300	9		
...SCENEDESMACEAE										
....SCENEDESMUS	3100	9	6500	13	--	3500	8	1200	4	
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	8100	23	1500	3	390	3	770	2	1900	7
..ZYGNEMATALES										
...DESMIDIACEAE										
....STAURASTRUM	--	770	1	--	--	--				
CHRYSOPHYTA (YELLOW-GREEN ALGAE)										
.BACILLARIOPHYCEAE										
..PENNALES										
...NAVICULACEAE										
....NAVICULA	770	2	1900	4	1200	10	3500	8	1200	4
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	7700	22	12000	23	6900	58	14000	33	8500	31
..OSCILLATORIALES										
...NOSTOCACEAE										
....ANABAENA	--	--	390	3	9600	22	2300	9		
...OSCILLATORIACEAE										
....OSCILLATORIA	1200	3	--	770	6	5800	13	390	1	
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....EUGLENA	1500	4	--	--	--	--				

07241550 NORTH CANADIAN RIVER NEAR HARRAH, OK--Continued

PHYTOPLANKTON ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	AUG 25, 93		SEP 07, 93	
TIME	1330		1200	
TOTAL CELLS/ML	35000		64000	
	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)				
.CHLOROPHYCEAE				
..CHLOROCOCCALES				
...HYDRODICTYACEAE				
....PEDIASTRUM	770	2	390	<1
...OOCYSTACEAE				
....ANKISTRODESMUS	5400	15	17000	27
....CHLORELLA	--	10000	16	
...SCENEDESMACEAE				
....SCENEDESMUS	--	27000	42	
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	3100	9	--	
..ZYGNEMATALES				
...DESMIDIACEAE				
....STAURASTRUM	770	2	1200	2
CHRYSOPHYTA (YELLOW-GREEN ALGAE)				
.BACILLARIOPHYCEAE				
..CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	1500	4	--	
..PENNALES				
...FRAGILARIACEAE				
....SYNEDRA	1200	3	--	
...NAVICULACEAE				
....NAVICULA	8100	23	3500	5
CYANOPHYTA (BLUE-GREEN ALGAE)				
.CYANOPHYCEAE				
..CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	12000	34	3100	5
..OSCILLATORIALES				
...NOSTOCACEAE				
....ANABAENA	1500	4	770	1
EUGLENOPHYTA (EUGLENOIDS)				
.EUGLENOPHYCEAE				
..EUGLENALES				
...EUGLENACEAE				
....EUGLENA	390	1	770	1



07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK

LOCATION.--Lat 35°15'56", long 96°12'21", in NE 1/4 SW 1/4 sec.12, T.9 N., R.10 E., Hughes County, Hydrologic Unit 11100302, on left downstream side of bridge on U.S. Highway 75, 2.3 mi upstream from Wewoka Creek, 2.5 mi northeast of Wetumka, and at mile 84.4.

DRAINAGE AREA.--14,290 mi^2 of which 4,899 mi^2 is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 977: 1942. WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 678.28 ft above sea level. Prior to Jan. 19, 1939, nonrecording gage at site 500 ft upstream and at datum 5.00 ft higher. Jan. 20, 1939, to Feb. 23, 1985, recording gage 500 ft upstream at datum 5.00 ft higher. Prior to Aug. 8, 1991, at same site and at datum 5.00 ft higher.

REMARKS.--Records poor. Some regulation by Lake Overholser (station 07240500) and other dams upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1923 reached a stage of 26.9 ft, from information provided by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	654	473	1690	948	827	1850	2950	1280	e2090	2050	e438	291
2	638	691	1590	927	788	2280	2280	1680	e2300	1650	e460	254
3	625	663	1450	932	780	2130	1630	1580	e2100	1390	e500	297
4	601	641	1240	954	836	1920	3290	2600	1910	1200	e550	312
5	583	678	1150	960	1530	1710	4270	2930	e1620	1130	e580	366
6	563	560	1200	926	1420	1460	2390	2830	e1290	1010	719	344
7	567	e500	1360	912	1070	1320	1760	2490	1570	954	647	374
8	566	e550	1310	970	992	1180	1500	2110	1420	994	578	820
9	549	e425	4560	1530	1170	1070	1300	13100	1440	976	598	1330
10	548	e400	6490	2550	1670	977	1170	17800	1500	963	588	873
11	536	8780	4260	2340	3280	902	1060	13000	1760	1160	612	818
12	529	22800	3450	2540	2390	852	950	16000	1900	1180	e530	1100
13	e520	e12500	3230	2460	1780	805	1020	23700	2040	1000	e415	957
14	e511	e7800	13800	2130	1530	755	2140	27300	1780	926	e365	7690
15	502	e6000	16600	1780	5360	718	3250	22800	1570	750	e340	2920
16	482	5380	8160	1570	8740	711	2500	18200	1520	712	e320	1410
17	457	5040	5510	1420	4960	701	2470	10000	1450	755	e315	1470
18	452	4850	e3500	1320	3600	659	3320	e3800	1400	746	e310	1040
19	445	4840	e2850	1240	2800	669	2350	e3080	1540	746	e285	669
20	446	5460	e2350	3580	2690	866	1840	e2650	3360	732	e260	996
21	444	5690	2140	3530	2270	1300	1570	e2300	3390	840	e250	772
22	432	9820	e1720	2650	1990	2220	1410	e2190	1930	790	e245	732
23	422	5060	e1520	2250	1840	2370	1250	e2230	2600	761	e320	530
24	421	3950	e1350	1760	1900	1900	1140	e2590	2090	645	e450	420
25	418	5390	e1200	1820	4490	1730	1070	e3000	1670	601	e580	723
26	424	3420	e1100	1570	3260	1460	982	e3300	1370	e555	325	761
27	436	2640	1080	1260	2380	1220	915	e3000	1310	e520	325	672
28	433	3060	1010	1030	1980	1110	861	e2700	1350	507	293	475
29	451	2610	1020	897	---	1010	2390	e2310	2530	e470	483	465
30	468	2120	1070	813	---	2470	1750	e2100	2710	e445	378	461
31	460	---	1010	826	---	5010	---	e2010	---	e430	333	---
TOTAL	15583	132791	99970	50395	68323	45335	56778	216660	56510	27588	13392	30342
MEAN	503	4426	3225	1626	2440	1462	1893	6989	1884	890	432	1011
MAX	654	22800	16600	3580	8740	5010	4270	27300	3390	2050	719	7690
MIN	418	400	1010	813	780	659	861	1280	1290	430	245	254
AC-FT	30910	263400	198300	99960	135500	89920	112600	429700	112100	54720	26560	60180

e Estimated

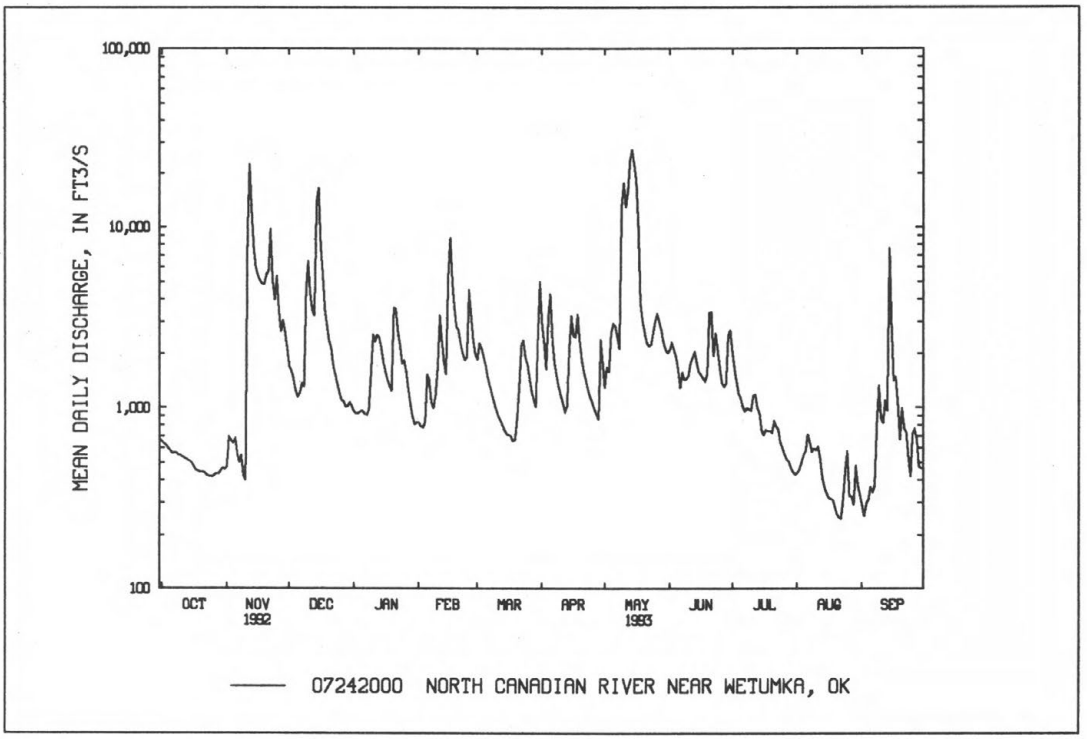
07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	704	641	467	409	565	800	1097	1722	1548	662	356	473
MAX	4914	4580	3225	2075	3037	5684	6643	6989	6081	3230	2667	3894
(WY)	1987	1942	1993	1985	1985	1990	1945	1993	1957	1951	1950	1950
MIN	4.25	16.7	43.8	44.3	56.6	43.5	72.8	85.3	73.4	42.5	8.71	.000
(WY)	1957	1955	1955	1940	1957	1940	1955	1940	1953	1954	1956	1954

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1938-93	
ANNUAL TOTAL	641120		813667			
ANNUAL MEAN	1752		2229		787	
HIGHEST ANNUAL MEAN					2229	1993
LOWEST ANNUAL MEAN					156	1956
HIGHEST DAILY MEAN	22800	Nov 12	27300	May 14	55800	Apr 15 1945
LOWEST DAILY MEAN	342	Aug 29	245	Aug 22	.00	[a]Aug 27 1954
ANNUAL SEVEN-DAY MINIMUM	421	Aug 23	284	Aug 16	.00	Aug 27 1954
INSTANTANEOUS PEAK FLOW			29000	May 14	66000	Apr 15 1945
INSTANTANEOUS PEAK STAGE			19.29	May 14	26.40	Apr 15 1945
ANNUAL RUNOFF (AC-FT)	1272000		1614000		570200	
10 PERCENT EXCEEDS	3960		4260		1820	
50 PERCENT EXCEEDS	993		1280		275	
90 PERCENT EXCEEDS	485		445		66	

[a]No flow Aug. 27 to Oct. 11, 1954, Aug. 25 to Oct. 22, 1956.



07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1944 to December 1944; December 1951 to March 1953; October 1953 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1953 to May 1989.
WATER TEMPERATURE: October 1953 to May 1989.

REMARKS.--Samples were collected bimonthly. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. A sample was collected on Aug. 16 for low level inorganic analysis. These data are available upon request at the District office.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUN											
07...	1633	20.0	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2
07...	1636	40.0	25.0	740	1028	1028	1560	7.21	1190	7.7	8.2
07...	1639	60.0	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2
07...	1642	80.0	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2
07...	1645	100	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2
07...	1648	120	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2
07...	1651	140	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2
07...	1654	160	25.0	740	1028	1028	1560	7.21	1190	7.7	8.2
07...	1657	180	25.0	740	1028	1028	1560	7.21	1190	7.7	8.3
07...	1700	200	25.0	740	1028	1028	1560	7.21	1190	7.6	8.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT												
05...	1300	1028	80020	602	*910	8.7	27.0	28.0	35	748	10.0	131
FEB												
08...	1130	1028	80020	957	909	8.3	17.0	10.5	77	746	11.6	107
APR												
19...	0830	1028	80020	2520	597	8.0	20.0	15.5	320	730	9.5	100
JUN												
07...	1540	1028	80020	1560	1190	8.0	29.0	25.5	9.8	740	7.9	100
AUG												
16...	1100	1028	80020	335	1070	8.2	32.5	30.0	120	745	8.0	109

*SPECIFIC CONDUCTANCE, LAB (µS/CM)

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)
OCT												
05...	K38	K58	200	29	41	23	98	51	3	5.2	185	10
FEB												
08...	180	88	270	39	69	23	77	38	2	3.9	279	0
APR												
19...	1700	1100	170	57	44	15	49	38	2	3.3	140	0
JUN												
07...	120	290	370	120	96	31	110	39	2	6.4	298	0
AUG												
16...	K4	K22	260	77	64	25	100	45	3	6.1	228	0

DATE	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
OCT												
05...	168	69	150	0.50	1.7	501	490	0.68	814	--	--	--
FEB												
08...	229	87	100	0.30	13	530	517	0.72	1370	0.960	0.960	4.2
APR												
19...	115	66	71	0.30	8.7	332	329	0.45	2260	0.540	--	--
JUN												
07...	244	180	150	0.50	12	754	737	1.03	3180	0.540	--	--
AUG												
16...	187	120	140	0.60	8.0	598	577	0.81	541	--	--	--

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)
OCT												
05...	0.020	<0.010	--	<0.050	<0.050	0.030	0.010	0.04	0.01	1.3	1.3	1.3
FEB												
08...	--	0.040	0.13	--	1.00	--	0.020	--	0.03	0.78	0.80	1.8
APR												
19...	--	<0.010	--	--	0.540	--	0.030	--	0.04	0.67	0.70	1.2
JUN												
07...	--	<0.010	--	--	0.540	--	0.030	--	0.04	0.27	0.30	0.84
AUG												
16...	--	<0.010	--	--	<0.050	--	0.020	--	0.03	0.38	0.40	0.40

07242000 NORTH CANADIAN RIVER NEAR WETUMKA, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	PHOS-PHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
OCT											
05...	0.400	0.28	0.050	0.090	<0.010	--	0.31	20	160	<3	20
FEB											
08...	0.450	--	0.230	--	0.260	0.80	--	30	200	<3	21
APR											
19...	0.200	--	0.140	--	0.090	0.28	--	--	--	--	--
JUN											
07...	0.170	--	0.180	--	0.150	0.46	--	<10	300	<3	<3
AUG											
16...	0.190	--	0.110	--	0.080	0.25	--	50	200	<3	4

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
05...	20	10	<10	3	<1	<1.0	600	<6	169	275	87
FEB											
08...	15	9	<10	2	<1	<1.0	690	<6	462	1190	59
APR											
19...	--	--	--	--	--	--	--	--	1890	12900	50
JUN											
07...	27	1	<10	2	<1	<1.0	900	10	808	3400	81
AUG											
16...	26	1	<10	3	<1	<1.0	790	11	227	205	92

07242340 ARCADIA LAKE NEAR ARCADIA, OK

LOCATION.--Lat 35°38'54", long 97°21'47", in NW 1/4 SE 1/4 sec.36, T.14 N., R.2 W., Oklahoma County, Hydrologic Unit 11100303, 2.0 mi southwest of Arcadia and at mile 213.8.

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--November 1986 to September 1993 (discontinued).

REVISED RECORDS.--WDR OK-88-1: 1987 (M).

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by rolled earth dam. An uncontrolled saddle spillway is located on the left end of the dam. Outlet works consist of a 7- by 10-foot conduit and an 18-inch water-supply pipe. Impoundment began Nov. 9, 1986; conservation pool first filled May 29, 1987. Capacity 92,100 acre-ft at elevation 1,029.5 ft, top of flood-control pool and spillway crest; 27,580 acre-ft at elevation 1,006.0 ft, top of conservation pool. Dead storage 190 acre-ft below elevation 970.0 ft. Figures given herein represent total contents. Reservoir is used for flood control, water-quality control, recreation, fish and wildlife, and future water supply. U.S. Army Corps of Engineers' satellite telemeter located at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 63,680 acre-ft, May 19, 20, 1993, elevation, 1021.16 ft; minimum since conservation pool first filled, 15,010 acre-ft, July 29, 1987, November 23, 1987, elevation, 997.91 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents 63,680 acre-ft, May 19, 20, elevation 1,021.16 ft; minimum, 26,520 acre-ft, Aug. 23, elevation, 1,005.41 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

990	6,990	1,005	25,790
995	11,590	1,010	35,430
1,000	17,840	1,015	46,880

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

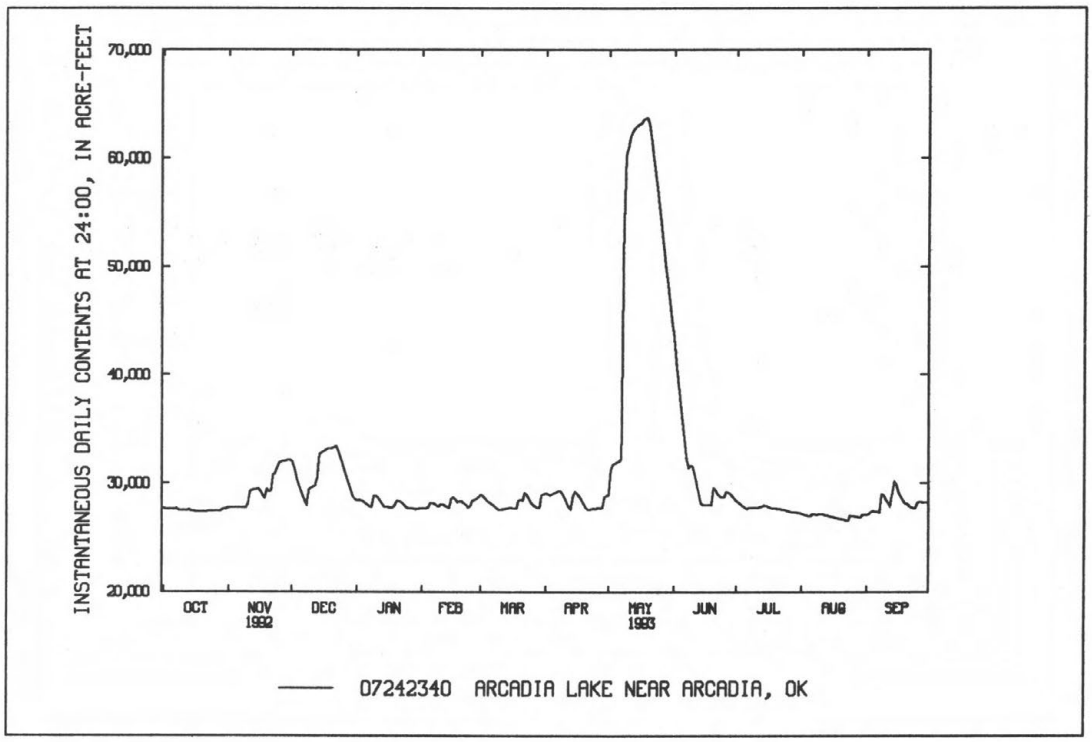
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27650	27760	32030	28410	27670	28950	29040	28910	43560	28350	27180	27090
2	27640	27760	31440	28430	27670	28840	28990	31250	41270	28190	27110	27170
3	27640	27750	30680	28410	27690	28610	28890	31720	39430	28040	27060	27380
4	27620	27710	29950	28320	27750	28390	28970	31800	37600	27870	26980	27440
5	27620	27710	29440	28150	28150	28240	29060	31940	35760	27750	26950	27380
6	27620	27710	28890	28000	28150	28090	29170	32010	34100	27620	27150	27380
7	27650	27720	28410	27840	28080	27950	29250	32270	32290	27760	27150	27270
8	27530	27710	28000	27800	27910	27800	29270	52950	31400	27760	27090	29000
9	27520	27750	29360	28840	27840	27620	29020	60270	31620	27760	27130	28880
10	27500	28080	29550	28840	28040	27560	28650	60970	31560	27710	27130	28480
11	27510	29230	29630	28670	28020	27580	28240	61960	30740	27730	27170	28190
12	27510	29360	29740	28410	27910	27620	27780	62430	29800	27780	27060	27860
13	27540	29380	30470	28080	27820	27650	27620	62700	28960	27840	27040	28990
14	27450	29420	32630	27820	27730	27690	28780	62910	28170	27950	26970	30140
15	27440	29490	32830	27800	28590	27760	29190	63080	27970	27910	26910	29860
16	27400	29270	32940	27760	28690	27710	29020	63140	27950	27820	26880	29170
17	27360	28910	33040	27750	28480	27650	28800	63500	28000	27750	26800	28760
18	27360	28610	33180	27730	28240	27670	28500	63620	27980	27670	26770	28480
19	27360	29440	33180	27970	28300	28410	28130	63680	27970	27650	26730	28130
20	27400	29230	33220	28370	28330	28440	27760	63110	29550	27650	26700	28080
21	27400	29290	33300	28350	28150	28410	27580	61760	29380	27620	26640	27890
22	27420	30760	33420	28260	27980	29100	27560	60070	28990	27600	26570	27750
23	27420	30910	33020	28080	27750	28930	27640	58530	28800	27540	26540	27690
24	27440	31460	32430	27890	27870	28570	27650	57040	28670	27530	27000	27710
25	27440	31880	31800	27730	28370	28200	27640	55330	28670	27450	26970	28220
26	27440	31960	31150	27650	28440	27970	27750	53670	29190	27420	26950	28280
27	27420	32010	30530	27690	28560	27860	27690	51790	29150	27350	26910	28240
28	27450	32050	29970	27640	28710	27730	27750	49990	29020	27310	26880	28220
29	27600	32110	29400	27580	---	27750	28740	48430	28800	27310	26860	28220
30	27600	32150	28800	27640	---	28890	28840	46700	28570	27290	27110	28220
31	27690	---	28500	27650	---	28990	---	44890	---	27260	27110	---

07242340 ARCADIA LAKE NEAR ARCADIA, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	27690	32150	33420	28840	28710	29100	29270	63680	43560	28350	27180	30140
MIN	27360	27710	28000	27580	27670	27560	27560	28910	27950	27260	26540	27090
‡	6.06	8.40	6.50	6.04	6.61	6.76	6.68	14.19	6.54	5.82	5.74	6.35
‡‡	+30	+4,460	-3,650	-850	+1,060	+280	-150	+16,050	-16,320	-1,310	-150	+1,110

CAL YR 1992 MAX 37220 MIN 27360 ‡‡ -7,760
WTR YR 1993 MAX 63680 MIN 26540 ‡‡ +560

‡ ELEVATION, LESS 1,000 FEET AT END OF MONTH.
‡‡ CHANGE IN CONTENTS, IN ACRE-FEET



07242350 DEEP FORK NEAR ARCADIA, OK

LOCATION.--Lat 35°38'50", long 97°21'35", in NE 1/4 SW 1/4 sec.36, T.14 N., R.2 W., Oklahoma County, Hydrologic Unit 11100303, on right bank 400 ft downstream from Arcadia Dam, 2.0 mi southwest of Arcadia, 2.6 mi upstream from Coffee Creek, and at mile 213.7.

DRAINAGE AREA.--105 mi^2.

PERIOD OF RECORD.--October 1969 to September 1993 (discontinued).

REVISED RECORDS.--WDR OK-77-1: 1975 (M) (gage height only), WDR OK-84-1: 1983 (m).

GAGE.--Water-stage recorder. Datum of gage is 900.00 ft above sea level. Prior to Nov. 1, 1974, at site 0.9 mi downstream at datum 41.65 ft higher. May 2, 1978 to May 14, 1979, the gage was temporarily moved 1.9 mi downstream to county road bridge at datum 36.65 ft higher. May 15, 1979 to March 10, 1987, at site 0.6 mi downstream at datum 41.65 ft higher.

REMARKS.--No estimated daily discharges. Records good. Regulation since November 1986 by Arcadia Lake (station 07242340), 400 ft upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.00	78	65	11	98	.13	.06	859	93	.00	.00
2	.13	.00	258	65	11	150	63	.16	860	62	.00	.00
3	.11	.00	303	65	11	149	55	.05	853	44	.00	.00
4	.09	.00	302	64	11	149	56	.05	846	45	.00	.00
5	.07	.01	300	81	43	105	20	.04	839	45	.00	.00
6	.11	.00	299	91	61	99	.15	.03	832	45	.00	.00
7	.18	.00	299	91	61	99	.15	.04	825	16	.00	.00
8	.15	.00	224	47	97	99	.14	14	817	.00	.00	.21
9	.21	.00	94	22	75	99	136	1.8	609	.00	.00	102
10	.14	.00	.03	22	52	37	215	.05	197	.00	.00	162
11	.14	.06	.01	128	72	.13	214	.06	448	.00	.00	159
12	.11	.00	.00	184	72	.13	213	.05	449	.00	.01	158
13	.10	.00	.02	183	65	.13	96	.05	447	.00	.02	146
14	.04	.00	.21	148	65	.14	23	.05	389	14	.08	45
15	.00	.00	.60	57	65	.14	24	.06	106	21	.05	174
16	.00	90	.00	22	93	34	129	.08	22	21	.04	293
17	.00	145	.00	22	121	41	187	.10	21	21	.01	206
18	.00	145	.01	22	121	46	187	.11	21	21	.01	159
19	.00	145	.01	22	121	47	186	.12	21	7.6	.00	158
20	.00	145	.01	22	121	47	186	262	23	.00	.01	157
21	.00	145	.01	72	120	47	81	668	127	.00	.00	106
22	.00	58	.01	100	120	47	23	801	183	.00	.00	43
23	.00	.05	187	100	120	143	8.3	797	89	.00	.00	.04
24	.00	.06	308	99	67	205	.07	793	44	.00	.02	.04
25	.00	.05	307	99	18	205	.06	788	44	.00	.00	.05
26	.00	.04	304	49	.10	129	.06	804	45	.00	.00	.04
27	.00	.04	304	21	.10	88	23	864	44	.00	.00	.05
28	.00	.04	304	21	.09	88	36	877	75	.00	.00	.04
29	.00	.04	303	15	---	61	14	878	94	.00	.00	.03
30	.00	.03	301	11	---	27	.06	871	94	.00	.06	.04
31	.00	---	155	11	---	.13	---	865	---	.00	.01	---
TOTAL	1.73	873.42	4630.92	2021	1794.29	2339.80	2176.12	9284.96	10323	455.60	0.32	2068.54
MEAN	.056	29.1	149	65.2	64.1	75.5	72.5	300	344	14.7	.010	69.0
MAX	.21	145	308	184	121	205	215	878	860	93	.08	293
MIN	.00	.00	.00	11	.09	.13	.06	.03	21	.00	.00	.00
AC-FT	3.4	1730	9190	4010	3560	4640	4320	18420	20480	904	.6	4100

07242350 DEEP FORK NEAR ARCADIA, OK--Continued

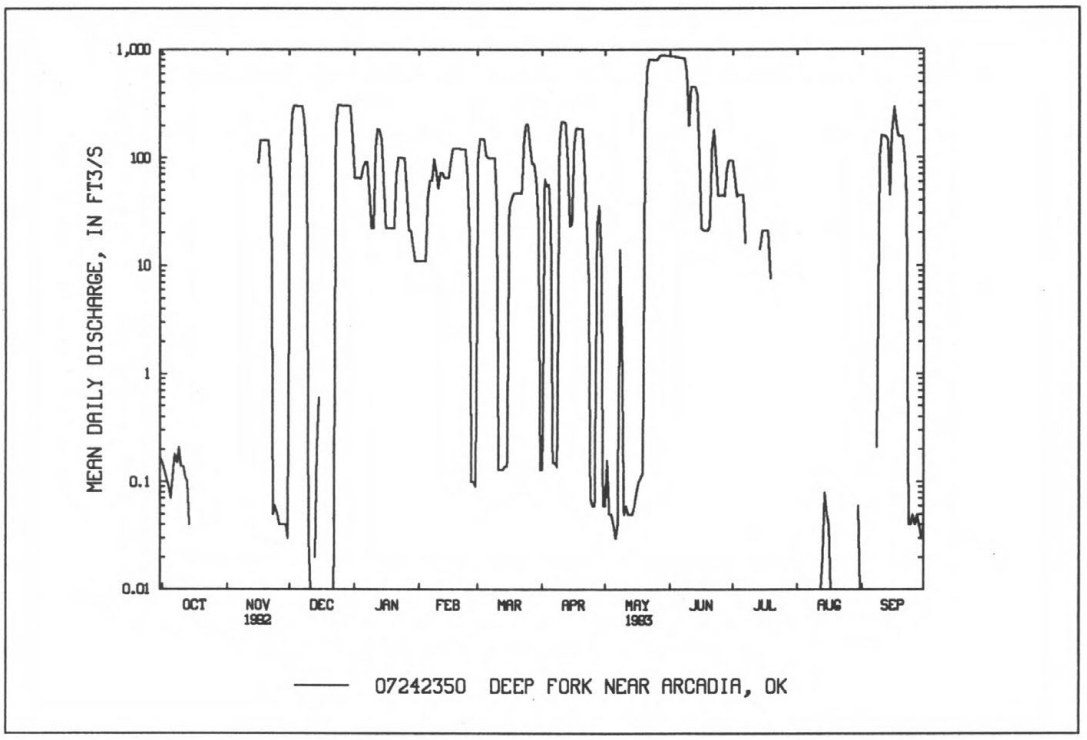
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.4	53.7	47.0	50.7	30.1	57.4	89.5	164	162	60.4	56.0	126
MAX	63.9	136	149	175	66.7	121	171	462	398	204	244	374
(WY)	1989	1992	1993	1992	1990	1990	1990	1990	1989	1992	1989	1989
MIN	.056	17.9	.13	.14	.15	2.80	21.7	13.9	3.53	.78	.010	42.5
(WY)	1993	1991	1989	1989	1989	1989	1989	1988	1988	1990	1993	1988

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1988-93	
ANNUAL TOTAL	29192.15		35969.70			
ANNUAL MEAN	79.8		98.5		[a]77.1	
HIGHEST ANNUAL MEAN					110	1989
LOWEST ANNUAL MEAN					35.6	1991
HIGHEST DAILY MEAN	690	Jul 4	878	May 29	1460	Jun 29 1989
LOWEST DAILY MEAN	.00	at times	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 15	.00	Oct 15	.00	Oct 15 1992
INSTANTANEOUS PEAK FLOW			881	May 27	[b]1470	Jun 28 1989
INSTANTANEOUS PEAK STAGE			56.52	May 27	[b]57.78	Jun 28 1989
ANNUAL RUNOFF (AC-FT)	57900		71350		55850	
10 PERCENT EXCEEDS	301		295		201	
50 PERCENT EXCEEDS	23		21		.98	
90 PERCENT EXCEEDS	.01		.00		.10	

[a]Prior to regulation water years 1970-86, 66.3 ft^3/s.

[b]Maximum discharge for period of record, 14,300 ft^3/s Nov. 2, 1974, gage height 26.9 ft from floodmark at former site and datum.



ARKANSAS RIVER BASIN

07242380 DEEP FORK NEAR WARWICK, OK

LOCATION.--Lat 35°40'51", long 97°00'29", NW 1/4 NE 1/4 sec. 20, T.14 N., R.3 E., Lincoln County, Hydrologic Unit 11100303, on left downstream abutment on U.S. Highway 66, 0.5 mi southwest of Warwick, and at mile 190.9.

DRAINAGE AREA.--532 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 823.05 ft above sea level.

REMARKS.--Records good. Considerable regulation by Arcadia Lake (station 07242340), 22.9 miles upstream, since November 1986. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	132	132	248	164	729	347	1320	1340	273	36	63
2	49	58	414	259	158	845	308	2180	1290	253	37	48
3	48	56	607	279	159	623	327	1560	1250	171	35	97
4	47	49	594	e310	174	590	560	1190	1210	159	81	48
5	46	48	588	e350	253	531	771	1060	1140	154	42	36
6	46	48	618	e370	348	453	404	934	1160	154	54	33
7	47	48	666	e310	284	442	319	927	1170	172	50	34
8	51	48	601	e270	284	430	258	4840	1780	104	44	920
9	49	48	2210	e240	321	414	300	19000	1810	80	45	255
10	49	49	927	e280	488	367	589	6860	1520	75	42	306
11	47	174	413	e400	614	213	566	3460	1110	69	39	270
12	44	472	264	e600	407	195	558	2860	986	67	35	260
13	45	150	e442	e430	305	181	478	1820	940	87	32	278
14	43	100	3800	e320	277	175	586	1550	860	103	31	1320
15	43	81	1490	e270	652	176	1130	1510	610	127	28	366
16	42	101	651	e260	790	184	734	1390	290	114	27	593
17	42	272	383	e250	495	234	1030	1320	265	104	27	481
18	46	274	315	e240	413	229	939	2200	241	110	24	270
19	45	878	290	e230	946	593	777	1380	236	147	25	319
20	45	618	246	e400	1470	434	618	1270	595	72	24	800
21	49	484	229	e350	877	321	483	1800	437	62	25	364
22	46	2180	223	e300	590	958	254	2000	563	56	23	183
23	44	862	272	e320	489	672	240	1960	497	56	25	85
24	49	800	568	e290	486	726	203	1880	236	51	41	59
25	49	1120	583	e250	1640	630	179	1670	260	48	39	241
26	46	436	574	e210	607	534	162	1590	508	46	27	132
27	46	278	591	e190	413	356	154	1610	426	46	26	75
28	45	221	603	e185	350	352	417	1570	305	44	25	61
29	49	180	644	e180	---	334	6480	1620	319	43	25	53
30	49	146	672	e175	---	1340	1840	1580	285	41	33	49
31	51	---	562	e170	---	645	---	1410	---	38	282	---
TOTAL	1447	10411	21172	8936	14454	14906	22011	77321	23639	3126	1329	8099
MEAN	46.7	347	683	288	516	481	734	2494	788	101	42.9	270
MAX	51	2180	3800	600	1640	1340	6480	19000	1810	273	282	1320
MIN	42	48	132	170	158	175	154	927	236	38	23	33
AC-FT	2870	20650	41990	17720	28670	29570	43660	153400	46890	6200	2640	16060

e Estimated

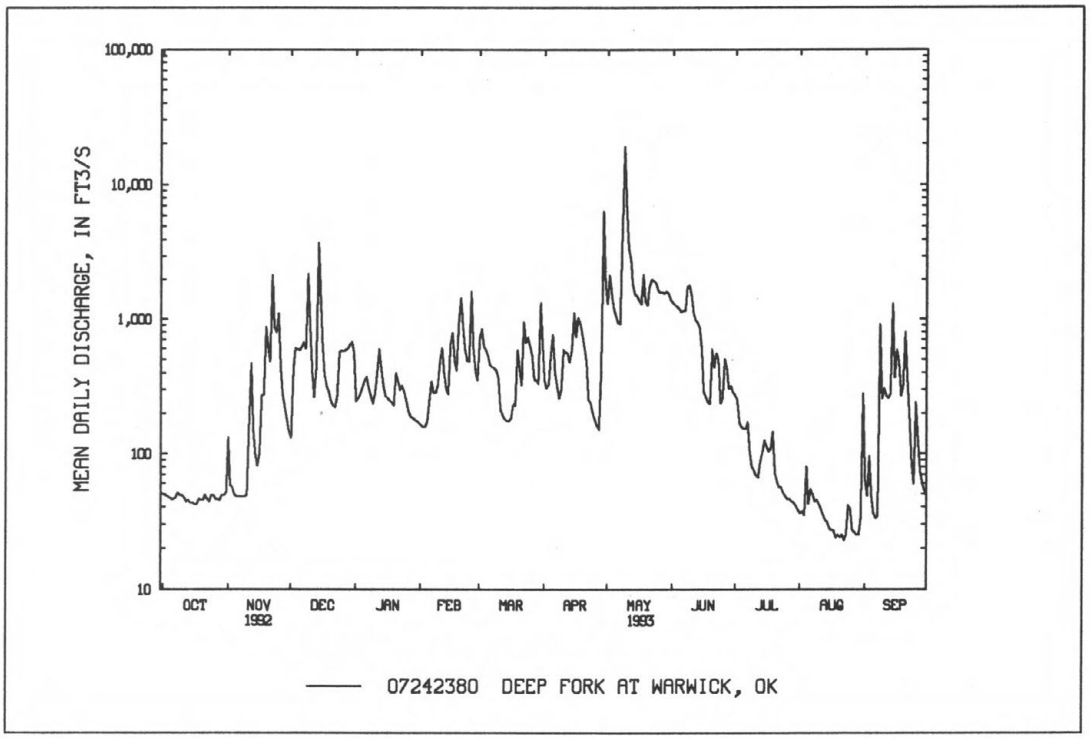
07242380 DEEP FORK NEAR WARWICK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	110	180	266	164	216	442	586	857	579	150	158	409
MAX	169	347	683	288	516	1219	1435	2494	1370	328	630	1527
(WY)	1990	1993	1993	1993	1993	1990	1990	1993	1989	1992	1989	1989
MIN	46.7	68.3	60.7	71.8	47.0	59.3	101	115	70.5	31.2	24.6	142
(WY)	1993	1991	1989	1991	1988	1991	1989	1988	1988	1990	1991	1988

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1988-93	
ANNUAL TOTAL	106446		206851			
ANNUAL MEAN	291		567		343	
HIGHEST ANNUAL MEAN					567	1993
LOWEST ANNUAL MEAN					119	1991
HIGHEST DAILY MEAN	3890	Jun 20	19000	May 9	19000	May 9 1993
LOWEST DAILY MEAN	21	Aug 25	23	Aug 22	[a]3.9	Dec 13 1987
ANNUAL SEVEN-DAY MINIMUM	31	Aug 19	25	Aug 17	11	Sep 9 1990
INSTANTANEOUS PEAK FLOW			22200	May 9	[b]22200	May 9 1993
INSTANTANEOUS PEAK STAGE			21.24	May 9	[c]21.24	May 9 1993
ANNUAL RUNOFF (AC-FT)	211100		410300		248600	
10 PERCENT EXCEEDS	650		1340		798	
50 PERCENT EXCEEDS	132		279		107	
90 PERCENT EXCEEDS	49		44		30	

[a]Minimum daily discharge for period of record, .05 ft^3/s Aug. 23, 1987.
[b]Maximum discharge for period of record, 28,700 ft^3/s, Oct. 21, 1983.
[c]Maximum gage height for period of record, 22.05 ft, Oct. 21, 1983.



07243000 DRY CREEK NEAR KENDRICK, OK

LOCATION.--Lat 35°46'55", long 96°51'14", in NW 1/4 NW 1/4 sec.14, T.15 N., R.4 E., Lincoln County, Hydrologic Unit 11100303, near left bank on downstream side of county road bridge, 1.0 mi downstream from Beaver Creek and 4.5 mi west of Kendrick.

DRAINAGE AREA.--69.0 mi^2.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Elevaton of gage is 820 ft above sea level, from topographic map. Prior to Oct. 1, 1981, gage at same site and datum 5.00 ft higher.

REMARKS.--No estimated daily discharges. Records poor. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov. 22	0945	3,170	16.90	May 2	0630	2,890	16.20
Dec. 14	1130	4,140	18.85	May 8	2300	11,100	22.37
Apr. 29	0645	7,240	20.83				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	10	24	25	20	99	44	65	15	11	3.4	3.7
2	3.2	4.6	22	28	20	115	36	861	14	10	3.3	3.4
3	3.2	4.1	21	31	20	56	33	292	12	9.3	3.2	5.2
4	3.2	3.9	20	31	21	41	251	70	12	8.5	3.1	3.1
5	3.2	3.8	20	27	28	36	145	38	10	8.0	4.0	2.7
6	3.1	3.8	23	26	26	32	65	34	9.8	7.8	4.8	2.5
7	3.2	3.9	26	26	22	29	49	34	9.2	7.5	4.0	2.8
8	3.4	4.0	23	26	21	27	39	2440	128	7.2	3.9	159
9	3.3	4.0	577	219	20	25	34	3670	193	6.5	4.0	14
10	3.3	4.2	147	83	210	22	31	338	152	6.2	3.5	8.4
11	3.3	44	59	44	111	21	28	411	55	5.9	3.1	7.0
12	3.2	33	45	54	52	20	27	301	41	11	2.9	6.5
13	3.2	8.4	264	32	38	19	26	125	35	11	2.7	9.1
14	3.2	6.8	1710	28	32	19	87	79	31	11	2.6	144
15	3.1	6.6	218	29	84	19	154	65	29	8.4	2.4	13
16	3.2	6.5	88	29	126	20	54	55	27	7.0	2.3	7.4
17	3.2	6.5	62	26	68	17	312	48	25	6.2	2.2	5.9
18	3.2	7.3	53	24	55	18	134	226	24	6.4	2.2	5.1
19	3.3	115	46	36	212	26	72	73	24	7.6	2.1	72
20	3.3	30	39	279	468	22	49	47	41	5.8	2.0	171
21	3.4	13	37	112	215	20	41	40	24	5.5	1.9	11
22	3.5	1080	35	51	91	151	38	35	20	5.1	1.8	5.8
23	3.5	135	32	40	69	63	37	40	18	4.9	1.8	4.3
24	4.0	219	29	29	99	38	35	34	17	4.6	2.3	4.0
25	3.9	221	32	27	620	30	32	28	15	4.3	2.2	30
26	3.8	60	29	26	95	26	29	25	23	4.2	1.9	6.7
27	3.8	40	29	25	61	25	28	23	19	3.9	1.8	4.9
28	3.8	32	29	24	50	23	715	21	15	3.9	1.7	4.6
29	5.4	28	29	22	---	23	2910	21	13	3.9	1.8	4.2
30	4.6	25	29	21	---	360	156	19	12	3.7	2.1	3.8
31	4.6	---	26	21	---	75	---	16	---	3.5	11	---
TOTAL	108.9	2163.4	3823	1501	2954	1517	5691	9574	1063.0	209.8	92.0	725.1
MEAN	3.51	72.1	123	48.4	105	48.9	190	309	35.4	6.77	2.97	24.2
MAX	5.4	1080	1710	279	620	360	2910	3670	193	11	11	171
MIN	3.1	3.8	20	21	20	17	26	16	9.2	3.5	1.7	2.5
AC-FT	216	4290	7580	2980	5860	3010	11290	18990	2110	416	182	1440

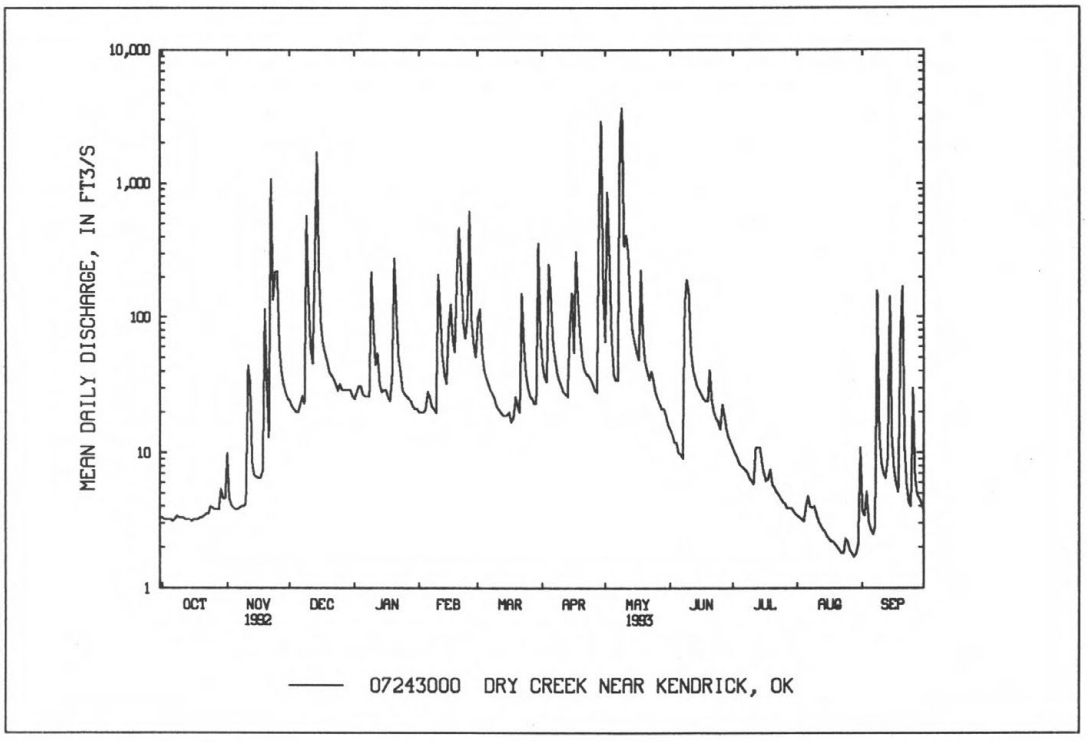
07243000 DRY CREEK NEAR KENDRICK, OK--Continuec

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.6	21.1	19.3	12.3	23.9	35.2	44.6	67.0	48.1	11.0	3.82	16.8
MAX	132	247	153	60.7	235	215	297	309	225	80.9	30.3	104
(WY)	1960	1975	1992	1987	1985	1990	1990	1993	1974	1959	1992	1974
MIN	.000	.000	.000	.000	.000	.000	.83	.57	.54	.000	.000	.000
(WY)	1957	1956	1956	1956	1956	1956	1981	1981	1964	1956	1956	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1956-93	
ANNUAL TOTAL	14179.8		29422.2			
ANNUAL MEAN	38.7		80.6		26.5	
HIGHEST ANNUAL MEAN					88.0	1975
LOWEST ANNUAL MEAN					2.02	1981
HIGHEST DAILY MEAN	1710	Dec 14	3670	May 9	5590	May 12 1982
LOWEST DAILY MEAN	3.1	Oct 6	1.7	Aug 28	[a].00	Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	3.2	Oct 12	1.9	Aug 22	.00	Oct 7 1955
INSTANTANEOUS PEAK FLOW			11100	May 8	18000	Nov 2 1974
INSTANTANEOUS PEAK STAGE			22.37	May 8	[b]24.20	Nov 2 1974
ANNUAL RUNOFF (AC-FT)	28130		58360		19200	
10 PERCENT EXCEEDS	44		144		27	
50 PERCENT EXCEEDS	9.8		23		2.6	
90 PERCENT EXCEEDS	3.7		3.2		.00	

[a]No flow at times most years.
[b]At present datum.



07243500 DEEP FORK NEAR BEGGS, OK

LOCATION.--Lat 35°40'26", long 96°04'06", NW 1/4 SW 1/4 sec.20, T.14 N., R.12 E., Okmulgee County, Hydrologic Unit 11100303, near right downstream abutment of county road bridge, 3.0 mi upstream from Adams Creek, 4.0 mi south of Beggs, 8.0 mi downstream from Flat Rock (Checkerboard) Creek, and at mile 85.0.

DRAINAGE AREA.--2,018 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1938 to current year.

REVISED RECORDS.--WSP 957: 1941. WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 632.55 ft above sea level. Prior to Aug. 29, 1939, nonrecording gage at site 450 ft downstream at same datum. Aug. 29, 1939, to June 22, 1953, nonrecording gage at present site and datum. June 23, 1953, to July 15, 1981, recording gage at present site and datum. July 16, 1981, to May 3, 1989, recording gage at site 1,000 ft downstream and at same datum.

REMARKS.--Records fair. Some regulation by Arcadia Lake (station 07242340) since November 1986. U.S. Army Corps of Engineers' satellite telemeter at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Nov 14	0100	5,460	17.42	Apr. 6	1100	7,770	20.61
Nov. 27	1200	8,470	21.36	Apr. 20	1100	4,950	16.97
Dec. 15	1500	15,900	25.79	May 14	1200	30,700	30.03
Jan. 21	1800	3,470	14.36	Sept. 15	1700	3,700	14.21
Feb. 27	0100	6,970	19.74				
Mar. 23	1800	3,340	14.08				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	162	265	4890	1060	656	5210	4180	8520	2110	463	e108	36
2	156	541	2800	980	617	5030	4560	7930	2070	395	e105	37
3	150	463	1280	896	589	4900	5160	8620	1970	355	e100	43
4	146	480	936	792	590	4180	6200	10100	1830	318	e99	116
5	139	351	880	763	1840	3260	7280	9500	1710	293	e95	133
6	133	248	940	737	2690	2780	7640	8390	1580	261	e150	106
7	129	194	1050	690	2540	2370	6860	7400	1500	228	e130	92
8	127	166	1120	650	1850	1890	6000	6540	1440	209	e120	117
9	129	150	2740	898	1310	1500	5500	8130	1640	200	e110	909
10	127	143	4580	2440	1080	1220	5010	11600	1760	196	e99	1090
11	125	2230	5300	2350	2120	1060	3780	14200	2170	195	84	1100
12	119	5230	5870	2350	2600	944	2130	20300	2330	e175	77	710
13	116	5340	5830	2660	2580	839	1440	28400	2510	e160	70	507
14	112	5170	9570	2650	2620	722	1690	30100	2620	e170	63	2630
15	107	4410	15200	2350	2880	660	3220	25000	2320	e165	57	3670
16	103	3360	13300	1920	3490	654	3350	17300	1710	e162	50	3440
17	98	1900	11000	1520	3860	663	3470	11500	1250	e160	43	2510
18	97	808	11000	1170	3970	625	4020	8960	900	e155	34	1640
19	97	546	10600	987	3800	822	4610	7690	647	e150	28	974
20	94	894	9100	2630	4420	1530	4900	6770	750	e148	24	1860
21	94	1430	7600	3420	5370	1520	4690	5960	1250	e145	20	2910
22	96	3160	6160	3430	5800	2080	4230	5340	759	e142	18	2700
23	100	4650	4710	3290	5400	3300	3600	4850	817	e140	17	2150
24	100	6060	2870	3170	4860	3310	2380	4370	735	e134	21	1180
25	104	7410	1750	3100	5430	3190	1360	3800	615	e130	27	656
26	106	8030	1410	2620	6470	3060	1020	3360	569	e124	27	532
27	108	8390	1340	1680	6840	2960	853	3120	468	e120	24	414
28	108	7890	1300	1170	5970	2460	752	3000	419	e118	25	390
29	121	7000	1240	993	---	1680	4030	e2850	558	e115	53	371
30	151	6040	1200	823	---	2480	7030	e2700	520	e112	54	266
31	167	---	1140	717	---	3580	---	e2400	---	e110	47	---

e Estimated

07243500 DEEP FORK NEAR BEGGS, OK--Continued

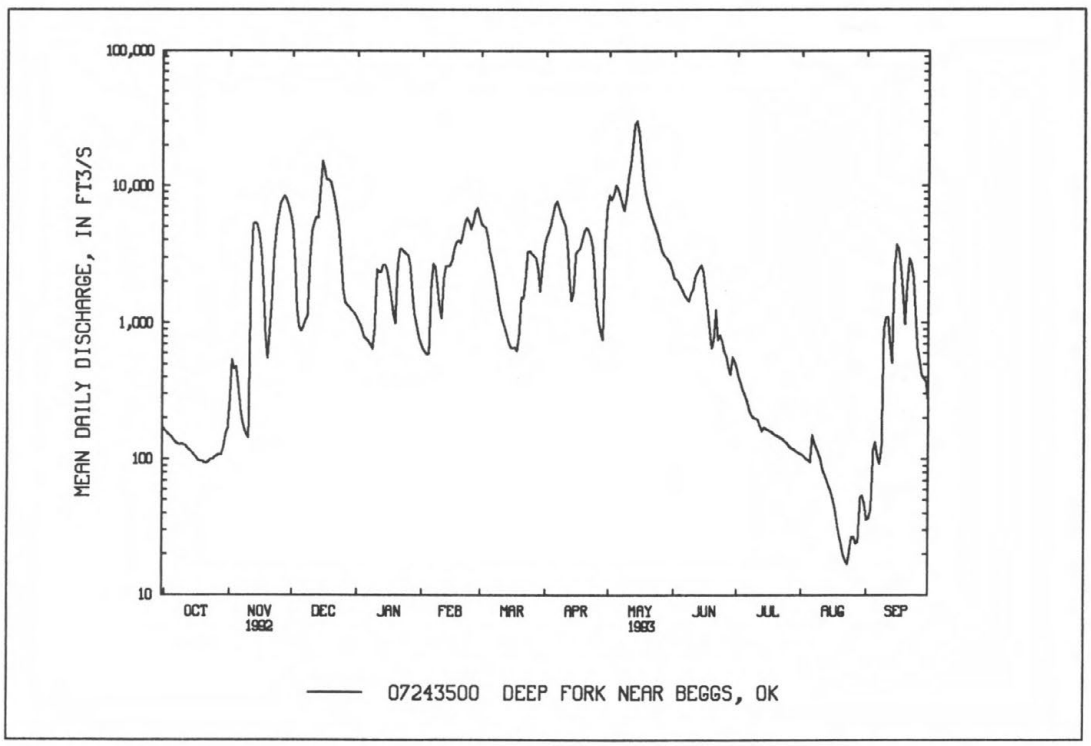
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TOTAL	3721	92949	148706	54906	92242	70479	120945	298700	41527	5948	1979	33289
MEAN	120	3098	4797	1771	3294	2274	4031	9635	1384	192	63.8	1110
MAX	167	8390	15200	3430	6840	5210	7640	30100	2620	463	150	3670
MIN	94	143	880	650	589	625	752	2400	419	110	17	36
AC-FT	7380	184400	295000	108900	183000	139800	239900	592500	82370	11800	3930	66030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	726	727	548	405	648	1122	1564	2315	1938	590	250	389
MAX	5464	8391	4797	3749	4388	8895	9519	12470	8994	3950	2416	1947
(WY)	1942	1975	1993	1985	1985	1990	1945	1943	1974	1950	1992	1989
MIN	.000	.000	.51	7.74	20.3	9.65	37.0	133	59.0	5.67	3.31	.000
(WY)	1955	1955	1955	1940	1957	1940	1955	1971	1953	1954	1954	1956

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1939-93	
ANNUAL TOTAL	727563		965391			
ANNUAL MEAN	1988		2645		935	
HIGHEST ANNUAL MEAN					2645	1993
LOWEST ANNUAL MEAN					114	1956
HIGHEST DAILY MEAN	15200	Dec 15	30100	May 14	55600	May 11 1943
LOWEST DAILY MEAN	94	Oct 20	17	Aug 23	[a].00	at times
ANNUAL SEVEN-DAY MINIMUM	97	Oct 17	22	Aug 20	.00	Sep 29 1939
INSTANTANEOUS PEAK FLOW			30700	May 14	66800	May 11 1943
INSTANTANEOUS PEAK STAGE			30.03	May 14	34.55	May 11 1943
ANNUAL RUNOFF (AC-FT)	1443000		1915000		677300	
10 PERCENT EXCEEDS	6070		6800		2620	
50 PERCENT EXCEEDS	843		1280		160	
90 PERCENT EXCEEDS	191		100		18	

[a]In 1939, 1954, 1956.



07243500 DEEP FORK NEAR BEGGS, OK--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952 to September 1993 (discontinued).
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1951 to May 1989.
WATER TEMPERATURE: November 1951 to May 1989.
REMARKS.--Samples were collected quarterly and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 10,500 microsiemens, Jan. 12, 1955; minimum daily, 74 microsiemens, Oct. 21, 1983.
WATER TEMPERATURE: (1951-85) Maximum daily, 38.5°C, Aug. 8, 1970; minimum daily, 0.0°C on many days during winter periods.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUN											
16...	1545	90.0	27.0	745	1028	1028	1640	9.10	498	5.9	8.1
16...	1550	70.0	27.0	745	1028	1028	1640	9.10	508	6.1	8.2
16...	1555	50.0	27.0	745	1028	1028	1640	9.10	499	6.0	8.2
16...	1600	30.0	27.0	745	1028	1028	1640	9.10	500	6.0	8.2
16...	1605	10.0	27.0	745	1028	1028	1640	9.10	499	5.9	8.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	TURBIDITY (NTU) (00076)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)
NOV											
16...	1430	1028	80020	3290	254	7.5	11.5	20.0	97	750	9.0
FEB											
10...	1500	1028	80020	1000	*614	8.2	10.0	9.0	53	740	11.3
JUN											
16...	1500	1028	80020	1640	500	8.2	31.0	27.0	120	745	6.0
AUG											
11...	1200	1028	80020	84	*985	8.1	26.5	35.0	56	745	6.5

*SPECIFIC CONDUCTANCE, LAB (µS/CM)

07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM ADSORPTION RATIO (00931)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
NOV 16...	101	550	510	79	11	17	8.8	16	29	0.8	4.7
FEB 10...	101	300	130	190	20	41	21	45	34	1	2.4
JUN 16...	77	180	110	180	12	40	19	33	28	1	3.1
AUG 11...	96	92	220	280	28	50	37	96	43	3	2.7

DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	SOLIDS, DISSOLVED (TONS PER AC-FT) (70303)	SOLIDS, DISSOLVED (TONS PER DAY) (70302)
NOV 16...	83	0	68	10	26	0.10	7.5	148	132	0.20	1310
FEB 10...	206	0	169	24	80	0.20	9.6	330	327	0.45	891
JUN 16...	203	0	166	18	52	0.30	9.5	289	277	0.39	1280
AUG 11...	305	0	250	38	150	0.40	9.4	548	535	0.75	124

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)
NOV 16...	0.090	0.090	0.40	0.020	0.020	0.07	0.110	0.110	0.040	0.040	0.05
FEB 10...	0.250	0.250	1.1	--	0.040	0.13	--	0.290	--	0.030	--
JUN 16...	0.330	0.330	1.5	--	0.010	0.03	--	0.340	--	0.030	--
AUG 11...	0.160	--	--	--	<0.010	--	--	0.160	--	0.020	--

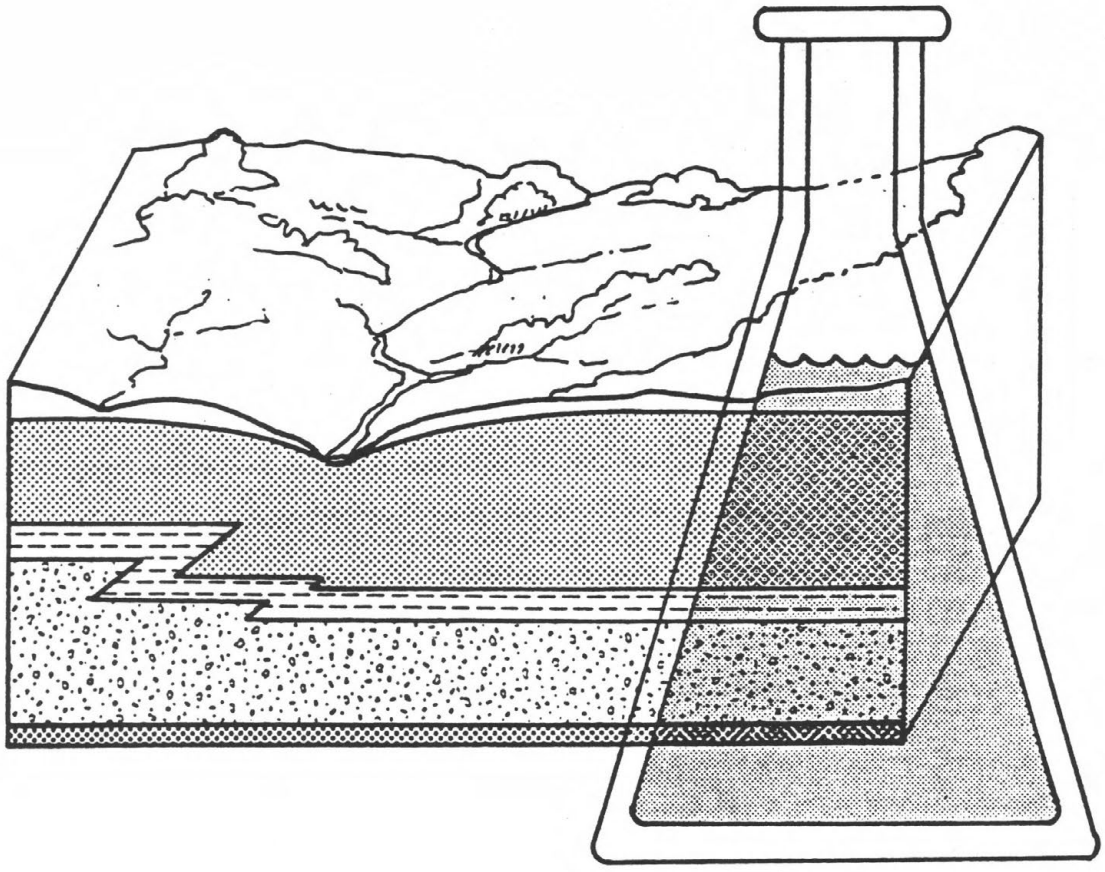
07243500 DEEP FORK NEAR BEGGS, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, DISSOLVED (UG/L AS SB) (01095)
NOV											
16...	0.05	0.86	0.90	1.0	4.5	0.240	0.060	0.050	0.15	60	--
FEB											
10...	0.04	0.47	0.50	0.79	--	0.110	0.040	0.030	0.09	50	--
JUN											
16...	0.04	0.37	0.40	0.74	--	0.060	0.060	0.030	0.09	<10	--
AUG											
11...	0.03	0.28	0.30	0.46	--	0.060	0.040	0.040	0.12	6	<1

DATE	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)
NOV											
16...	--	70	--	--	--	<3	--	140	--	4	26
FEB											
10...	--	120	--	--	--	<3	--	42	--	5	66
JUN											
16...	--	140	--	--	--	<3	--	4	--	<4	2
AUG											
11...	2	160	<1	<1.0	2	<1	2	6	<1	8	8

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV											
16...	<10	2	<1	<1.0	140	<6	--	--	--	--	--
FEB											
10...	<10	<1	<1	<1.0	340	<6	--	--	154	416	95
JUN											
16...	<10	1	<1	<1.0	350	<6	--	--	251	1110	97
AUG											
11...	3	3	<1	<1.0	520	<6	1	4.0	--	--	--



07244800 EUFAULA LAKE NEAR BROOKEN, OK

LOCATION.--Lat 35°18'25", long 95°21'45", in SW 1/4 sec.25, T.10 N., R.18 E., McIntosh County, Hydrologic Unit 11090204, in intake structure near left end of dam on Canadian River, 4.0 mi northeast of Brooken, and at mile 27.0.

DRAINAGE AREA.--47,522 mi^2, of which 9,700 mi^2 is probably noncontributing.

PERIOD OF RECORD.--February 1964 to September 30, 1993, (discontinued). Prior to October 1970, published as Eufaula Reservoir near Brooken.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by an earthen dam having a gated, concrete, ogee-type spillway weir controlled by eleven 40-foot taintor gates. Closure for diversion was made Feb. 1, 1963, and regulated storage began Feb. 10, 1964; minimum power pool was first filled June 17, 1964. Capacity, 3,825,400 acre-ft at elevation 597.0 ft,top of flood-control pool; 2,314,600 acre-ft at elevation 585.0 ft, top of power pool, and 851,600 acre-ft at elevation 565.0 ft, bottom of power pool. Dead storage is negligible. Figures given herein represent total contents. Reservoir is used for flood control, sediment control, power development, and other water uses. Revised capacity table, based on survey 1977, used since Oct. 1, 1983. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,237,000 acre-ft, May 4, 1990, elevation, 599.72 ft; minimum since power pool first filled, 1,182,000 acre-ft, Nov. 4, 1964, elevation, 570.23 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,891,000 acre-ft, May 17, elevation, 597.44 ft; minimum, 2,226,000 acre-ft, Mar. 30, elevation, 584.15 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

583	2,111,000	589	2,764,000
585	2,315,000	591	3,006,000
587	2,533,000	593	3,263,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

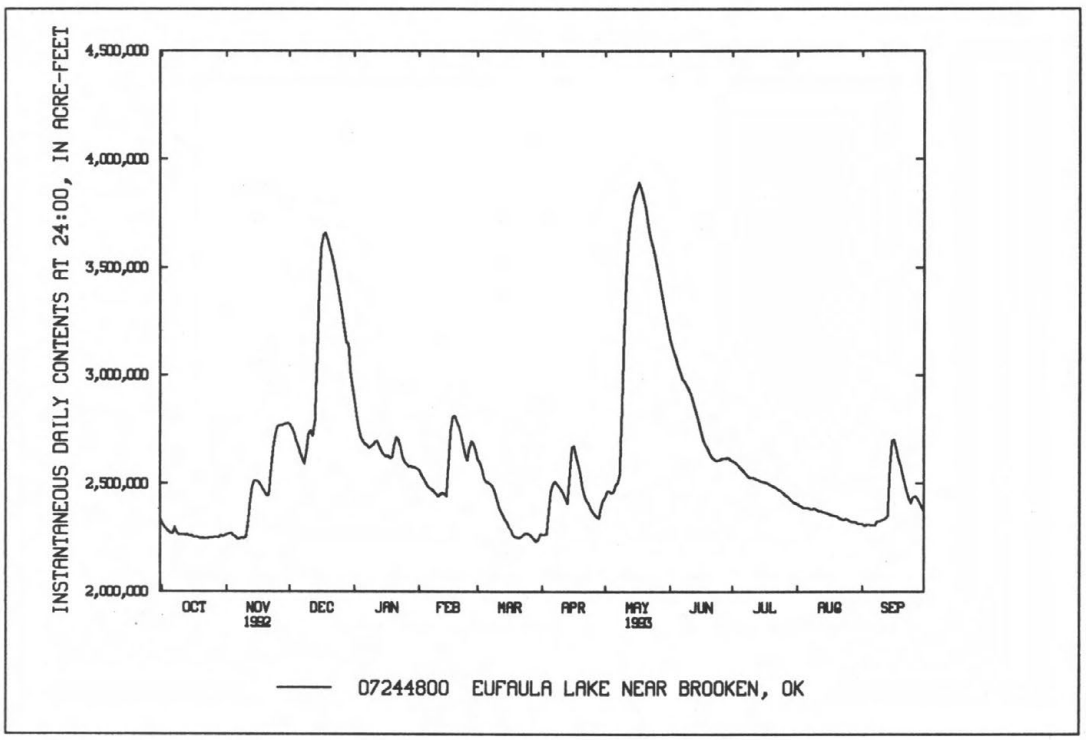
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2317000	2265000	2774000	2878000	2562000	2610000	2264000	2438000	3165000	2603000	2406000	2314000
2	2300000	2268000	2756000	2811000	2541000	2598000	2264000	2465000	3130000	2599000	2398000	2306000
3	2289000	2272000	2736000	2752000	2524000	2568000	2267000	2464000	3102000	2591000	2394000	2311000
4	2279000	2260000	2701000	2714000	2507000	2528000	2369000	2456000	3072000	2580000	2387000	2310000
5	2270000	2254000	2675000	2696000	2488000	2506000	2462000	2461000	3039000	2569000	2387000	2309000
6	2270000	2244000	2640000	2682000	2479000	2505000	2496000	2494000	3011000	2560000	2389000	2309000
7	2297000	2243000	2615000	2676000	2474000	2498000	2510000	2504000	2981000	2549000	2383000	2308000
8	2272000	2249000	2593000	2664000	2464000	2487000	2498000	2542000	2970000	2537000	2383000	2327000
9	2263000	2246000	2654000	2671000	2452000	2466000	2485000	2854000	2952000	2528000	2386000	2327000
10	2263000	2251000	2731000	2680000	2442000	2434000	2470000	3218000	2933000	2527000	2381000	2329000
11	2263000	2316000	2743000	2694000	2449000	2397000	2453000	3477000	2912000	2527000	2373000	2334000
12	2262000	2416000	2718000	2695000	2455000	2374000	2431000	3655000	2879000	2521000	2373000	2340000
13	2264000	2486000	2789000	2671000	2454000	2356000	2408000	3729000	2844000	2519000	2369000	2351000
14	2258000	2512000	3087000	2648000	2444000	2335000	2543000	3795000	2812000	2513000	2366000	2572000
15	2260000	2513000	3420000	2634000	2588000	2320000	2663000	3835000	2776000	2509000	2364000	2695000
16	2252000	2508000	3592000	2626000	2744000	2299000	2673000	3862000	2736000	2507000	2360000	2702000
17	2253000	2495000	3652000	2629000	2809000	2285000	2633000	3891000	2701000	2504000	2356000	2666000
18	2253000	2477000	3662000	2617000	2812000	2260000	2594000	3867000	2676000	2501000	2353000	2615000
19	2245000	2460000	3634000	2619000	2786000	2253000	2555000	3831000	2662000	2493000	2350000	2589000
20	2248000	2445000	3595000	2676000	2764000	2250000	2488000	3792000	2642000	2489000	2348000	2545000
21	2247000	2447000	3559000	2714000	2728000	2249000	2448000	3730000	2623000	2484000	2340000	2503000
22	2246000	2561000	3517000	2703000	2680000	2255000	2422000	3665000	2614000	2479000	2336000	2464000
23	2247000	2657000	3463000	2671000	2634000	2264000	2411000	3621000	2604000	2471000	2332000	2431000
24	2249000	2723000	3413000	2625000	2607000	2270000	2387000	3588000	2608000	2466000	2337000	2412000
25	2249000	2762000	3350000	2599000	2662000	2268000	2369000	3538000	2609000	2457000	2334000	2437000
26	2251000	2768000	3289000	2589000	2694000	2264000	2357000	3488000	2617000	2448000	2327000	2442000
27	2253000	2767000	3217000	2578000	2685000	2255000	2347000	3431000	2618000	2441000	2323000	2433000
28	2250000	2771000	3151000	2580000	2653000	2242000	2342000	3375000	2618000	2433000	2323000	2413000
29	2261000	2777000	3148000	2575000	---	2232000	2394000	3321000	2619000	2423000	2321000	2393000
30	2255000	2778000	3009000	2574000	---	2238000	2424000	3270000	2609000	2414000	2313000	2374000
31	2261000	---	2943000	2569000	---	2267000	---	3215000	---	2409000	2314000	---

07244800 EUFAULA LAKE NEAR BROOKEN, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	2317000	2778000	3662000	2878000	2812000	2610000	2673000	3891000	3165000	2603000	2406000	2702000
MIN	2245000	2243000	2593000	2569000	2442000	2232000	2264000	2438000	2604000	2409000	2313000	2306000
(‡)	584.49	589.12	590.49	587.32	588.05	584.55	586.02	592.63	587.67	585.88	584.99	585.56
(‡‡)	-76,000	+517,000	+165,000	-374,000	+84,888	-386,000	+157,000	+791,000	-606,000	-200,000	-95,000	+60,000

CAL YR 1992 MAX 3662000 MIN 2243000 (‡‡) +132,000
WTR YR 1993 MAX 3891000 MIN 2232000 (‡‡) -31,000

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE FEET



07245000 CANADIAN RIVER NEAR WHITEFIELD, OK

LOCATION.--Lat 35°15'50", long 95°14'21", in SE 1/4 SE 1/4 sec.12, T.9 N., R.19 E., Haskell County, Hydrologic Unit 11090204, on right downstream bank at end of bridge on State Highway 2, 0.8 mi north of Whitefield, 5.5 mi upstream from Taloka (Snake) Creek, 8.2 mi downstream from Eufaula Dam, and at mile 18.8.

DRAINAGE AREA.--47,576 mi^2, of which 9,700 mi^2 is probably noncontributing.

PERIOD OF RECORD.--July 1938 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 473.16 ft above sea level. Prior to Jan. 11, 1939, nonrecording gage and Jan. 11, 1939 to Dec. 10, 1941, June 12, 1947 to Sept. 30, 1948, water-stage recorder, all at site 2.1 mi downstream at datum 2.20 ft higher. Dec. 11, 1941 to June 1, 1947, and Oct. 1, 1948 to Sept. 30, 1978, water-stage recorder at site 400 ft upstream and at datum 5.00 ft higher. Oct. 1, 1978 to July 26, 1983, water-stage recorder at site 400 ft upstream at same datum.

REMARKS.--Records poor. Prior to February 1964, occasional slight regulation by Conchas Lake in New Mexico and, except for 54 mi^2 of intervening area, completely regulated thereafter by Eufaula Lake (station 07244800). U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1898, that of May 10, 1943, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11100	1320	15100	36900	6080	44500	13300	14300	31200	8780	2480	134
2	11500	954	17900	36700	12500	45400	13400	14100	24300	5640	2380	729
3	8700	1420	21800	36500	12500	43200	13400	17800	20000	6820	2280	2700
4	7910	2610	21100	31000	12600	41100	15500	21500	19800	6270	1750	608
5	8490	4060	21600	16600	12600	27700	9880	19800	19800	6480	1980	121
6	5160	4830	22600	12600	12600	15900	10800	15500	19900	6230	2030	103
7	2530	4060	20100	10000	12500	15700	18100	15700	19800	6580	2100	100
8	1930	1620	15900	9990	12400	15500	20500	10100	14500	6190	1600	724
9	2400	2520	16300	10800	12400	18800	20600	4290	17600	5110	1390	977
10	4900	2640	17400	10600	12500	22400	20500	1830	24000	3280	1800	952
11	2760	2680	27000	10600	12500	22400	20700	518	25200	2670	3100	520
12	2130	14900	35900	16600	8890	18900	20700	7030	23500	2610	1970	104
13	1610	14800	36400	20700	12500	14200	20900	21700	23400	3100	1070	4080
14	2940	14400	14400	21100	12500	12300	17900	24500	23400	4150	1190	7920
15	2680	14200	4080	18300	14400	13800	11200	32300	23400	2970	1450	14700
16	2640	14300	13700	13600	15400	13800	35200	39500	23400	2500	1190	21500
17	3170	14700	21600	9080	14300	10700	43800	39900	22300	2540	1740	24500
18	1690	15000	29200	11300	14000	15000	43600	40300	17800	2590	1210	28800
19	3580	15000	43500	11900	29000	13800	43200	41100	14100	4230	1150	28900
20	3540	15500	42800	13800	33900	13900	43100	41500	14100	2840	1590	29200
21	1710	15500	43000	14500	33800	13800	35800	48600	14000	3150	1360	29200
22	1660	16600	42700	23400	36700	13900	24000	52400	14000	3330	1360	21900
23	2280	15300	42600	31300	35600	13800	20000	48900	7610	3020	1270	14900
24	1270	14700	42200	30900	31600	13700	20300	45100	7740	3000	1310	17600
25	989	11300	42300	26100	32600	13600	20100	46600	7780	3150	882	13400
26	809	23400	41500	13700	29100	13600	17200	39200	5380	3670	2290	13000
27	893	21300	41400	13700	26000	13600	12400	39200	4560	2930	2580	12800
28	834	15800	41500	9690	33900	13600	9810	35700	4690	e2940	1030	12500
29	695	16000	41500	6240	---	13600	11200	33600	5100	e3870	139	12300
30	1300	15400	41300	6500	---	13600	12000	33400	6290	4440	2210	12300
31	1960	---	39100	6560	---	13400	---	33200	---	2770	967	---
TOTAL	105760	326814	917480	541260	545370	589200	639090	879168	498650	127850	50848	327272
MEAN	3412	10890	29600	17460	19480	19010	21300	28360	16620	4124	1640	10910
MAX	11500	23400	43500	36900	36700	45400	43800	52400	31200	8780	3100	29200
MIN	695	954	4080	6240	6080	10700	9810	518	4560	2500	139	100
AC-FT	209800	648200	1820000	1074000	1082000	1169000	1268000	1744000	989100	253600	100900	649100

e Estimated

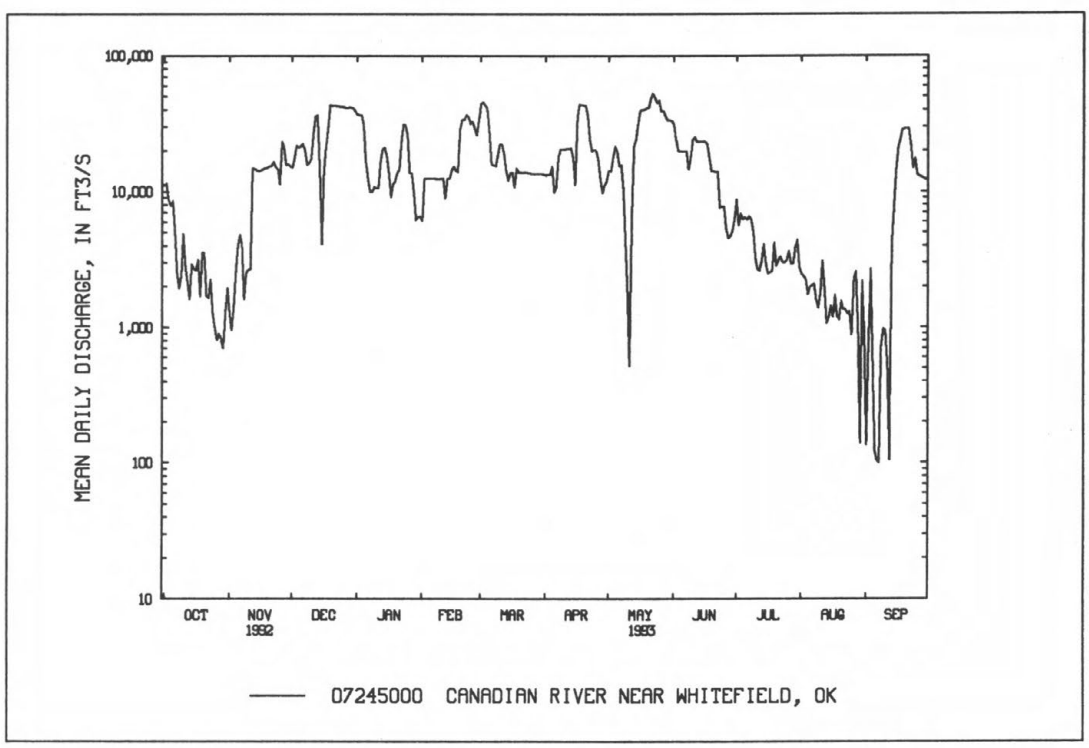
07245000 CANADIAN RIVER NEAR WHITEFIELD, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1993, BY WATER YEAR (WY)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2906	5802	6932	6239	6188	8893	9136	13200	11530	4632	3596	2707
MAX	13100	21930	29600	20270	19480	30340	37980	64970	35550	10420	20050	13910
(WY)	1987	1975	1993	1988	1993	1985	1990	1990	1982	1982	1992	1992
MIN	241	248	247	119	127	129	81.5	148	600	259	692	558
(WY)	1979	1983	1981	1981	1981	1981	1981	1981	1988	1988	1985	1985

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1968-93	
ANNUAL TOTAL	5032204		5548762			
ANNUAL MEAN	13750		15200		[a]6813	
HIGHEST ANNUAL MEAN					15200	1993
LOWEST ANNUAL MEAN					1012	1981
HIGHEST DAILY MEAN	43500	Dec 19	52400	May 22	226000	May 5 1990
LOWEST DAILY MEAN	23	Apr 5	100	Sep 7	[b]17	Dec 1 1980
ANNUAL SEVEN-DAY MINIMUM	965	Mar 31	497	Sep 6	39	Oct 7 1985
INSTANTANEOUS PEAK FLOW			55000	May 21	[c]241000	May 3 1990
INSTANTANEOUS PEAK STAGE			15.45	May 21	[d]25.32	May 3 1990
ANNUAL RUNOFF (AC-FT)	9981000		11010000		4935000	
10 PERCENT EXCEEDS	29700		36600		16300	
50 PERCENT EXCEEDS	11400		13600		3690	
90 PERCENT EXCEEDS	2080		1440		126	

[a]Prior to regulation, water years 1939-63, 6,005 ft^3/s.
[b]Minimum daily discharge for period of record was 0.4, Oct. 8, 1956.
[c]Maximum discharge for period of record 281,000 ft^3/s, May 10, 1943.
[d]Maximum gage height for period of record 25.5 ft, May 10, 1943.



07246940 POTEAU RIVER EAST OF WALDRON, AR

LOCATION.of--Lat 34°53'46", long 94°03'57", in SW 1/4 SE 1/4, sec. 22, T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at downstream side of bridge on State Highway 80 in Waldron, 1.8 mi east of Waldron High School.

DRAINAGE AREA.--15 mi^2.

PERIOD OF RECORD.--November 1983 to current year.

REMARKS.--Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Additional samples collected by Arkansas Department of Pollution Control and Ecology, Little Rock, Arkansas,are published by the U.S. Geological Survey, Arkansas District in Water Resources Data, Arkansas.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)
FEB												
09...	1115	1028	*80020	2.6	92	7.6	12.0	6.5	753	12.0	99	0.36
MAR												
31...	0855	1028	*80020	2.9	97	7.6	13.0	14.0	740	8.6	86	--
MAY												
05...	0900	1028	*80020	18	67	7.5	18.0	18.0	751	8.2	88	--
JUN												
16...	0915	1028	*80020	4.1	77	7.7	26.5	23.5	750	7.5	90	--

DATE	HARDNESS NONCARB WH WAT TOT LAB MG/L AS CACO3 (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
FEB												
09...	0	3.0	3.0	10	1.3	25	0	21	<20	0.010	0.010	0.04
MAR												
31...	0	3.0	3.0	<10	0.9	28	0	23	<20	--	--	--
MAY												
05...	0	2.0	2.0	<10	1.2	18	0	14	<20	--	--	--
JUN												
16...	2	3.0	3.0	<10	1.4	19	0	15	<20	--	--	--

*Trace element and common constituent analyses were provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07246940 POTEAU RIVER EAST OF WALDRON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
FEB												
09...	0.050	0.16	0.060	0.030	0.04	0.27	0.27	0.30	0.30	0.36	0.050	0.050
MAR												
31...	<0.010	--	<0.050	0.020	0.03	--	0.28	--	0.30	--	--	0.020
MAY												
05...	<0.010	--	<0.050	0.030	0.04	0.27	0.27	0.30	0.30	0.30	0.040	0.040
JUN												
16...	<0.010	--	<0.050	0.040	0.05	0.26	0.26	0.30	0.30	0.30	0.020	0.020

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
FEB											
09...	0.020	0.06	830	<350	<10	20	<10	<5	<10	<10	620
MAR											
31...	<0.010	--	370	<350	<10	20	<10	<5	<10	<10	500
MAY											
05...	0.010	0.03	560	<350	<60	20	<10	<5	<10	<10	740
JUN											
16...	0.020	0.06	390	<350	<10	20	<10	<5	<10	<10	640

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	THAL-LIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOV-ERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
FEB											
09...	<45	19	<0.50	<25	<5	<7	<200	<500	<5	6	0.04
MAR											
31...	<45	31	<0.50	<25	<5	<7	<200	<500	20	5	0.04
MAY											
05...	<45	23	<0.50	<25	<70	<7	<200	<500	7	7	0.34
JUN											
16...	<45	28	<0.50	<25	<5	<7	<200	<500	<5	9	0.10

07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR

LOCATION.--Lat 34°54'47", long 94°06'28", in SE 1/4 SW 1/4, sec. 17, T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on U.S. Highway 71, 0.9 mi north of Waldron city limits and Kansas City Southern Railroad crossing.

DRAINAGE AREA.--46.1 mi^2.

PERIOD OF RECORD.--November 1983 to current year.

REMARKS.--Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field. Additional samples collected by Arkansas Department of Pollution Control and Ecology, Little Rock, Arkansas, are published by the U.S. Geological Survey, Arkansas District in Water Resources Data, Arkansas.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
22...	1052	3.00	29.5	750	1028	1028	1.9	25.05	725	8.4	7.4
22...	1054	6.00	29.5	750	1028	1028	1.9	25.05	725	8.4	7.4
22...	1056	9.00	29.5	750	1028	1028	1.9	25.05	726	8.5	7.4
22...	1058	12.0	29.5	750	1028	1028	1.9	25.05	725	8.5	7.4
22...	1100	15.0	29.5	750	1028	1028	1.9	25.05	726	8.6	7.4
22...	1102	18.0	29.5	750	1028	1028	1.9	25.05	726	8.6	7.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)
FEB												
09...	0900	1028	*80020	9.7	206	7.8	12.5	8.0	755	11.0	94	1.7
MAR												
31...	1020	1028	*80020	12	307	7.6	11.0	15.0	742	8.1	83	1.0
MAY												
05...	1030	1028	*80020	76	94	7.2	18.0	20.5	752	7.2	81	0.75
JUN												
16...	1030	1028	*80020	20	199	7.6	23.5	26.0	753	7.2	90	1.9
JUL												
28...	0900	1028	*80020	1.3	708	7.5	30.0	27.5	752	4.0	52	--
AUG												
25...	1050	1028	*80020	2.3	778	7.6	33.5	29.5	753	5.3	71	--

*Trace element and common constituent analyses were provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	HARDNESS NONCARB WH WAT TOT LAB (MG/L AS CACO3) (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
FEB												
09...	0	5.0	3.0	30	7.3	63	0	52	<20	0.910	0.910	4.0
MAR												
31...	0	6.0	3.0	40	14	70	0	57	23	0.190	0.190	0.84
MAY												
05...	--	<3.0	2.0	<10	3.4	22	0	18	<20	0.042	0.042	0.19
JUN												
16...	0	4.0	3.0	24	8.9	30	0	25	<20	1.28	1.28	5.7
JUL												
28...	--	--	--	--	--	90	0	74	--	3.30	--	--
AUG												
25...	--	--	--	--	--	132	0	108	--	4.90	--	--

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)
FEB												
09...	0.090	0.30	1.00	0.220	0.28	0.58	0.48	0.80	0.70	1.8	2.00	1.90
MAR												
31...	0.020	0.07	0.210	0.210	0.27	0.89	0.59	1.1	0.80	1.3	--	3.90
MAY												
05...	0.010	0.03	0.052	0.070	0.09	--	0.63	--	0.70	--	0.460	0.450
JUN												
16...	0.020	0.07	1.30	0.070	0.09	0.53	0.53	0.60	0.60	1.9	2.60	2.60
JUL												
28...	--	--	3.30	0.500	0.64	1.6	--	2.1	--	5.4	15.0	--
AUG												
25...	--	--	4.90	0.650	0.84	2.7	--	3.3	--	8.2	13.0	--

07246950 POTEAU RIVER NORTHWEST OF WALDRON, AR

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
FEB 09...	1.90	5.8	820	<350	<10	20	<10	<5	<10	<10	920
MAR 31...	3.30	10	540	<350	<10	20	<10	<5	<10	<10	890
MAY 05...	0.400	1.2	560	<350	<60	20	<10	<5	<10	<10	920
JUN 16...	2.50	7.7	<300	<350	<10	10	<10	<5	<10	<10	580
JUL 28...	13.0	40	--	--	--	--	--	--	--	--	--
AUG 25...	13.0	40	--	--	--	--	--	--	--	--	--

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	THALLIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOVERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
FEB 09...	<45	53	<0.50	<25	<5	<7	<200	<500	<5	13	0.34
MAR 31...	<45	90	<0.50	<25	<5	<7	<200	<500	30	25	0.80
MAY 05...	<45	69	<0.50	<25	<70	<7	<200	<500	6	26	5.4
JUN 16...	<45	66	<0.50	<25	<5	<7	<200	<500	7	13	0.68
JUL 28...	--	--	--	--	--	--	--	--	--	28	0.10
AUG 25...	--	--	--	--	--	--	--	--	--	85	0.52

07246960 POTEAU RIVER NEAR HON, AR

LOCATION.--Lat 34°55'34", long 94°10'03", in SW 1/4 SE 1/4, sec. 10, T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.0 mi southwest of Hon, AR.

DRAINAGE AREA.--69.5 mi^2.

PERIOD OF RECORD.--February 1993 to July 1993 (discontinued).

REMARKS.--Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
22...	1300	1.50	29.5	750	1028	1028	1.8	27.77	450	8.0	7.9
22...	1304	3.00	29.5	750	1028	1028	1.8	27.77	450	8.1	7.9
22...	1306	4.50	29.5	750	1028	1028	1.8	27.77	450	8.2	7.9
22...	1308	6.00	29.5	750	1028	1028	1.8	27.77	450	8.2	7.9
22...	1310	7.50	29.5	750	1028	1028	1.8	27.77	450	8.2	7.9
22...	1312	9.00	29.5	750	1028	1028	1.8	27.77	450	8.3	7.9
22...	1314	10.5	29.5	750	1028	1028	1.8	27.77	449	8.2	7.9
22...	1316	12.0	29.5	750	1028	1028	1.8	27.77	453	8.3	7.9
22...	1318	13.5	30.0	750	1028	1028	1.8	27.77	449	8.1	7.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)
FEB												
09...	1425	1028	*80020	13	140	7.9	13.5	12.5	750	13.4	128	1.1
MAR												
31...	1145	1028	*80020	16	156	7.7	10.5	15.0	744	7.9	80	--
MAY												
05...	1315	1028	*80020	101	74	7.3	27.5	21.5	752	7.8	89	0.46
JUN												
16...	1300	1028	*80020	30	87	7.7	28.5	27.5	753	7.4	95	0.78

*Trace element and common constituent analyses were provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07246960 POTEAU RIVER NEAR HON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	HARDNESS NONCARB WH WAT TOT LAB MG/L AS CACO3 (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
FEB												
09...	0	4.0	3.0	18	3.6	40	0	33	<20	0.610	0.610	2.7
MAR												
31...	0	5.0	3.0	18	4.2	40	0	33	<20	--	--	--
MAY												
05...	0	3.0	2.0	<10	2.0	18	0	15	<20	0.059	--	--
JUN												
16...	0	3.0	2.0	<10	2.4	18	0	14	<20	0.280	--	--

DATE	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)
FEB												
09...	0.070	0.23	0.680	0.020	0.03	0.38	0.38	0.40	0.40	1.1	0.770	0.650
MAR												
31...	<0.010	--	<0.050	0.020	0.03	0.38	0.38	0.40	0.40	0.40	0.800	0.790
MAY												
05...	<0.010	--	0.059	0.050	0.06	0.45	0.35	0.50	0.40	0.56	0.150	0.130
JUN												
16...	<0.010	--	0.280	0.020	0.03	--	0.48	--	0.50	--	0.380	0.370

DATE	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
FEB											
09...	0.660	2.0	1100	<350	<10	20	<10	<5	<10	<10	1100
MAR											
31...	0.760	2.3	<300	<350	<10	20	<10	<5	<10	<10	630
MAY											
05...	0.100	0.31	980	<350	<60	20	<10	<5	<10	<10	1400
JUN											
16...	0.340	1.0	<300	<350	<10	20	<10	<5	<10	<10	540

07246960 POTEAU RIVER NEAR HON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	THAL-LIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOV-ERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
FEB											
09...	<45	39	<0.50	<25	<5	<7	<200	<500	<5	9	0.32
MAR											
31...	<45	57	<0.50	<25	<5	<7	<200	<500	20	17	0.74
MAY											
05...	<45	65	<0.50	<25	<70	<7	<200	<500	8	20	5.5
JUN											
16...	<45	50	<0.50	<25	<5	<7	<200	<500	<5	8	0.65

07246980 JONES CREEK NEAR HON, AR

LOCATION.--Lat 34°55'13", long 94°09'58", in SE 1/4 NE 1/4, sec. 15, T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at low-water crossing on unimproved county road, 1.5 mi southeast of Hon, AR.

DRAINAGE AREA.--93.2 mi^2.

PERIOD OF RECORD.--February 1993 to June 1993 (discontinued).

REMARKS.--Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)
FEB												
09...	1315	1028	*80020	34	47	7.2	12.5	10.5	751	12.0	110	0.39
MAR												
31...	1300	1028	*80020	29	58	7.3	10.0	15.0	740	8.5	87	--
MAY												
05...	1200	1028	*80020	201	44	7.2	21.5	19.5	752	7.8	86	--
JUN												
16...	1150	1028	*80020	18	54	7.7	24.5	26.0	753	6.9	86	0.46

DATE	HARDNESS NONCARB WH WAT TOT LAB MG/L AS CACO3 (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)
FEB												
09...	0	2.0	2.0	<10	<1.0	14	0	12	<20	0.044	0.044	0.19
MAR												
31...	0	2.0	2.0	<10	1.2	14	0	12	<20	--	--	--
MAY												
05...	1	2.0	2.0	<10	1.0	9	0	7	<20	0.073	--	--
JUN												
16...	1	2.0	2.0	<10	1.0	10	0	9	<20	0.160	--	--

*Trace element and common constituent analyses were provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07246980 JONES CREEK NEAR HON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)
FEB												
09...	0.050	0.16	0.094	0.030	0.04	0.27	0.27	0.30	0.30	0.39	0.020	0.010
MAR												
31...	<0.010	--	<0.050	0.020	0.03	0.28	0.28	0.30	0.30	0.30	--	0.020
MAY												
05...	<0.010	--	0.073	0.040	0.05	0.16	--	0.20	<0.20	0.27	0.020	0.030
JUN												
16...	<0.010	--	0.160	0.050	0.06	0.35	0.25	0.40	0.30	0.56	0.060	0.050

DATE	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
FEB											
09...	<0.010	--	750	<350	<10	20	<10	<5	<10	<10	610
MAR											
31...	<0.010	--	360	<350	<10	20	<10	<5	<10	<10	570
MAY											
05...	0.010	0.03	710	<350	<60	20	<10	<5	<10	<10	800
JUN											
16...	0.040	0.12	300	<350	<10	20	<10	<5	<10	<10	590

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	THAL-LIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOV-ERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
FEB											
09...	<45	42	<0.50	<25	<5	<7	<200	<500	<5	6	0.55
MAR											
31...	<45	53	<0.50	<25	<5	<7	<200	<500	10	10	0.79
MAY											
05...	<45	75	<0.50	<25	<70	<7	<200	<500	<5	19	10
JUN											
16...	<45	71	<0.50	<25	<5	<7	<200	<500	7	8	0.39

07247000 POTEAU RIVER AT CAUTHRON, AR

LOCATION.--Lat 34°55'08", long 94°17'55", NW 1/4 SW 1/4 sec.16, T.3 N., R.31 W., Scott County, Hydrologic Unit 11110105, on right bank at downstream side of highway bridge at Cauthron, 2.9 mi downstream from Cross Creek, 7.8 mi downstream from Jones Creek, and at mile 109.0.

DRAINAGE AREA.--203 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1939 to current year.

REVISED RECORDS.--WSP 1037: 1939(M). WRD Ark. 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 569.53 ft above sea level. Prior to May 2, 1939, nonrecording gage at present site and datum. Satellite data collection platform installed Sept. 13, 1991.

REMARKS.--Records good, except for estimated daily discharge, which are fair. As of September 1974, flow from 92.2 mi^2 upstream from this station is controlled by 16-floodwater detention reservoirs that have a total combined capacity of 39,082 acre-ft below the flood spillway crests, of which 33,524 acre-ft are flood detention capacity, 2,100 acre-ft are water-supply storage, and 3,458 acre-feet are sediment storage capacity.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 27.4 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	48	145	e250	186	304	8.5	866	280	75	7.4	1.8
2	49	42	133	e300	168	767	7.0	581	180	51	9.2	2.9
3	43	38	110	e600	142	366	6.4	810	129	36	12	5.3
4	38	30	96	e7000	131	234	110	704	99	25	21	4.4
5	33	29	89	e3000	124	187	586	493	78	17	12	3.2
6	28	28	98	1360	120	153	267	377	62	13	25	2.9
7	24	33	135	1080	117	124	182	300	53	9.7	261	2.5
8	20	31	112	871	99	97	151	242	45	6.7	73	2.3
9	17	34	885	821	87	76	131	1600	45	5.1	34	2.3
10	14	39	819	945	79	58	107	6440	46	4.0	19	2.3
11	11	40	512	751	158	41	91	1560	889	3.3	13	2.3
12	9.3	53	378	691	199	30	94	1180	453	2.9	9.2	2.3
13	7.4	101	301	589	143	24	72	947	301	2.9	6.8	4.4
14	5.8	65	609	469	121	19	305	775	208	2.9	5.5	11
15	4.4	53	8460	410	1400	17	1530	652	147	2.9	4.3	123
16	8.7	46	3000	365	1260	56	795	558	106	2.6	3.5	34
17	25	30	1470	313	464	60	530	475	81	2.5	3.2	15
18	26	42	1190	332	270	34	452	392	62	2.2	2.9	8.1
19	24	72	1000	324	212	30	366	356	49	2.2	2.7	5.0
20	23	267	861	2220	177	101	346	287	39	2.2	2.7	3.3
21	21	485	742	1180	137	98	263	228	33	2.2	2.7	3.1
22	20	2370	601	837	105	72	197	193	31	2.1	2.6	2.7
23	25	801	503	687	81	59	170	183	34	2.3	2.3	2.3
24	30	516	406	556	63	48	142	1120	32	2.5	2.3	2.3
25	31	538	361	464	794	39	1030	782	236	2.2	2.3	2.7
26	44	416	309	401	523	33	710	504	690	1.7	2.1	3.1
27	44	299	294	346	274	24	447	355	340	1.6	1.8	3.3
28	47	247	257	301	202	18	329	283	219	1.5	1.7	3.7
29	47	205	249	245	---	16	1680	234	154	1.8	1.9	3.3
30	54	181	259	219	---	13	1630	255	109	3.0	1.8	2.4
31	48	---	210	203	---	11	---	448	---	6.1	1.8	---
TOTAL	876.6	7179	24594	28130	7836	3209	12734.9	24180	5230	296.1	550.7	267.2
MEAN	28.3	239	793	907	280	104	424	780	174	9.55	17.8	8.91
MAX	55	2370	8460	7000	1400	767	1680	6440	889	75	261	123
MIN	4.4	28	89	203	63	11	6.4	183	31	1.5	1.7	1.8
AC-FT	1740	14240	48780	55800	15540	6370	25260	47960	10370	587	1090	530

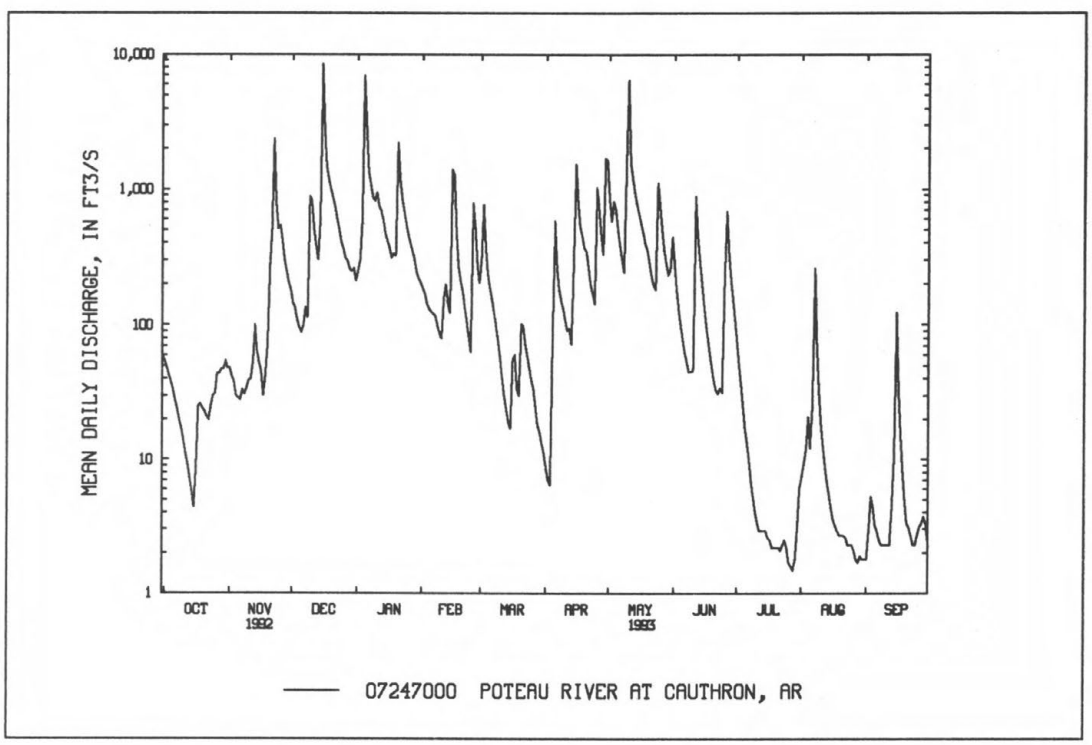
e Estimated

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.7	172	281	274	365	409	378	456	182	62.4	27.1	36.5
MAX	1423	849	1262	1650	1514	2212	1629	2080	1238	686	283	300
(WY)	1985	1975	1972	1949	1945	1945	1957	1990	1974	1969	1957	1950
MIN	.000	.000	.000	.000	12.4	18.0	25.4	13.6	1.24	.003	.000	.000
(WY)	1953	1956	1956	1956	1964	1954	1956	1977	1972	1964	1954	1943

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1940-93	
ANNUAL TOTAL	70718.56		115083.5			
ANNUAL MEAN	193		315		227	
HIGHEST ANNUAL MEAN					538	1945
LOWEST ANNUAL MEAN					43.7	1956
HIGHEST DAILY MEAN	8460	Dec 15	8460	Dec 15	19300	May 20 1960
LOWEST DAILY MEAN	.71	Aug 18	1.5	Jul 28	.00	at times
ANNUAL SEVEN-DAY MINIMUM	.77	Aug 14	1.8	Aug 26	.00	Oct 1 1939
INSTANTANEOUS PEAK FLOW			10400	Dec 15	32200	May 20 1960
INSTANTANEOUS PEAK STAGE			17.41	Dec 15	23.76	May 20 1960
INSTANTANEOUS LOW FLOW	1.5		Jul 28, 29			
ANNUAL RUNOFF (AC-FT)	140300		228300		164100	
10 PERCENT EXCEEDS	446		794		478	
50 PERCENT EXCEEDS	54		89		36	
90 PERCENT EXCEEDS	2.9		2.7		.60	



07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1945-61, 1975-79, December 1991 to current year.

REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity,and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
22...	1402	1.00	30.5	750	1028	1028	2.1	3.33	90	5.9	6.6
22...	1404	2.00	30.5	750	1028	1028	2.1	3.33	90	5.8	6.6
22...	1406	3.00	30.5	750	1028	1028	2.1	3.33	90	6.0	6.7
22...	1408	4.00	30.5	750	1028	1028	2.1	3.33	90	6.0	6.7
22...	1410	5.00	30.5	750	1028	1028	2.1	3.33	89	6.1	6.7
22...	1412	6.00	30.5	750	1028	1028	2.1	3.33	89	6.1	6.8
22...	1414	7.00	30.5	750	1028	1028	2.1	3.33	89	6.1	6.8
22...	1416	8.00	30.5	750	1028	1028	2.1	3.33	90	6.1	6.8
22...	1418	9.00	30.5	750	1028	1028	2.1	3.33	90	6.1	6.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE (NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
NOV											
18...	0800	1028	*80020	36	115	7.3	11.5	11.5	755	7.6	71
JAN											
06...	0855	1028	*80020	1420	41	7.0	1.0	7.0	758	10.7	89
FEB											
09...	1545	1028	*80020	68	72	7.5	13.0	11.0	751	11.5	106
MAR											
31...	1430	1028	*80020	57	85	7.4	13.0	1.0	744	8.5	61
MAY											
06...	0830	1028	*80020	350	58	7.2	18.5	19.5	755	7.4	82
JUN											
16...	1515	1028	*80020	85	64	7.7	28.5	28.0	753	8.2	106
JUL											
28...	1025	1028	80020	1.5	100	7.2	31.0	29.5	753	4.1	55
AUG											
25...	0845	1028	80020	2.1	161	7.6	25.5	28.5	754	4.6	60

*Trace elements and common constituents were analyzed by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS NONCARB WH WAT TOT LAB MG/L AS CACO3 (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
NOV											
18...	--	0	4.0	3.0	11	4.2	34	0	28	<20	--
JAN											
06...	0.45	5	2.0	2.0	<10	2.2	9	0	7	<20	0.130
FEB											
09...	0.53	0	2.0	2.0	<10	1.7	20	0	16	<20	0.180
MAR											
31...	--	0	3.0	2.0	<10	0.9	18	0	14	<20	--
MAY											
06...	0.38	0	2.0	2.0	<10	1.4	13	0	11	<20	0.080
JUN											
16...	0.39	0	2.0	2.0	<10	1.7	14	0	12	<20	0.088
JUL											
28...	--	--	--	--	--	--	26	0	21	--	--
AUG											
25...	--	--	--	--	--	--	36	0	30	--	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
NOV											
18...	--	--	0.020	<0.010	--	<0.050	<0.050	0.020	0.020	0.03	0.03
JAN											
06...	0.130	0.58	--	0.020	0.07	--	0.150	--	0.030	--	0.04
FEB											
09...	0.180	0.80	--	0.050	0.16	--	0.230	--	0.030	--	0.04
MAR											
31...	--	--	--	<0.010	--	--	<0.050	--	0.030	--	0.04
MAY											
06...	--	--	--	<0.010	--	--	0.080	--	0.040	--	0.05
JUN											
16...	--	--	--	<0.010	--	--	0.088	--	0.040	--	0.05
JUL											
28...	--	--	--	--	--	--	<0.050	--	0.060	--	0.08
AUG											
25...	--	--	--	--	--	--	<0.050	--	0.070	--	0.09

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
NOV 18...	0.38	--	0.40	--	0.40	0.090	0.18	0.090	0.060	0.060	0.18
JAN 06...	0.37	0.27	0.40	0.30	0.55	0.090	--	0.060	--	0.030	0.09
FEB 09...	0.37	0.27	0.40	0.30	0.63	0.210	--	0.150	--	0.160	0.49
MAR 31...	0.37	0.37	0.40	0.40	0.40	0.120	--	0.080	--	--	--
MAY 06...	0.26	0.26	0.30	0.30	0.38	0.060	--	0.060	--	0.040	0.12
JUN 16...	0.36	0.26	0.40	0.30	0.49	0.120	--	0.100	--	0.080	0.25
JUL 28...	0.94	--	1.0	--	1.0	0.140	--	--	--	0.110	0.34
AUG 25...	0.83	--	0.90	--	0.90	0.120	--	--	--	0.070	0.21

DATE	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)
NOV 18...	0.03	<300	<350	<10	20	<10	<5	<10	10	310	<45
JAN 06...	--	1400	<350	<10	20	<10	<5	<10	<10	1800	<45
FEB 09...	--	780	<350	<10	20	<10	<5	<10	<10	800	<45
MAR 31...	--	470	<350	<10	20	<10	<5	<10	<10	790	<45
MAY 06...	--	800	<350	<60	20	<10	<5	<10	<10	1000	<45
JUN 16...	--	360	<350	<10	20	<10	<5	<10	<10	660	<45
JUL 28...	--	--	--	--	--	--	--	--	--	--	--
AUG 25...	--	--	--	--	--	--	--	--	--	--	--

07247000 POTEAU RIVER AT CAUTHRON, AR--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	THALLIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOVERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
NOV										
18...	60	<0.50	<25	<5	<7	<200	<500	<5	17	1.7
JAN										
06...	84	<0.50	<25	<5	<7	<200	<500	8	31	117
FEB										
09...	43	<0.50	<25	<5	<7	<200	<500	<5	7	1.3
MAR										
31...	59	<0.50	<25	<5	<7	<200	<500	30	14	2.2
MAY										
06...	71	<0.50	<25	<70	<7	<200	<500	8	21	20
JUN										
16...	84	<0.50	<25	<5	<7	<200	<500	5	21	4.8
JUL										
28...	--	--	--	--	--	--	--	--	8	0.03
AUG										
25...	--	--	--	--	--	--	--	--	65	0.37

07247015 POTEAU RIVER NEAR LOVING, OK

LOCATION.--Lat 34°52'47", long 94°29'02", in SW 1/4 NW 1/4 sec.29, T.5 N., R.27 E., LeFlore County, Hydrologic Unit 11110105, on right downstream bank of county road bridge, 0.6 mi northwest of Loving, 1.0 mi above Loving Creek, and at mile 93.6.

DRAINAGE AREA.--269 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1992, to current year.

GAGE.--Water-stage recorder. Datum of gage is 507.76 ft above sea level.

REMARKS.--Records fair. Some regulation by small flood-retarding structures. U.S. Geological Survey's satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	32	68	104	171	512	69	1160	254	50	2.5	1.3
2	63	44	55	90	151	1240	62	757	143	36	2.9	1.8
3	57	41	46	77	130	794	58	990	99	26	3.5	3.3
4	49	38	39	4470	117	575	90	916	76	19	5.2	3.1
5	46	32	35	5080	108	474	686	597	62	15	7.8	3.1
6	43	29	39	1730	103	389	400	439	53	11	30	4.3
7	40	28	49	1320	94	339	256	344	43	8.8	60	4.5
8	34	28	53	914	85	288	197	270	39	7.0	81	5.4
9	28	25	637	825	77	236	167	2460	37	5.6	36	4.5
10	23	28	1110	1180	72	195	138	7670	39	3.5	23	4.0
11	17	33	430	790	99	162	111	2440	614	3.5	20	3.3
12	14	59	259	665	194	136	93	1510	355	3.3	15	2.9
13	11	70	182	555	144	116	83	1110	230	3.1	11	3.3
14	9.0	67	463	402	110	102	355	822	148	3.1	5.7	7.0
15	9.3	41	6830	326	1040	92	2220	607	107	2.9	4.3	15
16	12	29	5750	272	2480	150	1150	496	80	2.7	3.5	51
17	11	19	1930	220	945	225	684	417	62	2.7	2.7	23
18	8.8	12	1480	203	631	159	543	335	50	2.5	2.0	14
19	6.5	9.8	1240	245	505	142	450	298	41	2.5	2.1	9.5
20	4.6	323	998	2390	443	270	513	224	33	3.8	2.1	8.1
21	3.0	528	675	1690	387	341	351	176	28	2.9	2.0	6.6
22	2.8	2920	520	981	314	260	256	151	24	2.9	1.7	6.7
23	3.2	998	412	715	244	218	204	e140	22	2.9	1.5	5.7
24	4.4	445	318	579	202	181	173	1100	26	2.3	3.3	5.4
25	4.8	362	256	468	998	154	1140	853	31	2.1	3.3	5.4
26	5.4	286	223	387	1120	136	1050	456	513	e1.9	3.1	4.8
27	11	188	182	330	637	118	556	292	237	e1.5	2.9	4.5
28	15	138	149	285	491	103	390	214	137	1.1	2.1	4.5
29	18	106	128	242	---	92	1280	175	92	12	1.4	4.5
30	20	85	116	208	---	84	2560	166	67	7.2	2.0	4.5
31	20	---	110	186	---	76	---	250	---	4.5	1.4	---
TOTAL	665.8	7043.8	24782	27929	12092	8359	16285	27835	3742	253.3	345.0	225.0
MEAN	21.5	235	799	901	432	270	543	898	125	8.17	11.1	7.50
MAX	72	2920	6830	5080	2480	1240	2560	7670	614	50	81	51
MIN	2.8	9.8	35	77	72	76	58	140	22	1.1	1.4	1.3
AC-FT	1320	13970	49160	55400	23980	16580	32300	55210	7420	502	684	446

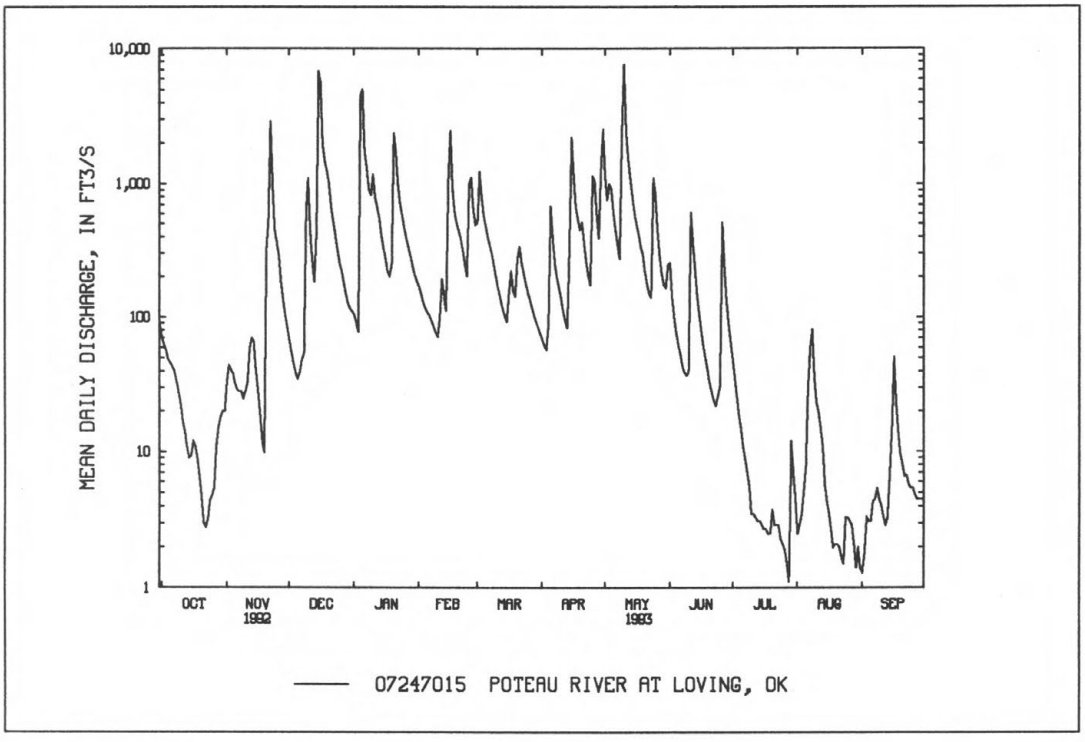
e Estimated

07247015 POTEAU RIVER NEAR LOVING, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.5	235	799	901	432	270	304	501	362	31.1	8.98	77.5
MAX	21.5	235	799	901	432	270	543	898	600	53.9	11.1	148
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1992	1992	1993	1992
MIN	21.5	235	799	901	432	270	64.4	104	125	8.17	6.83	7.50
(WY)	1993	1993	1993	1993	1993	1993	1992	1992	1993	1993	1992	1993

SUMMARY STATISTICS	1993 WATER YEAR		WATER YEARS 1992-93	
ANNUAL TOTAL	129556.9			
ANNUAL MEAN	355		355	
HIGHEST ANNUAL MEAN			355	1993
LOWEST ANNUAL MEAN			355	1993
HIGHEST DAILY MEAN	7670	May 10	7670	May 10 1993
LOWEST DAILY MEAN	1.1	Jul 28	1.1	Jul 28 1993
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 27	1.8	Aug 27 1993
INSTANTANEOUS PEAK FLOW	8410	Dec 16	8410	Dec 16 1992
INSTANTANEOUS PEAK STAGE	27.18	Dec 16	27.18	Dec 16 1992
ANNUAL RUNOFF (AC-FT)	257000		257100	
10 PERCENT EXCEEDS	959		736	
50 PERCENT EXCEEDS	92		67	
90 PERCENT EXCEEDS	3.1		3.5	



07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1991 to current year.

REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
21...	1503	3.00	32.0	754	1028	1028	3.1	8.71	86	5.9	7.7
21...	1506	6.00	32.5	754	1028	1028	3.1	8.71	86	6.0	7.6
21...	1509	9.00	31.5	754	1028	1028	3.1	8.71	86	6.0	7.5
21...	1512	12.0	31.5	754	1028	1028	3.1	8.71	86	5.5	7.5
21...	1515	15.0	31.5	754	1028	1028	3.1	8.71	86	5.7	7.3
21...	1518	18.0	31.5	754	1028	1028	3.1	8.71	86	5.7	7.3
21...	1521	21.0	31.0	754	1028	1028	3.1	8.71	86	5.5	7.3
21...	1524	24.0	31.5	754	1028	1028	3.1	8.71	86	5.5	7.3
21...	1527	27.0	31.5	754	1028	1028	3.1	8.71	86	5.6	7.3
21...	1530	30.0	31.5	754	1028	1028	3.1	8.71	86	5.6	7.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)
OCT												
13...	1445	1028	*80020	11	79	7.4	20.5	19.0	745	8.0	88	--
NOV												
18...	1010	1028	*80020	12	91	7.1	14.5	12.0	756	6.5	61	--
DEC												
14...	1530	1028	*80020	326	79	6.7	--	--	740	9.3	--	--
15...	1400	1028	*80020	7410	47	6.8	4.5	9.0	742	9.9	88	--
15...	1640	1028	*80020	8180	38	7.0	2.0	9.0	745	9.4	83	--
16...	1130	1028	*80020	4940	37	6.7	4.0	7.5	751	10.4	88	--
16...	1430	1028	*80020	4110	40	6.9	5.0	8.0	750	10.4	90	--
JAN												
06...	1015	1028	*80020	1640	**43	7.0	5.5	7.5	760	11.8	98	0.46
FEB												
10...	0810	1028	*80020	74	78	7.4	7.5	8.5	752	11.0	95	0.32
MAR												
31...	1530	1028	*80020	76	83	7.4	12.0	15.5	745	8.0	82	--
MAY												
06...	0930	1028	*80020	453	61	7.1	25.0	19.5	756	7.6	84	0.39
JUN												
17...	0815	1028	*80020	64	68	7.3	25.0	26.0	754	5.4	67	0.74
JUL												
28...	1130	1028	80020	1.1	96	7.3	35.0	30.0	754	5.7	76	--
AUG												
25...	1250	1028	80020	3.2	120	7.4	32.5	30.0	755	5.0	67	--

*Trace element and common constituent analyses provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

**SPECIFIC CONDUCTANCE, LAB (µS/CM)

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	HARDNESS NONCARB WH WAT TOT LAB (MG/L AS CACO3) (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
13...	0	2.0	2.0	<10	2.4	29	0	24	<20	--	--
NOV											
18...	0	3.0	3.0	<10	3.1	30	0	24	<20	--	--
DEC											
14...	4	3.0	2.0	<10	1.9	--	--	--	<20	0.130	0.110
15...	--	--	--	--	--	8	0	7	--	0.120	0.130
15...	--	--	--	--	--	11	0	9	--	0.120	0.130
16...	--	--	--	--	--	8	0	7	--	0.170	0.150
16...	--	--	--	--	--	7	0	6	--	0.180	0.190
JAN											
06...	5	2.0	2.0	<10	1.5	9	0	7	<20	0.140	0.140
FEB											
10...	0	3.0	2.0	<10	1.4	20	0	16	<20	0.060	0.060
MAR											
31...	2	3.0	3.0	<10	1.0	18	0	15	<20	--	--
MAY											
06...	0	2.0	2.0	<10	1.2	13	0	11	<20	0.092	--
JUN											
17...	0	3.0	2.0	<10	2.3	14	0	12	<20	0.240	--
JUL											
28...	--	--	--	--	--	25	0	21	--	--	--
AUG											
25...	--	--	--	--	--	35	0	28	--	0.120	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT											
13...	--	<0.010	<0.010	--	<0.050	<0.050	0.030	0.040	0.04	0.05	0.37
NOV											
18...	--	0.010	0.010	0.03	<0.050	<0.050	0.020	0.020	0.03	0.03	0.28
DEC											
14...	0.49	0.030	0.030	0.10	0.160	0.140	0.050	0.040	0.06	0.05	0.35
15...	0.58	0.040	0.030	0.10	--	0.160	0.070	0.040	0.09	0.05	0.53
15...	0.58	0.040	0.030	0.10	--	0.160	0.080	0.060	0.10	0.08	0.82
16...	0.66	0.030	0.030	0.10	0.200	0.180	0.040	0.040	0.05	0.05	0.46
16...	0.84	0.030	0.030	0.10	0.210	0.220	0.050	0.040	0.06	0.05	0.55
JAN											
06...	0.62	--	0.020	0.07	--	0.160	--	0.030	--	0.04	0.37
FEB											
10...	0.27	--	0.060	0.20	--	0.120	--	0.020	--	0.03	0.28
MAR											
31...	--	--	<0.010	--	--	<0.050	--	0.020	--	0.03	0.28
MAY											
06...	--	--	<0.010	--	--	0.092	--	0.040	--	0.05	0.26
JUN											
17...	--	--	<0.010	--	--	0.240	--	0.050	--	0.06	0.45
JUL											
28...	--	--	--	--	--	<0.050	--	0.040	--	0.05	0.96
AUG											
25...	--	--	--	--	--	0.120	--	0.080	--	0.10	0.62

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
OCT											
13...	--	0.40	--	0.40	--	--	0.15	0.100	0.050	0.040	0.12
NOV											
18...	--	0.30	--	0.30	--	0.050	0.12	0.060	0.040	0.030	0.09
DEC											
14...	--	0.40	--	0.56	2.5	0.100	0.25	0.020	0.080	0.020	0.06
15...	--	0.60	--	0.76	--	0.220	0.34	0.070	0.110	0.070	0.21
15...	--	0.90	--	1.1	--	0.350	0.37	0.080	0.120	0.070	0.21
16...	--	0.50	--	0.70	3.1	0.200	0.34	0.130	0.110	0.090	0.28
16...	--	0.60	--	0.81	3.6	0.190	0.31	0.090	0.100	0.080	0.25
JAN											
06...	0.27	0.40	0.30	0.56	--	0.090	--	0.060	--	0.030	0.09
FEB											
10...	0.18	0.30	0.20	0.42	--	0.100	--	0.070	--	0.060	0.18
MAR											
31...	0.28	0.30	0.30	0.30	--	0.040	--	0.040	--	0.030	0.09
MAY											
06...	0.26	0.30	0.30	0.39	--	--	--	0.070	--	0.030	0.09
JUN											
17...	0.45	0.50	0.50	0.74	--	0.120	--	0.080	--	0.070	0.21
JUL											
28...	--	1.0	--	1.0	--	0.110	--	--	--	0.020	0.06
AUG											
25...	--	0.70	--	0.82	--	0.150	--	--	--	0.130	0.40

DATE	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)
OCT											
13...	--	450	<350	<10	20	<10	<5	<10	<10	620	<45
NOV											
18...	0.01	340	<350	<10	20	<10	<5	<10	<10	640	<45
DEC											
14...	0.02	1600	<350	<10	30	<10	<5	<10	14	1600	<45
15...	0.11	--	--	--	--	--	--	--	--	--	--
15...	0.23	--	--	--	--	--	--	--	--	--	--
16...	0.09	--	--	--	--	--	--	--	--	--	--
16...	0.09	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	1400	<350	<10	30	<10	<5	<10	<10	1800	<45
FEB											
10...	--	990	<350	<10	20	<10	<5	<10	<10	900	<45
MAR											
31...	--	520	<350	<10	20	<10	<5	<10	<10	880	52
MAY											
06...	--	1200	<350	<60	20	<10	<5	<10	<10	1600	<45
JUN											
17...	--	590	<350	<10	20	<10	<5	<10	<10	1200	<45
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	--	--	--	--	--	--	--	--	--	--	--

07247015 POTEAU RIVER AT LOVING, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	THALLIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOVERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
13...	56	<0.50	<25	<5	<7	<200	<500	<5	8	0.23	--
NOV											
18...	73	<0.50	<25	<5	<7	<200	<500	40	50	1.7	--
DEC											
14...	54	<0.50	<25	<5	<7	<200	<500	20	--	--	--
15...	--	--	--	--	--	--	--	--	240	4800	89
15...	--	--	--	--	--	--	--	--	287	6350	90
16...	--	--	--	--	--	--	--	--	56	743	--
16...	--	--	--	--	--	--	--	--	54	594	--
JAN											
06...	100	<0.50	<25	<5	<7	<200	<500	7	49	218	--
FEB											
10...	35	<0.50	<24	<5	<7	<200	<500	<5	6	1.2	--
MAR											
31...	52	<0.50	<25	<5	<7	<200	<500	20	14	2.9	--
MAY											
06...	61	<0.50	<25	<70	<7	<200	<500	7	17	21	--
JUN											
17...	83	<0.50	<25	<5	<7	<200	<500	6	15	2.6	--
JUL											
28...	--	--	--	--	--	--	--	--	37	0.11	--
AUG											
25...	--	--	--	--	--	--	--	--	16	0.14	--

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK

LOCATION.--Lat 34°46'25", long 94°30'43", NE 1/4 SW 1/4 sec. 31, T.4 N., R.27 E., LeFlore County, Hydrologic Unit 11110105, on downstream side of bridge pier of county road bridge, 2.2 mi above Haw Creek, 5.0 mi north of Page, and at mile 24.6, .

DRAINAGE AREA.--74.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 684.00 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. U.S. Army Corps of Engineers' satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

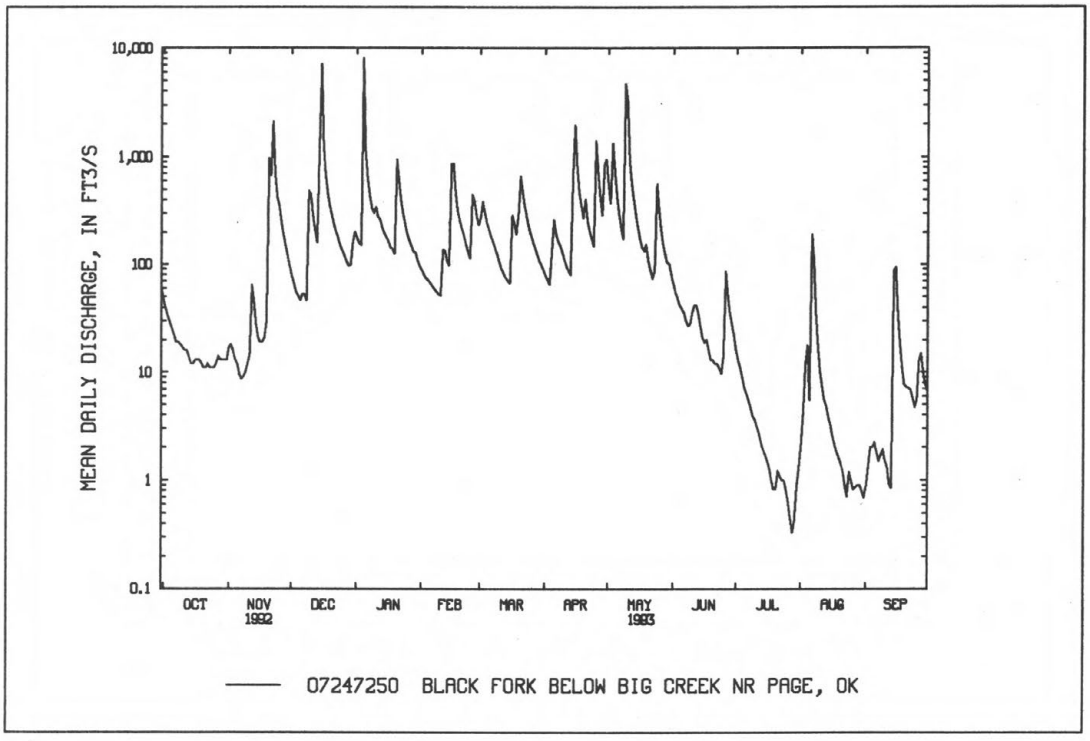
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	17	78	177	88	276	79	544	66	16	2.1	.86
2	39	18	66	157	80	385	72	370	55	13	4.2	1.3
3	33	16	56	152	74	299	65	1350	48	11	12	2.0
4	29	13	51	8150	71	245	135	737	42	9.1	18	2.0
5	25	12	47	1160	67	211	264	424	39	7.3	5.5	2.2
6	22	9.6	53	631	63	180	194	293	36	6.3	194	1.8
7	19	8.7	53	445	59	161	165	222	30	5.5	105	1.5
8	19	9.1	46	336	56	138	150	174	27	4.7	34	1.7
9	18	10	484	304	53	121	130	4720	28	3.9	17	1.9
10	17	12	454	346	52	104	111	3290	36	3.6	10	1.5
11	16	15	285	276	136	90	97	913	42	3.1	7.4	1.3
12	16	65	206	263	134	82	87	555	42	2.7	5.5	.92
13	14	46	160	222	108	75	80	407	35	2.2	4.8	.84
14	12	28	1250	194	97	70	673	294	27	1.9	3.8	87
15	12	21	7070	178	856	67	1970	221	21	1.7	3.2	95
16	13	19	1350	162	864	292	797	174	19	1.5	2.5	34
17	13	19	680	143	460	244	478	143	20	1.3	2.1	18
18	13	21	456	138	321	191	356	134	16	1.0	1.8	11
19	12	30	352	125	257	306	272	154	13	.82	1.6	7.7
20	11	978	286	957	217	663	407	107	13	.82	1.4	7.3
21	11	671	234	605	188	463	253	87	12	1.2	1.2	7.1
22	12	2130	202	392	153	347	205	75	12	1.1	.89	6.9
23	11	690	177	299	130	275	174	86	11	1.0	.71	5.8
24	11	419	149	236	114	220	147	570	9.7	1.0	1.2	4.8
25	11	350	134	192	448	187	1420	334	14	.81	1.0	5.5
26	12	243	120	167	395	162	725	212	86	.63	.82	13
27	14	186	107	148	286	140	418	155	52	.45	.86	15
28	13	150	97	131	233	123	287	122	36	.33	.90	9.9
29	13	120	99	128	---	108	859	104	28	.42	.90	7.7
30	13	94	162	109	---	98	956	101	22	.86	.80	6.6
31	13	---	203	96	---	89	---	79	---	1.3	.70	---
TOTAL	534	6420.4	15167	17019	6060	6412	12026	17151	937.7	106.54	445.88	362.12
MEAN	17.2	214	489	549	216	207	401	553	31.3	3.44	14.4	12.1
MAX	47	2130	7070	8150	864	663	1970	4720	86	16	194	95
MIN	11	8.7	46	96	52	67	65	75	9.7	.33	.70	.84
AC-FT	1060	12730	30080	33760	12020	12720	23850	34020	1860	211	884	718

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUGSEP
MEAN	17.2	214	489	549	216	185	248	303	104	8.51	14.3	195
MAX	17.2	214	489	549	216	207	401	553	176	13.6	14.4	378
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1992	1992	1993	1992
MIN	17.2	214	489	549	216	163	95.4	52.5	31.3	3.44	14.2	12.1
(WY)	1993	1993	1993	1993	1993	1992	1992	1992	1993	1993	1992	1993

SUMMARY STATISTICS	1993 WATER YEAR		WATER YEARS 1992-93	
ANNUAL TOTAL	82641.64			
ANNUAL MEAN	226		226	
HIGHEST ANNUAL MEAN			226	1993
LOWEST ANNUAL MEAN			226	1993
HIGHEST DAILY MEAN	8150	Jan 4	8150	Jan 4 1993
LOWEST DAILY MEAN	.33	Jul 28	.33	Jul 28 1993
ANNUAL SEVEN-DAY MINIMUM	.64	Jul 24	.64	Jul 24 1993
INSTANTANEOUS PEAK FLOW	25800	Jan 4	25800	Jan 4 1993
INSTANTANEOUS PEAK STAGE	18.45	Jan 4	18.45	Jan 4 1993
ANNUAL RUNOFF (AC-FT)	163900		164000	
10 PERCENT EXCEEDS	455		370	
50 PERCENT EXCEEDS	70		59	
90 PERCENT EXCEEDS	1.7		2.6	



07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1991 to current year.

REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
21...	1403	3.00	33.5	755	1028	1028	1.1	3.66	49	5.9	7.9
21...	1406	6.00	32.5	755	1028	1028	1.1	3.66	50	5.9	7.7
21...	1409	9.00	32.5	755	1028	1028	1.1	3.66	49	5.8	7.5
21...	1412	12.0	32.0	755	1028	1028	1.1	3.66	49	5.6	7.4
21...	1415	15.0	32.0	755	1028	1028	1.1	3.66	50	5.7	7.3
21...	1418	18.0	32.0	755	1028	1028	1.1	3.66	50	5.6	7.2
21...	1421	21.0	32.0	755	1028	1028	1.1	3.66	50	5.6	7.2
21...	1424	24.0	32.0	755	1028	1028	1.1	3.66	50	5.8	7.2
21...	1427	27.0	32.0	755	1028	1028	1.1	3.66	50	5.8	7.2

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	NITROGEN DISSOLVED (MG/L AS N) (00602)
OCT												
15...	0915	1028	*80020	11	38	7.1	22.0	19.5	747	7.5	83	--
NOV												
18...	1130	1028	*80020	20	**36	7.0	17.0	13.5	752	9.5	92	--
DEC												
14...	1400	1028	*80020	829	37	6.6	--	12.0	740	9.4	90	--
14...	2130	1028	*80020	2810	**27	6.1	10.0	11.0	740	10.4	97	--
15...	0700	1028	*80020	12900	**21	6.3	4.0	9.5	737	10.0	91	--
15...	1630	1028	*80020	5540	21	6.3	6.0	9.0	738	10.9	98	--
16...	0900	1028	*80020	1390	22	6.5	3.0	8.0	744	11.1	96	--
JAN												
06...	1230	1028	*80020	619	23	6.8	8.5	8.0	753	11.2	96	--
FEB												
10...	0930	1028	*80020	52	35	7.1	10.0	9.5	746	9.6	86	--
APR												
01...	0900	1028	*80020	82	28	7.1	4.0	12.0	745	7.0	66	--
MAY												
04...	1625	1028	*80020	640	28	7.0	28.5	17.5	745	10.5	112	0.65
JUN												
17...	0940	1028	*80020	20	36	7.3	26.5	26.5	753	6.0	75	--
JUL												
28...	1245	1028	80020	0.24	57	7.3	35.5	33.0	750	6.5	92	--
AUG												
25...	1430	1028	80020	1.2	58	7.3	32.5	31.5	750	7.4	103	--

*Trace element and common constituent analyses provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

**SPECIFIC CONDUCTANCE, LAB (µS/CM)

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	HARDNESS NONCARB WH WAT TOT LAB (MG/L AS CACO3) (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)
OCT											
15...	0	1.0	1.0	<10	<1.0	13	0	11	<20	0.058	--
NOV											
18...	0	1.0	1.0	<10	1.2	10	0	8	<20	0.044	0.033
DEC											
14...	430	86	53	190	1.3	--	--	--	<20	0.210	0.220
14...	--	--	--	--	--	5	0	3	--	0.090	0.080
15...	--	--	--	--	--	4	0	3	--	0.080	0.080
15...	--	--	--	--	--	3	0	3	--	0.090	0.080
16...	--	--	--	--	--	5	0	4	--	0.130	0.120
JAN											
06...	--	<1.0	<1.0	<10	0.5	6	0	5	<20	0.100	0.100
FEB											
10...	23	6.0	4.0	12	1.9	8	0	7	<20	0.080	0.080
APR											
01...	--	1.0	<1.0	<10	0.4	4	0	3	<20	--	--
MAY											
04...	--	<1.0	<1.0	<10	1.1	4	0	3	<20	0.050	--
JUN											
17...	0	1.0	1.0	<10	1.0	10	0	8	<20	--	--
JUL											
28...	--	--	--	--	--	17	0	14	--	--	--
AUG											
25...	--	--	--	--	--	17	0	14	--	--	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)
OCT											
15...	--	<0.010	<0.010	--	0.058	0.063	0.050	0.040	0.06	0.05	0.25
NOV											
18...	0.15	0.020	0.020	0.07	0.064	0.053	0.020	0.010	0.03	0.01	0.18
DEC											
14...	0.97	0.030	0.020	0.07	--	0.240	--	0.090	--	0.12	0.41
14...	0.35	0.020	0.020	0.07	0.110	0.100	0.040	0.030	0.05	0.04	0.36
15...	0.35	0.030	0.020	0.07	0.110	0.100	0.040	0.030	0.05	0.04	0.66
15...	0.35	0.020	0.030	0.10	0.110	0.110	0.030	0.030	0.04	0.04	0.17
16...	0.53	0.010	0.020	0.07	0.140	0.140	0.020	0.020	0.03	0.03	--
JAN											
06...	0.44	--	0.020	0.07	--	0.120	--	0.010	--	0.01	--
FEB											
10...	0.35	--	0.060	0.20	--	0.140	--	0.030	--	0.04	--
APR											
01...	--	--	<0.010	--	--	<0.050	--	0.030	--	0.04	0.27
MAY											
04...	--	--	<0.010	--	--	0.050	--	0.040	--	0.05	0.56
JUN											
17...	--	--	<0.010	--	--	<0.050	--	0.020	--	0.03	0.18
JUL											
28...	--	--	--	--	--	<0.050	--	0.040	--	0.05	0.46
AUG											
25...	--	--	--	--	--	<0.050	--	0.080	--	0.10	0.42

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)
OCT											
15...	--	0.30	--	0.36	1.6	0.020	--	0.030	<0.010	<0.010	--
NOV											
18...	--	0.20	--	0.26	1.2	--	0.06	0.020	0.020	0.010	0.03
DEC											
14...	--	0.50	--	0.74	--	--	--	0.080	--	0.060	0.18
14...	--	0.40	--	0.51	2.3	0.050	0.06	0.020	0.020	0.020	0.06
15...	--	0.70	--	0.81	3.6	0.070	0.12	0.020	0.040	0.010	0.03
15...	--	0.20	--	0.31	1.4	0.030	0.06	0.030	0.020	0.020	0.06
16...	--	<0.20	--	--	--	0.020	--	0.010	<0.010	<0.010	--
JAN											
06...	--	<0.20	<0.20	--	--	<0.010	--	<0.010	--	<0.010	--
FEB											
10...	--	<0.20	<0.20	--	--	0.010	--	0.010	--	0.010	0.03
APR											
01...	0.27	0.30	0.30	0.30	--	--	--	0.020	--	0.010	0.03
MAY											
04...	0.56	0.60	0.60	0.65	--	0.020	--	0.040	--	<0.010	--
JUN											
17...	--	0.20	<0.20	0.20	--	0.030	--	0.020	--	0.010	0.03
JUL											
28...	--	0.50	--	0.50	--	0.040	--	--	--	0.010	0.03
AUG											
25...	--	0.50	--	0.50	--	0.060	--	--	--	0.020	0.06

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)
OCT											
15...	--	380	<350	<10	20	<10	<5	<10	<10	420	<45
NOV											
18...	--	490	<350	<10	20	<10	<5	<10	<10	510	<45
DEC											
14...	--	<300	<350	<10	100	<10	<5	<10	<10	1100	<45
14...	0.03	--	--	--	--	--	--	--	--	--	--
15...	0.03	--	--	--	--	--	--	--	--	--	--
15...	0.01	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--
JAN											
06...	--	670	<350	<10	20	<10	<5	<10	<10	510	<45
FEB											
10...	--	2200	<350	<10	40	<10	<5	<10	<10	2000	<45
APR											
01...	--	<300	<350	<10	20	<10	<5	<10	<10	350	<45
MAY											
04...	--	630	<350	<60	20	<10	<5	<10	<10	670	<45
JUN											
17...	--	<300	<350	<10	20	<10	<5	<10	<10	330	<45
JUL											
28...	--	--	--	--	--	--	--	--	--	--	--
AUG											
25...	--	--	--	--	--	--	--	--	--	--	--

07247250 BLACK FORK BELOW BIG CREEK NEAR PAGE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	THALLIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOVERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
15...	21	<0.50	<25	<5	<7	<200	<500	<5	4	0.12	--
NOV											
18...	14	<0.50	<25	<5	<7	<200	<500	<5	13	0.72	--
DEC											
14...	180	<0.50	<25	<5	<7	<200	<500	90	11	25	--
14...	--	--	--	--	--	--	--	--	42	319	--
15...	--	--	--	--	--	--	--	--	146	5100	78
15...	--	--	--	--	--	--	--	--	38	568	--
16...	--	--	--	--	--	--	--	--	7	26	--
JAN											
06...	14	<0.50	<25	<5	<7	<200	<500	6	9	15	--
FEB											
10...	68	<0.50	<25	<5	<7	<200	<500	<5	4	0.56	--
APR											
01...	14	<0.50	<25	<5	<7	<200	<500	20	9	2.0	--
MAY											
04...	15	<0.50	<25	<70	<7	<200	<500	90	11	19	--
JUN											
17...	24	<0.50	<25	<5	<7	<200	<500	9	3	0.16	--
JUL											
28...	--	--	--	--	--	--	--	--	4	0.00	--
AUG											
25...	--	--	--	--	--	--	--	--	11	0.03	--

07247345 BLACK FORK AT HODGEN, OK

LOCATION.--Lat 34°50'35", long 94°37'28", in SE 1/4 SE 1/4, sec. 01 T.4 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 0.4 mi east of Hodgen, OK.

DRAINAGE AREA.--179 mi^2.

PERIOD OF RECORD.--December 1991 to current year.

REMARKS.--Samples were collected periodically, and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
21...	1132	10.0	31.5	755	1028	1028	0.74	9.33	53	4.6	7.0
21...	1134	9.20	31.5	755	1028	1028	0.74	9.33	53	4.6	7.0
21...	1136	8.40	31.5	755	1028	1028	0.74	9.33	53	4.7	7.0
21...	1138	7.60	31.5	755	1028	1028	0.74	9.33	53	4.8	7.0
21...	1140	6.80	31.5	755	1028	1028	0.74	9.33	53	4.7	7.0
21...	1142	6.00	31.5	755	1028	1028	0.74	9.33	53	4.8	7.0
21...	1144	5.20	31.5	755	1028	1028	0.74	9.33	53	4.8	7.0
21...	1146	4.40	31.5	755	1028	1028	0.74	9.33	53	4.8	6.9
21...	1148	3.60	31.5	755	1028	1028	0.74	9.33	53	4.7	6.9
21...	1150	2.80	31.5	755	1028	1028	0.74	9.33	54	4.7	6.9
21...	1152	2.00	31.5	755	1028	1028	0.74	9.33	54	4.6	6.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT											
14...	1525	1028	*80020	19	48	7.2	28.5	19.5	748	8.3	92
NOV											
17...	1530	1028	*80020	34	52	7.3	18.0	13.5	754	9.2	89
JAN											
06...	1430	1028	*80020	1010	27	6.9	9.0	8.0	758	11.2	95
FEB											
10...	1045	1028	*80020	69	41	7.3	9.5	10.0	753	11.6	103
MAR											
30...	1145	1028	*80020	145	37	7.2	25.0	19.0	743	8.9	98
APR											
14...	1800	1028	*80020	1690	50	6.7	10.5	16.5	740	8.3	88
14...	1900	1028	80020	1550	56	6.7	9.5	16.0	740	8.1	84
15...	0950	1028	80020	5860	32	6.6	5.5	13.0	743	9.6	94
15...	1400	1028	80020	4180	32	6.6	10.5	12.5	746	9.9	94
15...	1530	1028	80020	3860	22	6.6	8.0	12.0	746	10.1	95
MAY											
04...	1100	1028	*80020	1420	30	6.8	20.5	18.0	757	10.0	107
JUN											
15...	1330	1028	*80020	e36	42	7.3	30.5	28.5	755	6.5	85
JUL											
27...	1430	1028	80020	0.16	59	7.3	38.0	34.0	752	4.9	71
AUG											
26...	1245	1028	80020	4.3	48	7.2	32.0	30.0	756	7.2	96

e Estimated instantaneous discharge (ft^3/s)

*Trace element and common constituent analyses provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07247345 BLACK FORK AT HODGEN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS NONCARB WH WAT TOT LAB (MG/L AS CACO3) (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT											
14...	--	0	2.0	2.0	<10	1.1	13	0	11	<20	--
NOV											
17...	--	0	2.0	2.0	<10	1.6	15	0	12	<20	0.049
JAN											
06...	--	1	1.0	1.0	<10	0.8	5	0	4	<20	0.110
FEB											
10...	--	0	1.0	1.0	<10	<1.0	11	0	9	<20	0.040
MAR											
30...	--	0	1.0	1.0	<10	0.9	10	0	8	<20	--
APR											
14...	--	3	2.0	2.0	<10	1.1	12	0	10	<20	0.110
14...	0.47	--	--	--	--	--	9	0	7	--	0.050
15...	0.27	--	--	--	--	--	8	0	6	--	0.070
15...	--	--	--	--	--	--	5	0	4	--	0.069
15...	--	--	--	--	--	--	6	0	5	--	0.068
MAY											
04...	--	0	1.0	1.0	<10	0.9	7	0	5	<20	--
JUN											
15...	--	0	1.0	1.0	<10	<0.1	9	0	7	<20	--
JUL											
27...	--	--	--	--	--	--	16	0	13	--	--
AUG											
26...	--	--	--	--	--	--	13	0	11	--	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
OCT											
14...	--	--	<0.010	<0.010	--	<0.050	<0.050	0.010	0.020	0.01	0.03
NOV											
17...	--	--	0.020	0.020	0.07	0.069	<0.050	0.020	0.020	0.03	0.03
JAN											
06...	0.110	0.49	--	0.020	0.07	--	0.130	--	0.020	--	0.03
FEB											
10...	0.040	0.18	--	0.060	0.20	--	0.100	--	0.020	--	0.03
MAR											
30...	--	--	--	<0.010	--	--	<0.050	--	0.040	--	0.05
APR											
14...	--	--	--	<0.010	--	--	0.110	--	0.030	--	0.04
14...	0.050	0.22	--	0.020	0.07	--	0.070	--	0.040	--	0.05
15...	--	--	--	<0.010	--	--	0.070	--	0.020	--	0.03
15...	--	--	--	<0.010	--	--	0.069	--	0.020	--	0.03
15...	--	--	--	<0.010	--	--	0.068	--	0.010	--	0.01
MAY											
04...	--	--	--	<0.010	--	--	<0.050	--	0.030	--	0.04
JUN											
15...	--	--	--	<0.010	--	--	<0.050	--	0.020	--	0.03
JUL											
27...	--	--	--	--	--	--	<0.050	--	0.080	--	0.10
AUG											
26...	--	--	--	--	--	--	<0.050	--	0.080	--	0.10

07247345 BLACK FORK AT HODGEN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
OCT											
14...	--	--	<0.20	--	--	--	--	--	0.040	<0.010	<0.010
NOV											
17...	0.18	--	0.20	--	0.27	1.2	--	0.03	0.020	0.010	0.010
JAN											
06...	--	--	<0.20	<0.20	--	--	0.030	--	0.030	--	<0.010
FEB											
10...	--	--	<0.20	<0.20	--	--	--	--	0.020	--	<0.010
MAR											
30...	0.26	0.26	0.30	0.30	0.30	--	--	--	0.030	--	<0.010
APR											
14...	0.47	--	0.50	<0.20	0.61	--	0.090	--	0.030	--	0.020
14...	0.66	0.36	0.70	0.40	0.77	--	0.130	--	0.070	--	0.030
15...	0.78	0.18	0.80	0.20	0.87	--	0.120	--	0.020	--	0.010
15...	0.48	--	0.50	<0.20	0.57	--	0.080	--	0.030	--	0.030
15...	0.39	--	0.40	<0.20	0.47	--	0.070	--	0.020	--	0.010
MAY											
04...	0.37	0.17	0.40	0.20	0.40	--	0.030	--	0.030	--	<0.010
JUN											
15...	0.28	--	0.30	<0.20	0.30	--	0.020	--	0.010	--	0.010
JUL											
27...	0.42	--	0.50	--	0.50	--	0.040	--	--	--	0.020
AUG											
26...	0.42	--	0.50	--	0.50	--	0.050	--	--	--	0.030

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)
OCT											
14...	--	430	<350	<10	20	<10	<5	<10	<10	640	<45
NOV											
17...	0.03	<300	<350	<10	20	<10	<5	<10	<10	480	<45
JAN											
06...	--	1300	<350	<10	20	<10	<5	<10	<10	1100	130
FEB											
10...	--	610	<350	<10	20	<10	<5	<10	<10	590	<45
MAR											
30...	--	370	<350	<10	10	<10	<5	<10	<10	380	<45
APR											
14...	0.06	1500	<350	<10	30	<10	<5	19	<10	2000	<45
14...	0.09	--	--	--	--	--	--	--	--	--	--
15...	0.03	--	--	--	--	--	--	--	--	--	--
15...	0.09	--	--	--	--	--	--	--	--	--	--
15...	0.03	--	--	--	--	--	--	--	--	--	--
MAY											
04...	--	1100	<350	<60	20	<10	<5	<10	<10	940	<45
JUN											
15...	0.03	<300	<350	<10	10	<10	<5	<10	<10	390	<45
JUL											
27...	0.06	--	--	--	--	--	--	--	--	--	--
AUG											
26...	0.09	--	--	--	--	--	--	--	--	--	--

07247345 BLACK FORK AT HODGEN, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	THALLIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOVERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
14...	33	<0.50	<25	<5	<7	<200	<500	<5	5	0.26	--
NOV											
17...	23	<0.50	<25	<5	<7	<200	<500	<5	14	1.3	--
JAN											
06...	21	<0.50	<25	<5	<7	<200	<500	<5	10	27	--
FEB											
10...	22	<0.50	<25	<5	<7	<200	<500	<5	206	39	--
MAR											
30...	18	<0.50	<25	<5	<7	<200	<500	20	8	3.1	--
APR											
14...	98	<0.50	<25	<5	<7	<200	<500	7	65	296	77
14...	--	--	--	--	--	--	--	--	101	423	78
15...	--	--	--	--	--	--	--	--	83	1310	73
15...	--	--	--	--	--	--	--	--	57	644	79
15...	--	--	--	--	--	--	--	--	42	437	80
MAY											
04...	27	<0.50	<25	<70	<7	<200	<500	5	26	100	--
JUN											
15...	37	<0.50	<25	<5	<7	<200	<500	7	6	--	--
JUL											
27...	--	--	--	--	--	--	--	--	4	0.00	--
AUG											
26...	--	--	--	--	--	--	--	--	6	0.07	--

07247500 FOURCHE MALINE NEAR RED OAK, OK

LOCATION.--Lat 34°54'45", long 95°09'20", in NW 1/4 NW 1/4 sec.13, T.5 N., R.20 E., Latimer County, Hydrologic Unit 11110105, on downstream side of left abutment of county road bridge, 0.1 mi downstream from Little Fourche Maline, 5.0 mi southwest of Red Oak, and at mile 41.2.
DRAINAGE AREA.--122 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to April 1991, October 1991 to current year.
REVISED RECORDS.--WSP 1117: Drainage area. WSP 1631: 1940.
GAGE.--Water-stage recorder. Datum of gage is 540.80 ft above sea level. Prior to April 25, 1939, nonrecording gage at same site and datum.
REMARKS.--Records fair. Some regulation by several flood-retarding structures. U.S. Army Corps of Engineers satellite telemeter at station.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1935 reached a stage of 25.4 ft, from flood-marks.
PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s:

Date	Time	Discharge (ft^3/s)	Gage Height (ft)	Date	Time	Discharge (ft^3/s)	Gage Height (ft)
Dec. 14	unknown	3,400	16.00 (HWM)	May 10	0600	3,510	16.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	e6.0	80	66	64	234	106	271	7.4	5.0	.01	.00
2	58	e12	68	57	57	478	81	162	6.1	3.5	.00	.00
3	50	e10	69	55	51	312	69	288	4.6	2.5	.00	.45
4	42	e7.0	62	235	57	203	e1100	205	3.8	2.0	.00	2.3
5	35	e5.2	56	244	100	162	e900	134	3.2	1.5	.00	3.5
6	28	e4.5	54	164	e80	135	641	133	2.6	1.3	.12	2.3
7	24	e4.0	54	136	e65	122	486	156	2.4	1.2	.22	1.3
8	19	e3.7	54	121	58	112	210	102	14	1.1	.37	1.3
9	17	e3.4	421	158	e53	97	135	1380	76	1.3	.90	1.1
10	15	e40	626	330	e47	82	109	3210	627	1.1	1.0	.45
11	10	83	320	223	e46	68	89	1500	790	1.1	.92	.29
12	9.1	124	220	267	e44	58	76	1050	436	1.1	.86	.26
13	7.8	101	286	244	e41	51	66	968	206	1.1	.32	.38
14	6.3	60	e3000	175	e39	45	e1800	862	94	1.1	.25	271
15	5.7	38	e2300	146	e38	40	e1500	715	64	1.1	.28	404
16	5.2	29	e1800	128	e36	41	e1300	535	79	1.1	.22	275
17	4.5	15	1220	108	e34	40	936	332	52	1.1	.17	129
18	3.8	14	1050	101	e450	34	881	126	38	1.1	.05	82
19	4.2	11	980	114	e350	57	798	82	29	1.0	.00	65
20	4.6	127	929	1400	e250	284	653	63	23	1.1	.00	74
21	6.7	305	845	e1120	e230	242	464	52	19	1.1	.00	99
22	5.2	e1500	720	e900	200	177	284	45	14	1.1	.00	73
23	e4.5	e1100	612	e720	105	184	116	40	11	1.1	.00	57
24	e4.0	800	414	221	96	151	80	103	8.4	.95	1.4	67
25	e3.7	654	159	156	e600	120	249	75	54	.81	2.1	125
26	e3.5	431	119	131	437	98	212	47	86	.86	2.8	306
27	e3.3	259	105	116	268	84	130	34	43	.61	1.6	139
28	e3.1	172	93	101	185	73	93	26	23	.26	.98	84
29	e2.9	122	84	92	---	64	438	19	13	.28	.27	62
30	e2.7	101	82	80	---	68	556	14	7.8	.39	.10	48
31	e3.5	---	78	71	---	165	---	9.4	---	.19	.00	---
TOTAL	465.3	6141.8	16960	8180	4081	4081	14558	12738.4	2837.3	39.05	14.94	2373.63
MEAN	15.0	205	547	264	146	132	485	411	94.6	1.26	.48	79.1
MAX	73	1500	3000	1400	600	478	1800	3210	790	5.0	2.8	404
MIN	2.7	3.4	54	55	34	34	66	9.4	2.4	.19	.00	.00
AC-FT	923	12180	33640	16230	8090	8090	28880	25270	5630	77	30	4710

e Estimated

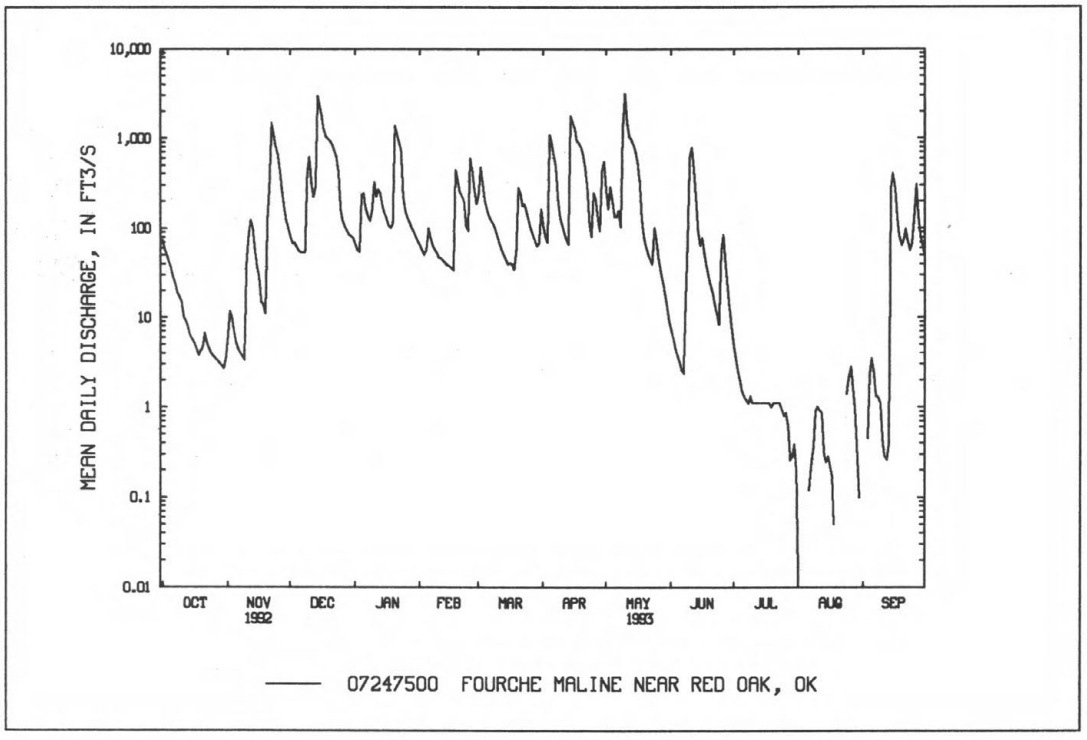
07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.5	114	128	95.5	183	224	271	278	119	58.1	18.2	47.3
MAX	675	811	726	314	715	1100	1224	1377	695	847	189	547
(WY)	1971	1986	1972	1950	1945	1945	1957	1960	1945	1950	1964	1950
MIN	.000	.000	.000	.000	1.75	2.42	18.6	8.85	.91	.042	.000	.000
(WY)	1939	1957	1964	1964	1967	1967	1950	1988	1963	1955	1943	1939

SUMMARY STATISTICS	1992 CALENDAR YEAR		1993 WATER YEAR		WATER YEARS 1939-93	
ANNUAL TOTAL	90854.4		72470.42			
ANNUAL MEAN	248		199		134	
HIGHEST ANNUAL MEAN					317	1945
LOWEST ANNUAL MEAN					18.3	1956
HIGHEST DAILY MEAN	3000	Dec 14	3210	May 10	18900	May 19 1960
LOWEST DAILY MEAN	2.7	Oct 30	.00	at times	.00	at times
ANNUAL SEVEN-DAY MINIMUM	3.2	Oct 25	.03	Aug 17	.00	Oct 1 1938
INSTANTANEOUS PEAK FLOW			3510	May 10	[a]41500	May 19 1960
INSTANTANEOUS PEAK STAGE			16.11	May 10	[b]24.79	May 19 1960
ANNUAL RUNOFF (AC-FT)	180200		143700		96980	
10 PERCENT EXCEEDS	721		626		300	
50 PERCENT EXCEEDS	84		63		16	
90 PERCENT EXCEEDS	11		.86		.20	

[a]From rating curve extended above 25,000 ft^3/s.
[b]From floodmark.



07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1954, 1956-60, 1978, 1979, December 1991 to current year.
REMARKS.--Samples were collected on a six-week schedule and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL										
20...	1633	2.00	29.5	751	1028	1028	1.2	2.35	189	7.0
20...	1636	4.00	29.5	751	1028	1028	1.2	2.35	190	7.0
20...	1639	6.00	29.5	751	1028	1028	1.2	2.35	190	7.0
20...	1642	8.00	29.5	751	1028	1028	1.2	2.35	190	7.0
20...	1645	10.0	29.5	751	1028	1028	1.2	2.35	190	7.0
20...	1648	12.0	29.5	751	1028	1028	1.2	2.35	190	7.0
20...	1651	14.0	30.0	751	1028	1028	1.2	2.35	190	7.0
20...	1654	16.0	30.0	751	1028	1028	1.2	2.35	191	7.0
20...	1657	18.0	30.0	751	1028	1028	1.2	2.35	190	7.0
20...	1700	20.0	30.0	751	1028	1028	1.2	2.35	191	7.0
20...	1703	22.0	30.0	751	1028	1028	1.2	2.35	191	6.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT											
14...	1000	1028	*80020	7.1	129	7.3	23.5	17.5	748	5.2	55
NOV											
17...	1030	1028	*80020	12	182	7.3	17.5	12.0	755	6.5	61
JAN											
05...	1110	1028	*80020	250	97	7.4	-2.0	5.5	760	12.2	97
FEB											
08...	1120	1028	*80020	57	151	7.3	13.5	8.0	755	11.8	101
MAR											
30...	1440	1028	*80020	57	129	7.4	27.0	18.5	741	7.6	83
MAY											
03...	1245	1028	*80020	380	103	7.4	17.0	17.5	748	7.4	79
JUN											
15...	0800	1028	*80020	67	98	7.4	24.5	23.5	755	5.8	69
JUL											
27...	0830	1028	80020	0.61	214	7.4	27.5	26.5	751	1.8	23
AUG											
26...	0845	1028	80020	2.9	252	7.4	26.5	26.0	756	2.0	25

*Trace element and common constituent analyses provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS NONCARB WH WAT TOT LAB MG/L AS CACO3 (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT											
14...	--	0	7.0	4.0	11	<2.0	56	0	46	<20	0.072
NOV											
17...	--	0	10	5.0	14	3.2	66	0	54	<20	0.100
JAN											
05...	0.39	4	5.0	3.0	<10	1.6	25	0	21	<20	0.067
FEB											
08...	0.41	4	7.0	4.0	12	1.1	37	0	30	23	0.050
MAR											
30...	0.79	3	6.0	4.0	11	1.3	30	0	24	<20	0.091
MAY											
03...	0.49	4	7.0	3.0	<10	1.9	33	0	27	<20	0.077
JUN											
15...	0.65	2	5.0	3.0	<10	1.5	23	0	19	<20	0.150
JUL											
27...	--	--	--	--	--	--	62	0	51	--	--
AUG											
26...	--	--	--	--	--	--	85	0	70	--	0.054

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
OCT											
14...	--	--	<0.010	<0.010	--	--	0.072	0.050	0.040	0.06	0.05
NOV											
17...	0.090	0.40	0.030	0.020	0.07	0.130	0.110	0.050	0.050	0.06	0.06
JAN											
05...	0.067	0.30	--	0.020	0.07	--	0.087	--	0.050	--	0.06
FEB											
08...	0.050	0.22	--	0.060	0.20	--	0.110	--	0.070	--	0.09
MAR											
30...	--	--	--	<0.010	--	--	0.091	--	0.060	--	0.08
MAY											
03...	0.077	0.34	--	0.010	0.03	--	0.087	--	0.060	--	0.08
JUN											
15...	--	--	--	<0.010	--	--	0.150	--	0.080	--	0.10
JUL											
27...	--	--	--	--	--	--	<0.050	--	0.060	--	0.08
AUG											
26...	--	--	--	--	--	--	0.054	--	0.170	--	0.22

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	NITRO-GEN, TOTAL (MG/L AS NO3) (71887)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHATE, TOTAL (MG/L AS PO4) (00650)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT											
14...	0.45	--	0.50	--	0.57	--	--	0.09	0.090	0.030	0.020
NOV											
17...	0.55	--	0.60	--	0.73	3.2	0.030	0.06	0.040	0.020	0.020
JAN											
05...	0.35	0.25	0.40	0.30	0.49	--	0.060	--	0.010	--	<0.010
FEB											
08...	0.33	0.23	0.40	0.30	0.51	--	0.050	--	0.020	--	<0.010
MAR											
30...	0.64	0.64	0.70	0.70	0.79	--	0.020	--	0.030	--	0.010
MAY											
03...	0.44	0.34	0.50	0.40	0.59	--	0.050	--	0.040	--	0.020
JUN											
15...	0.42	0.42	0.50	0.50	0.65	--	0.080	--	0.050	--	0.040
JUL											
27...	0.64	--	0.70	--	0.70	--	0.080	--	--	--	0.020
AUG											
26...	0.83	--	1.0	--	1.1	--	0.080	--	--	--	0.020

DATE	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4) (00660)	PHOS-PHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA) (01007)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
OCT											
14...	0.06	--	1100	<350	<10	50	<10	<5	<10	<10	2400
NOV											
17...	0.06	0.01	<300	<350	<10	40	<10	<5	<10	11	960
JAN											
05...	--	--	1300	<350	<10	40	<10	<5	<10	<10	1900
FEB											
08...	--	--	1900	<350	<10	40	<10	<5	<10	<10	1900
MAR											
30...	0.03	--	980	<350	<10	40	<10	<5	<10	<10	1600
MAY											
03...	0.06	--	3300	<350	<60	70	<10	<5	<10	<10	4800
JUN											
15...	0.12	--	450	<350	<10	40	<10	<5	<10	<10	1200
JUL											
27...	0.06	--	--	--	--	--	--	--	--	--	--
AUG											
26...	0.06	--	--	--	--	--	--	--	--	--	--

07247500 FOURCHE MALINE NEAR RED OAK, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	THAL-LIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOV-ERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT											
14...	<45	180	<0.50	<25	<5	<7	<200	<500	<5	16	0.30
NOV											
17...	<45	85	<0.50	<25	<5	<7	<200	<500	9	40	1.3
JAN											
05...	<45	110	<0.50	<25	<5	<7	<200	<500	<5	36	24
FEB											
08...	<45	130	<0.50	<25	<5	<7	<200	<500	<5	16	2.5
MAR											
30...	<45	130	<0.50	<25	<5	<7	<200	<500	20	19	2.9
MAY											
03...	55	280	<0.50	<25	<70	<7	<200	<500	20	142	146
JUN											
15...	80	150	<0.50	<25	<5	<7	<200	<500	40	31	5.6
JUL											
27...	--	--	--	--	--	--	--	--	--	15	0.02
AUG											
26...	--	--	--	--	--	--	--	--	--	72	0.56

07247650 FOURCHE MALINE NEAR LEFLORE, OK

LOCATION.--Lat 34°55'11", long 94°56'43", in NE 1/4 SE 1/4, sec. 11 T.5 N., R.22 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 1.6 mi east of LeFlore, OK.

DRAINAGE AREA.--270 mi^2.

PERIOD OF RECORD.--December 1991 to current year.

REMARKS.--Samples were collected periodically, and specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
23...	0930	1.50	28.0	752	1028	1028	1.1	8.32	138	3.7	6.6
23...	0933	3.00	28.0	752	1028	1028	1.1	8.32	138	3.7	6.6
23...	0936	4.50	28.0	752	1028	1028	1.1	8.32	138	3.7	6.6
23...	0939	6.00	28.0	752	1028	1028	1.1	8.32	138	3.7	6.7
23...	0942	7.50	28.0	752	1028	1028	1.1	8.32	138	3.8	6.7
23...	0945	9.00	28.0	752	1028	1028	1.1	8.32	138	3.7	6.7
23...	0948	10.5	28.0	752	1028	1028	1.1	8.32	138	3.7	6.8
23...	0951	12.0	28.0	752	1028	1028	1.1	8.32	138	3.8	6.8
23...	0954	13.5	28.0	752	1028	1028	1.1	8.32	138	3.8	6.8
23...	0957	15.0	28.0	752	1028	1028	1.1	8.32	137	3.8	6.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)
OCT											
14...	1200	1028	*80020	11	108	7.2	26.0	18.0	748	6.6	71
NOV											
17...	1330	1028	*80020	24	182	7.4	18.5	12.5	755	8.2	78
JAN											
05...	1430	1028	*80020	900	**80	7.3	4.0	7.5	759	12.0	101
FEB											
08...	1315	1028	*80020	E150	139	7.4	16.0	10.5	755	10.0	91
APR											
01...	1100	1028	*80020	244	116	7.5	3.5	12.5	753	7.2	68
MAY											
04...	0900	1028	*80020	747	74	7.4	16.0	17.5	752	8.2	87
JUN											
15...	0915	1028	*80020	177	78	7.2	24.5	25.0	755	5.0	61
JUL											
27...	1030	1028	*80020	0.64	141	7.5	33.5	27.5	751	3.8	49
AUG											
26...	1000	1028	*80020	1.3	106	7.3	28.5	27.0	757	3.6	46

*Trace element and common constituent analysis provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

**SPECIFIC CONDUCTANCE, LAB (µS/CM)

07247650 FOURCHE MALINE NEAR LEFLORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN DISSOLVED (MG/L AS N) (00602)	HARDNESS NONCARB WH WAT TOT LAB (MG/L AS CACO3) (00903)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA) (00916)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA) (00929)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K) (00937)	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	ALKALINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN, NITRATE TOTAL (MG/L AS N) (00620)
OCT											
14...	--	4	8.0	4.0	<10	1.8	33	0	27	<20	0.050
NOV											
17...	--	0	9.0	5.0	15	3.1	57	0	47	<20	--
JAN											
05...	0.50	3	4.0	2.0	<10	2.4	15	0	12	<20	0.070
FEB											
08...	0.64	0	1.0	1.0	<10	<1.0	25	0	20	<20	0.080
APR											
01...	0.38	1	6.0	3.0	10	1.1	27	0	22	43	0.078
MAY											
04...	0.49	0	4.0	2.0	<10	1.5	19	0	16	<20	0.087
JUN											
15...	0.66	0	4.0	2.0	<10	1.5	15	0	13	<20	0.160
JUL											
27...	--	--	--	--	--	--	39	0	32	--	--
AUG											
26...	--	--	--	--	--	--	40	0	33	--	--

DATE	NITROGEN, NITRATE DISSOLVED (MG/L AS N) (00618)	NITROGEN, NITRATE DISSOLVED (MG/L AS NO3) (71851)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2) (71856)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4) (71846)
OCT											
14...	--	--	<0.010	<0.010	--	0.050	0.062	0.040	0.030	0.05	0.04
NOV											
17...	--	--	0.020	0.020	0.07	<0.050	<0.050	0.020	0.020	0.03	0.03
JAN											
05...	0.070	0.31	--	0.030	0.10	--	0.100	--	0.040	--	0.05
FEB											
08...	0.080	0.35	--	0.060	0.20	--	0.140	--	0.040	--	0.05
APR											
01...	--	--	--	<0.010	--	--	0.078	--	0.020	--	0.03
MAY											
04...	--	--	--	<0.010	--	--	0.087	--	0.040	--	0.05
JUN											
15...	--	--	--	<0.010	--	--	0.160	--	0.060	--	0.08
JUL											
27...	--	--	--	--	--	--	<0.050	--	0.080	--	0.10
AUG											
26...	--	--	--	--	--	--	<0.050	--	0.130	--	0.17

07247650 FOURCHE MALINE NEAR LEFLORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N) (00607)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, TOTAL (MG/L AS N) (00600)	NITROGEN, TOTAL (MG/L AS NO3) (71887)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHATE, TOTAL (MG/L AS PO4) (00650)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
OCT											
14...	0.36	--	0.40	--	0.45	2.0	0.050	0.06	0.030	0.020	0.010
NOV											
17...	0.48	--	0.50	--	0.50	--	--	0.06	0.050	0.020	0.020
JAN											
05...	0.46	0.36	0.50	0.40	0.60	--	0.070	--	0.060	--	0.010
FEB											
08...	--	0.46	--	0.50	--	--	--	--	0.110	--	<0.010
APR											
01...	0.28	0.28	0.30	0.30	0.38	--	0.040	--	0.040	--	<0.010
MAY											
04...	0.36	0.36	0.40	0.40	0.49	--	0.050	--	0.060	--	<0.010
JUN											
15...	0.54	0.44	0.60	0.50	0.76	--	0.090	--	0.060	--	0.020
JUL											
27...	0,62	--	0.70	--	0.70	--	0.030	--	--	--	0.030
AUG											
26...	0.47	--	0.60	--	0.60	--	0.050	--	--	--	0.020

DATE	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	PHOSPHORUS ORGANIC TOTAL (MG/L AS P) (00670)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
OCT											
14...	0.03	0.03	1200	<350	<10	40	<10	<5	<10	<10	2100
NOV											
17...	0.06	--	<300	<350	<10	40	<10	<5	<10	<10	1100
JAN											
05...	0.03	--	2600	<350	<10	50	<10	<5	<10	<10	2900
FEB											
08...	--	--	370	<350	<10	20	<10	<5	<10	<10	350
APR											
01...	--	--	1100	<350	<10	40	<10	<5	<10	<10	1800
MAY											
04...	--	--	2300	<350	<60	50	<10	<5	<10	<10	3000
JUN											
15...	0.06	--	640	<350	<10	40	<10	<5	<10	<10	100
JUL											
27...	0.09	--	--	--	--	--	--	--	--	--	--
AUG											
26...	0.06	--	--	--	--	--	--	--	--	--	--

07247650 FOURCHE MALINE NEAR LEFLORE, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG) (01077)	THAL-LIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOV-ERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)
OCT											
14...	<45	97	<0.50	<25	<5	<7	<200	<500	<5	13	0.38
NOV											
17...	<45	53	<0.50	<25	<5	<7	<200	<500	<5	29	1.9
JAN											
05...	<45	100	<0.50	<25	<5	<7	<200	<500	8	57	139
FEB											
08...	<45	11	<0.50	<25	<5	<7	<200	<500	<5	14	--
APR											
01...	<45	91	<0.50	<25	<5	<7	<200	<500	9	25	17
MAY											
04...	<45	130	<0.50	<25	<70	<7	<200	<500	8	73	144
JUN											
15...	<45	120	--	<25	<5	<7	<200	<500	7	28	13
JUL											
27...	--	--	--	--	--	--	--	--	--	21	0.04
AUG											
26...	--	--	--	--	--	--	--	--	--	52	0.18

07247800 HOLSON CREEK AT SUMMERFIELD, OK

LOCATION.--Lat 34°52'46", long 94°51'11", in SW 1/4 NW 1/4, sec. 26, T.5 N., R.23 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge, 1.4 mi east of Summerfield, OK.

DRAINAGE AREA.--71.6 mi^2.

PERIOD OF RECORD.--December 1991 to current year.

REMARKS.--Samples were collected periodically. Specific conductance, pH, water temperature, alkalinity, and dissolved oxygen were determined in the field.

MISCELLANEOUS WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)
JUL											
21...	1000	0.80	30.5	755	1028	1028	0.04	21.90	69	3.6	6.5
21...	1003	1.60	30.5	755	1028	1028	0.04	21.90	69	3.6	6.6
21...	1006	2.40	30.5	755	1028	1028	0.04	21.90	67	3.5	6.5
21...	1009	3.20	30.5	755	1028	1028	0.04	21.90	67	3.7	6.5
21...	1012	4.00	30.5	755	1028	1028	0.04	21.90	67	3.7	6.5
21...	1015	4.80	30.5	755	1028	1028	0.04	21.90	68	3.7	6.5
21...	1018	5.60	30.5	755	1028	1028	0.04	21.90	68	3.7	6.6
21...	1021	6.40	30.5	755	1028	1028	0.04	21.90	69	3.0	6.6
21...	1024	7.20	30.5	755	1028	1028	0.04	21.90	69	2.0	6.6
21...	1027	8.00	30.5	755	1028	1028	0.04	21.90	74	2.0	6.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	AGENCY COLLECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANALYZING SAMPLE (CODE NUMBER) (00028)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	OXYGEN, DISSOLVED (MG/L) (00300)	OXYGEN, DISSOLVED (PERCENT SATURATION) (00301)	HARDNESS NONCARB WH WAT TOT LAB (MG/L AS CACO3) (00903)
OCT												
14...	1340	1028	*80020	5.5	49	7.3	22.0	19.5	748	7.6	85	0
NOV												
18...	1450	1028	*80020	10	51	7.2	17.5	15.0	753	8.9	89	0
JAN												
07...	0900	1028	*80020	136	38	6.9	6.0	8.0	753	11.0	93	0
FEB												
10...	1015	1028	*80020	17	42	7.3	8.5	9.0	755	10.2	89	1
MAR												
30...	1500	1028	*80020	16	44	7.1	27.0	1.0	742	9.4	68	--
MAY												
03...	1515	1028	*80020	177	42	7.0	17.0	16.0	743	8.0	84	0
JUN												
15...	1015	1028	*80020	10	53	7.4	25.0	27.0	755	7.2	91	0
JUL												
27...	1130	1028	80020	0.03	71	7.6	33.5	32.0	751	6.5	90	--
AUG												
26...	1130	1028	80020	1.2	64	7.3	32.0	29.5	756	6.8	90	--

*Trace element and common constituent analyses provided by the Oklahoma State Department of Environmental Quality, formerly the Oklahoma State Department of Health.

07247800 HOLSON CREEK AT SUMMERFIELD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA) (00916)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG) (00927)	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA) (00929)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K) (00937)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS NO2) (71856)
OCT												
14...	2.0	2.0	<10	1.0	15	0	12	<20	--	<0.010	<0.010	--
NOV												
18...	2.0	2.0	<10	1.4	11	0	9	<20	--	0.020	<0.010	--
JAN												
07...	1.0	1.0	<10	1.4	6	0	4	<20	--	--	0.020	0.07
FEB												
10...	1.0	2.0	<10	<1.0	10	0	8	<20	--	--	0.040	0.13
MAR												
30...	2.0	--	<10	0.8	9	0	7	<20	--	--	<0.010	--
MAY												
03...	1.0	1.0	<10	0.9	12	0	10	<20	--	--	<0.010	--
JUN												
15...	2.0	2.0	<10	1.0	12	0	10	<20	--	--	<0.010	--
JUL												
27...	--	--	--	--	17	0	14	--	0.078	--	--	--
AUG												
26...	--	--	--	--	18	0	15	--	--	--	--	--

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA TOTAL (MG/L AS NH4) (71845)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)
OCT												
14...	<0.050	<0.050	0.020	0.020	0.03	0.03	--	--	<0.20	--	--	0.020
NOV												
18...	<0.050	<0.050	0.030	0.020	0.04	0.03	--	--	<0.20	--	--	--
JAN												
07...	--	<0.050	--	0.020	--	0.03	--	--	<0.20	<0.20	--	0.020
FEB												
10...	--	<0.050	--	0.030	--	0.04	--	--	<0.20	<0.20	--	0.020
MAR												
30...	--	<0.050	--	0.020	--	0.03	0.18	0.18	0.20	0.20	0.20	--
MAY												
03...	--	<0.050	--	0.030	--	0.04	--	0.27	--	0.30	--	0.020
JUN												
15...	--	<0.050	--	0.030	--	0.04	0.27	0.17	0.30	0.20	0.30	0.020
JUL												
27...	--	0.078	--	0.070	--	0.09	0.43	--	0.50	--	0.58	0.030
AUG												
26...	--	<0.050	--	0.070	--	0.09	0.23	--	0.30	--	0.30	<0.010

07247800 HOLSON CREEK AT SUMMERFIELD, OK--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4) (00660)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA) (01007)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)
OCT												
14...	0.020	<0.010	0.010	0.03	650	<350	<10	20	<10	<5	<10	<10
NOV												
18...	0.050	<0.010	0.020	0.06	680	<350	<10	20	<10	<5	<10	<10
JAN												
07...	<0.010	--	0.010	0.03	1400	<350	<10	20	<10	<5	<10	<10
FEB												
10...	0.020	--	<0.010	--	1300	<350	<10	20	<10	<5	<10	<10
MAR												
30...	0.030	--	<0.010	--	500	<350	<10	20	<10	<5	<10	<10
MAY												
03...	0.020	--	<0.010	--	1400	<350	<60	20	<10	<5	<10	<10
JUN												
15...	0.010	--	0.020	0.06	<300	<350	<10	20	<10	<5	<10	15
JUL												
27...	--	--	0.010	0.03	--	--	--	--	--	--	--	--
AUG												
26...	--	--	<0.010	--	--	--	--	--	--	--	--	--

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	SELENIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOVERABLE (UG/L AS AG) (01077)	THALLIUM, TOTAL (UG/L AS TL) (01059)	TIN, TOTAL RECOVERABLE (UG/L AS SN) (01102)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)
OCT												
14...	580	<45	20	<0.50	<25	<5	<7	<200	<500	<5	9	0.13
NOV												
18...	790	<45	21	<0.50	<25	<5	<7	<200	<500	7	12	0.33
JAN												
07...	950	<45	17	<0.50	<25	<5	<7	<200	<500	<5	10	3.7
FEB												
10...	730	<45	12	<0.50	<25	<5	<7	<200	<500	<5	3	0.14
MAR												
30...	410	<45	22	<0.50	<25	<5	<7	<200	<500	30	4	0.18
MAY												
03...	1500	<45	21	<0.50	<25	<70	<7	<200	<500	<5	7	3.3
JUN												
15...	370	<45	35	<0.50	<25	<5	<7	<200	<500	9	6	0.17
JUL												
27...	--	--	--	--	--	--	--	--	--	--	5	0.00
AUG												
26...	--	--	--	--	--	--	--	--	--	--	18	0.06

07248000 WISTER LAKE NEAR WISTER, OK

LOCATION.--Lat 34°56'12", long 94°43'10", in SE 1/4 NE 1/4 sec.1, T.5 N., R.24 E., Le Flore County, Hydrologic Unit 11110105, in control tower near right end of Wister Dam on Poteau River, 2.0 mi south of Wister, 2.7 mi upstream from Caston Creek, and at mile 60.9.

DRAINAGE AREA.--993 mi^2.

PERIOD OF RECORD.--October 1949 to September 1993, (discontinued). Prior to October 1970, published as Wister Reservoir near Wister.

GAGE.--Water-stage recorder. Datum of gage is sea level.

REMARKS.--Reservoir is formed by an earth dam with outlets of an uncontrolled, concrete, chute-type spillway and six 7- by 12-foot vertical liftgates. Regulated storage began Oct. 4, 1949, conservation pool was first filled Dec. 19, 1949. Capacity, 427,400 acre-ft at elevation 502.5 ft crest of spillway and 23,910 acre-ft at elevation 471.6 ft conservation pool. Figures given herein represent total contents. Reservoir is used for flood control and recreation. Revised capacity table, based on survey in 1985, used since Oct. 1, 1989. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 574,500 acre-ft, May 4, 1990, elevation, 508.23 ft; minimum since conservation pool was first filled, 4,020 acre-ft, Oct. 16, 1961, elevation, 456.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 272,800 acre-ft, Dec. 21, elevation, 495.05 ft; minimum, 45,420 acre-ft, Mar. 11, elevation, 475.66 ft.

Capacity table (elevation, in feet, and contents, in acre-ft):

474	35,660	492	220,800
478	61,430	500	371,200
485	126,200	509	596,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

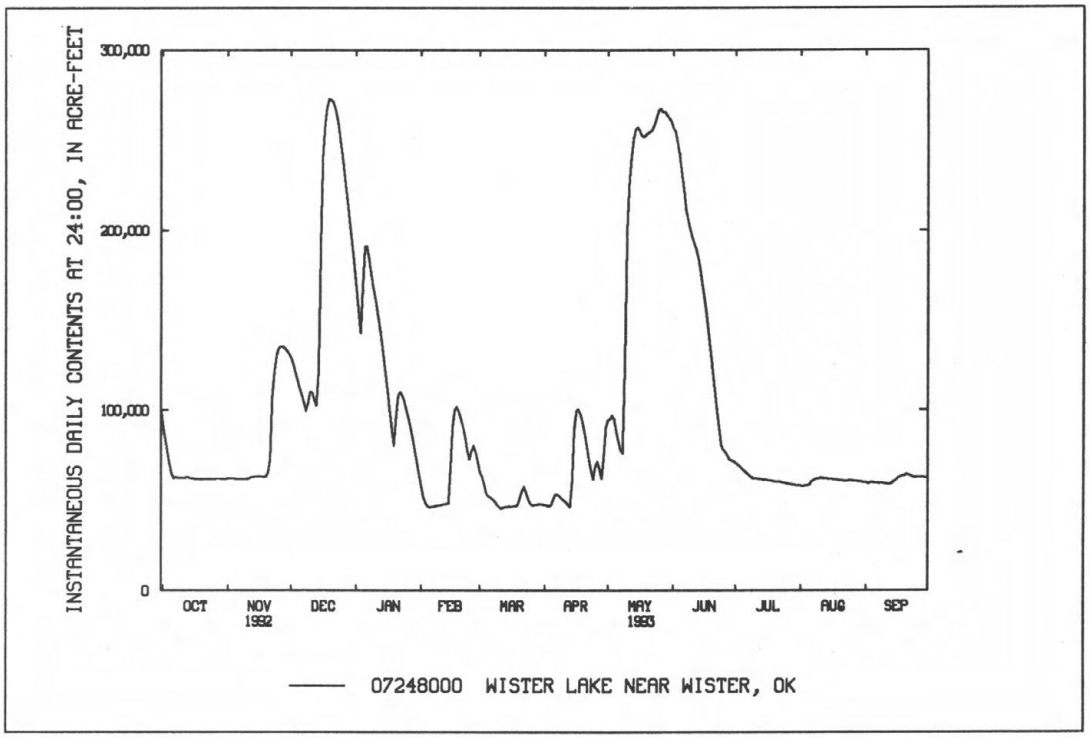
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91500	62180	128700	167300	57720	65500	47320	94300	257000	70390	57790	59700
2	83840	61880	125100	154800	51750	63160	47070	94960	254900	69420	57720	59030
3	77080	61880	120800	142600	48560	58700	46560	96870	248600	68390	58080	59900
4	69910	61810	116500	167300	46620	53930	47260	94770	240800	67250	58010	59760
5	64510	61730	112300	190900	45990	52100	50540	88040	231400	66210	58560	59610
6	62180	61660	108400	191100	46370	51480	53250	82430	222400	65120	60190	59470
7	62630	61580	104300	184200	46430	50470	53250	77850	211400	64060	61210	59250
8	62330	61580	99940	175500	46810	49220	52160	76080	205700	63010	61720	59470
9	62410	61580	103900	167900	46940	47640	50740	123400	200900	62110	62010	59320
10	62410	61650	109900	161900	47000	46500	49880	201500	196000	62030	62180	59100
11	62480	62180	109800	154500	47570	45420	48890	226700	192800	61880	62260	58880
12	62560	62780	105600	146900	47770	45800	47570	241000	189300	61730	61960	58810
13	62560	62860	102400	138500	47900	46120	46310	250800	184200	61500	61880	59030
14	62110	63010	120700	129000	48100	46430	60340	256300	177900	61360	61730	60340
15	61960	63010	193700	119400	67770	46500	89580	257200	169400	61210	61580	60850
16	61650	63080	241000	109400	91220	46430	99360	255300	161800	61070	61430	62260
17	61730	63010	258600	99080	100100	46560	100300	252400	152500	60850	61360	63010
18	61730	62860	268500	88940	101600	46620	97920	251900	142200	60680	61210	63240
19	61650	62930	273100	79920	98980	47510	93180	253200	131600	60340	60990	63540
20	61730	65270	272600	95720	95050	51410	87310	254300	121200	60340	60920	64290
21	61730	72410	271300	108000	90760	54980	80090	254900	110700	60190	60700	64060
22	61730	107600	267800	109900	84810	57160	71930	256000	100500	60050	60560	63540
23	61730	120600	262100	108100	77420	54270	66290	259100	90570	59760	60480	62930
24	61730	130000	253700	104700	72580	50410	61580	262800	80520	59540	60920	62480
25	61730	134000	244500	100000	77080	47970	68550	266500	77680	59270	60770	62860
26	61810	135000	234100	95140	80000	47000	71120	267600	76660	58990	60630	62630
27	61810	135000	223700	89940	76410	47320	67220	265800	74570	58810	60560	62710
28	61810	134000	213100	84020	71360	47570	61730	265800	72410	58520	60340	62710
29	61730	132600	202200	77330	---	47710	73480	264200	71850	58300	60120	62410
30	61730	130900	192100	70880	---	47770	90390	262400	71440	58160	60050	62260
31	61810	---	180300	64290	---	47510	---	260500	---	58010	59900	---

07248000 WISTER LAKE NEAR WISTER, OK--Continued

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MAX	91500	135000	273100	191100	101600	65500	100300	267600	257000	70390	62260	64290
MIN	61650	61580	99940	64290	45990	45420	46310	76080	71440	58010	57720	58810
(‡)	478.05	485.41	489.31	478.38	479.28	475.99	481.48	494.36	479.29	477.53	477.79	478.11
(‡‡)	-39,590	+69,090	+49,400	-116,010	+7,070	-23,850	+42,880	+170,110	-189,060	-13,430	+1,890	+2,360

CAL YR 1992 MAX 273100 MIN 38130 (‡‡) +86,560
WTR YR 1993 MAX 273100 MIN 45420 (‡‡) -39,140

(‡) ELEVATION, IN FEET, AT END OF MONTH
(‡‡) CHANGE IN CONTENTS, IN ACRE-FEET



07249413 POTEAU RIVER NEAR PANAMA, OK

LOCATION.--Lat 35°09'56", long 94°39'10", in SE 1/4, SE 1/4 sec.15, T.8 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, on left pier of county bridge, 1.5 mi east of Panama, OK, .8 mi downstream from James Fork creek, and at mile 26.4.

DRAINAGE AREA.--1,767 mi^2.

PERIOD OF RECORD.--October 1989 to December 1990, May 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 387.961 ft above sea level. Prior to December 1990, at site .4 mi upstream at datum 5.00 ft higher.

REMARKS.--Records good. Flow partially regulated by Wister Reservoir 34.5 mi upstream. U.S. Army Corps of Engineers' satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1935 reached a stage of 44.6 ft (HWM) at datum then in use, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5350	39	2430	6750	3760	5460	950	9880	2250	742	148	e37
2	4620	41	2430	7240	3680	6530	863	5020	2240	638	153	38
3	3610	40	3010	7320	3290	6720	810	4770	2240	496	132	46
4	3260	38	3130	9540	1870	6150	1590	6240	3590	479	100	e42
5	3140	38	2930	12700	1670	5340	4340	6230	4130	468	51	e41
6	2450	38	2850	9070	778	3150	2560	6430	4150	461	46	e42
7	806	37	2950	6680	661	2270	2370	6660	4150	452	175	e43
8	140	36	2800	7090	620	2250	2410	4880	4190	461	91	e42
9	96	36	4170	7370	553	2120	2250	5570	3430	470	60	39
10	83	39	6470	8910	555	1930	1710	13600	3510	340	57	e42
11	76	44	4270	8680	608	1440	1370	15900	3800	203	53	e42
12	70	208	4400	8240	743	1120	1330	11600	3610	178	45	e43
13	65	252	4500	8240	745	690	1290	7840	3610	154	e45	e45
14	76	186	8690	7570	704	564	3780	4820	3470	158	e44	116
15	165	244	16100	7020	4210	465	12700	4420	3810	198	e45	280
16	163	246	22800	6650	12300	1280	12000	4830	4110	182	e46	308
17	129	244	17200	6270	7770	1480	7720	4820	4090	173	e45	198
18	67	250	9780	6110	3530	1070	6750	4650	4200	192	e45	174
19	50	183	4710	6160	4100	1010	6250	3860	4330	169	e40	169
20	43	236	4820	10100	4310	2470	7250	3740	4280	142	e39	311
21	41	1160	4740	11700	4230	2670	7150	3730	4200	142	e41	383
22	39	8120	5180	6750	4150	1790	6200	3730	4140	176	e42	454
23	36	10700	5310	5190	4370	1920	5600	3780	4040	186	e45	438
24	35	3940	5740	4790	4610	3870	4090	4100	3920	206	e44	539
25	37	2030	6320	4440	5820	3220	5320	3770	4240	203	e41	644
26	36	2600	6720	4230	7060	2460	6270	3150	3700	185	e42	886
27	36	2690	6700	3940	5950	1240	4800	2840	1890	176	e45	1010
28	38	2570	6540	3760	5650	854	4530	2540	1580	176	e42	1120
29	37	2520	6420	3880	---	806	8100	2300	1040	143	e44	1160
30	38	2460	6330	3890	---	1350	13600	2280	781	141	e43	1130
31	39	---	6230	3850	---	1260	---	2260	---	145	e41	---
TOTAL	24871	41265	196670	214130	98297	74949	145953	170240	102721	8635	1930	9862
MEAN	802	1375	6344	6907	3511	2418	4865	5492	3424	279	62.3	329
MAX	5350	10700	22800	12700	12300	6720	13600	15900	4330	742	175	1160
MIN	35	36	2430	3760	553	465	810	2260	781	141	39	37
AC-FT	49330	81850	390100	424700	195000	148700	289500	337700	203700	17130	3830	19560

e Estimated

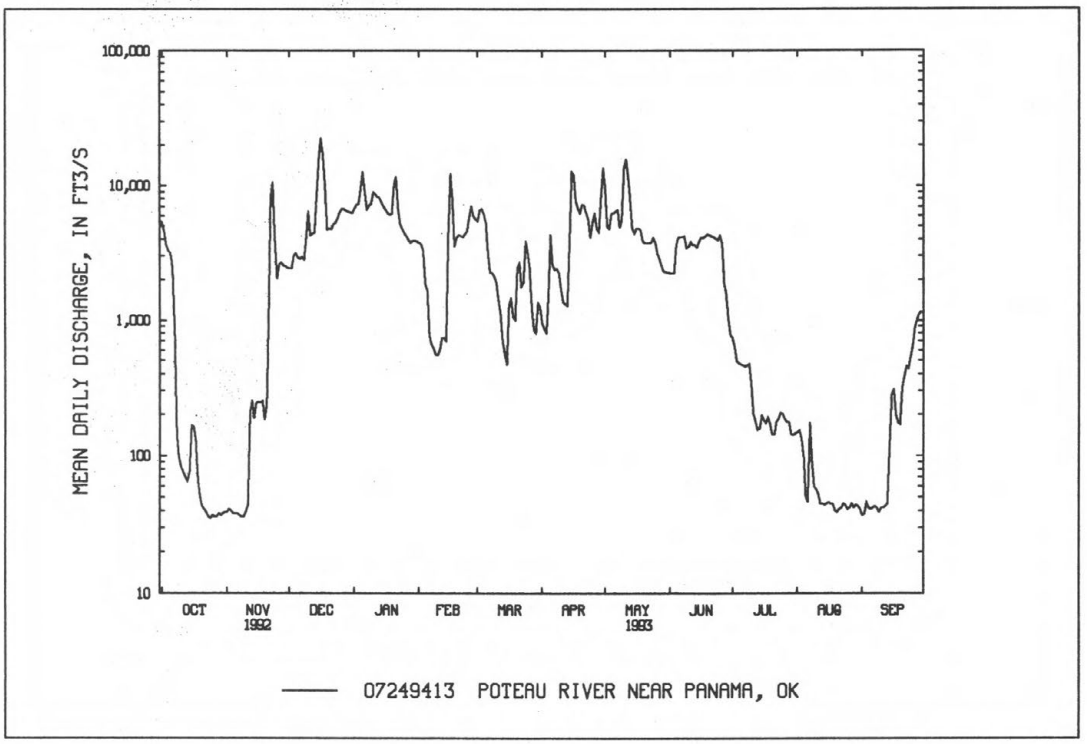
07249413 POTEAU RIVER NEAR PANAMA, OK--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	493	677	2694	4760	5489	3801	6432	7944	4503	432	431	1297
MAX	802	1375	6344	6907	7467	5184	8000	16670	5531	630	818	2678
(WY)	1993	1993	1993	1993	1990	1990	1990	1990	1990	1992	1992	1992
MIN	15.0	11.5	10.4	2612	3511	2418	4865	1664	3424	279	62.3	329
(WY)	1990	1990	1990	1990	1993	1993	1993	1992	1993	1993	1993	1993

SUMMARY STATISTICS	1993 WATER YEAR		WATER YEARS 1990-93	
ANNUAL TOTAL	1089523			
ANNUAL MEAN	2985		3446	
HIGHEST ANNUAL MEAN			3907	1990
LOWEST ANNUAL MEAN			2985	1993
HIGHEST DAILY MEAN	22800	Dec 16	67000	May 3 1990
LOWEST DAILY MEAN	35	Oct 24	6.8	Dec 4 1989
ANNUAL SEVEN-DAY MINIMUM	36	Oct 23	7.4	Dec 2 1989
INSTANTANEOUS PEAK FLOW	23500	Dec 16	74600	May 3 1990
INSTANTANEOUS PEAK STAGE	37.60	Dec 16	[a]46.59	May 3 1990
ANNUAL RUNOFF (AC-FT)	2161000		2496000	
10 PERCENT EXCEEDS	7040		7230	
50 PERCENT EXCEEDS	2250		1290	
90 PERCENT EXCEEDS	42		19	

[a]At present datum.



As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Miscellaneous Sites

Discharge measurements in the following table were made at special study and miscellaneous sites throughout the state.

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN				
07159639	Bluff Creek above Bethany and Warr Acres Sewage Treatment Plant near Edmond, OK.	Lat 35°40'02", long 97°35'45", in NE 1/4, NW 1/4, sec.26, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at county road bridge 0.4 mi upstream of Deer Creek and 0.6 mi west of State Highway 74.		1986, 93	08-31-93 09-22-93	15 9.1
07159643	Deer Creek below Bluff Creek at Oklahoma City, OK.	Lat 35°40'56", long 97°35'26", in NE 1/4,NW 1/4, sec.23, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, 0.3 mi upstream of County Road and 0.5 mi downstream of confluence of Bluff Creek.		1993	08-31-93 09-22-93	72 35
07159650	Deer Creek at Oklahoma City, OK.	Lat 35°41'24", long 97°35'06", in SW 1/4, NW 1/4, sec.13, T.14 N., R.4 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on State Highway 74, 0.4 mi south of Logan County line.		1993	08-31-93 09-22-93	73 51
07159690	Chisholm Creek at Edmond, OK.	Lat 35°38'03", long 97°31'56", in SE 1/4, SE 1/4, sec.17, T.14 N., R.3 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on Western Avenue, 1.8 mi south of Logan County line.		1993	08-31-93 09-21-93	10 4.0
07159695	Chisholm Creek near Edmond, OK.	Lat 35°43'32", long 97°31'37", in NW 1/4, NW 1/4, sec.4, T.14 N., R.3 W., Oklahoma County, Hydrologic Unit 11050002, at bridge on County Road, 0.2 mi east of Western Avenue on the Logan and Oklahoma County line.		1993	08-31-93 09-21-93	26 7.7
07161000	Cimarron River at Perkins, OK.	Lat 35°57'27", long 97°01'54", in SW 1/4, SW 1/4, sec.7, T.17 N., R.3 E., Payne County, Hydrologic Unit 11050003, at bridge on U.S. Highway 177, 1.0 mi south of Perkins.	17,892	[a]1939-89 1990-93	10-20-92 03-03-93 04-06-93 06-28-93 08-18-93	238 3,280 4,140 9,700 479

[a]Continuous streamflow records for this period.

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		ARKANSAS RIVER BASIN				
07231955	Gaines Creek near Higgins, OK.	Lat 34°48'57", long 95°28'46", in NE 1/4, SE 1/4, sec.14, T.4 N., R.17 E., Latimer County, Hydrologic Unit 11090204, 1.0 mi downstream Beaver Creek, 3.0 mi west of Higgins.	152	1978-80 1990-93	10-29-92 01-27-93 03-10-93 05-19-93 06-29-93	2.6 81 56 48 20
07231959	Pit Creek near Hartshorne, OK.	Lat 34°50'51", long 95°30'12" in SW 1/4, NE 1/4, sec.3, T.4 N., R.17 E., Latimer County, Hydrologic Unit 11090204, 3.0 mi east of Hartshorne.	8.95	1992-93	10-29-92 11-23-92 01-27-93 03-10-93 05-19-93 06-29-93	.18 30 5.9 3.3 3.5 2.5
07231960	Gaines Creek near Gowen, OK.	Lat 34°53'43", long 95°26'13", in NE 1/4, NE 1/4, sec.19, T.5 N., R.18 E., Latimer County, Hydrologic Unit 11090204, 1.1 mi upstream from Beaver Creek, 2.4 mi northeast of Gowen.	182	1990-93	10-29-92 11-24-92 01-28-93 03-11-93 05-20-93 06-29-93	5.6 847 102 72 54 27
07246940	Poteau River east of Waldron, AR.	Lat 34°53'46", long 94°03'57", in SW 1/4, SE 1/4, sec.22 T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.8 mi east of high school.	15.0	1983-93	10-22-92 01-21-93 02-09-93 03-31-93 04-13-93 05-05-93 06-16-93 07-08-93 07-22-93 07-28-93 08-25-93	.02 56 2.6 2.8 2.8 18 4.1 0 0 0 0
07246950	Poteau River northwest of Waldron, AR.	Lat 34°54'47", long 94°06'28", in SE 1/4, SW 1/4, sec.17 T.3 N., R.29 W., Scott County, Hydrologic Unit 11110105, at bridge on U.S. Highway 71, 0.9 mi north of city limits.	46.1	1983-93	02-09-93 03-31-93 05-05-93 06-16-93 07-22-93 07-28-93 08-25-93	9.7 12 76 20 1.9 1.3 2.3
07246960	Poteau River near Hon, AR.	Lat 34°55'34", long 94°10'03", in SW 1/4, SE 1/4, sec.10 T.3 N., R.30 W., Scott County, Hydrologic Unit 11110105, at bridge on State Highway 80, 1.0 mi southwest of Hon, AR.	69.5	1993	02-09-93 03-31-93 05-05-93 06-16-93 07-22-93	13 16 101 30 1.8
07246980	Jones Creek near Hon, AR.	Lat 34°55'13", long 94°09'58", in SE 1/4, NE 1/4, sec.15 T.3 N., R.30 W., Scott County, Hydrologic Unit, 11110105, at low-water crossing on unimproved county road, 1.5 mi southeast of Hon, AR.	93.2	1993	02-09-93 03-31-93 05-05-93 06-16-93	34 29 201 18

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		ARKANSAS RIVER BASIN				
07247345	Black Fork at Hodgen, OK.	Lat 34°50'35", long 94°37'28", in SE 1/4, SE 1/4, sec.1 T.4 N., R.25 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge .4 mi east of Hodgen.	179	1992-93	10-14-92	19
					11-17-92	34
					01-06-93	1,010
					02-10-93	69
					03-30-93	145
					04-14-93	2,120
					04-14-93	1,880
					04-15-93	5,860
					04-15-93	4,190
					04-15-93	3,870
					05-04-93	1,410
					07-21-93	0.7
					07-27-93	0.2
					08-26-93	4.3
07247650	Fourche Maline near LeFlore, OK.	Lat 34°55'11", long 94°56'43", in NE 1/4, SE 1/4, sec.11 T.5 N., R.22 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 1.6 mi east of LeFlore.	270	1992-93	10-14-92	11
					11-17-92	24
					01-05-93	900
					04-01-93	244
					05-04-93	747
					06-15-93	177
					07-23-93	1.1
					07-27-93	0.6
					08-26-93	1.3
07247800	Holson Creek at Summerfield, OK.	Lat 34°52'46", long 94°51'11", in SW 1/4, NW 1/4, sec.26 T.5 N., R.23 E., LeFlore County, Hydrologic Unit 11110105, at county road bridge 1.4 mi east of Summerfield.	71.6	1992-93	10-14-92	5.5
					11-18-92	10
					01-07-93	136
					02-10-93	17
					03-30-93	16
					05-03-93	177
					06-15-93	10
					07-21-93	.04
					07-27-93	.03
					08-26-93	1.2

Flood hydrograph stations

The following tables contain rainfall and discharge for indicated times at a flood hydrograph station. Records of discharge above the base discharge are obtained from a water-stage recorder. A stage-discharge relation for each gage is developed from indirect methods. Records of rainfall are obtained from a water-stage recorder collecting rain in a holding pipe.

ARKANSAS RIVER BASIN

07165515 Fred Creek at Evanston Ave., at Tulsa, OK

LOCATION.--Lat 36°03'08", long 95°56'48", in NW 1/4, SE 1/4, sec.8, T.18 N., R.13 E., Tulsa County, Hydrologic Unit 11110101, at left downstream wingwall of culvert, near intersection of Evanston Ave. and 76th Place, and at mile 1.2.

DRAINAGE AREA.--1.87 mi^2

PERIOD OF RECORD.--April 1988 to current year.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME, WATER YEAR ENDING SEPT. 30, 1993

DATE	HOUR	DISCHARGE**	RAINFALL*
Oct. 31	2210	N/A	.00
	2215	N/A	.07
	2220	N/A	.22
	2225	N/A	.13
	2230	N/A	.35
	2235	N/A	.31
	2240	N/A	.13
	2245	N/A	.12
	2250	N/A	.05
	2255	N/A	.19
	2300	N/A	.19
	2320	N/A	.14

*1.91 inches of rainfall this date.
**Maximum discharge, 1,440 ft^3/s this date.

DATE	HOUR	DISCHARGE**	RAINFALL*
Dec. 14*	0215	**N/A	.00
	0310	N/A	.26
	0315	N/A	.24
	0320	N/A	.14
	0425	N/A	.35
	0435	N/A	.11
	0440	N/A	.12
	0510	N/A	.21
	0530	N/A	.18
	0545	N/A	.07

*2.54 inches of rainfall this date.
** No peaks high enough to be recorded this date.

DATE	HOUR	DISCHARGE**	RAINFALL*
May 8	1755	N/A	.00
	1825	N/A	.06
	1840	N/A	.20
	1900	N/A	.02
	1905	N/A	.15
	1910	N/A	.10
	1920	N/A	.09
	1925	N/A	.13
	1930	N/A	.12
	1940	N/A	.11
	1950	N/A	.10
	1955	N/A	.11
	2000	N/A	.06
	2005	N/A	.19
	2025	N/A	.02

*2.67 inches of rainfall this date.
** No peaks high enough to be recorded this date.

07165560 Little Haikey Tributary at Tulsa, OK

LOCATION.--Lat 36°02'10", long 95°53'09", in NW 1/4, SW 1/4, sec.13, T.18 N., R.13 E., Tulsa County, Hydrologic Unit 11110101, at downstream wingwall of culvert, on south Memorial, 0.5 mile south of 81st on east side of road, and at mile 0.3.

DRAINAGE AREA.--.50 mi^2

PERIOD OF RECORD.--April 1988 to current year.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME, WATER YEAR ENDING SEPT. 30, 1993

DATE	HOUR	DISCHARGE	RAINFALL*
Oct. 31	2225	42	.00
	2230	101	.02
	2235	148	.28
	2240	195	**.38
	2245	217	.08
	2250	176	.04
	2255	171	.04
	2300	155	.06
	2305	148	.10
	2310	131	.02
	2315	129	.04

*1.10 inches of rainfall this date.
**Maximum intensity for year.

DATE	HOUR	DISCHARGE	RAINFALL*
Sept. 19	2100		.00
	2105		.01
	2110		.12
	2115		.11
	2120	<41	.12
	2125	102	.20
	2130	149	.16
	2135	219	.27
	2140	254	.02
	2145	235	.02
	2150	217	.05
	2155	176	.01

*1.12 inches of rainfall this date.

May 2*	1630		.00
	1640	<41	.16
	1645	56	.10
	1650	96	.10
	1700	121	.10
	1705	121	.00
	1710	130	.08
	1715	180	.12
	1720	237	.04
	1725	225	.00
	1805	120	.00

*0.80 inches of rainfall this date.

May 8*	1855	<41	.02
	1900	47	.00
	1905	80	.14
	1910	124	.10
	1915	197	.14
	1920	227	.12
	1925	245	.04
	1930	257	.16
	1935	263	.04
	1945	245	.00
	1955	268	.16
	2005	319	.14
	2010	**337	.14
	2015	**337	.06
	2105	227	.16
	2120	272	.20
	2125	**337	.10
	2135	311	.10
	2300	151	.18

*2.56 inches of rainfall this date.
**Maximum discharge for year.

07178010 Brook Hollow at S 136th St at Tulsa, OK

LOCATION.--Lat 36°07'19", long 95°49'32" SE 1/4, SW 1/4, sec.16, T.19 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at right downstream wingwall of culvert, near intersection of S 136th E Ave. and E 28th Place, and at mile 2.7

DRAINAGE AREA.--2.17 mi^2

PERIOD OF RECORD.--April 1988 to current year.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME, WATER YEAR ENDING SEPT. 30, 1993

DATE	HOUR	DISCHARGE**	RAINFALL*
Oct. 31	2220	N/A	.00
	2225	N/A	.10
	2230	N/A	.09
	2235	N/A	.18
	2240	N/A	.26
	2245	N/A	.25
	2250	N/A	.09
	2310	N/A	.16
	2320	N/A	.05

*1.21 inches of rainfall this date.
** No peaks high enough to be recorded this date.

May 8*	1715	**N/A	.00
	1725	N/A	.06
	1730	N/A	.20
	1820	N/A	.28
	1825	N/A	.16
	1830	N/A	.18
	1840	N/A	.16
	1845	N/A	.12
	1850	N/A	.12
	1920	N/A	.17
	1930	N/A	.14
	1945	N/A	.08
	2000	N/A	.02
	2015	N/A	.21
	2055	N/A	.25

*2.65 inches of rainfall this date.
**Maximum discharge 900 ft^3/s.

DATE	HOUR	DISCHARGE**	RAINFALL*
June 8	0145	N/A	.00
	0150	N/A	.27
	0155	N/A	.26
	0200	N/A	.01
	0205	N/A	.01

*.73 inches of rainfall this date.
** No peaks high enough to be recorded this date.

Aug. 5*	0955	**N/A	.00
1015	N/A	.05	
	1020	N/A	.03
	1025	N/A	.19
	1030	N/A	.10
	1040	N/A	.04

*.95 inches of rainfall this date.
** No peaks high enough to be recorded this date.

07178020 Tupelo Creek at US 169 at Tulsa, OK

LOCATION.--Lat 36°09'04", long 95°51'39", in SE 1/4, SW 1/4, sec.6, T.19 N., R.14 E., Tulsa County, Hydrologic Unit 11070107, at left downstream wingwall of culvert, on US 169 south between Admiral and 11 St exit, and at mile 0.6.

DRAINAGE AREA.--3.53 mi^2

PERIOD OF RECORD.--April 1988 to current year.

DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, IN INCHES, AT INDICATED TIME, WATER YEAR ENDING SEPT. 30, 1993

DATE	HOUR	DISCHARGE	RAINFALL
Oct. 31	2215	N/A	.00
	2220	N/A	.09
	2225	N/A	.26
	2230	N/A	.22
	2235	N/A	.20
	2240	N/A	.23
	2245	N/A	.10
	2250	N/A	.04
	2300	N/A	.06
	2310	N/A	.12
	2315	N/A	.02
May 8*	1710	**N/A	.00
	1720	N/A	.17
	1725	N/A	.18
	1730	N/A	.13
	1740	N/A	.16
	1755	N/A	.15
	1820	N/A	.19
	1825	N/A	.19
	1830	N/A	.09
	1835	N/A	.16
	1845	N/A	.15
	1850	N/A	.08
	1920	N/A	.18
	1935	N/A	.15
	1940	N/A	.01

*3.00 inches of rainfall on this date.
**Peak dischrge of 1,300 ft^3/s.

DATE	HOUR	DISCHARGE**	RAINFALL*
June 8	0230	N/A	.00
	0235	N/A	.06
	0240	N/A	.17
	0245	N/A	.22
	0255	N/A	.02

*.99 inches of rainfall this date.
** No peaks high enough to be recorded this date.

Sept. 19*	2050	N/A	.00
	2055	N/A	.03
	2100	N/A	.26
	2105	N/A	.27
	2110		.19
	2115		.05
	2120		.01
	2125		.10
	2130		.03

*1.25 inches of rainfall this date.
** No peaks high enough to be recorded this date.

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^{0}	kilometer
	Area	
acre	4.047×10^{3}	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi^2)	2.590×10^{0}	square kilometer
	Volume	
gallon (gal)	3.785×10^{0}	liter
	3.785×10^{0}	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^{3}	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft^3)	2.832×10^{1}	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic–foot–per–second day [(ft^3/s) d]	2.447×10^{3}	cubic meter
	2.447×10^{-3}	cubic hectometer
acre–foot (acre–ft)	1.233×10^{3}	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second
	2.832×10^{1}	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^{1}	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
	Mass	
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first–order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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